

West Santa Ana Branch Transit Corridor

Final Energy Impact Analysis Report



Metro®

WEST SANTA ANA BRANCH TRANSIT CORRIDOR PROJECT

Final Energy Impact Analysis Report

Prepared for:



Metro®

Los Angeles County
Metropolitan Transportation Authority

Prepared by:



WSP
515 South Figueroa Street
Suite 1400
Los Angeles, California 90071



March 2024

AUTHOR(S)

Terry A. Hayes, TAHA

Sam Silverman, TAHA

Anders Sutherland, TAHA

Allyson Dong, TAHA

Blaire Frei, TAHA

TABLE OF CONTENTS

1	INTRODUCTION.....	1-1
1.1	Study Background	1-1
1.2	Alternatives Evaluation, Screening, and Selection Process	1-1
1.3	Draft Environmental Impact Statement/Environmental Impact Report	1-2
1.4	Report Purpose and Structure	1-4
1.5	General Background.....	1-4
1.6	Methodology	1-5
2	PROJECT DESCRIPTION	2-1
2.1	No Build Alternative	2-4
2.2	Locally Preferred Alternative	2-6
2.2.1	Refinements to the Locally Preferred Alternative	2-6
2.2.2	Alignment Configuration	2-8
2.2.3	Design Option – Close 186th Street.....	2-12
2.2.4	Maintenance and Storage Facility	2-14
3	REGULATORY FRAMEWORK.....	3-1
3.1	Federal.....	3-2
3.1.1	The Energy Policy and Conservation Act of 1975	3-2
3.1.2	Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and Congestion Mitigation and Air Quality Improvement (CMAQ) Program	3-2
3.1.3	Energy Policy Act of 1992.....	3-2
3.1.4	Transportation Equity Act for the 21st Century (TEA-21)	3-3
3.1.5	Energy Policy Act of 2005.....	3-3
3.1.6	Energy Independence and Security Act of 2007	3-3
3.1.7	Moving Ahead for Progress in the 21st Century Act (MAP-21)	3-3
3.2	State	3-4
3.2.1	California Energy Commission (CEC)	3-4
3.2.2	California Public Utilities Commission (CPUC)	3-4
3.2.3	Alternative and Renewable Fuel and Vehicle Technology Program	3-4
3.2.4	California Transportation Plan (CTP).....	3-4
3.2.5	California Code of Regulations (CCR), Title 13	3-5
3.2.6	California Code of Regulations (CCR), Energy Efficiency Standards.....	3-5
3.2.7	Assembly Bill 2076.....	3-5
3.2.8	Assembly Bill 1493.....	3-5
3.2.9	Senate Bill 1389, Chapter 568, Statutes of 2002.....	3-5
3.2.10	Executive Order S-3-05.....	3-5
3.2.11	Senate Bill 375	3-6
3.2.12	Senate Bill X1-2 and Senate Bill 250.....	3-6
3.2.13	Executive Order B-30-15.....	3-6
3.2.14	Senate Bill 350	3-6
3.2.15	Senate Bill 743	3-6
3.2.16	Senate Bill 100	3-6

3.3	Regional.....	3-7
3.3.1	Southern California Association of Governments (SCAG) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)	3-7
3.3.2	Metro Energy and Sustainability Policy.....	3-7
3.3.3	Metro Sustainability Implementation Plan (MSIP).....	3-8
3.3.4	Metro Construction and Demolition Debris Recycling and Reuse Policy.....	3-8
3.3.5	Metro Green Construction Policy.....	3-8
3.3.6	Metro Energy Conservation and Management Plan (ECMP)	3-9
3.3.7	Metro Sustainable Rail Plan	3-9
3.3.8	Metro Climate Action and Adaptation Plan	3-10
3.3.9	Metro Moving Beyond Sustainability 2020 Strategic Plan	3-10
3.3.10	Transportation Electrification Partnership Leadership Group	3-11
3.4	Local	3-11
3.4.1	City of Los Angeles General Plan.....	3-11
3.4.2	City of Vernon General Plan	3-11
3.4.3	City of Huntington Park General Plan	3-12
3.4.4	Los Angeles County General Plan 2035	3-12
3.4.5	City of Bell General Plan	3-13
3.4.6	City of Cudahy General Plan	3-13
3.4.7	City of South Gate General Plan	3-14
3.4.8	City of Downey	3-14
3.4.9	City of Paramount	3-15
3.4.10	City of Bellflower.....	3-15
3.4.11	City of Artesia	3-15
3.4.12	City of Cerritos.....	3-16
4	AFFECTED ENVIRONMENT AND EXISTING CONDITIONS.....	4-1
4.1	State Energy Use	4-1
4.1	Regional Energy Use	4-3
4.2	Local Energy Use.....	4-4
4.2.1	Los Angeles Department of Water and Power (LADWP)	4-4
4.2.2	Southern California Edison (SCE)	4-4
4.2.3	California Independent System Operator	4-4
4.2.4	Southern California Gas Company (SoCalGas)	4-4
5	ENVIRONMENTAL CONSEQUENCES /ENVIRONMENTAL IMPACTS	5-1
5.1	No Build Alternative.....	5-1
5.2	Locally Preferred Alternative.....	5-1
5.3	Design Option: Close 186th Street.....	5-3
5.4	Maintenance and Storage Facility	5-3
5.5	U.S. Army Corps of Engineers Facilities	5-3
5.6	California Department of Transportation Facilities	5-3
6	CALIFORNIA ENVIRONMENTAL QUALITY ACT DETERMINATION.....	6-1
6.1	Threshold ENERGY-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
6.1.1	No Project Alternative	6-1

6.1.2	Locally Preferred Alternative	6-1
6.1.3	Design Option: Close 186th Street	6-2
6.1.4	Maintenance and Storage Facility	6-2
6.2	Threshold ENERGY-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	6-3
6.2.1	No Project Alternative	6-3
6.2.2	Locally Preferred Alternative	6-3
6.2.3	Design Option: Close 186th Street	6-4
6.2.4	Maintenance and Storage Facility	6-4
7	CONSTRUCTION IMPACTS.....	7-1
7.1	Construction Activities	7-1
7.2	Regulatory Background and Methodology.....	7-1
7.2.1	Regulatory Background.....	7-1
7.2.2	Methodology.....	7-1
7.3	Construction Impacts.....	7-1
7.3.1	Locally Preferred Alternative	7-1
7.3.2	Design Option: Close 186th Street	7-3
7.3.3	Maintenance and Storage Facility	7-3
7.3.4	U.S. Army Corps of Engineers Facilities.....	7-3
7.3.5	California Department of Transportation Facilities.....	7-3
7.4	California Environmental Quality Act Determination	7-3
7.4.1	Threshold ENERGY-CON-1: Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?.....	7-3
7.4.2	Threshold ENERGY-CON-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?.....	7-5
8	PROJECT MEASURES AND MITIGATION MEASURES.....	8-1
8.1	Project Measures.....	8-1
8.2	Mitigation Measures	8-1
8.2.1	Operation.....	8-1
8.2.2	Construction.....	8-1
9	REFERENCES.....	9-1

Appendices

APPENDIX A – ENERGY CALCULATION WORKSHEETS.

List of Tables

Table 1.1.	Countywide Vehicle Miles Traveled and WSAB Project Revenue Light Rail Transit Car Miles	1-5
Table 2.1.	No Build Alternative – Existing Transportation Network and Planned Improvements	2-4
Table 2.2.	Summary of LPA Components	2-8
Table 3.1.	City of Vernon General Plan – Relevant Energy Resources Goals and Policies	3-11
Table 3.2.	City of Huntington Park General Plan – Relevant Energy Conservation Goals and Policies	3-12
Table 3.3.	Los Angeles County General Plan – Relevant Energy Conservation Goals and Policies	3-12
Table 3.4.	City of Cudahy General Plan – Relevant Energy Conservation Goals and Policies	3-13
Table 3.5.	City of South Gate General Plan – Relevant Energy Resources Goals, Objectives, and Policies.....	3-14
Table 3.6.	City of Downey General Plan – Relevant Energy Conservation Goals, Policies, and Programs.....	3-14
Table 3.7.	City of Artesia General Plan – Energy Conservation and Green Building Practices	3-15
Table 3.8.	City of Cerritos General Plan – Relevant Energy Conservation Goals and Policies	3-16
Table 4.1.	Metro Direct Energy Consumption.....	4-3
Table 5.1.	No Build Alternative Operational Energy Consumption based on Regional On-Road VMT	5-1
Table 5.2.	Operational Energy Consumption (2042).....	5-2
Table 6.1.	Operational Energy Consumption under Existing Conditions and the Locally Preferred Alternative (2017).....	6-2
Table 7.1.	Locally Preferred Alternative Construction Energy Consumption	7-2

Figures

Figure 1-1.	Draft EIS/EIR Build Alternatives	1-3
Figure 2-1.	Locally Preferred Alternative Alignment by Grade.....	2-2
Figure 2-2.	Existing Rail Right-of-Way Ownership	2-3
Figure 2-3.	Freeway Crossings.....	2-9
Figure 2-4.	Locally Preferred Alternative and Design Option: Close 186th Street.....	2-13
Figure 2-5.	Maintenance and Storage Facility Site.....	2-15
Figure 4-1.	California Energy Consumption by End-Use Sector (2016)	4-2
Figure 4-2.	California Energy Consumption by Source 2016.....	4-2

ACRONYMS AND ABBREVIATIONS

Acronyms	Definitions
AA	Alternatives Analysis
AB	Assembly Bill
BMP	Best Management Practices
Btu	British thermal units
CAAP	Climate Action and Adaptation Plan
CAFE	Corporate Average Fuel Economy
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
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CMAQ	Congestion Mitigation and Air Quality Improvement
CPUC	California Public Utilities Commission
CTP	California Transportation Plan
ECMP	Energy Conservation and Management Plan
EIA	United States Energy Information Administration
EIS/EIR	Environmental Impact Statement/Environmental Impact Report
EMAP	Energy Management Action Plan
EMFAC	EMission FACtor
EO	Executive Order
FTA	Federal Transit Administration
GHG	Greenhouse Gas
ISTEA	Intermodal Surface Transportation Efficiency Act
kWh	kilowatt-hour
LA	Los Angeles County
LADWP	Los Angeles Department of Water and Power
LEED	Leadership in Energy and Environmental Design

Acronyms	Definitions
LPA	Locally Preferred Alternative
LRT	light rail transit
LRTP	Long Range Transportation Plan
LRV	light rail vehicle
MAP-21	Moving Ahead for Progress in the 21st Century Act
MBSSP	Moving Beyond Sustainability Strategic Plan
Metro	Los Angeles County Metropolitan Transportation Authority
MMBTU	Metric Million British Thermal Units
MRDC	Metro Rail Design Criteria
MSF	maintenance and storage facility
MSIP	Metro Sustainability Implementation Plan
MTCO ₂ e	metric tons of carbon dioxide equivalent
NEPA	National Environmental Policy Act
NOP	Notice of Preparation
PEROW	Pacific Electric Right-of-Way
Project	West Santa Ana Branch Transit Corridor Project
ROW	right-of-way
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SAFETEA-LU	Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SoCalGas	Southern California Gas Company
TEA-21	Transportation Equity Act for the 21st Century
TPSS	traction power substation
UPRR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
VTM	vehicle miles traveled
VRM	vehicle revenue mile
WSAB	West Santa Ana Branch

1 INTRODUCTION

1.1 Study Background

The West Santa Ana Branch (WSAB) Transit Corridor (Project) is a proposed light rail transit (LRT) line. In January 2022, the Los Angeles County Metropolitan Transportation Authority (Metro) Board of Directors identified the Locally Preferred Alternative (LPA), which will extend approximately 14.5 miles from the northern terminus in the City of Los Angeles/Florence-Firestone community of Los Angeles (LA) County to the southern terminus in the City of Artesia, traversing densely populated, low-income, and heavily transit-dependent communities. The Project will provide reliable, fixed-guideway transit service that will 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 (SCAG 2013) in coordination with the relevant cities, the Orangeline Development Authority (renamed to Eco-Rapid Transit, which has since been dissolved), the Gateway Cities Council of Governments, 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 Report¹ and recommended two LRT alternatives for further study: West Bank 3 and the East Bank.

Following completion of the AA, Metro completed the *West Santa Ana Branch Transit Corridor Project Technical Refinement Study* (Metro 2015) 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 C (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.

Metro issued a Notice of Preparation (NOP) on May 25, 2017, with a revised NOP issued on June 14, 2017, extending the comment period to 60 days. 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 Alternatives E and G for further evaluation.

On July 11, 2018, Metro issued a revised and recirculated CEQA NOP, thereby initiating a scoping comment period. The purpose of the revised NOP 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 on August 24, 2018; more than 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 its November 2018 meeting.

1.3 Draft Environmental Impact Statement/Environmental Impact Report

The Draft EIS/EIR and corresponding technical studies included evaluation of a No Build Alternative, four Build Alternatives, two station design options, and two site options for a maintenance and storage facility (MSF):

- Alternative 1: Los Angeles Union Station to Pioneer Station
 - Design Option 1: Los Angeles Union Station – Metropolitan Water District
 - Design Option 2: Addition of Little Tokyo Station
- Alternative 2: 7th St/Metro Center to Pioneer Station
- Alternative 3: Slauson/A Line (Blue) to Pioneer Station
- Alternative 4: I-105/C Line (Green) to Pioneer Station

- Paramount MSF site option
- Bellflower MSF site option

Figure 1-1 illustrates the Build Alternatives evaluated in the Draft EIS/EIR.

Figure 1-1. Draft EIS/EIR Build Alternatives



Source: Metro 2020

The Draft EIS/EIR was released for public review and comment in July 2021 for 45 days, which was then extended to a 60-day public review period through September 28, 2021, to provide additional time for the public to respond. Notices of the Draft EIS/EIR release were done in accordance with CEQA and NEPA regulations and included two rounds of notices to announce details of the release of the Draft EIS/EIR, as well as to provide information on the public hearings and comment methods. The Notice of Availability was distributed to 261 agencies via USB drives, which included an electronic copy of the Draft EIS/EIR.

During the 60-day public review period, Metro hosted four virtual public hearings, four virtual community information sessions, and over 19 pop-up booths for in-person engagement at locations throughout the project corridor. In addition, Metro held approximately 20 briefings to key stakeholders, elected officials, corridor cities, and other agencies. In total, approximately 450 submissions were received during the public review and comment period. In January 2022, the Metro Board of Directors identified Alternative 3 as the LPA. The LPA extends from a northern terminus at the Slauson/A Line Station located in the City of Los Angeles/Florence-Firestone unincorporated area of LA County to a southern terminus at the Pioneer Station located in Artesia for a total of 14.5 miles. With identification of the LPA, the Metro Board also identified the MSF site option located in the City of Bellflower as a component of the LPA.

1.4 Report Purpose and Structure

This Energy 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

1.5 General Background

Energy powers cars and lights, as well as 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.

1.6 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 transport 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 MSF. As noted in the bottom of Table 1.1, 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, LPA, and design option. Energy intensity factors relate energy inputs (such as British thermal units (Btus) consumed) to resulting output (such as a mile traveled). Since preparation of the energy analysis for the Draft EIS/EIR, more comprehensive operational data pertaining to Metro energy consumption associated with various modes of transportation was published in conjunction with its Moving Beyond Sustainability Strategic Plan, based on an updated systemwide energy assessment between 2014–2017. Metro estimates that for every vehicle revenue mile (VRM) of LRT travel, approximately 9.41 kilowatt-hours (kWh) of electricity were consumed on average. This energy intensity factor was applied to the LRT miles presented in Table 1.1 to estimate annual LRT propulsion energy consumption (in the form of electricity) for the Final EIS/EIR analysis. Additionally, the electricity required to power the stations and parking facilities that will be developed with the LPA was estimated using lighting electricity consumption factors provided in the California Emissions Estimator (CalEEMod, Version 2020.4.0) User's Guide.

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

Condition/LPA	Regional Roadway VMT (annual, million miles)	LRT Car Miles (annual, miles)
CEQA Baseline Year 2017		
Existing	160,746	N/A
Existing + Locally Preferred Alternative	160,721	1,604,323
NEPA/CEQA Baseline Year 2042¹		
No Build Alternative	210,396	N/A
Locally Preferred Alternative	210,351	1,604,323

Source: TAHA 2023

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 uses the Existing Baseline Year 2017 and a Future Horizon 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; LPA = Locally Preferred Alternative; LRT = light rail transit; N/A = not applicable; NEPA = National Environmental Policy Act; WSAB = West Santa Ana Branch; 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 vehicle mile). Regarding energy consumption attributed to regional on-road

vehicle travel, the analysis has been updated since publication of the Draft EIS/EIR to incorporate fuel consumption factors derived from a newer iteration of the California Air Resources Board (CARB) Emission FACtor (EMFAC) mobile source emissions model.² The EMFAC database contains factors that can be used to estimate gallons of gasoline and diesel fuel burned per vehicle mile traveled (VMT) for a given year, vehicle fleet mix, and speed. The EMFAC database also includes energy consumption factors for alternatively fueled vehicles (i.e., electric vehicles, hybrid vehicles, and those powered by natural gas). The updated Final EIS/EIR analysis accounts for the increased prevalence of alternatively fueled vehicles.

Generally, traffic in the Affected Area is assumed to be approximately 7 percent trucks based on the Metro regional model. Annual energy consumption associated with on-road vehicle travel was estimated using the annual VMT data produced by the Metro regional transportation model organized by speed bins of five mile-per-hour increments and the corresponding EMFAC2021 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 (U.S. Department of Energy 2021): approximately 118,223 Btu per gallon gasoline (BTU/gal-G) and approximately 133,489 BTU per gallon of diesel fuel (BTU/gal-D). Energy consumption is assessed on a regional scale for the entirety of the LPA. 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. CalEEMod is the preferred land use development emissions model for use in California. Since publication of the Draft EIS/EIR, a newer version of CalEEMod (Version 2020.4.0) was published by the state air districts, and the energy analysis for the MSF was updated accordingly. 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 in which 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 were 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.

² The energy analysis presented in the Draft EIS/EIR relied on CARB’s prior EMFAC mobile source emissions model, EMFAC2017. The analysis presented in this Final EIS/EIR Energy Impact Analysis is based on the latest EMFAC model, EMFAC2021.

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.

Additionally, a recent CEQA case held that assessments of potential energy impacts shall consider opportunities to incorporate renewable energy features and provide substantial evidence when renewable energy features are not included as part of project design (*League to Save Lake Tahoe Mountain v. County of Placer* [2022] 75 Cal.App.5th 63).

2 PROJECT DESCRIPTION

This section describes the No Build Alternative and the LPA studied in the WSAB Transit Corridor Final EIS/EIR, including station locations, and the MSF. The LPA was developed through a comprehensive alternatives analysis process and meets the purpose and need of the Project.

The No Build Alternative and LPA are generally defined as follows:

- **No Build Alternative:** Reflects the transportation network in the 2042 horizon year without the LPA. 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 RTP/SCS* (SCAG 2016), as well as additional projects funded by Measure M that would be completed by 2042.
- **LPA:** The LPA consists of a 14.5-mile LRT line that will extend from the northern terminus in the City of Los Angeles/Florence-Firestone community of LA County to a southern terminus in the City of Artesia.

Figure 2-1 illustrates the LPA. The northern terminus of the LPA will be located just south of the intersection of Long Beach Avenue and Slauson Avenue, connecting to the current Slauson/A Line Station. South of Slauson Avenue, the LPA will follow the UPRR-owned La Habra Branch³ ROW east along Randolph Street. At the Ports-owned San Pedro Subdivision ROW, the LPA will turn southeast to follow the San Pedro Subdivision ROW and then transition to the PEROW south of the I-105 freeway. The LPA will then follow the Metro-owned PEROW to the southern terminus at the Pioneer Station in Artesia. Figure 2-2 depicts the alignment sections that will require freight track relocation. The LPA will be grade separated where warranted, as indicated on Figure 2-1.

³ The La Habra Branch may also be referred to as the La Habra Subdivision. La Habra Branch is used within this document.

Figure 2-1. Locally Preferred Alternative Alignment by Grade



Source: WSP and TAHA 2023

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



Source: WSP and TAHA 2023

2.1 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 each side of the four alternatives evaluated in the Draft EIS/EIR) 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 LPA's 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.

The required environmental baseline socioeconomic growth projections, including the reasonably foreseeable transportation network in 2042, were established in July 2017 when the preparation of the Draft EIS/EIR began. The SCAG 2016-2040 RTP/SCS was the adopted current regional growth forecast at the time the Draft EIS/EIR baseline was established. Specifically, the baseline year 2017 and future year 2042 population, housing, and employment are derived from the Transportation Analysis Zone-level estimates from the SCAG 2016-2040 RTP/SCS.

Table 2.1 lists the existing transportation network and planned improvements included as part of the No Build Alternative based on the Metro 2009 LRTP and SCAG 2016 RTP/SCS.

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 Line Extension	Wilshire/Western to Westwood/VA Hospital	Outside Study Area
Metro C Line Extension ² to Torrance	96th Street Station to Torrance	Outside Study Area
Metro C Line Extension	Norwalk to Expo/Crenshaw	Outside Study Area
Metro East-West Line/Regional Connector/Eastside Phase 2	Santa Monica to Lambert Road 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 Line to Metro E Line	Outside Study Area

Project	To / From	Location Relative to Study Area
Metro East San Fernando Valley Transit Corridor	Sylmar to Metro G 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
California High-Speed Rail	Burbank to LA LA to Anaheim	Within Study Area
Link US ³	LAUS	Within Study Area
Bus (Existing)		
Metro Bus System (including BRT, Express, and local)	Various locations	Within Study Area
Municipality Bus System ⁴	Various locations	Within Study Area
Bus (Under Construction/Planned)		
Metro G 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 Road	Outside Study Area
SR-71 Gap Closure	I-10 to Rio Rancho Road	Outside Study Area
Sepulveda Pass Express Lane	I-10 to US-101	Outside Study Area
SR-57/SR-60 Interchange Improvements	SR-57/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 The Metro C Line extension to Torrance includes new construction from Redondo Beach to Torrance; however, the line will operate from Torrance to 96th Street.

³ Link US rail walk times included only.

⁴ 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; LA = Los Angeles; LAUS = Los Angeles Union Station; LAX = Los Angeles International Airport;

LRT = light rail transit; SR = State Route; VA = Veterans Affairs

2.2 Locally Preferred Alternative

2.2.1 Refinements to the Locally Preferred Alternative

The LPA evaluated in this report is Alternative 3 from the Draft EIS/EIR with refinements to address stakeholder coordination and comments on the Draft EIS/EIR. Refinements to the LPA include the following:

- Shift the Slauson/A Line aerial station platform south and add a second set of vertical circulation and pedestrian circulation elements between the Slauson/A Line Station and the existing A Line Station. Additionally, a set of stairs was added between the A Line station and street level.
- Swap the location of the freight and LRT tracks within the La Habra Branch ROW compared to the Draft EIS/EIR design. Freight tracks will be located on the north side of the ROW and LRT tracks on the south side to accommodate potential freight connectivity to an existing industrial track on the north side of the ROW.
- Open or close at-grade crossings and implement left-turn restrictions over the LRT tracks in the City of Huntington Park:
 - Open crossings previously proposed for closure at Albany Street and Rugby Boulevard
 - Close crossings previously proposed to remain open at Malabar Street and Arbutus Avenue
 - Implement left-turn restrictions at Santa Fe Avenue, Pacific Boulevard, Miles Avenue, and State Street
- Modify roadway design at the southeast corner of Florence Avenue and California Avenue to avoid partial acquisition of infrastructure related to a water well.
- Redesign a freight spur track connection north of Rayo Avenue on the west side of the freight tracks to avoid impacts to a spur track.
- Close the private at-grade crossing at Miller Way. The private business will be displaced by the Project.
- Extend the LRT viaduct north of Imperial Highway to avoid impacts to a spur track and full acquisition of a property.
- Reconfigure the I-105/C Line Station parking facility by removing dedicated transit parking on the west side of the freight tracks and expanding the parking facility on the east side of the freight tracks to the north; also add a new driveway entrance to the parking facility at Century Boulevard.
- Eliminate demolition and reconstruction of the Arthur Avenue and Façade Avenue bridges; modify Façade Avenue to an emergency exit only from the I-105/C Line infill station (rather than a station entrance and exit).
- Modify the replacement freight bridge at I-105 to a four-span structure, consistent with the current bridge, rather than the previously proposed two-span structure.
- Replace the proposed pedestrian undercrossing with a pedestrian bridge at Paramount High School that will span the entire rail ROW.
- Realign the MSF site entrance on Somerset Boulevard to align with Bayou Avenue to allow for a signalized pedestrian crossing of Somerset Boulevard.
- Add protected left turn and a traffic signal on Clark Avenue at Los Angeles Street to accommodate dedicated turning movements to the community.

- Modify alignment of the LRT tracks and soundwall at the Bellflower Mobile Home Park to minimize parking loss and provide replacement parking elsewhere on the property to maintain the existing number of parking spaces.
- Redesign retaining walls on the southeast side of the 183rd Street/Gridley Road crossing from retained fill to columns.
- Incorporate the Artesia Historic District Recreation Trails as an existing, rather than future, condition in the Final EIS/EIR plan set.
- Add a design option that will close 186th Street but keep 187th Street open to traffic in the City of Artesia, and turn Corby Avenue into a cul-de-sac with an access driveway for the existing business.
- Modify the entrance to the Pioneer Station parking structure to align with Solana Place and shift structure north to provide alley egress resulting in an additional level on the Pioneer parking structure to maintain the number of parking spaces identified in the Draft EIS/EIR.
- Extend the median located north of the LRT tracks at the Pioneer Boulevard grade crossing to prohibit left turns from a shopping center driveway along the east side.
- Incorporate Mitigation Measures NOI-4 (Crossing Signal Bell Shrouds) and NOI-5 (Gate-Down-Bell-Stop Variance), recommended in the Draft EIS/EIR to further reduce noise at grade crossings, as Project Measure NOI PM-1 and NOI PM-2 in the Final EIS/EIR to be implemented as part of the LPA.
- Add Project Measure VA PM-8 (Residential Screening for Aerial Structures), which requires privacy screening along portions of the aerial structure adjacent to the rear of residential properties in the Cities of Paramount, Bellflower, and Cerritos if the soundwall in those locations will not be sufficiently tall to provide similar privacy screening.
- Add Project Measures BIO PM-1 (Invasive Plant Species Best Management Practices) and BIO PM-2 (Prohibition of Invasive Plant Species in Landscape Plans) to provide options to minimize the spread of invasive species during construction and prohibit the inclusion of invasive species in landscape plans; add Project Measure BIO PM-3 (LA Metro Tree Policy) to require adherence to LA Metro Tree Policy, adopted by Metro in October 2022.
- Add Project Measure CR PM-1 (Secretary of the Interior Standards Design Review), which requires review and approval of the design of the new LRT bridge and C Line station that will be constructed within the Century Freeway-Transitway Historic District and extension of the Union Pacific LA River Rail Bridge's existing concrete piers by a professional who meets the Secretary of the Interior's Professional Qualification Standards in architectural history, history, or architecture.

Refinements also included the following modifications to construction laydown/staging areas:

- Relocate the construction laydown area near State Street and Randolph Street to east of State Street in the railroad ROW.
- Relocate the laydown area at the southeast corner of Imperial Highway and Garfield Place to north of Imperial Highway within the San Pedro Subdivision ROW.
- Locate a construction laydown/staging area on the east side of the ROW between Rayo Avenue and Southern Avenue.

Additionally, refinements included changes to traction power substations (TPSS) site locations:

- Relocate TPSS Site 14 from the northwest corner of Randolph Street and State Street to the east within railroad ROW.
- Eliminate optional TPSS Sites 16E and 12E in the City of Huntington Park.
- Add Optional TPSS Site 7E within the reconfigured parking facility east of the tracks at the I-105/C Line Station parking facility.
- Relocate the proposed TPSS Site 2 from the northwest side of the intersection of 183rd Street/Gridley Road to the southeast side.

2.2.2 Alignment Configuration

This section summarizes the LPA alignment. The general characteristics of the LPA are summarized in Table 2.2. Figure 2-3 illustrates the freeway crossings along the alignment. Additionally, the LPA will require relocation of existing freight rail tracks within the ROW to maintain existing operations where freight tracks will be in a shared corridor with the LRT tracks. Figure 2-2 depicts the alignment sections that will require freight track relocation.

Table 2.2. Summary of LPA Components

Component	Quantity
Alignment length	14.5 miles
Length of at-grade and aerial	12.1 miles at-grade; 2.4 miles aerial ¹
Station configurations	9 along WSAB alignment, 1 at-grade infill station along C Line 3 aerial; 6 at-grade
Parking facilities	5 total: 4 surface lots and 1 parking structure (approximately 2,800 spaces)
At-grade crossings	30
Elevated street crossings	15
Freight crossings	6
Freeway crossings	4 (1 aerial/overcrossing at I-105; 3 freeway undercrossings ² at I-710, I-605, SR 91)
Freight realignment	8.7 miles
River crossings	3 (Rio Hondo, LA River and San Gabriel)
TPSS facilities	17
Maintenance and Storage Facility site	1 (City of Bellflower)

Source: WSP 2023

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

² The light rail tracks crossing beneath freeway structures.

LA = Los Angeles; TPSS = traction power substation; WSAB = West Santa Ana Branch

Figure 2-3. Freeway Crossings



Source: WSP 2023

The total alignment length of the LPA will be approximately 14.5 miles, consisting of approximately 12.1 miles of at-grade and 2.4 miles of aerial alignment. The LPA will include nine new LRT stations along the WSAB alignment, of which six will be at-grade and three will be aerial. Additionally, the Project will add one new infill station along the C Line at I-105 to allow transfers between the WSAB alignment and the C Line. Five of the stations will include parking facilities, providing a total of approximately 2,800 dedicated transit parking spaces. Four of the parking facilities will be surface lots and the fifth will be a parking structure. The alignment will include 30 at-grade crossings, 4 freeway crossings (3 freeway undercrossings and 1 aerial freeway crossing), 3 river crossings, 15 aerial road crossings, and 6 freight crossings. The following further describes the LPA along the alignment.

Northern terminus (City of Los Angeles/Florence-Firestone community of LA County): The northern terminus of the LPA will begin at the Slauson/A Line Station, which will serve as a transfer point to the Metro A Line. Transfers between the Slauson/A Line Station and the existing Metro A Line will be accommodated via two pedestrian bridges between the two station platforms. The pedestrian bridges will be located at the southern and northern ends of the platforms and will be accessed by stairs, escalators, and/or elevators. Stairs, escalators, and/or elevators will also connect with the street level on the north side of the station, while stairs will connect with the street level on the south side of the station. An additional set of stairs will be added to the existing A Line Station providing access to street level. Tail tracks⁴ accommodating layover storage for a three-car train will extend approximately 1,000 feet north from the station.

La Habra Branch ROW⁵ (City of Huntington Park): South of the Slauson/A Line Station, the alignment will turn east along the existing UPRR owned La Habra Branch ROW in the median of Randolph Street. The alignment will be on the south side of the La Habra Branch ROW, and the freight tracks will be realigned but remain in the northern portion of the ROW. The alignment will transition to an at-grade configuration west of Alameda Street and will proceed east along the Randolph Street median. Wilmington Avenue, Regent Street, and Malabar Street will be closed to traffic crossing the ROW, altering the intersection design to a right-in, right-out configuration. The Pacific/Randolph Station will be located just east of Pacific Boulevard. From the Pacific/Randolph Station, the alignment will continue east at-grade. Arbutus Avenue and Rita Avenue will be closed to traffic crossing the ROW, altering the intersection design to a right-in, right-out configuration.

San Pedro Subdivision ROW (Cities of Huntington Park, Bell, Cudahy, South Gate, Downey, and Paramount): At the San Pedro Subdivision ROW, the alignment will 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 will be located on the east side of the existing San Pedro Subdivision ROW freight tracks, and the existing track(s) will be relocated to the west side of the ROW. The alignment will continue at-grade within the San Pedro Subdivision ROW to the at-grade Florence/Salt Lake Station south of Florence Avenue.

⁴ Tail tracks are additional tracks that extend beyond the end of the mainline tracks and can be used for temporarily parking, storing, or reversing the direction of trains. While the tracks are designed to allow for layover if needed, trains will not sit at the end of the line.

⁵ The La Habra Branch may also be referred to as the La Habra Subdivision. La Habra Branch is used within this document.

The alignment will continue southeast from the 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 will be located on the east side of the existing San Pedro Subdivision freight tracks, and the existing tracks will be relocated to the west side of the ROW. South of Ardine Street, the alignment will transition to an aerial structure to cross over the existing UPRR tracks and Atlantic Avenue. The Firestone Station will be located on an aerial structure between Atlantic Avenue and Firestone Boulevard. The Firestone Station will include a dedicated transit parking facility providing approximately 600 parking spaces with a vehicle underpass under the freight tracks to access the parking facility.

The alignment will then cross over Firestone Boulevard and transition back to an at-grade configuration prior to crossing Rayo Avenue at-grade. The alignment will 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 LRT bridge will be constructed next to the existing freight bridge. South of the LA River, the alignment will transition to an at-grade configuration, then passing under the I-710 freeway through a new box tunnel structure. The alignment will then return to an aerial structure to cross over the Rio Hondo Channel. South of the Rio Hondo Channel, the alignment will transition to an aerial structure to cross over a realigned spur track, Imperial Highway and Garfield Avenue. South of Garfield Avenue, the alignment will transition to an at-grade configuration and serve the Gardendale Station north of Gardendale Street.

From the Gardendale Station, the alignment will continue south in an at-grade configuration, crossing Gardendale Street and Main Street to serve the I-105/C Line Station, which will be located at-grade north of Century Boulevard. The I-105/C Line Station will include a dedicated transit parking facility providing approximately 340 to 360 parking spaces, depending on the location of the TPSS. The alignment will continue at-grade, crossing Century Boulevard, then will cross over the I-105 freeway in an aerial configuration within the existing San Pedro Subdivision ROW bridge footprint. A new Metro C Line Station will be constructed in the median of the I-105 freeway. The I-105/C Line Station will be connected to the new infill C Line Station in the middle of the freeway via a pedestrian walkway on the new LRT bridge. Vertical pedestrian access will be provided from the LRT bridge to the new C Line Station platform via stairs, escalators, and/or elevators. Emergency egress from the C Line Station will also be provided at Façade Avenue via stairs and elevators. To accommodate construction of the new station platform, the existing Metro C Line tracks will be widened and, as part of the I-105 Express Lanes Project, the I-105 lanes will be reconfigured.

PEROW (Cities of Paramount, Bellflower, Cerritos, and Artesia): South of the I-105 freeway, the alignment will continue at-grade within the San Pedro Subdivision ROW. In order to maintain freight operations and allow for freight train crossings, the alignment will transition to an aerial configuration as it turns southeast and enter the PEROW. The existing freight track will cross beneath the aerial alignment and align on the north side of the PEROW east of the San Pedro Subdivision ROW. The Paramount/Rosecrans Station will be located in an aerial configuration west of Paramount Boulevard and north of Rosecrans Avenue. The existing freight track will be relocated to the northeast side of the alignment adjacent to the viaduct structure. The Paramount/Rosecrans Station will include a dedicated transit parking facility providing approximately 490 parking spaces located south of the alignment between Los Angeles Department of Water and Power property and Rosecrans Avenue.

The alignment will continue southeast in an aerial configuration over the Paramount Boulevard/Rosecrans Avenue intersection and descend to an at-grade configuration. The alignment will return to an aerial configuration to cross over Downey Avenue descending back to an at-grade configuration north of Somerset Boulevard. The existing Paramount High School pedestrian bridge will be reconstructed over the LPA and freight tracks to maintain the connection between Paramount High School and the athletics fields. One of the adjacent freight storage tracks at the World Energy facility will be relocated to accommodate the new LRT tracks and maintain storage capacity. There are no active freight tracks south of the World Energy facility (Somerset Boulevard).

The alignment will cross Somerset Boulevard at-grade. South of Somerset Boulevard, the at-grade alignment will parallel the existing Bellflower Bike Trail that is currently aligned on the south side of the PEROW. The alignment will continue at-grade crossing Lakewood Boulevard, Clark Avenue, and Alondra Boulevard. The at-grade Bellflower Station will be located west of Bellflower Boulevard. The Bellflower Station will include a dedicated transit parking facility providing approximately 260 parking spaces.

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

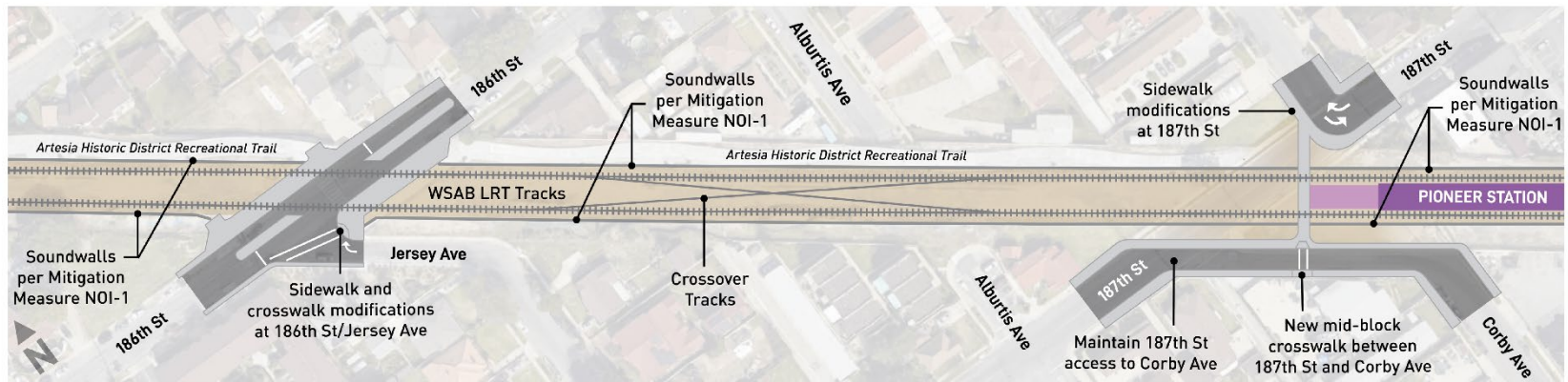
East of Artesia Boulevard, the alignment will cross beneath the I-605 freeway in an existing underpass. Southeast of the underpass, the alignment will continue at-grade, crossing Studebaker Road. North of Gridley Road, the alignment will transition to an aerial configuration to cross over 183rd Street and Gridley Road. The alignment will return to an at-grade configuration and cross 186th Street and 187th Street at-grade. The alignment will then pass through the Pioneer Station on the north side of Pioneer Boulevard at-grade. The Pioneer Station will include a dedicated transit parking facility providing approximately 1,100 parking spaces. Tail tracks accommodating layover storage for a three-car train will extend approximately 1,000 feet south from the station, crossing Pioneer Boulevard and terminating north of South Street.

2.2.3 Design Option – Close 186th Street

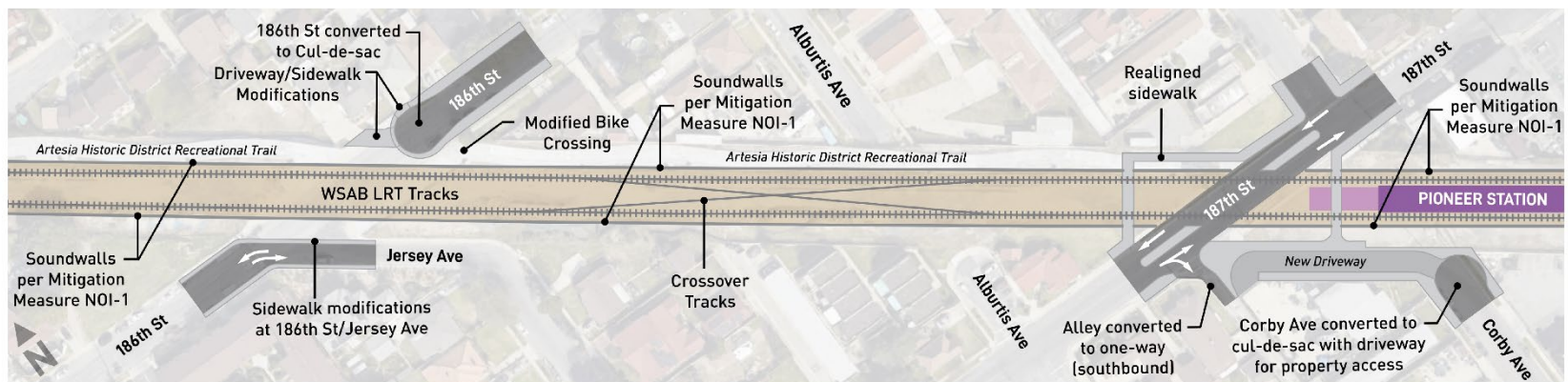
The LPA includes one design option:

- **Design Option:** Close 186th Street – The design option would close 186th Street but keep 187th Street open to traffic in the City of Artesia. Corby Avenue would become a cul-de-sac with an access driveway for the existing business (Figure 2-4).

Figure 2-4. Locally Preferred Alternative and Design Option: Close 186th Street



Locally Preferred Alternative



Design Option 1: Close 186th Street

Source: Cityworks Design and WSP 2023

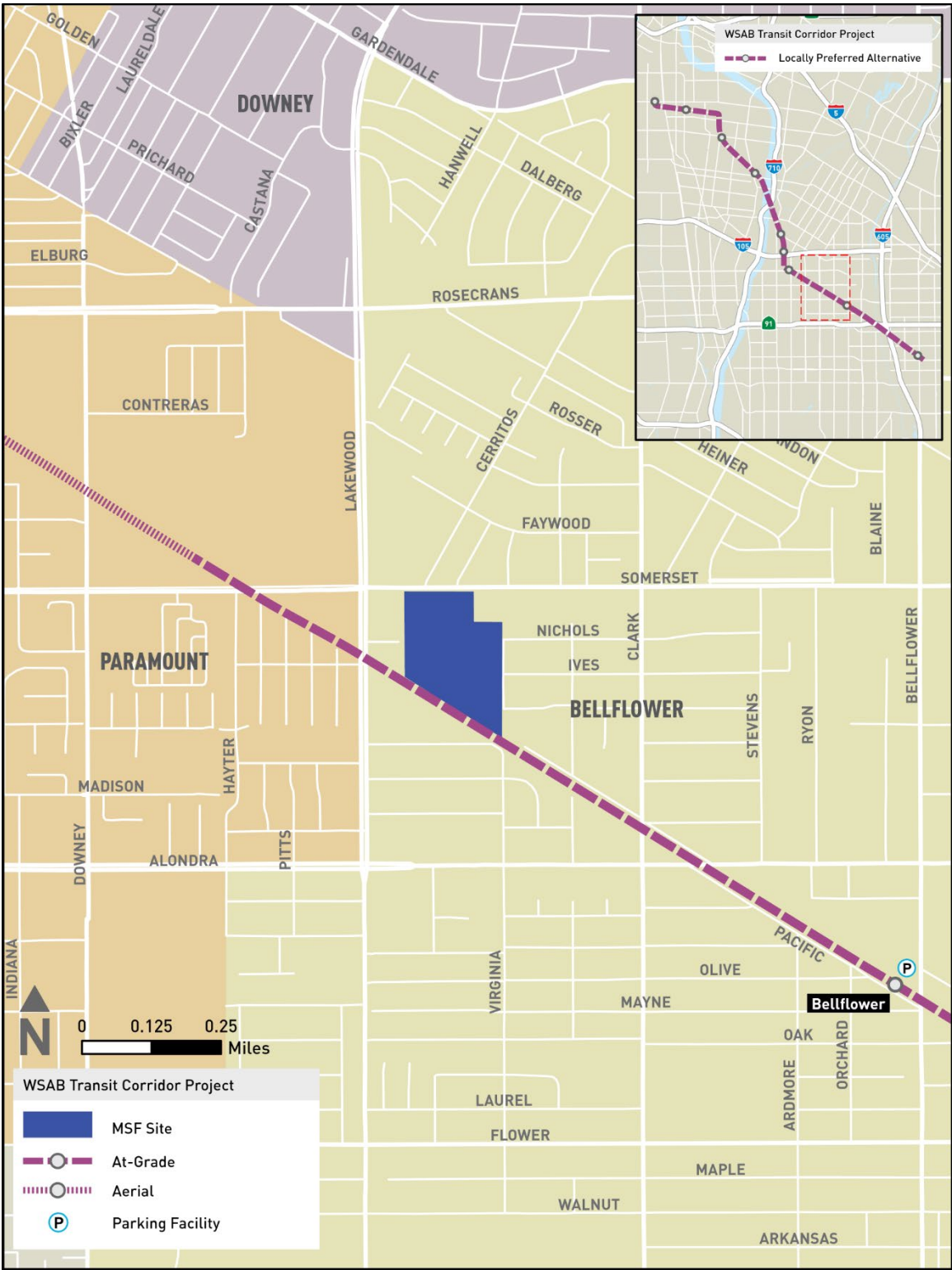
2.2.4 Maintenance and Storage Facility

Generally, each LRT project requires an MSF facility to provide 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.

In January 2022, the Metro Board identified the Bellflower MSF as the WSAB Project's MSF site. The MSF site is located in the City of Bellflower and is bounded by a mobile home community and 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. Access to the site will be via a signalized driveway at Somerset Boulevard and Bayou Avenue (Figure 2-5). In total, the MSF site is approximately 21 acres and could accommodate up to 80 LRVs to serve the Project's operations plan.

The MSF will have storage tracks, each with sufficient length to store three-car train sets and a maintenance-of-way vehicle storage. The facility will include a main shop building with administrative offices, a cleaning platform, a 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) will have sufficient length for a three-car train set.

Figure 2-5. Maintenance and Storage Facility Site



Source: WSP and TAHA 2023

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
- Energy Policy Act of 1992
- Transportation Equity Act for the 21st Century (TEA-21)
- Energy Policy Act of 2005
- Energy Independence and Security Act of 2007
- Moving Ahead for Progress in the 21st Century Act (MAP-21)

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
- CCR, Energy Efficiency Standards
- Assembly Bill 2076
- Assembly Bill 1493
- Senate Bill 1389, Chapter 568, Statutes of 2002
- Executive Order S-3-05
- Senate Bill 375
- Senate Bill X1-2 and Senate Bill 250
- Executive Order B-30-15
- Senate Bill 350
- Senate Bill 743
- Senate Bill 100

Regional

- SCAG RTP/SCS
- Metro Energy and Sustainability Policy
- Metro Sustainability Implementation Plan (MSIP)
- Metro Construction and Demolition Debris Recycling and Reuse Policy
- Metro Green Construction Policy
- Metro Energy Conservation and Management Plan (ECMP)
- Metro Sustainable Rail Plan
- Metro Climate Action and Adaptation Plan
- Metro Moving Beyond Sustainability 2020 Strategic Plan
- 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 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 and gave 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 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.

3.1.3 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.

3.1.4 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 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.

3.1.6 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

3.1.7 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.

3.2 State

3.2.1 California Energy Commission (CEC)

The CEC is the state's primary energy policy and planning agency. Created by the 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 statute was amended in 2008 and 2013, which authorized the CEC to develop and deploy alternative and renewable fuels and advanced transportation technologies to help attain the state's climate change policies.

3.2.4 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. The 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.

3.2.5 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.

3.2.6 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.

3.2.7 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.

3.2.8 Assembly Bill 1493

AB 1493 amended the Clean Car Standards (Chapter 200, Statutes of 2002) that require reductions in greenhouse gas (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.

3.2.9 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.

3.2.10 Executive Order S-3-05

Executive Order (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, which originated as a coordinating council organized by the Secretary of the Cal/EPA.

3.2.11 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 SCAG 2016-2040 RTP/SCS (SCAG 2016) 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.

3.2.12 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.

3.2.13 Executive Order B-30-15

EO B-30-15 established state GHG emission targets 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 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.

3.2.14 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.

3.2.15 Senate Bill 743

SB 743 encourages land use and transportation planning decisions and investments to reduce VMT 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.

3.2.16 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.

3.3 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 LPA:

- 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 and data and information sharing activities (SCAG 2016).

3.3.2 Metro Energy and Sustainability Policy

Metro spends approximately \$30 million per year on utility costs for electricity, gas, and water, with \$26 million of those costs being just for electricity. Metro expects that these costs will rise in future years, and thus is committed to embracing sustainability, energy efficiency, conservation, and renewable energy sources as a primary pathway toward reducing Metro's energy costs. In June 2007, the Board adopted the Energy and Sustainability Policy, the purpose of which is to control energy consumption and embrace energy efficiency, energy conservation, and sustainability to:

- Avoid unnecessary expenditure; help in protecting the environment; improve cost effectiveness, productivity, and working conditions; prolong the useful life of fossil fuels by using resources more efficiently
- Gain more control over our energy consumption by aggressively pursuing renewable energy sources, take advantages of rebates and subsidies for energy and water conservation wherever feasible, conduct energy audits of Metro divisions and facilities, and implement energy conservation measures where they are feasible and fiscally prudent

The Energy and Sustainability Policy was an initial attempt to capture the essence of sustainability, as the term applies to the planning, construction, operations, and procurement practices.

3.3.3 Metro Sustainability Implementation Plan (MSIP)

The creation of the Ad-Hoc Sustainability and Climate Change Committee in July 2007 provided the basis to develop an agency-wide plan of sustainability implementation. Since September 2007, staff have reported accomplishments to the Ad-Hoc Sustainability and Climate Change Committee and have coordinated efforts with the Clean Air Task Force. The Sustainability Mission and Vision Statements were adopted by members of the Ad-Hoc Sustainability and Climate Change Committee at its January 2008 meeting.

The purpose of MSIP is to demonstrate to employees, stakeholders, customers, and the general public Metro's continuing commitment to sustainability through fiscal responsibility, social equity, and environmental stewardship. Similar to other transportation plans, the MSIP has a short-term and a long-term set of actions. The short-term plan identifies four specific projects for continued implementation or commencement: Metro and Countywide GHG Emissions Management, Energy Sustainability Initiatives, Development of Sustainability Design Guidelines, and Development and Implementation of Sustainable and Environmental Management Systems.

3.3.4 Metro Construction and Demolition Debris Recycling and Reuse Policy

The Construction and Demolition Debris Recycling and Reuse Policy was adopted in December 2007 and required Metro to give preference to recycled and recyclable products in selecting construction materials to the maximum extent feasible. It stated that Metro would use landfills and recycling facilities that maintain documentation that indicated their legitimacy for disposal or diversion.

3.3.5 Metro Green Construction Policy

The development and implementation of a Green Construction Policy was approved by the Metro Board on December 9, 2010. Under the Policy, Metro will only use greener, less polluting construction equipment and vehicles and will implement best practices to meet or exceed air quality emission standards in all construction projects performed on Metro properties and rights-of-way. Phase the implementation of this policy, through a collaborative process, for implementation by other jurisdictions that receive/program Metro funding (in whole or in part) for construction projects. The Policy provides requirements for 1) identifying and mitigating air emission impacts on human health, the environment, and climate of on-road and off-road construction equipment and generators used in Metro construction and development activities; 2) implementing appropriate Best Management Practices (BMP) to complement equipment mitigations; and 3) implementing strategies to ensure compliance with this policy.

Off-road construction equipment shall incorporate, where feasible, emissions-reducing technology such as hybrid drives and specific fuel economy standards; must restrict engine idling to a maximum of 5 minutes; all off-road diesel-powered construction equipment greater than 50 horsepower shall meet Tier-4 off-road emission standards at a minimum; all construction equipment shall be outfitted with Best Available Control Technology devices certified by CARB; and any emissions-control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.

3.3.6 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 concurrent iteration with the CEQA Existing Conditions Baseline year is the *2018 Energy and Resource Report* (Metro 2019a), 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 [MTCO₂e]) and reduced energy use by 0.6 percent (per VRM). These achievements are testaments to the effectiveness of the ECMP. Key accomplishments highlighted in the *2018 Energy and Resource Report* (Metro 2019a) include Metro's Green Construction Policy emission reductions, which have a 114 percent greater impact on the improvement of air quality in areas 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, and implementation of Metro Rail Design Criteria that uses sustainable features in project design and encourages the use of third-party certifications such as Leadership in Energy and Environmental Design (LEED) (Metro 2019a). Metro's *2017 Energy and Resource Report* (Metro 2017) analyzes the 2016 calendar year and is also relevant for information on systemwide energy usage.

3.3.7 Metro Sustainable Rail Plan

The *Sustainable Rail Plan* (Metro 2013) supports the implementation of the ECMP by identifying strategies that directly reduce energy used by rail operations, auxiliary systems, propulsion, and facilities. Specifically, the plan provides detailed recommendations that apply to the ECMP sections regarding key equipment upgrades and powerful sustainability and investment-grade opportunities to explore. While the ECMP addresses Metro's broader energy use and procurement strategy, this plan specifically addresses the rail system and

analyzes in detail the energy-efficiency opportunities within Metro's rail equipment and operations.

3.3.8 Metro Climate Action and Adaptation Plan

To advance its goals of creating a climate-resilient organization and transit system equipped to meet future regional needs, Metro published a Climate Action and Adaptation Plan (2019 CAAP, Metro 2019b) that outlined a path to achieving net zero systemwide GHG emissions by 2050. Among the actions identified by Metro to reduce emissions, the CAAP included the following measures related to energy resource management:

- Switch directly operated buses to battery-powered technologies
- Deploy battery-powered buses in the contracted fleet
- Switch vanpool vehicles to battery-powered vehicles
- Replace non-revenue vehicles with battery-powered vehicles
- Install systems to store energy captured from trains
- Buy 100% renewable energy
- Install photovoltaic systems
- Install water-saving fixtures
- Install non-potable recycled water systems
- Install light-emitting diode lights at facilities
- Install electric heating systems
- Replace facility appliances with more efficient electric appliances
- Install electric vehicle charging at Metro facilities and implement an employee electric vehicle outreach plan

3.3.9 Metro Moving Beyond Sustainability 2020 Strategic Plan

The Metro Board adopted a new 10-year sustainability strategic plan—the Moving Beyond Sustainability Strategic Plan (MBSSP, Metro 2020)—which updates and consolidates the principles established in Metro's prior sustainability planning documents, including Vision 2028, LRTP, Equity Platform Framework, and the 2019 CAAP. The MBSSP includes objectives related to energy resource management, water quality and conservation, emissions and pollution control, materials and construction/operations, climate adaptation and resiliency, and equity in economic and workforce development; it also establishes California Green Building Standards Code (CALGreen) Tier 2 as a standard for its capital projects. Targets related specifically to energy resource management include reducing energy consumption by 17 percent at facilities relative to the 2030 Business-as-Usual scenario and increasing onsite renewable energy generation to 7.5 megawatts (MW). The following strategies related to energy resource management are outlined in the MBSSP:

- **E1:** Implement projects identified in the energy conservation project portfolio
- **E2:** Optimize building management systems at all divisions and Gateway facility
- **E3:** Implement an agency-wide facility commissioning and retro-commissioning program
- **E4:** Expand the onsite renewable energy portfolio by completing identified solar photovoltaic projects, expanding photovoltaic operations and maintenance programs, and identifying new opportunities for onsite renewable energy generation facilities
- **E5:** Develop supporting infrastructure for electric transportation

3.3.10 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 toward 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 General Plan

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 GHG 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, and by approving projects that will reduce VMT and provide alternative modes of transportation.

3.4.2 City of Vernon General Plan

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 electricity generated by natural gas 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 General Plan

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 Los Angeles County General Plan 2035

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 Element, 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. Los Angeles County 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 General Plan

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 use 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 General Plan

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 General Plan

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 EXISTING CONDITIONS

4.1 State Energy Use

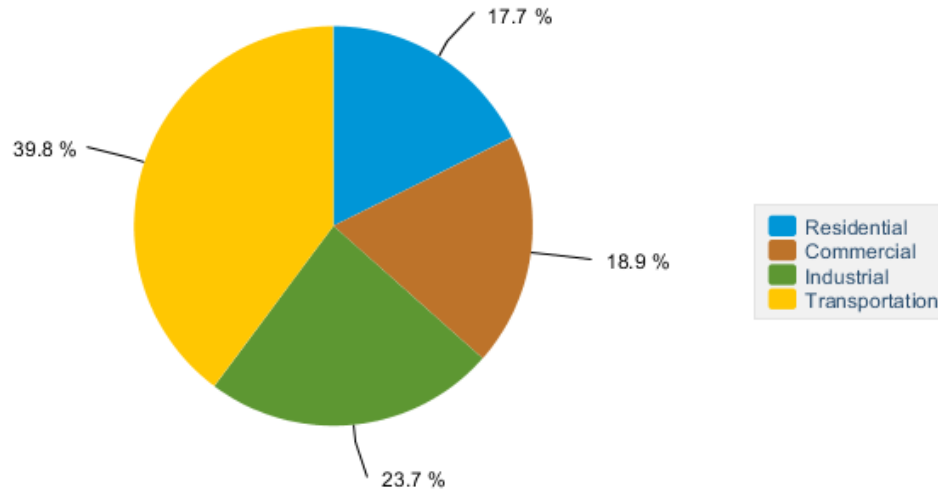
California contains abundant sources of renewable and nonrenewable energy sources. Nonrenewable resources include large crude oil and natural gas deposits located within six geological basins in the Central Valley and along the coast of California. A majority of these reserves are concentrated in the 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.

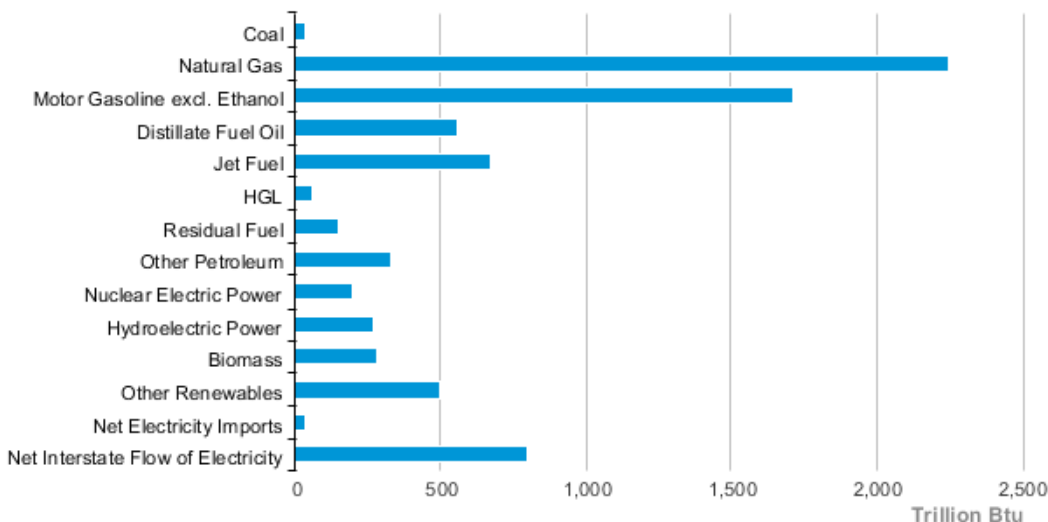
Figure 4-1. California Energy Consumption by End-Use Sector (2016)



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.) account for approximately 6.4 percent of all energy consumption (EIA 2016). 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 2 to 3 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 as it relates 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 kWh of energy in the year 2016.

Table 4.1. Metro Direct Energy Consumption

End Use	Unit	2012	2013	2014	2015	2016
Non-Rail Vehicle Fuel	GGE	42,490,623	43,930,100	44,710,242	43,995,037	42,995,037
	kBTU/GGE	120.2				
	MMBTU	5,107,968	5,281,013	5,374,797	5,288,819	5,168,605
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
Rail Propulsion + Facilities	kWh	296,593,596	319,966,047	305,082,037	315,068,329	327,070,329
	kBTU/kWh	3,412				
	MMBTU	1,012,018,873	1,091,768,948	1,040,982,622	1,075,057,248	1,116,009,752
Total Energy	MMBTU	1,017,126,840	1,097,049,961	1,046,357,419	1,080,346,067	1,121,178,358

Source: Metro 2017c, TAHA 2023

Note: GGE = gasoline gallon equivalent; kBTU = 1,000 BTU; MMBTU = million British thermal units; kWh = kilowatt-hours

As of 2017, the Metro system comprises 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. 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 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 2018a). 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 (CEC 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

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. The California Independent System Operator manages 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 LRTP (Metro 2009), and Measure M. These projects are identified in Table 2.1. 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 LPA that would affect energy consumption or require energy infrastructure to meet project demands.

Transportation energy use for the No Build Alternative is proportional to 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). Daily on-road VMT in the region would increase from approximately 463 million VMT (2017) to approximately 606 million VMT (2042) (Metro 2019b). Annual VMT would increase from 160,746 million to 210,396 million due to ambient regional growth. 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 will decline.

The CARB EMFAC 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 output produced by the Metro regional transportation model and energy consumption factors calculated from EMFAC2021 and Metro's *Moving Beyond Sustainability Strategic Plan* Technical Appendix.

Table 5.1. No Build Alternative Operational Energy Consumption based on Regional On-Road VMT

Existing (2017) (Annual MMBTU)	No Build Alternative (2042) (Annual MMBTU)	Change in Energy (Annual MMBTU)	Percent Change
923,225,261	871,138,853	(52,086,408)	(6%)

Source: TAHA 2023

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

As shown above, the No Build Alternative would result in 6 percent less transportation energy use than the existing condition and would not introduce additional Metro system energy consumption in 2042. Therefore, the No Build Alternative would not result in adverse effects related to operational energy consumption.

5.2 Locally Preferred Alternative

The LPA will 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). The LPA consists of 14.5 miles of alignment and includes nine stations. The LPA will reduce regional VMT compared to the No Build Alternative. Electricity will 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). The LPA will indirectly change regional energy consumption through reduction in regional VMT and the corresponding decreases in the consumption of petroleum transportation fuels.

As shown in Table 5.2, the LPA will reduce annual regional energy consumption from the No Build Alternative by 126,706 million British thermal units (MMBTU), which is a 0.015 percent net reduction in the horizon year of 2042. The change in annual energy consumption in the Draft EIS/EIR was estimated to be an energy savings of 123,011 MMBTU. Therefore, the updated analysis for the Final EIS/EIR is consistent with the conclusions of the Draft EIS/EIR, and the annual energy savings increased to 126,706 MMBTU by using the updated versions of the emissions modeling tools published by regulatory agencies and Metro energy consumption metrics. The reduction is consistent with objectives of regional planning strategies to reduce reliance on fossil fuels and nonrenewable resources.

