Appendix A

Notice of Preparation

NOTICE OF PREPARATION
Metropolitan Transportation Commission
San Francisco Bay Area Regional Transportation Plan / Sustainable Communities Strategy
Environmental Impact Report

To:	Interested Agencies, Organizations and Individuals
Project:	**Draft Environmental Impact Report for Plan Bay Area 2040 – the Regional Transportation Plan (RTP) / Sustainable Communities Strategy (SCS)**
Lead Agency:	Metropolitan Transportation Commission
Comment Period	May 16, 2015 – June 15, 2016 (30-days)



Figure 1. Nine-County San Francisco Bay Area

Interested agencies, organizations and individuals are invited by the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG) to comment on the scope and content of the environmental impact assessment that will be conducted for the update of *Plan Bay Area*, an integrated land use and transportation plan looking out to the year 2040 for the nine-county San Francisco Bay Area. A map of the area is included in this notice as Figure 1.

MTC is the lead agency undertaking preparation of a program-level Draft Environmental Impact Report (DEIR) for Plan Bay Area 2040. Plan Bay Area 2040 (or "the Plan") is the update of the area Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS), a long-range plan that balances future mobility and housing needs with other economic, environmental, and public health goals. It identifies regional transportation planning needs, priorities and funding, and allows project sponsors to qualify for federal funding for public transit, streets and roads and bicycle and pedestrian facilities. The Plan must demonstrate achievement of a region's share of state greenhouse gas emission reduction goals and is required to be updated every four years. Attachment A to this NOP provides more information on MTC, SB 375, Plan Bay Area 2040 and alternative plan scenarios.

In accordance with the California Environmental Quality Act (CEQA) Guidelines (Section 15082), the purpose of this Notice of Preparation is to seek comments about the scope and comment of the environmental impact assessment that will be conducted for this update of the Plan. If you represent an agency that may rely upon the EIR for project approval and/or tiering, MTC and ABAG are particularly interested in what information may be helpful for these purposes. Input is also sought from organizations and individuals as to the issues that should be addressed in the EIR.

Adoption and implementation of the Plan has the potential to result in environmental effects in all of the environmental impact areas identified in CEQA. For this reason, the Plan Bay Area 2040 EIR will be a

(continued on back page)

"full scope" document and will analyze all of the required CEQA environmental issue areas. These include: aesthetics and visual resources; agriculture and forestry resources; air quality (including toxic air contaminants); biological resources; cultural resources; geology, seismicity, soils, and mineral resources; energy consumption; greenhouse gas emissions and climate change (including sea level rise); hazards and hazardous materials; hydrology and water quality; land use and planning; noise and vibration; population and housing; public services and recreation; transportation; utilities and other service systems. The EIR will also address cumulative effects, growth inducing impacts and other issues required by CEQA.

All interested agencies, organizations and individuals are welcome to submit comments and/or participate in the scoping meetings for the Draft EIR. Oral comments will be accepted during three regional scoping meetings:

Thursday, May 26, 2016
11:00 a.m. to 1 p.m.
Dr. Martin Luther King Jr. Library
One Washington Square, Room 225
San Jose, California

Tuesday, May 31, 2016
6:30 p.m. to 8:30 p.m.
MetroCenter Auditorium
101 8th Street
Oakland, California

Thursday, June 2, 2016
11:00 a.m. to 1 p.m.
Finley Community Center
2060 W. College Avenue
Santa Rosa, California

Written comments will be accepted at the scoping meetings; via mail to MTC Public Information, 375 Beale Street, Suite 800, San Francisco, CA, 94105; via fax to 510.817.5848 before May 19 (beginning May 23, send fax to 415.536.9800); or via email to eircomments@mtc.ca.gov. **Written comments must be received at the MTC offices no later than June 15, 2016.** For more information, call the MTC Public Information Office at 510.817.5757 before May 19 (beginning May 23, call 415.778.6757). Note: MTC and ABAG will have new phone numbers beginning May 23.

Do you need written materials in large type or in Braille to participate in MTC or BATA meetings? Do you need a sign language interpreter or other assistance? Is English your second language? Do you need one of our documents translated? Do you need an interpreter who speaks your language present at one of our meetings?

We can help! You can request assistance by calling 510.817.5757 before May 19 (call 415.778.6757 beginning May 23) or 510.817.5769 for TDD/TTY before May 19 (the TDD/TTY number is 415.778.6769 beginning May 23). Visit www.mtc.ca.gov for more information. We require at least three days' notice to provide reasonable accommodations. We prefer more notice if possible. We will make every effort to arrange for assistance as soon as possible.

5/16/2016

Adam Noelting, MTC Senior Planner — Date
Plan Bay Area 2040 Project Manager

NOTICE OF PREPARATION
Metropolitan Transportation Commission
San Francisco Bay Area Regional Transportation Plan / Sustainable Communities Strategy
Environmental Impact Report
ATTACHMENT A

Background

The Metropolitan Transportation Commission (MTC) is the transportation planning, coordinating and financing agency for the nine-county San Francisco Bay Area (which includes Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano and Sonoma Counties). Created by the State Legislature in 1970, MTC functions as both the regional transportation planning agency (RTPA) which is a state designation, and as the region's metropolitan planning organization (MPO) which is a federal designation. As required by State legislation (Government Code Section 65080 et. seq.) and by federal regulation (Title 23 USC Section 134), MTC is responsible for preparing the Regional Transportation Plan (RTP) for the San Francisco Bay Area Region. An RTP is a long-range plan that identifies the strategies and investments to maintain, manage, and improve the region's transportation network.

A Sustainable Communities Strategy (SCS) is a required element of the RTP under California's Sustainable Communities and Climate Protection Act, also known as Sen. Bill 375 (Stats. 2008, ch. 728) (SB 375). While other efforts to reduce greenhouse gas (GHG) emissions focus on alternative fuels and vehicle efficiency, SB 375 is intended to more effectively reduce emissions by integrating land use and transportation planning to reduce overall passenger vehicle miles traveled. Through the development of a SCS, that accompanies the RTP, policies and strategies will be identified to reduce per capita passenger vehicle-generated GHG emissions. The SCS will identify the general location of land uses, residential densities, and building intensities within the region; identify areas within the region sufficient to house all the population of the region; identify areas within the region sufficient to house an 8-year projection of the regional housing need; identify a transportation network to serve the regional transportation needs; gather and consider the best practically available scientific information regarding resources areas and farmland in the region; consider the state housing goals; set forth a forecasted development pattern for the region; and allow the regional transportation plan to comply with the federal Clean Air Act. (Gov. Code, § 65080, subd. (b)(F)(2)(B)) If the SCS for the RTP update does not achieve the GHG emission targets set by the California Air Resources Board (CARB), an Alternative Planning Strategy (APS) must be developed to demonstrate how the targets could be achieved.

The San Francisco Bay Area's RTP/SCS sets policies to guide transportation decisions and proposes a program of capital, operational, and management improvements needed through the year 2040. In addition, if the SCS achieves its GHG emission target and the CARB accepts a determination by MTC that the SCS, if implemented, would achieve its GHG emissions target, certain land development projects may be eligible for CEQA streamlining if they are consistent with the general use, density, intensity and applicable policies of the adopted SCS.

Plan Bay Area 2040

Plan Bay Area 2040 is the update of the region's first RTP/SCS, *Plan Bay Area*, and is a joint effort led by MTC and ABAG and developed in partnership with the Bay Area's other two regional government agencies, the Bay Area Air Quality Management District (BAAQMD), and the Bay Conservation and

Development Commission (BCDC). Plan Bay Area 2040 strives to meet the requirements of SB 375 by developing an integrated RTP/SCS plan and strives to attain the per-capita GHG emission reduction targets of -7 percent by year 2020 and -15 percent by year 2035 from 2005 levels.

Plan Bay Area 2040 will reinforce land use and transportation integration per SB 375 and present a vision of what the Bay Area's land use patterns and transportation networks might look like in 2040. Goals of Plan Bay Area 2040 include:

- Climate Protection
- Open Space & Agricultural Preservation
- Transportation System Effectiveness
- Adequate Housing
- Healthy and Safe Communities
- Equitable Access
- Economic Vitality

Plan Bay Area 2040 forecasts the Bay Area to add over 2.4 million people, 1.3 million new jobs and 823,000 new housing units between 2010 and 2040. To plan for this future growth and meet the targets set forth in SB 375, Plan Bay Area 2040 builds on local and regional planning efforts by using a framework of 188 locally-adopted Priority Development Areas (PDAs) and 165 Priority Conservation Areas (PCAs) in the nine-county Bay Area. PDAs are areas where amenities and services can be developed to meet the day-to-day needs of residents in a pedestrian-friendly environment served by transit. Plan Bay Area 2040 strives to help PDAs become "Complete Communities," based in large part on local aspirations and community context. PCAs are areas of regional significance that have broad community support and are in need of protection. They provide important agricultural, natural resource, scenic, cultural, recreational, and/or ecological values, and ecosystem functions.

Plan Bay Area 2040 also includes a financially constrained transportation investment plan as required by state and federal planning regulations. It includes transportation projects and programs that would be funded through existing and future revenues that are projected to be reasonably available to the region over the 24-year horizon of the plan to support the adopted growth pattern. A total of $299 billion in revenues is available for the financially constrained Plan Bay Area 2040.

For more information about Plan Bay Area 2040, visit: http://planbayarea.org/plan-bay-area.html.

Scenarios to be Analyzed

MTC and ABAG have developed three land use and transportation scenarios, described below, to illustrate the effects that different housing, land use and transportation strategies have on the region's adopted goals and performance targets. MTC and ABAG will evaluate the three scenarios, and one or a combination of them will be identified as the preferred plan, which will be analyzed as the project in the EIR. The remaining scenarios may be analyzed as alternatives in the EIR.

Each scenario uses the same regional growth control totals of 2.4 million new people, 1.3 million new jobs and 823,000 new housing units, along with the same discretionary transportation revenues to support the growth.

Main Streets Scenario

The Main Streets Scenario targets expected growth in people and jobs in the downtowns of every Bay Area city. This scenario most closely resembles traditional suburban growth, with more growth in areas that are presently undeveloped. Of the three scenarios, this scenario expects the smallest share of

housing growth to occur in PDAs (54%); comparable to the other scenarios, expects the smallest share of new housing to occur in the three big cities of San Jose, San Francisco and Oakland (43%); expects a similar share as with the Connected Neighborhoods scenario of new housing in Bayside communities (21%); the largest share of new housing is distributed in Inland, Coastal, Delta communities (35%) in comparison to the other scenarios. Specific land use strategies include upzoning of select suburban areas to increase residential and commercial development capacity; allowing urban growth boundaries to expand faster than expected compared to past trends; reducing parking minimums in PDAs along regional rail transit; and encouraging affordable housing through inclusionary zoning, fees on commercial development and other tax policies.

This scenario calls for an expansion of high-occupancy toll lanes, with pricing based on level of congestion, and highway widenings to manage the increased number of cars. Of the three scenarios, this scenario invests the largest share of discretionary revenues towards maintaining and operating the existing system (53%), followed by investments in major projects (24%) and system enhancements (23%). Specific strategies to support the growth pattern include strategic transit investments, especially bus improvements, to provide access to increasingly dispersed job centers; technological advances to use roadway capacity more efficiently, while emphasizing freeway-focused pricing like Express Lanes / Managed Lanes as complementary strategies; strategic highway capacity increases; investment into both state of good repair (particularly for highways and local streets across all nine counties); and technological advancements (e.g. clean vehicles) and incentive programs to encourage travel options that help meet GHG emissions reduction targets.

Connected Neighborhoods Scenario

The Connected Neighborhoods Scenario emphasizes expected growth in people and jobs in areas near major transit corridors prioritized by cities as being the best places for new development. Of the three scenarios, this scenario expects the largest share of housing growth to occur in PDAs (69%); expects a similar share as the Main Streets Scenario of new housing to occur in the three big cities of San Jose, San Francisco and Oakland (44%); expects a more modest share of new housing in Bayside communities (22%); with the largest share of new housing in Inland, Coastal, Delta communities (35%). Specific land use strategies include encouraging new housing development by increasing residential development capacity in PDAs based on locally identified PDA place type; raising caps on office development in San Francisco; avoiding development on adopted PCAs and accommodating all new growth within existing urban growth boundaries or urban limit lines, using city boundaries as a limit when a jurisdiction has no expansion limit; reducing parking minimums in PDAs with high levels of transit access along El Camino Real and East Bay corridors; and encouraging affordable housing through inclusionary zoning.

Expansion of roadways would be limited, with more focus on modernizing and expanding our transit system. Investments in bicycle and pedestrian infrastructure would help create more walkable and bikeable downtowns. Compared to the Main Streets Scenario, this scenario invests a smaller share of discretionary revenues towards maintaining and operating the existing system (46%), but invests more towards major projects (31%) and the same share toward system enhancements (23%). Specific strategies to support the growth pattern include strategic transit efficiency investments to improve frequencies and reduce travel times on core transit lines across the region; a limited set of high performing highway efficiency investments, including strategic highway capacity improvements to address bottlenecks and provide reliever routes to freeways within the urban core; the most cost-effective transit expansion projects that support the region's highest-growth PDAs; state of good repair needs with expansion and efficiency priorities for all modes; identify opportunities to align state of good repair to support PDA growth by repaving streets and upgrading buses that serve these communities;

and technological advancements (e.g. clean vehicles) and incentive programs to encourage travel options that help meet GHG emissions reduction targets.

Big Cities Scenario

The Big Cities Scenario concentrates expected growth in the Bay Area's three largest cities: San Jose, San Francisco and Oakland. Neighboring towns already well connected to these cities would also see growth, particularly in areas that cities have prioritized for development. Of the three scenarios, this scenario expects a similar share of housing growth as the Main Streets Scenario to occur in PDAs (55%); expects the highest share of new housing to occur in the three big cities of San Jose, San Francisco and Oakland (72%); expects a smaller share of new housing in Bayside communities (17%); and the smallest share of new housing in Inland, Coastal, Delta communities (11%). Specific land use strategies include increasing development capacity in areas with high transit access by increasing residential densities in key PDAs, TPAs and select opportunity sites; eliminating caps on office development in San Francisco; avoiding development on adopted PCAs and accommodating all new growth within existing urban growth boundaries or urban limit lines, using city boundaries as a limit when a jurisdiction has no expansion limit; reducing parking minimums in three big cities and neighboring communities; encouraging more affordable housing through inclusionary zoning, fees on residential development and other tax policy.

City streets, bike lanes, rail lines and other transportation infrastructure serving the region's core will be repaired, maintained, and expanded to meet increased demand. Compared to the previous two scenarios, this scenario invests the smallest share of discretionary revenues towards maintaining and operating the existing system (39%), and invests the largest share towards major projects (38%) and the same share toward system enhancements (23%). Specific strategies to support the growth pattern include expansion of the South Bay transit system to support high-density development across Silicon Valley, while at the same time prioritizing investment in core capacity projects in San Francisco and Oakland to enable high-density development; link regional rail systems into the heart of the Bay Area's two largest cities – San Francisco and San Jose – while boosting service frequencies to support increasingly-urban commute patterns; state of good repair needs with expansion and efficiency priorities for all modes; support urban development in San Francisco by implementing cordon pricing and leveraging motorists' tolls to pay for robust and time-competitive transit services; align operating and maintenance funds to prioritize investments into high-growth cities and high-ridership systems; and technological advancements (e.g. clean vehicles) and incentive programs to encourage travel options that help meet GHG emissions reduction targets.

Appendix B

Scoping Summary and Comments on the NOP

APPENDIX B
SCOPING SUMMARY

A Notice of Preparation (NOP) informs the public of the lead agency's intent to prepare an environmental impact report (EIR) pursuant to the California Environmental Quality Act (CEQA). An NOP for an EIR was issued by the Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) on May 16, 2016 for the Draft Environmental Impact Report for Plan Bay Area 2040 – the Regional Transportation Plan (RTP) / Sustainable Communities Strategy (SCS) (Plan). The NOP was sent to the California State Clearinghouse, federal, state, and local agencies, and members of the public. As a connected action, three public scoping meetings were held to provide the public and public agencies with the opportunity to learn more about the Plan Bay Area 2040 and to provide another venue to submit comments regarding the issues that should be addressed in the EIR. The scoping meetings were held as follows:

Thursday, May 26, 2016 11:00 a.m. to 1 p.m.	Tuesday, May 31, 2016 6:30 p.m. to 8:30 p.m.	Thursday, June 2, 2016 11:00 a.m. to 1 p.m.
Dr. Martin Luther King Jr. Library One Washington Square, Room 225 San Jose, California	MetroCenter Auditorium 101 8th Street Oakland, California	Finley Community Center 2060 W. College Avenue Santa Rosa, California

At each of these meetings, MTC and EIR consultant staff were available to describe the Plan Bay Area update and EIR processes and to disclose and discuss key environmental issues identified in the NOP. Appendix A of this EIR contains the NOP.

Table B-1, below, lists the scoping comments (both written and oral) received during the NOP comment period (May 16, 2015 through June 15, 2016). The table lists the commenter, the County from which the commenter is located (if applicable), the date the comment was received, and a summary of the relevant EIR section/s in which the comments are addressed. All written NOP comment letters in their entirety are provided in this Appendix. Oral comments at the public scoping meetings were provided to court reporters in attendance at each meeting; the transcripts in their entirety are also provided in this Appendix.

COMMENTS RELATED TO THE SCOPE OF THE PROJECT

Some of the comments include questions about aspects of the Plan or request information that are not related to the potential physical environmental impacts of the project. Some comments are related to the description and scope of the Plan, rather than the content of the environmental document for the project. Comments regarding the Plan that do not pertain to potential physical environmental effects of the project were forwarded to the appropriate MTC and ABAG staff, but are not evaluated in this Draft EIR because they do not pertain to the project's physical environmental effects. The following table includes a list of the NOP comments, including oral comments received during the scoping meetings. The table includes a summary of the topics addressed in the NOP comments, indicating in which EIR section the comments are addressed.

Table B-1 Comments Received on the Notice of Preparation

Letter Number	Name of Author	Agency / Organization	County of comment origin[1] (if applicable)	Date Received	Relevant EIR Section(s)	Written / Oral
			AGENCIES			
			State			
1	Erik Vink	Delta Protection Commission	Multiple	June 7, 2016	Land Use and Physical Development Public Services and Recreation Cultural Resources Visual Resources	Written
2	Gayle Totton	Native American Heritage Commission	N/A	June 14, 2016	Cultural Resources	Written
3	Kelsey Ducklow	California Coastal Commission	Multiple	June 15, 2016	Land Use and Physical Development Climate Change and Greenhouse Gases Transportation	Written
4	Patricia Maurice	Caltrans District 4	Multiple	June 15, 2015	Transportation Land Use and Physical Development Air Quality	Written
5	Ben Tripousis	California High Speed Rail Authority	Multiple	June 15, 2016	Transportation Land Use and Physical Development	Written
6			Regional / Local			
7	Cindy Horvath	Alameda County	Alameda	May 26, 2016	Non-CEQA (information request) Project Description/Plan Non-CEQA (equity) Transportation Project Description (funding)	Written
8	Matt Rodriguez	City of San Pablo	Contra Costa	June 6, 2016	Land Use and Physical Development	
9	Gerry Beaudin	City of Pleasanton, Community Development Planning	Alameda	June 8, 2016	Land Use and Physical Development Alternatives Air Quality Climate Change and Greenhouse Gases Public Utilities and Facilities Growth-inducement	Written
10	Mona Palacios	Alameda LAFCo	Alameda	June 10, 2016	Land Use and Physical Development Public Services and Recreation	Written
11	Patrick Cavanah	Stanislaus County	Stanislaus	June 10, 2016	No Comments	Written
12	Chris Augenstein	Santa Clara Valley Transportation Authority	Santa Clara	June 14, 2016	Project Description (growth assumptions) Alternatives Transportation Land Use and Physical Development	Written
13	Sandra Hamlat	East Bay Regional Park District	Contra Costa Alameda	June 14, 2016	Public Services and Recreation Land Use and Physical Development	Written
14	Jennifer Barrett	Sonoma County Permit and Resource Management Department	Sonoma	June 14, 2016	Land Use and Physical Development	Written

Table B-1 Comments Received on the Notice of Preparation

Letter Number	Name of Author	Agency / Organization	County of comment origin[1] (if applicable)	Date Received	Relevant EIR Section(s)	Written / Oral
15	Christie Thomason	Delta Stewardship Council	Sacramento-San Joaquin Delta and Suisun Marsh	June 15, 2016	Land Use and Planning Biological Resources Hazards Public Utilities and Facilities Water Resources	Written
16	Lou Ann Texeira	Contra Costa LAFCo	Contra Costa	June 15, 2016	Land Use and Physical Development Public Utilities and Facilities	Written
17	Elizabeth Scanlon	Caltrain	SF, San Mateo, Santa Clara	June 15, 2016	Transportation Air Quality	Written
18	Harry Freitas Jim Ortbal	City of San Jose	Santa Clara	June 15, 2016	Land Use and Physical Development Alternatives Transportation	Written
19	Edward D. Reiskin	San Francisco Municipal Transportation Agency	San Francisco	June 15, 2016	Transportation	Written
20	Annie Thomson	County of Santa Clara Parks and Recreation Department	Santa Clara	June 15, 2016	Non-CEQA (planning process) Land Use and Physical Development Transportation Public Services and Recreation	Written
21	Diane Nguyen	San Joaquin Council of Governments	San Joaquin	June 15, 2016	Land Use and Physical Development Transportation Climate Change and Greenhouse Gases	Written
22	Dawn S. Cameron	County of Santa Clara Roads and Airports Department	Santa Clara	June 15, 2016	Land Use and Physical Development Transportation	Written
23	Denis Mulligan	Golden Gate Bridge Highway & Transportation District	Multiple	June 15, 2016	Transportation	Written
24	Marc Roberts	City of Livermore	Alameda	June 15, 2016	Alternatives Transportation Land Use and Physical Development Land Use and Physical Development Cumulative Impacts	Written
25	Keene Simons	Marin LAFCo	Marin	June 21, 2016	Non-CEQA (Marin agency coordination) Non-CEQA (MTC/LAFCo coordination)	Written
ORGANIZATIONS AND INDIVIDUALS						
Organizations						
26	Colin Heyne	Silicon Valley Bicycle Coalition	Santa Clara	May 26, 2016	Non-CEQA (planning process/preferred scenario)	Written
27	David Schonbrunn	Transportation Solutions Defense and Education Fund	Multiple	June 5, 2016	Non-CEQA (planning process) Climate Change and Greenhouse Gases	Written

Table B-1 Comments Received on the Notice of Preparation

Letter Number	Name of Author	Agency / Organization	County of comment origin[1] (if applicable)	Date Received	Relevant EIR Section(s)	Written / Oral
28	Irene Gutierrez and Will Rostov	Earthjustice Counsel for Sierra Club and CBE	N/A	June 7, 2016	Project Description Background (Settlement Agreements)	Written
29	Sherman Lewis	Hayward Area Planning Association	Alameda	June 14, 2016	Transportation Alternatives	Written
30	Melissa Jones Chuck McKetney Michael Stacey	Bay Area Regional Health Inequities Initiative	Multiple	June 15, 2016	Climate Change and Greenhouse Gases Alternative Transportation Displacement Impacts Air Quality Noise and Vibration Alternatives	Written
31	Jonathan Scharfman	Universal Paragon Corporation	San Mateo	June 15, 2016	Non-CEQA (planning process/preferred scenario)	Written
32	Matt Vander Sluis	Greenbelt Alliance	San Francisco, Sonoma, Contra Costa, Santa Clara	June 15, 2016	Biological Resources Public Utilities and Facilities Public Services and Recreation Water Resources Land Use and Physical Development Transportation Climate Change and Greenhouse Gases Alternatives Non-CEQA (social equity)	Written
33	Jack Swearengen	Friends of SMART	Sonoma, Marin	June 15, 2016	Non-CEQA (transportation planning)	Written
34	David Schonbrunn	Transportation Solutions Defense and Education Fund	Multiple	June 15, 2016	Alternatives Transportation Air Quality Climate Change and Greenhouse Gases Land Use and Physical Development	Written
35	David Zisser	6 Wins for Social Equity Network	Multiple	June 15, 2016	Alternatives Air Quality Climate Change and Greenhouse Gases Land Use and Physical Development Non-CEQA (housing affordability, social equity)	Written
36	Michael J. Ferreira	Sierra Club	Multiple	June 15, 2016	Transportation Climate Change and Greenhouse Gases Non-CEQA (process/plan) Non-CEQA (scoping meeting) Alternative Scenarios Non-CEQA (Settlement Agreements)	Written
			Individuals			
37	Jake Brenneise	N/A	Unknown	May 19, 2016	Land Use and Planning (zoning)	Written

Table B-1 Comments Received on the Notice of Preparation

Letter Number	Name of Author	Agency / Organization	County of comment origin[1] (if applicable)	Date Received	Relevant EIR Section(s)	Written / Oral
38	Mary Collins	N/A	Santa Clara	May 26, 2016	Non-CEQA (preferred scenario) Land Use and Physical Development Transportation	Written
39	Karen Schlesser	N/A	Santa Clara	May 26, 2016	Land Use and Physical Development Transportation	Written
40	Roma Dawson	N/A	Santa Clara	May 26, 2016	Land Use and Physical Development Project Description Non-CEQA (housing affordability, social equity)	Written
41	Gloria Chun Hoo	N/A	Santa Clara	May 26, 2016	Non-CEQA (alternative preference) Climate Change and Greenhouse Gases Water Resources Public Utilities and Facilities Transportation	Written
42	Edward C. Moore	N/A	Alameda	May 26, 2016	Non-CEQA (planning process/preferred scenario) Land Use and Physical Development Transportation (project description)	Written
43	Ferenc Kovac	N/A	Alameda	May 26, 2016	Land Use and Physical Development Non-CEQA (process comment)	Written
44	Jennie Schultz	N/A	Sonoma	May 26, 2016	Project Description/Plan	Written
45	Ferenc Kovac	N/A	Alameda	May 27, 2016	Land Use and Physical Development Transportation	Written
46	Alan Burnham	N/A	Alameda	May 28, 2016	Transportation	Written
47	Charles Cameron	N/A	Alameda	June 6, 2016	Transportation Climate Change and Greenhouse Gases Public Utilities and Facilities Water Resources Biological Resources	Written
48	Marina Carlson Wendy Jung	N/A	Alameda	June 14, 2016	Land Use and Physical Development Transportation	Written
49	Jill Borders	N/A	Santa Clara	June 15, 2016	Non-CEQA (gentrification)	Written
50	Sara Greenwald	N/A	San Francisco	June 15, 2015	Transportation Climate Change and Greenhouse Gases	Written
51	Gladwyn D'Souza	N/A	San Mateo	June 15, 2016	Transportation	Written
52	Howard Strassner	N/A	San Francisco	June 17, 2016	Transportation (parking)	Written

Table B-1 Comments Received on the Notice of Preparation

Letter Number	Name of Author	Agency / Organization	County of comment origin[1] (if applicable)	Date Received	Relevant EIR Section(s)	Written / Oral
SCOPING MEETING TRANSCRIPTS						
May 26, 2016 – San Jose						
53	Anonymous	N/A	Santa Clara	May 26, 2016	Transportation Public Services and Recreation	Oral
54	Shaunn Cartwright	N/A	Santa Clara	May 26, 2016	Non-CEQA (gentrification/environmental justice) Climate Change and Greenhouse Gases Land Use and Physical Development	Oral
55	Doug Muirhead	N/A	Santa Clara	May 26, 2016	Air Quality (modeling) Biological Resources Transportation/trail preferences	Oral
56	Anonymous	N/A	Santa Clara	May 26, 2016	Land Use and Physical Development	Oral
57	Jill Borders	N/A	Santa Clara	May 26, 2016	Non-CEQA (gentrification/environmental justice)	Oral
58	Peggy Cabrera	N/A	Santa Clara	May 26, 2016	Non-CEQA (plan preference) Land Use and Physical Development Transportation	Oral
59	Mark Roest	N/A	Santa Clara	May 26, 2016	Alternatives	Oral
May 31, 2016 – Oakland						
60	David Zisser	N/A	Alameda	May 31, 2016	Alternatives Non-CEQA (environmental justice) Transportation Climate Change and Greenhouse Gases	Oral
61	James Peterson	N/A	Alameda	May 31, 2016	Non-CEQA (MTC/ABAG staff location) Non-CEQA (market/housing plan)	Oral
62	Anonymous	N/A	Alameda	May 31, 2016	Non-CEQA (process)	Oral
63	**June 2, 2016 – Santa Rosa**					
64	Steve Birdlebough	N/A	Sonoma	June 2, 2016	Non-CEQA (regional vs local planning)	Oral
65	Myron R. Siegel	N/A	Sonoma	June 2, 2016	Alternative Transportation Land Use and Physical Development	Oral
66	Chris Knerr	N/A	Sonoma	June 2, 2016	Non-CEQA (planning process)	Oral
67	Anonymous	N/A	Sonoma	June 2, 2016	Non-CEQA (support for the project)	Oral
68	Anonymous	N/A	Sonoma	June 2, 2016	Land Use and Physical Development Alternatives	Oral
69	Steve Birdlebough	N/A	Sonoma	June 2, 2016	Non-CEQA (parking)	Oral

[1] The county of commenter origin indicates the country from which the commenter is located or the county (or counties) represented by the commenter, if applicable.
The Land Use and Physical Development chapter contains: land use and planning, agriculture and forest resources, and population, employment and housing.

State

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Contra Costa County Board of Supervisors

Skip Thomson, Vice Chair
Solano County Board of Supervisors

Don Nottoli
Sacramento County Board of Supervisors

Chuck Winn
San Joaquin County Board of Supervisors

Oscar Villegas
Yolo County Board of Supervisors

Ben Johnson
Cities of Contra Costa and Solano Counties

Christopher Cabaldon
Cities of Sacramento and Yolo Counties

Susan Lofthus
Cities of San Joaquin County

Michael Scriven
Central Delta Reclamation Districts

Justin van Loben Sels
North Delta Reclamation Districts

Robert Ferguson
South Delta Reclamation Districts

Brian Kelly
CA State Transportation Agency

Karen Ross
CA Department of Food and Agriculture

John Laird
CA Natural Resources Agency

Brian Bugsch
CA State Lands Commission

Ex Officio Members

Honorable Jim Frazier
California State Assembly

Honorable Cathleen Galgiani
California State Senate

June 7 2016

Adam Noelting, Senior Planner
Metropolitan Transportation Commission
MTC Public Information
375 Beale Street, Suite 800
San Francisco, CA 94105

RE: Notice of Preparation: San Francisco Bay Area Regional Transportation Plan/Sustainable Communities Strategy Environmental Impact Report

Dear Mr. Noelting:

The staff of the Delta Protection Commission offers these comments on the scope and content of the environmental impact report to be conducted for *Plan Bay Area 2040*. The Commission is a state agency charged with protecting and preserving the Sacramento-San Joaquin Delta. Portions of eastern Contra Costa, Solano, and Alameda counties lie within the Delta. The Commission has land use authority over development in the Primary Zone (see enclosed map), and monitors actions outside the Delta and in the Secondary Zone for their impacts on the resources of the Primary Zone.

The staff requests that MTC explicitly consider the Commission's jurisdiction and concerns about the Primary Zone when evaluating the environmental impacts of Plan Bay Area 2040 scenarios. Plan Bay Area 2040 will identify the general location of land uses, residential densities, and building intensities within the region. It will also identify a transportation network sufficient to serve the projected regional transportation needs, and consider the best available scientific information regarding resources areas and farmland in the region.

The following paragraphs describe the Commission's jurisdiction and authorities under the California Public Resources Code (PRC). For your convenience, the text of the referenced PRC sections is included as an enclosure to this letter.

Consistency with the Commission's Land Use and Resource Management Plan
The Commission may review proposed development in the Primary Zone for consistency with the policies of the Commission's Land Use and Resource Management Plan (LURMP), approved portions of local general plans, or the Delta Protection Act. The Commission may also comment on projects in the Secondary Zone that impact the Primary Zone (PRC §29770(a),(b),(d)). More specifically, the Delta Protection Act calls upon local agencies to internalize and implement the Commission's LURMP by adopting amendments to their General Plans so that those Plans are consistent with the LURMP for land within the Primary Zone (PRC §29763). Where local agencies have not adopted these amendments to their General Plan, the agencies must make a series of specific findings based on the record regarding the impacts of the proposed development on the Delta (PRC §29765). Only Sacramento and Yolo counties have complied with this requirement since the Commission updated its LURMP in 2010.

The Commission is updating the LURMP in the coming year. The revised LURMP could include new or revised policies addressing subdivision of agricultural lands, and installation of infrastructure (such as solar facilities, wind turbines, and wireless telecommunications facilities) in the Primary Zone.

Preserving the Delta as an Evolving Place and Advising the Delta Stewardship Council on the Implementation of the Delta Plan
The Delta Reform Act (Statutes of 2009, 7th Ex. Session, Chapter 5) identified the Commission as a forum for Delta residents to engage in decisions regarding actions to recognize and enhance the unique cultural, recreational, and agricultural resources of the Delta. As such, the Commission is the "appropriate agency to identify and provide recommendations to the Delta Stewardship Council on methods of preserving the Delta as an evolving place as the Delta Stewardship Council develops and implements the Delta Plan" (PRC § 29703.5(a), emphasis added). The Commission may also review and comment on "any significant project or proposed project within the scope of the Delta Plan, including but not limited to actions by state and federal agencies, that may affect the unique cultural, recreational, and agricultural values within the primary and secondary zones." (PRC §29773(a), emphasis added).

The Great California Delta Trail
The Commission also has a statutory mandate to develop and adopt a plan for the Great California Delta Trail (PRC §5852-5855).

Scope of the Environmental Analysis for Plan Bay Area 2040
The environmental analysis for Plan Bay Area 2040 should identify where each of the three land use and transportation scenarios (Main Streets, Connected Neighborhoods, and Big Cities) would cause changes in land use in the Delta, particularly loss of agricultural lands, in both the Primary and Secondary zones. Please indicate in each scenario where new housing is expected to be developed in the Delta, and where existing urban growth boundaries or urban limit lines are expected to expand into the Primary Zone. The analysis should indicate which (if any) Priority Development Areas (PDAs) and Priority Conservation Areas (PCAs) are in the Primary or Secondary zones. In addition, the MTC should analyze the cumulative impacts of the three

development scenarios on the resources of the Primary Zone, including: the sustainability of agriculture; increasing demand for, and needed improvements to, the recreational resources of the Delta (e.g., marinas, roads, bike paths, and parks); and the values of the Delta that make it a unique place (e.g., cultural resources and the aesthetic experience of the Delta).

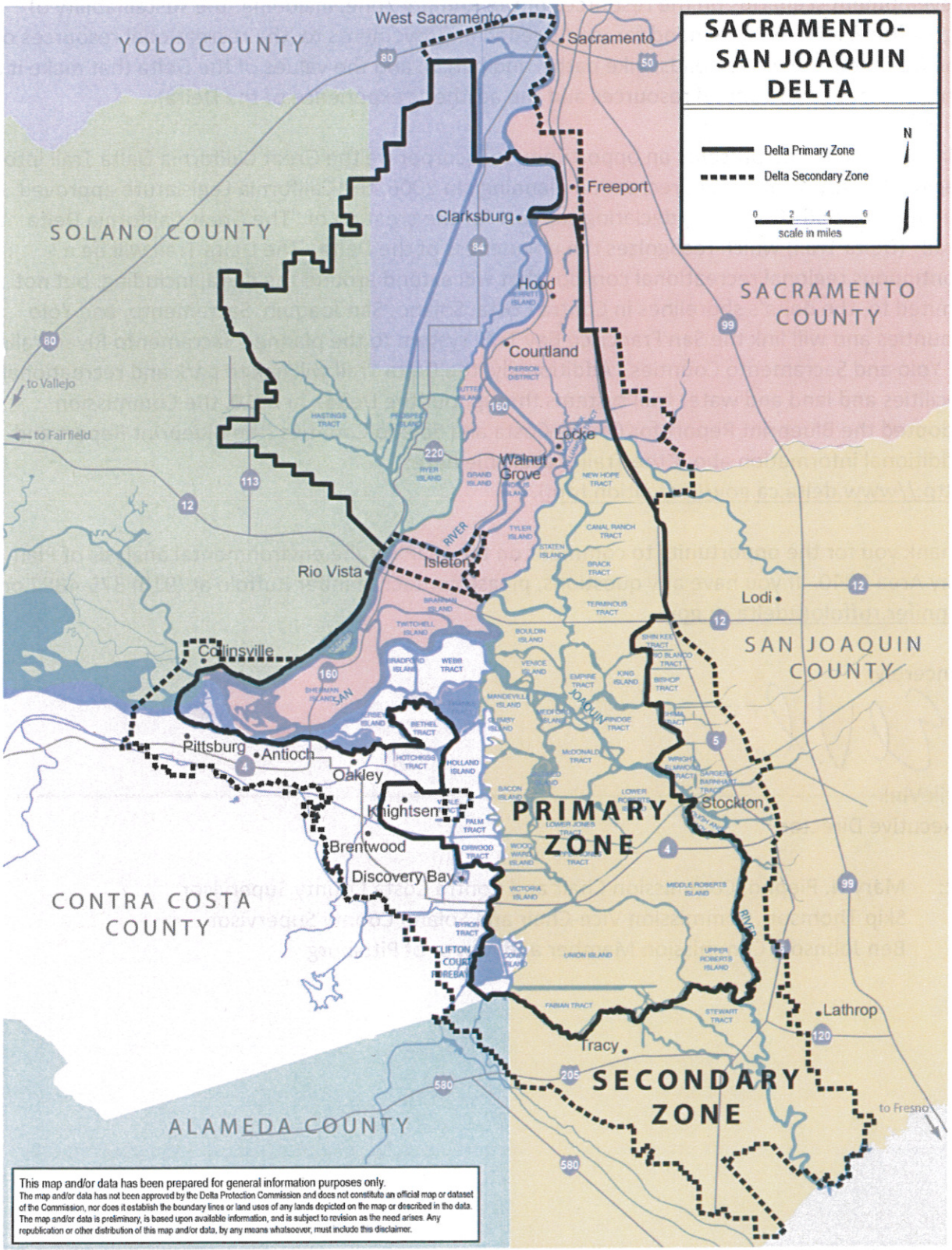
Plan Bay Area 2040 presents an opportunity to incorporate the Great California Delta Trail into regional transportation and recreation planning. In 2006, the California Legislature approved Senate Bill 1556 (Torlakson) declaring support for the creation of "The Great California Delta Trail" (Delta Trail) which recognizes the uniqueness of the Delta. The Delta Trail will be a continuous regional recreational corridor that will extend around the delta, including, but not limited to, the delta's shorelines in Contra Costa, Solano, San Joaquin, Sacramento, and Yolo Counties and will link the San Francisco Bay Trail system to the planned Sacramento River trails in Yolo and Sacramento Counties. Additionally, the Delta Trail will link to park and recreational facilities and land and water trail systems throughout the Delta. In 2010, the Commission adopted the Blueprint Report for Contra Costa and Solano Counties (the Blueprint Report and additional information about the Trail is available here: http://www.delta.ca.gov/Recreation.htm).

Thank you for the opportunity to comment on the NOP for the environmental analysis of Plan Bay Area 2040. If you have any questions, please contact Jennifer Ruffolo at (916) 375-4882 or jennifer.ruffolo@delta.ca.gov

Sincerely,

Erik Vink
Executive Director

cc: Mary N. Piepho, Commission Chair and Contra Costa County Supervisor
Skip Thomson, Commission Vice-Chair and Solano County Supervisor
Ben Johnson, Commission Member and Mayor of Pittsburg


SACRAMENTO-SAN JOAQUIN DELTA
Delta Primary Zone
Delta Secondary Zone
N
0 2 4 6
scale in miles
YOLO COUNTY
SOLANO COUNTY
SACRAMENTO COUNTY
SAN JOAQUIN COUNTY
CONTRA COSTA COUNTY
ALAMEDA COUNTY
West Sacramento
Sacramento
Freeport
Clarksburg
Hood
Courtland
Locke
Walnut Grove
Isleton
Rio Vista
Lodi
Collinsville
Pittsburg
Antioch
Oakley
Knightsen
Brentwood
Discovery Bay
Stockton
Lathrop
Tracy
to Vallejo
to Fairfield
to Fresno
PRIMARY ZONE
SECONDARY ZONE
This map and/or data has been prepared for general information purposes only.
The map and/or data has not been approved by the Delta Protection Commission and does not constitute an official map or dataset of the Commission, nor does it establish the boundary lines or land uses of any lands depicted on the map or described in the data. The map and/or data is preliminary, is based upon available information, and is subject to revision as the need arises. Any republication or other distribution of this map and/or data, by any means whatsoever, must include this disclaimer.

ENCLOSURE
DELTA PROTECTION COMMISSION STATUTORY AUTHORITY

PRC Section 29770(a)
Any person who is aggrieved by any action taken by a local government or other local agency in implementing the resource management plan, or otherwise taken pursuant to this division, may file an appeal with the commission. The ground for an appeal and the commission consideration of an appeal shall be that an action, as to land located exclusively within the primary zone, is inconsistent with the resource management plan, the approved portions of local government general plans that implement the resource management plan, or this division. The appeal shall be heard by the commission within 60 days from the date of the filing of the appeal, unless the commission, either itself or by delegation to the executive director, determines that the issue raised on appeal is not within the commission's jurisdiction or does not raise an appealable issue.

PRC Section 29770(b)
In the absence of an appeal by an aggrieved person, the commission may decide by majority vote to review on appeal any action taken by a local government or other local agency in implementing the resource management plan, or otherwise taken pursuant to this division, for land located exclusively within the primary zone, if the commission believes the action may be inconsistent with the resource management plan, or this division.

PRC Section 29770(d)
The commission may comment on projects within the secondary zone that impact the primary zone.

PRC Section 29703.5(a)
The Legislature further finds and declares both of the following:
(a) The Delta Protection Commission created pursuant to Section 29735 provides an existing forum for Delta residents to engage in decisions regarding actions to recognize and enhance the unique cultural, recreational, and agricultural resources of the Delta. As such, the commission is the appropriate agency to identify and provide recommendations to the Delta Stewardship Council on methods of preserving the Delta as an evolving place as the Delta Stewardship Council develops and implements the Delta Plan.

PRC Section 29723(a)
"Development" means on, in, over, or under land or water, the placement or erection of any solid material or structure; discharge of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, including, but not limited to, subdivisions pursuant to the Subdivision Map Act (Division 2 (commencing with Section 66410) of Title 7 of the Government Code), and any other division of land including lot splits, except where the land division is brought about in connection with the purchase of the land by a public agency for public recreational or fish and wildlife uses or preservation; construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes.

PRC Section 29760
(a) Not later than October 1, 1994, the commission shall prepare and adopt, by a majority vote of the membership of the commission, and thereafter review and maintain, a comprehensive long-term resource management plan for land uses within the primary zone of the delta. The resource

management plan shall consist of the map of the primary zone and text or texts setting forth a description of the needs and goals for the delta and a statement of the policies, standards, and elements of the resource management plan.
(b) The resource management plan shall meet the following requirements:
(1) Protect and preserve the cultural values and economic vitality that reflect the history, natural heritage, and human resources of the delta.
(2) Conserve and protect the quality of renewable resources.
(3) Preserve and protect agricultural viability.
(4) Restore, improve, and manage levee systems by promoting strategies, including, but not limited to, methods and procedures which advance the adoption and implementation of coordinated and uniform standards among governmental agencies for the maintenance, repair, and construction of both public and private levees.
(5) Preserve and protect delta dependent fisheries and their habitat.
(6) Preserve and protect riparian and wetlands habitat, and promote and encourage a net increase in both the acreage and values of those resources on public lands and through voluntary cooperative arrangements with private property owners.
(7) Preserve and protect the water quality of the delta, both for instream purposes and for human use and consumption.
(8) Preserve and protect open-space and outdoor recreational opportunities.
(9) Preserve and protect private property interests from trespassing and vandalism.
(10) Preserve and protect opportunities for controlled public access and use of public lands and waterways consistent with the protection of natural resources and private property interests.
(11) Preserve, protect, and maintain navigation.
(12) Protect the delta from any development that results in any significant loss of habitat or agricultural land.
(13) Promote strategies for the funding, acquisition, and maintenance of voluntary cooperative arrangements, such as conservation easements, between property owners and conservation groups that protect wildlife habitat and agricultural land, while not impairing the integrity of levees.
(14) Permit water reservoir and habitat development that is compatible with other uses.
(c) The resource management plan shall not supersede the authority of local governments over areas within the secondary zone.
(d) To facilitate, in part, the requirements specified in paragraphs (8), (9), (10), and (11) of subdivision (b), the commission shall include in the resource management plan, in consultation with all law enforcement agencies having jurisdiction in the delta, a strategy for the implementation of a coordinated marine patrol system throughout the delta that will improve law enforcement and coordinate the use of resources by all jurisdictions to ensure an adequate level of public safety. The strategic plan shall identify resources to implement that coordination. The commission shall have no authority to abrogate the existing authority of any law enforcement agency.
(e) To the extent that any of the requirements specified in this section are in conflict, nothing in this division shall deny the right of the landowner to continue the agricultural use of the land.

PRC Section 29763
Within 180 days from the date of the adoption of the resources management plan or any amendments, changes, or updates, to the resources management plan by the commission, each local government shall submit to the commission proposed amendments to its general plan that are intended to make the general plan consistent with the resources management plan with respect to land located within the primary zone.

PRC Section 29763.5

The commission shall act on proposed local government general plan amendments within 60 days from the date of submittal of the proposed amendments. The commission shall approve the proposed general plan amendments by a majority vote of the commission membership, with regard to lands within the primary zone, only after making all of the following written findings as to the potential impact of the proposed amendments, to the extent that those impacts will not increase requirements or restrictions upon agricultural practices in the primary zone, based on substantial evidence in the record:

(a) The general plan, and any development approved or proposed that is consistent with the general plan, are consistent with the resource management plan.

(b) The general plan, and any development approved or proposed that is consistent with the general plan, will not result in wetland or riparian loss.

(c) The general plan, and development approved or proposed that is consistent with the general plan, will not result in the degradation of water quality.

(d) The general plan, and any development approved or proposed that is consistent with the general plan, will not result in increased nonpoint source pollution.

(e) The general plan, and any development approved or proposed that is consistent with the general plan, will not result in the degradation or reduction of Pacific Flyway habitat.

(f) The general plan, and any development approved or proposed that is consistent with the general plan, will not result in reduced public access, provided the access does not infringe on private property rights.

(g) The general plan, and any development approved or proposed that is consistent with the general plan, will not expose the public to increased flood hazard.

(h) The general plan, and any development approved or proposed that is consistent with the general plan, will not adversely impact agricultural lands or increase the potential for vandalism, trespass, or the creation of public or private nuisances on public or private land.

(i) The general plan, and any development approved or proposed that is consistent with the general plan, will not result in the degradation or impairment of levee integrity.

(j) The general plan, and any development approved or proposed that is consistent with the general plan, will not adversely impact navigation.

(k) The general plan, and any development approved or proposed that is consistent with the general plan, will not result in any increased requirements or restrictions upon agricultural practices in the primary zone.

PRC Section 29765

Prior to the commission approving the general plan amendments of the local government, the local government may approve development within the primary zone only after making all of the following written findings on the basis of substantial evidence in the record:

(a) The development will not result in wetland or riparian loss.

(b) The development will not result in the degradation of water quality.

(c) The development will not result in increased nonpoint source pollution or soil erosion, including subsidence or sedimentation.

(d) The development will not result in degradation or reduction of Pacific Flyway habitat.

(e) The development will not result in reduced public access, provided that access does not infringe upon private property rights.

(f) The development will not expose the public to increased flood hazards.

(g) The development will not adversely impact agricultural lands or increase the potential for vandalism, trespass, or the creation of public or private nuisances on private or public land.

(h) The development will not result in the degradation or impairment of levee integrity.

(i) The development will not adversely impact navigation.

(j) The development will not result in any increased requirements or restrictions upon agricultural practices in the primary zone.

PRC Section 29773(a)
The commission may review and provide comments and recommendations to the Delta Stewardship Council on any significant project or proposed project within the scope of the Delta Plan, including, but not limited to, actions by state and federal agencies, that may affect the unique cultural, recreational, and agricultural values within the primary and secondary zones. Review and comment authority granted to the commission shall include, but is not limited to, all of the following:
(1) Identification of impacts to the cultural, recreational, and agricultural values of the Delta.
(2) Recommendations for actions that may avoid, reduce, or mitigate impacts to the cultural, recreational, and agricultural values of the Delta.
(3) Review of consistency of the project or proposed project with the resources management plan and the Delta Plan.
(4) Identification and recommendation of methods to address Delta community concerns regarding large-scale habitat plan development and implementation.

PRC Section 29773(b)
The council shall take into consideration the recommendations of the commission, including the recommendations included in the economic sustainability plan. If the council, in its discretion, determines that a recommendation of the commission is feasible and consistent with the objectives of the Delta Plan and the purposes of this division, the council shall adopt the recommendation.

PRC Section 5854(a) The Great California Delta Trail
...The commission shall develop and adopt a plan and implementation program, including a finance and maintenance plan, for a continuous regional recreational corridor that will extend around the delta, including, but not limited to, the delta's shorelines in Contra Costa, Solano, San Joaquin, Sacramento, and Yolo Counties. This plan shall link the San Francisco Bay Trail system to the planned Sacramento River trails in Yolo and Sacramento Counties. This plan shall include a specific route of a bicycling and hiking trail, the relationship of the route to existing and proposed park and recreational facilities and land and water trail systems, and links to existing and proposed public transportation and transit. The transportation and transit links may include, but are not limited to, roadside bus stops, transit facilities, and transportation facilities. The continuous regional recreational corridor planned and executed pursuant to this chapter shall be called the Great California Delta Trail. The continuous regional recreational corridor shall include, but not be limited to, bikeway systems, and hiking and bicycling trails.

STATE OF CALIFORNIA Edmund G. Brown Jr., Governor
NATIVE AMERICAN HERITAGE COMMISSION
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West Sacramento, CA 95691
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June 14, 2016

Adam Noetting
Metropolitan Transportation Commission
375 Beal Street, Suite 800
San Francisco, CA 94105

sent via e-mail:
eircomments@mtc.ca.gov

RE: SCH# 2016052041Plan Bay Area 2040 Project, draft Environmental Impact Report, City of San Francisco, Marin, Sonoma, Napa, Solano, Contra Costa, Alameda, Santa Clara, San Mateo, and San Francisco Counties, California

Dear Mr. Noetting:

The Native American Heritage Commission has received the Notice of Preparation (NOP) for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b) (CEQA Guidelines Section 15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared. (Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd.(a)(1) (CEQA Guidelines § 15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a **separate subcategory of cultural resources**, "tribal cultural resources" (Pub. Resources Code § 21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code § 21084.3 (a)). **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. § 800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
    a. A brief description of the project.
    b. The lead agency contact information.
    c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code § 21080.3.1 (d)).
    d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code § 21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code § 21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. (Pub. Resources Code § 21080.3.1(b)).
    a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18). (Pub. Resources Code § 21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
    a. Alternatives to the project.
    b. Recommended mitigation measures.
    c. Significant effects. (Pub. Resources Code § 21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
    a. Type of environmental review necessary.
    b. Significance of the tribal cultural resources.
    c. Significance of the project's impacts on tribal cultural resources.
    d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code § 21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code § 21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
    a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
    b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code § 21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
    a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
    b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code § 21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code § 21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code section 21084.3 (b). (Pub. Resources Code § 21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
    a. Avoidance and preservation of the resources in place, including, but not limited to:
        i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
   i. Protecting the cultural character and integrity of the resource.
   ii. Protecting the traditional use of the resource.
   iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code § 21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a nonfederally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code § 815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code § 5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An environmental impact report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
    a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
    b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
    c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code § 21082.3 (d)).

    This process should be documented in the Cultural Resources section of your environmental document.

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code § 65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code § 65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code section 65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction. (Gov. Code § 65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have been already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
    a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
    b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
    a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
    b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
    c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

Please contact me if you need any additional information at gayle.totton@nahc.ca.gov.

Sincerely,



Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst

cc: State Clearinghouse

Pam Grove

From: Ducklow, Kelsey@Coastal <Kelsey.Ducklow@coastal.ca.gov>
Sent: Wednesday, June 15, 2016 5:47 PM
To: EIR Comments
Cc: Grove, Tami@Coastal; Cave, Nancy@Coastal; Manna, Jeannine@Coastal
Subject: Comments for SCH#2016052041 Plan Bay Area 2040 NOP
Attachments: MTCBayArea2040TransPlan_CCCcomments_6.14.16.pdf

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Dear Mr. Noetling,

Thank you for the opportunity to provide comments for the EIR for the Plan Bay Area 2040 RTP/SCS. The California Coastal Commission has several recommendations for topics to include in the EIR to ensure that the requirements of the Coastal Act are met and potential impacts to coastal resources are considered. These comments are detailed in the attached letter. A courtesy hard copy letter has been mailed to your office as well.

Please feel free to contact me if you have any questions.

Best,
Kelsey Ducklow

--

CALIFORNIA COASTAL COMMISSION

Kelsey Ducklow
LCP Grant Coordinator and Climate Change Analyst
kelsey.ducklow@coastal.ca.gov | 415.904.2335
45 Fremont St. Suite 2000, San Francisco, CA 94105

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CALIFORNIA COASTAL COMMISSION
NORTH CENTRAL COAST DISTRICT OFFICE
45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105
PHONE: (415) 904-5260
FAX: (415) 904-5400
WEB: WWW.COASTAL.CA.GOV

June 10, 2016

Adam Noetling
Plan Bay Area 2040 Project Manager
Metropolitan Transportation Commission
Sent via email to [eircomments@mtc.ca.gov]

Subject: SCH# 2016052041. Comments on the NOP for the Draft EIR for Plan Bay Area 2040 – the Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS)

Dear Mr. Noetling:

Thank you for the opportunity to provide comments regarding the preparation of the Draft Environmental Impact Report (DEIR) for the Metropolitan Transportation Commission's (MTC) San Francisco Bay Area Regional Transportation Plan (RTP) and Sustainable Community Strategy (SCS). According to the Notice of Preparation for this DEIR, Plan Bay Area 2040 will update the RTP/SCS and provide a long-range plan that balances transportation and housing needs with other economic and environmental goals, and identifies regional planning needs, priorities, and funding. The DEIR will specifically evaluate three different land use and transportation scenarios that were developed by the MTC and the Association of Bay Area Governments (ABAG) to illustrate the potential effects these different strategies would have on reaching the region's adopted goals and performance targets.

Adoption and implementation of Plan Bay Area 2040 has the potential to impact a broad range of environmental resources, and as such, the EIR will analyze the full scope of CEQA environmental issue areas. Given the California Coastal Commission's mandate to protect coastal resources through planning and regulation of the use of land and water within the Coastal Zone, we are providing the following comments and topics that should be considered, analyzed, and addressed in the EIR.

1) **California Coastal Act and Local Coastal Programs (LCPs)**. Please note that the Coastal Act and certified LCPs are the applicable standard of review for development projects in the Coastal Zone, and as such, the EIR should include an evaluation of consistency with these relevant documents for the proposed land use and transportation scenarios. Broadly, the Coastal Act and certified LCPs contain policies designed to protect coastal resources including public access, recreation, marine environments, environmentally sensitive habitats, wetlands, agricultural lands, archaeological and paleontological resources, and scenic and visual resources, as well as to ensure safety of development. Some LCPs in the planning area also contain policies which limit the density and rate of development, set aside water and sewer allocations for Coastal Act

and LCP priority uses, require development of regional transportation plans, direct public transit, roadway and trail improvements, and outline acceptable traffic standards.

Given the standards of review described above, we strongly recommend that the project's DEIR include a table identifying the Coastal Act policies and LCP standards applicable to the project, for those areas within the Coastal Zone. Such a table should include a preliminary evaluation of the project's conformance with each of the applicable policies and standards. We also urge the design and selection of a preferred alternative that best conforms to those policies and standards.

2) **Sea Level Rise.** Section 30253 of the Coastal Act requires that new development minimize risks to life and property from hazards and to assure stability and structural integrity without the use of a shoreline protective device. Thus, understanding the potential impacts of climate change and sea level rise is of critical importance when beginning long-range planning efforts so as to ensure that land use decisions and development projects are not designed in a way that will put investments at risk from coastal hazards.

   The California Coastal Commission, in line with the guidance from the Ocean Protection Council and the State of California, recognizes the National Research Council's 2012 report "*Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future*" as the best available science on sea level rise projections for California. This report anticipates that by 2040, the planning horizon for this planning effort, there could be almost 2 feet of sea level rise. When combined with waves, storms, erosion, and other coastal hazards, sea level rise will put many coastal assets at risk. Given that the land use and transportation scenarios described in the NOP envision some scenarios in which housing and transportation increase in coastal communities, it is essential that the EIR evaluate the extent to which such scenarios would result in new development that is or would be vulnerable to sea level rise. This analysis should be compared to alternatives that would not require new construction in areas likely to be impacted by sea level rise.

   Importantly, sea levels will continue to rise – the NRC report projects that there could be 66 inches of sea level rise by 2100. Although the Plan Bay Area 2040 is focused on a planning horizon through the next 25 years, land use and development decisions made today will largely still be in place beyond 2040. Evaluation of sea level rise should account for risks to transportation, housing, and other land use decisions over their entire anticipated lifetime.

   Additionally, beyond ensuring that new development is not placed in areas that are or will become hazardous due to sea level rise, the EIR should, to the extent feasible, evaluate the extent to which the various scenarios would or could alleviate impacts to transportation networks and housing stocks as sea levels rise. Such reduction in impacts could come through such actions as the provision of additional transportation and housing outside of vulnerable coastal areas, by removing, realigning, or relocating existing assets to safer locations, and/or identifying adaptation strategies for critical north-south and east-west roadway segments at risk from SLR which may affect the overall transportation network.

3) **Public Access**. A fundamental pillar of the Coastal Act is the protection and provision of public access to, and along, the coast. As a matter of State policy, Coastal Act sections 30210 and 30212 require that maximum opportunities for public access and recreation be provided in new development projects, consistent with public safety, private property rights, and natural resource protection. Additionally, Section 30252 dictates that new development should maintain and enhance public access through such actions as facilitating transit service, providing non-automobile options, and providing adequate parking.

   Accordingly, the DEIR should evaluate the proposed project and alternatives for consistency with the above-mentioned policies. In particular, there should be an analysis of how the project would maximize access to the coast, including options for non-motorized, bicycle, and pedestrian routes and related amenities throughout the region. This analysis should incorporate evaluation of ways to facilitate access to beaches and coastal areas from the inland portions of the study region, as well as options for enhancing connections to public transit, the Coastal Trail, and other visitor-serving recreational opportunities.

   Importantly, the DEIR should also analyze the potential negative impacts to public access that could arise from the various land use, housing, and transportation scenarios identified by the Plan Bay Area 2040 effort. Scenarios that would lead to increased development in coastal communities, or development that would result in additional traffic along critical coastal highway connectors such as Highways 1 and 92, should be analyzed for their potential impacts to traffic congestion, as well as the possibility of increasing use of certain beaches beyond their carrying capacity. At a minimum, a traffic study at peak recreational periods, as well as peak commuter periods, should be completed for the various scenarios to help the Commission understand potential impacts more fully.

4) **Concentration of development.** Section 30250 of the Coastal Act generally requires that new development within the Coastal Zone be located within, contiguous with, or in close proximity to existing developed areas, and Section 30253 requires new development to be sited in a manner that will minimize energy consumption and vehicle miles travelled. In this way, the Coastal Act encourages smart growth patterns that recognize a strong urban-rural boundary to ensure protection of coastal resources. Accordingly, the DEIR should analyze the extent to which the various Plan Bay Area 2040 land use, transportation, and development scenarios, as well as the broader goals of the Sustainable Communities Strategy would be consistent with and mutually supported by such concentration of development.

Thank you again for the opportunity to comment on the NOP. We look forward to reviewing the draft DEIR and providing additional comments at that time. Assuming that the above-noted issues and recommendations are addressed, we expect that the CEQA document will provide the type of information that is needed for a careful analysis of Coastal Act and LCP policy conformance. If you have any questions, please do not hesitate to contact me.

Sincerely,

Kelsey Ducklow

Kelsey Ducklow

Coastal Analyst, California Coastal Commission
415.904.2335 | kelsey.ducklow@coastal.ca.gov

CC:
Tami Grove, Caltrans Liaison
Nancy Cave, North Central Coast District Manager
Jeannine Manna, North Central Coast District Supervisor

Pam Grove

From: Schofield, Jesse@DOT <Jesse.Schofield@dot.ca.gov>
Sent: Wednesday, June 15, 2016 10:38 AM
To: EIR Comments
Subject: Caltrans Comment - Plan Bay Area 2040 NOP
Attachments: BAG055 - Plan Bay Area 2040 Update - NOP - Caltrans Comment.pdf

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Good afternoon Mr. Noelting:

Please find attached a soft copy of the Caltrans comment letter regarding the Plan Bay Area 2040 Notice of Preparation. The original letter will be mailed to you. Thank you for including Caltrans in the review process for this project. Should you have any questions regarding this letter or require any additional information, please feel free to contact me at 510-286-5562 or jesse.schofield@dot.ca.gov.

Sincerely,

Jesse B. Schofield
Caltrans District 4
Local Development - Intergovernmental Review
510-286-5562

DEPARTMENT OF TRANSPORTATION
DISTRICT 4
OFFICE OF TRANSIT AND COMMUNITY PLANNING
P.O. BOX 23660, MS-10D
OAKLAND, CA 94623-0660
PHONE (510) 286-5528
FAX (510) 286-5559
TTY 711
www.dot.ca.gov

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June 15, 2016

BAG055
SCH# 2016052041

Mr. Adam Noelting
Metropolitan Transportation Commission
375 Beal Street, Suite 800
San Francisco, CA 94105

Plan Bay Area 2040 – Notice of Preparation

Dear Mr. Noelting:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for Plan Bay Area 2040. The new Caltrans mission, vision, and goals signal a modernization of our approach to California's transportation system, in which we seek to reduce statewide vehicle miles traveled (VMT) by 15 percent by 2020 and increase non-auto modes of active transportation. Caltrans aims to increase non-auto mode shares by 2020 through tripling bicycle, and doubling pedestrian and transit trips. These targets also support the Metropolitan Transportation Commission's (MTC) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which promotes the increase of non-auto mode shares by ten percentage points and a decrease in automobile VMT per capita by ten percent. The following comments are based on the Notice of Preparation.

Project Understanding
Plan Bay Area 2040 is the update to Plan Bay Area, the first RTP/SCS for the nine-county San Francisco Bay Area. The RTP/SCS sets policies to guide transportation decisions and proposes a program of capital, operational, and management improvements needed through the year 2040. Plan Bay Area 2040 forecasts that between 2010 and 2040, the Bay Area will add over 2.4 million people, 1.3 million new jobs, and 823,000 new housing units. Planning for this growth builds on local and regional planning efforts using a framework of 188 locally-adopted Priority Development Areas (PDAs) and 165 Priority Conservation Areas (PCAs). Three land use and transportation scenarios, each using the same growth forecasts, will be evaluated. One of the scenarios—or a combination thereof—will be identified as the preferred plan for analysis in the draft Environmental Impact Report (EIR); the remaining scenarios may be analyzed as alternatives in the draft EIR.

Plan Bay Area 2040 includes a financially constrained transportation investment plan. A total of $299 billion over 24 years will available under the Plan, funded through existing and future revenues.

Senate Bill 743
Please include a discussion of the regulatory changes since the adoption of the first Plan Bay Area and the implications of those changes to Plan Bay Area 2040. In particular, include a discussion of Senate Bill 743 (SB 743). SB 743 updated the California Environmental Quality Act (CEQA) review process by changing the metric by which transportation impacts and mitigation are measured and by presuming that infill projects, or projects well-served by transit and active transportation, cause a less than significant transportation impact.

Scenario Alternatives
Discussion of the scenario alternatives for Plan Bay Area 2040 comprise the bulk of these comments. To better organize them, comments related to the scenarios are separated into subheadings.

Highway Expansion. For the preferred plan and alternative scenarios, each analysis should identify the State highway corridors that will be targeted for improvements. In keeping with Caltrans sustainability and stewardship and efficiency goals to reduce environmental impacts and responsibly manage the State transportation network, the analysis should include:

- An estimation of the types of improvements, with consideration of the time and costs required for implementation;
- Identification of sensitive habitats (e.g. wetlands, riparian areas, or waterways) in, or near, the areas identified for improvements; and
- Identification of existing and proposed infrastructure improvements vulnerable to sea level rise.

Please also note that Caltrans embraces a *Fix-It First* policy regarding the commitment of transportation funds, focusing on maintenance and rehabilitation. Priority for expansion of the State Transportation Network is second to investing in the management, preservation, and efficient operation of the existing infrastructure.

Priority Development Areas. PDAs are a key feature of the RTP/SCS, influencing land use planning decisions to reduce greenhouse gas emissions. To become a PDA, an area must be: 1) within an existing community; 2) within walking distance of frequent transit service; 3) designated for more housing in a locally adopted plan or identified by a local government for future planning and potential growth; and 4) nominated through a resolution adopted by a City Council or County Board of Supervisors. As an incentive for this pattern of development, SB 743 streamlines the CEQA review process for projects in PDAs by presuming less than significant transportation impacts. To further highlight the opportunity for PDAs to achieve regional emission reduction targets, we recommend that PDAs also include maximum vehicle parking ratio requirements.

The draft EIR should analyze overall impacts and changes in transportation accessibility for disadvantaged communities. In regards to the Plan Bay Area 2040 goals of *Adequate Housing* and *Equitable Access*, please ensure that the 188 planned PDAs include adequate low and middle income housing.

Transportation Demand Modeling. To move toward State goals supported by SB 743, Caltrans suggests that MTC include VMT-based analysis for the preferred plan and alternative scenarios to assess impacts and to mitigate with transportation demand management, multi-modal, and operational efficiency projects. In addition to considering commute patterns, the analyses should also consider impacts of regional attractions such as event centers, tourist landmarks, and large shopping centers.

Air Quality. In regards to the Plan Bay 2040 goals of *Climate Protection* and *Healthy and Safe Communities*, please consider having the preferred plan strive to achieve the more stringent 15% reduction in per-capita greenhouse gas emission from 2005 levels.

Pedestrian and Bicycle Infrastructure. Although costs for active transportation projects are relatively lower than for transit or highway projects, and may represent a smaller percentage of total transportation expenditures, each scenario should specify the level of investment in new or good state of repair of existing pedestrian and bicycle infrastructure.

Regional Vehicle Miles Traveled

Please establish baseline values to serve as guidelines for VMT for residential, retail, and office trips that reflect the nine-county San Francisco Bay Area. The Governor's Office of Planning and Research (OPR) published their draft Revised Updates to the CEQA Guidelines for Implementing Senate Bill 743 (SB 743) in January 2016. In brief, VMT replaces Level of Service (LOS) as the metric for evaluating and mitigating the transportation impact of a proposed project in the CEQA review process. The OPR Guidelines provide recommended numeric thresholds for residential, office and retail projects for determining a significant transportation impact. Generally, these thresholds compare VMT generated by the proposed project to the regional VMT. As local agencies transition to VMT analysis—each relying on their own transportation models—it is likely that their models will maintain different values for regional VMT. Without consistent guidelines for regional VMT, there is the potential for an inconsistent evaluation of transportation impacts throughout the Bay Area.

Regional Impact Fees

Please consider implementing a regional impact fee for new developments to fund regional transportation projects and programs for all modes of transportation. While local development impact fees fund local mitigation projects, we encourage a sufficient allocation of fair share contributions toward multi-modal improvements and regional transit projects to better plan for the impact of future cumulative growth on the regional transportation system.

Regional Transportation Demand Management Strategies

Please include a regional reference for Transportation Demand Management (TDM) strategies, specific to the Bay Area. For large projects, Caltrans recommends implementation of a TDM program. Such measures will be critical in order to facilitate efficient transportation access to and from these project sites and reduce transportation impacts associated with these projects. There are a variety of TDM strategies ranging from infrastructure and design to program and policy. We direct local agencies to refer to Chapter 8 of FHWA's *Integrating Demand Management into the Transportation Planning Process: A Desk Reference*, regarding TDM at the local planning

level. Having a regionally sensitive TDM reference would increase the likelihood of projects incorporating these strategies to reduce VMT and greenhouse gas production.

Early Coordination
Caltrans suggests that the Plan Bay Area 2040 clearly state that Lead Agencies should ensure early coordination with Caltrans for any project proposal that would entail any ongoing access issues; or work within, over, under, or adjacent to public transportation rights of way.

Should you have any questions regarding this letter, please contact Jesse Schofield at 510-286-5562 or jesse.schofield@dot.ca.gov.

Sincerely,

PATRICIA MAURICE
District Branch Chief
Local Development - Intergovernmental Review

c: State Clearinghouse

Pam Grove

From: Doyle, Kelly@HSR <Kelly.Doyle@hsr.ca.gov>
Sent: Wednesday, June 15, 2016 1:59 PM
To: EIR Comments
Subject: Scoping Letter Plan Bay Area 2040
Attachments: Plan Bay Area 2040 Scoping Ltr CHSRA.pdf

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Attached please find a comment letter submitted by the California High-Speed Rail Authority.

Kelly Doyle
Supervising Transportation Planner
California High-Speed Rail Authority
100 Paseo de San Antonio, #206
San Jose, CA 95113
408-277-1093 (office)
408-981-6357 (cell)
kelly.doyle@hsr.ca.gov
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CALIFORNIA
High-Speed Rail Authority

BOARD MEMBERS

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Lorraine Paskett

Michael Rossi

Lynn Schenk

Jeff Morales
CHIEF EXECUTIVE OFFICER

EDMUND G. BROWN JR.
GOVERNOR

June 14, 2016

MTC Public Information
375 Beale Street, Suite 800
San Francisco, CA 94105

Subject: Notice of Preparation of a Draft Environmental Impact Report for Plan Bay Area 2040

To Whom It May Concern:

Thank you for the opportunity to comment on the Notice of Preparation (NOP) for the Plan Bay Area 2040 – the Regional Transportation Plan / Sustainable Communities Strategy (SCS) environmental impact report (EIR). The Plan Bay Area 2040 will provide a long-range road map to guide the Bay Area's transportation investments.

As the Bay Area's RTP and SCS, Plan Bay Area 2040 sets the policy framework for guiding transportation decisions in the region. In drafting the EIR for the RTP/SCS, the California High-Speed Rail Authority (Authority) offers the following comments on the NOP:

- The High-Speed Rail stations will focus growth and economic development opportunities in the existing downtown cores of San Francisco, Millbrae, San Jose and Gilroy.

- High-Speed Rail will provide a boost to the state's economic productivity as more travelers take the train to travel around the state: reducing congestion for drivers on the region's transportation network.

- By 2040, the high-speed rail system will reduce vehicles miles of travel in the state by almost 10 million miles of travel every day.

- Over a 58 year period the system will reduce auto travel on the state's highways and roads by more than 400 billion miles of travel.

- The Plan should acknowledge the regional and statewide significance of the high-speed rail system.

The California High-Speed Rail (HSR) Program will contribute to economic development, enable a cleaner environment, improve air quality, enable a cleaner environment, improve air quality, reduce greenhouse gas emissions (GHG), and with the adoption of the High-Speed Rail's 2016 Business Plan an increase in the livability in California and in the Bay Area. By 2029, the system will run from San Francisco to the Los Angeles basin in under three hours at speeds capable of

over 200 miles per hour. The system will eventually extend to Sacramento and San Diego, totaling 800 miles with up to 24 stations.

Authority Contributions to the Bay Area Regional System

In 2012, Senate Bill (SB) 1029 appropriated approximately $2 billion in Proposition 1A funds – that will leverage approximately $5 billion in additional funding – for bookend and connectivity projects. These projects will generate significant near-term benefits from increased safety, capacity and frequency for regional and interregional rail services, which will also lead to air quality improvements in some of the most challenged communities in the state. Examples of the Authority's investments in the nine-county Bay Area region include:

Central Subway
Construction is underway on the 1.7-mile light-rail line extension from 4th and King Streets to Chinatown in downtown San Francisco. California's investment of $61 million will help leverage a total investment of $1.6 billion into this project.

Caltrain Corridor
The Caltrain Modernization Program, scheduled to be implemented by 2020, will electrify and upgrade the performance, operating efficiency, capacity, safety and reliability of Caltrain's commuter rail service. California's investment of $600 million will help fund a total investment of $1.759 billion for this project.

Plan Bay Area 2040 Scenarios

High-Speed Rail service will begin revenue operations during the timeframe of the Plan Bay Area 2040. As a major asset in California's statewide integrated passenger rail network, High-Speed Rail will connect big cities, neighborhoods, and our main streets. Working together, we can optimize the user experience by ensuring strategic investments in our transportation system as the backbone for development and other economic opportunities. The Authority supports the analysis of the scenarios developed by MTC and ABAG to realize the benefits of high-speed rail and the investments that the Authority has made into the regional system. Elements of the three scenarios will generally support the goals and benefits of high-speed train service. Both the Connected Neighborhoods Scenario and the Big Cities Scenario direct the greatest share of housing and development into the Bay Area's Priority Development Areas (PDAs) with more focus on modernizing and expanding the region's transit system. At the individual station level, we believe High-Speed Rail could have an effect on the Main Street Scenario. It is critical to the successful development of High-Speed Rail station areas that we work with our partners to promote the densities of development and types of investments needed to increase ridership and develop sustainably in our urban centers.

Thank you again for considering these comments. If you have any questions or need more information, please contact Kelly Doyle at (408) 277-1093 or kelly.doyle@hsr.ca.gov.

Sincerely,

Ben Tripousis
Northern California Regional Director

Regional/Local

Plan BayArea 2040

Comment Form

Plan Bay Area 2040 Draft EIR Scoping Meeting
Tuesday, May 31, 2016
MetroCenter Auditorium
101 8th Street
Oakland, California

Name: Cindy HORVATH Title: _____

Agency: ALAMEDA CO

Address: _____

E-mail: _____ Phone: _____

Use this form to submit any comments. Use the other side if additional space is needed.

comments

(1) CAN WE get more details INFO ON THE 3 SCENARIOS? IS THAT in THE DRAFT PLAN?

(2) ~~IF~~ THERE ANEWS TO PDA PROJECT FUNDING IMPACTS? EVEN THO ~~*~~ THERE ARE 3 ALTERNATIVES, THERE IS ONE POLICY THAT will DETERMINE PREFERRED (ALL PDAS) DRIVE THIS REGION'S FUNDING Investment AREAS.

(3) PLEASE include in THE EIR AN ANALYSIS OF EQUITY ~~AAA~~ NEEDS FOR ALL 3 SCENARIOS (ALL KINDS OF Equity).

(4) PLEASE include AN ANALYSIS OF HOW "COMPLETE STREETS" will BE SUPPORTED/ENCOURAGED IN EACH SCENARIO.

Written comments will be accepted at the scoping meetings; via mail to MTC Public Information, 375 Beale Street, Suite 800, San Francisco, CA, 94105; via fax to 415.536.9800; or via email to eircomments@mtc.ca.gov. **Written comments must be received at the MTC offices no later than June 15, 2016. For more information, call the MTC Public Information Office at 415.778.6757.**

Association of Bay Area Governments

METROPOLITAN TRANSPORTATION COMMISSION

(5) PLEASE COMPLETE AN ANALYSIS OF HOW THE MAJOR BACKLOG IN STATE FUNDING FOR TRANSPORTATION THIS YEAR DUE TO ~~CAP~~ AND TRADE

As well as GAS TAX FUNDS decrease implementation options in all scenarios.

Thanks!

THE CITY OF
PLEASANTON

June 8, 2016

Via electronic mail to: eircomments@mtc.ca.gov

MTC Public Information
375 Beale Street, Suite 800
San Francisco, CA 94105

Re: Notice of Preparation for Draft Environmental Impact Report for Plan Bay Area 2040

Dear MTC,

The City of Pleasanton appreciates the opportunity to provide comments on the Notice of Preparation (NOP) for an Environmental Impact Report (EIR) for Plan Bay Area 2040 – the Regional Transportation Plan (RTP) / Sustainable Communities Strategy (SCS).

The City has reviewed the NOP and has concerns that the proposed Plan Bay Area Projections, as currently drafted, would have significant environmental impacts related to the fact that the projected growth is not within the planned capacity for the City.

In previous letters to the Associated of Bay Area Governments (ABAG), the City of Pleasanton has expressed concerns over the household and jobs growth allocations presented in the latest projections (dated December 23, 2015). These projections forecast household growth of 41%, 43%, and 38%, and forecast job growth of 35%, 29%, and 30% for Scenarios 1, 2 and 3, respectively, over the 30-year time span encompassed by Plan Bay Area. All three of these scenarios represent a significant departure from the anticipated growth in the City's Housing Element, and from previous projections provided by ABAG. Additionally, the City has communicated concerns that the growth projected in Hacienda Business Park is significantly disproportional to that of the remainder of the City. Therefore, given that the projected growth for Pleasanton is not in alignment with the growth planned for in the City's General Plan (including the Housing Element), the proposed growth has environmental implications that should be addressed in the Draft EIR that is being prepared for Plan Bay Area 2040.

Therefore, as Plan Bay Area 2040 moves forward and environmental review is undertaken, we recommend that the EIR evaluate at least one alternative that is in alignment with the planned growth in Pleasanton's Housing Element (household growth of about 1% a year) and Growth Management Ordinance (currently 235 residential units per year). Additionally, given that the growth forecast is significantly out of step with the planned growth within Pleasanton, we recommend the following areas be addressed in the Draft EIR:

- *Air Quality & Greenhouse Gas* – The significant growth currently projected in all three scenarios should be evaluated for air quality and greenhouse gas impacts, including impacts to existing sensitive receptors associated with exposure to elevated pollution levels that arise from the projected growth. The EIR should also evaluate how the proposed Plan Bay Area 2040 Scenarios will dovetail with the City's Climate Action Plan.

COMMUNITY DEVELOPMENT **P. O. BOX 520, Pleasanton, CA 94566-0802**

Planning	Building & Safety	Engineering	Traffic	Inspection
200 Old Bernal Ave.	200 Old Bernal Ave.	200 Old Bernal Ave.	200 Old Bernal Ave.	157 Main Street
(925) 931-5600	(925) 931-5300	(925) 931-5650	(925) 931-5650	(925) 931-5680
Fax: 931-5483	Fax: 931-5478	Fax: 931-5479	Fax: 931-5479	Fax: 931-5484

- *Public Infrastructure Capacity* – The City would be eager to see analysis of the public infrastructure necessary to achieve the growth projections as currently drafted, particularly because they exceed planned growth in the City's governing policy documents. Public infrastructure includes, but is not necessarily limited to: utility capacity (e.g. water and sewer) and roadway/intersection capacity. The City believes that accommodating the growth anticipated in the current population projections would require the City to undertake costly infrastructure investments that could themselves trigger environmental impacts. These needed investments and associated impacts should be at least programmatically explored in the EIR.

The City is happy to assist with the development of revised growth projections and refinement of the associated environmental review, and as such, is open to meeting with MTC and/or ABAG staff as needed. We would appreciate the opportunity to receive future information about this project as it becomes available. Please feel free to contact me should you have any questions.

Respectfully,

Gerry Beaudin
Director of Community Development

Copy:
Adam Weinstein, Planning Manager
Shweta Bonn, Senior Planner

AGENDA ITEM #3

Alameda
LAFCO

ALAMEDA LOCAL AGENCY FORMATION COMMISSION
1221 OAK STREET, SUITE 555 * OAKLAND, CA 94612
(510) 271-5142 FAX (510) 272-3784
WWW.ACGOV.ORG/LAFCO

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Ayn Wieskamp, Vice Chair, Special District Member
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Ralph Johnson, Special District Member
Scott Haggerty, County Member
Jerry Thorne, City Member

Alternates
Georgean Vonheeder-Leopold, Special District Member
Wilma Chan, County Member
David Haubert, City Member
Tom Pico, Public Member

Executive Officer
Mona Palacios

June 10, 2016

MTC Public Information
375 Beale Street, Suite 800
San Francisco, CA, 94105

Sent via email to eircomments@mtc.ca.gov

Dear MTC Public Information Officer:

Thank you for including the Alameda Local Agency Formation Commission (Alameda LAFCo) in the distribution of the Notice of Preparation (NOP), informing us that an Environmental Impact Report (EIR) is being prepared for the update to the regional planning document, *Plan Bay Area 2040*.

LAFCos are independent agencies with discretion to approve or disapprove, with or without amendment, wholly, partially or conditionally, changes of organization or reorganization of cities or special districts. LAFCos are required to consider a variety of factors when evaluating a matter or project that comes before it for approval, including, but not limited to the proposed project's potential impacts on agricultural land and open space and the provision of public services, including the timely and available supply of water, adequate and proximate affordable housing, and other factors.

Many of the matters that require action by LAFCo are considered "projects' under CEQA, and therefore, as a Responsible Agency, LAFCo, or applicants seeking approval from LAFCo for some form of boundary change, may need to rely on or tier from the *Plan Bay Area 2040 EIR* to facilitate the environmental review and documentation process of the proposed project.

The NOP states that "adoption and implementation of the Plan has the potential to result in environmental effects in all of the environmental impact areas identified in CEQA." The two environmental topics of greatest interest and relevance to the decisions with which LAFCos are confronted are impacts on agricultural lands and open space, and issues related to the adequacy and efficiency of public services.

In light of this, we would request that as the potential impacts of the Plan are identified and evaluated in the EIR, particularly with reference to proposed Priority Development Areas (PDAs), the EIR should give particular attention to impacts involving the loss of agricultural land and to the availability and capacity of public services. With regard to agricultural land issues, the EIR should address the impacts to the PDA site as well as surrounding areas and should include a productivity analysis.

With regard to the public services needed to support each proposed PDA, the EIR should evaluate the level and availability of the following:

- Domestic potable water resources to support the potential future growth in the PDAs;
- Wastewater collection and treatment infrastructure;
- Flood control and stormwater management systems;
- Fire protection services and ability to expand to meet the needs of growth within a PDA;
- Police and other law enforcement services;
- Emergency medical, healthcare, vector control and mosquito abatement services;
- Local transportation, road maintenance and street lighting systems;
- Open space and parks and recreation facilities and services;
- Solid waste collection and disposal systems;
- Electricity and other sources of energy;
- Animal control;
- Library services, and
- Broadband and related internet services.

Sources of information that would likely facilitate the requested evaluation of public services should include data from the most recent Municipal Service Reviews (MSRs) that are prepared periodically by the LAFCo in each of the Bay Area Counties in which PDAs are proposed. We encourage the EIR preparers to avail themselves of this rich data source as a way of presenting to the public an assessment of the degree to which necessary public services are available, or would likely become available, in support of the anticipated growth embodied in the *Plan Bay Area 2040* and specifically within the PDAs. Further, from the consideration of impacts to public services on PDAs distributed throughout the Bay Area, it is hoped that a picture would emerge indicating to the public a sort of 'report card' or overall assessment of where the Bay Area can feasibly rise to the new level of needs of public services and where the Bay Area, as a whole, is seen as deficient or lacking, or facing potentially serious constraints. We think the EIR for the Plan Bay Area 2040 presents an ideal opportunity to heighten the public's awareness of potential impacts in these critical topic areas.

Thank you for considering our comments.

Sincerely,

Mona Palacios

Mona Palacios
Executive Officer
v:\laf\plan bay area\pba, 2016 eir comment ltr.doc

cc: Each Commissioner, Alameda LAFCo
Each Executive Officer, Bay Area LAFCos (Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma)
Andrew Massey, Alameda LAFCo Legal Counsel
Nat Taylor, Alameda LAFCo Planning Consultant

SANTA CLARA
Valley Transportation Authority

June 14, 2016

Adam Noelting, Senior Planner
Metropolitan Transportation Commission
375 Beale Street, Suite 800
San Francisco, CA 94105

Subject: Notice of Preparation of a Draft Environmental Impact Report for Plan Bay Area 2040 – The Regional Transportation Plan (RTP) / Sustainable Communities Strategy (SCS)

Dear Adam:
Thank you for the opportunity to comment on the Notice of Preparation (NOP) for the Draft Environmental Impact Report (EIR) for Plan Bay Area 2040, prepared by the Metropolitan Transportation Commission (MTC). The Santa Clara Valley Transportation Authority (VTA) offers the following comments on the NOP.

Scenario Development and Outreach Process
VTA recommends that the Draft Environmental Impact Report focus on development scenarios that are practicable and implementable, and reflect reasonable assumptions regarding existing conditions and future growth in each local jurisdiction.

On May 16, 2016, the Association of Bay Area Governments (ABAG) emailed an overview memo and detailed scenarios process document from the May 19th ABAG Executive Board packet to planning partners throughout the Bay Area. The scenarios process document included UrbanSim model results produced by MTC for three growth scenarios, including household and job growth from 2010 to 2040. However, VTA noticed several results for projected growth in cities in Santa Clara County that are questionable based on the land use and growth policies of those jurisdictions. In addition, local agencies in Santa Clara County have had very little time to review these scenarios or consider the implications of these growth projections for future transportation planning and investments in their cities.

The ABAG memo, included with the scenario results, noted that, "Given where we are in the schedule, however, it makes more sense for both agencies to focus on the Preferred Scenario rather than spend time trying to correct portions of the three initial scenarios." However, this NOP states that "MTC and ABAG will evaluate the three scenarios, and one or a combination of them will be identified as the preferred plan, which will be analyzed as the project in the EIR." Thus, it is unclear to what extent the three scenarios remain to be analyzed and how local agencies can weigh in on the Preferred Scenario.

VTA strongly requests that MTC extend the deadline for comments on the land use scenarios until September 15, at the earliest, and come to Santa Clara County to present at relevant VTA Board Committees and Working Groups this summer in order to clarify this process and ensure that realistic and meaningful land use scenarios are analyzed in the DEIR. Please contact George Naylor at 408-321-5763 or Rob Swierk at 408-321-5949 to discuss scheduling these presentations.

Relationship to Senate Bill (SB) 743

Senate Bill (SB) 743, approved by the California legislature in September 2013, directs the Governor's Office of Planning and Research (OPR) to develop alternative metrics to replace the use of vehicular "level of service" (LOS) for evaluating the transportation impacts of projects under CEQA. OPR has not yet submitted a final draft of updates to the CEQA Guidelines to implement this provision of SB 743; however, their most recent "Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA" (January, 2016) include several recommendations for agencies to refer to the RTP/SCS in evaluating plans and projects.

For instance, the Revised Proposal includes a "Presumption of Less Than Significant Impact Near Transit Stations" applicable to residential, retail, and office projects within ½ mile of frequent transit service, but notes that this presumption may not be appropriate if the project "…Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization)" (pg. 22). Similarly, the Recommendations Regarding Land Use Plans note that, "A land use plan may have a significant impact on transportation if it is not consistent with the relevant RTP/SCS" (pg. 25).