Table 5.2. Operational Energy Consumption (2042)

Component	Annual Energy Consumption (MMBTU)	
	No Build Alternative	Locally Preferred Alternative
Regional On-Road Vehicle Fuel	871,138,853	870,940,687
LRT Vehicle Propulsion	-	51,518
Station & Parking Facilities Energy	-	9,492
MSF Energy	-	10,450
Total Energy	871,138,853	871,012,147
Change from No Build Alternative (MMBTU)		(126,706)
Percent Change from No Build Alternative		(0.015%)

Source: TAHA 2023

Notes: LRT = light rail transit; MMBTU = million British thermal units; MSF = maintenance and storage facility;

() = decrease/reduction

Although implementation of the LPA will involve construction of power poles, transmission lines, and connections to the existing grid, it will not require the expansion of existing generation facilities and will not interfere with LADWP and SCE efforts to augment the renewable energy supply. The LPA will not constitute a wasteful, inefficient, or unnecessary consumption of energy. The LPA will be designed per the MRDC or equivalent, constructed in compliance with Metro's *Green Construction Policy* (Metro 2018), and implement mandatory Title 24 and CALGreen requirements as specified in the ECMP. Furthermore, parking facilities included as part of the LPA will be designed to be electric vehicle ready and to potentially accommodate solar energy installations. Therefore, the LPA will not result in an adverse effect related to operational energy consumption.

5.3 Design Option: Close 186th Street

Implementation of the design option would close 186th Street but keep 187th Street open to traffic in the City of Artesia. Corby Avenue would be turned into a cul-de-sac with an access driveway for the existing business. In terms of effects to long-term energy consumption, operation of the design option would result in the same amount of energy use as the LPA. Operation of the design option would not introduce any end uses of electricity, natural gas, or petroleum fuels beyond those that are elements of the LPA. Operation of the design option would not result in adverse environmental effects related to energy consumption.

5.4 Maintenance and Storage Facility

The MSF site will result in the consumption of fuels and electricity and is a component of the LPA; therefore, its energy consumption is accounted for in the overall analysis of the LPA. As summarized in Table 5.2, the MSF site will use approximately 10,450 MMBTU of energy per year between electricity consumption, natural gas consumption, and transportation fuels for employee commuting. Accounting for MSF energy consumption, the LPA will have a net energy reduction when including on-road energy consumption compared to the No Build Alternative.

The MSF site will not constitute a wasteful, inefficient, or unnecessary consumption of energy. The MSF site will be designed per the MRDC or equivalent, constructed in compliance with mandatory Title 24 and CALGreen requirements, and will achieve a minimum Silver rating under the LEED certification, as specified in the ECMP. Furthermore, parking facilities at the MSF will be electric vehicle ready and will be designed to accommodate installation of solar energy features in the future. Therefore, the MSF site will not result in an adverse effect related to operational energy consumption.

5.5 U.S. Army Corps of Engineers Facilities

The LPA alignment will cross three U.S. Army Corps of Engineers (USACE) facilities: the concrete-lined LA River and Rio Hondo channels just west and east, respectively, of I-710, and the concrete-lined San Gabriel River channel just west of I-605. Energy consumption associated with long-term operation of the LPA will not affect the USACE facilities. There will be no effect to USACE facilities during future LPA operations related to energy resources.

5.6 California Department of Transportation Facilities

The LPA alignment will cross the following Caltrans facilities from north to south: I-710, I-105, SR-91, and I-605. The LPA is a transit system that will serve the residents, visitors, and employees of the surrounding community and cities and will not conflict or impede the function of the Caltrans facilities. Implementation of the LPA could decrease vehicle travel on these Caltrans facilities through the indirect mode shift that occurs when members of the community elect to use the LPA LRT facilities instead of driving passenger vehicles. Any changes in energy consumption for Caltrans facilities within the Affected Area as a result of the LPA operations and consumption of the associated electricity, natural gas, and petroleum transportation fuels are included in the on-road values presented in Table 5.2.

6 CALIFORNIA ENVIRONMENTAL QUALITY ACT DETERMINATION

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

6.1 Threshold ENERGY-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 Locally Preferred Alternative

As described in Section 5.2, the LPA will result in less energy use than the No Build Alternative as a result of decreased regional VMT and associated fuel use. The data presented in Table 5.2 demonstrate that implementation of the LPA will reduce annual regional energy consumption from the No Build Alternative by 126,706 MMBTU in 2042 (a 0.015 percent net reduction). An additional analysis of the Existing + LPA scenario was completed to satisfy CEQA requirements. As shown in Table 6.1 under the heading Existing + LPA conditions, had the LPA been operational in the scenario year of 2017 it would have resulted in 32,613 MMBTU less energy resource consumption (a 0.004 percent net reduction) than Existing Conditions.

Although this theoretical energy savings in the scenario year of 2017 is lower than the energy savings described in the Draft EIS/EIR (147,833 MMBTU/year), the decrease in theoretical energy savings does not alter the conclusions of the analysis. The LPA—if operational in 2017—would still have contributed to statewide and regional efforts to conserve transportation fuels and reduce on-road VMT, which are key elements of enhancing transportation efficiency and sustainability. The LPA does not constitute a wasteful, inefficient, or unnecessary consumption of energy during project operation. Therefore, this impact will be less than significant.

Table 6.1. Operational Energy Consumption under Existing Conditions and the Locally Preferred Alternative (2017)

Component	Annual MMBTU	
	Existing	Existing + LPA
Regional On-Road Vehicle Fuel	923,225,261	923,118,782
LRT System Electricity	-	51,518
Stations & Parking Facilities Energy	-	9,492
MSF Energy	-	12,856
Total Energy	923,225,261	923,192,648
Change Relative to Existing Conditions		(32,613)
Percent Change Relative to Existing Conditions		(0.004%)

Source: TAHA 2023

Notes: LPA = Locally Preferred Alternative; LRT = light rail transit; MMBTU = metric million British thermal units; MSF = maintenance and storage facility; VMT = vehicle miles traveled; () = a decrease

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 Design Option: Close 186th Street

In terms of effects to long-term energy consumption, operation of the LPA with the design option would result in the same amount of energy use as the LPA without the design option. Operation of the LPA with the design option would not introduce any additional end uses of electricity, natural gas, or petroleum fuels beyond those that are included in the analysis for the LPA without the design option. As demonstrated by the results of the analyses presented in Table 5.2 for the operational year of 2042 and in Table 6.1 for the scenario year of 2017, operation of the LPA without the design option would result in net energy savings when accounting for the offset of the consumption of petroleum transportation fuels resulting from mode shift to transit and increased Metro ridership. Therefore, the LPA with the design option would result in a less than significant impact related to the consumption of energy resources.

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 Maintenance and Storage Facility

Operation of the MSF will result in the consumption of petroleum transportation fuels, electricity, and natural gas and is a critical component of the LPA that will not be developed independently without implementation of the LRT alignment. As shown in Table 6.1, the

MSF site will use approximately 12,856 MMBTU per year in the operational scenario year of 2017. By 2042, MSF operations will consume approximately 10,450 MMBTU of energy annually, as presented in Table 5.2. Overall, LPA operations will result in a net energy benefit to the Affected Area, and the MSF is required to operate the LPA and considered cumulatively with the effects of the increased LRT ridership and corresponding regional VMT reductions. The MSF site will not constitute a wasteful, inefficient, or unnecessary consumption of energy. Therefore, this impact will 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.

6.2 Threshold ENERGY-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 that is not related to the LPA. Compared to the LPA, the No Project Alternative would do less to support regional and local conservation plans in reducing VMT. This impact 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 Locally Preferred Alternative

The LPA will 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. Implementation of the LPA will contribute to the improvement of regional transportation-related energy efficiency and decrease the reliance on petroleum-based transportation fuels. There are no state, regional, or local energy conservation plans that promote increasing passenger vehicle miles on the roadway network in place of mass transit. Implementation of the LPA will be consistent with applicable regional and local conservation plans; and energy used for operation of the LPA will not be a wasteful or inefficient use of energy as mass transit and reduced on-road VMT are key components of relevant energy conservation plans. Furthermore, the LPA, MSF and parking facilities will be designed to provide electric vehicle-ready infrastructure and will consider

opportunities to potentially accommodate solar energy installations should Metro pursue such projects in the future.

Additionally, Metro has embarked on a robust mission to evaluate opportunities to expand the use of renewable energy resources, including developing its own renewable energy installations at certain Metro facilities. The Metro Moving Beyond Sustainability Strategic Plan 2020 includes a goal to increase systemwide onsite renewable energy generation to 7.5 MW by 2030, as existing solar generation was estimated to be 2.6 MW across eight Metro facilities in 2019. In 2014, Metro launched its PV Operations and Maintenance Program to provide technical training and resources to Metro maintenance personnel at facilities with PV systems. Metro is also planning new solar and battery storage project opportunities that will provide an estimated 2.4 MW of renewable power, as well as retrofitting existing facilities with LED lighting to enhance energy efficiency. Therefore, impacts will be less than significant, and mitigation will not be required.

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 Design Option: Close 186th Street

With regard to regional and local planning objectives to improve energy efficiency and expand renewable energy resources, the analysis for the LPA with the design option is similar to the analysis provided for the LPA without the design option and incorporates the same assumptions. Operation of the LPA with the design option would involve the same end uses of petroleum transportation fuels, electricity, and natural gas, and the magnitude of resource consumption would be the same. The LPA with the design option 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 related to energy efficiency and renewable energy resources.

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 Maintenance and Storage Facility

The MSF site is an essential component of the LPA and will be consistent with the applicable regional and local conservation plans by contributing to the energy savings benefits that will be achieved through implementation of the LPA. The MSF site will 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. Furthermore, in accordance with Metro policies, the MSF will be designed to meet the equivalent of LEED Silver certification or better and will implement energy-efficient features

where practicable and not cost-prohibitive. Therefore, this impact will be less than significant, and no mitigation is required.

6.2.4.1 Mitigation Measures

No mitigation measures are required.

6.2.4.2 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 2024).

7.2 Regulatory Background and Methodology

7.2.1 Regulatory Background

Federal, state, regional, and local regulations and guidelines pertinent to the construction of the Project would be followed. For additional regulatory information, refer to the Construction Methods Report (Metro 2024).

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 Alternative and the LPA 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 the LPA.

7.3 Construction Impacts

Table 7.1 provides an overview of the fuel consumption end uses that will be involved in construction activities for the LPA and the LPA with the design option. Construction of the LPA with the design option would follow the same construction schedule and involve the same amount of equipment and vehicle activity as LPA construction.

7.3.1 Locally Preferred Alternative

Diesel fuel for construction vehicles and equipment will be the primary source of energy use during the construction period. The LPA construction activities will comply with Metro's *Green Construction Policy* (Metro 2018)—including all off-road equipment will use renewable diesel fuel—and construction equipment will be maintained in accordance with manufacturers' specifications. As shown in Table 7.1, construction of the LPA (including parking facilities and the MSF) will require a one-time expenditure of approximately 2,143,114 gallons of renewable diesel fuel and 803,410 gallons of gasoline, which sums to the equivalent of 381,064 MMBTU.

Table 7.1. Locally Preferred Alternative Construction Energy Consumption

End Use	Locally Preferred Alternative
Diesel Fuel	
Off-Road Construction Equipment – LRT (gallons)	1,381,889
Off-Road Construction Equipment – MSF (gallons)	137,002
Disposal Haul Trucks – LRT (gallons)	322,648
Disposal Haul Trucks – MSF (gallons)	18,358
Vendor Material Deliveries – LRT (gallons)	261,978
Vendor Material Deliveries – MSF (gallons)	21,230
Total diesel fuel consumption (in gallons)	2,143,114
Conversion factor (kBtu/gallons-diesel)	133.5
Total diesel combustion energy consumption (MMBTU)	286,082
Gasoline Fuel	
Total worker fuel consumption – LRT (gallons)	723,025
Total worker fuel consumption – MSF (gallons)	80,385
Total gasoline fuel consumption (gallons)	803,410
Conversion factor (kBtu/gallons-gasoline)	118.2
Total gasoline combustion energy consumption (MMBTU)	94,982
Total construction energy consumption (MMBTU)	381,064
Annual average energy consumption (MMBTU)	47,633

Source: TAHA 2023

Notes: kBtu = thousand British thermal units; LRT = light rail transit; MMBTU = million British thermal units; MSF = maintenance and storage facility

The analysis provided in the Draft EIS/EIR estimated that construction of Alternative 3 would require 7,300,299 gallons of renewable diesel fuel and 596,447 gallons of gasoline. Refinements to the construction schedule resulted in a substantial decrease in forecasted diesel fuel consumption—predominately attributed to less off-road equipment activity and shortening of MSF construction from three years to two—and an increase in motor gasoline consumption attributed to construction crew vehicle trips during extended utility and freight relocation activities. The increase in motor gasoline consumption will not place an undue burden on regional commercial supply and does not represent a substantial change from the analysis provided in the Draft EIS/EIR.

Given that the transportation fuels summarized above will be used to construct an energy-efficient mass transit system, the accessibility of an extensive network of fueling stations throughout the project vicinity, and the temporary nature of the construction activities, the LPA will not require new or expanded sources of energy or infrastructure to meet demands and will not result in the wasteful or inefficient use of energy. Furthermore, based on the annual energy savings of 126,706 MMBTU shown in Table 5.2, the energy required to

construct the LPA will be offset within approximately three years of LPA operations. Therefore, the LPA will not result in adverse effects related to energy consumption during construction.

7.3.2 Design Option: Close 186th Street

Construction of the LPA with the design option would involve the same amount of off-road equipment and on-road vehicle activities as will be required to construct the LPA without the design option. The volumes of diesel fuel and gasoline that are presented in Table 7.1 would be applicable to construction of the LPA with the design option. Construction contractors would ensure that BMPs of the Green Construction Policy (Metro 2018) are adhered to—including the use of renewable diesel fuel in off-road equipment—and would prevent the unnecessary expenditure of petroleum fuels. Therefore, construction of the LPA with the design option would not result in adverse effects related to energy resources.

7.3.3 Maintenance and Storage Facility

As shown in Table 7.1, a one-time expenditure of approximately 176,590 gallons of renewable diesel fuel and 80,385 gallons of gasoline will be needed to construct the MSF site. As the MSF is a critical component of the LPA and will not be developed independently of the LRT, energy consumption is accounted for in the overall analysis of the LPA. The MSF will contribute to an overall net energy savings that will be achieved through the increased transit ridership and corresponding reduction in regional on-road VMT. Construction of the MSF site will not constitute a wasteful, inefficient, or unnecessary consumption of energy. Therefore, the MSF site will not result in adverse effects related to energy during construction.

7.3.4 U.S. Army Corps of Engineers Facilities

Energy consumption associated with short-term construction of the LPA will not affect USACE facilities.

7.3.5 California Department of Transportation Facilities

Petroleum fuels consumption that will occur during construction of the LPA will not affect Caltrans facilities.

7.4 California Environmental Quality Act Determination

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

7.4.1 Threshold ENERGY-CON-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 involved in construction activities for the LPA, design option, and MSF site.

7.4.1.1 No Project Alternative

Under the No Project Alternative, the LPA 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 section of this impact report 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 Locally Preferred Alternative

LPA construction activities will comply with Metro's *Green Construction Policy* (Metro 2018), and construction equipment will be maintained in accordance with manufacturers' specifications and all off-road equipment will be powered by renewable diesel fuel. As shown in the analysis presented in Table 7.1, construction of the LPA will require a one-time expenditure of approximately 2,143,114 gallons of renewable diesel fuel and 803,410 gallons of gasoline, which sums to the equivalent of 381,064 MMBTU needed to construct the LPA. Given that these fuels will be used to construct an energy-efficient mass transit system, the accessibility of an extensive network of fueling stations throughout the project vicinity, and the temporary nature of the construction activities, the LPA will not require new or expanded sources of energy or infrastructure to meet energy demands and will not result in the wasteful or inefficient use of energy resources. Furthermore, based on the annual energy savings of 126,706 MMBTU as shown in Table 5.2, the energy required to construct the LPA will be offset within approximately three years of LPA operations. Therefore, this impact will be less than significant, and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

Impacts Remaining After Mitigation

Less than significant impact.

7.4.1.3 Design Option: Close 186th Street

Construction of the LPA with the design option would involve the same amount of off-road equipment and on-road vehicle activities as will be required to construct the LPA without the design option. The volumes of renewable diesel fuel and motor gasoline that are presented in Table 7.1 would also be applicable to construction of the LPA with the design option. Construction contractors would ensure that BMPs of the Green Construction Policy (Metro 2018) are adhered to, which would prevent the unnecessary expenditure of petroleum fuels. Therefore, construction of the LPA with the design option would result in a less than significant impact related to energy resource consumption.

Mitigation Measures

No mitigation measures are required.

Impacts Remaining After Mitigation

Less than significant impact.

7.4.1.4 Maintenance and Storage Facility

Diesel fuel for construction vehicles and equipment will be the primary source of energy use during construction of the MSF site. As shown in the analysis presented in Table 7.1, a one-time expenditure of approximately 176,590 gallons of renewable diesel fuel and 80,385 gallons of gasoline will be needed to construct the MSF site. The construction energy analysis in the Draft EIS/EIR estimated that the total fuel consumption for MSF construction would be 1,231,975 gallons of renewable diesel fuel and 150,651 gallons of gasoline. These estimates were based on conservative estimates of average daily equipment activity and accounted for a three-year construction schedule. Refinements to the conceptual construction schedule indicate that construction of the MSF is anticipated to last two years, from spring 2029 to spring 2031. The maximum daily equipment activities were adjusted to represent reasonably conservative forecasts of average equipment use throughout construction of the MSF. The shorter construction schedule means fewer days of construction crew vehicle trips, which is the primary driver for the decrease in motor gasoline consumption relative to the Draft EIS/EIR analysis.

As the MSF is a critical component of the LPA that will not be developed independently of the LRT alignment, energy consumption is accounted for in the overall analysis of the LPA. Ultimately, the MSF will contribute to annual net energy savings achieved through the increased transit ridership and corresponding transportation mode shift resulting from LPA implementation. Construction of the MSF site will be conducted in compliance with the Metro Green Construction Policy (Metro 2018), which includes the provision that all off-road construction equipment be powered by renewable diesel fuel. Construction of the MSF will not constitute a wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, this impact will be less than significant, and mitigation is not required.

Mitigation Measures

No mitigation measures are required.

Impacts Remaining After Mitigation

Less than significant impact.

7.4.2 Threshold ENERGY-CON-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 Locally Preferred Alternative

Implementation of Metro's *Green Construction Policy* (Metro 2018), CALGreen Code, and Title 24 will ensure that the LPA will 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, as well as requiring the exclusive use of renewable diesel fuel in off-road equipment. 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. The LPA will comply with state and local plans for energy efficiency in construction activities. Therefore, this impact will be less than significant.

Mitigation Measures

No mitigation measures are required.

Impacts Remaining After Mitigation

Less than significant impact.

7.4.2.3 Design Option: Close 186th Street

The analysis of energy resource consumption during construction of the LPA with the design option emulates the analysis provided for the LPA without the design option and incorporates the same assumptions related to the schedule and amount of equipment and vehicle use. Construction of the design option would involve the same amount of off-road equipment and on-road vehicle activities as will be required to construct the LPA without the design option. The volumes of renewable diesel fuel and gasoline that are presented in Table 7.1 also would be applicable to construction of the LPA with the design option. Construction contractors would ensure that BMPs of the Green Construction Policy (Metro 2018) are adhered to, which would prevent the unnecessary expenditure of petroleum fuels. Construction of the LPA with the design option would result in a less than significant environmental impact related to regional and local planning efforts to expand renewable energy supply and enhance energy efficiency.

Mitigation Measures

No mitigation measures are required.

Impacts Remaining After Mitigation

Less than significant impact.

7.4.2.4 Maintenance and Storage Facility

Construction activities for the MSF site will comply with Metro's *Green Construction Policy*, Title 24, and CALGreen requirements that will ensure consistency with state and local energy plans and policies to reduce energy consumption. Therefore, this impact will 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. 2015. *Los Angeles County General Plan*. Adopted October 6, 2015.
- Los Angeles County. 2017. *Florence-Firestone Community 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). 2018a. *West Santa Ana Branch Transit Corridor Final Northern Alignment Alternatives and Concepts Updated Screening Report*.
- Los Angeles County Metropolitan Transportation Authority (Metro). 2018b. *Green Construction Policy*.
- Los Angeles County Metropolitan Transportation Authority (Metro). 2019a. *2018 Energy and Resource Report*.
- Los Angeles County Metropolitan Transportation Authority (Metro). 2019b. *Metro Climate Action and Adaptation Plan 2019*.
- Los Angeles County Metropolitan Transportation Authority (Metro). 2024. *West Santa Ana Branch Transit Corridor Project Construction Methods Report*.
- 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. 2018a. *2017 Financial & Statistical Report*.
- Southern California Edison. 2018b. *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. 2011a. *Senate Bill 250*.
- State of California. 2011b. *Senate Bill X1-2*.
- State of California. 2013a. *Assembly Bill 118 Alternative and Renewable Fuel and Vehicle Technology Program*.

- State of California. 2013b. *Senate Bill 743*.
- State of California. 2015a. *Senate Bill 350*.
- State of California. 2015b. *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. *Energy 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 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
 - Regional On-Road Vehicle Miles Traveled (VMT) Fuel Consumption Calculations
 - EMFAC2021 On-Road Vehicles Fuel Consumption Factors & Raw Output File
 - Rail Propulsion Energy Consumption Calculations
 - Stations, Parking Facilities, and MSF Operational Energy Consumption
 - MSF Annual CalEEMod (Version 2020.4.0) Output Files – 2042 & 2017
 - Stations & Parking Facilities CalEEMod (Version 2020.4.0) Output Files
- Construction Energy
 - Construction Equipment Fuel Consumption Calculations
 - Construction Vehicles Fuel Consumption Calculations & Total Fuel Consumption
 - CalEEMod (Version 2020.4.0) Output Files – Construction
 - Utility & Freight Track Relocations
 - Demolition & Right-of-Way Clearing
 - Bulk Materials Hauling Trips
 - At-Grade Alignment, At-Grade Stations, & Parking Facilities
 - Aerial Alignment & Stations
 - Systems & Utility Connections
 - MSF

Operational Energy Summary Table

Annual Energy Consumption Summary Table

Energy End Use	Annual MMBTU			
	Existing [2017]	Existing + Locally Preferred Alternative [2017]	No Build Alternative [2042]	Locally Preferred Alternative [2042]
Regional On-Road Vehicle Travel Fuel	923,225,261	923,118,782	871,138,853	870,940,687
Rail Propulsion	-	51,518	-	51,518
Station & Parking Facilities Energy	-	9,492	-	9,492
MSF Operations	-	12,856	-	10,450
Total Emissions	923,225,261	923,192,648	871,138,853	871,012,147
	<i>Change from Existing</i>	-32,613	-52,086,408	-52,213,114
	<i>% Change from Existing</i>	-0.004%	-5.642%	-5.656%
		Change from No Build Alternative		-126,706
		% Change from No Build Alternative		-0.015%

Regional On-Road Vehicle Miles Traveled (VMT) Fuel Consumption Calculations

REGIONAL ON-ROAD VEHICLE TRAVEL ANNUAL ENERGY CONSUMPTION

ANNUAL ENERGY CONSUMPTION (GALLONS/YEAR OR KWH/YEAR)										Conversions
Year	Scenario	Speed	Annual VMT	Gasoline (Gallons)	Diesel (Gallons)	Natural Gas (Gallons)	Electricity (kWh)	Plug-in Hybrid (Gas-Gal)	Plug-in Hybrid (kWh)	
2017	Existing	5	1,014,976,971	88,309,771	2,822,862	16,600,781	57,842,449	371,821	13,759,401	GasGalEq/Gal-D 1.155
2017	Existing	10	1,822,770,225	138,090,371	6,075,838	11,125,198	21,736,267	500,444	13,553,145	
2017	Existing	15	4,774,553,895	296,581,640	16,971,816	13,773,069	48,594,508	1,055,397	34,300,821	BTU/GasGalEq 116,090
2017	Existing	20	10,203,676,784	530,615,668	49,382,719	59,050,867	50,797,122	1,953,738	34,689,347	
2017	Existing	25	21,579,898,288	992,476,735	60,802,392	4,525,209	57,857,264	3,845,772	36,143,116	NatGas Gal/CF 7.48052
2017	Existing	30	23,327,704,677	955,254,622	63,021,472	3,720,013	41,660,948	3,804,779	20,373,921	
2017	Existing	35	20,551,721,638	777,258,516	66,055,017	3,232,615	37,708,923	3,075,041	13,863,956	NatGas BTU/CF 1035
2017	Existing	40	12,828,977,557	466,437,486	65,975,227	3,440,611	41,717,975	1,732,351	12,271,157	
2017	Existing	45	7,916,251,403	288,796,737	45,989,520	2,302,213	23,465,273	998,464	5,585,866	kWh => BTU 3412.14
2017	Existing	50	5,877,353,168	221,342,187	40,147,187	2,020,791	13,624,536	695,333	2,719,452	
2017	Existing	55	5,853,346,171	228,959,827	50,373,055	2,228,891	5,397,662	649,623	966,179	
2017	Existing	60	5,604,841,132	225,722,991	55,114,719	2,245,392	1,218,869	591,326	162,040	
2017	Existing	65	7,629,726,334	318,672,302	78,867,824	3,170,632	391,370	773,823	36,125	
2017	Existing	70	12,384,787,257	496,597,869	140,158,990	3,101,734	40,896	1,198,880	1,139	
2017	Existing	75	19,310,451,855	774,299,069	218,536,934	4,836,247	63,765	1,869,303	1,777	
2017	Existing	80	65,262,296	2,616,849	738,575	16,345	216	6,318	6	
Totals			160,746,299,651	6,802,032,641	961,034,146	135,390,608	402,118,041	23,122,414	188,427,448	<u>Total Annual MMBTU</u> 923,225,261

ANNUAL ENERGY CONSUMPTION (GALLONS/YEAR OR KWH/YEAR)										
Year	Scenario	Speed	Annual VMT	Gasoline (Gallons)	Diesel (Gallons)	Natural Gas (Gallons)	Electricity (kWh)	Plug-in Hybrid (Gas-Gal)	Plug-in Hybrid (kWh)	
2017	LPA	5	1,014,835,127	88,297,430	2,822,468	16,598,461	57,834,365	371,769	13,757,478	
2017	LPA	10	1,820,184,598	137,894,488	6,067,219	11,109,417	21,705,433	499,734	13,533,920	
2017	LPA	15	4,759,141,940	295,624,294	16,917,032	13,728,611	48,437,648	1,051,991	34,190,100	
2017	LPA	20	10,240,056,603	532,507,506	49,558,786	59,261,405	50,978,232	1,960,703	34,813,027	
2017	LPA	25	21,521,897,492	989,809,232	60,638,972	4,513,046	57,701,759	3,835,436	36,045,973	
2017	LPA	30	23,447,915,454	960,177,177	63,346,230	3,739,183	41,875,632	3,824,386	20,478,911	
2017	LPA	35	20,428,961,937	772,615,790	65,660,456	3,213,306	37,483,680	3,056,673	13,781,144	
2017	LPA	40	12,831,754,260	466,538,442	65,989,506	3,441,355	41,727,005	1,732,726	12,273,813	
2017	LPA	45	7,903,510,602	288,331,933	45,915,502	2,298,507	23,427,507	996,857	5,576,876	
2017	LPA	50	5,882,148,874	221,522,794	40,179,945	2,022,440	13,635,653	695,901	2,721,671	
2017	LPA	55	5,880,795,071	230,033,520	50,609,276	2,239,343	5,422,974	652,670	970,710	
2017	LPA	60	5,596,970,135	225,406,003	55,037,321	2,242,239	1,217,157	590,496	161,812	
2017	LPA	65	7,652,019,753	319,603,435	79,098,269	3,179,897	392,513	776,084	36,230	
2017	LPA	70	12,350,445,885	495,220,869	139,770,348	3,093,133	40,782	1,195,556	1,136	
2017	LPA	75	19,325,471,452	774,901,316	218,706,911	4,840,008	63,814	1,870,757	1,778	
2017	LPA	80	65,260,254	2,616,767	738,552	16,344	215	6,317	6	
Totals			160,721,369,436	6,801,100,996	961,056,794	135,536,696	401,944,372	23,118,056	188,344,586	<u>Total Annual MMBTU</u> 923,118,782

REGIONAL ON-ROAD VEHICLE TRAVEL ANNUAL ENERGY CONSUMPTION

ANNUAL ENERGY CONSUMPTION (GALLONS/YEAR OR KWH/YEAR)

Year	Scenario	Speed	Annual VMT	Gasoline (Gallons)	Diesel (Gallons)	Natural Gas (Gallons)	Electricity (kWh)	Plug-in Hybrid (Gas-Gal)	Plug-in Hybrid (kWh)	
2042	No Build	5	2,831,971,180	69,093,324	2,505,575	7,066,197	1,299,187,756	1,337,056	115,951,669	
2042	No Build	10	7,700,912,319	279,636,256	12,326,695	8,427,882	1,218,136,317	4,695,385	262,041,579	
2042	No Build	15	13,036,805,820	401,388,091	23,673,818	6,083,153	1,582,029,444	6,659,681	384,272,671	
2042	No Build	20	20,126,818,240	602,935,069	59,681,633	14,545,673	2,331,627,155	10,389,170	322,594,962	
2042	No Build	25	29,775,980,408	872,656,413	60,074,713	3,972,983	1,343,243,811	15,754,008	255,032,824	
2042	No Build	30	30,470,947,140	826,877,166	61,653,139	3,516,504	1,001,721,408	15,344,831	140,408,970	
2042	No Build	35	23,956,594,811	596,645,941	59,669,842	3,118,659	874,170,707	11,010,287	87,515,964	
2042	No Build	40	15,655,198,680	353,216,979	59,734,818	3,235,681	929,708,895	6,183,075	73,613,841	
2042	No Build	45	6,941,484,449	156,637,687	34,786,168	1,829,467	454,589,417	2,542,679	24,028,242	
2042	No Build	50	5,860,462,385	138,793,423	31,827,052	1,691,754	366,290,197	2,072,991	13,770,335	
2042	No Build	55	5,256,729,480	131,943,200	41,441,893	2,040,442	315,900,209	1,781,756	4,891,918	
2042	No Build	60	7,230,024,300	186,099,632	81,881,182	3,447,643	440,551,388	2,290,592	1,062,800	
2042	No Build	65	9,967,822,387	267,518,441	121,126,390	5,061,910	616,594,407	3,070,458	197,555	
2042	No Build	70	16,993,401,286	445,880,951	223,057,090	5,608,371	809,934,919	5,018,924	7,882	
2042	No Build	75	14,543,238,783	381,592,421	190,896,011	4,799,738	693,155,933	4,295,280	6,745	
2042	No Build	80	48,087,295	1,261,737	631,199	15,870	2,291,924	14,202	22	Total Annual MMBTU
	Totals		210,396,478,961	5,712,176,731	1,064,967,218	74,461,929	14,279,133,887	92,460,375	1,685,397,980	871,138,853

ANNUAL ENERGY CONSUMPTION (GALLONS/YEAR OR KWH/YEAR)

Year	Scenario	Speed	Annual VMT	Gasoline (Gallons)	Diesel (Gallons)	Natural Gas (Gallons)	Electricity (kWh)	Plug-in Hybrid (Gas-Gal)	Plug-in Hybrid (kWh)	
2042	LPA	5	2,817,672,867	68,744,480	2,492,925	7,030,521	1,292,628,299	1,330,305	115,366,242	
2042	LPA	10	7,719,254,915	280,302,314	12,356,056	8,447,957	1,221,037,763	4,706,569	262,665,729	
2042	LPA	15	13,032,910,444	401,268,157	23,666,745	6,081,336	1,581,556,736	6,657,692	384,157,851	
2042	LPA	20	20,104,034,362	602,252,537	59,614,073	14,529,207	2,328,987,716	10,377,409	322,229,780	
2042	LPA	25	29,855,715,530	874,993,242	60,235,583	3,983,622	1,346,840,795	15,796,195	255,715,759	
2042	LPA	30	30,449,671,200	826,299,810	61,610,090	3,514,048	1,001,021,969	15,334,117	140,310,931	
2042	LPA	35	23,867,831,485	594,435,264	59,448,755	3,107,104	870,931,753	10,969,492	87,191,703	
2042	LPA	40	15,723,282,116	354,753,097	59,994,601	3,249,753	933,752,138	6,209,965	73,933,983	
2042	LPA	45	6,917,912,309	156,105,771	34,668,040	1,823,255	453,045,707	2,534,044	23,946,646	
2042	LPA	50	5,918,038,172	140,156,991	32,139,735	1,708,374	369,888,795	2,093,357	13,905,621	
2042	LPA	55	5,166,286,183	129,673,086	40,728,875	2,005,336	310,465,069	1,751,101	4,807,752	
2042	LPA	60	7,236,420,465	186,264,269	81,953,619	3,450,693	440,941,129	2,292,618	1,063,741	
2042	LPA	65	9,914,610,439	266,090,328	120,479,772	5,034,888	613,302,797	3,054,067	196,500	
2042	LPA	70	17,069,342,689	447,873,537	224,053,904	5,633,434	813,554,418	5,041,353	7,917	
2042	LPA	75	14,510,036,909	380,721,254	190,460,200	4,788,781	691,573,475	4,285,474	6,730	
2042	LPA	80	48,046,985	1,260,680	630,670	15,857	2,290,002	14,190	22	Total Annual MMBTU
	Totals		210,351,067,071	5,711,194,815	1,064,533,643	74,404,165	14,271,818,561	92,447,947	1,685,506,905	870,940,687

EMFAC2021 Affected Area Fuel Consumption Factors & Raw Output File

ENERGY CONSUMPTION FACTORS (GAL/VMT OR KWH/VMT)

Year	Speed	Gasoline	Diesel	Natural Gas	Electricity	Gasoline	Electricity
						Plug-in Hybrid	Plug-in Hybrid
2017	5	0.087007	0.002781	0.016356	0.056989	0.000366	0.013556
2017	10	0.075759	0.003333	0.006103	0.011925	0.000275	0.007435
2017	15	0.062117	0.003555	0.002885	0.010178	0.000221	0.007184
2017	20	0.052002	0.004840	0.005787	0.004978	0.000191	0.003400
2017	25	0.045991	0.002818	0.000210	0.002681	0.000178	0.001675
2017	30	0.040949	0.002702	0.000159	0.001786	0.000163	0.000873
2017	35	0.037820	0.003214	0.000157	0.001835	0.000150	0.000675
2017	40	0.036358	0.005143	0.000268	0.003252	0.000135	0.000957
2017	45	0.036482	0.005810	0.000291	0.002964	0.000126	0.000706
2017	50	0.037660	0.006831	0.000344	0.002318	0.000118	0.000463
2017	55	0.039116	0.008606	0.000381	0.000922	0.000111	0.000165
2017	60	0.040273	0.009833	0.000401	0.000217	0.000106	0.000029
2017	65	0.041767	0.010337	0.000416	0.000051	0.000101	0.000005
2017	70	0.040097	0.011317	0.000250	0.000003	0.000097	0.0000001
2017	75	0.040097	0.011317	0.000250	0.000003	0.000097	0.0000001
2017	80	0.040097	0.011317	0.000250	0.000003	0.000097	0.0000001
Year	Speed	Gasoline	Diesel	Natural Gas	Electricity	Plug-in Hybrid (G)	Plug-in Hybrid (E)
2042	5	0.024398	0.000885	0.002495	0.458757	0.000472	0.040944
2042	10	0.036312	0.001601	0.001094	0.158181	0.000610	0.034027
2042	15	0.030789	0.001816	0.000467	0.121351	0.000511	0.029476
2042	20	0.029957	0.002965	0.000723	0.115847	0.000516	0.016028
2042	25	0.029307	0.002018	0.000133	0.045112	0.000529	0.008565
2042	30	0.027137	0.002023	0.000115	0.032875	0.000504	0.004608
2042	35	0.024905	0.002491	0.000130	0.036490	0.000460	0.003653
2042	40	0.022562	0.003816	0.000207	0.059387	0.000395	0.004702
2042	45	0.022565	0.005011	0.000264	0.065489	0.000366	0.003462
2042	50	0.023683	0.005431	0.000289	0.062502	0.000354	0.002350
2042	55	0.025100	0.007884	0.000388	0.060094	0.000339	0.000931
2042	60	0.025740	0.011325	0.000477	0.060934	0.000317	0.000147
2042	65	0.026838	0.012152	0.000508	0.061858	0.000308	0.000020
2042	70	0.026238	0.013126	0.000330	0.047662	0.000295	0.000000
2042	75	0.026238	0.013126	0.000330	0.047662	0.000295	0.0000005
2042	80	0.026238	0.013126	0.000330	0.047662	0.000295	0.0000005

EMFAC2021 Raw Output File

Source: EMFAC2021 (v1.0.2) Emissions Inventory

Region Type: Sub-Area

Region: Los Angeles (SC)

Calendar Year: 2017, 2042

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for CVMT and EVMT, tons/day for Emissions, 1000 gallons/day for Fuel Consumption, mph for Speed, kWh/day for Energy Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Total VMT	CVMT	EVMT	Fuel Consumption	Energy Consumption
Los Angeles (SC)	2017	HHDT	Aggregate	5	Gasoline	1.124723609	1.124723609	0	0.000755238	0
Los Angeles (SC)	2017	HHDT	Aggregate	5	Diesel	737.7577083	737.7577083	0	0.280770585	0
Los Angeles (SC)	2017	HHDT	Aggregate	5	Natural Gas	37.03886147	37.03886147	0	0.025188302	0
Los Angeles (SC)	2017	HHDT	Aggregate	10	Gasoline	14.90778093	14.90778093	0	0.008073461	0
Los Angeles (SC)	2017	HHDT	Aggregate	10	Diesel	10076.19943	10076.19943	0	3.351798729	0
Los Angeles (SC)	2017	HHDT	Aggregate	10	Natural Gas	522.6563899	522.6563899	0	0.277380147	0
Los Angeles (SC)	2017	HHDT	Aggregate	15	Gasoline	50.70326843	50.70326843	0	0.022381462	0
Los Angeles (SC)	2017	HHDT	Aggregate	15	Diesel	32065.67618	32065.67618	0	8.662345018	0
Los Angeles (SC)	2017	HHDT	Aggregate	15	Natural Gas	1542.037507	1542.037507	0	0.590152186	0
Los Angeles (SC)	2017	HHDT	Aggregate	20	Gasoline	142.1792237	142.1792237	0	0.052110519	0
Los Angeles (SC)	2017	HHDT	Aggregate	20	Diesel	209893.2832	209893.2832	0	47.31781861	0
Los Angeles (SC)	2017	HHDT	Aggregate	20	Natural Gas	4736.809934	4736.809934	0	1.457822783	0
Los Angeles (SC)	2017	HHDT	Aggregate	25	Gasoline	275.2507493	275.2507493	0	0.086207354	0
Los Angeles (SC)	2017	HHDT	Aggregate	25	Diesel	202391.8793	202391.8793	0	42.02540467	0
Los Angeles (SC)	2017	HHDT	Aggregate	25	Natural Gas	9231.311519	9231.311519	0	2.435839884	0
Los Angeles (SC)	2017	HHDT	Aggregate	30	Gasoline	438.7318499	438.7318499	0	0.121898414	0
Los Angeles (SC)	2017	HHDT	Aggregate	30	Diesel	342157.2192	342157.2192	0	64.84469589	0
Los Angeles (SC)	2017	HHDT	Aggregate	30	Natural Gas	14675.5342	14675.5342	0	3.420639517	0
Los Angeles (SC)	2017	HHDT	Aggregate	35	Gasoline	535.2017628	535.2017628	0	0.137743158	0
Los Angeles (SC)	2017	HHDT	Aggregate	35	Diesel	453509.6708	453509.6708	0	79.59130728	0
Los Angeles (SC)	2017	HHDT	Aggregate	35	Natural Gas	18672.02502	18672.02502	0	3.929902076	0
Los Angeles (SC)	2017	HHDT	Aggregate	40	Gasoline	532.825768	532.825768	0	0.132579588	0
Los Angeles (SC)	2017	HHDT	Aggregate	40	Diesel	411336.5102	411336.5102	0	68.43459017	0
Los Angeles (SC)	2017	HHDT	Aggregate	40	Natural Gas	17935.1189	17935.1189	0	3.469802876	0
Los Angeles (SC)	2017	HHDT	Aggregate	45	Gasoline	546.6836407	546.6836407	0	0.136337845	0
Los Angeles (SC)	2017	HHDT	Aggregate	45	Diesel	412627.7997	412627.7997	0	65.98631484	0
Los Angeles (SC)	2017	HHDT	Aggregate	45	Natural Gas	18438.26192	18438.26192	0	3.313579986	0
Los Angeles (SC)	2017	HHDT	Aggregate	50	Gasoline	534.5597716	534.5597716	0	0.137178235	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2017	HHDT	Aggregate	50	Diesel	376431.3731	376431.3731	0	59.16204408	0
Los Angeles (SC)	2017	HHDT	Aggregate	50	Natural Gas	17925.22145	17925.22145	0	3.022991445	0
Los Angeles (SC)	2017	HHDT	Aggregate	55	Gasoline	703.839041	703.839041	0	0.188351009	0
Los Angeles (SC)	2017	HHDT	Aggregate	55	Diesel	516155.3582	516155.3582	0	80.79070995	0
Los Angeles (SC)	2017	HHDT	Aggregate	55	Natural Gas	24033.87702	24033.87702	0	3.827036448	0
Los Angeles (SC)	2017	HHDT	Aggregate	60	Gasoline	742.634356	742.634356	0	0.207867166	0
Los Angeles (SC)	2017	HHDT	Aggregate	60	Diesel	703262.6109	703262.6109	0	110.4585478	0
Los Angeles (SC)	2017	HHDT	Aggregate	60	Natural Gas	27753.28472	27753.28472	0	4.402285697	0
Los Angeles (SC)	2017	HHDT	Aggregate	65	Gasoline	585.8778061	585.8778061	0	0.170763646	0
Los Angeles (SC)	2017	HHDT	Aggregate	65	Diesel	508762.8588	508762.8588	0	82.86493329	0
Los Angeles (SC)	2017	HHDT	Aggregate	65	Natural Gas	20618.7724	20618.7724	0	3.270217363	0
Los Angeles (SC)	2017	HHDT	Aggregate	70	Gasoline	1006.128818	1006.128818	0	0.298642167	0
Los Angeles (SC)	2017	HHDT	Aggregate	70	Diesel	2010542.791	2010542.791	0	318.3509504	0
Los Angeles (SC)	2017	HHDT	Aggregate	70	Natural Gas	52234.94309	52234.94309	0	8.173770972	0
Los Angeles (SC)	2017	LDA	Aggregate	5	Gasoline	239116.8959	239116.8959	0	20.6161998	0
Los Angeles (SC)	2017	LDA	Aggregate	5	Diesel	743.3612944	743.3612944	0	0.046860575	0
Los Angeles (SC)	2017	LDA	Aggregate	5	Electricity	37199.66315	0	37199.66315	0	25833.69873
Los Angeles (SC)	2017	LDA	Aggregate	5	Plug-in Hybrid	13357.44223	1687.061174	11670.38106	0.164349272	6081.897972
Los Angeles (SC)	2017	LDA	Aggregate	10	Gasoline	1325071.047	1325071.047	0	92.35131263	0
Los Angeles (SC)	2017	LDA	Aggregate	10	Diesel	4119.351438	4119.351438	0	0.216336961	0
Los Angeles (SC)	2017	LDA	Aggregate	10	Electricity	59512.57371	0	59512.57371	0	27892.71983
Los Angeles (SC)	2017	LDA	Aggregate	10	Plug-in Hybrid	56011.68134	9348.883143	46662.7982	0.636790111	17245.92138
Los Angeles (SC)	2017	LDA	Aggregate	15	Gasoline	2874050.151	2874050.151	0	163.9234149	0
Los Angeles (SC)	2017	LDA	Aggregate	15	Diesel	8934.783266	8934.783266	0	0.385940456	0
Los Angeles (SC)	2017	LDA	Aggregate	15	Electricity	132539.5951	0	132539.5951	0	52257.6641
Los Angeles (SC)	2017	LDA	Aggregate	15	Plug-in Hybrid	134484.0089	20277.52328	114206.4856	1.12398719	36530.44314
Los Angeles (SC)	2017	LDA	Aggregate	20	Gasoline	8296222.721	8296222.721	0	393.7823965	0
Los Angeles (SC)	2017	LDA	Aggregate	20	Diesel	25791.11291	25791.11291	0	0.91388627	0
Los Angeles (SC)	2017	LDA	Aggregate	20	Electricity	194643.2902	0	194643.2902	0	71864.84154
Los Angeles (SC)	2017	LDA	Aggregate	20	Plug-in Hybrid	224672.6669	58533.025	166139.6419	2.804809341	49801.05171
Los Angeles (SC)	2017	LDA	Aggregate	25	Gasoline	16871273.22	16871273.22	0	684.865596	0
Los Angeles (SC)	2017	LDA	Aggregate	25	Diesel	52449.0394	52449.0394	0	1.557861511	0
Los Angeles (SC)	2017	LDA	Aggregate	25	Electricity	212590.1332	0	212590.1332	0	77675.81237
Los Angeles (SC)	2017	LDA	Aggregate	25	Plug-in Hybrid	285352.418	119033.2866	166319.1314	5.092649573	47862.02998
Los Angeles (SC)	2017	LDA	Aggregate	30	Gasoline	25537929.81	25537929.81	0	919.6848415	0
Los Angeles (SC)	2017	LDA	Aggregate	30	Diesel	79391.74889	79391.74889	0	2.042568272	0
Los Angeles (SC)	2017	LDA	Aggregate	30	Electricity	213133.5546	0	213133.5546	0	77963.75223
Los Angeles (SC)	2017	LDA	Aggregate	30	Plug-in Hybrid	313059.5013	180179.8643	132879.6371	7.022772273	37606.15624

EMFAC2021 Raw Output File

Los Angeles (SC)	2017	LDA	Aggregate	35	Gasoline	23307076.63	23307076.63	0	777.2713322	0
Los Angeles (SC)	2017	LDA	Aggregate	35	Diesel	72456.5221	72456.5221	0	1.685145675	0
Los Angeles (SC)	2017	LDA	Aggregate	35	Electricity	200312.0544	0	200312.0544	0	73617.52259
Los Angeles (SC)	2017	LDA	Aggregate	35	Plug-in Hybrid	259804.8863	164440.3417	95364.54458	5.919921639	26690.53184
Los Angeles (SC)	2017	LDA	Aggregate	40	Gasoline	11231820.31	11231820.31	0	361.9654918	0
Los Angeles (SC)	2017	LDA	Aggregate	40	Diesel	34917.23349	34917.23349	0	0.759926874	0
Los Angeles (SC)	2017	LDA	Aggregate	40	Electricity	174431.0838	0	174431.0838	0	64989.06284
Los Angeles (SC)	2017	LDA	Aggregate	40	Plug-in Hybrid	143618.5502	79244.78902	64373.76123	2.661513582	18853.1119
Los Angeles (SC)	2017	LDA	Aggregate	45	Gasoline	9214239.454	9214239.454	0	297.989737	0
Los Angeles (SC)	2017	LDA	Aggregate	45	Diesel	28645.02293	28645.02293	0	0.60217641	0
Los Angeles (SC)	2017	LDA	Aggregate	45	Electricity	128940.9303	0	128940.9303	0	49018.4826
Los Angeles (SC)	2017	LDA	Aggregate	45	Plug-in Hybrid	103542.6594	65009.98423	38532.67515	2.057747736	11512.10982
Los Angeles (SC)	2017	LDA	Aggregate	50	Gasoline	6842897.521	6842897.521	0	228.132076	0
Los Angeles (SC)	2017	LDA	Aggregate	50	Diesel	21273.04781	21273.04781	0	0.448340949	0
Los Angeles (SC)	2017	LDA	Aggregate	50	Electricity	73629.19299	0	73629.19299	0	28814.18319
Los Angeles (SC)	2017	LDA	Aggregate	50	Plug-in Hybrid	66800.11173	48279.25975	18520.85198	1.451836359	5678.208566
Los Angeles (SC)	2017	LDA	Aggregate	55	Gasoline	6976918.896	6976918.896	0	242.2415364	0
Los Angeles (SC)	2017	LDA	Aggregate	55	Diesel	21689.69048	21689.69048	0	0.478342091	0
Los Angeles (SC)	2017	LDA	Aggregate	55	Electricity	29134.74664	0	29134.74664	0	11850.21114
Los Angeles (SC)	2017	LDA	Aggregate	55	Plug-in Hybrid	55506.77896	49224.83182	6281.947144	1.41174559	2099.704996
Los Angeles (SC)	2017	LDA	Aggregate	60	Gasoline	8067742.202	8067742.202	0	290.8566356	0
Los Angeles (SC)	2017	LDA	Aggregate	60	Diesel	25080.81775	25080.81775	0	0.599658958	0
Los Angeles (SC)	2017	LDA	Aggregate	60	Electricity	7460.424586	0	7460.424586	0	3179.534332
Los Angeles (SC)	2017	LDA	Aggregate	60	Plug-in Hybrid	58135.68785	56921.00754	1214.680316	1.558992209	427.2127369
Los Angeles (SC)	2017	LDA	Aggregate	65	Gasoline	5786213.544	5786213.544	0	215.5040601	0
Los Angeles (SC)	2017	LDA	Aggregate	65	Diesel	17988.05213	17988.05213	0	0.483494206	0
Los Angeles (SC)	2017	LDA	Aggregate	65	Electricity	1088.990522	0	1088.990522	0	485.8976358
Los Angeles (SC)	2017	LDA	Aggregate	65	Plug-in Hybrid	40954.11413	40823.95006	130.1640718	1.076853332	50.27162558
Los Angeles (SC)	2017	LDA	Aggregate	70	Gasoline	17989823.81	17989823.81	0	666.4773003	0
Los Angeles (SC)	2017	LDA	Aggregate	70	Diesel	55926.36465	55926.36465	0	1.62324431	0
Los Angeles (SC)	2017	LDA	Aggregate	70	Electricity	176.6248876	0	176.6248876	0	87.55603827
Los Angeles (SC)	2017	LDA	Aggregate	70	Plug-in Hybrid	126932.9153	126925.089	7.826359977	3.173184214	3.015761953
Los Angeles (SC)	2017	LDT1	Aggregate	5	Gasoline	21109.44711	21109.44711	0	2.141215967	0
Los Angeles (SC)	2017	LDT1	Aggregate	5	Diesel	18.83700577	18.83700577	0	0.00212083	0
Los Angeles (SC)	2017	LDT1	Aggregate	5	Electricity	494.1611875	0	494.1611875	0	343.1754527
Los Angeles (SC)	2017	LDT1	Aggregate	5	Plug-in Hybrid	1.812995956	0.228983591	1.584012365	2.23228E-05	0.825491605
Los Angeles (SC)	2017	LDT1	Aggregate	10	Gasoline	116978.4221	116978.4221	0	9.594665782	0
Los Angeles (SC)	2017	LDT1	Aggregate	10	Diesel	104.3856432	104.3856432	0	0.009892964	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2017	LDT1	Aggregate	10	Electricity	790.5664086	0	790.5664086	0	370.5275367
Los Angeles (SC)	2017	LDT1	Aggregate	10	Plug-in Hybrid	7.602424926	1.268917135	6.333507791	8.64813E-05	2.340776413
Los Angeles (SC)	2017	LDT1	Aggregate	15	Gasoline	253723.6418	253723.6418	0	17.03218153	0
Los Angeles (SC)	2017	LDT1	Aggregate	15	Diesel	226.4101793	226.4101793	0	0.017791905	0
Los Angeles (SC)	2017	LDT1	Aggregate	15	Electricity	1760.659054	0	1760.659054	0	694.1920211
Los Angeles (SC)	2017	LDT1	Aggregate	15	Plug-in Hybrid	18.25341709	2.752253542	15.50116355	0.000152647	4.958250579
Los Angeles (SC)	2017	LDT1	Aggregate	20	Gasoline	732397.7424	732397.7424	0	40.92172834	0
Los Angeles (SC)	2017	LDT1	Aggregate	20	Diesel	653.5548009	653.5548009	0	0.042194557	0
Los Angeles (SC)	2017	LDT1	Aggregate	20	Electricity	2585.645979	0	2585.645979	0	954.6542207
Los Angeles (SC)	2017	LDT1	Aggregate	20	Plug-in Hybrid	30.4946583	7.944645074	22.55001322	0.000380925	6.759460666
Los Angeles (SC)	2017	LDT1	Aggregate	25	Gasoline	1489410.642	1489410.642	0	71.18308373	0
Los Angeles (SC)	2017	LDT1	Aggregate	25	Diesel	1329.074927	1329.074927	0	0.071946271	0
Los Angeles (SC)	2017	LDT1	Aggregate	25	Electricity	2824.052257	0	2824.052257	0	1031.847292
Los Angeles (SC)	2017	LDT1	Aggregate	25	Plug-in Hybrid	38.73067695	16.15630175	22.5743752	0.000691642	6.496278651
Los Angeles (SC)	2017	LDT1	Aggregate	30	Gasoline	2254510.608	2254510.608	0	95.59720461	0
Los Angeles (SC)	2017	LDT1	Aggregate	30	Diesel	2011.811542	2011.811542	0	0.094171636	0
Los Angeles (SC)	2017	LDT1	Aggregate	30	Electricity	2831.271079	0	2831.271079	0	1035.672292
Los Angeles (SC)	2017	LDT1	Aggregate	30	Plug-in Hybrid	42.49133929	24.45568243	18.03565686	0.000953764	5.10425634
Los Angeles (SC)	2017	LDT1	Aggregate	35	Gasoline	2057568.954	2057568.954	0	80.78749497	0
Los Angeles (SC)	2017	LDT1	Aggregate	35	Diesel	1836.070744	1836.070744	0	0.077568954	0
Los Angeles (SC)	2017	LDT1	Aggregate	35	Electricity	2660.949973	0	2660.949973	0	977.9368764
Los Angeles (SC)	2017	LDT1	Aggregate	35	Plug-in Hybrid	35.26312898	22.31936844	12.94376054	0.000803965	3.622686549
Los Angeles (SC)	2017	LDT1	Aggregate	40	Gasoline	991554.8456	991554.8456	0	37.61288012	0
Los Angeles (SC)	2017	LDT1	Aggregate	40	Diesel	884.8135271	884.8135271	0	0.034888403	0
Los Angeles (SC)	2017	LDT1	Aggregate	40	Electricity	2317.14656	0	2317.14656	0	863.316217
Los Angeles (SC)	2017	LDT1	Aggregate	40	Plug-in Hybrid	19.49324177	10.7558378	8.737403971	0.000361438	2.558919218
Los Angeles (SC)	2017	LDT1	Aggregate	45	Gasoline	813441.0563	813441.0563	0	30.94932924	0
Los Angeles (SC)	2017	LDT1	Aggregate	45	Diesel	725.8737661	725.8737661	0	0.027595858	0
Los Angeles (SC)	2017	LDT1	Aggregate	45	Electricity	1712.854307	0	1712.854307	0	651.1626591
Los Angeles (SC)	2017	LDT1	Aggregate	45	Plug-in Hybrid	14.05377014	8.823758058	5.23001208	0.00027945	1.562530325
Los Angeles (SC)	2017	LDT1	Aggregate	50	Gasoline	604096.9323	604096.9323	0	23.67858721	0
Los Angeles (SC)	2017	LDT1	Aggregate	50	Diesel	539.0656299	539.0656299	0	0.020527937	0
Los Angeles (SC)	2017	LDT1	Aggregate	50	Electricity	978.0919063	0	978.0919063	0	382.7682774
Los Angeles (SC)	2017	LDT1	Aggregate	50	Plug-in Hybrid	9.066730765	6.552908945	2.51382182	0.000197176	0.770699135
Los Angeles (SC)	2017	LDT1	Aggregate	55	Gasoline	615928.4556	615928.4556	0	25.13194071	0
Los Angeles (SC)	2017	LDT1	Aggregate	55	Diesel	549.6234844	549.6234844	0	0.021884006	0
Los Angeles (SC)	2017	LDT1	Aggregate	55	Electricity	387.0266497	0	387.0266497	0	157.4184795
Los Angeles (SC)	2017	LDT1	Aggregate	55	Plug-in Hybrid	7.533894891	6.681250757	0.852644134	0.000191737	0.284991438

EMFAC2021 Raw Output File

Los Angeles (SC)	2017	LDT1	Aggregate	60	Gasoline	712227.2838	712227.2838	0	30.17520481	0
Los Angeles (SC)	2017	LDT1	Aggregate	60	Diesel	635.5557012	635.5557012	0	0.027411051	0
Los Angeles (SC)	2017	LDT1	Aggregate	60	Electricity	99.10445312	0	99.10445312	0	42.23700776
Los Angeles (SC)	2017	LDT1	Aggregate	60	Plug-in Hybrid	7.890714791	7.725847111	0.164867679	0.000211725	0.057985275
Los Angeles (SC)	2017	LDT1	Aggregate	65	Gasoline	510811.9536	510811.9536	0	22.35461265	0
Los Angeles (SC)	2017	LDT1	Aggregate	65	Diesel	455.8228205	455.8228205	0	0.022081823	0
Los Angeles (SC)	2017	LDT1	Aggregate	65	Electricity	14.46617534	0	14.46617534	0	6.454675457
Los Angeles (SC)	2017	LDT1	Aggregate	65	Plug-in Hybrid	5.558672238	5.541005162	0.017667075	0.000146258	0.006823331
Los Angeles (SC)	2017	LDT1	Aggregate	70	Gasoline	1588157.26	1588157.26	0	69.24095421	0
Los Angeles (SC)	2017	LDT1	Aggregate	70	Diesel	1417.191427	1417.191427	0	0.074071363	0
Los Angeles (SC)	2017	LDT1	Aggregate	70	Electricity	2.346289101	0	2.346289101	0	1.163096442
Los Angeles (SC)	2017	LDT1	Aggregate	70	Plug-in Hybrid	17.22851263	17.22745036	0.001062266	0.000430808	0.000409327
Los Angeles (SC)	2017	LDT2	Aggregate	5	Gasoline	81682.93909	81682.93909	0	9.183339344	0
Los Angeles (SC)	2017	LDT2	Aggregate	5	Diesel	256.4442734	256.4442734	0	0.021418516	0
Los Angeles (SC)	2017	LDT2	Aggregate	5	Electricity	137.0638379	0	137.0638379	0	95.185429
Los Angeles (SC)	2017	LDT2	Aggregate	5	Plug-in Hybrid	65.95889524	8.330688566	57.62820668	0.000811698	30.03234184
Los Angeles (SC)	2017	LDT2	Aggregate	10	Gasoline	452647.636	452647.636	0	41.16573701	0
Los Angeles (SC)	2017	LDT2	Aggregate	10	Diesel	1421.091055	1421.091055	0	0.099910225	0
Los Angeles (SC)	2017	LDT2	Aggregate	10	Electricity	219.276764	0	219.276764	0	102.7719852
Los Angeles (SC)	2017	LDT2	Aggregate	10	Plug-in Hybrid	276.5850346	46.16467683	230.4203578	0.003144918	85.16016028
Los Angeles (SC)	2017	LDT2	Aggregate	15	Gasoline	981782.8327	981782.8327	0	73.066237	0
Los Angeles (SC)	2017	LDT2	Aggregate	15	Diesel	3082.31545	3082.31545	0	0.179682581	0
Los Angeles (SC)	2017	LDT2	Aggregate	15	Electricity	488.3481206	0	488.3481206	0	192.5457221
Los Angeles (SC)	2017	LDT2	Aggregate	15	Plug-in Hybrid	664.0804805	100.1301754	563.9503051	0.005551047	180.3869057
Los Angeles (SC)	2017	LDT2	Aggregate	20	Gasoline	2834010.757	2834010.757	0	175.5049423	0
Los Angeles (SC)	2017	LDT2	Aggregate	20	Diesel	8897.400578	8897.400578	0	0.426127894	0
Los Angeles (SC)	2017	LDT2	Aggregate	20	Electricity	717.1719884	0	717.1719884	0	264.7892524
Los Angeles (SC)	2017	LDT2	Aggregate	20	Plug-in Hybrid	1109.431031	289.0354005	820.3956301	0.013852202	245.9170173
Los Angeles (SC)	2017	LDT2	Aggregate	25	Gasoline	5763269.79	5763269.79	0	305.2320644	0
Los Angeles (SC)	2017	LDT2	Aggregate	25	Diesel	18093.83392	18093.83392	0	0.726594013	0
Los Angeles (SC)	2017	LDT2	Aggregate	25	Electricity	783.2979414	0	783.2979414	0	286.2000367
Los Angeles (SC)	2017	LDT2	Aggregate	25	Plug-in Hybrid	1409.06694	587.7849925	821.2819472	0.025151255	236.3421505
Los Angeles (SC)	2017	LDT2	Aggregate	30	Gasoline	8723821.698	8723821.698	0	409.9108606	0
Los Angeles (SC)	2017	LDT2	Aggregate	30	Diesel	27388.5115	27388.5115	0	0.951050642	0
Los Angeles (SC)	2017	LDT2	Aggregate	30	Electricity	785.300202	0	785.300202	0	287.2609641
Los Angeles (SC)	2017	LDT2	Aggregate	30	Plug-in Hybrid	1545.884197	889.7260857	656.1581108	0.034683523	185.6987646
Los Angeles (SC)	2017	LDT2	Aggregate	35	Gasoline	7961756.586	7961756.586	0	346.4795357	0
Los Angeles (SC)	2017	LDT2	Aggregate	35	Diesel	24996.00168	24996.00168	0	0.783378166	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2017	LDT2	Aggregate	35	Electricity	738.0588058	0	738.0588058	0	271.2470848
Los Angeles (SC)	2017	LDT2	Aggregate	35	Plug-in Hybrid	1282.913523	812.0045054	470.9090181	0.029236662	131.7975375
Los Angeles (SC)	2017	LDT2	Aggregate	40	Gasoline	3836818.352	3836818.352	0	161.3805837	0
Los Angeles (SC)	2017	LDT2	Aggregate	40	Diesel	12045.72344	12045.72344	0	0.352342169	0
Los Angeles (SC)	2017	LDT2	Aggregate	40	Electricity	642.6992013	0	642.6992013	0	239.4551354
Los Angeles (SC)	2017	LDT2	Aggregate	40	Plug-in Hybrid	709.18674	391.3098516	317.8768884	0.013144268	93.0964485
Los Angeles (SC)	2017	LDT2	Aggregate	45	Gasoline	3147607.605	3147607.605	0	132.8408693	0
Los Angeles (SC)	2017	LDT2	Aggregate	45	Diesel	9881.940516	9881.940516	0	0.278693877	0
Los Angeles (SC)	2017	LDT2	Aggregate	45	Electricity	475.0886776	0	475.0886776	0	180.6108117
Los Angeles (SC)	2017	LDT2	Aggregate	45	Plug-in Hybrid	511.2924544	321.0185502	190.2739042	0.010162522	56.84666516
Los Angeles (SC)	2017	LDT2	Aggregate	50	Gasoline	2337551.177	2337551.177	0	101.6620257	0
Los Angeles (SC)	2017	LDT2	Aggregate	50	Diesel	7338.761555	7338.761555	0	0.207314096	0
Los Angeles (SC)	2017	LDT2	Aggregate	50	Electricity	271.2900849	0	271.2900849	0	106.1671585
Los Angeles (SC)	2017	LDT2	Aggregate	50	Plug-in Hybrid	329.8581791	238.4024262	91.45575286	0.007170235	28.03892822
Los Angeles (SC)	2017	LDT2	Aggregate	55	Gasoline	2383333.219	2383333.219	0	107.9310991	0
Los Angeles (SC)	2017	LDT2	Aggregate	55	Diesel	7482.49466	7482.49466	0	0.221009197	0
Los Angeles (SC)	2017	LDT2	Aggregate	55	Electricity	107.348289	0	107.348289	0	43.66263783
Los Angeles (SC)	2017	LDT2	Aggregate	55	Plug-in Hybrid	274.0918325	243.0716502	31.02018234	0.006972284	10.36831898
Los Angeles (SC)	2017	LDT2	Aggregate	60	Gasoline	2755961.232	2755961.232	0	129.6252054	0
Los Angeles (SC)	2017	LDT2	Aggregate	60	Diesel	8652.363436	8652.363436	0	0.276827495	0
Los Angeles (SC)	2017	LDT2	Aggregate	60	Electricity	27.48827112	0	27.48827112	0	11.71513776
Los Angeles (SC)	2017	LDT2	Aggregate	60	Plug-in Hybrid	287.0733542	281.0752769	5.998077351	0.007699414	2.109571553
Los Angeles (SC)	2017	LDT2	Aggregate	65	Gasoline	1976585.246	1976585.246	0	96.00371647	0
Los Angeles (SC)	2017	LDT2	Aggregate	65	Diesel	6205.505982	6205.505982	0	0.223006975	0
Los Angeles (SC)	2017	LDT2	Aggregate	65	Electricity	4.012434732	0	4.012434732	0	1.790311771
Los Angeles (SC)	2017	LDT2	Aggregate	65	Plug-in Hybrid	202.2309419	201.5881932	0.642748681	0.005318371	0.248240706
Los Angeles (SC)	2017	LDT2	Aggregate	70	Gasoline	6145369.515	6145369.515	0	297.5947126	0
Los Angeles (SC)	2017	LDT2	Aggregate	70	Diesel	19293.43921	19293.43921	0	0.748055572	0
Los Angeles (SC)	2017	LDT2	Aggregate	70	Electricity	0.650782371	0	0.650782371	0	0.322604175
Los Angeles (SC)	2017	LDT2	Aggregate	70	Plug-in Hybrid	626.7932677	626.7546212	0.038646475	0.015670177	0.014891798
Los Angeles (SC)	2017	LHDT1	Aggregate	5	Gasoline	1700.213408	1700.213408	0	0.351255169	0
Los Angeles (SC)	2017	LHDT1	Aggregate	5	Diesel	374.2200711	374.2200711	0	0.04574402	0
Los Angeles (SC)	2017	LHDT1	Aggregate	10	Gasoline	18294.76096	18294.76096	0	3.144275804	0
Los Angeles (SC)	2017	LHDT1	Aggregate	10	Diesel	4013.382458	4013.382458	0	0.423162764	0
Los Angeles (SC)	2017	LHDT1	Aggregate	15	Gasoline	57018.41671	57018.41671	0	8.181356004	0
Los Angeles (SC)	2017	LHDT1	Aggregate	15	Diesel	12460.18409	12460.18409	0	1.075312011	0
Los Angeles (SC)	2017	LHDT1	Aggregate	20	Gasoline	167636.6718	167636.6718	0	20.25951661	0
Los Angeles (SC)	2017	LHDT1	Aggregate	20	Diesel	44812.27729	44812.27729	0	3.334347975	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2017	LHDT1	Aggregate	25	Gasoline	321114.2719	321114.2719	0	33.21826538	0
Los Angeles (SC)	2017	LHDT1	Aggregate	25	Diesel	84094.1554	84094.1554	0	5.437568594	0
Los Angeles (SC)	2017	LHDT1	Aggregate	30	Gasoline	495670.0717	495670.0717	0	44.92621751	0
Los Angeles (SC)	2017	LHDT1	Aggregate	30	Diesel	140900.3122	140900.3122	0	7.987215177	0
Los Angeles (SC)	2017	LHDT1	Aggregate	35	Gasoline	519022.4849	519022.4849	0	42.48616798	0
Los Angeles (SC)	2017	LHDT1	Aggregate	35	Diesel	165669.2012	165669.2012	0	8.472199006	0
Los Angeles (SC)	2017	LHDT1	Aggregate	40	Gasoline	396042.8791	396042.8791	0	30.31508482	0
Los Angeles (SC)	2017	LHDT1	Aggregate	40	Diesel	114233.6275	114233.6275	0	5.330475822	0
Los Angeles (SC)	2017	LHDT1	Aggregate	45	Gasoline	366806.0956	366806.0956	0	27.19338538	0
Los Angeles (SC)	2017	LHDT1	Aggregate	45	Diesel	98325.08804	98325.08804	0	4.285299296	0
Los Angeles (SC)	2017	LHDT1	Aggregate	50	Gasoline	320395.0591	320395.0591	0	23.74933117	0
Los Angeles (SC)	2017	LHDT1	Aggregate	50	Diesel	79014.27493	79014.27493	0	3.365850032	0
Los Angeles (SC)	2017	LHDT1	Aggregate	55	Gasoline	386828.4501	386828.4501	0	29.35962722	0
Los Angeles (SC)	2017	LHDT1	Aggregate	55	Diesel	100579.7518	100579.7518	0	4.32096338	0
Los Angeles (SC)	2017	LHDT1	Aggregate	60	Gasoline	414971.1323	414971.1323	0	32.74027303	0
Los Angeles (SC)	2017	LHDT1	Aggregate	60	Diesel	144605.7253	144605.7253	0	6.408866298	0
Los Angeles (SC)	2017	LHDT1	Aggregate	65	Gasoline	303587.0256	303587.0256	0	25.08427414	0
Los Angeles (SC)	2017	LHDT1	Aggregate	65	Diesel	99324.95899	99324.95899	0	4.67568263	0
Los Angeles (SC)	2017	LHDT1	Aggregate	70	Gasoline	735379.7557	735379.7557	0	63.51486047	0
Los Angeles (SC)	2017	LHDT1	Aggregate	70	Diesel	478896.8979	478896.8979	0	24.38456978	0
Los Angeles (SC)	2017	LHDT2	Aggregate	5	Gasoline	239.4635954	239.4635954	0	0.057059621	0
Los Angeles (SC)	2017	LHDT2	Aggregate	5	Diesel	147.527773	147.527773	0	0.02176292	0
Los Angeles (SC)	2017	LHDT2	Aggregate	10	Gasoline	2576.693734	2576.693734	0	0.509479807	0
Los Angeles (SC)	2017	LHDT2	Aggregate	10	Diesel	1582.184982	1582.184982	0	0.203611513	0
Los Angeles (SC)	2017	LHDT2	Aggregate	15	Gasoline	8030.659564	8030.659564	0	1.322859467	0
Los Angeles (SC)	2017	LHDT2	Aggregate	15	Diesel	4912.144891	4912.144891	0	0.524502415	0
Los Angeles (SC)	2017	LHDT2	Aggregate	20	Gasoline	23610.49498	23610.49498	0	3.271447336	0
Los Angeles (SC)	2017	LHDT2	Aggregate	20	Diesel	17666.22366	17666.22366	0	1.626869153	0
Los Angeles (SC)	2017	LHDT2	Aggregate	25	Gasoline	45226.78018	45226.78018	0	5.363413927	0
Los Angeles (SC)	2017	LHDT2	Aggregate	25	Diesel	33152.21291	33152.21291	0	2.651896162	0
Los Angeles (SC)	2017	LHDT2	Aggregate	30	Gasoline	69811.7877	69811.7877	0	7.263631579	0
Los Angeles (SC)	2017	LHDT2	Aggregate	30	Diesel	55546.75146	55546.75146	0	3.88431157	0
Los Angeles (SC)	2017	LHDT2	Aggregate	35	Gasoline	73100.81764	73100.81764	0	6.888394157	0
Los Angeles (SC)	2017	LHDT2	Aggregate	35	Diesel	65311.324	65311.324	0	4.099553517	0
Los Angeles (SC)	2017	LHDT2	Aggregate	40	Gasoline	55779.96933	55779.96933	0	4.933805224	0
Los Angeles (SC)	2017	LHDT2	Aggregate	40	Diesel	45034.016	45034.016	0	2.565970587	0
Los Angeles (SC)	2017	LHDT2	Aggregate	45	Gasoline	51662.1655	51662.1655	0	4.443510156	0
Los Angeles (SC)	2017	LHDT2	Aggregate	45	Diesel	38762.43524	38762.43524	0	2.051814859	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2017	LHDT2	Aggregate	50	Gasoline	45125.48391	45125.48391	0	3.893735671	0
Los Angeles (SC)	2017	LHDT2	Aggregate	50	Diesel	31149.58528	31149.58528	0	1.600973671	0
Los Angeles (SC)	2017	LHDT2	Aggregate	55	Gasoline	54482.17913	54482.17913	0	4.822639728	0
Los Angeles (SC)	2017	LHDT2	Aggregate	55	Diesel	39651.28526	39651.28526	0	2.046355766	0
Los Angeles (SC)	2017	LHDT2	Aggregate	60	Gasoline	58445.88617	58445.88617	0	5.377729645	0
Los Angeles (SC)	2017	LHDT2	Aggregate	60	Diesel	57007.5265	57007.5265	0	3.036025206	0
Los Angeles (SC)	2017	LHDT2	Aggregate	65	Gasoline	42758.18572	42758.18572	0	4.111342819	0
Los Angeles (SC)	2017	LHDT2	Aggregate	65	Diesel	39156.61168	39156.61168	0	2.218208146	0
Los Angeles (SC)	2017	LHDT2	Aggregate	70	Gasoline	103573.2805	103573.2805	0	10.3654317	0
Los Angeles (SC)	2017	LHDT2	Aggregate	70	Diesel	188794.2372	188794.2372	0	11.6374635	0
Los Angeles (SC)	2017	MCY	Aggregate	5	Gasoline	1375.213978	1375.213978	0	0.076593851	0
Los Angeles (SC)	2017	MCY	Aggregate	10	Gasoline	7620.775684	7620.775684	0	0.33934075	0
Los Angeles (SC)	2017	MCY	Aggregate	15	Gasoline	16529.29595	16529.29595	0	0.596982251	0
Los Angeles (SC)	2017	MCY	Aggregate	20	Gasoline	47713.40563	47713.40563	0	1.427813242	0
Los Angeles (SC)	2017	MCY	Aggregate	25	Gasoline	97030.41125	97030.41125	0	2.478969628	0
Los Angeles (SC)	2017	MCY	Aggregate	30	Gasoline	146874.2637	146874.2637	0	3.32516275	0
Los Angeles (SC)	2017	MCY	Aggregate	35	Gasoline	134044.1354	134044.1354	0	2.804884163	0
Los Angeles (SC)	2017	MCY	Aggregate	40	Gasoline	64596.67449	64596.67449	0	1.302479743	0
Los Angeles (SC)	2017	MCY	Aggregate	45	Gasoline	52993.12222	52993.12222	0	1.066441036	0
Los Angeles (SC)	2017	MCY	Aggregate	50	Gasoline	39355.01205	39355.01205	0	0.811749657	0
Los Angeles (SC)	2017	MCY	Aggregate	55	Gasoline	40125.79852	40125.79852	0	0.861739999	0
Los Angeles (SC)	2017	MCY	Aggregate	60	Gasoline	46399.36381	46399.36381	0	1.044939231	0
Los Angeles (SC)	2017	MCY	Aggregate	65	Gasoline	33277.78956	33277.78956	0	0.784598264	0
Los Angeles (SC)	2017	MCY	Aggregate	70	Gasoline	103463.4423	103463.4423	0	2.511587862	0
Los Angeles (SC)	2017	MDV	Aggregate	5	Gasoline	51993.2032	51993.2032	0	7.029068926	0
Los Angeles (SC)	2017	MDV	Aggregate	5	Diesel	520.221511	520.221511	0	0.053532778	0
Los Angeles (SC)	2017	MDV	Aggregate	5	Electricity	64.60676129	0	64.60676129	0	44.86684732
Los Angeles (SC)	2017	MDV	Aggregate	5	Plug-in Hybrid	386.7151624	48.84259462	337.8725678	0.004760391	176.0787822
Los Angeles (SC)	2017	MDV	Aggregate	10	Gasoline	288121.3724	288121.3724	0	31.51612761	0
Los Angeles (SC)	2017	MDV	Aggregate	10	Diesel	2882.817878	2882.817878	0	0.25193057	0
Los Angeles (SC)	2017	MDV	Aggregate	10	Electricity	103.3588564	0	103.3588564	0	48.44286585
Los Angeles (SC)	2017	MDV	Aggregate	10	Plug-in Hybrid	1621.610341	270.6622122	1350.948129	0.018443094	499.2916436
Los Angeles (SC)	2017	MDV	Aggregate	15	Gasoline	624928.9617	624928.9617	0	55.92875889	0
Los Angeles (SC)	2017	MDV	Aggregate	15	Diesel	6252.768992	6252.768992	0	0.463410948	0
Los Angeles (SC)	2017	MDV	Aggregate	15	Electricity	230.1890194	0	230.1890194	0	90.75884414
Los Angeles (SC)	2017	MDV	Aggregate	15	Plug-in Hybrid	3893.485328	587.0604246	3306.424904	0.032553703	1057.603395
Los Angeles (SC)	2017	MDV	Aggregate	20	Gasoline	1803917.67	1803917.67	0	134.3175136	0
Los Angeles (SC)	2017	MDV	Aggregate	20	Diesel	18049.22025	18049.22025	0	1.110938241	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2017	MDV	Aggregate	20	Electricity	338.0480231	0	338.0480231	0	124.8117394
Los Angeles (SC)	2017	MDV	Aggregate	20	Plug-in Hybrid	6504.563177	1694.606488	4809.956689	0.081235821	1441.804611
Los Angeles (SC)	2017	MDV	Aggregate	25	Gasoline	3668463.214	3668463.214	0	233.5804629	0
Los Angeles (SC)	2017	MDV	Aggregate	25	Diesel	36705.0568	36705.0568	0	1.910397914	0
Los Angeles (SC)	2017	MDV	Aggregate	25	Electricity	369.2173215	0	369.2173215	0	134.9039815
Los Angeles (SC)	2017	MDV	Aggregate	25	Plug-in Hybrid	8261.320152	3446.167011	4815.153141	0.147499011	1385.667434
Los Angeles (SC)	2017	MDV	Aggregate	30	Gasoline	5552927.444	5552927.444	0	313.6868256	0
Los Angeles (SC)	2017	MDV	Aggregate	30	Diesel	55560.1911	55560.1911	0	2.497576751	0
Los Angeles (SC)	2017	MDV	Aggregate	30	Electricity	370.1611122	0	370.1611122	0	135.4040629
Los Angeles (SC)	2017	MDV	Aggregate	30	Plug-in Hybrid	9063.475911	5216.439216	3847.036696	0.203399798	1088.746675
Los Angeles (SC)	2017	MDV	Aggregate	35	Gasoline	5067854.225	5067854.225	0	265.1668995	0
Los Angeles (SC)	2017	MDV	Aggregate	35	Diesel	50706.7582	50706.7582	0	2.068242266	0
Los Angeles (SC)	2017	MDV	Aggregate	35	Electricity	347.8932868	0	347.8932868	0	127.8557198
Los Angeles (SC)	2017	MDV	Aggregate	35	Plug-in Hybrid	7521.686193	4760.759759	2760.926434	0.171455082	772.7252852
Los Angeles (SC)	2017	MDV	Aggregate	40	Gasoline	2442229.411	2442229.411	0	123.5260334	0
Los Angeles (SC)	2017	MDV	Aggregate	40	Diesel	24435.89154	24435.89154	0	0.932274237	0
Los Angeles (SC)	2017	MDV	Aggregate	40	Electricity	302.9443397	0	302.9443397	0	112.8701852
Los Angeles (SC)	2017	MDV	Aggregate	40	Plug-in Hybrid	4157.942069	2294.238742	1863.703327	0.077081829	545.82188
Los Angeles (SC)	2017	MDV	Aggregate	45	Gasoline	2003529.79	2003529.79	0	101.6792547	0
Los Angeles (SC)	2017	MDV	Aggregate	45	Diesel	20046.45282	20046.45282	0	0.736018288	0
Los Angeles (SC)	2017	MDV	Aggregate	45	Electricity	223.9390145	0	223.9390145	0	85.13317423
Los Angeles (SC)	2017	MDV	Aggregate	45	Plug-in Hybrid	2997.693394	1882.122803	1115.570591	0.059596392	333.2904117
Los Angeles (SC)	2017	MDV	Aggregate	50	Gasoline	1487908.916	1487908.916	0	77.80348282	0
Los Angeles (SC)	2017	MDV	Aggregate	50	Diesel	14887.37329	14887.37329	0	0.549338391	0
Los Angeles (SC)	2017	MDV	Aggregate	50	Electricity	127.8759885	0	127.8759885	0	50.04322345
Los Angeles (SC)	2017	MDV	Aggregate	50	Plug-in Hybrid	1933.9493	1397.746773	536.2025272	0.042049669	164.3914538
Los Angeles (SC)	2017	MDV	Aggregate	55	Gasoline	1517050.313	1517050.313	0	82.60306563	0
Los Angeles (SC)	2017	MDV	Aggregate	55	Diesel	15178.94951	15178.94951	0	0.591098465	0
Los Angeles (SC)	2017	MDV	Aggregate	55	Electricity	50.59996414	0	50.59996414	0	20.58093267
Los Angeles (SC)	2017	MDV	Aggregate	55	Plug-in Hybrid	1606.992766	1425.122303	181.8704635	0.040889251	60.78916491
Los Angeles (SC)	2017	MDV	Aggregate	60	Gasoline	1754237.224	1754237.224	0	99.24129054	0
Los Angeles (SC)	2017	MDV	Aggregate	60	Diesel	17552.13919	17552.13919	0	0.740109408	0
Los Angeles (SC)	2017	MDV	Aggregate	60	Electricity	12.9569418	0	12.9569418	0	5.522077304
Los Angeles (SC)	2017	MDV	Aggregate	60	Plug-in Hybrid	1683.103066	1647.936506	35.16656015	0.045152671	12.36835916
Los Angeles (SC)	2017	MDV	Aggregate	65	Gasoline	1258145.207	1258145.207	0	73.50054514	0
Los Angeles (SC)	2017	MDV	Aggregate	65	Diesel	12588.45696	12588.45696	0	0.596024234	0
Los Angeles (SC)	2017	MDV	Aggregate	65	Electricity	1.8913115	0	1.8913115	0	0.843885936
Los Angeles (SC)	2017	MDV	Aggregate	65	Plug-in Hybrid	1185.67437	1181.905952	3.768417583	0.031190239	1.455428331

EMFAC2021 Raw Output File

Los Angeles (SC)	2017	MDV	Aggregate	70	Gasoline	3911679.103	3911679.103	0	228.2272086	0
Los Angeles (SC)	2017	MDV	Aggregate	70	Diesel	39138.56982	39138.56982	0	1.994881631	0
Los Angeles (SC)	2017	MDV	Aggregate	70	Electricity	0.306754443	0	0.306754443	0	0.152063529
Los Angeles (SC)	2017	MDV	Aggregate	70	Plug-in Hybrid	3674.87144	3674.644857	0.226583205	0.091884065	0.087310194
Los Angeles (SC)	2017	MH	Aggregate	5	Gasoline	109.779851	109.779851	0	0.054184439	0
Los Angeles (SC)	2017	MH	Aggregate	5	Diesel	22.25975067	22.25975067	0	0.004704729	0
Los Angeles (SC)	2017	MH	Aggregate	10	Gasoline	835.7635111	835.7635111	0	0.334554736	0
Los Angeles (SC)	2017	MH	Aggregate	10	Diesel	163.5115632	163.5115632	0	0.031379839	0
Los Angeles (SC)	2017	MH	Aggregate	15	Gasoline	2457.062791	2457.062791	0	0.803915702	0
Los Angeles (SC)	2017	MH	Aggregate	15	Diesel	478.7338595	478.7338595	0	0.075437171	0
Los Angeles (SC)	2017	MH	Aggregate	20	Gasoline	7209.117255	7209.117255	0	1.960107809	0
Los Angeles (SC)	2017	MH	Aggregate	20	Diesel	1558.91499	1558.91499	0	0.201583607	0
Los Angeles (SC)	2017	MH	Aggregate	25	Gasoline	14047.58998	14047.58998	0	3.264196697	0
Los Angeles (SC)	2017	MH	Aggregate	25	Diesel	3077.793821	3077.793821	0	0.356980971	0
Los Angeles (SC)	2017	MH	Aggregate	30	Gasoline	20356.02834	20356.02834	0	4.196778398	0
Los Angeles (SC)	2017	MH	Aggregate	30	Diesel	4636.788433	4636.788433	0	0.504808977	0
Los Angeles (SC)	2017	MH	Aggregate	35	Gasoline	20340.66802	20340.66802	0	3.887089674	0
Los Angeles (SC)	2017	MH	Aggregate	35	Diesel	4855.73925	4855.73925	0	0.499972779	0
Los Angeles (SC)	2017	MH	Aggregate	40	Gasoline	15729.55619	15729.55619	0	2.909567296	0
Los Angeles (SC)	2017	MH	Aggregate	40	Diesel	3595.072946	3595.072946	0	0.353290677	0
Los Angeles (SC)	2017	MH	Aggregate	45	Gasoline	15008.84714	15008.84714	0	2.785959838	0
Los Angeles (SC)	2017	MH	Aggregate	45	Diesel	3425.910406	3425.910406	0	0.324731077	0
Los Angeles (SC)	2017	MH	Aggregate	50	Gasoline	13748.03379	13748.03379	0	2.627136263	0
Los Angeles (SC)	2017	MH	Aggregate	50	Diesel	3147.903827	3147.903827	0	0.29122308	0
Los Angeles (SC)	2017	MH	Aggregate	55	Gasoline	16685.25287	16685.25287	0	3.320606358	0
Los Angeles (SC)	2017	MH	Aggregate	55	Diesel	4065.311529	4065.311529	0	0.371774388	0
Los Angeles (SC)	2017	MH	Aggregate	60	Gasoline	17848.66579	17848.66579	0	3.699114881	0
Los Angeles (SC)	2017	MH	Aggregate	60	Diesel	4987.039621	4987.039621	0	0.456802909	0
Los Angeles (SC)	2017	MH	Aggregate	65	Gasoline	14090.7736	14090.7736	0	3.013790334	0
Los Angeles (SC)	2017	MH	Aggregate	65	Diesel	3584.26266	3584.26266	0	0.333179258	0
Los Angeles (SC)	2017	MH	Aggregate	70	Gasoline	17788.75354	17788.75354	0	3.844116798	0
Los Angeles (SC)	2017	MH	Aggregate	70	Diesel	6687.577523	6687.577523	0	0.638829663	0
Los Angeles (SC)	2017	MHDT	Aggregate	5	Gasoline	490.4074311	490.4074311	0	0.237194964	0
Los Angeles (SC)	2017	MHDT	Aggregate	5	Diesel	1574.141331	1574.141331	0	0.37473828	0
Los Angeles (SC)	2017	MHDT	Aggregate	5	Natural Gas	12.71025257	12.71025257	0	0.004287429	0
Los Angeles (SC)	2017	MHDT	Aggregate	10	Gasoline	3733.514235	3733.514235	0	1.465701013	0
Los Angeles (SC)	2017	MHDT	Aggregate	10	Diesel	12488.54806	12488.54806	0	2.589372114	0
Los Angeles (SC)	2017	MHDT	Aggregate	10	Natural Gas	97.84154911	97.84154911	0	0.02634778	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2017	MHDT	Aggregate	15	Gasoline	10976.16585	10976.16585	0	3.524079969	0
Los Angeles (SC)	2017	MHDT	Aggregate	15	Diesel	35778.65654	35778.65654	0	6.00970422	0
Los Angeles (SC)	2017	MHDT	Aggregate	15	Natural Gas	282.7626183	282.7626183	0	0.057301446	0
Los Angeles (SC)	2017	MHDT	Aggregate	20	Gasoline	32204.49509	32204.49509	0	8.596050404	0
Los Angeles (SC)	2017	MHDT	Aggregate	20	Diesel	102542.7468	102542.7468	0	14.49032762	0
Los Angeles (SC)	2017	MHDT	Aggregate	20	Natural Gas	850.5158783	850.5158783	0	0.14284519	0
Los Angeles (SC)	2017	MHDT	Aggregate	25	Gasoline	62753.25071	62753.25071	0	14.31922607	0
Los Angeles (SC)	2017	MHDT	Aggregate	25	Diesel	200009.4433	200009.4433	0	25.38542537	0
Los Angeles (SC)	2017	MHDT	Aggregate	25	Natural Gas	1667.536995	1667.536995	0	0.243511093	0
Los Angeles (SC)	2017	MHDT	Aggregate	30	Gasoline	90934.24224	90934.24224	0	18.412916	0
Los Angeles (SC)	2017	MHDT	Aggregate	30	Diesel	286418.2241	286418.2241	0	33.69136773	0
Los Angeles (SC)	2017	MHDT	Aggregate	30	Natural Gas	2436.731759	2436.731759	0	0.318178752	0
Los Angeles (SC)	2017	MHDT	Aggregate	35	Gasoline	90865.62478	90865.62478	0	17.05423244	0
Los Angeles (SC)	2017	MHDT	Aggregate	35	Diesel	284393.2798	284393.2798	0	31.38396141	0
Los Angeles (SC)	2017	MHDT	Aggregate	35	Natural Gas	2472.099759	2472.099759	0	0.294081575	0
Los Angeles (SC)	2017	MHDT	Aggregate	40	Gasoline	70266.91302	70266.91302	0	12.76372691	0
Los Angeles (SC)	2017	MHDT	Aggregate	40	Diesel	224030.0618	224030.0618	0	23.51894269	0
Los Angeles (SC)	2017	MHDT	Aggregate	40	Natural Gas	1897.98477	1897.98477	0	0.208565777	0
Los Angeles (SC)	2017	MHDT	Aggregate	45	Gasoline	67047.36893	67047.36893	0	12.21821482	0
Los Angeles (SC)	2017	MHDT	Aggregate	45	Diesel	211233.8208	211233.8208	0	21.44015802	0
Los Angeles (SC)	2017	MHDT	Aggregate	45	Natural Gas	1799.787742	1799.787742	0	0.18446912	0
Los Angeles (SC)	2017	MHDT	Aggregate	50	Gasoline	61415.07637	61415.07637	0	11.51695235	0
Los Angeles (SC)	2017	MHDT	Aggregate	50	Diesel	189749.7562	189749.7562	0	18.94605578	0
Los Angeles (SC)	2017	MHDT	Aggregate	50	Natural Gas	1634.014954	1634.014954	0	0.1574186	0
Los Angeles (SC)	2017	MHDT	Aggregate	55	Gasoline	74536.19148	74536.19148	0	14.54849568	0
Los Angeles (SC)	2017	MHDT	Aggregate	55	Diesel	222806.6195	222806.6195	0	22.28863384	0
Los Angeles (SC)	2017	MHDT	Aggregate	55	Natural Gas	2000.390651	2000.390651	0	0.182210837	0
Los Angeles (SC)	2017	MHDT	Aggregate	60	Gasoline	79733.3778	79733.3778	0	16.19301004	0
Los Angeles (SC)	2017	MHDT	Aggregate	60	Diesel	233758.5749	233758.5749	0	23.85640357	0
Los Angeles (SC)	2017	MHDT	Aggregate	60	Natural Gas	2248.181004	2248.181004	0	0.20464019	0
Los Angeles (SC)	2017	MHDT	Aggregate	65	Gasoline	62946.16013	62946.16013	0	13.17639585	0
Los Angeles (SC)	2017	MHDT	Aggregate	65	Diesel	177744.5848	177744.5848	0	18.73927678	0
Los Angeles (SC)	2017	MHDT	Aggregate	65	Natural Gas	1665.373563	1665.373563	0	0.151626871	0
Los Angeles (SC)	2017	MHDT	Aggregate	70	Gasoline	79465.73842	79465.73842	0	16.7910678	0
Los Angeles (SC)	2017	MHDT	Aggregate	70	Diesel	227966.3518	227966.3518	0	24.03227344	0
Los Angeles (SC)	2017	MHDT	Aggregate	70	Natural Gas	2557.842778	2557.842778	0	0.232478666	0
Los Angeles (SC)	2017	OBUS	Aggregate	5	Gasoline	304.4274579	304.4274579	0	0.147746023	0
Los Angeles (SC)	2017	OBUS	Aggregate	5	Diesel	224.4364346	224.4364346	0	0.065187608	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2017	OBUS	Aggregate	5	Natural Gas	19.84975029	19.84975029	0	0.006788739	0
Los Angeles (SC)	2017	OBUS	Aggregate	10	Gasoline	1216.427933	1216.427933	0	0.479246198	0
Los Angeles (SC)	2017	OBUS	Aggregate	10	Diesel	898.2356192	898.2356192	0	0.228663602	0
Los Angeles (SC)	2017	OBUS	Aggregate	10	Natural Gas	79.31541683	79.31541683	0	0.021640222	0
Los Angeles (SC)	2017	OBUS	Aggregate	15	Gasoline	3554.557649	3554.557649	0	1.145350086	0
Los Angeles (SC)	2017	OBUS	Aggregate	15	Diesel	2631.568359	2631.568359	0	0.547939128	0
Los Angeles (SC)	2017	OBUS	Aggregate	15	Natural Gas	231.7697694	231.7697694	0	0.047570147	0
Los Angeles (SC)	2017	OBUS	Aggregate	20	Gasoline	9528.069438	9528.069438	0	2.552304994	0
Los Angeles (SC)	2017	OBUS	Aggregate	20	Diesel	7259.82314	7259.82314	0	1.291973469	0
Los Angeles (SC)	2017	OBUS	Aggregate	20	Natural Gas	621.2639307	621.2639307	0	0.105712151	0
Los Angeles (SC)	2017	OBUS	Aggregate	25	Gasoline	20194.87653	20194.87653	0	4.624358735	0
Los Angeles (SC)	2017	OBUS	Aggregate	25	Diesel	15437.60295	15437.60295	0	2.473133133	0
Los Angeles (SC)	2017	OBUS	Aggregate	25	Natural Gas	1316.777596	1316.777596	0	0.194778941	0
Los Angeles (SC)	2017	OBUS	Aggregate	30	Gasoline	25805.66713	25805.66713	0	5.243597553	0
Los Angeles (SC)	2017	OBUS	Aggregate	30	Diesel	20499.34364	20499.34364	0	3.068704626	0
Los Angeles (SC)	2017	OBUS	Aggregate	30	Natural Gas	1682.621049	1682.621049	0	0.222563141	0
Los Angeles (SC)	2017	OBUS	Aggregate	35	Gasoline	18866.16856	18866.16856	0	3.553453287	0
Los Angeles (SC)	2017	OBUS	Aggregate	35	Diesel	15212.73397	15212.73397	0	2.13968155	0
Los Angeles (SC)	2017	OBUS	Aggregate	35	Natural Gas	1230.141123	1230.141123	0	0.148250053	0
Los Angeles (SC)	2017	OBUS	Aggregate	40	Gasoline	19722.67592	19722.67592	0	3.595557181	0
Los Angeles (SC)	2017	OBUS	Aggregate	40	Diesel	15265.6232	15265.6232	0	2.017441565	0
Los Angeles (SC)	2017	OBUS	Aggregate	40	Natural Gas	1285.988441	1285.988441	0	0.143102401	0
Los Angeles (SC)	2017	OBUS	Aggregate	45	Gasoline	20410.05399	20410.05399	0	3.733292246	0
Los Angeles (SC)	2017	OBUS	Aggregate	45	Diesel	15426.87588	15426.87588	0	1.953467119	0
Los Angeles (SC)	2017	OBUS	Aggregate	45	Natural Gas	1330.80793	1330.80793	0	0.138113539	0
Los Angeles (SC)	2017	OBUS	Aggregate	50	Gasoline	18890.8049	18890.8049	0	3.5561165	0
Los Angeles (SC)	2017	OBUS	Aggregate	50	Diesel	14863.01523	14863.01523	0	1.863978296	0
Los Angeles (SC)	2017	OBUS	Aggregate	50	Natural Gas	1231.747499	1231.747499	0	0.120150771	0
Los Angeles (SC)	2017	OBUS	Aggregate	55	Gasoline	15859.08182	15859.08182	0	3.107475499	0
Los Angeles (SC)	2017	OBUS	Aggregate	55	Diesel	13881.79749	13881.79749	0	1.781637761	0
Los Angeles (SC)	2017	OBUS	Aggregate	55	Natural Gas	1034.068399	1034.068399	0	0.095396976	0
Los Angeles (SC)	2017	OBUS	Aggregate	60	Gasoline	28501.59171	28501.59171	0	5.810445788	0
Los Angeles (SC)	2017	OBUS	Aggregate	60	Diesel	30556.27527	30556.27527	0	4.154633603	0
Los Angeles (SC)	2017	OBUS	Aggregate	60	Natural Gas	1858.404897	1858.404897	0	0.17144534	0
Los Angeles (SC)	2017	OBUS	Aggregate	65	Gasoline	21783.48444	21783.48444	0	4.576408009	0
Los Angeles (SC)	2017	OBUS	Aggregate	65	Diesel	22767.93797	22767.93797	0	3.183002526	0
Los Angeles (SC)	2017	OBUS	Aggregate	65	Natural Gas	1420.360468	1420.360468	0	0.131033976	0
Los Angeles (SC)	2017	OBUS	Aggregate	70	Gasoline	13.13859544	13.13859544	0	0.002785689	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2017	OBUS	Aggregate	70	Diesel	16.67243318	16.67243318	0	0.002409149	0
Los Angeles (SC)	2017	OBUS	Aggregate	70	Natural Gas	0.856683035	0.856683035	0	7.90325E-05	0
Los Angeles (SC)	2017	SBUS	Aggregate	5	Gasoline	1318.82544	1318.82544	0	0.308306956	0
Los Angeles (SC)	2017	SBUS	Aggregate	5	Diesel	1279.81421	1279.81421	0	0.307495948	0
Los Angeles (SC)	2017	SBUS	Aggregate	5	Natural Gas	826.5355691	826.5355691	0	1.006389601	0
Los Angeles (SC)	2017	SBUS	Aggregate	10	Gasoline	1889.917693	1889.917693	0	0.358406935	0
Los Angeles (SC)	2017	SBUS	Aggregate	10	Diesel	1834.013393	1834.013393	0	0.395884191	0
Los Angeles (SC)	2017	SBUS	Aggregate	10	Natural Gas	1184.451064	1184.451064	0	0.919928594	0
Los Angeles (SC)	2017	SBUS	Aggregate	15	Gasoline	2707.574958	2707.574958	0	0.419855893	0
Los Angeles (SC)	2017	SBUS	Aggregate	15	Diesel	2627.484124	2627.484124	0	0.464293013	0
Los Angeles (SC)	2017	SBUS	Aggregate	15	Natural Gas	1696.894024	1696.894024	0	0.747969067	0
Los Angeles (SC)	2017	SBUS	Aggregate	20	Gasoline	3278.650013	3278.650013	0	0.422674879	0
Los Angeles (SC)	2017	SBUS	Aggregate	20	Diesel	3181.666618	3181.666618	0	0.464478509	0
Los Angeles (SC)	2017	SBUS	Aggregate	20	Natural Gas	2054.798741	2054.798741	0	0.623672837	0
Los Angeles (SC)	2017	SBUS	Aggregate	25	Gasoline	4589.437301	4589.437301	0	0.505832435	0
Los Angeles (SC)	2017	SBUS	Aggregate	25	Diesel	4453.680447	4453.680447	0	0.583658484	0
Los Angeles (SC)	2017	SBUS	Aggregate	25	Natural Gas	2876.296632	2876.296632	0	0.660679619	0
Los Angeles (SC)	2017	SBUS	Aggregate	30	Gasoline	5329.132336	5329.132336	0	0.521211298	0
Los Angeles (SC)	2017	SBUS	Aggregate	30	Diesel	5171.495093	5171.495093	0	0.634493147	0
Los Angeles (SC)	2017	SBUS	Aggregate	30	Natural Gas	3339.879027	3339.879027	0	0.614111376	0
Los Angeles (SC)	2017	SBUS	Aggregate	35	Gasoline	5679.016223	5679.016223	0	0.514759357	0
Los Angeles (SC)	2017	SBUS	Aggregate	35	Diesel	5511.029316	5511.029316	0	0.638613584	0
Los Angeles (SC)	2017	SBUS	Aggregate	35	Natural Gas	3559.158598	3559.158598	0	0.54376633	0
Los Angeles (SC)	2017	SBUS	Aggregate	40	Gasoline	4290.266705	4290.266705	0	0.376245515	0
Los Angeles (SC)	2017	SBUS	Aggregate	40	Diesel	4163.359402	4163.359402	0	0.460378441	0
Los Angeles (SC)	2017	SBUS	Aggregate	40	Natural Gas	2688.800143	2688.800143	0	0.350515866	0
Los Angeles (SC)	2017	SBUS	Aggregate	45	Gasoline	2642.273853	2642.273853	0	0.232373931	0
Los Angeles (SC)	2017	SBUS	Aggregate	45	Diesel	2564.114645	2564.114645	0	0.273760762	0
Los Angeles (SC)	2017	SBUS	Aggregate	45	Natural Gas	1655.968452	1655.968452	0	0.187898799	0
Los Angeles (SC)	2017	SBUS	Aggregate	50	Gasoline	1811.955464	1811.955464	0	0.163920958	0
Los Angeles (SC)	2017	SBUS	Aggregate	50	Diesel	1758.357308	1758.357308	0	0.183622058	0
Los Angeles (SC)	2017	SBUS	Aggregate	50	Natural Gas	1135.590499	1135.590499	0	0.113901289	0
Los Angeles (SC)	2017	SBUS	Aggregate	55	Gasoline	2499.027717	2499.027717	0	0.235329634	0
Los Angeles (SC)	2017	SBUS	Aggregate	55	Diesel	2425.10577	2425.10577	0	0.251134543	0
Los Angeles (SC)	2017	SBUS	Aggregate	55	Natural Gas	1566.193093	1566.193093	0	0.140589564	0
Los Angeles (SC)	2017	SBUS	Aggregate	60	Gasoline	1824.633786	1824.633786	0	0.178824635	0
Los Angeles (SC)	2017	SBUS	Aggregate	60	Diesel	1770.660602	1770.660602	0	0.184060807	0
Los Angeles (SC)	2017	SBUS	Aggregate	60	Natural Gas	1143.53627	1143.53627	0	0.102649709	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2017	SBUS	Aggregate	65	Gasoline	1072.260429	1072.260429	0	0.108385466	0
Los Angeles (SC)	2017	SBUS	Aggregate	65	Diesel	1040.542662	1040.542662	0	0.1090075	0
Los Angeles (SC)	2017	SBUS	Aggregate	65	Natural Gas	672.008104	672.008104	0	0.060322911	0
Los Angeles (SC)	2017	SBUS	Aggregate	70	Gasoline	1072.260429	1072.260429	0	0.109486676	0
Los Angeles (SC)	2017	SBUS	Aggregate	70	Diesel	1040.542662	1040.542662	0	0.1090075	0
Los Angeles (SC)	2017	SBUS	Aggregate	70	Natural Gas	672.008104	672.008104	0	0.060322911	0
Los Angeles (SC)	2017	SBUS	Aggregate	75	Gasoline	1072.260429	1072.260429	0	0.109486676	0
Los Angeles (SC)	2017	SBUS	Aggregate	75	Diesel	1040.542662	1040.542662	0	0.1090075	0
Los Angeles (SC)	2017	SBUS	Aggregate	75	Natural Gas	672.008104	672.008104	0	0.060322911	0
Los Angeles (SC)	2017	SBUS	Aggregate	80	Gasoline	1072.260429	1072.260429	0	0.109486676	0
Los Angeles (SC)	2017	SBUS	Aggregate	80	Diesel	1040.542662	1040.542662	0	0.1090075	0
Los Angeles (SC)	2017	SBUS	Aggregate	80	Natural Gas	672.008104	672.008104	0	0.060322911	0
Los Angeles (SC)	2017	UBUS	Aggregate	5	Gasoline	329.622609	329.622609	0	0.159705867	0
Los Angeles (SC)	2017	UBUS	Aggregate	5	Diesel	190.782751	190.782751	0	0.065872984	0
Los Angeles (SC)	2017	UBUS	Aggregate	5	Electricity	20.37405491	0	20.37405491	0	120.3874876
Los Angeles (SC)	2017	UBUS	Aggregate	5	Natural Gas	5417.339669	5417.339669	0	6.544854154	0
Los Angeles (SC)	2017	UBUS	Aggregate	10	Gasoline	1109.77115	1109.77115	0	0.427143452	0
Los Angeles (SC)	2017	UBUS	Aggregate	10	Diesel	617.0107207	617.0107207	0	0.192413291	0
Los Angeles (SC)	2017	UBUS	Aggregate	10	Electricity	66.2017788	0	66.2017788	0	185.2916095
Los Angeles (SC)	2017	UBUS	Aggregate	10	Natural Gas	17526.35735	17526.35735	0	13.3928164	0
Los Angeles (SC)	2017	UBUS	Aggregate	15	Gasoline	2067.475412	2067.475412	0	0.639812642	0
Los Angeles (SC)	2017	UBUS	Aggregate	15	Diesel	1109.791384	1109.791384	0	0.283661755	0
Los Angeles (SC)	2017	UBUS	Aggregate	15	Electricity	119.5802988	0	119.5802988	0	278.9925358
Los Angeles (SC)	2017	UBUS	Aggregate	15	Natural Gas	31533.93412	31533.93412	0	13.72444431	0
Los Angeles (SC)	2017	UBUS	Aggregate	20	Gasoline	17377.80577	17377.80577	0	4.618075365	0
Los Angeles (SC)	2017	UBUS	Aggregate	20	Diesel	9920.176165	9920.176165	0	2.086957346	0
Los Angeles (SC)	2017	UBUS	Aggregate	20	Electricity	1061.083982	0	1061.083982	0	2198.055383
Los Angeles (SC)	2017	UBUS	Aggregate	20	Natural Gas	281720.1203	281720.1203	0	85.32959327	0
Los Angeles (SC)	2017	UBUS	Aggregate	25	Gasoline	1707.792252	1707.792252	0	0.270325014	0
Los Angeles (SC)	2017	UBUS	Aggregate	25	Diesel	399.8189697	399.8189697	0	0.075456098	0
Los Angeles (SC)	2017	UBUS	Aggregate	25	Electricity	49.90615646	0	49.90615646	0	94.8149167
Los Angeles (SC)	2017	UBUS	Aggregate	25	Natural Gas	11495.59176	11495.59176	0	2.661529712	0
Los Angeles (SC)	2017	UBUS	Aggregate	30	Gasoline	2345.733013	2345.733013	0	0.30967288	0
Los Angeles (SC)	2017	UBUS	Aggregate	30	Diesel	463.3776764	463.3776764	0	0.081938564	0
Los Angeles (SC)	2017	UBUS	Aggregate	30	Electricity	60.43716555	0	60.43716555	0	92.07628763
Los Angeles (SC)	2017	UBUS	Aggregate	30	Natural Gas	13374.41337	13374.41337	0	2.524531858	0
Los Angeles (SC)	2017	UBUS	Aggregate	35	Gasoline	2167.803515	2167.803515	0	0.23969896	0
Los Angeles (SC)	2017	UBUS	Aggregate	35	Diesel	327.3368778	327.3368778	0	0.054666277	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2017	UBUS	Aggregate	35	Electricity	46.31393683	0	46.31393683	0	71.77431676
Los Angeles (SC)	2017	UBUS	Aggregate	35	Natural Gas	9519.497745	9519.497745	0	1.519097299	0
Los Angeles (SC)	2017	UBUS	Aggregate	40	Gasoline	1788.303822	1788.303822	0	0.192462078	0
Los Angeles (SC)	2017	UBUS	Aggregate	40	Diesel	320.9154042	320.9154042	0	0.051105233	0
Los Angeles (SC)	2017	UBUS	Aggregate	40	Electricity	43.01686291	0	43.01686291	0	70.60925032
Los Angeles (SC)	2017	UBUS	Aggregate	40	Natural Gas	9285.502275	9285.502275	0	1.293943337	0
Los Angeles (SC)	2017	UBUS	Aggregate	45	Gasoline	1680.291704	1680.291704	0	0.174180558	0
Los Angeles (SC)	2017	UBUS	Aggregate	45	Diesel	301.8309784	301.8309784	0	0.046350513	0
Los Angeles (SC)	2017	UBUS	Aggregate	45	Electricity	40.44691084	0	40.44691084	0	70.4927818
Los Angeles (SC)	2017	UBUS	Aggregate	45	Natural Gas	8733.072099	8733.072099	0	1.082089368	0
Los Angeles (SC)	2017	UBUS	Aggregate	50	Gasoline	1503.805631	1503.805631	0	0.154594741	0
Los Angeles (SC)	2017	UBUS	Aggregate	50	Diesel	267.8123976	267.8123976	0	0.040158899	0
Los Angeles (SC)	2017	UBUS	Aggregate	50	Electricity	35.9796485	0	35.9796485	0	62.77170868
Los Angeles (SC)	2017	UBUS	Aggregate	50	Natural Gas	7750.598456	7750.598456	0	0.948509035	0
Los Angeles (SC)	2017	UBUS	Aggregate	55	Gasoline	1632.507489	1632.507489	0	0.154522532	0
Los Angeles (SC)	2017	UBUS	Aggregate	55	Diesel	216.4628726	216.4628726	0	0.032125194	0
Los Angeles (SC)	2017	UBUS	Aggregate	55	Electricity	32.03704403	0	32.03704403	0	57.46679378
Los Angeles (SC)	2017	UBUS	Aggregate	55	Natural Gas	6322.997022	6322.997022	0	0.763411358	0
Los Angeles (SC)	2017	UBUS	Aggregate	60	Gasoline	1866.923992	1866.923992	0	0.20887806	0
Los Angeles (SC)	2017	UBUS	Aggregate	60	Diesel	355.2587689	355.2587689	0	0.052789863	0
Los Angeles (SC)	2017	UBUS	Aggregate	60	Electricity	46.82114334	0	46.82114334	0	83.83666384
Los Angeles (SC)	2017	UBUS	Aggregate	60	Natural Gas	10263.3974	10263.3974	0	1.240301684	0
Los Angeles (SC)	2017	UBUS	Aggregate	65	Gasoline	1473.979933	1473.979933	0	0.170804256	0
Los Angeles (SC)	2017	UBUS	Aggregate	65	Diesel	271.5166992	271.5166992	0	0.040489814	0
Los Angeles (SC)	2017	UBUS	Aggregate	65	Electricity	36.11846413	0	36.11846413	0	68.18279155
Los Angeles (SC)	2017	UBUS	Aggregate	65	Natural Gas	7850.70397	7850.70397	0	0.949241874	0
Los Angeles (SC)	2017	UBUS	Aggregate	70	Gasoline	1774.733234	1774.733234	0	0.141549639	0
Los Angeles (SC)	2017	UBUS	Aggregate	70	Diesel	0.134550565	0.134550565	0	2.00648E-05	0
Los Angeles (SC)	2017	UBUS	Aggregate	70	Electricity	12.59230651	0	12.59230651	0	22.73167899
Los Angeles (SC)	2017	UBUS	Aggregate	70	Natural Gas	252.6306661	252.6306661	0	0.022365524	0
Los Angeles (SC)	2017	UBUS	Aggregate	75	Gasoline	0	0	0	0	0
Los Angeles (SC)	2017	UBUS	Aggregate	75	Diesel	0	0	0	0	0
Los Angeles (SC)	2017	UBUS	Aggregate	75	Natural Gas	0	0	0	0	0
Los Angeles (SC)	2017	UBUS	Aggregate	80	Gasoline	0	0	0	0	0
Los Angeles (SC)	2017	UBUS	Aggregate	80	Diesel	0	0	0	0	0
Los Angeles (SC)	2017	UBUS	Aggregate	80	Natural Gas	0	0	0	0	0
Los Angeles (SC)	2042	HHDT	Aggregate	5	Gasoline	0.14252662	0.14252662	0	6.49E-05	0
Los Angeles (SC)	2042	HHDT	Aggregate	5	Diesel	661.1706201	661.1706201	0	0.159482335	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2042	HHDT	Aggregate	5	Electricity	131.6510932	0	131.6510932	0	777.9081985
Los Angeles (SC)	2042	HHDT	Aggregate	5	Natural Gas	39.92841161	39.92841161	0	0.021082112	0
Los Angeles (SC)	2042	HHDT	Aggregate	10	Gasoline	1.93275809	1.93275809	0	0.000716112	0
Los Angeles (SC)	2042	HHDT	Aggregate	10	Diesel	8592.850034	8592.850034	0	1.784222993	0
Los Angeles (SC)	2042	HHDT	Aggregate	10	Electricity	1681.223283	0	1681.223283	0	4705.5619
Los Angeles (SC)	2042	HHDT	Aggregate	10	Natural Gas	499.4286073	499.4286073	0	0.202406516	0
Los Angeles (SC)	2042	HHDT	Aggregate	15	Gasoline	7.54051025	7.54051025	0	0.002291073	0
Los Angeles (SC)	2042	HHDT	Aggregate	15	Diesel	34014.08451	34014.08451	0	5.840954483	0
Los Angeles (SC)	2042	HHDT	Aggregate	15	Electricity	6628.071234	0	6628.071234	0	15463.93862
Los Angeles (SC)	2042	HHDT	Aggregate	15	Natural Gas	1964.121988	1964.121988	0	0.574661034	0
Los Angeles (SC)	2042	HHDT	Aggregate	20	Gasoline	23.23424289	23.23424289	0	0.005884256	0
Los Angeles (SC)	2042	HHDT	Aggregate	20	Diesel	213209.4654	213209.4654	0	34.18140913	0
Los Angeles (SC)	2042	HHDT	Aggregate	20	Electricity	93410.55169	0	93410.55169	0	193501.711
Los Angeles (SC)	2042	HHDT	Aggregate	20	Natural Gas	6481.795018	6481.795018	0	1.529067516	0
Los Angeles (SC)	2042	HHDT	Aggregate	25	Gasoline	45.7654261	45.7654261	0	0.009929169	0
Los Angeles (SC)	2042	HHDT	Aggregate	25	Diesel	240299.9979	240299.9979	0	33.47821677	0
Los Angeles (SC)	2042	HHDT	Aggregate	25	Electricity	45324.05807	0	45324.05807	0	86109.55231
Los Angeles (SC)	2042	HHDT	Aggregate	25	Natural Gas	12880.35622	12880.35622	0	2.595717365	0
Los Angeles (SC)	2042	HHDT	Aggregate	30	Gasoline	70.28499395	70.28499395	0	0.013546609	0
Los Angeles (SC)	2042	HHDT	Aggregate	30	Diesel	398987.8231	398987.8231	0	52.06597914	0
Los Angeles (SC)	2042	HHDT	Aggregate	30	Electricity	73724.12536	0	73724.12536	0	112319.0293
Los Angeles (SC)	2042	HHDT	Aggregate	30	Natural Gas	20399.93299	20399.93299	0	3.626176901	0
Los Angeles (SC)	2042	HHDT	Aggregate	35	Gasoline	82.19079381	82.19079381	0	0.01468042	0
Los Angeles (SC)	2042	HHDT	Aggregate	35	Diesel	517470.9183	517470.9183	0	64.04139321	0
Los Angeles (SC)	2042	HHDT	Aggregate	35	Electricity	93190.19804	0	93190.19804	0	144420.0871
Los Angeles (SC)	2042	HHDT	Aggregate	35	Natural Gas	24991.00724	24991.00724	0	4.006151024	0
Los Angeles (SC)	2042	HHDT	Aggregate	40	Gasoline	87.72716478	87.72716478	0	0.01514259	0
Los Angeles (SC)	2042	HHDT	Aggregate	40	Diesel	486421.474	486421.474	0	58.16443485	0
Los Angeles (SC)	2042	HHDT	Aggregate	40	Electricity	89867.03904	0	89867.03904	0	147510.6232
Los Angeles (SC)	2042	HHDT	Aggregate	40	Natural Gas	25065.7763	25065.7763	0	3.672711117	0
Los Angeles (SC)	2042	HHDT	Aggregate	45	Gasoline	104.9552357	104.9552357	0	0.018131538	0
Los Angeles (SC)	2042	HHDT	Aggregate	45	Diesel	557434.8651	557434.8651	0	65.4279337	0
Los Angeles (SC)	2042	HHDT	Aggregate	45	Electricity	105668.2334	0	105668.2334	0	184163.5756
Los Angeles (SC)	2042	HHDT	Aggregate	45	Natural Gas	30540.7645	30540.7645	0	4.13296377	0
Los Angeles (SC)	2042	HHDT	Aggregate	50	Gasoline	90.35851907	90.35851907	0	0.01601832	0
Los Angeles (SC)	2042	HHDT	Aggregate	50	Diesel	437518.1961	437518.1961	0	51.36508444	0
Los Angeles (SC)	2042	HHDT	Aggregate	50	Electricity	86511.91448	0	86511.91448	0	150932.5666
Los Angeles (SC)	2042	HHDT	Aggregate	50	Natural Gas	26132.87256	26132.87256	0	3.291060581	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2042	HHDT	Aggregate	55	Gasoline	120.1289669	120.1289669	0	0.022104262	0
Los Angeles (SC)	2042	HHDT	Aggregate	55	Diesel	614264.0183	614264.0183	0	73.18812519	0
Los Angeles (SC)	2042	HHDT	Aggregate	55	Electricity	120541.7274	0	120541.7274	0	216223.0257
Los Angeles (SC)	2042	HHDT	Aggregate	55	Natural Gas	35689.38427	35689.38427	0	4.223979411	0
Los Angeles (SC)	2042	HHDT	Aggregate	60	Gasoline	187.1210239	187.1210239	0	0.035734502	0
Los Angeles (SC)	2042	HHDT	Aggregate	60	Diesel	1167408.02	1167408.02	0	143.1675288	0
Los Angeles (SC)	2042	HHDT	Aggregate	60	Electricity	214606.3947	0	214606.3947	0	384268.3644
Los Angeles (SC)	2042	HHDT	Aggregate	60	Natural Gas	58150.51806	58150.51806	0	6.917167148	0
Los Angeles (SC)	2042	HHDT	Aggregate	65	Gasoline	197.3147081	197.3147081	0	0.038751803	0
Los Angeles (SC)	2042	HHDT	Aggregate	65	Diesel	1065460.384	1065460.384	0	137.5793737	0
Los Angeles (SC)	2042	HHDT	Aggregate	65	Electricity	201739.614	0	201739.614	0	380834.855
Los Angeles (SC)	2042	HHDT	Aggregate	65	Natural Gas	56310.26409	56310.26409	0	6.692750119	0
Los Angeles (SC)	2042	HHDT	Aggregate	70	Gasoline	208.5346253	208.5346253	0	0.041291096	0
Los Angeles (SC)	2042	HHDT	Aggregate	70	Diesel	3175088.026	3175088.026	0	404.9143775	0
Los Angeles (SC)	2042	HHDT	Aggregate	70	Electricity	478263.9672	0	478263.9672	0	863363.909
Los Angeles (SC)	2042	HHDT	Aggregate	70	Natural Gas	95921.07869	95921.07869	0	11.70309779	0
Los Angeles (SC)	2042	LDA	Aggregate	5	Gasoline	128865.001	128865.001	0	8.190935109	0
Los Angeles (SC)	2042	LDA	Aggregate	5	Diesel	78.60700195	78.60700195	0	0.003617822	0
Los Angeles (SC)	2042	LDA	Aggregate	5	Electricity	380239.3724	0	380239.3724	0	264061.2457
Los Angeles (SC)	2042	LDA	Aggregate	5	Plug-in Hybrid	43180.58594	2516.299476	40664.28647	0.245038835	21191.77087
Los Angeles (SC)	2042	LDA	Aggregate	10	Gasoline	810817.802	810817.802	0	41.71222276	0
Los Angeles (SC)	2042	LDA	Aggregate	10	Diesel	494.5947777	494.5947777	0	0.018963988	0
Los Angeles (SC)	2042	LDA	Aggregate	10	Electricity	608312.5965	0	608312.5965	0	285107.6968
Los Angeles (SC)	2042	LDA	Aggregate	10	Plug-in Hybrid	178424.4379	15832.54098	162591.8969	1.079715199	60091.70427
Los Angeles (SC)	2042	LDA	Aggregate	15	Gasoline	2042940.849	2042940.849	0	85.927646	0
Los Angeles (SC)	2042	LDA	Aggregate	15	Diesel	1246.183634	1246.183634	0	0.039300366	0
Los Angeles (SC)	2042	LDA	Aggregate	15	Electricity	1354764.216	0	1354764.216	0	534155.9498
Los Angeles (SC)	2042	LDA	Aggregate	15	Plug-in Hybrid	437832.9379	39891.75452	397941.1834	2.212027223	127286.7096
Los Angeles (SC)	2042	LDA	Aggregate	20	Gasoline	5991638.489	5991638.489	0	209.5286862	0
Los Angeles (SC)	2042	LDA	Aggregate	20	Diesel	3654.869318	3654.869318	0	0.094552321	0
Los Angeles (SC)	2042	LDA	Aggregate	20	Electricity	1989562.17	0	1989562.17	0	734572.3034
Los Angeles (SC)	2042	LDA	Aggregate	20	Plug-in Hybrid	695893.6417	116996.5209	578897.1208	5.60380876	173526.8303
Los Angeles (SC)	2042	LDA	Aggregate	25	Gasoline	12373565.93	12373565.93	0	369.9221918	0
Los Angeles (SC)	2042	LDA	Aggregate	25	Diesel	7547.812932	7547.812932	0	0.16367815	0
Los Angeles (SC)	2042	LDA	Aggregate	25	Electricity	2173007.28	0	2173007.28	0	793969.6129
Los Angeles (SC)	2042	LDA	Aggregate	25	Plug-in Hybrid	821136.6048	241614.0706	579522.5342	10.33017323	166770.5012
Los Angeles (SC)	2042	LDA	Aggregate	30	Gasoline	18887114.53	18887114.53	0	500.7134149	0
Los Angeles (SC)	2042	LDA	Aggregate	30	Diesel	11521.04479	11521.04479	0	0.216407022	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2042	LDA	Aggregate	30	Electricity	2178561.906	0	2178561.906	0	796912.8135
Los Angeles (SC)	2042	LDA	Aggregate	30	Plug-in Hybrid	831807.6676	368801.7383	463005.9293	14.3597661	131034.9253
Los Angeles (SC)	2042	LDA	Aggregate	35	Gasoline	16715777.78	16715777.78	0	410.1878397	0
Los Angeles (SC)	2042	LDA	Aggregate	35	Diesel	10196.5403	10196.5403	0	0.173137474	0
Los Angeles (SC)	2042	LDA	Aggregate	35	Electricity	2047505.902	0	2047505.902	0	752487.4748
Los Angeles (SC)	2042	LDA	Aggregate	35	Plug-in Hybrid	658691.151	326402.8443	332288.3067	11.73246116	93000.51366
Los Angeles (SC)	2042	LDA	Aggregate	40	Gasoline	8444285.652	8444285.652	0	200.3872594	0
Los Angeles (SC)	2042	LDA	Aggregate	40	Diesel	5150.971741	5150.971741	0	0.081846368	0
Los Angeles (SC)	2042	LDA	Aggregate	40	Electricity	1782961.463	0	1782961.463	0	664290.974
Los Angeles (SC)	2042	LDA	Aggregate	40	Plug-in Hybrid	389192.4526	164888.4599	224303.9927	5.53284196	65691.8004
Los Angeles (SC)	2042	LDA	Aggregate	45	Gasoline	6898729.09	6898729.09	0	164.2065863	0
Los Angeles (SC)	2042	LDA	Aggregate	45	Diesel	4208.190018	4208.190018	0	0.064587456	0
Los Angeles (SC)	2042	LDA	Aggregate	45	Electricity	1317980.171	0	1317980.171	0	501046.3936
Los Angeles (SC)	2042	LDA	Aggregate	45	Plug-in Hybrid	268972.2341	134708.9454	134263.2887	4.256420056	40112.80604
Los Angeles (SC)	2042	LDA	Aggregate	50	Gasoline	5100319.84	5100319.84	0	125.0797833	0
Los Angeles (SC)	2042	LDA	Aggregate	50	Diesel	3111.169428	3111.169428	0	0.047871896	0
Los Angeles (SC)	2042	LDA	Aggregate	50	Electricity	752606.7648	0	752606.7648	0	294526.5093
Los Angeles (SC)	2042	LDA	Aggregate	50	Plug-in Hybrid	164126.1431	99592.0695	64534.07364	2.986653204	19785.15514
Los Angeles (SC)	2042	LDA	Aggregate	55	Gasoline	4785455.552	4785455.552	0	122.2414872	0
Los Angeles (SC)	2042	LDA	Aggregate	55	Diesel	2919.103798	2919.103798	0	0.047001644	0
Los Angeles (SC)	2042	LDA	Aggregate	55	Electricity	297803.1746	0	297803.1746	0	121127.8938
Los Angeles (SC)	2042	LDA	Aggregate	55	Plug-in Hybrid	115332.6528	93443.83037	21888.8224	2.672073342	7316.214015
Los Angeles (SC)	2042	LDA	Aggregate	60	Gasoline	6022472.132	6022472.132	0	160.0266414	0
Los Angeles (SC)	2042	LDA	Aggregate	60	Diesel	3673.677685	3673.677685	0	0.064127152	0
Los Angeles (SC)	2042	LDA	Aggregate	60	Electricity	76257.33468	0	76257.33468	0	32499.86792
Los Angeles (SC)	2042	LDA	Aggregate	60	Plug-in Hybrid	121831.0313	117598.5981	4232.433208	3.217074188	1488.580452
Los Angeles (SC)	2042	LDA	Aggregate	65	Gasoline	5304363.243	5304363.243	0	145.6945024	0
Los Angeles (SC)	2042	LDA	Aggregate	65	Diesel	3235.634877	3235.634877	0	0.063495788	0
Los Angeles (SC)	2042	LDA	Aggregate	65	Electricity	11131.2049	0	11131.2049	0	4966.642073
Los Angeles (SC)	2042	LDA	Aggregate	65	Plug-in Hybrid	104029.8938	103576.35	453.5438112	2.729987329	175.1664983
Los Angeles (SC)	2042	LDA	Aggregate	70	Gasoline	13745724.83	13745724.83	0	375.6027568	0
Los Angeles (SC)	2042	LDA	Aggregate	70	Diesel	8384.822952	8384.822952	0	0.177680377	0
Los Angeles (SC)	2042	LDA	Aggregate	70	Electricity	1805.385607	0	1805.385607	0	894.9611427
Los Angeles (SC)	2042	LDA	Aggregate	70	Plug-in Hybrid	268434.9829	268407.7127	27.27017589	6.709869925	10.50812372
Los Angeles (SC)	2042	LDT1	Aggregate	5	Gasoline	11338.20735	11338.20735	0	0.846718016	0
Los Angeles (SC)	2042	LDT1	Aggregate	5	Diesel	0.125493569	0.125493569	0	1.04713E-05	0
Los Angeles (SC)	2042	LDT1	Aggregate	5	Electricity	6908.626714	0	6908.626714	0	4797.768744
Los Angeles (SC)	2042	LDT1	Aggregate	5	Plug-in Hybrid	1738.249164	100.055278	1638.193886	0.009743049	853.7277423