VTA requests clarification as to whether the level of detail for land use plans and developments in Plan Bay Area will be sufficient to make these determinations. Also, VTA recommends that MTC clarify the methodology for determining the consistency of land use plans and projects with the SCS, and other issues surrounding SB 743, in this update of the RTP/SCS.

UrbanSim Model

Development of the scenarios will employ the use of the UrbanSim development simulation model. As such, VTA recommends that the UrbanSim tool, application procedures and outputs be thoroughly documented and presented in a transparent manner to instill a sense of confidence that the tool is providing meaningful and supportable (or justifiable) results. As with the MTC travel demand models, an important aspect of the documentation of UrbanSim should include a base year model validation. A suggested venue for sharing UrbanSim results is the MTC Regional Model Working Group, attended by technical representatives of the various Congestion Management Agencies in the MTC region.

VTA looks forward to continued dialog and partnership with MTC in the planning and implementation of Plan Bay Area. We suggest that VTA and MTC staff continue the discussions during the development of the DEIR and the Plan Bay Area document. If you have any questions or would like to arrange a meeting, please call me at (408) 321-7093.

Sincerely,

Chris Augenstein, AICP
Deputy Director, Planning



East Bay Regional Park District

2950 PERALTA OAKS COURT P.O. BOX 5381 OAKLAND CALIFORNIA 94605-0381 T: 1-888-EBPARKS F: 510-569-4319 TRS RELAY: 711 WWW.EBPARKS.ORG

June 14, 2016

MTC Public Information
375 Beale Street, Suite 800
San Francisco, CA 94105

RE: Plan Bay Area 2040 – RTP/SCS Draft PEIR NOP

Dear Metropolitan Transportation Commission,

Thank you for the opportunity to comment on the Plan Bay Area 2040 Draft Program Environmental Impact Report Notice of Preparation. The East Bay Regional Park District owns and manages over 120,000 acres of open space and active transportation trails in both Contra Costa and Alameda Counties. In doing so, the District defines the quality of life in the East San Francisco Bay, and our 200 miles of paved trails provide important regional transportation connections, including trails that parallel Interstate-80 and -680 and provide first- and last-mile connections to transit.

As a regional agency that protects open space and agricultural lands, we look forward to working with our partner agencies in balancing future mobility and housing needs with other economic, environmental, and public health goals. Not only are we interested in how the Sustainable Communities Strategy will identify a transportation network to serve the regional transportation needs, but also how it will consider the best practically available scientific information regarding resource areas and farmland in the region. The District shares the Plan goals of climate protection, open space and agricultural preservation, transportation system effectiveness, and healthy and safe communities. We also understand the value of providing adequate housing that is affordable to economically and environmentally sustain the region.

The District plans to focus on the 165 Priority Conservation Areas (PCAs) that we suggest align with our Master Plan and other strategic initiatives, since the PCAs are areas of regional significance that have broad community support and are in need of protection as providers of important agricultural, natural resource, scenic, cultural, recreational, ecological, and ecosystem functions. To that end, following are the elements of the Connected Neighborhood and Big Cities Scenarios that best address our interests:

- Avoiding development on adopted PCAs and accommodating all new growth within existing urban growth boundaries or urban limit lines
- Investments in bicycle and pedestrian infrastructure that would create more walkable and bikeable downtowns
- City streets and bicycle lanes, rail lines, and other transportation infrastructure serving the region's core will be repaired, maintained, and expanded to meet increased demand

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District staff suggest that these elements be retained in the preferred scenario.

We are concerned that the region's ambitious public health target remains out of reach across all scenarios and agree that strict urban growth boundaries are effective in focusing growth within the existing urban footprint. The District supports much more aggressive bicycle/pedestrian investments to increase physical activity, reduce congestion, and increase non-automobile mode share.

We are particularly interested in potential impacts of the Plan on agriculture and forestry resources, biological resources, public services and recreation, and transportation. The District is also keenly interested in greenhouse gas emissions and climate change, especially sea level rise and resilience, which the chapter of the Plan dealing with these issues is being led by the San Francisco Bay Conservation and Development Commission, since we manage 55 miles of shorelines as arguably the largest landowner of shorelines along the East Bay.

To the extent that mitigation is required for any of the resources that we steward, such as habitat restoration, the District is interested in partnering with transportation and planning agencies to mitigate those impacts and to reduce potential lawsuits in advance. For example, mitigation lands that are located adjacent District parklands, we could manage. The District is also interested in working with other jurisdictions, especially those ones that are increasing their density, in creating an agreement where they could receive LEED-certified credits for open space by mitigating for it with District parklands.

Please feel free to contact us if you have any questions or would like additional information.

Sincerely,

Sandra Hamlat
Senior Planner

Pam Grove

From: Jane Riley <Jane.Riley@sonoma-county.org>
Sent: Tuesday, June 14, 2016 4:38 PM
To: EIR Comments
Cc: Amy Lyle; Jennifer Barrett
Subject: NOP Comment letter
Attachments: Plan Bay Area NOP Comment letter 6-14-16.pdf

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Attached please find Sonoma County's comments on the NOP for Plan Bay Area 2040. Please feel free to contact Amy Lyle at (707) 565-7389 if you have any questions or wish clarification.

Thank you,

Jane Riley, AICP
Supervising Planner
Comprehensive Planning Division
Sonoma County PRMD
(707) 565-7388

OFFICE HOURS: ***PRMD's Public Lobby is open Monday through Friday from 8:00 AM until 4:00 PM, except Wednesdays, open from 10:30 AM to 4:00 PM.***

permit SONOMA

COUNTY OF SONOMA
PERMIT AND RESOURCE MANAGEMENT DEPARTMENT

2550 Ventura Avenue, Santa Rosa, CA 95403
(707) 565-1900 FAX (707) 565-1103

June 14, 2016

MTC Public Information
Attn: Adam Noelting, MTC Senior Planner
375 Beale Street, Suite 800
San Francisco, CA 94105

Re: Notice of Preparation- MTC Bay Area Regional Transportation Plan/Sustainable Communities Strategy

The County of Sonoma appreciates the opportunity to review and comment on the Notice of Preparation (NOP) for Plan Bay Area 2040. The County submits the following comments for MTC's consideration.

PDA Placetype Recognition

Plan Bay Area and associated website resources fail to recognize the unincorporated PDA placetypes. Sonoma County has six Rural Community Investment Areas and one Employment Investment Area. These have been recognized by MTC and ABAG as areas that meet the PDA designation criteria with anticipated housing density, a mix of land uses, access to transit, etc. These areas have been deemed eligible for OBAG grant opportunities and we, thus far, have received $800,000 for new Specific Plans. The following unincorporated PDA placetypes should be recognized and analyzed as part of the Plan Bay Area and the associated Environmental Impact Report:

- Forestville Rural Community Investment Area
- Graton Rural Community Investment Area
- Guerneville Rural Community Investment Area
- Larkfield Rural Community Investment Area
- Penngrove Rural Community Investment Area
- Springs Rural Community Investment Area
- Airport Employment Investment Area

We look forward to working with you on the latest version of Plan Bay Area. Please feel free to contact Amy Lyle at amy.lyle@sonoma-county.org or by phone at (707)565-7389 if you have any questions.

Sincerely,

Jennifer Barrett, AICP
Deputy Director, Planning
Permit and Resource Management Department

cc: Tennis Wick

Pam Grove

From: Lou Ann Texeira <LouAnn.Texeira@lafco.cccounty.us>
Sent: Wednesday, June 15, 2016 12:13 PM
To: EIR Comments
Subject: Contra Costa LAFCO's Comment Letter - NOP EIR - Plan Bay Area 2040
Attachments: Signed CCLAFCO Letter to MTC - Plan Bay Area 2040 NOP EIR.docx.pdf

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Thank you for the opportunity to comment.

CONTRA COSTA LOCAL AGENCY FORMATION COMMISSION
651 Pine Street, Sixth Floor • Martinez, CA 94553-1229
e-mail: LouAnn.Texeira@lafco.cccounty.us
(925) 335-1094 • (925) 335-1031 FAX

Lou Ann Texeira
Executive Officer

MEMBERS
Donald A. Blubaugh, *Public Member*
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Igor Skaredoff, *Special District Member*
Don Tatzin, *City Member*

ALTERNATE MEMBERS
Candace Andersen, *County Member*
Sharon Burke, *Public Member*
Tom Butt, *City Member*
Stanley Caldwell, *Special District Member*

June 15, 2016

MTC Public Information
375 Beale Street, Suite 800
San Francisco, CA, 94105

Sent via email to eircomments@mtc.ca.gov

Dear MTC:

Thank you for the opportunity to comment on the Notice of Preparation (NOP) relating to an Environmental Impact Report (EIR) being prepared for the update to the regional planning document, *Plan Bay Area 2040*.

We would like to echo the comments submitted by Alameda LAFCO regarding LAFCO's mission, role and responsibilities. LAFCO is charged with balancing the competing interests of preserving agricultural and open space lands, while encouraging orderly growth and development and the efficient extension of public services. As noted by Alameda LAFCO, we request that the EIR consider impacts to agricultural and open space lands, as well as the availability and capacity of public services.

With regard to agricultural and open space land issues, the EIR should address potential impacts to the Priority Conservation Area (PCA) sites as well as surrounding areas.

With regard to the public services needed to support each proposed Priority Development Area (PDA), the EIR should evaluate the level and availability of those services identified in the Alameda LAFCO letter.

You may recall that in 2010, the nine Bay Area LAFCO Executive Officers met with staff from ABAG, BAAQMD, BCDC and MTC to discuss development of the inaugural *Plan Bay Area*.

As discussed in 2010, the *Plan Bay Area* documents should take into consideration the LAFCO established spheres of influence (SOIs) for each city and special district, as the SOIs establish the areas designated as probable physical boundaries and future service areas. Further, the *Plan Bay Area* documents should recognize special districts as critical service providers. In many counties, including Contra Costa County, most infrastructure services (i.e., fire, sewer, water) are provided by special districts. *Plan Bay Area 2040* would be incomplete if it fails to consider SOIs, as well as the role of special districts as critical service providers.

As noted by Alameda LAFCO, Municipal Service Reviews (MSRs), as prepared by LAFCOs, contain a wealth of information regarding municipal services. The MSRs evaluate growth and population projections; present and planned capacity of public facilities, adequacy of public services, and infrastructure needs or deficiencies; financial ability of agencies to provide services; status of, and opportunities for, shared facilities; accountability for community service needs, including governmental structure and operational efficiencies; location and characteristics of disadvantaged unincorporated communities; and any other matters related to effective or efficient service.

We agree with Alameda LAFCO that the EIR for *Plan Bay Area 2040* presents a valuable opportunity to heighten the public's awareness of these critical issues.

Thank you for your consideration of these comments, and please include Contra Costa LAFCO on your future mailing list.

Sincerely,

Lou Ann Texeira
Executive Officer

cc: Each Commissioner, Contra Costa LAFCO
Each Executive Officer, Bay Area LAFCOs (Alameda, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma)

Pam Grove

From: Petty, Sebastian <Pettys@samtrans.com>
Sent: Wednesday, June 15, 2016 2:08 PM
To: EIR Comments
Cc: Scanlon, Elizabeth
Subject: Caltrain comments on Plan Bay Area NOP
Attachments: Caltrain comments on PBA 2040 NOP.pdf

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Hello,

Attached please find Caltrain's comments on the Plan Bay Area 2040 Notice of Preparation.

Thanks you,

Sebastian Petty, AICP, Principal Planner
Caltrain Planning / Caltrain Modernization Program
2121 S. El Camino Real, Suite 300
San Mateo, CA 94403
t: 650.622.7831 c: 650.730.8858
www.caltrain.com/calmod

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June 15, 2016

MTC Public Information
375 Beale Street, Suite 800
San Francisco, CA 94105

Subject: Peninsula Corridor Joint Powers Board comments on Notice of Preparation (NOP) for the Plan Bay Area 2040 Draft Environmental Impact Report

Dear Mr. Noelting,

Thank you for the opportunity to comment on the scoping of the Environmental Impact Report (EIR) for Plan Bay Area 2040, the Metropolitan Transportation Commission's (MTC) Regional Transportation Plan (RTP). As a multi-county transit operator serving San Francisco, San Mateo and Santa Clara counties, Caltrain participates directly in the development of the RTP. As work on the RTP advances to the environmental phase we look forward to continuing our close coordination with MTC to ensure that our services and projects are coordinated with this important document.

Caltrain is currently working towards the delivery of the Peninsula Corridor Electrification Project (PCEP). This transformative project will upgrade the performance, operating efficiency, capacity, safety and reliability of Caltrain's commuter rail service. The PCEP is scheduled to be operational by 2020 and will include the installation of traction power facilities and an overhead catenary system as well as the procurement of new Electric Multiple Unit (EMU) trains that will replace a portion of Caltrain's existing diesel fleet. After completion of the PCEP, but within the timeframe of Plan Bay Area 2040, it is Caltrain's desire to expand the number of EMUs in its fleet to provide fully electrified service on the mainline with longer trains and platforms modified to achieve level boarding. Both the PCEP and the subsequent conversion and expansion of the EMU fleet were submitted as projects to MTC as part of the Plan Bay Area 2040 Call for Projects.

Within the EIR we respectfully request that MTC analyze the full air quality benefits of Caltrain's Peninsula Corridor Electrification project and proposed fleet

expansion. We believe these air quality benefits should reflect both the projected impacts of anticipated ridership and trip diversion related to the projects as well as the direct and substantial air quality benefits that occur from removing diesel locomotives from service and converting to EMUs. We also respectfully request that MTC's analysis consider and disclose existing and future transit crowding so that the effects of transit capacity constraints on regional travel choices and behavior (along with associated benefits and impacts) is adequately understood and disclosed.

Thank you again for the opportunity to comment on the scope of this important analysis. Should you have any questions please contact Sebastian Petty, Caltrain Principal Planner, at 650-622-7831 or pettys@samtrans.com.

Sincerely,



Elizabeth Scanlon
Manager, Caltrain Planning

Cc: April Chan, Chief Officer, Planning, Grants and Transportation Authority
Sebastian Petty, Principal Planner, Caltrain

Pam Grove

From: Diehl, Sue <Sue.Diehl@sanjoseca.gov>
Sent: Wednesday, June 15, 2016 3:35 PM
To: EIR Comments
Subject: City of San Jose Comments on Bay Area Plan 2040 EIR, Public Scoping
Attachments: 20160615150718697.pdf

Importance: High

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Please see attached letter.

Thank you,

SUE DIEHL
ADMINISTRATIVE SERVICES DIVISION | ADM ASSISTANT
PLANNING, BUILDING AND CODE ENFORCEMENT
CITY OF SAN JOSE
(408) 535-7880

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Department of Planning, Building and Code Enforcement

HARRY FREITAS, DIRECTOR

June 15, 2016

EMAIL: eircomments@mtc.ca.gov

Miriam Chion, Planning & Research Director
ABAG
Bay Area Metro Center
375 Beale Street
San Francisco, CA 94105

Adam Noelting, MTC Senior Planner
MTC Public Information
375 Beale Street, Suite 800
San Francisco, CA 94105

Subject: Bay Area Plan 2040 Environmental Impact Report, Public Scoping Comments

Dear Ms. Chion and Mr. Noelting,

Thank you for the opportunity to provide comments on the scope of the MTC SF Bay Regional Transportation Plan/Sustainable Communities Strategy Environmental Impact Report [Bay Area Plan 2040 EIR].

Regarding the development of the three scenarios for the Plan Bay Area update, the City of San Jose has been collaborating with ABAG/MTC on the land use projections and transportation improvements through the Department of Planning, Building and Code Enforcement's Long Range Planning Division and the Department of Transportation. The City regards Plan Bay Area 2040 as an important vision for comprehensive regional planning for the Bay Area and, specifically, for the City of San Jose as one of the three big cities in the Bay Area. We applaud the regional agencies for producing three scenarios that address key issues for growth within existing urbanized areas with high-quality transit and conservation of open space through growth boundaries and priority conservation areas. San Jose's comments are mainly focused on the jobs-housing distribution and CEQA streamlining for future City's projects.

Jobs and Housing Distribution: As the largest city in the Bay Area, San Jose plays a key role in providing jobs and housing for the region and meeting the Bay Area's greenhouse gas (GHG) emission reduction targets. The key challenge faced by San Jose is the imbalance between jobs and housing. This imbalance has significantly impacted the City's fiscal health, thereby affecting the quality of life for its residents and businesses. Due to this imbalance, many residents commute long distances by automobile, which also contributes to the City and region's greenhouse gas emissions.

Envision San Jose 2040: The City's General Plan, Envision San Jose 2040, aims to address these issues. The City's General Plan plans for 470,000 new jobs and establishes a goal of achieving 1.3 jobs for each employed resident. Consistent with San Jose's General Plan, the MTC SF Bay Regional Transportation Plan/Sustainable Communities Strategy EIR should

analyze growth scenarios that recognize San Jose as a regional jobs center. Specifically, the Connected Neighborhoods Scenario and the Big Cities Scenario analyzed in the EIR should include jobs growth that would achieve San Jose's goal of transitioning from a bedroom community for Silicon Valley to a primary employment destination in the Bay Area. As San Jose has and continues to produce a large portion of the region's housing, it is important that these scenarios include strategies to create a more balanced housing outcome throughout the region, with a focus on more housing production for households of all income levels in close-in towns/cities surrounding the three big cities.

Envision San Jose 2040 sets forth policies requiring the City to conduct a review of the General Plan every four years to evaluate significant changes in the planning context and achievement of key goals. The General Plan requires the City to reconvene the Envision San José 2040 Task Force during each Four-Year Review to provide community and stakeholder engagement in reviewing and evaluating success in the implementation of the General Plan and recommending any mid-course actions needed to achieve its goals. The first Four-Year Review Task Force process was conducted earlier this year, with the last Task Force meeting in April. As part of this process, the Four-Year Review Task Force and Planning staff are recommending to the City Council to adjust the General Plan's jobs to employed-resident ratio goal from 1.3 to 1 to 1.1 to 1. This adjusted ratio will establish a more achievable objective and support implementation of the General Plan's Urban Village Major Strategy.

Center for Continuing Study of the California Economy (CCSCE) Report: Additionally, as part of the Four-Year Review process, the Center for Continuing Study of the California Economy (CCSCE) completed updated jobs and population projections for San Jose. The Report projected a range of job growth for San Jose which exceeds Plan Bay Area 2040's projected job growth for San Jose in all three scenarios as presented to the City in December 2015. (http://www.sanjoseca.gov/DocumentCenter/View/47999).

As stated above, consistent with the City's General Plan, the Connected Neighborhoods Scenario and the Big Cities Scenario analyzed in the EIR should include jobs growth that would achieve a jobs to employed resident ratio in San Jose that would be equal to or be greater than 1.1 to 1. We strongly emphasize review of the jobs-housing distribution and its effect on sustainable and equitable development, regional air quality, traffic and transportation, and greenhouse gas emissions.

Alternatives: The City of San Jose land use and transportation patterns are consistent with the vision of the Bay Area Plan's Connected Neighborhood and Big Cities Scenarios with compact development along transportation infrastructure at the City's core and along transit corridors. We urge that the Environmental Impact Report also analyze other potential priority development areas in an alternative with the view that they will become Planned Priority Development Areas over the 2040 horizon.

Transportation Investment: With population and employment growth concentrated in the three Big Cities and priority development areas, the region must invest in transportation infrastructure

that supports sustainable development. This includes addressing our significant State of Good Repair needs and major new transit and rail, bikeways, and complete street projects. Investing in the BART Silicon Valley extension, Caltrain Modernization, and frequent, high-quality bus and light rail infrastructure and services is critical to San Jose's sustainable development. In the near future, the City will also pursue a significantly expanded Diridon Transportation Center in conjunction with partners like Caltrain, VTA, BART and High-Speed Rail. Regional support for investment in the Diridon Transportation Center and connections to it (for example, between it and the San Jose International Airport) will be imperative and should be considered as part of this Plan.

Transit Priority Project (TPP) CEQA Streamlining: The City of San Jose looks forward to land use and transportation integration pursuant to Senate Bill 743 and CEQA streamlining for local projects that would be the basis for regional and local climate protection, open space and conservation, transportation systems, adequate housing, healthy and complete communities with equitable access and economic vitality. This consideration of TPP eligible land use would leverage transportation infrastructure, intensity of land uses within the PDAs, and streamline CEQA review at local level. The City looks forward to the inclusion and analysis of traffic impacts for how vehicle miles traveled (VMT) is applied to evaluate the cost of auto-oriented growth and pricing impacts. We look forward to further understanding of the CEQA streamlining offered by the Bay Area Plan 2040 EIR.

Again, thank you for the opportunity to comment on the Bay Area Plan 2040 EIR. The City looks forward to continuing the partnership with ABAG/MTC to support this endeavor. To that end and for further development of the Bay Area Plan and its Environmental Impact Report, please include Meenaxi Panakkal, Supervising Planner, Environmental Review Team at meenaxi.panakkal@sanjoseca.gov. Should you have any questions, you may also contact Rosalynn Hughey, Assistant Director, at (408) 535-7911, or rosalynn.hughey@sanjoseca.gov.

Sincerely,

Harry Freitas, Director
Planning, Building & Code Enforcement

Sincerely,

Jim Ortbal
Director of Transportation

SFMTA
Municipal
Transportation
Agency

Edwin M. Lee, *Mayor*

Tom Nolan, *Chairman*
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Cristina Rubke, *Director*

Edward D. Reiskin, *Director of Transportation*

June 15, 2016

Steve Heminger, Executive Director
Metropolitan Transportation Commission
375 Beale Street, Suite 800
San Francisco, CA 94105

Re: Bay Area HOT Lanes and FTA 5337 Funds

Dear Mr. Heminger,

As you know, High Occupancy Toll (HOT) lanes are High Occupancy Vehicle (HOV) lanes that allow vehicles which do not meet minimum occupancy requirements to pay a toll to use the lane. By using variable pricing, HOT lanes provide reliable travel times for all road users, increase roadway efficiency, and mitigate traffic congestion. HOT lanes may also improve air quality and reduce emissions by encouraging carpooling and transit ridership. Due to these benefits, the U.S. Department of Transportation (DOT) promotes the conversion of traditional HOV lanes into HOT lanes.

The Federal Transit Administration (FTA) currently excludes HOT lane service from the High Intensity Motorbus (HIM) apportionment formula for 5337 funds. As a result, Houston and San Diego Urbanized Areas (UAs) are losing funding because a large proportion of their HIM service is now in HOT lanes. Subsequently, other UAs (including Bay Area UAs) with little or no HIM service in HOT lanes are receiving increased apportionments from what is redistributed away from Houston and San Diego. The HOT lane exclusion benefits the Bay Area in the short term, but may be a disadvantage in the long term. The region could possibly lose funding, $6M annually, in future 5337 funds as regional plans to convert HOV lanes to HOT lanes are implemented and more HIM service occurs in HOT lanes.

Like MTC, the SFMTA is concerned about the public policy discrepancy of DOT promoting the implementation of HOT lanes while FTA penalizes regions that implement them through the HIM formula. As it stands now, this disadvantages regions across the country (like the Bay Area) that are pioneering congestion management techniques, which benefit public transit and increase vehicle speed for all users by making more efficient use of existing lanes.

The SFMTA requests a commitment from MTC to study the impact that FTA's current policy on the conversion of HOV lanes to HOT lanes will have. And, if it is determined that there will be a net loss of funding to the Bay Area's transit operators, we request that a commitment be made by MTC that revenues proportional to the amount that would have been received through the 5337 formula be restored to the Transit Capital Priorities program.

Sincerely,

Edward D. Reiskin
Director of Transportation

cc: T. Nolan – Chair, SFMTA Board of Directors
D. Campos, A. Halsted, S. Wiener – MTC Commission
T. Chang – Executive Director, SFCTA
G. Gillett – Office of Mayor Edwin M. Lee
M. Webster, K. Breen, J. Haley, S. Bose – SFMTA

County of Santa Clara

Parks and Recreation Department

298 Garden Hill Drive
Los Gatos, California 95032-7669
(408) 355-2200 FAX 355-2290
Reservations (408) 355-2201
www.parkhere.org

June 15, 2016

Metropolitan Transportation Commission
Public Information
375 Beale Street, Suite 800
San Francisco, CA 94105

Subject: Notice of Preparation of a Draft Program Environmental Impact Report for the Plan Bay Area 2040

The County of Santa Clara Parks and Recreation Department ("County Parks Department") is in receipt of a Notice of Preparation for a Draft Program Environmental Impact Report (DEIR) for Plan Bay Area 2040, an update to the previous Plan Bay Area; which includes the area Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS). As stated in the NOP, the overarching goal is to develop, "a long-range plan that balances future mobility and housing needs with other economic, environmental, and public health goals" for the nine Bay Area counties.

The County Parks Department's comments are primarily focused on potential impacts related to land use policies, regional parks, natural and cultural resources, recreation and recreational facilities, and countywide trail routes identified in the *Santa Clara County Countywide Trails Master Plan Update ("Countywide Trails Master Plan")*. The County Parks Department, in partnership with Cities and other public agencies, is charged with implementing the *Countywide Trails Master Plan*, a component of the Parks and Recreation Element of the County General Plan that the Board of Supervisors adopted on November 14, 1995. Major national, state, and regional trail routes identified in the *Countywide Trails Master Plan* provide recreational opportunities and habitat, but also provide alternative non-motorized transportation routes for commuters, and safe routes to schools.

Board of Supervisors: Mike Wasserman, Cindy Chavez, Dave Cortese, Ken Yeager, S. Joseph Simitian

County Executive: Jeffrey V. Smith

The Santa Clara County Parks system consists of over 50,000 acres of regional parklands, open space, lakes, streams, creeks and trails in 28 parks. These regional parks, trails and open space areas provide 'green' infrastructure and resource preservation/protection of critical importance to the County and the greater Bay Area and afford residents substantial public health benefits that should be recognized in the Plan Bay Area 2040 update. The importance of these resources to residents of the region was demonstrated by recent election results wherein natural resource funding Measure A in Santa Clara County and Measure AA in the greater San Francisco Bay Area passed with resounding support.

As addressed in Plan Bay Area 2040, transportation and land use policies have the potential to either significantly impact open space and park resources or to seamlessly connect these critical infrastructures. As such, the County Parks Department respectfully requests that Plan Bay Area 2040 builds on and extends the conceptual integration reflected in Priority Development Areas and Priority Conservation Areas. We recommend an in-depth discussion and proposed framework that seeks to better incorporate work undertaken by agencies and organizations like ours (open space preservation, access for recreation, provision of regional trail connections, cultural and natural resource protection, etc.) into the larger long-range regional vision for transportation and general land use policy and development. The One Bay Area Grant program should continue to grow make additional funding available for land acquisition and development projects that protect undeveloped open space and agricultural land in outlying areas. Further, Plan Bay Area 2040 should ensure that the quantity and quality of public transit and other clean-air connections to open space, trails, and parks is identified as a priority.

Related to the above, the DEIR should include quantitative and qualitative criteria for evaluating how the implementation of an integrated land use and transportation framework (especially one absent a focus on green infrastructure) would impact and/or degrade recreation, open space, conservation and related public services. The document should consider how increased usage (based on population growth projections and the Plan's Sustainable Communities Strategy) of regional parkland and Countywide trail routes will help meet Plan goals, and include a strategy for the long-term management and maintenance of these important systems.

Lastly, the DEIR should include general analysis of a variety of potential impacts of the Plan to the Santa Clara County Parks system and regional trail routes including, but not limited to, the following areas of concern: aesthetics and visual resources; agriculture and forestry resources; air quality; biological resources; cultural resources; hydrology and water quality; land use and planning; noise and vibration; population and housing; public services and recreation; and traffic and transportation.

The Santa Clara County Parks Department appreciates the opportunity to comment on the Notice of Preparation for a Draft Program Environmental Impact Report for the update of Plan Bay Area 2040. Please add our contact information to your distribution list for future

SANTA CLARA COUNTY PARKS

Board of Supervisors: Mike Wasserman, Cindy Chavez, Dave Cortese, Ken Yeager, S. Joseph Simitian

County Executive: Jeffrey V. Smith

notifications. If you have any questions regarding these comments, please feel free to contact me at (408) 355-2299 or via email at annie.thomson@prk.sccgov.org.

Sincerely,

Annie Thomson
Principal Planner

cc: Don Rocha, Deputy Director
Robb Courtney, Director

SANTA CLARA COUNTY PARKS

Board of Supervisors: Mike Wasserman, Cindy Chavez, Dave Cortese, Ken Yeager, S. Joseph Simitian

County Executive: Jeffrey V. Smith

SAN JOAQUIN COUNCIL OF GOVERNMENTS

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June 15, 2016

Mr. Adam Noelting
Plan Bay Area 2040 Project Manager
Metropolitan Transportation Commission (MTC)
375 Beale Street, Suite 800
San Francisco, CA 94105

SENT Via Email: eircomments@mtc.ca.gov

Mr. Noelting:

Thank-you for the opportunity to review and provide comments on the Notice of Preparation (NOP) for the Environmental Impact Report (EIR) for Plan Bay Area 2040. The San Joaquin Council of Governments (SJCOG) has enjoyed a cooperative and collaborative relationship with MTC for many years on planning issues of joint concern, including coordination on many of the assumptions that will form the foundation of Plan Bay Area 2040 and its associated EIR. Particular issues of joint concern include population and housing growth, inter-regional travel (commute and goods movement), the jobs-housing balance, and the effect these may have on the ability of our respective regions to continue to meet greenhouse gas (GhG) reduction goals envisioned in SB375 and AB32, and prescribed by the California Air Resources Board (CARB).

Plan Bay Area 2040 alternatives all include housing the entire projected population/workforce increase within the nine-county Greater Bay Area region, thus providing no net increase in workers commuting from other areas to Bay Area jobs. However, the assumption is contrary to recent trends, and, fails to address the existing imbalance of jobs to housing that results in excess of 45,000 daily commuters into the Bay Area from San Joaquin County alone. This level of inter-regional travel has a profound effect on vehicle miles of travel (VMT) in both the Bay Area and San Joaquin regions, delay and travel time reliability for both people and goods along the primary travel corridor of I-580/I-205, and GhG emissions. An unanticipated increase of in-commuters to the Bay Area may result in the need to shift transportation investments to commute-shed corridors with an emphasis on non-single-occupant vehicle (SOV) options and strategies. An equally plausible future would be decreasing Bay Area job growth as jobs begin to follow increasing population growth outside of the Bay Area.

For these reasons, the impacts of the eventual preferred plan alternative and any other potential EIR alternative scenarios (which are not currently explicitly detailed in the NOP), should be evaluated for their impacts to the jobs-housing balance between regions, inter-regional VMT and GhG emissions, and the impact to goods movement between the regions

in the form of delay, travel-time reliability measures, and concurrent economic losses. This inter-regional approach follows the recognition of the close economic and demographic ties of the increasingly integrated northern California "Megaregion," with San Joaquin County and the San Francisco Bay Area at its core.

SJCOG recognizes, and is appreciative of, the on-going collaborative planning efforts with our Bay Area partners at ABAG and MTC. We look forward to discussing a framework for the assumptions underlying any EIR alternative scenarios developed by MTC, as well as inter-regional performance measures that will inform future planning efforts for both MTC and SJCOG.

Sincerely,



Diane Nguyen
Deputy Director for Programming, Planning & Project Delivery
San Joaquin Council of Governments

County of Santa Clara
Roads and Airports Department

101 Skyport Drive
San Jose, California 95110-1302
1-408-573-2400

June 15, 2016

MTC Public Information
375 Beale Street, Suite 800
San Francisco, CA 94105

SUBJECT: Notice of Preparation of an Environmental Impact Report
San Francisco Bay Area Regional Transportation Plan/Sustainable Communities Strategy

Dear MTC Staff:

The County of Santa Clara Roads and Airports Department is submitting the following comments regarding the notice of preparation (NOP) of an environmental impact report (EIR) for the project cited above.

The program-level Draft Environmental Impact Report (DEIR) should provide the analysis results for individual counties, in addition to results for the entire Bay Area region. It is important to analyze the transportation impacts on a county level, as all counties have different growth assumptions and transportation facilities available. Significant impacts for Santa Clara County, with its high jobs and housing growth projections, may be lost in a regional analysis.

Thank you for the opportunity to comment on the DEIR. If you have any questions about these comments, please contact me at 408-573-2465 or at dawn.cameron@rda.sccgov.org.

Sincerely,

Dawn S. Cameron
Deputy Director, Infrastructure Department

cc: AB, MA

Board of Supervisors: Mike Wasserman, Cindy Chavez, Dave Cortese, Ken Yeager, S. Joseph Simitian
County Executive: Jeffrey V. Smith

GOLDEN GATE BRIDGE
HIGHWAY & TRANSPORTATION DISTRICT

June 15, 2016

MTC Public Information
375 Beale Street, Suite 800
San Francisco, CA 94105

Re: NOP for DEIR for Plan Bay Area 2040 – RTP/SCS

To Whom It May Concern:

The Golden Gate Bridge, Highway and Transportation District (District) operates public transit service with buses and ferries linking five Bay Area counties. District staff has reviewed the Notice of Preparation (NOP) for the Draft Environmental Impact Report (DEIR) for Plan Bay Area 2040 – the Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) and has the following comments related to the scope of the DEIR.

The NOP indicates that the DEIR will analyze a Main Streets Scenario, which calls for an expansion of high-occupancy toll (HOT) lanes. Should the Metropolitan Transportation Commission (MTC) choose to expand the network of HOT lanes in the Bay Area through conversion of existing high-occupancy vehicle (HOV) lanes, Federal Transit Administration (FTA) regulations dictate that the conversion of HOV lanes to HOT lanes would reduce the Bay Area's share of the 3% set aside for High Intensity Motor Bus from the FTA Section 5337 State of Good Repair funds. Approximately 8% of the District's bus service operates in HOV lanes that help the region qualify for this funding.

The District is concerned that the conversion of HOV lanes to HOT lanes could have a negative impact on public transit funding in the Bay Area. We respectfully request that any Plan Bay Area strategy that converts HOV lanes to HOT lanes account for the potential impact to public transit funding. Therefore, MTC's analysis of the Main Streets Scenario should evaluate the loss of FTA 5337 funding and the net toll funding generated by HOT lanes, and it should demonstrate whether the HOT lane concept makes financial sense for the Bay Area.

Thank you for providing the District the opportunity to comment on the NOP for the Plan Bay Area 2040 DEIR. We look forward to reviewing a DEIR that analyses the key financial concerns listed above. Please feel free to contact me to discuss these comments further.

Sincerely,

Denis Mulligan

Denis J. Mulligan
General Manager

c: A. Frye, D. Davenport, G. Prior, R. Downing

Pam Grove

From: Parks, Lori <laparks@cityoflivermore.net>
Sent: Wednesday, June 15, 2016 4:20 PM
To: EIR Comments
Subject: Comment Letter
Attachments: Comment Letter on PBA Update and EIR Scope - City of Livermore.pdf

Follow Up Flag: Flag for follow up
Flag Status: Flagged

The attached PDF is a comment letter from the City of Livermore on the Scope of the EIR to be prepared for the Plan Bay Area 2040 Update.

Thanks!
Lori

Lori Parks
Associate Planner
Community & Economic Development Department
City of Livermore
(925) 960-4462
www.cityoflivermore.net

LIVERMORE
CALIFORNIA

June 13, 2016

Ken Kirkey, MTC Planning Director
Miriam Chion, ABAG
Bay Area Metro Center
375 Beale Street
San Francisco, CA 94105

Dear Mr. Kirkey and Ms. Chion,

The City of Livermore has reviewed the Alternative Scenarios for the Plan Bay Area update, sent to the Planning Division on May 18, 2016. The City offers the following comments on the Alternative Scenarios, the growth projections for Livermore, and the scope of the Environmental Impact Report (EIR). We intend this input to help guide selection of a Preferred Alternative. The City's comments are based upon the following principles that were included in the letter from Tri-Valley officials sent to ABAG and MTC on September 28, 2015:

- Recognize and plan for interregional travel.
- Invest in transportation improvements that increase connectivity to existing activity nodes and job centers.
- Support Bay Area communities at the policy level that are experiencing growth and are working to be more sustainable.
- Provide policies for "geographic equity" within counties.

Alternative Scenarios

1. Scenario #2 (Connected Neighborhoods) builds upon the established Priority Development Area (PDA) framework. Scenarios #1 (Main Streets) and #3 (Big Cities) are major deviations from the adopted Plan Bay Area. PDAs are useful tools as they provide predictability to local governments, property owners, residents, and the regional agencies regarding the direction of transportation and infrastructure investments. PDAs are voluntarily designated and are more aligned with local plans, increasing the chances of achieving the regional vision.

   In addition to retaining a focus on PDAs, Scenario #2 takes a balanced approach between investing in state-of-good repair on roads and transit, while supporting strategic expansions to the transit system to serve growing areas. Scenario #2 also performs best against the new targets and would have the largest regional benefits. Furthermore, the growth projections for Livermore under Scenario #2 generally align with the existing Plan Bay Area and forecasts based on the City's General Plan (although we identified some key issues with the projections, as discussed further below). A drastic move away from PDAs and the original growth assumptions would undermine planning efforts completed over the last five years. The City understands the rationale of providing three different

scenarios. However, the next update should provide a more focused range of policy adjustments – continuing to build consensus around the adopted vision rather than introducing uncertainty.

2. The affordable housing policies under Scenarios #1 and #3 would be very problematic. Labeling areas as "high VMT" or "low VMT" over simplifies the complex relationship between jobs, housing, and services that exist from the neighborhood level up to the regional scale. A direct and complete transfer of funds from some jurisdictions to others would have many unintended consequences. For example, many places considered as high VMT are also high opportunity areas, and imposing fees on development while providing no subsidies for affordable housing in these locations would conflict with equity goals.

   Providing sufficient affordable housing is a challenge in every community in the Bay Area. Accordingly, all scenarios (including Scenario #2) should include a fair and effective policy for generating additional funds for affordable housing in PDAs throughout the region. Policies that discourage housing construction in certain communities in the face of a regional housing crisis would be counterproductive to the regional vision.

3. In addition to strengthening the affordable housing policies, Scenario #2 should emphasize transit extensions. The region should invest in regional rail improvements that increase connectivity between growing job centers and residential communities (the Tri-Valley is experiencing both). The regional rail network plays a key role in connecting people to jobs, and the urgency to provide viable transit options where they are lacking will only increase. Regional rail also catalyzes transit-oriented, infill, and higher density development – increasing opportunities for people to live and work with less dependence on vehicles. Plan Bay Area should support communities wanting and needing regional rail service to improve sustainability, quality of life, and community health. The plan should also consider how land use changes can take advantage of under-utilized infrastructure in the reverse commute direction.

For these reasons, City staff strongly supports moving forward with Scenario #2, but with adjustments to the affordable housing policies and emphasis on transit. These two changes to Scenario #2 would improve performance on equity targets and further support congestion- and emissions-related goals.

Forecasted Household and Job Growth for Livermore

4. *Projections 2013* shows the city of Livermore as having 29,134 households in 2010. Why does Attachment 2 (Growth Forecasts by Alternative Scenario) show Livermore as having 28,600 households in 2010?

5. The household forecasts for Livermore vary widely across the scenarios and do not align with our expectations based on approved development and adopted land use plans. For

example, there are projects completed since 2010 or currently under construction that are not reflected in the table, including Shea Sage and Shea Montage in the Isabel PDA and the Brisa project in the Eastside PDA. In addition, the approved Downtown Specific Plan allows up to 1,400 units in the first phase of implementation, and up to 3,600 units in subsequent phases. The "No Project" scenario should reflect projects approved since 2010 and minimum anticipated growth under approved land use plans (as described further in comments #11 and #12 below). This table shows a more accurate distribution of Livermore households under the No Project Scenario:

Geography	2010 Baseline	2040 No Project	#2 Connected Neighborhoods
Livermore total	28,600	32,800	37,600
Downtown	600	1,500	2,100
East Side	0	500	2,500
Isabel Neighborhood	300	1,250	4,000
Outside PDAs	27,700	29,550	29,000

6. Forecasted growth under Scenario #3 should be at least as much as under the "No Project" scenario, as Livermore will continue to grow regardless if regional investments are directed towards the Big Cities. The number of households assumed for each PDA under Scenario #3 should reflect the distribution under the No Project scenario.

7. New housing in the Isabel PDA is dependent upon a BART extension to Isabel Avenue (see PDA application, attached). Under existing regulations, no new housing is allowed in this area. The City is preparing the Isabel Neighborhood Plan (INP), which will include amendments to allow residential uses. The INP will ultimately serve as a PDA plan (for Plan Bay Area purposes), Station Area Plan (MTC's TOD policy), and Ridership Development Plan (BART policy). The Draft INP plans for about 4,225 new housing units, which should be reflected in at least Scenario #2.

8. Under Scenario #2, Livermore is forecasted to grow by 9,000 households; however, household growth in the three PDAs adds up to 10,800. This distribution should be corrected so that household growth in the PDAs does not exceed citywide household growth. The scenario should also assume some development outside of the PDAs. A suggested distribution of households for Scenario #2 is provided in the table above.

9. *Projections 2013* shows the city of Livermore as having 38,450 jobs in 2010 (and 46,650 in the SSA). Livermore annexed the Lawrence Livermore and Sandia National Labs sites in 2011. Together, these Labs are the City's largest employer and provide approximately 9,400 jobs. Please ensure that the Labs are included in the job forecasts for Livermore.

10. All of the scenarios show Livermore adding 7,100-7,900 jobs over 2010 baseline conditions. This is drastically lower than job estimates under the current Plan Bay Area, which estimates over 14,000 new jobs in Livermore. Please explain this difference. For reference, we estimated that General Plan build-out would result in about 87,000 jobs within the city. According to US Census Bureau data (On the Map), the number of jobs in Livermore increased by 2,800 between 2010 and 2014, which would represent 36-40% of the total projected job growth under the No Project and alternative scenarios. Based on ABAG data, Livermore has grown by an average of 400 jobs per year since 1990. We expect to experience a similar growth rate moving forward, especially considering the recently approved industrial and commercial projects (e.g., Gillig, Phase II of the Outlets, The Shoppes, Trammel Crow distribution facility, etc.).

Scope of the Environmental Impact Report (EIR)

The EIR for the Preferred Alternative will analyze the cumulative impacts of implementing major transportation projects in the region (over which MTC has some control). As part of the analysis, assumptions will be made about the land use pattern in 2040 (over which regional agencies have very little control, as local agencies have land use authority). Plan Bay Area will continue to include incentives to influence the land use pattern, with the largest catalysts being the transportation investments themselves.

Implementing this visionary plan requires voluntary actions and coordination among numerous stakeholders. While this is a worthy effort, we recognize that it will be very difficult to fully achieve the vision. This makes it difficult to rely on the land use inputs, transportation model, and EIR to represent "reasonably foreseeable conditions" for tiering purposes under CEQA. It also creates challenges with evaluating the true costs and benefits of specific transportation projects. Given these concerns, we make the following suggestions and requests:

11. The land use inputs for the EIR analysis should generally align with local land use regulations and planning efforts. If the gap between the region's forecasts and the city's forecasts is too wide, it will be difficult for cities to rely on Plan Bay Area for planning and on the EIR for tiering. Therefore, please validate the land use inputs with local jurisdictions prior to running the transportation model for the Preferred Alternative.

12. The No Project scenario should reflect business-as-usual conditions. We recognize the need to assume 100% of housing needs will be met within the region's boundaries for the *project* scenarios, in response to the lawsuit and to meet the intent of SB 375. This is an

important goal for cities and the region to strive towards. However, this is not a reasonable assumption for the No Project scenario as housing construction has never kept up with job growth within the Bay Area, and people continue to move to adjacent regions in search of affordable housing options. Therefore, the No Project scenario should assume continuation of housing patterns in the Bay Area and Central Valley.

13. Relying on one set of long-term land use projections gives a false sense of precision. The projections completed in 2007 for Central Valley and Bay Area growth are very different than those completed in 2013. Furthermore, assuming there will be less inter-regional commuting and less congestion on highways, based on a visionary land use pattern, distorts the estimated performance of projects. Transportation investments based on these assumptions will be inadequate and less effective if congestion continues to grow, which it will likely do.

    Given the sensitivity of projections to fluctuating market conditions and the sensitivity of the model to land use inputs, the planning process should consider the range of land use patterns that may play out in the long-term. Specifically, the EIR and future updates should evaluate transportation projects against the more realistic No Project land use scenario described above *and* the Preferred Alternative. This approach would provide a more realistic range of potential outcomes, as the actual land use pattern will likely end up somewhere in between. This comparison should be an important part of the decision making process and disclosed to the public.

Thank you for the opportunity to provide feedback on the Plan Bay Area update. Please let us know if you have any questions.

Sincerely,

Marc Roberts, City Manager
City of Livermore

Marin Local Agency Formation Commission
Regional Service Planning | Subdivision of the State of California

June 21, 2016

Delivered by Email
Metropolitan Transportation Commission (MTC)
Public Information Office
375 Beale Street, Suite 800
San Francisco, California 94105
eircomments@mtc.ca.gov

SUBJECT: Comments on Notice of Preparation | Draft Environmental Impact Report for MTC's Plan Bay Area 2040

Public Information Office:

The Marin Local Agency Formation Commission (LAFCO) is aware of MTC's recent circulation of a notice of preparation of a draft environmental impact report (EIR) for Plan Bay Area 2040. Marin LAFCO did not receive the notice directly, and therefore we respectfully request MTC accept our late submittal beyond the prescribed June 15th deadline given our potential and/or probable role as a responsible agency in directly facilitating implementation aspects of Plan Bay Area 2040. Implementation examples include Marin LAFCO amending and updating spheres of influence, approving change of organizations or reorganizations, and authorizing outside municipal service services.

With the preceding comments in mind, Marin LAFCO offers the following comments to MTC as it develops and sets the content and analysis in the Draft EIR.

1. State law directs MTC to coordinate with LAFCOs in preparing Plan Bay Area 2040 as a sustainable communities strategy and specifically consider the spheres of influence that have been adopted by LAFCOs (Section 65080(b)(2)(F)). To this end, please note there are 65 local agencies in Marin County divided between 11 cities and 54 special districts that are each assigned a sphere of influence by Marin LAFCO. Additional comments herein follow.

   a) A listing of all 65 local agencies under Marin LAFCO's jurisdiction is attached.

   b) A digital viewing of Marin LAFCO's spheres of influence for the 65 local agencies are available online through MarinMap at www.marinmap.org.

   c) Pertinent information concerning the availability, need, and performance of public services tied to the 65 local governmental agencies are regularly updated by Marin LAFCO as part of our municipal service review program. These studies are available online at www.marinlafco.org.

Administrative Office
Keene Simonds, Executive Officer
1401 Los Gamos Drive, Suite 220
San Rafael, California 94903
T: 415-448-5877 E: staff@marinlafco.org
www.marinlafco.org

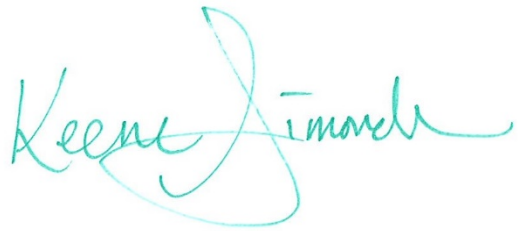
Judy Arnold, Regular, County of Marin
Damon Connolly, Regular, County of Marin
Kate Sears, Alternate, County of Marin
Carla Condon, Vice Chair, Town of Corte Madera
Gary Phillips, Regular, City of San Rafael
Sashi McEntee, Alternate, City of Mill Valley
Jack Baker, Regular, North Marin Water District
Craig K. Murray, Regular, Las Gallinas Valley Sanitary
Lew Kious, Alternate, Almonte Sanitary
Jeffry Blanchfield, Chair, Public Member
Chris Burdick, Alternate, Public Member

2. In step with streamlining the collection and analysis of information required of MTC in preparing the Draft EIR under Section 65080(b)(2)(F) it would seem reasonable to conduct one or more staff workshops between MTC and the nine Bay Area LAFCOs. This platform, notably, would help MTC and LAFCOs enhance their shared interests and duties – albeit divided between distinct functions – in regional growth management in the Bay Area.

Thank you for the opportunity to comment on the preparation of the Draft EIR and its role in informing decision-makers on potential impacts tied to MTC's statutory task to integrate land use and transportation in the Bay Area. As reflected in the above comments Marin LAFCO's principal interest is to help ensure the document effectively considers the impacts generated in the referenced integration with respect to local municipal service providers on a programmatic level.

Should you have any questions or related follow up please contact me at your convenience by telephone at 415-448-5877 or by email at ksimonds@marinlafco.org.

Sincerely,



Keene Simonds
Executive Officer

Attachments:

1) List of Local Agencies Under Marin LAFCO

cc: Marin LAFCO Commissioners
Bay Area LAFCO Executive Officers

ATTACHMENT TO LETTER

AGENCIES SUBJECT TO MARIN LAFCO JURISDICTION

Marin LAFCO has explicit jurisdiction over 65 local governmental agencies in Marin County. These agencies include all 11 cities/towns, 30 independent special districts (i.e., directly elected board members), and 24 dependent special districts (appointed board members from other governmental agencies). A current listing of agencies subject to Marin LAFCO follows.

A. Cities and Towns:

- Belvedere
- Corte Madera
- Fairfax
- Larkspur
- Mill Valley
- Novato
- Ross
- Sausalito
- San Rafael
- San Anselmo
- Tiburon

B. Independent Special Districts
(Directly Elected Governing Boards)

- Almonte Sanitary District
- Alto Sanitary District
- Bel Marin Key Community Services District
- Bolinas Fire Protection District
- Bolinas Community Public Utility District
- Homestead Valley Sanitary District
- Inverness Public Utility District
- Kentfield Fire Protection District
- Las Gallinas Valley Sanitary District
- Marin City Community Services District
- Marin County Resource Conservation District
- Marin Healthcare District
- Marin Municipal Water District
- Marinwood Community Services District
- Muir Beach Community Services District
- North Marin Water District
- Novato Fire Protection District

- Novato Sanitary District
- Richardson Bay Sanitary District
- Ross Valley Sanitary District (County Sanitary District 1)
- Sausalito-Marin City Sanitary District
- Sleepy Hollow Fire Protection District
- Southern Marin Fire Protection District
- Stinson Beach Fire Protection District
- Stinson Beach Water District
- Strawberry Recreation District
- Tamalpais Community Services District
- Tiburon Fire Protection District
- Tiburon County Sanitary District (County Sanitary District 5)
- Tomales Village Community Services District

C. Dependent Special Districts
(Appointed Governing Boards)

- County Service Area 1 (Loma Verde)
- County Service Area 6 (Gallinas Creek)
- County Service Area 9 (Northbridge)
- County Service Area 13 (Upper Lucas Valley)
- County Service Area 14 (Homestead Valley)
- County Service Area 16 (Greenbrae)
- County Service Area 17 (Kentfield/Larkspur)
- County Service Area 18 (Las Gallinas)
- County Service Area 19 (Country Club)
- County Service Area 20 (Indian Valley, Country Club, and Domingo Canyon)
- County Service Area 23 (Terra Linda)
- County Service Area 25 (San Marin)
- County Service Area 27 (Ross Valley)
- County Service Area 28 (West Marin)
- County Service Area 29 (Paradise Cay)
- County Service Area 31 (Unincorporated Area)
- County Service Area 33 (Stinson Beach)
- Marin/Sonoma Mosquito and Vector Control District
- Marin County Parks Open Space District
- San Rafael Sanitation District
- Corte Madera Sanitary District No. 2
- Murray Park Sewer Maintenance District
- San Quentin Village Sewer Maintenance District
- Marin County Flood Control and Water Conservation District

Organizations

Plan BayArea 2040

Comment Form

Plan Bay Area 2040 Draft EIR Scoping Meeting
Thursday, May 26, 2016
Dr. Martin Luther King Jr. Library
One Washington Square, Room 225
San Jose, California

Name: Colin Heyne Title: Dep. Director
Agency: Silicon Valley Bicycle Coalition
Address:
E-mail: colin@bikesiliconvalley.org Phone: 408) 464-5195

Use this form to submit any comments. Use the other side if additional space is needed.

I greatly prefer the Connected Communities & Big Cities scenarios to the Main St. scenario. Highway widening & greenfield development are anathema to our state & regional environmental & transportation goals.

Suggestion: Show existing population, jobs, & housing distribution on poster next to scenario "pies."

Written comments will be accepted at the scoping meetings; via mail to MTC Public Information, 375 Beale Street, Suite 800, San Francisco, CA, 94105; via fax to 415.536.9800; or via email to eircomments@mtc.ca.gov. **Written comments must be received at the MTC offices no later than June 15, 2016. For more information, call the MTC Public Information Office at 415.778.6757.**

Association of Bay Area Governments

METROPOLITAN TRANSPORTATION COMMISSION

EARTHJUSTICE

June 7, 2016

Via Email

Tina A. Thomas
Amy Higuera
Thomas Law Group
455 Capitol Mall, Suite 801
Sacramento, CA 95814
Tel.: (916)287-9292
Email: tthomas@thomaslaw.com
ahiguera@thomaslaw.com

Metropolitan Transportation Commission
Public Information Office
375 Beale Street, Suite 800
San Francisco, CA 94105
eircomments@mtc.ca.gov

Association of Bay Area Governments
375 Beale Street, Suite 700
San Francisco, CA 94105
info@abag.ca.gov

RE: Settlement Agreement in *Communities for a Better Environment et al. v. Metropolitan Transportation Commission et al.*, Case No. RG13692189

Dear Tina and Amy –

We write on behalf of our clients because it appears that the Metropolitan Transportation Commission ("MTC") and Association of Bay Area Governments ("ABAG") have not complied with the settlement agreement entered into in *Communities for a Better Environment et al. v. Metropolitan Transportation Commission et al.*, Case No. RG13692189. We ask that you please rectify this lack of compliance.

As you are aware, the litigation referenced above concluded when MTC, ABAG and Petitioners Sierra Club and Communities for a Better Environment ("CBE") entered into a settlement agreement on June 18, 2014. The potential compliance issues with these provisions of the settlement agreement are addressed in turn below.

A key feature of the settlement agreement requires the preparation of a Feasibility Analysis for the Priority Development Areas ("PDA"), prior to the issuance of a notice of preparation ("NOP") for the Plan Bay Area Environmental Impact Report ("EIR"). (Settlement Agreement, Section5(c).) The agreement requires a Feasibility Analysis for the PDAs that includes analysis of: current transit availability for each PDA, development readiness in the PDA, analysis of risks of sea level rise and liquefaction in the PDA, housing and jobs information for the PDA, and public health information for the PDA. (Settlement Agreement, Section 5(c)(i)-(v).)

The NOP was issued on May 16, 2016.[1] However, we have not been provided with the Feasibility Analysis. The Feasibility Analysis also does not appear in the section of the Plan Bay Area website dedicated to documents required by the parties' settlement agreement.[2] There is a document titled "PDA Assessment Update" posted on the website page, which was prepared in response to a different settlement agreement.[3] This document is not, however, the "Feasibility Analysis" for which Sierra Club and CBE negotiated, and does not satisfy the requirements of our settlement agreement. Specifically, the document does not analyze transit availability, development readiness, environmental factors, housing and jobs factors, or public health information, in the detail required by the Settlement Agreement. (Settlement Agreement, Section 5(c)(i)-(v).) Notably, the document omits study of whether transit operates at required intervals, whether PDAs are at risk of sea level rise or liquefaction, whether PDAs are also situated in CARE communities, and the anti-displacement programs in place in the PDA. To the extent that this information is available, it must be included in the Feasibility Analysis for each PDA.

Further, the "PDA Assessment Update" does not cover all the PDAs in the Bay Area – it covers only 65 PDAs.[4] The settlement agreement applied to all PDAs, which number over 170.[5] We understand that MTC and ABAG are only required to provide the requisite information to the extent that this information is available. However, the existence of environmental documents and other public information suggests that such information is already available for at least some, if not all, of the PDAs omitted from the "PDA Assessment Update." For example, Alameda County and several localities have prepared their own analyses of PDAs in their jurisdictions, or there is public information otherwise available about various PDAs. Therefore, MTC and ABAG should have access to information enabling them to prepare a Feasibility

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[1] The Notice of Preparation is available at: http://mtc.ca.gov/sites/default/files/PBA2040_NOP-EIR_LegalNotice.pdf

[2] The materials prepared in accordance with the parties' settlement agreement are available at: http://planbayarea.org/plan-bay-area/plan-bay-area/legal-documents.html

[3] The materials prepared in accordance with MTC, ABAG and the Building Industry Association's settlement are available at: http://planbayarea.org/the-plan/quick-facts/Legal-Settlements.html

[4] *See* PDA Assessment Update at p. 2.

[5] *See* Plan Bay Area, Frequently Asked Questions, available at: http://planbayarea.org/about/faq.html#q10022

Analysis for many, if not all, of the PDAs. As a method of illustration, we identify several examples of PDAs where MTC and ABAG should have had the requisite information:

a. ***Alameda County PDAs*** – In 2015, the Alameda County Transportation Commission ("ACTC") prepared a progress report covering PDAs in Alameda County, including such factors as: Complete Streets and Housing Elements status, PDA funding allocations, PDA coordination with other planning efforts, and housing data.[6] ACTC's report covered PDAs which do not appear to be included in MTC's "PDA Assessment Update," including: Dublin's Downtown and Town Center, Fremont's Centerville and Irvington District, Hayward's the Cannery, Livermore's Downtown, Oakland's Fruitvale and Dimond districts, and the Union City Intermodal Station District PDA.

b. ***City of Berkeley, Adeline and South Shattuck PDAs*** – The City of Berkeley received a $750,000 Priority Development Area Planning grant from MTC to plan development in the Adeline and South Shattuck PDAs and some initial analysis of demographic and economic conditions, current land uses and infrastructure has already been prepared.[7]

c. ***Treasure Island and Yerba Buena Island PDA*** – Treasure Island and Yerba Buena Island are another planned PDA.[8] San Francisco's Department of Planning and the Treasure Island Development Authority have prepared several environmental review documents covering this development.[9] There are numerous concerns associated with development on the site, such as transportation access, soil contamination, and the continued availability of affordable housing on the site.[10]

d. ***Dumbarton Transit Oriented Development PDA*** – The City of Newark has planned a Dumbarton Transit Oriented Development PDA, located near the Dumbarton Bridge. The City of Newark has already conducted environmental

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[6] The Alameda County Transportation Commission memorandum "2015 Alameda County Priority Development Area Investment and Growth Strategy Annual Progress Report" (May 28, 2015) is available at: http://www.alamedactc.org/files/managed/Document/16389/2015_Update_AlamedaCounty_PDA_IGS_May2015.pdf

[7] *See* *http://www.ci.berkeley.ca.us/uploadedFiles/Planning_and_Development/Level_3_-_Land_Use_Division/1_Introduction.pdf*

[8] *See* *http://gis.abag.ca.gov/website/PDAShowcase/#nogo1*

[9] *See* *http://sftreasureisland.org/environmental-review*

[10] *See* http://kalw.org/post/would-you-live-treasure-island#stream/0, http://www.sfchronicle.com/bayarea/article/Yerba-Buena-Island-plan-an-unwelcome-development-6434398.php

review related to such development.[11] The Sierra Club has publicly written about its concerns with the feasibility of this PDA, due to lack of transit access, seal level rise, and contaminated soil risks.[12]

e. ***Brisbane Baylands Development*** – Similarly, the City of Brisbane has prepared environmental analysis of the proposed Baylands development[13] along the waterfront, which does appear on ABAG's list of planned PDAs.[14]

MTC and ABAG must prepare a Feasibility Analysis that complies with the parties' Settlement Agreement. Please advise us when such analysis will be provided.

The Settlement Agreement also requires MTC and ABAG to "disclose the effects of financing the construction of express lanes by using bridge toll revenues, and … disclose the effect of such financing on the current uses of toll bridge revenues." (Settlement Agreement, Section 5(b).) This disclosure shall be made 30 days before the release of the NOP for the EIR. However, this analysis does not appear to have occurred, and we request correction of this omission.

Additionally, the Settlement Agreement requires MTC and ABAG to issue healthy infill guidelines, titled "Planning Healthy Places" before the issuance of the NOP. (Settlement Agreement, Section 5(e).) BAAQMD has released guidelines that appear to address this part of the settlement.[15] However, they are not referenced on the Plan Bay Area website nor have we been informed that these serve that purpose. If these are in fact the healthy infill guidelines, the guidelines and mitigations identified therein should also be considered and incorporated into the update to Plan Bay Area, as required by the Settlement Agreement.

We appreciate that MTC and ABAG have moved forward with constituting the Regional Freight New Technologies Task Force, and that the group is working towards developing the Freight Emissions Reduction Action Plan. We do note that it does not appear that the group has evaluated the potential for zero-emission truck lanes along Interstate 880, as required by the Settlement Agreement, Section 5(d)(i). Further, we understand that the task force has not yet focused on issues related Section 5(d)(ii), including funding sources. We expect that these issues will also be addressed by the task force.

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[11] *See e.g.,* *http://www.newark.org/images/uploads/comdev/pdfs/DumbartonTOD/Draft%20SEIR%20December%202013(reduced).pdf* and http://www.newark.org/images/uploads/comdev/pdfs/NewarkGP_DEIR_PublicReview.pdf

[12] *See* *http://theyodeler.org/?p=10597*

[13] *See* *http://www.ci.brisbane.ca.us/sites/default/files/1_intro.pdf*

[14] *See http://gis.abag.ca.gov/website/PDAShowcase/#nogo1*

[15] *See* *http://www.baaqmd.gov/~/media/files/planning-and-research/planning-healthy-places/php_may20_2016-pdf.pdf?la=en*

We appreciate your attention, and look forward to your prompt action to address these matters.

Sincerely,



Irene Gutierrez
Will Rostov
Counsel for Sierra Club and Communities for a Better Environment

From:	Heidi Tschudin
To:	Fran Ruger; Gary Jakobs; Amy Higuera
Cc:	"Tina Thomas"; Adam Noelting
Subject:	FW: Comment on RTP
Date:	Tuesday, June 14, 2016 4:54:58 PM

Heidi Tschudin
(916) 447-1809 office
(916) 952-0358 cell

From: Adam Noelting [mailto:ANoelting@mtc.ca.gov]
Sent: Tuesday, June 14, 2016 3:50 PM
To: Heidi
Subject: Fw: Comment on RTP

Please find the enclosed comments.
Adam

From: Sherman Lewis <sherman.lewisiii@gmail.com> on behalf of Sherman Lewis <sherman@csuhayward.us>
Sent: Tuesday, June 14, 2016 2:38 PM
To: EIR Comments
Subject: Comment on RTP

Roads vs. Rail; cars vs. transit: The RTP should favor rail and transit over roads and cars.

In Alameda County, an anti-environmental Supervisor is trying to revive a long-dormant highway project from the 1980s. The proposed route 84 would be environmentally damaging, increase traffic on the Dumbarton Bridge and on Mission Blvd. in Fremont and Union City. It would increase traffic on the winding, scenic two-lane road through Niles Canyon and create pressure to widen it and straighten it for more and faster traffic.

This highway project directly parallels the most cost-effective way of increasing east-west transportation capacity in this area, rail service over the Dumbarton Rail Bridge. Restoring this bridge would benefit tidal flows in the South Bay, now stagnant due to an outmoded berm. It would serve many markets—inter-regional passenger service, ACE, the San Joaquin service. It would tie into Caltrain service, reaching the new Transbay Terminal. This choice tests MTC's commitment to its stated goals.

I also request that you study the RTP alternatives proposed by TRANSDEF, as they will place this one project decision into a region-wide context, and show the consequences of the different paths open to MTC.

--
Sherman Lewis
Professor Emeritus, Cal. State Univ. EB Hayward
President, Hayward Area Planning Association
sherman@csuhayward.us
510-538-3692

Pam Grove

From: Melanie Newcomb <MNewcomb@barhii.org>
Sent: Wednesday, June 15, 2016 4:03 PM
To: EIR Comments
Cc: Melissa Jones; Amy Smith; Chuck McKetney; Michael Stacey
Subject: BARHII Comment Letter on Plan Bay Area Environmental Impact Report
Attachments: BARHII MTC PBA EIR Letter June 2016.pdf

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Hello,

In response to your request for comments on the Plan Bay Area Environmental Impact Report, please find a comment letter from the Bay Area Regional Health Inequities Initiative.

Melanie Newcomb | Project Specialist
Bay Area Regional Health Inequities Initiative (BARHII)
300 Frank H. Ogawa Plaza, Ste. 520, Oakland, CA 94612 | MNewcomb@barhii.org

BARHII

Bay Area Regional Health Inequities Initiative

Alameda County | City of Berkeley | Contra Costa County | Marin County | Napa County | City and County of San Francisco | San Mateo County | Santa Clara County | Santa Cruz County | Solano County | Sonoma County

June 14, 2016

To: eircomments@mtc.ca.gov

Re: Scoping Comments for Plan Bay Area Environmental Impact Report (EIR)

Dear Mr. Noelting,

The Bay Area Regional Health Inequities Initiative (BARHII) is a collaborative of the eleven Bay Area Public Health Departments that plan and work together to achieve more equitable health outcomes in our region. We have welcomed the opportunity to partner with our regional planning agencies to help further the dialogue on how our region's plan to reduce greenhouse gas emissions can also make significant contributions towards improving equitable health outcomes for our residents. We are providing the following recommendations for what should be studied in the EIR to help further health equity goals:

The EIR should analyze and propose mitigation measures for the following topics:

1. **Impacts on circulation disaggregated by mode**, with a focus on pedestrians, bicyclists and transit users. More specifically, the EIR should assess safety, quality of services provided, and travel time (commute and non-commute) for these users.

2. **The environmental impacts of the displacement of low-income populations from their neighborhoods and the region**, either directly or indirectly due to rising housing costs. Physical changes in the environment caused by economic or social effects of a project may constitute significant environmental effects and economic and social effects of a project may be factors in determining the significance of physical changes in the environment. (CEQA Guidelines §§ 15131, 15064(e).)

   As noted in a recent MTC staff report to the Regional Equity Working Group, displacement has far reaching effects, which include impacts to the environment: *Lower-income households may be displaced within the region, from a transit accessible and walkable neighborhood to an area that does not provide these amenities, or outside the region, to neighboring counties or another state. Both forms of displacement impact the economy, the environment and community stability and cohesion.* [1]

This statement reflects broader findings in the literature which indicate that the displacement of low-income households from transit rich neighborhoods can increase vehicle miles traveled (VMT), and greenhouse gas emissions (GHG) and cause health problems. [2] Preliminary evaluation results suggest all three scenarios will cause significant displacement risk.

Because household income is a fundamental variable in predicting transportation behavior, the out-migration of populations of low-income households from transit proximate areas, and corresponding in-migration of higher-income households (or population level displacement) will have significant impacts on circulation, VMT, GHG emissions and the geographic distribution of air pollution. The EIR should therefore consider displacement and its corresponding environmental impacts. The UrbanSim model allows considerable opportunity to model changing household location choices by a variety of demographic factors, and MTC could look to tools under development by Dr. Paul Waddell.

In addition to impacts on circulation, VMT and GHG, we request the DIER analyze the impacts of displacement to human health. Our *Displacement Brief* produced for commissioners at MTC's recent displacement forum summarizes these impacts, which include unsafe and toxic housing, asthma, poisoning, falls, burns, mental distress, behavioral problems, educational delays, depression, low birth weights, increased stress, blood pressure and Body Mass Index, and lower physical fitness. [3]

The DEIR should also propose *proactive and effective* mitigation measures to address displacement and its environmental impacts. As noted in a recent (5/13) presentation by MTC staff to the Planning Committee, meeting Plan Bay Area's housing equity targets will require strong action, including: new growth in currently higher-income areas, significant housing subsidies and affordable unit production and additional anti-displacement policies. The DEIR should include these and other mitigations, including an OBAG program capable of motivating local jurisdictions to protect existing tenants.

3. **Air Quality Impacts, including cancer risk, PM2.5, PM10 and other toxic air contaminants.** The DEIR should project concentration and/or health risk levels and changes to these levels by census tract, for Communities of Concern (COCs) versus non-COCs, and for BAAQMD CARE Areas. This analysis should include the impacts caused by the increases in regional goods movement resulting from population growth, and the impact on placing new residents in close proximity to major sources of diesel pollution such as freeways, ports, transportation hubs, and rail lines. The DEIR should also use the PBA land use model and Air District modeling to project changes in exposure at the household or person scale, disaggregating for age, race, income and gender.

The DEIR should include the recommendations of the Air District's recently released *Planning for Healthy Places,* particularly those directed at reducing emissions and exposure. Additionally, the DEIR should propose strategies to incentivize growth outside of potentially toxic areas.

4. **Exposure to noise and vibration.** The DEIR should project the levels of ambient noise and vibration exposure as well as changes to these levels by census tract, comparing Communities of Concern (COCs) with non-COCs, disaggregating for age, race, income and gender. The DEIR should estimate reductions in noise exposure from the implementation of policies such as (1) energy efficiency program resources, especially for low-income communities in geographic areas with high levels of ambient noise and air pollution, (2) building codes for energy efficiency upgrades, (3) and incentives for the development of energy-efficient homes and multi-unit housing with double-paned windows and other acoustical protections.

The DEIR should analyze and address the distribution of environmental impacts across all communities, including low-income people and people of color, to ensure that the benefits and burdens of Plan Bay Area are fairly distributed. The Plan Bay Area DEIR should explicitly analyze and address mitigations for impacts that disproportionately affect low-income people and people of color in the Bay Area. This includes the environmental impacts, disaggregated by race and income, related to inequitable access to transit, high transportation and housing cost burdens, lack of affordable housing, risk of direct and indirect displacement, and other public health factors (including those included above).

Study the Equity, Environment and Jobs (EEJ) Scenario as one of the DEIR alternatives. Preliminary equity analysis results (presented at the June 3rd Planning Committee) suggest that the three scenarios all fall short of adequately addressing the needs of low-income communities and communities of color in the Bay Area. As health professionals, these are the communities where we see the most intractable health issues. In many cases, these health issues are caused by conditions outside of our control, including land use, transportation and housing. As proposed, the three scenarios studied make inadequate progress toward improving health outcomes in these communities. In the previous cycle of Plan Bay Area, the EEJ scenario demonstrated good performance on environmental goals, and would have significantly improved health and equity outcomes. This scenario should therefore be included in this DEIR.

We will continue to participate in discussions about Plan Bay Area in the upcoming months and look forward to seeing our comments addressed in the DEIR and later in the Final EIR. Thank you for your consideration.

Sincerely,



Melissa Jones, MPA
BARHII Executive Director



Chuck McKetney, DrPH
Co-Chair of BARHII
Alameda County Department of Public Health



Michael Stacey, MD, MPH
Co-Chair of BARHII
Solano County Public Health Department

---

[1] Regional Equity Working Group Packet, June 8th.

[2] Bay Area Health Inequities Initiative, Displacement Brief. (2016). Available at: http://barhii.org/wp-content/uploads/2016/02/BARHII-displacement-brief.pdf; Stephanie Pollack et al., Maintaining Diversity in America's Transit-Rich Neighborhoods (Dukakis Center for Urban and Regional Policy, 2010); TransForm and California Housing Partnership Corporation, Why Creating and Preserving Affordable Homes Near Transit Is a Highly Effective Climate Protection Strategy (May 2014). Available at: http://www.transformca.org/sites/default/files/CHPC%20TF%20Affordable%20TOD%20Climate%20Strategy%20BOOKLET%20FORMAT.pdf.

[3] Bay Area Health Inequities Initiative, Displacement Brief. (2016). Available at: http://barhii.org/wp-content/uploads/2016/02/BARHII-displacement-brief.pdf

UNIVERSAL PARAGON CORPORATION
150 Executive Park Blvd., Suite 4000
San Francisco, CA 94134
Tel: (415) 468-6676
Fax: (415) 468-6678

June 15, 2016

TRANSMITTED VIA ELECTRONIC MAIL:

June 15, 2016

MTC Public Information
eircommnents@mtc.ca.gov
375 Beale Street
Suite 800
San Francisco CA 94105

Dave Cortese, Chair
Metropolitan Transportation Commission (MTC)

Julie Pierce, President
Association of Bay Area Governments (ABAG)

Re: Comments on the Plan Bay Area Draft EIR, due date June 15, 2016

Dear MTC Chair Cortese and ABAG President Pierce:

Universal Paragon Corporation, as owner and developer of the majority of the 684-acre **Baylands site in the City of Brisbane**, we would like to address the One Bay Area planning process and the implication for a preferred scenario plan. As part of a the Baylands is one of the last remaining large transit-oriented development sites in the Bay Area, the future of the Baylands will be critical in meeting the goals of SB 375 and Plan Bay Area. We are urging you to 1) revise the RHNA forecast update for the City of Brisbane to include development potential for Brisbane Baylands as indicated below in Exhibit One and 2) to include increased development for transit corridor PDAs, TPPs and opportunity sites.

The Brisbane Baylands is designed to meet the smart growth best practices outlined in SB375 and AB32 with high density residential near transit to increase walkability, access to transit, and reduce car use and greenhouse gas emissions reductions.

Currently, the City of Brisbane is considering a few different scenarios for the Baylands, including the following that are listed in Exhibit 1, pulled from the Brisbane Baylands Specific Plan (February 2011):

Exhibit 1. Brisbane Baylands EIR Land Use Scenarios)

	Developer-Sponsored Plan		Community-Preferred Plan	
Component	Plan	Entertainment Variant	Plan	Recology Variant
Non-Residential	Sq. Ft. (Units)	Sq. Ft. (Units)	Sq. Ft. (Units)	Sq. Ft. (Units)
Total Non-Residential	6,945,900	6,899,000	8,301,400	8,372,400
Residential	Sq. Ft. (Units)	Sq. Ft. (Units)	Sq. Ft. (Units)	Sq. Ft. (Units)
Total Residential	5,150,400 (4,434 units)	5,150,400 (4,434 units)	0	0
Total Development	12,096,300	12,049,400	8,301,400	8,372,400

The proposed number of new residential units range up to 4,434 residential units, and non-residential uses would range from 6,900,000 square feet to 8,370,000 square feet. The number of new jobs would vary from 15,000 to 20,000 jobs.

Based on the 2013 Draft Plan Bay Area forecasts, the City of Brisbane would accommodate 890 more jobs and 270 more households, as demonstrated in Exhibit 2.

Exhibit 2. Excerpt from Plan Bay Area Forecasts, 2013

		JOBS			
Jurisdiction or Area Name	Place Type	2010	2040	2010-2040‡	% Growth
Brisbane		*6,780*	*7,670*	*890*	*13%*
San Francisco/San Mateo Bi-County Area (with San Francisco)	*Suburban Center*	*500*	*960*	*460*	

		HOUSING UNITS				HOUSEHOLDS			
Jurisdiction or Area Name	Place Type	2010	2040	2010-2040‡	% Growth	2010	2040	2010-2040‡	% Growth
Brisbane		*1,930*	*2,180*	*250*	*13%*	*1,820*	*2,090*	*270*	*15%*
San Francisco/San Mateo Bi-County Area (with San Francisco)	*Suburban Center*	*0*	*0*	*0*		*0*	*0*	*0*	

The City of Brisbane is preparing a plan to redevelop part of their downtown, called 'The Parkside Plan.' This proposed plan is designed to address the City's shortfall in the RHNA Allocation of 293 units. We understand the City of Brisbane's preparation for the proposed Parkside Plan is designed to account for a portion of their shortfall in Regional Housing Needs Allocation of 293 units. In the Plan Bay Area Forecast Update, February 2015, even this low number of units is reduced from 270 to zero. Disregarding the development potential of this vast bi-county Priority Development Area undermines each of Plan Bay Area's goals, especially in providing adequate housing for the region.

None of the three Scenario Draft Concepts outlined in the January 29, 2016 Scenario Description and Strategies fully achieve the environmental and socio- economic goals of Plan Bay Area. We urge you to consider additional development for transit-corridor PDAs, TPPs and opportunity sites in Plan Bay Area.

Therefore, **we also urge you to include the full range of land uses** in the Exhibit One, above, as **currently proposed for the Baylands**, **in the update for Plan Bay Area.**

Thank you for giving me the opportunity to comment.

Sincerely,

Jonathan Scharfman
General Manager
UNIVERSAL PARAGON CORPORATION

cc: Ezra Rapport, Association of Bay Area Governments
Steve Heminger, Metropolitan Transportation Commission
Sandy Wong, City/County Association of Governments of San Mateo County
Clay Holstine, City of Brisbane City Manager
John Swiecki, City of Brisbane Planning Director

GREENBELT ALLIANCE

San Francisco Office
312 Sutter Street, Suite 510
San Francisco, CA 94108
(415) 543-6771

June 15, 2016

MTC Public Information
375 Beale Street, Suite 800
San Francisco, CA 94105
EIRComments@mtc.ca.gov

RE: Notice of Preparation for Draft Environmental Impact Report for Plan Bay Area 2040

Dear MTC Commissioners and staff and ABAG Board members and staff:

Thank you for this opportunity to comment on the Notice of Preparation (NOP) for the Draft Environmental Impact Report (DEIR) for Plan Bay Area 2040.

Greenbelt Alliance is the San Francisco Bay Area's leading organization working to protect natural and agricultural landscapes from sprawl development and help our cities and towns grow in ways that create thriving communities for everyone across the income spectrum. We are the champions of the places that make the Bay Area special, with more than 10,000 supporters and a 58-year history of local and regional success.

We strongly encourage the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG) to ensure that the Environmental Impact Report for Plan Bay Area 2040 addresses the following items:

1) Provide a detailed assessment of the impacts each alternative will have on our region's natural resources

The EIR must analyze a reasonable range of alternatives and describe the environmental impacts of those alternatives. The public should be provided with a clear picture of the full range of impacts that each alternative will have on the many values provided by the Bay Area's natural and agricultural lands.

Some of the most important questions are:

- What will the effects of different development patterns be on our farms and ranchlands?
- Will habitat for rare, sensitive or endangered species be directly or indirectly impacted?
- Will habitat connectivity be directly or indirectly impacted?
- Will there be any fragmentation of habitat?
- Will any alternatives negatively impact the region's proposed trail network or other recreational lands?
- How will regional water consumption vary between the alternatives? Will groundwater recharge areas be preserved to protect our local water supplies or will they be paved over?
- What land use policies are in place today for any impacted lands? Are they currently covered by any protective policies (e.g. urban growth boundaries, hillside ordinances, rural zoning)? Could these

protections be weakened or compromised by the land use and transportation patterns outlined in the alternatives?

This information is needed to adequately assess the alternatives and ensure the most appropriate development footprint and policy strategies are included in the final plan.

2) Include effective strategies to curtail sprawl and foster more sustainable, equitable development

The California Environmental Quality Act (CEQA) requires public agencies to include feasible measures to avoid or mitigate significant environmental impacts. The EIR should analyze and include all feasible land use and transportation strategies that protect natural and agricultural lands and encourage smarter development patterns to avoid significant impacts on the Bay Area's natural resources. These strategies should include, but not be limited to, the following:

a) A VMT fee on sprawling development, similar to the Central Valley's Indirect Source Rule
b) Removal of outdated parking minimums for new development, particularly in PDAs
c) Strong financial incentives for growing smartly, including stronger OBAG-like programs
d) Conditioning discretionary transportation resources on land use patterns that avoid sprawl, such as prohibitions on receiving regional transportation revenues for jurisdictions that approve development on natural and agricultural lands
e) A Regional Advanced Mitigation Program (RAMP) that strategically invests mitigation funds from transportation and other infrastructure projects to preserve and steward important natural and agricultural resources

MTC and ABAG should conduct a sensitivity analysis that identifies the scale of impact that each of these strategies would have in protecting natural and agricultural lands and achieving the other Plan Bay Area 2040 performance targets.

3) Include an alternative that maximizes equity and environmental outcomes

An alternative that builds upon the "environmentally superior alternative" from Plan Bay Area ("Equity, Environment and Jobs") should be included. For Plan Bay Area 2040, this alternative should aim to achieve open space conservation, environmental health, housing affordability, displacement mitigation, equitable transportation, and middle-wage job growth goals for a more healthy, prosperous, and sustainable future for all Bay Area residents.

In addition, the EIR should analyze and include specific measures that would mitigate significant social equity impacts. For example, the EIR should include measures to mitigate displacement of low-income residents. When residents in inner-Bay Area locations are no longer able to afford to live in their communities, they often seek more affordable housing opportunities at the edges of the region. This results in longer commutes, additional traffic congestion, increased transportation-related pollution, and increased pressure for sprawl development, with its related environmental impacts. The EIR should include feasible measures to reduce this displacement pressure, thereby improving environmental and social equity outcomes.

4) Ensure expected GHG reductions provide the greatest possible array of co-benefits

SB 375 of 2008 is widely recognized as California's premier policy to reduce greenhouse gas emissions through smarter land use patterns that reduce the amount of per-capita driving across the state. This approach provides a broad array of co-benefits, including protection of important natural resources, improvements in public health, reduction in traffic, stronger economic performance, and municipal cost-savings from more efficient infrastructure investments.

The EIR should provide the public with a detailed accounting of how the alternatives would achieve the California Air Resources Board's SB 375 GHG-reduction target for the Bay Area. The GHG reduction approach adopted in the final plan should maximize the use of land use pattern changes to provide the greatest possible array of co-benefits and conform to intent and vision of SB 375.

Thank you for your consideration of these comments.

Sincerely,

Matt Vander Sluis
Program Director
mvandersluis@greenbelt.org

Alta Cunningham

From: Adam Noelting <ANoelting@mtc.ca.gov>
Sent: Wednesday, June 15, 2016 6:12 PM
To: Heidi Tschudin
Subject: Fw: 2017 RTP/SCS Scoping Comments

Please find the enclosed comments.
Adam

From: Fos <friendsofsmart@sbcglobal.net>
Sent: Wednesday, June 15, 2016 4:31 PM
To: EIR Comments
Cc: 'David Schonbrunn'; 'Steve Birdlebough'; 'Valerie Taylor'
Subject: Re: 2017 RTP/SCS Scoping Comments

Mr. Steve Heminger
Metropolitan Transportation Commission
375 Beale Street, Suite 800
San Francisco, CA 94105

Re: 2017 RTP/SCS Scoping Comments

Dear Mr. Heminger:

Friends of SMART (Sonoma-Marin Area Rail Transit) strongly endorses the comments submitted June 15 2016 (today) by TRANSDEF, pursuant to the 2017 Regional Transportation Plan. We must stop expanding infrastructure for moving roadway *vehicles*, and instead invest in moving *people*. This is the pathway way to land preservation, productive economics, and greenhouse gas reduction.

If we don't start now, when does it become too late?

Thank you very much,

Jack Swearengen, Chair
Friends of SMART

Pam Grove

From: David Schonbrunn <david@schonbrunn.org>
Sent: Wednesday, June 15, 2016 2:31 PM
To: Steve Heminger
Cc: EIR Comments
Subject: RTP Scoping Comments
Attachments: 2017 RTP Scoping Comments.pdf

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Steve,

Attached please find our RTP Scoping Comments. I hope we can have a productive discussion about additional alternatives that will be studied for the RTP.

I'd appreciate it if your staff could send an email indicating receipt.

Thank you,

--David

David Schonbrunn, President
Transportation Solutions Defense and Education Fund (TRANSDEF) P.O. Box 151439 San Rafael, CA 94915-1439

415-331-1982

David@Schonbrunn.org
www.transdef.org

Transportation Solutions Defense and Education Fund

P.O. Box 151439 San Rafael, CA 94915 415-331-1982

June 15, 2016
By E-Mail to:
eircomments
@mtc.ca.gov

Steve Heminger
Metropolitan Transportation Commission
375 Beale Street, Suite 800
San Francisco, CA 94105

Re: 2017 RTP/SCS Scoping Comments

Dear Mr. Heminger:

The Transportation Solutions Defense and Education Fund, TRANSDEF, is an environmental non-profit advocating the regional planning of transportation, land use and air quality. Our focus in recent years has been on reducing the impacts of transportation on climate change. This marks the seventh Regional Transportation Plan process in which we have participated.

These comments are intended to test a coherent set of the latest policies from Caltrans:

> California's goal for all sectors and economic activities is to reduce GHG emissions while we go about our daily business. For transportation, this means making significant changes in how we travel. We must provide access and mobility for people and businesses, yet reduce our single occupant miles travelled and advance cleaner vehicles and fuels. (California Transportation Plan 2040, Final Draft version ("CTP"), p. 87.)

TRANSDEF recognizes that the environmental review process was set into law for the purpose of improving projects. It was not intended to merely generate stacks of unread paper documenting foregone conclusions. As a result, we believe that the appropriate testing of different conceptual approaches to the solution of regional problems is both warranted and desirable.

An ongoing controversy exists as to the long-held MTC conclusion that "transportation investments do not move the needle," referring to the ability of an RTP to produce significant shifts in travel patterns, mode split and GHG emissions. TRANSDEF, on the

other hand, strongly believes that well-designed cost-effective projects, selected to advance specific strategic objectives, will produce better outcomes.

This was demonstrated in the 2005 RTP FEIR, in which the TRANSDEF Smart Growth Alternative outperformed[1] the adopted staff alternative. We believe that MTC's practice of selecting politically popular costly transportation projects for the RTP over better-performing ones is the core reason that total transit ridership in the Bay Area is now lower[2] than it was in 1982[3]--and far lower per capita, due to population growth.

To resolve this important policy question, we propose that MTC/ABAG study the following transportation sub-alternatives, based on the land use assumptions of the Big Cities Scenario, as defined by MTC/ABAG staff. We believe that comparing the outcomes of these sub-alternatives with the outcomes of the Big Cities Scenario will provide MTC/ABAG with invaluable data for policy making. In addition, utilizing inputs from CTP 2040 Scenario 2 will perform a comparison between MTC's model and the State's.

Cost-Effectiveness Sub-Alternative

This Alternative is guided by the chief conclusion of our strategic analysis: The Bay Area has far too many personal vehicles for the Single Occupant Vehicle (SOV) mode to be viable for commuting. We recognize that when a large percentage of the population insists on commuting at the same time, a mass transportation solution, rather than reliance on individual transportation, is required. The Alternative does not waste funds attempting the hopeless task of maintaining SOV mobility. It builds no additional SOV capacity.

Consistent with CTP 2040 Scenario 2, this Alternative tests building convenient transit options, hopefully resulting in a significant drop in the SOV mode share and GHG emissions.

This Alternative uses the transportation project definitions[4] of the 2005 TRANSDEF Smart Growth Alternative.[5] The input files of transit headways that were developed for the 2005 EIR should still be stored at MTC. If not, we can provide them to avoid unnecessary duplication of work.

Obviously some things have changed since we created the Alternative back in 2004. SMART and eBART will soon be operational, so their trips need to be input to the model. BART built the central section of our Delta DMU proposal, so that project should

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[1] http://transdef.org/RTP/RTP_Analysis_assets/Technical Report.pdf

[2] See graph at http://transdef.org/Bay_Area/Bay_Area.html

[3] TRANSDEF had sought to enforce TCM 2, MTC's commitment in the State Implementation air quality Plan to increase regional transit ridership in 1987 by 15% over the baseline year of 1982.