EMFAC2021 Raw Output File

Los Angeles (SC)	2042	LDT1	Aggregate	10	Gasoline	71339.93161	71339.93161	0	4.313714155	0
Los Angeles (SC)	2042	LDT1	Aggregate	10	Diesel	0.789604774	0.789604774	0	5.54602E-05	0
Los Angeles (SC)	2042	LDT1	Aggregate	10	Electricity	11052.52364	0	11052.52364	0	5180.1649
Los Angeles (SC)	2042	LDT1	Aggregate	10	Plug-in Hybrid	7179.694135	629.5471997	6550.146935	0.04293104	2420.843228
Los Angeles (SC)	2042	LDT1	Aggregate	15	Gasoline	179748.4714	179748.4714	0	8.886885438	0
Los Angeles (SC)	2042	LDT1	Aggregate	15	Diesel	1.989492391	1.989492391	0	0.000115866	0
Los Angeles (SC)	2042	LDT1	Aggregate	15	Electricity	24614.9161	0	24614.9161	0	9705.160305
Los Angeles (SC)	2042	LDT1	Aggregate	15	Plug-in Hybrid	17617.59502	1586.210475	16031.38454	0.087953485	5127.848723
Los Angeles (SC)	2042	LDT1	Aggregate	20	Gasoline	527175.2533	527175.2533	0	21.67016261	0
Los Angeles (SC)	2042	LDT1	Aggregate	20	Diesel	5.834882194	5.834882194	0	0.000279185	0
Los Angeles (SC)	2042	LDT1	Aggregate	20	Electricity	36148.65622	0	36148.65622	0	13346.55537
Los Angeles (SC)	2042	LDT1	Aggregate	20	Plug-in Hybrid	27973.45874	4652.116941	23321.3418	0.222815786	6990.66963
Los Angeles (SC)	2042	LDT1	Aggregate	25	Gasoline	1088690.141	1088690.141	0	38.2587265	0
Los Angeles (SC)	2042	LDT1	Aggregate	25	Diesel	12.0498424	12.0498424	0	0.000483422	0
Los Angeles (SC)	2042	LDT1	Aggregate	25	Electricity	39481.69819	0	39481.69819	0	14425.75408
Los Angeles (SC)	2042	LDT1	Aggregate	25	Plug-in Hybrid	32953.80492	9607.267828	23346.53709	0.410743125	6718.485412
Los Angeles (SC)	2042	LDT1	Aggregate	30	Gasoline	1661785.738	1661785.738	0	51.79069559	0
Los Angeles (SC)	2042	LDT1	Aggregate	30	Diesel	18.39298023	18.39298023	0	0.000638074	0
Los Angeles (SC)	2042	LDT1	Aggregate	30	Electricity	39582.62103	0	39582.62103	0	14479.22953
Los Angeles (SC)	2042	LDT1	Aggregate	30	Plug-in Hybrid	33317.18477	14664.61397	18652.5708	0.57096645	5278.848645
Los Angeles (SC)	2042	LDT1	Aggregate	35	Gasoline	1470740.333	1470740.333	0	42.4352867	0
Los Angeles (SC)	2042	LDT1	Aggregate	35	Diesel	16.2784511	16.2784511	0	0.00050968	0
Los Angeles (SC)	2042	LDT1	Aggregate	35	Electricity	37201.44466	0	37201.44466	0	13672.05883
Los Angeles (SC)	2042	LDT1	Aggregate	35	Plug-in Hybrid	26365.2174	12978.71244	13386.50496	0.466501809	3746.601406
Los Angeles (SC)	2042	LDT1	Aggregate	40	Gasoline	742971.799	742971.799	0	20.73298232	0
Los Angeles (SC)	2042	LDT1	Aggregate	40	Diesel	8.223361954	8.223361954	0	0.000240306	0
Los Angeles (SC)	2042	LDT1	Aggregate	40	Electricity	32394.8967	0	32394.8967	0	12069.60326
Los Angeles (SC)	2042	LDT1	Aggregate	40	Plug-in Hybrid	15592.70663	6556.437677	9036.268957	0.219995114	2646.44766
Los Angeles (SC)	2042	LDT1	Aggregate	45	Gasoline	606985.7622	606985.7622	0	16.99004798	0
Los Angeles (SC)	2042	LDT1	Aggregate	45	Diesel	6.718241029	6.718241029	0	0.000189289	0
Los Angeles (SC)	2042	LDT1	Aggregate	45	Electricity	23946.58123	0	23946.58123	0	9103.587767
Los Angeles (SC)	2042	LDT1	Aggregate	45	Plug-in Hybrid	10765.31959	5356.413697	5408.90589	0.169242485	1615.977048
Los Angeles (SC)	2042	LDT1	Aggregate	50	Gasoline	448752.442	448752.442	0	12.9395785	0
Los Angeles (SC)	2042	LDT1	Aggregate	50	Diesel	4.966882677	4.966882677	0	0.000140176	0
Los Angeles (SC)	2042	LDT1	Aggregate	50	Electricity	13674.22623	0	13674.22623	0	5351.296729
Los Angeles (SC)	2042	LDT1	Aggregate	50	Plug-in Hybrid	6559.873773	3960.066078	2599.807695	0.118754167	797.0610823
Los Angeles (SC)	2042	LDT1	Aggregate	55	Gasoline	421049.0582	421049.0582	0	12.64459495	0
Los Angeles (SC)	2042	LDT1	Aggregate	55	Diesel	4.660256029	4.660256029	0	0.000137517	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2042	LDT1	Aggregate	55	Electricity	5410.830956	0	5410.830956	0	2200.791037
Los Angeles (SC)	2042	LDT1	Aggregate	55	Plug-in Hybrid	4597.403502	3715.594472	881.8090303	0.106245824	294.7396379
Los Angeles (SC)	2042	LDT1	Aggregate	60	Gasoline	529888.1561	529888.1561	0	16.55322736	0
Los Angeles (SC)	2042	LDT1	Aggregate	60	Diesel	5.864909151	5.864909151	0	0.000187465	0
Los Angeles (SC)	2042	LDT1	Aggregate	60	Electricity	1385.531057	0	1385.531057	0	590.4950197
Los Angeles (SC)	2042	LDT1	Aggregate	60	Plug-in Hybrid	4846.564273	4676.057256	170.5070175	0.127915922	59.96867541
Los Angeles (SC)	2042	LDT1	Aggregate	65	Gasoline	466705.2328	466705.2328	0	15.06424989	0
Los Angeles (SC)	2042	LDT1	Aggregate	65	Diesel	5.165587793	5.165587793	0	0.000185458	0
Los Angeles (SC)	2042	LDT1	Aggregate	65	Electricity	202.2445467	0	202.2445467	0	90.23967162
Los Angeles (SC)	2042	LDT1	Aggregate	65	Plug-in Hybrid	4136.763869	4118.492487	18.27138167	0.108548029	7.056724991
Los Angeles (SC)	2042	LDT1	Aggregate	70	Gasoline	1209419.757	1209419.757	0	38.90940006	0
Los Angeles (SC)	2042	LDT1	Aggregate	70	Diesel	13.38610218	13.38610218	0	0.000518516	0
Los Angeles (SC)	2042	LDT1	Aggregate	70	Electricity	32.80232436	0	32.80232436	0	16.26068447
Los Angeles (SC)	2042	LDT1	Aggregate	70	Plug-in Hybrid	10673.75842	10672.65982	1.098601237	0.266799576	0.423328319
Los Angeles (SC)	2042	LDT2	Aggregate	5	Gasoline	86627.52577	86627.52577	0	6.624161219	0
Los Angeles (SC)	2042	LDT2	Aggregate	5	Diesel	327.9937506	327.9937506	0	0.020320848	0
Los Angeles (SC)	2042	LDT2	Aggregate	5	Electricity	50482.69481	0	50482.69481	0	35058.24027
Los Angeles (SC)	2042	LDT2	Aggregate	5	Plug-in Hybrid	16311.03039	943.7755845	15367.25481	0.091899954	8008.48536
Los Angeles (SC)	2042	LDT2	Aggregate	10	Gasoline	545059.8647	545059.8647	0	33.75589821	0
Los Angeles (SC)	2042	LDT2	Aggregate	10	Diesel	2063.734682	2063.734682	0	0.107627134	0
Los Angeles (SC)	2042	LDT2	Aggregate	10	Electricity	80762.96508	0	80762.96508	0	37852.48422
Los Angeles (SC)	2042	LDT2	Aggregate	10	Plug-in Hybrid	67382.59151	5938.230232	61444.36128	0.404942053	22708.98155
Los Angeles (SC)	2042	LDT2	Aggregate	15	Gasoline	1373335.736	1373335.736	0	69.54514201	0
Los Angeles (SC)	2042	LDT2	Aggregate	15	Diesel	5199.796887	5199.796887	0	0.224851171	0
Los Angeles (SC)	2042	LDT2	Aggregate	15	Electricity	179866.0354	0	179866.0354	0	70917.51603
Los Angeles (SC)	2042	LDT2	Aggregate	15	Plug-in Hybrid	165346.1319	14961.9965	150384.1354	0.829611395	48102.33917
Los Angeles (SC)	2042	LDT2	Aggregate	20	Gasoline	4027787.324	4027787.324	0	169.5832494	0
Los Angeles (SC)	2042	LDT2	Aggregate	20	Diesel	15250.22283	15250.22283	0	0.541792376	0
Los Angeles (SC)	2042	LDT2	Aggregate	20	Electricity	264145.3439	0	264145.3439	0	97525.9063
Los Angeles (SC)	2042	LDT2	Aggregate	20	Plug-in Hybrid	262649.6546	43881.28718	218768.3674	2.101685083	65576.73204
Los Angeles (SC)	2042	LDT2	Aggregate	25	Gasoline	8317940.426	8317940.426	0	299.4015787	0
Los Angeles (SC)	2042	LDT2	Aggregate	25	Diesel	31493.82893	31493.82893	0	0.938137637	0
Los Angeles (SC)	2042	LDT2	Aggregate	25	Electricity	288500.5375	0	288500.5375	0	105411.8236
Los Angeles (SC)	2042	LDT2	Aggregate	25	Plug-in Hybrid	309625.6692	90620.95468	219004.7145	3.874288987	63023.47856
Los Angeles (SC)	2042	LDT2	Aggregate	30	Gasoline	12696573.84	12696573.84	0	405.3223237	0
Los Angeles (SC)	2042	LDT2	Aggregate	30	Diesel	48072.4439	48072.4439	0	1.238258433	0
Los Angeles (SC)	2042	LDT2	Aggregate	30	Electricity	289238.0005	0	289238.0005	0	105802.5793
Los Angeles (SC)	2042	LDT2	Aggregate	30	Plug-in Hybrid	313297.0396	138324.5832	174972.4564	5.385580789	49518.81027

EMFAC2021 Raw Output File

Los Angeles (SC)	2042	LDT2	Aggregate	35	Gasoline	11236925.92	11236925.92	0	332.1410296	0
Los Angeles (SC)	2042	LDT2	Aggregate	35	Diesel	42545.84724	42545.84724	0	0.989094927	0
Los Angeles (SC)	2042	LDT2	Aggregate	35	Electricity	271838.2763	0	271838.2763	0	99904.42414
Los Angeles (SC)	2042	LDT2	Aggregate	35	Plug-in Hybrid	247995.8033	122422.2467	125573.5566	4.400233758	35145.39943
Los Angeles (SC)	2042	LDT2	Aggregate	40	Gasoline	5676541.862	5676541.862	0	162.2869369	0
Los Angeles (SC)	2042	LDT2	Aggregate	40	Diesel	21492.82505	21492.82505	0	0.466342632	0
Los Angeles (SC)	2042	LDT2	Aggregate	40	Electricity	236715.8845	0	236715.8845	0	88194.96595
Los Angeles (SC)	2042	LDT2	Aggregate	40	Plug-in Hybrid	146609.5696	61843.87198	84765.69762	2.075084168	24825.28831
Los Angeles (SC)	2042	LDT2	Aggregate	45	Gasoline	4637565.105	4637565.105	0	132.9910826	0
Los Angeles (SC)	2042	LDT2	Aggregate	45	Diesel	17558.99593	17558.99593	0	0.367337064	0
Los Angeles (SC)	2042	LDT2	Aggregate	45	Electricity	174982.381	0	174982.381	0	66521.70712
Los Angeles (SC)	2042	LDT2	Aggregate	45	Plug-in Hybrid	101263.422	50524.59572	50738.82631	1.596364792	15158.84736
Los Angeles (SC)	2042	LDT2	Aggregate	50	Gasoline	3428611.996	3428611.996	0	101.2760752	0
Los Angeles (SC)	2042	LDT2	Aggregate	50	Diesel	12981.5933	12981.5933	0	0.272028204	0
Los Angeles (SC)	2042	LDT2	Aggregate	50	Electricity	99920.26174	0	99920.26174	0	39102.97817
Los Angeles (SC)	2042	LDT2	Aggregate	50	Plug-in Hybrid	61741.26561	37353.48853	24387.77708	1.120137163	7476.917631
Los Angeles (SC)	2042	LDT2	Aggregate	55	Gasoline	3216949.295	3216949.295	0	98.96097562	0
Los Angeles (SC)	2042	LDT2	Aggregate	55	Diesel	12180.18471	12180.18471	0	0.266868728	0
Los Angeles (SC)	2042	LDT2	Aggregate	55	Electricity	39538.00649	0	39538.00649	0	16081.61316
Los Angeles (SC)	2042	LDT2	Aggregate	55	Plug-in Hybrid	43319.40482	35047.4999	8271.904917	1.002152817	2764.837029
Los Angeles (SC)	2042	LDT2	Aggregate	60	Gasoline	4048514.768	4048514.768	0	129.5515487	0
Los Angeles (SC)	2042	LDT2	Aggregate	60	Diesel	15328.70218	15328.70218	0	0.363797522	0
Los Angeles (SC)	2042	LDT2	Aggregate	60	Electricity	10124.34806	0	10124.34806	0	4314.8633
Los Angeles (SC)	2042	LDT2	Aggregate	60	Plug-in Hybrid	45706.5647	44107.10519	1599.459506	1.206553833	562.5426412
Los Angeles (SC)	2042	LDT2	Aggregate	65	Gasoline	3565777.052	3565777.052	0	117.8694143	0
Los Angeles (SC)	2042	LDT2	Aggregate	65	Diesel	13500.93493	13500.93493	0	0.35990259	0
Los Angeles (SC)	2042	LDT2	Aggregate	65	Electricity	1477.840698	0	1477.840698	0	659.399037
Los Angeles (SC)	2042	LDT2	Aggregate	65	Plug-in Hybrid	39019.24892	38847.85225	171.3966706	1.023865718	66.19637149
Los Angeles (SC)	2042	LDT2	Aggregate	70	Gasoline	9240353.256	9240353.256	0	304.7684357	0
Los Angeles (SC)	2042	LDT2	Aggregate	70	Diesel	34986.3175	34986.3175	0	1.00624173	0
Los Angeles (SC)	2042	LDT2	Aggregate	70	Electricity	239.6930386	0	239.6930386	0	118.820021
Los Angeles (SC)	2042	LDT2	Aggregate	70	Plug-in Hybrid	100680.6146	100670.3091	10.30554764	2.516580075	3.971077048
Los Angeles (SC)	2042	LHDT1	Aggregate	5	Gasoline	793.0596845	793.0596845	0	0.121496087	0
Los Angeles (SC)	2042	LHDT1	Aggregate	5	Diesel	374.0519716	374.0519716	0	0.04012218	0
Los Angeles (SC)	2042	LHDT1	Aggregate	5	Electricity	803.7309352	0	803.7309352	0	1510.40979
Los Angeles (SC)	2042	LHDT1	Aggregate	10	Gasoline	10239.15711	10239.15711	0	1.353587557	0
Los Angeles (SC)	2042	LHDT1	Aggregate	10	Diesel	4643.036126	4643.036126	0	0.43419065	0
Los Angeles (SC)	2042	LHDT1	Aggregate	10	Electricity	10252.68381	0	10252.68381	0	9126.492215

EMFAC2021 Raw Output File

Los Angeles (SC)	2042	LHDT1	Aggregate	15	Gasoline	34704.71126	34704.71126	0	3.942468075	0
Los Angeles (SC)	2042	LHDT1	Aggregate	15	Diesel	16056.46367	16056.46367	0	1.304140622	0
Los Angeles (SC)	2042	LHDT1	Aggregate	15	Electricity	34963.47793	0	34963.47793	0	25943.45458
Los Angeles (SC)	2042	LHDT1	Aggregate	20	Gasoline	105526.1659	105526.1659	0	10.27612296	0
Los Angeles (SC)	2042	LHDT1	Aggregate	20	Diesel	58867.30014	58867.30014	0	4.15178017	0
Los Angeles (SC)	2042	LHDT1	Aggregate	20	Electricity	113010.9276	0	113010.9276	0	74454.25815
Los Angeles (SC)	2042	LHDT1	Aggregate	25	Gasoline	193493.4718	193493.4718	0	16.15865512	0
Los Angeles (SC)	2042	LHDT1	Aggregate	25	Diesel	107160.3964	107160.3964	0	6.574969479	0
Los Angeles (SC)	2042	LHDT1	Aggregate	25	Electricity	206698.0806	0	206698.0806	0	124893.3217
Los Angeles (SC)	2042	LHDT1	Aggregate	30	Gasoline	297738.5993	297738.5993	0	21.42503465	0
Los Angeles (SC)	2042	LHDT1	Aggregate	30	Diesel	178225.221	178225.221	0	9.571111036	0
Los Angeles (SC)	2042	LHDT1	Aggregate	30	Electricity	326947.1602	0	326947.1602	0	158416.9001
Los Angeles (SC)	2042	LHDT1	Aggregate	35	Gasoline	308246.8742	308246.8742	0	19.32665429	0
Los Angeles (SC)	2042	LHDT1	Aggregate	35	Diesel	208943.0173	208943.0173	0	9.940542078	0
Los Angeles (SC)	2042	LHDT1	Aggregate	35	Electricity	354775.0634	0	354775.0634	0	174860.0841
Los Angeles (SC)	2042	LHDT1	Aggregate	40	Gasoline	261751.427	261751.427	0	14.57949734	0
Los Angeles (SC)	2042	LHDT1	Aggregate	40	Diesel	153992.7671	153992.7671	0	6.614843273	0
Los Angeles (SC)	2042	LHDT1	Aggregate	40	Electricity	285635.4128	0	285635.4128	0	149112.8749
Los Angeles (SC)	2042	LHDT1	Aggregate	45	Gasoline	290473.7268	290473.7268	0	14.79495354	0
Los Angeles (SC)	2042	LHDT1	Aggregate	45	Diesel	156723.3634	156723.3634	0	6.245054197	0
Los Angeles (SC)	2042	LHDT1	Aggregate	45	Electricity	307531.576	0	307531.576	0	170462.6493
Los Angeles (SC)	2042	LHDT1	Aggregate	50	Gasoline	225914.6024	225914.6024	0	10.92865017	0
Los Angeles (SC)	2042	LHDT1	Aggregate	50	Diesel	112998.8044	112998.8044	0	4.323547297	0
Los Angeles (SC)	2042	LHDT1	Aggregate	50	Electricity	233251.8738	0	233251.8738	0	129423.2807
Los Angeles (SC)	2042	LHDT1	Aggregate	55	Gasoline	262131.5244	262131.5244	0	12.580235	0
Los Angeles (SC)	2042	LHDT1	Aggregate	55	Diesel	138405.0834	138405.0834	0	5.285321495	0
Los Angeles (SC)	2042	LHDT1	Aggregate	55	Electricity	275506.9318	0	275506.9318	0	157172.7631
Los Angeles (SC)	2042	LHDT1	Aggregate	60	Gasoline	377347.7967	377347.7967	0	18.77524479	0
Los Angeles (SC)	2042	LHDT1	Aggregate	60	Diesel	254952.9937	254952.9937	0	10.10093735	0
Los Angeles (SC)	2042	LHDT1	Aggregate	60	Electricity	433753.1973	0	433753.1973	0	247010.2021
Los Angeles (SC)	2042	LHDT1	Aggregate	65	Gasoline	329904.0072	329904.0072	0	17.69636711	0
Los Angeles (SC)	2042	LHDT1	Aggregate	65	Diesel	194482.2755	194482.2755	0	8.277596061	0
Los Angeles (SC)	2042	LHDT1	Aggregate	65	Electricity	360269.5584	0	360269.5584	0	216298.3963
Los Angeles (SC)	2042	LHDT1	Aggregate	70	Gasoline	579559.1631	579559.1631	0	34.54752836	0
Los Angeles (SC)	2042	LHDT1	Aggregate	70	Diesel	786961.3868	786961.3868	0	36.99740981	0
Los Angeles (SC)	2042	LHDT1	Aggregate	70	Electricity	929840.9289	0	929840.9289	0	533844.9211
Los Angeles (SC)	2042	LHDT2	Aggregate	5	Gasoline	107.831577	107.831577	0	0.018655091	0
Los Angeles (SC)	2042	LHDT2	Aggregate	5	Diesel	173.015146	173.015146	0	0.02163674	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2042	LHDT2	Aggregate	5	Electricity	181.8774345	0	181.8774345	0	341.7928136
Los Angeles (SC)	2042	LHDT2	Aggregate	10	Gasoline	1392.20853	1392.20853	0	0.207973614	0
Los Angeles (SC)	2042	LHDT2	Aggregate	10	Diesel	2147.604168	2147.604168	0	0.234197735	0
Los Angeles (SC)	2042	LHDT2	Aggregate	10	Electricity	2292.111678	0	2292.111678	0	2040.337903
Los Angeles (SC)	2042	LHDT2	Aggregate	15	Gasoline	4718.766842	4718.766842	0	0.606055041	0
Los Angeles (SC)	2042	LHDT2	Aggregate	15	Diesel	7426.805946	7426.805946	0	0.702548425	0
Los Angeles (SC)	2042	LHDT2	Aggregate	15	Electricity	7865.043028	0	7865.043028	0	5835.98654
Los Angeles (SC)	2042	LHDT2	Aggregate	20	Gasoline	14348.29321	14348.29321	0	1.580188519	0
Los Angeles (SC)	2042	LHDT2	Aggregate	20	Diesel	27228.66153	27228.66153	0	2.236160241	0
Los Angeles (SC)	2042	LHDT2	Aggregate	20	Electricity	26939.30219	0	26939.30219	0	17748.24614
Los Angeles (SC)	2042	LHDT2	Aggregate	25	Gasoline	26309.12478	26309.12478	0	2.484881827	0
Los Angeles (SC)	2042	LHDT2	Aggregate	25	Diesel	49566.29836	49566.29836	0	3.541188862	0
Los Angeles (SC)	2042	LHDT2	Aggregate	25	Electricity	49161.5237	0	49161.5237	0	29704.90088
Los Angeles (SC)	2042	LHDT2	Aggregate	30	Gasoline	40483.23641	40483.23641	0	3.293874794	0
Los Angeles (SC)	2042	LHDT2	Aggregate	30	Diesel	82436.84026	82436.84026	0	5.154596475	0
Los Angeles (SC)	2042	LHDT2	Aggregate	30	Electricity	79661.29921	0	79661.29921	0	38598.57989
Los Angeles (SC)	2042	LHDT2	Aggregate	35	Gasoline	41912.03663	41912.03663	0	2.969463001	0
Los Angeles (SC)	2042	LHDT2	Aggregate	35	Diesel	96645.14398	96645.14398	0	5.355554326	0
Los Angeles (SC)	2042	LHDT2	Aggregate	35	Electricity	89827.33083	0	89827.33083	0	44273.72791
Los Angeles (SC)	2042	LHDT2	Aggregate	40	Gasoline	35590.09454	35590.09454	0	2.23801457	0
Los Angeles (SC)	2042	LHDT2	Aggregate	40	Diesel	71228.28675	71228.28675	0	3.564237375	0
Los Angeles (SC)	2042	LHDT2	Aggregate	40	Electricity	69222.68167	0	69222.68167	0	36136.95155
Los Angeles (SC)	2042	LHDT2	Aggregate	45	Gasoline	39495.43854	39495.43854	0	2.268576554	0
Los Angeles (SC)	2042	LHDT2	Aggregate	45	Diesel	72491.30511	72491.30511	0	3.364947498	0
Los Angeles (SC)	2042	LHDT2	Aggregate	45	Electricity	72553.19799	0	72553.19799	0	40215.74145
Los Angeles (SC)	2042	LHDT2	Aggregate	50	Gasoline	30717.39532	30717.39532	0	1.673962537	0
Los Angeles (SC)	2042	LHDT2	Aggregate	50	Diesel	52266.81349	52266.81349	0	2.330240858	0
Los Angeles (SC)	2042	LHDT2	Aggregate	50	Electricity	53750.74974	0	53750.74974	0	29824.40508
Los Angeles (SC)	2042	LHDT2	Aggregate	55	Gasoline	35641.77603	35641.77603	0	1.925589785	0
Los Angeles (SC)	2042	LHDT2	Aggregate	55	Diesel	64018.3117	64018.3117	0	2.84898416	0
Los Angeles (SC)	2042	LHDT2	Aggregate	55	Electricity	64562.83958	0	64562.83958	0	36832.17633
Los Angeles (SC)	2042	LHDT2	Aggregate	60	Gasoline	51307.62386	51307.62386	0	2.873544625	0
Los Angeles (SC)	2042	LHDT2	Aggregate	60	Diesel	117926.7396	117926.7396	0	5.443820858	0
Los Angeles (SC)	2042	LHDT2	Aggregate	60	Electricity	109714.5066	0	109714.5066	0	62479.31457
Los Angeles (SC)	2042	LHDT2	Aggregate	65	Gasoline	44856.73657	44856.73657	0	2.709975823	0
Los Angeles (SC)	2042	LHDT2	Aggregate	65	Diesel	89956.4281	89956.4281	0	4.459752905	0
Los Angeles (SC)	2042	LHDT2	Aggregate	65	Electricity	87364.96967	0	87364.96967	0	52452.12202
Los Angeles (SC)	2042	LHDT2	Aggregate	70	Gasoline	78802.11254	78802.11254	0	5.296861682	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2042	LHDT2	Aggregate	70	Diesel	364003.5332	364003.5332	0	19.92508775	0
Los Angeles (SC)	2042	LHDT2	Aggregate	70	Electricity	287547.8272	0	287547.8272	0	165088.3956
Los Angeles (SC)	2042	MCY	Aggregate	5	Gasoline	1328.541208	1328.541208	0	0.069754604	0
Los Angeles (SC)	2042	MCY	Aggregate	10	Gasoline	8359.173194	8359.173194	0	0.355172848	0
Los Angeles (SC)	2042	MCY	Aggregate	15	Gasoline	21061.81727	21061.81727	0	0.73281	0
Los Angeles (SC)	2042	MCY	Aggregate	20	Gasoline	61771.1448	61771.1448	0	1.792520469	0
Los Angeles (SC)	2042	MCY	Aggregate	25	Gasoline	127565.9962	127565.9962	0	3.173924457	0
Los Angeles (SC)	2042	MCY	Aggregate	30	Gasoline	194717.8036	194717.8036	0	4.302700551	0
Los Angeles (SC)	2042	MCY	Aggregate	35	Gasoline	172332.2813	172332.2813	0	3.521006061	0
Los Angeles (SC)	2042	MCY	Aggregate	40	Gasoline	87056.85308	87056.85308	0	1.711711115	0
Los Angeles (SC)	2042	MCY	Aggregate	45	Gasoline	71122.848	71122.848	0	1.391978166	0
Los Angeles (SC)	2042	MCY	Aggregate	50	Gasoline	52582.04344	52582.04344	0	1.050026519	0
Los Angeles (SC)	2042	MCY	Aggregate	55	Gasoline	49335.93179	49335.93179	0	1.017517989	0
Los Angeles (SC)	2042	MCY	Aggregate	60	Gasoline	62089.02602	62089.02602	0	1.324429266	0
Los Angeles (SC)	2042	MCY	Aggregate	65	Gasoline	54685.64075	54685.64075	0	1.198411566	0
Los Angeles (SC)	2042	MCY	Aggregate	70	Gasoline	141712.348	141712.348	0	3.131757814	0
Los Angeles (SC)	2042	MDV	Aggregate	5	Gasoline	47291.58881	47291.58881	0	4.399075609	0
Los Angeles (SC)	2042	MDV	Aggregate	5	Diesel	509.647389	509.647389	0	0.039070231	0
Los Angeles (SC)	2042	MDV	Aggregate	5	Electricity	45826.2921	0	45826.2921	0	31824.55226
Los Angeles (SC)	2042	MDV	Aggregate	5	Plug-in Hybrid	9626.929889	558.3820851	9068.547804	0.054371061	4725.979574
Los Angeles (SC)	2042	MDV	Aggregate	10	Gasoline	297558.3889	297558.3889	0	22.42615507	0
Los Angeles (SC)	2042	MDV	Aggregate	10	Diesel	3206.698269	3206.698269	0	0.208769216	0
Los Angeles (SC)	2042	MDV	Aggregate	10	Electricity	73313.58286	0	73313.58286	0	34361.06185
Los Angeles (SC)	2042	MDV	Aggregate	10	Plug-in Hybrid	39772.97671	3513.33668	36259.64003	0.239577864	13401.05877
Los Angeles (SC)	2042	MDV	Aggregate	15	Gasoline	749729.7003	749729.7003	0	46.2046841	0
Los Angeles (SC)	2042	MDV	Aggregate	15	Diesel	8079.614024	8079.614024	0	0.446096915	0
Los Angeles (SC)	2042	MDV	Aggregate	15	Electricity	163275.6237	0	163275.6237	0	64376.25442
Los Angeles (SC)	2042	MDV	Aggregate	15	Plug-in Hybrid	97597.13677	8852.221798	88744.91497	0.490827336	28386.22563
Los Angeles (SC)	2042	MDV	Aggregate	20	Gasoline	2198844.539	2198844.539	0	112.6649006	0
Los Angeles (SC)	2042	MDV	Aggregate	20	Diesel	23696.2937	23696.2937	0	1.086567211	0
Los Angeles (SC)	2042	MDV	Aggregate	20	Electricity	239781.2109	0	239781.2109	0	88530.35058
Los Angeles (SC)	2042	MDV	Aggregate	20	Plug-in Hybrid	155062.1582	25962.23619	129099.9221	1.243431063	38698.24095
Los Angeles (SC)	2042	MDV	Aggregate	25	Gasoline	4540919.47	4540919.47	0	198.9063552	0
Los Angeles (SC)	2042	MDV	Aggregate	25	Diesel	48936.13874	48936.13874	0	1.897458705	0
Los Angeles (SC)	2042	MDV	Aggregate	25	Electricity	261889.9398	0	261889.9398	0	95688.88978
Los Angeles (SC)	2042	MDV	Aggregate	25	Plug-in Hybrid	182855.0204	53615.6248	129239.3956	2.292166237	37191.51112
Los Angeles (SC)	2042	MDV	Aggregate	30	Gasoline	6931297.46	6931297.46	0	269.2974431	0
Los Angeles (SC)	2042	MDV	Aggregate	30	Diesel	74696.53148	74696.53148	0	2.501498505	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2042	MDV	Aggregate	30	Electricity	262559.381	0	262559.381	0	96043.6031
Los Angeles (SC)	2042	MDV	Aggregate	30	Plug-in Hybrid	185094.3505	81839.33814	103255.0124	3.186302081	29222.11571
Los Angeles (SC)	2042	MDV	Aggregate	35	Gasoline	6134448.324	6134448.324	0	220.7192418	0
Los Angeles (SC)	2042	MDV	Aggregate	35	Diesel	66109.12532	66109.12532	0	2.008823007	0
Los Angeles (SC)	2042	MDV	Aggregate	35	Electricity	246764.5656	0	246764.5656	0	90689.47964
Los Angeles (SC)	2042	MDV	Aggregate	35	Plug-in Hybrid	146534.4253	72430.76692	74103.65841	2.603338958	20740.05662
Los Angeles (SC)	2042	MDV	Aggregate	40	Gasoline	3098930.522	3098930.522	0	107.8598483	0
Los Angeles (SC)	2042	MDV	Aggregate	40	Diesel	33396.25267	33396.25267	0	0.949200441	0
Los Angeles (SC)	2042	MDV	Aggregate	40	Electricity	214881.779	0	214881.779	0	80060.07379
Los Angeles (SC)	2042	MDV	Aggregate	40	Plug-in Hybrid	86611.80989	36589.74735	50022.06254	1.227696482	14649.93694
Los Angeles (SC)	2042	MDV	Aggregate	45	Gasoline	2531733.65	2531733.65	0	88.39487387	0
Los Angeles (SC)	2042	MDV	Aggregate	45	Diesel	27283.74066	27283.74066	0	0.746276355	0
Los Angeles (SC)	2042	MDV	Aggregate	45	Electricity	158842.4258	0	158842.4258	0	60385.90439
Los Angeles (SC)	2042	MDV	Aggregate	45	Plug-in Hybrid	59834.80384	29892.7304	29942.07344	0.944468585	8945.562082
Los Angeles (SC)	2042	MDV	Aggregate	50	Gasoline	1871743.505	1871743.505	0	67.30645785	0
Los Angeles (SC)	2042	MDV	Aggregate	50	Diesel	20171.22313	20171.22313	0	0.554496496	0
Los Angeles (SC)	2042	MDV	Aggregate	50	Electricity	90703.85642	0	90703.85642	0	35496.21324
Los Angeles (SC)	2042	MDV	Aggregate	50	Plug-in Hybrid	36491.83521	22100.08307	14391.75214	0.662713917	4412.290016
Los Angeles (SC)	2042	MDV	Aggregate	55	Gasoline	1756192.872	1756192.872	0	65.76327786	0
Los Angeles (SC)	2042	MDV	Aggregate	55	Diesel	18925.96832	18925.96832	0	0.549061413	0
Los Angeles (SC)	2042	MDV	Aggregate	55	Electricity	35891.11559	0	35891.11559	0	14598.28373
Los Angeles (SC)	2042	MDV	Aggregate	55	Plug-in Hybrid	25617.18071	20735.75159	4881.429124	0.592909638	1631.589837
Los Angeles (SC)	2042	MDV	Aggregate	60	Gasoline	2210160.039	2210160.039	0	86.09564849	0
Los Angeles (SC)	2042	MDV	Aggregate	60	Diesel	23818.23748	23818.23748	0	0.748204285	0
Los Angeles (SC)	2042	MDV	Aggregate	60	Electricity	9190.502476	0	9190.502476	0	3916.870657
Los Angeles (SC)	2042	MDV	Aggregate	60	Plug-in Hybrid	27039.71624	26095.84076	943.8754791	0.71384066	331.96852
Los Angeles (SC)	2042	MDV	Aggregate	65	Gasoline	1946624.478	1946624.478	0	78.29981315	0
Los Angeles (SC)	2042	MDV	Aggregate	65	Diesel	20978.19311	20978.19311	0	0.739953106	0
Los Angeles (SC)	2042	MDV	Aggregate	65	Electricity	1341.528217	0	1341.528217	0	598.5776511
Los Angeles (SC)	2042	MDV	Aggregate	65	Plug-in Hybrid	23085.36389	22984.21902	101.1448642	0.605754014	39.06390353
Los Angeles (SC)	2042	MDV	Aggregate	70	Gasoline	5044481.91	5044481.91	0	202.8490009	0
Los Angeles (SC)	2042	MDV	Aggregate	70	Diesel	54362.88141	54362.88141	0	2.064235994	0
Los Angeles (SC)	2042	MDV	Aggregate	70	Electricity	217.5843276	0	217.5843276	0	107.8603472
Los Angeles (SC)	2042	MDV	Aggregate	70	Plug-in Hybrid	59567.37769	59561.29616	6.081525465	1.488914162	2.343418034
Los Angeles (SC)	2042	MH	Aggregate	5	Gasoline	91.54290464	91.54290464	0	0.044791675	0
Los Angeles (SC)	2042	MH	Aggregate	5	Diesel	39.40316768	39.40316768	0	0.008416988	0
Los Angeles (SC)	2042	MH	Aggregate	10	Gasoline	556.9461943	556.9461943	0	0.221219954	0
Los Angeles (SC)	2042	MH	Aggregate	10	Diesel	233.6632944	233.6632944	0	0.04532147	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2042	MH	Aggregate	15	Gasoline	1710.692103	1710.692103	0	0.555679733	0
Los Angeles (SC)	2042	MH	Aggregate	15	Diesel	727.1756233	727.1756233	0	0.115808866	0
Los Angeles (SC)	2042	MH	Aggregate	20	Gasoline	5046.772272	5046.772272	0	1.362656483	0
Los Angeles (SC)	2042	MH	Aggregate	20	Diesel	2346.684288	2346.684288	0	0.306689349	0
Los Angeles (SC)	2042	MH	Aggregate	25	Gasoline	9456.115278	9456.115278	0	2.182328349	0
Los Angeles (SC)	2042	MH	Aggregate	25	Diesel	4443.096399	4443.096399	0	0.520837839	0
Los Angeles (SC)	2042	MH	Aggregate	30	Gasoline	13638.60434	13638.60434	0	2.79293397	0
Los Angeles (SC)	2042	MH	Aggregate	30	Diesel	6695.67069	6695.67069	0	0.736741483	0
Los Angeles (SC)	2042	MH	Aggregate	35	Gasoline	13516.55047	13516.55047	0	2.565826689	0
Los Angeles (SC)	2042	MH	Aggregate	35	Diesel	6979.201455	6979.201455	0	0.726286523	0
Los Angeles (SC)	2042	MH	Aggregate	40	Gasoline	11136.08723	11136.08723	0	2.046357583	0
Los Angeles (SC)	2042	MH	Aggregate	40	Diesel	5402.02788	5402.02788	0	0.536528184	0
Los Angeles (SC)	2042	MH	Aggregate	45	Gasoline	12339.93773	12339.93773	0	2.275566071	0
Los Angeles (SC)	2042	MH	Aggregate	45	Diesel	5846.481442	5846.481442	0	0.560084658	0
Los Angeles (SC)	2042	MH	Aggregate	50	Gasoline	10240.45619	10240.45619	0	1.9438534	0
Los Angeles (SC)	2042	MH	Aggregate	50	Diesel	4866.967711	4866.967711	0	0.455065645	0
Los Angeles (SC)	2042	MH	Aggregate	55	Gasoline	12261.00814	12261.00814	0	2.423007579	0
Los Angeles (SC)	2042	MH	Aggregate	55	Diesel	6267.801364	6267.801364	0	0.579311446	0
Los Angeles (SC)	2042	MH	Aggregate	60	Gasoline	17111.27239	17111.27239	0	3.518658102	0
Los Angeles (SC)	2042	MH	Aggregate	60	Diesel	9989.982129	9989.982129	0	0.924830199	0
Los Angeles (SC)	2042	MH	Aggregate	65	Gasoline	14943.37991	14943.37991	0	3.166741518	0
Los Angeles (SC)	2042	MH	Aggregate	65	Diesel	7763.856304	7763.856304	0	0.72940186	0
Los Angeles (SC)	2042	MH	Aggregate	70	Gasoline	15449.42934	15449.42934	0	3.304097921	0
Los Angeles (SC)	2042	MH	Aggregate	70	Diesel	12260.09725	12260.09725	0	1.183644838	0
Los Angeles (SC)	2042	MHDT	Aggregate	5	Gasoline	241.3834601	241.3834601	0	0.095032259	0
Los Angeles (SC)	2042	MHDT	Aggregate	5	Diesel	1424.55303	1424.55303	0	0.300840007	0
Los Angeles (SC)	2042	MHDT	Aggregate	5	Electricity	1345.064518	0	1345.064518	0	4728.321482
Los Angeles (SC)	2042	MHDT	Aggregate	5	Natural Gas	26.71003685	26.71003685	0	0.008325698	0
Los Angeles (SC)	2042	MHDT	Aggregate	10	Gasoline	1468.574763	1468.574763	0	0.469353215	0
Los Angeles (SC)	2042	MHDT	Aggregate	10	Diesel	8676.017295	8676.017295	0	1.512702857	0
Los Angeles (SC)	2042	MHDT	Aggregate	10	Electricity	8194.723035	0	8194.723035	0	13645.21479
Los Angeles (SC)	2042	MHDT	Aggregate	10	Natural Gas	161.1195562	161.1195562	0	0.04028137	0
Los Angeles (SC)	2042	MHDT	Aggregate	15	Gasoline	4510.811414	4510.811414	0	1.178970656	0
Los Angeles (SC)	2042	MHDT	Aggregate	15	Diesel	26702.45719	26702.45719	0	3.655201887	0
Los Angeles (SC)	2042	MHDT	Aggregate	15	Electricity	25200.70861	0	25200.70861	0	34978.86428
Los Angeles (SC)	2042	MHDT	Aggregate	15	Natural Gas	497.7245653	497.7245653	0	0.094235957	0
Los Angeles (SC)	2042	MHDT	Aggregate	20	Gasoline	13307.50164	13307.50164	0	2.891133579	0
Los Angeles (SC)	2042	MHDT	Aggregate	20	Diesel	77134.90157	77134.90157	0	8.992341414	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2042	MHDT	Aggregate	20	Electricity	72692.20048	0	72692.20048	0	89585.28706
Los Angeles (SC)	2042	MHDT	Aggregate	20	Natural Gas	1494.440852	1494.440852	0	0.235564761	0
Los Angeles (SC)	2042	MHDT	Aggregate	25	Gasoline	24934.208	24934.208	0	4.630252178	0
Los Angeles (SC)	2042	MHDT	Aggregate	25	Diesel	144808.7659	144808.7659	0	15.32154486	0
Los Angeles (SC)	2042	MHDT	Aggregate	25	Electricity	136447.2085	0	136447.2085	0	154222.3089
Los Angeles (SC)	2042	MHDT	Aggregate	25	Natural Gas	2815.80275	2815.80275	0	0.387119311	0
Los Angeles (SC)	2042	MHDT	Aggregate	30	Gasoline	35962.73812	35962.73812	0	5.92579362	0
Los Angeles (SC)	2042	MHDT	Aggregate	30	Diesel	207320.9146	207320.9146	0	20.36604605	0
Los Angeles (SC)	2042	MHDT	Aggregate	30	Electricity	195065.6142	0	195065.6142	0	176800.8847
Los Angeles (SC)	2042	MHDT	Aggregate	30	Natural Gas	4107.645544	4107.645544	0	0.506271079	0
Los Angeles (SC)	2042	MHDT	Aggregate	35	Gasoline	35640.90232	35640.90232	0	5.443928441	0
Los Angeles (SC)	2042	MHDT	Aggregate	35	Diesel	204132.0579	204132.0579	0	18.92304556	0
Los Angeles (SC)	2042	MHDT	Aggregate	35	Electricity	191566.8984	0	191566.8984	0	176619.1692
Los Angeles (SC)	2042	MHDT	Aggregate	35	Natural Gas	4130.568067	4130.568067	0	0.464824298	0
Los Angeles (SC)	2042	MHDT	Aggregate	40	Gasoline	29364.01545	29364.01545	0	4.341740429	0
Los Angeles (SC)	2042	MHDT	Aggregate	40	Diesel	171797.6029	171797.6029	0	15.35227831	0
Los Angeles (SC)	2042	MHDT	Aggregate	40	Electricity	161296.1481	0	161296.1481	0	157509.5399
Los Angeles (SC)	2042	MHDT	Aggregate	40	Natural Gas	3366.964796	3366.964796	0	0.350559441	0
Los Angeles (SC)	2042	MHDT	Aggregate	45	Gasoline	32538.36962	32538.36962	0	4.828004231	0
Los Angeles (SC)	2042	MHDT	Aggregate	45	Diesel	191627.155	191627.155	0	16.871699	0
Los Angeles (SC)	2042	MHDT	Aggregate	45	Electricity	180162.1592	0	180162.1592	0	186802.5805
Los Angeles (SC)	2042	MHDT	Aggregate	45	Natural Gas	3718.041928	3718.041928	0	0.361646701	0
Los Angeles (SC)	2042	MHDT	Aggregate	50	Gasoline	27002.38493	27002.38493	0	4.124174058	0
Los Angeles (SC)	2042	MHDT	Aggregate	50	Diesel	158090.8153	158090.8153	0	14.02959254	0
Los Angeles (SC)	2042	MHDT	Aggregate	50	Electricity	148958.8043	0	148958.8043	0	154608.4455
Los Angeles (SC)	2042	MHDT	Aggregate	50	Natural Gas	3082.313716	3082.313716	0	0.282205396	0
Los Angeles (SC)	2042	MHDT	Aggregate	55	Gasoline	32330.24539	32330.24539	0	5.140717966	0
Los Angeles (SC)	2042	MHDT	Aggregate	55	Diesel	182201.7934	182201.7934	0	16.65230447	0
Los Angeles (SC)	2042	MHDT	Aggregate	55	Electricity	172066.4115	0	172066.4115	0	183620.2745
Los Angeles (SC)	2042	MHDT	Aggregate	55	Natural Gas	3708.754562	3708.754562	0	0.321530936	0
Los Angeles (SC)	2042	MHDT	Aggregate	60	Gasoline	45119.58794	45119.58794	0	7.46521468	0
Los Angeles (SC)	2042	MHDT	Aggregate	60	Diesel	242663.0128	242663.0128	0	23.28095069	0
Los Angeles (SC)	2042	MHDT	Aggregate	60	Electricity	228541.2416	0	228541.2416	0	243453.7998
Los Angeles (SC)	2042	MHDT	Aggregate	60	Natural Gas	5314.993642	5314.993642	0	0.460686493	0
Los Angeles (SC)	2042	MHDT	Aggregate	65	Gasoline	39403.21495	39403.21495	0	6.718542104	0
Los Angeles (SC)	2042	MHDT	Aggregate	65	Diesel	209309.9248	209309.9248	0	21.53241019	0
Los Angeles (SC)	2042	MHDT	Aggregate	65	Electricity	198834.8434	0	198834.8434	0	223304.7684
Los Angeles (SC)	2042	MHDT	Aggregate	65	Natural Gas	4389.040259	4389.040259	0	0.38047651	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2042	MHDT	Aggregate	70	Gasoline	40737.58338	40737.58338	0	7.009935655	0
Los Angeles (SC)	2042	MHDT	Aggregate	70	Diesel	214313.8993	214313.8993	0	21.78129711	0
Los Angeles (SC)	2042	MHDT	Aggregate	70	Electricity	193368.2633	0	193368.2633	0	207668.8827
Los Angeles (SC)	2042	MHDT	Aggregate	70	Natural Gas	5400.809945	5400.809945	0	0.467838171	0
Los Angeles (SC)	2042	OBUS	Aggregate	5	Gasoline	118.5855194	118.5855194	0	0.048206911	0
Los Angeles (SC)	2042	OBUS	Aggregate	5	Diesel	339.4471443	339.4471443	0	0.08299396	0
Los Angeles (SC)	2042	OBUS	Aggregate	5	Electricity	106.9669489	0	106.9669489	0	376.0222025
Los Angeles (SC)	2042	OBUS	Aggregate	5	Natural Gas	54.09926722	54.09926722	0	0.015772762	0
Los Angeles (SC)	2042	OBUS	Aggregate	10	Gasoline	346.5710782	346.5710782	0	0.114370941	0
Los Angeles (SC)	2042	OBUS	Aggregate	10	Diesel	988.7423407	988.7423407	0	0.20431516	0
Los Angeles (SC)	2042	OBUS	Aggregate	10	Electricity	312.6153261	0	312.6153261	0	520.5427021
Los Angeles (SC)	2042	OBUS	Aggregate	10	Natural Gas	158.1073428	158.1073428	0	0.036941047	0
Los Angeles (SC)	2042	OBUS	Aggregate	15	Gasoline	918.0029217	918.0029217	0	0.247755239	0
Los Angeles (SC)	2042	OBUS	Aggregate	15	Diesel	2632.481941	2632.481941	0	0.440619426	0
Los Angeles (SC)	2042	OBUS	Aggregate	15	Electricity	828.0603916	0	828.0603916	0	1149.357048
Los Angeles (SC)	2042	OBUS	Aggregate	15	Natural Gas	418.7972158	418.7972158	0	0.074032089	0
Los Angeles (SC)	2042	OBUS	Aggregate	20	Gasoline	2301.665284	2301.665284	0	0.516365111	0
Los Angeles (SC)	2042	OBUS	Aggregate	20	Diesel	6782.789511	6782.789511	0	0.992900972	0
Los Angeles (SC)	2042	OBUS	Aggregate	20	Electricity	2076.156634	0	2076.156634	0	2558.638848
Los Angeles (SC)	2042	OBUS	Aggregate	20	Natural Gas	1050.030441	1050.030441	0	0.154464205	0
Los Angeles (SC)	2042	OBUS	Aggregate	25	Gasoline	4793.567966	4793.567966	0	0.919224298	0
Los Angeles (SC)	2042	OBUS	Aggregate	25	Diesel	14209.30038	14209.30038	0	1.904787346	0
Los Angeles (SC)	2042	OBUS	Aggregate	25	Electricity	4323.911911	0	4323.911911	0	4887.191798
Los Angeles (SC)	2042	OBUS	Aggregate	25	Natural Gas	2186.84807	2186.84807	0	0.280446564	0
Los Angeles (SC)	2042	OBUS	Aggregate	30	Gasoline	6254.796108	6254.796108	0	1.064302124	0
Los Angeles (SC)	2042	OBUS	Aggregate	30	Diesel	19313.96342	19313.96342	0	2.436646115	0
Los Angeles (SC)	2042	OBUS	Aggregate	30	Electricity	5641.974325	0	5641.974325	0	5113.694981
Los Angeles (SC)	2042	OBUS	Aggregate	30	Natural Gas	2853.467166	2853.467166	0	0.327959464	0
Los Angeles (SC)	2042	OBUS	Aggregate	35	Gasoline	4715.614164	4715.614164	0	0.743800819	0
Los Angeles (SC)	2042	OBUS	Aggregate	35	Diesel	14755.2581	14755.2581	0	1.766185041	0
Los Angeles (SC)	2042	OBUS	Aggregate	35	Electricity	4253.595733	0	4253.595733	0	3921.692894
Los Angeles (SC)	2042	OBUS	Aggregate	35	Natural Gas	2151.285182	2151.285182	0	0.225700808	0
Los Angeles (SC)	2042	OBUS	Aggregate	40	Gasoline	4832.976336	4832.976336	0	0.73791672	0
Los Angeles (SC)	2042	OBUS	Aggregate	40	Diesel	14495.39353	14495.39353	0	1.652624954	0
Los Angeles (SC)	2042	OBUS	Aggregate	40	Electricity	4359.459195	0	4359.459195	0	4257.115994
Los Angeles (SC)	2042	OBUS	Aggregate	40	Natural Gas	2204.826353	2204.826353	0	0.213932957	0
Los Angeles (SC)	2042	OBUS	Aggregate	45	Gasoline	4855.346644	4855.346644	0	0.743908874	0
Los Angeles (SC)	2042	OBUS	Aggregate	45	Diesel	14339.36186	14339.36186	0	1.596928446	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2042	OBUS	Aggregate	45	Electricity	4379.637742	0	4379.637742	0	4541.062536
Los Angeles (SC)	2042	OBUS	Aggregate	45	Natural Gas	2215.031791	2215.031791	0	0.200726715	0
Los Angeles (SC)	2042	OBUS	Aggregate	50	Gasoline	4831.363218	4831.363218	0	0.761926245	0
Los Angeles (SC)	2042	OBUS	Aggregate	50	Diesel	14548.3138	14548.3138	0	1.628880022	0
Los Angeles (SC)	2042	OBUS	Aggregate	50	Electricity	4358.004123	0	4358.004123	0	4523.292503
Los Angeles (SC)	2042	OBUS	Aggregate	50	Natural Gas	2204.09044	2204.09044	0	0.187967007	0
Los Angeles (SC)	2042	OBUS	Aggregate	55	Gasoline	5408.793024	5408.793024	0	0.887981986	0
Los Angeles (SC)	2042	OBUS	Aggregate	55	Diesel	18980.24106	18980.24106	0	2.241682827	0
Los Angeles (SC)	2042	OBUS	Aggregate	55	Electricity	4878.859493	0	4878.859493	0	5206.463666
Los Angeles (SC)	2042	OBUS	Aggregate	55	Natural Gas	2467.516612	2467.516612	0	0.199242274	0
Los Angeles (SC)	2042	OBUS	Aggregate	60	Gasoline	7876.366007	7876.366007	0	1.345475464	0
Los Angeles (SC)	2042	OBUS	Aggregate	60	Diesel	32341.47054	32341.47054	0	4.078587936	0
Los Angeles (SC)	2042	OBUS	Aggregate	60	Electricity	7104.668804	0	7104.668804	0	7568.255972
Los Angeles (SC)	2042	OBUS	Aggregate	60	Natural Gas	3593.234919	3593.234919	0	0.290139605	0
Los Angeles (SC)	2042	OBUS	Aggregate	65	Gasoline	3838.817235	3838.817235	0	0.675772854	0
Los Angeles (SC)	2042	OBUS	Aggregate	65	Diesel	18337.62958	18337.62958	0	2.492253051	0
Los Angeles (SC)	2042	OBUS	Aggregate	65	Electricity	3462.704124	0	3462.704124	0	3888.847292
Los Angeles (SC)	2042	OBUS	Aggregate	65	Natural Gas	1751.286332	1751.286332	0	0.141409492	0
Los Angeles (SC)	2042	OBUS	Aggregate	70	Gasoline	3.911786715	3.911786715	0	0.000694948	0
Los Angeles (SC)	2042	OBUS	Aggregate	70	Diesel	17.20693453	17.20693453	0	0.002313266	0
Los Angeles (SC)	2042	OBUS	Aggregate	70	Electricity	3.528524325	0	3.528524325	0	3.789477609
Los Angeles (SC)	2042	OBUS	Aggregate	70	Natural Gas	1.78457535	1.78457535	0	0.000144097	0
Los Angeles (SC)	2042	SBUS	Aggregate	5	Gasoline	1335.14931	1335.14931	0	0.265061472	0
Los Angeles (SC)	2042	SBUS	Aggregate	5	Diesel	338.5655486	338.5655486	0	0.075041338	0
Los Angeles (SC)	2042	SBUS	Aggregate	5	Electricity	1299.961435	0	1299.961435	0	4569.770072
Los Angeles (SC)	2042	SBUS	Aggregate	5	Natural Gas	1004.068257	1004.068257	0	1.041701416	0
Los Angeles (SC)	2042	SBUS	Aggregate	10	Gasoline	1913.310304	1913.310304	0	0.308349721	0
Los Angeles (SC)	2042	SBUS	Aggregate	10	Diesel	485.1749147	485.1749147	0	0.088937402	0
Los Angeles (SC)	2042	SBUS	Aggregate	10	Electricity	1862.884989	0	1862.884989	0	3101.931048
Los Angeles (SC)	2042	SBUS	Aggregate	10	Natural Gas	1438.860903	1438.860903	0	0.952206698	0
Los Angeles (SC)	2042	SBUS	Aggregate	15	Gasoline	2741.088188	2741.088188	0	0.361267767	0
Los Angeles (SC)	2042	SBUS	Aggregate	15	Diesel	695.0818303	695.0818303	0	0.100219754	0
Los Angeles (SC)	2042	SBUS	Aggregate	15	Electricity	2668.846778	0	2668.846778	0	3704.389058
Los Angeles (SC)	2042	SBUS	Aggregate	15	Natural Gas	2061.372176	2061.372176	0	0.77421352	0
Los Angeles (SC)	2042	SBUS	Aggregate	20	Gasoline	3319.231771	3319.231771	0	0.363640014	0
Los Angeles (SC)	2042	SBUS	Aggregate	20	Diesel	841.6867816	841.6867816	0	0.103517027	0
Los Angeles (SC)	2042	SBUS	Aggregate	20	Electricity	3231.753381	0	3231.753381	0	3982.787045
Los Angeles (SC)	2042	SBUS	Aggregate	20	Natural Gas	2496.151729	2496.151729	0	0.645556032	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2042	SBUS	Aggregate	25	Gasoline	4646.243436	4646.243436	0	0.435087969	0
Los Angeles (SC)	2042	SBUS	Aggregate	25	Diesel	1178.188796	1178.188796	0	0.13152695	0
Los Angeles (SC)	2042	SBUS	Aggregate	25	Electricity	4523.791639	0	4523.791639	0	5113.110038
Los Angeles (SC)	2042	SBUS	Aggregate	25	Natural Gas	3494.100257	3494.100257	0	0.683861293	0
Los Angeles (SC)	2042	SBUS	Aggregate	30	Gasoline	5395.094107	5395.094107	0	0.448291524	0
Los Angeles (SC)	2042	SBUS	Aggregate	30	Diesel	1368.081444	1368.081444	0	0.141923145	0
Los Angeles (SC)	2042	SBUS	Aggregate	30	Electricity	5252.906342	0	5252.906342	0	4761.0569
Los Angeles (SC)	2042	SBUS	Aggregate	30	Natural Gas	4057.256139	4057.256139	0	0.635659082	0
Los Angeles (SC)	2042	SBUS	Aggregate	35	Gasoline	5749.308709	5749.308709	0	0.442838666	0
Los Angeles (SC)	2042	SBUS	Aggregate	35	Diesel	1457.902755	1457.902755	0	0.142856572	0
Los Angeles (SC)	2042	SBUS	Aggregate	35	Electricity	5597.785615	0	5597.785615	0	5160.997294
Los Angeles (SC)	2042	SBUS	Aggregate	35	Natural Gas	4323.635065	4323.635065	0	0.562845796	0
Los Angeles (SC)	2042	SBUS	Aggregate	40	Gasoline	4343.369831	4343.369831	0	0.323844971	0
Los Angeles (SC)	2042	SBUS	Aggregate	40	Diesel	1101.386473	1101.386473	0	0.103935956	0
Los Angeles (SC)	2042	SBUS	Aggregate	40	Electricity	4228.900271	0	4228.900271	0	4129.622088
Los Angeles (SC)	2042	SBUS	Aggregate	40	Natural Gas	3266.331145	3266.331145	0	0.362814633	0
Los Angeles (SC)	2042	SBUS	Aggregate	45	Gasoline	2674.978814	2674.978814	0	0.200146584	0
Los Angeles (SC)	2042	SBUS	Aggregate	45	Diesel	678.3178951	678.3178951	0	0.062997216	0
Los Angeles (SC)	2042	SBUS	Aggregate	45	Electricity	2604.479717	0	2604.479717	0	2700.475694
Los Angeles (SC)	2042	SBUS	Aggregate	45	Natural Gas	2011.656145	2011.656145	0	0.194491721	0
Los Angeles (SC)	2042	SBUS	Aggregate	50	Gasoline	1834.38309	1834.38309	0	0.141277911	0
Los Angeles (SC)	2042	SBUS	Aggregate	50	Diesel	465.1606473	465.1606473	0	0.043490677	0
Los Angeles (SC)	2042	SBUS	Aggregate	50	Electricity	1786.037903	0	1786.037903	0	1853.777929
Los Angeles (SC)	2042	SBUS	Aggregate	50	Natural Gas	1379.505511	1379.505511	0	0.117897814	0
Los Angeles (SC)	2042	SBUS	Aggregate	55	Gasoline	2529.959636	2529.959636	0	0.202847463	0
Los Angeles (SC)	2042	SBUS	Aggregate	55	Diesel	641.5441073	641.5441073	0	0.061738997	0
Los Angeles (SC)	2042	SBUS	Aggregate	55	Electricity	2463.282522	0	2463.282522	0	2628.686267
Los Angeles (SC)	2042	SBUS	Aggregate	55	Natural Gas	1902.597816	1902.597816	0	0.145522517	0
Los Angeles (SC)	2042	SBUS	Aggregate	60	Gasoline	1847.21834	1847.21834	0	0.154110269	0
Los Angeles (SC)	2042	SBUS	Aggregate	60	Diesel	468.4153944	468.4153944	0	0.047363867	0
Los Angeles (SC)	2042	SBUS	Aggregate	60	Electricity	1798.53488	0	1798.53488	0	1915.891187
Los Angeles (SC)	2042	SBUS	Aggregate	60	Natural Gas	1389.157965	1389.157965	0	0.106251443	0
Los Angeles (SC)	2042	SBUS	Aggregate	65	Gasoline	1085.53242	1085.53242	0	0.093329629	0
Los Angeles (SC)	2042	SBUS	Aggregate	65	Diesel	275.2679992	275.2679992	0	0.029762772	0
Los Angeles (SC)	2042	SBUS	Aggregate	65	Electricity	1056.923201	0	1056.923201	0	1186.995128
Los Angeles (SC)	2042	SBUS	Aggregate	65	Natural Gas	816.3496292	816.3496292	0	0.062439498	0
Los Angeles (SC)	2042	SBUS	Aggregate	70	Gasoline	1085.53242	1085.53242	0	0.094187726	0
Los Angeles (SC)	2042	SBUS	Aggregate	70	Diesel	275.2679992	275.2679992	0	0.029762772	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2042	SBUS	Aggregate	70	Electricity	1056.923201	0	1056.923201	0	1135.088336
Los Angeles (SC)	2042	SBUS	Aggregate	70	Natural Gas	816.3496292	816.3496292	0	0.062439498	0
Los Angeles (SC)	2042	SBUS	Aggregate	75	Gasoline	1085.53242	1085.53242	0	0.094187726	0
Los Angeles (SC)	2042	SBUS	Aggregate	75	Diesel	275.2679992	275.2679992	0	0.029762772	0
Los Angeles (SC)	2042	SBUS	Aggregate	75	Electricity	1056.923201	0	1056.923201	0	1135.088336
Los Angeles (SC)	2042	SBUS	Aggregate	75	Natural Gas	816.3496292	816.3496292	0	0.062439498	0
Los Angeles (SC)	2042	SBUS	Aggregate	80	Gasoline	1085.53242	1085.53242	0	0.094187726	0
Los Angeles (SC)	2042	SBUS	Aggregate	80	Diesel	275.2679992	275.2679992	0	0.029762772	0
Los Angeles (SC)	2042	SBUS	Aggregate	80	Electricity	1056.923201	0	1056.923201	0	1135.088336
Los Angeles (SC)	2042	SBUS	Aggregate	80	Natural Gas	816.3496292	816.3496292	0	0.062439498	0
Los Angeles (SC)	2042	UBUS	Aggregate	5	Gasoline	3.319152123	3.319152123	0	0.000744759	0
Los Angeles (SC)	2042	UBUS	Aggregate	5	Electricity	7048.43839	0	7048.43839	0	41648.25279
Los Angeles (SC)	2042	UBUS	Aggregate	5	Natural Gas	691.3771578	691.3771578	0	1.032639723	0
Los Angeles (SC)	2042	UBUS	Aggregate	10	Gasoline	36.82325789	36.82325789	0	0.005827843	0
Los Angeles (SC)	2042	UBUS	Aggregate	10	Electricity	22444.30332	0	22444.30332	0	62819.17436
Los Angeles (SC)	2042	UBUS	Aggregate	10	Natural Gas	2210.537164	2210.537164	0	1.940102136	0
Los Angeles (SC)	2042	UBUS	Aggregate	15	Gasoline	122.0515513	122.0515513	0	0.015967388	0
Los Angeles (SC)	2042	UBUS	Aggregate	15	Electricity	40209.11296	0	40209.11296	0	93811.79425
Los Angeles (SC)	2042	UBUS	Aggregate	15	Natural Gas	3979.392618	3979.392618	0	1.789857388	0
Los Angeles (SC)	2042	UBUS	Aggregate	20	Gasoline	383.8960206	383.8960206	0	0.046110027	0
Los Angeles (SC)	2042	UBUS	Aggregate	20	Electricity	358478.6123	0	358478.6123	0	742595.1734
Los Angeles (SC)	2042	UBUS	Aggregate	20	Natural Gas	35236.59518	35236.59518	0	10.27652209	0
Los Angeles (SC)	2042	UBUS	Aggregate	25	Gasoline	660.3859316	660.3859316	0	0.061135168	0
Los Angeles (SC)	2042	UBUS	Aggregate	25	Electricity	14294.32444	0	14294.32444	0	27157.27432
Los Angeles (SC)	2042	UBUS	Aggregate	25	Natural Gas	1625.915922	1625.915922	0	0.316703601	0
Los Angeles (SC)	2042	UBUS	Aggregate	30	Gasoline	1006.637506	1006.637506	0	0.080166476	0
Los Angeles (SC)	2042	UBUS	Aggregate	30	Electricity	16421.98984	0	16421.98984	0	25018.97378
Los Angeles (SC)	2042	UBUS	Aggregate	30	Natural Gas	1952.82172	1952.82172	0	0.289918801	0
Los Angeles (SC)	2042	UBUS	Aggregate	35	Gasoline	1028.595347	1028.595347	0	0.071164816	0
Los Angeles (SC)	2042	UBUS	Aggregate	35	Electricity	11996.73312	0	11996.73312	0	18591.75405
Los Angeles (SC)	2042	UBUS	Aggregate	35	Natural Gas	1526.982152	1526.982152	0	0.179588431	0
Los Angeles (SC)	2042	UBUS	Aggregate	40	Gasoline	878.5666632	878.5666632	0	0.053820424	0
Los Angeles (SC)	2042	UBUS	Aggregate	40	Electricity	11186.66861	0	11186.66861	0	18362.15452
Los Angeles (SC)	2042	UBUS	Aggregate	40	Natural Gas	1396.288149	1396.288149	0	0.138900293	0
Los Angeles (SC)	2042	UBUS	Aggregate	45	Gasoline	1005.841505	1005.841505	0	0.056094728	0
Los Angeles (SC)	2042	UBUS	Aggregate	45	Electricity	11218.46298	0	11218.46298	0	19552.06582
Los Angeles (SC)	2042	UBUS	Aggregate	45	Natural Gas	1442.977257	1442.977257	0	0.122592865	0
Los Angeles (SC)	2042	UBUS	Aggregate	50	Gasoline	813.1720484	813.1720484	0	0.042914498	0