[4] http://mtcwatch.com/2004_RAFT_RTP/2004_RTP_Main.html

[5] http://transdef.org/RTP/RTP.html

be omitted. Please contact us to resolve questions about handling other changes to the regional network.

Altamont Corridor Rail Project: Since we designed the Bay Area High-Speed Rail Service in 2004, the Altamont Corridor Rail Project was developed as a collaboration of ACE and CHSRA, among others. For our Alternative, we have replaced the Bay Area High-Speed Rail Service with the Altamont Corridor Rail Project, as the latter is better defined. An EIR for the project was scoped in 2009 but never completed. The 2011 Preliminary Alternatives Analysis[6] has a list of preferred alternatives on p. 5-1. (Some of these alternatives bear a striking similarity to the Altamont HSR alternative[7] TRANSDEF proposed to CHSRA in 2010.) For this project, we propose the following specifications/ enhancements:

- 20 minute headways for the peak period and 30 minute off-peak.
- Service to Downtown San Francisco via the Dumbarton Rail Bridge and DTX.
- A new ROW from Stockton to Sacramento, allowing one-seat rides from Sacramento to San Jose and San Francisco.
- San Joaquin trains westbound from Stockton are rerouted to San Jose via this new line, greatly increasing the ridership.
- Travel time from Stockton to San Jose is 1:00.
- California HSR is assumed to not be functional during the Plan period.

Altamont Funding: This Alternative does not provide any regional contribution to BART extensions, making funding available for this project. As the transit solution for one of the top ten congested highway corridors in the region, this project should compete very well for cap and trade funding. For RTP purposes, assume a project cost of $4 billion.

Highway Funding: Please note that, in striving for policy coherence, this Alternative provides no funding for so-called Express lanes or other highway capacity-increasing projects. Instead, like CTP 2040 Scenario 2, HOV networks are made continuous by converting mixed-flow lanes. (Appendix 7, p. 11.) Highway construction funding is used to meet the needs of SHOPP, and highly visible enforcement of HOV lane occupancy limits. HOV lanes will be presumed to operate at at least FHWA minimum speeds. Available funding not needed for basic maintenance is swapped with sales tax counties for money eligible to spend on transit operations.

Transit Speeds: Like CTP 2040 Scenario 2, significantly higher transit speeds are key to productivity and carrying large passenger loads at reasonable operating costs. In this Alternative, we propose these methods of achieving the 50% higher speeds assumed by Scenario 2:

- Widespread use of traffic signal priority for buses

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[6] http://transdef.org/2017_SCS/Altamont Corridor Rail Project Preliminary AA Report.pdf

[7] http://transdef.org/HSR/Altamont_assets/Exhibit_C.pdf

- Arterial HOV lanes where needed to bypass congestion
- Automated enforcement of transit lanes, with all fines going directly to the transit operator.[8]
- Unlike CTP 2040 Scenario 2, HOV minimum occupancies are not changed, as TRANSDEF believes that would result in limiting the HOV mode share.

Land Use: We note with approval that the description of the Big Cities Scenario includes elements that have no basis in current law or policy, including changing parking minimums and the office development cap. MTC had raised serious feasibility concerns about our 2005 RTP Alternative because we proposed innovations like these. It is only by testing proposed policies that decision-makers can determine whether to support legislation to make the innovation possible.

In addition to incorporating all of the Scenario's land use assumptions, the Alternative includes:

- No public subsidies for the operation or construction of parking within PDAs.
- The conditioning of funding for PDAs on enactment of the parking and other policy reforms proposed by the Big Cities Scenario.
- Required unbundling of the parking from leases and residential purchase agreements.
- Encouragement for the permitting of micro-apartments and Junior Second Units.

This Alternative's focus on increasing the availability of convenient transit should meet a critical need of PDAs, and the Big City Alternative in particular. We would be pleased to discuss the proposed headways with staff, and adjust these specifications to find an optimal balance of ridership and cost, as well as adjust the dollar inputs to meet the financial realities of today.

Pricing Sub-Alternative

CTP 2040 Scenario 2 is described in Appendix 7 (pp. 11-12) as increasing the out-of-pocket cost of urban driving by 133% (from $0.23 to $0.55 per mile). We propose to achieve this by implementing some of the following pricing programs:

- Mixed-flow lane freeway tolling during congested periods.
- A parking charge on all commercial parking spaces, including privately owned ones. This could conceivably be achieved through public funding of the installation of parking management hardware: gates and access controls. This would enable excellent administration of employee commuter benefit programs.
- Impose a regional transportation mitigation fee on new development, based on additional auto trips and VMT added to the regional network. If the fee is high enough, it will increase the desirability of developing close to transit and decrease interest in greenfield sites. This could come in the form of an Indirect Source Mitigation Fee, which has been under consideration by BAAQMD.

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[8] http://arch21.org/BusLanes/BusOnlyPaper.html

While the Big Cities Scenario contains cordon pricing and incentive programs, the Notice of Preparation does not specify the degree of cost increase proposed. This Sub-Alternative therefore prescribes the increase in the cost of driving, and some of the potential ways to achieve it.

Back in 2004, the travel demand model was limited in its ability to study pricing. We were forced to use a daily parking charge as a surrogate for the road user charges we wanted studied. Please contact us to discuss what is possible with the current model.

A key part of this Sub-Alternative is drawn from the experience of LACMTA. After it entered into a consent decree with the Bus Riders Union, bus fares were very substantially reduced. Bus ridership went up dramatically. Conversely, after the consent decree expired, fares rose and ridership dropped. TRANSDEF proposes this Sub-Alternative model a fare reduction here in the Bay Area, to test whether price sensitivity is different up here. We propose cross-subsidizing fares from the revenues received through pricing, with a target of reducing fares by 80%.

For simplicity and directness of comparison, this Alternative uses the exact same transportation and land use assumptions as the Cost-Effectiveness Sub-Alternative.

Conclusion

TRANSDEF is committed to achieving GHG emissions reductions and VMT reductions at the regional level. These Alternatives represent our best thinking as to what can be done, and what needs to be done. Studying the Alternatives proposed here will place concrete choices before the agencies. We think it is far healthier for the agencies to either accept or reject the choices in public than avoid altogether the discomfort of "pushing the envelope." We stand ready to provide whatever further inputs might be needed or useful. We look forward to collaborating on the best RTP yet.

Sincerely,

/s/ DAVID SCHONBRUNN

David Schonbrunn,
President

CC:
Steve Kinsey, MTC
Ezra Rapport, ABAG
Jack Broadbent, BAAQMD
Larry Goldzband, BCDC
Stacey Mortensen, ACE & SJJPB

Pam Grove

From: David Schonbrunn <david@schonbrunn.org>
Sent: Thursday, June 16, 2016 7:22 AM
To: EIR Comments
Subject: Link Problem

After submitting our comment letter, I discovered the link to a very long URL in footnote 6 was truncated due to a limitation of the word processor. The URL itself works, however, if copied and pasted.

Would it be useful to have a corrected letter where the footnote is not a hyperlink?

Sorry for the inconvenience.

--David

David Schonbrunn, President
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Pam Grove

From: David Zisser <dzisser@publicadvocates.org>
Sent: Wednesday, June 15, 2016 1:44 PM
To: EIR Comments
Cc: Steve Heminger; ezrar@abag.ca.gov; Ken Kirkey; Miriam Chion (miriamc@abag.ca.gov); Dave.Cortese@BOS.SCCGOV.org; blumacjazz@aol.com; aaguirre@redwoodcity.org; Thomas_W._Azumbrado@HUD.GOV; Jason Baker (jasonb@cityofcampbell.com); mayor@ci.berkeley.ca.us; david.campos@sfgov.org; Dorene Giacopini; dist5 @bos.cccounty.us; district1@acgov.org; ahalsted@aol.com; skinsey@co.marin.ca.us; mayoremail@sanjoseca.gov; mark.luce@countyofnapa.org; jpierce@ci.clayton.ca.us; Bijan Sartipi; officeofthemayor@oaklandnet.com; jimzspering@cs.com; atissier@smcgov.org; scott.wiener@sfgov.org; aworth@cityoforinda.org; david.rabbitt@sonoma-county.org; peklund@novato.org; bharrison@fremont.gov; district1@acgov.org; eric.l.mar@sfgov.org; pradeep.gupta@ssf.net; dpine@smcgov.org
Subject: 6 Wins Comments on Notice of Preparation of Draft Environmental Impact Report for Plan Bay Area 2040
Attachments: 6 Wins NOP Comment Letter w attachment 6 15 16.pdf

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Please find attached comments from the 6 Wins for Social Equity Network on the Notice of Preparation of the DEIR for Plan Bay Area 2040. Please let me know if you have any questions.

Thank you,

David Zisser
Staff Attorney
131 Steuart Street | Suite 300 | San Francisco CA 94105
415.625.8455
dzisser@publicadvocates.org

Public Advocates Inc. | ***Making Rights Real*** | www.publicadvocates.org



June 15, 2016

BY EMAIL: eircomments@mtc.ca.gov

MTC Public Information
375 Beale Street, Suite 800
San Francisco, CA 94105

Re: 6 Wins Comments on Notice of Preparation of Draft Environmental Impact Report for Plan Bay Area 2040

To Whom It May Concern:

Public Advocates offers these comments on the Notice of Preparation for the Draft Environmental Impact Report (DEIR) for Plan Bay Area 2040 on behalf of the **6 Wins for Social Equity Network**.[1] The 6 Wins is a coalition of more than 20 grassroots, faith, public health, environmental, labor and policy organizations across the Bay Area that work to improve the lives of low-income people of color through affordable housing, reliable and affordable local transit service, investment without displacement, healthy and safe communities, quality jobs and economic opportunity, and community power.

In order to fulfill the legal requirements of the California Environmental Quality Act (CEQA), the EIR should, among other things, (a) identify a reasonable range of alternatives that includes an Equity, Environment and Jobs (EEJ) alternative; (b) analyze the environmental impacts caused by economic displacement and lack of jobs-housing fit; and (c) include measures to mitigate economic displacement and improve jobs-housing fit, as described below.

A. Include an Equity, Environment and Jobs Alternative in the Alternatives Analysis

An EIR must analyze a "reasonable range of alternatives to the project," with an emphasis on alternatives which "offer substantial environmental advantages over the project proposal."[2] The purpose of analyzing alternatives is to assess options for attaining the basic objectives of the project while avoiding or substantially lessening environmental impacts and to evaluate the

[1] The 6 Wins Network includes the following member organizations: Alliance of Californians for Community Empowerment (ACCE), Asian Pacific Environmental Network (APEN), Breakthrough Communities, California WALKS, Causa Justa :: Just Cause, Center for Sustainable Neighborhoods, Community Legal Services in East Palo Alto, SF Council of Community Housing Organizations (CCHO), Ditching Dirty Diesel Collaborative, East Bay Alliance for a Sustainable Economy (EBASE), East Bay Housing Organizations (EBHO), Faith in Action Bay Area, Genesis, Housing Leadership Council of San Mateo County, North Bay Organizing Project (NBOP), Public Advocates, Regional Asthma Management and Prevention (RAMP), Rose Foundation and New Voices Are Rising, San Mateo County Union Community Alliance, Sunflower Alliance, TransForm, Urban Habitat, and Working Partnerships USA.

[2] *Citizens of Goleta Valley v. Board of Supervisors*, 52 Cal. 3d 553, 566 (1990); California Native Plant Society v. City of Santa Cruz, 177 Cal. App. 4th 957, 982-83 (2009).

comparative merits of each alternative.[3] Specifically, "[t]he range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects" in order to "permit a reasoned choice"[4] and "foster informed decisionmaking and public participation."[5]

To accomplish these requirements, the EIR must include an updated version of the "environmentally superior alternative"[6] identified in the CEQA process for the first Plan Bay Area: the Equity, Environment and Jobs Alternative. The three scenarios for Plan Bay Area currently being considered are inadequate to meet CEQA requirements. They all have substantial environmental impacts likely to be reduced by an updated EEJ scenario. We highlight this fact because the Metropolitan Transportation Commission (MTC) has made it clear that only the three scenarios they have developed for Plan Bay Area "will be the basis for the initial CEQA alternatives,"[7] even though MTC acknowledges that all fall short on a number of important metrics.

Specifically, the preliminary evaluation by MTC and the Association of Bay Area Governments (ABAG) concluded that the scenarios perform poorly on a number of targets, including reducing adverse health impacts, not increasing the share of households at risk of displacement (which has foreseeable environmental impacts), and increasing non-auto mode share.[8] Because an updated EEJ alternative is likely to improve performance on environmental metrics and meet the overall project objectives of Plan Bay Area, it must be included in the EIR.

For example, compared to the preferred alternative adopted in the last round, the EEJ alternative would have resulted in:

- 1,900 fewer tons of CO2 emissions per day and 568,000 fewer tons of GHG emissions per year;
- 6.4 fewer tons of Toxic Air Contaminants (TACs) per year;
- 1,290 fewer tons of CO emissions per year; and
- Daily energy savings of 68 billion BTUs, the equivalent of burning 600,000 fewer gallons of gasoline each day.[9]

Despite these strong results, MTC and ABAG have refused to include the EEJ among the scenarios they evaluate against the performance targets or among the alternatives studied in the EIR. A "reasonable range of alternatives" should include the environmentally superior

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[3] 14 CCR § 15126.6
[4] 14 CCR § 15126.6(c), (f).
[5] 14 CCR § 15126.6(a). *See also Laurel Heights Improvement Assn. v. Regents of University of California*, 47 Cal. 3d 376, 406-07 (1988).
[6] MTC and ABAG, Plan Bay Area Final Environmental Impact Report – Final Certification (July 5, 2013), p.A-128.
[7] MTC, Plan Bay Area 2040: Scenario Evaluation, Planning Committee Agenda Item 4a (May 6, 2016), p.3.
[8] *Id.* at Attachment 5, pp.23-25 (slides 8-10).
[9] Sustainable Systems Research, LLC, Summary Comparison of Plan Bay Area Performance Metrics for EEJ and Proposed Plan Scenarios (April 29, 2013), available at http://www.publicadvocates.org/sites/default/files/library/uc_davis_comparison_of_draft_pba_with_eej_alternative_summary.pdf.

alternative – as well as the one that performed best on a range of benefits. To this end, the EEJ should be updated and analyzed in this round's EIR.

As detailed in our comments on the DEIR last round (attached), MTC and ABAG should update the EEJ alternative so that it matches more closely the scenario that was proposed by the community. Changes from the EEJ studied in the last EIR process should include:

- forcing housing into the desired infill zones in the EEJ alternative (as was done in the preferred alternative),[10]
- assuming there would be CEQA streamlining under the EEJ alternative (as was done in the preferred alternative), [11] and
- capturing in the model the benefits the EEJ alternative would achieve through deed-restricted affordable housing and anti-displacement protections.

Building upon the EEJ in these ways would likely yield even stronger environmental benefits.[12]

Moreover, the EIR alternatives will also become the basis for MTC's federally-required equity analysis of Plan Bay Area. Last time, the EEJ was not only environmentally superior, but also provided the greatest benefits to low-income and minority residents, including the lowest H+T cost burden and the lowest risk of displacement. Failing to include an EEJ Alternative in the EIR will therefore also remove from consideration the alternative most likely to provide a full and fair share of the benefits of the regional plan to low-income and minority populations.

B. Analyze the Environmental Effects of Economic Displacement and Improper Jobs-Housing Fit

CEQA requires an analysis of direct and indirect impacts,[13] including impacts resulting from social and economic consequences of the project.[14] In addition, an EIR is required where "[t]he environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly."[15] To fulfill its fundamental purpose, an EIR must "identify and focus on

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[10] Sustainable Systems Research, LLC, Technical Memorandum: Review of the Draft Environmental Impact Report for Plan Bay Area (May 15, 2013) pp. 2-6, 13-14, available at http://www.publicadvocates.org/sites/default/files/library/ssr_technical_memorandum_5_16_13.pdf. In any event, the EIR alternatives must be modeled in a consistent manner. That was not the case in PBA 2013, when the UrbanSim land-use model was used to forecast the housing distribution for several EIR alternatives, but not for the preferred alternative. In the preferred alternative, instead of allowing UrbanSim to forecast how much of the housing distribution would fall within "Priority Development Areas" (PDAs) and "transit priority project zones," MTC and ABAG manually assigned a significant share of the housing growth to these areas; UrbanSim was only used to model the distribution of those units within each PDA. Had the preferred alternative been modeled properly (and consistently with the alternatives), the resulting housing distribution would have been far less compact, raising serious questions about whether the region's greenhouse gas (GHG) targets would be met.

[11] *Id.* at 14.

[12] *Id.*

[13] 14 CCR § 15358(a).

[14] 14 CCR § 15064(e); *see El Dorado Union High Sch. Dist. V. City of Placerville* (1983) 144 Cal. App. 3d 123, 132 (social effects of increased student enrollment and potential for overcrowding could lead to construction of new facilities and were thus relevant under CEQA); *see also Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal. App. 4th 1184, 1215 (EIR improperly dismissed the possibility that a large shopping center could drive other retailers out of business as an economic effect when urban decay and other blightlike conditions could result).

[15] 14 CCR § 15065(a)(4).

the significant environmental effects of the proposed project," including "changes induced in population distribution, population concentration, [and] the human use of the land (including commercial and residential development)…."[16] Furthermore, "[a]n EIR should be prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences."[17]

Low-income households living in areas of focused growth and investment, such as Plan Bay Area's Priority Development Areas and Transit Priority Areas, are likely to experience increased displacement resulting from increased property values[18] and subsequent rent hikes and evictions. As noted above, MTC and ABAG's own evaluation of the scenarios indicates that the risk of displacement is likely to increase significantly in all three scenarios.

When low-income people in the Bay Area are displaced, they tend to move far from their jobs and to places with poor public transit,[19] robbing the transit system of its highest propensity riders and adding high-polluting vehicles to the roads. As a result, displacement has significant adverse effects, including harming human health,[20] decreasing public transit utilization, increasing congestion and VMT, causing poorer air quality, increasing greenhouse gas emissions, and causing other environmental impacts.[21] Similarly, an increase in road and highway usage may result in a significant environmental impact as roads and highways fall into disrepair and traffic congestion increases.[22]

The DEIR must therefore evaluate the environmental and health consequences associated with economic displacement. Among other steps, the DEIR should model displacement and identify likely trends in displacement, including:

- areas likely to face displacement pressure,
- the number of households affected,
- the communities expected to absorb these households,
- the number of households with increased commutes resulting from displacement,

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[16] 14 CCR § 15126.2(a); *see also* Pub. Res. Code § 21002.1(a).
[17] 14 CCR § 15151.
[18] University of California, Berkeley and Los Angeles, Gentrification, Displacement and the Role of Public Investment: A Literature Review (Mar. 3, 2015), pp.17-20, available at http://iurd.berkeley.edu/uploads/Displacement_Lit_Review_Final.pdf.
[19] *See* Federal Reserve Bank of San Francisco, Suburbanization of Poverty in the Bay Area (Jan 2012), available at http://www.frbsf.org/community-development/files/Suburbanization-of-Poverty-in-the-Bay-Area2.pdf; *see also* Brookings Institution, The Growing Distance Between People and Jobs in Metropolitan America (Mar. 2015), available at http://www.brookings.edu/~/media/research/files/reports/2015/03/24-job-proximity/srvy_jobsproximity.pdf.
[20] Bay Area Regional Health Inequities Initiative, Displacement Brief (Feb. 2016), available at http://barhii.org/wp-content/uploads/2016/02/BARHII-displacement-brief.pdf.
[21] TransForm and California Housing Partnership Corporation, Why Creating and Preserving Affordable Homes Near Transit Is a Highly Effective Climate Protection Strategy (May 2014), available at http://www.transformca.org/sites/default/files/CHPC%20TF%20Affordable%20TOD%20Climate%20Strategy%20BOOKLET%20FORMAT.pdf. *See* 14 CCR § 15064.4(b).
[22] *See, e.g., Save our Peninsula Comm. V. Monterey Cty. Bd. Of Supervisors*, 87 Cal. App. 4th 99, 118, 139 (2001) (discussing traffic impact as a significant environmental effect).

- the impact on access to middle-wage jobs[23] for low-income households, and
- the location and quantity of resulting demand for additional housing construction.

In addition, academic research has found that many parts of the Bay Area have a poor match between housing costs and local wages – a poor "jobs-housing fit," causing new workers, particularly low-wage workers, to travel further distances than those in existing jobs.[24] The DEIR must evaluate the environmental and health effects resulting from this mismatch.

C. Describe Measures to Mitigate the Effects of Economic Displacement and Improve Jobs-Housing Fit

Public agencies are also required to describe and discuss mitigation measures that could minimize *each* significant environmental effect identified in an EIR.[25] Mitigation measures are "the teeth of the EIR" because "[a] gloomy forecast of environmental degradation is of little or no value without pragmatic, concrete means to minimize the impacts and restore ecological equilibrium."[26] Such measures must be at least "roughly proportional" to the impacts of the project, and must not be remote or speculative.[27] They must be "fully enforceable through permit conditions, agreements, or other legally binding instruments."[28]

Indeed, a project should not be approved "as proposed if there are feasible mitigation measures available which would substantially lessen the significant environmental effects of the project."[29] Measures or alternatives that mitigate the risk of displacement and therefore reduce the identified environmental impacts of displacement are feasible and should be incorporated into the EIR.[30] Such measures include:

- leveraging the One Bay Area Grant (OBAG) program to encourage local anti-displacement protections and affordable housing production, [31] as proposed by the 6 Wins,[32]

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[23] "Middle-wage" jobs are defined as those that pay $18 to $30 per hour. SPUR, CCSCE, SMCUCA, Working Partnerships USA, Economic Prosperity Strategy: Improving Economic Opportunity for the Bay Area's low- and moderate-wage workers (Oct. 2014), p. 8, available at http://www.spur.org/sites/default/files/publications_pdfs/Economic_Prosperity_Strategy.pdf.
[24] Alex Karner and Chris Benner, Job Growth, Housing Affordability, and Commuting in the Bay Area (May 29, 2015), pp. 40-41, available at http://planbayarea.org/pdf/prosperity/research/Jobs-Housing_Report.pdf; *see also* Chris Benner with Alex Karner, Why is Housing So Expensive? Beyond Balance to Jobs Housing *Fit*, presentation available at http://calbudgetcenter.org/wp-content/uploads/Policy-Insights-2016-Benner.pdf.
[25] *See* Pub. Res. Code §§ 21002.1(a)-b) and 21081.6(b); *see also* 14 CCR § 15126.4.
[26] *Environmental Council of Sacramento v. City of Sacramento* (2006) 142 Cal. App. 4th 1018, 1039.
[27] 14 CCR § 15126.4(a)(2)(B) (citing *Dolan v. City of Tigard*, 512 U.S. 374 (1994)); *see also Fed'n of Hillside & Canyon Ass'ns v. City of Los Angeles* (2000) 83 Cal. App. 4th 1252, 1261.
[28] 14 CCR § 15126.4(a)(2).
[29] Cal. Pub. Res. Code § 21002; *see also* 14 CCR § 15002(a)(3) (an agency must prevent avoidable damage "when [it] finds [mitigation measures] to be feasible").
[30] *See* 14 CCR § 15131(c) ("Economic, social and particularly housing factors shall be considered by public agencies … in deciding whether changes in a project are feasible to reduce or avoid the significant effects on the environment identified in the EIR").
[31] Such local policies have been adopted throughout the Bay Area and have a proven track record of reducing displacement. *See* UC Berkeley, Urban Displacement Project, Policy Tools, available at http://www.urbandisplacement.org/policy-tools-2.
[32] 6 Wins Network, Recommended Modifications to the One Bay Area Grant Program to Advance Investment Without Displacement, Affordable Housing, and Economic Opportunity (Sept. 30, 2015), available at https://drive.google.com/file/d/0B9IjCmacmnhWYWRYQXBtNDFJRU0/view?pref=2&pli=1.

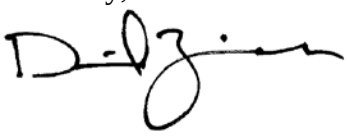
- funding for the development and preservation of affordable housing,
- more equitable distribution of development throughout both affluent and low-income neighborhoods, and
- reducing transit costs to low-income households to reduce the pressure of rising housing costs.

Policies to improve jobs-housing fit should also be considered as mitigation measures, including:

- increasing affordable housing near entry-level jobs,
- supporting investment and development patterns that prioritize the growth and retention of living-wage and middle-wage jobs near housing, and
- raising wages for low-income workers so that they are better able to afford housing.

To ensure a robust environmental analysis, a transparent process, and a Plan Bay Area that results in the greatest number of benefits and the least number of harms to the region's residents, it is critical that the DEIR include an EEJ Alternative, analyze the environmental effects of displacement and lack of jobs-housing fit, and explore measures to mitigate displacement and its effects and to improve jobs-housing fit.

Sincerely,



David Zisser
Staff Attorney

Copy: Steve Heminger, Executive Director, MTC (sheminger@mtc.ca.gov)
Ezra Rapport, Executive Director, ABAG (ezrar@abag.ca.gov)
Ken Kirkey, Director, Planning, MTC (kkirkey@mtc.ca.gov)
Miriam Chion, Director of Planning and Research, ABAG (miriamc@abag.ca.gov)
Commissioners, MTC
Members, Administrative Committee, ABAG

Attachment: Comments on the draft Environmental Impact Report for Plan Bay Area (May 16, 2013)

Carolyn Clevenger, MTC EIR Project Manager
Metropolitan Transportation Commission
101 Eighth Street
Oakland, CA 94607
By email: eircomments@mtc.ca.gov

Re: Comments on the draft Environmental Impact Report for Plan Bay Area

Introduction

When the Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) issued their draft Plan Bay Area (draft Plan), thousands of pages of documents and appendices went up on their website. Most of those pages are parts of the Environmental Impact Report (EIR) prepared to comply with the requirements of the California Environmental Quality Act (CEQA). These comments address concerns in each of the core components of the EIR:

- The basic function to fully inform the public.
- The project description.
- The analysis of alternatives.
- The analysis of project impacts.
- The mitigation measures.

A number of these concerns stem in part from the fact that there are key differences in how the land-use model, UrbanSim, was used to determine the housing distribution in the draft Plan, on the one hand, and in the Equity, Environment and Jobs (EEJ) alternative, and other alternatives on the other hand. Specifically, the EIR adjusted the modeling results for the draft Plan by using unspecified "calibration techniques," but did not make the same adjustments in the modeling results for the other alternatives. The use of different methods obscures the comparison among Plan alternatives, and departs from the California Transportation Commission's modeling guidelines for regional transportation plans.

The EIR is Inadequate as an Informational Document

The basic function of an EIR is to fully inform the public and decision makers about the environmental impacts of a project so that the public can provide informed input and the decision makers can make an informed decision. However, this EIR is so complex and confusing – so dependent upon unexplained assumptions embedded in computer models – that it is impossible for the public to fully understand its methodology and clearly evaluate its conclusions. To even attempt to decipher the methodology of the key land use models, the public has to plow through a technical appendix to the draft Plan document, which itself is an appendix to the EIR. Even academic modeling experts who have reviewed the technical appendices and asked for clarification from modeling staff at MTC and ABAG have been unable to determine the exact steps used to create the housing distribution for the draft Plan.

The EIR also falls short of its information function in even more basic ways. It does not inform decision-makers or the public of the health effects on disproportionately-impacted populations of the

increased emissions the EIR identifies as potentially significant. It also does not inform them of the disproportionate impacts on low-income populations that will result from economic displacement.

The Project Description in the EIR is Inadequate

It is impossible for an EIR to adequately inform the public and decision makers about the impacts of a project unless the EIR clearly and consistently describes the project in the first place. This EIR does not pass that test. Unlike every other EIR that has been prepared for SB 375 plans, and for that matter almost every other EIR that is prepared for any purpose, this EIR does not have a separate chapter, or section, entitled "Project Description." Instead, Chapter 1.2 of the EIR is called "Overview of the Proposed Plan Bay Area." As its title suggests, it provides an overview of certain features of the plan, but not a complete project description. The description of the core land use component required by SB 375, the Sustainable Community Strategy (SCS), is woefully incomplete. The description of the SCS basically amounts to the statement that it "calls for focused housing and job growth around high-quality transit corridors, particularly within areas identified by local jurisdictions as Priority Development Areas" (DEIR, p. 1.2-24), without providing any specifics about how this focused growth will be achieved, and without even providing a list of the PDAs where the growth will be focused.

For "details" about the SCS, EIR readers are directed to the draft Plan document, which in turn directs readers to the "Jobs-Housing Connection Strategy" (JHCS) published a year before the EIR. The JHCS states that there are 198 PDAs, and the EIR and the draft Plan document both state that there are "nearly 200" PDAs. However, the PDA Readiness Assessment, one of the many support documents published at the same time as the EIR and draft Plan document, states that "a number of changes or modifications have been made since" the JHCS was published, so "the current number of PDAs is 169." Even though the core feature of the draft Plan is to encourage growth around PDAs, neither the EIR nor any of the documents it references provide a list of PDAs (only maps that are not at a scale to allow one to distinguish individual PDAs in proximity to each other, or to count them individually). There is also an inconsistency in the description of how much housing and jobs will go into the PDAs under the Plan. Among the EIR, SCS and JHCS, the housing number is variously described as "77 percent," "79 percent," "over 80 percent," "80 percent" and "about 80 percent." The jobs numbers are expressed as 63 percent sometimes and 66 percent other times – a discrepancy of more than 40,000 jobs. The unspecified "calibration techniques" discussed above, which were used to generate the description of how many housing units will be in PDAs as a result of the draft Plan, suggest that the EIR uses an elastic project description that changes shape as necessary to produce various outcomes. That is not a recipe for a useful EIR.

The EIR's Identification and Analysis of Alternatives Falls Short

The EIR deserves praise for its inclusion of an Equity, Environment and Jobs (EEJ) Alternative, and for acknowledging that the EEJ alternative is the environmentally superior alternative. However, there are important differences between the robust EEJ alternative proposed to ABAG and MTC and the alternative analyzed in the EIR. These differences include: forcing housing into the desired infill zones in the preferred alternative, but not the EEJ alternative; failing to capture in the model the benefits the EEJ alternative would achieve through deed-restricted affordable housing and of OBAG anti-displacement protections; and assuming there would be no CEQA streamlining under the EEJ alternative. As result, the EIR has not in fact analyzed a fully-developed EEJ alternative.

The analysis of the impacts of the EEJ alternative inappropriately masks how much better the EEJ alternative performs compared to the preferred alternative by representing those differences as seemingly-small percentage point differences and then repeating the misleading statement that its benefits are only "marginal." In fact, when one focuses on absolute numbers rather than misleading percentages, the analysis in the EIR shows substantially better performance by the EEJ alternative. Compared to the proposed plan, the EEJ scenario would result in:

- 1,900 fewer tons of CO2 emissions per day and 568,000 fewer tons of GHG emissions per year
- 6.4 fewer tons of Toxic Air Contaminants (TACs) per year
- 1,290 fewer tons of carbon monoxide emissions per year
- Daily energy savings of 68 billion BTUs, the equivalent of burning 600,000 fewer gallons of gasoline each day.

Furthermore, Sustainable Systems Research LLC concluded that if the modeling had been applied consistently, the EEJ alternative would show improved performance even beyond the performance that caused the EIR to select it as the environmentally superior alternative.

In addition, while the discussion of the EEJ alternative as the environmentally superior alternative drops hints that the alternative may be infeasible, it does not evaluate its feasibility at a level of detail that would be necessary for ABAG and MTC to make a finding of infeasibility. Any such analysis would need to individually evaluate the feasibility of the different major components, and not simply assume that one component can make an entire alternative infeasible. In fact, the VMT fee is not an essential part of the EEJ alternative. While it provides a useful tool for analyzing the benefits that a big boost in transit service would bring to the region, the bulk of those benefits can be achieved without a VMT fee through making $3 billion in additional transit operating funds available in the final Plan, as recommended below. Because the issue here is only financial feasibility, a feasibility analysis would need to fairly apply the same feasibility standards to the preferred alternative, by, for example, acknowledging that it may not be feasible to assume that the same revenues that existed before redevelopment agencies were eliminated will be available now that they have been eliminated.

The EIR's Analysis of Project Impacts is Inadequate.

The failure to base the impact analysis on a fixed, consistent project description permeates all of the individual sections of the impact analysis. The "calibration techniques" used in the land use analysis of the draft Plan are one extreme example of the fact that the impact analysis conducted through complex computer modeling appears to be result-oriented rather than a fair effort to characterize the actual impacts of the actual policy decisions that are supposed drive the analysis. As noted above, Sustainable Systems Research, LLC evaluated the inconsistencies in the modeling approaches and determined that EEJ would show even greater performance benefits relative to the draft Plan had the two been analyzed using comparable methods.

As discussed above, the impact analysis does not analyze the localized health effects on disproportionately-impacted populations of the increased emissions the EIR identifies as potentially significant. It also does not analyze the disproportionate health effects on low-income populations that will experience economic displacement, despite the fact that ABAG acknowledged in its 2007 to

2014 Housing Needs Plan that displacement caused by urban housing demand results in "negative impacts on health, equity, air quality, the environment and overall quality of life in the Bay Area."

One important shortcoming in the impact analysis relates to the impact of economic displacement. The draft EIR notes correctly that CEQA does not require analysis of pure social or economic impacts. CEQA does, however, require analysis of the physical changes to the environment that are caused by the economic or social effects of a project. And yet the draft EIR does not analyze the social and economic effects of displacement, even though it acknowledges that "Changing development types and higher prices resulting from increased demand could disrupt business patterns and displace existing residents to other parts of the region or outside the region altogether." Instead, these issues are given inadequate consideration in the Equity Analysis, which is not part of the CEQA analysis. There is no attempt in the draft EIR or in the Equity Analysis to model displacement and identify likely trends in displacement, including areas likely to face pressure, number of households affected, and the impacts on the communities expected to absorb these households, and no attempt to mitigate the impacts of the significant displacement risks that the Equity Analysis found.

The EIR's Mitigation Measures Fall Short.

To the extent the draft EIR does identify certain localized displacement impacts as significant, it does not propose sufficient mitigation measures even in the context of the artificially-constrained impacts it does address. The displacement mitigation measures focus on enhancing pedestrian and bike access, and general planning. No mitigation is proposed that adds any actual protection against displacement pressures.

Many of the mitigation measures (particularly for air impacts) set forth in the draft EIR are already required by applicable state or local regulations, and thus already required by law to be in the project. For example, (a) use of Tier 2 off-road equipment, (b) anti-idling requirements, and (c) controlling fugitive dust. As the Attorney General pointed out in her lawsuit challenging SANDAG's SB 375 plan, measures that are already legally required should have been assumed to be part of the baseline of the project. By inappropriately calling them out as mitigation measures, the draft EIR side-steps the consideration of other mitigation measures that could reduce pollution, improve public health, and save lives.

The draft EIR correctly points out in many places that mitigation of a number of the identified impacts is outside the jurisdiction of ABAG and MTC. Nevertheless, ABAG and MTC have not adequately leveraged the mitigation potential of programs that are within their jurisdiction, namely the One Bay Area Grant program (OBAG) and the Regional Housing Needs Allocation (RHNA). The EEJ alternative does a much better job of targeting those programs to achieve the objectives of SB 375 and state and federal transportation and housing laws than the preferred alternative.

We recommend adding the following specific mitigation measures:

- **Transit operations**: Provide $3 billion in additional operating revenue for local transit service in the final Plan, and commit to adopt a long-range, high-priority "Regional Transit Operating Program" to boost transit operating subsidies by another $9 billion over the coming years, as new operating-eligible sources of funds become available.

- **SCS and RHNA housing distribution**: Shift 25,000 RHNA units from PDAs to "PDA-like places," with a corresponding shift in the SCS.
- **Displacement protections**: Develop and incorporate into the draft EIR strong anti-displacement policies that future OBAG grant recipients will be required to adopt and implement, and provide substantial regional funding for community stabilization measures, such as land banking and preservation of affordable housing in at-risk neighborhoods.

Sincerely,

ACCE Riders for Transit Justice

Roger Kim, Executive Director
Asian Pacific Environmental Network

Kirsten Schwind, Program Director
Bay Localize

Carl Anthony and Paloma Pavel, Co-founders
Breakthrough Communities

Michael Rawson, Director
California Affordable Housing Law Project

Ilene Jacobs, Director of Litigation, Advocacy & Training
California Rural Legal Assistance

Wendy Alfsen, Executive Director
California WALKS

Dawn Phillips, Co-Director of Program
Causa Justa :: Just Cause

Tim Frank, Director
Center for Sustainable Neighborhoods

Nile Malloy, Northern California Program Director
Communities for a Better Environment

Amie Fishman, Executive Director
East Bay Housing Organizations

Genesis

Gladwyn d'Souza, Project Director
Green Youth Alliance

Joshua Hugg, Program Manager
Housing Leadership Council of San Mateo County

Melissa A. Morris, Senior Attorney
Law Foundation of Silicon Valley

John Young, Executive Director
Marin Grassroots/Marin County Action Coalition for Equity

Myesha Williams, Co-Director
New Voices Are Rising

Karyl Eldridge, Housing Committee Chairperson
Peninsula Interfaith Action (PIA)

Richard Marcantonio, Managing Attorney
Sam Tepperman-Gelfant, Senior Staff Attorney
Public Advocates Inc.

Anne Kelsey Lamb, Director
Regional Asthma Management and Prevention

Jill Ratner, President
Rose Foundation for Communities & the Environment

Allen Fernandez Smith, President & CEO
Urban Habitat

Brian Darrow, Director of Land Use and Urban Policy
Working Partnerships USA

Pam Grove

From: Matt WILLIAMS <mwillia@mac.com>
Sent: Wednesday, June 15, 2016 4:12 PM
To: EIR Comments
Subject: Comment letter
Attachments: Sierra Club Letter on NOP to MTC 6152016.pdf

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Dear MTC:

Please let me know that you have received this on time. Thank you.

SIERRA CLUB
FOUNDED 1892

June 15, 2016

via email to: eircomments@mtc.ca.gov

Metropolitan Transportation Commission
MTC Public Information
375 Beale Street, Suite 800
San Francisco, CA 94105

RE: Comments re Scoping of Draft Environmental Impact Report (DEIR) for Plan Bay Area (PBA) 2040

To Whom It May Concern:

On behalf of our more than fifty thousand members in the nine-county Bay Area Region (the Region), these comments regarding the recommended scope and content for the DEIR for the first update of PBA are submitted jointly by the three Chapters of the Sierra Club whose jurisdiction overlaps with that of the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG).

The Sierra Club continues to be very supportive of the goals of SB 375 – to reduce Greenhouse Gas (GHG) emissions and Vehicle Miles Traveled (VMT). To accomplish these ends, viable Priority Development Areas (PDAs) must be made successful, and must include levels of transit service that will make travel by single-occupancy auto generally unnecessary. Adequate capital and operations funds must be ensured within the Regional Transportation Plan (RTP) to achieve public transit with headways of 15 minutes or less at peak commute times as well as implementation of Complete Streets to safely enable active transportation.

MTC and the Association of Bay Area Governments (ABAG) are commended for developing creative funding mechanisms such as the One Bay Area Grant (OBAG) program. But spreading such funds broadly for political goals merely undermines MTC's and ABAG's own objectives in being able to achieve a successful Sustainable Communities Strategy (SCS). OBAG funding should be significantly increased and directed toward those projects and PDAs that actively strive to cut GHGs and VMT, not toward pet projects.

We are disappointed by the decision to have this second round of Plan Bay Area represent only a minor update to the first "new" RTP. We had minimized criticism of the first process and its outcomes as a "beta version" by assuming (and hoping) that lessons learned from the first round

would be incorporated into a more aggressive successor attempt to achieve SB 375's goals throughout the Region. It would be beneficial to the public and decisionmakers for MTC and ABAG to present a comprehensive analysis of what PBA 2013 actually accomplished, what trends are observed leading toward reductions in GHGs and VMT, and what steps or policies have been determined to be counter-productive, and why. Avoiding this crucial information in the current update merely guarantees limited improvements in building and moving a better Bay Area. In addition, marginal projects and proposals included in PBA 2013 such as those to build or expand highways or that would induce sprawl and which have not yet had meaningful implementation should be identified, with the reasons for such lack of action, so that they do not receive any preferential treatment in this or future updates.

The Sierra Club requests that the transcripts be made publicly available from the scoping meetings that were held recently in San Jose, Oakland, and Santa Rosa. Rather than the standard format of a brief presentation by staff, followed by answering of questions from the attendees, whereby everyone is able to hear the same information about what the public agencies are considering, the format was broken into a series of "stations" where individual discussions were held around large-format posterboards. There was no capturing of the discussions, unless individual members of the public spent extra time to visit the court reporters' work-desks to present comments. Some attendees were told about this extra requirement as they checked in to the event, but the information was not conveyed consistently, and in some cases not even accurately. In Oakland, the lead consultant for the firm which was described as handling the CEQA review was observed as having to look up the composition of the MTC Commission (their client) after not being able to answer a question from a member of the public as to who would be making the decisions about Plan Bay Area.

Information presented to the public is not consistent or does not achieve established Targets and essential goals

According to regulations for the California Environmental Quality Act (CEQA), a major purpose of a DEIR and its adopted EIR is to provide information on which the public can base its advocacy and whereby decisionmakers can determine the most appropriate outcome. Specifically, "the range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects."

The issue of which scenarios will be evaluated becomes problematic in light of the handout labeled "Plan Bay Area 2040 Scenario Analysis Performance Summary", with its chart labeled "Draft Performance Target Results." The color-coded outcomes of the Target Results indicate that the three MTC scenarios fall far short of achieving most of the adopted "targets," and which therefore do not satisfy CEQA by "accomplish(ing) most

of the basic objectives of the project." The most that will be accomplished, according to the Target Results, would be under the MTC-proposed Connected Neighborhoods and/or Big Cities scenarios, where only 5 of the 13 Targets are determined to be "achieved." This equates to less than a 39% success factor, well below a failing grade. **Notably, none of the MTC-proposed Scenarios achieve any of the Targets under the categories of Equitable Access or Transportation System Effectiveness.** Further, taken as a whole (including the "No Project" scenario), the evaluation of the Target Results yields an overall achievement rate of 30% (13 green dots out of a possible 52).

Of additional concern is the failure of the preliminary Target Results to achieve meaningful accomplishment for those goals identified as surrogates for State of Good Repair (i.e., Targets #12 and 13). Pavement condition needs to be significantly improved for the safety of pedestrians and bicyclists, especially through the consistent implementation of Complete Streets, and funding for road projects should be focused on streets that are used for transit service. Such accomplishments can then help to limit the rate of continuing needs for future funding. The DEIR should identify costs and timelines to achieve these objectives, as well as the problems that will be caused by failure to do so.

The document available on the PBA 2040 website labeled "Environmental Impact Document" identifies the process leading to selection of a preferred plan scenario, and states in part that:

> "Among other issues, MTC and ABAG seek comments on:…Are there alternatives that should be evaluated?"

In multiple public meetings, including the Regional Equity Working Group (REWG), MTC staff have invited the submission of alternative scenarios by other agencies or members of the public and stated that such would receive full consideration in the process.

But, the Notice of Preparation states on Attachment A under the heading of "Scenarios to be Analyzed" that "MTC and ABAG will evaluate the three scenarios, and one or a combination of them will be identified as the preferred Plan, which will be analyzed as 'the project' in the EIR. The remaining scenarios may be analyzed as alternatives in the EIR." There is no mention of other possible scenarios or alternatives. The handout sheet labeled "Frequently Asked Questions (FAQs)," under the heading of "What is the Project?" contains the same language as in Attachment A.

Alternatives to MTC's scenarios need to be included and honestly evaluated

Because of the CEQA regulations and the deficiencies noted above, alternative elements must also be considered. The Sierra Club supports the objectives of the Equity, Environment and Jobs (EEJ) Alternative that was developed and analyzed for the 2013 PBA and urges that a similar package be considered for this round. While we fully support the goals of the EEJ alternative to ensure that affordable housing and jobs with dignity be available for all levels of the growing population throughout the region, Sierra Club National policy would prefer that the EEJ alternative be amended to ensure that sprawl development be minimized. PDAs need to be supported by policies and funding to ensure adequate densities that will make public transit services more successful and usable than merely "lifeline."

We also recommend that a fully "aspirational" alternative be described and analyzed. At the June meeting of the REWG, a brief discussion occurred about the topic of "what would it take?" to achieve all (or at least a significant majority) of the Performance Targets for this round of PBA. The staff presentation, which was described as consistent with information that had been presented to the May meeting of MTC's Planning Committee, included additional options such as increased investments in active transportation, public transportation programs, autonomous vehicle technology, and housing production in PDAs. Since staff has already reviewed much of this information, it should not be difficult to compile a full alternative. We recognize that such a package would not be fiscally constrained, but it would have the value of presenting decisionmakers and the public with a much truer picture of how far short the PBA outcomes fall compared to the targets that have been established. Such a comparison could truly be enlightening – just imagine a Bay Area Region that is healthy, mobile, and with equitable opportunity for all residents and workers!

Plan Bay Area should emulate the approach and philosophy of the draft California Transportation Plan 2040 (CTP)

The revised draft California Transportation Plan 2040, which is expected to be finalized in the near future, represents a major shift in the former "Highway Department's" approach to mobility and its effects on the State's environment and population. Concepts and policies such as sustainability, climate change, healthy communities, environmental stewardship, more transit service and greater access to public transit through lower or no fares, are just a few of the achievements which Caltrans is seeking to address. Plan Bay Area should identify how the local Regional approach will be influenced for the better by actions at the State level.

However, because of actions and policies that have been developed or are underway at the State level, MTC must be careful to not introduce, or take credit for in the RTP, reductions in VMT and/or GHGs that are attributable to others. Since several of the Region's Congestion Management Agencies (CMAs) do not seem to have become cognizant of this precaution, MTC must be careful to avoid double-counting the lowered emission results from other actions or proposals.

Deficiencies in the public agencies' compliance with the Settlement Agreement with Communities for a Better Environment (CBE) and the Sierra Club must be rectified, and improved educational information should made available publicly

Our settlement agreement with MTC and ABAG, dated June 18, 2014 calls for a comprehensive Feasibility Analysis of each PDA, financial information regarding express lanes, healthy infill guidelines, and Freight New Technologies. These have not been produced, although they are required before the recent NOP was released.

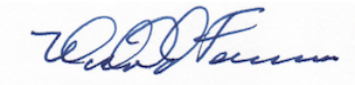
As part of these scoping comments, the Sierra Club specifically incorporates by reference the letter from Earthjustice dated June 7, 2016 as addressed to MTC, ABAG, and outside counsel, a copy of which is attached for your convenience.

We have also observed that a significant percentage of local public officials still do not understand, or in too many instances are even aware of, the process and results of PBA 2013. Better educational materials should be developed regarding the DEIR results and the draft Plan, and should be widely disseminated to local officials, in particular to City Council members throughout the Region.

We also specifically request that the "Regional Transportation Plan Checklist" developed by the California Transportation Commission (CTC), and which is required to be submitted to Caltrans "along with the draft RTP" should be included in the documents made publicly available with the DEIR. The checklist (Appendix C in the 2010 Regional Transportation Plan Guidelines) provides information that can be very useful to the public and to public agencies in identifying where specific information can be found in the PBA documents.

If you have any questions or desire further information regarding these comments, please do not hesitate to contact Matt Williams, Chair of the San Francisco Bay Chapter Committee on Transportation and Compact Growth, at mwillia@mac.com

Sincerely,



Michael J. Ferreira
Loma Prieta Chapter Chair



Victoria Brandon
Redwood Chapter Chair



Rebecca Evans
San Francisco Bay Chapter Chair

cc: Association of Bay Area Governments
Sierra Club California
Earthjustice
Loma Prieta, Redwood and San Francisco Bay Chapters

EARTHJUSTICE

June 7, 2016

Via Email

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RE: Settlement Agreement in *Communities for a Better Environment et al. v. Metropolitan Transportation Commission et al.*, Case No. RG13692189

Dear Tina and Amy –

We write on behalf of our clients because it appears that the Metropolitan Transportation Commission ("MTC") and Association of Bay Area Governments ("ABAG") have not complied with the settlement agreement entered into in *Communities for a Better Environment et al. v. Metropolitan Transportation Commission et al.*, Case No. RG13692189. We ask that you please rectify this lack of compliance.

As you are aware, the litigation referenced above concluded when MTC, ABAG and Petitioners Sierra Club and Communities for a Better Environment ("CBE") entered into a settlement agreement on June 18, 2014. The potential compliance issues with these provisions of the settlement agreement are addressed in turn below.

A key feature of the settlement agreement requires the preparation of a Feasibility Analysis for the Priority Development Areas ("PDA"), prior to the issuance of a notice of preparation ("NOP") for the Plan Bay Area Environmental Impact Report ("EIR"). (Settlement Agreement, Section5(c).) The agreement requires a Feasibility Analysis for the PDAs that includes analysis of: current transit availability for each PDA, development readiness in the PDA, analysis of risks of sea level rise and liquefaction in the PDA, housing and jobs information for the PDA, and public health information for the PDA. (Settlement Agreement, Section 5(c)(i)-(v).)

The NOP was issued on May 16, 2016.[1] However, we have not been provided with the Feasibility Analysis. The Feasibility Analysis also does not appear in the section of the Plan Bay Area website dedicated to documents required by the parties' settlement agreement.[2] There is a document titled "PDA Assessment Update" posted on the website page, which was prepared in response to a different settlement agreement.[3] This document is not, however, the "Feasibility Analysis" for which Sierra Club and CBE negotiated, and does not satisfy the requirements of our settlement agreement. Specifically, the document does not analyze transit availability, development readiness, environmental factors, housing and jobs factors, or public health information, in the detail required by the Settlement Agreement. (Settlement Agreement, Section 5(c)(i)-(v).) Notably, the document omits study of whether transit operates at required intervals, whether PDAs are at risk of sea level rise or liquefaction, whether PDAs are also situated in CARE communities, and the anti-displacement programs in place in the PDA. To the extent that this information is available, it must be included in the Feasibility Analysis for each PDA.

Further, the "PDA Assessment Update" does not cover all the PDAs in the Bay Area – it covers only 65 PDAs.[4] The settlement agreement applied to all PDAs, which number over 170.[5] We understand that MTC and ABAG are only required to provide the requisite information to the extent that this information is available. However, the existence of environmental documents and other public information suggests that such information is already available for at least some, if not all, of the PDAs omitted from the "PDA Assessment Update." For example, Alameda County and several localities have prepared their own analyses of PDAs in their jurisdictions, or there is public information otherwise available about various PDAs. Therefore, MTC and ABAG should have access to information enabling them to prepare a Feasibility

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[1] The Notice of Preparation is available at: http://mtc.ca.gov/sites/default/files/PBA2040_NOP-EIR_LegalNotice.pdf

[2] The materials prepared in accordance with the parties' settlement agreement are available at: http://planbayarea.org/plan-bay-area/plan-bay-area/legal-documents.html

[3] The materials prepared in accordance with MTC, ABAG and the Building Industry Association's settlement are available at: http://planbayarea.org/the-plan/quick-facts/Legal-Settlements.html

[4] *See* PDA Assessment Update at p. 2.

[5] *See* Plan Bay Area, Frequently Asked Questions, available at: http://planbayarea.org/about/faq.html#q10022

Analysis for many, if not all, of the PDAs. As a method of illustration, we identify several examples of PDAs where MTC and ABAG should have had the requisite information:

a. ***Alameda County PDAs*** – In 2015, the Alameda County Transportation Commission ("ACTC") prepared a progress report covering PDAs in Alameda County, including such factors as: Complete Streets and Housing Elements status, PDA funding allocations, PDA coordination with other planning efforts, and housing data.[6] ACTC's report covered PDAs which do not appear to be included in MTC's "PDA Assessment Update," including: Dublin's Downtown and Town Center, Fremont's Centerville and Irvington District, Hayward's the Cannery, Livermore's Downtown, Oakland's Fruitvale and Dimond districts, and the Union City Intermodal Station District PDA.

b. ***City of Berkeley, Adeline and South Shattuck PDAs*** – The City of Berkeley received a $750,000 Priority Development Area Planning grant from MTC to plan development in the Adeline and South Shattuck PDAs and some initial analysis of demographic and economic conditions, current land uses and infrastructure has already been prepared.[7]

c. ***Treasure Island and Yerba Buena Island PDA*** – Treasure Island and Yerba Buena Island are another planned PDA.[8] San Francisco's Department of Planning and the Treasure Island Development Authority have prepared several environmental review documents covering this development.[9] There are numerous concerns associated with development on the site, such as transportation access, soil contamination, and the continued availability of affordable housing on the site.[10]

d. ***Dumbarton Transit Oriented Development PDA*** – The City of Newark has planned a Dumbarton Transit Oriented Development PDA, located near the Dumbarton Bridge. The City of Newark has already conducted environmental

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[6] The Alameda County Transportation Commission memorandum "2015 Alameda County Priority Development Area Investment and Growth Strategy Annual Progress Report" (May 28, 2015) is available at: http://www.alamedactc.org/files/managed/Document/16389/2015_Update_AlamedaCounty_PDA_IGS_May2015.pdf

[7] *See* *http://www.ci.berkeley.ca.us/uploadedFiles/Planning_and_Development/Level_3_-_Land_Use_Division/1_Introduction.pdf*

[8] *See* *http://gis.abag.ca.gov/website/PDAShowcase/#nogo1*

[9] *See* *http://sftreasureisland.org/environmental-review*

[10] *See* http://kalw.org/post/would-you-live-treasure-island#stream/0, http://www.sfchronicle.com/bayarea/article/Yerba-Buena-Island-plan-an-unwelcome-development-6434398.php

review related to such development.[11] The Sierra Club has publicly written about its concerns with the feasibility of this PDA, due to lack of transit access, seal level rise, and contaminated soil risks.[12]

e. ***Brisbane Baylands Development*** – Similarly, the City of Brisbane has prepared environmental analysis of the proposed Baylands development[13] along the waterfront, which does appear on ABAG's list of planned PDAs.[14]

MTC and ABAG must prepare a Feasibility Analysis that complies with the parties' Settlement Agreement. Please advise us when such analysis will be provided.

The Settlement Agreement also requires MTC and ABAG to "disclose the effects of financing the construction of express lanes by using bridge toll revenues, and … disclose the effect of such financing on the current uses of toll bridge revenues." (Settlement Agreement, Section 5(b).) This disclosure shall be made 30 days before the release of the NOP for the EIR. However, this analysis does not appear to have occurred, and we request correction of this omission.

Additionally, the Settlement Agreement requires MTC and ABAG to issue healthy infill guidelines, titled "Planning Healthy Places" before the issuance of the NOP. (Settlement Agreement, Section 5(e).) BAAQMD has released guidelines that appear to address this part of the settlement.[15] However, they are not referenced on the Plan Bay Area website nor have we been informed that these serve that purpose. If these are in fact the healthy infill guidelines, the guidelines and mitigations identified therein should also be considered and incorporated into the update to Plan Bay Area, as required by the Settlement Agreement.

We appreciate that MTC and ABAG have moved forward with constituting the Regional Freight New Technologies Task Force, and that the group is working towards developing the Freight Emissions Reduction Action Plan. We do note that it does not appear that the group has evaluated the potential for zero-emission truck lanes along Interstate 880, as required by the Settlement Agreement, Section 5(d)(i). Further, we understand that the task force has not yet focused on issues related Section 5(d)(ii), including funding sources. We expect that these issues will also be addressed by the task force.

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[11] *See e.g.,* *http://www.newark.org/images/uploads/comdev/pdfs/DumbartonTOD/Draft%20SEIR%20December%202013(reduced).pdf* and http://www.newark.org/images/uploads/comdev/pdfs/NewarkGP_DEIR_PublicReview.pdf

[12] *See* *http://theyodeler.org/?p=10597*

[13] *See* *http://www.ci.brisbane.ca.us/sites/default/files/1_intro.pdf*

[14] *See http://gis.abag.ca.gov/website/PDAShowcase/#nogo1*

[15] *See* *http://www.baaqmd.gov/~/media/files/planning-and-research/planning-healthy-places/php_may20_2016-pdf.pdf?la=en*

We appreciate your attention, and look forward to your prompt action to address these matters.

Sincerely,



Irene Gutierrez
Will Rostov
Counsel for Sierra Club and Communities for a Better Environment

Individuals

Pam Grove

From: Jake Brenneise <jake_9642@mach3internet.com>
Sent: Thursday, May 19, 2016 7:46 PM
To: EIR Comments
Subject: Please prioritize and enable "secondary suites" as a free-market, zero cost to taxpayers way to reduce the housing crisis

Follow Up Flag: Follow up
Flag Status: Flagged

By zoning for and enabling "secondary suites", we could dramatically reduce the cost of housing, while at the same time distributing those people rather uniformly across our residential areas.

The mercurynews had this comment:

Matt Regan, senior vice president of public policy at the Bay Area Council, suggested streamlining permitting processes to encourage homeowners to create second units. Citing Vancouver, British Columbia, where 35 percent of single family homes have such "granny units," he said that **if 10 percent of Bay Area homeowners were to receive such permits, then "150,000 units of housing can come on stream immediately."**

http://www.mercurynews.com/business/ci_29890334/policy-road-map-affordable-housing-santa-clara-county

Here is an analysis done on the impact of "secondary suites" across all of Canada:

Not only are secondary suites a source of affordable rental housing, they can also provide the needed extra income to first-time homebuyers for whom that additional income makes housing affordable in high-cost areas. For older households who no longer need a large house, the addition of a suite can generate needed income and security, as well as allow them to continue to live in their neighbourhoods and age in place.

http://www.cmhc-schl.gc.ca/en/inpr/afhoce/afhoce/afhostcast/afhoid/pore/pesesu/pesesu_001.cfm

How the Strategy Works

Secondary suites are an important supply of rental housing in many cities, towns and rural communities across Canada. For example, in 2014, it was estimated that there were about 26,600 secondary units in Vancouver, forming about a fifth of the rental stock. About a fifth of the rental stock in Edmonton is in secondary suites and accessory dwellings, as well. Rents in secondary suites are often lower than those for apartments in conventional rental buildings, and the suites can be developed with no or minimal government assistance. Secondary suites enable low- and moderate-income households to live in ground-related housing in a residential setting.

Not only are secondary suites a source of affordable rental housing, they can also provide the needed extra income to first-time homebuyers for whom that additional income makes housing affordable in high-cost areas. For older households who no longer need a large house, the addition of a suite can

Policy and Regulation

- Modifying Development Standards
- Permitting Secondary Suites
- Providing for Garden Suites
- Reducing Length of Approvals
- Retaining Affordable Housing
- Using Development Levies

generate needed income and security, as well as allow them to continue to live in their neighbourhoods and age in place.

- Using Inclusionary Housing Policies

What are Secondary Suites?

A secondary suite is a private, self-contained unit within an existing dwelling. Secondary suites are also called second units, accessory apartments, granny flats, in-law suites and basement apartments (since many are found in basements). A secondary suite has its own bathroom, kitchen, living and sleeping areas but can share a number of features with the rest of the house. Shared facilities may include a yard, parking area, laundry and storage space, and sometimes a hallway.

The secondary suite is usually created in a dwelling originally designed to accommodate a single family. Builders in some markets construct houses with apartments included at the outset or houses that can be easily converted (see Designing Flexible Housing).

How are Secondary Suites Created?

The majority of secondary suites are created through internal alterations, although some are built as additions to the main house. The size of the apartment will depend on the size and design of the house as well as the lot configuration. Secondary suites can be located in the basement, on a floor or in the attic. However, most secondary suites are found in basements, because such units are the easiest to develop and they allow for the greatest degree of privacy and separation. The following diagram illustrates a basement in a house before and after its conversion into a secondary apartment. Owners are required to have a building permit to add a secondary suite.

Legalizing Non-compliant Secondary Suites

Because many municipalities do not permit secondary suites, or only permit them in selected neighbourhoods, secondary suites are often created illegally. Even when secondary suites are legalized, homeowners may be reluctant to declare their unit because they will likely have to bear the cost of upgrading their unit to local and provincial building, fire and safety standards. Some owners do not legalize their units in the hope of continuing to avoid paying income taxes on their net rental revenue.

Municipalities are taking a variety of approaches to facilitate the documentation and upgrading of illegal suites. In order to ensure residents have adequate and safe housing, some municipalities developed specific programs to assist homeowners with secondary suite compliance. For example, the City of Saskatoon, Saskatchewan, offers to waive municipal building and plumbing permit fees for property owners to encourage the legalizing of existing secondary suites. The City of Burnaby, British Columbia, provides property owners who would like to legalize their secondary suite with the option of a complimentary suite feasibility inspection and report. This free

service is a coordinated inspection carried out by building, electrical, plumbing and gas inspectors.

Types of Regulations

Secondary suites are subject to a number of provincial, territorial or municipal requirements, including:

- zoning;
- building code;
- unit size;
- parking; and
- inspections and licensing.

Zoning

Most municipalities allow secondary suites in a limited number of areas; however, in recent years many municipalities have expanded the areas and building types where secondary suites are permitted, as illustrated by the following list:

- The City of Vancouver permits secondary suites “as of right” within the RS (one-family dwelling), RM (multiple-family dwelling) and RT (two-family dwelling) zones. They are also permitted in multiple-unit dwellings (apartments) and mixed-use developments.
- The City of Edmonton permits secondary suites “as of right” in all locations, in all low-density residential zones. A maximum of one secondary suite is allowed per single-detached dwelling. Requirements include providing three on-site parking spaces (tandem parking is permitted).
- Some municipalities, in the province of Quebec, for example, permit suites occupied by immediate family members only.

Although all provinces in Canada encourage the development of secondary suites as a means to provide options for affordable housing, only Ontario has enacted specific provincial legislation requiring municipalities to develop policies in their official plans and zoning provisions to provide for secondary suites. Changes made to the Ontario *Planning Act* in 2011 make it obligatory for municipalities to allow for secondary suites within single-detached, semi-detached and townhouse dwellings, as well as in ancillary structures, such as detached garages. These changes are intended to improve access to adequate, suitable and affordable housing. Municipalities must meet the new requirements set out in the *Planning Act* and bring their planning documents into conformity as part of their five-year review or sooner, at the discretion of the municipality.

In Quebec and British Columbia, the provincial legislation includes provisions granting municipalities the authority to regulate intergenerational dwellings and secondary suites, although they are not mandated. In Quebec, under section 113 of the *Act respecting land use planning and development*, municipalities have the authority to limit the occupancy of an additional

dwelling to a relative, a dependant, or persons who are or were related to the owner or occupant of the principal dwelling. As well, Saskatchewan, Manitoba and Nova Scotia provide financial assistance to property owners to construct or renovate secondary suites.

Building code

In Canada, the design and construction of new secondary suites and the upgrade of existing ones are governed by provincial and territorial codes. The provinces and territories often either adopt or adapt the National Model Construction Codes, which include the National Building Code (NBC) of Canada and the National Fire Code of Canada. The NBC includes specific floor area maximums, ceiling height minimums, window dimensions and smoke alarm installation, as they pertain to secondary suites. British Columbia, Alberta, Ontario and Quebec have their own provincial building codes that regulate the development of secondary suite codes, based on the National Model Construction Codes.

Some of the requirements that secondary suites must follow:

- Entrances — A secondary suite must have a separate entry door. This door may open to a vestibule shared with the rest of the house or may lead directly outside. An existing side or back door can often be used as the apartment entrance.
- Fire safety — Each wall, floor or ceiling separating the secondary suite from the rest of the house must provide adequate fire and sound resistance. According to a brochure prepared by the Province of Ontario, a combination of batt insulation and drywall supported on metal channels will normally enable standard wood-frame construction to meet code requirements. Other requirements include smoke alarms, carbon monoxide detectors and a fire exit.
- Height, moisture and natural light — If the apartment is provided in the basement, it must be dry and have adequate natural lighting and enough headroom (height varies by jurisdiction).

Unit size

The size of the secondary suite varies with the individual unit and the municipality. For example, North Vancouver has a minimum size of 27 square metres (400 square feet) and a maximum size of 968 square feet (90 square metres), while representing no more than 40 per cent of the habitable floor space of the building, for a secondary suite. An issue for some municipalities is to ensure that the secondary suite is “accessory,” that is, smaller in size than the main unit.

Parking

In most municipalities, a parking space is required for the secondary suite. Two parking spaces are the minimum usually required for houses with a secondary suite, but these requirements vary considerably. For example, in a built-up area that is well served by public transit, a lower parking standard may

be appropriate. In the city of Toronto, one parking space was considered sufficient for the main unit plus a secondary apartment, and so, no additional parking is required in the bylaw. But in Nanaimo, where two off-street parking spaces are required for a single-detached dwelling, a home with a secondary suite has to provide a total of three off-street parking spaces.

Inspections and licensing

The ability of municipal officials to inspect secondary suites depends on provincial legislation. Municipal officials have limited powers to inspect units unless they are considered a threat to health and safety. Generally, fire officials have the strongest powers to inspect a property. When a secondary suite is created legally, relevant municipal officials will inspect it. Some municipalities use licensing as a way to provide for inspections, but others are reluctant to enter into licensing arrangements because of the bureaucracy that this entails.

Financing

Typically, homeowners must take out a loan and/or second mortgage to create a secondary suite. The rent will usually exceed the cost of repaying the loan. As shown below, a secondary suite lowers the monthly carrying costs for a homeowner and also reduces the required annual qualifying income for a mortgage. Costs for installing secondary suites can range from $20,000 to $30,000.

How a Secondary Suite Can Reduce the Cost of Homeownership

House price *(based on the Canadian average house price from the Canadian Real Estate Association)*	$398,618
Mortgage principal *(based on a 20% down payment)*	$318,894
Monthly carrying costs	
• Mortgage payment *(based on a 4.32% annual interest rate and a 25-year amortization)*	$1,733
• Taxes	$397
• Maintenance and utilities	$200
• Total*** *(based on a 30% gross debt service ratio)*	$2,330
Required annual qualifying income for mortgage	$93,205
Conversion cost	$25,000
Additional monthly carrying costs	
• Mortgage payment	$135

• Taxes, maintenance and utilities	$150
• Total	$285
Total monthly carrying costs	$2,615
Rent for additional unit	$808
Net monthly carrying costs	$1,807
Net monthly financial benefit	$523
Required annual qualifying income for mortgage	$72,285
% change in affordability (before tax)	22.5%

To make the conversion financially attractive, governments have had programs providing interest-free loans and forgivable grants through programs that usually had a high take-up rate.

Impact of Secondary Suites

Often, the opposition to secondary suites centres around their perceived impact on the neighbourhood. Communities that oppose secondary suites will cite worries that the densification will lead to the overcrowding of schools and neighbourhoods, increased parking problems, and higher use of water, sewer, and garbage collection services. However, research undertaken by CMHC in the past regarding the impact of municipal user fees on secondary suites found that secondary suites do not have an overall significant negative impact. Given the trend to smaller households, secondary suites generally do not place an extra burden on municipal infrastructure or services beyond the original design capacity. Conversely, by helping to reduce the decline in neighbourhood density, secondary suites can absorb underutilized capacity and allow for the more effective use of resources, such as for water, sewer, and garbage collection services.

In terms of infrastructure services, secondary suites tend not to overtax services but serve to offset the decline in school population. The impact on parking was found to be negligible, as people who live in secondary suites tend to own fewer cars on average than people who live in single-detached homes.

Secondary Suites in Canada

In 2014, CMHC completed a study using information on local secondary suite policies obtained from 650 Canadian municipalities in census metropolitan areas (CMAs) and census agglomerations (CAs). Overall, 77 per cent of these 650 municipalities permit secondary suites.

Size of Municipalities(population)	**Percentage of Municipalities Permitting Secondary Suites**
Rural (less than 5,000 persons)	68%
Small (5,000 to 29,999 persons)	82%
Medium (30,000 to 99,999 persons)	85%

Large (100,000 and over)	88%

Of the 149 municipalities that did not permit secondary suites dwellings, more than half (58 per cent) were rural areas, and just over a quarter (28 per cent) were small municipalities. Only 10 per cent of medium areas and 4 per cent of large areas did not permit these units.

The percentage of municipalities in CMAs that permit secondary suites increased from only 54 per cent (220 of 404 municipalities) in 2006 to 78 per cent (292 of 373 municipalities) in 2014.

The most frequently used zoning permissions among the municipalities that permitted secondary suites were imposing size limitations, including limiting the size of the secondary suite in relation to the primary building, limiting the number of rooms and/or specifying a minimum lot size to be permitted, and allowing the secondary suites within a primary dwelling.

Also popular were subjecting the suites to a specific approval process identified as discretionary or conditional (which could result in the suite being denied), imposing occupancy limitations (limiting the number of occupants in the suite and/or allowing only relatives, or persons with special needs, to occupy the suite), having a permitting process that involves municipal approvals or agreements, setting temporary use or time limitations on the suite, and allowing suites only in specific zones and/or specific types of dwellings.

Plan BayArea 2040

Comment Form

Plan Bay Area 2040 Draft EIR Scoping Meeting
Thursday, May 26, 2016
Dr. Martin Luther King Jr. Library
One Washington Square, Room 225
San Jose, California

Name: MARY Collins Title: _____

Agency: _____

Address: 3664 Sydney Ct SJ 95132

E-mail: m Phone: _____

Use this form to submit any comments. Use the other side if additional space is needed.

I support Big Cities Scenario, but want more inclusion of jobs in San Jose. Thru housing, land use needs to include business zoning Major projects - no roads

DK Continue - maintain low ridership lines instead of just continuing highly used lines.

Written comments will be accepted at the scoping meetings; via mail to MTC Public Information, 375 Beale Street, Suite 800, San Francisco, CA, 94105; via fax to 415.536.9800; or via email to eircomments@mtc.ca.gov. **Written comments must be received at the MTC offices no later than June 15, 2016. For more information, call the MTC Public Information Office at 415.778.6757.**

Association of Bay Area Governments

METROPOLITAN TRANSPORTATION COMMISSION

Plan BayArea 2040

Comment Form

Plan Bay Area 2040 Draft EIR Scoping Meeting
Thursday, May 26, 2016
Dr. Martin Luther King Jr. Library
One Washington Square, Room 225
San Jose, California

Name: Karen Schlesser Title: _____

Agency: _____

Address: 450 N. Mathilda Ave. Sunnyvale 94085

E-mail: k_schlesser@yahoo.com Phone: _____

Use this form to submit any comments. Use the other side if additional space is needed.

My primary concern is the housing shortage. I believe we need to encourage development of new housing at every level. We should use tax incentives to encourage cities to build/allow housing development. More housing is the only way to bring down the market rate, allowing more people to afford to live in the Bay Area near jobs. Better regional coordination is necessary to improve both housing + transportation.

Written comments will be accepted at the scoping meetings; via mail to MTC Public Information, 375 Beale Street, Suite 800, San Francisco, CA, 94105; via fax to 415.536.9800; or via email to eircomments@mtc.ca.gov. **Written comments must be received at the MTC offices no later than June 15, 2016. For more information, call the MTC Public Information Office at 415.778.6757.**

Association of Bay Area Governments

METROPOLITAN TRANSPORTATION COMMISSION

Plan BayArea 2040

Comment Form

Plan Bay Area 2040 Draft EIR Scoping Meeting
Thursday, May 26, 2016
Dr. Martin Luther King Jr. Library
One Washington Square, Room 225
San Jose, California

Name: Roma Dawson Title:
Agency: retired - former legislative aide
Address: 3986 Williams Rd.
E-mail: romadawson@yahoo.com Phone:

Use this form to submit any comments. Use the other side if additional space is needed.

Concerned that San Jose is asked to build too much housing with no recognition of our lack of jobs (per employed resident). We should have a revenue incentive for building more housing.
None of the scenarios (though I can't find the detail I need)

Written comments will be accepted at the scoping meetings; via mail to MTC Public Information, 375 Beale Street, Suite 800, San Francisco, CA, 94105; via fax to 415.536.9800; or via email to eircomments@mtc.ca.gov. **Written comments must be received at the MTC offices no later than June 15, 2016. For more information, call the MTC Public Information Office at 415.778.6757.**

Association of Bay Area Governments

METROPOLITAN TRANSPORTATION COMMISSION

(OVER)

discuss our housing afford-
ability crisis. I hope to see
detailed analysis of all equity
and displacement of low income
residents.

I only 2 of the scenarios
that encourage smart growth

The EIR should also focus on
settling the issue of what is
best to put by transit centers—
jobs or housing to help
guide cities' in land use
decision.

Plan BayArea 2040

Comment Form

Plan Bay Area 2040 Draft EIR Scoping Meeting
Thursday, May 26, 2016
Dr. Martin Luther King Jr. Library
One Washington Square, Room 225
San Jose, California

Name: Gloria Chun Hoo Title: ——

Agency: —— (representing self – not the League)

Address: 6076 Calle de Amar, San Jose, CA

E-mail: glocalifornia@yahoo.com Phone: (408) 265-7404

Use this form to submit any comments. Use the other side if additional space is needed.

(1) Suggest that EIR consider "ecosystem services" approach to evaluating the "value" of Open Space for purposes of GHG reduction & water quality

(2) We should REJECT Main Streets Scenario – encourages too much suburban sprawl and threatens open space & parkland – (3) Does EIR focus on water use, availability & Quality –? capacity issues etc –

(4) Does transit address "1st and last mile"?? How can those "connections" – connectivity be encouraged?

Written comments will be accepted at the scoping meetings; via mail to MTC Public Information, 375 Beale Street, Suite 800, San Francisco, CA, 94105; via fax to 415.536.9800; or via email to eircomments@mtc.ca.gov. **Written comments must be received at the MTC offices no later than June 15, 2016. For more information, call the MTC Public Information Office at 415.778.6757.**

Association of Bay Area Governments

METROPOLITAN TRANSPORTATION COMMISSION

(5) Most Supportive of a blend of Scenario "Connected Neighborhood" & "Big Cities"
— Feel supportive of the focus on more "distributed" housing in Connected Neighborhood Scenario — is appropriate esp. as it is along major transit corridor
BUT I believe that the transportation plans in Big Cities — is pragmatic, good for the environment + makes great sense. Also hope "major project" is not new roads — To meet GHG emissions reductions — need to focus more on high ridership systems —
(6) EIR must address all impacts of climate change Especially Sea level rise !!

Received 5/31/2016 @ 6:05

EDWARD C. MOORE
ATTORNEY AT LAW[1]

2436 Ninth Street
Berkeley, California 94710

Tele: (510) 531-7272
E-mail: ecmoorelaw@gmail.com

ca

May 31, 2016

Metropolitan Transportation Commission
Plan Bay 2040 EIR Scoping Meeting
MetroCenter Auditorium
101-Eighth Street
Oakland, California

(HAND DELIVERED AT 6:30 P.M. MEETING.)

I have two concerns that cry out in me for competent evaluations of the adequacy of whatever 'thresholds of significance' are chosen to evaluate these concerns when studying the environmental impacts of alternative regional developmental scenarios for Plan Bay 2040.

I. OCEANVIEW WATERFRONT IN ALBANY AND BERKELEY AS A PRIORITY CONSERVATION AREA

The ocean-view waterfront west of Interstates 80/580 in the cities of Albany and Berkeley (the Waterfront) is in my opinion a Cultural Landscape currently eligible for listing on the National Register of Historic Places as an historic 'site' or 'district.' It is situated at waters' edge on an axis running from upper reaches of the Pacific through the Golden Gate, across the San Francisco Bay and up University Avenue culminating at a hub of higher-learning institutions in Berkeley. The Waterfront possesses high artistic values of great magnitudes in height and depth and breadth of significance for a diversity of people and numerous intellectual disciplines. Among its high artistic values is an actuality this particular Waterfront is associated with historic events which have made significant contributions to the broad patterns of American and world history. The Waterfront's 'high artistic values' and its 'association with historic events' are two separate criteria of significance by which National Register eligibility is determined.

I am requesting that henceforth the Waterfront be classified for purposes of regional planning as a Priority Conservation Area (PCA). Regionally significant open space is found at the Waterfront regarding which there exists a broad consensus for long-term protection. That open space

[1]Voluntarily inactive as of March 1, 2010.

includes but is not limited to the McLaughlin East Shore State Park.

It is hoped that with this designation the Regional Transportation Plan will fund as infrastructure a new mode of public transportation to and from the Waterfront and its eventual ferry terminal and Albany's business district and Berkeley's revitalized downtown. A mode of transportation, that is, needing no parking lots.

I am not suggesting 141 acres of privately owned upland at the Waterfront (102 acres in Albany and 39 in Berkeley) known as Golden Gate Fields should not be developed in the event the lessee racetrack business relocates. What I am urging is that any future development of this historic 'site' or 'district' be concordant with and enhance (make more revealing) its significances as a Cultural Landscape for the future enrichment of our public university community and the public generally. It would be tragic if the privately owned Waterfront upland is evaluated for development purposes as little more than a picturesque infill site, as has happened repeatedly in the recent past (e.g., Fern Tiger's Shared Vision Planning Study for Albany; the Stronach Group Proposal for a National Laboratory Campus at Golden Gate Fields).

At some point in the not-distant future I plan to submit an application to California's Historic Preservation Officer in Sacramento requesting a formal designation of the Waterfront as eligible for listing on the National Register of Historic Places and the California Register of Historical Resources.

II. BERKELEY'S REGIONAL HOUSING ALLOCATION

Each Regional Housing Need Allocation (RHNA) is periodically calculated by the California Department of Housing and Community Development based on census data. Allocations of the number of new housing units that each city within a region must accommodate in the Housing Element of its General Plan are then distributed by the Association of Bay Area Governments (ABAG). Berkeley's RHNA Capacity for 2014-2022 is set at an additional 2,959 housing units spread among five income capacities.

Berkeley is a small, *densely populated* landlocked city of 115,500 with special needs and societal purposes directly tied to hosting UCB and allied institutions of higher learning including the Graduate Theological Union and Lawrence Berkeley National Laboratory. As a university community with 50,000-plus students, faculties and staffs included among its population, this city has atypical housing needs and merits something other than rote RHNA allocations.

Conceivably Berkeley may yet evolve into an exemplar urban setting reflecting wisdom and foresight by illustrating how a well-plan city can enhance the quality of urban life and perpetually inspire maturing health, morality and general welfare in its inhabitants. Downtown revitalization is coming along nicely. Unfortunately though this highly desirable outcome appears increasingly unlikely given how threatened the livability of Berkeley's neighborhoods are becoming due to rapidly developing oversized building outside the downtown core. Excepting the downtown core and the current Adeline Corridor project, pushes for increase density by permitting ever bigger buildings has not been preceded by planning for well-integrated neighborhoods. Instead the current approach involves authorizing oversized residential projects that permit densities above and beyond well-thought-out specific area plans such as the West Berkeley Plan (1993) and the University Avenue Strategic Plan (1996), or oversized residential building on San Pablo Avenue, a commercial zone and priority development area, without any integrated planning having been done for many decades.

This rush to increase density is driven by the 2014-2022 RHNA allocation, the One Bay Area Plan, seemingly rote applications of Not-So-Smart Growth, the state density bonuses and a region-wide shortage of affordable housing. Descent into a multi-generational chaos of poorly planned and integrated neighborhood-less 'family housing' for the masses with streets choked in automobile traffic is foreseeable. An all-too-American mediocrity is on the horizon as calls for ever-denser housing, offices and lucrative shopping will crowd out industrial west Berkeley while benzene wafts in from the adjacent Interstates 80/580. The oldest industrial and housing district in the East Bay (Berkeley Land & Town Improvement Association, 1873) is threatened by ad hoc calls by elected officials for R-3 'buffer zones' in an R1-A area to create a transition from the inflated residential housing foreseen on San Pablo Avenue

(i.e., a sprinkling of 8-12-story apartment complexes without sufficient schools, authorized by local density bonuses atop state density bonuses combined with transfers of development rights, etc.).

Higher learning teaches that dwelling is an art manifested by the interplay of a fourfold unity consisting of earth, sky, divinity and mortal human beings at play with one another in forming the world. (See Vincent Vycinas, Earth and Gods – An introduction to the philosophy of Martin Heidegger [1961 Martinus Nijhoff / The Hague].) This explanation of what human dwelling constitutes will seem strange to many who still see the earth as a de-divinized complex of blind powers subordinate to whatever human beings can manipulate it into providing. The lives of many who teach and practice in Berkeley are richly endowed lives – not rich in a material sense necessarily but rich in an appreciative awareness giving rise to artful expressions of the means by which especial aspects of humanity's past and future are seen and become known as ever present in the Present here and now given us to enjoy and make fruitful. Such awareness reflects a growth of higher learning and for most of us higher learning *begins* with higher education to varying degrees as a prelude to applying the principles taken to heart when dwelling in the world.

CONCLUSION

I ask that Berkeley's RHNA allotment be tempered in the future to facilitate this city's develop into an exemplar urban setting for a premier university community, rather than a bedroom community for the isolated masses built on transit corridors. I ask also for a substantial investment in infrastructure to develop an advanced system of public transportation that serves to connect the East Bay along San Pablo Avenue and serves to tie the cities of Albany and downtown Berkeley to their Waterfront without the intrusion of automobiles.

Thank you for your attention and consideration given to my two concerns regarding 2040 planning.

Very truly yours,

EDWARD C. MOORE

Comment Form

Plan Bay Area 2040 Draft EIR Scoping Meeting
Tuesday, May 31, 2016
MetroCenter Auditorium
101 8th Street
Oakland, California

Name: Ferenc Title:

Agency:

Address: 34 WOODSIDE Drive MORAGA

E-mail: flkovacs@gmail.com Phone: 925 999 1398

Use this form to submit any comments. Use the other side if additional space is needed.

How do we provide for "self-contained" senior housing to meet the growing senior population needs? & Q's?

~~Do we~~

Please provide real data for us & keep up your efforts to be more transparent & accountable.

Written comments will be accepted at the scoping meetings; via mail to MTC Public Information, 375 Beale Street, Suite 800, San Francisco, CA, 94105; via fax to 415.536.9800; or via email to eircomments@mtc.ca.gov. **Written comments must be received at the MTC offices no later than June 15, 2016. For more information, call the MTC Public Information Office at 415.778.6757.**

Association of Bay Area Governments

METROPOLITAN TRANSPORTATION COMMISSION

Comment Form

Plan Bay Area 2040 Draft EIR Scoping Meeting
Thursday, June 2, 2016
Finley Community Center
2060 W. College Avenue
Santa Rosa, California

Name: Jennie Schultz Title: _____

Agency: _____

Address: 1913 Zinfandel Ave #102 Santa Rosa 95403

E-mail: jgrace17@sbcglobal.net Phone: 707/545-6283

Use this form to submit any comments. Use the other side if additional space is needed.

Well explained!

Written comments will be accepted at the scoping meetings; via mail to MTC Public Information, 375 Beale Street, Suite 800, San Francisco, CA, 94105; via fax to 415.536.9800; or via email to eircomments@mtc.ca.gov. **Written comments must be received at the MTC offices no later than June 15, 2016. For more information, call the MTC Public Information Office at 415.778.6757.**

Association of Bay Area Governments

METROPOLITAN TRANSPORTATION COMMISSION

Pam Grove

From: Ferenc Kovac <flkovacs@gmail.com>
Sent: Friday, May 27, 2016 12:38 PM
To: EIR Comments
Subject: provincial concerns and comments attached
Attachments: mtc-may2016.docx

Follow Up Flag: Follow up
Flag Status: Flagged

Hi, my comments are not as global as perhaps you're looking for, but it is a view/concern from the untrained trenches.
Feel free to contact me if further information of discussion is needed.
Thanks,
Ferenc

MTC/ABAG PlanBayArea2040 Comments

As a Planning Commissioner in the City of the Town of Moraga, I want to make good decisions. Traffic is a big concern and we need better regional data.

To paraphrase our outgoing Mayor: Moraga does not have a traffic problem – it's only a problem when you try and get to (and fro) a major hub like BART or SR24.' Those are in our neighbor cities of Orinda and Lafayette. With Moraga, the three comprise Lamorinda.

Moraga has an MTC approved PDA – the Moraga Center Specific Plan (MCSP), which has a Moraga Traffic Hub. Unfortunately, it is essentially a bus stop, with no parking spots, some 4 miles from an actual traffic hub. In its approval process, what conditions/assumptions did the MTC impose on that 'hub?' As our friends at the CCTA indicated wisely, there is no funding for added bus runs, and even if there were, those buses would be stuck in the same one lane of traffic to/from Orinda and Lafayette. Also ,rush hour traffic is pretty much all day.

The EIR that was done for MCSP assumes significantly lower number of trips, claiming things like workforce housing. Moraga's existing commercial and business real estate is overbuilt and Moraga Center has a significant vacancy. Added first floor commercial space via form based coding will just add to the inventory of empty storefronts, as it does in many similar developments.

With the aging of America, and especially Moraga, we are considering senior-focused housing, and workforce needs may arise for senior care givers. Those jobs typically pay $15/hour – and one such worker would be hard pressed to afford to rent, much less buy in Moraga. This will add to the traffic in and out of Lamoridna. Lafayette cannot even handle its own traffic.

Also, just when we got used to LOS, we are now faced with VMT and trip rights. What do those mean, and how can they help us make good decisions on new developments? Should VMT be a PVMT, accounting for number of passengers/occupants in the vehicles? How could impact fees we may charge help with the added traffic congestion, in our cul-de-sac town at the mercy of its upset neighbors?

We need an updated EIR/traffic study that is regional and accurate. Myopic studies and finger pointing do not provide accurate tools to help address problems, neither current nor future.

For the numerous projects that are in the works in Lamorinda, including those piecemeal projects adding under the 100 peak trips trigger, could we, say, get a development countdown number that will help ensure our quality of life and emergency vehicle egress meets the needs of our aging population?

Looks like a golden opportunity to help its tarnished image in Lamorinda, and help us move forward to a bright and workable future!

MTC/ABAG PlanBayArea2040 Comments

Ferenc Kovac

(925) 999 - 5398

flkovacs@gmail.com

Pam Grove

From: Alan Burnham <akburnham@comcast.net>
Sent: Saturday, May 28, 2016 12:57 PM
To: EIR Comments
Subject: EIR comments

Follow Up Flag: Follow up
Flag Status: Flagged

Dear MTC,

I downloaded and read the 2013 Plan Bay Area. I was disappointed that it contained a lot of fluff and not much hard information. I was hoping to see some more concrete indications of how to solve our transportation problems.

One of the bright spots in the report was pages 114-116, which used some specific criteria to rank various general approaches to transportation issues. One can argue about the price of carbon emission, but at least the criteria are clear. Unfortunately, it doesn't address specific problems very well.

I commute from Livermore to Palo Alto. To take public transportation would take me 2 hours each way. Driving off hours takes less than an hour, and mid-rush driving takes about the same as public transit. Transfers, space, and limitations of motion sickness limit my ability to work on mass transit. So I usually drive off-hours. I don't like it, but what would make me change?