EMFAC2021 Raw Output File

Los Angeles (SC)	2042	UBUS	Aggregate	50	Electricity	10371.96956	0	10371.96956	0	18095.40334
Los Angeles (SC)	2042	UBUS	Aggregate	50	Natural Gas	1294.116763	1294.116763	0	0.110144305	0
Los Angeles (SC)	2042	UBUS	Aggregate	55	Gasoline	933.6145846	933.6145846	0	0.048744174	0
Los Angeles (SC)	2042	UBUS	Aggregate	55	Electricity	10980.20262	0	10980.20262	0	19695.85705
Los Angeles (SC)	2042	UBUS	Aggregate	55	Natural Gas	1394.916264	1394.916264	0	0.118059286	0
Los Angeles (SC)	2042	UBUS	Aggregate	60	Gasoline	1254.824908	1254.824908	0	0.067892379	0
Los Angeles (SC)	2042	UBUS	Aggregate	60	Electricity	13782.12241	0	13782.12241	0	24677.89297
Los Angeles (SC)	2042	UBUS	Aggregate	60	Natural Gas	1779.277107	1779.277107	0	0.150854837	0
Los Angeles (SC)	2042	UBUS	Aggregate	65	Gasoline	1183.107813	1183.107813	0	0.069093076	0
Los Angeles (SC)	2042	UBUS	Aggregate	65	Electricity	6882.383045	0	6882.383045	0	12992.24925
Los Angeles (SC)	2042	UBUS	Aggregate	65	Natural Gas	1079.044126	1079.044126	0	0.089056402	0
Los Angeles (SC)	2042	UBUS	Aggregate	70	Gasoline	1517.457115	1517.457115	0	0.098850462	0
Los Angeles (SC)	2042	UBUS	Aggregate	70	Electricity	9.37620859	0	9.37620859	0	16.92596694
Los Angeles (SC)	2042	UBUS	Aggregate	70	Natural Gas	520.4554186	520.4554186	0	0.038442614	0
Los Angeles (SC)	2042	UBUS	Aggregate	75	Gasoline	0	0	0	0	0
Los Angeles (SC)	2042	UBUS	Aggregate	75	Natural Gas	0	0	0	0	0
Los Angeles (SC)	2042	UBUS	Aggregate	80	Gasoline	0	0	0	0	0
Los Angeles (SC)	2042	UBUS	Aggregate	80	Natural Gas	0	0	0	0	0

Rail Propulsion Energy Consumption Calculations

Metro Rail Electricity Consumption Data and Annual Locally Preferred Alternative Rail Propulsion Electricity Consumption

Rail Propulsion										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Rail Propulsion (kWh)	172,000,000	178,556,320	199,093,552	229,866,745	210,937,939	199,799,058	197,554,651	215,284,093	227,049,584	217,103,112

Total Vehicle Revenue Miles										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Total Rail Vehicle Revenue Miles	15,531,064	16,062,424	17,299,665	20,104,388	20,832,088	20,438,664	22,049,345	24,509,530	25,513,511	23,064,082
Heavy Rail - Directly Operated (HRDO)	5,885,380	5,907,851	6,156,263	6,865,440	7,013,259	6,929,542	6,902,018	7,047,446	6,928,824	6,874,114
Light Rail - Directly Operated (LRDO)	9,645,684	10,154,573	11,143,402	13,238,948	13,818,829	13,509,122	15,147,327	17,462,084	18,584,687	16,189,968

Source: Metro 2020

Rail Propulsion Electricity

Consumption Rate (kWh/VRM)	11.07	11.12	11.51	11.43	10.13	9.78	8.96	8.78	8.90	9.41

Average Rail Propulsion Electricity Consumption Rate 2014-2017 (kWh/VRM) 9.41 < used in FEIR analysis, matches 2019

Locally Preferred Alternative Annual Rail Vehicle Revenue Miles (VRM/year)	1,604,323

Locally Preferred Alternative Annual Rail Propulsion Electricity Consumption (kWh/year)	15,098,492

BTU/kWh	3,412.14

MMBTU/year	51,518

Stations, Parking Facilities, and MSF Operational Energy Consumption

Annual Station, Lighting, and MSF Energy Consumption Calculations

Data Extracted from CalEEMod Output Files

Electricity

LRT Alignment (2042)

Three Aerial Stations	52,380 kWh/year
Six At-Grade Stations	94,500 kWh/year
Parking Structure	2,393,600 kWh/year
Parking Lot	36,400 kWh/year
Parking Lot	50,400 kWh/year
Parking Lot	68,600 kWh/year
Parking Lot	85,960 kWh/year

MSF (2042)

General Light Industry	131,406 kWh/year
General Light Industry	49,956 kWh/year
Industrial Park	1,293,000 kWh/year
Other Asphalt Surfaces	0 kWh/year
Other Non-Asphalt Surfaces	0 kWh/year
Parking Lot	42,980 kWh/year
Unrefrigerated Warehouse-Rail	45,577 kWh/year
MSF - Electricity (MMBTU)	5,332.9

Total Electricity **4,344,759.0 kWh/year**
14,824.9 MMBTU/year

Natural Gas (MSF 2042)

General Light Industry	217,316.0 kBTU/year
General Light Industry	82,616.0 kBTU/year
Industrial Park	1,066,470.0 kBTU/year
Other Asphalt Surfaces	0.0 kBTU/year
Other Non-Asphalt Surfaces	0.0 kBTU/year
Parking Lot	0.0 kBTU/year
Unrefrigerated Warehouse-Rail	10,234.0 kBTU/year

Total Natural Gas **1,376.6 MMBTU/year**

USEPA 2023 Fuel Carbon Intensity Factors

kgCO ₂ /gal-D	10.21
kgCO ₂ /gal-G	8.78
lbCO ₂ /gal-D	22.51
lbCO ₂ /gal-G	19.36

Energy Conversion Factors

BTU/gal-G	114,000.00
BTU/kWh	3,412.14

MT/year from CalEEMod Output

MSF (2042) Operational Vehicle Trips	Total CO₂
LD Vehicles (Gasoline)	277.7722
Annual Gasoline (Gallons)	31,636.9
Annual MMBTU	3,740.2

MSF Annual Energy 2042 (MMBTU) **10,450**

LPA ANNUAL ENERGY CONSUMPTION

Parking/Station Energy (MMBTU)	9,492
Rail Prop Energy (MMBTU)	51,518
Total LRT Corridor Energy (MMBTU)	61,010
MSF Annual Energy (MMBTU)	10,450
LPA On-Road Vehicle Travel Energy (MMBTU)	870,940,687

Annual Energy Consumption (MMBTU)

No Build Alternative (2042)	LPA (2042)
871,138,853	871,012,147

Annual Energy Change (MMBTU) **-126,706**
-0.015%

Annual Station, Lighting, and MSF Energy Consumption Calculations

MSF Operational Vehicle Trips (2017)

	MT/year		<u>Existing</u>	<u>LPA(2017)</u>
	Total CO2			
LD Vehicles (Gasoline)	441.4752		923,225,261	923,118,782 On-Road Vehicle Travel
				61,010 LRT Alignment, Stations, Parking
Annual Gasoline (Gallons)	50281.91344			12,856 MSF
Annual MMBTU	5,944.5			923,192,649 Total MMBTU
				-32,613 Change from No Build
				-0.004% % Change from No Build

MSF 2017 Electricity

General Light Industry	134,310	kWh/year
General Light Industry	51,060	kWh/year
Industrial Park	1,343,690	kWh/year
Other Asphalt Surfaces	0	kWh/year
Other Non-Asphalt Surfaces	0	kWh/year
Parking Lot	42,980	kWh/year
Unrefrigerated Warehouse-Rail	46,410	kWh/year
Annual MMBTU	5,522	

USEPA 2023 Fuel

kgCO2/gal-D	10.21
kgCO2/gal-G	8.78
lbCO2/gal-D	22.51
lbCO2/gal-G	19.36

Energy Conversion

BTU/gal-G	114,000.00
BTU/kWh	3,412.14

MSF 2017 Natural Gas

General Light Industry	83,260	kBTU/year
General Light Industry	219,010	kBTU/year
Industrial Park	1,076,810	kBTU/year
Other Asphalt Surfaces	0	kBTU/year
Other Non-Asphalt Surfaces	0	kBTU/year
Parking Lot	0	kBTU/year
Unrefrigerated Warehouse-Rail	10,353	kBTU/year
Annual MMBTU	1,389	

Total Annual MMBTU - MSF 2017 12,856

Maintenance and Storage Facility (MSF)
CalEEMod (Version 2020.4.0) Output Files – 2042 & 2017

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**LACMTA West Santa Ana Branch MSF - Bellflower Site****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	2040
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	260.79	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Analysis for Operational Year 2042. Construction 2029-2031. SCE CO2 factor from CalEEMod 2022.1.1.3 User's Guide.

Land Use -

Construction Phase - Preliminary Schedule Updated: March 2029 - April 2031.

Off-road Equipment - Metro Inventory

Off-road Equipment - Metro Inventory

Off-road Equipment - Metro Inventory

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment - Project Inventory

Daily Haul Trips = $30 \times 60 = 1800$ (Demo), $60 \times 90 = 5400$

Architectural Coating - SCAQMD Rule 1113 = 50 g/L max for building envelope

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating - SCAQMD Rule 1113 - Building Envelope = 50 g/L

Energy Use -

Construction Off-road Equipment Mitigation - Metro GCP Compliance

Fleet Mix -

[illegible]

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	10.00	90.00
tblConstructionPhase	NumDays	370.00	450.00
tblConstructionPhase	NumDays	20.00	60.00
tblConstructionPhase	NumDays	20.00	30.00
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

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CO2IntensityFactor	390.98	260.79
tblTripsAndVMT	HaulingTripNumber	910.00	1,800.00
tblTripsAndVMT	HaulingTripNumber	0.00	5,400.00
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	VendorTripNumber	0.00	20.00
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	1.99	0.00
tblVehicleTrips	ST_TR	2.54	2.42
tblVehicleTrips	ST_TR	1.74	0.00
tblVehicleTrips	SU_TR	5.00	0.00
tblVehicleTrips	SU_TR	1.24	2.42
tblVehicleTrips	SU_TR	1.74	0.00
tblVehicleTrips	WD_TR	4.96	0.00
tblVehicleTrips	WD_TR	3.37	2.42
tblVehicleTrips	WD_TR	1.74	0.00

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.0 Emissions Summary

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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					
2029	0.4297	3.9526	4.3135	0.0126	1.3172	0.1328	1.4499	0.4675	0.1235	0.5910	0.0000	1,144.316 1	1,144.316 1	0.1913	0.0479	1,163.358 0
2030	0.3997	2.1355	4.7695	0.0114	0.5539	0.0389	0.5928	0.1480	0.0386	0.1867	0.0000	1,004.590 3	1,004.590 3	0.0337	0.0218	1,011.915 9
2031	0.7348	0.5756	1.3174	3.1200e-003	0.1518	0.0159	0.1677	0.0406	0.0159	0.0565	0.0000	277.0590	277.0590	9.6700e-003	6.8400e-003	279.3388
Maximum	0.7348	3.9526	4.7695	0.0126	1.3172	0.1328	1.4499	0.4675	0.1235	0.5910	0.0000	1,144.316 1	1,144.316 1	0.1913	0.0479	1,163.358 0

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					
2029	0.1971	1.2052	5.0486	0.0126	0.8246	7.8800e-003	0.8325	0.2657	7.5700e-003	0.2733	0.0000	1,144.315 4	1,144.315 4	0.1913	0.0479	1,163.357 3
2030	0.2136	0.9349	5.0204	0.0114	0.5539	5.2200e-003	0.5592	0.1480	5.0000e-003	0.1530	0.0000	1,004.589 6	1,004.589 6	0.0337	0.0218	1,011.915 3
2031	0.6732	0.2145	1.3875	3.1200e-003	0.1518	1.3600e-003	0.1532	0.0406	1.3000e-003	0.0419	0.0000	277.0588	277.0588	9.6700e-003	6.8400e-003	279.3386
Maximum	0.6732	1.2052	5.0486	0.0126	0.8246	7.8800e-003	0.8325	0.2657	7.5700e-003	0.2733	0.0000	1,144.315 4	1,144.315 4	0.1913	0.0479	1,163.357 3

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	30.71	64.66	-10.15	0.00	24.35	92.29	30.11	30.76	92.21	43.86	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)
37	1-22-2029	4-21-2029	0.6314	0.1804
38	4-22-2029	7-21-2029	1.7405	0.5129
39	7-22-2029	10-21-2029	1.3177	0.4286
40	10-22-2029	1-21-2030	0.7715	0.3061
41	1-22-2030	4-21-2030	0.6252	0.2834
42	4-22-2030	7-21-2030	0.6272	0.2817
43	7-22-2030	10-21-2030	0.6356	0.2862
44	10-22-2030	1-21-2031	0.6399	0.2906
45	1-22-2031	4-21-2031	1.1361	0.8001
		Highest	1.7405	0.8001

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	5.7600e-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	7.4200e-003	0.0675	0.0567	4.0000e-004		5.1300e-003	5.1300e-003		5.1300e-003	5.1300e-003	0.0000	258.3437	258.3437	0.0248	4.1800e-003	260.2102
Mobile	0.1280	0.1271	1.3321	3.0000e-003	0.4168	1.4900e-003	0.4183	0.1112	1.3900e-003	0.1126	0.0000	277.7722	277.7722	0.0197	0.0119	281.8046
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	47.0314	56.7186	1.0009	0.0242	88.9572
Total	0.7293	0.1947	1.3945	3.4000e-003	0.4168	6.6400e-003	0.4234	0.1112	6.5400e-003	0.1178	42.2002	583.1586	625.3588	2.9669	0.0403	711.5338

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	5.7600e-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	7.4200e-003	0.0675	0.0567	4.0000e-004		5.1300e-003	5.1300e-003		5.1300e-003	5.1300e-003	0.0000	258.3437	258.3437	0.0248	4.1800e-003	260.2102
Mobile	0.1280	0.1271	1.3321	3.0000e-003	0.4168	1.4900e-003	0.4183	0.1112	1.3900e-003	0.1126	0.0000	277.7722	277.7722	0.0197	0.0119	281.8046
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	47.0314	56.7186	1.0009	0.0242	88.9572
Total	0.7293	0.1947	1.3945	3.4000e-003	0.4168	6.6400e-003	0.4234	0.1112	6.5400e-003	0.1178	42.2002	583.1586	625.3588	2.9669	0.0403	711.5338

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	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	Demolition	Demolition	3/12/2029	5/19/2029	6	60	
2	Site Preparation	Site Preparation	5/21/2029	9/1/2029	6	90	
3	Building Construction & Track Laydown	Building Construction	9/3/2029	2/8/2031	6	450	

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Paving Parking & Access Roads	Paving	2/10/2031	4/19/2031	6	60
5	Road Striping & Architectural Coating	Architectural Coating	3/17/2031	4/19/2031	6	30

Acres of Grading (Site Preparation Phase): 315**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: 40,000; 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

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	1,800.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	10	300.00	40.00	5,400.00	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	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

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Demolition - 2029****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	0.0862	0.7959	0.8195	1.7800e-003		0.0325	0.0325		0.0303	0.0303	0.0000	155.6350	155.6350	0.0413	0.0000	156.6680
Total	0.0862	0.7959	0.8195	1.7800e-003	0.0984	0.0325	0.1309	0.0149	0.0303	0.0452	0.0000	155.6350	155.6350	0.0413	0.0000	156.6680

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	1.8000e-003	0.1182	0.0338	4.7000e-004	0.0155	7.3000e-004	0.0162	4.2500e-003	6.9000e-004	4.9500e-003	0.0000	46.8579	46.8579	3.0500e-003	7.4600e-003	49.1566
Vendor	1.1700e-003	0.0469	0.0167	2.0000e-004	7.5600e-003	2.3000e-004	7.7900e-003	2.1800e-003	2.2000e-004	2.4000e-003	0.0000	19.5448	19.5448	7.5000e-004	2.8200e-003	20.4048
Worker	0.0197	0.0128	0.2132	7.2000e-004	0.0986	4.3000e-004	0.0991	0.0262	3.9000e-004	0.0266	0.0000	66.1489	66.1489	1.2000e-003	1.4500e-003	66.6114
Total	0.0227	0.1779	0.2636	1.3900e-003	0.1217	1.3900e-003	0.1231	0.0326	1.3000e-003	0.0339	0.0000	132.5516	132.5516	5.0000e-003	0.0117	136.1728

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Demolition - 2029****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	0.0210	0.0911	1.0234	1.7800e-003		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	155.6348	155.6348	0.0413	0.0000	156.6678
Total	0.0210	0.0911	1.0234	1.7800e-003	0.0384	4.2000e-004	0.0388	5.8100e-003	4.2000e-004	6.2300e-003	0.0000	155.6348	155.6348	0.0413	0.0000	156.6678

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	1.8000e-003	0.1182	0.0338	4.7000e-004	0.0155	7.3000e-004	0.0162	4.2500e-003	6.9000e-004	4.9500e-003	0.0000	46.8579	46.8579	3.0500e-003	7.4600e-003	49.1566
Vendor	1.1700e-003	0.0469	0.0167	2.0000e-004	7.5600e-003	2.3000e-004	7.7900e-003	2.1800e-003	2.2000e-004	2.4000e-003	0.0000	19.5448	19.5448	7.5000e-004	2.8200e-003	20.4048
Worker	0.0197	0.0128	0.2132	7.2000e-004	0.0986	4.3000e-004	0.0991	0.0262	3.9000e-004	0.0266	0.0000	66.1489	66.1489	1.2000e-003	1.4500e-003	66.6114
Total	0.0227	0.1779	0.2636	1.3900e-003	0.1217	1.3900e-003	0.1231	0.0326	1.3000e-003	0.0339	0.0000	132.5516	132.5516	5.0000e-003	0.0117	136.1728

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Site Preparation - 2029****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					0.7090	0.0000	0.7090	0.3160	0.0000	0.3160	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1603	1.6028	1.2441	3.1400e-003		0.0646	0.0646		0.0595	0.0595	0.0000	276.1943	276.1943	0.0893	0.0000	278.4275
Total	0.1603	1.6028	1.2441	3.1400e-003	0.7090	0.0646	0.7736	0.3160	0.0595	0.3754	0.0000	276.1943	276.1943	0.0893	0.0000	278.4275

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	5.4000e-003	0.3547	0.1013	1.4000e-003	0.0465	2.1800e-003	0.0486	0.0128	2.0800e-003	0.0149	0.0000	140.5737	140.5737	9.1500e-003	0.0224	147.4698
Vendor	1.7600e-003	0.0703	0.0250	3.0000e-004	0.0113	3.4000e-004	0.0117	3.2700e-003	3.3000e-004	3.6000e-003	0.0000	29.3172	29.3172	1.1300e-003	4.2300e-003	30.6072
Worker	0.0296	0.0192	0.3197	1.0800e-003	0.1479	6.4000e-004	0.1486	0.0393	5.9000e-004	0.0399	0.0000	99.2234	99.2234	1.8000e-003	2.1800e-003	99.9172
Total	0.0368	0.4442	0.4461	2.7800e-003	0.2057	3.1600e-003	0.2089	0.0553	3.0000e-003	0.0583	0.0000	269.1143	269.1143	0.0121	0.0288	277.9941

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Site Preparation - 2029****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					0.2765	0.0000	0.2765	0.1232	0.0000	0.1232	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0386	0.1672	1.6429	3.1400e-003		7.7000e-004	7.7000e-004		7.7000e-004	7.7000e-004	0.0000	276.1940	276.1940	0.0893	0.0000	278.4272
Total	0.0386	0.1672	1.6429	3.1400e-003	0.2765	7.7000e-004	0.2773	0.1232	7.7000e-004	0.1240	0.0000	276.1940	276.1940	0.0893	0.0000	278.4272

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	5.4000e-003	0.3547	0.1013	1.4000e-003	0.0465	2.1800e-003	0.0486	0.0128	2.0800e-003	0.0149	0.0000	140.5737	140.5737	9.1500e-003	0.0224	147.4698
Vendor	1.7600e-003	0.0703	0.0250	3.0000e-004	0.0113	3.4000e-004	0.0117	3.2700e-003	3.3000e-004	3.6000e-003	0.0000	29.3172	29.3172	1.1300e-003	4.2300e-003	30.6072
Worker	0.0296	0.0192	0.3197	1.0800e-003	0.1479	6.4000e-004	0.1486	0.0393	5.9000e-004	0.0399	0.0000	99.2234	99.2234	1.8000e-003	2.1800e-003	99.9172
Total	0.0368	0.4442	0.4461	2.7800e-003	0.2057	3.1600e-003	0.2089	0.0553	3.0000e-003	0.0583	0.0000	269.1143	269.1143	0.0121	0.0288	277.9941

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Building Construction & Track Laydown - 2029****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	0.0879	0.8295	1.1456	1.9100e-003		0.0300	0.0300		0.0283	0.0283	0.0000	163.7133	163.7133	0.0402	0.0000	164.7178
Total	0.0879	0.8295	1.1456	1.9100e-003		0.0300	0.0300		0.0283	0.0283	0.0000	163.7133	163.7133	0.0402	0.0000	164.7178

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	2.0100e-003	0.0805	0.0287	3.4000e-004	0.0130	3.9000e-004	0.0134	3.7500e-003	3.8000e-004	4.1200e-003	0.0000	33.5519	33.5519	1.2900e-003	4.8500e-003	35.0282
Worker	0.0339	0.0220	0.3659	1.2400e-003	0.1693	7.3000e-004	0.1700	0.0450	6.7000e-004	0.0456	0.0000	113.5556	113.5556	2.0600e-003	2.4900e-003	114.3496
Total	0.0359	0.1024	0.3946	1.5800e-003	0.1823	1.1200e-003	0.1834	0.0487	1.0500e-003	0.0498	0.0000	147.1076	147.1076	3.3500e-003	7.3400e-003	149.3778

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction & Track Laydown - 2029

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	0.0421	0.2225	1.2780	1.9100e-003		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003	0.0000	163.7131	163.7131	0.0402	0.0000	164.7177
Total	0.0421	0.2225	1.2780	1.9100e-003		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003	0.0000	163.7131	163.7131	0.0402	0.0000	164.7177

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	2.0100e-003	0.0805	0.0287	3.4000e-004	0.0130	3.9000e-004	0.0134	3.7500e-003	3.8000e-004	4.1200e-003	0.0000	33.5519	33.5519	1.2900e-003	4.8500e-003	35.0282
Worker	0.0339	0.0220	0.3659	1.2400e-003	0.1693	7.3000e-004	0.1700	0.0450	6.7000e-004	0.0456	0.0000	113.5556	113.5556	2.0600e-003	2.4900e-003	114.3496
Total	0.0359	0.1024	0.3946	1.5800e-003	0.1823	1.1200e-003	0.1834	0.0487	1.0500e-003	0.0498	0.0000	147.1076	147.1076	3.3500e-003	7.3400e-003	149.3778

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction & Track Laydown - 2030

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	0.2965	1.8307	3.6172	6.7100e-003		0.0356	0.0356		0.0356	0.0356	0.0000	566.6753	566.6753	0.0240	0.0000	567.2747
Total	0.2965	1.8307	3.6172	6.7100e-003		0.0356	0.0356		0.0356	0.0356	0.0000	566.6753	566.6753	0.0240	0.0000	567.2747

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	6.0200e-003	0.2429	0.0867	1.0200e-003	0.0395	1.1900e-003	0.0407	0.0114	1.1400e-003	0.0125	0.0000	100.1030	100.1030	3.9600e-003	0.0145	104.5108
Worker	0.0971	0.0619	1.0656	3.6800e-003	0.5145	2.0800e-003	0.5166	0.1367	1.9100e-003	0.1386	0.0000	337.8119	337.8119	5.8000e-003	7.2900e-003	340.1305
Total	0.1032	0.3048	1.1523	4.7000e-003	0.5539	3.2700e-003	0.5572	0.1480	3.0500e-003	0.1511	0.0000	437.9149	437.9149	9.7600e-003	0.0218	444.6413

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction & Track Laydown - 2030

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	0.1104	0.6301	3.8680	6.7100e-003		1.9500e-003	1.9500e-003		1.9500e-003	1.9500e-003	0.0000	566.6746	566.6746	0.0240	0.0000	567.2740
Total	0.1104	0.6301	3.8680	6.7100e-003		1.9500e-003	1.9500e-003		1.9500e-003	1.9500e-003	0.0000	566.6746	566.6746	0.0240	0.0000	567.2740

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	6.0200e-003	0.2429	0.0867	1.0200e-003	0.0395	1.1900e-003	0.0407	0.0114	1.1400e-003	0.0125	0.0000	100.1030	100.1030	3.9600e-003	0.0145	104.5108
Worker	0.0971	0.0619	1.0656	3.6800e-003	0.5145	2.0800e-003	0.5166	0.1367	1.9100e-003	0.1386	0.0000	337.8119	337.8119	5.8000e-003	7.2900e-003	340.1305
Total	0.1032	0.3048	1.1523	4.7000e-003	0.5539	3.2700e-003	0.5572	0.1480	3.0500e-003	0.1511	0.0000	437.9149	437.9149	9.7600e-003	0.0218	444.6413

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Building Construction & Track Laydown - 2031****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	0.0322	0.1989	0.3929	7.3000e-004		3.8700e-003	3.8700e-003		3.8700e-003	3.8700e-003	0.0000	61.5558	61.5558	2.6000e-003	0.0000	61.6209
Total	0.0322	0.1989	0.3929	7.3000e-004		3.8700e-003	3.8700e-003		3.8700e-003	3.8700e-003	0.0000	61.5558	61.5558	2.6000e-003	0.0000	61.6209

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	6.5000e-004	0.0263	9.4100e-003	1.1000e-004	4.2900e-003	1.3000e-004	4.4100e-003	1.2400e-003	1.2000e-004	1.3600e-003	0.0000	10.6815	10.6815	4.3000e-004	1.5400e-003	11.1522
Worker	9.9200e-003	6.2500e-003	0.1114	3.9000e-004	0.0559	2.1000e-004	0.0561	0.0148	1.9000e-004	0.0150	0.0000	36.0387	36.0387	5.9000e-004	7.7000e-004	36.2816
Total	0.0106	0.0325	0.1208	5.0000e-004	0.0602	3.4000e-004	0.0605	0.0161	3.1000e-004	0.0164	0.0000	46.7202	46.7202	1.0200e-003	2.3100e-003	47.4338

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction & Track Laydown - 2031

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	0.0120	0.0684	0.4202	7.3000e-004		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	61.5557	61.5557	2.6000e-003	0.0000	61.6208
Total	0.0120	0.0684	0.4202	7.3000e-004		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	61.5557	61.5557	2.6000e-003	0.0000	61.6208

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	6.5000e-004	0.0263	9.4100e-003	1.1000e-004	4.2900e-003	1.3000e-004	4.4100e-003	1.2400e-003	1.2000e-004	1.3600e-003	0.0000	10.6815	10.6815	4.3000e-004	1.5400e-003	11.1522
Worker	9.9200e-003	6.2500e-003	0.1114	3.9000e-004	0.0559	2.1000e-004	0.0561	0.0148	1.9000e-004	0.0150	0.0000	36.0387	36.0387	5.9000e-004	7.7000e-004	36.2816
Total	0.0106	0.0325	0.1208	5.0000e-004	0.0602	3.4000e-004	0.0605	0.0161	3.1000e-004	0.0164	0.0000	46.7202	46.7202	1.0200e-003	2.3100e-003	47.4338

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving Parking & Access Roads - 2031

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	0.0469	0.2429	0.5470	9.5000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	82.0096	82.0096	3.8200e-003	0.0000	82.1051
Paving	7.5500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0544	0.2429	0.5470	9.5000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	82.0096	82.0096	3.8200e-003	0.0000	82.1051

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	1.1400e-003	0.0463	0.0166	1.9000e-004	7.5600e-003	2.2000e-004	7.7900e-003	2.1800e-003	2.1000e-004	2.4000e-003	0.0000	18.8498	18.8498	7.6000e-004	2.7200e-003	19.6803
Worker	0.0117	7.3500e-003	0.1311	4.6000e-004	0.0658	2.5000e-004	0.0660	0.0175	2.3000e-004	0.0177	0.0000	42.3985	42.3985	6.9000e-004	9.0000e-004	42.6843
Total	0.0128	0.0537	0.1477	6.5000e-004	0.0733	4.7000e-004	0.0738	0.0196	4.4000e-004	0.0201	0.0000	61.2482	61.2482	1.4500e-003	3.6200e-003	62.3646

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving Parking & Access Roads - 2031

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	9.5400e-003	0.0414	0.5886	9.5000e-004		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	82.0095	82.0095	3.8200e-003	0.0000	82.1050
Paving	7.5500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0171	0.0414	0.5886	9.5000e-004		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	82.0095	82.0095	3.8200e-003	0.0000	82.1050

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	1.1400e-003	0.0463	0.0166	1.9000e-004	7.5600e-003	2.2000e-004	7.7900e-003	2.1800e-003	2.1000e-004	2.4000e-003	0.0000	18.8498	18.8498	7.6000e-004	2.7200e-003	19.6803
Worker	0.0117	7.3500e-003	0.1311	4.6000e-004	0.0658	2.5000e-004	0.0660	0.0175	2.3000e-004	0.0177	0.0000	42.3985	42.3985	6.9000e-004	9.0000e-004	42.6843
Total	0.0128	0.0537	0.1477	6.5000e-004	0.0733	4.7000e-004	0.0738	0.0196	4.4000e-004	0.0201	0.0000	61.2482	61.2482	1.4500e-003	3.6200e-003	62.3646

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Road Striping & Architectural Coating - 2031****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	0.6163					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2300e-003	0.0343	0.0719	1.2000e-004		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	10.2130	10.2130	4.1000e-004	0.0000	10.2234
Total	0.6215	0.0343	0.0719	1.2000e-004		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	10.2130	10.2130	4.1000e-004	0.0000	10.2234

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	2.9000e-004	0.0116	4.1500e-003	5.0000e-005	1.8900e-003	6.0000e-005	1.9500e-003	5.5000e-004	5.0000e-005	6.0000e-004	0.0000	4.7124	4.7124	1.9000e-004	6.8000e-004	4.9201
Worker	2.9200e-003	1.8400e-003	0.0328	1.2000e-004	0.0164	6.0000e-005	0.0165	4.3700e-003	6.0000e-005	4.4200e-003	0.0000	10.5996	10.5996	1.7000e-004	2.3000e-004	10.6711
Total	3.2100e-003	0.0134	0.0369	1.7000e-004	0.0183	1.2000e-004	0.0185	4.9200e-003	1.1000e-004	5.0200e-003	0.0000	15.3121	15.3121	3.6000e-004	9.1000e-004	15.5911

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Road Striping & Architectural Coating - 2031

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	0.6163					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1900e-003	5.1500e-003	0.0733	1.2000e-004		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	10.2130	10.2130	4.1000e-004	0.0000	10.2233
Total	0.6175	5.1500e-003	0.0733	1.2000e-004		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	10.2130	10.2130	4.1000e-004	0.0000	10.2233

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	2.9000e-004	0.0116	4.1500e-003	5.0000e-005	1.8900e-003	6.0000e-005	1.9500e-003	5.5000e-004	5.0000e-005	6.0000e-004	0.0000	4.7124	4.7124	1.9000e-004	6.8000e-004	4.9201
Worker	2.9200e-003	1.8400e-003	0.0328	1.2000e-004	0.0164	6.0000e-005	0.0165	4.3700e-003	6.0000e-005	4.4200e-003	0.0000	10.5996	10.5996	1.7000e-004	2.3000e-004	10.6711
Total	3.2100e-003	0.0134	0.0369	1.7000e-004	0.0183	1.2000e-004	0.0185	4.9200e-003	1.1000e-004	5.0200e-003	0.0000	15.3121	15.3121	3.6000e-004	9.1000e-004	15.5911

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.1280	0.1271	1.3321	3.0000e-003	0.4168	1.4900e-003	0.4183	0.1112	1.3900e-003	0.1126	0.0000	277.7722	277.7722	0.0197	0.0119	281.8046
Unmitigated	0.1280	0.1271	1.3321	3.0000e-003	0.4168	1.4900e-003	0.4183	0.1112	1.3900e-003	0.1126	0.0000	277.7722	277.7722	0.0197	0.0119	281.8046

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

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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
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	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Industrial Park	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Other Asphalt Surfaces	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Other Non-Asphalt Surfaces	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Parking Lot	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Unrefrigerated Warehouse-Rail	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	184.8814	184.8814	0.0234	2.8400e-003	186.3113
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	184.8814	184.8814	0.0234	2.8400e-003	186.3113
NaturalGas Mitigated	7.4200e-003	0.0675	0.0567	4.0000e-004		5.1300e-003	5.1300e-003		5.1300e-003	5.1300e-003	0.0000	73.4624	73.4624	1.4100e-003	1.3500e-003	73.8989
NaturalGas Unmitigated	7.4200e-003	0.0675	0.0567	4.0000e-004		5.1300e-003	5.1300e-003		5.1300e-003	5.1300e-003	0.0000	73.4624	73.4624	1.4100e-003	1.3500e-003	73.8989

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	82616	4.5000e-004	4.0500e-003	3.4000e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	4.4087	4.4087	8.0000e-005	8.0000e-005	4.4349
General Light Industry	217316	1.1700e-003	0.0107	8.9500e-003	6.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	11.5968	11.5968	2.2000e-004	2.1000e-004	11.6657
Industrial Park	1.06647e+006	5.7500e-003	0.0523	0.0439	3.1000e-004		3.9700e-003	3.9700e-003		3.9700e-003	3.9700e-003	0.0000	56.9107	56.9107	1.0900e-003	1.0400e-003	57.2489
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	10234	6.0000e-005	5.0000e-004	4.2000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.5461	0.5461	1.0000e-005	1.0000e-005	0.5494
Total		7.4300e-003	0.0675	0.0567	3.9000e-004		5.1300e-003	5.1300e-003		5.1300e-003	5.1300e-003	0.0000	73.4624	73.4624	1.4000e-003	1.3400e-003	73.8989

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	217316	1.1700e-003	0.0107	8.9500e-003	6.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	11.5968	11.5968	2.2000e-004	2.1000e-004	11.6657
General Light Industry	82616	4.5000e-004	4.0500e-003	3.4000e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	4.4087	4.4087	8.0000e-005	8.0000e-005	4.4349
Industrial Park	1.06647e+006	5.7500e-003	0.0523	0.0439	3.1000e-004		3.9700e-003	3.9700e-003		3.9700e-003	3.9700e-003	0.0000	56.9107	56.9107	1.0900e-003	1.0400e-003	57.2489
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	10234	6.0000e-005	5.0000e-004	4.2000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.5461	0.5461	1.0000e-005	1.0000e-005	0.5494
Total		7.4300e-003	0.0675	0.0567	3.9000e-004		5.1300e-003	5.1300e-003		5.1300e-003	5.1300e-003	0.0000	73.4624	73.4624	1.4000e-003	1.3400e-003	73.8989

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	131406	15.5443	1.9700e-003	2.4000e-004	15.6646
General Light Industry	49956	5.9094	7.5000e-004	9.0000e-005	5.9551
Industrial Park	1.293e+006	152.9520	0.0194	2.3500e-003	154.1350
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	5.0842	6.4000e-004	8.0000e-005	5.1235
Unrefrigerated Warehouse-Rail	45577	5.3914	6.8000e-004	8.0000e-005	5.4331
Total		184.8814	0.0234	2.8400e-003	186.3113

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.3 Energy by Land Use - Electricity****Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	131406	15.5443	1.9700e-003	2.4000e-004	15.6646
General Light Industry	49956	5.9094	7.5000e-004	9.0000e-005	5.9551
Industrial Park	1.293e+006	152.9520	0.0194	2.3500e-003	154.1350
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	5.0842	6.4000e-004	8.0000e-005	5.1235
Unrefrigerated Warehouse-Rail	45577	5.3914	6.8000e-004	8.0000e-005	5.4331
Total		184.8814	0.0234	2.8400e-003	186.3113

6.0 Area Detail**6.1 Mitigation Measures Area**

Use Low VOC Cleaning Supplies

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.7600e-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	5.7600e-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	5.7600e-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	5.7600e-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

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	5.7600e-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	5.7600e-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**

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	56.7186	1.0009	0.0242	88.9572
Unmitigated	56.7186	1.0009	0.0242	88.9572

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	7.1736	0.1266	3.0600e-003	11.2510
Industrial Park	23.9205 / 0	44.4333	0.7841	0.0190	69.6890
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	5.1117	0.0902	2.1800e-003	8.0172
Total		56.7185	1.0009	0.0242	88.9572

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	7.1736	0.1266	3.0600e-003	11.2510
Industrial Park	23.9205 / 0	44.4333	0.7841	0.0190	69.6890
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	5.1117	0.0902	2.1800e-003	8.0172
Total		56.7185	1.0009	0.0242	88.9572

8.0 Waste Detail**8.1 Mitigation Measures Waste**

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	531.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Operations only (2017)

Land Use -

Construction Phase - Operations only

Off-road Equipment - Project Inventory

Off-road Equipment - 2017 Operations Only

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Trips and VMT - 2017 Operations Only

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

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating - SCAQMD Rule 1113 - Building Envelope = 50 g/L

Construction Off-road Equipment Mitigation - Metro GCP Compliance

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	1.00
tblEnergyUse	T24E	2.01	2.25
tblEnergyUse	T24E	4.11	4.60
tblEnergyUse	T24E	0.58	0.65
tblEnergyUse	T24NG	13.51	13.65
tblEnergyUse	T24NG	9.92	10.02
tblEnergyUse	T24NG	0.83	0.84
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	390.98	531.98
tblTripsAndVMT	WorkerTripLength	14.70	0.00
tblVehicleTrips	DV_TP	19.00	5.00
tblVehicleTrips	PB_TP	2.00	3.00

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblVehicleTrips	PR_TP	79.00	92.00
tblVehicleTrips	ST_TR	1.99	0.00
tblVehicleTrips	ST_TR	2.54	2.42
tblVehicleTrips	ST_TR	1.74	0.00
tblVehicleTrips	SU_TR	5.00	0.00
tblVehicleTrips	SU_TR	1.24	2.42
tblVehicleTrips	SU_TR	1.74	0.00
tblVehicleTrips	WD_TR	4.96	0.00
tblVehicleTrips	WD_TR	3.37	2.42
tblVehicleTrips	WD_TR	1.74	0.00

2.0 Emissions Summary

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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					
2017	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.1000e-004	3.1000e-004	0.0000	0.0000	3.5000e-004
Maximum	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.1000e-004	3.1000e-004	0.0000	0.0000	3.5000e-004

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					
2017	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.1000e-004	3.1000e-004	0.0000	0.0000	3.5000e-004
Maximum	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.1000e-004	3.1000e-004	0.0000	0.0000	3.5000e-004

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	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)

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Highest

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	6.0000e-005	5.9100e-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	0.0121
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	464.6797	464.6797	0.0257	4.3000e-003	466.6011
Mobile	0.2227	0.4041	2.7674	4.7800e-003	0.4164	6.2500e-003	0.4227	0.1111	5.8800e-003	0.1170	0.0000	441.4752	441.4752	0.0329	0.0217	448.7762
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	95.9384	105.6256	1.0009	0.0242	137.8642
Total	0.8241	0.4722	2.8305	5.1900e-003	0.4164	0.0115	0.4279	0.1111	0.0111	0.1222	42.2002	1,002.1047	1,044.3048	2.9810	0.0503	1,133.8033

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	6.0000e-005	5.9100e-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	0.0121
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	464.6797	464.6797	0.0257	4.3000e-003	466.6011
Mobile	0.2227	0.4041	2.7674	4.7800e-003	0.4164	6.2500e-003	0.4227	0.1111	5.8800e-003	0.1170	0.0000	441.4752	441.4752	0.0329	0.0217	448.7762
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	95.9384	105.6256	1.0009	0.0242	137.8642
Total	0.8241	0.4722	2.8305	5.1900e-003	0.4164	0.0115	0.4279	0.1111	0.0111	0.1222	42.2002	1,002.1047	1,044.3048	2.9810	0.0503	1,133.8033

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	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	Site Preparation	Site Preparation	12/20/2017	12/20/2017	5	1	

Acres of Grading (Site Preparation Phase): 0

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**Acres of Grading (Grading Phase): 0****Acres of Paving: 18.26****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
Site Preparation	Tractors/Loaders/Backhoes	1	0.00	97	0.37

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
Site Preparation	1	3.00	0.00	0.00	0.00	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

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Site Preparation - 2017****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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.1000e-004	3.1000e-004	0.0000	0.0000	3.5000e-004
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.1000e-004	3.1000e-004	0.0000	0.0000	3.5000e-004

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Site Preparation - 2017****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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.1000e-004	3.1000e-004	0.0000	0.0000	3.5000e-004
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.1000e-004	3.1000e-004	0.0000	0.0000	3.5000e-004

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	0.2227	0.4041	2.7674	4.7800e-003	0.4164	6.2500e-003	0.4227	0.1111	5.8800e-003	0.1170	0.0000	441.4752	441.4752	0.0329	0.0217	448.7762
Unmitigated	0.2227	0.4041	2.7674	4.7800e-003	0.4164	6.2500e-003	0.4227	0.1111	5.8800e-003	0.1170	0.0000	441.4752	441.4752	0.0329	0.0217	448.7762

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

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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
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	0.558576	0.056735	0.184428	0.128422	0.022014	0.004926	0.010706	0.007707	0.001001	0.000652	0.020602	0.000669	0.003563
Industrial Park	0.558576	0.056735	0.184428	0.128422	0.022014	0.004926	0.010706	0.007707	0.001001	0.000652	0.020602	0.000669	0.003563
Other Asphalt Surfaces	0.558576	0.056735	0.184428	0.128422	0.022014	0.004926	0.010706	0.007707	0.001001	0.000652	0.020602	0.000669	0.003563
Other Non-Asphalt Surfaces	0.558576	0.056735	0.184428	0.128422	0.022014	0.004926	0.010706	0.007707	0.001001	0.000652	0.020602	0.000669	0.003563
Parking Lot	0.558576	0.056735	0.184428	0.128422	0.022014	0.004926	0.010706	0.007707	0.001001	0.000652	0.020602	0.000669	0.003563
Unrefrigerated Warehouse-Rail	0.558576	0.056735	0.184428	0.128422	0.022014	0.004926	0.010706	0.007707	0.001001	0.000652	0.020602	0.000669	0.003563

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	390.5343	390.5343	0.0242	2.9400e-003	392.0150
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	390.5343	390.5343	0.0242	2.9400e-003	392.0150
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

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	32.4093	2.0100e-003	2.4000e-004	32.5322
General Light Industry	51060	12.3209	7.6000e-004	9.0000e-005	12.3676
Industrial Park	1.34369e+006	324.2341	0.0201	2.4400e-003	325.4635
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	10.3712	6.4000e-004	8.0000e-005	10.4105
Unrefrigerated Warehouse-Rail	46410	11.1988	6.9000e-004	8.0000e-005	11.2413
Total		390.5343	0.0242	2.9300e-003	392.0150

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	32.4093	2.0100e-003	2.4000e-004	32.5322
General Light Industry	51060	12.3209	7.6000e-004	9.0000e-005	12.3676
Industrial Park	1.34369e+006	324.2341	0.0201	2.4400e-003	325.4635
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	10.3712	6.4000e-004	8.0000e-005	10.4105
Unrefrigerated Warehouse-Rail	46410	11.1988	6.9000e-004	8.0000e-005	11.2413
Total		390.5343	0.0242	2.9300e-003	392.0150

6.0 Area Detail**6.1 Mitigation Measures Area**

Use Low VOC Cleaning Supplies

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	6.0000e-005	5.9100e-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	0.0121
Unmitigated	0.5939	6.0000e-005	5.9100e-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	0.0121

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	5.7000e-004	6.0000e-005	5.9100e-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	0.0121
Total	0.5939	6.0000e-005	5.9100e-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	0.0121

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	5.7000e-004	6.0000e-005	5.9100e-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	0.0121
Total	0.5939	6.0000e-005	5.9100e-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	0.0121

7.0 Water Detail**7.1 Mitigation Measures Water**

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	105.6256	1.0009	0.0242	137.8642
Unmitigated	105.6256	1.0009	0.0242	137.8642

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	13.3592	0.1266	3.0600e-003	17.4366
Industrial Park	23.9205 / 0	82.7469	0.7841	0.0190	108.0027
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	9.5194	0.0902	2.1800e-003	12.4249
Total		105.6255	1.0009	0.0242	137.8642

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	13.3592	0.1266	3.0600e-003	17.4366
Industrial Park	23.9205 / 0	82.7469	0.7841	0.0190	108.0027
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	9.5194	0.0902	2.1800e-003	12.4249
Total		105.6255	1.0009	0.0242	137.8642

8.0 Waste Detail**8.1 Mitigation Measures Waste**

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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

LACMTA West Santa Ana Branch MSF - Bellflower Option - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Stations & Parking Facilities CalEEMod (Version 2020.4.0)

Output Files

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	2.3936e+006	424.4943	0.0358	4.3400e-003	426.6842
Parking Lot	36400	6.4554	5.4000e-004	7.0000e-005	6.4887
Parking Lot	50400	8.9382	7.5000e-004	9.0000e-005	8.9843
Parking Lot	68600	12.1659	1.0300e-003	1.2000e-004	12.2287
Parking Lot	85960	15.2446	1.2900e-003	1.6000e-004	15.3233
Unenclosed Parking Structure	94500	16.7592	1.4100e-003	1.7000e-004	16.8456
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		484.0576	0.0409	4.9500e-003	486.5548

6.0 Area Detail**6.1 Mitigation Measures Area**

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unenclosed Parking with Elevator	52380	9.2894	7.8000e-004	1.0000e-004	9.3373
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		9.2894	7.8000e-004	1.0000e-004	9.3373

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unenclosed Parking with Elevator	52380	9.2894	7.8000e-004	1.0000e-004	9.3373
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		9.2894	7.8000e-004	1.0000e-004	9.3373

6.0 Area Detail

Construction Equipment Fuel Consumption Calculations

Construction Equipment Fuel Consumption Calculations

<u>Diesel Equipment</u>			gal/bhp-hr
HP>100	BSFC (lb/hp-hr)	0.367	0.05162543
HP<100	BSFC (lb/hp-hr)	0.408	0.05739285
	Unit conversion (lb/gallon)	7.1089	

<u>Total Diesel Gallons</u>	
MSF	137,002
LRT	1,381,899
Gallons D	1,518,900
BTU/gal-D	133,489
MMBTU	202,756

<u>Component</u>	<u>Phase Name</u>	<u>Offroad Equipment Type</u>	<u>Amount</u>	<u>Usage Hours</u>	<u>Horse Power</u>	<u>Load Factor</u>	<u>Daily Diesel Consumption (Gallons)</u>	<u>Days</u>	<u>Total Diesel Fuel (Gallons)</u>
Early Relocations	Early Utility Relocation	Bore/Drill Rigs	1	6	221	0.5	34.228	230	7,872.4
Early Relocations	Early Utility Relocation	Concrete/Industrial Saws	2	6	81	0.73	40.724	230	9,366.4
Early Relocations	Early Utility Relocation	Cranes	1	6	231	0.29	20.750	230	4,772.6
Early Relocations	Early Utility Relocation	Excavators	2	6	158	0.38	37.195	230	8,554.9
Early Relocations	Early Utility Relocation	Generator Sets	2	6	84	0.74	42.810	230	9,846.4
Early Relocations	Early Utility Relocation	Paving Equipment	2	6	132	0.36	29.439	230	6,770.9
Early Relocations	Early Utility Relocation	Rollers	2	6	80	0.38	20.937	230	4,815.5
Early Relocations	Early Utility Relocation	Rubber Tired Loaders	2	6	203	0.36	45.273	230	10,412.9
Early Relocations	Early Utility Relocation	Tractors/Loaders/Backhoes	2	6	97	0.37	24.718	230	5,685.1
Early Relocations	Early Freight Relocation	Crawler Tractors	2	6	212	0.43	56.474	550	31,060.7
Early Relocations	Early Freight Relocation	Excavators	2	6	158	0.38	37.195	550	20,457.3
Early Relocations	Early Freight Relocation	Graders	2	4	187	0.41	31.665	550	17,415.7
Early Relocations	Early Freight Relocation	Other Material Handling Equipment	2	6	168	0.4	41.631	550	22,896.9
Early Relocations	Early Freight Relocation	Plate Compactors	2	6	8	0.43	2.369	550	1,303.0
Early Relocations	Early Freight Relocation	Rollers	2	6	80	0.38	20.937	550	11,515.3
Early Relocations	Early Freight Relocation	Rubber Tired Dozers	2	6	247	0.4	61.207	550	33,663.9
Early Relocations	Early Freight Relocation	Rubber Tired Loaders	2	6	203	0.36	45.273	550	24,900.4
Aerial LRT	Guideway - Foundations	Bore/Drill Rigs	2	7	221	0.5	79.865	100	7,986.5
Aerial LRT	Guideway - Foundations	Cranes	2	7	231	0.29	48.417	100	4,841.7
Aerial LRT	Guideway - Foundations	Excavators	2	8	158	0.38	49.593	100	4,959.3
Aerial LRT	Guideway - Foundations	Pumps	2	8	84	0.74	57.081	100	5,708.1
Aerial LRT	Guideway - Foundations	Rollers	2	8	80	0.38	27.916	100	2,791.6
Aerial LRT	Guideway - Foundations	Rough Terrain Forklifts	2	8	100	0.4	36.731	100	3,673.1
Aerial LRT	Guideway - Horizontal Support	Aerial Lifts	2	8	63	0.31	17.934	240	4,304.2
Aerial LRT	Guideway - Horizontal Support	Cranes	2	7	231	0.29	48.417	240	11,620.2
Aerial LRT	Guideway - Horizontal Support	Pumps	2	8	84	0.74	57.081	240	13,699.4
Aerial LRT	Guideway - Horizontal Support	Rough Terrain Forklifts	2	8	100	0.4	36.731	240	8,815.5
Aerial LRT	Guideway - Horizontal Support	Tractors/Loaders/Backhoes	2	8	97	0.37	32.957	240	7,909.7
Aerial LRT	Guideway - Horizontal Support	Welders	2	8	51	0.45	21.075	240	5,057.9
Aerial LRT	Stations - Foundations	Bore/Drill Rigs	2	7	221	0.5	79.865	125	9,983.1
Aerial LRT	Stations - Foundations	Cranes	2	7	231	0.29	48.417	125	6,052.2

Construction Equipment Fuel Consumption Calculations

<u>Component</u>	<u>Phase Name</u>	<u>Offroad Equipment Type</u>	<u>Amount</u>	<u>Usage Hours</u>	<u>Horse Power</u>	<u>Load Factor</u>	<u>Daily Diesel</u>	<u>Days</u>	<u>Total Diesel Fuel</u>
							<u>Consumption (Gallons)</u>		<u>(Gallons)</u>
Aerial LRT	Stations - Foundations	Excavators	2	8	158	0.38	49.593	125	6,199.2
Aerial LRT	Stations - Foundations	Pumps	2	7	84	0.74	49.946	125	6,243.2
Aerial LRT	Stations - Foundations	Rollers	2	8	80	0.38	27.916	125	3,489.5
Aerial LRT	Stations - Foundations	Rough Terrain Forklifts	2	8	100	0.4	36.731	125	4,591.4
Aerial LRT	Stations - Platform Construction	Aerial Lifts	2	8	63	0.31	17.934	425	7,622.0
Aerial LRT	Stations - Platform Construction	Cranes	2	7	231	0.29	48.417	425	20,577.4
Aerial LRT	Stations - Platform Construction	Pumps	2	8	84	0.74	57.081	425	24,259.3
Aerial LRT	Stations - Platform Construction	Rough Terrain Forklifts	2	8	100	0.4	36.731	425	15,610.9
Aerial LRT	Stations - Platform Construction	Tractors/Loaders/Backhoes	2	8	97	0.37	32.957	425	14,006.8
Aerial LRT	Stations - Platform Construction	Welders	2	8	46	0.45	19.009	425	8,078.6
At-Grade LRT + Parking	At-Grade Guideway Prep	Bore/Drill Rigs	2	6	221	0.5	68.455	240	16,429.3
At-Grade LRT + Parking	At-Grade Guideway Prep	Excavators	2	8	158	0.38	49.593	240	11,902.4
At-Grade LRT + Parking	At-Grade Guideway Prep	Graders	2	8	187	0.41	63.330	240	15,199.2
At-Grade LRT + Parking	At-Grade Guideway Prep	Rollers	2	8	80	0.38	27.916	240	6,699.8
At-Grade LRT + Parking	At-Grade Guideway Prep	Rubber Tired Dozers	2	8	247	0.4	81.609	240	19,586.3
At-Grade LRT + Parking	At-Grade Guideway Prep	Rubber Tired Loaders	2	8	203	0.36	60.365	240	14,487.5
At-Grade LRT + Parking	At-Grade Guideway Construction	Bore/Drill Rigs	2	6	221	0.5	68.455	440	30,120.3
At-Grade LRT + Parking	At-Grade Guideway Construction	Generator Sets	2	8	84	0.74	57.081	440	25,115.5
At-Grade LRT + Parking	At-Grade Guideway Construction	Other Material Handling Equipment	2	8	168	0.4	55.508	440	24,423.4
At-Grade LRT + Parking	At-Grade Guideway Construction	Rough Terrain Forklifts	2	8	100	0.4	36.731	440	16,161.8
At-Grade LRT + Parking	At-Grade Guideway Construction	Tractors/Loaders/Backhoes	2	8	97	0.37	32.957	440	14,501.2
At-Grade LRT + Parking	At-Grade Guideway Construction	Welders	2	8	51	0.45	21.075	440	9,272.8
At-Grade LRT + Parking	At-Grade Station Prep	Bore/Drill Rigs	2	6	221	0.5	68.455	120	8,214.6
At-Grade LRT + Parking	At-Grade Station Prep	Excavators	2	8	158	0.38	49.593	120	5,951.2
At-Grade LRT + Parking	At-Grade Station Prep	Graders	2	6	187	0.41	47.497	120	5,699.7
At-Grade LRT + Parking	At-Grade Station Prep	Rollers	2	8	80	0.38	27.916	120	3,349.9
At-Grade LRT + Parking	At-Grade Station Prep	Rubber Tired Dozers	2	6	247	0.4	61.207	120	7,344.9
At-Grade LRT + Parking	At-Grade Station Prep	Rubber Tired Loaders	2	8	203	0.36	60.365	120	7,243.7
At-Grade LRT + Parking	At-Grade Station Construction	Cranes	2	6	231	0.29	41.501	125	5,187.6
At-Grade LRT + Parking	At-Grade Station Construction	Generator Sets	2	8	84	0.74	57.081	125	7,135.1
At-Grade LRT + Parking	At-Grade Station Construction	Other Material Handling Equipment	2	8	168	0.4	55.508	125	6,938.5
At-Grade LRT + Parking	At-Grade Station Construction	Rough Terrain Forklifts	2	8	100	0.4	36.731	125	4,591.4
At-Grade LRT + Parking	At-Grade Station Construction	Tractors/Loaders/Backhoes	2	8	97	0.37	32.957	125	4,119.7
At-Grade LRT + Parking	At-Grade Station Construction	Welders	2	8	51	0.45	21.075	125	2,634.3
At-Grade LRT + Parking	Parking Structure Construction	Air Compressors	2	8	78	0.48	34.381	180	6,188.5
At-Grade LRT + Parking	Parking Structure Construction	Bore/Drill Rigs	1	6	221	0.5	34.228	180	6,161.0
At-Grade LRT + Parking	Parking Structure Construction	Cranes	1	6	231	0.29	20.750	180	3,735.1
At-Grade LRT + Parking	Parking Structure Construction	Paving Equipment	2	8	132	0.36	39.252	180	7,065.3

Construction Equipment Fuel Consumption Calculations

<u>Component</u>	<u>Phase Name</u>	<u>Offroad Equipment Type</u>	<u>Amount</u>	<u>Usage Hours</u>	<u>Horse Power</u>	<u>Load Factor</u>	<u>Daily Diesel</u>	<u>Days</u>	<u>Total Diesel Fuel</u>
							<u>Consumption</u>		
							<u>n (Gallons)</u>		<u>(Gallons)</u>
At-Grade LRT + Parking	Parking Structure Construction	Pumps	2	8	84	0.74	57.081	180	10,274.5
At-Grade LRT + Parking	Parking Structure Construction	Rough Terrain Forklifts	2	8	100	0.4	36.731	180	6,611.7
At-Grade LRT + Parking	Parking Structure Construction	Rubber Tired Loaders	2	8	203	0.36	60.365	180	10,865.6
At-Grade LRT + Parking	Surface Parking Lots Construction	Air Compressors	2	8	78	0.48	34.381	90	3,094.3
At-Grade LRT + Parking	Surface Parking Lots Construction	Paving Equipment	2	8	132	0.36	39.252	90	3,532.7
At-Grade LRT + Parking	Surface Parking Lots Construction	Pumps	2	8	84	0.74	57.081	90	5,137.3
At-Grade LRT + Parking	Surface Parking Lots Construction	Rubber Tired Loaders	2	8	203	0.36	60.365	90	5,432.8
At-Grade LRT + Parking	Surface Parking Lots Construction	Skid Steer Loaders	2	8	65	0.37	22.085	90	1,987.6
At-Grade LRT + Parking	Surface Parking Lots Construction	Tractors/Loaders/Backhoes	2	8	97	0.37	32.957	90	2,966.2
Demo + Relocations	Utility Relocations	Concrete/Industrial Saws	2	8	81	0.73	54.298	585	31,764.5
Demo + Relocations	Utility Relocations	Cranes	2	6	231	0.29	41.501	585	24,277.9
Demo + Relocations	Utility Relocations	Excavators	2	8	158	0.38	49.593	585	29,012.2
Demo + Relocations	Utility Relocations	Generator Sets	2	8	84	0.74	57.081	585	33,392.2
Demo + Relocations	Utility Relocations	Paving Equipment	1	8	132	0.36	19.626	585	11,481.2
Demo + Relocations	Utility Relocations	Rollers	1	8	80	0.38	13.958	585	8,165.4
Demo + Relocations	Utility Relocations	Tractors/Loaders/Backhoes	2	8	97	0.37	32.957	585	19,280.0
Demo + Relocations	Demolition	Excavators	2	8	158	0.38	49.593	260	12,894.3
Demo + Relocations	Demolition	Rubber Tired Dozers	2	8	247	0.4	81.609	260	21,218.5
Demo + Relocations	Demolition	Rubber Tired Loaders	2	8	203	0.36	60.365	260	15,694.8
Demo + Relocations	Demolition	Skid Steer Loaders	2	8	65	0.37	22.085	260	5,742.0
Demo + Relocations	Demolition	Tractors/Loaders/Backhoes	2	8	97	0.37	32.957	260	8,568.9
Demo + Relocations	ROW clearing/prep	Excavators	2	8	158	0.38	49.593	260	12,894.3
Demo + Relocations	ROW clearing/prep	Graders	2	6	187	0.41	47.497	260	12,349.3
Demo + Relocations	ROW clearing/prep	Rollers	2	8	80	0.38	27.916	260	7,258.1
Demo + Relocations	ROW clearing/prep	Rubber Tired Dozers	2	6	247	0.4	61.207	260	15,913.8
Demo + Relocations	ROW clearing/prep	Rubber Tired Loaders	2	8	203	0.36	60.365	260	15,694.8
Demo + Relocations	Freight Track Relocations & Freight Bridge	Air Compressors	2	8	78	0.48	34.381	520	17,877.9
Demo + Relocations	Freight Track Relocations & Freight Bridge	Bore/Drill Rigs	1	6	221	0.5	34.228	520	17,798.4
Demo + Relocations	Freight Track Relocations & Freight Bridge	Cranes	1	6	231	0.29	20.750	520	10,790.2
Demo + Relocations	Freight Track Relocations & Freight Bridge	Excavators	2	8	158	0.38	49.593	520	25,788.6
Demo + Relocations	Freight Track Relocations & Freight Bridge	Paving Equipment	2	8	132	0.36	39.252	520	20,411.0
Demo + Relocations	Freight Track Relocations & Freight Bridge	Pumps	2	8	84	0.74	57.081	520	29,681.9
Demo + Relocations	Freight Track Relocations & Freight Bridge	Rubber Tired Loaders	2	8	203	0.36	60.365	520	31,389.6
Systems	Signals	Cranes	1	6	231	0.29	20.750	285	5,913.8
Systems	Signals	Other Construction Equipment	1	8	172	0.42	29.835	285	8,503.1
Systems	Signals	Rough Terrain Forklifts	2	8	100	0.4	36.731	285	10,468.5
Systems	Signals	Skid Steer Loaders	2	8	65	0.37	22.085	285	6,294.2
Systems	Signals	Tractors/Loaders/Backhoes	2	8	97	0.37	32.957	285	9,392.8

Construction Equipment Fuel Consumption Calculations

<u>Component</u>	<u>Phase Name</u>	<u>Offroad Equipment Type</u>	<u>Amount</u>	<u>Usage Hours</u>	<u>Horse Power</u>	<u>Load Factor</u>	<u>Daily Diesel</u>	<u>Days</u>	<u>Total Diesel Fuel</u>
							<u>Consumption</u>		
							<u>n (Gallons)</u>		<u>(Gallons)</u>
Systems	Signals	Trenchers	2	8	78	0.5	35.813	285	10,206.7
Systems	OCS	Cranes	1	6	231	0.29	20.750	285	5,913.8
Systems	OCS	Other Construction Equipment	1	8	172	0.42	29.835	285	8,503.1
Systems	OCS	Rough Terrain Forklifts	2	8	100	0.4	36.731	285	10,468.5
Systems	OCS	Skid Steer Loaders	2	8	65	0.37	22.085	285	6,294.2
Systems	OCS	Tractors/Loaders/Backhoes	2	8	97	0.37	32.957	285	9,392.8
Systems	OCS	Trenchers	2	8	78	0.5	35.813	285	10,206.7
Systems	TPSS	Cranes	1	6	231	0.29	20.750	285	5,913.8
Systems	TPSS	Generator Sets	2	8	84	0.74	57.081	285	16,268.0
Systems	TPSS	Other Material Handling Equipment	1	8	168	0.4	27.754	285	7,909.8
Systems	TPSS	Rough Terrain Forklifts	2	8	100	0.4	36.731	285	10,468.5
Systems	TPSS	Skid Steer Loaders	2	8	65	0.37	22.085	285	6,294.2
Systems	TPSS	Tractors/Loaders/Backhoes	2	8	97	0.37	32.957	285	9,392.8
MSF	Demolition	Concrete/Industrial Saws	2	8	81	0.73	54.298	60	3,257.9
MSF	Demolition	Excavators	2	8	158	0.38	49.593	60	2,975.6
MSF	Demolition	Rough Terrain Forklifts	2	8	100	0.4	36.731	60	2,203.9
MSF	Demolition	Rubber Tired Dozers	2	8	247	0.4	81.609	60	4,896.6
MSF	Demolition	Rubber Tired Loaders	2	8	203	0.36	60.365	60	3,621.9
MSF	Site Preparation	Crawler Tractors	1	8	212	0.43	37.649	90	3,388.4
MSF	Site Preparation	Excavators	2	8	158	0.38	49.593	90	4,463.4
MSF	Site Preparation	Graders	2	8	187	0.41	63.330	90	5,699.7
MSF	Site Preparation	Rubber Tired Dozers	2	8	247	0.4	81.609	90	7,344.9
MSF	Site Preparation	Scrapers	1	8	367	0.48	72.755	90	6,547.9
MSF	Site Preparation	Tractors/Loaders/Backhoes	2	8	97	0.37	32.957	90	2,966.2
MSF	Building Construction & Track Laydown	Cranes	1	8	231	0.29	27.667	450	12,450.2
MSF	Building Construction & Track Laydown	Generator Sets	1	8	84	0.74	28.540	450	12,843.1
MSF	Building Construction & Track Laydown	Rough Terrain Forklifts	3	8	100	0.4	55.097	450	24,793.7
MSF	Building Construction & Track Laydown	Tractors/Loaders/Backhoes	3	8	97	0.37	49.436	450	22,246.2
MSF	Building Construction & Track Laydown	Welders	2	8	46	0.45	19.009	450	8,553.8
MSF	Paving Parking & Access Roads	Forklifts	2	8	89	0.2	16.345	60	980.7
MSF	Paving Parking & Access Roads	Pavers	2	8	130	0.42	45.100	60	2,706.0
MSF	Paving Parking & Access Roads	Paving Equipment	2	8	132	0.36	39.252	60	2,355.1
MSF	Paving Parking & Access Roads	Rollers	2	8	80	0.38	27.916	60	1,675.0
MSF	Road Striping & Architectural Coating	Air Compressors	2	8	78	0.48	34.381	30	1,031.4

Construction Vehicles Fuel Consumption Calculations & Total Fuel Consumption

Construction Fuel Consumption Calculations

Phase & Activities

Early Utility Relocations

		Total CO2	CH4	N2O	CO2e
2024	Hauling	0	0	0	0
	Vendor	22.3477	7.60E-04	3.20E-03	23.3214
	Worker	34.4134	7.50E-04	8.10E-04	34.6724
2025	Hauling	0	0	0	0
	Vendor	398.6689	0.0139	0.0572	416.0585
	Worker	603.933	0.0122	0.0137	608.3087
2025	Hauling	0	0	0	0
	Vendor	78.6365	2.74E-03	0.0113	82.0666
	Worker	119.1244	2.41E-03	2.69E-03	119.9875
2026	Hauling	0	0	0	0
	Vendor	468.4533	0.0168	0.0672	488.9076
	Worker	701.0832	0.0133	0.0154	706.0008
2027	Hauling	0	0	0	0
	Vendor	432.8255	0.0159	0.0622	451.7469
	Worker	642.4518	0.0114	0.0138	646.8329

Early Freight Relocations

Aerial Alignment Construction

Guideway Foundations

		Total CO2	CH4	N2O	CO2e
2028	Hauling	0	0	0	0
	Vendor	33.1962	1.25E-03	4.79E-03	34.6556
	Worker	94.0459	1.81E-03	2.10E-03	94.7174
2028	Hauling	0	0	0	0
	Vendor	71.3719	2.68E-03	0.0103	74.5095
	Worker	202.1986	3.89E-03	4.52E-03	203.6425
2029	Hauling	0	0	0	0
	Vendor	8.1437	3.10E-04	1.18E-03	8.502
	Worker	22.9684	4.20E-04	5.00E-04	23.129
2029	Hauling	0	0	0	0
	Vendor	40.7184	1.57E-03	5.88E-03	42.5099
	Worker	114.8418	2.09E-03	2.52E-03	115.6449
2029	Hauling	0	0	0	0
	Vendor	42.6729	1.65E-03	6.16E-03	44.5504
	Worker	120.3543	2.19E-03	2.64E-03	121.1958
2030	Hauling	0	0	0	0
	Vendor	83.4725	3.30E-03	0.0121	87.148
	Worker	234.7415	4.03E-03	5.07E-03	236.3526
2031	Hauling	0	0	0	0
	Vendor	10.3674	4.20E-04	1.50E-03	10.8242
	Worker	29.149	4.70E-04	6.20E-04	29.3454

Guideway Span

Guideway Span

Station Foundations

Station Platforms

Station Platforms

Station Platforms

Construction Fuel Consumption Calculations

Phase & Activities

At-Grade Alignment Construction

		Total CO2	CH4	N2O	CO2e
		Total CO2	CH4	N2O	CO2e
At-Grade Guideway Prep	2028 Hauling	0	0	0	0
	Vendor	0	0	0	0
	Worker	90.284	1.74E-03	2.02E-03	90.9287
At-Grade Guideway Construction	2028 Hauling	0	0	0	0
	Vendor	13.2785	5.00E-04	1.92E-03	13.8622
	Worker	37.6184	7.20E-04	8.40E-04	37.887
At-Grade Guideway Construction	2029 Hauling	0	0	0	0
	Vendor	170.0399	6.56E-03	0.0246	177.5215
	Worker	479.5795	8.71E-03	0.0105	482.933
At-Grade Guideway Construction	2030 Hauling	0	0	0	0
	Vendor	101.7021	4.02E-03	0.0147	106.1803
	Worker	286.0069	4.91E-03	6.18E-03	287.9699
At-Grade Station Prep	2029 Hauling	0	0	0	0
	Vendor	0	0	0	0
	Worker	44.0993	8.00E-04	9.70E-04	44.4076
At-Grade Station Construction	2029 Hauling	0	0	0	0
	Vendor	81.4368	3.14E-03	0.0118	85.0199
	Worker	229.6837	4.17E-03	5.04E-03	231.2897
Parking Structure Construction	2030 Hauling	0	0	0	0
	Vendor	115.1345	4.55E-03	0.0166	120.2041
	Worker	323.7814	5.56E-03	6.99E-03	326.0036
Surface Parking Lots Construction	2030 Hauling	0	0	0	0
	Vendor	0	0.00E+00	0	0
	Worker	97.1344	1.67E-03	2.10E-03	97.8011

Demolition & Relocation Activities

		Total CO2	CH4	N2O	CO2e
Utility Relocations	2027 Hauling	0	0	0	0
	Vendor	82.9153	3.04E-03	0.012	86.5574
	Worker	236.3812	4.82E-03	5.39E-03	238.1088
Utility Relocations	2028 Hauling	0	0	0	0
	Vendor	86.3102	3.24E-03	0.0125	90.1045
	Worker	244.5193	4.71E-03	5.46E-03	246.2653
Utility Relocations	2029 Hauling	0	0	0	0
	Vendor	26.0598	1.01E-03	3.76E-03	27.2064
	Worker	73.4988	1.34E-03	1.61E-03	74.0127

Construction Fuel Consumption Calculations

<u>Phase & Activities</u>		Total CO2	CH4	N2O	CO2e
Demo	2027 Hauling	134.6314	8.26E-03	0.0214	141.2188
	Vendor	0	0	0	0
	Worker	207.4366	4.23E-03	4.73E-03	208.9526
Demo	2028 Hauling	27.603	1.74E-03	4.39E-03	28.9552
	Vendor	0	0	0	0
	Worker	42.3207	8.10E-04	9.50E-04	42.6229
Freight Track Relocations & Freight Bridge	2027 Hauling	0	0	0	0
	Vendor	72.7624	2.67E-03	0.0105	75.9585
	Worker	207.4366	4.23E-03	4.73E-03	208.9526
Freight Track Relocations & Freight Bridge	2028 Hauling	0	0	0	0
	Vendor	86.3102	3.24E-03	0.0125	90.1045
	Worker	244.5193	4.71E-03	5.46E-03	246.2653
Freight Track Relocations & Freight Bridge	2029 Hauling	0	0	0	0
	Vendor	14.6586	5.70E-04	2.12E-03	15.3036
	Worker	41.3431	7.50E-04	9.10E-04	41.6322
ROW Clearing/Prep	2028 Hauling	0	0	0	0
	Vendor	0	0	0	0
	Worker	202.1986	3.89E-03	4.52E-03	203.6425
ROW Clearing/Prep	2029 Hauling	0	0	0	0
	Vendor	0	0	0	0
	Worker	41.3431	7.50E-04	9.10E-04	41.6322

Hauling Activities

LPA Cut/Fill Import & Export

		Total CO2	CH4	N2O	CO2e
2025	Hauling	109.2373	6.34E-03	0.0174	114.5694
	Vendor	0	0	0	0
	Worker	0	0	0	0
2026	Hauling	650.3209	0.0389	0.1034	682.1044
	Vendor	0	0	0	0
	Worker	0	0	0	0
2027	Hauling	637.1302	0.0391	0.1013	668.3042
	Vendor	0	0	0	0
	Worker	0	0	0	0
2028	Hauling	621.7218	0.0393	0.0989	652.1804
	Vendor	0	0	0	0
	Worker	0	0	0	0
2029	Hauling	611.2355	0.0398	0.0973	641.2203
	Vendor	0	0	0	0
	Worker	0	0	0	0

Construction Fuel Consumption Calculations

Phase & Activities

		Total CO2	CH4	N2O	CO2e
2030	Hauling	502.353	3.37E-02	8.00E-02	527.0289
	Vendor	0	0	0	0
	Worker	0	0	0	0

Systems Construction

Signals	2031	Hauling	0	0	0	0
		Vendor	24.0334	9.70E-04	3.47E-03	25.0924
		Worker	54.0581	8.80E-04	1.15E-03	54.4225
Signals	2032	Hauling	0	0	0	0
		Vendor	20.405	8.50E-04	2.95E-03	21.3046
		Worker	45.8321	7.10E-04	9.60E-04	46.1365
OCS	2031	Hauling	0	0	0	0
		Vendor	24.0334	9.70E-04	3.47E-03	25.0924
		Worker	54.0581	8.80E-04	1.15E-03	54.4225
OCS	2032	Hauling	0	0	0	0
		Vendor	20.405	8.50E-04	2.95E-03	21.3046
		Worker	45.8321	7.10E-04	9.60E-04	46.1365
TPSS	2031	Hauling	0	0	0	0
		Vendor	24.0334	9.70E-04	3.47E-03	25.0924
		Worker	54.0581	8.80E-04	1.15E-03	54.4225
TPSS	2032	Hauling	0	0	0	0
		Vendor	20.405	8.50E-04	2.95E-03	21.3046
		Worker	45.8321	7.10E-04	9.60E-04	46.1365

MSF

Demo	2029	Hauling	46.8579	3.05E-03	7.46E-03	49.1566
		Vendor	19.5448	7.50E-04	2.82E-03	20.4048
		Worker	66.1489	1.20E-03	1.45E-03	66.6114
Site Prep	2029	Hauling	140.5737	9.15E-03	0.0224	147.4698
		Vendor	29.3172	1.13E-03	4.23E-03	30.6072
		Worker	99.2234	1.80E-03	2.18E-03	99.9172
Building Construction & Track Laydown	2029	Hauling	0	0	0	0
		Vendor	33.5519	1.29E-03	4.85E-03	35.0282
		Worker	113.5556	2.06E-03	2.49E-03	114.3496
Building Construction & Track Laydown	2030	Hauling	0	0	0	0
		Vendor	100.103	3.96E-03	0.0145	104.5108
		Worker	337.8119	5.80E-03	7.29E-03	340.1305
Building Construction & Track Laydown	2031	Hauling	0	0	0	0
		Vendor	10.6815	4.30E-04	1.54E-03	11.1522
		Worker	36.0387	5.90E-04	7.70E-04	36.2816

Construction Fuel Consumption Calculations

Phase & Activities

		Total CO2	CH4	N2O	CO2e
Paving Parking & Access Roads	2031 Hauling	0	0	0	0
	Vendor	18.8498	7.60E-04	2.72E-03	19.6803
	Worker	42.3985	6.90E-04	9.00E-04	42.6843
Road Striping & Architectural Coating	2032 Hauling	0	0	0	0
	Vendor	4.7124	1.90E-04	6.80E-04	4.9201
	Worker	10.5996	1.70E-04	2.30E-04	10.6711

MTCO2

Diesel	Hauling	3481.6647	Hauling	3652.208
Diesel	Vendor	2891.559	Vendor	3018.318
Gasoline	Worker	7053.9374	Worker	7103.46
Diesel MMBTU		83,325.7		
Gasoline MMBTU		94,981.5		
Equipment MMBTU		202,756.5		

USEPA 2023 Fuel Carbon Intensity Factors

kgCO2/gal-D	10.21
kgCO2/gal-G	8.78
lbCO2/gal-D	22.51
lbCO2/gal-G	19.36

Conversion	BTU/gal-D	133489
	BTU/gal-G	118223

LRT Only

		MTCO2	Gallons	MMBTU
Diesel	Hauling	3,294.2	322,648	43,070
Diesel	Vendor	2,674.8	261,978	34,971
Gasoline	Worker	6,348.2	723,025	85,478

MSF

		MTCO2	Gallons	MMBTU
Diesel	Hauling	187.4	18,358	2,451
Diesel	Vendor	216.8	21,230	2,834
Gasoline	Worker	705.8	80,385	9,503

Equipment

LRT 1,381,899

Equipment

MSF 137,002

Total MSF Diesel Gallons 176,590

Total Gallons Diesel 2,143,114

Diesel MMBTU 286,082

Total Gasoline Gallons 803,410

Gasoline MMBTU 94,982

Total Con MMBTU 381,064

Annual Savings (MMBTU) -126,706

Years to Offset -3.01

CalEEMod (Version 2020.4.0) Annual Output File
Utility & Freight Track Relocations

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**LACMTA West Santa Ana Branch Construction - Early 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
Other Non-Asphalt Surfaces	1,710.72	1000sqft	39.27	1,710,720.00	0
Other Non-Asphalt Surfaces	432.74	1000sqft	9.93	432,740.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			Operational Year	2034
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Construction only

Land Use - Freight Relocations: Approx 8.1 miles x 40 ft work area width = 1,710,720 sq ft = 39.3 acres.

Utility relocation area based on early duration (~224 days) out of 809 total days x 14.8 miles x 20 ft width.

Construction Phase - Updated Schedule provided by Metro April 2023

Off-road Equipment - Metro Inventory. "Other materiald handling equipment" = specialized rail/ties/ballast installation equipment.

Off-road Equipment - Metro Inventory

Trips and VMT - Conservatively assumed up to 250 workers per day & 50 material/equipment deliveries per day.

Grading - Defaults

Area Coating -

Construction Off-road Equipment Mitigation - Compliance with Metro Green Construction Policy
(use renewable diesel not accounted for)

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

[illegible]

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	NumDays	30.00	230.00
tblConstructionPhase	NumDays	30.00	550.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblTripsAndVMT	VendorTripLength	6.90	15.00
tblTripsAndVMT	VendorTripLength	6.90	15.00
tblTripsAndVMT	VendorTripNumber	0.00	100.00
tblTripsAndVMT	VendorTripNumber	0.00	100.00
tblTripsAndVMT	WorkerTripLength	14.70	20.00
tblTripsAndVMT	WorkerTripLength	14.70	20.00
tblTripsAndVMT	WorkerTripNumber	40.00	500.00
tblTripsAndVMT	WorkerTripNumber	40.00	500.00

2.0 Emissions Summary

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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					
2024	0.0277	0.1960	0.3224	9.8000e-004	0.0529	6.7300e-003	0.0597	0.0142	6.3600e-003	0.0206	0.0000	89.5010	89.5010	9.3200e-003	4.0100e-003	90.9290
2025	0.5761	4.0959	6.6748	0.0209	1.9285	0.1346	2.0631	0.4795	0.1265	0.6060	0.0000	1,911.2036	1,911.2036	0.2099	0.0848	1,941.7281
2026	0.6267	4.8926	5.8855	0.0205	2.9131	0.1689	3.0820	1.0207	0.1557	1.1764	0.0000	1,873.8657	1,873.8657	0.2565	0.0826	1,904.8988
2027	0.5792	4.5912	5.4178	0.0190	2.7792	0.1589	2.9380	0.9657	0.1465	1.1121	0.0000	1,739.1278	1,739.1278	0.2407	0.0759	1,767.7662
Maximum	0.6267	4.8926	6.6748	0.0209	2.9131	0.1689	3.0820	1.0207	0.1557	1.1764	0.0000	1,911.2036	1,911.2036	0.2565	0.0848	1,941.7281

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2024	0.0163	0.0721	0.3666	9.8000e-004	0.0529	1.0900e-003	0.0540	0.0142	1.0600e-003	0.0153	0.0000	89.5009	89.5009	9.3200e-003	4.0100e-003	90.9289
2025	0.3400	1.5545	7.6842	0.0209	1.4542	0.0238	1.4780	0.3759	0.0231	0.3991	0.0000	1,911.2027	1,911.2027	0.2099	0.0848	1,941.7273
2026	0.3357	1.5830	7.0561	0.0205	1.8382	0.0254	1.8636	0.5870	0.0248	0.6118	0.0000	1,873.8648	1,873.8648	0.2565	0.0826	1,904.8980
2027	0.3049	1.4718	6.5211	0.0190	1.7456	0.0237	1.7693	0.5547	0.0231	0.5778	0.0000	1,739.1270	1,739.1270	0.2407	0.0759	1,767.7654
Maximum	0.3400	1.5830	7.6842	0.0209	1.8382	0.0254	1.8636	0.5870	0.0248	0.6118	0.0000	1,911.2027	1,911.2027	0.2565	0.0848	1,941.7273

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	44.92	66.02	-18.18	0.00	33.66	84.23	36.57	38.23	83.44	44.98	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	12-9-2024	3-8-2025	1.0396	0.4312
2	3-9-2025	6-8-2025	1.1198	0.4614
3	6-9-2025	9-8-2025	1.1150	0.4565
4	9-9-2025	12-8-2025	1.1971	0.4630
5	12-9-2025	3-8-2026	1.3637	0.4769
6	3-9-2026	6-8-2026	1.3775	0.4709
7	6-9-2026	9-8-2026	1.3728	0.4662
8	9-9-2026	12-8-2026	1.3720	0.4753

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

9	12-9-2026	3-8-2027	1.3552	0.4683
10	3-9-2027	6-8-2027	1.3694	0.4628
11	6-9-2027	9-8-2027	1.3648	0.4582
12	9-9-2027	9-30-2027	0.3264	0.1096
		Highest	1.3775	0.4769

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	0.1709	2.5000e-004	0.0272	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0532	0.0532	1.4000e-004	0.0000	0.0566
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	0.1709	2.5000e-004	0.0272	0.0000	0.0000	1.0000e-004	1.0000e-004	0.0000	1.0000e-004	1.0000e-004	0.0000	0.0532	0.0532	1.4000e-004	0.0000	0.0566

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	0.1709	2.5000e-004	0.0272	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0532	0.0532	1.4000e-004	0.0000	0.0566
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	0.1709	2.5000e-004	0.0272	0.0000	0.0000	1.0000e-004	1.0000e-004	0.0000	1.0000e-004	1.0000e-004	0.0000	0.0532	0.0532	1.4000e-004	0.0000	0.0566

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	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	Early Utility Relocation	Site Preparation	12/16/2024	10/31/2025	5	230	
2	Early Freight Relocation	Site Preparation	11/3/2025	12/10/2027	5	550	

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 0****Acres of Paving: 49.2****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
Early Utility Relocation	Bore/Drill Rigs	1	6.00	221	0.50
Early Utility Relocation	Concrete/Industrial Saws	2	6.00	81	0.73
Early Utility Relocation	Cranes	1	6.00	231	0.29
Early Utility Relocation	Excavators	2	6.00	158	0.38
Early Utility Relocation	Generator Sets	2	6.00	84	0.74
Early Utility Relocation	Paving Equipment	2	6.00	132	0.36
Early Utility Relocation	Rollers	2	6.00	80	0.38
Early Utility Relocation	Rubber Tired Loaders	2	6.00	203	0.36
Early Utility Relocation	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Early Freight Relocation	Crawler Tractors	2	6.00	212	0.43
Early Freight Relocation	Excavators	2	6.00	158	0.38
Early Freight Relocation	Graders	2	4.00	187	0.41
Early Freight Relocation	Other Material Handling Equipment	2	6.00	168	0.40
Early Freight Relocation	Plate Compactors	2	6.00	8	0.43
Early Freight Relocation	Rollers	2	6.00	80	0.38
Early Freight Relocation	Rubber Tired Dozers	2	6.00	247	0.40
Early Freight Relocation	Rubber Tired Loaders	2	6.00	203	0.36

Trips and VMT

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
Early Utility Relocation	16	500.00	100.00	0.00	20.00	15.00	20.00	LD_Mix	HDT_Mix	HHDT
Early Freight Relocation	16	500.00	100.00	0.00	20.00	15.00	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 Early 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0158	0.1428	0.1857	3.8000e-004		6.2300e-003	6.2300e-003		5.8900e-003	5.8900e-003	0.0000	32.7398	32.7398	7.8100e-003	0.0000	32.9352
Total	0.0158	0.1428	0.1857	3.8000e-004	0.0000	6.2300e-003	6.2300e-003	0.0000	5.8900e-003	5.8900e-003	0.0000	32.7398	32.7398	7.8100e-003	0.0000	32.9352

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Early 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	9.9000e-004	0.0446	0.0126	2.3000e-004	8.2000e-003	2.5000e-004	8.4500e-003	2.3700e-003	2.4000e-004	2.6000e-003	0.0000	22.3477	22.3477	7.6000e-004	3.2000e-003	23.3214
Worker	0.0109	8.7000e-003	0.1241	3.8000e-004	0.0447	2.6000e-004	0.0450	0.0119	2.4000e-004	0.0121	0.0000	34.4134	34.4134	7.5000e-004	8.1000e-004	34.6724
Total	0.0119	0.0533	0.1367	6.1000e-004	0.0529	5.1000e-004	0.0534	0.0143	4.8000e-004	0.0147	0.0000	56.7612	56.7612	1.5100e-003	4.0100e-003	57.9938

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3500e-003	0.0189	0.2299	3.8000e-004		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	32.7398	32.7398	7.8100e-003	0.0000	32.9351
Total	4.3500e-003	0.0189	0.2299	3.8000e-004	0.0000	5.8000e-004	5.8000e-004	0.0000	5.8000e-004	5.8000e-004	0.0000	32.7398	32.7398	7.8100e-003	0.0000	32.9351

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Early 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	9.9000e-004	0.0446	0.0126	2.3000e-004	8.2000e-003	2.5000e-004	8.4500e-003	2.3700e-003	2.4000e-004	2.6000e-003	0.0000	22.3477	22.3477	7.6000e-004	3.2000e-003	23.3214
Worker	0.0109	8.7000e-003	0.1241	3.8000e-004	0.0447	2.6000e-004	0.0450	0.0119	2.4000e-004	0.0121	0.0000	34.4134	34.4134	7.5000e-004	8.1000e-004	34.6724
Total	0.0119	0.0533	0.1367	6.1000e-004	0.0529	5.1000e-004	0.0534	0.0143	4.8000e-004	0.0147	0.0000	56.7612	56.7612	1.5100e-003	4.0100e-003	57.9938

3.2 Early 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2672	2.3388	3.3590	6.8200e-003		0.0977	0.0977		0.0924	0.0924	0.0000	594.8019	594.8019	0.1413	0.0000	598.3352
Total	0.2672	2.3388	3.3590	6.8200e-003	0.0000	0.0977	0.0977	0.0000	0.0924	0.0924	0.0000	594.8019	594.8019	0.1413	0.0000	598.3352

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Early 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	0.0173	0.8056	0.2246	4.0800e-003	0.1490	4.5500e-003	0.1536	0.0430	4.3500e-003	0.0473	0.0000	398.6689	398.6689	0.0139	0.0572	416.0585
Worker	0.1862	0.1416	2.0948	6.5900e-003	0.8123	4.4600e-003	0.8168	0.2157	4.1000e-003	0.2198	0.0000	603.9330	603.9330	0.0122	0.0137	608.3087
Total	0.2034	0.9472	2.3194	0.0107	0.9613	9.0100e-003	0.9704	0.2587	8.4500e-003	0.2672	0.0000	1,002.6019	1,002.6019	0.0261	0.0709	1,024.3672

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0791	0.3426	4.1756	6.8200e-003		0.0105	0.0105		0.0105	0.0105	0.0000	594.8011	594.8011	0.1413	0.0000	598.3345
Total	0.0791	0.3426	4.1756	6.8200e-003	0.0000	0.0105	0.0105	0.0000	0.0105	0.0105	0.0000	594.8011	594.8011	0.1413	0.0000	598.3345

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Early 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	0.0173	0.8056	0.2246	4.0800e-003	0.1490	4.5500e-003	0.1536	0.0430	4.3500e-003	0.0473	0.0000	398.6689	398.6689	0.0139	0.0572	416.0585
Worker	0.1862	0.1416	2.0948	6.5900e-003	0.8123	4.4600e-003	0.8168	0.2157	4.1000e-003	0.2198	0.0000	603.9330	603.9330	0.0122	0.0137	608.3087
Total	0.2034	0.9472	2.3194	0.0107	0.9613	9.0100e-003	0.9704	0.2587	8.4500e-003	0.2672	0.0000	1,002.6019	1,002.6019	0.0261	0.0709	1,024.3672

3.3 Early Freight 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					0.7775	0.0000	0.7775	0.1697	0.0000	0.1697	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0653	0.6231	0.5388	1.3300e-003		0.0261	0.0261		0.0240	0.0240	0.0000	116.0389	116.0389	0.0373	0.0000	116.9716
Total	0.0653	0.6231	0.5388	1.3300e-003	0.7775	0.0261	0.8036	0.1697	0.0240	0.1938	0.0000	116.0389	116.0389	0.0373	0.0000	116.9716

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Early Freight 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	3.4100e-003	0.1589	0.0443	8.0000e-004	0.0294	9.0000e-004	0.0303	8.4800e-003	8.6000e-004	9.3300e-003	0.0000	78.6365	78.6365	2.7400e-003	0.0113	82.0666
Worker	0.0367	0.0279	0.4132	1.3000e-003	0.1602	8.8000e-004	0.1611	0.0426	8.1000e-004	0.0434	0.0000	119.1244	119.1244	2.4100e-003	2.6900e-003	119.9875
Total	0.0401	0.1868	0.4575	2.1000e-003	0.1896	1.7800e-003	0.1914	0.0510	1.6700e-003	0.0527	0.0000	197.7609	197.7609	5.1500e-003	0.0140	202.0541

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					0.3032	0.0000	0.3032	0.0662	0.0000	0.0662	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0174	0.0779	0.7317	1.3300e-003		2.4600e-003	2.4600e-003		2.4600e-003	2.4600e-003	0.0000	116.0388	116.0388	0.0373	0.0000	116.9715
Total	0.0174	0.0779	0.7317	1.3300e-003	0.3032	2.4600e-003	0.3057	0.0662	2.4600e-003	0.0687	0.0000	116.0388	116.0388	0.0373	0.0000	116.9715

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Early Freight 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	3.4100e-003	0.1589	0.0443	8.0000e-004	0.0294	9.0000e-004	0.0303	8.4800e-003	8.6000e-004	9.3300e-003	0.0000	78.6365	78.6365	2.7400e-003	0.0113	82.0666
Worker	0.0367	0.0279	0.4132	1.3000e-003	0.1602	8.8000e-004	0.1611	0.0426	8.1000e-004	0.0434	0.0000	119.1244	119.1244	2.4100e-003	2.6900e-003	119.9875
Total	0.0401	0.1868	0.4575	2.1000e-003	0.1896	1.7800e-003	0.1914	0.0510	1.6700e-003	0.0527	0.0000	197.7609	197.7609	5.1500e-003	0.0140	202.0541

3.3 Early Freight Relocation - 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					1.7621	0.0000	1.7621	0.7110	0.0000	0.7110	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3966	3.7823	3.2704	8.0400e-003		0.1584	0.1584		0.1459	0.1459	0.0000	704.3292	704.3292	0.2265	0.0000	709.9905
Total	0.3966	3.7823	3.2704	8.0400e-003	1.7621	0.1584	1.9205	0.7110	0.1459	0.8568	0.0000	704.3292	704.3292	0.2265	0.0000	709.9905

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Early Freight Relocation - 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	0.0000	0.0000	0.0000	0.0000	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	0.0200	0.9568	0.2645	4.7900e-003	0.1784	5.4300e-003	0.1838	0.0515	5.1900e-003	0.0566	0.0000	468.4533	468.4533	0.0168	0.0672	488.9076
Worker	0.2101	0.1535	2.3505	7.6500e-003	0.9726	5.0600e-003	0.9776	0.2583	4.6600e-003	0.2629	0.0000	701.0832	701.0832	0.0133	0.0154	706.0008
Total	0.2301	1.1103	2.6151	0.0124	1.1510	0.0105	1.1615	0.3097	9.8500e-003	0.3196	0.0000	1,169.5364	1,169.5364	0.0300	0.0826	1,194.9084

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					0.6872	0.0000	0.6872	0.2773	0.0000	0.2773	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1056	0.4727	4.4410	8.0400e-003		0.0149	0.0149		0.0149	0.0149	0.0000	704.3284	704.3284	0.2265	0.0000	709.9896
Total	0.1056	0.4727	4.4410	8.0400e-003	0.6872	0.0149	0.7022	0.2773	0.0149	0.2922	0.0000	704.3284	704.3284	0.2265	0.0000	709.9896

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Early Freight Relocation - 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	0.0000	0.0000	0.0000	0.0000	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	0.0200	0.9568	0.2645	4.7900e-003	0.1784	5.4300e-003	0.1838	0.0515	5.1900e-003	0.0566	0.0000	468.4533	468.4533	0.0168	0.0672	488.9076
Worker	0.2101	0.1535	2.3505	7.6500e-003	0.9726	5.0600e-003	0.9776	0.2583	4.6600e-003	0.2629	0.0000	701.0832	701.0832	0.0133	0.0154	706.0008
Total	0.2301	1.1103	2.6151	0.0124	1.1510	0.0105	1.1615	0.3097	9.8500e-003	0.3196	0.0000	1,169.5364	1,169.5364	0.0300	0.0826	1,194.9084

3.3 Early Freight Relocation - 2027**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					1.6944	0.0000	1.6944	0.6737	0.0000	0.6737	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3738	3.5650	3.0824	7.5800e-003		0.1493	0.1493		0.1375	0.1375	0.0000	663.8505	663.8505	0.2134	0.0000	669.1864
Total	0.3738	3.5650	3.0824	7.5800e-003	1.6944	0.1493	1.8437	0.6737	0.1375	0.8112	0.0000	663.8505	663.8505	0.2134	0.0000	669.1864

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Early Freight Relocation - 2027****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	0.0183	0.8944	0.2460	4.4200e-003	0.1682	5.1000e-003	0.1732	0.0485	4.8700e-003	0.0534	0.0000	432.8255	432.8255	0.0159	0.0622	451.7469
Worker	0.1871	0.1319	2.0894	7.0100e-003	0.9167	4.4700e-003	0.9212	0.2434	4.1200e-003	0.2476	0.0000	642.4518	642.4518	0.0114	0.0138	646.8329
Total	0.2054	1.0263	2.3354	0.0114	1.0848	9.5700e-003	1.0944	0.2919	8.9900e-003	0.3009	0.0000	1,075.2773	1,075.2773	0.0273	0.0759	1,098.5798

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					0.6608	0.0000	0.6608	0.2628	0.0000	0.2628	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0995	0.4455	4.1858	7.5800e-003		0.0141	0.0141		0.0141	0.0141	0.0000	663.8497	663.8497	0.2134	0.0000	669.1856
Total	0.0995	0.4455	4.1858	7.5800e-003	0.6608	0.0141	0.6749	0.2628	0.0141	0.2768	0.0000	663.8497	663.8497	0.2134	0.0000	669.1856

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Early Freight Relocation - 2027****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	0.0183	0.8944	0.2460	4.4200e-003	0.1682	5.1000e-003	0.1732	0.0485	4.8700e-003	0.0534	0.0000	432.8255	432.8255	0.0159	0.0622	451.7469
Worker	0.1871	0.1319	2.0894	7.0100e-003	0.9167	4.4700e-003	0.9212	0.2434	4.1200e-003	0.2476	0.0000	642.4518	642.4518	0.0114	0.0138	646.8329
Total	0.2054	1.0263	2.3354	0.0114	1.0848	9.5700e-003	1.0944	0.2919	8.9900e-003	0.3009	0.0000	1,075.2773	1,075.2773	0.0273	0.0759	1,098.5798

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	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
Other Non-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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.523127	0.069299	0.195397	0.127437	0.025049	0.007382	0.011793	0.007546	0.000932	0.000553	0.027399	0.000749	0.003336

5.0 Energy Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.1 Mitigation Measures Energy

[illegible]

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated

[illegible]

Mitigated

[illegible]

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	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			
Other Non-Asphalt Surfaces	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

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1709	2.5000e-004	0.0272	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0532	0.0532	1.4000e-004	0.0000	0.0566
Unmitigated	0.1709	2.5000e-004	0.0272	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0532	0.0532	1.4000e-004	0.0000	0.0566

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	0.0298					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1386					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.4900e-003	2.5000e-004	0.0272	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0532	0.0532	1.4000e-004	0.0000	0.0566
Total	0.1709	2.5000e-004	0.0272	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0532	0.0532	1.4000e-004	0.0000	0.0566

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	0.0298					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1386					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.4900e-003	2.5000e-004	0.0272	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0532	0.0532	1.4000e-004	0.0000	0.0566
Total	0.1709	2.5000e-004	0.0272	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0532	0.0532	1.4000e-004	0.0000	0.0566

7.0 Water Detail**7.1 Mitigation Measures Water**

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	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

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	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			
Other Non-Asphalt Surfaces	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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

CalEEMod (Version 2020.4.0) Annual Output File
Demolition & Right-of-Way Clearing

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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
Other Non-Asphalt Surfaces	100.00	Acre	100.00	4,356,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			Operational Year	2034
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Demolition of structures, clearing of entire ROW, relocations of utilities & tracks.

Approximate total area = 50 ft wide x 14.8 miles = 90 acres for alignment + 10 for parking facilities (conservative).

Construction Phase - Demo & Site prep = 520 workdays

Utility & track relocations = 585 workdays

Metro Construction Methods Report (June 2021), Updated Schedule provided May 2023

Off-road Equipment - LACMTA Construction Methods Report

Off-road Equipment - Metro Construction Methods Report (June 2021)

Off-road Equipment - Metro Construction Methods Report (June 2021)

Off-road Equipment - Metro Construction Methods Report (June 2021)

Off-road Equipment - Metro Construction Methods Report (June 2021)

Trips and VMT - Material Delivery to Site(s)

Demolition -

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Grading - Metro Construction Methods Report (June 2021)

Consumer Products - Construction Only

Area Coating - Construction Only

Landscape Equipment - Construction Only

Construction Off-road Equipment Mitigation - LACMTA Green Construction Policy

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
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	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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
tblConstructionPhase	NumDays	100.00	260.00
tblConstructionPhase	NumDays	155.00	520.00
tblConstructionPhase	NumDays	60.00	585.00
tblConstructionPhase	NumDays	60.00	260.00

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblTripsAndVMT	HaulingTripNumber	4,450.00	6,000.00
tblTripsAndVMT	VendorTripNumber	0.00	40.00
tblTripsAndVMT	VendorTripNumber	0.00	40.00
tblTripsAndVMT	WorkerTripNumber	30.00	250.00
tblTripsAndVMT	WorkerTripNumber	25.00	250.00
tblTripsAndVMT	WorkerTripNumber	30.00	250.00
tblTripsAndVMT	WorkerTripNumber	25.00	250.00

2.0 Emissions Summary

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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					
2027	1.0599	8.2565	12.0399	0.0293	1.4234	0.3212	1.7446	0.3343	0.3023	0.6366	0.0000	2,625.6325	2,625.6325	0.4414	0.0587	2,654.1706
2028	1.2102	9.2556	13.3394	0.0324	2.4041	0.3697	2.7738	0.8739	0.3477	1.2215	0.0000	2,884.3172	2,884.3172	0.5067	0.0457	2,910.6039
2029	0.2607	2.0063	2.9593	7.0000e-003	0.6587	0.0807	0.7394	0.2004	0.0761	0.2765	0.0000	622.3511	622.3511	0.1057	9.3100e-003	627.7675
Maximum	1.2102	9.2556	13.3394	0.0324	2.4041	0.3697	2.7738	0.8739	0.3477	1.2215	0.0000	2,884.3172	2,884.3172	0.5067	0.0587	2,910.6039

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					
2027	0.4522	2.0382	14.1864	0.0293	1.1805	0.0129	1.1934	0.2975	0.0124	0.3099	0.0000	2,625.6305	2,625.6305	0.4414	0.0587	2,654.1686
2028	0.5001	1.8053	15.9913	0.0324	1.6348	0.0126	1.6474	0.5269	0.0121	0.5390	0.0000	2,884.3149	2,884.3149	0.5067	0.0457	2,910.6016
2029	0.1056	0.3727	3.5065	7.0000e-003	0.4085	2.6100e-003	0.4112	0.1187	2.5100e-003	0.1212	0.0000	622.3506	622.3506	0.1057	9.3100e-003	627.7670
Maximum	0.5001	2.0382	15.9913	0.0324	1.6348	0.0129	1.6474	0.5269	0.0124	0.5390	0.0000	2,884.3149	2,884.3149	0.5067	0.0587	2,910.6016

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	58.20	78.40	-18.86	0.00	28.14	96.36	38.15	33.04	96.28	54.55	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	1-25-2027	4-24-2027	1.8243	0.4720
2	4-25-2027	7-24-2027	2.6797	0.7109
3	7-25-2027	10-24-2027	2.7138	0.7234
4	10-25-2027	1-24-2028	2.7249	0.7344
5	1-25-2028	4-24-2028	2.6185	0.6171
6	4-25-2028	7-24-2028	2.5931	0.5381
7	7-25-2028	10-24-2028	2.6251	0.5475
8	10-25-2028	1-24-2029	2.6331	0.5554
9	1-25-2029	4-24-2029	1.5269	0.3253
		Highest	2.7249	0.7344

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	0.3423	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4800e-003	2.4800e-003	1.0000e-005	0.0000	2.6400e-003
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	0.3423	1.0000e-005	1.2700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.4800e-003	2.4800e-003	1.0000e-005	0.0000	2.6400e-003

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	0.3423	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4800e-003	2.4800e-003	1.0000e-005	0.0000	2.6400e-003
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	0.3423	1.0000e-005	1.2700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.4800e-003	2.4800e-003	1.0000e-005	0.0000	2.6400e-003

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	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	Utility Relocations	Site Preparation	1/25/2027	4/20/2029	5	585	Relocate or temporarily reroute utilities.
2	Demolition	Demolition	3/8/2027	3/3/2028	5	260	
3	Freight Track Relocations & Freight Bridge	Grading	3/8/2027	3/2/2029	5	520	

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	ROW clearing/prep	Site Preparation	3/6/2028	3/2/2029	5	260

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 100****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
Utility Relocations	Concrete/Industrial Saws	2	8.00	81	0.73
Utility Relocations	Cranes	2	6.00	231	0.29
Utility Relocations	Excavators	2	8.00	158	0.38
Utility Relocations	Generator Sets	2	8.00	84	0.74
Utility Relocations	Paving Equipment	1	8.00	132	0.36
Utility Relocations	Rollers	1	8.00	80	0.38
Utility Relocations	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Excavators	2	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Rubber Tired Loaders	2	8.00	203	0.36
Demolition	Skid Steer Loaders	2	8.00	65	0.37
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
ROW clearing/prep	Excavators	2	8.00	158	0.38
ROW clearing/prep	Graders	2	6.00	187	0.41
ROW clearing/prep	Rollers	2	8.00	80	0.38
ROW clearing/prep	Rubber Tired Dozers	2	6.00	247	0.40
ROW clearing/prep	Rubber Tired Loaders	2	8.00	203	0.36
Freight Track Relocations & Freight Bridge	Air Compressors	2	8.00	78	0.48

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Freight Track Relocations & Freight Bridge	Bore/Drill Rigs	1	6.00	221	0.50
Freight Track Relocations & Freight Bridge	Cranes	1	6.00	231	0.29
Freight Track Relocations & Freight Bridge	Excavators	2	8.00	158	0.38
Freight Track Relocations & Freight Bridge	Paving Equipment	2	8.00	132	0.36
Freight Track Relocations & Freight Bridge	Pumps	2	8.00	84	0.74
Freight Track Relocations & Freight Bridge	Rubber Tired Loaders	2	8.00	203	0.36

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
Utility Relocations	12	250.00	40.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	10	250.00	0.00	6,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
ROW clearing/prep	10	250.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Freight Track Relocations & Freight Bridge	12	250.00	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

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Utility Relocations - 2027****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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3031	2.6831	3.9916	7.0600e-003		0.1153	0.1153		0.1098	0.1098	0.0000	613.7502	613.7502	0.1220	0.0000	616.8008
Total	0.3031	2.6831	3.9916	7.0600e-003	0.0000	0.1153	0.1153	0.0000	0.1098	0.1098	0.0000	613.7502	613.7502	0.1220	0.0000	616.8008

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	4.9600e-003	0.1940	0.0692	8.5000e-004	0.0309	9.5000e-004	0.0318	8.9100e-003	9.1000e-004	9.8200e-003	0.0000	82.9153	82.9153	3.0400e-003	0.0120	86.5574
Worker	0.0753	0.0512	0.7996	2.5800e-003	0.3356	1.6700e-003	0.3373	0.0891	1.5400e-003	0.0907	0.0000	236.3812	236.3812	4.8200e-003	5.3900e-003	238.1088
Total	0.0803	0.2452	0.8688	3.4300e-003	0.3665	2.6200e-003	0.3691	0.0980	2.4500e-003	0.1005	0.0000	319.2966	319.2966	7.8600e-003	0.0174	324.6662

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Utility Relocations - 2027****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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0794	0.3443	4.5734	7.0600e-003		1.5900e-003	1.5900e-003		1.5900e-003	1.5900e-003	0.0000	613.7495	613.7495	0.1220	0.0000	616.8001
Total	0.0794	0.3443	4.5734	7.0600e-003	0.0000	1.5900e-003	1.5900e-003	0.0000	1.5900e-003	1.5900e-003	0.0000	613.7495	613.7495	0.1220	0.0000	616.8001

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	4.9600e-003	0.1940	0.0692	8.5000e-004	0.0309	9.5000e-004	0.0318	8.9100e-003	9.1000e-004	9.8200e-003	0.0000	82.9153	82.9153	3.0400e-003	0.0120	86.5574
Worker	0.0753	0.0512	0.7996	2.5800e-003	0.3356	1.6700e-003	0.3373	0.0891	1.5400e-003	0.0907	0.0000	236.3812	236.3812	4.8200e-003	5.3900e-003	238.1088
Total	0.0803	0.2452	0.8688	3.4300e-003	0.3665	2.6200e-003	0.3691	0.0980	2.4500e-003	0.1005	0.0000	319.2966	319.2966	7.8600e-003	0.0174	324.6662

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Utility Relocations - 2028****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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3217	2.8473	4.2360	7.4900e-003		0.1224	0.1224		0.1165	0.1165	0.0000	651.3268	651.3268	0.1295	0.0000	654.5641
Total	0.3217	2.8473	4.2360	7.4900e-003	0.0000	0.1224	0.1224	0.0000	0.1165	0.1165	0.0000	651.3268	651.3268	0.1295	0.0000	654.5641

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	5.1600e-003	0.2045	0.0728	8.8000e-004	0.0328	1.0000e-003	0.0338	9.4600e-003	9.6000e-004	0.0104	0.0000	86.3102	86.3102	3.2400e-003	0.0125	90.1045
Worker	0.0756	0.0500	0.8068	2.6700e-003	0.3561	1.6500e-003	0.3578	0.0946	1.5200e-003	0.0961	0.0000	244.5193	244.5193	4.7100e-003	5.4600e-003	246.2653
Total	0.0808	0.2545	0.8797	3.5500e-003	0.3889	2.6500e-003	0.3916	0.1041	2.4800e-003	0.1065	0.0000	330.8295	330.8295	7.9500e-003	0.0179	336.3698

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Utility Relocations - 2028****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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0843	0.3653	4.8534	7.4900e-003		1.6900e-003	1.6900e-003		1.6900e-003	1.6900e-003	0.0000	651.3260	651.3260	0.1295	0.0000	654.5633
Total	0.0843	0.3653	4.8534	7.4900e-003	0.0000	1.6900e-003	1.6900e-003	0.0000	1.6900e-003	1.6900e-003	0.0000	651.3260	651.3260	0.1295	0.0000	654.5633

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	5.1600e-003	0.2045	0.0728	8.8000e-004	0.0328	1.0000e-003	0.0338	9.4600e-003	9.6000e-004	0.0104	0.0000	86.3102	86.3102	3.2400e-003	0.0125	90.1045
Worker	0.0756	0.0500	0.8068	2.6700e-003	0.3561	1.6500e-003	0.3578	0.0946	1.5200e-003	0.0961	0.0000	244.5193	244.5193	4.7100e-003	5.4600e-003	246.2653
Total	0.0808	0.2545	0.8797	3.5500e-003	0.3889	2.6500e-003	0.3916	0.1041	2.4800e-003	0.1065	0.0000	330.8295	330.8295	7.9500e-003	0.0179	336.3698

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Utility Relocations - 2029****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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0990	0.8761	1.3034	2.3000e-003		0.0377	0.0377		0.0359	0.0359	0.0000	200.4082	200.4082	0.0398	0.0000	201.4043
Total	0.0990	0.8761	1.3034	2.3000e-003	0.0000	0.0377	0.0377	0.0000	0.0359	0.0359	0.0000	200.4082	200.4082	0.0398	0.0000	201.4043

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	1.5600e-003	0.0625	0.0223	2.7000e-004	0.0101	3.1000e-004	0.0104	2.9100e-003	2.9000e-004	3.2000e-003	0.0000	26.0598	26.0598	1.0100e-003	3.7600e-003	27.2064
Worker	0.0219	0.0142	0.2368	8.0000e-004	0.1096	4.7000e-004	0.1101	0.0291	4.4000e-004	0.0295	0.0000	73.4988	73.4988	1.3400e-003	1.6100e-003	74.0127
Total	0.0235	0.0767	0.2591	1.0700e-003	0.1197	7.8000e-004	0.1204	0.0320	7.3000e-004	0.0327	0.0000	99.5585	99.5585	2.3500e-003	5.3700e-003	101.2191

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Utility Relocations - 2029****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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0259	0.1124	1.4934	2.3000e-003		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	200.4080	200.4080	0.0398	0.0000	201.4041
Total	0.0259	0.1124	1.4934	2.3000e-003	0.0000	5.2000e-004	5.2000e-004	0.0000	5.2000e-004	5.2000e-004	0.0000	200.4080	200.4080	0.0398	0.0000	201.4041

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	1.5600e-003	0.0625	0.0223	2.7000e-004	0.0101	3.1000e-004	0.0104	2.9100e-003	2.9000e-004	3.2000e-003	0.0000	26.0598	26.0598	1.0100e-003	3.7600e-003	27.2064
Worker	0.0219	0.0142	0.2368	8.0000e-004	0.1096	4.7000e-004	0.1101	0.0291	4.4000e-004	0.0295	0.0000	73.4988	73.4988	1.3400e-003	1.6100e-003	74.0127
Total	0.0235	0.0767	0.2591	1.0700e-003	0.1197	7.8000e-004	0.1204	0.0320	7.3000e-004	0.0327	0.0000	99.5585	99.5585	2.3500e-003	5.3700e-003	101.2191

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Demolition - 2027****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					0.3981	0.0000	0.3981	0.0603	0.0000	0.0603	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2656	2.5453	2.4376	5.4100e-003		0.1055	0.1055		0.0970	0.0970	0.0000	475.0218	475.0218	0.1536	0.0000	478.8626
Total	0.2656	2.5453	2.4376	5.4100e-003	0.3981	0.1055	0.5036	0.0603	0.0970	0.1573	0.0000	475.0218	475.0218	0.1536	0.0000	478.8626

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	5.0400e-003	0.3329	0.0914	1.3400e-003	0.0427	2.0400e-003	0.0447	0.0117	1.9500e-003	0.0137	0.0000	134.6314	134.6314	8.2600e-003	0.0214	141.2188
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	0.0661	0.0449	0.7017	2.2600e-003	0.2945	1.4600e-003	0.2960	0.0782	1.3500e-003	0.0796	0.0000	207.4366	207.4366	4.2300e-003	4.7300e-003	208.9526
Total	0.0712	0.3778	0.7931	3.6000e-003	0.3372	3.5000e-003	0.3407	0.0900	3.3000e-003	0.0933	0.0000	342.0680	342.0680	0.0125	0.0261	350.1714

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Demolition - 2027****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					0.1553	0.0000	0.1553	0.0235	0.0000	0.0235	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0719	0.5139	3.1172	5.4100e-003		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003	0.0000	475.0212	475.0212	0.1536	0.0000	478.8620
Total	0.0719	0.5139	3.1172	5.4100e-003	0.1553	1.3300e-003	0.1566	0.0235	1.3300e-003	0.0248	0.0000	475.0212	475.0212	0.1536	0.0000	478.8620

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	5.0400e-003	0.3329	0.0914	1.3400e-003	0.0427	2.0400e-003	0.0447	0.0117	1.9500e-003	0.0137	0.0000	134.6314	134.6314	8.2600e-003	0.0214	141.2188
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	0.0661	0.0449	0.7017	2.2600e-003	0.2945	1.4600e-003	0.2960	0.0782	1.3500e-003	0.0796	0.0000	207.4366	207.4366	4.2300e-003	4.7300e-003	208.9526
Total	0.0712	0.3778	0.7931	3.6000e-003	0.3372	3.5000e-003	0.3407	0.0900	3.3000e-003	0.0933	0.0000	342.0680	342.0680	0.0125	0.0261	350.1714

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Demolition - 2028****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					0.0833	0.0000	0.0833	0.0126	0.0000	0.0126	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0556	0.5327	0.5102	1.1300e-003		0.0221	0.0221		0.0203	0.0203	0.0000	99.4232	99.4232	0.0322	0.0000	100.2271
Total	0.0556	0.5327	0.5102	1.1300e-003	0.0833	0.0221	0.1054	0.0126	0.0203	0.0329	0.0000	99.4232	99.4232	0.0322	0.0000	100.2271

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	1.0500e-003	0.0690	0.0193	2.8000e-004	8.9300e-003	4.2000e-004	9.3600e-003	2.4500e-003	4.1000e-004	2.8600e-003	0.0000	27.6030	27.6030	1.7400e-003	4.3900e-003	28.9552
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	0.0131	8.6500e-003	0.1396	4.6000e-004	0.0616	2.9000e-004	0.0619	0.0164	2.6000e-004	0.0166	0.0000	42.3207	42.3207	8.1000e-004	9.5000e-004	42.6229
Total	0.0141	0.0776	0.1590	7.4000e-004	0.0706	7.1000e-004	0.0713	0.0188	6.7000e-004	0.0195	0.0000	69.9236	69.9236	2.5500e-003	5.3400e-003	71.5781

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Demolition - 2028****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					0.0325	0.0000	0.0325	4.9200e-003	0.0000	4.9200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0150	0.1076	0.6524	1.1300e-003		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	99.4231	99.4231	0.0322	0.0000	100.2269
Total	0.0150	0.1076	0.6524	1.1300e-003	0.0325	2.8000e-004	0.0328	4.9200e-003	2.8000e-004	5.2000e-003	0.0000	99.4231	99.4231	0.0322	0.0000	100.2269

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	1.0500e-003	0.0690	0.0193	2.8000e-004	8.9300e-003	4.2000e-004	9.3600e-003	2.4500e-003	4.1000e-004	2.8600e-003	0.0000	27.6030	27.6030	1.7400e-003	4.3900e-003	28.9552
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	0.0131	8.6500e-003	0.1396	4.6000e-004	0.0616	2.9000e-004	0.0619	0.0164	2.6000e-004	0.0166	0.0000	42.3207	42.3207	8.1000e-004	9.5000e-004	42.6229
Total	0.0141	0.0776	0.1590	7.4000e-004	0.0706	7.1000e-004	0.0713	0.0188	6.7000e-004	0.0195	0.0000	69.9236	69.9236	2.5500e-003	5.3400e-003	71.5781

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Freight Track Relocations & Freight Bridge - 2027****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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2692	2.1900	3.1863	6.8300e-003		0.0920	0.0920		0.0876	0.0876	0.0000	595.2969	595.2969	0.1385	0.0000	598.7585
Total	0.2692	2.1900	3.1863	6.8300e-003	0.0000	0.0920	0.0920	0.0000	0.0876	0.0876	0.0000	595.2969	595.2969	0.1385	0.0000	598.7585

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	4.3500e-003	0.1703	0.0607	7.4000e-004	0.0271	8.3000e-004	0.0279	7.8200e-003	8.0000e-004	8.6200e-003	0.0000	72.7624	72.7624	2.6700e-003	0.0105	75.9585
Worker	0.0661	0.0449	0.7017	2.2600e-003	0.2945	1.4600e-003	0.2960	0.0782	1.3500e-003	0.0796	0.0000	207.4366	207.4366	4.2300e-003	4.7300e-003	208.9526
Total	0.0705	0.2152	0.7624	3.0000e-003	0.3216	2.2900e-003	0.3239	0.0860	2.1500e-003	0.0882	0.0000	280.1990	280.1990	6.9000e-003	0.0152	284.9111

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Freight Track Relocations & Freight Bridge - 2027****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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0789	0.3419	4.0714	6.8300e-003		1.5800e-003	1.5800e-003		1.5800e-003	1.5800e-003	0.0000	595.2961	595.2961	0.1385	0.0000	598.7578
Total	0.0789	0.3419	4.0714	6.8300e-003	0.0000	1.5800e-003	1.5800e-003	0.0000	1.5800e-003	1.5800e-003	0.0000	595.2961	595.2961	0.1385	0.0000	598.7578

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	4.3500e-003	0.1703	0.0607	7.4000e-004	0.0271	8.3000e-004	0.0279	7.8200e-003	8.0000e-004	8.6200e-003	0.0000	72.7624	72.7624	2.6700e-003	0.0105	75.9585
Worker	0.0661	0.0449	0.7017	2.2600e-003	0.2945	1.4600e-003	0.2960	0.0782	1.3500e-003	0.0796	0.0000	207.4366	207.4366	4.2300e-003	4.7300e-003	208.9526
Total	0.0705	0.2152	0.7624	3.0000e-003	0.3216	2.2900e-003	0.3239	0.0860	2.1500e-003	0.0882	0.0000	280.1990	280.1990	6.9000e-003	0.0152	284.9111

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Freight Track Relocations & Freight Bridge - 2028****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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3256	2.6484	3.8531	8.2600e-003		0.1113	0.1113		0.1059	0.1059	0.0000	719.8939	719.8939	0.1675	0.0000	724.0801
Total	0.3256	2.6484	3.8531	8.2600e-003	0.0000	0.1113	0.1113	0.0000	0.1059	0.1059	0.0000	719.8939	719.8939	0.1675	0.0000	724.0801

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	5.1600e-003	0.2045	0.0728	8.8000e-004	0.0328	1.0000e-003	0.0338	9.4600e-003	9.6000e-004	0.0104	0.0000	86.3102	86.3102	3.2400e-003	0.0125	90.1045
Worker	0.0756	0.0500	0.8068	2.6700e-003	0.3561	1.6500e-003	0.3578	0.0946	1.5200e-003	0.0961	0.0000	244.5193	244.5193	4.7100e-003	5.4600e-003	246.2653
Total	0.0808	0.2545	0.8797	3.5500e-003	0.3889	2.6500e-003	0.3916	0.1041	2.4800e-003	0.1065	0.0000	330.8295	330.8295	7.9500e-003	0.0179	336.3698

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Freight Track Relocations & Freight Bridge - 2028****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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0954	0.4135	4.9236	8.2600e-003		1.9100e-003	1.9100e-003		1.9100e-003	1.9100e-003	0.0000	719.8930	719.8930	0.1675	0.0000	724.0792
Total	0.0954	0.4135	4.9236	8.2600e-003	0.0000	1.9100e-003	1.9100e-003	0.0000	1.9100e-003	1.9100e-003	0.0000	719.8930	719.8930	0.1675	0.0000	724.0792

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	5.1600e-003	0.2045	0.0728	8.8000e-004	0.0328	1.0000e-003	0.0338	9.4600e-003	9.6000e-004	0.0104	0.0000	86.3102	86.3102	3.2400e-003	0.0125	90.1045
Worker	0.0756	0.0500	0.8068	2.6700e-003	0.3561	1.6500e-003	0.3578	0.0946	1.5200e-003	0.0961	0.0000	244.5193	244.5193	4.7100e-003	5.4600e-003	246.2653
Total	0.0808	0.2545	0.8797	3.5500e-003	0.3889	2.6500e-003	0.3916	0.1041	2.4800e-003	0.1065	0.0000	330.8295	330.8295	7.9500e-003	0.0179	336.3698

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Freight Track Relocations & Freight Bridge - 2029****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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0564	0.4584	0.6669	1.4300e-003		0.0193	0.0193		0.0183	0.0183	0.0000	124.5970	124.5970	0.0290	0.0000	125.3216
Total	0.0564	0.4584	0.6669	1.4300e-003	0.0000	0.0193	0.0193	0.0000	0.0183	0.0183	0.0000	124.5970	124.5970	0.0290	0.0000	125.3216

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	8.8000e-004	0.0352	0.0125	1.5000e-004	5.6700e-003	1.7000e-004	5.8400e-003	1.6400e-003	1.6000e-004	1.8000e-003	0.0000	14.6586	14.6586	5.7000e-004	2.1200e-003	15.3036
Worker	0.0123	7.9900e-003	0.1332	4.5000e-004	0.0616	2.7000e-004	0.0619	0.0164	2.4000e-004	0.0166	0.0000	41.3431	41.3431	7.5000e-004	9.1000e-004	41.6322
Total	0.0132	0.0431	0.1457	6.0000e-004	0.0673	4.4000e-004	0.0677	0.0180	4.0000e-004	0.0184	0.0000	56.0017	56.0017	1.3200e-003	3.0300e-003	56.9357

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Freight Track Relocations & Freight Bridge - 2029****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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0165	0.0716	0.8522	1.4300e-003		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	124.5969	124.5969	0.0290	0.0000	125.3214
Total	0.0165	0.0716	0.8522	1.4300e-003	0.0000	3.3000e-004	3.3000e-004	0.0000	3.3000e-004	3.3000e-004	0.0000	124.5969	124.5969	0.0290	0.0000	125.3214

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	8.8000e-004	0.0352	0.0125	1.5000e-004	5.6700e-003	1.7000e-004	5.8400e-003	1.6400e-003	1.6000e-004	1.8000e-003	0.0000	14.6586	14.6586	5.7000e-004	2.1200e-003	15.3036
Worker	0.0123	7.9900e-003	0.1332	4.5000e-004	0.0616	2.7000e-004	0.0619	0.0164	2.4000e-004	0.0166	0.0000	41.3431	41.3431	7.5000e-004	9.1000e-004	41.6322
Total	0.0132	0.0431	0.1457	6.0000e-004	0.0673	4.4000e-004	0.0677	0.0180	4.0000e-004	0.0184	0.0000	56.0017	56.0017	1.3200e-003	3.0300e-003	56.9357

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 ROW clearing/prep - 2028****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					1.1779	0.0000	1.1779	0.5561	0.0000	0.5561	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2692	2.5992	2.1546	5.4600e-003		0.1066	0.1066		0.0981	0.0981	0.0000	479.8922	479.8922	0.1552	0.0000	483.7724
Total	0.2692	2.5992	2.1546	5.4600e-003	1.1779	0.1066	1.2845	0.5561	0.0981	0.6542	0.0000	479.8922	479.8922	0.1552	0.0000	483.7724

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	0.0625	0.0413	0.6672	2.2100e-003	0.2945	1.3600e-003	0.2959	0.0782	1.2600e-003	0.0795	0.0000	202.1986	202.1986	3.8900e-003	4.5200e-003	203.6425
Total	0.0625	0.0413	0.6672	2.2100e-003	0.2945	1.3600e-003	0.2959	0.0782	1.2600e-003	0.0795	0.0000	202.1986	202.1986	3.8900e-003	4.5200e-003	203.6425

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 ROW clearing/prep - 2028****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					0.4594	0.0000	0.4594	0.2169	0.0000	0.2169	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0672	0.2910	2.9764	5.4600e-003		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003	0.0000	479.8916	479.8916	0.1552	0.0000	483.7718
Total	0.0672	0.2910	2.9764	5.4600e-003	0.4594	1.3400e-003	0.4607	0.2169	1.3400e-003	0.2182	0.0000	479.8916	479.8916	0.1552	0.0000	483.7718

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	0.0625	0.0413	0.6672	2.2100e-003	0.2945	1.3600e-003	0.2959	0.0782	1.2600e-003	0.0795	0.0000	202.1986	202.1986	3.8900e-003	4.5200e-003	203.6425
Total	0.0625	0.0413	0.6672	2.2100e-003	0.2945	1.3600e-003	0.2959	0.0782	1.2600e-003	0.0795	0.0000	202.1986	202.1986	3.8900e-003	4.5200e-003	203.6425

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 ROW clearing/prep - 2029****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					0.4100	0.0000	0.4100	0.1341	0.0000	0.1341	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0563	0.5440	0.4510	1.1400e-003		0.0223	0.0223		0.0205	0.0205	0.0000	100.4426	100.4426	0.0325	0.0000	101.2547
Total	0.0563	0.5440	0.4510	1.1400e-003	0.4100	0.0223	0.4324	0.1341	0.0205	0.1546	0.0000	100.4426	100.4426	0.0325	0.0000	101.2547

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	0.0123	7.9900e-003	0.1332	4.5000e-004	0.0616	2.7000e-004	0.0619	0.0164	2.4000e-004	0.0166	0.0000	41.3431	41.3431	7.5000e-004	9.1000e-004	41.6322
Total	0.0123	7.9900e-003	0.1332	4.5000e-004	0.0616	2.7000e-004	0.0619	0.0164	2.4000e-004	0.0166	0.0000	41.3431	41.3431	7.5000e-004	9.1000e-004	41.6322

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 ROW clearing/prep - 2029****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					0.1599	0.0000	0.1599	0.0523	0.0000	0.0523	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0141	0.0609	0.6230	1.1400e-003		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	100.4424	100.4424	0.0325	0.0000	101.2546
Total	0.0141	0.0609	0.6230	1.1400e-003	0.1599	2.8000e-004	0.1602	0.0523	2.8000e-004	0.0526	0.0000	100.4424	100.4424	0.0325	0.0000	101.2546

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	0.0123	7.9900e-003	0.1332	4.5000e-004	0.0616	2.7000e-004	0.0619	0.0164	2.4000e-004	0.0166	0.0000	41.3431	41.3431	7.5000e-004	9.1000e-004	41.6322
Total	0.0123	7.9900e-003	0.1332	4.5000e-004	0.0616	2.7000e-004	0.0619	0.0164	2.4000e-004	0.0166	0.0000	41.3431	41.3431	7.5000e-004	9.1000e-004	41.6322

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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
Other Non-Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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
Other Non-Asphalt Surfaces	0.523127	0.069299	0.195397	0.127437	0.025049	0.007382	0.011793	0.007546	0.000932	0.000553	0.027399	0.000749	0.003336

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

[illegible]

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated

[illegible]

Mitigated

[illegible]

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	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			
Other Non-Asphalt Surfaces	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

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.3423	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4800e-003	2.4800e-003	1.0000e-005	0.0000	2.6400e-003
Unmitigated	0.3423	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4800e-003	2.4800e-003	1.0000e-005	0.0000	2.6400e-003

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	0.0606					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2816					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4800e-003	2.4800e-003	1.0000e-005	0.0000	2.6400e-003
Total	0.3423	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4800e-003	2.4800e-003	1.0000e-005	0.0000	2.6400e-003

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	0.0606					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2816					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4800e-003	2.4800e-003	1.0000e-005	0.0000	2.6400e-003
Total	0.3423	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4800e-003	2.4800e-003	1.0000e-005	0.0000	2.6400e-003

7.0 Water Detail**7.1 Mitigation Measures Water**

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**7.2 Water by Land Use****Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	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

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	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			
Other Non-Asphalt Surfaces	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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

CalEEMod (Version 2020.4.0) Annual Output File
Bulk Materials Hauling Trips

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**LACMTA WSAB LPA Construction GHG - Hauling Activities****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	100.00	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	2040
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Major cut and fill activities anticipated to begin late 2025.