For me, the driving issue is time, not cost. To me, sitting in traffic in a bus is worse than sitting in a car. Having an express bus lane from the Fremont ACE station to Palo Alto would reduce travel time significantly during rush hour. A light rail line from Fremont Bart to the ACE station to Palo Alto would solve the time and connection problems between ACE and Palo Alto even better. Going all the way to San Jose and back with the current system is not time-efficient. Adding more stops makes the situation worse.

If the MTC cannot come up with viable mass transit options, I and most other people will continue to drive and lobby for better roads, which your analysis shows has an excellent benefit to cost ratio. I would also lobby for a much higher gasoline tax, which would provide revenue for the roads and mass transit. Unfortunately, the state legislature is out to lunch on this issue. Consequently, localities pass sales tax increases to pay for transportation, which is a ridiculous approach. It provides absolutely no incentive to drive less.

So I propose that all new roads be express lanes to encourage car pools and raise revenue. If people would rather waste their time in a traffic jam, that is their decision. But it is not mine. One of the first new express lanes should be north from I-680 at Mission to Vallecitos Rd. It is jammed up from 2:30 to 8 pm.

Another specific concern is the logic for improving highway 84 from Livermore to 880. Putting more lanes from I-580 to Pidgeon Pass just creates a larger parking lot. The couple miles from Pigeon Pass to I-680 should be a priority upgrade, as well as another lane from that merge to the truck lane up the I-680 grade. Most slow vehicles do not use that truck lane, so it is now the fastest lane in general except for the occasional very slow truck, which causes lane change hazards.

Sincerely,
Alan Burnham
Livermore

Pam Grove

From: David Schonbrunn <david@schonbrunn.org>
Sent: Sunday, June 05, 2016 6:27 PM
To: info@planbayarea.org
Subject: Notice of Preparation

This website is so poorly organized that, at first, I couldn't even find the NOP, or any information about submitting scoping comments. The home page is so cluttered with material aimed at making the plan accessible to the public that the only representation of the plan itself is the small box in the navigation bar saying "Plan."

Giving the Plan itself that low a hierarchical position in the structure of the overall Plan website is a serious communications failure. That series of pages should have been represented by a box at the top of the page at least as large as the boxes dedicated to "news" oriented features.

BTW, I had an extended discussion with John Goodwin at the Marin RTP event, and pointed out that the Open House displays were entirely silent on the challenge of climate change, and the need recognized by California Transportation Plan 2040 to seriously reduce driving. This is such a critical policy shift that the boards did not adequately inform the public about the actual constraints in planning this RTP.

I offered to make myself available, and could enlist colleagues as well, if staff were interested in further discussing these issues.

--David

David Schonbrunn, President
Transportation Solutions Defense and Education Fund (TRANSDEF) P.O. Box 151439 San Rafael, CA 94915-1439

415-370-7250 cell & office

David@Schonbrunn.org
www.transdef.org

Pam Grove

From: Wendy Jung <jungw@pacbell.net>
Sent: Tuesday, June 14, 2016 4:33 PM
To: EIR Comments
Cc: Marina Carlson; Wendy C. Jung
Subject: Bay Area Plan 2040

Follow Up Flag: Flag for follow up
Flag Status: Flagged

MTC

Adam Noelting, Project Manager, Bay Area Plan 2040

Dear Mr. Noelting,

Thank you for the opportunity to comment on the plan for 2040.

1. The inner cities build out (Main St. Scenario) is not in conflict with the build out along the corridors (Big Cities Scenario) of Oakland. In fact the corridors offer both less expensive land and lower building costs, a robust combination.

2. **The other option (connected neighborhoods scenario) using a transportation hub as a draw, has been available for years.** Unfortunately, this tested model has has failed to generate high density housing at these sites despite generous redevelopment funding.

3. Why not consider an all of the above approach and add a chapter to futuristic planning?

Innovation and technology should drive creative solutions. For example,

this plan should study reducing the need for single occupancy vehicles by driverless ride sharing. Many individuals would welcome the freedom car payments, insurance, car repairs, gasoline, and the many other expenses associated with car ownership. In addition to these economic issues, consider the public safety impact as an aging population can maintain freedom of movement without having to drive or rely on others. Or the convenience factor of busy younger folks having a car “on demand” for any number of needs. Operating fewer cars at maximum efficiency would save on energy (gasoline or

electric), parking spaces, transport people in greater safety, and make mobility something anyone could schedule and afford.

We already KNOW, thanks to UBER and LYFTM that this on-demand transportation model is viable, and dramatically expandable.

Driverless cars could be enlisted to get workers to and from the workplace. Transportation dollars could focus on critical road repairs. The three-car garage would become a thing of the past freeing up space for gardens, recreation, and additional housing.

The use of drones for small package delivery should also be promoted to reduce truck traffic as part of this automated transportation system.

If we could phase in even a relatively modest implementation of 5-10% percent over a few years, the savings would be significant, not to mention the positive impacts for our environment.

Finally I think you need to study the Urban Limit Line wherever it can be drawn. It is crucial for every County not only to save our transportation dollars and have them go further, but also to preserve the beauty of California by conserving natural resources and lightening our footprint.

Sincerely,

Marina Carlson

Wendy Jung

Wendy Jung
Jung Design

1707 16th Avenue
Oakland, CA 94606

T 510-261-4564
F 510-533-6185
E jungw@pacbell.net
W jungdesign.net

Pam Grove

From: Brian & Jill Borders <jbborders@att.net>
Sent: Wednesday, June 15, 2016 3:17 PM
To: EIR Comments
Cc: Jill Borders
Subject: PUBLIC COMMENTS for Draft EIR for Plan Bay Area - RTP/SCS 6/15/2016

Follow Up Flag: Flag for follow up
Flag Status: Flagged

June 15th, 2016

PUBLIC COMMENTS

To: Metropolitan Transportation Commission

Re: Draft Environmental Impact Report for Plan Bay Area 2040 - the Regional Transportation Plan (RTP) Sustainable Communities Strategy (SCS)

From : Jill Borders - Resident of San Jose - jbborders@att.net

Please accept my public comments into the record as I am sending this within the Comment Period.

Dear MTC and ABAG,

First and foremost let me begin by telling you that I am heartbroken. Daily, I communicate with the "almost homeless" population that are living through the stress and anxiety of impending evictions due to being a victim of Plan Bay Area's Priority Development Area's and the Plan's intention that PDA's become the place where growth is accelerated. Plan Bay Area has worked just as planned: Have cities hold community meetings to make people feel like they are involved, change land use designations to match up with requirements in Plan Bay Area to qualify for grant money, let lobbyists and developers know that older buildings along transit corridors are up for grabs....and poof! Just like magic, you have perfected the "consisted with the general plan" requirement to get the Mayor and full council to unanimously pass projects that will end up demolishing rent-controlled buildings that target lower-income people there and effectively banishing them from the city upon being evicted. I know these people. I talk with them. I have heard their stories.

I am sick each night trying to rack my brain about what I am going to do to help them to make sure they have shelter. I do not exaggerate - some will become homeless. These are long term residents that DO NOT qualify for the rents that are now being charged everywhere in San Jose and the region. I am talking about a nursing school student that will have to stop her program and leave San Jose for good. I am talking about an elderly man that is disabled and uses the transit right outside his apartment door. I am talking about women that are pregnant and both are set to deliver only two months before the final day they will need to be out. I am talking about people that I have met that have already looked for an apartment and cannot make 3x's the rent ANYWHERE in San Jose. And by the way, this run up in rent costs is not just market forces. Our Mayor has made it no secret that his desire is to reduce housing and increase jobs. Our entire general plan was based on this premise for the last four years! (1.3 jobs for every 1 employed resident) Limiting our supply may be a goal that sounds good on paper, but when implemented it means that when a mass displacement of 672 people out of a rent controlled property occurs, and there is no supply, these people have NO WHERE to go. But the MTC and ABAG awarded San Jose with a One Bay Area Grant and they awarded San Jose a MTC planning grant for the Winchester PDA Urban Village! Will those long term residents of this to-be demolished apartment complex see one

dime of that money? No, they won't. I've already asked. FEDERAL MONEY IS BEING USED TO PLAN THE AREA WHERE THIS MASS EVICTION IS HAPPENING. Plan Bay Area is a large reason why all of this began. Why do we feel no shame that we are awarding cities federal money, but those same cities won't use that money to assist those displaced from the very PDA the money is used to plan! I do not care that the Mayor continues to go around and discuss how we are sick of being a bedroom community. The facts are clear now. In an effort to stop being a bedroom community, we have become a tent-community!

While the MTC and ABAG sit around planning, there are vulnerable people being evicted systematically across the region in part due to Plan Bay Area's PDA framework. This cannot be denied. This is now factual information that we all know. I do not have to quote your own documents. You are well aware of the displacement issue. Instead of coming up with cold hard cash to relocate people to other cities and move them along to a more affordable way of life (really the only compassionate approach at this point), the MTC and ABAG try to talk to death about adding policies and language and other nonsensical solutions to a horrifying problem that is way beyond silly talk like, "Development without Displacement". Huh? Let's get real here. Plan Bay Area is setting up lower-income renters for demise. They are the kicking boys and it is just a fact. It is the truth of all truths about Plan Bay Area. I can no longer use language that sugar coats this fact: If you own a home, you're safe, you're valued. If you don't, you're just a renter. Plain and simple. The renter class is only as protected as the term of their leases and now, that doesn't mean a whole lot either. How many times do I have to hear at a meeting, "we must protect single-family homes" and then look at the map to see that the "growth" will mean the demolishing of two-story apartments complexes whose land-designations have been changed to accommodate seven story apartment buildings because density will save the world while not infringing on the all important property rights. The writing is on the wall for those vulnerable renters that call their apartment, "home". But Renters can just "move" right? Sure...no problem! "Move along renter...while we plan a wonderful new area at your expense! We need density now to save the environment!" Single-family home owners are the least dense form of housing there is, but let's protect them! Nothing new here in poverty land. The rich do get richer and more stable and the poor get poorer and move again.

In 2040, I suggest that somewhere in the region we should dedicate a monument to:

"The Renter" - that moved and moved and moved in order to save the world from greenhouse gases during the implementation of Plan Bay Area 2040!

While the MTC and ABAG continue to forge ahead with PDA's and their grand plans, I am dealing with the actual people that are losing their homes right near the bus stop (which they use), losing their homes where their children go to school, losing their homes where they are able to walk to their jobs at the regional shopping center, losing their homes where they have access to the grocery store across the street, losing their rent-controlled apartment that stabilized their lives in order to make steady progress attending nursing school and other colleges, losing their homes where they have been able to simply LIVE LIFE. All that is going away without a speck of compassion for them. Corporations like Greystar are now the owners of housing. They call the shots and the MTC and ABAG actually need these billion dollar companies to implement Plan Bay Area. We know that cities have no money and that the entire model of our society is crumbling under the weight of the monopolization of land by the wealthy. Cities are at the mercy of corporations to do the work of "investing" into communities. In other words, city's like San Jose need corporations like Greystar to push along an agenda that is really just a form of privatized eminent domain in hopes that all this new development will translate into tax dollars for the general fund.

I intended to comment on which of the scenarios has the best plan and why, but this has become a rather silly exercise as well. I'm quite certain that the MTC and ABAG know exactly what path they will take and it has already been figured out. We are not a part of the plan - we the people - that is. No, we are simply here awaiting the day when we too will be forced out.

Plan Bay Area makes me feel so angry and heartbroken. So much "talk" and so many shiny brochures and fancy box lunches at your displacement meeting, but no one actually saying out loud - "maybe we got this wrong". There are a lot of conspiracy theorists out there. I'm not one of them. I don't think this is some horrible world take over. I do think

however, it is a lot about money. It's always about money at the end of the day. Incentives dangled in front of unprincipled men and women will get you unprincipled results. This is what has happened in San Jose in my opinion.

My own home and existence is threatened here. I am in a PDA. I am one of those 69% of lower-income people that live in a very attractive PDA. I am one of those that moved here specifically because I do not have a car always available. I am one of those that has moved over and over again due to a landlord seeking more money. I am one of those that finally bought a manufactured home to try to gain stability only to find out now our local government put us in a PDA because the land underneath us is perfect for a jobs center and in their opinion is "underutilized". How horrifying. The MTC gives out federal dollars to a city like ours that changed our land use designation from residential to commercial and nominated our parcel to be in a PDA. Nothing like getting rid of the jobs/housing imbalance all in one swoop - out with that low tax producing mobile home community and in with a jobs center! WIN WIN for the city! My understanding is that the purpose of the PDA is to accelerate development. Thanks San Jose. How wonderful to know you really don't give a damn about me and my family. We are the landless and treated as such.

I was going to write a very factual and detailed comment to inform you about this and that, but the truth is I'm just sick of it all now. We all live with the fear of being displaced. An eviction notice now in San Jose is like a homeless sentence. The trauma of knowing that we are just sitting ducks waiting to be taken out by a corporation like Blackstone, Carlyle or Greystar and that our city has made appropriate land use changes ahead of time in the general plan to prepare ahead for the demise, is really more than I can take! My neighbors and I call it "the cloud". It is always over us and it is a constant stress we live with now. Sitting ducks, that's what we are. Speaking of ducks....it's good to know CEQA takes them into consideration during the EIR process for Plan Bay Area - I only wish people were treated with as much humanity as ducks! Perhaps the habitats of people already set up and thriving in a healthy human ecosystem will be evaluated in future EIR's as being worthy of being protected. Protect the humans! At one time that seemed so silly...now, not so much.

No little written policy about displacement is going to cover the enormous mistakes of Plan Bay Area and prevent the intentional growth in areas currently holding our lower-income residents. Instead of a silly line item and numerical point system involving "how many displacement measures does a city have...blah blah blah, THERE SHOULD BE A BOAT LOAD OF CASH SET ASIDE FOR THOSE DISPLACED OUT OF PDA'S so we can afford to officially relocate to a place that wants us! Cities, State and Federal government, should take responsibility for the redevelopment that is taking place in PDA's. People directly displaced in a PDA should receive money just like if a freeway or a bridge that was going in and was going to displace people. Plan Bay Area is a plan to incentive growth that indeed directly displaces citizens. Those citizens should be protected under laws that already exists that pay out to displaced persons when there is a capitol improvement. (Uniform relocation act) Accepting responsibility for the disparate impacts upon our most vulnerable residents, is the first step to acknowledging a problem and creating an actual solution. If we are committed to urbanizing our cities and have crafted all our general plans and regional plans to take this path, then this is a capital improvement. It does require relocation expenses be paid and rehousing people appropriately to occur. Anything less is an obvious evasion of government taking responsibility for its actions. Thomas Paine reminded us that security is the primary reason for government, if so, then why is government now the source of my insecurity?

Thank you for reading,

Jill Borders
(408) 979-0528
jbborders@att.net

Pam Grove

From: Sara Greenwald <anderson.greenwald@att.net>
Sent: Wednesday, June 15, 2016 3:44 PM
To: EIR Comments
Subject: Plan Bay Area 2040 Draft EIR
Attachments: PBA 2040 DEIR comment final 2016.06.14.docx

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Thank you for this opportunity to comment on the DEIR for Plan Bay Area (PBA) 2040. Please find my comment attached.

Sara Greenwald
1323 Lyon St.
San Francisco

Comment re: Plan Bay Area 2040 Draft Environmental Impact Report

PBA 2040 is an exciting opportunity to pull back from the brink of climate crisis. Scientists agree that greenhouse gases emitted by gas/diesel-powered engines wreak a significant portion of the catastrophic effect these gases have on our climate. They further agree that the catastrophe has begun, and that it may soon become irreversible.

As the author of a recent peer-reviewed study phrased it:

> Targeting on-road transportation is a win-win-win. It's good for the climate in the short term and long term, and it's good for our health.
> - Unger, N., T.C. Bond, J.S. Wang, D.M. Koch, S. Menon, D.T. Shindell, and S. Bauer (2010) Attribution of climate forcing to economic sectors. Proc. Natl. Acad. Sci., in press, doi: 10.1073/pnas.0906548107

In the Bay Area, about a third of greenhouse gas emissions come from the transportation sector. Public transportation to replace private gasoline-powered cars must be a top priority. The plan must specify how we will eliminate fossil fuel vehicles from the Bay Area by supporting transit, bikes, pedestrians, transit-oriented development, and zero emission vehicles including buses and trucks.

Plan Bay Area must:

- Set ambitious goals for reduction in automobile travel in the Bay Area
- Provide stronger incentives for carpooling
- Require employers to commit to reducing gas-powered trips per employee (for example, through transit commuter incentives and fees for employee parking)
- Chart a specific plan for providing convenient, inexpensive public-transit alternatives
- Name strict regulatory requirements for developers to provide for transit expansion to new housing
- Lay out specific goals and plans for increasing pedestrian, bicycle, and other human-powered transport on roadways

These needs are globally recognized. Several years ago, the Institute for Transportation and Development Policy published a policy guide that lays out a transit-oriented development Standard based on eight elements: walkability; bicycle-friendliness; a connected network of streets and paths; a robust transit system; a balanced mix of activities; dense, vertical building; compact development; and a shift away from personal motorized transport (J. Pyper Scientific American April 10, 2014). Plan Bay Area must live up to this standard.

Sara Greenwald
1323 Lyon St.
San Francisco CA 94115

Alta Cunningham

From: Fran Ruger
Sent: Thursday, June 16, 2016 10:55 AM
To: Alta Cunningham
Subject: Fwd: MTC RTP scoping EIR Comments

Sent from my iPhone

Begin forwarded message:

> **From:** Adam Noelting <ANoelting@mtc.ca.gov>
> **Date:** June 15, 2016 at 10:09:05 PM PDT
> **To:** "htschudin@sbcglobal.net" <htschudin@sbcglobal.net>, "fran.ruger@ascentenvironmental.com" <fran.ruger@ascentenvironmental.com>
> **Subject: Fw: MTC RTP scoping EIR Comments**
>
> Please find the enclosed comments.
> Adam
>
> ---
>
> **From:** Gladwyn D'Souza <godsouza@mac.com>
> **Sent:** Wednesday, June 15, 2016 8:39 PM
> **To:** EIR Comments
> **Subject:** MTC RTP scoping EIR Comments
>
> Please study the TRANSDEF alternatives.
>
> Please provide data on the success or failure of the current OBAP against the expressed VMT goals as required by SB375.
>
> Regards,
> Gladwyn D'Souza
> 1473 Sixth Ave, Belmont, CA 94002

HOWARD STRASSNER
419 Vicente, San Francisco CA
phone 415-661-8786 email ruthow1@gmail.com

June 17, 2016

Steve Heminger, via email
Metropolitan Transportation Commission
376 Beale Suite 800
Sa Francisco CA 94105

Re: 2017 RTP/SCS Scoping Comments

Dear Mr. Heminger,

An EIR should study all reasonable project alternatives so the decision making bodies and the public have sufficient information to make the best choice for the Region and the environment. For over twenty years the MTC has studied various capital spending plan combination of some transit and too much highway. Perhaps it is time to seriously study policy changes to start to reduce driving, as we must, for the region to comply with SB375 and AB32. In the past the MTC studies have stayed away from parking policy because the necessary policy changes are subject only to local control. This time the MTC should consider the ways in which regional funding can impose changes on local policy. I suggest that if the MTC studies the impacts of parking policy changes funding ways will be found to influence local policy. We should be mindful that even good transit cannot compete with an ample supply of cheap parking. I am pleased to make the following scoping comments for this important study:

1) First study the impacts of eliminating commercial project minimum parking requirements for new and existing projects, without regard to political feasibility. Project owners will appreciate the possibility of using their land more intensively for housing or additional commercial. The local community will appreciate increased real estate taxes on improved property and possible additional sales taxes. I suggest that the MTC can make this policy change feasible by holding back some transportation funding from counties who have communities which do not eliminate minimum parking requirements. This will be similar to the historical Federal reductions in highway funding based on speed limits and billboards. Since this policy change impacts projects desired by counties they will find ways to influence their communities. This policy change will require no regional funding to implement and will actually reduce the need for spending on new highways. The policy change is feasible because it covers a complete region and employees or shoppers cannot drive somewhere else to find easier parking. This policy change is also possible because we now have residential preferential parking permits to preserve curbside parking for residents. This study item will consider reduced parking upply.

2) With an entire region with no required parking minimums this study should consider the impacts of various levels of parking fees on every parking space in every garage or parking lot provided to serve employees or customers. I suggest that a low level fee will be $3.00 a day per space and a high level fee might range to $12.00 a day. These fees will probably have to be imposed gradually over a few years to give: garage owners; lot owners; drivers and communities time to respond and for funding to become available for alternative transit. These fees will be some mixture of fees and taxes but almost every space will be at the market rate. Some local

communities will prefer not to impose taxes but the MTC can help them to decide by offering a partial match of the actual taxes collected if the tax revenues and matching funds are used for local transit capital projects and transit operations or local contributions to regional transit. Because many lot and lot owners will start to charge for parking, drivers will respond first by car pooling and then demanding better transit. Some communities may choose to continue subsidizing parking to maintain cheap fees for shoppers but then they will collect less matching funds. Local legislatures and administrators will develop methods to gather parking fees and taxes to construct and operate the transit they desire using the matching funds they desire as some of their residents or employers demand better first and last mile transit. This item deals with making parking less cheap.

3) With a Region with less parking and fewer free parking spaces the MTC can study funding for the transit required over time. The funds available will be the regular flow of funds plus the additional funds generated by 2) above. Most importantly there will be less demand for additional highways.

The above, written as scoping comments, by a “Shoupista” acolyte is a prompt to the Region to consider correction of the Region’s parking imbalance as a partial solution to long term funding needs for highways and as a new revenue source for transit. These comments should be considered for study because the good Professor’s market rate parking and cash instead of free parking worked to reduce congestion.

Thank you for your consideration,

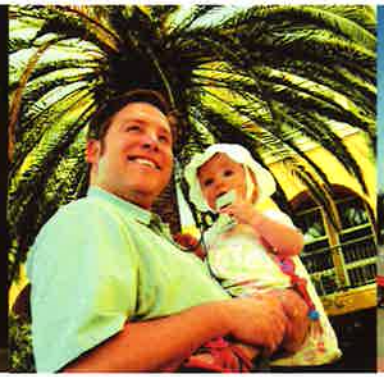
Howard Strassner,

PS: Your reduced BART fares for seniors comment at the Commonwealth Club this morning may apply to me but it would be fair. 14_Half_Fare_TriennialGuidance_FY2011.pdf

For fixed route service supported with Section 5307 assistance, fares charged elderly persons, persons with disabilities or an individual presenting a Medicare card during off peak hours will not be more than half the peak hour fare.









Plan BayArea 2040

Your Guide to this EIR Scoping Meeting

Comments
Help shape the draft EIR by submitting your comments on environmental issues, feasible alternatives and potential mitigation measures.

Welcome!
Get the lay of the land for displays and understand how your comments will help shape the Draft Environmental Impact Report (DEIR) for Plan Bay Area 2040.

California Environmental Quality Act
Learn about the California Environmental Quality Act (CEQA) and the the CEQA/EIR process.

Stations

About Plan Bay Area
Learn about all things Plan Bay Area: schedule and milestones, key terms.

Scenarios
Review the scenarios in detail.

Intro to Scenarios
Learn how regional forecasts are used to show future patterns for housing, jobs and transportation.

PlanBayArea.org
@PlanBayArea
info@planbayarea.org
Facebook.com/PlanBayArea

Notes:

Sounds like a better-than-good plan!

Appendix C

Energy Calculation

MTC RTP SCS Transportation Energy

	2015		2040		Net Change	
Vehicle Category	**Gasoline (gal/year)**	**Diesel (gal/year)**	**Gasoline (gal/year)**	**Diesel (gal/year)**	**Gasoline (Million gal/year)**	**Diesel (Million gal/year)**
Passenger Vehicles	2,063,187,339	12,211,295	1,322,291,006	11,991,454	-740.9	-0.2
Trucks	99,141,216	411,564,934	54,953,811	555,638,444	-44.2	144.1
Buses	15,057,129	53,166,105	20,264,498	33,835,730	5.2	-19.3
Other Vehicles	13,707,123	188,094	12,508,339	361,821	-1.2	0.2
All Vehicle Types	2,191,092,807	477,130,427	1,410,017,654	601,827,449	-781.1	124.7
MTC Climate Policy Initiative (Passenger Vehicles)	—	—	—	—	-265.6	-2.4

Note:
Gal = gallons; MT = metric tons; kg = kilogram
2016 Climate Registry Default Emission Factors, Table 13.1, Default CO2 Emission Factors for Tansportation Fuels.

Gasoline	8.78	kg CO2/gallon
Diesel	10.21	kg CO2/gallon

Conversions

1 MT =	1000	kg

	gasoline	diesel	units	source
Btu content	111,800	127,500	Btu/gal	www.energy.ca.gov/almanac/transportation_data/gge.html
Net Change in fuel consumption by fuel type	-8.7E+07	1.6E+07	Btu	calculation
Combined change in fuel consumption	-7.1E+07		Btu	summation
energy conversion rate	1,000,000		MMBtu	conversion rate
Combined change in fuel consumption	-71.4		MMBtu	conversion calc
Additional reduction from Climate Policy Inititives	-3.0E+07	-3.1E+05	Btu	calculation
Combined Additional reduction in fuel consumption	-30		MMBtu	calculation

Table 3.1-29: Comparative Annual Land Use and Vehicle GHG Emissions (MTCO2E)

	Year 2015	*Year 2040 Proposed Plan*
Passenger Vehicles	18,222,000	11,715,000
Trucks	4,484,000	5,361,000
Buses	599,000	475,000
Other Vehicles	122,000	113,000
MTC Climate Policy Initiative	0	(2,353,000)

Note:
Data from "3.1. GHG" excel file provided by MTC.

Column Labels									
2015	**2040**	**Grand Total**	**Vehicle Type**					2015 CO2	2040 CO2
15031.01543	**18784.84104**	**33815.85647**		2015	2040		Diesel	tons/day	tons/day
8168.981314	11160.98889	19329.9702	Truck	8168.981	11160.99		Passenger	312.1927	309.7412
289.1758907	287.0548817	576.2307725	Passenger	289.1759	287.0549		Truck	12864.73	17192.19
3.591768467	0.887140507	4.478908974	Passenger	3.591768	0.887141		Bus	1671.954	1053.99
19.42504886	21.79913302	41.22418188	Passenger	19.42505	21.79913		Other	182.138	228.9197
1080.915532	865.0611533	1945.976685	Truck	1080.916	865.0612				
424.5685108	481.7581237	906.3266344	Truck	424.5685	481.7581				
143.9413025	196.5969127	340.5382151	Other	143.9413	196.5969				
38.19671795	32.32281528	70.51953323	Other	38.19672	32.32282				
3190.265108	4684.381539	7874.646647	Truck	3190.265	4684.382				
340.2411611	488.4163391	828.6575002	Bus	340.2412	488.4163				
170.0714277	179.2490008	349.3204285	Bus	170.0714	179.249				
1161.641647	386.3251129	1547.96676	Bus	1161.642	386.3251				
0	**0**	**0**							
0	0	0							
0	0	0						2015	2040
69592.83482	**44400.45298**	**113993.2878**	**Vehicle Type**	2015	2040			CO2	CO2
72.31265467	97.91627407	170.2289287	Truck	72.31265	97.91627		Gas	tons/day	tons/day
33579.38464	21917.44592	55496.83055	Passenger	33579.38	21917.45		Passenger	52747.24	34154.99
3352.634036	1699.869562	5052.503598	Passenger	3352.634	1699.87		Truck	3098.964	1700.344
15815.21754	10537.66985	26352.88739	Passenger	15815.22	10537.67		Bus	473.5128	631.2436
2182.347585	732.6337699	2914.981355	Truck	2182.348	732.6338		Other	13273.12	7913.88
368.0680014	305.0487944	673.1167958	Truck	368.068	305.0488				
208.3121712	234.4207465	442.7329177	Other	208.3122	234.4207				
12872.7977	7540.828254	20413.62596	Other	12872.8	7540.828				
192.0116683	138.6313274	330.6429957	Other	192.0117	138.6313				
476.2360235	564.744905	1040.980929	Truck	476.236	564.7449				
254.4862234	300.8421088	555.3283322	Bus	254.4862	300.8421				
21.33823621	49.20044804	70.53868425	Bus	21.33824	49.20045				
197.6883422	281.2010193	478.8893614	Bus	197.6883	281.201				
84623.85025	**63185.29402**	**147809.1443**							

EMFAC2014 (v1.0.7) Emissions Inventory
Region Type: MPO
Region: MTC
Calendar Year: 2015, 2040
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Trips	ROG_RUNI	ROG_IDLE	ROG_STRE	ROG_TOTE
MTC	2015	HHDT	Aggregate	Aggregate	GAS	328.0613	34746.27	6563.850058	0.042941	0	0.029869	0.07281
MTC	2015	HHDT	Aggregate	Aggregate	DSL	31233.94	3971707	0	1.249486	0.101466	0	1.350952
MTC	2015	LDA	Aggregate	Aggregate	GAS	2646622	91374097	16574321.42	3.079927	0	4.53201	7.611936
MTC	2015	LDA	Aggregate	Aggregate	DSL	22426.75	833959.4	135749.4687	0.040397	0	0	0.040397
MTC	2015	LDA	Aggregate	Aggregate	ELEC	9885.876	511686.5	64210.25138	0	0	0	0
MTC	2015	LDT1	Aggregate	Aggregate	GAS	249593.6	7863948	1512612.4	0.74203	0	0.815524	1.557554
MTC	2015	LDT1	Aggregate	Aggregate	DSL	404.3578	8121.749	2002.493182	0.001935	0	0	0.001935
MTC	2015	LDT1	Aggregate	Aggregate	ELEC	222.0084	6909.466	1355.958669	0	0	0	0
MTC	2015	LDT2	Aggregate	Aggregate	GAS	882609.1	32120555	5552575.619	1.223711	0	1.61086	2.834571
MTC	2015	LDT2	Aggregate	Aggregate	DSL	971.6904	45530.06	6231.746887	0.001001	0	0	0.001001
MTC	2015	LHDT1	Aggregate	Aggregate	GAS	69867.9	2237677	1040927.598	0.343161	0.029358	0.705628	1.078147
MTC	2015	LHDT1	Aggregate	Aggregate	DSL	45471.16	1638521	571970.0223	0.399973	0.005502	0	0.405474
MTC	2015	LHDT2	Aggregate	Aggregate	GAS	9390.989	337130.6	139911.7474	0.036717	0.004048	0.080891	0.121657
MTC	2015	LHDT2	Aggregate	Aggregate	DSL	14342.05	573465.2	180404.938	0.119056	0.001735	0	0.120791
MTC	2015	MCY	Aggregate	Aggregate	GAS	130623.4	1045907	261220.7373	3.044914	0	0.695055	3.739969
MTC	2015	MDV	Aggregate	Aggregate	GAS	606164.2	20146888	3789726.697	1.30568	0	1.92977	3.23545
MTC	2015	MDV	Aggregate	Aggregate	DSL	5688.993	253445.7	36376.59016	0.004696	0	0	0.004696
MTC	2015	MH	Aggregate	Aggregate	GAS	16370.46	133301.8	1637.700915	0.060166	0	0.001883	0.062049
MTC	2015	MH	Aggregate	Aggregate	DSL	3569.033	32538.06	356.9033162	0.005567	0	0	0.005567
MTC	2015	MHDT	Aggregate	Aggregate	GAS	6680.145	316111.5	133656.3317	0.108175	0.005991	0.233605	0.347771
MTC	2015	MHDT	Aggregate	Aggregate	DSL	45105.3	2353250	0	0.939098	0.007992	0	0.94709
MTC	2015	OBUS	Aggregate	Aggregate	GAS	2878.452	173205.3	57592.06776	0.021427	0.001963	0.039709	0.063099
MTC	2015	OBUS	Aggregate	Aggregate	DSL	2733.187	215719.3	0	0.056975	0.002353	0	0.059328
MTC	2015	SBUS	Aggregate	Aggregate	GAS	524.5056	26317.12	2098.022247	0.008367	0.005071	0.004385	0.017823
MTC	2015	SBUS	Aggregate	Aggregate	DSL	2957.475	108759.9	0	0.02648	0.001614	0	0.028094
MTC	2015	UBUS	Aggregate	Aggregate	GAS	683.635	102995	2734.540098	0.141984	0	0.009314	0.151298
MTC	2015	UBUS	Aggregate	Aggregate	DSL	2865.561	428981.4	11462.24378	0.544115	0	0	0.544115
MTC	2040	HHDT	Aggregate	Aggregate	GAS	479.1395	54308.18	9586.623355	0.019071	0	0.007756	0.026827
MTC	2040	HHDT	Aggregate	Aggregate	DSL	44723.37	6496720	0	0.573177	0.049413	0	0.622589
MTC	2040	LDA	Aggregate	Aggregate	GAS	3163521	98974041	19949859.97	0.401096	0	0.261162	0.662258
MTC	2040	LDA	Aggregate	Aggregate	DSL	43436.63	1372708	275024.5949	0.006324	0	0	0.006324
MTC	2040	LDA	Aggregate	Aggregate	ELEC	550119.8	17838832	3504445.365	0	0	0	0
MTC	2040	LDT1	Aggregate	Aggregate	GAS	229872.8	7142258	1438665.801	0.033192	0	0.025165	0.058358
MTC	2040	LDT1	Aggregate	Aggregate	DSL	127.1351	3957.332	796.4401586	6.16E-05	0	0	6.16E-05
MTC	2040	LDT1	Aggregate	Aggregate	ELEC	107.8586	3265.633	666.1845351	0	0	0	0
MTC	2040	LDT2	Aggregate	Aggregate	GAS	1202858	38422111	7597014.127	0.197996	0	0.148543	0.346539
MTC	2040	LDT2	Aggregate	Aggregate	DSL	2628.829	84424.72	16658.3029	0.001263	0	0	0.001263
MTC	2040	LHDT1	Aggregate	Aggregate	GAS	28113.57	809278	418850.301	0.007043	0.007662	0.078896	0.093601
MTC	2040	LHDT1	Aggregate	Aggregate	DSL	49215.57	1501881	619069.9675	0.216206	0.005955	0	0.222161
MTC	2040	LHDT2	Aggregate	Aggregate	GAS	9179.434	304492.9	136759.883	0.002043	0.002162	0.012736	0.016941
MTC	2040	LHDT2	Aggregate	Aggregate	DSL	22560.47	750388.9	283782.36	0.102025	0.00273	0	0.104755
MTC	2040	MCY	Aggregate	Aggregate	GAS	168593.1	1121762	337152.4305	2.706521	0	0.780211	3.486732
MTC	2040	MDV	Aggregate	Aggregate	GAS	720440.9	20555945	4419741.12	0.155989	0	0.214869	0.370858
MTC	2040	MDV	Aggregate	Aggregate	DSL	19520.02	577619.2	122307.9705	0.00309	0	0	0.00309
MTC	2040	MH	Aggregate	Aggregate	GAS	13054.36	103456.5	1305.958005	0.001341	0	0.000348	0.001689
MTC	2040	MH	Aggregate	Aggregate	DSL	3698.001	29194.54	369.8000539	0.002415	0	0	0.002415
MTC	2040	MHDT	Aggregate	Aggregate	GAS	8510.982	404900.9	170287.7193	0.005164	0.007565	0.069102	0.081831
MTC	2040	MHDT	Aggregate	Aggregate	DSL	77943.15	3663920	0	0.170794	0.001365	0	0.172159
MTC	2040	OBUS	Aggregate	Aggregate	GAS	4509.966	218722.5	90235.40792	0.002927	0.002941	0.027921	0.033789
MTC	2040	OBUS	Aggregate	Aggregate	DSL	4880.236	334604.6	0	0.020409	0.000777	0	0.021185
MTC	2040	SBUS	Aggregate	Aggregate	GAS	1495.655	64069.84	5982.619724	0.000837	0.013637	0.004682	0.019156
MTC	2040	SBUS	Aggregate	Aggregate	DSL	3423.479	121773.1	0	0.007882	0.000329	0	0.008212
MTC	2040	UBUS	Aggregate	Aggregate	GAS	1231.414	156875.7	4925.655533	0.005259	0	0.008559	0.013818
MTC	2040	UBUS	Aggregate	Aggregate	DSL	1334.532	169718.8	5338.128812	0.025753	0	0	0.025753

EMFAC2014 (v1.0.7) Emissions Inv
Region Type: MPO
Region: MTC
Calendar Year: 2015, 2040
Season: Annual
Vehicle Classification: EMFAC200
Units: miles/day for VMT, trips/da

Region	CalYr	VehClass	ROG_DIUR	ROG_HTSK	ROG_RUNI	ROG_REST	ROG_TOTA	TOG_RUNI	TOG_IDLE	TOG_STRE	TOG_TOTE	TOG_DIUR
MTC	2015	HHDT	2.88E-05	0.00251	0.009882	1.51E-05	0.085246	0.058902	0	0.032563	0.091465	2.88E-05
MTC	2015	HHDT	0	0	0	0	1.350952	1.609845	0.116604	0	1.726449	0
MTC	2015	LDA	1.162498	3.620106	7.402304	0.918368	20.71521	4.186311	0	4.958486	9.144797	1.162498
MTC	2015	LDA	0	0	0	0	0.040397	0.045989	0	0	0.045989	0
MTC	2015	LDA	0.000167	0.000346	0	4.5E-05	0.000557	0	0	0	0	0.000167
MTC	2015	LDT1	0.240373	0.667067	2.502902	0.174839	5.142735	0.972752	0	0.891893	1.864645	0.240373
MTC	2015	LDT1	0	0	0	0	0.001935	0.002203	0	0	0.002203	0
MTC	2015	LDT1	3.72E-06	7.3E-06	0	1.01E-06	1.2E-05	0	0	0	0	3.72E-06
MTC	2015	LDT2	0.353185	1.084507	3.730628	0.297364	8.300256	1.687373	0	1.762803	3.450176	0.353185
MTC	2015	LDT2	0	0	0	0	0.001001	0.001139	0	0	0.001139	0
MTC	2015	LHDT1	0.004817	0.191435	1.409015	0.002272	2.685685	0.493481	0.0428	0.772359	1.30864	0.004817
MTC	2015	LHDT1	0	0	0	0	0.405474	0.455343	0.006263	0	0.461606	0
MTC	2015	LHDT2	0.000527	0.021143	0.1617	0.000247	0.305275	0.053237	0.005906	0.088556	0.147699	0.000527
MTC	2015	LHDT2	0	0	0	0	0.120791	0.135538	0.001975	0	0.137513	0
MTC	2015	MCY	0.244062	0.240796	0.923157	0.144591	5.292575	3.624659	0	0.755434	4.380093	0.244062
MTC	2015	MDV	0.270541	0.819547	2.767137	0.237266	7.329941	1.811949	0	2.112056	3.924005	0.270541
MTC	2015	MDV	0	0	0	0	0.004696	0.005346	0	0	0.005346	0
MTC	2015	MH	0.003006	0.000275	0.005425	0.00101	0.071764	0.076746	0	0.002053	0.0788	0.003006
MTC	2015	MH	0	0	0	0	0.005567	0.006337	0	0	0.006337	0
MTC	2015	MHDT	0.000528	0.027044	0.12959	0.00025	0.505183	0.151881	0.008646	0.255257	0.415784	0.000528
MTC	2015	MHDT	0	0	0	0	0.94709	1.069091	0.009099	0	1.07819	0
MTC	2015	OBUS	9.6E-05	0.001526	0.015387	4.02E-05	0.080148	0.030818	0.002859	0.043439	0.077115	9.6E-05
MTC	2015	OBUS	0	0	0	0	0.059328	0.064862	0.002679	0	0.067541	0
MTC	2015	SBUS	3.81E-05	0.000382	0.003895	1.26E-05	0.022151	0.012209	0.007399	0.004801	0.02441	3.81E-05
MTC	2015	SBUS	0	0	0	0	0.028094	0.030145	0.001838	0	0.031983	0
MTC	2015	UBUS	4.43E-05	0.001095	0.007289	2.07E-05	0.159747	0.196833	0	0.010186	0.20702	4.43E-05
MTC	2015	UBUS	0	0	0	0	0.544115	0.762369	0	0	0.762369	0
MTC	2040	HHDT	1.13E-05	0.000536	0.002762	7.85E-06	0.030143	0.027829	0	0.008491	0.03632	1.13E-05
MTC	2040	HHDT	0	0	0	0	0.622589	1.034242	0.057309	0	1.091551	0
MTC	2040	LDA	0.220645	0.84521	3.453276	0.228073	5.409461	0.585278	0	0.285939	0.871217	0.220645
MTC	2040	LDA	0	0	0	0	0.006324	0.0072	0	0	0.0072	0
MTC	2040	LDA	0.009422	0.018867	0	0.002552	0.030841	0	0	0	0	0.009422
MTC	2040	LDT1	0.024562	0.077418	0.327118	0.025957	0.513412	0.048434	0	0.027553	0.075987	0.024562
MTC	2040	LDT1	0	0	0	0	6.16E-05	7.01E-05	0	0	7.01E-05	0
MTC	2040	LDT1	1.8E-06	3.59E-06	0	4.88E-07	5.87E-06	0	0	0	0	1.8E-06
MTC	2040	LDT2	0.13428	0.327889	1.493968	0.140765	2.443441	0.288915	0	0.162636	0.451551	0.13428
MTC	2040	LDT2	0	0	0	0	0.001263	0.001438	0	0	0.001438	0
MTC	2040	LHDT1	0.001054	0.045401	0.223024	0.000723	0.363803	0.010277	0.01118	0.086382	0.107838	0.001054
MTC	2040	LHDT1	0	0	0	0	0.222161	0.246136	0.006779	0	0.252915	0
MTC	2040	LHDT2	0.00019	0.006275	0.032772	0.00013	0.056309	0.002982	0.003155	0.013944	0.020081	0.00019
MTC	2040	LHDT2	0	0	0	0	0.104755	0.116149	0.003107	0	0.119256	0
MTC	2040	MCY	0.296741	0.219148	0.461607	0.165564	4.629792	3.396905	0	0.849963	4.246867	0.296741
MTC	2040	MDV	0.1913	0.454289	1.384424	0.209072	2.609943	0.227619	0	0.235254	0.462874	0.1913
MTC	2040	MDV	0	0	0	0	0.00309	0.003518	0	0	0.003518	0
MTC	2040	MH	0.000479	3.47E-05	0.000421	0.000242	0.002866	0.001956	0	0.000381	0.002337	0.000479
MTC	2040	MH	0	0	0	0	0.002415	0.002749	0	0	0.002749	0
MTC	2040	MHDT	0.000195	0.00947	0.048133	0.000135	0.139765	0.007536	0.011039	0.075658	0.094232	0.000195
MTC	2040	MHDT	0	0	0	0	0.172159	0.194436	0.001554	0	0.19599	0
MTC	2040	OBUS	0.000127	0.001742	0.020257	6.42E-05	0.05598	0.004272	0.004292	0.03057	0.039133	0.000127
MTC	2040	OBUS	0	0	0	0	0.021185	0.023234	0.000884	0	0.024118	0
MTC	2040	SBUS	4.9E-05	0.000464	0.003207	2.52E-05	0.022901	0.001221	0.019899	0.005126	0.026246	4.9E-05
MTC	2040	SBUS	0	0	0	0	0.008212	0.008973	0.000375	0	0.009348	0
MTC	2040	UBUS	3.58E-05	0.000571	0.005301	2.34E-05	0.019749	0.007674	0	0.009371	0.017045	3.58E-05
MTC	2040	UBUS	0	0	0	0	0.025753	0.120788	0	0	0.120788	0

EMFAC2014 (v1.0.7) Emissions Inv
Region Type: MPO
Region: MTC
Calendar Year: 2015, 2040
Season: Annual
Vehicle Classification: EMFAC200
Units: miles/day for VMT, trips/da

Region	CalYr	VehClass	TOG_HTSK	TOG_RUNI	TOG_RESTI	TOG_TOTA	CO_RUNEX	CO_IDLEX	CO_STREX	CO_TOTEX	NOx_RUNE	NOx_IDLEX
MTC	2015	HHDT	0.00251	0.009882	1.51E-05	0.103901	1.621116	0	0.594409	2.215525	0.187926	0
MTC	2015	HHDT	0	0	0	1.726449	4.81726	0.367613	0	5.184873	31.74219	2.524518
MTC	2015	LDA	3.620106	7.402304	0.918368	22.24807	115.1398	0	56.64358	171.7834	11.41654	0
MTC	2015	LDA	0	0	0	0.045989	0.356779	0	0	0.356779	0.294424	0
MTC	2015	LDA	0.000346	0	4.5E-05	0.000557	0	0	0	0	0	0
MTC	2015	LDT1	0.667067	2.502902	0.174839	5.449826	23.31373	0	10.43259	33.74633	2.389549	0
MTC	2015	LDT1	0	0	0	0.002203	0.011788	0	0	0.011788	0.011957	0
MTC	2015	LDT1	7.3E-06	0	1.01E-06	1.2E-05	0	0	0	0	0	0
MTC	2015	LDT2	1.084507	3.730628	0.297364	8.915861	48.7865	0	22.12366	70.91016	6.399044	0
MTC	2015	LDT2	0	0	0	0.001139	0.007577	0	0	0.007577	0.004545	0
MTC	2015	LHDT1	0.191435	1.409015	0.002272	2.916178	6.428604	0.245595	7.228104	13.9023	1.366751	0.002469
MTC	2015	LHDT1	0	0	0	0.461606	1.830864	0.045599	0	1.876464	8.169198	0.130125
MTC	2015	LHDT2	0.021143	0.1617	0.000247	0.331317	0.684274	0.03359	0.862794	1.580658	0.171395	0.000342
MTC	2015	LHDT2	0	0	0	0.137513	0.526387	0.014383	0	0.540769	2.094265	0.041043
MTC	2015	MCY	0.240796	0.923157	0.144591	5.932698	28.73927	0	2.892563	31.63183	1.393557	0
MTC	2015	MDV	0.819547	2.767137	0.237266	8.018496	45.85362	0	23.08247	68.93609	6.688316	0
MTC	2015	MDV	0	0	0	0.005346	0.059057	0	0	0.059057	0.021957	0
MTC	2015	MH	0.000275	0.005425	0.00101	0.088515	1.675965	0	0.026116	1.702081	0.170095	0
MTC	2015	MH	0	0	0	0.006337	0.021382	0	0	0.021382	0.235226	0
MTC	2015	MHDT	0.027044	0.12959	0.00025	0.573195	2.595485	0.095198	3.540819	6.231502	0.543545	0.000504
MTC	2015	MHDT	0	0	0	1.07819	2.446437	0.073205	0	2.519642	13.88599	0.419669
MTC	2015	OBUS	0.001526	0.015387	4.02E-05	0.094164	0.507449	0.016118	0.620962	1.144529	0.137577	0.000166
MTC	2015	OBUS	0	0	0	0.067541	0.159607	0.011423	0	0.17103	1.504976	0.080963
MTC	2015	SBUS	0.000382	0.003895	1.26E-05	0.028738	0.201014	0.041584	0.084198	0.326795	0.039069	0.000432
MTC	2015	SBUS	0	0	0	0.031983	0.067957	0.011928	0	0.079885	1.154171	0.172047
MTC	2015	UBUS	0.001095	0.007289	2.07E-05	0.215469	1.625447	0	0.128263	1.75371	0.23485	0
MTC	2015	UBUS	0	0	0	0.762369	3.660791	0	0	3.660791	11.08221	0
MTC	2040	HHDT	0.000536	0.002762	7.85E-06	0.039637	1.789983	0	0.45702	2.247003	0.186991	0
MTC	2040	HHDT	0	0	0	1.091551	4.70309	0.188757	0	4.891848	10.45247	1.578688
MTC	2040	LDA	0.84521	3.453276	0.228073	5.618421	30.87578	0	9.576306	40.45208	2.379822	0
MTC	2040	LDA	0	0	0	0.0072	0.203057	0	0	0.203057	0.013746	0
MTC	2040	LDA	0.018867	0	0.002552	0.030841	0	0	0	0	0	0
MTC	2040	LDT1	0.077418	0.327118	0.025957	0.531041	2.396178	0	0.788126	3.184304	0.192457	0
MTC	2040	LDT1	0	0	0	7.01E-05	0.000623	0	0	0.000623	0.000173	0
MTC	2040	LDT1	3.59E-06	0	4.88E-07	5.87E-06	0	0	0	0	0	0
MTC	2040	LDT2	0.327889	1.493968	0.140765	2.548453	15.38335	0	4.568027	19.95138	1.106513	0
MTC	2040	LDT2	0	0	0	0.001438	0.012529	0	0	0.012529	0.002646	0
MTC	2040	LHDT1	0.045401	0.223024	0.000723	0.37804	0.154223	0.096912	1.193839	1.444975	0.061938	0.00069
MTC	2040	LHDT1	0	0	0	0.252915	1.014234	0.049354	0	1.063588	0.505535	0.058529
MTC	2040	LHDT2	0.006275	0.032772	0.00013	0.059449	0.050096	0.031938	0.381915	0.463949	0.013408	0.000194
MTC	2040	LHDT2	0	0	0	0.119256	0.458555	0.022624	0	0.481179	0.081846	0.021938
MTC	2040	MCY	0.219148	0.461607	0.165564	5.389927	21.94339	0	3.919103	25.86249	1.418431	0
MTC	2040	MDV	0.454289	1.384424	0.209072	2.701958	10.3485	0	4.303719	14.65222	0.858986	0
MTC	2040	MDV	0	0	0	0.003518	0.096459	0	0	0.096459	0.006237	0
MTC	2040	MH	3.47E-05	0.000421	0.000242	0.003515	0.022189	0	0.005786	0.027975	0.012935	0
MTC	2040	MH	0	0	0	0.002749	0.007103	0	0	0.007103	0.082528	0
MTC	2040	MHDT	0.00947	0.048133	0.000135	0.152167	0.092169	0.119794	1.029491	1.241455	0.043538	0.000679
MTC	2040	MHDT	0	0	0	0.19599	0.898339	0.010228	0	0.908567	4.304892	0.149897
MTC	2040	OBUS	0.001742	0.020257	6.42E-05	0.061324	0.051802	0.024135	0.423863	0.499801	0.024154	0.000264
MTC	2040	OBUS	0	0	0	0.024118	0.113276	0.003144	0	0.11642	0.472689	0.029343
MTC	2040	SBUS	0.000464	0.003207	2.52E-05	0.029992	0.014464	0.112339	0.084984	0.211788	0.006727	0.001226
MTC	2040	SBUS	0	0	0	0.009348	0.041022	0.002469	0	0.043491	0.184662	0.035854
MTC	2040	UBUS	0.000571	0.005301	2.34E-05	0.022976	0.098055	0	0.091112	0.189166	0.071329	0
MTC	2040	UBUS	0	0	0	0.120788	0.721379	0	0	0.721379	0.645946	0

EMFAC2014 (v1.0.7) Emissions Inv
Region Type: MPO
Region: MTC
Calendar Year: 2015, 2040
Season: Annual
Vehicle Classification: EMFAC200
Units: miles/day for VMT, trips/da

Region	CalYr	VehClass	NOx_STRE	NOx_TOTE	CO2_RUNE	CO2_IDLE	CO2_STRE	CO2_TOTE	PM10_RUN	PM10_IDLI	PM10_STR	PM10_TOT
MTC	2015	HHDT	0.039982	0.227908	70.75691	0	1.555741	72.31265	6.47E-05	0	7.26E-05	0.000137
MTC	2015	HHDT	0.529707	34.79642	7782.364	386.6176	0	8168.981	0.400256	0.009022	0	0.409278
MTC	2015	LDA	3.996904	15.41344	32290.35	0	1289.033	33579.38	0.182405	0	0.051659	0.234064
MTC	2015	LDA	0	0.294424	289.1759	0	0	289.1759	0.026642	0	0	0.026642
MTC	2015	LDA	0	0	0	0	0	0	0	0	0	0
MTC	2015	LDT1	0.591563	2.981113	3216.347	0	136.2874	3352.634	0.030831	0	0.008578	0.039409
MTC	2015	LDT1	0	0.011957	3.591768	0	0	3.591768	0.001515	0	0	0.001515
MTC	2015	LDT1	0	0	0	0	0	0	0	0	0	0
MTC	2015	LDT2	2.128709	8.527753	15233.13	0	582.0923	15815.22	0.058158	0	0.015047	0.073205
MTC	2015	LDT2	0	0.004545	19.42505	0	0	19.42505	0.000437	0	0	0.000437
MTC	2015	LHDT1	2.195179	3.564399	2108.675	8.960775	64.71228	2182.348	0.007869	0	0.002608	0.010476
MTC	2015	LHDT1	0	8.299323	1073.818	7.098029	0	1080.916	0.081652	0.001516	0	0.083169
MTC	2015	LHDT2	0.278927	0.450664	356.4382	1.400722	10.22903	368.068	0.000944	0	0.000274	0.001218
MTC	2015	LHDT2	0	2.135308	420.9974	3.571074	0	424.5685	0.022618	0.000456	0	0.023074
MTC	2015	MCY	0.092339	1.485896	194.0272	0	14.28501	208.3122	0.00212	0	0.001557	0.003677
MTC	2015	MDV	2.239362	8.927678	12363.56	0	509.2371	12872.8	0.040384	0	0.012253	0.052637
MTC	2015	MDV	0	0.021957	143.9413	0	0	143.9413	0.002518	0	0	0.002518
MTC	2015	MH	0.002707	0.172802	191.8399	0	0.171744	192.0117	0.000633	0	8.54E-06	0.000641
MTC	2015	MH	0	0.235226	38.19672	0	0	38.19672	0.006337	0	0	0.006337
MTC	2015	MHDT	0.442763	0.986812	453.3895	3.900031	18.94653	476.236	0.000778	0	0.000684	0.001462
MTC	2015	MHDT	0.42058	14.72624	3155.214	35.05142	0	3190.265	0.444695	0.002574	0	0.447269
MTC	2015	OBUS	0.101103	0.238846	248.2859	1.191036	5.009279	254.4862	0.000159	0	6.95E-05	0.000229
MTC	2015	OBUS	0.026773	1.612712	332.6983	7.542891	0	340.2412	0.017783	0.000246	0	0.018029
MTC	2015	SBUS	0.005786	0.045287	19.59177	1.452064	0.294402	21.33824	8.19E-05	0	7.71E-06	8.96E-05
MTC	2015	SBUS	0.012273	1.338491	157.9082	12.16326	0	170.0714	0.011568	0.000484	0	0.012051
MTC	2015	UBUS	0.013934	0.248784	196.7215	0	0.966811	197.6883	0.000464	0	1.39E-05	0.000478
MTC	2015	UBUS	0	11.08221	1161.642	0	0	1161.642	0.236548	0	0	0.236548
MTC	2040	HHDT	0.035313	0.222304	96.58068	0	1.33559	97.91627	7.03E-05	0	1.64E-05	8.67E-05
MTC	2040	HHDT	2.255067	14.28622	10611.3	549.6865	0	11160.99	0.038523	0.000237	0	0.03876
MTC	2040	LDA	0.348243	2.728064	20984.71	0	932.7356	21917.45	0.084469	0	0.026437	0.110906
MTC	2040	LDA	0	0.013746	287.0549	0	0	287.0549	0.001207	0	0	0.001207
MTC	2040	LDA	0	0	0	0	0	0	0	0	0	0
MTC	2040	LDT1	0.031385	0.223842	1626.963	0	72.90706	1699.87	0.006353	0	0.001998	0.008351
MTC	2040	LDT1	0	0.000173	0.887141	0	0	0.887141	1.91E-05	0	0	1.91E-05
MTC	2040	LDT1	0	0	0	0	0	0	0	0	0	0
MTC	2040	LDT2	0.185249	1.291762	10096.46	0	441.213	10537.67	0.032578	0	0.009881	0.042459
MTC	2040	LDT2	0	0.002646	21.79913	0	0	21.79913	0.000372	0	0	0.000372
MTC	2040	LHDT1	0.438286	0.500914	703.4854	3.364066	25.78427	732.6338	0.001921	0	0.000538	0.002459
MTC	2040	LHDT1	0	0.564064	858.3004	6.760727	0	865.0612	0.016169	0.000766	0	0.016936
MTC	2040	LHDT2	0.086443	0.100046	294.0562	1.252624	9.739921	305.0488	0.000745	0	0.000177	0.000922
MTC	2040	LHDT2	0	0.103784	476.8345	4.923594	0	481.7581	0.007751	0.000403	0	0.008154
MTC	2040	MCY	0.118058	1.536489	218.9554	0	15.46536	234.4207	0.002878	0	0.001256	0.004134
MTC	2040	MDV	0.259619	1.118604	7192.755	0	348.0736	7540.828	0.01926	0	0.006555	0.025815
MTC	2040	MDV	0	0.006237	196.5969	0	0	196.5969	0.00065	0	0	0.00065
MTC	2040	MH	0.000983	0.013918	138.5284	0	0.10288	138.6313	0.000158	0	1.63E-06	0.00016
MTC	2040	MH	0	0.082528	32.32282	0	0	32.32282	0.000755	0	0	0.000755
MTC	2040	MHDT	0.14549	0.189707	539.9698	4.620777	20.15435	564.7449	0.000626	0	0.000288	0.000914
MTC	2040	MHDT	2.27597	6.73076	4630.518	53.8632	0	4684.382	0.012208	1.34E-05	0	0.012221
MTC	2040	OBUS	0.068913	0.093331	292.0016	1.740956	7.099529	300.8421	0.000338	0	0.000112	0.00045
MTC	2040	OBUS	0.163687	0.665718	477.1794	11.23691	0	488.4163	0.001373	2.68E-06	0	0.001375
MTC	2040	SBUS	0.005835	0.013788	44.54924	3.86715	0.784054	49.20045	0.000111	0	1.7E-05	0.000128
MTC	2040	SBUS	0.099618	0.320133	166.4033	12.84568	0	179.249	0.000444	2.85E-06	0	0.000447
MTC	2040	UBUS	0.014746	0.086075	279.6136	0	1.587432	281.201	0.000403	0	1.83E-05	0.000422
MTC	2040	UBUS	0	0.645946	386.3251	0	0	386.3251	0.009986	0	0	0.009986

EMFAC2014 (v1.0.7) Emissions Inv
Region Type: MPO
Region: MTC
Calendar Year: 2015, 2040
Season: Annual
Vehicle Classification: EMFAC200
Units: miles/day for VMT, trips/da

Region	CalYr	VehClass	PM10_PM	PM10_PM	PM10_TOT	PM2_5_RU	PM2_5_ID	PM2_5_ST	PM2_5_TC	PM2_5_PM	PM2_5_PM	PM2_5_TC
MTC	2015	HHDT	0.000766	0.002365	0.003268	6.05E-05	0	6.88E-05	0.000129	0.000192	0.001013	0.001334
MTC	2015	HHDT	0.154927	0.265699	0.829904	0.382941	0.008632	0	0.391573	0.038732	0.113871	0.544176
MTC	2015	LDA	0.805782	3.701559	4.741405	0.168035	0	0.047642	0.215677	0.201445	1.586383	2.003505
MTC	2015	LDA	0.007354	0.033784	0.06778	0.025489	0	0	0.025489	0.001839	0.014479	0.041807
MTC	2015	LDA	0.004512	0.020728	0.025241	0	0	0	0	0.001128	0.008884	0.010012
MTC	2015	LDT1	0.069348	0.318568	0.427325	0.028464	0	0.007928	0.036392	0.017337	0.136529	0.190258
MTC	2015	LDT1	7.16E-05	0.000329	0.001916	0.00145	0	0	0.00145	1.79E-05	0.000141	0.001609
MTC	2015	LDT1	6.09E-05	0.00028	0.000341	0	0	0	0	1.52E-05	0.00012	0.000135
MTC	2015	LDT2	0.283255	1.301202	1.657662	0.053577	0	0.013871	0.067449	0.070814	0.557658	0.69592
MTC	2015	LDT2	0.000402	0.001844	0.002683	0.000418	0	0	0.000418	0.0001	0.00079	0.001309
MTC	2015	LHDT1	0.019733	0.188548	0.218758	0.007242	0	0.002404	0.009646	0.004933	0.080806	0.095386
MTC	2015	LHDT1	0.021674	0.138063	0.242905	0.07812	0.001451	0	0.079571	0.005418	0.05917	0.144159
MTC	2015	LHDT2	0.002973	0.033141	0.037332	0.000868	0	0.000253	0.001121	0.000743	0.014203	0.016067
MTC	2015	LHDT2	0.007586	0.056374	0.087034	0.021639	0.000437	0	0.022076	0.001896	0.02416	0.048133
MTC	2015	MCY	0.004612	0.013558	0.021847	0.002004	0	0.00148	0.003484	0.001153	0.005811	0.010447
MTC	2015	MDV	0.177665	0.816149	1.046452	0.037208	0	0.011293	0.048501	0.044416	0.349778	0.442696
MTC	2015	MDV	0.002235	0.010267	0.01502	0.002409	0	0	0.002409	0.000559	0.0044	0.007368
MTC	2015	MH	0.001763	0.019152	0.021557	0.000589	0	8.02E-06	0.000597	0.000441	0.008208	0.009246
MTC	2015	MH	0.000574	0.004675	0.011585	0.006063	0	0	0.006063	0.000143	0.002004	0.00821
MTC	2015	MHDT	0.004181	0.045417	0.051061	0.000719	0	0.000639	0.001358	0.001045	0.019465	0.021868
MTC	2015	MHDT	0.031128	0.338104	0.816501	0.425457	0.002463	0	0.42792	0.007782	0.144902	0.580604
MTC	2015	OBUS	0.002291	0.024885	0.027405	0.000147	0	6.47E-05	0.000211	0.000573	0.010665	0.011449
MTC	2015	OBUS	0.002853	0.030994	0.051876	0.017014	0.000235	0	0.017249	0.000713	0.013283	0.031245
MTC	2015	SBUS	0.000232	0.021606	0.021928	7.53E-05	0	7.09E-06	8.24E-05	5.8E-05	0.00926	0.0094
MTC	2015	SBUS	0.001439	0.089292	0.102782	0.011067	0.000463	0	0.01153	0.00036	0.038268	0.050158
MTC	2015	UBUS	0.001362	0.014798	0.016638	0.000432	0	1.29E-05	0.000445	0.000341	0.006342	0.007127
MTC	2015	UBUS	0.005674	0.398072	0.640294	0.226315	0	0	0.226315	0.001419	0.170602	0.398336
MTC	2040	HHDT	0.001197	0.003696	0.00498	6.46E-05	0	1.51E-05	7.97E-05	0.000299	0.001584	0.001963
MTC	2040	HHDT	0.254329	0.436173	0.729262	0.036857	0.000226	0	0.037083	0.063582	0.186931	0.287597
MTC	2040	LDA	0.872802	4.009433	4.99314	0.077666	0	0.024308	0.101974	0.2182	1.718328	2.038502
MTC	2040	LDA	0.012105	0.055608	0.06892	0.001154	0	0	0.001154	0.003026	0.023832	0.028013
MTC	2040	LDA	0.157312	0.72265	0.879962	0	0	0	0	0.039328	0.309707	0.349035
MTC	2040	LDT1	0.062984	0.289332	0.360668	0.005842	0	0.001837	0.007679	0.015746	0.124	0.147424
MTC	2040	LDT1	3.49E-05	0.00016	0.000214	1.83E-05	0	0	1.83E-05	8.72E-06	6.87E-05	9.57E-05
MTC	2040	LDT1	2.88E-05	0.000132	0.000161	0	0	0	0	7.2E-06	5.67E-05	6.39E-05
MTC	2040	LDT2	0.338825	1.556477	1.937761	0.029954	0	0.009085	0.039039	0.084706	0.667062	0.790807
MTC	2040	LDT2	0.000744	0.00342	0.004536	0.000356	0	0	0.000356	0.000186	0.001466	0.002008
MTC	2040	LHDT1	0.007137	0.06819	0.077786	0.001766	0	0.000495	0.002261	0.001784	0.029224	0.03327
MTC	2040	LHDT1	0.019866	0.126549	0.163352	0.01547	0.000733	0	0.016203	0.004967	0.054235	0.075405
MTC	2040	LHDT2	0.002685	0.029933	0.03354	0.000685	0	0.000163	0.000848	0.000671	0.012828	0.014347
MTC	2040	LHDT2	0.009926	0.073766	0.091847	0.007416	0.000385	0	0.007802	0.002481	0.031614	0.041897
MTC	2040	MCY	0.004946	0.014542	0.023622	0.002683	0	0.001172	0.003855	0.001237	0.006232	0.011324
MTC	2040	MDV	0.181272	0.83272	1.039808	0.017709	0	0.006027	0.023736	0.045318	0.35688	0.425934
MTC	2040	MDV	0.005094	0.023399	0.029143	0.000622	0	0	0.000622	0.001273	0.010028	0.011924
MTC	2040	MH	0.001368	0.014864	0.016392	0.000145	0	1.5E-06	0.000147	0.000342	0.00637	0.006859
MTC	2040	MH	0.000515	0.004195	0.005465	0.000723	0	0	0.000723	0.000129	0.001798	0.002649
MTC	2040	MHDT	0.005356	0.058174	0.064444	0.000576	0	0.000265	0.000841	0.001339	0.024932	0.027111
MTC	2040	MHDT	0.048465	0.526415	0.587101	0.01168	1.29E-05	0	0.011692	0.012116	0.225606	0.249415
MTC	2040	OBUS	0.002893	0.031425	0.034769	0.000311	0	0.000103	0.000414	0.000723	0.013468	0.014605
MTC	2040	OBUS	0.004426	0.048074	0.053876	0.001313	2.56E-06	0	0.001316	0.001107	0.020603	0.023026
MTC	2040	SBUS	0.000565	0.052601	0.053294	0.000102	0	1.56E-05	0.000118	0.000141	0.022543	0.022802
MTC	2040	SBUS	0.001611	0.099976	0.102033	0.000425	2.72E-06	0	0.000427	0.000403	0.042847	0.043677
MTC	2040	UBUS	0.002075	0.022539	0.025036	0.000371	0	1.69E-05	0.000388	0.000519	0.00966	0.010566
MTC	2040	UBUS	0.002245	0.15749	0.169721	0.009554	0	0	0.009554	0.000561	0.067496	0.077611

EMFAC2014 (v1.0.7) Emissions Inv
Region Type: MPO
Region: MTC
Calendar Year: 2015, 2040
Season: Annual
Vehicle Classification: EMFAC200
Units: miles/day for VMT, trips/da

Region	CalYr	VehClass	SOx_RUNE	SOx_IDLEX	SOx_STREX	SOx_TOTE	Fuel_Consu
MTC	2015	HHDT	0.000733	0	2.58E-05	0.000759	8.098728
MTC	2015	HHDT	0.07326	0.003639	0	0.076899	735.2083
MTC	2015	LDA	0.324243	0	0.013906	0.338149	3606.851
MTC	2015	LDA	0.002761	0	0	0.002761	26.02583
MTC	2015	LDA	0	0	0	0	0
MTC	2015	LDT1	0.032499	0	0.001551	0.03405	363.1939
MTC	2015	LDT1	3.43E-05	0	0	3.43E-05	0.323259
MTC	2015	LDT1	0	0	0	0	0
MTC	2015	LDT2	0.152868	0	0.006211	0.159079	1696.808
MTC	2015	LDT2	0.000185	0	0	0.000185	1.748254
MTC	2015	LHDT1	0.021164	9.45E-05	0.000783	0.022041	235.0978
MTC	2015	LHDT1	0.010251	6.78E-05	0	0.010319	97.2824
MTC	2015	LHDT2	0.00357	1.47E-05	0.000118	0.003703	39.49977
MTC	2015	LHDT2	0.004019	3.41E-05	0	0.004053	38.21117
MTC	2015	MCY	0.002494	0	0.000211	0.002705	28.85292
MTC	2015	MDV	0.124182	0	0.005509	0.129692	1383.35
MTC	2015	MDV	0.001374	0	0	0.001374	12.95472
MTC	2015	MH	0.001943	0	2.19E-06	0.001946	20.75296
MTC	2015	MH	0.000365	0	0	0.000365	3.437705
MTC	2015	MHDT	0.004571	4.07E-05	0.000252	0.004864	51.88008
MTC	2015	MHDT	0.030102	0.000334	0	0.030437	287.1239
MTC	2015	OBUS	0.002487	1.22E-05	6.11E-05	0.00256	27.3112
MTC	2015	OBUS	0.003174	7.2E-05	0	0.003246	30.6217
MTC	2015	SBUS	0.000199	1.54E-05	4.41E-06	0.000219	2.334228
MTC	2015	SBUS	0.001507	0.000116	0	0.001623	15.30643
MTC	2015	UBUS	0.001995	0	1.2E-05	0.002007	21.40608
MTC	2015	UBUS	0.010597	0	0	0.010597	104.5477
MTC	2040	HHDT	0.000993	0	2.08E-05	0.001014	10.81252
MTC	2040	HHDT	0.098486	0.005114	0	0.103599	1004.489
MTC	2040	LDA	0.209966	0	0.009469	0.219435	2340.594
MTC	2040	LDA	0.00274	0	0	0.00274	25.83494
MTC	2040	LDA	0	0	0	0	0
MTC	2040	LDT1	0.016279	0	0.000741	0.01702	181.5419
MTC	2040	LDT1	8.47E-06	0	0	8.47E-06	0.079843
MTC	2040	LDT1	0	0	0	0	0
MTC	2040	LDT2	0.10103	0	0.004481	0.105511	1125.427
MTC	2040	LDT2	0.000208	0	0	0.000208	1.961922
MTC	2040	LHDT1	0.007025	3.54E-05	0.000279	0.007339	78.27992
MTC	2040	LHDT1	0.008194	6.45E-05	0	0.008258	77.8555
MTC	2040	LHDT2	0.002936	1.31E-05	0.000104	0.003053	32.5626
MTC	2040	LHDT2	0.004552	4.7E-05	0	0.004599	43.35823
MTC	2040	MCY	0.00263	0	0.000242	0.002871	30.62478
MTC	2040	MDV	0.071965	0	0.003549	0.075514	805.4706
MTC	2040	MDV	0.001877	0	0	0.001877	17.69372
MTC	2040	MH	0.001383	0	1.13E-06	0.001384	14.76549
MTC	2040	MH	0.000309	0	0	0.000309	2.909053
MTC	2040	MHDT	0.005392	4.83E-05	0.00022	0.005659	60.36637
MTC	2040	MHDT	0.044177	0.000514	0	0.044691	421.5943
MTC	2040	OBUS	0.002916	1.79E-05	7.84E-05	0.003012	32.12684
MTC	2040	OBUS	0.004553	0.000107	0	0.00466	43.95747
MTC	2040	SBUS	0.000445	4.09E-05	9.31E-06	0.000495	5.282053
MTC	2040	SBUS	0.001588	0.000123	0	0.00171	16.13241
MTC	2040	UBUS	0.002793	0	1.76E-05	0.00281	29.97655
MTC	2040	UBUS	0.002802	0	0	0.002802	34.76926

Appendix D

Air Quality and Greenhouse Gas Calculations

Table 3.1-14: Travel Data

	Year 2015	*Year 2040 Proposed Plan*	*Year 2040 No Project*	*% difference from Proposed Plan*	*Year 2040 Main Streets*	*% difference from Proposed Plan*	*Year 2040 Big Cities*	*% difference from Proposed Plan*	*Year 2040 EEJ 2.0*	*% difference from Proposed Plan*
Vehicles in Use	**4,651,264**	**6,230,199**	**6,410,363**	3%	**6,363,435**	2%	**6,117,424**	-2%	**6,089,923**	-2%
Daily Vehicle Miles Traveled (VMT)	**161,151,772**	**195,595,085**	**201,246,338**	3%	**199,564,000**	2%	**191,447,042**	-2%	**191,221,978**	-2%
Engine Starts	**29,080,881**	**38,509,838**	**39,634,980**	3%	**39,338,472**	2%	**37,820,480**	-2%	**37,642,869**	-2%
Total Population (simulated)	**7,570,522**	**9,560,782**	**9,566,510**	0%	**9,563,266**	0%	**9,554,066**	0%	**9,559,398**	0%
Total Employment	**4,010,135**	**4,698,374**	**4,698,374**	0%	**4,698,374**	0%	**4,698,374**	0%	**4,698,374**	0%

Table 3.1-15: Emission Estimates for Criteria Pollutants Using EMFAC 2014 Emission Rates (tons per day)

	Year 2015	*Year 2040 Proposed Plan*	*Year 2040 No Project*	*% difference from Proposed Plan*	*Year 2040 Main Streets*	*% difference from Proposed Plan*	*Year 2040 Big Cities*	*% difference from Proposed Plan*	*Year 2040 EEJ 2.0*	*% difference from Proposed Plan*
ROG	**55.42**	**18.52**	**19.21**	4%	**18.91**	2%	**18.17**	-2%	**18.14**	-2%
NOx (Summertime)	**104.84**	**28.95**	**29.56**	2%	**29.41**	2%	**28.17**	-3%	**28.29**	-2%
CO	**420.99**	**118.69**	**124.05**	5%	**121.18**	2%	**116.60**	-2%	**116.89**	-2%
PM10	**32.65**	**37.75**	**38.91**	3%	**38.54**	2%	**36.94**	-2%	**36.92**	-2%
PM2.5	**8.46**	**8.58**	**8.84**	3%	**8.76**	2%	**8.40**	-2%	**8.39**	-2%
NOx (Wintertime)	**99.91**	**23.06**	**23.58**	2%	**23.43**	2%	**22.45**	-3%	**22.55**	-2%

Table 3.1-16: Emission Estimates for Toxic Air Contaminants Pollutants (kilograms per day)

	Year 2015	*Year 2040 Proposed Plan*	*Year 2040 No Project*	*% difference from Proposed Plan*	*Year 2040 Main Streets*	*% difference from Proposed Plan*	*Year 2040 Big Cities*	*% difference from Proposed Plan*	*Year 2040 EEJ 2.0*	*% difference from Proposed Plan*
Diesel PM	**1,159.7**	**84.2**	**85.8**	2%	**85.5**	2%	**81.9**	-3%	**82.3**	-2%
1,3 Butadiene	**74.0**	**26.1**	**28.1**	8%	**26.7**	2%	**25.7**	-1%	**25.9**	-1%
Benzene	**349.1**	**123.8**	**134.4**	9%	**126.8**	2%	**122.0**	-1%	**123.2**	0%

Table 3.1-28: Total and Per Capita Passenger Vehicle and Light Duty Truck CO2 Emissions by Alternative

Alternative	*Year*	*Simulated Population*	*Daily Vehicle Miles of Travel (VMT)*	*Daily Vehicle Miles of Travel Per-Capita (Simulated Population)*	*Modeled GHG Emissions (daily tons of CO2)* [1]	*Climate Policy Iniatives Reduction (daily tons of CO2)* [1]	*CO2 Emissions Per Capita (lbs)* [1]	*Per Capita CO2 Emissions Relative to 2005* [1]	*Modeled GHG Emissions (daily tons of CO2)* [2]	*Climate Policy Iniatives Reduction (daily tons of CO2)* [2]	*CO2 Emissions Per Capita (lbs)* [2]	*Per Capita CO2 Emissions Relative to 2005* [2]
Baseline	2005	6,978,983	149,164,223	21.4	64,246	*NA*	18.4	0%	72,340	*NA*	20.73	*NA*
	2015	7,570,522	158,406,824	20.9	69,732	*NA*	18.4	0%	*NA*	*NA*	*NA*	*NA*
Proposed Plan	2020	7,890,070	164,346,325	20.8	72,250	(4,360)	17.2	-7%	77,840	-4,320	18.6	-10.1%
	2035	9,075,512	185,930,198	20.5	81,718	(7,840)	16.3	-12%	87,750	-7,840	17.6	-15.1%
	2040	9,560,782	191,528,609	20.0	84,359	(7,680)	16.0	-13%	90,580	-7,750	17.3	-16.4%
No Project	2020	7,889,030	165,003,724	20.9	72,781	0	18.5	0%	78,450	0	19.9	-4%
	2035	9,072,182	189,275,010	20.9	84,939	0	18.7	2%	91,140	0	20.1	-3%
	2040	9,566,510	195,759,342	20.5	88,616	0	18.5	1%	95,080	0	19.9	-4%
Main Streets	2020	7,889,490	164,529,333	20.9	72,514	(4,390)	17.3	-6%	78,170	-4,360	18.7	-10%
	2035	9,075,284	188,062,839	20.7	82,729	(7,930)	16.5	-10%	88,810	-7,930	17.8	-14%
	2040	9,563,266	195,437,190	20.4	86,380	(7,970)	16.4	-11%	92,670	-8,030	17.7	-15%
Big Cities	2020	7,889,428	163,489,143	20.7	72,285	(4,360)	17.2	-6%	77,560	-4,340	18.6	-10%
	2035	9,068,196	181,571,755	20.0	80,094	(7,740)	16.0	-13%	85,910	-7,790	17.2	-17%
	2040	9,554,066	187,145,045	19.6	82,755	(7,630)	15.7	-15%	88,700	-7,720	17.0	-18%
EEJ 2	2020	7,890,992	162,767,306	20.6	71,713	(4,370)	17.1	-7%	77,320	-4,340	18.5	-11%
	2035	9,070,278	179,807,345	19.8	79,962	(7,730)	15.9	-13%	85,930	-7,750	17.2	-17%
	2040	9,559,398	185,691,803	19.4	82,850	(7,540)	15.8	-14%	89,050	-7,630	17.0	-18%

1: Travel Model One (v 0.5) and EMFAC 2014, using a simulation year 2010 baseline for EMFAC

2: Travel Model One (v 0.5) and EMFAC 2007, using a simulation year 2000 baseline for EMFAC

Table 3.1-28: Total and Per Capita Passenger Vehicle and Light Duty Truck CO2 Emissions by Alternative (Rounded)

Alternative	*Year*	*Simulated Population*	*Daily Vehicle Miles of Travel (VMT)*	*Daily Vehicle Miles of Travel Per-Capita (Simulated Population)*	*Modeled GHG Emissions (daily tons of CO2)* [1]	*Climate Policy Iniatives Reduction (daily tons of CO2)* [1]	*CO2 Emissions Per Capita (lbs)* [1]	*Per Capita CO2 Emissions Relative to 2005* [1]	*Modeled GHG Emissions (daily tons of CO2)* [2]	*Climate Policy Iniatives Reduction (daily tons of CO2)* [2]	*CO2 Emissions Per Capita (lbs)* [2]	*Per Capita CO2 Emissions Relative to 2005* [2]
Baseline	2005	6,979,000	149,164,000	21.4	64,200	*NA*	18.4	0%	72,300	*NA*	20.7	*NA*
	2015	7,571,000	158,407,000	20.9	69,700	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
	2020	7,890,000	164,346,000	20.8	72,300	-4,400	17.2	-7%	77,800	-4,320	18.6	-10.3%
Proposed Plan	2035	9,076,000	185,930,000	20.5	81,700	-7,800	16.3	-11%	87,800	-7,840	17.6	-15.1%
	2040	9,561,000	191,529,000	20.0	84,400	-7,700	16.0	-13%	90,600	-7,750	17.3	-16.5%
	2020	7,889,000	165,004,000	20.9	72,800	0	18.5	0%	78,500	0	19.9	-4%
No Project	2035	9,072,000	189,275,000	20.9	84,900	0	18.7	2%	91,100	0	20.1	-3%
	2040	9,567,000	195,759,000	20.5	88,600	0	18.5	0%	95,100	0	19.9	-4%
	2020	7,889,000	164,529,000	20.9	72,500	-4,400	17.3	-6%	78,200	-4,360	18.7	-10%
Main Streets	2035	9,075,000	188,063,000	20.7	82,700	-7,900	16.5	-10%	88,800	-7,930	17.8	-14%
	2040	9,563,000	195,437,000	20.4	86,400	-8,000	16.4	-11%	92,700	-8,030	17.7	-15%
	2020	7,889,000	163,489,000	20.7	72,300	-4,400	17.2	-7%	77,600	-4,340	18.6	-10%
Big Cities	2035	9,068,000	181,572,000	20.0	80,100	-7,700	16.0	-13%	85,900	-7,790	17.2	-17%
	2040	9,554,000	187,145,000	19.6	82,800	-7,600	15.7	-15%	88,700	-7,720	17.0	-18%
	2020	7,891,000	162,767,000	20.6	71,700	-4,400	17.1	-7%	77,300	-4,340	18.5	-11%
EEJ 2	2035	9,070,000	179,807,000	19.8	80,000	-7,700	15.9	-14%	85,900	-7,750	17.2	-17%
	2040	9,559,000	185,692,000	19.4	82,900	-7,500	15.8	-14%	89,100	-7,630	17.0	-18%

1: Travel Model One (v 0.5) and EMFAC 2014, using a simulation year 2010 baseline for EMFAC

2: Travel Model One (v 0.5) and EMFAC 2007, using a simulation year 2000 baseline for EMFAC

Table 3.1-29: Comparative Annual Land Use and Vehicle GHG Emissions (MTCO2E)

	Year 2015	*Year 2040 Proposed Plan*	*Year 2040 No Project*	*% difference from Proposed Plan*	*Year 2040 Main Streets*	*% difference from Proposed Plan*	*Year 2040 Big Cities*	*% difference from Proposed Plan*	*Year 2040 EEJ 2.0*	*% difference from Proposed Plan*
Passenger Vehicles	18,222,000	11,715,000	12,305,000	5%	11,995,000	2%	11,491,000	-2%	11,505,000	-2%
Trucks	4,484,000	5,361,000	5,448,000	2%	5,439,000	1%	5,209,000	-3%	5,239,000	-2%
Buses	599,000	475,000	487,000	3%	484,000	2%	464,000	-2%	465,000	-2%
Other Vehicles	122,000	113,000	118,000	4%	116,000	3%	111,000	-2%	111,000	-2%
MTC Climate Policy Initiative	0	(2,350,000)	0	-100%	(2,439,000)	4%	(2,335,000)	-1%	(2,307,000)	-2%
Total Vehicle GHG Emissions (Pavley)	**23,427,000**	**15,314,000**	**18,358,000**	20%	**15,595,000**	2%	**14,940,000**	-2%	**15,013,000**	-2%
On-Road GHG Emissions # Change 2015 to 2040	n/a	-8,113,000	-5,069,000	-38%	-7,832,000	-3%	-8,487,000	5%	-8,414,000	4%
On-Road GHG Emissions % Change 2015 to 2040	n/a	-35%	-22%		-33%		-36%		-36%	

Note:

To convert US tons [i.e., 2,000 pounds] to metric tons of carbon dioxide, CO_2 in US tons was multiplied by **907.1848** kilograms. [for conversion from US tons to kilograms]

A ratio of **1.00:1.02** was applied to all EMFAC2014 generated CO_2 estimates for conversion to CO_2E.

Emissions were annualized by multiplying by 300 to take account for the fact that there is less traffic on weekends.

The total annual CO_2E in kilograms were then converted to to metric tons by dividing by **1,000**.

Conversion factors are taken from the California Air Resource Board Local Government Operations Protocol, Version 1.1, May 2010.