Land Use - Approximate total project area.

Construction Phase - Metro Construction Methods Report (October 2023)

Total Days estimated assuming 45 trucks/day on average with 58,700 total trips (3,950 export & 54,750 import).

Off-road Equipment - Haul Truck Trips Only - no equipment

Off-road Equipment - No Equipment

Trips and VMT - Metro Construction Methods Report (September 2023)

Assumes 20 CY trucks for cut (~78,600 CY total, 3,950 loads), 10 CY trucks for fill (~547,300 CY total, 54,750 loads).

Rounded up to nearest 50 truck trips.

Grading - LPA Cut/Fill volumes (Construction Methods Report October 2023)

Vehicle Trips - Construction haul trips only.

Vehicle Emission Factors - Construction haul trips only.

Vehicle Emission Factors - Construction haul trips only.

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Vehicle Emission Factors - Construction haul trips only.

Construction Off-road Equipment Mitigation - Compliance with Metro GCP

Fleet Mix - Construction haul trips only.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	155.00	1,305.00
tblGrading	MaterialExported	0.00	78,600.00
tblGrading	MaterialImported	0.00	547,300.00
tblLandUse	LotAcreage	0.00	100.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	78,250.00	117,400.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00

2.0 Emissions Summary

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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					
2025	4.0200e-003	0.2650	0.0698	1.0900e-003	0.0687	1.6100e-003	0.0703	0.0145	1.5400e-003	0.0160	0.0000	109.2373	109.2373	6.3400e-003	0.0174	114.5694
2026	0.0241	1.5918	0.4287	6.5000e-003	0.2374	9.7200e-003	0.2471	0.0609	9.3000e-003	0.0701	0.0000	650.3209	650.3209	0.0389	0.1034	682.1044
2027	0.0239	1.5752	0.4327	6.3600e-003	0.2374	9.6500e-003	0.2471	0.0609	9.2300e-003	0.0701	0.0000	637.1302	637.1302	0.0391	0.1013	668.3042
2028	0.0236	1.5534	0.4352	6.1900e-003	0.2366	9.5400e-003	0.2462	0.0606	9.1200e-003	0.0698	0.0000	621.7218	621.7218	0.0393	0.0989	652.1804
2029	0.0235	1.5423	0.4407	6.0800e-003	0.2374	9.4800e-003	0.2469	0.0609	9.0700e-003	0.0699	0.0000	611.2355	611.2355	0.0398	0.0973	641.2203
2030	0.0195	1.2810	0.3727	4.9900e-003	0.2049	7.8700e-003	0.2128	0.0519	7.5300e-003	0.0595	0.0000	502.3530	502.3530	0.0337	0.0800	527.0289
Maximum	0.0241	1.5918	0.4407	6.5000e-003	0.2374	9.7200e-003	0.2471	0.0609	9.3000e-003	0.0701	0.0000	650.3209	650.3209	0.0398	0.1034	682.1044

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2025	4.0200e-003	0.2650	0.0698	1.0900e-003	0.0687	1.6100e-003	0.0703	0.0145	1.5400e-003	0.0160	0.0000	109.2373	109.2373	6.3400e-003	0.0174	114.5694
2026	0.0241	1.5918	0.4287	6.5000e-003	0.2374	9.7200e-003	0.2471	0.0609	9.3000e-003	0.0701	0.0000	650.3209	650.3209	0.0389	0.1034	682.1044
2027	0.0239	1.5752	0.4327	6.3600e-003	0.2374	9.6500e-003	0.2471	0.0609	9.2300e-003	0.0701	0.0000	637.1302	637.1302	0.0391	0.1013	668.3042
2028	0.0236	1.5534	0.4352	6.1900e-003	0.2366	9.5400e-003	0.2462	0.0606	9.1200e-003	0.0698	0.0000	621.7218	621.7218	0.0393	0.0989	652.1804
2029	0.0235	1.5423	0.4407	6.0800e-003	0.2374	9.4800e-003	0.2469	0.0609	9.0700e-003	0.0699	0.0000	611.2355	611.2355	0.0398	0.0973	641.2203
2030	0.0195	1.2810	0.3727	4.9900e-003	0.2049	7.8700e-003	0.2128	0.0519	7.5300e-003	0.0595	0.0000	502.3530	502.3530	0.0337	0.0800	527.0289
Maximum	0.0241	1.5918	0.4407	6.5000e-003	0.2374	9.7200e-003	0.2471	0.0609	9.3000e-003	0.0701	0.0000	650.3209	650.3209	0.0398	0.1034	682.1044

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	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	11-3-2025	2-2-2026	0.4056	0.4056
2	2-3-2026	5-2-2026	0.3841	0.3841
3	5-3-2026	8-2-2026	0.3865	0.3865
4	8-3-2026	11-2-2026	0.3924	0.3924
5	11-3-2026	2-2-2027	0.4015	0.4015

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6	2-3-2027	5-2-2027	0.3801	0.3801
7	5-3-2027	8-2-2027	0.3825	0.3825
8	8-3-2027	11-2-2027	0.3884	0.3884
9	11-3-2027	2-2-2028	0.3974	0.3974
10	2-3-2028	5-2-2028	0.3806	0.3806
11	5-3-2028	8-2-2028	0.3787	0.3787
12	8-3-2028	11-2-2028	0.3845	0.3845
13	11-3-2028	2-2-2029	0.3933	0.3933
14	2-3-2029	5-2-2029	0.3723	0.3723
15	5-3-2029	8-2-2029	0.3745	0.3745
16	8-3-2029	11-2-2029	0.3803	0.3803
17	11-3-2029	2-2-2030	0.3892	0.3892
18	2-3-2030	5-2-2030	0.3685	0.3685
19	5-3-2030	8-2-2030	0.3708	0.3708
20	8-3-2030	9-30-2030	0.2378	0.2378
		Highest	0.4056	0.4056

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	N2O	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	LPA Cut/Fill Import & Export	Grading	11/3/2025	11/1/2030	5	1305	

Acres of Grading (Site Preparation Phase): 0

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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
LPA Cut/Fill Import & Export	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
LPA Cut/Fill Import & Export	1	0.00	0.00	117,400.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 LPA Cut/Fill Import & Export - 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					0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	4.0200e-003	0.2650	0.0698	1.0900e-003	0.0333	1.6100e-003	0.0349	9.1400e-003	1.5400e-003	0.0107	0.0000	109.2373	109.2373	6.3400e-003	0.0174	114.5694
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	4.0200e-003	0.2650	0.0698	1.0900e-003	0.0333	1.6100e-003	0.0349	9.1400e-003	1.5400e-003	0.0107	0.0000	109.2373	109.2373	6.3400e-003	0.0174	114.5694

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 LPA Cut/Fill Import & Export - 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					0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	4.0200e-003	0.2650	0.0698	1.0900e-003	0.0333	1.6100e-003	0.0349	9.1400e-003	1.5400e-003	0.0107	0.0000	109.2373	109.2373	6.3400e-003	0.0174	114.5694
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	4.0200e-003	0.2650	0.0698	1.0900e-003	0.0333	1.6100e-003	0.0349	9.1400e-003	1.5400e-003	0.0107	0.0000	109.2373	109.2373	6.3400e-003	0.0174	114.5694

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 LPA Cut/Fill Import & Export - 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					0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0241	1.5918	0.4287	6.5000e-003	0.2020	9.7200e-003	0.2117	0.0555	9.3000e-003	0.0648	0.0000	650.3209	650.3209	0.0389	0.1034	682.1044
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	0.0241	1.5918	0.4287	6.5000e-003	0.2020	9.7200e-003	0.2117	0.0555	9.3000e-003	0.0648	0.0000	650.3209	650.3209	0.0389	0.1034	682.1044

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 LPA Cut/Fill Import & Export - 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					0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0241	1.5918	0.4287	6.5000e-003	0.2020	9.7200e-003	0.2117	0.0555	9.3000e-003	0.0648	0.0000	650.3209	650.3209	0.0389	0.1034	682.1044
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	0.0241	1.5918	0.4287	6.5000e-003	0.2020	9.7200e-003	0.2117	0.0555	9.3000e-003	0.0648	0.0000	650.3209	650.3209	0.0389	0.1034	682.1044

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 LPA Cut/Fill Import & Export - 2027****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					0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0239	1.5752	0.4327	6.3600e-003	0.2020	9.6500e-003	0.2117	0.0555	9.2300e-003	0.0647	0.0000	637.1302	637.1302	0.0391	0.1013	668.3042
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	0.0239	1.5752	0.4327	6.3600e-003	0.2020	9.6500e-003	0.2117	0.0555	9.2300e-003	0.0647	0.0000	637.1302	637.1302	0.0391	0.1013	668.3042

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 LPA Cut/Fill Import & Export - 2027****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					0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0239	1.5752	0.4327	6.3600e-003	0.2020	9.6500e-003	0.2117	0.0555	9.2300e-003	0.0647	0.0000	637.1302	637.1302	0.0391	0.1013	668.3042
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	0.0239	1.5752	0.4327	6.3600e-003	0.2020	9.6500e-003	0.2117	0.0555	9.2300e-003	0.0647	0.0000	637.1302	637.1302	0.0391	0.1013	668.3042

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 LPA Cut/Fill Import & Export - 2028****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					0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0236	1.5534	0.4352	6.1900e-003	0.2012	9.5400e-003	0.2108	0.0553	9.1200e-003	0.0644	0.0000	621.7218	621.7218	0.0393	0.0989	652.1804
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	0.0236	1.5534	0.4352	6.1900e-003	0.2012	9.5400e-003	0.2108	0.0553	9.1200e-003	0.0644	0.0000	621.7218	621.7218	0.0393	0.0989	652.1804

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 LPA Cut/Fill Import & Export - 2028****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					0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0236	1.5534	0.4352	6.1900e-003	0.2012	9.5400e-003	0.2108	0.0553	9.1200e-003	0.0644	0.0000	621.7218	621.7218	0.0393	0.0989	652.1804
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	0.0236	1.5534	0.4352	6.1900e-003	0.2012	9.5400e-003	0.2108	0.0553	9.1200e-003	0.0644	0.0000	621.7218	621.7218	0.0393	0.0989	652.1804

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 LPA Cut/Fill Import & Export - 2029****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					0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0235	1.5423	0.4407	6.0800e-003	0.2020	9.4800e-003	0.2115	0.0555	9.0700e-003	0.0646	0.0000	611.2355	611.2355	0.0398	0.0973	641.2203
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	0.0235	1.5423	0.4407	6.0800e-003	0.2020	9.4800e-003	0.2115	0.0555	9.0700e-003	0.0646	0.0000	611.2355	611.2355	0.0398	0.0973	641.2203

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 LPA Cut/Fill Import & Export - 2029****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					0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0235	1.5423	0.4407	6.0800e-003	0.2020	9.4800e-003	0.2115	0.0555	9.0700e-003	0.0646	0.0000	611.2355	611.2355	0.0398	0.0973	641.2203
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	0.0235	1.5423	0.4407	6.0800e-003	0.2020	9.4800e-003	0.2115	0.0555	9.0700e-003	0.0646	0.0000	611.2355	611.2355	0.0398	0.0973	641.2203

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 LPA Cut/Fill Import & Export - 2030****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					0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0195	1.2810	0.3727	4.9900e-003	0.1695	7.8700e-003	0.1774	0.0466	7.5300e-003	0.0541	0.0000	502.3530	502.3530	0.0337	0.0800	527.0289
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	0.0195	1.2810	0.3727	4.9900e-003	0.1695	7.8700e-003	0.1774	0.0466	7.5300e-003	0.0541	0.0000	502.3530	502.3530	0.0337	0.0800	527.0289

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 LPA Cut/Fill Import & Export - 2030****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					0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0354	0.0000	0.0354	5.3600e-003	0.0000	5.3600e-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	0.0195	1.2810	0.3727	4.9900e-003	0.1695	7.8700e-003	0.1774	0.0466	7.5300e-003	0.0541	0.0000	502.3530	502.3530	0.0337	0.0800	527.0289
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	0.0195	1.2810	0.3727	4.9900e-003	0.1695	7.8700e-003	0.1774	0.0466	7.5300e-003	0.0541	0.0000	502.3530	502.3530	0.0337	0.0800	527.0289

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

[illegible]

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated

[illegible]

Mitigated

[illegible]

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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**

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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

LACMTA WSAB LPA Construction GHG - Hauling Activities - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

CalEEMod (Version 2020.4.0) Annual Output File
At-Grade Alignment, At-Grade Stations,
& Parking Facilities

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking****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	74.00	0.00	0
Enclosed Parking with Elevator	1,100.00	Space	4.00	440,000.00	0
Parking Lot	614.00	Space	5.53	245,600.00	0
Parking Lot	490.00	Space	4.41	196,000.00	0
Parking Lot	360.00	Space	3.24	144,000.00	0
Parking Lot	260.00	Space	2.34	104,000.00	0
Unenclosed Parking Structure	54.00	1000sqft	1.24	54,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			Operational Year	2034
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total at-grade = 12.2 miles x 50 foot width = approximately 74 acres.

Firestone = 614 spaces; I-105/Green Line = 360 spaces; Paramount/Rosecrans = 490 spaces; Bellflower = 260; Pioneer = 1,100 spaces.

6 at-grade stations @ ~9,000 sq ft each = 54,000 sq ft

Construction Phase - LACMTA Construction Methods Report (June 2021)

Assume at-grade construction is approximately 2/3 of total guideway construction duration (~680 days).

Off-road Equipment - Metro Construction Methods Report (June 2021)

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Energy Use -

[illegible]

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

[illegible]

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	60.00	240.00
tblConstructionPhase	NumDays	1,550.00	440.00
tblConstructionPhase	NumDays	60.00	120.00
tblConstructionPhase	NumDays	1,550.00	125.00
tblConstructionPhase	NumDays	1,550.00	180.00
tblConstructionPhase	NumDays	155.00	90.00
tblLandUse	LotAcreage	0.00	74.00
tblLandUse	LotAcreage	9.90	4.00
tblOffRoadEquipment	HorsePower	46.00	51.00
tblOffRoadEquipment	HorsePower	46.00	51.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	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	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	7.00	6.00

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	VendorTripNumber	194.00	80.00
tblTripsAndVMT	VendorTripNumber	194.00	80.00
tblTripsAndVMT	VendorTripNumber	194.00	80.00
tblTripsAndVMT	WorkerTripNumber	30.00	100.00
tblTripsAndVMT	WorkerTripNumber	497.00	500.00
tblTripsAndVMT	WorkerTripNumber	30.00	100.00
tblTripsAndVMT	WorkerTripNumber	497.00	500.00
tblTripsAndVMT	WorkerTripNumber	497.00	500.00
tblTripsAndVMT	WorkerTripNumber	30.00	300.00

2.0 Emissions Summary

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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					
2028	0.4561	4.0799	3.7784	0.0108	1.8912	0.1623	2.0535	0.8729	0.1496	1.0224	0.0000	956.1659	956.1659	0.2622	4.7800e-003	964.1430
2029	0.8065	5.9604	9.7501	0.0253	1.8579	0.2181	2.0761	0.6346	0.2050	0.8396	0.0000	2,275.3254	2,275.3254	0.3497	0.0528	2,299.8158
2030	0.7289	3.3809	8.7189	0.0240	1.1621	0.0812	1.2433	0.3106	0.0808	0.3914	0.0000	2,137.5559	2,137.5559	0.0616	0.0466	2,152.9782
Maximum	0.8065	5.9604	9.7501	0.0253	1.8912	0.2181	2.0761	0.8729	0.2050	1.0224	0.0000	2,275.3254	2,275.3254	0.3497	0.0528	2,299.8158

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					
2028	0.1545	0.5705	5.2982	0.0108	0.8543	3.2900e-003	0.8576	0.3715	3.2200e-003	0.3747	0.0000	956.1649	956.1649	0.2622	4.7800e-003	964.1420
2029	0.4201	1.8760	11.5206	0.0253	1.4691	0.0112	1.4803	0.4466	0.0107	0.4573	0.0000	2,275.3239	2,275.3239	0.3497	0.0528	2,299.8143
2030	0.3637	1.5221	9.9413	0.0240	1.1621	9.7500e-003	1.1718	0.3106	9.2900e-003	0.3199	0.0000	2,137.5545	2,137.5545	0.0616	0.0466	2,152.9768
Maximum	0.4201	1.8760	11.5206	0.0253	1.4691	0.0112	1.4803	0.4466	0.0107	0.4573	0.0000	2,275.3239	2,275.3239	0.3497	0.0528	2,299.8143

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	52.89	70.43	-20.28	0.00	29.03	94.74	34.68	37.92	94.67	48.88	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	1-3-2028	4-2-2028	1.1610	0.1679
2	4-3-2028	7-2-2028	1.1599	0.1668
3	7-3-2028	10-2-2028	1.1726	0.1686
4	10-3-2028	1-2-2029	1.0358	0.2264
5	1-3-2029	4-2-2029	1.7221	0.4835
6	4-3-2029	7-2-2029	1.7541	0.4985
7	7-3-2029	10-2-2029	1.6981	0.6687
8	10-3-2029	1-2-2030	1.5289	0.6185
9	1-3-2030	4-2-2030	1.2472	0.6032
10	4-3-2030	7-2-2030	1.2723	0.6035
11	7-3-2030	9-30-2030	1.0830	0.4687
		Highest	1.7541	0.6687

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	0.0963	3.3000e-004	0.0366	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.0715	0.0715	1.8000e-004	0.0000	0.0761
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	484.0576	484.0576	0.0409	4.9500e-003	486.5547
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	0.0963	3.3000e-004	0.0366	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	1.3000e-004	1.3000e-004	0.0000	484.1290	484.1290	0.0410	4.9500e-003	486.6308

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	0.0963	3.3000e-004	0.0366	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.0715	0.0715	1.8000e-004	0.0000	0.0761
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	484.0576	484.0576	0.0409	4.9500e-003	486.5547
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	0.0963	3.3000e-004	0.0366	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	1.3000e-004	1.3000e-004	0.0000	484.1290	484.1290	0.0410	4.9500e-003	486.6308

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	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	At-Grade Guideway Prep	Site Preparation	1/3/2028	12/1/2028	5	240	Track bed preparation
2	At-Grade Guideway Construction	Building Construction	12/4/2028	8/9/2030	5	440	
3	At-Grade Station Prep	Site Preparation	1/8/2029	6/22/2029	5	120	Foundations & columns

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	At-Grade Station Construction	Building Construction	6/25/2029	12/14/2029	5	125	Walls, platforms, canopies, accessory features.
5	Parking Structure Construction	Building Construction	1/7/2030	9/13/2030	5	180	
6	Surface Parking Lots Construction	Grading	8/12/2030	12/13/2030	5	90	

Acres of Grading (Site Preparation Phase): 480**Acres of Grading (Grading Phase): 0****Acres of Paving: 20.76****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
At-Grade Guideway Prep	Bore/Drill Rigs	2	6.00	221	0.50
At-Grade Guideway Prep	Excavators	2	8.00	158	0.38
At-Grade Guideway Prep	Graders	2	8.00	187	0.41
At-Grade Guideway Prep	Rollers	2	8.00	80	0.38
At-Grade Guideway Prep	Rubber Tired Dozers	2	8.00	247	0.40
At-Grade Guideway Prep	Rubber Tired Loaders	2	8.00	203	0.36
At-Grade Guideway Construction	Bore/Drill Rigs	2	6.00	221	0.50
At-Grade Guideway Construction	Generator Sets	2	8.00	84	0.74
At-Grade Guideway Construction	Other Material Handling Equipment	2	8.00	168	0.40
At-Grade Guideway Construction	Rough Terrain Forklifts	2	8.00	100	0.40
At-Grade Guideway Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
At-Grade Guideway Construction	Welders	2	8.00	51	0.45
At-Grade Station Prep	Bore/Drill Rigs	2	6.00	221	0.50
At-Grade Station Prep	Excavators	2	8.00	158	0.38
At-Grade Station Prep	Graders	2	6.00	187	0.41
At-Grade Station Prep	Rollers	2	8.00	80	0.38
At-Grade Station Prep	Rubber Tired Dozers	2	6.00	247	0.40

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

At-Grade Station Prep	Rubber Tired Loaders	2	8.00	203	0.36
At-Grade Station Construction	Cranes	2	6.00	231	0.29
At-Grade Station Construction	Generator Sets	2	8.00	84	0.74
At-Grade Station Construction	Other Material Handling Equipment	2	8.00	168	0.40
At-Grade Station Construction	Rough Terrain Forklifts	2	8.00	100	0.40
At-Grade Station Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
At-Grade Station Construction	Welders	2	8.00	51	0.45
Parking Structure Construction	Air Compressors	2	8.00	78	0.48
Parking Structure Construction	Bore/Drill Rigs	1	6.00	221	0.50
Parking Structure Construction	Cranes	1	6.00	231	0.29
Parking Structure Construction	Paving Equipment	2	8.00	132	0.36
Parking Structure Construction	Pumps	2	8.00	84	0.74
Parking Structure Construction	Rough Terrain Forklifts	2	8.00	100	0.40
Parking Structure Construction	Rubber Tired Loaders	2	8.00	203	0.36
Surface Parking Lots Construction	Air Compressors	2	8.00	78	0.48
Surface Parking Lots Construction	Paving Equipment	2	8.00	132	0.36
Surface Parking Lots Construction	Pumps	2	8.00	84	0.74
Surface Parking Lots Construction	Rubber Tired Loaders	2	8.00	203	0.36
Surface Parking Lots Construction	Skid Steer Loaders	2	8.00	65	0.37
Surface Parking Lots Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

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
At-Grade Guideway Prep	12	100.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
At-Grade Guideway Construction	12	500.00	80.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
At-Grade Station Prep	12	100.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
At-Grade Station Construction	12	500.00	80.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Parking Structure Construction	12	500.00	80.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Surface Parking Lots Construction	12	300.00	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 At-Grade Guideway Prep - 2028**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					1.6998	0.0000	1.6998	0.8219	0.0000	0.8219	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3957	3.8425	3.0472	8.7100e-003		0.1541	0.1541		0.1418	0.1418	0.0000	765.3357	765.3357	0.2475	0.0000	771.5238
Total	0.3957	3.8425	3.0472	8.7100e-003	1.6998	0.1541	1.8540	0.8219	0.1418	0.9637	0.0000	765.3357	765.3357	0.2475	0.0000	771.5238

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 At-Grade Guideway Prep - 2028****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	0.0279	0.0185	0.2979	9.8000e-004	0.1315	6.1000e-004	0.1321	0.0349	5.6000e-004	0.0355	0.0000	90.2840	90.2840	1.7400e-003	2.0200e-003	90.9287
Total	0.0279	0.0185	0.2979	9.8000e-004	0.1315	6.1000e-004	0.1321	0.0349	5.6000e-004	0.0355	0.0000	90.2840	90.2840	1.7400e-003	2.0200e-003	90.9287

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					0.6629	0.0000	0.6629	0.3206	0.0000	0.3206	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1071	0.4643	4.5028	8.7100e-003		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003	0.0000	765.3348	765.3348	0.2475	0.0000	771.5229
Total	0.1071	0.4643	4.5028	8.7100e-003	0.6629	2.1400e-003	0.6651	0.3206	2.1400e-003	0.3227	0.0000	765.3348	765.3348	0.2475	0.0000	771.5229

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 At-Grade Guideway Prep - 2028****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	0.0279	0.0185	0.2979	9.8000e-004	0.1315	6.1000e-004	0.1321	0.0349	5.6000e-004	0.0355	0.0000	90.2840	90.2840	1.7400e-003	2.0200e-003	90.9287
Total	0.0279	0.0185	0.2979	9.8000e-004	0.1315	6.1000e-004	0.1321	0.0349	5.6000e-004	0.0355	0.0000	90.2840	90.2840	1.7400e-003	2.0200e-003	90.9287

3.3 At-Grade Guideway Construction - 2028**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	0.0201	0.1799	0.2979	5.7000e-004		7.1700e-003	7.1700e-003		6.8200e-003	6.8200e-003	0.0000	49.6494	49.6494	0.0117	0.0000	49.9412
Total	0.0201	0.1799	0.2979	5.7000e-004		7.1700e-003	7.1700e-003		6.8200e-003	6.8200e-003	0.0000	49.6494	49.6494	0.0117	0.0000	49.9412

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 At-Grade Guideway Construction - 2028****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	7.9000e-004	0.0315	0.0112	1.4000e-004	5.0400e-003	1.5000e-004	5.2000e-003	1.4600e-003	1.5000e-004	1.6000e-003	0.0000	13.2785	13.2785	5.0000e-004	1.9200e-003	13.8622
Worker	0.0116	7.6900e-003	0.1241	4.1000e-004	0.0548	2.5000e-004	0.0550	0.0146	2.3000e-004	0.0148	0.0000	37.6184	37.6184	7.2000e-004	8.4000e-004	37.8870
Total	0.0124	0.0392	0.1353	5.5000e-004	0.0598	4.0000e-004	0.0602	0.0160	3.8000e-004	0.0164	0.0000	50.8968	50.8968	1.2200e-003	2.7600e-003	51.7492

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	7.0700e-003	0.0486	0.3621	5.7000e-004		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	49.6493	49.6493	0.0117	0.0000	49.9412
Total	7.0700e-003	0.0486	0.3621	5.7000e-004		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	49.6493	49.6493	0.0117	0.0000	49.9412

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 At-Grade Guideway Construction - 2028****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	7.9000e-004	0.0315	0.0112	1.4000e-004	5.0400e-003	1.5000e-004	5.2000e-003	1.4600e-003	1.5000e-004	1.6000e-003	0.0000	13.2785	13.2785	5.0000e-004	1.9200e-003	13.8622
Worker	0.0116	7.6900e-003	0.1241	4.1000e-004	0.0548	2.5000e-004	0.0550	0.0146	2.3000e-004	0.0148	0.0000	37.6184	37.6184	7.2000e-004	8.4000e-004	37.8870
Total	0.0124	0.0392	0.1353	5.5000e-004	0.0598	4.0000e-004	0.0602	0.0160	3.8000e-004	0.0164	0.0000	50.8968	50.8968	1.2200e-003	2.7600e-003	51.7492

3.3 At-Grade Guideway Construction - 2029**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	0.2622	2.3470	3.8879	7.4300e-003		0.0936	0.0936		0.0889	0.0889	0.0000	647.9240	647.9240	0.1524	0.0000	651.7330
Total	0.2622	2.3470	3.8879	7.4300e-003		0.0936	0.0936		0.0889	0.0889	0.0000	647.9240	647.9240	0.1524	0.0000	651.7330

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 At-Grade Guideway Construction - 2029****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	0.0102	0.4078	0.1453	1.7300e-003	0.0658	2.0000e-003	0.0678	0.0190	1.9100e-003	0.0209	0.0000	170.0399	170.0399	6.5600e-003	0.0246	177.5215
Worker	0.1432	0.0927	1.5454	5.2300e-003	0.7150	3.0900e-003	0.7181	0.1899	2.8400e-003	0.1928	0.0000	479.5795	479.5795	8.7100e-003	0.0105	482.9330
Total	0.1533	0.5005	1.6906	6.9600e-003	0.7808	5.0900e-003	0.7859	0.2089	4.7500e-003	0.2137	0.0000	649.6195	649.6195	0.0153	0.0351	660.4544

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	0.0923	0.6343	4.7260	7.4300e-003		1.7200e-003	1.7200e-003		1.7200e-003	1.7200e-003	0.0000	647.9232	647.9232	0.1524	0.0000	651.7323
Total	0.0923	0.6343	4.7260	7.4300e-003		1.7200e-003	1.7200e-003		1.7200e-003	1.7200e-003	0.0000	647.9232	647.9232	0.1524	0.0000	651.7323

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 At-Grade Guideway Construction - 2029****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	0.0102	0.4078	0.1453	1.7300e-003	0.0658	2.0000e-003	0.0678	0.0190	1.9100e-003	0.0209	0.0000	170.0399	170.0399	6.5600e-003	0.0246	177.5215
Worker	0.1432	0.0927	1.5454	5.2300e-003	0.7150	3.0900e-003	0.7181	0.1899	2.8400e-003	0.1928	0.0000	479.5795	479.5795	8.7100e-003	0.0105	482.9330
Total	0.1533	0.5005	1.6906	6.9600e-003	0.7808	5.0900e-003	0.7859	0.2089	4.7500e-003	0.2137	0.0000	649.6195	649.6195	0.0153	0.0351	660.4544

3.3 At-Grade Guideway Construction - 2030**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	0.1761	0.9318	2.4664	5.2300e-003		0.0229	0.0229		0.0229	0.0229	0.0000	449.7375	449.7375	0.0141	0.0000	450.0890
Total	0.1761	0.9318	2.4664	5.2300e-003		0.0229	0.0229		0.0229	0.0229	0.0000	449.7375	449.7375	0.0141	0.0000	450.0890

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 At-Grade Guideway Construction - 2030****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	6.1100e-003	0.2468	0.0881	1.0400e-003	0.0401	1.2100e-003	0.0413	0.0116	1.1600e-003	0.0127	0.0000	101.7021	101.7021	4.0200e-003	0.0147	106.1803
Worker	0.0822	0.0524	0.9022	3.1200e-003	0.4356	1.7600e-003	0.4373	0.1157	1.6200e-003	0.1173	0.0000	286.0069	286.0069	4.9100e-003	6.1800e-003	287.9699
Total	0.0884	0.2992	0.9903	4.1600e-003	0.4757	2.9700e-003	0.4786	0.1273	2.7800e-003	0.1300	0.0000	387.7090	387.7090	8.9300e-003	0.0209	394.1502

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	0.0562	0.3864	2.8791	5.2300e-003		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	449.7370	449.7370	0.0141	0.0000	450.0884
Total	0.0562	0.3864	2.8791	5.2300e-003		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	449.7370	449.7370	0.0141	0.0000	450.0884

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 At-Grade Guideway Construction - 2030

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	6.1100e-003	0.2468	0.0881	1.0400e-003	0.0401	1.2100e-003	0.0413	0.0116	1.1600e-003	0.0127	0.0000	101.7021	101.7021	4.0200e-003	0.0147	106.1803
Worker	0.0822	0.0524	0.9022	3.1200e-003	0.4356	1.7600e-003	0.4373	0.1157	1.6200e-003	0.1173	0.0000	286.0069	286.0069	4.9100e-003	6.1800e-003	287.9699
Total	0.0884	0.2992	0.9903	4.1600e-003	0.4757	2.9700e-003	0.4786	0.1273	2.7800e-003	0.1300	0.0000	387.7090	387.7090	8.9300e-003	0.0209	394.1502

3.4 At-Grade Station Prep - 2029

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					0.6374	0.0000	0.6374	0.3082	0.0000	0.3082	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1691	1.6186	1.3859	3.9000e-003		0.0650	0.0650		0.0598	0.0598	0.0000	342.7372	342.7372	0.1109	0.0000	345.5084
Total	0.1691	1.6186	1.3859	3.9000e-003	0.6374	0.0650	0.7025	0.3082	0.0598	0.3681	0.0000	342.7372	342.7372	0.1109	0.0000	345.5084

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 At-Grade Station Prep - 2029****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	0.0132	8.5200e-003	0.1421	4.8000e-004	0.0658	2.8000e-004	0.0660	0.0175	2.6000e-004	0.0177	0.0000	44.0993	44.0993	8.0000e-004	9.7000e-004	44.4076
Total	0.0132	8.5200e-003	0.1421	4.8000e-004	0.0658	2.8000e-004	0.0660	0.0175	2.6000e-004	0.0177	0.0000	44.0993	44.0993	8.0000e-004	9.7000e-004	44.4076

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					0.2486	0.0000	0.2486	0.1202	0.0000	0.1202	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0480	0.2080	2.0471	3.9000e-003		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	342.7368	342.7368	0.1109	0.0000	345.5080
Total	0.0480	0.2080	2.0471	3.9000e-003	0.2486	9.6000e-004	0.2496	0.1202	9.6000e-004	0.1212	0.0000	342.7368	342.7368	0.1109	0.0000	345.5080

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 At-Grade Station Prep - 2029****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	0.0132	8.5200e-003	0.1421	4.8000e-004	0.0658	2.8000e-004	0.0660	0.0175	2.6000e-004	0.0177	0.0000	44.0993	44.0993	8.0000e-004	9.7000e-004	44.4076
Total	0.0132	8.5200e-003	0.1421	4.8000e-004	0.0658	2.8000e-004	0.0660	0.0175	2.6000e-004	0.0177	0.0000	44.0993	44.0993	8.0000e-004	9.7000e-004	44.4076

3.5 At-Grade Station Construction - 2029**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	0.1353	1.2462	1.8339	3.2100e-003		0.0517	0.0517		0.0489	0.0489	0.0000	279.8250	279.8250	0.0631	0.0000	281.4028
Total	0.1353	1.2462	1.8339	3.2100e-003		0.0517	0.0517		0.0489	0.0489	0.0000	279.8250	279.8250	0.0631	0.0000	281.4028

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 At-Grade Station Construction - 2029****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	4.8800e-003	0.1953	0.0696	8.3000e-004	0.0315	9.6000e-004	0.0325	9.1000e-003	9.2000e-004	0.0100	0.0000	81.4368	81.4368	3.1400e-003	0.0118	85.0199
Worker	0.0686	0.0444	0.7401	2.5000e-003	0.3424	1.4800e-003	0.3439	0.0910	1.3600e-003	0.0923	0.0000	229.6837	229.6837	4.1700e-003	5.0400e-003	231.2897
Total	0.0734	0.2397	0.8097	3.3300e-003	0.3740	2.4400e-003	0.3764	0.1001	2.2800e-003	0.1023	0.0000	311.1204	311.1204	7.3100e-003	0.0168	316.3096

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	0.0399	0.2851	2.1051	3.2100e-003		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	279.8247	279.8247	0.0631	0.0000	281.4024
Total	0.0399	0.2851	2.1051	3.2100e-003		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	279.8247	279.8247	0.0631	0.0000	281.4024

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 At-Grade Station Construction - 2029****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	4.8800e-003	0.1953	0.0696	8.3000e-004	0.0315	9.6000e-004	0.0325	9.1000e-003	9.2000e-004	0.0100	0.0000	81.4368	81.4368	3.1400e-003	0.0118	85.0199
Worker	0.0686	0.0444	0.7401	2.5000e-003	0.3424	1.4800e-003	0.3439	0.0910	1.3600e-003	0.0923	0.0000	229.6837	229.6837	4.1700e-003	5.0400e-003	231.2897
Total	0.0734	0.2397	0.8097	3.3300e-003	0.3740	2.4400e-003	0.3764	0.1001	2.2800e-003	0.1023	0.0000	311.1204	311.1204	7.3100e-003	0.0168	316.3096

3.6 Parking Structure Construction - 2030**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	0.2319	1.1990	2.5593	6.2200e-003		0.0352	0.0352		0.0352	0.0352	0.0000	534.8064	534.8064	0.0185	0.0000	535.2692
Total	0.2319	1.1990	2.5593	6.2200e-003		0.0352	0.0352		0.0352	0.0352	0.0000	534.8064	534.8064	0.0185	0.0000	535.2692

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Parking Structure Construction - 2030****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	6.9200e-003	0.2794	0.0997	1.1700e-003	0.0454	1.3700e-003	0.0468	0.0131	1.3100e-003	0.0144	0.0000	115.1345	115.1345	4.5500e-003	0.0166	120.2041
Worker	0.0931	0.0593	1.0214	3.5300e-003	0.4931	1.9900e-003	0.4951	0.1310	1.8300e-003	0.1328	0.0000	323.7814	323.7814	5.5600e-003	6.9900e-003	326.0036
Total	0.1000	0.3387	1.1211	4.7000e-003	0.5385	3.3600e-003	0.5419	0.1441	3.1400e-003	0.1472	0.0000	438.9159	438.9159	0.0101	0.0236	446.2078

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	0.0622	0.2697	3.1732	6.2200e-003		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003	0.0000	534.8058	534.8058	0.0185	0.0000	535.2685
Total	0.0622	0.2697	3.1732	6.2200e-003		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003	0.0000	534.8058	534.8058	0.0185	0.0000	535.2685

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Parking Structure Construction - 2030

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	6.9200e-003	0.2794	0.0997	1.1700e-003	0.0454	1.3700e-003	0.0468	0.0131	1.3100e-003	0.0144	0.0000	115.1345	115.1345	4.5500e-003	0.0166	120.2041
Worker	0.0931	0.0593	1.0214	3.5300e-003	0.4931	1.9900e-003	0.4951	0.1310	1.8300e-003	0.1328	0.0000	323.7814	323.7814	5.5600e-003	6.9900e-003	326.0036
Total	0.1000	0.3387	1.1211	4.7000e-003	0.5385	3.3600e-003	0.5419	0.1441	3.1400e-003	0.1472	0.0000	438.9159	438.9159	0.0101	0.0236	446.2078

3.7 Surface Parking Lots Construction - 2030

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1046	0.5944	1.2755	2.6700e-003		0.0162	0.0162		0.0162	0.0162	0.0000	229.2527	229.2527	8.3300e-003	0.0000	229.4611
Total	0.1046	0.5944	1.2755	2.6700e-003	0.0000	0.0162	0.0162	0.0000	0.0162	0.0162	0.0000	229.2527	229.2527	8.3300e-003	0.0000	229.4611

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.7 Surface Parking Lots Construction - 2030****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	0.0279	0.0178	0.3064	1.0600e-003	0.1479	6.0000e-004	0.1485	0.0393	5.5000e-004	0.0398	0.0000	97.1344	97.1344	1.6700e-003	2.1000e-003	97.8011
Total	0.0279	0.0178	0.3064	1.0600e-003	0.1479	6.0000e-004	0.1485	0.0393	5.5000e-004	0.0398	0.0000	97.1344	97.1344	1.6700e-003	2.1000e-003	97.8011

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0290	0.2103	1.4713	2.6700e-003		5.3000e-004	5.3000e-004		5.3000e-004	5.3000e-004	0.0000	229.2525	229.2525	8.3300e-003	0.0000	229.4608
Total	0.0290	0.2103	1.4713	2.6700e-003	0.0000	5.3000e-004	5.3000e-004	0.0000	5.3000e-004	5.3000e-004	0.0000	229.2525	229.2525	8.3300e-003	0.0000	229.4608

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.7 Surface Parking Lots Construction - 2030****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	0.0279	0.0178	0.3064	1.0600e-003	0.1479	6.0000e-004	0.1485	0.0393	5.5000e-004	0.0398	0.0000	97.1344	97.1344	1.6700e-003	2.1000e-003	97.8011
Total	0.0279	0.0178	0.3064	1.0600e-003	0.1479	6.0000e-004	0.1485	0.0393	5.5000e-004	0.0398	0.0000	97.1344	97.1344	1.6700e-003	2.1000e-003	97.8011

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unenclosed Parking Structure	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
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
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

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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
Unenclosed Parking Structure	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
Unenclosed Parking Structure	0.523127	0.069299	0.195397	0.127437	0.025049	0.007382	0.011793	0.007546	0.000932	0.000553	0.027399	0.000749	0.003336
Enclosed Parking with Elevator	0.523127	0.069299	0.195397	0.127437	0.025049	0.007382	0.011793	0.007546	0.000932	0.000553	0.027399	0.000749	0.003336
Parking Lot	0.523127	0.069299	0.195397	0.127437	0.025049	0.007382	0.011793	0.007546	0.000932	0.000553	0.027399	0.000749	0.003336
User Defined Industrial	0.523127	0.069299	0.195397	0.127437	0.025049	0.007382	0.011793	0.007546	0.000932	0.000553	0.027399	0.000749	0.003336

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

[illegible]

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated

[illegible]

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated

[illegible]

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	2.3936e+006	424.4943	0.0358	4.3400e-003	426.6842
Parking Lot	36400	6.4554	5.4000e-004	7.0000e-005	6.4887
Parking Lot	50400	8.9382	7.5000e-004	9.0000e-005	8.9843
Parking Lot	68600	12.1659	1.0300e-003	1.2000e-004	12.2287
Parking Lot	85960	15.2446	1.2900e-003	1.6000e-004	15.3233
Unenclosed Parking Structure	94500	16.7592	1.4100e-003	1.7000e-004	16.8456
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		484.0576	0.0409	4.9500e-003	486.5548

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	2.3936e +006	424.4943	0.0358	4.3400e- 003	426.6842
Parking Lot	36400	6.4554	5.4000e- 004	7.0000e- 005	6.4887
Parking Lot	50400	8.9382	7.5000e- 004	9.0000e- 005	8.9843
Parking Lot	68600	12.1659	1.0300e- 003	1.2000e- 004	12.2287
Parking Lot	85960	15.2446	1.2900e- 003	1.6000e- 004	15.3233
Unenclosed Parking Structure	94500	16.7592	1.4100e- 003	1.7000e- 004	16.8456
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		484.0576	0.0409	4.9500e- 003	486.5548

6.0 Area Detail**6.1 Mitigation Measures Area**

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0963	3.3000e-004	0.0366	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.0715	0.0715	1.8000e-004	0.0000	0.0761
Unmitigated	0.0963	3.3000e-004	0.0366	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.0715	0.0715	1.8000e-004	0.0000	0.0761

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	0.0165					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0765					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.3400e-003	3.3000e-004	0.0366	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.0715	0.0715	1.8000e-004	0.0000	0.0761
Total	0.0963	3.3000e-004	0.0366	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.0715	0.0715	1.8000e-004	0.0000	0.0761

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	0.0165					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0765					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.3400e-003	3.3000e-004	0.0366	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.0715	0.0715	1.8000e-004	0.0000	0.0761
Total	0.0963	3.3000e-004	0.0366	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.0715	0.0715	1.8000e-004	0.0000	0.0761

7.0 Water Detail**7.1 Mitigation Measures Water**

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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
Unenclosed Parking Structure	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

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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
Unenclosed Parking Structure	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

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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
Unenclosed Parking Structure	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

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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
Unenclosed Parking Structure	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

LACMTA West Santa Ana Branch Construction - At-Grade LRT & Parking - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number

11.0 Vegetation

CalEEMod (Version 2020.4.0) Annual Output File
Aerial Alignment & Stations

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	15.80	0.00	0
Unenclosed Parking with Elevator	27.00	1000sqft	0.62	27,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	11			Operational Year	2034
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 2.6 miles aerial x 50 foot width = 15.8 acres
3 aerial stations x ~9,000 sq ft per station = 27,000 sq ft

Construction Phase - Metro Construction Schedule (May 2023)

Off-road Equipment - Metro Construction Methods Report (June 2021)

Off-road Equipment - Metro Construction Methods Report (June 2021)

Off-road Equipment - Metro Construction Methods Report (June 2021)

Off-road Equipment - Metro Construction Methods Report (June 2021)

Grading -

Trips and VMT - Metro Construction Methods Report (June 2021)

Vehicle Emission Factors -

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction Off-road Equipment Mitigation - Metro Green Construction Policy (Updated 2018)

Table Name	Column Name	Default Value	New Value
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	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	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

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	300.00	240.00
tblConstructionPhase	NumDays	300.00	425.00
tblConstructionPhase	NumDays	10.00	100.00
tblConstructionPhase	NumDays	10.00	125.00
tblLandUse	LotAcreage	0.00	15.80
tblOffRoadEquipment	HorsePower	46.00	51.00
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	PhaseName		Guideway - Horizontal Support

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	PhaseName		Guideway - Horizontal Support
tblOffRoadEquipment	PhaseName		Stations - Foundations
tblOffRoadEquipment	PhaseName		Guideway - Foundations
tblOffRoadEquipment	PhaseName		Stations - Foundations
tblOffRoadEquipment	PhaseName		Guideway - Foundations
tblOffRoadEquipment	PhaseName		Stations - Platform Construction
tblOffRoadEquipment	PhaseName		Stations - Platform Construction
tblOffRoadEquipment	PhaseName		Guideway - Foundations
tblOffRoadEquipment	PhaseName		Stations - Foundations
tblOffRoadEquipment	PhaseName		Guideway - Horizontal Support
tblOffRoadEquipment	PhaseName		Guideway - Horizontal Support
tblOffRoadEquipment	PhaseName		Stations - Platform Construction
tblOffRoadEquipment	PhaseName		Guideway - Foundations
tblOffRoadEquipment	PhaseName		Guideway - Foundations
tblOffRoadEquipment	PhaseName		Guideway - Foundations
tblOffRoadEquipment	PhaseName		Guideway - Horizontal Support
tblOffRoadEquipment	PhaseName		Stations - Foundations
tblOffRoadEquipment	PhaseName		Stations - Foundations
tblOffRoadEquipment	PhaseName		Stations - Foundations
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	40.00
tblTripsAndVMT	VendorTripNumber	4.00	40.00
tblTripsAndVMT	VendorTripNumber	0.00	40.00
tblTripsAndVMT	VendorTripNumber	4.00	40.00
tblTripsAndVMT	WorkerTripNumber	13.00	250.00
tblTripsAndVMT	WorkerTripNumber	11.00	250.00
tblTripsAndVMT	WorkerTripNumber	13.00	250.00
tblTripsAndVMT	WorkerTripNumber	11.00	250.00

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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					
2028	0.4167	3.3776	5.1469	0.0122	0.8253	0.1245	0.9498	0.2973	0.1178	0.4151	0.0000	1,090.694 3	1,090.694 3	0.1701	0.0217	1,101.417 9
2029	0.3814	3.0785	4.5966	0.0110	0.8630	0.1122	0.9752	0.3265	0.1059	0.4324	0.0000	981.6060	981.6060	0.1631	0.0189	991.3103
2030	0.3442	1.9598	4.1031	0.0101	0.3904	0.0380	0.4284	0.1045	0.0378	0.1422	0.0000	880.4201	880.4201	0.0293	0.0171	886.2549
2031	0.0430	0.2473	0.5153	1.2600e-003	0.0494	4.7900e-003	0.0542	0.0132	4.7700e-003	0.0180	0.0000	110.5999	110.5999	3.6700e-003	2.1200e-003	111.3224
Maximum	0.4167	3.3776	5.1469	0.0122	0.8630	0.1245	0.9752	0.3265	0.1178	0.4324	0.0000	1,090.694 3	1,090.694 3	0.1701	0.0217	1,101.417 9

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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					
2028	0.2666	0.8104	5.8002	0.0122	0.6093	0.0382	0.6475	0.1928	0.0379	0.2307	0.0000	1,090.693 5	1,090.693 5	0.1701	0.0217	1,101.417 0
2029	0.2307	0.6887	5.2444	0.0110	0.5930	0.0322	0.6251	0.1959	0.0319	0.2278	0.0000	981.6052	981.6052	0.1631	0.0189	991.3095
2030	0.1932	0.6686	4.3544	0.0101	0.3904	0.0168	0.4072	0.1045	0.0167	0.1211	0.0000	880.4195	880.4195	0.0293	0.0171	886.2542
2031	0.0239	0.0840	0.5471	1.2600e-003	0.0494	2.1100e-003	0.0515	0.0132	2.1000e-003	0.0153	0.0000	110.5998	110.5998	3.6700e-003	2.1200e-003	111.3224
Maximum	0.2666	0.8104	5.8002	0.0122	0.6093	0.0382	0.6475	0.1959	0.0379	0.2307	0.0000	1,090.693 5	1,090.693 5	0.1701	0.0217	1,101.417 0

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	39.72	74.01	-11.03	0.00	22.84	68.04	28.09	31.70	66.77	40.97	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	1-3-2028	4-2-2028	1.0905	0.2794
2	4-3-2028	7-2-2028	1.1855	0.3306
3	7-3-2028	10-2-2028	0.7522	0.2281
4	10-3-2028	1-2-2029	0.7572	0.2331
5	1-3-2029	4-2-2029	1.0349	0.2680
6	4-3-2029	7-2-2029	0.8119	0.1947
7	7-3-2029	10-2-2029	0.7834	0.2185
8	10-3-2029	1-2-2030	0.7838	0.2233

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

9	1-3-2030	4-2-2030	0.5687	0.2134
10	4-3-2030	7-2-2030	0.5702	0.2111
11	7-3-2030	10-2-2030	0.5766	0.2135
12	10-3-2030	1-2-2031	0.5814	0.2183
13	1-3-2031	4-2-2031	0.2708	0.1010
		Highest	1.1855	0.3306

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	2.1500e-003	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.9000e-004	6.9000e-004	0.0000	0.0000	7.4000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.2894	9.2894	7.8000e-004	1.0000e-004	9.3373
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	2.1500e-003	0.0000	3.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	9.2901	9.2901	7.8000e-004	1.0000e-004	9.3380

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	2.1500e-003	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.9000e-004	6.9000e-004	0.0000	0.0000	7.4000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.2894	9.2894	7.8000e-004	1.0000e-004	9.3373
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	2.1500e-003	0.0000	3.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	9.2901	9.2901	7.8000e-004	1.0000e-004	9.3380

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	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	Guideway - Foundations	Site Preparation	1/3/2028	5/19/2028	5	100	Pile-supported reinforced concrete columns.
2	Guideway - Horizontal Support	Building Construction	3/6/2028	2/2/2029	5	240	Aerial girders & bent/pier cap.
3	Stations - Foundations	Site Preparation	1/8/2029	6/29/2029	5	125	

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Stations - Platform Construction	Building Construction	7/2/2029	2/14/2031	5	425

Acres of Grading (Site Preparation Phase): 100**Acres of Grading (Grading Phase): 0****Acres of Paving: 0.62****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
Stations - Foundations	Excavators	2	8.00	158	0.38
Guideway - Horizontal Support	Welders	2	8.00	51	0.45
Stations - Foundations	Rollers	2	8.00	80	0.38
Stations - Platform Construction	Aerial Lifts	2	8.00	63	0.31
Stations - Platform Construction	Pumps	2	8.00	84	0.74
Guideway - Foundations	Excavators	2	8.00	158	0.38
Guideway - Foundations	Cranes	2	7.00	231	0.29
Guideway - Foundations	Rollers	2	8.00	80	0.38
Guideway - Horizontal Support	Aerial Lifts	2	8.00	63	0.31
Guideway - Horizontal Support	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Stations - Foundations	Cranes	2	7.00	231	0.29
Guideway - Horizontal Support	Cranes	2	7.00	231	0.29
Stations - Platform Construction	Rough Terrain Forklifts	2	8.00	100	0.40
Guideway - Horizontal Support	Rough Terrain Forklifts	2	8.00	100	0.40
Stations - Platform Construction	Cranes	2	7.00	231	0.29
Stations - Platform Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Stations - Platform Construction	Welders	2	8.00	46	0.45
Guideway - Foundations	Bore/Drill Rigs	2	7.00	221	0.50
Guideway - Foundations	Pumps	2	8.00	84	0.74

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Guideway - Foundations	Rough Terrain Forklifts	2	8.00	100	0.40
Guideway - Horizontal Support	Pumps	2	8.00	84	0.74
Stations - Foundations	Bore/Drill Rigs	2	7.00	221	0.50
Stations - Foundations	Pumps	2	7.00	84	0.74
Stations - Foundations	Rough Terrain Forklifts	2	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
Stations - Foundations	5	250.00	40.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Guideway - Foundations	5	250.00	40.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Guideway - Horizontal Support	5	250.00	40.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Stations - Platform Construction	5	250.00	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

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Guideway - Foundations - 2028****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					0.3541	0.0000	0.3541	0.1712	0.0000	0.1712	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1144	1.0779	1.4408	3.1200e-003		0.0441	0.0441		0.0414	0.0414	0.0000	272.4021	272.4021	0.0721	0.0000	274.2048
Total	0.1144	1.0779	1.4408	3.1200e-003	0.3541	0.0441	0.3982	0.1712	0.0414	0.2126	0.0000	272.4021	272.4021	0.0721	0.0000	274.2048

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	1.9900e-003	0.0787	0.0280	3.4000e-004	0.0126	3.9000e-004	0.0130	3.6400e-003	3.7000e-004	4.0100e-003	0.0000	33.1962	33.1962	1.2500e-003	4.7900e-003	34.6556
Worker	0.0291	0.0192	0.3103	1.0300e-003	0.1370	6.3000e-004	0.1376	0.0364	5.8000e-004	0.0370	0.0000	94.0459	94.0459	1.8100e-003	2.1000e-003	94.7174
Total	0.0311	0.0979	0.3383	1.3700e-003	0.1496	1.0200e-003	0.1506	0.0400	9.5000e-004	0.0410	0.0000	127.2421	127.2421	3.0600e-003	6.8900e-003	129.3730

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Guideway - Foundations - 2028****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					0.1381	0.0000	0.1381	0.0668	0.0000	0.0668	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0589	0.1310	1.8254	3.1200e-003		0.0107	0.0107		0.0107	0.0107	0.0000	272.4017	272.4017	0.0721	0.0000	274.2044
Total	0.0589	0.1310	1.8254	3.1200e-003	0.1381	0.0107	0.1488	0.0668	0.0107	0.0775	0.0000	272.4017	272.4017	0.0721	0.0000	274.2044

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	1.9900e-003	0.0787	0.0280	3.4000e-004	0.0126	3.9000e-004	0.0130	3.6400e-003	3.7000e-004	4.0100e-003	0.0000	33.1962	33.1962	1.2500e-003	4.7900e-003	34.6556
Worker	0.0291	0.0192	0.3103	1.0300e-003	0.1370	6.3000e-004	0.1376	0.0364	5.8000e-004	0.0370	0.0000	94.0459	94.0459	1.8100e-003	2.1000e-003	94.7174
Total	0.0311	0.0979	0.3383	1.3700e-003	0.1496	1.0200e-003	0.1506	0.0400	9.5000e-004	0.0410	0.0000	127.2421	127.2421	3.0600e-003	6.8900e-003	129.3730

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Guideway - Horizontal Support - 2028****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	1.9913	2.6404	4.8000e-003		0.0772	0.0772		0.0735	0.0735	0.0000	417.4797	417.4797	0.0883	0.0000	419.6881
Total	0.2044	1.9913	2.6404	4.8000e-003		0.0772	0.0772		0.0735	0.0735	0.0000	417.4797	417.4797	0.0883	0.0000	419.6881