EMFAC 2014

Table 2.5-5: Plan Bay Area 2040 Climate Policy Initiatives and Reductions (EMFAC 2014)

Policy	Proposed Plan			No Project			Main Streets			Big Cities			EEJ		
	2020 Daily Tons of CO2	2035 Daily Tons of CO2	2040 Daily Tons of CO2	2020 Daily Tons of CO2	2035 Daily Tons of CO2	2040 Daily Tons of CO2	2020 Daily Tons of CO2	2035 Daily Tons of CO2	2040 Daily Tons of CO2	2020 Daily Tons of CO2	2035 Daily Tons of CO2	2040 Daily Tons of CO2	2020 Daily Tons of CO2	2035 Daily Tons of CO2	2040 Daily Tons of CO2
CBO	(300)	(330)	(340)	-	-	-	(300)	(330)	(340)	(300)	(330)	(340)	(300)	(330)	(340)
Trip Caps	(120)	(690)	(850)	-	-	-	(150)	(760)	(1,100)	(140)	(640)	(830)	(150)	(620)	(760)
Regional EV Charger Network	(250)	(1,190)	(1,290)	-	-	-	(250)	(1,190)	(1,290)	(250)	(1,190)	(1,290)	(250)	(1,190)	(1,290)
Feebate Program	(180)	(680)	(450)	-	-	-	(180)	(680)	(450)	(180)	(680)	(450)	(180)	(680)	(450)
Vehicle Buyback Program	(60)	(360)	(230)	-	-	-	(60)	(360)	(230)	(60)	(360)	(230)	(60)	(360)	(230)
Targeted Transportation Alternatives	(960)	(1,600)	(1,570)	-	-	-	(960)	(1,590)	(1,580)	(960)	(1,570)	(1,550)	(950)	(1,570)	(1,540)
Car Share	(1,720)	(1,920)	(1,890)	-	-	-	(1,720)	(1,920)	(1,880)	(1,700)	(1,910)	(1,880)	(1,720)	(1,920)	(1,890)
Smart Driving	(500)	(670)	(660)	-	-	-	(500)	(680)	(670)	(500)	(670)	(660)	(500)	(660)	(650)
Vanpool Incentives	(60)	(170)	(170)	-	-	-	(60)	(180)	(180)	(60)	(160)	(170)	(60)	(170)	(160)
Employer Shuttles	(170)	(160)	(160)	-	-	-	(170)	(170)	(180)	(170)	(160)	(160)	(160)	(160)	(160)
Bike Infrastructure	(20)	(50)	(50)	-	-	-	(20)	(50)	(50)	(20)	(50)	(50)	(20)	(50)	(50)
Bike Share	(20)	(20)	(20)	-	-	-	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)
Total	**(4,360)**	**(7,840)**	**(7,680)**	**-**	**-**	**-**	**(4,390)**	**(7,930)**	**(7,970)**	**(4,360)**	**(7,740)**	**(7,630)**	**(4,370)**	**(7,730)**	**(7,540)**

Table 2.5-5: Plan Bay Area 2040 Climate Policy Initiatives and Reductions (EMFAC 2007)

Policy	Proposed Plan			No Project			Main Streets			Big Cities			EEJ		
	2020 Daily Tons of CO2	2035 Daily Tons of CO2	2040 Daily Tons of CO2	2020 Daily Tons of CO2	2035 Daily Tons of CO2	2040 Daily Tons of CO2	2020 Daily Tons of CO2	2035 Daily Tons of CO2	2040 Daily Tons of CO2	2020 Daily Tons of CO2	2035 Daily Tons of CO2	2040 Daily Tons of CO2	2020 Daily Tons of CO2	2035 Daily Tons of CO2	2040 Daily Tons of CO2
CBO	(300)	(330)	(340)	-	-	-	(300)	(330)	(340)	(300)	(330)	(340)	(300)	(330)	(340)
Trip Caps	(120)	(690)	(860)	-	-	-	(150)	(760)	(1,100)	(140)	(650)	(840)	(150)	(620)	(760)
Regional EV Charger Network	(250)	(1,200)	(1,300)	-	-	-	(250)	(1,200)	(1,300)	(250)	(1,200)	(1,300)	(250)	(1,200)	(1,300)
Feebate Program	(180)	(680)	(450)	-	-	-	(180)	(680)	(450)	(180)	(680)	(450)	(180)	(680)	(450)
Vehicle Buyback Program	(60)	(360)	(230)	-	-	-	(60)	(360)	(230)	(60)	(360)	(230)	(60)	(360)	(230)
Targeted Transportation Alternatives	(950)	(1,600)	(1,600)	-	-	-	(960)	(1,600)	(1,600)	(950)	(1,600)	(1,600)	(950)	(1,600)	(1,600)
Car Share	(1,700)	(1,900)	(1,900)	-	-	-	(1,700)	(1,900)	(1,900)	(1,700)	(1,900)	(1,900)	(1,700)	(1,900)	(1,900)
Smart Driving	(500)	(680)	(670)	-	-	-	(500)	(680)	(680)	(500)	(670)	(660)	(490)	(660)	(650)
Vanpool Incentives	(60)	(170)	(170)	-	-	-	(60)	(180)	(180)	(60)	(170)	(170)	(60)	(170)	(170)
Employer Shuttles	(160)	(160)	(160)	-	-	-	(160)	(170)	(180)	(160)	(160)	(160)	(160)	(160)	(160)
Bike Infrastructure	(20)	(50)	(50)	-	-	-	(20)	(50)	(50)	(20)	(50)	(50)	(20)	(50)	(50)
Bike Share	(20)	(20)	(20)	-	-	-	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)
Total	**(4,320)**	**(7,840)**	**(7,750)**	**-**	**-**	**-**	**(4,360)**	**(7,930)**	**(8,030)**	**(4,340)**	**(7,790)**	**(7,720)**	**(4,340)**	**(7,750)**	**(7,630)**

Run	County	Land Use Categories	Land Use Addition or Loss	Year of Operation	Electricity Emission Factor (lb CO2/MWh)	Electricity Emission Factor (lb CH4/MWh)	Electricity Emission Factor (lb N2O/MWh)	Energy Use Tab - Historical?	Percent below default Title 24 energy rates	All Gas fireplaces?	Comment for Project Characteristics
1	Alameda	SFH and Low/Mid-Rise Residential	Addition	2040	297.945	0.018	0.003	No	28.0%	Yes	Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.
1	Alameda	High Rise Residential	Addition	2040	297.945	0.018	0.003	No	5.0%	Yes	Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.
1	Alameda	Office	Addition	2040	297.945	0.018	0.003	No	5.0%	N/A	Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.
2	Alameda	Retail/Industrial	Loss	2015	435.000	0.027	0.005	Yes	0.0%	N/A	PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/
3	Contra Costa	SFH and Low/Mid-Rise Residential	Addition	2040	297.945	0.018	0.003	No	28.0%	Yes	Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.
3	Contra Costa	High Rise Residential	Addition	2040	297.945	0.018	0.003	No	5.0%	Yes	Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.
3	Contra Costa	Office/Retail	Addition	2040	297.945	0.018	0.003	No	5.0%	N/A	Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.
4	Contra Costa	Industrial	Loss	2015	435.000	0.027	0.005	Yes	0.0%	N/A	PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/
5	Marin	Residential	Addition	2040	119.178	0.007	0.001	No	28.0%	Yes	Marin Clean Energy emission factor based on an 80% renewable mix per MCE's implementation plan. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix
5	Marin	Office	Addition	2040	119.178	0.007	0.001	No	5.0%	N/A	Marin Clean Energy emission factor based on an 80% renewable mix per MCE's implementation plan. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix
6	Marin	Retail/Industrial	Loss	2015	297.945	0.018	0.003	Yes	0.0%	N/A	Marin Clean Energy emission factor based on a 50% renewable mix in 2015. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.
7	Napa	Residential	Addition	2040	119.178	0.007	0.001	No	28.0%	Yes	Marin Clean Energy emission factor based on an 80% renewable mix per MCE's implementation plan. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix
8	Napa	Office/Retail/Industrial	Loss	2015	435.000	0.027	0.005	Yes	0.0%	N/A	PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/
9	San Francisco	SFH and Low/Mid-Rise Residential	Addition	2040	297.945	0.018	0.003	No	28.0%	Yes	Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.
9	San Francisco	High Rise Residential	Addition	2040	297.945	0.018	0.003	No	5.0%	Yes	Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

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11	San Mateo	SFH and Low/Mid-Rise Residential	Addition	2040	148.973	0.009	0.002	No	28.0%	Yes	Peninsula Clean Energy emission factor based on a 75% renewable mix. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix. (http://www.peninsulacleanenergy.com/resources/technical-study/)
11	San Mateo	High Rise Residential	Addition	2040	148.973	0.009	0.002	No	5.0%	Yes	Peninsula Clean Energy emission factor based on a 75% renewable mix. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix. (http://www.peninsulacleanenergy.com/resources/technical-study/)
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12	San Mateo	Industrial	Loss	2015	435.000	0.027	0.005	Yes	0.0%	N/A	PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/
13	Santa Clara	SFH and Low/Mid-Rise Residential	Addition	2040	59.589	0.004	0.001	No	28.0%	Yes	Silicon Valley Clean Energy emission factor based on a 90% renewable mix. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.(https://www.svcleanenergy.org/files/managed/Document/376/SVCEA%20CCA%20Implementation%20Plan%20071416%20%20NO%20Appendices.pdf)
13	Santa Clara	High Rise Residential	Addition	2040	59.589	0.004	0.001	No	5.0%	Yes	Silicon Valley Clean Energy emission factor based on a 90% renewable mix. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.(https://www.svcleanenergy.org/files/managed/Document/376/SVCEA%20CCA%20Implementation%20Plan%20071416%20%20NO%20Appendices.pdf)
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14	Santa Clara	Industrial	Loss	2015	435.000	0.027	0.005	Yes	0.0%	N/A	PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/
15	Solano	Residential	Addition	2040	297.945	0.018	0.003	No	28.0%	Yes	Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.
15	Solano	Office/Retail	Addition	2040	297.945	0.018	0.003	No	5.0%	N/A	Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.
16	Solano	Industrial	Loss	2015	435.000	0.027	0.005	Yes	0.0%	N/A	PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/
17	Sonoma	Residential	Addition	2040	297.945	0.018	0.003	No	28.0%	Yes	Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

17	Sonoma	Office/Retail	Addition	2040	297.945	0.018	0.003	No	5.0%	N/A	Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.
18	Sonoma	Industrial	Loss	2015	381.370	0.023	0.004	Yes	0.0%	N/A	Sonoma Clean Energy emission factor based on a 36% renewable mix in 2015. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Run	County	Land Use Categories	Land Use Addition or Loss	Year of Operation	Electricity Emission Factor (lb CO2/MWh)	Electricity Emission Factor (lb CH4/MWh)	Electricity Emission Factor (lb N2O/MWh)	Energy Use Tab - Historical?	Percent below default Title 24 energy rates	All Gas fireplaces?	Comment for Project Characteristics
1	Alameda	SFH and Low/Mid-Rise Residential	Addition	2040	297.945	0.018	0.003	No	85.6%	Yes	Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.
1	Alameda	High Rise Residential	Addition	2040	297.945	0.018	0.003	No	43.0%	Yes	Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.
1	Alameda	Office	Addition	2040	297.945	0.018	0.003	No	43.0%	N/A	Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.
2	Alameda	Retail/Industrial	Loss	2015	435.000	0.027	0.005	Yes	0.0%	N/A	PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/
3	Contra Costa	SFH and Low/Mid-Rise Residential	Addition	2040	297.945	0.018	0.003	No	85.6%	Yes	Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.
3	Contra Costa	High Rise Residential	Addition	2040	297.945	0.018	0.003	No	43.0%	Yes	Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.
3	Contra Costa	Office/Retail	Addition	2040	297.945	0.018	0.003	No	43.0%	N/A	Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.
4	Contra Costa	Industrial	Loss	2015	435.000	0.027	0.005	Yes	0.0%	N/A	PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/
5	Marin	Residential	Addition	2040	119.178	0.007	0.001	No	85.6%	Yes	Marin Clean Energy emission factor based on an 80% renewable mix per MCE's implementation plan. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix
5	Marin	Office	Addition	2040	119.178	0.007	0.001	No	43.0%	N/A	Marin Clean Energy emission factor based on an 80% renewable mix per MCE's implementation plan. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix
6	Marin	Retail/Industrial	Loss	2015	297.945	0.018	0.003	Yes	0.0%	N/A	Marin Clean Energy emission factor based on a 50% renewable mix in 2015. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.
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Plan Bay Area 2040 Update - Alameda - New Land Uses

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	17,885.29	1000sqft	410.59	17,885,300.00	0
Apartments High Rise	32,553.00	Dwelling Unit	525.05	32,553,000.00	93102
Apartments Low Rise	41,455.00	Dwelling Unit	2,590.94	41,455,000.00	118561
Apartments Mid Rise	41,455.00	Dwelling Unit	1,090.92	41,455,000.00	118561
Single Family Housing	29,238.00	Dwelling Unit	9,492.86	52,628,400.00	83621

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.95	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Alameda - New Land Uses - Alameda County, Annual

Project Characteristics - Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Operational emissions only

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Grading -

Architectural Coating -

Vehicle Trips - **

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306

Area Coating -

Energy Use - CalEEMod Default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards.

Water And Wastewater -

Solid Waste -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	11,000.00	0.00
tblConstructionPhase	NumDays	155,000.00	0.00
tblConstructionPhase	NumDays	10,000.00	0.00
tblConstructionPhase	NumDays	15,500.00	0.00
tblConstructionPhase	NumDays	11,000.00	0.00
tblConstructionPhase	NumDays	6,000.00	0.00
tblEnergyUse	T24E	502.89	477.75
tblEnergyUse	T24E	274.84	197.88

tblEnergyUse	T24E	502.89	362.08
tblEnergyUse	T24E	4.30	4.08
tblEnergyUse	T24E	246.52	177.49
tblEnergyUse	T24NG	8,824.58	8,383.35
tblEnergyUse	T24NG	25,590.91	18,425.46
tblEnergyUse	T24NG	8,824.58	6,353.70
tblEnergyUse	T24NG	18.41	17.49
tblEnergyUse	T24NG	50,264.25	36,190.26
tblFireplaces	NumberGas	4,882.95	10,416.96
tblFireplaces	NumberGas	6,218.25	13,265.60
tblFireplaces	NumberGas	6,218.25	13,265.60
tblFireplaces	NumberGas	7,309.50	19,881.84
tblFireplaces	NumberWood	5,534.01	0.00
tblFireplaces	NumberWood	7,047.35	0.00
tblFireplaces	NumberWood	7,047.35	0.00
tblFireplaces	NumberWood	12,572.34	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.95
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2040

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Alameda - New Land Uses - Alameda County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	903.3415	20.9386	1,223.5094	0.5886		31.0932	31.0932		31.0932	31.0932	3,299.1867	8,849.9853	12,149.1719	17.2304	0.1301	12,618.6910
Energy	16.5406	142.3199	67.2841	0.9022		11.4280	11.4280		11.4280	11.4280	0.0000	296,609.9165	296,609.9165	11.1673	4.3394	298,182.2296
Mobile	136.8607	1,446.4736	1,519.6979	9.8104	960.6690	4.0365	964.7055	258.0686	3.7750	261.8436	0.0000	914,831.6678	914,831.6678	33.1033	0.0000	915,659.2495
Waste						0.0000	0.0000		0.0000	0.0000	21,287.0797	0.0000	21,287.0797	1,258.0304	0.0000	52,737.8389
Water						0.0000	0.0000		0.0000	0.0000	3,999.5161	12,952.1047	16,951.6208	411.5711	9.8300	30,170.2457
Total	**1,056.7428**	**1,609.7320**	**2,810.4914**	**11.3012**	**960.6690**	**46.5577**	**1,007.2267**	**258.0686**	**46.2962**	**304.3648**	**28,585.7825**	**1,233,243.6743**	**1,261,829.4567**	**1,731.1024**	**14.2995**	**1,309,368.2547**

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	903.3415	20.9386	1,223.5094	0.5886		31.0932	31.0932		31.0932	31.0932	3,299.1867	8,849.9853	12,149.1719	17.2304	0.1301	12,618.6910
Energy	16.5406	142.3199	67.2841	0.9022		11.4280	11.4280		11.4280	11.4280	0.0000	296,609.9165	296,609.9165	11.1673	4.3394	298,182.2296
Mobile	136.8607	1,446.4736	1,519.6979	9.8104	960.6690	4.0365	964.7055	258.0686	3.7750	261.8436	0.0000	914,831.6678	914,831.6678	33.1033	0.0000	915,659.2495
Waste						0.0000	0.0000		0.0000	0.0000	21,287.0797	0.0000	21,287.0797	1,258.0304	0.0000	52,737.8389
Water						0.0000	0.0000		0.0000	0.0000	3,999.5161	12,952.1047	16,951.6208	411.5711	9.8300	30,170.2457
Total	**1,056.7428**	**1,609.7320**	**2,810.4914**	**11.3012**	**960.6690**	**46.5577**	**1,007.2267**	**258.0686**	**46.2962**	**304.3648**	**28,585.7825**	**1,233,243.6743**	**1,261,829.4567**	**1,731.1024**	**14.2995**	**1,309,368.2547**

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

3.0 Construction Detail

Construction Phase

Plan Bay Area 2040 Update - Alameda - New Land Uses - Alameda County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	
2	Site Preparation	Site Preparation	7/1/2014	6/30/2014	5	0	
3	Grading	Grading	7/1/2014	6/30/2014	5	0	
4	Building Construction	Building Construction	7/1/2014	6/30/2014	5	0	
5	Paving	Paving	7/1/2014	6/30/2014	5	0	
6	Architectural Coating	Architectural Coating	7/1/2014	6/30/2014	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 340,385,085; Residential Outdoor: 113,461,695; Non-Residential Indoor: 26,827,950; Non-Residential Outdoor: 8,942,650; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Plan Bay Area 2040 Update - Alameda - New Land Uses - Alameda County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	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	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	99,382.00	18,400.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	19,876.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	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**

3.3 Site Preparation - 2014

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	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	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**

3.3 Site Preparation - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive 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	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	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**

3.3 Site Preparation - 2014

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	0.0000	0.0000	0.0000	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**

3.4 Grading - 2014

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	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	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**

3.4 Grading - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive 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	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	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**

3.4 Grading - 2014

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	0.0000	0.0000	0.0000	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**

3.5 Building Construction - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.5 Building Construction - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.5 Building Construction - 2014

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	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	0.0000	0.0000	0.0000	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**

3.7 Architectural Coating - 2014

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	0.0000	0.0000	0.0000	0.0000	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	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**

3.7 Architectural Coating - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000	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	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**

3.7 Architectural Coating - 2014

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	0.0000	0.0000	0.0000	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**

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	136.8607	1,446.4736	1,519.6979	9.8104	960.6690	4.0365	964.7055	258.0686	3.7750	261.8436	0.0000	914,831.6678	914,831.6678	33.1033	0.0000	915,659.2495
Unmitigated	136.8607	1,446.4736	1,519.6979	9.8104	960.6690	4.0365	964.7055	258.0686	3.7750	261.8436	0.0000	914,831.6678	914,831.6678	33.1033	0.0000	915,659.2495

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	136,722.60	162,113.94	118818.45	318,245,868	318,245,868
Apartments Low Rise	273,188.45	296,817.80	251631.85	631,641,930	631,641,930
Apartments Mid Rise	275,675.75	264,897.45	242926.30	622,341,009	622,341,009
General Office Building	197,274.75	43,997.81	18779.55	358,173,118	358,173,118
Single Family Housing	278,345.76	289,748.58	252031.56	637,949,480	637,949,480
Total	1,161,207.31	1,057,575.58	884,187.71	2,568,351,405	2,568,351,405

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
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Apartments High Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Apartments Low Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Apartments Mid Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Single Family Housing	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	132,915.0869	132,915.0869	8.0298	1.3383	133,514.6435
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	132,915.0869	132,915.0869	8.0298	1.3383	133,514.6435
NaturalGas Mitigated	16.5406	142.3199	67.2841	0.9022		11.4280	11.4280		11.4280	11.4280	0.0000	163,694.8296	163,694.8296	3.1375	3.0011	164,667.5861
NaturalGas Unmitigated	16.5406	142.3199	67.2841	0.9022		11.4280	11.4280		11.4280	11.4280	0.0000	163,694.8296	163,694.8296	3.1375	3.0011	164,667.5861

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	3.58029e+008	1.9306	16.4974	7.0202	0.1053		1.3338	1.3338		1.3338	1.3338	0.0000	19,105.8062	19,105.8062	0.3662	0.3503	19,219.3425
Apartments Low Rise	8.72232e+008	4.7032	40.1911	17.1026	0.2565		3.2495	3.2495		3.2495	3.2495	0.0000	46,545.6356	46,545.6356	0.8921	0.8533	46,822.2330
Apartments Mid Rise	3.71797e+008	2.0048	17.1318	7.2902	0.1094		1.3851	1.3851		1.3851	1.3851	0.0000	19,840.5283	19,840.5283	0.3803	0.3637	19,958.4306
General Office Building	3.30878e+008	1.7842	16.2195	13.6244	0.0973		1.2327	1.2327		1.2327	1.2327	0.0000	17,656.9128	17,656.9128	0.3384	0.3237	17,761.8390
Single Family Housing	1.13459e+009	6.1179	52.2800	22.2468	0.3337		4.2269	4.2269		4.2269	4.2269	0.0000	60,545.9467	60,545.9467	1.1605	1.1100	60,905.7410
Total		**16.5406**	**142.3199**	**67.2841**	**0.9022**		**11.4280**	**11.4280**		**11.4280**	**11.4280**	**0.0000**	**163,694.8296**	**163,694.8296**	**3.1375**	**3.0011**	**164,667.5861**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments High Rise	3.58029e+008	1.9306	16.4974	7.0202	0.1053		1.3338	1.3338		1.3338	1.3338	0.0000	19,105.8062	19,105.8062	0.3662	0.3503	19,219.3425
Apartments Low Rise	8.72232e+008	4.7032	40.1911	17.1026	0.2565		3.2495	3.2495		3.2495	3.2495	0.0000	46,545.6356	46,545.6356	0.8921	0.8533	46,822.2330
Apartments Mid Rise	3.71797e+008	2.0048	17.1318	7.2902	0.1094		1.3851	1.3851		1.3851	1.3851	0.0000	19,840.5283	19,840.5283	0.3803	0.3637	19,958.4306
General Office Building	3.30878e+008	1.7842	16.2195	13.6244	0.0973		1.2327	1.2327		1.2327	1.2327	0.0000	17,656.9128	17,656.9128	0.3384	0.3237	17,761.8390
Single Family Housing	1.13459e+009	6.1179	52.2800	22.2468	0.3337		4.2269	4.2269		4.2269	4.2269	0.0000	60,545.9467	60,545.9467	1.1605	1.1100	60,905.7410
Total		**16.5406**	**142.3199**	**67.2841**	**0.9022**		**11.4280**	**11.4280**		**11.4280**	**11.4280**	**0.0000**	**163,694.8296**	**163,694.8296**	**3.1375**	**3.0011**	**164,667.5861**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.46366e+008	19,781.1073	1.1950	0.1992	19,870.3364
Apartments Low Rise	1.83505e+008	24,800.2655	1.4983	0.2497	24,912.1351
Apartments Mid Rise	1.81597e+008	24,542.4359	1.4827	0.2471	24,653.1425
General Office Building	2.24461e+008	30,335.3553	1.8326	0.3054	30,472.1927
Single Family Housing	2.47551e+008	33,455.9230	2.0212	0.3369	33,606.8368
Total		**132,915.0869**	**8.0298**	**1.3383**	**133,514.6435**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.46366e+008	19,781.1073	1.1950	0.1992	19,870.3364
Apartments Low Rise	1.83505e+008	24,800.2655	1.4983	0.2497	24,912.1351
Apartments Mid Rise	1.81597e+008	24,542.4359	1.4827	0.2471	24,653.1425
General Office Building	2.24461e+008	30,335.3553	1.8326	0.3054	30,472.1927
Single Family Housing	2.47551e+008	33,455.9230	2.0212	0.3369	33,606.8368
Total		**132,915.0869**	**8.0298**	**1.3383**	**133,514.6435**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	903.3415	20.9386	1,223.5094	0.5886		31.0932	31.0932		31.0932	31.0932	3,299.1867	8,849.9853	12,149.1719	17.2304	0.1301	12,618.6910
Unmitigated	903.3415	20.9386	1,223.5094	0.5886		31.0932	31.0932		31.0932	31.0932	3,299.1867	8,849.9853	12,149.1719	17.2304	0.1301	12,618.6910

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	127.6524					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	726.3320					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	17.3483	8.5900	153.6445	0.5319		25.1344	25.1344		25.1344	25.1344	3,299.1867	7,094.6170	10,393.8037	15.5590	0.1301	10,821.5392
Landscaping	32.0088	12.3486	1,069.8649	0.0568		5.9588	5.9588		5.9588	5.9588	0.0000	1,755.3682	1,755.3682	1.6713	0.0000	1,797.1518
Total	**903.3415**	**20.9386**	**1,223.5093**	**0.5886**		**31.0932**	**31.0932**		**31.0932**	**31.0932**	**3,299.1867**	**8,849.9853**	**12,149.1719**	**17.2304**	**0.1301**	**12,618.6910**

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	127.6524					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	726.3320					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	17.3483	8.5900	153.6445	0.5319		25.1344	25.1344		25.1344	25.1344	3,299.1867	7,094.6170	10,393.8037	15.5590	0.1301	10,821.5392
Landscaping	32.0088	12.3486	1,069.8649	0.0568		5.9588	5.9588		5.9588	5.9588	0.0000	1,755.3682	1,755.3682	1.6713	0.0000	1,797.1518
Total	**903.3415**	**20.9386**	**1,223.5093**	**0.5886**		**31.0932**	**31.0932**		**31.0932**	**31.0932**	**3,299.1867**	**8,849.9853**	**12,149.1719**	**17.2304**	**0.1301**	**12,618.6910**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	16,951.6208	411.5711	9.8300	30,170.2457
Unmitigated	16,951.6208	411.5711	9.8300	30,170.2457

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	2120.96 / 1337.13	2,856.3920	69.2434	1.6539	5,080.3262
Apartments Low Rise	2700.96 / 1702.78	3,637.5060	88.1788	2.1061	6,469.6011
Apartments Mid Rise	2700.96 / 1702.78	3,637.5060	88.1788	2.1061	6,469.6011
General Office Building	3178.82 / 1948.31	4,254.7024	103.7781	2.4785	7,587.7406
Single Family Housing	1904.97 / 1200.96	2,565.5144	62.1921	1.4854	4,562.9766
Total		**16,951.6208**	**411.5711**	**9.8300**	**30,170.2457**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	2120.96 / 1337.13	2,856.3920	69.2434	1.6539	5,080.3262
Apartments Low Rise	2700.96 / 1702.78	3,637.5060	88.1788	2.1061	6,469.6011
Apartments Mid Rise	2700.96 / 1702.78	3,637.5060	88.1788	2.1061	6,469.6011
General Office Building	3178.82 / 1948.31	4,254.7024	103.7781	2.4785	7,587.7406
Single Family Housing	1904.97 / 1200.96	2,565.5144	62.1921	1.4854	4,562.9766
Total		**16,951.6208**	**411.5711**	**9.8300**	**30,170.2457**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	21,287.0797	1,258.0304	0.0000	52,737.8389
Unmitigated	21,287.0797	1,258.0304	0.0000	52,737.8389

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	14974.4	3,039.6638	179.6390	0.0000	7,530.6384
Apartments Low Rise	19069.3	3,870.8956	228.7634	0.0000	9,589.9799
Apartments Mid Rise	19069.3	3,870.8956	228.7634	0.0000	9,589.9799
General Office Building	16633.3	3,376.4157	199.5405	0.0000	8,364.9269
Single Family Housing	35120.8	7,129.2091	421.3242	0.0000	17,662.3137
Total		**21,287.0797**	**1,258.0304**	**0.0000**	**52,737.8389**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	14974.4	3,039.6638	179.6390	0.0000	7,530.6384
Apartments Low Rise	19069.3	3,870.8956	228.7634	0.0000	9,589.9799
Apartments Mid Rise	19069.3	3,870.8956	228.7634	0.0000	9,589.9799
General Office Building	16633.3	3,376.4157	199.5405	0.0000	8,364.9269
Single Family Housing	35120.8	7,129.2091	421.3242	0.0000	17,662.3137
Total		**21,287.0797**	**1,258.0304**	**0.0000**	**52,737.8389**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Alameda - New Land Uses

Alameda County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	17,885.29	1000sqft	410.59	17,885,300.00	0
Apartments High Rise	32,553.00	Dwelling Unit	525.05	32,553,000.00	93102
Apartments Low Rise	41,455.00	Dwelling Unit	2,590.94	41,455,000.00	118561
Apartments Mid Rise	41,455.00	Dwelling Unit	1,090.92	41,455,000.00	118561
Single Family Housing	29,238.00	Dwelling Unit	9,492.86	52,628,400.00	83621

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.95	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Alameda - New Land Uses - Alameda County, Summer

Project Characteristics - Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Operational emissions only

Off-road Equipment -

Off-road Equipment - no construction

Trips and VMT - No construction

Grading -

Architectural Coating -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306

Area Coating -

Energy Use - CalEEMod Default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards.

Water And Wastewater -

Solid Waste -

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	11,000.00	0.00
tblConstructionPhase	NumDays	155,000.00	0.00
tblConstructionPhase	NumDays	10,000.00	0.00
tblConstructionPhase	NumDays	15,500.00	0.00
tblConstructionPhase	NumDays	11,000.00	0.00
tblConstructionPhase	NumDays	6,000.00	0.00
tblEnergyUse	T24E	502.89	477.75

Plan Bay Area 2040 Update - Alameda - New Land Uses - Alameda County, Summer

tblEnergyUse	T24E	274.84	197.88
tblEnergyUse	T24E	502.89	362.08
tblEnergyUse	T24E	4.30	4.08
tblEnergyUse	T24E	246.52	177.49
tblEnergyUse	T24NG	8,824.58	8,383.35
tblEnergyUse	T24NG	25,590.91	18,425.46
tblEnergyUse	T24NG	8,824.58	6,353.70
tblEnergyUse	T24NG	18.41	17.49
tblEnergyUse	T24NG	50,264.25	36,190.26
tblFireplaces	NumberGas	4,882.95	10,416.96
tblFireplaces	NumberGas	6,218.25	13,265.60
tblFireplaces	NumberGas	6,218.25	13,265.60
tblFireplaces	NumberGas	7,309.50	19,881.84
tblFireplaces	NumberWood	5,534.01	0.00
tblFireplaces	NumberWood	7,047.35	0.00
tblFireplaces	NumberWood	7,047.35	0.00
tblFireplaces	NumberWood	12,572.34	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Demolition
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.95
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2040

tblTripsAndVMT	VendorTripNumber	18,400.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	0.00
tblTripsAndVMT	WorkerTripNumber	99,382.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblTripsAndVMT	WorkerTripNumber	19,876.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	10.6593	0.0000	0.0000	9.8738	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**10.6593**	**0.0000**	**0.0000**	**9.8738**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	10.6593	0.0000	0.0000	9.8738	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**10.6593**	**0.0000**	**0.0000**	**9.8738**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	7,166.8880	1,533.7995	30,547.0992	67.0037		3,122.7822	3,122.7822		3,122.7822	3,122.7822	438,025.2754	1,425,534.8747	1,863,560.1501	2,095.0603	25.7407	1,923,607.3696
Energy	90.6333	779.8352	368.6802	4.9436		62.6194	62.6194		62.6194	62.6194		988,726.9161	988,726.9161	18.9506	18.1267	994,602.4258
Mobile	943.3332	8,699.0992	9,615.5830	62.4351	6,053.4785	24.4873	6,077.9658	1,621.0179	22.8999	1,643.9178		6,412,015.5232	6,412,015.5232	216.6994		6,417,433.0075
Total	**8,200.8545**	**11,012.7338**	**40,531.3624**	**134.3824**	**6,053.4785**	**3,209.8889**	**9,263.3674**	**1,621.0179**	**3,208.3015**	**4,829.3194**	**438,025.2754**	**8,826,277.3140**	**9,264,302.5894**	**2,330.7102**	**43.8673**	**9,335,642.8028**

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	lb/day										lb/day					
Area	7,166.8880	1,533.7995	30,547.0992	67.0037		3,122.7822	3,122.7822		3,122.7822	3,122.7822	438,025.2754	1,425,534.8747	1,863,560.1501	2,095.0603	25.7407	1,923,607.3696
Energy	90.6333	779.8352	368.6802	4.9436		62.6194	62.6194		62.6194	62.6194		988,726.9161	988,726.9161	18.9506	18.1267	994,602.4258
Mobile	943.3332	8,699.0992	9,615.5830	62.4351	6,053.4785	24.4873	6,077.9658	1,621.0179	22.8999	1,643.9178		6,412,015.5232	6,412,015.5232	216.6994		6,417,433.0075
Total	**8,200.8545**	**11,012.7338**	**40,531.3624**	**134.3824**	**6,053.4785**	**3,209.8889**	**9,263.3674**	**1,621.0179**	**3,208.3015**	**4,829.3194**	**438,025.2754**	**8,826,277.3140**	**9,264,302.5894**	**2,330.7102**	**43.8673**	**9,335,642.8028**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	
2	Site Preparation	Site Preparation	7/1/2014	6/30/2014	5	0	
3	Grading	Grading	7/1/2014	6/30/2014	5	0	
4	Building Construction	Building Construction	7/1/2014	6/30/2014	5	0	
5	Paving	Paving	7/1/2014	6/30/2014	5	0	
6	Architectural Coating	Architectural Coating	7/1/2014	6/30/2014	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 340,385,085; Residential Outdoor: 113,461,695; Non-Residential Indoor: 26,827,950; Non-Residential Outdoor: 8,942,650; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Plan Bay Area 2040 Update - Alameda - New Land Uses - Alameda County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73
Demolition	Excavators	3	0.00	158	0.38
Demolition	Rubber Tired Dozers	2	0.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	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	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.3 Site Preparation - 2014

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	lb/day										lb/day					
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	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	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**

3.3 Site Preparation - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	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	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**

3.3 Site Preparation - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.4 Grading - 2014

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	lb/day										lb/day					
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	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	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**

3.4 Grading - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	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	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**

3.4 Grading - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.5 Building Construction - 2014

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	lb/day										lb/day					
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	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**

3.5 Building Construction - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	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**

3.5 Building Construction - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	lb/day										lb/day					
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	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.7 Architectural Coating - 2014

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	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	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	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**

3.7 Architectural Coating - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	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	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**

3.7 Architectural Coating - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	943.3332	8,699.0992	9,615.5830	62.4351	6,053.4785	24.4873	6,077.9658	1,621.0179	22.8999	1,643.9178		6,412,015.5232	6,412,015.5232	216.6994		6,417,433.0075
Unmitigated	943.3332	8,699.0992	9,615.5830	62.4351	6,053.4785	24.4873	6,077.9658	1,621.0179	22.8999	1,643.9178		6,412,015.5232	6,412,015.5232	216.6994		6,417,433.0075

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	136,722.60	162,113.94	118818.45	318,245,868	318,245,868
Apartments Low Rise	273,188.45	296,817.80	251631.85	631,641,930	631,641,930
Apartments Mid Rise	275,675.75	264,897.45	242926.30	622,341,009	622,341,009
General Office Building	197,274.75	43,997.81	18779.55	358,173,118	358,173,118
Single Family Housing	278,345.76	289,748.58	252031.56	637,949,480	637,949,480
Total	1,161,207.31	1,057,575.58	884,187.71	2,568,351,405	2,568,351,405

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
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Apartments High Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Apartments Low Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Apartments Mid Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Single Family Housing	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	90.6333	779.8352	368.6802	4.9436		62.6194	62.6194		62.6194	62.6194		988,726.9161	988,726.9161	18.9506	18.1267	994,602.4258
NaturalGas Unmitigated	90.6333	779.8352	368.6802	4.9436		62.6194	62.6194		62.6194	62.6194		988,726.9161	988,726.9161	18.9506	18.1267	994,602.4258

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	lb/day										lb/day					
Apartments High Rise	980902	10.5784	90.3969	38.4668	0.5770		7.3087	7.3087		7.3087	7.3087		115,400.2538	115,400.2538	2.2118	2.1157	116,086.0199
Apartments Low Rise	2.38968e+006	25.7710	220.2252	93.7128	1.4057		17.8054	17.8054		17.8054	17.8054		281,138.5236	281,138.5236	5.3885	5.1542	282,809.1892
Apartments Mid Rise	1.01862e+006	10.9852	93.8731	39.9460	0.5992		7.5897	7.5897		7.5897	7.5897		119,838.0205	119,838.0205	2.2969	2.1970	120,550.1579
General Office Building	906515	9.7761	88.8740	74.6542	0.5332		6.7544	6.7544		6.7544	6.7544		106,648.8477	106,648.8477	2.0441	1.9552	107,282.6085
Single Family Housing	3.10846e+006	33.5226	286.4660	121.9004	1.8285		23.1611	23.1611		23.1611	23.1611		365,701.2706	365,701.2706	7.0093	6.7045	367,874.4504
Total		**90.6333**	**779.8352**	**368.6802**	**4.9436**		**62.6194**	**62.6194**		**62.6194**	**62.6194**		**988,726.9161**	**988,726.9161**	**18.9506**	**18.1267**	**994,602.4258**

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	lb/day										lb/day					
Apartments High Rise	980.902	10.5784	90.3969	38.4668	0.5770		7.3087	7.3087		7.3087	7.3087		115,400.2538	115,400.2538	2.2118	2.1157	116,086.0199
Apartments Low Rise	2389.68	25.7710	220.2252	93.7128	1.4057		17.8054	17.8054		17.8054	17.8054		281,138.5236	281,138.5236	5.3885	5.1542	282,809.1892
Apartments Mid Rise	1018.62	10.9852	93.8731	39.9460	0.5992		7.5897	7.5897		7.5897	7.5897		119,838.0205	119,838.0205	2.2969	2.1970	120,550.1579
General Office Building	906.515	9.7761	88.8740	74.6542	0.5332		6.7544	6.7544		6.7544	6.7544		106,648.8477	106,648.8477	2.0441	1.9552	107,282.6085
Single Family Housing	3108.46	33.5226	286.4660	121.9004	1.8285		23.1611	23.1611		23.1611	23.1611		365,701.2706	365,701.2706	7.0093	6.7045	367,874.4504
Total		**90.6333**	**779.8352**	**368.6802**	**4.9436**		**62.6194**	**62.6194**		**62.6194**	**62.6194**		**988,726.9161**	**988,726.9161**	**18.9506**	**18.1267**	**994,602.4258**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7,166.8880	1,533.7995	30,547.0992	67.0037		3,122.7822	3,122.7822		3,122.7822	3,122.7822	438,025.2754	1,425,534.8747	1,863,560.1501	2,095.0603	25.7407	1,923,607.3696
Unmitigated	7,166.8880	1,533.7995	30,547.0992	67.0037		3,122.7822	3,122.7822		3,122.7822	3,122.7822	438,025.2754	1,425,534.8747	1,863,560.1501	2,095.0603	25.7407	1,923,607.3696

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	lb/day										lb/day					
Architectural Coating	699.4654					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3,979.9014					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2,131.8676	1,396.5927	18,659.7119	66.3732		3,056.5732	3,056.5732		3,056.5732	3,056.5732	438,025.2754	1,404,035.2941	1,842,060.5696	2,074.5898	25.7407	1,901,596.0276
Landscaping	355.6537	137.2068	11,887.3873	0.6305		66.2091	66.2091		66.2091	66.2091		21,499.5806	21,499.5806	20.4705		22,011.3419
Total	**7,166.8880**	**1,533.7995**	**30,547.0992**	**67.0037**		**3,122.7822**	**3,122.7822**		**3,122.7822**	**3,122.7822**	**438,025.2754**	**1,425,534.8747**	**1,863,560.1501**	**2,095.0603**	**25.7407**	**1,923,607.3696**

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	lb/day										lb/day					
Architectural Coating	699.4654					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3,979.9014					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2,131.8676	1,396.5927	18,659.7119	66.3732		3,056.5732	3,056.5732		3,056.5732	3,056.5732	438,025.2754	1,404,035.2941	1,842,060.5696	2,074.5898	25.7407	1,901,596.0276
Landscaping	355.6537	137.2068	11,887.3873	0.6305		66.2091	66.2091		66.2091	66.2091		21,499.5806	21,499.5806	20.4705		22,011.3419
Total	**7,166.8880**	**1,533.7995**	**30,547.0992**	**67.0037**		**3,122.7822**	**3,122.7822**		**3,122.7822**	**3,122.7822**	**438,025.2754**	**1,425,534.8747**	**1,863,560.1501**	**2,095.0603**	**25.7407**	**1,923,607.3696**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Alameda - Net Reduction in Land Uses

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	807.17	1000sqft	18.53	807,170.00	0
Regional Shopping Center	5,523.44	1000sqft	126.80	5,523,440.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Grading -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	220.00	0.00
tblConstructionPhase	NumDays	3,100.00	0.00
tblConstructionPhase	NumDays	200.00	0.00
tblConstructionPhase	NumDays	310.00	0.00
tblConstructionPhase	NumDays	220.00	0.00
tblConstructionPhase	NumDays	120.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Alameda - Net Reduction in Land Uses - Alameda County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	28.0312	5.8000e-004	0.0602	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	0.1131	0.1131	3.3000e-004	0.0000	0.1213
Energy	0.2629	2.3901	2.0077	0.0143		0.1816	0.1816		0.1816	0.1816	0.0000	18,151.4843	18,151.4843	1.0150	0.2264	18,244.3366
Mobile	110.2012	556.2202	1,133.8595	2.3470	153.9275	5.5473	159.4748	41.4374	5.2696	46.7069	0.0000	214,790.8520	214,790.8520	14.6191	0.0000	215,156.3287
Waste						0.0000	0.0000		0.0000	0.0000	1,380.4400	0.0000	1,380.4400	81.5817	0.0000	3,419.9818
Water						0.0000	0.0000		0.0000	0.0000	189.0177	809.2775	998.2952	19.4642	0.4677	1,624.2759
Total	**138.4953**	**558.6109**	**1,135.9273**	**2.3613**	**153.9275**	**5.7292**	**159.6567**	**41.4374**	**5.4514**	**46.8888**	**1,569.4577**	**233,751.7270**	**235,321.1847**	**116.6803**	**0.6941**	**238,445.0442**

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	28.0312	5.8000e-004	0.0602	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	0.1131	0.1131	3.3000e-004	0.0000	0.1213
Energy	0.2629	2.3901	2.0077	0.0143		0.1816	0.1816		0.1816	0.1816	0.0000	18,151.4843	18,151.4843	1.0150	0.2264	18,244.3366
Mobile	110.2012	556.2202	1,133.8595	2.3470	153.9275	5.5473	159.4748	41.4374	5.2696	46.7069	0.0000	214,790.8520	214,790.8520	14.6191	0.0000	215,156.3287
Waste						0.0000	0.0000		0.0000	0.0000	1,380.4400	0.0000	1,380.4400	81.5817	0.0000	3,419.9818
Water						0.0000	0.0000		0.0000	0.0000	189.0177	809.2775	998.2952	19.4642	0.4677	1,624.2759
Total	**138.4953**	**558.6109**	**1,135.9273**	**2.3613**	**153.9275**	**5.7292**	**159.6567**	**41.4374**	**5.4514**	**46.8888**	**1,569.4577**	**233,751.7270**	**235,321.1847**	**116.6803**	**0.6941**	**238,445.0442**

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

3.0 Construction Detail

Construction Phase

Plan Bay Area 2040 Update - Alameda - Net Reduction in Land Uses - Alameda County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	
2	Site Preparation	Site Preparation	7/1/2014	6/30/2014	5	0	
3	Grading	Grading	7/1/2014	6/30/2014	5	0	
4	Building Construction	Building Construction	7/1/2014	6/30/2014	5	0	
5	Paving	Paving	7/1/2014	6/30/2014	5	0	
6	Architectural Coating	Architectural Coating	7/1/2014	6/30/2014	5	0	

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: 9,495,915; Non-Residential Outdoor: 3,165,305; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Plan Bay Area 2040 Update - Alameda - Net Reduction in Land Uses - Alameda County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Plan Bay Area 2040 Update - Alameda - Net Reduction in Land Uses - Alameda County, Annual

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	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	2,107.00	1,038.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	421.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	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**

3.3 Site Preparation - 2014

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	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	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**

3.3 Site Preparation - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive 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	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	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**

3.3 Site Preparation - 2014

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	0.0000	0.0000	0.0000	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**

3.4 Grading - 2014

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	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	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**

3.4 Grading - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive 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	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	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**

3.4 Grading - 2014

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	0.0000	0.0000	0.0000	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**

3.5 Building Construction - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.5 Building Construction - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.5 Building Construction - 2014

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	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	0.0000	0.0000	0.0000	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**

3.7 Architectural Coating - 2014

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	0.0000	0.0000	0.0000	0.0000	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	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**

3.7 Architectural Coating - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000	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	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**

3.7 Architectural Coating - 2014

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	0.0000	0.0000	0.0000	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**

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	110.2012	556.2202	1,133.8595	2.3470	153.9275	5.5473	159.4748	41.4374	5.2696	46.7069	0.0000	214,790.8520	214,790.8520	14.6191	0.0000	215,156.3287
Unmitigated	110.2012	556.2202	1,133.8595	2.3470	153.9275	5.5473	159.4748	41.4374	5.2696	46.7069	0.0000	214,790.8520	214,790.8520	14.6191	0.0000	215,156.3287

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	5,512.97	2,009.85	589.23	11,297,811	11,297,811
Regional Shopping Center	235,850.89	276,006.30	139411.63	399,420,964	399,420,964
Total	241,363.86	278,016.15	140,000.86	410,718,775	410,718,775

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.547438	0.047363	0.190248	0.115325	0.021763	0.005234	0.020654	0.039416	0.001932	0.003860	0.005630	0.000257	0.000879
Regional Shopping Center	0.547438	0.047363	0.190248	0.115325	0.021763	0.005234	0.020654	0.039416	0.001932	0.003860	0.005630	0.000257	0.000879

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	15,549.6119	15,549.6119	0.9652	0.1787	15,627.0025
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	15,549.6119	15,549.6119	0.9652	0.1787	15,627.0025
NaturalGas Mitigated	0.2629	2.3901	2.0077	0.0143		0.1816	0.1816		0.1816	0.1816	0.0000	2,601.8724	2,601.8724	0.0499	0.0477	2,617.3340
NaturalGas Unmitigated	0.2629	2.3901	2.0077	0.0143		0.1816	0.1816		0.1816	0.1816	0.0000	2,601.8724	2,601.8724	0.0499	0.0477	2,617.3340

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					
Industrial Park	1.90411e+007	0.1027	0.9334	0.7841	5.6000e-003		0.0709	0.0709		0.0709	0.0709	0.0000	1,016.1078	1,016.1078	0.0195	0.0186	1,022.1460
Regional Shopping Center	2.97161e+007	0.1602	1.4567	1.2236	8.7400e-003		0.1107	0.1107		0.1107	0.1107	0.0000	1,585.7647	1,585.7647	0.0304	0.0291	1,595.1881
Total		**0.2629**	**2.3901**	**2.0077**	**0.0143**		**0.1817**	**0.1817**		**0.1817**	**0.1817**	**0.0000**	**2,601.8724**	**2,601.8724**	**0.0499**	**0.0477**	**2,617.3340**

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					
Industrial Park	1.90411e+007	0.1027	0.9334	0.7841	5.6000e-003		0.0709	0.0709		0.0709	0.0709	0.0000	1,016.1078	1,016.1078	0.0195	0.0186	1,022.1460
Regional Shopping Center	2.97161e+007	0.1602	1.4567	1.2236	8.7400e-003		0.1107	0.1107		0.1107	0.1107	0.0000	1,585.7647	1,585.7647	0.0304	0.0291	1,595.1881
Total		**0.2629**	**2.3901**	**2.0077**	**0.0143**		**0.1817**	**0.1817**		**0.1817**	**0.1817**	**0.0000**	**2,601.8724**	**2,601.8724**	**0.0499**	**0.0477**	**2,617.3340**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	1.17524e+007	2,318.8966	0.1439	0.0267	2,330.4378
Regional Shopping Center	6.70546e+007	13,230.7153	0.8212	0.1521	13,296.5647
Total		**15,549.6119**	**0.9652**	**0.1787**	**15,627.0025**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	1.17524e+007	2,318.8966	0.1439	0.0267	2,330.4378
Regional Shopping Center	6.70546e+007	13,230.7153	0.8212	0.1521	13,296.5647
Total		**15,549.6119**	**0.9652**	**0.1787**	**15,627.0025**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	28.0312	5.8000e-004	0.0602	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	0.1131	0.1131	3.3000e-004	0.0000	0.1213
Unmitigated	28.0312	5.8000e-004	0.0602	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	0.1131	0.1131	3.3000e-004	0.0000	0.1213

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	3.3010					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	24.7242					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.9500e-003	5.8000e-004	0.0602	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	0.1131	0.1131	3.3000e-004	0.0000	0.1213
Total	**28.0312**	**5.8000e-004**	**0.0602**	**0.0000**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.1131**	**0.1131**	**3.3000e-004**	**0.0000**	**0.1213**

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	3.3010					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	24.7242					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.9500e-003	5.8000e-004	0.0602	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	0.1131	0.1131	3.3000e-004	0.0000	0.1213
Total	**28.0312**	**5.8000e-004**	**0.0602**	**0.0000**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.1131**	**0.1131**	**3.3000e-004**	**0.0000**	**0.1213**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	998.2952	19.4642	0.4677	1,624.2759
Unmitigated	998.2952	19.4642	0.4677	1,624.2759

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	186.658 / 0	258.5051	6.0946	0.1459	454.3507
Regional Shopping Center	409.135 / 250.76	739.7901	13.3695	0.3218	1,169.9252
Total		**998.2952**	**19.4642**	**0.4677**	**1,624.2759**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	186.658 / 0	258.5051	6.0946	0.1459	454.3507
Regional Shopping Center	409.135 / 250.76	739.7901	13.3695	0.3218	1,169.9252
Total		**998.2952**	**19.4642**	**0.4677**	**1,624.2759**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1,380.4400	81.5817	0.0000	3,419.9818
Unmitigated	1,380.4400	81.5817	0.0000	3,419.9818

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	1000.89	203.1716	12.0071	0.0000	503.3491
Regional Shopping Center	5799.61	1,177.2684	69.5746	0.0000	2,916.6327
Total		**1,380.4400**	**81.5817**	**0.0000**	**3,419.9818**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	1000.89	203.1716	12.0071	0.0000	503.3491
Regional Shopping Center	5799.61	1,177.2684	69.5746	0.0000	2,916.6327
Total		**1,380.4400**	**81.5817**	**0.0000**	**3,419.9818**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Alameda - Net Reduction in Land Uses

Alameda County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	807.17	1000sqft	18.53	807,170.00	0
Regional Shopping Center	5,523.44	1000sqft	126.80	5,523,440.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Grading -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	220.00	0.00
tblConstructionPhase	NumDays	3,100.00	0.00
tblConstructionPhase	NumDays	200.00	0.00
tblConstructionPhase	NumDays	310.00	0.00
tblConstructionPhase	NumDays	220.00	0.00
tblConstructionPhase	NumDays	120.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	16.2465	0.0000	0.0000	15.1548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**16.2465**	**0.0000**	**0.0000**	**15.1548**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	16.2465	0.0000	0.0000	15.1548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**16.2465**	**0.0000**	**0.0000**	**15.1548**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	153.6289	6.4700e-003	0.6686	5.0000e-005		2.4200e-003	2.4200e-003		2.4200e-003	2.4200e-003		1.3855	1.3855	4.0100e-003		1.4858
Energy	1.4406	13.0962	11.0008	0.0786		0.9953	0.9953		0.9953	0.9953		15,715.4706	15,715.4706	0.3012	0.2881	15,808.8598
Mobile	830.9860	3,588.4532	7,591.5543	16.5426	1,065.3180	36.8020	1,102.1201	285.8567	34.9580	320.8147		1,668,560.2146	1,668,560.2146	106.0833		1,671,212.2966
Total	**986.0555**	**3,601.5559**	**7,603.2237**	**16.6213**	**1,065.3180**	**37.7998**	**1,103.1178**	**285.8567**	**35.9557**	**321.8124**		**1,684,277.0707**	**1,684,277.0707**	**106.3885**	**0.2881**	**1,687,022.6421**

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	lb/day										lb/day					
Area	153.6289	6.4700e-003	0.6686	5.0000e-005		2.4200e-003	2.4200e-003		2.4200e-003	2.4200e-003		1.3855	1.3855	4.0100e-003		1.4858
Energy	1.4406	13.0962	11.0008	0.0786		0.9953	0.9953		0.9953	0.9953		15,715.4706	15,715.4706	0.3012	0.2881	15,808.8598
Mobile	830.9860	3,588.4532	7,591.5543	16.5426	1,065.3180	36.8020	1,102.1201	285.8567	34.9580	320.8147		1,668,560.2146	1,668,560.2146	106.0833		1,671,212.2966
Total	**986.0555**	**3,601.5559**	**7,603.2237**	**16.6213**	**1,065.3180**	**37.7998**	**1,103.1178**	**285.8567**	**35.9557**	**321.8124**		**1,684,277.0707**	**1,684,277.0707**	**106.3885**	**0.2881**	**1,687,022.6421**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	
2	Site Preparation	Site Preparation	7/1/2014	6/30/2014	5	0	
3	Grading	Grading	7/1/2014	6/30/2014	5	0	
4	Building Construction	Building Construction	7/1/2014	6/30/2014	5	0	
5	Paving	Paving	7/1/2014	6/30/2014	5	0	
6	Architectural Coating	Architectural Coating	7/1/2014	6/30/2014	5	0	

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: 9,495,915; Non-Residential Outdoor: 3,165,305; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Plan Bay Area 2040 Update - Alameda - Net Reduction in Land Uses - Alameda County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Plan Bay Area 2040 Update - Alameda - Net Reduction in Land Uses - Alameda County, Summer

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	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	2,107.00	1,038.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	421.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.3 Site Preparation - 2014

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	lb/day										lb/day					
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	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	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**

3.3 Site Preparation - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	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	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**

3.3 Site Preparation - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.4 Grading - 2014

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	lb/day										lb/day					
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	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	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**

3.4 Grading - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	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	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**

3.4 Grading - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.5 Building Construction - 2014

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	lb/day										lb/day					
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	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**

3.5 Building Construction - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	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**

3.5 Building Construction - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	lb/day										lb/day					
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	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.7 Architectural Coating - 2014

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	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	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	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**

3.7 Architectural Coating - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	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	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**

3.7 Architectural Coating - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	830.9860	3,588.4532	7,591.5543	16.5426	1,065.3180	36.8020	1,102.1201	285.8567	34.9580	320.8147		1,668,560.2146	1,668,560.2146	106.0833		1,671,212.2966
Unmitigated	830.9860	3,588.4532	7,591.5543	16.5426	1,065.3180	36.8020	1,102.1201	285.8567	34.9580	320.8147		1,668,560.2146	1,668,560.2146	106.0833		1,671,212.2966

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	5,512.97	2,009.85	589.23	11,297,811	11,297,811
Regional Shopping Center	235,850.89	276,006.30	139411.63	399,420,964	399,420,964
Total	241,363.86	278,016.15	140,000.86	410,718,775	410,718,775

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.547438	0.047363	0.190248	0.115325	0.021763	0.005234	0.020654	0.039416	0.001932	0.003860	0.005630	0.000257	0.000879
Regional Shopping Center	0.547438	0.047363	0.190248	0.115325	0.021763	0.005234	0.020654	0.039416	0.001932	0.003860	0.005630	0.000257	0.000879

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.4406	13.0962	11.0008	0.0786		0.9953	0.9953		0.9953	0.9953		15,715.4706	15,715.4706	0.3012	0.2881	15,808.8598
NaturalGas Unmitigated	1.4406	13.0962	11.0008	0.0786		0.9953	0.9953		0.9953	0.9953		15,715.4706	15,715.4706	0.3012	0.2881	15,808.8598

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	lb/day										lb/day					
Industrial Park	52167.5	0.5626	5.1145	4.2962	0.0307		0.3887	0.3887		0.3887	0.3887		6,137.3538	6,137.3538	0.1176	0.1125	6,173.8251
Regional Shopping Center	81414	0.8780	7.9818	6.7047	0.0479		0.6066	0.6066		0.6066	0.6066		9,578.1167	9,578.1167	0.1836	0.1756	9,635.0347
Total		**1.4406**	**13.0962**	**11.0008**	**0.0786**		**0.9953**	**0.9953**		**0.9953**	**0.9953**		**15,715.4706**	**15,715.4706**	**0.3012**	**0.2881**	**15,808.8598**

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	lb/day										lb/day					
Industrial Park	52.1675	0.5626	5.1145	4.2962	0.0307		0.3887	0.3887		0.3887	0.3887		6,137.3538	6,137.3538	0.1176	0.1125	6,173.8251
Regional Shopping Center	81.414	0.8780	7.9818	6.7047	0.0479		0.6066	0.6066		0.6066	0.6066		9,578.1167	9,578.1167	0.1836	0.1756	9,635.0347
Total		**1.4406**	**13.0962**	**11.0008**	**0.0786**		**0.9953**	**0.9953**		**0.9953**	**0.9953**		**15,715.4706**	**15,715.4706**	**0.3012**	**0.2881**	**15,808.8598**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	153.6289	6.4700e-003	0.6686	5.0000e-005		2.4200e-003	2.4200e-003		2.4200e-003	2.4200e-003		1.3855	1.3855	4.0100e-003		1.4858
Unmitigated	153.6289	6.4700e-003	0.6686	5.0000e-005		2.4200e-003	2.4200e-003		2.4200e-003	2.4200e-003		1.3855	1.3855	4.0100e-003		1.4858

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	lb/day										lb/day					
Architectural Coating	18.0878					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	135.4751					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0661	6.4700e-003	0.6686	5.0000e-005		2.4200e-003	2.4200e-003		2.4200e-003	2.4200e-003		1.3855	1.3855	4.0100e-003		1.4858
Total	**153.6289**	**6.4700e-003**	**0.6686**	**5.0000e-005**		**2.4200e-003**	**2.4200e-003**		**2.4200e-003**	**2.4200e-003**		**1.3855**	**1.3855**	**4.0100e-003**		**1.4858**

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	lb/day										lb/day					
Architectural Coating	18.0878					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	135.4751					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0661	6.4700e-003	0.6686	5.0000e-005		2.4200e-003	2.4200e-003		2.4200e-003	2.4200e-003		1.3855	1.3855	4.0100e-003		1.4858
Total	**153.6289**	**6.4700e-003**	**0.6686**	**5.0000e-005**		**2.4200e-003**	**2.4200e-003**		**2.4200e-003**	**2.4200e-003**		**1.3855**	**1.3855**	**4.0100e-003**		**1.4858**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Contra Costa - New Land Uses

Contra Costa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	8,314.99	1000sqft	190.89	8,314,990.00	0
Apartments High Rise	5,357.00	Dwelling Unit	86.40	5,357,000.00	15321
Apartments Low Rise	19,491.50	Dwelling Unit	1,218.22	19,491,500.00	55746
Apartments Mid Rise	19,491.50	Dwelling Unit	512.93	19,491,500.00	55746
Single Family Housing	41,100.00	Dwelling Unit	13,344.16	73,980,000.00	117546

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.95	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Contra Costa - New Land Uses - Contra Costa County, Annual

Project Characteristics - 'Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards.

Plan Bay Area 2040 Update - Contra Costa - New Land Uses - Contra Costa County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	392.47	372.85
tblEnergyUse	T24E	431.22	310.48
tblEnergyUse	T24E	392.47	282.58
tblEnergyUse	T24E	6.40	6.08
tblEnergyUse	T24E	368.92	265.62
tblEnergyUse	T24NG	7,914.07	7,518.37
tblEnergyUse	T24NG	10,164.29	7,318.29
tblEnergyUse	T24NG	7,914.07	5,698.13
tblEnergyUse	T24NG	16.39	15.57
tblEnergyUse	T24NG	32,797.58	23,614.26
tblFireplaces	NumberGas	803.55	1,714.24
tblFireplaces	NumberGas	2,923.72	6,237.27
tblFireplaces	NumberGas	2,923.72	6,237.27
tblFireplaces	NumberGas	10,275.00	27,948.00
tblFireplaces	NumberWood	910.69	0.00
tblFireplaces	NumberWood	3,313.55	0.00
tblFireplaces	NumberWood	3,313.55	0.00
tblFireplaces	NumberWood	17,673.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.95
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2040

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					
2014					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum					**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

	ROG	NOx	CO	SO2	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					
2014					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Contra Costa - New Land Uses - Contra Costa County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	615.7323	13.9228	761.7070	0.4804		24.7801	24.7801		24.7801	24.7801	2,797.7854	6,296.7586	9,094.5439	14.1667	0.0964	9,477.4493
Energy	8.9729	77.0596	35.4319	0.4894		6.1995	6.1995		6.1995	6.1995	0.0000	182,901.1984	182,901.1984	7.3869	2.5755	183,853.3673
Mobile	80.1436	472.4941	952.2820	5.1837	636.1090	2.1866	638.2956	170.5392	2.0348	172.5740	0.0000	478,410.2112	478,410.2112	13.1750	0.0000	478,739.5849
Waste						0.0000	0.0000		0.0000	0.0000	15,731.5276	0.0000	15,731.5276	929.7067	0.0000	38,974.1938
Water						0.0000	0.0000		0.0000	0.0000	2,234.9311	7,240.1162	9,475.0473	229.9863	5.4931	16,861.6311
Total	**704.8487**	**563.4765**	**1,749.4209**	**6.1535**	**636.1090**	**33.1662**	**669.2751**	**170.5392**	**33.0144**	**203.5536**	**20,764.2441**	**674,848.2844**	**695,612.5284**	**1,194.4214**	**8.1650**	**727,906.2264**

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	615.7323	13.9228	761.7070	0.4804		24.7801	24.7801		24.7801	24.7801	2,797.7854	6,296.7586	9,094.5439	14.1667	0.0964	9,477.4493
Energy	8.9729	77.0596	35.4319	0.4894		6.1995	6.1995		6.1995	6.1995	0.0000	182,901.1984	182,901.1984	7.3869	2.5755	183,853.3673
Mobile	80.1436	472.4941	952.2820	5.1837	636.1090	2.1866	638.2956	170.5392	2.0348	172.5740	0.0000	478,410.2112	478,410.2112	13.1750	0.0000	478,739.5849
Waste						0.0000	0.0000		0.0000	0.0000	15,731.5276	0.0000	15,731.5276	929.7067	0.0000	38,974.1938
Water						0.0000	0.0000		0.0000	0.0000	2,234.9311	7,240.1162	9,475.0473	229.9863	5.4931	16,861.6311
Total	**704.8487**	**563.4765**	**1,749.4209**	**6.1535**	**636.1090**	**33.1662**	**669.2751**	**170.5392**	**33.0144**	**203.5536**	**20,764.2441**	**674,848.2844**	**695,612.5284**	**1,194.4214**	**8.1650**	**727,906.2264**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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

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				0.00	10.80	7.30				

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	80.1436	472.4941	952.2820	5.1837	636.1090	2.1866	638.2956	170.5392	2.0348	172.5740	0.0000	478,410.2112	478,410.2112	13.1750	0.0000	478,739.5849
Unmitigated	80.1436	472.4941	952.2820	5.1837	636.1090	2.1866	638.2956	170.5392	2.0348	172.5740	0.0000	478,410.2112	478,410.2112	13.1750	0.0000	478,739.5849

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	22,499.40	26,677.86	19553.05	52,371,306	52,371,306
Apartments Low Rise	128,448.99	139,559.14	118313.41	296,988,269	296,988,269
Apartments Mid Rise	129,618.48	124,550.69	114220.19	292,615,119	292,615,119
General Office Building	91,714.34	20,454.88	8730.74	166,517,059	166,517,059
Single Family Housing	391,272.00	407,301.00	354282.00	896,768,713	896,768,713
Total	763,553.20	718,543.56	615,099.38	1,705,260,466	1,705,260,466

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
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.610313	0.034164	0.184108	0.106158	0.010619	0.004825	0.011002	0.027530	0.001689	0.001441	0.005033	0.002507	0.000611
Apartments High Rise	0.610313	0.034164	0.184108	0.106158	0.010619	0.004825	0.011002	0.027530	0.001689	0.001441	0.005033	0.002507	0.000611
Apartments Low Rise	0.610313	0.034164	0.184108	0.106158	0.010619	0.004825	0.011002	0.027530	0.001689	0.001441	0.005033	0.002507	0.000611
Apartments Mid Rise	0.610313	0.034164	0.184108	0.106158	0.010619	0.004825	0.011002	0.027530	0.001689	0.001441	0.005033	0.002507	0.000611
Single Family Housing	0.610313	0.034164	0.184108	0.106158	0.010619	0.004825	0.011002	0.027530	0.001689	0.001441	0.005033	0.002507	0.000611

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Plan Bay Area 2040 Update - Contra Costa - New Land Uses - Contra Costa County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	94,100.5095	94,100.5095	5.6849	0.9475	94,524.9804
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	94,100.5095	94,100.5095	5.6849	0.9475	94,524.9804
NaturalGas Mitigated	8.9729	77.0596	35.4319	0.4894		6.1995	6.1995		6.1995	6.1995	0.0000	88,800.6888	88,800.6888	1.7020	1.6280	89,328.3869
NaturalGas Unmitigated	8.9729	77.0596	35.4319	0.4894		6.1995	6.1995		6.1995	6.1995	0.0000	88,800.6888	88,800.6888	1.7020	1.6280	89,328.3869

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					
Apartments High Rise	5.71772e+007	0.3083	2.6346	1.1211	0.0168		0.2130	0.2130		0.2130	0.2130	0.0000	3,051.1944	3,051.1944	0.0585	0.0559	3,069.3262
Apartments Low Rise	2.0414e+008	1.1008	9.4065	4.0028	0.0600		0.7605	0.7605		0.7605	0.7605	0.0000	10,893.6936	10,893.6936	0.2088	0.1997	10,958.4294
Apartments Mid Rise	1.72561e+008	0.9305	7.9513	3.3835	0.0508		0.6429	0.6429		0.6429	0.6429	0.0000	9,208.5010	9,208.5010	0.1765	0.1688	9,263.2225
General Office Building	1.29967e+008	0.7008	6.3710	5.3516	0.0382		0.4842	0.4842		0.4842	0.4842	0.0000	6,935.5581	6,935.5581	0.1329	0.1272	6,976.7727
Single Family Housing	1.10022e+009	5.9325	50.6963	21.5729	0.3236		4.0989	4.0989		4.0989	4.0989	0.0000	58,711.7417	58,711.7417	1.1253	1.0764	59,060.6362
Total		**8.9729**	**77.0596**	**35.4319**	**0.4894**		**6.1994**	**6.1994**		**6.1994**	**6.1994**	**0.0000**	**88,800.6888**	**88,800.6888**	**1.7020**	**1.6280**	**89,328.3869**

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					
Apartments High Rise	5.71772e+007	0.3083	2.6346	1.1211	0.0168		0.2130	0.2130		0.2130	0.2130	0.0000	3,051.1944	3,051.1944	0.0585	0.0559	3,069.3262
Apartments Low Rise	2.0414e+008	1.1008	9.4065	4.0028	0.0600		0.7605	0.7605		0.7605	0.7605	0.0000	10,893.6936	10,893.6936	0.2088	0.1997	10,958.4294
Apartments Mid Rise	1.72561e+008	0.9305	7.9513	3.3835	0.0508		0.6429	0.6429		0.6429	0.6429	0.0000	9,208.5010	9,208.5010	0.1765	0.1688	9,263.2225
General Office Building	1.29967e+008	0.7008	6.3710	5.3516	0.0382		0.4842	0.4842		0.4842	0.4842	0.0000	6,935.5581	6,935.5581	0.1329	0.1272	6,976.7727
Single Family Housing	1.10022e+009	5.9325	50.6963	21.5729	0.3236		4.0989	4.0989		4.0989	4.0989	0.0000	58,711.7417	58,711.7417	1.1253	1.0764	59,060.6362
Total		**8.9729**	**77.0596**	**35.4319**	**0.4894**		**6.1994**	**6.1994**		**6.1994**	**6.1994**	**0.0000**	**88,800.6888**	**88,800.6888**	**1.7020**	**1.6280**	**89,328.3869**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	2.35244e+007	3,179.2778	0.1921	0.0320	3,193.6190
Apartments Low Rise	8.84758e+007	11,957.3119	0.7224	0.1204	12,011.2492
Apartments Mid Rise	8.38345e+007	11,330.0481	0.6845	0.1141	11,381.1559
General Office Building	1.48838e+008	20,115.1786	1.2152	0.2025	20,205.9146
Single Family Housing	3.51605e+008	47,518.6932	2.8707	0.4785	47,733.0416
Total		**94,100.5096**	**5.6849**	**0.9475**	**94,524.9804**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	2.35244e+007	3,179.2778	0.1921	0.0320	3,193.6190
Apartments Low Rise	8.84758e+007	11,957.3119	0.7224	0.1204	12,011.2492
Apartments Mid Rise	8.38345e+007	11,330.0481	0.6845	0.1141	11,381.1559
General Office Building	1.48838e+008	20,115.1786	1.2152	0.2025	20,205.9146
Single Family Housing	3.51605e+008	47,518.6932	2.8707	0.4785	47,733.0416
Total		**94,100.5096**	**5.6849**	**0.9475**	**94,524.9804**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	615.7323	13.9228	761.7070	0.4804		24.7801	24.7801		24.7801	24.7801	2,797.7854	6,296.7586	9,094.5439	14.1667	0.0964	9,477.4493
Unmitigated	615.7323	13.9228	761.7070	0.4804		24.7801	24.7801		24.7801	24.7801	2,797.7854	6,296.7586	9,094.5439	14.1667	0.0964	9,477.4493

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	87.6260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	494.5730					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	14.6353	6.6316	130.0162	0.4469		21.2618	21.2618		21.2618	21.2618	2,797.7854	5,260.3258	8,058.1112	13.1799	0.0964	8,416.3476
Landscaping	18.8980	7.2912	631.6908	0.0335		3.5184	3.5184		3.5184	3.5184	0.0000	1,036.4328	1,036.4328	0.9868	0.0000	1,061.1017
Total	**615.7323**	**13.9228**	**761.7070**	**0.4804**		**24.7801**	**24.7801**		**24.7801**	**24.7801**	**2,797.7854**	**6,296.7586**	**9,094.5439**	**14.1667**	**0.0964**	**9,477.4493**

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	87.6260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	494.5730					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	14.6353	6.6316	130.0162	0.4469		21.2618	21.2618		21.2618	21.2618	2,797.7854	5,260.3258	8,058.1112	13.1799	0.0964	8,416.3476
Landscaping	18.8980	7.2912	631.6908	0.0335		3.5184	3.5184		3.5184	3.5184	0.0000	1,036.4328	1,036.4328	0.9868	0.0000	1,061.1017
Total	**615.7323**	**13.9228**	**761.7070**	**0.4804**		**24.7801**	**24.7801**		**24.7801**	**24.7801**	**2,797.7854**	**6,296.7586**	**9,094.5439**	**14.1667**	**0.0964**	**9,477.4493**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9,475.0473	229.9863	5.4931	16,861.6311
Unmitigated	9,475.0473	229.9863	5.4931	16,861.6311

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	349.03 / 220.041	470.0548	11.3949	0.2722	836.0307
Apartments Low Rise	1269.95 / 800.62	1,710.2991	41.4603	0.9903	3,041.9064
Apartments Mid Rise	1269.95 / 800.62	1,710.2991	41.4603	0.9903	3,041.9064
General Office Building	1477.85 / 905.782	1,978.0383	48.2471	1.1523	3,527.5890
Single Family Housing	2677.83 / 1688.2	3,606.3562	87.4237	2.0881	6,414.1986
Total		**9,475.0473**	**229.9863**	**5.4931**	**16,861.6311**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	349.03 / 220.041	470.0548	11.3949	0.2722	836.0307
Apartments Low Rise	1269.95 / 800.62	1,710.2991	41.4603	0.9903	3,041.9064
Apartments Mid Rise	1269.95 / 800.62	1,710.2991	41.4603	0.9903	3,041.9064
General Office Building	1477.85 / 905.782	1,978.0383	48.2471	1.1523	3,527.5890
Single Family Housing	2677.83 / 1688.2	3,606.3562	87.4237	2.0881	6,414.1986
Total		**9,475.0473**	**229.9863**	**5.4931**	**16,861.6311**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	15,731.5276	929.7067	0.0000	38,974.1938
Unmitigated	15,731.5276	929.7067	0.0000	38,974.1938

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	2464.22	500.2144	29.5618	0.0000	1,239.2600
Apartments Low Rise	8966.09	1,820.0352	107.5610	0.0000	4,509.0603
Apartments Mid Rise	8966.09	1,820.0352	107.5610	0.0000	4,509.0603
General Office Building	7732.94	1,569.7169	92.7676	0.0000	3,888.9073
Single Family Housing	49369.3	10,021.5258	592.2552	0.0000	24,827.9060
Total		**15,731.5276**	**929.7066**	**0.0000**	**38,974.1938**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	2464.22	500.2144	29.5618	0.0000	1,239.2600
Apartments Low Rise	8966.09	1,820.0352	107.5610	0.0000	4,509.0603
Apartments Mid Rise	8966.09	1,820.0352	107.5610	0.0000	4,509.0603
General Office Building	7732.94	1,569.7169	92.7676	0.0000	3,888.9073
Single Family Housing	49369.3	10,021.5258	592.2552	0.0000	24,827.9060
Total		**15,731.5276**	**929.7066**	**0.0000**	**38,974.1938**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Contra Costa - New Land Uses

Contra Costa County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	8,314.99	1000sqft	190.89	8,314,990.00	0
Apartments High Rise	5,357.00	Dwelling Unit	86.40	5,357,000.00	15321
Apartments Low Rise	19,491.50	Dwelling Unit	1,218.22	19,491,500.00	55746
Apartments Mid Rise	19,491.50	Dwelling Unit	512.93	19,491,500.00	55746
Single Family Housing	41,100.00	Dwelling Unit	13,344.16	73,980,000.00	117546

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.95	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Contra Costa - New Land Uses - Contra Costa County, Summer

Project Characteristics - 'Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards.

Plan Bay Area 2040 Update - Contra Costa - New Land Uses - Contra Costa County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	392.47	372.85
tblEnergyUse	T24E	431.22	310.48
tblEnergyUse	T24E	392.47	282.58
tblEnergyUse	T24E	6.40	6.08
tblEnergyUse	T24E	368.92	265.62
tblEnergyUse	T24NG	7,914.07	7,518.37
tblEnergyUse	T24NG	10,164.29	7,318.29
tblEnergyUse	T24NG	7,914.07	5,698.13
tblEnergyUse	T24NG	16.39	15.57
tblEnergyUse	T24NG	32,797.58	23,614.26
tblFireplaces	NumberGas	803.55	1,714.24
tblFireplaces	NumberGas	2,923.72	6,237.27
tblFireplaces	NumberGas	2,923.72	6,237.27
tblFireplaces	NumberGas	10,275.00	27,948.00
tblFireplaces	NumberWood	910.69	0.00
tblFireplaces	NumberWood	3,313.55	0.00
tblFireplaces	NumberWood	3,313.55	0.00
tblFireplaces	NumberWood	17,673.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.95
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2040

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	4,997.6511	1,119.0190	21,007.2189	50.0845		2,330.3792	2,330.3792		2,330.3792	2,330.3792	328,462.3394	1,053,720.4577	1,382,182.7971	1,567.5334	19.0855	1,427,058.6053
Energy	49.1665	422.2445	194.1473	2.6818		33.9696	33.9696		33.9696	33.9696		536,361.6641	536,361.6641	10.2803	9.8333	539,548.9932
Mobile	567.4343	2,764.4703	6,070.6236	32.8329	3,910.7834	12.9867	3,923.7701	1,045.4601	12.0848	1,057.5449		3,337,043.9618	3,337,043.9618	86.1561		3,339,197.8634
Total	**5,614.2519**	**4,305.7339**	**27,271.9898**	**85.5992**	**3,910.7834**	**2,377.3354**	**6,288.1188**	**1,045.4601**	**2,376.4336**	**3,421.8937**	**328,462.3394**	**4,927,126.0836**	**5,255,588.4230**	**1,663.9697**	**28.9188**	**5,305,805.4620**

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	lb/day										lb/day					
Area	4,997.6511	1,119.0190	21,007.2189	50.0845		2,330.3792	2,330.3792		2,330.3792	2,330.3792	328,462.3394	1,053,720.4577	1,382,182.7971	1,567.5334	19.0855	1,427,058.6053
Energy	49.1665	422.2445	194.1473	2.6818		33.9696	33.9696		33.9696	33.9696		536,361.6641	536,361.6641	10.2803	9.8333	539,548.9932
Mobile	567.4343	2,764.4703	6,070.6236	32.8329	3,910.7834	12.9867	3,923.7701	1,045.4601	12.0848	1,057.5449		3,337,043.9618	3,337,043.9618	86.1561		3,339,197.8634
Total	**5,614.2519**	**4,305.7339**	**27,271.9898**	**85.5992**	**3,910.7834**	**2,377.3354**	**6,288.1188**	**1,045.4601**	**2,376.4336**	**3,421.8937**	**328,462.3394**	**4,927,126.0836**	**5,255,588.4230**	**1,663.9697**	**28.9188**	**5,305,805.4620**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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

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				0.00	10.80	7.30				

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	567.4343	2,764.4703	6,070.6236	32.8329	3,910.7834	12.9867	3,923.7701	1,045.4601	12.0848	1,057.5449		3,337,043.9618	3,337,043.9618	86.1561		3,339,197.8634
Unmitigated	567.4343	2,764.4703	6,070.6236	32.8329	3,910.7834	12.9867	3,923.7701	1,045.4601	12.0848	1,057.5449		3,337,043.9618	3,337,043.9618	86.1561		3,339,197.8634

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	22,499.40	26,677.86	19553.05	52,371,306	52,371,306
Apartments Low Rise	128,448.99	139,559.14	118313.41	296,988,269	296,988,269
Apartments Mid Rise	129,618.48	124,550.69	114220.19	292,615,119	292,615,119
General Office Building	91,714.34	20,454.88	8730.74	166,517,059	166,517,059
Single Family Housing	391,272.00	407,301.00	354282.00	896,768,713	896,768,713
Total	763,553.20	718,543.56	615,099.38	1,705,260,466	1,705,260,466

4.3 Trip Type Information

Plan Bay Area 2040 Update - Contra Costa - New Land Uses - Contra Costa County, Summer

	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
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.610313	0.034164	0.184108	0.106158	0.010619	0.004825	0.011002	0.027530	0.001689	0.001441	0.005033	0.002507	0.000611
Apartments High Rise	0.610313	0.034164	0.184108	0.106158	0.010619	0.004825	0.011002	0.027530	0.001689	0.001441	0.005033	0.002507	0.000611
Apartments Low Rise	0.610313	0.034164	0.184108	0.106158	0.010619	0.004825	0.011002	0.027530	0.001689	0.001441	0.005033	0.002507	0.000611
Apartments Mid Rise	0.610313	0.034164	0.184108	0.106158	0.010619	0.004825	0.011002	0.027530	0.001689	0.001441	0.005033	0.002507	0.000611
Single Family Housing	0.610313	0.034164	0.184108	0.106158	0.010619	0.004825	0.011002	0.027530	0.001689	0.001441	0.005033	0.002507	0.000611

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	49.1665	422.2445	194.1473	2.6818		33.9696	33.9696		33.9696	33.9696		536,361.6641	536,361.6641	10.2803	9.8333	539,548.9932
NaturalGas Unmitigated	49.1665	422.2445	194.1473	2.6818		33.9696	33.9696		33.9696	33.9696		536,361.6641	536,361.6641	10.2803	9.8333	539,548.9932

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	lb/day										lb/day					
Apartments High Rise	156650	1.6894	14.4364	6.1431	0.0922		1.1672	1.1672		1.1672	1.1672		18,429.4035	18,429.4035	0.3532	0.3379	18,538.9202
Apartments Low Rise	559288	6.0315	51.5422	21.9329	0.3290		4.1672	4.1672		4.1672	4.1672		65,798.5846	65,798.5846	1.2611	1.2063	66,189.5927
Apartments Mid Rise	472769	5.0985	43.5689	18.5400	0.2781		3.5226	3.5226		3.5226	3.5226		55,619.9166	55,619.9166	1.0661	1.0197	55,950.4379
General Office Building	356075	3.8400	34.9093	29.3238	0.2095		2.6531	2.6531		2.6531	2.6531		41,891.2010	41,891.2010	0.8029	0.7680	42,140.1395
Single Family Housing	3.01429e+006	32.5071	277.7877	118.2075	1.7731		22.4594	22.4594		22.4594	22.4594		354,622.5584	354,622.5584	6.7969	6.5014	356,729.9029
Total		**49.1665**	**422.2445**	**194.1473**	**2.6818**		**33.9696**	**33.9696**		**33.9696**	**33.9696**		**536,361.6641**	**536,361.6641**	**10.2803**	**9.8333**	**539,548.9932**

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	lb/day										lb/day					
Apartments High Rise	156.65	1.6894	14.4364	6.1431	0.0922		1.1672	1.1672		1.1672	1.1672		18,429.4035	18,429.4035	0.3532	0.3379	18,538.9202
Apartments Low Rise	559.288	6.0315	51.5422	21.9329	0.3290		4.1672	4.1672		4.1672	4.1672		65,798.5846	65,798.5846	1.2611	1.2063	66,189.5927
Apartments Mid Rise	472.769	5.0985	43.5689	18.5400	0.2781		3.5226	3.5226		3.5226	3.5226		55,619.9166	55,619.9166	1.0661	1.0197	55,950.4379
General Office Building	356.075	3.8400	34.9093	29.3238	0.2095		2.6531	2.6531		2.6531	2.6531		41,891.2010	41,891.2010	0.8029	0.7680	42,140.1395
Single Family Housing	3014.29	32.5071	277.7877	118.2075	1.7731		22.4594	22.4594		22.4594	22.4594		354,622.5584	354,622.5584	6.7969	6.5014	356,729.9029
Total		**49.1665**	**422.2445**	**194.1473**	**2.6818**		**33.9696**	**33.9696**		**33.9696**	**33.9696**		**536,361.6641**	**536,361.6641**	**10.2803**	**9.8333**	**539,548.9932**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4,997.6511	1,119.0190	21,007.2189	50.0845		2,330.3792	2,330.3792		2,330.3792	2,330.3792	328,462.3394	1,053,720.4577	1,382,182.7971	1,567.5334	19.0855	1,427,058.6053
Unmitigated	4,997.6511	1,119.0190	21,007.2189	50.0845		2,330.3792	2,330.3792		2,330.3792	2,330.3792	328,462.3394	1,053,720.4577	1,382,182.7971	1,567.5334	19.0855	1,427,058.6053

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	lb/day										lb/day					
Architectural Coating	480.1425					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2,709.9888					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,597.5418	1,038.0061	13,988.4325	49.7122		2,291.2863	2,291.2863		2,291.2863	2,291.2863	328,462.3394	1,041,026.3294	1,369,488.6688	1,555.4477	19.0855	1,414,062.3347
Landscaping	209.9780	81.0129	7,018.7864	0.3723		39.0929	39.0929		39.0929	39.0929		12,694.1283	12,694.1283	12.0857		12,996.2707
Total	**4,997.6511**	**1,119.0190**	**21,007.2189**	**50.0845**		**2,330.3792**	**2,330.3792**		**2,330.3792**	**2,330.3792**	**328,462.3394**	**1,053,720.4577**	**1,382,182.7971**	**1,567.5334**	**19.0855**	**1,427,058.6053**

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	lb/day										lb/day					
Architectural Coating	480.1425					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2,709.9888					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,597.5418	1,038.0061	13,988.4325	49.7122		2,291.2863	2,291.2863		2,291.2863	2,291.2863	328,462.3394	1,041,026.3294	1,369,488.6688	1,555.4477	19.0855	1,414,062.3347
Landscaping	209.9780	81.0129	7,018.7864	0.3723		39.0929	39.0929		39.0929	39.0929		12,694.1283	12,694.1283	12.0857		12,996.2707
Total	**4,997.6511**	**1,119.0190**	**21,007.2189**	**50.0845**		**2,330.3792**	**2,330.3792**		**2,330.3792**	**2,330.3792**	**328,462.3394**	**1,053,720.4577**	**1,382,182.7971**	**1,567.5334**	**19.0855**	**1,427,058.6053**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Contra Costa - Net Reduction in Land Uses

Contra Costa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Regional Shopping Center	84.00	1000sqft	1.93	84,000.00	0
Industrial Park	840.75	1000sqft	19.30	840,750.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled

Grading -

Off-road Equipment -

Energy Use - Using Historical Data for reduced land uses

Plan Bay Area 2040 Update - Contra Costa - Net Reduction in Land Uses - Contra Costa County, Annual

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Parking	150.00	0.00
tblConstructionPhase	NumDays	20.00	1.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

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					
2011	10.7162	1.9700e-003	3.7900e-003	1.0000e-005	3.0000e-004	1.6000e-004	4.6000e-004	8.0000e-005	1.6000e-004	2.4000e-004	0.0000	0.4493	0.4493	4.0000e-005	0.0000	0.4504
Maximum	**10.7162**	**1.9700e-003**	**3.7900e-003**	**1.0000e-005**	**3.0000e-004**	**1.6000e-004**	**4.6000e-004**	**8.0000e-005**	**1.6000e-004**	**2.4000e-004**	**0.0000**	**0.4493**	**0.4493**	**4.0000e-005**	**0.0000**	**0.4504**

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					
2011	10.7162	1.9700e-003	3.7900e-003	1.0000e-005	3.0000e-004	1.6000e-004	4.6000e-004	8.0000e-005	1.6000e-004	2.4000e-004	0.0000	0.4493	0.4493	4.0000e-005	0.0000	0.4504
Maximum	**10.7162**	**1.9700e-003**	**3.7900e-003**	**1.0000e-005**	**3.0000e-004**	**1.6000e-004**	**4.6000e-004**	**8.0000e-005**	**1.6000e-004**	**2.4000e-004**	**0.0000**	**0.4493**	**0.4493**	**4.0000e-005**	**0.0000**	**0.4504**

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

Plan Bay Area 2040 Update - Contra Costa - Net Reduction in Land Uses - Contra Costa County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	4.0947	9.0000e-005	8.7900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0165	0.0165	5.0000e-005	0.0000	0.0177
Energy	0.0918	0.8346	0.7011	5.0100e-003		0.0634	0.0634		0.0634	0.0634	0.0000	4,524.0120	4,524.0120	0.2418	0.0582	4,547.4053
Mobile	3.8447	15.0520	44.3468	0.0916	6.6709	0.1591	6.8300	1.7914	0.1507	1.9421	0.0000	8,337.4409	8,337.4409	0.4395	0.0000	8,348.4289
Waste						0.0000	0.0000		0.0000	0.0000	229.5280	0.0000	229.5280	13.5647	0.0000	568.6458
Water						0.0000	0.0000		0.0000	0.0000	63.6556	216.8546	280.5102	6.5515	0.1569	491.0448
Total	**8.0312**	**15.8868**	**45.0566**	**0.0967**	**6.6709**	**0.2225**	**6.8934**	**1.7914**	**0.2142**	**2.0055**	**293.1835**	**13,078.3240**	**13,371.5076**	**20.7976**	**0.2151**	**13,955.5426**

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	4.0947	9.0000e-005	8.7900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0165	0.0165	5.0000e-005	0.0000	0.0177
Energy	0.0918	0.8346	0.7011	5.0100e-003		0.0634	0.0634		0.0634	0.0634	0.0000	4,524.0120	4,524.0120	0.2418	0.0582	4,547.4053
Mobile	3.8447	15.0520	44.3468	0.0916	6.6709	0.1591	6.8300	1.7914	0.1507	1.9421	0.0000	8,337.4409	8,337.4409	0.4395	0.0000	8,348.4289
Waste						0.0000	0.0000		0.0000	0.0000	229.5280	0.0000	229.5280	13.5647	0.0000	568.6458
Water						0.0000	0.0000		0.0000	0.0000	63.6556	216.8546	280.5102	6.5515	0.1569	491.0448
Total	**8.0312**	**15.8868**	**45.0566**	**0.0967**	**6.6709**	**0.2225**	**6.8934**	**1.7914**	**0.2142**	**2.0055**	**293.1835**	**13,078.3240**	**13,371.5076**	**20.7976**	**0.2151**	**13,955.5426**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/2/2011	1/3/2011	5	1	

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: 1,387,125; Non-Residential Outdoor: 462,375; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	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
Architectural Coating	1	76.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2011

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	10.7155					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8000e-004	1.6900e-003	9.9000e-004	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	0.1277	0.1277	2.0000e-005	0.0000	0.1282
Total	**10.7158**	**1.6900e-003**	**9.9000e-004**	**0.0000**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**	**0.0000**	**0.1277**	**0.1277**	**2.0000e-005**	**0.0000**	**0.1282**

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	3.3000e-004	2.9000e-004	2.7900e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.3216	0.3216	2.0000e-005	0.0000	0.3221
Total	**3.3000e-004**	**2.9000e-004**	**2.7900e-003**	**0.0000**	**3.0000e-004**	**0.0000**	**3.0000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.3216**	**0.3216**	**2.0000e-005**	**0.0000**	**0.3221**

3.2 Architectural Coating - 2011

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	10.7155					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8000e-004	1.6900e-003	9.9000e-004	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	0.1277	0.1277	2.0000e-005	0.0000	0.1282
Total	**10.7158**	**1.6900e-003**	**9.9000e-004**	**0.0000**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**	**0.0000**	**0.1277**	**0.1277**	**2.0000e-005**	**0.0000**	**0.1282**

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	3.3000e-004	2.9000e-004	2.7900e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.3216	0.3216	2.0000e-005	0.0000	0.3221
Total	**3.3000e-004**	**2.9000e-004**	**2.7900e-003**	**0.0000**	**3.0000e-004**	**0.0000**	**3.0000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.3216**	**0.3216**	**2.0000e-005**	**0.0000**	**0.3221**

4.0 Operational Detail - Mobile

Plan Bay Area 2040 Update - Contra Costa - Net Reduction in Land Uses - Contra Costa County, Annual

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	3.8447	15.0520	44.3468	0.0916	6.6709	0.1591	6.8300	1.7914	0.1507	1.9421	0.0000	8,337.4409	8,337.4409	0.4395	0.0000	8,348.4289
Unmitigated	3.8447	15.0520	44.3468	0.0916	6.6709	0.1591	6.8300	1.7914	0.1507	1.9421	0.0000	8,337.4409	8,337.4409	0.4395	0.0000	8,348.4289

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	5,742.32	2,093.47	613.75	11,767,824	11,767,824
Regional Shopping Center	3,586.80	4,197.48	2120.16	6,074,360	6,074,360
Total	9,329.12	6,290.95	2,733.91	17,842,184	17,842,184

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Plan Bay Area 2040 Update - Contra Costa - Net Reduction in Land Uses - Contra Costa County, Annual