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	4.2700e-003	0.1691	0.0602	7.3000e-004	0.0271	8.3000e-004	0.0279	7.8200e-003	7.9000e-004	8.6200e-003	0.0000	71.3719	71.3719	2.6800e-003	0.0103	74.5095
Worker	0.0625	0.0413	0.6672	2.2100e-003	0.2945	1.3600e-003	0.2959	0.0782	1.2600e-003	0.0795	0.0000	202.1986	202.1986	3.8900e-003	4.5200e-003	203.6425
Total	0.0668	0.2105	0.7274	2.9400e-003	0.3216	2.1900e-003	0.3238	0.0860	2.0500e-003	0.0881	0.0000	273.5705	273.5705	6.5700e-003	0.0148	278.1520

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Guideway - Horizontal Support - 2028****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	0.1099	0.3711	2.9091	4.8000e-003		0.0243	0.0243		0.0242	0.0242	0.0000	417.4792	417.4792	0.0883	0.0000	419.6876
Total	0.1099	0.3711	2.9091	4.8000e-003		0.0243	0.0243		0.0242	0.0242	0.0000	417.4792	417.4792	0.0883	0.0000	419.6876

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	4.2700e-003	0.1691	0.0602	7.3000e-004	0.0271	8.3000e-004	0.0279	7.8200e-003	7.9000e-004	8.6200e-003	0.0000	71.3719	71.3719	2.6800e-003	0.0103	74.5095
Worker	0.0625	0.0413	0.6672	2.2100e-003	0.2945	1.3600e-003	0.2959	0.0782	1.2600e-003	0.0795	0.0000	202.1986	202.1986	3.8900e-003	4.5200e-003	203.6425
Total	0.0668	0.2105	0.7274	2.9400e-003	0.3216	2.1900e-003	0.3238	0.0860	2.0500e-003	0.0881	0.0000	273.5705	273.5705	6.5700e-003	0.0148	278.1520

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Guideway - Horizontal Support - 2029****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	0.0238	0.2316	0.3070	5.6000e-004		8.9800e-003	8.9800e-003		8.5400e-003	8.5400e-003	0.0000	48.5441	48.5441	0.0103	0.0000	48.8009
Total	0.0238	0.2316	0.3070	5.6000e-004		8.9800e-003	8.9800e-003		8.5400e-003	8.5400e-003	0.0000	48.5441	48.5441	0.0103	0.0000	48.8009

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	4.9000e-004	0.0195	6.9600e-003	8.0000e-005	3.1500e-003	1.0000e-004	3.2500e-003	9.1000e-004	9.0000e-005	1.0000e-003	0.0000	8.1437	8.1437	3.1000e-004	1.1800e-003	8.5020
Worker	6.8600e-003	4.4400e-003	0.0740	2.5000e-004	0.0342	1.5000e-004	0.0344	9.1000e-003	1.4000e-004	9.2300e-003	0.0000	22.9684	22.9684	4.2000e-004	5.0000e-004	23.1290
Total	7.3500e-003	0.0240	0.0810	3.3000e-004	0.0374	2.5000e-004	0.0376	0.0100	2.3000e-004	0.0102	0.0000	31.1121	31.1121	7.3000e-004	1.6800e-003	31.6310

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Guideway - Horizontal Support - 2029****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	0.0128	0.0432	0.3383	5.6000e-004		2.8300e-003	2.8300e-003		2.8100e-003	2.8100e-003	0.0000	48.5441	48.5441	0.0103	0.0000	48.8009
Total	0.0128	0.0432	0.3383	5.6000e-004		2.8300e-003	2.8300e-003		2.8100e-003	2.8100e-003	0.0000	48.5441	48.5441	0.0103	0.0000	48.8009

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	4.9000e-004	0.0195	6.9600e-003	8.0000e-005	3.1500e-003	1.0000e-004	3.2500e-003	9.1000e-004	9.0000e-005	1.0000e-003	0.0000	8.1437	8.1437	3.1000e-004	1.1800e-003	8.5020
Worker	6.8600e-003	4.4400e-003	0.0740	2.5000e-004	0.0342	1.5000e-004	0.0344	9.1000e-003	1.4000e-004	9.2300e-003	0.0000	22.9684	22.9684	4.2000e-004	5.0000e-004	23.1290
Total	7.3500e-003	0.0240	0.0810	3.3000e-004	0.0374	2.5000e-004	0.0376	0.0100	2.3000e-004	0.0102	0.0000	31.1121	31.1121	7.3000e-004	1.6800e-003	31.6310

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Stations - Foundations - 2029****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					0.4427	0.0000	0.4427	0.2141	0.0000	0.2141	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1385	1.3095	1.7430	3.7900e-003		0.0535	0.0535		0.0501	0.0501	0.0000	331.6712	331.6712	0.0898	0.0000	333.9157
Total	0.1385	1.3095	1.7430	3.7900e-003	0.4427	0.0535	0.4962	0.2141	0.0501	0.2642	0.0000	331.6712	331.6712	0.0898	0.0000	333.9157

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	2.4400e-003	0.0976	0.0348	4.2000e-004	0.0158	4.8000e-004	0.0162	4.5500e-003	4.6000e-004	5.0100e-003	0.0000	40.7184	40.7184	1.5700e-003	5.8800e-003	42.5099
Worker	0.0343	0.0222	0.3701	1.2500e-003	0.1712	7.4000e-004	0.1720	0.0455	6.8000e-004	0.0462	0.0000	114.8418	114.8418	2.0900e-003	2.5200e-003	115.6449
Total	0.0367	0.1198	0.4048	1.6700e-003	0.1870	1.2200e-003	0.1882	0.0500	1.1400e-003	0.0512	0.0000	155.5602	155.5602	3.6600e-003	8.4000e-003	158.1548

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Stations - Foundations - 2029****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					0.1726	0.0000	0.1726	0.0835	0.0000	0.0835	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0691	0.1638	2.2236	3.7900e-003		0.0118	0.0118		0.0118	0.0118	0.0000	331.6708	331.6708	0.0898	0.0000	333.9153
Total	0.0691	0.1638	2.2236	3.7900e-003	0.1726	0.0118	0.1844	0.0835	0.0118	0.0953	0.0000	331.6708	331.6708	0.0898	0.0000	333.9153

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	2.4400e-003	0.0976	0.0348	4.2000e-004	0.0158	4.8000e-004	0.0162	4.5500e-003	4.6000e-004	5.0100e-003	0.0000	40.7184	40.7184	1.5700e-003	5.8800e-003	42.5099
Worker	0.0343	0.0222	0.3701	1.2500e-003	0.1712	7.4000e-004	0.1720	0.0455	6.8000e-004	0.0462	0.0000	114.8418	114.8418	2.0900e-003	2.5200e-003	115.6449
Total	0.0367	0.1198	0.4048	1.6700e-003	0.1870	1.2200e-003	0.1882	0.0500	1.1400e-003	0.0512	0.0000	155.5602	155.5602	3.6600e-003	8.4000e-003	158.1548

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Stations - Platform Construction - 2029****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	0.1366	1.2681	1.6365	2.9400e-003		0.0470	0.0470		0.0447	0.0447	0.0000	251.6912	251.6912	0.0548	0.0000	253.0617
Total	0.1366	1.2681	1.6365	2.9400e-003		0.0470	0.0470		0.0447	0.0447	0.0000	251.6912	251.6912	0.0548	0.0000	253.0617

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	2.5600e-003	0.1023	0.0365	4.4000e-004	0.0165	5.0000e-004	0.0170	4.7700e-003	4.8000e-004	5.2500e-003	0.0000	42.6729	42.6729	1.6500e-003	6.1600e-003	44.5504
Worker	0.0359	0.0233	0.3878	1.3100e-003	0.1794	7.8000e-004	0.1802	0.0477	7.1000e-004	0.0484	0.0000	120.3543	120.3543	2.1900e-003	2.6400e-003	121.1958
Total	0.0385	0.1256	0.4243	1.7500e-003	0.1960	1.2800e-003	0.1972	0.0524	1.1900e-003	0.0536	0.0000	163.0271	163.0271	3.8400e-003	8.8000e-003	165.7462

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Stations - Platform Construction - 2029****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	0.0663	0.2123	1.7724	2.9400e-003		0.0148	0.0148		0.0147	0.0147	0.0000	251.6909	251.6909	0.0548	0.0000	253.0614
Total	0.0663	0.2123	1.7724	2.9400e-003		0.0148	0.0148		0.0147	0.0147	0.0000	251.6909	251.6909	0.0548	0.0000	253.0614

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	2.5600e-003	0.1023	0.0365	4.4000e-004	0.0165	5.0000e-004	0.0170	4.7700e-003	4.8000e-004	5.2500e-003	0.0000	42.6729	42.6729	1.6500e-003	6.1600e-003	44.5504
Worker	0.0359	0.0233	0.3878	1.3100e-003	0.1794	7.8000e-004	0.1802	0.0477	7.1000e-004	0.0484	0.0000	120.3543	120.3543	2.1900e-003	2.6400e-003	121.1958
Total	0.0385	0.1256	0.4243	1.7500e-003	0.1960	1.2800e-003	0.1972	0.0524	1.1900e-003	0.0536	0.0000	163.0271	163.0271	3.8400e-003	8.8000e-003	165.7462

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Stations - Platform Construction - 2030****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	0.2717	1.7142	3.2903	6.6400e-003		0.0355	0.0355		0.0355	0.0355	0.0000	562.2061	562.2061	0.0219	0.0000	562.7543
Total	0.2717	1.7142	3.2903	6.6400e-003		0.0355	0.0355		0.0355	0.0355	0.0000	562.2061	562.2061	0.0219	0.0000	562.7543

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	5.0200e-003	0.2026	0.0723	8.5000e-004	0.0329	9.9000e-004	0.0339	9.5000e-003	9.5000e-004	0.0105	0.0000	83.4725	83.4725	3.3000e-003	0.0121	87.1480
Worker	0.0675	0.0430	0.7405	2.5600e-003	0.3575	1.4400e-003	0.3590	0.0950	1.3300e-003	0.0963	0.0000	234.7415	234.7415	4.0300e-003	5.0700e-003	236.3526
Total	0.0725	0.2456	0.8128	3.4100e-003	0.3904	2.4300e-003	0.3928	0.1045	2.2800e-003	0.1067	0.0000	318.2140	318.2140	7.3300e-003	0.0171	323.5006

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Stations - Platform Construction - 2030****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	0.1207	0.4230	3.5416	6.6400e-003		0.0144	0.0144		0.0144	0.0144	0.0000	562.2055	562.2055	0.0219	0.0000	562.7536
Total	0.1207	0.4230	3.5416	6.6400e-003		0.0144	0.0144		0.0144	0.0144	0.0000	562.2055	562.2055	0.0219	0.0000	562.7536

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	5.0200e-003	0.2026	0.0723	8.5000e-004	0.0329	9.9000e-004	0.0339	9.5000e-003	9.5000e-004	0.0105	0.0000	83.4725	83.4725	3.3000e-003	0.0121	87.1480
Worker	0.0675	0.0430	0.7405	2.5600e-003	0.3575	1.4400e-003	0.3590	0.0950	1.3300e-003	0.0963	0.0000	234.7415	234.7415	4.0300e-003	5.0700e-003	236.3526
Total	0.0725	0.2456	0.8128	3.4100e-003	0.3904	2.4300e-003	0.3928	0.1045	2.2800e-003	0.1067	0.0000	318.2140	318.2140	7.3300e-003	0.0171	323.5006

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Stations - Platform Construction - 2031****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	0.0344	0.2167	0.4160	8.4000e-004		4.4900e-003	4.4900e-003		4.4900e-003	4.4900e-003	0.0000	71.0835	71.0835	2.7700e-003	0.0000	71.1528
Total	0.0344	0.2167	0.4160	8.4000e-004		4.4900e-003	4.4900e-003		4.4900e-003	4.4900e-003	0.0000	71.0835	71.0835	2.7700e-003	0.0000	71.1528

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	6.3000e-004	0.0255	9.1300e-003	1.1000e-004	4.1600e-003	1.2000e-004	4.2800e-003	1.2000e-003	1.2000e-004	1.3200e-003	0.0000	10.3674	10.3674	4.2000e-004	1.5000e-003	10.8242
Worker	8.0300e-003	5.0500e-003	0.0901	3.2000e-004	0.0452	1.7000e-004	0.0454	0.0120	1.6000e-004	0.0122	0.0000	29.1490	29.1490	4.7000e-004	6.2000e-004	29.3454
Total	8.6600e-003	0.0305	0.0993	4.3000e-004	0.0494	2.9000e-004	0.0497	0.0132	2.8000e-004	0.0135	0.0000	39.5163	39.5163	8.9000e-004	2.1200e-003	40.1696

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Stations - Platform Construction - 2031****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	0.0153	0.0535	0.4478	8.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003	0.0000	71.0835	71.0835	2.7700e-003	0.0000	71.1528
Total	0.0153	0.0535	0.4478	8.4000e-004		1.8200e-003	1.8200e-003		1.8200e-003	1.8200e-003	0.0000	71.0835	71.0835	2.7700e-003	0.0000	71.1528

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	6.3000e-004	0.0255	9.1300e-003	1.1000e-004	4.1600e-003	1.2000e-004	4.2800e-003	1.2000e-003	1.2000e-004	1.3200e-003	0.0000	10.3674	10.3674	4.2000e-004	1.5000e-003	10.8242
Worker	8.0300e-003	5.0500e-003	0.0901	3.2000e-004	0.0452	1.7000e-004	0.0454	0.0120	1.6000e-004	0.0122	0.0000	29.1490	29.1490	4.7000e-004	6.2000e-004	29.3454
Total	8.6600e-003	0.0305	0.0993	4.3000e-004	0.0494	2.9000e-004	0.0497	0.0132	2.8000e-004	0.0135	0.0000	39.5163	39.5163	8.9000e-004	2.1200e-003	40.1696

4.0 Operational Detail - Mobile

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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		
Unenclosed Parking with Elevator	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
Unenclosed Parking with	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	0.523127	0.069299	0.195397	0.127437	0.025049	0.007382	0.011793	0.007546	0.000932	0.000553	0.027399	0.000749	0.003336

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

5.1 Mitigation Measures Energy

[illegible]

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated

[illegible]

Mitigated

[illegible]

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unenclosed Parking with Elevator	52380	9.2894	7.8000e-004	1.0000e-004	9.3373
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		9.2894	7.8000e-004	1.0000e-004	9.3373

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unenclosed Parking with Elevator	52380	9.2894	7.8000e-004	1.0000e-004	9.3373
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		9.2894	7.8000e-004	1.0000e-004	9.3373

6.0 Area Detail

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	2.1500e-003	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.9000e-004	6.9000e-004	0.0000	0.0000	7.4000e-004
Unmitigated	2.1500e-003	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.9000e-004	6.9000e-004	0.0000	0.0000	7.4000e-004

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	3.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.7500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.9000e-004	6.9000e-004	0.0000	0.0000	7.4000e-004
Total	2.1600e-003	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.9000e-004	6.9000e-004	0.0000	0.0000	7.4000e-004

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	3.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.7500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.9000e-004	6.9000e-004	0.0000	0.0000	7.4000e-004
Total	2.1600e-003	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.9000e-004	6.9000e-004	0.0000	0.0000	7.4000e-004

7.0 Water Detail**7.1 Mitigation Measures Water**

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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			
Unenclosed Parking with Elevator	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

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**7.2 Water by Land Use****Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unenclosed Parking with Elevator	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

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unenclosed Parking with Elevator	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

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unenclosed Parking with Elevator	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

LACMTA West Santa Ana Branch Construction - Aerial LRT - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

CalEEMod (Version 2020.4.0) Annual Output File
Systems & Utility Connections

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	90.00	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	2033
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

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 - Metro Construction Methods Report (June 2021); Updated schedule provided May 2023

Off-road Equipment - LACMTA Construction Methods Report (October 2018)

Off-road Equipment - Metro Construction Methods Report (June 2021)

Off-road Equipment - Metro Construction Methods Report (June 2021)

Off-road Equipment - Metro Construction Methods Report (June 2021)

Trips and VMT - Metro Construction Methods Report (June 2021)

Grading -

Construction Off-road Equipment Mitigation - LACMTA Green Construction Policy (2011)

Vehicle Emission Factors -

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Fleet Mix -

[illegible]

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	1,550.00	285.00
tblConstructionPhase	NumDays	60.00	285.00
tblConstructionPhase	NumDays	60.00	285.00
tblLandUse	LotAcreage	0.00	90.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	WorkerTripNumber	25.00	100.00
tblTripsAndVMT	WorkerTripNumber	25.00	100.00
tblTripsAndVMT	WorkerTripNumber	0.00	100.00

2.0 Emissions Summary

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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					
2031	0.4729	2.6200	6.0262	0.0126	0.2804	0.0695	0.3499	0.0752	0.0693	0.1445	0.0000	1,098.4628	1,098.4628	0.0396	0.0139	1,103.5844
2032	0.4058	2.2580	5.1839	0.0108	0.2419	0.0599	0.3018	0.0648	0.0598	0.1246	0.0000	944.2855	944.2855	0.0341	0.0117	948.6325
Maximum	0.4729	2.6200	6.0262	0.0126	0.2804	0.0695	0.3499	0.0752	0.0693	0.1445	0.0000	1,098.4628	1,098.4628	0.0396	0.0139	1,103.5844

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					
2031	0.1613	1.1240	6.4620	0.0126	0.2804	3.8200e-003	0.2842	0.0752	3.7100e-003	0.0789	0.0000	1,098.4618	1,098.4618	0.0396	0.0139	1,103.5833
2032	0.1369	0.9673	5.5598	0.0108	0.2419	3.2400e-003	0.2452	0.0648	3.1500e-003	0.0680	0.0000	944.2846	944.2846	0.0341	0.0117	948.6316
Maximum	0.1613	1.1240	6.4620	0.0126	0.2804	3.8200e-003	0.2842	0.0752	3.7100e-003	0.0789	0.0000	1,098.4618	1,098.4618	0.0396	0.0139	1,103.5833

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	66.06	57.13	-7.24	0.00	0.00	94.54	18.76	0.00	94.69	45.43	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	6-2-2031	9-1-2031	1.3235	0.5471
2	9-2-2031	12-1-2031	1.3134	0.5455
3	12-2-2031	3-1-2032	1.3139	0.5459
4	3-2-2032	6-1-2032	1.3233	0.5470
5	6-2-2032	9-1-2032	0.4452	0.1836
		Highest	1.3235	0.5471

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

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	N2O	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	Signals	Site Preparation	6/2/2031	7/2/2032	5	285	Foundations & Conduit construction
2	OCS	Site Preparation	6/2/2031	7/2/2032	5	285	Overhead Catenary System Foundations

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3	TPSS	Building Construction	6/2/2031	7/2/2032	5	285	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	1	6.00	231	0.29
Signals	Other Construction Equipment	1	8.00	172	0.42
Signals	Rough Terrain Forklifts	2	8.00	100	0.40
Signals	Skid Steer Loaders	2	8.00	65	0.37
Signals	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Signals	Trenchers	2	8.00	78	0.50
OCS	Cranes	1	6.00	231	0.29
OCS	Other Construction Equipment	1	8.00	172	0.42
OCS	Rough Terrain Forklifts	2	8.00	100	0.40
OCS	Skid Steer Loaders	2	8.00	65	0.37
OCS	Tractors/Loaders/Backhoes	2	8.00	97	0.37
OCS	Trenchers	2	8.00	78	0.50
TPSS	Cranes	1	6.00	231	0.29
TPSS	Generator Sets	2	8.00	84	0.74
TPSS	Other Material Handling Equipment	1	8.00	168	0.40
TPSS	Rough Terrain Forklifts	2	8.00	100	0.40
TPSS	Skid Steer Loaders	2	8.00	65	0.37
TPSS	Tractors/Loaders/Backhoes	2	8.00	97	0.37

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	100.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
OCS	10	100.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
TPSS	10	100.00	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

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Signals - 2031**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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1443	0.7983	1.7670	3.2400e-003		0.0251	0.0251		0.0251	0.0251	0.0000	278.4913	278.4913	0.0116	0.0000	278.7809
Total	0.1443	0.7983	1.7670	3.2400e-003	0.0000	0.0251	0.0251	0.0000	0.0251	0.0251	0.0000	278.4913	278.4913	0.0116	0.0000	278.7809

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Signals - 2031****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	1.4600e-003	0.0591	0.0212	2.4000e-004	9.6400e-003	2.9000e-004	9.9300e-003	2.7800e-003	2.7000e-004	3.0600e-003	0.0000	24.0334	24.0334	9.7000e-004	3.4700e-003	25.0924
Worker	0.0149	9.3700e-003	0.1672	5.9000e-004	0.0838	3.2000e-004	0.0842	0.0223	2.9000e-004	0.0226	0.0000	54.0581	54.0581	8.8000e-004	1.1500e-003	54.4225
Total	0.0163	0.0684	0.1883	8.3000e-004	0.0935	6.1000e-004	0.0941	0.0250	5.6000e-004	0.0256	0.0000	78.0915	78.0915	1.8500e-003	4.6200e-003	79.5148

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0363	0.3014	1.8970	3.2400e-003		6.5000e-004	6.5000e-004		6.5000e-004	6.5000e-004	0.0000	278.4910	278.4910	0.0116	0.0000	278.7805
Total	0.0363	0.3014	1.8970	3.2400e-003	0.0000	6.5000e-004	6.5000e-004	0.0000	6.5000e-004	6.5000e-004	0.0000	278.4910	278.4910	0.0116	0.0000	278.7805

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Signals - 2031****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	1.4600e-003	0.0591	0.0212	2.4000e-004	9.6400e-003	2.9000e-004	9.9300e-003	2.7800e-003	2.7000e-004	3.0600e-003	0.0000	24.0334	24.0334	9.7000e-004	3.4700e-003	25.0924
Worker	0.0149	9.3700e-003	0.1672	5.9000e-004	0.0838	3.2000e-004	0.0842	0.0223	2.9000e-004	0.0226	0.0000	54.0581	54.0581	8.8000e-004	1.1500e-003	54.4225
Total	0.0163	0.0684	0.1883	8.3000e-004	0.0935	6.1000e-004	0.0941	0.0250	5.6000e-004	0.0256	0.0000	78.0915	78.0915	1.8500e-003	4.6200e-003	79.5148

3.2 Signals - 2032**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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1245	0.6887	1.5244	2.8000e-003		0.0216	0.0216		0.0216	0.0216	0.0000	240.2670	240.2670	9.9900e-003	0.0000	240.5168
Total	0.1245	0.6887	1.5244	2.8000e-003	0.0000	0.0216	0.0216	0.0000	0.0216	0.0216	0.0000	240.2670	240.2670	9.9900e-003	0.0000	240.5168

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Signals - 2032****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	1.2500e-003	0.0507	0.0183	2.1000e-004	8.3200e-003	2.5000e-004	8.5700e-003	2.4000e-003	2.3000e-004	2.6400e-003	0.0000	20.4050	20.4050	8.5000e-004	2.9500e-003	21.3046
Worker	0.0121	7.5700e-003	0.1391	5.0000e-004	0.0723	2.6000e-004	0.0726	0.0192	2.4000e-004	0.0195	0.0000	45.8321	45.8321	7.1000e-004	9.6000e-004	46.1365
Total	0.0134	0.0583	0.1574	7.1000e-004	0.0806	5.1000e-004	0.0812	0.0216	4.7000e-004	0.0221	0.0000	66.2371	66.2371	1.5600e-003	3.9100e-003	67.4412

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0313	0.2600	1.6366	2.8000e-003		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004	0.0000	240.2668	240.2668	9.9900e-003	0.0000	240.5165
Total	0.0313	0.2600	1.6366	2.8000e-003	0.0000	5.6000e-004	5.6000e-004	0.0000	5.6000e-004	5.6000e-004	0.0000	240.2668	240.2668	9.9900e-003	0.0000	240.5165

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Signals - 2032****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	1.2500e-003	0.0507	0.0183	2.1000e-004	8.3200e-003	2.5000e-004	8.5700e-003	2.4000e-003	2.3000e-004	2.6400e-003	0.0000	20.4050	20.4050	8.5000e-004	2.9500e-003	21.3046
Worker	0.0121	7.5700e-003	0.1391	5.0000e-004	0.0723	2.6000e-004	0.0726	0.0192	2.4000e-004	0.0195	0.0000	45.8321	45.8321	7.1000e-004	9.6000e-004	46.1365
Total	0.0134	0.0583	0.1574	7.1000e-004	0.0806	5.1000e-004	0.0812	0.0216	4.7000e-004	0.0221	0.0000	66.2371	66.2371	1.5600e-003	3.9100e-003	67.4412

3.3 OCS - 2031**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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1443	0.7983	1.7670	3.2400e-003		0.0251	0.0251		0.0251	0.0251	0.0000	278.4913	278.4913	0.0116	0.0000	278.7809
Total	0.1443	0.7983	1.7670	3.2400e-003	0.0000	0.0251	0.0251	0.0000	0.0251	0.0251	0.0000	278.4913	278.4913	0.0116	0.0000	278.7809

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 OCS - 2031****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	1.4600e-003	0.0591	0.0212	2.4000e-004	9.6400e-003	2.9000e-004	9.9300e-003	2.7800e-003	2.7000e-004	3.0600e-003	0.0000	24.0334	24.0334	9.7000e-004	3.4700e-003	25.0924
Worker	0.0149	9.3700e-003	0.1672	5.9000e-004	0.0838	3.2000e-004	0.0842	0.0223	2.9000e-004	0.0226	0.0000	54.0581	54.0581	8.8000e-004	1.1500e-003	54.4225
Total	0.0163	0.0684	0.1883	8.3000e-004	0.0935	6.1000e-004	0.0941	0.0250	5.6000e-004	0.0256	0.0000	78.0915	78.0915	1.8500e-003	4.6200e-003	79.5148

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0363	0.3014	1.8970	3.2400e-003		6.5000e-004	6.5000e-004		6.5000e-004	6.5000e-004	0.0000	278.4910	278.4910	0.0116	0.0000	278.7805
Total	0.0363	0.3014	1.8970	3.2400e-003	0.0000	6.5000e-004	6.5000e-004	0.0000	6.5000e-004	6.5000e-004	0.0000	278.4910	278.4910	0.0116	0.0000	278.7805

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 OCS - 2031****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	1.4600e-003	0.0591	0.0212	2.4000e-004	9.6400e-003	2.9000e-004	9.9300e-003	2.7800e-003	2.7000e-004	3.0600e-003	0.0000	24.0334	24.0334	9.7000e-004	3.4700e-003	25.0924
Worker	0.0149	9.3700e-003	0.1672	5.9000e-004	0.0838	3.2000e-004	0.0842	0.0223	2.9000e-004	0.0226	0.0000	54.0581	54.0581	8.8000e-004	1.1500e-003	54.4225
Total	0.0163	0.0684	0.1883	8.3000e-004	0.0935	6.1000e-004	0.0941	0.0250	5.6000e-004	0.0256	0.0000	78.0915	78.0915	1.8500e-003	4.6200e-003	79.5148

3.3 OCS - 2032**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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1245	0.6887	1.5244	2.8000e-003		0.0216	0.0216		0.0216	0.0216	0.0000	240.2670	240.2670	9.9900e-003	0.0000	240.5168
Total	0.1245	0.6887	1.5244	2.8000e-003	0.0000	0.0216	0.0216	0.0000	0.0216	0.0216	0.0000	240.2670	240.2670	9.9900e-003	0.0000	240.5168

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 OCS - 2032****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	1.2500e-003	0.0507	0.0183	2.1000e-004	8.3200e-003	2.5000e-004	8.5700e-003	2.4000e-003	2.3000e-004	2.6400e-003	0.0000	20.4050	20.4050	8.5000e-004	2.9500e-003	21.3046
Worker	0.0121	7.5700e-003	0.1391	5.0000e-004	0.0723	2.6000e-004	0.0726	0.0192	2.4000e-004	0.0195	0.0000	45.8321	45.8321	7.1000e-004	9.6000e-004	46.1365
Total	0.0134	0.0583	0.1574	7.1000e-004	0.0806	5.1000e-004	0.0812	0.0216	4.7000e-004	0.0221	0.0000	66.2371	66.2371	1.5600e-003	3.9100e-003	67.4412

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0313	0.2600	1.6366	2.8000e-003		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004	0.0000	240.2668	240.2668	9.9900e-003	0.0000	240.5165
Total	0.0313	0.2600	1.6366	2.8000e-003	0.0000	5.6000e-004	5.6000e-004	0.0000	5.6000e-004	5.6000e-004	0.0000	240.2668	240.2668	9.9900e-003	0.0000	240.5165

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 OCS - 2032****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	1.2500e-003	0.0507	0.0183	2.1000e-004	8.3200e-003	2.5000e-004	8.5700e-003	2.4000e-003	2.3000e-004	2.6400e-003	0.0000	20.4050	20.4050	8.5000e-004	2.9500e-003	21.3046
Worker	0.0121	7.5700e-003	0.1391	5.0000e-004	0.0723	2.6000e-004	0.0726	0.0192	2.4000e-004	0.0195	0.0000	45.8321	45.8321	7.1000e-004	9.6000e-004	46.1365
Total	0.0134	0.0583	0.1574	7.1000e-004	0.0806	5.1000e-004	0.0812	0.0216	4.7000e-004	0.0221	0.0000	66.2371	66.2371	1.5600e-003	3.9100e-003	67.4412

3.4 TPSS - 2031**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	0.1353	0.8182	1.9274	3.5800e-003		0.0176	0.0176		0.0176	0.0176	0.0000	307.2056	307.2056	0.0109	0.0000	307.4782
Total	0.1353	0.8182	1.9274	3.5800e-003		0.0176	0.0176		0.0176	0.0176	0.0000	307.2056	307.2056	0.0109	0.0000	307.4782

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 TPSS - 2031****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	1.4600e-003	0.0591	0.0212	2.4000e-004	9.6400e-003	2.9000e-004	9.9300e-003	2.7800e-003	2.7000e-004	3.0600e-003	0.0000	24.0334	24.0334	9.7000e-004	3.4700e-003	25.0924
Worker	0.0149	9.3700e-003	0.1672	5.9000e-004	0.0838	3.2000e-004	0.0842	0.0223	2.9000e-004	0.0226	0.0000	54.0581	54.0581	8.8000e-004	1.1500e-003	54.4225
Total	0.0163	0.0684	0.1883	8.3000e-004	0.0935	6.1000e-004	0.0941	0.0250	5.6000e-004	0.0256	0.0000	78.0915	78.0915	1.8500e-003	4.6200e-003	79.5148

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	0.0397	0.3159	2.1031	3.5800e-003		7.2000e-004	7.2000e-004		7.2000e-004	7.2000e-004	0.0000	307.2053	307.2053	0.0109	0.0000	307.4778
Total	0.0397	0.3159	2.1031	3.5800e-003		7.2000e-004	7.2000e-004		7.2000e-004	7.2000e-004	0.0000	307.2053	307.2053	0.0109	0.0000	307.4778

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 TPSS - 2031****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	1.4600e-003	0.0591	0.0212	2.4000e-004	9.6400e-003	2.9000e-004	9.9300e-003	2.7800e-003	2.7000e-004	3.0600e-003	0.0000	24.0334	24.0334	9.7000e-004	3.4700e-003	25.0924
Worker	0.0149	9.3700e-003	0.1672	5.9000e-004	0.0838	3.2000e-004	0.0842	0.0223	2.9000e-004	0.0226	0.0000	54.0581	54.0581	8.8000e-004	1.1500e-003	54.4225
Total	0.0163	0.0684	0.1883	8.3000e-004	0.0935	6.1000e-004	0.0941	0.0250	5.6000e-004	0.0256	0.0000	78.0915	78.0915	1.8500e-003	4.6200e-003	79.5148

3.4 TPSS - 2032**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	0.1168	0.7059	1.6629	3.0800e-003		0.0151	0.0151		0.0151	0.0151	0.0000	265.0402	265.0402	9.4100e-003	0.0000	265.2753
Total	0.1168	0.7059	1.6629	3.0800e-003		0.0151	0.0151		0.0151	0.0151	0.0000	265.0402	265.0402	9.4100e-003	0.0000	265.2753

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 TPSS - 2032****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	1.2500e-003	0.0507	0.0183	2.1000e-004	8.3200e-003	2.5000e-004	8.5700e-003	2.4000e-003	2.3000e-004	2.6400e-003	0.0000	20.4050	20.4050	8.5000e-004	2.9500e-003	21.3046
Worker	0.0121	7.5700e-003	0.1391	5.0000e-004	0.0723	2.6000e-004	0.0726	0.0192	2.4000e-004	0.0195	0.0000	45.8321	45.8321	7.1000e-004	9.6000e-004	46.1365
Total	0.0134	0.0583	0.1574	7.1000e-004	0.0806	5.1000e-004	0.0812	0.0216	4.7000e-004	0.0221	0.0000	66.2371	66.2371	1.5600e-003	3.9100e-003	67.4412

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	0.0342	0.2725	1.8144	3.0800e-003		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	265.0398	265.0398	9.4100e-003	0.0000	265.2750
Total	0.0342	0.2725	1.8144	3.0800e-003		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	265.0398	265.0398	9.4100e-003	0.0000	265.2750

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 TPSS - 2032****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	1.2500e-003	0.0507	0.0183	2.1000e-004	8.3200e-003	2.5000e-004	8.5700e-003	2.4000e-003	2.3000e-004	2.6400e-003	0.0000	20.4050	20.4050	8.5000e-004	2.9500e-003	21.3046
Worker	0.0121	7.5700e-003	0.1391	5.0000e-004	0.0723	2.6000e-004	0.0726	0.0192	2.4000e-004	0.0195	0.0000	45.8321	45.8321	7.1000e-004	9.6000e-004	46.1365
Total	0.0134	0.0583	0.1574	7.1000e-004	0.0806	5.1000e-004	0.0812	0.0216	4.7000e-004	0.0221	0.0000	66.2371	66.2371	1.5600e-003	3.9100e-003	67.4412

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	0.524555	0.068934	0.195079	0.127164	0.024860	0.007289	0.011784	0.007620	0.000934	0.000556	0.027162	0.000743	0.003320

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

[illegible]

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated

[illegible]

Mitigated

[illegible]

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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**

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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**

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

LACMTA West Santa Ana Branch Construction - Systems - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

CalEEMod (Version 2020.4.0) Annual Output File
Maintenance & Storage Facility (2042)

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**LACMTA West Santa Ana Branch MSF - Bellflower Site****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	2040
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	260.79	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Analysis for Operational Year 2042. Construction 2029-2031. SCE CO2 factor from CalEEMod 2022.1.1.3 User's Guide.

Land Use -

Construction Phase - Preliminary Schedule Updated: March 2029 - April 2031.

Off-road Equipment - Metro Inventory

Off-road Equipment - Metro Inventory

Off-road Equipment - Metro Inventory

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Fleet Mix -

[illegible]

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	10.00	90.00
tblConstructionPhase	NumDays	370.00	450.00
tblConstructionPhase	NumDays	20.00	60.00
tblConstructionPhase	NumDays	20.00	30.00
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

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CO2IntensityFactor	390.98	260.79
tblTripsAndVMT	HaulingTripNumber	910.00	1,800.00
tblTripsAndVMT	HaulingTripNumber	0.00	5,400.00
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	VendorTripNumber	0.00	20.00
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	1.99	0.00
tblVehicleTrips	ST_TR	2.54	2.42
tblVehicleTrips	ST_TR	1.74	0.00
tblVehicleTrips	SU_TR	5.00	0.00
tblVehicleTrips	SU_TR	1.24	2.42
tblVehicleTrips	SU_TR	1.74	0.00
tblVehicleTrips	WD_TR	4.96	0.00
tblVehicleTrips	WD_TR	3.37	2.42
tblVehicleTrips	WD_TR	1.74	0.00

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.0 Emissions Summary

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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					
2029	0.4297	3.9526	4.3135	0.0126	1.3172	0.1328	1.4499	0.4675	0.1235	0.5910	0.0000	1,144.316 1	1,144.316 1	0.1913	0.0479	1,163.358 0
2030	0.3997	2.1355	4.7695	0.0114	0.5539	0.0389	0.5928	0.1480	0.0386	0.1867	0.0000	1,004.590 3	1,004.590 3	0.0337	0.0218	1,011.915 9
2031	0.7348	0.5756	1.3174	3.1200e-003	0.1518	0.0159	0.1677	0.0406	0.0159	0.0565	0.0000	277.0590	277.0590	9.6700e-003	6.8400e-003	279.3388
Maximum	0.7348	3.9526	4.7695	0.0126	1.3172	0.1328	1.4499	0.4675	0.1235	0.5910	0.0000	1,144.316 1	1,144.316 1	0.1913	0.0479	1,163.358 0

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					
2029	0.1971	1.2052	5.0486	0.0126	0.8246	7.8800e-003	0.8325	0.2657	7.5700e-003	0.2733	0.0000	1,144.315 4	1,144.315 4	0.1913	0.0479	1,163.357 3
2030	0.2136	0.9349	5.0204	0.0114	0.5539	5.2200e-003	0.5592	0.1480	5.0000e-003	0.1530	0.0000	1,004.589 6	1,004.589 6	0.0337	0.0218	1,011.915 3
2031	0.6732	0.2145	1.3875	3.1200e-003	0.1518	1.3600e-003	0.1532	0.0406	1.3000e-003	0.0419	0.0000	277.0588	277.0588	9.6700e-003	6.8400e-003	279.3386
Maximum	0.6732	1.2052	5.0486	0.0126	0.8246	7.8800e-003	0.8325	0.2657	7.5700e-003	0.2733	0.0000	1,144.315 4	1,144.315 4	0.1913	0.0479	1,163.357 3

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	30.71	64.66	-10.15	0.00	24.35	92.29	30.11	30.76	92.21	43.86	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)
37	1-22-2029	4-21-2029	0.6314	0.1804
38	4-22-2029	7-21-2029	1.7405	0.5129
39	7-22-2029	10-21-2029	1.3177	0.4286
40	10-22-2029	1-21-2030	0.7715	0.3061
41	1-22-2030	4-21-2030	0.6252	0.2834
42	4-22-2030	7-21-2030	0.6272	0.2817
43	7-22-2030	10-21-2030	0.6356	0.2862
44	10-22-2030	1-21-2031	0.6399	0.2906
45	1-22-2031	4-21-2031	1.1361	0.8001
		Highest	1.7405	0.8001

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	5.7600e-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	7.4200e-003	0.0675	0.0567	4.0000e-004		5.1300e-003	5.1300e-003		5.1300e-003	5.1300e-003	0.0000	258.3437	258.3437	0.0248	4.1800e-003	260.2102
Mobile	0.1280	0.1271	1.3321	3.0000e-003	0.4168	1.4900e-003	0.4183	0.1112	1.3900e-003	0.1126	0.0000	277.7722	277.7722	0.0197	0.0119	281.8046
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	47.0314	56.7186	1.0009	0.0242	88.9572
Total	0.7293	0.1947	1.3945	3.4000e-003	0.4168	6.6400e-003	0.4234	0.1112	6.5400e-003	0.1178	42.2002	583.1586	625.3588	2.9669	0.0403	711.5338

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	5.7600e-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	7.4200e-003	0.0675	0.0567	4.0000e-004		5.1300e-003	5.1300e-003		5.1300e-003	5.1300e-003	0.0000	258.3437	258.3437	0.0248	4.1800e-003	260.2102
Mobile	0.1280	0.1271	1.3321	3.0000e-003	0.4168	1.4900e-003	0.4183	0.1112	1.3900e-003	0.1126	0.0000	277.7722	277.7722	0.0197	0.0119	281.8046
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	47.0314	56.7186	1.0009	0.0242	88.9572
Total	0.7293	0.1947	1.3945	3.4000e-003	0.4168	6.6400e-003	0.4234	0.1112	6.5400e-003	0.1178	42.2002	583.1586	625.3588	2.9669	0.0403	711.5338

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	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	Demolition	Demolition	3/12/2029	5/19/2029	6	60	
2	Site Preparation	Site Preparation	5/21/2029	9/1/2029	6	90	
3	Building Construction & Track Laydown	Building Construction	9/3/2029	2/8/2031	6	450	

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Paving Parking & Access Roads	Paving	2/10/2031	4/19/2031	6	60
5	Road Striping & Architectural Coating	Architectural Coating	3/17/2031	4/19/2031	6	30

Acres of Grading (Site Preparation Phase): 315**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: 40,000; 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

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	1,800.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	10	300.00	40.00	5,400.00	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	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

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Demolition - 2029****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	0.0862	0.7959	0.8195	1.7800e-003		0.0325	0.0325		0.0303	0.0303	0.0000	155.6350	155.6350	0.0413	0.0000	156.6680
Total	0.0862	0.7959	0.8195	1.7800e-003	0.0984	0.0325	0.1309	0.0149	0.0303	0.0452	0.0000	155.6350	155.6350	0.0413	0.0000	156.6680

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	1.8000e-003	0.1182	0.0338	4.7000e-004	0.0155	7.3000e-004	0.0162	4.2500e-003	6.9000e-004	4.9500e-003	0.0000	46.8579	46.8579	3.0500e-003	7.4600e-003	49.1566
Vendor	1.1700e-003	0.0469	0.0167	2.0000e-004	7.5600e-003	2.3000e-004	7.7900e-003	2.1800e-003	2.2000e-004	2.4000e-003	0.0000	19.5448	19.5448	7.5000e-004	2.8200e-003	20.4048
Worker	0.0197	0.0128	0.2132	7.2000e-004	0.0986	4.3000e-004	0.0991	0.0262	3.9000e-004	0.0266	0.0000	66.1489	66.1489	1.2000e-003	1.4500e-003	66.6114
Total	0.0227	0.1779	0.2636	1.3900e-003	0.1217	1.3900e-003	0.1231	0.0326	1.3000e-003	0.0339	0.0000	132.5516	132.5516	5.0000e-003	0.0117	136.1728

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Demolition - 2029****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	0.0210	0.0911	1.0234	1.7800e-003		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	155.6348	155.6348	0.0413	0.0000	156.6678
Total	0.0210	0.0911	1.0234	1.7800e-003	0.0384	4.2000e-004	0.0388	5.8100e-003	4.2000e-004	6.2300e-003	0.0000	155.6348	155.6348	0.0413	0.0000	156.6678

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	1.8000e-003	0.1182	0.0338	4.7000e-004	0.0155	7.3000e-004	0.0162	4.2500e-003	6.9000e-004	4.9500e-003	0.0000	46.8579	46.8579	3.0500e-003	7.4600e-003	49.1566
Vendor	1.1700e-003	0.0469	0.0167	2.0000e-004	7.5600e-003	2.3000e-004	7.7900e-003	2.1800e-003	2.2000e-004	2.4000e-003	0.0000	19.5448	19.5448	7.5000e-004	2.8200e-003	20.4048
Worker	0.0197	0.0128	0.2132	7.2000e-004	0.0986	4.3000e-004	0.0991	0.0262	3.9000e-004	0.0266	0.0000	66.1489	66.1489	1.2000e-003	1.4500e-003	66.6114
Total	0.0227	0.1779	0.2636	1.3900e-003	0.1217	1.3900e-003	0.1231	0.0326	1.3000e-003	0.0339	0.0000	132.5516	132.5516	5.0000e-003	0.0117	136.1728

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Site Preparation - 2029****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					0.7090	0.0000	0.7090	0.3160	0.0000	0.3160	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1603	1.6028	1.2441	3.1400e-003		0.0646	0.0646		0.0595	0.0595	0.0000	276.1943	276.1943	0.0893	0.0000	278.4275
Total	0.1603	1.6028	1.2441	3.1400e-003	0.7090	0.0646	0.7736	0.3160	0.0595	0.3754	0.0000	276.1943	276.1943	0.0893	0.0000	278.4275

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	5.4000e-003	0.3547	0.1013	1.4000e-003	0.0465	2.1800e-003	0.0486	0.0128	2.0800e-003	0.0149	0.0000	140.5737	140.5737	9.1500e-003	0.0224	147.4698
Vendor	1.7600e-003	0.0703	0.0250	3.0000e-004	0.0113	3.4000e-004	0.0117	3.2700e-003	3.3000e-004	3.6000e-003	0.0000	29.3172	29.3172	1.1300e-003	4.2300e-003	30.6072
Worker	0.0296	0.0192	0.3197	1.0800e-003	0.1479	6.4000e-004	0.1486	0.0393	5.9000e-004	0.0399	0.0000	99.2234	99.2234	1.8000e-003	2.1800e-003	99.9172
Total	0.0368	0.4442	0.4461	2.7800e-003	0.2057	3.1600e-003	0.2089	0.0553	3.0000e-003	0.0583	0.0000	269.1143	269.1143	0.0121	0.0288	277.9941

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Site Preparation - 2029****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					0.2765	0.0000	0.2765	0.1232	0.0000	0.1232	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0386	0.1672	1.6429	3.1400e-003		7.7000e-004	7.7000e-004		7.7000e-004	7.7000e-004	0.0000	276.1940	276.1940	0.0893	0.0000	278.4272
Total	0.0386	0.1672	1.6429	3.1400e-003	0.2765	7.7000e-004	0.2773	0.1232	7.7000e-004	0.1240	0.0000	276.1940	276.1940	0.0893	0.0000	278.4272

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	5.4000e-003	0.3547	0.1013	1.4000e-003	0.0465	2.1800e-003	0.0486	0.0128	2.0800e-003	0.0149	0.0000	140.5737	140.5737	9.1500e-003	0.0224	147.4698
Vendor	1.7600e-003	0.0703	0.0250	3.0000e-004	0.0113	3.4000e-004	0.0117	3.2700e-003	3.3000e-004	3.6000e-003	0.0000	29.3172	29.3172	1.1300e-003	4.2300e-003	30.6072
Worker	0.0296	0.0192	0.3197	1.0800e-003	0.1479	6.4000e-004	0.1486	0.0393	5.9000e-004	0.0399	0.0000	99.2234	99.2234	1.8000e-003	2.1800e-003	99.9172
Total	0.0368	0.4442	0.4461	2.7800e-003	0.2057	3.1600e-003	0.2089	0.0553	3.0000e-003	0.0583	0.0000	269.1143	269.1143	0.0121	0.0288	277.9941

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction & Track Laydown - 2029

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	0.0879	0.8295	1.1456	1.9100e-003		0.0300	0.0300		0.0283	0.0283	0.0000	163.7133	163.7133	0.0402	0.0000	164.7178
Total	0.0879	0.8295	1.1456	1.9100e-003		0.0300	0.0300		0.0283	0.0283	0.0000	163.7133	163.7133	0.0402	0.0000	164.7178

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	2.0100e-003	0.0805	0.0287	3.4000e-004	0.0130	3.9000e-004	0.0134	3.7500e-003	3.8000e-004	4.1200e-003	0.0000	33.5519	33.5519	1.2900e-003	4.8500e-003	35.0282
Worker	0.0339	0.0220	0.3659	1.2400e-003	0.1693	7.3000e-004	0.1700	0.0450	6.7000e-004	0.0456	0.0000	113.5556	113.5556	2.0600e-003	2.4900e-003	114.3496
Total	0.0359	0.1024	0.3946	1.5800e-003	0.1823	1.1200e-003	0.1834	0.0487	1.0500e-003	0.0498	0.0000	147.1076	147.1076	3.3500e-003	7.3400e-003	149.3778

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction & Track Laydown - 2029

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	0.0421	0.2225	1.2780	1.9100e-003		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003	0.0000	163.7131	163.7131	0.0402	0.0000	164.7177
Total	0.0421	0.2225	1.2780	1.9100e-003		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003	0.0000	163.7131	163.7131	0.0402	0.0000	164.7177

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	2.0100e-003	0.0805	0.0287	3.4000e-004	0.0130	3.9000e-004	0.0134	3.7500e-003	3.8000e-004	4.1200e-003	0.0000	33.5519	33.5519	1.2900e-003	4.8500e-003	35.0282
Worker	0.0339	0.0220	0.3659	1.2400e-003	0.1693	7.3000e-004	0.1700	0.0450	6.7000e-004	0.0456	0.0000	113.5556	113.5556	2.0600e-003	2.4900e-003	114.3496
Total	0.0359	0.1024	0.3946	1.5800e-003	0.1823	1.1200e-003	0.1834	0.0487	1.0500e-003	0.0498	0.0000	147.1076	147.1076	3.3500e-003	7.3400e-003	149.3778

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction & Track Laydown - 2030

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	0.2965	1.8307	3.6172	6.7100e-003		0.0356	0.0356		0.0356	0.0356	0.0000	566.6753	566.6753	0.0240	0.0000	567.2747
Total	0.2965	1.8307	3.6172	6.7100e-003		0.0356	0.0356		0.0356	0.0356	0.0000	566.6753	566.6753	0.0240	0.0000	567.2747

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	6.0200e-003	0.2429	0.0867	1.0200e-003	0.0395	1.1900e-003	0.0407	0.0114	1.1400e-003	0.0125	0.0000	100.1030	100.1030	3.9600e-003	0.0145	104.5108
Worker	0.0971	0.0619	1.0656	3.6800e-003	0.5145	2.0800e-003	0.5166	0.1367	1.9100e-003	0.1386	0.0000	337.8119	337.8119	5.8000e-003	7.2900e-003	340.1305
Total	0.1032	0.3048	1.1523	4.7000e-003	0.5539	3.2700e-003	0.5572	0.1480	3.0500e-003	0.1511	0.0000	437.9149	437.9149	9.7600e-003	0.0218	444.6413

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Building Construction & Track Laydown - 2030****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	0.1104	0.6301	3.8680	6.7100e-003		1.9500e-003	1.9500e-003		1.9500e-003	1.9500e-003	0.0000	566.6746	566.6746	0.0240	0.0000	567.2740
Total	0.1104	0.6301	3.8680	6.7100e-003		1.9500e-003	1.9500e-003		1.9500e-003	1.9500e-003	0.0000	566.6746	566.6746	0.0240	0.0000	567.2740

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	6.0200e-003	0.2429	0.0867	1.0200e-003	0.0395	1.1900e-003	0.0407	0.0114	1.1400e-003	0.0125	0.0000	100.1030	100.1030	3.9600e-003	0.0145	104.5108
Worker	0.0971	0.0619	1.0656	3.6800e-003	0.5145	2.0800e-003	0.5166	0.1367	1.9100e-003	0.1386	0.0000	337.8119	337.8119	5.8000e-003	7.2900e-003	340.1305
Total	0.1032	0.3048	1.1523	4.7000e-003	0.5539	3.2700e-003	0.5572	0.1480	3.0500e-003	0.1511	0.0000	437.9149	437.9149	9.7600e-003	0.0218	444.6413

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Building Construction & Track Laydown - 2031****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	0.0322	0.1989	0.3929	7.3000e-004		3.8700e-003	3.8700e-003		3.8700e-003	3.8700e-003	0.0000	61.5558	61.5558	2.6000e-003	0.0000	61.6209
Total	0.0322	0.1989	0.3929	7.3000e-004		3.8700e-003	3.8700e-003		3.8700e-003	3.8700e-003	0.0000	61.5558	61.5558	2.6000e-003	0.0000	61.6209

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	6.5000e-004	0.0263	9.4100e-003	1.1000e-004	4.2900e-003	1.3000e-004	4.4100e-003	1.2400e-003	1.2000e-004	1.3600e-003	0.0000	10.6815	10.6815	4.3000e-004	1.5400e-003	11.1522
Worker	9.9200e-003	6.2500e-003	0.1114	3.9000e-004	0.0559	2.1000e-004	0.0561	0.0148	1.9000e-004	0.0150	0.0000	36.0387	36.0387	5.9000e-004	7.7000e-004	36.2816
Total	0.0106	0.0325	0.1208	5.0000e-004	0.0602	3.4000e-004	0.0605	0.0161	3.1000e-004	0.0164	0.0000	46.7202	46.7202	1.0200e-003	2.3100e-003	47.4338

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Building Construction & Track Laydown - 2031****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	0.0120	0.0684	0.4202	7.3000e-004		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	61.5557	61.5557	2.6000e-003	0.0000	61.6208
Total	0.0120	0.0684	0.4202	7.3000e-004		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	61.5557	61.5557	2.6000e-003	0.0000	61.6208

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	6.5000e-004	0.0263	9.4100e-003	1.1000e-004	4.2900e-003	1.3000e-004	4.4100e-003	1.2400e-003	1.2000e-004	1.3600e-003	0.0000	10.6815	10.6815	4.3000e-004	1.5400e-003	11.1522
Worker	9.9200e-003	6.2500e-003	0.1114	3.9000e-004	0.0559	2.1000e-004	0.0561	0.0148	1.9000e-004	0.0150	0.0000	36.0387	36.0387	5.9000e-004	7.7000e-004	36.2816
Total	0.0106	0.0325	0.1208	5.0000e-004	0.0602	3.4000e-004	0.0605	0.0161	3.1000e-004	0.0164	0.0000	46.7202	46.7202	1.0200e-003	2.3100e-003	47.4338

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving Parking & Access Roads - 2031

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	0.0469	0.2429	0.5470	9.5000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	82.0096	82.0096	3.8200e-003	0.0000	82.1051
Paving	7.5500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0544	0.2429	0.5470	9.5000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	82.0096	82.0096	3.8200e-003	0.0000	82.1051

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	1.1400e-003	0.0463	0.0166	1.9000e-004	7.5600e-003	2.2000e-004	7.7900e-003	2.1800e-003	2.1000e-004	2.4000e-003	0.0000	18.8498	18.8498	7.6000e-004	2.7200e-003	19.6803
Worker	0.0117	7.3500e-003	0.1311	4.6000e-004	0.0658	2.5000e-004	0.0660	0.0175	2.3000e-004	0.0177	0.0000	42.3985	42.3985	6.9000e-004	9.0000e-004	42.6843
Total	0.0128	0.0537	0.1477	6.5000e-004	0.0733	4.7000e-004	0.0738	0.0196	4.4000e-004	0.0201	0.0000	61.2482	61.2482	1.4500e-003	3.6200e-003	62.3646

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Paving Parking & Access Roads - 2031****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	9.5400e-003	0.0414	0.5886	9.5000e-004		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	82.0095	82.0095	3.8200e-003	0.0000	82.1050
Paving	7.5500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0171	0.0414	0.5886	9.5000e-004		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	82.0095	82.0095	3.8200e-003	0.0000	82.1050

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	1.1400e-003	0.0463	0.0166	1.9000e-004	7.5600e-003	2.2000e-004	7.7900e-003	2.1800e-003	2.1000e-004	2.4000e-003	0.0000	18.8498	18.8498	7.6000e-004	2.7200e-003	19.6803
Worker	0.0117	7.3500e-003	0.1311	4.6000e-004	0.0658	2.5000e-004	0.0660	0.0175	2.3000e-004	0.0177	0.0000	42.3985	42.3985	6.9000e-004	9.0000e-004	42.6843
Total	0.0128	0.0537	0.1477	6.5000e-004	0.0733	4.7000e-004	0.0738	0.0196	4.4000e-004	0.0201	0.0000	61.2482	61.2482	1.4500e-003	3.6200e-003	62.3646

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Road Striping & Architectural Coating - 2031****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	0.6163					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2300e-003	0.0343	0.0719	1.2000e-004		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	10.2130	10.2130	4.1000e-004	0.0000	10.2234
Total	0.6215	0.0343	0.0719	1.2000e-004		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	10.2130	10.2130	4.1000e-004	0.0000	10.2234

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	2.9000e-004	0.0116	4.1500e-003	5.0000e-005	1.8900e-003	6.0000e-005	1.9500e-003	5.5000e-004	5.0000e-005	6.0000e-004	0.0000	4.7124	4.7124	1.9000e-004	6.8000e-004	4.9201
Worker	2.9200e-003	1.8400e-003	0.0328	1.2000e-004	0.0164	6.0000e-005	0.0165	4.3700e-003	6.0000e-005	4.4200e-003	0.0000	10.5996	10.5996	1.7000e-004	2.3000e-004	10.6711
Total	3.2100e-003	0.0134	0.0369	1.7000e-004	0.0183	1.2000e-004	0.0185	4.9200e-003	1.1000e-004	5.0200e-003	0.0000	15.3121	15.3121	3.6000e-004	9.1000e-004	15.5911

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Road Striping & Architectural Coating - 2031****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	0.6163					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1900e-003	5.1500e-003	0.0733	1.2000e-004		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	10.2130	10.2130	4.1000e-004	0.0000	10.2233
Total	0.6175	5.1500e-003	0.0733	1.2000e-004		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	10.2130	10.2130	4.1000e-004	0.0000	10.2233

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	2.9000e-004	0.0116	4.1500e-003	5.0000e-005	1.8900e-003	6.0000e-005	1.9500e-003	5.5000e-004	5.0000e-005	6.0000e-004	0.0000	4.7124	4.7124	1.9000e-004	6.8000e-004	4.9201
Worker	2.9200e-003	1.8400e-003	0.0328	1.2000e-004	0.0164	6.0000e-005	0.0165	4.3700e-003	6.0000e-005	4.4200e-003	0.0000	10.5996	10.5996	1.7000e-004	2.3000e-004	10.6711
Total	3.2100e-003	0.0134	0.0369	1.7000e-004	0.0183	1.2000e-004	0.0185	4.9200e-003	1.1000e-004	5.0200e-003	0.0000	15.3121	15.3121	3.6000e-004	9.1000e-004	15.5911

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.1280	0.1271	1.3321	3.0000e-003	0.4168	1.4900e-003	0.4183	0.1112	1.3900e-003	0.1126	0.0000	277.7722	277.7722	0.0197	0.0119	281.8046
Unmitigated	0.1280	0.1271	1.3321	3.0000e-003	0.4168	1.4900e-003	0.4183	0.1112	1.3900e-003	0.1126	0.0000	277.7722	277.7722	0.0197	0.0119	281.8046

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

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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
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	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Industrial Park	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Other Asphalt Surfaces	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Other Non-Asphalt Surfaces	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Parking Lot	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Unrefrigerated Warehouse-Rail	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	184.8814	184.8814	0.0234	2.8400e-003	186.3113
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	184.8814	184.8814	0.0234	2.8400e-003	186.3113
NaturalGas Mitigated	7.4200e-003	0.0675	0.0567	4.0000e-004		5.1300e-003	5.1300e-003		5.1300e-003	5.1300e-003	0.0000	73.4624	73.4624	1.4100e-003	1.3500e-003	73.8989
NaturalGas Unmitigated	7.4200e-003	0.0675	0.0567	4.0000e-004		5.1300e-003	5.1300e-003		5.1300e-003	5.1300e-003	0.0000	73.4624	73.4624	1.4100e-003	1.3500e-003	73.8989

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	82616	4.5000e-004	4.0500e-003	3.4000e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	4.4087	4.4087	8.0000e-005	8.0000e-005	4.4349
General Light Industry	217316	1.1700e-003	0.0107	8.9500e-003	6.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	11.5968	11.5968	2.2000e-004	2.1000e-004	11.6657
Industrial Park	1.06647e+006	5.7500e-003	0.0523	0.0439	3.1000e-004		3.9700e-003	3.9700e-003		3.9700e-003	3.9700e-003	0.0000	56.9107	56.9107	1.0900e-003	1.0400e-003	57.2489
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	10234	6.0000e-005	5.0000e-004	4.2000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.5461	0.5461	1.0000e-005	1.0000e-005	0.5494
Total		7.4300e-003	0.0675	0.0567	3.9000e-004		5.1300e-003	5.1300e-003		5.1300e-003	5.1300e-003	0.0000	73.4624	73.4624	1.4000e-003	1.3400e-003	73.8989

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	217316	1.1700e-003	0.0107	8.9500e-003	6.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004	0.0000	11.5968	11.5968	2.2000e-004	2.1000e-004	11.6657
General Light Industry	82616	4.5000e-004	4.0500e-003	3.4000e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	4.4087	4.4087	8.0000e-005	8.0000e-005	4.4349
Industrial Park	1.06647e+006	5.7500e-003	0.0523	0.0439	3.1000e-004		3.9700e-003	3.9700e-003		3.9700e-003	3.9700e-003	0.0000	56.9107	56.9107	1.0900e-003	1.0400e-003	57.2489
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	10234	6.0000e-005	5.0000e-004	4.2000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.5461	0.5461	1.0000e-005	1.0000e-005	0.5494
Total		7.4300e-003	0.0675	0.0567	3.9000e-004		5.1300e-003	5.1300e-003		5.1300e-003	5.1300e-003	0.0000	73.4624	73.4624	1.4000e-003	1.3400e-003	73.8989

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	131406	15.5443	1.9700e-003	2.4000e-004	15.6646
General Light Industry	49956	5.9094	7.5000e-004	9.0000e-005	5.9551
Industrial Park	1.293e+006	152.9520	0.0194	2.3500e-003	154.1350
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	5.0842	6.4000e-004	8.0000e-005	5.1235
Unrefrigerated Warehouse-Rail	45577	5.3914	6.8000e-004	8.0000e-005	5.4331
Total		184.8814	0.0234	2.8400e-003	186.3113

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.3 Energy by Land Use - Electricity****Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	131406	15.5443	1.9700e-003	2.4000e-004	15.6646
General Light Industry	49956	5.9094	7.5000e-004	9.0000e-005	5.9551
Industrial Park	1.293e+006	152.9520	0.0194	2.3500e-003	154.1350
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	5.0842	6.4000e-004	8.0000e-005	5.1235
Unrefrigerated Warehouse-Rail	45577	5.3914	6.8000e-004	8.0000e-005	5.4331
Total		184.8814	0.0234	2.8400e-003	186.3113

6.0 Area Detail**6.1 Mitigation Measures Area**

Use Low VOC Cleaning Supplies

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.7600e-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	5.7600e-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	5.7600e-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	5.7600e-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

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	5.7600e-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	5.7600e-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**

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	56.7186	1.0009	0.0242	88.9572
Unmitigated	56.7186	1.0009	0.0242	88.9572

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	7.1736	0.1266	3.0600e-003	11.2510
Industrial Park	23.9205 / 0	44.4333	0.7841	0.0190	69.6890
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	5.1117	0.0902	2.1800e-003	8.0172
Total		56.7185	1.0009	0.0242	88.9572

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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	7.1736	0.1266	3.0600e-003	11.2510
Industrial Park	23.9205 / 0	44.4333	0.7841	0.0190	69.6890
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	5.1117	0.0902	2.1800e-003	8.0172
Total		56.7185	1.0009	0.0242	88.9572

8.0 Waste Detail**8.1 Mitigation Measures Waste**

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**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

LACMTA West Santa Ana Branch MSF - Bellflower Site - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation