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Regional Shopping Center	0.541884	0.047901	0.190388	0.144410	0.023837	0.005291	0.011169	0.021845	0.001497	0.002070	0.005874	0.002682	0.001153
Industrial Park	0.541884	0.047901	0.190388	0.144410	0.023837	0.005291	0.011169	0.021845	0.001497	0.002070	0.005874	0.002682	0.001153

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,615.4051	3,615.4051	0.2244	0.0416	3,633.3991
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,615.4051	3,615.4051	0.2244	0.0416	3,633.3991
NaturalGas Mitigated	0.0918	0.8346	0.7011	5.0100e-003		0.0634	0.0634		0.0634	0.0634	0.0000	908.6069	908.6069	0.0174	0.0167	914.0063
NaturalGas Unmitigated	0.0918	0.8346	0.7011	5.0100e-003		0.0634	0.0634		0.0634	0.0634	0.0000	908.6069	908.6069	0.0174	0.0167	914.0063

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					
Industrial Park	1.67814e+007	0.0905	0.8226	0.6910	4.9400e-003		0.0625	0.0625		0.0625	0.0625	0.0000	895.5178	895.5178	0.0172	0.0164	900.8394
Regional Shopping Center	245280	1.3200e-003	0.0120	0.0101	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0891	13.0891	2.5000e-004	2.4000e-004	13.1669
Total		**0.0918**	**0.8346**	**0.7011**	**5.0100e-003**		**0.0634**	**0.0634**		**0.0634**	**0.0634**	**0.0000**	**908.6069**	**908.6069**	**0.0174**	**0.0167**	**914.0063**

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					
Industrial Park	1.67814e+007	0.0905	0.8226	0.6910	4.9400e-003		0.0625	0.0625		0.0625	0.0625	0.0000	895.5178	895.5178	0.0172	0.0164	900.8394
Regional Shopping Center	245280	1.3200e-003	0.0120	0.0101	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0891	13.0891	2.5000e-004	2.4000e-004	13.1669
Total		**0.0918**	**0.8346**	**0.7011**	**5.0100e-003**		**0.0634**	**0.0634**		**0.0634**	**0.0634**	**0.0000**	**908.6069**	**908.6069**	**0.0174**	**0.0167**	**914.0063**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	1.72942e+007	3,412.3704	0.2118	0.0392	3,429.3538
Regional Shopping Center	1.029e+006	203.0348	0.0126	2.3300e-003	204.0453
Total		**3,615.4051**	**0.2244**	**0.0416**	**3,633.3991**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	1.72942e+007	3,412.3704	0.2118	0.0392	3,429.3538
Regional Shopping Center	1.029e+006	203.0348	0.0126	2.3300e-003	204.0453
Total		**3,615.4051**	**0.2244**	**0.0416**	**3,633.3991**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.0947	9.0000e-005	8.7900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0165	0.0165	5.0000e-005	0.0000	0.0177
Unmitigated	4.0947	9.0000e-005	8.7900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0165	0.0165	5.0000e-005	0.0000	0.0177

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	0.4822					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.6116					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.7000e-004	9.0000e-005	8.7900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0165	0.0165	5.0000e-005	0.0000	0.0177
Total	**4.0947**	**9.0000e-005**	**8.7900e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0165**	**0.0165**	**5.0000e-005**	**0.0000**	**0.0177**

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	0.4822					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.6116					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.7000e-004	9.0000e-005	8.7900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0165	0.0165	5.0000e-005	0.0000	0.0177
Total	**4.0947**	**9.0000e-005**	**8.7900e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0165**	**0.0165**	**5.0000e-005**	**0.0000**	**0.0177**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	280.5102	6.5515	0.1569	491.0448
Unmitigated	280.5102	6.5515	0.1569	491.0448

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	194.423 / 0	269.2595	6.3482	0.1520	473.2527
Regional Shopping Center	6.22209 / 3.81354	11.2507	0.2033	4.8900e-003	17.7921
Total		**280.5102**	**6.5515**	**0.1569**	**491.0448**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	194.423 / 0	269.2595	6.3482	0.1520	473.2527
Regional Shopping Center	6.22209 / 3.81354	11.2507	0.2033	4.8900e-003	17.7921
Total		**280.5102**	**6.5515**	**0.1569**	**491.0448**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	229.5280	13.5647	0.0000	568.6458
Unmitigated	229.5280	13.5647	0.0000	568.6458

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	1042.53	211.6242	12.5066	0.0000	524.2899
Regional Shopping Center	88.2	17.9038	1.0581	0.0000	44.3559
Total		**229.5280**	**13.5647**	**0.0000**	**568.6458**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	1042.53	211.6242	12.5066	0.0000	524.2899
Regional Shopping Center	88.2	17.9038	1.0581	0.0000	44.3559
Total		**229.5280**	**13.5647**	**0.0000**	**568.6458**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Contra Costa - Net Reduction in Land Uses

Contra Costa County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Regional Shopping Center	84.00	1000sqft	1.93	84,000.00	0
Industrial Park	840.75	1000sqft	19.30	840,750.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled

Grading -

Off-road Equipment -

Energy Use - Using Historical Data for reduced land uses

Plan Bay Area 2040 Update - Contra Costa - Net Reduction in Land Uses - Contra Costa County, Summer

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Parking	150.00	0.00
tblConstructionPhase	NumDays	20.00	1.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2011	21,432.3378	3.8855	8.0627	0.0108	0.6243	0.3171	0.9415	0.1656	0.3166	0.4822	0.0000	1,053.1990	1,053.1990	0.0977	0.0000	1,055.6408
Maximum	**21,432.3378**	**3.8855**	**8.0627**	**0.0108**	**0.6243**	**0.3171**	**0.9415**	**0.1656**	**0.3166**	**0.4822**	**0.0000**	**1,053.1990**	**1,053.1990**	**0.0977**	**0.0000**	**1,055.6408**

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	lb/day										lb/day					
2011	21,432.3378	3.8855	8.0627	0.0108	0.6243	0.3171	0.9415	0.1656	0.3166	0.4822	0.0000	1,053.1990	1,053.1990	0.0977	0.0000	1,055.6408
Maximum	**21,432.3378**	**3.8855**	**8.0627**	**0.0108**	**0.6243**	**0.3171**	**0.9415**	**0.1656**	**0.3166**	**0.4822**	**0.0000**	**1,053.1990**	**1,053.1990**	**0.0977**	**0.0000**	**1,055.6408**

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

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	lb/day										lb/day					
Area	22.4415	9.5000e-004	0.0977	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.9000e-004		0.2170
Energy	0.5031	4.5734	3.8416	0.0274		0.3476	0.3476		0.3476	0.3476		5,488.0419	5,488.0419	0.1052	0.1006	5,520.6546
Mobile	30.7312	99.3344	319.6890	0.6782	47.6640	1.0932	48.7571	12.7623	1.0355	13.7978		68,002.7642	68,002.7642	3.3883		68,087.4719
Total	**53.6758**	**103.9088**	**323.6283**	**0.7057**	**47.6640**	**1.4411**	**49.1051**	**12.7623**	**1.3834**	**14.1457**		**73,491.0084**	**73,491.0084**	**3.4941**	**0.1006**	**73,608.3436**

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	lb/day										lb/day					
Area	22.4415	9.5000e-004	0.0977	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.9000e-004		0.2170
Energy	0.5031	4.5734	3.8416	0.0274		0.3476	0.3476		0.3476	0.3476		5,488.0419	5,488.0419	0.1052	0.1006	5,520.6546
Mobile	30.7312	99.3344	319.6890	0.6782	47.6640	1.0932	48.7571	12.7623	1.0355	13.7978		68,002.7642	68,002.7642	3.3883		68,087.4719
Total	**53.6758**	**103.9088**	**323.6283**	**0.7057**	**47.6640**	**1.4411**	**49.1051**	**12.7623**	**1.3834**	**14.1457**		**73,491.0084**	**73,491.0084**	**3.4941**	**0.1006**	**73,608.3436**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/2/2011	1/3/2011	5	1	

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: 1,387,125; Non-Residential Outdoor: 462,375; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	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
Architectural Coating	1	76.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2011

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	lb/day										lb/day					
Archit. Coating	21,431.0813					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5646	3.3702	1.9835	2.9700e-003		0.3100	0.3100		0.3100	0.3100		281.4481	281.4481	0.0505		282.7109
Total	**21,431.6458**	**3.3702**	**1.9835**	**2.9700e-003**		**0.3100**	**0.3100**		**0.3100**	**0.3100**		**281.4481**	**281.4481**	**0.0505**		**282.7109**

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	lb/day										lb/day					
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
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
Worker	0.6919	0.5153	6.0792	7.8100e-003	0.6243	7.1000e-003	0.6314	0.1656	6.5800e-003	0.1722		771.7510	771.7510	0.0472		772.9298
Total	**0.6919**	**0.5153**	**6.0792**	**7.8100e-003**	**0.6243**	**7.1000e-003**	**0.6314**	**0.1656**	**6.5800e-003**	**0.1722**		**771.7510**	**771.7510**	**0.0472**		**772.9298**

3.2 Architectural Coating - 2011

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	lb/day										lb/day					
Archit. Coating	21,431.0813					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5646	3.3702	1.9835	2.9700e-003		0.3100	0.3100		0.3100	0.3100	0.0000	281.4481	281.4481	0.0505		282.7109
Total	**21,431.6458**	**3.3702**	**1.9835**	**2.9700e-003**		**0.3100**	**0.3100**		**0.3100**	**0.3100**	**0.0000**	**281.4481**	**281.4481**	**0.0505**		**282.7109**

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	lb/day										lb/day					
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
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
Worker	0.6919	0.5153	6.0792	7.8100e-003	0.6243	7.1000e-003	0.6314	0.1656	6.5800e-003	0.1722		771.7510	771.7510	0.0472		772.9298
Total	**0.6919**	**0.5153**	**6.0792**	**7.8100e-003**	**0.6243**	**7.1000e-003**	**0.6314**	**0.1656**	**6.5800e-003**	**0.1722**		**771.7510**	**771.7510**	**0.0472**		**772.9298**

4.0 Operational Detail - Mobile

Plan Bay Area 2040 Update - Contra Costa - Net Reduction in Land Uses - Contra Costa County, Summer

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	lb/day										lb/day					
Mitigated	30.7312	99.3344	319.6890	0.6782	47.6640	1.0932	48.7571	12.7623	1.0355	13.7978		68,002.7642	68,002.7642	3.3883		68,087.4719
Unmitigated	30.7312	99.3344	319.6890	0.6782	47.6640	1.0932	48.7571	12.7623	1.0355	13.7978		68,002.7642	68,002.7642	3.3883		68,087.4719

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	5,742.32	2,093.47	613.75	11,767,824	11,767,824
Regional Shopping Center	3,586.80	4,197.48	2120.16	6,074,360	6,074,360
Total	9,329.12	6,290.95	2,733.91	17,842,184	17,842,184

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Regional Shopping Center	0.541884	0.047901	0.190388	0.144410	0.023837	0.005291	0.011169	0.021845	0.001497	0.002070	0.005874	0.002682	0.001153
Industrial Park	0.541884	0.047901	0.190388	0.144410	0.023837	0.005291	0.011169	0.021845	0.001497	0.002070	0.005874	0.002682	0.001153

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.5031	4.5734	3.8416	0.0274		0.3476	0.3476		0.3476	0.3476		5,488.0419	5,488.0419	0.1052	0.1006	5,520.6546
NaturalGas Unmitigated	0.5031	4.5734	3.8416	0.0274		0.3476	0.3476		0.3476	0.3476		5,488.0419	5,488.0419	0.1052	0.1006	5,520.6546

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	lb/day										lb/day					
Industrial Park	45976.4	0.4958	4.5075	3.7863	0.0270		0.3426	0.3426		0.3426	0.3426		5,408.9831	5,408.9831	0.1037	0.0992	5,441.1260
Regional Shopping Center	672	7.2500e-003	0.0659	0.0553	4.0000e-004		5.0100e-003	5.0100e-003		5.0100e-003	5.0100e-003		79.0588	79.0588	1.5200e-003	1.4500e-003	79.5286
Total		**0.5031**	**4.5734**	**3.8416**	**0.0274**		**0.3476**	**0.3476**		**0.3476**	**0.3476**		**5,488.0419**	**5,488.0419**	**0.1052**	**0.1006**	**5,520.6546**

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	lb/day										lb/day					
Industrial Park	45.9764	0.4958	4.5075	3.7863	0.0270		0.3426	0.3426		0.3426	0.3426		5,408.9831	5,408.9831	0.1037	0.0992	5,441.1260
Regional Shopping Center	0.672	7.2500e-003	0.0659	0.0553	4.0000e-004		5.0100e-003	5.0100e-003		5.0100e-003	5.0100e-003		79.0588	79.0588	1.5200e-003	1.4500e-003	79.5286
Total		**0.5031**	**4.5734**	**3.8416**	**0.0274**		**0.3476**	**0.3476**		**0.3476**	**0.3476**		**5,488.0419**	**5,488.0419**	**0.1052**	**0.1006**	**5,520.6546**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	22.4415	9.5000e-004	0.0977	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.9000e-004		0.2170
Unmitigated	22.4415	9.5000e-004	0.0977	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.9000e-004		0.2170

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	lb/day										lb/day					
Architectural Coating	2.6422					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	19.7897					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.6600e-003	9.5000e-004	0.0977	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.9000e-004		0.2170
Total	**22.4415**	**9.5000e-004**	**0.0977**	**1.0000e-005**		**3.5000e-004**	**3.5000e-004**		**3.5000e-004**	**3.5000e-004**		**0.2024**	**0.2024**	**5.9000e-004**		**0.2170**

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	lb/day										lb/day					
Architectural Coating	2.6422					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	19.7897					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.6600e-003	9.5000e-004	0.0977	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.9000e-004		0.2170
Total	**22.4415**	**9.5000e-004**	**0.0977**	**1.0000e-005**		**3.5000e-004**	**3.5000e-004**		**3.5000e-004**	**3.5000e-004**		**0.2024**	**0.2024**	**5.9000e-004**		**0.2170**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Marin - New Land Uses

Marin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	448.00	Dwelling Unit	28.00	448,000.00	1281
Apartments Mid Rise	448.00	Dwelling Unit	11.79	448,000.00	1281
Single Family Housing	2,031.00	Dwelling Unit	659.42	3,655,800.00	5809

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	69
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	119.18	**CH4 Intensity (lb/MWhr)**	0.007	**N2O Intensity (lb/MWhr)**	0.001

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Marin - New Land Uses - Marin County, Annual

Project Characteristics - 'Marin Clean Energy emission factor based on an 80% renewable mix per MCE's implementation plan. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards.

Plan Bay Area 2040 Update - Marin - New Land Uses - Marin County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	700.00	0.00
tblEnergyUse	T24E	274.84	197.88
tblEnergyUse	T24E	502.89	362.08
tblEnergyUse	T24E	246.52	177.49
tblEnergyUse	T24NG	25,590.91	18,425.46
tblEnergyUse	T24NG	8,824.58	6,353.70
tblEnergyUse	T24NG	50,264.25	36,190.26
tblFireplaces	NumberGas	67.20	143.36
tblFireplaces	NumberGas	67.20	143.36
tblFireplaces	NumberGas	507.75	1,381.08
tblFireplaces	NumberWood	76.16	0.00
tblFireplaces	NumberWood	76.16	0.00
tblFireplaces	NumberWood	873.33	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.007
tblProjectCharacteristics	CO2IntensityFactor	641.35	119.18
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.001
tblProjectCharacteristics	OperationalYear	2018	2040

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Marin - New Land Uses - Marin County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	22.2446	0.5177	27.1190	0.0199		1.0167	1.0167		1.0167	1.0167	118.0561	243.7080	361.7640	0.5897	3.8200e-003	377.6433
Energy	0.4975	4.2511	1.8090	0.0271		0.3437	0.3437		0.3437	0.3437	0.0000	6,066.1114	6,066.1114	0.1615	0.0999	6,099.9036
Mobile	2.7630	10.2463	31.9705	0.1619	21.3463	0.0760	21.4223	5.7150	0.0707	5.7857	0.0000	14,889.4754	14,889.4754	0.4033	0.0000	14,899.5576
Waste						0.0000	0.0000		0.0000	0.0000	578.9181	0.0000	578.9181	34.2131	0.0000	1,434.2450
Water						0.0000	0.0000		0.0000	0.0000	60.5022	78.5320	139.0342	6.2188	0.1474	338.4251
Total	**25.5050**	**15.0150**	**60.8984**	**0.2089**	**21.3463**	**1.4364**	**22.7828**	**5.7150**	**1.4311**	**7.1461**	**757.4763**	**21,277.8268**	**22,035.3031**	**41.5863**	**0.2511**	**23,149.7745**

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	22.2446	0.5177	27.1190	0.0199		1.0167	1.0167		1.0167	1.0167	118.0561	243.7080	361.7640	0.5897	3.8200e-003	377.6433
Energy	0.4975	4.2511	1.8090	0.0271		0.3437	0.3437		0.3437	0.3437	0.0000	6,066.1114	6,066.1114	0.1615	0.0999	6,099.9036
Mobile	2.7630	10.2463	31.9705	0.1619	21.3463	0.0760	21.4223	5.7150	0.0707	5.7857	0.0000	14,889.4754	14,889.4754	0.4033	0.0000	14,899.5576
Waste						0.0000	0.0000		0.0000	0.0000	578.9181	0.0000	578.9181	34.2131	0.0000	1,434.2450
Water						0.0000	0.0000		0.0000	0.0000	60.5022	78.5320	139.0342	6.2188	0.1474	338.4251
Total	**25.5050**	**15.0150**	**60.8984**	**0.2089**	**21.3463**	**1.4364**	**22.7828**	**5.7150**	**1.4311**	**7.1461**	**757.4763**	**21,277.8268**	**22,035.3031**	**41.5863**	**0.2511**	**23,149.7745**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	2.7630	10.2463	31.9705	0.1619	21.3463	0.0760	21.4223	5.7150	0.0707	5.7857	0.0000	14,889.4754	14,889.4754	0.4033	0.0000	14,899.5576
Unmitigated	2.7630	10.2463	31.9705	0.1619	21.3463	0.0760	21.4223	5.7150	0.0707	5.7857	0.0000	14,889.4754	14,889.4754	0.4033	0.0000	14,899.5576

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,952.32	3,207.68	2719.36	6,826,091	6,826,091
Apartments Mid Rise	2,979.20	2,862.72	2625.28	6,725,576	6,725,576
Single Family Housing	19,335.12	20,127.21	17507.22	44,314,775	44,314,775
Total	25,266.64	26,197.61	22,851.86	57,866,442	57,866,442

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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.608155	0.036349	0.195929	0.105551	0.011757	0.005346	0.011845	0.014259	0.002138	0.001733	0.005453	0.000811	0.000673
Apartments Mid Rise	0.608155	0.036349	0.195929	0.105551	0.011757	0.005346	0.011845	0.014259	0.002138	0.001733	0.005453	0.000811	0.000673
Single Family Housing	0.608155	0.036349	0.195929	0.105551	0.011757	0.005346	0.011845	0.014259	0.002138	0.001733	0.005453	0.000811	0.000673

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,142.8954	1,142.8954	0.0671	9.5900e-003	1,147.4314
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,142.8954	1,142.8954	0.0671	9.5900e-003	1,147.4314
NaturalGas Mitigated	0.4975	4.2511	1.8090	0.0271		0.3437	0.3437		0.3437	0.3437	0.0000	4,923.2160	4,923.2160	0.0944	0.0903	4,952.4722
NaturalGas Unmitigated	0.4975	4.2511	1.8090	0.0271		0.3437	0.3437		0.3437	0.3437	0.0000	4,923.2160	4,923.2160	0.0944	0.0903	4,952.4722

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					
Apartments Low Rise	9.42612e+006	0.0508	0.4343	0.1848	2.7700e-003		0.0351	0.0351		0.0351	0.0351	0.0000	503.0139	503.0139	9.6400e-003	9.2200e-003	506.0030
Apartments Mid Rise	4.01798e+006	0.0217	0.1851	0.0788	1.1800e-003		0.0150	0.0150		0.0150	0.0150	0.0000	214.4145	214.4145	4.1100e-003	3.9300e-003	215.6887
Single Family Housing	7.88135e+007	0.4250	3.6316	1.5454	0.0232		0.2936	0.2936		0.2936	0.2936	0.0000	4,205.7876	4,205.7876	0.0806	0.0771	4,230.7805
Total		**0.4975**	**4.2511**	**1.8090**	**0.0271**		**0.3437**	**0.3437**		**0.3437**	**0.3437**	**0.0000**	**4,923.2160**	**4,923.2160**	**0.0944**	**0.0903**	**4,952.4722**

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					
Apartments Low Rise	9.42612e+006	0.0508	0.4343	0.1848	2.7700e-003		0.0351	0.0351		0.0351	0.0351	0.0000	503.0139	503.0139	9.6400e-003	9.2200e-003	506.0030
Apartments Mid Rise	4.01798e+006	0.0217	0.1851	0.0788	1.1800e-003		0.0150	0.0150		0.0150	0.0150	0.0000	214.4145	214.4145	4.1100e-003	3.9300e-003	215.6887
Single Family Housing	7.88135e+007	0.4250	3.6316	1.5454	0.0232		0.2936	0.2936		0.2936	0.2936	0.0000	4,205.7876	4,205.7876	0.0806	0.0771	4,230.7805
Total		**0.4975**	**4.2511**	**1.8090**	**0.0271**		**0.3437**	**0.3437**		**0.3437**	**0.3437**	**0.0000**	**4,923.2160**	**4,923.2160**	**0.0944**	**0.0903**	**4,952.4722**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.98312e+006	107.2057	6.3000e-003	9.0000e-004	107.6312
Apartments Mid Rise	1.9625e+006	106.0911	6.2300e-003	8.9000e-004	106.5121
Single Family Housing	1.7196e+007	929.5987	0.0546	7.8000e-003	933.2881
Total		**1,142.8954**	**0.0671**	**9.5900e-003**	**1,147.4314**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.98312e+006	107.2057	6.3000e-003	9.0000e-004	107.6312
Apartments Mid Rise	1.9625e+006	106.0911	6.2300e-003	8.9000e-004	106.5121
Single Family Housing	1.7196e+007	929.5987	0.0546	7.8000e-003	933.2881
Total		**1,142.8954**	**0.0671**	**9.5900e-003**	**1,147.4314**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	22.2446	0.5177	27.1190	0.0199		1.0167	1.0167		1.0167	1.0167	118.0561	243.7080	361.7640	0.5897	3.8200e-003	377.6433
Unmitigated	22.2446	0.5177	27.1190	0.0199		1.0167	1.0167		1.0167	1.0167	118.0561	243.7080	361.7640	0.5897	3.8200e-003	377.6433

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	3.2042					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	17.7771					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.6162	0.2680	5.4811	0.0188		0.8962	0.8962		0.8962	0.8962	118.0561	208.2070	326.2631	0.5559	3.8200e-003	341.2975
Landscaping	0.6472	0.2498	21.6378	1.1500e-003		0.1205	0.1205		0.1205	0.1205	0.0000	35.5010	35.5010	0.0338	0.0000	36.3458
Total	**22.2446**	**0.5177**	**27.1190**	**0.0199**		**1.0167**	**1.0167**		**1.0167**	**1.0167**	**118.0561**	**243.7080**	**361.7640**	**0.5897**	**3.8200e-003**	**377.6433**

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	3.2042					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	17.7771					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.6162	0.2680	5.4811	0.0188		0.8962	0.8962		0.8962	0.8962	118.0561	208.2070	326.2631	0.5559	3.8200e-003	341.2975
Landscaping	0.6472	0.2498	21.6378	1.1500e-003		0.1205	0.1205		0.1205	0.1205	0.0000	35.5010	35.5010	0.0338	0.0000	36.3458
Total	**22.2446**	**0.5177**	**27.1190**	**0.0199**		**1.0167**	**1.0167**		**1.0167**	**1.0167**	**118.0561**	**243.7080**	**361.7640**	**0.5897**	**3.8200e-003**	**377.6433**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	139.0342	6.2188	0.1474	338.4251
Unmitigated	139.0342	6.2188	0.1474	338.4251

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	29.189 / 18.4018	21.2803	0.9518	0.0226	51.7986
Apartments Mid Rise	29.189 / 18.4018	21.2803	0.9518	0.0226	51.7986
Single Family Housing	132.328 / 83.4241	96.4737	4.3151	0.1023	234.8279
Total		**139.0342**	**6.2188**	**0.1474**	**338.4251**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	29.189 / 18.4018	21.2803	0.9518	0.0226	51.7986
Apartments Mid Rise	29.189 / 18.4018	21.2803	0.9518	0.0226	51.7986
Single Family Housing	132.328 / 83.4241	96.4737	4.3151	0.1023	234.8279
Total		**139.0342**	**6.2188**	**0.1474**	**338.4251**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	578.9181	34.2131	0.0000	1,434.2450
Unmitigated	578.9181	34.2131	0.0000	1,434.2450

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	206.08	41.8324	2.4722	0.0000	103.6379
Apartments Mid Rise	206.08	41.8324	2.4722	0.0000	103.6379
Single Family Housing	2439.78	495.2533	29.2686	0.0000	1,226.9691
Total		**578.9181**	**34.2131**	**0.0000**	**1,434.2450**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	206.08	41.8324	2.4722	0.0000	103.6379
Apartments Mid Rise	206.08	41.8324	2.4722	0.0000	103.6379
Single Family Housing	2439.78	495.2533	29.2686	0.0000	1,226.9691
Total		**578.9181**	**34.2131**	**0.0000**	**1,434.2450**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Marin - New Land Uses

Marin County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	448.00	Dwelling Unit	28.00	448,000.00	1281
Apartments Mid Rise	448.00	Dwelling Unit	11.79	448,000.00	1281
Single Family Housing	2,031.00	Dwelling Unit	659.42	3,655,800.00	5809

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	69
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	119.18	**CH4 Intensity (lb/MWhr)**	0.007	**N2O Intensity (lb/MWhr)**	0.001

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Marin - New Land Uses - Marin County, Summer

Project Characteristics - 'Marin Clean Energy emission factor based on an 80% renewable mix per MCE's implementation plan. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards.

Plan Bay Area 2040 Update - Marin - New Land Uses - Marin County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	700.00	0.00
tblEnergyUse	T24E	274.84	197.88
tblEnergyUse	T24E	502.89	362.08
tblEnergyUse	T24E	246.52	177.49
tblEnergyUse	T24NG	25,590.91	18,425.46
tblEnergyUse	T24NG	8,824.58	6,353.70
tblEnergyUse	T24NG	50,264.25	36,190.26
tblFireplaces	NumberGas	67.20	143.36
tblFireplaces	NumberGas	67.20	143.36
tblFireplaces	NumberGas	507.75	1,381.08
tblFireplaces	NumberWood	76.16	0.00
tblFireplaces	NumberWood	76.16	0.00
tblFireplaces	NumberWood	873.33	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.007
tblProjectCharacteristics	CO2IntensityFactor	641.35	119.18
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.001
tblProjectCharacteristics	OperationalYear	2018	2040

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5257	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5257**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5257	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5257**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	185.7392	43.9120	797.2782	1.9908		92.5496	92.5496		92.5496	92.5496	13,077.4788	41,639.2832	54,716.7620	62.3382	0.7554	56,500.3302
Energy	2.7259	23.2936	9.9122	0.1487		1.8833	1.8833		1.8833	1.8833		29,736.5297	29,736.5297	0.5700	0.5452	29,913.2391
Mobile	18.2442	57.3859	192.6675	0.9908	128.3995	0.4388	128.8382	34.2599	0.4082	34.6681		100,394.6855	100,394.6855	2.5669		100,458.8588
Total	**206.7092**	**124.5915**	**999.8579**	**3.1303**	**128.3995**	**94.8717**	**223.2711**	**34.2599**	**94.8411**	**129.1010**	**13,077.4788**	**171,770.4984**	**184,847.9772**	**65.4751**	**1.3006**	**186,872.4281**

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	lb/day										lb/day					
Area	185.7392	43.9120	797.2782	1.9908		92.5496	92.5496		92.5496	92.5496	13,077.4788	41,639.2832	54,716.7620	62.3382	0.7554	56,500.3302
Energy	2.7259	23.2936	9.9122	0.1487		1.8833	1.8833		1.8833	1.8833		29,736.5297	29,736.5297	0.5700	0.5452	29,913.2391
Mobile	18.2442	57.3859	192.6675	0.9908	128.3995	0.4388	128.8382	34.2599	0.4082	34.6681		100,394.6855	100,394.6855	2.5669		100,458.8588
Total	**206.7092**	**124.5915**	**999.8579**	**3.1303**	**128.3995**	**94.8717**	**223.2711**	**34.2599**	**94.8411**	**129.1010**	**13,077.4788**	**171,770.4984**	**184,847.9772**	**65.4751**	**1.3006**	**186,872.4281**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	18.2442	57.3859	192.6675	0.9908	128.3995	0.4388	128.8382	34.2599	0.4082	34.6681		100,394.6855	100,394.6855	2.5669		100,458.8588
Unmitigated	18.2442	57.3859	192.6675	0.9908	128.3995	0.4388	128.8382	34.2599	0.4082	34.6681		100,394.6855	100,394.6855	2.5669		100,458.8588

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,952.32	3,207.68	2719.36	6,826,091	6,826,091
Apartments Mid Rise	2,979.20	2,862.72	2625.28	6,725,576	6,725,576
Single Family Housing	19,335.12	20,127.21	17507.22	44,314,775	44,314,775
Total	25,266.64	26,197.61	22,851.86	57,866,442	57,866,442

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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.608155	0.036349	0.195929	0.105551	0.011757	0.005346	0.011845	0.014259	0.002138	0.001733	0.005453	0.000811	0.000673
Apartments Mid Rise	0.608155	0.036349	0.195929	0.105551	0.011757	0.005346	0.011845	0.014259	0.002138	0.001733	0.005453	0.000811	0.000673
Single Family Housing	0.608155	0.036349	0.195929	0.105551	0.011757	0.005346	0.011845	0.014259	0.002138	0.001733	0.005453	0.000811	0.000673

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.7259	23.2936	9.9122	0.1487		1.8833	1.8833		1.8833	1.8833		29,736.5297	29,736.5297	0.5700	0.5452	29,913.2391
NaturalGas Unmitigated	2.7259	23.2936	9.9122	0.1487		1.8833	1.8833		1.8833	1.8833		29,736.5297	29,736.5297	0.5700	0.5452	29,913.2391

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	lb/day										lb/day					
Apartments Low Rise	25825	0.2785	2.3800	1.0127	0.0152		0.1924	0.1924		0.1924	0.1924		3,038.2350	3,038.2350	0.0582	0.0557	3,056.2897
Apartments Mid Rise	11008.2	0.1187	1.0145	0.4317	6.4800e-003		0.0820	0.0820		0.0820	0.0820		1,295.0770	1,295.0770	0.0248	0.0237	1,302.7730
Single Family Housing	215927	2.3286	19.8992	8.4677	0.1270		1.6089	1.6089		1.6089	1.6089		25,403.2178	25,403.2178	0.4869	0.4657	25,554.1764
Total		**2.7259**	**23.2936**	**9.9122**	**0.1487**		**1.8833**	**1.8833**		**1.8833**	**1.8833**		**29,736.5297**	**29,736.5297**	**0.5700**	**0.5452**	**29,913.2391**

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	lb/day										lb/day					
Apartments Low Rise	25.825	0.2785	2.3800	1.0127	0.0152		0.1924	0.1924		0.1924	0.1924		3,038.2350	3,038.2350	0.0582	0.0557	3,056.2897
Apartments Mid Rise	11.0082	0.1187	1.0145	0.4317	6.4800e-003		0.0820	0.0820		0.0820	0.0820		1,295.0770	1,295.0770	0.0248	0.0237	1,302.7730
Single Family Housing	215.927	2.3286	19.8992	8.4677	0.1270		1.6089	1.6089		1.6089	1.6089		25,403.2178	25,403.2178	0.4869	0.4657	25,554.1764
Total		**2.7259**	**23.2936**	**9.9122**	**0.1487**		**1.8833**	**1.8833**		**1.8833**	**1.8833**		**29,736.5297**	**29,736.5297**	**0.5700**	**0.5452**	**29,913.2391**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	185.7392	43.9120	797.2782	1.9908		92.5496	92.5496		92.5496	92.5496	13,077.4788	41,639.2832	54,716.7620	62.3382	0.7554	56,500.3302
Unmitigated	185.7392	43.9120	797.2782	1.9908		92.5496	92.5496		92.5496	92.5496	13,077.4788	41,639.2832	54,716.7620	62.3382	0.7554	56,500.3302

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	lb/day										lb/day					
Architectural Coating	17.5572					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	97.4085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	63.5826	41.1369	556.8578	1.9780		91.2104	91.2104		91.2104	91.2104	13,077.4788	41,204.4706	54,281.9494	61.9243	0.7554	56,055.1709
Landscaping	7.1908	2.7751	240.4204	0.0128		1.3391	1.3391		1.3391	1.3391		434.8126	434.8126	0.4139		445.1594
Total	**185.7392**	**43.9120**	**797.2782**	**1.9908**		**92.5496**	**92.5496**		**92.5496**	**92.5496**	**13,077.4788**	**41,639.2832**	**54,716.7620**	**62.3382**	**0.7554**	**56,500.3302**

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	lb/day										lb/day					
Architectural Coating	17.5572					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	97.4085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	63.5826	41.1369	556.8578	1.9780		91.2104	91.2104		91.2104	91.2104	13,077.4788	41,204.4706	54,281.9494	61.9243	0.7554	56,055.1709
Landscaping	7.1908	2.7751	240.4204	0.0128		1.3391	1.3391		1.3391	1.3391		434.8126	434.8126	0.4139		445.1594
Total	**185.7392**	**43.9120**	**797.2782**	**1.9908**		**92.5496**	**92.5496**		**92.5496**	**92.5496**	**13,077.4788**	**41,639.2832**	**54,716.7620**	**62.3382**	**0.7554**	**56,500.3302**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Marin - Net Reduction in Land Uses

Marin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	112.00	1000sqft	2.57	112,000.00	0
Industrial Park	40.32	1000sqft	0.93	40,320.00	0
Regional Shopping Center	134.39	1000sqft	3.09	134,390.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	69
Climate Zone	5			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.75	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Marin Clean Energy emission factor based on a 50% renewable mix in 2015. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.75
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2015

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Marin - Net Reduction in Land Uses - Marin County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	1.2695	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.1200e-003	5.1200e-003	1.0000e-005	0.0000	5.4900e-003
Energy	0.0233	0.2116	0.1777	1.2700e-003		0.0161	0.0161		0.0161	0.0161	0.0000	750.2032	750.2032	0.0358	9.4600e-003	753.9186
Mobile	3.0095	9.8838	32.0750	0.0621	4.6786	0.1306	4.8092	1.2622	0.1239	1.3860	0.0000	5,644.5587	5,644.5587	0.2870	0.0000	5,651.7333
Waste						0.0000	0.0000		0.0000	0.0000	59.9371	0.0000	59.9371	3.5422	0.0000	148.4917
Water						0.0000	0.0000		0.0000	0.0000	12.4315	37.2873	49.7188	1.2791	0.0305	90.7924
Total	**4.3023**	**10.0954**	**32.2554**	**0.0634**	**4.6786**	**0.1467**	**4.8253**	**1.2622**	**0.1399**	**1.4021**	**72.3687**	**6,432.0543**	**6,504.4230**	**5.1441**	**0.0400**	**6,644.9415**

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	1.2695	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.1200e-003	5.1200e-003	1.0000e-005	0.0000	5.4900e-003
Energy	0.0233	0.2116	0.1777	1.2700e-003		0.0161	0.0161		0.0161	0.0161	0.0000	750.2032	750.2032	0.0358	9.4600e-003	753.9186
Mobile	3.0095	9.8838	32.0750	0.0621	4.6786	0.1306	4.8092	1.2622	0.1239	1.3860	0.0000	5,644.5587	5,644.5587	0.2870	0.0000	5,651.7333
Waste						0.0000	0.0000		0.0000	0.0000	59.9371	0.0000	59.9371	3.5422	0.0000	148.4917
Water						0.0000	0.0000		0.0000	0.0000	12.4315	37.2873	49.7188	1.2791	0.0305	90.7924
Total	**4.3023**	**10.0954**	**32.2554**	**0.0634**	**4.6786**	**0.1467**	**4.8253**	**1.2622**	**0.1399**	**1.4021**	**72.3687**	**6,432.0543**	**6,504.4230**	**5.1441**	**0.0400**	**6,644.9415**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Excavators	3	8.00	158	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	3.0095	9.8838	32.0750	0.0621	4.6786	0.1306	4.8092	1.2622	0.1239	1.3860	0.0000	5,644.5587	5,644.5587	0.2870	0.0000	5,651.7333
Unmitigated	3.0095	9.8838	32.0750	0.0621	4.6786	0.1306	4.8092	1.2622	0.1239	1.3860	0.0000	5,644.5587	5,644.5587	0.2870	0.0000	5,651.7333

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	1,235.36	275.52	117.60	2,242,926	2,242,926
Industrial Park	275.39	100.40	29.43	564,352	564,352
Regional Shopping Center	5,738.45	6,715.47	3392.00	9,718,252	9,718,252
Total	7,249.20	7,091.39	3,539.04	12,525,530	12,525,530

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 Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.560293	0.050856	0.204480	0.119666	0.023268	0.004913	0.010313	0.009578	0.001992	0.006870	0.006201	0.000656	0.000914
Industrial Park	0.560293	0.050856	0.204480	0.119666	0.023268	0.004913	0.010313	0.009578	0.001992	0.006870	0.006201	0.000656	0.000914
Regional Shopping Center	0.560293	0.050856	0.204480	0.119666	0.023268	0.004913	0.010313	0.009578	0.001992	0.006870	0.006201	0.000656	0.000914

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	519.8719	519.8719	0.0314	5.2400e-003	522.2185
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	519.8719	519.8719	0.0314	5.2400e-003	522.2185
NaturalGas Mitigated	0.0233	0.2116	0.1777	1.2700e-003		0.0161	0.0161		0.0161	0.0161	0.0000	230.3314	230.3314	4.4100e-003	4.2200e-003	231.7001
NaturalGas Unmitigated	0.0233	0.2116	0.1777	1.2700e-003		0.0161	0.0161		0.0161	0.0161	0.0000	230.3314	230.3314	4.4100e-003	4.2200e-003	231.7001

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 Office Building	2.64208e+006	0.0143	0.1295	0.1088	7.8000e-004		9.8400e-003	9.8400e-003		9.8400e-003	9.8400e-003	0.0000	140.9915	140.9915	2.7000e-003	2.5800e-003	141.8293
Industrial Park	951149	5.1300e-003	0.0466	0.0392	2.8000e-004		3.5400e-003	3.5400e-003		3.5400e-003	3.5400e-003	0.0000	50.7569	50.7569	9.7000e-004	9.3000e-004	51.0586
Regional Shopping Center	723018	3.9000e-003	0.0354	0.0298	2.1000e-004		2.6900e-003	2.6900e-003		2.6900e-003	2.6900e-003	0.0000	38.5830	38.5830	7.4000e-004	7.1000e-004	38.8123
Total		**0.0233**	**0.2116**	**0.1777**	**1.2700e-003**		**0.0161**	**0.0161**		**0.0161**	**0.0161**	**0.0000**	**230.3314**	**230.3314**	**4.4100e-003**	**4.2200e-003**	**231.7001**

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 Office Building	2.64208e+006	0.0143	0.1295	0.1088	7.8000e-004		9.8400e-003	9.8400e-003		9.8400e-003	9.8400e-003	0.0000	140.9915	140.9915	2.7000e-003	2.5800e-003	141.8293
Industrial Park	951149	5.1300e-003	0.0466	0.0392	2.8000e-004		3.5400e-003	3.5400e-003		3.5400e-003	3.5400e-003	0.0000	50.7569	50.7569	9.7000e-004	9.3000e-004	51.0586
Regional Shopping Center	723018	3.9000e-003	0.0354	0.0298	2.1000e-004		2.6900e-003	2.6900e-003		2.6900e-003	2.6900e-003	0.0000	38.5830	38.5830	7.4000e-004	7.1000e-004	38.8123
Total		**0.0233**	**0.2116**	**0.1777**	**1.2700e-003**		**0.0161**	**0.0161**		**0.0161**	**0.0161**	**0.0000**	**230.3314**	**230.3314**	**4.4100e-003**	**4.2200e-003**	**231.7001**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	1.63072e+006	220.2404	0.0133	2.2200e-003	221.2345
Industrial Park	587059	79.2865	4.7900e-003	8.0000e-004	79.6444
Regional Shopping Center	1.63149e+006	220.3450	0.0133	2.2200e-003	221.3396
Total		**519.8719**	**0.0314**	**5.2400e-003**	**522.2185**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	1.63072e+006	220.2404	0.0133	2.2200e-003	221.2345
Industrial Park	587059	79.2865	4.7900e-003	8.0000e-004	79.6444
Regional Shopping Center	1.63149e+006	220.3450	0.0133	2.2200e-003	221.3396
Total		**519.8719**	**0.0314**	**5.2400e-003**	**522.2185**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2695	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.1200e-003	5.1200e-003	1.0000e-005	0.0000	5.4900e-003
Unmitigated	1.2695	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.1200e-003	5.1200e-003	1.0000e-005	0.0000	5.4900e-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	0.1495					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1198					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.7000e-004	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.1200e-003	5.1200e-003	1.0000e-005	0.0000	5.4900e-003
Total	**1.2695**	**3.0000e-005**	**2.7300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.1200e-003**	**5.1200e-003**	**1.0000e-005**	**0.0000**	**5.4900e-003**

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	0.1495					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1198					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.7000e-004	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.1200e-003	5.1200e-003	1.0000e-005	0.0000	5.4900e-003
Total	**1.2695**	**3.0000e-005**	**2.7300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.1200e-003**	**5.1200e-003**	**1.0000e-005**	**0.0000**	**5.4900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	49.7188	1.2791	0.0305	90.7924
Unmitigated	49.7188	1.2791	0.0305	90.7924

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	19.9062 / 12.2006	26.6298	0.6499	0.0155	47.5017
Industrial Park	9.324 / 0	9.7720	0.3042	7.2400e-003	19.5362
Regional Shopping Center	9.95461 / 6.10121	13.3170	0.3250	7.7600e-003	23.7545
Total		**49.7188**	**1.2791**	**0.0305**	**90.7924**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	19.9062 / 12.2006	26.6298	0.6499	0.0155	47.5017
Industrial Park	9.324 / 0	9.7720	0.3042	7.2400e-003	19.5362
Regional Shopping Center	9.95461 / 6.10121	13.3170	0.3250	7.7600e-003	23.7545
Total		**49.7188**	**1.2791**	**0.0305**	**90.7924**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	59.9371	3.5422	0.0000	148.4917
Unmitigated	59.9371	3.5422	0.0000	148.4917

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	104.16	21.1435	1.2496	0.0000	52.3822
Industrial Park	50	10.1496	0.5998	0.0000	25.1451
Regional Shopping Center	141.11	28.6441	1.6928	0.0000	70.9644
Total		**59.9371**	**3.5422**	**0.0000**	**148.4917**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	104.16	21.1435	1.2496	0.0000	52.3822
Industrial Park	50	10.1496	0.5998	0.0000	25.1451
Regional Shopping Center	141.11	28.6441	1.6928	0.0000	70.9644
Total		**59.9371**	**3.5422**	**0.0000**	**148.4917**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Marin - Net Reduction in Land Uses

Marin County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	112.00	1000sqft	2.57	112,000.00	0
Industrial Park	40.32	1000sqft	0.93	40,320.00	0
Regional Shopping Center	134.39	1000sqft	3.09	134,390.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	69
Climate Zone	5			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.75	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Marin - Net Reduction in Land Uses - Marin County, Summer

Project Characteristics - Marin Clean Energy emission factor based on a 50% renewable mix in 2015. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.75
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2015

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5257	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5257**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5257	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5257**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	6.9578	2.9000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0628	0.0628	1.8000e-004		0.0673
Energy	0.1275	1.1594	0.9739	6.9600e-003		0.0881	0.0881		0.0881	0.0881		1,391.2158	1,391.2158	0.0267	0.0255	1,399.4831
Mobile	22.8081	63.1781	217.2496	0.4472	33.0312	0.8838	33.9150	8.8789	0.8381	9.7171		44,800.3701	44,800.3701	2.1489		44,854.0913
Total	**29.8934**	**64.3377**	**218.2537**	**0.4542**	**33.0312**	**0.9720**	**34.0032**	**8.8789**	**0.9264**	**9.8053**		**46,191.6487**	**46,191.6487**	**2.1757**	**0.0255**	**46,253.6417**

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	lb/day										lb/day					
Area	6.9578	2.9000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0628	0.0628	1.8000e-004		0.0673
Energy	0.1275	1.1594	0.9739	6.9600e-003		0.0881	0.0881		0.0881	0.0881		1,391.2158	1,391.2158	0.0267	0.0255	1,399.4831
Mobile	22.8081	63.1781	217.2496	0.4472	33.0312	0.8838	33.9150	8.8789	0.8381	9.7171		44,800.3701	44,800.3701	2.1489		44,854.0913
Total	**29.8934**	**64.3377**	**218.2537**	**0.4542**	**33.0312**	**0.9720**	**34.0032**	**8.8789**	**0.9264**	**9.8053**		**46,191.6487**	**46,191.6487**	**2.1757**	**0.0255**	**46,253.6417**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Excavators	3	8.00	158	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	22.8081	63.1781	217.2496	0.4472	33.0312	0.8838	33.9150	8.8789	0.8381	9.7171		44,800.3701	44,800.3701	2.1489		44,854.0913
Unmitigated	22.8081	63.1781	217.2496	0.4472	33.0312	0.8838	33.9150	8.8789	0.8381	9.7171		44,800.3701	44,800.3701	2.1489		44,854.0913

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	1,235.36	275.52	117.60	2,242,926	2,242,926
Industrial Park	275.39	100.40	29.43	564,352	564,352
Regional Shopping Center	5,738.45	6,715.47	3392.00	9,718,252	9,718,252
Total	7,249.20	7,091.39	3,539.04	12,525,530	12,525,530

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 Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.560293	0.050856	0.204480	0.119666	0.023268	0.004913	0.010313	0.009578	0.001992	0.006870	0.006201	0.000656	0.000914
Industrial Park	0.560293	0.050856	0.204480	0.119666	0.023268	0.004913	0.010313	0.009578	0.001992	0.006870	0.006201	0.000656	0.000914
Regional Shopping Center	0.560293	0.050856	0.204480	0.119666	0.023268	0.004913	0.010313	0.009578	0.001992	0.006870	0.006201	0.000656	0.000914

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1275	1.1594	0.9739	6.9600e-003		0.0881	0.0881		0.0881	0.0881		1,391.2158	1,391.2158	0.0267	0.0255	1,399.4831
NaturalGas Unmitigated	0.1275	1.1594	0.9739	6.9600e-003		0.0881	0.0881		0.0881	0.0881		1,391.2158	1,391.2158	0.0267	0.0255	1,399.4831

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	lb/day										lb/day					
General Office Building	7238.58	0.0781	0.7097	0.5961	4.2600e-003		0.0539	0.0539		0.0539	0.0539		851.5971	851.5971	0.0163	0.0156	856.6577
Industrial Park	2605.89	0.0281	0.2555	0.2146	1.5300e-003		0.0194	0.0194		0.0194	0.0194		306.5750	306.5750	5.8800e-003	5.6200e-003	308.3968
Regional Shopping Center	1980.87	0.0214	0.1942	0.1631	1.1700e-003		0.0148	0.0148		0.0148	0.0148		233.0437	233.0437	4.4700e-003	4.2700e-003	234.4286
Total		**0.1275**	**1.1593**	**0.9739**	**6.9600e-003**		**0.0881**	**0.0881**		**0.0881**	**0.0881**		**1,391.2158**	**1,391.2158**	**0.0267**	**0.0255**	**1,399.4831**

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	lb/day										lb/day					
General Office Building	7.23858	0.0781	0.7097	0.5961	4.2600e-003		0.0539	0.0539		0.0539	0.0539		851.5971	851.5971	0.0163	0.0156	856.6577
Industrial Park	2.60589	0.0281	0.2555	0.2146	1.5300e-003		0.0194	0.0194		0.0194	0.0194		306.5750	306.5750	5.8800e-003	5.6200e-003	308.3968
Regional Shopping Center	1.98087	0.0214	0.1942	0.1631	1.1700e-003		0.0148	0.0148		0.0148	0.0148		233.0437	233.0437	4.4700e-003	4.2700e-003	234.4286
Total		**0.1275**	**1.1593**	**0.9739**	**6.9600e-003**		**0.0881**	**0.0881**		**0.0881**	**0.0881**		**1,391.2158**	**1,391.2158**	**0.0267**	**0.0255**	**1,399.4831**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.9578	2.9000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0628	0.0628	1.8000e-004		0.0673
Unmitigated	6.9578	2.9000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0628	0.0628	1.8000e-004		0.0673

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	lb/day										lb/day					
Architectural Coating	0.8192					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.1356					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9900e-003	2.9000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0628	0.0628	1.8000e-004		0.0673
Total	**6.9578**	**2.9000e-004**	**0.0303**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0628**	**0.0628**	**1.8000e-004**		**0.0673**

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	lb/day										lb/day					
Architectural Coating	0.8192					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.1356					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9900e-003	2.9000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0628	0.0628	1.8000e-004		0.0673
Total	**6.9578**	**2.9000e-004**	**0.0303**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0628**	**0.0628**	**1.8000e-004**		**0.0673**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Napa - New Land Uses

Napa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	2,449.00	1000sqft	56.22	2,449,000.00	0
Apartments Low Rise	49.00	Dwelling Unit	3.06	49,000.00	140
Apartments Mid Rise	49.00	Dwelling Unit	1.29	49,000.00	140
Single Family Housing	3,284.00	Dwelling Unit	1,066.23	5,911,200.00	9392

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.6	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	119.18	**CH4 Intensity (lb/MWhr)**	0.007	**N2O Intensity (lb/MWhr)**	0.001

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Napa - New Land Uses - Napa County, Annual

Project Characteristics - Marin Clean Energy emission factor based on an 80% renewable mix per MCE's implementation plan. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards.

Fleet Mix -

Plan Bay Area 2040 Update - Napa - New Land Uses - Napa County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	431.22	310.48
tblEnergyUse	T24E	392.47	282.58
tblEnergyUse	T24E	6.40	6.08
tblEnergyUse	T24E	368.92	265.62
tblEnergyUse	T24NG	10,164.29	7,318.29
tblEnergyUse	T24NG	7,914.07	5,698.13
tblEnergyUse	T24NG	16.39	15.57
tblEnergyUse	T24NG	32,797.58	23,614.26
tblFireplaces	NumberGas	7.35	15.68
tblFireplaces	NumberGas	7.35	15.68
tblFireplaces	NumberGas	821.00	2,233.12
tblFireplaces	NumberWood	8.33	0.00
tblFireplaces	NumberWood	8.33	0.00
tblFireplaces	NumberWood	1,412.12	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.007
tblProjectCharacteristics	CO2IntensityFactor	641.35	119.18
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.001
tblProjectCharacteristics	OperationalYear	2018	2040

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Napa - New Land Uses - Napa County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	40.1751	0.6597	32.9021	0.0283		1.4273	1.4273		1.4273	1.4273	169.8216	323.7594	493.5810	0.8385	5.1800e-003	516.0869
Energy	0.6855	5.9708	3.3185	0.0374		0.4737	0.4737		0.4737	0.4737	0.0000	10,696.4400	10,696.4400	0.3598	0.1572	10,752.2825
Mobile	5.7660	48.0006	69.0448	0.3965	45.4297	0.1655	45.5952	12.1773	0.1544	12.3317	0.0000	36,870.8402	36,870.8402	1.3535	0.0000	36,904.6785
Waste						0.0000	0.0000		0.0000	0.0000	1,272.2032	0.0000	1,272.2032	75.1851	0.0000	3,151.8297
Water						0.0000	0.0000		0.0000	0.0000	207.9983	268.5387	476.5369	21.3792	0.5067	1,162.0101
Total	**46.6266**	**54.6312**	**105.2654**	**0.4621**	**45.4297**	**2.0665**	**47.4962**	**12.1773**	**2.0554**	**14.2327**	**1,650.0231**	**48,159.5782**	**49,809.6013**	**99.1160**	**0.6691**	**52,486.8877**

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	40.1751	0.6597	32.9021	0.0283		1.4273	1.4273		1.4273	1.4273	169.8216	323.7594	493.5810	0.8385	5.1800e-003	516.0869
Energy	0.6855	5.9708	3.3185	0.0374		0.4737	0.4737		0.4737	0.4737	0.0000	10,696.4400	10,696.4400	0.3598	0.1572	10,752.2825
Mobile	5.7660	48.0006	69.0448	0.3965	45.4297	0.1655	45.5952	12.1773	0.1544	12.3317	0.0000	36,870.8402	36,870.8402	1.3535	0.0000	36,904.6785
Waste						0.0000	0.0000		0.0000	0.0000	1,272.2032	0.0000	1,272.2032	75.1851	0.0000	3,151.8297
Water						0.0000	0.0000		0.0000	0.0000	207.9983	268.5387	476.5369	21.3792	0.5067	1,162.0101
Total	**46.6266**	**54.6312**	**105.2654**	**0.4621**	**45.4297**	**2.0665**	**47.4962**	**12.1773**	**2.0554**	**14.2327**	**1,650.0231**	**48,159.5782**	**49,809.6013**	**99.1160**	**0.6691**	**52,486.8877**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	5.7660	48.0006	69.0448	0.3965	45.4297	0.1655	45.5952	12.1773	0.1544	12.3317	0.0000	36,870.8402	36,870.8402	1.3535	0.0000	36,904.6785
Unmitigated	5.7660	48.0006	69.0448	0.3965	45.4297	0.1655	45.5952	12.1773	0.1544	12.3317	0.0000	36,870.8402	36,870.8402	1.3535	0.0000	36,904.6785

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	322.91	350.84	297.43	746,604	746,604
Apartments Mid Rise	325.85	313.11	287.14	735,610	735,610
General Office Building	27,012.47	6,024.54	2571.45	49,043,989	49,043,989
Single Family Housing	31,263.68	32,544.44	28308.08	71,654,220	71,654,220
Total	58,924.91	39,232.93	31,464.10	122,180,423	122,180,423

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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556
Apartments Low Rise	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556
Apartments Mid Rise	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556
Single Family Housing	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,911.9612	3,911.9612	0.2298	0.0328	3,927.4869
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,911.9612	3,911.9612	0.2298	0.0328	3,927.4869
NaturalGas Mitigated	0.6855	5.9708	3.3185	0.0374		0.4737	0.4737		0.4737	0.4737	0.0000	6,784.4788	6,784.4788	0.1300	0.1244	6,824.7956
NaturalGas Unmitigated	0.6855	5.9708	3.3185	0.0374		0.4737	0.4737		0.4737	0.4737	0.0000	6,784.4788	6,784.4788	0.1300	0.1244	6,824.7956

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					
Apartments Low Rise	513191	2.7700e-003	0.0237	0.0101	1.5000e-004		1.9100e-003	1.9100e-003		1.9100e-003	1.9100e-003	0.0000	27.3858	27.3858	5.2000e-004	5.0000e-004	27.5486
Apartments Mid Rise	433803	2.3400e-003	0.0200	8.5100e-003	1.3000e-004		1.6200e-003	1.6200e-003		1.6200e-003	1.6200e-003	0.0000	23.1494	23.1494	4.4000e-004	4.2000e-004	23.2870
General Office Building	3.82791e+007	0.2064	1.8764	1.5762	0.0113		0.1426	0.1426		0.1426	0.1426	0.0000	2,042.7183	2,042.7183	0.0392	0.0375	2,054.8571
Single Family Housing	8.79102e+007	0.4740	4.0508	1.7237	0.0259		0.3275	0.3275		0.3275	0.3275	0.0000	4,691.2253	4,691.2253	0.0899	0.0860	4,719.1029
Total		**0.6856**	**5.9708**	**3.3185**	**0.0374**		**0.4737**	**0.4737**		**0.4737**	**0.4737**	**0.0000**	**6,784.4788**	**6,784.4788**	**0.1300**	**0.1244**	**6,824.7956**

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					
Apartments Low Rise	513191	2.7700e-003	0.0237	0.0101	1.5000e-004		1.9100e-003	1.9100e-003		1.9100e-003	1.9100e-003	0.0000	27.3858	27.3858	5.2000e-004	5.0000e-004	27.5486
Apartments Mid Rise	433803	2.3400e-003	0.0200	8.5100e-003	1.3000e-004		1.6200e-003	1.6200e-003		1.6200e-003	1.6200e-003	0.0000	23.1494	23.1494	4.4000e-004	4.2000e-004	23.2870
General Office Building	3.82791e+007	0.2064	1.8764	1.5762	0.0113		0.1426	0.1426		0.1426	0.1426	0.0000	2,042.7183	2,042.7183	0.0392	0.0375	2,054.8571
Single Family Housing	8.79102e+007	0.4740	4.0508	1.7237	0.0259		0.3275	0.3275		0.3275	0.3275	0.0000	4,691.2253	4,691.2253	0.0899	0.0860	4,719.1029
Total		**0.6856**	**5.9708**	**3.3185**	**0.0374**		**0.4737**	**0.4737**		**0.4737**	**0.4737**	**0.0000**	**6,784.4788**	**6,784.4788**	**0.1300**	**0.1244**	**6,824.7956**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	222421	12.0239	7.1000e-004	1.0000e-004	12.0716
Apartments Mid Rise	210753	11.3931	6.7000e-004	1.0000e-004	11.4383
General Office Building	4.38371e+007	2,369.7959	0.1392	0.0199	2,379.2011
Single Family Housing	2.80942e+007	1,518.7483	0.0892	0.0127	1,524.7759
Total		**3,911.9612**	**0.2298**	**0.0328**	**3,927.4869**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	222421	12.0239	7.1000e-004	1.0000e-004	12.0716
Apartments Mid Rise	210753	11.3931	6.7000e-004	1.0000e-004	11.4383
General Office Building	4.38371e+007	2,369.7959	0.1392	0.0199	2,379.2011
Single Family Housing	2.80942e+007	1,518.7483	0.0892	0.0127	1,524.7759
Total		**3,911.9612**	**0.2298**	**0.0328**	**3,927.4869**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	40.1751	0.6597	32.9021	0.0283		1.4273	1.4273		1.4273	1.4273	169.8216	323.7594	493.5810	0.8385	5.1800e-003	516.0869
Unmitigated	40.1751	0.6597	32.9021	0.0283		1.4273	1.4273		1.4273	1.4273	169.8216	323.7594	493.5810	0.8385	5.1800e-003	516.0869

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	5.5071					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	33.0335					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.8847	0.3709	7.8784	0.0269		1.2880	1.2880		1.2880	1.2880	169.8216	282.6961	452.5177	0.7993	5.1800e-003	474.0447
Landscaping	0.7498	0.2888	25.0238	1.3300e-003		0.1393	0.1393		0.1393	0.1393	0.0000	41.0633	41.0633	0.0392	0.0000	42.0423
Total	**40.1751**	**0.6597**	**32.9021**	**0.0283**		**1.4273**	**1.4273**		**1.4273**	**1.4273**	**169.8216**	**323.7594**	**493.5810**	**0.8385**	**5.1800e-003**	**516.0869**

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	5.5071					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	33.0335					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.8847	0.3709	7.8784	0.0269		1.2880	1.2880		1.2880	1.2880	169.8216	282.6961	452.5177	0.7993	5.1800e-003	474.0447
Landscaping	0.7498	0.2888	25.0238	1.3300e-003		0.1393	0.1393		0.1393	0.1393	0.0000	41.0633	41.0633	0.0392	0.0000	42.0423
Total	**40.1751**	**0.6597**	**32.9021**	**0.0283**		**1.4273**	**1.4273**		**1.4273**	**1.4273**	**169.8216**	**323.7594**	**493.5810**	**0.8385**	**5.1800e-003**	**516.0869**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	476.5369	21.3792	0.5067	1,162.0101
Unmitigated	476.5369	21.3792	0.5067	1,162.0101

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	3.19255 / 2.01269	2.3275	0.1041	2.4700e-003	5.6655
Apartments Mid Rise	3.19255 / 2.01269	2.3275	0.1041	2.4700e-003	5.6655
General Office Building	435.27 / 266.778	315.8900	14.1937	0.3364	770.9771
Single Family Housing	213.966 / 134.891	155.9919	6.9773	0.1654	379.7021
Total		**476.5369**	**21.3792**	**0.5067**	**1,162.0102**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	3.19255 / 2.01269	2.3275	0.1041	2.4700e-003	5.6655
Apartments Mid Rise	3.19255 / 2.01269	2.3275	0.1041	2.4700e-003	5.6655
General Office Building	435.27 / 266.778	315.8900	14.1937	0.3364	770.9771
Single Family Housing	213.966 / 134.891	155.9919	6.9773	0.1654	379.7021
Total		**476.5369**	**21.3792**	**0.5067**	**1,162.0102**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1,272.2032	75.1851	0.0000	3,151.8297
Unmitigated	1,272.2032	75.1851	0.0000	3,151.8297

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	22.54	4.5754	0.2704	0.0000	11.3354
Apartments Mid Rise	22.54	4.5754	0.2704	0.0000	11.3354
General Office Building	2277.57	462.3261	27.3227	0.0000	1,145.3934
Single Family Housing	3944.64	800.7263	47.3216	0.0000	1,983.7655
Total		**1,272.2032**	**75.1851**	**0.0000**	**3,151.8297**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	22.54	4.5754	0.2704	0.0000	11.3354
Apartments Mid Rise	22.54	4.5754	0.2704	0.0000	11.3354
General Office Building	2277.57	462.3261	27.3227	0.0000	1,145.3934
Single Family Housing	3944.64	800.7263	47.3216	0.0000	1,983.7655
Total		**1,272.2032**	**75.1851**	**0.0000**	**3,151.8297**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Napa - New Land Uses

Napa County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	2,449.00	1000sqft	56.22	2,449,000.00	0
Apartments Low Rise	49.00	Dwelling Unit	3.06	49,000.00	140
Apartments Mid Rise	49.00	Dwelling Unit	1.29	49,000.00	140
Single Family Housing	3,284.00	Dwelling Unit	1,066.23	5,911,200.00	9392

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.6	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	119.18	**CH4 Intensity (lb/MWhr)**	0.007	**N2O Intensity (lb/MWhr)**	0.001

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Napa - New Land Uses - Napa County, Summer

Project Characteristics - Marin Clean Energy emission factor based on an 80% renewable mix per MCE's implementation plan. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards.

Fleet Mix -

Plan Bay Area 2040 Update - Napa - New Land Uses - Napa County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	431.22	310.48
tblEnergyUse	T24E	392.47	282.58
tblEnergyUse	T24E	6.40	6.08
tblEnergyUse	T24E	368.92	265.62
tblEnergyUse	T24NG	10,164.29	7,318.29
tblEnergyUse	T24NG	7,914.07	5,698.13
tblEnergyUse	T24NG	16.39	15.57
tblEnergyUse	T24NG	32,797.58	23,614.26
tblFireplaces	NumberGas	7.35	15.68
tblFireplaces	NumberGas	7.35	15.68
tblFireplaces	NumberGas	821.00	2,233.12
tblFireplaces	NumberWood	8.33	0.00
tblFireplaces	NumberWood	8.33	0.00
tblFireplaces	NumberWood	1,412.12	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.007
tblProjectCharacteristics	CO2IntensityFactor	641.35	119.18
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.001
tblProjectCharacteristics	OperationalYear	2018	2040

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5258	0.0000	0.0000	2.3581	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5258**	**0.0000**	**0.0000**	**2.3581**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5258	0.0000	0.0000	2.3581	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5258**	**0.0000**	**0.0000**	**2.3581**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	306.3000	59.1307	1,038.2740	2.7140		126.0675	126.0675		126.0675	126.0675	17,856.0681	56,448.9163	74,304.9844	85.0254	1.0257	76,736.2703
Energy	3.7564	32.7169	18.1835	0.2049		2.5953	2.5953		2.5953	2.5953		40,978.6724	40,978.6724	0.7854	0.7513	41,222.1881
Mobile	41.6907	300.8461	456.5135	2.6390	299.8834	1.0507	300.9341	80.1288	0.9805	81.1092		270,343.1535	270,343.1535	9.3021		270,575.7068
Total	**351.7471**	**392.6936**	**1,512.9710**	**5.5579**	**299.8834**	**129.7136**	**429.5969**	**80.1288**	**129.6433**	**209.7721**	**17,856.0681**	**367,770.7421**	**385,626.8102**	**95.1129**	**1.7770**	**388,534.1652**

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	lb/day										lb/day					
Area	306.3000	59.1307	1,038.2740	2.7140		126.0675	126.0675		126.0675	126.0675	17,856.0681	56,448.9163	74,304.9844	85.0254	1.0257	76,736.2703
Energy	3.7564	32.7169	18.1835	0.2049		2.5953	2.5953		2.5953	2.5953		40,978.6724	40,978.6724	0.7854	0.7513	41,222.1881
Mobile	41.6907	300.8461	456.5135	2.6390	299.8834	1.0507	300.9341	80.1288	0.9805	81.1092		270,343.1535	270,343.1535	9.3021		270,575.7068
Total	**351.7471**	**392.6936**	**1,512.9710**	**5.5579**	**299.8834**	**129.7136**	**429.5969**	**80.1288**	**129.6433**	**209.7721**	**17,856.0681**	**367,770.7421**	**385,626.8102**	**95.1129**	**1.7770**	**388,534.1652**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	41.6907	300.8461	456.5135	2.6390	299.8834	1.0507	300.9341	80.1288	0.9805	81.1092		270,343.1535	270,343.1535	9.3021		270,575.7068
Unmitigated	41.6907	300.8461	456.5135	2.6390	299.8834	1.0507	300.9341	80.1288	0.9805	81.1092		270,343.1535	270,343.1535	9.3021		270,575.7068

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	322.91	350.84	297.43	746,604	746,604
Apartments Mid Rise	325.85	313.11	287.14	735,610	735,610
General Office Building	27,012.47	6,024.54	2571.45	49,043,989	49,043,989
Single Family Housing	31,263.68	32,544.44	28308.08	71,654,220	71,654,220
Total	58,924.91	39,232.93	31,464.10	122,180,423	122,180,423

4.3 Trip Type Information

Plan Bay Area 2040 Update - Napa - New Land Uses - Napa County, Summer

	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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556
Apartments Low Rise	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556
Apartments Mid Rise	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556
Single Family Housing	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.7564	32.7169	18.1835	0.2049		2.5953	2.5953		2.5953	2.5953		40,978.6724	40,978.6724	0.7854	0.7513	41,222.1881
NaturalGas Unmitigated	3.7564	32.7169	18.1835	0.2049		2.5953	2.5953		2.5953	2.5953		40,978.6724	40,978.6724	0.7854	0.7513	41,222.1881

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	lb/day										lb/day					
Apartments Low Rise	1406	0.0152	0.1296	0.0551	8.3000e-004		0.0105	0.0105		0.0105	0.0105		165.4121	165.4121	3.1700e-003	3.0300e-003	166.3951
Apartments Mid Rise	1188.5	0.0128	0.1095	0.0466	7.0000e-004		8.8600e-003	8.8600e-003		8.8600e-003	8.8600e-003		139.8238	139.8238	2.6800e-003	2.5600e-003	140.6547
General Office Building	104874	1.1310	10.2818	8.6367	0.0617		0.7814	0.7814		0.7814	0.7814		12,338.1449	12,338.1449	0.2365	0.2262	12,411.4643
Single Family Housing	240850	2.5974	22.1960	9.4451	0.1417		1.7946	1.7946		1.7946	1.7946		28,335.2915	28,335.2915	0.5431	0.5195	28,503.6740
Total		**3.7564**	**32.7169**	**18.1836**	**0.2049**		**2.5953**	**2.5953**		**2.5953**	**2.5953**		**40,978.6724**	**40,978.6724**	**0.7854**	**0.7513**	**41,222.1881**

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	lb/day										lb/day					
Apartments Low Rise	1.406	0.0152	0.1296	0.0551	8.3000e-004		0.0105	0.0105		0.0105	0.0105		165.4121	165.4121	3.1700e-003	3.0300e-003	166.3951
Apartments Mid Rise	1.1885	0.0128	0.1095	0.0466	7.0000e-004		8.8600e-003	8.8600e-003		8.8600e-003	8.8600e-003		139.8238	139.8238	2.6800e-003	2.5600e-003	140.6547
General Office Building	104.874	1.1310	10.2818	8.6367	0.0617		0.7814	0.7814		0.7814	0.7814		12,338.1449	12,338.1449	0.2365	0.2262	12,411.4643
Single Family Housing	240.85	2.5974	22.1960	9.4451	0.1417		1.7946	1.7946		1.7946	1.7946		28,335.2915	28,335.2915	0.5431	0.5195	28,503.6740
Total		**3.7564**	**32.7169**	**18.1836**	**0.2049**		**2.5953**	**2.5953**		**2.5953**	**2.5953**		**40,978.6724**	**40,978.6724**	**0.7854**	**0.7513**	**41,222.1881**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	306.3000	59.1307	1,038.2740	2.7140		126.0675	126.0675		126.0675	126.0675	17,856.0681	56,448.9163	74,304.9844	85.0254	1.0257	76,736.2703
Unmitigated	306.3000	59.1307	1,038.2740	2.7140		126.0675	126.0675		126.0675	126.0675	17,856.0681	56,448.9163	74,304.9844	85.0254	1.0257	76,736.2703

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	lb/day										lb/day					
Architectural Coating	30.1760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	181.0055					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	86.7872	55.9220	760.2320	2.6993		124.5193	124.5193		124.5193	124.5193	17,856.0681	55,945.9765	73,802.0446	84.5458	1.0257	76,221.3408
Landscaping	8.3313	3.2087	278.0420	0.0148		1.5482	1.5482		1.5482	1.5482		502.9399	502.9399	0.4796		514.9295
Total	**306.3000**	**59.1307**	**1,038.2740**	**2.7140**		**126.0675**	**126.0675**		**126.0675**	**126.0675**	**17,856.0681**	**56,448.9163**	**74,304.9844**	**85.0254**	**1.0257**	**76,736.2703**

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	lb/day										lb/day					
Architectural Coating	30.1760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	181.0055					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	86.7872	55.9220	760.2320	2.6993		124.5193	124.5193		124.5193	124.5193	17,856.0681	55,945.9765	73,802.0446	84.5458	1.0257	76,221.3408
Landscaping	8.3313	3.2087	278.0420	0.0148		1.5482	1.5482		1.5482	1.5482		502.9399	502.9399	0.4796		514.9295
Total	**306.3000**	**59.1307**	**1,038.2740**	**2.7140**		**126.0675**	**126.0675**		**126.0675**	**126.0675**	**17,856.0681**	**56,448.9163**	**74,304.9844**	**85.0254**	**1.0257**	**76,736.2703**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Napa - Net Reduction in Land Uses

Napa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	10.25	1000sqft	0.24	10,250.00	0
Regional Shopping Center	124.60	1000sqft	2.86	124,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.6	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2040

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Napa - Net Reduction in Land Uses - Napa County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	0.5971	1.0000e-005	1.2300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5600e-003
Energy	3.0700e-003	0.0279	0.0234	1.7000e-004		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	373.1033	373.1033	0.0219	4.5000e-003	374.9895
Mobile	0.5104	4.4088	5.5489	0.0307	3.4036	0.0130	3.4166	0.9123	0.0121	0.9244	0.0000	2,859.6244	2,859.6244	0.1153	0.0000	2,862.5072
Waste						0.0000	0.0000		0.0000	0.0000	29.1373	0.0000	29.1373	1.7220	0.0000	72.1865
Water						0.0000	0.0000		0.0000	0.0000	3.6801	16.2911	19.9712	0.3790	9.1100e-003	32.1613
Total	**1.1106**	**4.4367**	**5.5736**	**0.0309**	**3.4036**	**0.0151**	**3.4187**	**0.9123**	**0.0142**	**0.9266**	**32.8174**	**3,249.0212**	**3,281.8386**	**2.2381**	**0.0136**	**3,341.8470**

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	0.5971	1.0000e-005	1.2300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5600e-003
Energy	3.0700e-003	0.0279	0.0234	1.7000e-004		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	373.1033	373.1033	0.0219	4.5000e-003	374.9895
Mobile	0.5104	4.4088	5.5489	0.0307	3.4036	0.0130	3.4166	0.9123	0.0121	0.9244	0.0000	2,859.6244	2,859.6244	0.1153	0.0000	2,862.5072
Waste						0.0000	0.0000		0.0000	0.0000	29.1373	0.0000	29.1373	1.7220	0.0000	72.1865
Water						0.0000	0.0000		0.0000	0.0000	3.6801	16.2911	19.9712	0.3790	9.1100e-003	32.1613
Total	**1.1106**	**4.4367**	**5.5736**	**0.0309**	**3.4036**	**0.0151**	**3.4187**	**0.9123**	**0.0142**	**0.9266**	**32.8174**	**3,249.0212**	**3,281.8386**	**2.2381**	**0.0136**	**3,341.8470**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	0.5104	4.4088	5.5489	0.0307	3.4036	0.0130	3.4166	0.9123	0.0121	0.9244	0.0000	2,859.6244	2,859.6244	0.1153	0.0000	2,862.5072
Unmitigated	0.5104	4.4088	5.5489	0.0307	3.4036	0.0130	3.4166	0.9123	0.0121	0.9244	0.0000	2,859.6244	2,859.6244	0.1153	0.0000	2,862.5072

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	70.01	25.52	7.48	143,467	143,467
Regional Shopping Center	5,320.42	6,226.26	3144.90	9,010,300	9,010,300
Total	5,390.43	6,251.78	3,152.39	9,153,768	9,153,768

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Plan Bay Area 2040 Update - Napa - Net Reduction in Land Uses - Napa County, Annual

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556
Regional Shopping Center	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	342.7701	342.7701	0.0213	3.9400e-003	344.4761
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	342.7701	342.7701	0.0213	3.9400e-003	344.4761
NaturalGas Mitigated	3.0700e-003	0.0279	0.0234	1.7000e-004		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	30.3332	30.3332	5.8000e-004	5.6000e-004	30.5134
NaturalGas Unmitigated	3.0700e-003	0.0279	0.0234	1.7000e-004		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	30.3332	30.3332	5.8000e-004	5.6000e-004	30.5134

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					
Industrial Park	204590	1.1000e-003	0.0100	8.4200e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.9177	10.9177	2.1000e-004	2.0000e-004	10.9826
Regional Shopping Center	363832	1.9600e-003	0.0178	0.0150	1.1000e-004		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003	0.0000	19.4155	19.4155	3.7000e-004	3.6000e-004	19.5308
Total		**3.0600e-003**	**0.0279**	**0.0234**	**1.7000e-004**		**2.1200e-003**	**2.1200e-003**		**2.1200e-003**	**2.1200e-003**	**0.0000**	**30.3332**	**30.3332**	**5.8000e-004**	**5.6000e-004**	**30.5134**

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					
Industrial Park	204590	1.1000e-003	0.0100	8.4200e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.9177	10.9177	2.1000e-004	2.0000e-004	10.9826
Regional Shopping Center	363832	1.9600e-003	0.0178	0.0150	1.1000e-004		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003	0.0000	19.4155	19.4155	3.7000e-004	3.6000e-004	19.5308
Total		**3.0600e-003**	**0.0279**	**0.0234**	**1.7000e-004**		**2.1200e-003**	**2.1200e-003**		**2.1200e-003**	**2.1200e-003**	**0.0000**	**30.3332**	**30.3332**	**5.8000e-004**	**5.6000e-004**	**30.5134**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	210843	41.6019	2.5800e-003	4.8000e-004	41.8090
Regional Shopping Center	1.52635e+006	301.1682	0.0187	3.4600e-003	302.6671
Total		**342.7701**	**0.0213**	**3.9400e-003**	**344.4761**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	210843	41.6019	2.5800e-003	4.8000e-004	41.8090
Regional Shopping Center	1.52635e+006	301.1682	0.0187	3.4600e-003	302.6671
Total		**342.7701**	**0.0213**	**3.9400e-003**	**344.4761**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5971	1.0000e-005	1.2300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5600e-003
Unmitigated	0.5971	1.0000e-005	1.2300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5600e-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	0.0703					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5267					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1000e-004	1.0000e-005	1.2300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5600e-003
Total	**0.5971**	**1.0000e-005**	**1.2300e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.4100e-003**	**2.4100e-003**	**1.0000e-005**	**0.0000**	**2.5600e-003**

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	0.0703					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5267					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1000e-004	1.0000e-005	1.2300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5600e-003
Total	**0.5971**	**1.0000e-005**	**1.2300e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.4100e-003**	**2.4100e-003**	**1.0000e-005**	**0.0000**	**2.5600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	19.9712	0.3790	9.1100e-003	32.1613
Unmitigated	19.9712	0.3790	9.1100e-003	32.1613

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	2.37031 / 0	3.2827	0.0774	1.8500e-003	5.7697
Regional Shopping Center	9.22944 / 5.65675	16.6885	0.3016	7.2600e-003	26.3917
Total		**19.9712**	**0.3790**	**9.1100e-003**	**32.1613**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	2.37031 / 0	3.2827	0.0774	1.8500e-003	5.7697
Regional Shopping Center	9.22944 / 5.65675	16.6885	0.3016	7.2600e-003	26.3917
Total		**19.9712**	**0.3790**	**9.1100e-003**	**32.1613**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	29.1373	1.7220	0.0000	72.1865
Unmitigated	29.1373	1.7220	0.0000	72.1865

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	12.71	2.5800	0.1525	0.0000	6.3919
Regional Shopping Center	130.83	26.5573	1.5695	0.0000	65.7946
Total		**29.1373**	**1.7220**	**0.0000**	**72.1865**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	12.71	2.5800	0.1525	0.0000	6.3919
Regional Shopping Center	130.83	26.5573	1.5695	0.0000	65.7946
Total		**29.1373**	**1.7220**	**0.0000**	**72.1865**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Napa - Net Reduction in Land Uses

Napa County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	10.25	1000sqft	0.24	10,250.00	0
Regional Shopping Center	124.60	1000sqft	2.86	124,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.6	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2040

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5258	0.0000	0.0000	2.3581	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5258**	**0.0000**	**0.0000**	**2.3581**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5258	0.0000	0.0000	2.3581	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5258**	**0.0000**	**0.0000**	**2.3581**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	3.2723	1.2000e-004	0.0137	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0314
Energy	0.0168	0.1527	0.1283	9.2000e-004		0.0116	0.0116		0.0116	0.0116		183.2142	183.2142	3.5100e-003	3.3600e-003	184.3029
Mobile	3.9318	29.1229	37.9419	0.2145	23.5611	0.0864	23.6475	6.2955	0.0806	6.3761		21,992.8221	21,992.8221	0.8269		22,013.4951
Total	**7.2210**	**29.2757**	**38.0838**	**0.2154**	**23.5611**	**0.0981**	**23.6592**	**6.2955**	**0.0923**	**6.3878**		**22,176.0658**	**22,176.0658**	**0.8305**	**3.3600e-003**	**22,197.8295**

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	lb/day										lb/day					
Area	3.2723	1.2000e-004	0.0137	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0314
Energy	0.0168	0.1527	0.1283	9.2000e-004		0.0116	0.0116		0.0116	0.0116		183.2142	183.2142	3.5100e-003	3.3600e-003	184.3029
Mobile	3.9318	29.1229	37.9419	0.2145	23.5611	0.0864	23.6475	6.2955	0.0806	6.3761		21,992.8221	21,992.8221	0.8269		22,013.4951
Total	**7.2210**	**29.2757**	**38.0838**	**0.2154**	**23.5611**	**0.0981**	**23.6592**	**6.2955**	**0.0923**	**6.3878**		**22,176.0658**	**22,176.0658**	**0.8305**	**3.3600e-003**	**22,197.8295**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	3.9318	29.1229	37.9419	0.2145	23.5611	0.0864	23.6475	6.2955	0.0806	6.3761		21,992.8221	21,992.8221	0.8269		22,013.4951
Unmitigated	3.9318	29.1229	37.9419	0.2145	23.5611	0.0864	23.6475	6.2955	0.0806	6.3761		21,992.8221	21,992.8221	0.8269		22,013.4951

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	70.01	25.52	7.48	143,467	143,467
Regional Shopping Center	5,320.42	6,226.26	3144.90	9,010,300	9,010,300
Total	5,390.43	6,251.78	3,152.39	9,153,768	9,153,768

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556
Regional Shopping Center	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0168	0.1527	0.1283	9.2000e-004		0.0116	0.0116		0.0116	0.0116		183.2142	183.2142	3.5100e-003	3.3600e-003	184.3029
NaturalGas Unmitigated	0.0168	0.1527	0.1283	9.2000e-004		0.0116	0.0116		0.0116	0.0116		183.2142	183.2142	3.5100e-003	3.3600e-003	184.3029

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	lb/day										lb/day					
Industrial Park	560.521	6.0400e-003	0.0550	0.0462	3.3000e-004		4.1800e-003	4.1800e-003		4.1800e-003	4.1800e-003		65.9436	65.9436	1.2600e-003	1.2100e-003	66.3355
Regional Shopping Center	996.8	0.0108	0.0977	0.0821	5.9000e-004		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003		117.2706	117.2706	2.2500e-003	2.1500e-003	117.9675
Total		**0.0168**	**0.1527**	**0.1283**	**9.2000e-004**		**0.0116**	**0.0116**		**0.0116**	**0.0116**		**183.2142**	**183.2142**	**3.5100e-003**	**3.3600e-003**	**184.3029**

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	lb/day										lb/day					
Industrial Park	0.560521	6.0400e-003	0.0550	0.0462	3.3000e-004		4.1800e-003	4.1800e-003		4.1800e-003	4.1800e-003		65.9436	65.9436	1.2600e-003	1.2100e-003	66.3355
Regional Shopping Center	0.9968	0.0108	0.0977	0.0821	5.9000e-004		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003		117.2706	117.2706	2.2500e-003	2.1500e-003	117.9675
Total		**0.0168**	**0.1527**	**0.1283**	**9.2000e-004**		**0.0116**	**0.0116**		**0.0116**	**0.0116**		**183.2142**	**183.2142**	**3.5100e-003**	**3.3600e-003**	**184.3029**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.2723	1.2000e-004	0.0137	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0314
Unmitigated	3.2723	1.2000e-004	0.0137	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0314

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	lb/day										lb/day					
Architectural Coating	0.3853					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8858					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.2500e-003	1.2000e-004	0.0137	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0314
Total	**3.2723**	**1.2000e-004**	**0.0137**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0295**	**0.0295**	**8.0000e-005**		**0.0314**

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	lb/day										lb/day					
Architectural Coating	0.3853					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8858					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.2500e-003	1.2000e-004	0.0137	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0314
Total	**3.2723**	**1.2000e-004**	**0.0137**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0295**	**0.0295**	**8.0000e-005**		**0.0314**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - San Francisco - New Land Uses

San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	5,306.29	1000sqft	121.82	5,306,290.00	0
Apartments High Rise	54,859.00	Dwelling Unit	884.82	54,859,000.00	156897
Apartments Low Rise	18,622.00	Dwelling Unit	1,163.88	18,622,000.00	53259
Apartments Mid Rise	18,622.00	Dwelling Unit	490.05	18,622,000.00	53259
Single Family Housing	7,274.00	Dwelling Unit	2,361.69	13,093,200.00	20804
Regional Shopping Center	7,219.39	1000sqft	165.73	7,219,390.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	4.6	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.94	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - San Francisco - New Land Uses - San Francisco County, Annual

Project Characteristics - Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards.

Plan Bay Area 2040 Update - San Francisco - New Land Uses - San Francisco County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	502.89	477.75
tblEnergyUse	T24E	274.84	197.88
tblEnergyUse	T24E	502.89	362.08
tblEnergyUse	T24E	4.30	4.09
tblEnergyUse	T24E	2.35	2.23
tblEnergyUse	T24E	246.52	177.49
tblEnergyUse	T24NG	8,824.58	8,383.35
tblEnergyUse	T24NG	25,590.91	18,425.46
tblEnergyUse	T24NG	8,824.58	6,353.70
tblEnergyUse	T24NG	18.41	17.49
tblEnergyUse	T24NG	3.92	3.72
tblEnergyUse	T24NG	50,264.25	36,190.26
tblFireplaces	NumberGas	8,228.85	17,554.88
tblFireplaces	NumberGas	2,793.30	5,959.04
tblFireplaces	NumberGas	2,793.30	5,959.04
tblFireplaces	NumberGas	1,818.50	4,946.32
tblFireplaces	NumberWood	9,326.03	0.00
tblFireplaces	NumberWood	3,165.74	0.00
tblFireplaces	NumberWood	3,165.74	0.00
tblFireplaces	NumberWood	3,127.82	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.94
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2040

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Plan Bay Area 2040 Update - San Francisco - New Land Uses - San Francisco County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**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)
		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	571.8839	13.5422	819.1662	0.3329		17.9044	17.9044		17.9044	17.9044	1,809.2715	5,502.4256	7,311.6971	9.6882	0.0788	7,577.3769
Energy	8.4903	72.9359	33.6799	0.4631		5.8660	5.8660		5.8660	5.8660	0.0000	167,184.4394	167,184.4394	6.6346	2.3778	168,058.8875
Mobile	100.7123	532.8463	1,161.5615	5.9916	703.8461	2.8662	706.7123	189.3129	2.6654	191.9783	0.0000	557,910.5121	557,910.5121	21.5627	0.0000	558,449.5802
Waste						0.0000	0.0000		0.0000	0.0000	12,914.3399	0.0000	12,914.3399	763.2156	0.0000	31,994.7304
Water						0.0000	0.0000		0.0000	0.0000	2,523.0175	8,174.6846	10,697.7020	259.6320	6.2011	19,036.4359
Total	**681.0865**	**619.3244**	**2,014.4076**	**6.7876**	**703.8461**	**26.6366**	**730.4827**	**189.3129**	**26.4358**	**215.7487**	**17,246.6289**	**738,772.0616**	**756,018.6904**	**1,060.7331**	**8.6577**	**785,117.0109**

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	571.8839	13.5422	819.1662	0.3329		17.9044	17.9044		17.9044	17.9044	1,809.2715	5,502.4256	7,311.6971	9.6882	0.0788	7,577.3769
Energy	8.4903	72.9359	33.6799	0.4631		5.8660	5.8660		5.8660	5.8660	0.0000	167,184.4394	167,184.4394	6.6346	2.3778	168,058.8875
Mobile	100.7123	532.8463	1,161.5615	5.9916	703.8461	2.8662	706.7123	189.3129	2.6654	191.9783	0.0000	557,910.5121	557,910.5121	21.5627	0.0000	558,449.5802
Waste						0.0000	0.0000		0.0000	0.0000	12,914.3399	0.0000	12,914.3399	763.2156	0.0000	31,994.7304
Water						0.0000	0.0000		0.0000	0.0000	2,523.0175	8,174.6846	10,697.7020	259.6320	6.2011	19,036.4359
Total	**681.0865**	**619.3244**	**2,014.4076**	**6.7876**	**703.8461**	**26.6366**	**730.4827**	**189.3129**	**26.4358**	**215.7487**	**17,246.6289**	**738,772.0616**	**756,018.6904**	**1,060.7331**	**8.6577**	**785,117.0109**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	100.7123	532.8463	1,161.5615	5.9916	703.8461	2.8662	706.7123	189.3129	2.6654	191.9783	0.0000	557,910.5121	557,910.5121	21.5627	0.0000	558,449.5802
Unmitigated	100.7123	532.8463	1,161.5615	5.9916	703.8461	2.8662	706.7123	189.3129	2.6654	191.9783	0.0000	557,910.5121	557,910.5121	21.5627	0.0000	558,449.5802

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	230,407.80	273,197.82	200235.35	536,314,627	536,314,627
Apartments Low Rise	122,718.98	133,333.52	113035.54	283,739,863	283,739,863
Apartments Mid Rise	123,836.30	118,994.58	109124.92	279,561,796	279,561,796
General Office Building	58,528.38	13,053.47	5571.60	106,264,446	106,264,446
Regional Shopping Center	308,267.95	360,752.92	182217.40	522,061,562	522,061,562
Single Family Housing	69,248.48	72,085.34	62701.88	158,712,789	158,712,789
Total	913,007.89	971,417.65	672,886.70	1,886,655,083	1,886,655,083

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
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663
Apartments High Rise	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663
Apartments Low Rise	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663
Apartments Mid Rise	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663
Single Family Housing	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663
Regional Shopping Center	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Plan Bay Area 2040 Update - San Francisco - New Land Uses - San Francisco County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83,159.8822	83,159.8822	5.0241	0.8374	83,535.0144
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83,159.8822	83,159.8822	5.0241	0.8374	83,535.0144
NaturalGas Mitigated	8.4903	72.9359	33.6799	0.4631		5.8660	5.8660		5.8660	5.8660	0.0000	84,024.5571	84,024.5571	1.6105	1.5405	84,523.8731
NaturalGas Unmitigated	8.4903	72.9359	33.6799	0.4631		5.8660	5.8660		5.8660	5.8660	0.0000	84,024.5571	84,024.5571	1.6105	1.5405	84,523.8731

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					
Apartments High Rise	6.03359e+008	3.2534	27.8018	11.8306	0.1775		2.2478	2.2478		2.2478	2.2478	0.0000	32,197.5093	32,197.5093	0.6171	0.5903	32,388.8430
Apartments Low Rise	3.91815e+008	2.1127	18.0542	7.6827	0.1152		1.4597	1.4597		1.4597	1.4597	0.0000	20,908.7596	20,908.7596	0.4008	0.3833	21,033.0099
Apartments Mid Rise	1.67015e+008	0.9006	7.6958	3.2748	0.0491		0.6222	0.6222		0.6222	0.6222	0.0000	8,912.5611	8,912.5611	0.1708	0.1634	8,965.5240
General Office Building	9.81637e+007	0.5293	4.8120	4.0420	0.0289		0.3657	0.3657		0.3657	0.3657	0.0000	5,238.3895	5,238.3895	0.1004	0.0960	5,269.5186
Regional Shopping Center	3.19386e+007	0.1722	1.5656	1.3151	9.3900e-003		0.1190	0.1190		0.1190	0.1190	0.0000	1,704.3643	1,704.3643	0.0327	0.0313	1,714.4925
Single Family Housing	2.82269e+008	1.5220	13.0065	5.5347	0.0830		1.0516	1.0516		1.0516	1.0516	0.0000	15,062.9734	15,062.9734	0.2887	0.2762	15,152.4851
Total		**8.4903**	**72.9359**	**33.6799**	**0.4631**		**5.8660**	**5.8660**		**5.8660**	**5.8660**	**0.0000**	**84,024.5571**	**84,024.5571**	**1.6105**	**1.5405**	**84,523.8731**

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					
Apartments High Rise	6.03359e+008	3.2534	27.8018	11.8306	0.1775		2.2478	2.2478		2.2478	2.2478	0.0000	32,197.5093	32,197.5093	0.6171	0.5903	32,388.8430
Apartments Low Rise	3.91815e+008	2.1127	18.0542	7.6827	0.1152		1.4597	1.4597		1.4597	1.4597	0.0000	20,908.7596	20,908.7596	0.4008	0.3833	21,033.0099
Apartments Mid Rise	1.67015e+008	0.9006	7.6958	3.2748	0.0491		0.6222	0.6222		0.6222	0.6222	0.0000	8,912.5611	8,912.5611	0.1708	0.1634	8,965.5240
General Office Building	9.81637e+007	0.5293	4.8120	4.0420	0.0289		0.3657	0.3657		0.3657	0.3657	0.0000	5,238.3895	5,238.3895	0.1004	0.0960	5,269.5186
Regional Shopping Center	3.19386e+007	0.1722	1.5656	1.3151	9.3900e-003		0.1190	0.1190		0.1190	0.1190	0.0000	1,704.3643	1,704.3643	0.0327	0.0313	1,714.4925
Single Family Housing	2.82269e+008	1.5220	13.0065	5.5347	0.0830		1.0516	1.0516		1.0516	1.0516	0.0000	15,062.9734	15,062.9734	0.2887	0.2762	15,152.4851
Total		**8.4903**	**72.9359**	**33.6799**	**0.4631**		**5.8660**	**5.8660**		**5.8660**	**5.8660**	**0.0000**	**84,024.5571**	**84,024.5571**	**1.6105**	**1.5405**	**84,523.8731**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	2.4666e+008	33,334.3858	2.0139	0.3357	33,484.7564
Apartments Low Rise	8.24322e+007	11,140.1651	0.6730	0.1122	11,190.4181
Apartments Mid Rise	8.15752e+007	11,024.3393	0.6660	0.1110	11,074.0698
General Office Building	6.66205e+007	9,003.3110	0.5439	0.0907	9,043.9247
Regional Shopping Center	7.64714e+007	10,334.5966	0.6244	0.1041	10,381.2157
Single Family Housing	6.15871e+007	8,323.0844	0.5028	0.0838	8,360.6297
Total		**83,159.8822**	**5.0241**	**0.8374**	**83,535.0144**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	2.4666e+008	33,334.3858	2.0139	0.3357	33,484.7564
Apartments Low Rise	8.24322e+007	11,140.1651	0.6730	0.1122	11,190.4181
Apartments Mid Rise	8.15752e+007	11,024.3393	0.6660	0.1110	11,074.0698
General Office Building	6.66205e+007	9,003.3110	0.5439	0.0907	9,043.9247
Regional Shopping Center	7.64714e+007	10,334.5966	0.6244	0.1041	10,381.2157
Single Family Housing	6.15871e+007	8,323.0844	0.5028	0.0838	8,360.6297
Total		**83,159.8822**	**5.0241**	**0.8374**	**83,535.0144**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	571.8839	13.5422	819.1662	0.3329		17.9044	17.9044		17.9044	17.9044	1,809.2715	5,502.4256	7,311.6971	9.6882	0.0788	7,577.3769
Unmitigated	571.8839	13.5422	819.1662	0.3329		17.9044	17.9044		17.9044	17.9044	1,809.2715	5,502.4256	7,311.6971	9.6882	0.0788	7,577.3769

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	80.5832					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	459.7628					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	9.5548	5.0615	84.4078	0.2939		13.8120	13.8120		13.8120	13.8120	1,809.2715	4,296.8786	6,106.1501	8.5403	0.0788	6,343.1337
Landscaping	21.9831	8.4807	734.7584	0.0390		4.0924	4.0924		4.0924	4.0924	0.0000	1,205.5470	1,205.5470	1.1479	0.0000	1,234.2432
Total	**571.8839**	**13.5422**	**819.1662**	**0.3329**		**17.9044**	**17.9044**		**17.9044**	**17.9044**	**1,809.2715**	**5,502.4256**	**7,311.6971**	**9.6882**	**0.0788**	**7,577.3769**

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	80.5832					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	459.7628					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	9.5548	5.0615	84.4078	0.2939		13.8120	13.8120		13.8120	13.8120	1,809.2715	4,296.8786	6,106.1501	8.5403	0.0788	6,343.1337
Landscaping	21.9831	8.4807	734.7584	0.0390		4.0924	4.0924		4.0924	4.0924	0.0000	1,205.5470	1,205.5470	1.1479	0.0000	1,234.2432
Total	**571.8839**	**13.5422**	**819.1662**	**0.3329**		**17.9044**	**17.9044**		**17.9044**	**17.9044**	**1,809.2715**	**5,502.4256**	**7,311.6971**	**9.6882**	**0.0788**	**7,577.3769**

7.0 Water Detail

7.1 Mitigation Measures Water

Plan Bay Area 2040 Update - San Francisco - New Land Uses - San Francisco County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	10,697.7020	259.6320	6.2011	19,036.4359
Unmitigated	10,697.7020	259.6320	6.2011	19,036.4359

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	3574.28 / 2253.35	4,813.5284	116.6904	2.7871	8,561.3491
Apartments Low Rise	1213.3 / 764.905	1,633.9621	39.6108	0.9461	2,906.1675
Apartments Mid Rise	1213.3 / 764.905	1,633.9621	39.6108	0.9461	2,906.1675
General Office Building	943.107 / 578.033	1,262.2716	30.7893	0.7353	2,251.1322
Regional Shopping Center	534.758 / 327.755	715.7306	17.4581	0.4169	1,276.4322
Single Family Housing	473.93 / 298.782	638.2473	15.4725	0.3696	1,135.1875
Total		**10,697.7020**	**259.6320**	**6.2011**	**19,036.4359**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	3574.28 / 2253.35	4,813.5284	116.6904	2.7871	8,561.3491
Apartments Low Rise	1213.3 / 764.905	1,633.9621	39.6108	0.9461	2,906.1675
Apartments Mid Rise	1213.3 / 764.905	1,633.9621	39.6108	0.9461	2,906.1675
General Office Building	943.107 / 578.033	1,262.2716	30.7893	0.7353	2,251.1322
Regional Shopping Center	534.758 / 327.755	715.7306	17.4581	0.4169	1,276.4322
Single Family Housing	473.93 / 298.782	638.2473	15.4725	0.3696	1,135.1875
Total		**10,697.7020**	**259.6320**	**6.2011**	**19,036.4359**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12,914.3399	763.2156	0.0000	31,994.7304
Unmitigated	12,914.3399	763.2156	0.0000	31,994.7304

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	25235.1	5,122.5054	302.7314	0.0000	12,690.7902
Apartments Low Rise	8566.12	1,738.8450	102.7628	0.0000	4,307.9148
Apartments Mid Rise	8566.12	1,738.8450	102.7628	0.0000	4,307.9148
General Office Building	4934.85	1,001.7300	59.2005	0.0000	2,481.7436
Regional Shopping Center	7580.36	1,538.7446	90.9372	0.0000	3,812.1746
Single Family Housing	8737.68	1,773.6701	104.8209	0.0000	4,394.1925
Total		**12,914.3399**	**763.2156**	**0.0000**	**31,994.7304**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	25235.1	5,122.5054	302.7314	0.0000	12,690.7902
Apartments Low Rise	8566.12	1,738.8450	102.7628	0.0000	4,307.9148
Apartments Mid Rise	8566.12	1,738.8450	102.7628	0.0000	4,307.9148
General Office Building	4934.85	1,001.7300	59.2005	0.0000	2,481.7436
Regional Shopping Center	7580.36	1,538.7446	90.9372	0.0000	3,812.1746
Single Family Housing	8737.68	1,773.6701	104.8209	0.0000	4,394.1925
Total		**12,914.3399**	**763.2156**	**0.0000**	**31,994.7304**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - San Francisco - New Land Uses

San Francisco County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	5,306.29	1000sqft	121.82	5,306,290.00	0
Apartments High Rise	54,859.00	Dwelling Unit	884.82	54,859,000.00	156897
Apartments Low Rise	18,622.00	Dwelling Unit	1,163.88	18,622,000.00	53259
Apartments Mid Rise	18,622.00	Dwelling Unit	490.05	18,622,000.00	53259
Single Family Housing	7,274.00	Dwelling Unit	2,361.69	13,093,200.00	20804
Regional Shopping Center	7,219.39	1000sqft	165.73	7,219,390.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	4.6	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.94	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - San Francisco - New Land Uses - San Francisco County, Summer

Project Characteristics - Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards.

Plan Bay Area 2040 Update - San Francisco - New Land Uses - San Francisco County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	502.89	477.75
tblEnergyUse	T24E	274.84	197.88
tblEnergyUse	T24E	502.89	362.08
tblEnergyUse	T24E	4.30	4.08
tblEnergyUse	T24E	2.35	2.23
tblEnergyUse	T24E	246.52	177.49
tblEnergyUse	T24NG	8,824.58	8,383.35
tblEnergyUse	T24NG	25,590.91	18,425.46
tblEnergyUse	T24NG	8,824.58	6,353.70
tblEnergyUse	T24NG	18.41	17.49
tblEnergyUse	T24NG	3.92	3.72
tblEnergyUse	T24NG	50,264.25	36,190.26
tblFireplaces	NumberGas	8,228.85	17,554.88
tblFireplaces	NumberGas	2,793.30	5,959.04
tblFireplaces	NumberGas	2,793.30	5,959.04
tblFireplaces	NumberGas	1,818.50	4,946.32
tblFireplaces	NumberWood	9,326.03	0.00
tblFireplaces	NumberWood	3,165.74	0.00
tblFireplaces	NumberWood	3,165.74	0.00
tblFireplaces	NumberWood	3,127.82	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.94
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2040

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5256	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5256**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5256	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5256**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Plan Bay Area 2040 Update - San Francisco - New Land Uses - San Francisco County, Summer

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

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	lb/day										lb/day					
Area	4,487.1706	938.7394	19,383.0337	40.3638		1,883.2744	1,883.2744		1,883.2744	1,883.2744	263,310.6527	865,124.1055	1,128,434.7582	1,261.2811	15.5899	1,164,612.5775
Energy	46.5213	399.6420	184.5413	2.5375		32.1420	32.1420		32.1420	32.1420		507,505.1056	507,505.1056	9.7272	9.3043	510,520.9547
Mobile	696.5388	3,286.9472	7,537.1980	39.4751	4,607.6563	18.0800	4,625.7363	1,235.2668	16.8127	1,252.0795		4,048,543.5585	4,048,543.5585	149.4212		4,052,279.0894
Total	**5,230.2306**	**4,625.3286**	**27,104.7730**	**82.3764**	**4,607.6563**	**1,933.4963**	**6,541.1527**	**1,235.2668**	**1,932.2291**	**3,167.4958**	**263,310.6527**	**5,421,172.7697**	**5,684,483.4224**	**1,420.4295**	**24.8942**	**5,727,412.6217**

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	lb/day										lb/day					
Area	4,487.1706	938.7394	19,383.0337	40.3638		1,883.2744	1,883.2744		1,883.2744	1,883.2744	263,310.6527	865,124.1055	1,128,434.7582	1,261.2811	15.5899	1,164,612.5775
Energy	46.5213	399.6420	184.5413	2.5375		32.1420	32.1420		32.1420	32.1420		507,505.1056	507,505.1056	9.7272	9.3043	510,520.9547
Mobile	696.5388	3,286.9472	7,537.1980	39.4751	4,607.6563	18.0800	4,625.7363	1,235.2668	16.8127	1,252.0795		4,048,543.5585	4,048,543.5585	149.4212		4,052,279.0894
Total	**5,230.2306**	**4,625.3286**	**27,104.7730**	**82.3764**	**4,607.6563**	**1,933.4963**	**6,541.1527**	**1,235.2668**	**1,932.2291**	**3,167.4958**	**263,310.6527**	**5,421,172.7697**	**5,684,483.4224**	**1,420.4295**	**24.8942**	**5,727,412.6217**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	696.5388	3,286.9472	7,537.1980	39.4751	4,607.6563	18.0800	4,625.7363	1,235.2668	16.8127	1,252.0795		4,048,543.5585	4,048,543.5585	149.4212		4,052,279.0894
Unmitigated	696.5388	3,286.9472	7,537.1980	39.4751	4,607.6563	18.0800	4,625.7363	1,235.2668	16.8127	1,252.0795		4,048,543.5585	4,048,543.5585	149.4212		4,052,279.0894

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	230,407.80	273,197.82	200235.35	536,314,627	536,314,627
Apartments Low Rise	122,718.98	133,333.52	113035.54	283,739,863	283,739,863
Apartments Mid Rise	123,836.30	118,994.58	109124.92	279,561,796	279,561,796
General Office Building	58,528.38	13,053.47	5571.60	106,264,446	106,264,446
Regional Shopping Center	308,267.95	360,752.92	182217.40	522,061,562	522,061,562
Single Family Housing	69,248.48	72,085.34	62701.88	158,712,789	158,712,789
Total	913,007.89	971,417.65	672,886.70	1,886,655,083	1,886,655,083

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
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663
Apartments High Rise	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663
Apartments Low Rise	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663
Apartments Mid Rise	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663
Single Family Housing	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663
Regional Shopping Center	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Plan Bay Area 2040 Update - San Francisco - New Land Uses - San Francisco County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	46.5213	399.6420	184.5413	2.5375		32.1420	32.1420		32.1420	32.1420		507,505.1056	507,505.1056	9.7272	9.3043	510,520.9547
NaturalGas Unmitigated	46.5213	399.6420	184.5413	2.5375		32.1420	32.1420		32.1420	32.1420		507,505.1056	507,505.1056	9.7272	9.3043	510,520.9547

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	lb/day										lb/day					
Apartments High Rise	1.65304e+006	17.8269	152.3387	64.8250	0.9724		12.3168	12.3168		12.3168	12.3168		194,474.9340	194,474.9340	3.7274	3.5654	195,630.6013
Apartments Low Rise	1.07347e+006	11.5766	98.9274	42.0967	0.6315		7.9984	7.9984		7.9984	7.9984		126,290.2324	126,290.2324	2.4206	2.3153	127,040.7121
Apartments Mid Rise	457576	4.9346	42.1687	17.9442	0.2692		3.4094	3.4094		3.4094	3.4094		53,832.4356	53,832.4356	1.0318	0.9869	54,152.3348
General Office Building	268949	2.9004	26.3675	22.1487	0.1582		2.0039	2.0039		2.0039	2.0039		31,641.0524	31,641.0524	0.6065	0.5801	31,829.0793
Regional Shopping Center	87423.8	0.9428	8.5710	7.1996	0.0514		0.6514	0.6514		0.6514	0.6514		10,285.1584	10,285.1584	0.1971	0.1886	10,346.2779
Single Family Housing	773341	8.3400	71.2687	30.3271	0.4549		5.7622	5.7622		5.7622	5.7622		90,981.2929	90,981.2929	1.7438	1.6680	91,521.9492
Total		**46.5213**	**399.6420**	**184.5413**	**2.5375**		**32.1420**	**32.1420**		**32.1420**	**32.1420**		**507,505.1056**	**507,505.1056**	**9.7272**	**9.3043**	**510,520.9547**

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	lb/day										lb/day					
Apartments High Rise	1653.04	17.8269	152.3387	64.8250	0.9724		12.3168	12.3168		12.3168	12.3168		194,474.9340	194,474.9340	3.7274	3.5654	195,630.6013
Apartments Low Rise	1073.47	11.5766	98.9274	42.0967	0.6315		7.9984	7.9984		7.9984	7.9984		126,290.2324	126,290.2324	2.4206	2.3153	127,040.7121
Apartments Mid Rise	457.576	4.9346	42.1687	17.9442	0.2692		3.4094	3.4094		3.4094	3.4094		53,832.4356	53,832.4356	1.0318	0.9869	54,152.3348
General Office Building	268.949	2.9004	26.3675	22.1487	0.1582		2.0039	2.0039		2.0039	2.0039		31,641.0524	31,641.0524	0.6065	0.5801	31,829.0793
Regional Shopping Center	87.4238	0.9428	8.5710	7.1996	0.0514		0.6514	0.6514		0.6514	0.6514		10,285.1584	10,285.1584	0.1971	0.1886	10,346.2779
Single Family Housing	773.341	8.3400	71.2687	30.3271	0.4549		5.7622	5.7622		5.7622	5.7622		90,981.2929	90,981.2929	1.7438	1.6680	91,521.9492
Total		**46.5213**	**399.6420**	**184.5413**	**2.5375**		**32.1420**	**32.1420**		**32.1420**	**32.1420**		**507,505.1056**	**507,505.1056**	**9.7272**	**9.3043**	**510,520.9547**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4,487.1706	938.7394	19,383.0337	40.3638		1,883.2744	1,883.2744		1,883.2744	1,883.2744	263,310.6527	865,124.1055	1,128,434.7582	1,261.2811	15.5899	1,164,612.5775
Unmitigated	4,487.1706	938.7394	19,383.0337	40.3638		1,883.2744	1,883.2744		1,883.2744	1,883.2744	263,310.6527	865,124.1055	1,128,434.7582	1,261.2811	15.5899	1,164,612.5775

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	lb/day										lb/day					
Architectural Coating	441.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2,519.2482					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,282.1141	844.5091	11,219.0511	39.9307		1,837.8036	1,837.8036		1,837.8036	1,837.8036	263,310.6527	850,358.6824	1,113,669.3351	1,247.2223	15.5899	1,149,495.6861
Landscaping	244.2562	94.2304	8,163.9826	0.4330		45.4708	45.4708		45.4708	45.4708		14,765.4232	14,765.4232	14.0587		15,116.8914
Total	**4,487.1706**	**938.7394**	**19,383.0337**	**40.3638**		**1,883.2744**	**1,883.2744**		**1,883.2744**	**1,883.2744**	**263,310.6527**	**865,124.1055**	**1,128,434.7583**	**1,261.2811**	**15.5899**	**1,164,612.5775**

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	lb/day										lb/day					
Architectural Coating	441.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2,519.2482					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,282.1141	844.5091	11,219.0511	39.9307		1,837.8036	1,837.8036		1,837.8036	1,837.8036	263,310.6527	850,358.6824	1,113,669.3351	1,247.2223	15.5899	1,149,495.6861
Landscaping	244.2562	94.2304	8,163.9826	0.4330		45.4708	45.4708		45.4708	45.4708		14,765.4232	14,765.4232	14.0587		15,116.8914
Total	**4,487.1706**	**938.7394**	**19,383.0337**	**40.3638**		**1,883.2744**	**1,883.2744**		**1,883.2744**	**1,883.2744**	**263,310.6527**	**865,124.1055**	**1,128,434.7583**	**1,261.2811**	**15.5899**	**1,164,612.5775**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - San Francisco - Net Reduction in Land Uses

San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	3,488.21	1000sqft	80.08	3,488,210.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	4.6	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - San Francisco - Net Reduction in Land Uses - San Francisco County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	15.4454	3.2000e-004	0.0332	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0623	0.0623	1.8000e-004	0.0000	0.0668
Energy	0.4437	4.0337	3.3883	0.0242		0.3066	0.3066		0.3066	0.3066	0.0000	14,412.3240	14,412.3240	0.7062	0.1957	14,488.2939
Mobile	9.5901	36.4877	109.5425	0.2534	18.3771	0.5539	18.9310	4.9700	0.5256	5.4956	0.0000	23,117.6087	23,117.6087	1.2887	0.0000	23,149.8268
Waste						0.0000	0.0000		0.0000	0.0000	878.0131	0.0000	878.0131	51.8891	0.0000	2,175.2402
Water						0.0000	0.0000		0.0000	0.0000	255.9124	861.2255	1,117.1379	26.3381	0.6305	1,963.4906
Total	**25.4792**	**40.5217**	**112.9640**	**0.2776**	**18.3771**	**0.8606**	**19.2376**	**4.9700**	**0.8323**	**5.8023**	**1,133.9254**	**38,391.2206**	**39,525.1460**	**80.2223**	**0.8262**	**41,776.9184**

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	15.4454	3.2000e-004	0.0332	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0623	0.0623	1.8000e-004	0.0000	0.0668
Energy	0.4437	4.0337	3.3883	0.0242		0.3066	0.3066		0.3066	0.3066	0.0000	14,412.3240	14,412.3240	0.7062	0.1957	14,488.2939
Mobile	9.5901	36.4877	109.5425	0.2534	18.3771	0.5539	18.9310	4.9700	0.5256	5.4956	0.0000	23,117.6087	23,117.6087	1.2887	0.0000	23,149.8268
Waste						0.0000	0.0000		0.0000	0.0000	878.0131	0.0000	878.0131	51.8891	0.0000	2,175.2402
Water						0.0000	0.0000		0.0000	0.0000	255.9124	861.2255	1,117.1379	26.3381	0.6305	1,963.4906
Total	**25.4792**	**40.5217**	**112.9640**	**0.2776**	**18.3771**	**0.8606**	**19.2376**	**4.9700**	**0.8323**	**5.8023**	**1,133.9254**	**38,391.2206**	**39,525.1460**	**80.2223**	**0.8262**	**41,776.9184**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	9.5901	36.4877	109.5425	0.2534	18.3771	0.5539	18.9310	4.9700	0.5256	5.4956	0.0000	23,117.6087	23,117.6087	1.2887	0.0000	23,149.8268
Unmitigated	9.5901	36.4877	109.5425	0.2534	18.3771	0.5539	18.9310	4.9700	0.5256	5.4956	0.0000	23,117.6087	23,117.6087	1.2887	0.0000	23,149.8268

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	23,824.47	8,685.64	2546.39	48,823,839	48,823,839
Total	23,824.47	8,685.64	2,546.39	48,823,839	48,823,839

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.609525	0.047630	0.185192	0.080591	0.018926	0.004422	0.023841	0.008261	0.004343	0.007543	0.008489	0.000865	0.000371

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	10,021.1831	10,021.1831	0.6220	0.1152	10,071.0586
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	10,021.1831	10,021.1831	0.6220	0.1152	10,071.0586
NaturalGas Mitigated	0.4437	4.0337	3.3883	0.0242		0.3066	0.3066		0.3066	0.3066	0.0000	4,391.1410	4,391.1410	0.0842	0.0805	4,417.2353
NaturalGas Unmitigated	0.4437	4.0337	3.3883	0.0242		0.3066	0.3066		0.3066	0.3066	0.0000	4,391.1410	4,391.1410	0.0842	0.0805	4,417.2353

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					
Industrial Park	8.22869e+007	0.4437	4.0337	3.3883	0.0242		0.3066	0.3066		0.3066	0.3066	0.0000	4,391.1410	4,391.1410	0.0842	0.0805	4,417.2353
Total		**0.4437**	**4.0337**	**3.3883**	**0.0242**		**0.3066**	**0.3066**		**0.3066**	**0.3066**	**0.0000**	**4,391.1410**	**4,391.1410**	**0.0842**	**0.0805**	**4,417.2353**

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					
Industrial Park	8.22869e+007	0.4437	4.0337	3.3883	0.0242		0.3066	0.3066		0.3066	0.3066	0.0000	4,391.1410	4,391.1410	0.0842	0.0805	4,417.2353
Total		**0.4437**	**4.0337**	**3.3883**	**0.0242**		**0.3066**	**0.3066**		**0.3066**	**0.3066**	**0.0000**	**4,391.1410**	**4,391.1410**	**0.0842**	**0.0805**	**4,417.2353**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	5.07883e+007	10,021.1831	0.6220	0.1152	10,071.0586
Total		**10,021.1831**	**0.6220**	**0.1152**	**10,071.0586**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	5.07883e+007	10,021.1831	0.6220	0.1152	10,071.0586
Total		**10,021.1831**	**0.6220**	**0.1152**	**10,071.0586**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	15.4454	3.2000e-004	0.0332	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0623	0.0623	1.8000e-004	0.0000	0.0668
Unmitigated	15.4454	3.2000e-004	0.0332	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0623	0.0623	1.8000e-004	0.0000	0.0668

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	1.8189					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	13.6232					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.2800e-003	3.2000e-004	0.0332	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0623	0.0623	1.8000e-004	0.0000	0.0668
Total	**15.4454**	**3.2000e-004**	**0.0332**	**0.0000**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.0623**	**0.0623**	**1.8000e-004**	**0.0000**	**0.0668**

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	1.8189					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	13.6232					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.2800e-003	3.2000e-004	0.0332	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0623	0.0623	1.8000e-004	0.0000	0.0668
Total	**15.4454**	**3.2000e-004**	**0.0332**	**0.0000**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.0623**	**0.0623**	**1.8000e-004**	**0.0000**	**0.0668**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1,117.1379	26.3381	0.6305	1,963.4906
Unmitigated	1,117.1379	26.3381	0.6305	1,963.4906

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	806.649 / 0	1,117.1379	26.3381	0.6305	1,963.4906
Total		**1,117.1379**	**26.3381**	**0.6305**	**1,963.4906**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	806.649 / 0	1,117.1379	26.3381	0.6305	1,963.4906
Total		**1,117.1379**	**26.3381**	**0.6305**	**1,963.4906**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	878.0131	51.8891	0.0000	2,175.2402
Unmitigated	878.0131	51.8891	0.0000	2,175.2402

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	4325.38	878.0131	51.8891	0.0000	2,175.2402
Total		**878.0131**	**51.8891**	**0.0000**	**2,175.2402**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	4325.38	878.0131	51.8891	0.0000	2,175.2402
Total		**878.0131**	**51.8891**	**0.0000**	**2,175.2402**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - San Francisco - Net Reduction in Land Uses

San Francisco County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	3,488.21	1000sqft	80.08	3,488,210.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	4.6	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5256	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5256**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5256	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5256**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	84.6506	3.5700e-003	0.3684	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.7634	0.7634	2.2100e-003		0.8187
Energy	2.4313	22.1023	18.5659	0.1326		1.6798	1.6798		1.6798	1.6798		26,522.7636	26,522.7636	0.5084	0.4863	26,680.3751
Mobile	72.0386	242.5278	776.8485	1.8709	134.1543	3.8907	138.0450	36.1571	3.6919	39.8490		188,141.9420	188,141.9420	10.0636		188,393.5316
Total	**159.1205**	**264.6337**	**795.7829**	**2.0035**	**134.1543**	**5.5718**	**139.7261**	**36.1571**	**5.3730**	**41.5301**		**214,665.4690**	**214,665.4690**	**10.5741**	**0.4863**	**215,074.7253**

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	lb/day										lb/day					
Area	84.6506	3.5700e-003	0.3684	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.7634	0.7634	2.2100e-003		0.8187
Energy	2.4313	22.1023	18.5659	0.1326		1.6798	1.6798		1.6798	1.6798		26,522.7636	26,522.7636	0.5084	0.4863	26,680.3751
Mobile	72.0386	242.5278	776.8485	1.8709	134.1543	3.8907	138.0450	36.1571	3.6919	39.8490		188,141.9420	188,141.9420	10.0636		188,393.5316
Total	**159.1205**	**264.6337**	**795.7829**	**2.0035**	**134.1543**	**5.5718**	**139.7261**	**36.1571**	**5.3730**	**41.5301**		**214,665.4690**	**214,665.4690**	**10.5741**	**0.4863**	**215,074.7253**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	72.0386	242.5278	776.8485	1.8709	134.1543	3.8907	138.0450	36.1571	3.6919	39.8490		188,141.9420	188,141.9420	10.0636		188,393.5316
Unmitigated	72.0386	242.5278	776.8485	1.8709	134.1543	3.8907	138.0450	36.1571	3.6919	39.8490		188,141.9420	188,141.9420	10.0636		188,393.5316

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	23,824.47	8,685.64	2546.39	48,823,839	48,823,839
Total	23,824.47	8,685.64	2,546.39	48,823,839	48,823,839

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.609525	0.047630	0.185192	0.080591	0.018926	0.004422	0.023841	0.008261	0.004343	0.007543	0.008489	0.000865	0.000371

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.4313	22.1023	18.5659	0.1326		1.6798	1.6798		1.6798	1.6798		26,522.7636	26,522.7636	0.5084	0.4863	26,680.3751
NaturalGas Unmitigated	2.4313	22.1023	18.5659	0.1326		1.6798	1.6798		1.6798	1.6798		26,522.7636	26,522.7636	0.5084	0.4863	26,680.3751

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	lb/day										lb/day					
Industrial Park	225443	2.4313	22.1023	18.5659	0.1326		1.6798	1.6798		1.6798	1.6798		26,522.7636	26,522.7636	0.5084	0.4863	26,680.3751
Total		**2.4313**	**22.1023**	**18.5659**	**0.1326**		**1.6798**	**1.6798**		**1.6798**	**1.6798**		**26,522.7636**	**26,522.7636**	**0.5084**	**0.4863**	**26,680.3751**

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	lb/day										lb/day					
Industrial Park	225.443	2.4313	22.1023	18.5659	0.1326		1.6798	1.6798		1.6798	1.6798		26,522.7636	26,522.7636	0.5084	0.4863	26,680.3751
Total		**2.4313**	**22.1023**	**18.5659**	**0.1326**		**1.6798**	**1.6798**		**1.6798**	**1.6798**		**26,522.7636**	**26,522.7636**	**0.5084**	**0.4863**	**26,680.3751**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	84.6506	3.5700e-003	0.3684	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.7634	0.7634	2.2100e-003		0.8187
Unmitigated	84.6506	3.5700e-003	0.3684	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.7634	0.7634	2.2100e-003		0.8187

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	lb/day										lb/day					
Architectural Coating	9.9665					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	74.6477					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0364	3.5700e-003	0.3684	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.7634	0.7634	2.2100e-003		0.8187
Total	**84.6506**	**3.5700e-003**	**0.3684**	**3.0000e-005**		**1.3300e-003**	**1.3300e-003**		**1.3300e-003**	**1.3300e-003**		**0.7634**	**0.7634**	**2.2100e-003**		**0.8187**

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	lb/day										lb/day					
Architectural Coating	9.9665					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	74.6477					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0364	3.5700e-003	0.3684	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.7634	0.7634	2.2100e-003		0.8187
Total	**84.6506**	**3.5700e-003**	**0.3684**	**3.0000e-005**		**1.3300e-003**	**1.3300e-003**		**1.3300e-003**	**1.3300e-003**		**0.7634**	**0.7634**	**2.2100e-003**		**0.8187**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - San Mateo - New Land Uses

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	28,769.53	1000sqft	660.46	28,769,530.00	0
Apartments High Rise	8,777.00	Dwelling Unit	141.56	8,777,000.00	25102
Apartments Low Rise	11,741.00	Dwelling Unit	733.81	11,741,000.00	33579
Apartments Mid Rise	11,741.00	Dwelling Unit	308.97	11,741,000.00	33579
Single Family Housing	11,598.00	Dwelling Unit	3,765.58	20,876,400.00	33170

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	148.97	**CH4 Intensity (lb/MWhr)**	0.009	**N2O Intensity (lb/MWhr)**	0.002

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - San Mateo - New Land Uses - San Mateo County, Annual

Project Characteristics - Peninsula Clean Energy emission factor based on a 75% renewable mix. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix. (http://www.peninsulacleanenergy.com/resources/technical-study/)

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards.

Plan Bay Area 2040 Update - San Mateo - New Land Uses - San Mateo County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	502.89	477.75
tblEnergyUse	T24E	274.84	197.88
tblEnergyUse	T24E	502.89	362.08
tblEnergyUse	T24E	4.30	4.09
tblEnergyUse	T24E	246.52	177.49
tblEnergyUse	T24NG	8,824.58	8,383.35
tblEnergyUse	T24NG	25,590.91	18,425.46
tblEnergyUse	T24NG	8,824.58	6,353.70
tblEnergyUse	T24NG	18.41	17.49
tblEnergyUse	T24NG	50,264.25	36,190.26
tblFireplaces	NumberGas	1,316.55	2,808.64
tblFireplaces	NumberGas	1,761.15	3,757.12
tblFireplaces	NumberGas	1,761.15	3,757.12
tblFireplaces	NumberGas	2,899.50	7,886.64
tblFireplaces	NumberWood	1,492.09	0.00
tblFireplaces	NumberWood	1,995.97	0.00
tblFireplaces	NumberWood	1,995.97	0.00
tblFireplaces	NumberWood	4,987.14	0.00
tblLandUse	BuildingSpaceSquareFeet	28,769,500.00	28,769,530.00
tblLandUse	LandUseSquareFeet	28,769,500.00	28,769,530.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.009
tblProjectCharacteristics	CO2IntensityFactor	641.35	148.97
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.002
tblProjectCharacteristics	OperationalYear	2018	2040

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	387.7686	6.5272	375.5541	0.1937		10.1618	10.1618		10.1618	10.1618	1,097.4904	2,805.7102	3,903.2006	5.6818	0.0417	4,057.6640
Energy	7.7170	67.5108	39.5412	0.4209		5.3318	5.3318		5.3318	5.3318	0.0000	117,068.1073	117,068.1073	3.9225	1.9465	117,746.2313
Mobile	77.8591	237.7830	865.1942	3.8236	471.5824	1.6824	473.2648	126.8214	1.5655	128.3869	0.0000	352,975.6349	352,975.6349	12.5249	0.0000	353,288.7569
Waste						0.0000	0.0000		0.0000	0.0000	11,271.3127	0.0000	11,271.3127	666.1155	0.0000	27,924.2002
Water						0.0000	0.0000		0.0000	0.0000	2,528.7580	4,081.5826	6,610.3405	259.9743	6.1875	14,953.5818
Total	**473.3447**	**311.8209**	**1,280.2894**	**4.4382**	**471.5824**	**17.1760**	**488.7584**	**126.8214**	**17.0591**	**143.8805**	**14,897.5611**	**476,931.0349**	**491,828.5960**	**948.2189**	**8.1757**	**517,970.4342**

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	387.7686	6.5272	375.5541	0.1937		10.1618	10.1618		10.1618	10.1618	1,097.4904	2,805.7102	3,903.2006	5.6818	0.0417	4,057.6640
Energy	7.7170	67.5108	39.5412	0.4209		5.3318	5.3318		5.3318	5.3318	0.0000	117,068.1073	117,068.1073	3.9225	1.9465	117,746.2313
Mobile	77.8591	237.7830	865.1942	3.8236	471.5824	1.6824	473.2648	126.8214	1.5655	128.3869	0.0000	352,975.6349	352,975.6349	12.5249	0.0000	353,288.7569
Waste						0.0000	0.0000		0.0000	0.0000	11,271.3127	0.0000	11,271.3127	666.1155	0.0000	27,924.2002
Water						0.0000	0.0000		0.0000	0.0000	2,528.7580	4,081.5826	6,610.3405	259.9743	6.1875	14,953.5818
Total	**473.3447**	**311.8209**	**1,280.2894**	**4.4382**	**471.5824**	**17.1760**	**488.7584**	**126.8214**	**17.0591**	**143.8805**	**14,897.5611**	**476,931.0349**	**491,828.5960**	**948.2189**	**8.1757**	**517,970.4342**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	77.8591	237.7830	865.1942	3.8236	471.5824	1.6824	473.2648	126.8214	1.5655	128.3869	0.0000	352,975.6349	352,975.6349	12.5249	0.0000	353,288.7569
Unmitigated	77.8591	237.7830	865.1942	3.8236	471.5824	1.6824	473.2648	126.8214	1.5655	128.3869	0.0000	352,975.6349	352,975.6349	12.5249	0.0000	353,288.7569

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	36,863.40	43,709.46	32036.05	85,806,039	85,806,039
Apartments Low Rise	77,373.19	84,065.56	71267.87	178,895,378	178,895,378
Apartments Mid Rise	78,077.65	75,024.99	68802.26	176,261,146	176,261,146
General Office Building	317,327.92	70,773.04	30208.01	576,142,308	576,142,308
Single Family Housing	110,412.96	114,936.18	99974.76	253,058,967	253,058,967
Total	620,055.12	388,509.23	302,288.95	1,270,163,838	1,270,163,838

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
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.439771	0.051539	0.277940	0.149346	0.016860	0.007937	0.030341	0.007301	0.004762	0.002815	0.009681	0.000729	0.000979
Apartments High Rise	0.439771	0.051539	0.277940	0.149346	0.016860	0.007937	0.030341	0.007301	0.004762	0.002815	0.009681	0.000729	0.000979
Apartments Low Rise	0.439771	0.051539	0.277940	0.149346	0.016860	0.007937	0.030341	0.007301	0.004762	0.002815	0.009681	0.000729	0.000979
Apartments Mid Rise	0.439771	0.051539	0.277940	0.149346	0.016860	0.007937	0.030341	0.007301	0.004762	0.002815	0.009681	0.000729	0.000979
Single Family Housing	0.439771	0.051539	0.277940	0.149346	0.016860	0.007937	0.030341	0.007301	0.004762	0.002815	0.009681	0.000729	0.000979

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Plan Bay Area 2040 Update - San Mateo - New Land Uses - San Mateo County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	40,696.2095	40,696.2095	2.4587	0.5464	40,920.4935
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	40,696.2095	40,696.2095	2.4587	0.5464	40,920.4935
NaturalGas Mitigated	7.7170	67.5108	39.5412	0.4209		5.3318	5.3318		5.3318	5.3318	0.0000	76,371.8978	76,371.8978	1.4638	1.4002	76,825.7378
NaturalGas Unmitigated	7.7170	67.5108	39.5412	0.4209		5.3318	5.3318		5.3318	5.3318	0.0000	76,371.8978	76,371.8978	1.4638	1.4002	76,825.7378

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					
Apartments High Rise	9.65325e+007	0.5205	4.4481	1.8928	0.0284		0.3596	0.3596		0.3596	0.3596	0.0000	5,151.3432	5,151.3432	0.0987	0.0944	5,181.9551
Apartments Low Rise	2.47036e+008	1.3321	11.3830	4.8438	0.0727		0.9203	0.9203		0.9203	0.9203	0.0000	13,182.7809	13,182.7809	0.2527	0.2417	13,261.1196
Apartments Mid Rise	1.05301e+008	0.5678	4.8521	2.0647	0.0310		0.3923	0.3923		0.3923	0.3923	0.0000	5,619.2879	5,619.2879	0.1077	0.1030	5,652.6805
General Office Building	5.32222e+008	2.8698	26.0893	21.9150	0.1565		1.9828	1.9828		1.9828	1.9828	0.0000	28,401.3885	28,401.3885	0.5444	0.5207	28,570.1637
Single Family Housing	4.50063e+008	2.4268	20.7382	8.8248	0.1324		1.6767	1.6767		1.6767	1.6767	0.0000	24,017.0973	24,017.0973	0.4603	0.4403	24,159.8189
Total		**7.7170**	**67.5108**	**39.5412**	**0.4209**		**5.3318**	**5.3318**		**5.3318**	**5.3318**	**0.0000**	**76,371.8978**	**76,371.8978**	**1.4638**	**1.4001**	**76,825.7378**

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					
Apartments High Rise	9.65325e+007	0.5205	4.4481	1.8928	0.0284		0.3596	0.3596		0.3596	0.3596	0.0000	5,151.3432	5,151.3432	0.0987	0.0944	5,181.9551
Apartments Low Rise	2.47036e+008	1.3321	11.3830	4.8438	0.0727		0.9203	0.9203		0.9203	0.9203	0.0000	13,182.7809	13,182.7809	0.2527	0.2417	13,261.1196
Apartments Mid Rise	1.05301e+008	0.5678	4.8521	2.0647	0.0310		0.3923	0.3923		0.3923	0.3923	0.0000	5,619.2879	5,619.2879	0.1077	0.1030	5,652.6805
General Office Building	5.32222e+008	2.8698	26.0893	21.9150	0.1565		1.9828	1.9828		1.9828	1.9828	0.0000	28,401.3885	28,401.3885	0.5444	0.5207	28,570.1637
Single Family Housing	4.50063e+008	2.4268	20.7382	8.8248	0.1324		1.6767	1.6767		1.6767	1.6767	0.0000	24,017.0973	24,017.0973	0.4603	0.4403	24,159.8189
Total		**7.7170**	**67.5108**	**39.5412**	**0.4209**		**5.3318**	**5.3318**		**5.3318**	**5.3318**	**0.0000**	**76,371.8978**	**76,371.8978**	**1.4638**	**1.4001**	**76,825.7378**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	3.94635e+007	2,666.6172	0.1611	0.0358	2,681.3134
Apartments Low Rise	5.19728e+007	3,511.8859	0.2122	0.0472	3,531.2405
Apartments Mid Rise	5.14324e+007	3,475.3724	0.2100	0.0467	3,494.5257
General Office Building	3.61201e+008	24,406.9798	1.4745	0.3277	24,541.4910
Single Family Housing	9.81973e+007	6,635.3542	0.4009	0.0891	6,671.9228
Total		**40,696.2095**	**2.4586**	**0.5464**	**40,920.4935**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	3.94635e+007	2,666.6172	0.1611	0.0358	2,681.3134
Apartments Low Rise	5.19728e+007	3,511.8859	0.2122	0.0472	3,531.2405
Apartments Mid Rise	5.14324e+007	3,475.3724	0.2100	0.0467	3,494.5257
General Office Building	3.61201e+008	24,406.9798	1.4745	0.3277	24,541.4910
Single Family Housing	9.81973e+007	6,635.3542	0.4009	0.0891	6,671.9228
Total		**40,696.2095**	**2.4586**	**0.5464**	**40,920.4935**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	387.7686	6.5272	375.5541	0.1937		10.1618	10.1618		10.1618	10.1618	1,097.4904	2,805.7102	3,903.2006	5.6818	0.0417	4,057.6640
Unmitigated	387.7686	6.5272	375.5541	0.1937		10.1618	10.1618		10.1618	10.1618	1,097.4904	2,805.7102	3,903.2006	5.6818	0.0417	4,057.6640

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	52.4057					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	319.8797					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.7622	2.7825	51.0787	0.1765		8.3550	8.3550		8.3550	8.3550	1,097.4904	2,273.2636	3,370.7540	5.1741	0.0417	3,512.5265
Landscaping	9.7210	3.7446	324.4754	0.0172		1.8068	1.8068		1.8068	1.8068	0.0000	532.4466	532.4466	0.5076	0.0000	545.1375
Total	**387.7685**	**6.5272**	**375.5541**	**0.1937**		**10.1618**	**10.1618**		**10.1618**	**10.1618**	**1,097.4904**	**2,805.7102**	**3,903.2006**	**5.6818**	**0.0417**	**4,057.6640**

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	52.4057					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	319.8797					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.7622	2.7825	51.0787	0.1765		8.3550	8.3550		8.3550	8.3550	1,097.4904	2,273.2636	3,370.7540	5.1741	0.0417	3,512.5265
Landscaping	9.7210	3.7446	324.4754	0.0172		1.8068	1.8068		1.8068	1.8068	0.0000	532.4466	532.4466	0.5076	0.0000	545.1375
Total	**387.7685**	**6.5272**	**375.5541**	**0.1937**		**10.1618**	**10.1618**		**10.1618**	**10.1618**	**1,097.4904**	**2,805.7102**	**3,903.2006**	**5.6818**	**0.0417**	**4,057.6640**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	6,610.3405	259.9743	6.1875	14,953.5818
Unmitigated	6,610.3405	259.9743	6.1875	14,953.5818

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	571.857 / 360.518	475.7749	18.6518	0.4439	1,074.3627
Apartments Low Rise	764.973 / 482.266	636.4444	24.9505	0.5939	1,437.1759
Apartments Mid Rise	764.973 / 482.266	636.4444	24.9505	0.5939	1,437.1759
General Office Building	5113.31 / 3133.96	4,232.9840	166.7750	3.9693	9,585.1956
Single Family Housing	755.656 / 476.392	628.6928	24.6466	0.5866	1,419.6717
Total		**6,610.3405**	**259.9743**	**6.1875**	**14,953.5818**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	571.857 / 360.518	475.7749	18.6518	0.4439	1,074.3627
Apartments Low Rise	764.973 / 482.266	636.4444	24.9505	0.5939	1,437.1759
Apartments Mid Rise	764.973 / 482.266	636.4444	24.9505	0.5939	1,437.1759
General Office Building	5113.31 / 3133.96	4,232.9840	166.7750	3.9693	9,585.1956
Single Family Housing	755.656 / 476.392	628.6928	24.6466	0.5866	1,419.6717
Total		**6,610.3405**	**259.9743**	**6.1875**	**14,953.5818**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11,271.3127	666.1155	0.0000	27,924.2002
Unmitigated	11,271.3127	666.1155	0.0000	27,924.2002

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	4037.42	819.5598	48.4346	0.0000	2,030.4247
Apartments Low Rise	5400.86	1,096.3258	64.7910	0.0000	2,716.1007
Apartments Mid Rise	5400.86	1,096.3258	64.7910	0.0000	2,716.1007
General Office Building	26755.6	5,431.1531	320.9720	0.0000	13,455.4520
Single Family Housing	13931.4	2,827.9483	167.1270	0.0000	7,006.1222
Total		**11,271.3127**	**666.1155**	**0.0000**	**27,924.2003**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	4037.42	819.5598	48.4346	0.0000	2,030.4247
Apartments Low Rise	5400.86	1,096.3258	64.7910	0.0000	2,716.1007
Apartments Mid Rise	5400.86	1,096.3258	64.7910	0.0000	2,716.1007
General Office Building	26755.6	5,431.1531	320.9720	0.0000	13,455.4520
Single Family Housing	13931.4	2,827.9483	167.1270	0.0000	7,006.1222
Total		**11,271.3127**	**666.1155**	**0.0000**	**27,924.2003**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - San Mateo - New Land Uses

San Mateo County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	28,769.53	1000sqft	660.46	28,769,530.00	0
Apartments High Rise	8,777.00	Dwelling Unit	141.56	8,777,000.00	25102
Apartments Low Rise	11,741.00	Dwelling Unit	733.81	11,741,000.00	33579
Apartments Mid Rise	11,741.00	Dwelling Unit	308.97	11,741,000.00	33579
Single Family Housing	11,598.00	Dwelling Unit	3,765.58	20,876,400.00	33170

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	148.97	**CH4 Intensity (lb/MWhr)**	0.009	**N2O Intensity (lb/MWhr)**	0.002

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - San Mateo - New Land Uses - San Mateo County, Summer

Project Characteristics - Peninsula Clean Energy emission factor based on a 75% renewable mix. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix. (http://www.peninsulacleanenergy.com/resources/technical-study/)

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards.

Plan Bay Area 2040 Update - San Mateo - New Land Uses - San Mateo County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	502.89	477.75
tblEnergyUse	T24E	274.84	197.88
tblEnergyUse	T24E	502.89	362.08
tblEnergyUse	T24E	4.30	4.09
tblEnergyUse	T24E	246.52	177.49
tblEnergyUse	T24NG	8,824.58	8,383.35
tblEnergyUse	T24NG	25,590.91	18,425.46
tblEnergyUse	T24NG	8,824.58	6,353.70
tblEnergyUse	T24NG	18.41	17.49
tblEnergyUse	T24NG	50,264.25	36,190.26
tblFireplaces	NumberGas	1,316.55	2,808.64
tblFireplaces	NumberGas	1,761.15	3,757.12
tblFireplaces	NumberGas	1,761.15	3,757.12
tblFireplaces	NumberGas	2,899.50	7,886.64
tblFireplaces	NumberWood	1,492.09	0.00
tblFireplaces	NumberWood	1,995.97	0.00
tblFireplaces	NumberWood	1,995.97	0.00
tblFireplaces	NumberWood	4,987.14	0.00
tblLandUse	BuildingSpaceSquareFeet	28,769,500.00	28,769,530.00
tblLandUse	LandUseSquareFeet	28,769,500.00	28,769,530.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.009
tblProjectCharacteristics	CO2IntensityFactor	641.35	148.97
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.002
tblProjectCharacteristics	OperationalYear	2018	2040

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5255	0.0000	0.0000	2.3578	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5255**	**0.0000**	**0.0000**	**2.3578**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5255	0.0000	0.0000	2.3578	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5255**	**0.0000**	**0.0000**	**2.3578**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Plan Bay Area 2040 Update - San Mateo - New Land Uses - San Mateo County, Summer

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

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	lb/day										lb/day					
Area	2,832.9612	489.3911	9,601.8220	21.5160		1,002.3330	1,002.3330		1,002.3330	1,002.3330	140,775.7129	456,403.6133	597,179.3262	672.9381	8.2478	616,460.6350
Energy	42.2850	369.9219	216.6639	2.3065		29.2151	29.2151		29.2151	29.2151		461,290.9961	461,290.9961	8.8414	8.4570	464,032.2179
Mobile	554.4583	1,485.8009	5,700.1378	25.9226	3,188.9485	10.9170	3,199.8654	854.5311	10.1585	864.6896		2,636,010.2997	2,636,010.2997	88.8247		2,638,230.9165
Total	**3,429.7045**	**2,345.1139**	**15,518.6237**	**49.7450**	**3,188.9485**	**1,042.4651**	**4,231.4136**	**854.5311**	**1,041.7067**	**1,896.2378**	**140,775.7129**	**3,553,704.9091**	**3,694,480.6220**	**770.6042**	**16.7048**	**3,718,723.7694**

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	lb/day										lb/day					
Area	2,832.9612	489.3911	9,601.8220	21.5160		1,002.3330	1,002.3330		1,002.3330	1,002.3330	140,775.7129	456,403.6133	597,179.3262	672.9381	8.2478	616,460.6350
Energy	42.2850	369.9219	216.6639	2.3065		29.2151	29.2151		29.2151	29.2151		461,290.9961	461,290.9961	8.8414	8.4570	464,032.2179
Mobile	554.4583	1,485.8009	5,700.1378	25.9226	3,188.9485	10.9170	3,199.8654	854.5311	10.1585	864.6896		2,636,010.2997	2,636,010.2997	88.8247		2,638,230.9165
Total	**3,429.7045**	**2,345.1139**	**15,518.6237**	**49.7450**	**3,188.9485**	**1,042.4651**	**4,231.4136**	**854.5311**	**1,041.7067**	**1,896.2378**	**140,775.7129**	**3,553,704.9091**	**3,694,480.6220**	**770.6042**	**16.7048**	**3,718,723.7694**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	554.4583	1,485.8009	5,700.1378	25.9226	3,188.9485	10.9170	3,199.8654	854.5311	10.1585	864.6896		2,636,010.2997	2,636,010.2997	88.8247		2,638,230.9165
Unmitigated	554.4583	1,485.8009	5,700.1378	25.9226	3,188.9485	10.9170	3,199.8654	854.5311	10.1585	864.6896		2,636,010.2997	2,636,010.2997	88.8247		2,638,230.9165

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	36,863.40	43,709.46	32036.05	85,806,039	85,806,039
Apartments Low Rise	77,373.19	84,065.56	71267.87	178,895,378	178,895,378
Apartments Mid Rise	78,077.65	75,024.99	68802.26	176,261,146	176,261,146
General Office Building	317,327.92	70,773.04	30208.01	576,142,308	576,142,308
Single Family Housing	110,412.96	114,936.18	99974.76	253,058,967	253,058,967
Total	620,055.12	388,509.23	302,288.95	1,270,163,838	1,270,163,838

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
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.439771	0.051539	0.277940	0.149346	0.016860	0.007937	0.030341	0.007301	0.004762	0.002815	0.009681	0.000729	0.000979
Apartments High Rise	0.439771	0.051539	0.277940	0.149346	0.016860	0.007937	0.030341	0.007301	0.004762	0.002815	0.009681	0.000729	0.000979
Apartments Low Rise	0.439771	0.051539	0.277940	0.149346	0.016860	0.007937	0.030341	0.007301	0.004762	0.002815	0.009681	0.000729	0.000979
Apartments Mid Rise	0.439771	0.051539	0.277940	0.149346	0.016860	0.007937	0.030341	0.007301	0.004762	0.002815	0.009681	0.000729	0.000979
Single Family Housing	0.439771	0.051539	0.277940	0.149346	0.016860	0.007937	0.030341	0.007301	0.004762	0.002815	0.009681	0.000729	0.000979

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	42.2850	369.9219	216.6639	2.3065		29.2151	29.2151		29.2151	29.2151		461,290.9961	461,290.9961	8.8414	8.4570	464,032.2179
NaturalGas Unmitigated	42.2850	369.9219	216.6639	2.3065		29.2151	29.2151		29.2151	29.2151		461,290.9961	461,290.9961	8.8414	8.4570	464,032.2179

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	lb/day										lb/day					
Apartments High Rise	264473	2.8522	24.3730	10.3715	0.1556		1.9706	1.9706		1.9706	1.9706		31,114.4325	31,114.4325	0.5964	0.5704	31,299.3300
Apartments Low Rise	676811	7.2989	62.3728	26.5416	0.3981		5.0429	5.0429		5.0429	5.0429		79,624.8137	79,624.8137	1.5261	1.4598	80,097.9842
Apartments Mid Rise	288497	3.1112	26.5870	11.3136	0.1697		2.1496	2.1496		2.1496	2.1496		33,940.8472	33,940.8472	0.6505	0.6223	34,142.5407
General Office Building	1.45814e+006	15.7251	142.9551	120.0823	0.8577		10.8646	10.8646		10.8646	10.8646		171,546.1467	171,546.1467	3.2880	3.1450	172,565.5597
Single Family Housing	1.23305e+006	13.2976	113.6341	48.3549	0.7253		9.1874	9.1874		9.1874	9.1874		145,064.7560	145,064.7560	2.7804	2.6595	145,926.8033
Total		**42.2850**	**369.9219**	**216.6639**	**2.3064**		**29.2151**	**29.2151**		**29.2151**	**29.2151**		**461,290.9961**	**461,290.9961**	**8.8414**	**8.4570**	**464,032.2179**

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	lb/day										lb/day					
Apartments High Rise	264.473	2.8522	24.3730	10.3715	0.1556		1.9706	1.9706		1.9706	1.9706		31,114.4325	31,114.4325	0.5964	0.5704	31,299.3300
Apartments Low Rise	676.811	7.2989	62.3728	26.5416	0.3981		5.0429	5.0429		5.0429	5.0429		79,624.8137	79,624.8137	1.5261	1.4598	80,097.9842
Apartments Mid Rise	288.497	3.1112	26.5870	11.3136	0.1697		2.1496	2.1496		2.1496	2.1496		33,940.8472	33,940.8472	0.6505	0.6223	34,142.5407
General Office Building	1458.14	15.7251	142.9551	120.0823	0.8577		10.8646	10.8646		10.8646	10.8646		171,546.1467	171,546.1467	3.2880	3.1450	172,565.5597
Single Family Housing	1233.05	13.2976	113.6341	48.3549	0.7253		9.1874	9.1874		9.1874	9.1874		145,064.7560	145,064.7560	2.7804	2.6595	145,926.8033
Total		**42.2850**	**369.9219**	**216.6639**	**2.3064**		**29.2151**	**29.2151**		**29.2151**	**29.2151**		**461,290.9961**	**461,290.9961**	**8.8414**	**8.4570**	**464,032.2179**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2,832.9612	489.3911	9,601.8220	21.5160		1,002.3330	1,002.3330		1,002.3330	1,002.3330	140,775.7129	456,403.6133	597,179.3262	672.9381	8.2478	616,460.6350
Unmitigated	2,832.9612	489.3911	9,601.8220	21.5160		1,002.3330	1,002.3330		1,002.3330	1,002.3330	140,775.7129	456,403.6133	597,179.3262	672.9381	8.2478	616,460.6350

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	lb/day										lb/day					
Architectural Coating	287.1543					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1,752.7655					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	685.0306	447.7843	5,996.5402	21.3247		982.2575	982.2575		982.2575	982.2575	140,775.7129	449,882.2588	590,657.9717	666.7206	8.2478	609,783.8432
Landscaping	108.0108	41.6069	3,605.2819	0.1913		20.0755	20.0755		20.0755	20.0755		6,521.3545	6,521.3545	6.2175		6,676.7919
Total	**2,832.9612**	**489.3912**	**9,601.8220**	**21.5160**		**1,002.3331**	**1,002.3331**		**1,002.3331**	**1,002.3331**	**140,775.7129**	**456,403.6133**	**597,179.3262**	**672.9381**	**8.2478**	**616,460.6350**

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	lb/day										lb/day					
Architectural Coating	287.1543					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1,752.7655					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	685.0306	447.7843	5,996.5402	21.3247		982.2575	982.2575		982.2575	982.2575	140,775.7129	449,882.2588	590,657.9717	666.7206	8.2478	609,783.8432
Landscaping	108.0108	41.6069	3,605.2819	0.1913		20.0755	20.0755		20.0755	20.0755		6,521.3545	6,521.3545	6.2175		6,676.7919
Total	**2,832.9612**	**489.3912**	**9,601.8220**	**21.5160**		**1,002.3331**	**1,002.3331**		**1,002.3331**	**1,002.3331**	**140,775.7129**	**456,403.6133**	**597,179.3262**	**672.9381**	**8.2478**	**616,460.6350**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - San Mateo - Net Reduction in Land Uses

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	1,747.18	1000sqft	40.11	1,747,180.00	0
Regional Shopping Center	1,405.69	1000sqft	32.27	1,405,690.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	70.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	13.9605	2.9000e-004	0.0300	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0563	0.0563	1.6000e-004	0.0000	0.0604
Energy	0.2630	2.3911	2.0085	0.0144		0.1817	0.1817		0.1817	0.1817	0.0000	10,989.5929	10,989.5929	0.5704	0.1441	11,046.8014
Mobile	25.8144	75.5978	277.0333	0.5922	46.7765	1.0165	47.7930	12.5750	0.9622	13.5372	0.0000	53,839.0632	53,839.0632	2.6242	0.0000	53,904.6687
Waste						0.0000	0.0000		0.0000	0.0000	739.3885	0.0000	739.3885	43.6966	0.0000	1,831.8037
Water						0.0000	0.0000		0.0000	0.0000	161.2152	586.6117	747.8269	16.5948	0.3977	1,281.2168
Total	**40.0379**	**77.9892**	**279.0718**	**0.6065**	**46.7765**	**1.1983**	**47.9748**	**12.5750**	**1.1441**	**13.7190**	**900.6037**	**65,415.3241**	**66,315.9278**	**63.4862**	**0.5418**	**68,064.5510**

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	13.9605	2.9000e-004	0.0300	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0563	0.0563	1.6000e-004	0.0000	0.0604
Energy	0.2630	2.3911	2.0085	0.0144		0.1817	0.1817		0.1817	0.1817	0.0000	10,989.5929	10,989.5929	0.5704	0.1441	11,046.8014
Mobile	25.8144	75.5978	277.0333	0.5922	46.7765	1.0165	47.7930	12.5750	0.9622	13.5372	0.0000	53,839.0632	53,839.0632	2.6242	0.0000	53,904.6687
Waste						0.0000	0.0000		0.0000	0.0000	739.3885	0.0000	739.3885	43.6966	0.0000	1,831.8037
Water						0.0000	0.0000		0.0000	0.0000	161.2152	586.6117	747.8269	16.5948	0.3977	1,281.2168
Total	**40.0379**	**77.9892**	**279.0718**	**0.6065**	**46.7765**	**1.1983**	**47.9748**	**12.5750**	**1.1441**	**13.7190**	**900.6037**	**65,415.3241**	**66,315.9278**	**63.4862**	**0.5418**	**68,064.5510**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

4.0 Operational Detail - Mobile

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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	25.8144	75.5978	277.0333	0.5922	46.7765	1.0165	47.7930	12.5750	0.9622	13.5372	0.0000	53,839.0632	53,839.0632	2.6242	0.0000	53,904.6687
Unmitigated	25.8144	75.5978	277.0333	0.5922	46.7765	1.0165	47.7930	12.5750	0.9622	13.5372	0.0000	53,839.0632	53,839.0632	2.6242	0.0000	53,904.6687

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	11,933.24	4,350.48	1275.44	24,454,960	24,454,960
Regional Shopping Center	60,022.96	70,242.33	35479.62	101,650,793	101,650,793
Total	71,956.20	74,592.81	36,755.06	126,105,753	126,105,753

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.541400	0.048669	0.219726	0.125322	0.019975	0.005320	0.017963	0.006094	0.003356	0.003822	0.007367	0.000343	0.000643
Regional Shopping Center	0.541400	0.048669	0.219726	0.125322	0.019975	0.005320	0.017963	0.006094	0.003356	0.003822	0.007367	0.000343	0.000643

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	8,386.5816	8,386.5816	0.5206	0.0964	8,428.3217
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	8,386.5816	8,386.5816	0.5206	0.0964	8,428.3217
NaturalGas Mitigated	0.2630	2.3911	2.0085	0.0144		0.1817	0.1817		0.1817	0.1817	0.0000	2,603.0112	2,603.0112	0.0499	0.0477	2,618.4796
NaturalGas Unmitigated	0.2630	2.3911	2.0085	0.0144		0.1817	0.1817		0.1817	0.1817	0.0000	2,603.0112	2,603.0112	0.0499	0.0477	2,618.4796

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					
Industrial Park	4.1216e+007	0.2222	2.0204	1.6971	0.0121		0.1536	0.1536		0.1536	0.1536	0.0000	2,199.4415	2,199.4415	0.0422	0.0403	2,212.5116
Regional Shopping Center	7.56261e+006	0.0408	0.3707	0.3114	2.2200e-003		0.0282	0.0282		0.0282	0.0282	0.0000	403.5698	403.5698	7.7400e-003	7.4000e-003	405.9680
Total		**0.2630**	**2.3911**	**2.0085**	**0.0143**		**0.1817**	**0.1817**		**0.1817**	**0.1817**	**0.0000**	**2,603.0112**	**2,603.0112**	**0.0499**	**0.0477**	**2,618.4796**

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					
Industrial Park	4.1216e+007	0.2222	2.0204	1.6971	0.0121		0.1536	0.1536		0.1536	0.1536	0.0000	2,199.4415	2,199.4415	0.0422	0.0403	2,212.5116
Regional Shopping Center	7.56261e+006	0.0408	0.3707	0.3114	2.2200e-003		0.0282	0.0282		0.0282	0.0282	0.0000	403.5698	403.5698	7.7400e-003	7.4000e-003	405.9680
Total		**0.2630**	**2.3911**	**2.0085**	**0.0143**		**0.1817**	**0.1817**		**0.1817**	**0.1817**	**0.0000**	**2,603.0112**	**2,603.0112**	**0.0499**	**0.0477**	**2,618.4796**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	2.54389e+007	5,019.4256	0.3116	0.0577	5,044.4074
Regional Shopping Center	1.70651e+007	3,367.1560	0.2090	0.0387	3,383.9144
Total		**8,386.5816**	**0.5206**	**0.0964**	**8,428.3217**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	2.54389e+007	5,019.4256	0.3116	0.0577	5,044.4074
Regional Shopping Center	1.70651e+007	3,367.1560	0.2090	0.0387	3,383.9144
Total		**8,386.5816**	**0.5206**	**0.0964**	**8,428.3217**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	13.9605	2.9000e-004	0.0300	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0563	0.0563	1.6000e-004	0.0000	0.0604
Unmitigated	13.9605	2.9000e-004	0.0300	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0563	0.0563	1.6000e-004	0.0000	0.0604

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	1.6440					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	12.3135					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.9600e-003	2.9000e-004	0.0300	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0563	0.0563	1.6000e-004	0.0000	0.0604
Total	**13.9605**	**2.9000e-004**	**0.0300**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**0.0563**	**0.0563**	**1.6000e-004**	**0.0000**	**0.0604**

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	1.6440					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	12.3135					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.9600e-003	2.9000e-004	0.0300	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0563	0.0563	1.6000e-004	0.0000	0.0604
Total	**13.9605**	**2.9000e-004**	**0.0300**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**0.0563**	**0.0563**	**1.6000e-004**	**0.0000**	**0.0604**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	747.8269	16.5948	0.3977	1,281.2168
Unmitigated	747.8269	16.5948	0.3977	1,281.2168

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	404.035 / 0	559.5538	13.1923	0.3158	983.4762
Regional Shopping Center	104.123 / 63.8173	188.2732	3.4025	0.0819	297.7406
Total		**747.8269**	**16.5948**	**0.3977**	**1,281.2168**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	404.035 / 0	559.5538	13.1923	0.3158	983.4762
Regional Shopping Center	104.123 / 63.8173	188.2732	3.4025	0.0819	297.7406
Total		**747.8269**	**16.5948**	**0.3977**	**1,281.2168**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	739.3885	43.6966	0.0000	1,831.8037
Unmitigated	739.3885	43.6966	0.0000	1,831.8037

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	2166.5	439.7799	25.9903	0.0000	1,089.5361
Regional Shopping Center	1475.97	299.6086	17.7064	0.0000	742.2676
Total		**739.3885**	**43.6966**	**0.0000**	**1,831.8037**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	2166.5	439.7799	25.9903	0.0000	1,089.5361
Regional Shopping Center	1475.97	299.6086	17.7064	0.0000	742.2676
Total		**739.3885**	**43.6966**	**0.0000**	**1,831.8037**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - San Mateo - Net Reduction in Land Uses

San Mateo County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	1,747.18	1000sqft	40.11	1,747,180.00	0
Regional Shopping Center	1,405.69	1000sqft	32.27	1,405,690.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	70.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5255	0.0000	0.0000	2.3578	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5255**	**0.0000**	**0.0000**	**2.3578**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5255	0.0000	0.0000	2.3578	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5255**	**0.0000**	**0.0000**	**2.3578**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	76.5127	3.2200e-003	0.3330	2.0000e-005		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003		0.6900	0.6900	2.0000e-003		0.7400
Energy	1.4412	13.1020	11.0056	0.0786		0.9958	0.9958		0.9958	0.9958		15,722.3492	15,722.3492	0.3014	0.2882	15,815.7793
Mobile	189.7740	480.0982	1,842.7039	4.1887	328.2154	6.8279	335.0433	87.9200	6.4636	94.3836		419,890.2072	419,890.2072	19.3795		420,374.6938
Total	**267.7279**	**493.2034**	**1,854.0426**	**4.2673**	**328.2154**	**7.8249**	**336.0402**	**87.9200**	**7.4605**	**95.3806**		**435,613.2464**	**435,613.2464**	**19.6828**	**0.2882**	**436,191.2130**

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	lb/day										lb/day					
Area	76.5127	3.2200e-003	0.3330	2.0000e-005		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003		0.6900	0.6900	2.0000e-003		0.7400
Energy	1.4412	13.1020	11.0056	0.0786		0.9958	0.9958		0.9958	0.9958		15,722.3492	15,722.3492	0.3014	0.2882	15,815.7793
Mobile	189.7740	480.0982	1,842.7039	4.1887	328.2154	6.8279	335.0433	87.9200	6.4636	94.3836		419,890.2072	419,890.2072	19.3795		420,374.6938
Total	**267.7279**	**493.2034**	**1,854.0426**	**4.2673**	**328.2154**	**7.8249**	**336.0402**	**87.9200**	**7.4605**	**95.3806**		**435,613.2464**	**435,613.2464**	**19.6828**	**0.2882**	**436,191.2130**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	189.7740	480.0982	1,842.7039	4.1887	328.2154	6.8279	335.0433	87.9200	6.4636	94.3836		419,890.2072	419,890.2072	19.3795		420,374.6938
Unmitigated	189.7740	480.0982	1,842.7039	4.1887	328.2154	6.8279	335.0433	87.9200	6.4636	94.3836		419,890.2072	419,890.2072	19.3795		420,374.6938

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	11,933.24	4,350.48	1275.44	24,454,960	24,454,960
Regional Shopping Center	60,022.96	70,242.33	35479.62	101,650,793	101,650,793
Total	71,956.20	74,592.81	36,755.06	126,105,753	126,105,753

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.541400	0.048669	0.219726	0.125322	0.019975	0.005320	0.017963	0.006094	0.003356	0.003822	0.007367	0.000343	0.000643
Regional Shopping Center	0.541400	0.048669	0.219726	0.125322	0.019975	0.005320	0.017963	0.006094	0.003356	0.003822	0.007367	0.000343	0.000643

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.4412	13.1020	11.0056	0.0786		0.9958	0.9958		0.9958	0.9958		15,722.3492	15,722.3492	0.3014	0.2882	15,815.7793
NaturalGas Unmitigated	1.4412	13.1020	11.0056	0.0786		0.9958	0.9958		0.9958	0.9958		15,722.3492	15,722.3492	0.3014	0.2882	15,815.7793

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	lb/day										lb/day					
Industrial Park	112920	1.2178	11.0706	9.2993	0.0664		0.8414	0.8414		0.8414	0.8414		13,284.7627	13,284.7627	0.2546	0.2436	13,363.7074
Regional Shopping Center	20719.5	0.2235	2.0313	1.7063	0.0122		0.1544	0.1544		0.1544	0.1544		2,437.5865	2,437.5865	0.0467	0.0447	2,452.0719
Total		**1.4412**	**13.1020**	**11.0056**	**0.0786**		**0.9958**	**0.9958**		**0.9958**	**0.9958**		**15,722.3492**	**15,722.3492**	**0.3013**	**0.2882**	**15,815.7793**

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	lb/day										lb/day					
Industrial Park	112.92	1.2178	11.0706	9.2993	0.0664		0.8414	0.8414		0.8414	0.8414		13,284.7627	13,284.7627	0.2546	0.2436	13,363.7074
Regional Shopping Center	20.7195	0.2235	2.0313	1.7063	0.0122		0.1544	0.1544		0.1544	0.1544		2,437.5865	2,437.5865	0.0467	0.0447	2,452.0719
Total		**1.4412**	**13.1020**	**11.0056**	**0.0786**		**0.9958**	**0.9958**		**0.9958**	**0.9958**		**15,722.3492**	**15,722.3492**	**0.3013**	**0.2882**	**15,815.7793**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	76.5127	3.2200e-003	0.3330	2.0000e-005		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003		0.6900	0.6900	2.0000e-003		0.7400
Unmitigated	76.5127	3.2200e-003	0.3330	2.0000e-005		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003		0.6900	0.6900	2.0000e-003		0.7400

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	lb/day										lb/day					
Architectural Coating	9.0084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	67.4714					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0329	3.2200e-003	0.3330	2.0000e-005		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003		0.6900	0.6900	2.0000e-003		0.7400
Total	**76.5127**	**3.2200e-003**	**0.3330**	**2.0000e-005**		**1.2000e-003**	**1.2000e-003**		**1.2000e-003**	**1.2000e-003**		**0.6900**	**0.6900**	**2.0000e-003**		**0.7400**

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	lb/day										lb/day					
Architectural Coating	9.0084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	67.4714					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0329	3.2200e-003	0.3330	2.0000e-005		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003		0.6900	0.6900	2.0000e-003		0.7400
Total	**76.5127**	**3.2200e-003**	**0.3330**	**2.0000e-005**		**1.2000e-003**	**1.2000e-003**		**1.2000e-003**	**1.2000e-003**		**0.6900**	**0.6900**	**2.0000e-003**		**0.7400**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Santa Clara - New Land Uses

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	54,248.81	1000sqft	1,245.38	54,248,800.00	0
Apartments High Rise	41,888.00	Dwelling Unit	675.61	41,888,000.00	119800
Apartments Low Rise	70,470.00	Dwelling Unit	4,404.38	70,470,000.00	201544
Apartments Mid Rise	70,470.00	Dwelling Unit	1,854.47	70,470,000.00	201544
Single Family Housing	20,855.00	Dwelling Unit	6,771.10	37,539,000.00	59645

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	59.59	**CH4 Intensity (lb/MWhr)**	0.004	**N2O Intensity (lb/MWhr)**	0.001

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Santa Clara - New Land Uses - Santa Clara County, Annual

Project Characteristics - Silicon Valley Clean Energy emission factor based on a 90% renewable mix. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards.

Plan Bay Area 2040 Update - Santa Clara - New Land Uses - Santa Clara County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblConstructionPhase	PhaseEndDate	10/28/2052	6/30/2014
tblEnergyUse	T24E	392.47	372.85
tblEnergyUse	T24E	431.22	310.48
tblEnergyUse	T24E	392.47	282.58
tblEnergyUse	T24E	6.40	6.08
tblEnergyUse	T24E	368.92	265.62
tblEnergyUse	T24NG	7,914.07	7,518.37
tblEnergyUse	T24NG	10,164.29	7,318.29
tblEnergyUse	T24NG	7,914.07	5,698.13
tblEnergyUse	T24NG	16.39	15.57
tblEnergyUse	T24NG	32,797.58	23,614.26
tblFireplaces	NumberGas	6,283.20	13,404.16
tblFireplaces	NumberGas	10,570.50	22,550.40
tblFireplaces	NumberGas	10,570.50	22,550.40
tblFireplaces	NumberGas	5,213.75	14,181.40
tblFireplaces	NumberWood	7,120.96	0.00
tblFireplaces	NumberWood	11,979.90	0.00
tblFireplaces	NumberWood	11,979.90	0.00
tblFireplaces	NumberWood	8,967.65	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.004
tblProjectCharacteristics	CO2IntensityFactor	641.35	59.59
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.001
tblProjectCharacteristics	OperationalYear	2018	2040

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					
2014					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum					**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

	ROG	NOx	CO	SO2	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					
2014					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Santa Clara - New Land Uses - Santa Clara County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	1,321.6841	28.1475	1,689.0259	0.7155		38.2996	38.2996		38.2996	38.2996	3,920.2617	11,545.5123	15,465.7740	20.8543	0.1664	16,036.7062
Energy	17.3369	150.6453	81.3314	0.9457		11.9782	11.9782		11.9782	11.9782	0.0000	224,455.5851	224,455.5851	6.8381	4.0330	225,828.3573
Mobile	189.6313	1,030.1695	2,293.9994	11.9928	1,518.0315	5.1553	1,523.1868	406.2477	4.7965	411.0441	0.0000	1,107,337.2118	1,107,337.2118	29.5270	0.0000	1,108,075.3858
Waste						0.0000	0.0000		0.0000	0.0000	32,397.9991	0.0000	32,397.9991	1,914.6669	0.0000	80,264.6715
Water						0.0000	0.0000		0.0000	0.0000	7,269.1141	4,701.6767	11,970.7908	746.9233	17.7079	35,920.8360
Total	**1,528.6523**	**1,208.9622**	**4,064.3567**	**13.6539**	**1,518.0315**	**55.4330**	**1,573.4645**	**406.2477**	**55.0742**	**461.3219**	**43,587.3749**	**1,348,039.9859**	**1,391,627.3608**	**2,718.8096**	**21.9072**	**1,466,125.9568**

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	1,321.6841	28.1475	1,689.0259	0.7155		38.2996	38.2996		38.2996	38.2996	3,920.2617	11,545.5123	15,465.7740	20.8543	0.1664	16,036.7062
Energy	17.3369	150.6453	81.3314	0.9457		11.9782	11.9782		11.9782	11.9782	0.0000	224,455.5851	224,455.5851	6.8381	4.0330	225,828.3573
Mobile	189.6313	1,030.1695	2,293.9994	11.9928	1,518.0315	5.1553	1,523.1868	406.2477	4.7965	411.0441	0.0000	1,107,337.2118	1,107,337.2118	29.5270	0.0000	1,108,075.3858
Waste						0.0000	0.0000		0.0000	0.0000	32,397.9991	0.0000	32,397.9991	1,914.6669	0.0000	80,264.6715
Water						0.0000	0.0000		0.0000	0.0000	7,269.1141	4,701.6767	11,970.7908	746.9233	17.7079	35,920.8360
Total	**1,528.6523**	**1,208.9622**	**4,064.3567**	**13.6539**	**1,518.0315**	**55.4330**	**1,573.4645**	**406.2477**	**55.0742**	**461.3219**	**43,587.3749**	**1,348,039.9859**	**1,391,627.3608**	**2,718.8096**	**21.9072**	**1,466,125.9568**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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

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				0.00	10.80	7.30				

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	189.6313	1,030.1695	2,293.9994	11.9928	1,518.0315	5.1553	1,523.1868	406.2477	4.7965	411.0441	0.0000	1,107,337.2118	1,107,337.2118	29.5270	0.0000	1,108,075.3858
Unmitigated	189.6313	1,030.1695	2,293.9994	11.9928	1,518.0315	5.1553	1,523.1868	406.2477	4.7965	411.0441	0.0000	1,107,337.2118	1,107,337.2118	29.5270	0.0000	1,108,075.3858

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	175,929.60	208,602.24	152891.20	409,507,047	409,507,047
Apartments Low Rise	464,397.30	504,565.20	427752.90	1,073,737,952	1,073,737,952
Apartments Mid Rise	468,625.50	450,303.30	412954.20	1,057,927,172	1,057,927,172
General Office Building	598,364.37	133,452.07	56961.25	1,086,393,647	1,086,393,647
Single Family Housing	198,539.60	206,673.05	179770.10	455,039,210	455,039,210
Total	1,905,856.37	1,503,595.86	1,230,329.65	4,082,605,027	4,082,605,027

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
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.621663	0.033362	0.179130	0.101130	0.011078	0.005126	0.013709	0.024709	0.002299	0.001422	0.005077	0.000653	0.000642
Apartments High Rise	0.621663	0.033362	0.179130	0.101130	0.011078	0.005126	0.013709	0.024709	0.002299	0.001422	0.005077	0.000653	0.000642
Apartments Low Rise	0.621663	0.033362	0.179130	0.101130	0.011078	0.005126	0.013709	0.024709	0.002299	0.001422	0.005077	0.000653	0.000642
Apartments Mid Rise	0.621663	0.033362	0.179130	0.101130	0.011078	0.005126	0.013709	0.024709	0.002299	0.001422	0.005077	0.000653	0.000642
Single Family Housing	0.621663	0.033362	0.179130	0.101130	0.011078	0.005126	0.013709	0.024709	0.002299	0.001422	0.005077	0.000653	0.000642

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Plan Bay Area 2040 Update - Santa Clara - New Land Uses - Santa Clara County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	52,880.2368	52,880.2368	3.5496	0.8874	53,233.4225
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	52,880.2368	52,880.2368	3.5496	0.8874	53,233.4225
NaturalGas Mitigated	17.3369	150.6453	81.3314	0.9457		11.9782	11.9782		11.9782	11.9782	0.0000	171,575.3483	171,575.3483	3.2885	3.1456	172,594.9348
NaturalGas Unmitigated	17.3369	150.6453	81.3314	0.9457		11.9782	11.9782		11.9782	11.9782	0.0000	171,575.3483	171,575.3483	3.2885	3.1456	172,594.9348

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					
Apartments High Rise	4.47086e+008	2.4108	20.6010	8.7664	0.1315		1.6656	1.6656		1.6656	1.6656	0.0000	23,858.2181	23,858.2181	0.4573	0.4374	23,999.9956
Apartments Low Rise	7.38053e+008	3.9797	34.0083	14.4716	0.2171		2.7496	2.7496		2.7496	2.7496	0.0000	39,385.3052	39,385.3052	0.7549	0.7221	39,619.3524
Apartments Mid Rise	6.2388e+008	3.3641	28.7474	12.2329	0.1835		2.3243	2.3243		2.3243	2.3243	0.0000	33,292.6165	33,292.6165	0.6381	0.6104	33,490.4579
General Office Building	8.47909e+008	4.5721	41.5642	34.9139	0.2494		3.1589	3.1589		3.1589	3.1589	0.0000	45,247.6396	45,247.6396	0.8673	0.8295	45,516.5237
Single Family Housing	5.58273e+008	3.0103	25.7243	10.9465	0.1642		2.0798	2.0798		2.0798	2.0798	0.0000	29,791.5689	29,791.5689	0.5710	0.5462	29,968.6053
Total		**17.3369**	**150.6453**	**81.3314**	**0.9456**		**11.9782**	**11.9782**		**11.9782**	**11.9782**	**0.0000**	**171,575.3483**	**171,575.3483**	**3.2885**	**3.1455**	**172,594.9348**

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					
Apartments High Rise	4.47086e+008	2.4108	20.6010	8.7664	0.1315		1.6656	1.6656		1.6656	1.6656	0.0000	23,858.2181	23,858.2181	0.4573	0.4374	23,999.9956
Apartments Low Rise	7.38053e+008	3.9797	34.0083	14.4716	0.2171		2.7496	2.7496		2.7496	2.7496	0.0000	39,385.3052	39,385.3052	0.7549	0.7221	39,619.3524
Apartments Mid Rise	6.2388e+008	3.3641	28.7474	12.2329	0.1835		2.3243	2.3243		2.3243	2.3243	0.0000	33,292.6165	33,292.6165	0.6381	0.6104	33,490.4579
General Office Building	8.47909e+008	4.5721	41.5642	34.9139	0.2494		3.1589	3.1589		3.1589	3.1589	0.0000	45,247.6396	45,247.6396	0.8673	0.8295	45,516.5237
Single Family Housing	5.58273e+008	3.0103	25.7243	10.9465	0.1642		2.0798	2.0798		2.0798	2.0798	0.0000	29,791.5689	29,791.5689	0.5710	0.5462	29,968.6053
Total		**17.3369**	**150.6453**	**81.3314**	**0.9456**		**11.9782**	**11.9782**		**11.9782**	**11.9782**	**0.0000**	**171,575.3483**	**171,575.3483**	**3.2885**	**3.1455**	**172,594.9348**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.83945e+008	4,971.9506	0.3337	0.0834	5,005.1581
Apartments Low Rise	3.19877e+008	8,646.1490	0.5804	0.1451	8,703.8964
Apartments Mid Rise	3.03097e+008	8,192.5843	0.5499	0.1375	8,247.3023
General Office Building	9.71054e+008	26,247.1584	1.7619	0.4405	26,422.4625
Single Family Housing	1.78412e+008	4,822.3945	0.3237	0.0809	4,854.6031
Total		**52,880.2368**	**3.5496**	**0.8874**	**53,233.4225**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.83945e+008	4,971.9506	0.3337	0.0834	5,005.1581
Apartments Low Rise	3.19877e+008	8,646.1490	0.5804	0.1451	8,703.8964
Apartments Mid Rise	3.03097e+008	8,192.5843	0.5499	0.1375	8,247.3023
General Office Building	9.71054e+008	26,247.1584	1.7619	0.4405	26,422.4625
Single Family Housing	1.78412e+008	4,822.3945	0.3237	0.0809	4,854.6031
Total		**52,880.2368**	**3.5496**	**0.8874**	**53,233.4225**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1,321.6841	28.1475	1,689.0259	0.7155		38.2996	38.2996		38.2996	38.2996	3,920.2617	11,545.5123	15,465.7740	20.8543	0.1664	16,036.7062
Unmitigated	1,321.6841	28.1475	1,689.0259	0.7155		38.2996	38.2996		38.2996	38.2996	3,920.2617	11,545.5123	15,465.7740	20.8543	0.1664	16,036.7062

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	183.4126					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1,072.5120					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	20.6792	10.7630	182.8048	0.6356		29.9109	29.9109		29.9109	29.9109	3,920.2617	9,074.1138	12,994.3755	18.5004	0.1664	13,506.4591
Landscaping	45.0803	17.3845	1,506.2211	0.0799		8.3887	8.3887		8.3887	8.3887	0.0000	2,471.3985	2,471.3985	2.3539	0.0000	2,530.2471
Total	**1,321.6841**	**28.1475**	**1,689.0259**	**0.7155**		**38.2996**	**38.2996**		**38.2996**	**38.2996**	**3,920.2617**	**11,545.5123**	**15,465.7740**	**20.8543**	**0.1664**	**16,036.7062**

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	183.4126					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1,072.5120					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	20.6792	10.7630	182.8048	0.6356		29.9109	29.9109		29.9109	29.9109	3,920.2617	9,074.1138	12,994.3755	18.5004	0.1664	13,506.4591
Landscaping	45.0803	17.3845	1,506.2211	0.0799		8.3887	8.3887		8.3887	8.3887	0.0000	2,471.3985	2,471.3985	2.3539	0.0000	2,530.2471
Total	**1,321.6841**	**28.1475**	**1,689.0259**	**0.7155**		**38.2996**	**38.2996**		**38.2996**	**38.2996**	**3,920.2617**	**11,545.5123**	**15,465.7740**	**20.8543**	**0.1664**	**16,036.7062**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	11,970.7908	746.9233	17.7079	35,920.8360
Unmitigated	11,970.7908	746.9233	17.7079	35,920.8360

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	2729.17 / 1720.56	1,427.7722	88.9678	2.1093	4,280.5280
Apartments Low Rise	4591.4 / 2894.58	2,402.0032	149.6744	3.5485	7,201.3180
Apartments Mid Rise	4591.4 / 2894.58	2,402.0032	149.6744	3.5485	7,201.3180
General Office Building	9641.84 / 5909.52	5,028.1597	314.3118	7.4515	15,106.5029
Single Family Housing	1358.79 / 856.627	710.8525	44.2949	1.0502	2,131.1691
Total		**11,970.7908**	**746.9233**	**17.7079**	**35,920.8360**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	2729.17 / 1720.56	1,427.7722	88.9678	2.1093	4,280.5280
Apartments Low Rise	4591.4 / 2894.58	2,402.0032	149.6744	3.5485	7,201.3180
Apartments Mid Rise	4591.4 / 2894.58	2,402.0032	149.6744	3.5485	7,201.3180
General Office Building	9641.84 / 5909.52	5,028.1597	314.3118	7.4515	15,106.5029
Single Family Housing	1358.79 / 856.627	710.8525	44.2949	1.0502	2,131.1691
Total		**11,970.7908**	**746.9233**	**17.7079**	**35,920.8360**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	32,397.9991	1,914.6669	0.0000	80,264.6715
Unmitigated	32,397.9991	1,914.6669	0.0000	80,264.6715

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	19268.5	3,911.3273	231.1528	0.0000	9,690.1479
Apartments Low Rise	32416.2	6,580.1957	388.8784	0.0000	16,302.1562
Apartments Mid Rise	32416.2	6,580.1957	388.8784	0.0000	16,302.1562
General Office Building	50451.4	10,241.1742	605.2361	0.0000	25,372.0756
Single Family Housing	25050.9	5,085.1063	300.5212	0.0000	12,598.1357
Total		**32,397.9991**	**1,914.6669**	**0.0000**	**80,264.6715**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	19268.5	3,911.3273	231.1528	0.0000	9,690.1479
Apartments Low Rise	32416.2	6,580.1957	388.8784	0.0000	16,302.1562
Apartments Mid Rise	32416.2	6,580.1957	388.8784	0.0000	16,302.1562
General Office Building	50451.4	10,241.1742	605.2361	0.0000	25,372.0756
Single Family Housing	25050.9	5,085.1063	300.5212	0.0000	12,598.1357
Total		**32,397.9991**	**1,914.6669**	**0.0000**	**80,264.6715**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Santa Clara - New Land Uses

Santa Clara County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	54,248.81	1000sqft	1,245.38	54,248,800.00	0
Apartments High Rise	41,888.00	Dwelling Unit	675.61	41,888,000.00	119800
Apartments Low Rise	70,470.00	Dwelling Unit	4,404.38	70,470,000.00	201544
Apartments Mid Rise	70,470.00	Dwelling Unit	1,854.47	70,470,000.00	201544
Single Family Housing	20,855.00	Dwelling Unit	6,771.10	37,539,000.00	59645

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	59.59	**CH4 Intensity (lb/MWhr)**	0.004	**N2O Intensity (lb/MWhr)**	0.001

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Santa Clara - New Land Uses - Santa Clara County, Summer

Project Characteristics - Silicon Valley Clean Energy emission factor based on a 90% renewable mix. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards.

Plan Bay Area 2040 Update - Santa Clara - New Land Uses - Santa Clara County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblConstructionPhase	PhaseEndDate	10/28/2052	6/30/2014
tblEnergyUse	T24E	392.47	372.85
tblEnergyUse	T24E	431.22	310.48
tblEnergyUse	T24E	392.47	282.58
tblEnergyUse	T24E	6.40	6.08
tblEnergyUse	T24E	368.92	265.62
tblEnergyUse	T24NG	7,914.07	7,518.37
tblEnergyUse	T24NG	10,164.29	7,318.29
tblEnergyUse	T24NG	7,914.07	5,698.13
tblEnergyUse	T24NG	16.39	15.57
tblEnergyUse	T24NG	32,797.58	23,614.26
tblFireplaces	NumberGas	6,283.20	13,404.16
tblFireplaces	NumberGas	10,570.50	22,550.40
tblFireplaces	NumberGas	10,570.50	22,550.40
tblFireplaces	NumberGas	5,213.75	14,181.40
tblFireplaces	NumberWood	7,120.96	0.00
tblFireplaces	NumberWood	11,979.90	0.00
tblFireplaces	NumberWood	11,979.90	0.00
tblFireplaces	NumberWood	8,967.65	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.004
tblProjectCharacteristics	CO2IntensityFactor	641.35	59.59
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.001
tblProjectCharacteristics	OperationalYear	2018	2040

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	10,094.9994	1,977.2946	40,471.4071	85.3545		3,981.3321	3,981.3321		3,981.3321	3,981.3321	557,100.2847	1,826,050.1094	2,383,150.3941	2,667.5806	32.9227	2,459,650.8573
Energy	94.9965	825.4534	445.6514	5.1816		65.6340	65.6340		65.6340	65.6340		1,036,325.7377	1,036,325.7377	19.8629	18.9993	1,042,484.1034
Mobile	1,355.6623	6,318.8692	15,167.0746	79.0459	9,807.4917	32.1726	9,839.6643	2,617.2167	29.9328	2,647.1495		8,038,148.2756	8,038,148.2756	203.0483		8,043,224.4819
Total	**11,545.6582**	**9,121.6172**	**56,084.1331**	**169.5821**	**9,807.4917**	**4,079.1387**	**13,886.6304**	**2,617.2167**	**4,076.8989**	**6,694.1155**	**557,100.2847**	**10,900,524.1227**	**11,457,624.4074**	**2,890.4918**	**51.9220**	**11,545,359.4426**

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	lb/day										lb/day					
Area	10,094.9994	1,977.2946	40,471.4071	85.3545		3,981.3321	3,981.3321		3,981.3321	3,981.3321	557,100.2847	1,826,050.1094	2,383,150.3941	2,667.5806	32.9227	2,459,650.8573
Energy	94.9965	825.4534	445.6514	5.1816		65.6340	65.6340		65.6340	65.6340		1,036,325.7377	1,036,325.7377	19.8629	18.9993	1,042,484.1034
Mobile	1,355.6623	6,318.8692	15,167.0746	79.0459	9,807.4917	32.1726	9,839.6643	2,617.2167	29.9328	2,647.1495		8,038,148.2756	8,038,148.2756	203.0483		8,043,224.4819
Total	**11,545.6582**	**9,121.6172**	**56,084.1331**	**169.5821**	**9,807.4917**	**4,079.1387**	**13,886.6304**	**2,617.2167**	**4,076.8989**	**6,694.1155**	**557,100.2847**	**10,900,524.1227**	**11,457,624.4074**	**2,890.4918**	**51.9220**	**11,545,359.4426**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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

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				0.00	10.80	7.30				

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	1,355.6623	6,318.8692	15,167.0746	79.0459	9,807.4917	32.1726	9,839.6643	2,617.2167	29.9328	2,647.1495		8,038,148.2756	8,038,148.2756	203.0483		8,043,224.4819
Unmitigated	1,355.6623	6,318.8692	15,167.0746	79.0459	9,807.4917	32.1726	9,839.6643	2,617.2167	29.9328	2,647.1495		8,038,148.2756	8,038,148.2756	203.0483		8,043,224.4819

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	175,929.60	208,602.24	152891.20	409,507,047	409,507,047
Apartments Low Rise	464,397.30	504,565.20	427752.90	1,073,737,952	1,073,737,952
Apartments Mid Rise	468,625.50	450,303.30	412954.20	1,057,927,172	1,057,927,172
General Office Building	598,364.37	133,452.07	56961.25	1,086,393,647	1,086,393,647
Single Family Housing	198,539.60	206,673.05	179770.10	455,039,210	455,039,210
Total	1,905,856.37	1,503,595.86	1,230,329.65	4,082,605,027	4,082,605,027

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
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.621663	0.033362	0.179130	0.101130	0.011078	0.005126	0.013709	0.024709	0.002299	0.001422	0.005077	0.000653	0.000642
Apartments High Rise	0.621663	0.033362	0.179130	0.101130	0.011078	0.005126	0.013709	0.024709	0.002299	0.001422	0.005077	0.000653	0.000642
Apartments Low Rise	0.621663	0.033362	0.179130	0.101130	0.011078	0.005126	0.013709	0.024709	0.002299	0.001422	0.005077	0.000653	0.000642
Apartments Mid Rise	0.621663	0.033362	0.179130	0.101130	0.011078	0.005126	0.013709	0.024709	0.002299	0.001422	0.005077	0.000653	0.000642
Single Family Housing	0.621663	0.033362	0.179130	0.101130	0.011078	0.005126	0.013709	0.024709	0.002299	0.001422	0.005077	0.000653	0.000642

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	94.9965	825.4534	445.6514	5.1816		65.6340	65.6340		65.6340	65.6340		1,036,325.7377	1,036,325.7377	19.8629	18.9993	1,042,484.1034
NaturalGas Unmitigated	94.9965	825.4534	445.6514	5.1816		65.6340	65.6340		65.6340	65.6340		1,036,325.7377	1,036,325.7377	19.8629	18.9993	1,042,484.1034

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	lb/day										lb/day					
Apartments High Rise	1.22489e+006	13.2096	112.8823	48.0350	0.7205		9.1267	9.1267		9.1267	9.1267		144,105.1161	144,105.1161	2.7620	2.6419	144,961.4607
Apartments Low Rise	2.02206e+006	21.8066	186.3469	79.2966	1.1895		15.0664	15.0664		15.0664	15.0664		237,889.6845	237,889.6845	4.5596	4.3613	239,303.3440
Apartments Mid Rise	1.70926e+006	18.4332	157.5201	67.0298	1.0055		12.7357	12.7357		12.7357	12.7357		201,089.4669	201,089.4669	3.8542	3.6866	202,284.4411
General Office Building	2.32304e+006	25.0524	227.7488	191.3090	1.3665		17.3089	17.3089		17.3089	17.3089		273,298.5476	273,298.5476	5.2382	5.0105	274,922.6242
Single Family Housing	1.52951e+006	16.4948	140.9553	59.9810	0.8997		11.3964	11.3964		11.3964	11.3964		179,942.9226	179,942.9226	3.4489	3.2990	181,012.2334
Total		**94.9965**	**825.4534**	**445.6514**	**5.1816**		**65.6340**	**65.6340**		**65.6340**	**65.6340**		**1,036,325.7377**	**1,036,325.7377**	**19.8629**	**18.9993**	**1,042,484.1034**

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	lb/day										lb/day					
Apartments High Rise	1224.89	13.2096	112.8823	48.0350	0.7205		9.1267	9.1267		9.1267	9.1267		144,105.1161	144,105.1161	2.7620	2.6419	144,961.4607
Apartments Low Rise	2022.06	21.8066	186.3469	79.2966	1.1895		15.0664	15.0664		15.0664	15.0664		237,889.6845	237,889.6845	4.5596	4.3613	239,303.3440
Apartments Mid Rise	1709.26	18.4332	157.5201	67.0298	1.0055		12.7357	12.7357		12.7357	12.7357		201,089.4669	201,089.4669	3.8542	3.6866	202,284.4411
General Office Building	2323.04	25.0524	227.7488	191.3090	1.3665		17.3089	17.3089		17.3089	17.3089		273,298.5476	273,298.5476	5.2382	5.0105	274,922.6242
Single Family Housing	1529.51	16.4948	140.9553	59.9810	0.8997		11.3964	11.3964		11.3964	11.3964		179,942.9226	179,942.9226	3.4489	3.2990	181,012.2334
Total		**94.9965**	**825.4534**	**445.6514**	**5.1816**		**65.6340**	**65.6340**		**65.6340**	**65.6340**		**1,036,325.7377**	**1,036,325.7377**	**19.8629**	**18.9993**	**1,042,484.1034**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10,094.9994	1,977.2946	40,471.4071	85.3545		3,981.3321	3,981.3321		3,981.3321	3,981.3321	557,100.2847	1,826,050.1094	2,383,150.3941	2,667.5806	32.9227	2,459,650.8573
Unmitigated	10,094.9994	1,977.2946	40,471.4071	85.3545		3,981.3321	3,981.3321		3,981.3321	3,981.3321	557,100.2847	1,826,050.1094	2,383,150.3941	2,667.5806	32.9227	2,459,650.8573

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	lb/day										lb/day					
Architectural Coating	1,005.0008					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5,876.7781					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2,712.3279	1,784.1341	23,735.6176	84.4668		3,888.1250	3,888.1250		3,888.1250	3,888.1250	557,100.2847	1,795,780.6588	2,352,880.9435	2,638.7497	32.9227	2,428,660.6351
Landscaping	500.8926	193.1605	16,735.7895	0.8878		93.2072	93.2072		93.2072	93.2072		30,269.4506	30,269.4506	28.8309		30,990.2223
Total	**10,094.9994**	**1,977.2946**	**40,471.4071**	**85.3545**		**3,981.3321**	**3,981.3321**		**3,981.3321**	**3,981.3321**	**557,100.2847**	**1,826,050.1094**	**2,383,150.3941**	**2,667.5806**	**32.9227**	**2,459,650.8573**

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	lb/day										lb/day					
Architectural Coating	1,005.0008					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5,876.7781					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2,712.3279	1,784.1341	23,735.6176	84.4668		3,888.1250	3,888.1250		3,888.1250	3,888.1250	557,100.2847	1,795,780.6588	2,352,880.9435	2,638.7497	32.9227	2,428,660.6351
Landscaping	500.8926	193.1605	16,735.7895	0.8878		93.2072	93.2072		93.2072	93.2072		30,269.4506	30,269.4506	28.8309		30,990.2223
Total	**10,094.9994**	**1,977.2946**	**40,471.4071**	**85.3545**		**3,981.3321**	**3,981.3321**		**3,981.3321**	**3,981.3321**	**557,100.2847**	**1,826,050.1094**	**2,383,150.3941**	**2,667.5806**	**32.9227**	**2,459,650.8573**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Santa Clara - Net Reduction in Land Uses

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	6,463.48	1000sqft	148.38	6,463,480.00	0
Regional Shopping Center	10,626.74	1000sqft	243.96	10,626,700.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	400.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Santa Clara - Net Reduction in Land Uses - Santa Clara County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	75.6732	1.5700e-003	0.1624	1.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	0.3054	0.3054	8.8000e-004	0.0000	0.3275
Energy	0.8630	7.8452	6.5899	0.0471		0.5962	0.5962		0.5962	0.5962	0.0000	60,459.4537	60,459.4537	3.3863	0.7533	60,768.6068
Mobile	200.5448	687.6310	2,177.3336	4.2361	319.7017	7.4018	327.1035	85.6386	7.0075	92.6461	0.0000	385,165.4275	385,165.4275	20.5200	0.0000	385,678.4286
Waste						0.0000	0.0000		0.0000	0.0000	3,891.8970	0.0000	3,891.8970	230.0045	0.0000	9,642.0101
Water						0.0000	0.0000		0.0000	0.0000	723.9182	2,769.3856	3,493.3038	74.5252	1.7875	5,889.1023
Total	**277.0810**	**695.4777**	**2,184.0859**	**4.2832**	**319.7017**	**7.9986**	**327.7003**	**85.6386**	**7.6043**	**93.2429**	**4,615.8152**	**448,394.5722**	**453,010.3874**	**328.4369**	**2.5408**	**461,978.4753**

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	75.6732	1.5700e-003	0.1624	1.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	0.3054	0.3054	8.8000e-004	0.0000	0.3275
Energy	0.8630	7.8452	6.5899	0.0471		0.5962	0.5962		0.5962	0.5962	0.0000	60,459.4537	60,459.4537	3.3863	0.7533	60,768.6068
Mobile	200.5448	687.6310	2,177.3336	4.2361	319.7017	7.4018	327.1035	85.6386	7.0075	92.6461	0.0000	385,165.4275	385,165.4275	20.5200	0.0000	385,678.4286
Waste						0.0000	0.0000		0.0000	0.0000	3,891.8970	0.0000	3,891.8970	230.0045	0.0000	9,642.0101
Water						0.0000	0.0000		0.0000	0.0000	723.9182	2,769.3856	3,493.3038	74.5252	1.7875	5,889.1023
Total	**277.0810**	**695.4777**	**2,184.0859**	**4.2832**	**319.7017**	**7.9986**	**327.7003**	**85.6386**	**7.6043**	**93.2429**	**4,615.8152**	**448,394.5722**	**453,010.3874**	**328.4369**	**2.5408**	**461,978.4753**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

4.0 Operational Detail - Mobile

Plan Bay Area 2040 Update - Santa Clara - Net Reduction in Land Uses - Santa Clara County, Annual

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	200.5448	687.6310	2,177.3336	4.2361	319.7017	7.4018	327.1035	85.6386	7.0075	92.6461	0.0000	385,165.4275	385,165.4275	20.5200	0.0000	385,678.4286
Unmitigated	200.5448	687.6310	2,177.3336	4.2361	319.7017	7.4018	327.1035	85.6386	7.0075	92.6461	0.0000	385,165.4275	385,165.4275	20.5200	0.0000	385,678.4286

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	44,145.57	16,094.07	4718.34	90,468,151	90,468,151
Regional Shopping Center	453,761.80	531,018.20	268218.92	768,460,006	768,460,006
Total	497,907.37	547,112.26	272,937.26	858,928,157	858,928,157

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Plan Bay Area 2040 Update - Santa Clara - Net Reduction in Land Uses - Santa Clara County, Annual

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.581066	0.044264	0.192756	0.115658	0.019411	0.004878	0.012376	0.018919	0.001909	0.001745	0.005487	0.000584	0.000947
Regional Shopping Center	0.581066	0.044264	0.192756	0.115658	0.019411	0.004878	0.012376	0.018919	0.001909	0.001745	0.005487	0.000584	0.000947

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	51,919.0552	51,919.0552	3.2226	0.5968	52,177.4569
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	51,919.0552	51,919.0552	3.2226	0.5968	52,177.4569
NaturalGas Mitigated	0.8630	7.8452	6.5899	0.0471		0.5962	0.5962		0.5962	0.5962	0.0000	8,540.3986	8,540.3986	0.1637	0.1566	8,591.1499
NaturalGas Unmitigated	0.8630	7.8452	6.5899	0.0471		0.5962	0.5962		0.5962	0.5962	0.0000	8,540.3986	8,540.3986	0.1637	0.1566	8,591.1499

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					
Industrial Park	1.29011e+008	0.6957	6.3241	5.3122	0.0379		0.4806	0.4806		0.4806	0.4806	0.0000	6,884.5215	6,884.5215	0.1320	0.1262	6,925.4328
Regional Shopping Center	3.103e+007	0.1673	1.5211	1.2777	9.1300e-003		0.1156	0.1156		0.1156	0.1156	0.0000	1,655.8771	1,655.8771	0.0317	0.0304	1,665.7171
Total		**0.8630**	**7.8452**	**6.5899**	**0.0471**		**0.5962**	**0.5962**		**0.5962**	**0.5962**	**0.0000**	**8,540.3986**	**8,540.3986**	**0.1637**	**0.1566**	**8,591.1499**

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					
Industrial Park	1.29011e+008	0.6957	6.3241	5.3122	0.0379		0.4806	0.4806		0.4806	0.4806	0.0000	6,884.5215	6,884.5215	0.1320	0.1262	6,925.4328
Regional Shopping Center	3.103e+007	0.1673	1.5211	1.2777	9.1300e-003		0.1156	0.1156		0.1156	0.1156	0.0000	1,655.8771	1,655.8771	0.0317	0.0304	1,665.7171
Total		**0.8630**	**7.8452**	**6.5899**	**0.0471**		**0.5962**	**0.5962**		**0.5962**	**0.5962**	**0.0000**	**8,540.3986**	**8,540.3986**	**0.1637**	**0.1566**	**8,591.1499**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	1.32954e+008	26,233.4675	1.6283	0.3015	26,364.0318
Regional Shopping Center	1.30177e+008	25,685.5877	1.5943	0.2952	25,813.4251
Total		**51,919.0552**	**3.2226**	**0.5968**	**52,177.4569**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	1.32954e+008	26,233.4675	1.6283	0.3015	26,364.0318
Regional Shopping Center	1.30177e+008	25,685.5877	1.5943	0.2952	25,813.4251
Total		**51,919.0552**	**3.2226**	**0.5968**	**52,177.4569**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	75.6732	1.5700e-003	0.1624	1.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	0.3054	0.3054	8.8000e-004	0.0000	0.3275
Unmitigated	75.6732	1.5700e-003	0.1624	1.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	0.3054	0.3054	8.8000e-004	0.0000	0.3275

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	8.9115					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	66.7457					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0161	1.5700e-003	0.1624	1.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	0.3054	0.3054	8.8000e-004	0.0000	0.3275
Total	**75.6732**	**1.5700e-003**	**0.1624**	**1.0000e-005**		**5.9000e-004**	**5.9000e-004**		**5.9000e-004**	**5.9000e-004**	**0.0000**	**0.3054**	**0.3054**	**8.8000e-004**	**0.0000**	**0.3275**

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	8.9115					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	66.7457					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0161	1.5700e-003	0.1624	1.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	0.3054	0.3054	8.8000e-004	0.0000	0.3275
Total	**75.6732**	**1.5700e-003**	**0.1624**	**1.0000e-005**		**5.9000e-004**	**5.9000e-004**		**5.9000e-004**	**5.9000e-004**	**0.0000**	**0.3054**	**0.3054**	**8.8000e-004**	**0.0000**	**0.3275**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3,493.3038	74.5252	1.7875	5,889.1023
Unmitigated	3,493.3038	74.5252	1.7875	5,889.1023

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	1494.68 / 0	2,070.0011	48.8032	1.1684	3,638.2507
Regional Shopping Center	787.146 / 482.445	1,423.3027	25.7220	0.6191	2,250.8517
Total		**3,493.3038**	**74.5252**	**1.7875**	**5,889.1023**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	1494.68 / 0	2,070.0011	48.8032	1.1684	3,638.2507
Regional Shopping Center	787.146 / 482.445	1,423.3027	25.7220	0.6191	2,250.8517
Total		**3,493.3038**	**74.5252**	**1.7875**	**5,889.1023**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3,891.8970	230.0045	0.0000	9,642.0101
Unmitigated	3,891.8970	230.0045	0.0000	9,642.0101

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	8014.72	1,626.9157	96.1480	0.0000	4,030.6149
Regional Shopping Center	11158	2,264.9813	133.8566	0.0000	5,611.3953
Total		**3,891.8970**	**230.0045**	**0.0000**	**9,642.0101**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	8014.72	1,626.9157	96.1480	0.0000	4,030.6149
Regional Shopping Center	11158	2,264.9813	133.8566	0.0000	5,611.3953
Total		**3,891.8970**	**230.0045**	**0.0000**	**9,642.0101**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Santa Clara - Net Reduction in Land Uses

Santa Clara County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	6,463.48	1000sqft	148.38	6,463,480.00	0
Regional Shopping Center	10,626.74	1000sqft	243.96	10,626,700.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	400.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5256	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5256**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5256	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5256**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	414.7382	0.0175	1.8049	1.3000e-004		6.5300e-003	6.5300e-003		6.5300e-003	6.5300e-003		3.7402	3.7402	0.0108		4.0110
Energy	4.7286	42.9871	36.1092	0.2579		3.2670	3.2670		3.2670	3.2670		51,584.5366	51,584.5366	0.9887	0.9457	51,891.0777
Mobile	1,522.2045	4,407.6077	14,893.4343	30.1026	2,216.2989	49.3644	2,265.6633	591.9877	46.7324	638.7201		3,017,127.3518	3,017,127.3518	152.1685		3,020,931.5634
Total	**1,941.6713**	**4,450.6123**	**14,931.3484**	**30.3606**	**2,216.2989**	**52.6380**	**2,268.9368**	**591.9877**	**50.0060**	**641.9937**		**3,068,715.6287**	**3,068,715.6287**	**153.1680**	**0.9457**	**3,072,826.6520**

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	lb/day										lb/day					
Area	414.7382	0.0175	1.8049	1.3000e-004		6.5300e-003	6.5300e-003		6.5300e-003	6.5300e-003		3.7402	3.7402	0.0108		4.0110
Energy	4.7286	42.9871	36.1092	0.2579		3.2670	3.2670		3.2670	3.2670		51,584.5366	51,584.5366	0.9887	0.9457	51,891.0777
Mobile	1,522.2045	4,407.6077	14,893.4343	30.1026	2,216.2989	49.3644	2,265.6633	591.9877	46.7324	638.7201		3,017,127.3518	3,017,127.3518	152.1685		3,020,931.5634
Total	**1,941.6713**	**4,450.6123**	**14,931.3484**	**30.3606**	**2,216.2989**	**52.6380**	**2,268.9368**	**591.9877**	**50.0060**	**641.9937**		**3,068,715.6287**	**3,068,715.6287**	**153.1680**	**0.9457**	**3,072,826.6520**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	1,522.2045	4,407.6077	14,893.4343	30.1026	2,216.2989	49.3644	2,265.6633	591.9877	46.7324	638.7201		3,017,127.3518	3,017,127.3518	152.1685		3,020,931.5634
Unmitigated	1,522.2045	4,407.6077	14,893.4343	30.1026	2,216.2989	49.3644	2,265.6633	591.9877	46.7324	638.7201		3,017,127.3518	3,017,127.3518	152.1685		3,020,931.5634

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	44,145.57	16,094.07	4718.34	90,468,151	90,468,151
Regional Shopping Center	453,761.80	531,018.20	268218.92	768,460,006	768,460,006
Total	497,907.37	547,112.26	272,937.26	858,928,157	858,928,157

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.581066	0.044264	0.192756	0.115658	0.019411	0.004878	0.012376	0.018919	0.001909	0.001745	0.005487	0.000584	0.000947
Regional Shopping Center	0.581066	0.044264	0.192756	0.115658	0.019411	0.004878	0.012376	0.018919	0.001909	0.001745	0.005487	0.000584	0.000947

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.7286	42.9871	36.1092	0.2579		3.2670	3.2670		3.2670	3.2670		51,584.5366	51,584.5366	0.9887	0.9457	51,891.0777
NaturalGas Unmitigated	4.7286	42.9871	36.1092	0.2579		3.2670	3.2670		3.2670	3.2670		51,584.5366	51,584.5366	0.9887	0.9457	51,891.0777

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	lb/day										lb/day					
Industrial Park	353455	3.8118	34.6525	29.1081	0.2079		2.6336	2.6336		2.6336	2.6336		41,582.9366	41,582.9366	0.7970	0.7624	41,830.0432
Regional Shopping Center	85013.6	0.9168	8.3347	7.0011	0.0500		0.6334	0.6334		0.6334	0.6334		10,001.6000	10,001.6000	0.1917	0.1834	10,061.0345
Total		**4.7286**	**42.9871**	**36.1092**	**0.2579**		**3.2670**	**3.2670**		**3.2670**	**3.2670**		**51,584.5366**	**51,584.5366**	**0.9887**	**0.9457**	**51,891.0777**

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	lb/day										lb/day					
Industrial Park	353.455	3.8118	34.6525	29.1081	0.2079		2.6336	2.6336		2.6336	2.6336		41,582.9366	41,582.9366	0.7970	0.7624	41,830.0432
Regional Shopping Center	85.0136	0.9168	8.3347	7.0011	0.0500		0.6334	0.6334		0.6334	0.6334		10,001.6000	10,001.6000	0.1917	0.1834	10,061.0345
Total		**4.7286**	**42.9871**	**36.1092**	**0.2579**		**3.2670**	**3.2670**		**3.2670**	**3.2670**		**51,584.5366**	**51,584.5366**	**0.9887**	**0.9457**	**51,891.0777**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	414.7382	0.0175	1.8049	1.3000e-004		6.5300e-003	6.5300e-003		6.5300e-003	6.5300e-003		3.7402	3.7402	0.0108		4.0110
Unmitigated	414.7382	0.0175	1.8049	1.3000e-004		6.5300e-003	6.5300e-003		6.5300e-003	6.5300e-003		3.7402	3.7402	0.0108		4.0110

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	lb/day										lb/day					
Architectural Coating	48.8299					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	365.7299					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.1784	0.0175	1.8049	1.3000e-004		6.5300e-003	6.5300e-003		6.5300e-003	6.5300e-003		3.7402	3.7402	0.0108		4.0110
Total	**414.7382**	**0.0175**	**1.8049**	**1.3000e-004**		**6.5300e-003**	**6.5300e-003**		**6.5300e-003**	**6.5300e-003**		**3.7402**	**3.7402**	**0.0108**		**4.0110**

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	lb/day										lb/day					
Architectural Coating	48.8299					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	365.7299					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.1784	0.0175	1.8049	1.3000e-004		6.5300e-003	6.5300e-003		6.5300e-003	6.5300e-003		3.7402	3.7402	0.0108		4.0110
Total	**414.7382**	**0.0175**	**1.8049**	**1.3000e-004**		**6.5300e-003**	**6.5300e-003**		**6.5300e-003**	**6.5300e-003**		**3.7402**	**3.7402**	**0.0108**		**4.0110**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Solano - New Land Uses

Solano-San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	311.93	1000sqft	7.16	311,930.00	0
Apartments Low Rise	1,738.00	Dwelling Unit	108.63	1,738,000.00	4971
Apartments Mid Rise	1,738.00	Dwelling Unit	45.74	1,738,000.00	4971
Single Family Housing	17,538.00	Dwelling Unit	5,694.16	31,568,400.00	50159

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.94	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Solano - New Land Uses - Solano-San Francisco County, Annual

Project Characteristics - Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards.

Plan Bay Area 2040 Update - Solano - New Land Uses - Solano-San Francisco County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	431.22	310.48
tblEnergyUse	T24E	392.47	282.58
tblEnergyUse	T24E	6.40	6.08
tblEnergyUse	T24E	368.92	265.62
tblEnergyUse	T24NG	10,164.29	7,318.29
tblEnergyUse	T24NG	7,914.07	5,698.13
tblEnergyUse	T24NG	16.39	15.57
tblEnergyUse	T24NG	32,797.58	23,614.26
tblFireplaces	NumberGas	260.70	556.16
tblFireplaces	NumberGas	260.70	556.16
tblFireplaces	NumberGas	4,384.50	11,925.84
tblFireplaces	NumberWood	295.46	0.00
tblFireplaces	NumberWood	295.46	0.00
tblFireplaces	NumberWood	7,541.34	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.94
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2040

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Solano - New Land Uses - Solano-San Francisco County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	172.5310	3.9103	199.5742	0.1596		8.0960	8.0960		8.0960	8.0960	952.9734	1,882.5547	2,835.5281	4.7288	0.0298	2,962.6398
Energy	2.7389	23.4196	10.0649	0.1494		1.8923	1.8923		1.8923	1.8923	0.0000	50,213.0850	50,213.0850	1.9156	0.7296	50,478.3977
Mobile	23.6302	198.3493	252.2560	1.6023	164.8110	0.6206	165.4316	44.1154	0.5787	44.6940	0.0000	148,474.1672	148,474.1672	4.7075	0.0000	148,591.8540
Waste						0.0000	0.0000		0.0000	0.0000	4,659.8260	0.0000	4,659.8260	275.3878	0.0000	11,544.5218
Water						0.0000	0.0000		0.0000	0.0000	451.9558	1,466.0917	1,918.0475	46.5088	1.1108	3,411.7980
Total	**198.9000**	**225.6792**	**461.8951**	**1.9113**	**164.8110**	**10.6089**	**175.4199**	**44.1154**	**10.5670**	**54.6823**	**6,064.7552**	**202,035.8986**	**208,100.6537**	**333.2484**	**1.8703**	**216,989.2112**

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	172.5310	3.9103	199.5742	0.1596		8.0960	8.0960		8.0960	8.0960	952.9734	1,882.5547	2,835.5281	4.7288	0.0298	2,962.6398
Energy	2.7389	23.4196	10.0649	0.1494		1.8923	1.8923		1.8923	1.8923	0.0000	50,213.0850	50,213.0850	1.9156	0.7296	50,478.3977
Mobile	23.6302	198.3493	252.2560	1.6023	164.8110	0.6206	165.4316	44.1154	0.5787	44.6940	0.0000	148,474.1672	148,474.1672	4.7075	0.0000	148,591.8540
Waste						0.0000	0.0000		0.0000	0.0000	4,659.8260	0.0000	4,659.8260	275.3878	0.0000	11,544.5218
Water						0.0000	0.0000		0.0000	0.0000	451.9558	1,466.0917	1,918.0475	46.5088	1.1108	3,411.7980
Total	**198.9000**	**225.6792**	**461.8951**	**1.9113**	**164.8110**	**10.6089**	**175.4199**	**44.1154**	**10.5670**	**54.6823**	**6,064.7552**	**202,035.8986**	**208,100.6537**	**333.2484**	**1.8703**	**216,989.2112**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	23.6302	198.3493	252.2560	1.6023	164.8110	0.6206	165.4316	44.1154	0.5787	44.6940	0.0000	148,474.1672	148,474.1672	4.7075	0.0000	148,591.8540
Unmitigated	23.6302	198.3493	252.2560	1.6023	164.8110	0.6206	165.4316	44.1154	0.5787	44.6940	0.0000	148,474.1672	148,474.1672	4.7075	0.0000	148,591.8540

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	11,453.42	12,444.08	10549.66	26,481,575	26,481,575
Apartments Mid Rise	11,557.70	11,105.82	10184.68	26,091,634	26,091,634
General Office Building	3,440.59	767.35	327.53	6,246,750	6,246,750
Single Family Housing	166,961.76	173,801.58	151177.56	382,664,956	382,664,956
Total	193,413.47	198,118.83	172,239.43	441,484,915	441,484,915

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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.610976	0.032380	0.175368	0.095785	0.010224	0.004582	0.009330	0.049791	0.003299	0.001549	0.005509	0.000616	0.000591
Apartments Low Rise	0.610976	0.032380	0.175368	0.095785	0.010224	0.004582	0.009330	0.049791	0.003299	0.001549	0.005509	0.000616	0.000591
Apartments Mid Rise	0.610976	0.032380	0.175368	0.095785	0.010224	0.004582	0.009330	0.049791	0.003299	0.001549	0.005509	0.000616	0.000591
Single Family Housing	0.610976	0.032380	0.175368	0.095785	0.010224	0.004582	0.009330	0.049791	0.003299	0.001549	0.005509	0.000616	0.000591

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	23,107.2493	23,107.2493	1.3960	0.2327	23,211.4855
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	23,107.2493	23,107.2493	1.3960	0.2327	23,211.4855
NaturalGas Mitigated	2.7389	23.4196	10.0649	0.1494		1.8923	1.8923		1.8923	1.8923	0.0000	27,105.8357	27,105.8357	0.5195	0.4969	27,266.9122
NaturalGas Unmitigated	2.7389	23.4196	10.0649	0.1494		1.8923	1.8923		1.8923	1.8923	0.0000	27,105.8357	27,105.8357	0.5195	0.4969	27,266.9122

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					
Apartments Low Rise	1.82026e+007	0.0982	0.8388	0.3569	5.3500e-003		0.0678	0.0678		0.0678	0.0678	0.0000	971.3588	971.3588	0.0186	0.0178	977.1311
Apartments Mid Rise	1.53867e+007	0.0830	0.7090	0.3017	4.5300e-003		0.0573	0.0573		0.0573	0.0573	0.0000	821.0951	821.0951	0.0157	0.0151	825.9744
General Office Building	4.87562e+006	0.0263	0.2390	0.2008	1.4300e-003		0.0182	0.0182		0.0182	0.0182	0.0000	260.1818	260.1818	4.9900e-003	4.7700e-003	261.7279
Single Family Housing	4.69479e+008	2.5315	21.6329	9.2055	0.1381		1.7490	1.7490		1.7490	1.7490	0.0000	25,053.2001	25,053.2001	0.4802	0.4593	25,202.0788
Total		**2.7389**	**23.4196**	**10.0649**	**0.1494**		**1.8923**	**1.8923**		**1.8923**	**1.8923**	**0.0000**	**27,105.8357**	**27,105.8357**	**0.5195**	**0.4969**	**27,266.9121**

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					
Apartments Low Rise	1.82026e+007	0.0982	0.8388	0.3569	5.3500e-003		0.0678	0.0678		0.0678	0.0678	0.0000	971.3588	971.3588	0.0186	0.0178	977.1311
Apartments Mid Rise	1.53867e+007	0.0830	0.7090	0.3017	4.5300e-003		0.0573	0.0573		0.0573	0.0573	0.0000	821.0951	821.0951	0.0157	0.0151	825.9744
General Office Building	4.87562e+006	0.0263	0.2390	0.2008	1.4300e-003		0.0182	0.0182		0.0182	0.0182	0.0000	260.1818	260.1818	4.9900e-003	4.7700e-003	261.7279
Single Family Housing	4.69479e+008	2.5315	21.6329	9.2055	0.1381		1.7490	1.7490		1.7490	1.7490	0.0000	25,053.2001	25,053.2001	0.4802	0.4593	25,202.0788
Total		**2.7389**	**23.4196**	**10.0649**	**0.1494**		**1.8923**	**1.8923**		**1.8923**	**1.8923**	**0.0000**	**27,105.8357**	**27,105.8357**	**0.5195**	**0.4969**	**27,266.9121**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	7.88913e+006	1,066.1627	0.0644	0.0107	1,070.9722
Apartments Mid Rise	7.47527e+006	1,010.2333	0.0610	0.0102	1,014.7905
General Office Building	5.58355e+006	754.5790	0.0456	7.6000e-003	757.9829
Single Family Housing	1.50035e+008	20,276.2742	1.2250	0.2042	20,367.7400
Total		**23,107.2493**	**1.3960**	**0.2327**	**23,211.4855**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	7.88913e+006	1,066.1627	0.0644	0.0107	1,070.9722
Apartments Mid Rise	7.47527e+006	1,010.2333	0.0610	0.0102	1,014.7905
General Office Building	5.58355e+006	754.5790	0.0456	7.6000e-003	757.9829
Single Family Housing	1.50035e+008	20,276.2742	1.2250	0.2042	20,367.7400
Total		**23,107.2493**	**1.3960**	**0.2327**	**23,211.4855**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	172.5310	3.9103	199.5742	0.1596		8.0960	8.0960		8.0960	8.0960	952.9734	1,882.5547	2,835.5281	4.7288	0.0298	2,962.6398
Unmitigated	172.5310	3.9103	199.5742	0.1596		8.0960	8.0960		8.0960	8.0960	952.9734	1,882.5547	2,835.5281	4.7288	0.0298	2,962.6398

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	24.8318					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	138.0842					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.9685	2.1172	44.2255	0.1513		7.2307	7.2307		7.2307	7.2307	952.9734	1,627.6747	2,580.6480	4.4862	0.0298	2,701.6944
Landscaping	4.6465	1.7931	155.3488	8.2400e-003		0.8653	0.8653		0.8653	0.8653	0.0000	254.8801	254.8801	0.2426	0.0000	260.9454
Total	**172.5310**	**3.9103**	**199.5742**	**0.1596**		**8.0960**	**8.0960**		**8.0960**	**8.0960**	**952.9734**	**1,882.5547**	**2,835.5281**	**4.7288**	**0.0298**	**2,962.6398**

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	24.8318					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	138.0842					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.9685	2.1172	44.2255	0.1513		7.2307	7.2307		7.2307	7.2307	952.9734	1,627.6747	2,580.6480	4.4862	0.0298	2,701.6944
Landscaping	4.6465	1.7931	155.3488	8.2400e-003		0.8653	0.8653		0.8653	0.8653	0.0000	254.8801	254.8801	0.2426	0.0000	260.9454
Total	**172.5310**	**3.9103**	**199.5742**	**0.1596**		**8.0960**	**8.0960**		**8.0960**	**8.0960**	**952.9734**	**1,882.5547**	**2,835.5281**	**4.7288**	**0.0298**	**2,962.6398**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1,918.0475	46.5088	1.1108	3,411.7980
Unmitigated	1,918.0475	46.5088	1.1108	3,411.7980

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	113.238 / 71.389	152.4985	3.6969	0.0883	271.2340
Apartments Mid Rise	113.238 / 71.389	152.4985	3.6969	0.0883	271.2340
General Office Building	55.4405 / 33.9797	74.2026	1.8100	0.0432	132.3327
Single Family Housing	1142.67 / 720.38	1,538.8480	37.3050	0.8910	2,736.9974
Total		**1,918.0475**	**46.5088**	**1.1109**	**3,411.7981**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	113.238 / 71.389	152.4985	3.6969	0.0883	271.2340
Apartments Mid Rise	113.238 / 71.389	152.4985	3.6969	0.0883	271.2340
General Office Building	55.4405 / 33.9797	74.2026	1.8100	0.0432	132.3327
Single Family Housing	1142.67 / 720.38	1,538.8480	37.3050	0.8910	2,736.9974
Total		**1,918.0475**	**46.5088**	**1.1109**	**3,411.7981**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4,659.8260	275.3878	0.0000	11,544.5218
Unmitigated	4,659.8260	275.3878	0.0000	11,544.5218

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	799.48	162.2872	9.5909	0.0000	402.0597
Apartments Mid Rise	799.48	162.2872	9.5909	0.0000	402.0597
General Office Building	290.09	58.8857	3.4800	0.0000	145.8867
Single Family Housing	21066.8	4,276.3660	252.7260	0.0000	10,594.5157
Total		**4,659.8260**	**275.3878**	**0.0000**	**11,544.5218**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	799.48	162.2872	9.5909	0.0000	402.0597
Apartments Mid Rise	799.48	162.2872	9.5909	0.0000	402.0597
General Office Building	290.09	58.8857	3.4800	0.0000	145.8867
Single Family Housing	21066.8	4,276.3660	252.7260	0.0000	10,594.5157
Total		**4,659.8260**	**275.3878**	**0.0000**	**11,544.5218**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Solano - New Land Uses

Solano-San Francisco County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	311.93	1000sqft	7.16	311,930.00	0
Apartments Low Rise	1,738.00	Dwelling Unit	108.63	1,738,000.00	4971
Apartments Mid Rise	1,738.00	Dwelling Unit	45.74	1,738,000.00	4971
Single Family Housing	17,538.00	Dwelling Unit	5,694.16	31,568,400.00	50159

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.94	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Solano - New Land Uses - Solano-San Francisco County, Summer

Project Characteristics - Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards.

Plan Bay Area 2040 Update - Solano - New Land Uses - Solano-San Francisco County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	431.22	310.48
tblEnergyUse	T24E	392.47	282.58
tblEnergyUse	T24E	6.40	6.08
tblEnergyUse	T24E	368.92	265.62
tblEnergyUse	T24NG	10,164.29	7,318.29
tblEnergyUse	T24NG	7,914.07	5,698.13
tblEnergyUse	T24NG	16.39	15.57
tblEnergyUse	T24NG	32,797.58	23,614.26
tblFireplaces	NumberGas	260.70	556.16
tblFireplaces	NumberGas	260.70	556.16
tblFireplaces	NumberGas	4,384.50	11,925.84
tblFireplaces	NumberWood	295.46	0.00
tblFireplaces	NumberWood	295.46	0.00
tblFireplaces	NumberWood	7,541.34	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.94
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2040

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5257	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5257**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5257	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5257**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	1,442.8222	341.7283	6,092.4693	15.5977		724.7948	724.7948		724.7948	724.7948	102,549.4682	325,240.9934	427,790.4616	488.5434	5.9055	441,763.8908
Energy	15.0078	128.3266	55.1499	0.8186		10.3690	10.3690		10.3690	10.3690		163,720.9277	163,720.9277	3.1380	3.0016	164,693.8393
Mobile	158.5735	1,138.2376	1,539.9159	9.7973	986.3281	3.5903	989.9184	263.2930	3.3477	266.6407		1,000,069.6672	1,000,069.6672	29.5354		1,000,808.0521
Total	**1,616.4034**	**1,608.2925**	**7,687.5351**	**26.2137**	**986.3281**	**738.7540**	**1,725.0821**	**263.2930**	**738.5114**	**1,001.8044**	**102,549.4682**	**1,489,031.5883**	**1,591,581.0565**	**521.2168**	**8.9071**	**1,607,265.7822**

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	lb/day										lb/day					
Area	1,442.8222	341.7283	6,092.4693	15.5977		724.7948	724.7948		724.7948	724.7948	102,549.4682	325,240.9934	427,790.4616	488.5434	5.9055	441,763.8908
Energy	15.0078	128.3266	55.1499	0.8186		10.3690	10.3690		10.3690	10.3690		163,720.9277	163,720.9277	3.1380	3.0016	164,693.8393
Mobile	158.5735	1,138.2376	1,539.9159	9.7973	986.3281	3.5903	989.9184	263.2930	3.3477	266.6407		1,000,069.6672	1,000,069.6672	29.5354		1,000,808.0521
Total	**1,616.4034**	**1,608.2925**	**7,687.5351**	**26.2137**	**986.3281**	**738.7540**	**1,725.0821**	**263.2930**	**738.5114**	**1,001.8044**	**102,549.4682**	**1,489,031.5883**	**1,591,581.0565**	**521.2168**	**8.9071**	**1,607,265.7822**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	158.5735	1,138.2376	1,539.9159	9.7973	986.3281	3.5903	989.9184	263.2930	3.3477	266.6407		1,000,069.6672	1,000,069.6672	29.5354		1,000,808.0521
Unmitigated	158.5735	1,138.2376	1,539.9159	9.7973	986.3281	3.5903	989.9184	263.2930	3.3477	266.6407		1,000,069.6672	1,000,069.6672	29.5354		1,000,808.0521

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	11,453.42	12,444.08	10549.66	26,481,575	26,481,575
Apartments Mid Rise	11,557.70	11,105.82	10184.68	26,091,634	26,091,634
General Office Building	3,440.59	767.35	327.53	6,246,750	6,246,750
Single Family Housing	166,961.76	173,801.58	151177.56	382,664,956	382,664,956
Total	193,413.47	198,118.83	172,239.43	441,484,915	441,484,915

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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.610976	0.032380	0.175368	0.095785	0.010224	0.004582	0.009330	0.049791	0.003299	0.001549	0.005509	0.000616	0.000591
Apartments Low Rise	0.610976	0.032380	0.175368	0.095785	0.010224	0.004582	0.009330	0.049791	0.003299	0.001549	0.005509	0.000616	0.000591
Apartments Mid Rise	0.610976	0.032380	0.175368	0.095785	0.010224	0.004582	0.009330	0.049791	0.003299	0.001549	0.005509	0.000616	0.000591
Single Family Housing	0.610976	0.032380	0.175368	0.095785	0.010224	0.004582	0.009330	0.049791	0.003299	0.001549	0.005509	0.000616	0.000591

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	15.0078	128.3266	55.1499	0.8186		10.3690	10.3690		10.3690	10.3690		163,720.9277	163,720.9277	3.1380	3.0016	164,693.8393
NaturalGas Unmitigated	15.0078	128.3266	55.1499	0.8186		10.3690	10.3690		10.3690	10.3690		163,720.9277	163,720.9277	3.1380	3.0016	164,693.8393

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	lb/day										lb/day					
Apartments Low Rise	49870.1	0.5378	4.5959	1.9557	0.0293		0.3716	0.3716		0.3716	0.3716		5,867.0672	5,867.0672	0.1125	0.1076	5,901.9322
Apartments Mid Rise	42155.5	0.4546	3.8849	1.6532	0.0248		0.3141	0.3141		0.3141	0.3141		4,959.4652	4,959.4652	0.0951	0.0909	4,988.9368
General Office Building	13357.9	0.1441	1.3096	1.1001	7.8600e-003		0.0995	0.0995		0.0995	0.0995		1,571.5139	1,571.5139	0.0301	0.0288	1,580.8526
Single Family Housing	1.28624e+006	13.8713	118.5363	50.4410	0.7566		9.5838	9.5838		9.5838	9.5838		151,322.8815	151,322.8815	2.9004	2.7743	152,222.1177
Total		**15.0078**	**128.3266**	**55.1499**	**0.8186**		**10.3690**	**10.3690**		**10.3690**	**10.3690**		**163,720.9277**	**163,720.9277**	**3.1380**	**3.0015**	**164,693.8393**

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	lb/day										lb/day					
Apartments Low Rise	49.8701	0.5378	4.5959	1.9557	0.0293		0.3716	0.3716		0.3716	0.3716		5,867.0672	5,867.0672	0.1125	0.1076	5,901.9322
Apartments Mid Rise	42.1555	0.4546	3.8849	1.6532	0.0248		0.3141	0.3141		0.3141	0.3141		4,959.4652	4,959.4652	0.0951	0.0909	4,988.9368
General Office Building	13.3579	0.1441	1.3096	1.1001	7.8600e-003		0.0995	0.0995		0.0995	0.0995		1,571.5139	1,571.5139	0.0301	0.0288	1,580.8526
Single Family Housing	1286.24	13.8713	118.5363	50.4410	0.7566		9.5838	9.5838		9.5838	9.5838		151,322.8815	151,322.8815	2.9004	2.7743	152,222.1177
Total		**15.0078**	**128.3266**	**55.1499**	**0.8186**		**10.3690**	**10.3690**		**10.3690**	**10.3690**		**163,720.9277**	**163,720.9277**	**3.1380**	**3.0015**	**164,693.8393**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1,442.8222	341.7283	6,092.4693	15.5977		724.7948	724.7948		724.7948	724.7948	102,549.4682	325,240.9934	427,790.4616	488.5434	5.9055	441,763.8908
Unmitigated	1,442.8222	341.7283	6,092.4693	15.5977		724.7948	724.7948		724.7948	724.7948	102,549.4682	325,240.9934	427,790.4616	488.5434	5.9055	441,763.8908

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	lb/day										lb/day					
Architectural Coating	136.0648					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	756.6255					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	498.5038	321.8047	4,366.3720	15.5062		715.1805	715.1805		715.1805	715.1805	102,549.4682	322,119.2471	424,668.7153	485.5719	5.9055	438,567.8569
Landscaping	51.6281	19.9236	1,726.0973	0.0916		9.6143	9.6143		9.6143	9.6143		3,121.7463	3,121.7463	2.9715		3,196.0339
Total	**1,442.8222**	**341.7283**	**6,092.4693**	**15.5977**		**724.7948**	**724.7948**		**724.7948**	**724.7948**	**102,549.4682**	**325,240.9934**	**427,790.4616**	**488.5434**	**5.9055**	**441,763.8908**

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	lb/day										lb/day					
Architectural Coating	136.0648					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	756.6255					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	498.5038	321.8047	4,366.3720	15.5062		715.1805	715.1805		715.1805	715.1805	102,549.4682	322,119.2471	424,668.7153	485.5719	5.9055	438,567.8569
Landscaping	51.6281	19.9236	1,726.0973	0.0916		9.6143	9.6143		9.6143	9.6143		3,121.7463	3,121.7463	2.9715		3,196.0339
Total	**1,442.8222**	**341.7283**	**6,092.4693**	**15.5977**		**724.7948**	**724.7948**		**724.7948**	**724.7948**	**102,549.4682**	**325,240.9934**	**427,790.4616**	**488.5434**	**5.9055**	**441,763.8908**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Solano - Net Reduction in Land Uses

Solano-San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	73.45	1000sqft	1.69	73,450.00	0
Regional Shopping Center	640.43	1000sqft	14.70	640,430.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Solano - Net Reduction in Land Uses - Solano-San Francisco County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	3.1610	7.0000e-005	6.7900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0128	0.0128	4.0000e-005	0.0000	0.0137
Energy	0.0180	0.1635	0.1374	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	2,024.1118	2,024.1118	0.1180	0.0245	2,034.3577
Mobile	13.2246	58.7941	131.1642	0.2751	17.7347	0.5154	18.2501	4.7597	0.4890	5.2486	0.0000	25,150.0883	25,150.0883	1.7056	0.0000	25,192.7277
Waste						0.0000	0.0000		0.0000	0.0000	154.9897	0.0000	154.9897	9.1596	0.0000	383.9804
Water						0.0000	0.0000		0.0000	0.0000	20.4386	88.8615	109.3001	2.1048	0.0506	176.9946
Total	**16.4036**	**58.9577**	**131.3084**	**0.2761**	**17.7347**	**0.5279**	**18.2625**	**4.7597**	**0.5014**	**5.2611**	**175.4283**	**27,263.0743**	**27,438.5027**	**13.0880**	**0.0751**	**27,788.0741**

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	3.1610	7.0000e-005	6.7900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0128	0.0128	4.0000e-005	0.0000	0.0137
Energy	0.0180	0.1635	0.1374	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	2,024.1118	2,024.1118	0.1180	0.0245	2,034.3577
Mobile	13.2246	58.7941	131.1642	0.2751	17.7347	0.5154	18.2501	4.7597	0.4890	5.2486	0.0000	25,150.0883	25,150.0883	1.7056	0.0000	25,192.7277
Waste						0.0000	0.0000		0.0000	0.0000	154.9897	0.0000	154.9897	9.1596	0.0000	383.9804
Water						0.0000	0.0000		0.0000	0.0000	20.4386	88.8615	109.3001	2.1048	0.0506	176.9946
Total	**16.4036**	**58.9577**	**131.3084**	**0.2761**	**17.7347**	**0.5279**	**18.2625**	**4.7597**	**0.5014**	**5.2611**	**175.4283**	**27,263.0743**	**27,438.5027**	**13.0880**	**0.0751**	**27,788.0741**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Excavators	3	8.00	158	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	13.2246	58.7941	131.1642	0.2751	17.7347	0.5154	18.2501	4.7597	0.4890	5.2486	0.0000	25,150.0883	25,150.0883	1.7056	0.0000	25,192.7277
Unmitigated	13.2246	58.7941	131.1642	0.2751	17.7347	0.5154	18.2501	4.7597	0.4890	5.2486	0.0000	25,150.0883	25,150.0883	1.7056	0.0000	25,192.7277

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	501.66	182.89	53.62	1,028,066	1,028,066
Regional Shopping Center	27,346.36	32,002.29	16164.45	46,311,930	46,311,930
Total	27,848.02	32,185.18	16,218.07	47,339,997	47,339,997

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.542018	0.045082	0.176705	0.136457	0.028531	0.006368	0.010341	0.038449	0.003099	0.002866	0.007968	0.000581	0.001536
Regional Shopping Center	0.542018	0.045082	0.176705	0.136457	0.028531	0.006368	0.010341	0.038449	0.003099	0.002866	0.007968	0.000581	0.001536

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,846.0839	1,846.0839	0.1146	0.0212	1,855.2719
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,846.0839	1,846.0839	0.1146	0.0212	1,855.2719
NaturalGas Mitigated	0.0180	0.1635	0.1374	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	178.0279	178.0279	3.4100e-003	3.2600e-003	179.0859
NaturalGas Unmitigated	0.0180	0.1635	0.1374	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	178.0279	178.0279	3.4100e-003	3.2600e-003	179.0859

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					
Industrial Park	1.46606e+006	7.9100e-003	0.0719	0.0604	4.3000e-004		5.4600e-003	5.4600e-003		5.4600e-003	5.4600e-003	0.0000	78.2347	78.2347	1.5000e-003	1.4300e-003	78.6996
Regional Shopping Center	1.87006e+006	0.0101	0.0917	0.0770	5.5000e-004		6.9700e-003	6.9700e-003		6.9700e-003	6.9700e-003	0.0000	99.7933	99.7933	1.9100e-003	1.8300e-003	100.3863
Total		**0.0180**	**0.1635**	**0.1374**	**9.8000e-004**		**0.0124**	**0.0124**		**0.0124**	**0.0124**	**0.0000**	**178.0279**	**178.0279**	**3.4100e-003**	**3.2600e-003**	**179.0859**

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					
Industrial Park	1.46606e+006	7.9100e-003	0.0719	0.0604	4.3000e-004		5.4600e-003	5.4600e-003		5.4600e-003	5.4600e-003	0.0000	78.2347	78.2347	1.5000e-003	1.4300e-003	78.6996
Regional Shopping Center	1.87006e+006	0.0101	0.0917	0.0770	5.5000e-004		6.9700e-003	6.9700e-003		6.9700e-003	6.9700e-003	0.0000	99.7933	99.7933	1.9100e-003	1.8300e-003	100.3863
Total		**0.0180**	**0.1635**	**0.1374**	**9.8000e-004**		**0.0124**	**0.0124**		**0.0124**	**0.0124**	**0.0000**	**178.0279**	**178.0279**	**3.4100e-003**	**3.2600e-003**	**179.0859**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	1.51087e+006	298.1131	0.0185	3.4300e-003	299.5968
Regional Shopping Center	7.84527e+006	1,547.9708	0.0961	0.0178	1,555.6750
Total		**1,846.0839**	**0.1146**	**0.0212**	**1,855.2719**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	1.51087e+006	298.1131	0.0185	3.4300e-003	299.5968
Regional Shopping Center	7.84527e+006	1,547.9708	0.0961	0.0178	1,555.6750
Total		**1,846.0839**	**0.1146**	**0.0212**	**1,855.2719**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.1610	7.0000e-005	6.7900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0128	0.0128	4.0000e-005	0.0000	0.0137
Unmitigated	3.1610	7.0000e-005	6.7900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0128	0.0128	4.0000e-005	0.0000	0.0137

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	0.3722					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.7881					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.7000e-004	7.0000e-005	6.7900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0128	0.0128	4.0000e-005	0.0000	0.0137
Total	**3.1610**	**7.0000e-005**	**6.7900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0128**	**0.0128**	**4.0000e-005**	**0.0000**	**0.0137**

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	0.3722					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.7881					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.7000e-004	7.0000e-005	6.7900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0128	0.0128	4.0000e-005	0.0000	0.0137
Total	**3.1610**	**7.0000e-005**	**6.7900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0128**	**0.0128**	**4.0000e-005**	**0.0000**	**0.0137**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	109.3001	2.1048	0.0506	176.9946
Unmitigated	109.3001	2.1048	0.0506	176.9946

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	16.9853 / 0	23.5232	0.5546	0.0133	41.3445
Regional Shopping Center	47.4383 / 29.0751	85.7769	1.5502	0.0373	135.6501
Total		**109.3001**	**2.1048**	**0.0506**	**176.9946**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	16.9853 / 0	23.5232	0.5546	0.0133	41.3445
Regional Shopping Center	47.4383 / 29.0751	85.7769	1.5502	0.0373	135.6501
Total		**109.3001**	**2.1048**	**0.0506**	**176.9946**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	154.9897	9.1596	0.0000	383.9804
Unmitigated	154.9897	9.1596	0.0000	383.9804

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	91.08	18.4884	1.0926	0.0000	45.8043
Regional Shopping Center	672.45	136.5013	8.0670	0.0000	338.1761
Total		**154.9897**	**9.1596**	**0.0000**	**383.9804**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	91.08	18.4884	1.0926	0.0000	45.8043
Regional Shopping Center	672.45	136.5013	8.0670	0.0000	338.1761
Total		**154.9897**	**9.1596**	**0.0000**	**383.9804**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Solano - Net Reduction in Land Uses

Solano-San Francisco County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	73.45	1000sqft	1.69	73,450.00	0
Regional Shopping Center	640.43	1000sqft	14.70	640,430.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5257	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5257**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5257	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5257**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	17.3242	7.3000e-004	0.0754	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1562	0.1562	4.5000e-004		0.1675
Energy	0.0986	0.8961	0.7527	5.3800e-003		0.0681	0.0681		0.0681	0.0681		1,075.2998	1,075.2998	0.0206	0.0197	1,081.6898
Mobile	101.6336	378.3475	888.3375	1.9472	122.2021	3.4111	125.6131	32.7052	3.2356	35.9409		196,201.5946	196,201.5946	12.4465		196,512.7576
Total	**119.0564**	**379.2443**	**889.1656**	**1.9526**	**122.2021**	**3.4794**	**125.6815**	**32.7052**	**3.3040**	**36.0092**		**197,277.0506**	**197,277.0506**	**12.4676**	**0.0197**	**197,594.6149**

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	lb/day										lb/day					
Area	17.3242	7.3000e-004	0.0754	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1562	0.1562	4.5000e-004		0.1675
Energy	0.0986	0.8961	0.7527	5.3800e-003		0.0681	0.0681		0.0681	0.0681		1,075.2998	1,075.2998	0.0206	0.0197	1,081.6898
Mobile	101.6336	378.3475	888.3375	1.9472	122.2021	3.4111	125.6131	32.7052	3.2356	35.9409		196,201.5946	196,201.5946	12.4465		196,512.7576
Total	**119.0564**	**379.2443**	**889.1656**	**1.9526**	**122.2021**	**3.4794**	**125.6815**	**32.7052**	**3.3040**	**36.0092**		**197,277.0506**	**197,277.0506**	**12.4676**	**0.0197**	**197,594.6149**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Excavators	3	8.00	158	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	101.6336	378.3475	888.3375	1.9472	122.2021	3.4111	125.6131	32.7052	3.2356	35.9409		196,201.5946	196,201.5946	12.4465		196,512.7576
Unmitigated	101.6336	378.3475	888.3375	1.9472	122.2021	3.4111	125.6131	32.7052	3.2356	35.9409		196,201.5946	196,201.5946	12.4465		196,512.7576

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	501.66	182.89	53.62	1,028,066	1,028,066
Regional Shopping Center	27,346.36	32,002.29	16164.45	46,311,930	46,311,930
Total	27,848.02	32,185.18	16,218.07	47,339,997	47,339,997

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.542018	0.045082	0.176705	0.136457	0.028531	0.006368	0.010341	0.038449	0.003099	0.002866	0.007968	0.000581	0.001536
Regional Shopping Center	0.542018	0.045082	0.176705	0.136457	0.028531	0.006368	0.010341	0.038449	0.003099	0.002866	0.007968	0.000581	0.001536

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0986	0.8961	0.7527	5.3800e-003		0.0681	0.0681		0.0681	0.0681		1,075.2998	1,075.2998	0.0206	0.0197	1,081.6898
NaturalGas Unmitigated	0.0986	0.8961	0.7527	5.3800e-003		0.0681	0.0681		0.0681	0.0681		1,075.2998	1,075.2998	0.0206	0.0197	1,081.6898

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	lb/day										lb/day					
Industrial Park	4016.61	0.0433	0.3938	0.3308	2.3600e-003		0.0299	0.0299		0.0299	0.0299		472.5421	472.5421	9.0600e-003	8.6600e-003	475.3502
Regional Shopping Center	5123.44	0.0553	0.5023	0.4219	3.0100e-003		0.0382	0.0382		0.0382	0.0382		602.7577	602.7577	0.0116	0.0111	606.3395
Total		**0.0986**	**0.8961**	**0.7527**	**5.3700e-003**		**0.0681**	**0.0681**		**0.0681**	**0.0681**		**1,075.2998**	**1,075.2998**	**0.0206**	**0.0197**	**1,081.6898**

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	lb/day										lb/day					
Industrial Park	4.01661	0.0433	0.3938	0.3308	2.3600e-003		0.0299	0.0299		0.0299	0.0299		472.5421	472.5421	9.0600e-003	8.6600e-003	475.3502
Regional Shopping Center	5.12344	0.0553	0.5023	0.4219	3.0100e-003		0.0382	0.0382		0.0382	0.0382		602.7577	602.7577	0.0116	0.0111	606.3395
Total		**0.0986**	**0.8961**	**0.7527**	**5.3700e-003**		**0.0681**	**0.0681**		**0.0681**	**0.0681**		**1,075.2998**	**1,075.2998**	**0.0206**	**0.0197**	**1,081.6898**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	17.3242	7.3000e-004	0.0754	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1562	0.1562	4.5000e-004		0.1675
Unmitigated	17.3242	7.3000e-004	0.0754	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1562	0.1562	4.5000e-004		0.1675

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	lb/day										lb/day					
Architectural Coating	2.0397					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	15.2770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.4500e-003	7.3000e-004	0.0754	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1562	0.1562	4.5000e-004		0.1675
Total	**17.3242**	**7.3000e-004**	**0.0754**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**		**0.1562**	**0.1562**	**4.5000e-004**		**0.1675**

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	lb/day										lb/day					
Architectural Coating	2.0397					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	15.2770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.4500e-003	7.3000e-004	0.0754	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1562	0.1562	4.5000e-004		0.1675
Total	**17.3242**	**7.3000e-004**	**0.0754**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**		**0.1562**	**0.1562**	**4.5000e-004**		**0.1675**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Sonoma - New Land Uses

Sonoma-San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	837.80	1000sqft	19.23	837,800.00	0
Apartments Low Rise	6,860.00	Dwelling Unit	428.75	6,860,000.00	19620
Apartments Mid Rise	6,860.00	Dwelling Unit	180.53	6,860,000.00	19620
Single Family Housing	12,407.00	Dwelling Unit	4,028.25	22,332,600.00	35484

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	75
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.94	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Sonoma - New Land Uses - Sonoma-San Francisco County, Annual

Project Characteristics - Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards.

Plan Bay Area 2040 Update - Sonoma - New Land Uses - Sonoma-San Francisco County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	431.22	310.48
tblEnergyUse	T24E	392.47	282.58
tblEnergyUse	T24E	6.40	6.08
tblEnergyUse	T24E	368.92	265.62
tblEnergyUse	T24NG	10,164.29	7,318.29
tblEnergyUse	T24NG	7,914.07	5,698.13
tblEnergyUse	T24NG	16.39	15.57
tblEnergyUse	T24NG	32,797.58	23,614.26
tblFireplaces	NumberGas	1,029.00	2,195.20
tblFireplaces	NumberGas	1,029.00	2,195.20
tblFireplaces	NumberGas	3,101.75	8,436.76
tblFireplaces	NumberWood	1,166.20	0.00
tblFireplaces	NumberWood	1,166.20	0.00
tblFireplaces	NumberWood	5,335.01	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.94
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2040

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Sonoma - New Land Uses - Sonoma-San Francisco County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	180.1144	4.2468	232.6439	0.1460		7.5341	7.5341		7.5341	7.5341	849.8010	1,918.2376	2,768.0386	4.3050	0.0294	2,884.4123
Energy	2.5764	22.0548	9.6511	0.1405		1.7800	1.7800		1.7800	1.7800	0.0000	50,063.7566	50,063.7566	1.9729	0.7148	50,326.0929
Mobile	23.8151	204.9227	285.6039	1.6546	183.3924	0.7157	184.1081	49.2984	0.6673	49.9657	0.0000	153,890.8211	153,890.8211	4.8202	0.0000	154,011.3250
Waste						0.0000	0.0000		0.0000	0.0000	4,464.5081	0.0000	4,464.5081	263.8449	0.0000	11,060.6299
Water						0.0000	0.0000		0.0000	0.0000	587.2955	1,904.4803	2,491.7758	60.4359	1.4435	4,432.8321
Total	**206.5059**	**231.2244**	**527.8989**	**1.9411**	**183.3924**	**10.0299**	**193.4222**	**49.2984**	**9.9815**	**59.2799**	**5,901.6046**	**207,777.2956**	**213,678.9002**	**335.3788**	**2.1877**	**222,715.2922**

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	180.1144	4.2468	232.6439	0.1460		7.5341	7.5341		7.5341	7.5341	849.8010	1,918.2376	2,768.0386	4.3050	0.0294	2,884.4123
Energy	2.5764	22.0548	9.6511	0.1405		1.7800	1.7800		1.7800	1.7800	0.0000	50,063.7566	50,063.7566	1.9729	0.7148	50,326.0929
Mobile	23.8151	204.9227	285.6039	1.6546	183.3924	0.7157	184.1081	49.2984	0.6673	49.9657	0.0000	153,890.8211	153,890.8211	4.8202	0.0000	154,011.3250
Waste						0.0000	0.0000		0.0000	0.0000	4,464.5081	0.0000	4,464.5081	263.8449	0.0000	11,060.6299
Water						0.0000	0.0000		0.0000	0.0000	587.2955	1,904.4803	2,491.7758	60.4359	1.4435	4,432.8321
Total	**206.5059**	**231.2244**	**527.8989**	**1.9411**	**183.3924**	**10.0299**	**193.4222**	**49.2984**	**9.9815**	**59.2799**	**5,901.6046**	**207,777.2956**	**213,678.9002**	**335.3788**	**2.1877**	**222,715.2922**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	23.8151	204.9227	285.6039	1.6546	183.3924	0.7157	184.1081	49.2984	0.6673	49.9657	0.0000	153,890.8211	153,890.8211	4.8202	0.0000	154,011.3250
Unmitigated	23.8151	204.9227	285.6039	1.6546	183.3924	0.7157	184.1081	49.2984	0.6673	49.9657	0.0000	153,890.8211	153,890.8211	4.8202	0.0000	154,011.3250

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	45,207.40	49,117.60	41640.20	104,524,512	104,524,512
Apartments Mid Rise	45,619.00	43,835.40	40199.60	102,985,390	102,985,390
General Office Building	9,240.93	2,060.99	879.69	16,777,891	16,777,891
Single Family Housing	118,114.64	122,953.37	106948.34	270,710,692	270,710,692
Total	218,181.97	217,967.36	189,667.83	494,998,484	494,998,484

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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.633644	0.029850	0.160723	0.084957	0.010113	0.004172	0.033873	0.032642	0.003322	0.001200	0.004059	0.000902	0.000543
Apartments Low Rise	0.633644	0.029850	0.160723	0.084957	0.010113	0.004172	0.033873	0.032642	0.003322	0.001200	0.004059	0.000902	0.000543
Apartments Mid Rise	0.633644	0.029850	0.160723	0.084957	0.010113	0.004172	0.033873	0.032642	0.003322	0.001200	0.004059	0.000902	0.000543
Single Family Housing	0.633644	0.029850	0.160723	0.084957	0.010113	0.004172	0.033873	0.032642	0.003322	0.001200	0.004059	0.000902	0.000543

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	24,566.5149	24,566.5149	1.4842	0.2474	24,677.3339
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	24,566.5149	24,566.5149	1.4842	0.2474	24,677.3339
NaturalGas Mitigated	2.5764	22.0548	9.6511	0.1405		1.7800	1.7800		1.7800	1.7800	0.0000	25,497.2417	25,497.2417	0.4887	0.4675	25,648.7590
NaturalGas Unmitigated	2.5764	22.0548	9.6511	0.1405		1.7800	1.7800		1.7800	1.7800	0.0000	25,497.2417	25,497.2417	0.4887	0.4675	25,648.7590

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					
Apartments Low Rise	7.18468e+007	0.3874	3.3106	1.4088	0.0211		0.2677	0.2677		0.2677	0.2677	0.0000	3,834.0172	3,834.0172	0.0735	0.0703	3,856.8009
Apartments Mid Rise	6.07325e+007	0.3275	2.7985	1.1908	0.0179		0.2263	0.2263		0.2263	0.2263	0.0000	3,240.9160	3,240.9160	0.0621	0.0594	3,260.1751
General Office Building	1.30948e+007	0.0706	0.6419	0.5392	3.8500e-003		0.0488	0.0488		0.0488	0.0488	0.0000	698.7891	698.7891	0.0134	0.0128	702.9417
Single Family Housing	3.32126e+008	1.7909	15.3039	6.5123	0.0977		1.2373	1.2373		1.2373	1.2373	0.0000	17,723.5193	17,723.5193	0.3397	0.3249	17,828.8413
Total		**2.5764**	**22.0548**	**9.6511**	**0.1405**		**1.7800**	**1.7800**		**1.7800**	**1.7800**	**0.0000**	**25,497.2417**	**25,497.2417**	**0.4887**	**0.4675**	**25,648.7590**

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					
Apartments Low Rise	7.18468e+007	0.3874	3.3106	1.4088	0.0211		0.2677	0.2677		0.2677	0.2677	0.0000	3,834.0172	3,834.0172	0.0735	0.0703	3,856.8009
Apartments Mid Rise	6.07325e+007	0.3275	2.7985	1.1908	0.0179		0.2263	0.2263		0.2263	0.2263	0.0000	3,240.9160	3,240.9160	0.0621	0.0594	3,260.1751
General Office Building	1.30948e+007	0.0706	0.6419	0.5392	3.8500e-003		0.0488	0.0488		0.0488	0.0488	0.0000	698.7891	698.7891	0.0134	0.0128	702.9417
Single Family Housing	3.32126e+008	1.7909	15.3039	6.5123	0.0977		1.2373	1.2373		1.2373	1.2373	0.0000	17,723.5193	17,723.5193	0.3397	0.3249	17,828.8413
Total		**2.5764**	**22.0548**	**9.6511**	**0.1405**		**1.7800**	**1.7800**		**1.7800**	**1.7800**	**0.0000**	**25,497.2417**	**25,497.2417**	**0.4887**	**0.4675**	**25,648.7590**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	3.11389e+007	4,208.2157	0.2542	0.0424	4,227.1988
Apartments Mid Rise	2.95054e+007	3,987.4586	0.2409	0.0402	4,005.4460
General Office Building	1.49966e+007	2,026.6929	0.1224	0.0204	2,035.8352
Single Family Housing	1.0614e+008	14,344.1478	0.8666	0.1444	14,408.8539
Total		**24,566.5149**	**1.4842**	**0.2474**	**24,677.3339**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	3.11389e+007	4,208.2157	0.2542	0.0424	4,227.1988
Apartments Mid Rise	2.95054e+007	3,987.4586	0.2409	0.0402	4,005.4460
General Office Building	1.49966e+007	2,026.6929	0.1224	0.0204	2,035.8352
Single Family Housing	1.0614e+008	14,344.1478	0.8666	0.1444	14,408.8539
Total		**24,566.5149**	**1.4842**	**0.2474**	**24,677.3339**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	180.1144	4.2468	232.6439	0.1460		7.5341	7.5341		7.5341	7.5341	849.8010	1,918.2376	2,768.0386	4.3050	0.0294	2,884.4123
Unmitigated	180.1144	4.2468	232.6439	0.1460		7.5341	7.5341		7.5341	7.5341	849.8010	1,918.2376	2,768.0386	4.3050	0.0294	2,884.4123

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	25.8158					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	144.0755					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.4457	2.0174	39.4925	0.1358		6.4583	6.4583		6.4583	6.4583	849.8010	1,601.3336	2,451.1346	4.0033	0.0294	2,559.9667
Landscaping	5.7775	2.2295	193.1514	0.0102		1.0758	1.0758		1.0758	1.0758	0.0000	316.9040	316.9040	0.3017	0.0000	324.4456
Total	**180.1144**	**4.2468**	**232.6439**	**0.1460**		**7.5342**	**7.5342**		**7.5342**	**7.5342**	**849.8010**	**1,918.2376**	**2,768.0386**	**4.3050**	**0.0294**	**2,884.4123**

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	25.8158					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	144.0755					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.4457	2.0174	39.4925	0.1358		6.4583	6.4583		6.4583	6.4583	849.8010	1,601.3336	2,451.1346	4.0033	0.0294	2,559.9667
Landscaping	5.7775	2.2295	193.1514	0.0102		1.0758	1.0758		1.0758	1.0758	0.0000	316.9040	316.9040	0.3017	0.0000	324.4456
Total	**180.1144**	**4.2468**	**232.6439**	**0.1460**		**7.5342**	**7.5342**		**7.5342**	**7.5342**	**849.8010**	**1,918.2376**	**2,768.0386**	**4.3050**	**0.0294**	**2,884.4123**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2,491.7758	60.4359	1.4435	4,432.8321
Unmitigated	2,491.7758	60.4359	1.4435	4,432.8321

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	446.957 / 281.777	601.9214	14.5919	0.3485	1,070.5783
Apartments Mid Rise	446.957 / 281.777	601.9214	14.5919	0.3485	1,070.5783
General Office Building	148.905 / 91.2646	199.2977	4.8613	0.1161	355.4270
Single Family Housing	808.366 / 509.622	1,088.6354	26.3909	0.6303	1,936.2485
Total		**2,491.7758**	**60.4359**	**1.4435**	**4,432.8321**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	446.957 / 281.777	601.9214	14.5919	0.3485	1,070.5783
Apartments Mid Rise	446.957 / 281.777	601.9214	14.5919	0.3485	1,070.5783
General Office Building	148.905 / 91.2646	199.2977	4.8613	0.1161	355.4270
Single Family Housing	808.366 / 509.622	1,088.6354	26.3909	0.6303	1,936.2485
Total		**2,491.7758**	**60.4359**	**1.4435**	**4,432.8321**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4,464.5081	263.8449	0.0000	11,060.6299
Unmitigated	4,464.5081	263.8449	0.0000	11,060.6299

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	3155.6	640.5583	37.8559	0.0000	1,586.9560
Apartments Mid Rise	3155.6	640.5583	37.8559	0.0000	1,586.9560
General Office Building	779.15	158.1604	9.3470	0.0000	391.8357
Single Family Housing	14903.3	3,025.2312	178.7860	0.0000	7,494.8821
Total		**4,464.5081**	**263.8449**	**0.0000**	**11,060.6299**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	3155.6	640.5583	37.8559	0.0000	1,586.9560
Apartments Mid Rise	3155.6	640.5583	37.8559	0.0000	1,586.9560
General Office Building	779.15	158.1604	9.3470	0.0000	391.8357
Single Family Housing	14903.3	3,025.2312	178.7860	0.0000	7,494.8821
Total		**4,464.5081**	**263.8449**	**0.0000**	**11,060.6299**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Sonoma - New Land Uses

Sonoma-San Francisco County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	837.80	1000sqft	19.23	837,800.00	0
Apartments Low Rise	6,860.00	Dwelling Unit	428.75	6,860,000.00	19620
Apartments Mid Rise	6,860.00	Dwelling Unit	180.53	6,860,000.00	19620
Single Family Housing	12,407.00	Dwelling Unit	4,028.25	22,332,600.00	35484

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	75
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.94	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Sonoma - New Land Uses - Sonoma-San Francisco County, Summer

Project Characteristics - Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards.

Plan Bay Area 2040 Update - Sonoma - New Land Uses - Sonoma-San Francisco County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	431.22	310.48
tblEnergyUse	T24E	392.47	282.58
tblEnergyUse	T24E	6.40	6.08
tblEnergyUse	T24E	368.92	265.62
tblEnergyUse	T24NG	10,164.29	7,318.29
tblEnergyUse	T24NG	7,914.07	5,698.13
tblEnergyUse	T24NG	16.39	15.57
tblEnergyUse	T24NG	32,797.58	23,614.26
tblFireplaces	NumberGas	1,029.00	2,195.20
tblFireplaces	NumberGas	1,029.00	2,195.20
tblFireplaces	NumberGas	3,101.75	8,436.76
tblFireplaces	NumberWood	1,166.20	0.00
tblFireplaces	NumberWood	1,166.20	0.00
tblFireplaces	NumberWood	5,335.01	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.94
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2040

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5260	0.0000	0.0000	2.3583	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5260**	**0.0000**	**0.0000**	**2.3583**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5260	0.0000	0.0000	2.3583	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5260**	**0.0000**	**0.0000**	**2.3583**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	1,481.3330	340.7451	6,403.6196	15.2444		709.3259	709.3259		709.3259	709.3259	99,969.6875	320,787.7152	420,757.4027	477.1068	5.8100	434,416.4369
Energy	14.1171	120.8482	52.8826	0.7700		9.7536	9.7536		9.7536	9.7536		154,004.9199	154,004.9199	2.9518	2.8234	154,920.0942
Mobile	157.1267	1,178.4635	1,726.7304	10.0607	1,117.4078	4.1688	1,121.5765	299.2306	3.8868	303.1175		1,030,786.1812	1,030,786.1812	30.6265		1,031,551.8443
Total	**1,652.5768**	**1,640.0568**	**8,183.2326**	**26.0751**	**1,117.4078**	**723.2483**	**1,840.6561**	**299.2306**	**722.9664**	**1,022.1970**	**99,969.6875**	**1,505,578.8163**	**1,605,548.5038**	**510.6851**	**8.6334**	**1,620,888.3753**

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	lb/day										lb/day					
Area	1,481.3330	340.7451	6,403.6196	15.2444		709.3259	709.3259		709.3259	709.3259	99,969.6875	320,787.7152	420,757.4027	477.1068	5.8100	434,416.4369
Energy	14.1171	120.8482	52.8826	0.7700		9.7536	9.7536		9.7536	9.7536		154,004.9199	154,004.9199	2.9518	2.8234	154,920.0942
Mobile	157.1267	1,178.4635	1,726.7304	10.0607	1,117.4078	4.1688	1,121.5765	299.2306	3.8868	303.1175		1,030,786.1812	1,030,786.1812	30.6265		1,031,551.8443
Total	**1,652.5768**	**1,640.0568**	**8,183.2326**	**26.0751**	**1,117.4078**	**723.2483**	**1,840.6561**	**299.2306**	**722.9664**	**1,022.1970**	**99,969.6875**	**1,505,578.8163**	**1,605,548.5038**	**510.6851**	**8.6334**	**1,620,888.3753**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	157.1267	1,178.4635	1,726.7304	10.0607	1,117.4078	4.1688	1,121.5765	299.2306	3.8868	303.1175		1,030,786.1812	1,030,786.1812	30.6265		1,031,551.8443
Unmitigated	157.1267	1,178.4635	1,726.7304	10.0607	1,117.4078	4.1688	1,121.5765	299.2306	3.8868	303.1175		1,030,786.1812	1,030,786.1812	30.6265		1,031,551.8443

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	45,207.40	49,117.60	41640.20	104,524,512	104,524,512
Apartments Mid Rise	45,619.00	43,835.40	40199.60	102,985,390	102,985,390
General Office Building	9,240.93	2,060.99	879.69	16,777,891	16,777,891
Single Family Housing	118,114.64	122,953.37	106948.34	270,710,692	270,710,692
Total	218,181.97	217,967.36	189,667.83	494,998,484	494,998,484

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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.633644	0.029850	0.160723	0.084957	0.010113	0.004172	0.033873	0.032642	0.003322	0.001200	0.004059	0.000902	0.000543
Apartments Low Rise	0.633644	0.029850	0.160723	0.084957	0.010113	0.004172	0.033873	0.032642	0.003322	0.001200	0.004059	0.000902	0.000543
Apartments Mid Rise	0.633644	0.029850	0.160723	0.084957	0.010113	0.004172	0.033873	0.032642	0.003322	0.001200	0.004059	0.000902	0.000543
Single Family Housing	0.633644	0.029850	0.160723	0.084957	0.010113	0.004172	0.033873	0.032642	0.003322	0.001200	0.004059	0.000902	0.000543

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	14.1171	120.8482	52.8826	0.7700		9.7536	9.7536		9.7536	9.7536		154,004.9199	154,004.9199	2.9518	2.8234	154,920.0942
NaturalGas Unmitigated	14.1171	120.8482	52.8826	0.7700		9.7536	9.7536		9.7536	9.7536		154,004.9199	154,004.9199	2.9518	2.8234	154,920.0942

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	lb/day										lb/day					
Apartments Low Rise	196840	2.1228	18.1402	7.7192	0.1158		1.4667	1.4667		1.4667	1.4667		23,157.7017	23,157.7017	0.4439	0.4246	23,295.3163
Apartments Mid Rise	166390	1.7944	15.3340	6.5251	0.0979		1.2398	1.2398		1.2398	1.2398		19,575.3334	19,575.3334	0.3752	0.3589	19,691.6598
General Office Building	35876.2	0.3869	3.5173	2.9545	0.0211		0.2673	0.2673		0.2673	0.2673		4,220.7297	4,220.7297	0.0809	0.0774	4,245.8114
Single Family Housing	909935	9.8130	83.8567	35.6837	0.5353		6.7799	6.7799		6.7799	6.7799		107,051.1551	107,051.1551	2.0518	1.9626	107,687.3066
Total		**14.1171**	**120.8482**	**52.8826**	**0.7700**		**9.7536**	**9.7536**		**9.7536**	**9.7536**		**154,004.9199**	**154,004.9199**	**2.9518**	**2.8234**	**154,920.0941**

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	lb/day										lb/day					
Apartments Low Rise	196.84	2.1228	18.1402	7.7192	0.1158		1.4667	1.4667		1.4667	1.4667		23,157.7017	23,157.7017	0.4439	0.4246	23,295.3163
Apartments Mid Rise	166.39	1.7944	15.3340	6.5251	0.0979		1.2398	1.2398		1.2398	1.2398		19,575.3334	19,575.3334	0.3752	0.3589	19,691.6598
General Office Building	35.8762	0.3869	3.5173	2.9545	0.0211		0.2673	0.2673		0.2673	0.2673		4,220.7297	4,220.7297	0.0809	0.0774	4,245.8114
Single Family Housing	909.935	9.8130	83.8567	35.6837	0.5353		6.7799	6.7799		6.7799	6.7799		107,051.1551	107,051.1551	2.0518	1.9626	107,687.3066
Total		**14.1171**	**120.8482**	**52.8826**	**0.7700**		**9.7536**	**9.7536**		**9.7536**	**9.7536**		**154,004.9199**	**154,004.9199**	**2.9518**	**2.8234**	**154,920.0941**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1,481.3330	340.7451	6,403.6196	15.2444		709.3259	709.3259		709.3259	709.3259	99,969.6875	320,787.7152	420,757.4027	477.1068	5.8100	434,416.4369
Unmitigated	1,481.3330	340.7451	6,403.6196	15.2444		709.3259	709.3259		709.3259	709.3259	99,969.6875	320,787.7152	420,757.4027	477.1068	5.8100	434,416.4369

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	lb/day										lb/day					
Architectural Coating	141.4562					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	789.4546					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	486.2282	315.9734	4,257.4931	15.1306		697.3721	697.3721		697.3721	697.3721	99,969.6875	316,906.3059	416,875.9934	473.4120	5.8100	430,442.6584
Landscaping	64.1941	24.7717	2,146.1266	0.1138		11.9538	11.9538		11.9538	11.9538		3,881.4093	3,881.4093	3.6948		3,973.7785
Total	**1,481.3330**	**340.7451**	**6,403.6196**	**15.2444**		**709.3259**	**709.3259**		**709.3259**	**709.3259**	**99,969.6875**	**320,787.7152**	**420,757.4027**	**477.1068**	**5.8100**	**434,416.4369**

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	lb/day										lb/day					
Architectural Coating	141.4562					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	789.4546					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	486.2282	315.9734	4,257.4931	15.1306		697.3721	697.3721		697.3721	697.3721	99,969.6875	316,906.3059	416,875.9934	473.4120	5.8100	430,442.6584
Landscaping	64.1941	24.7717	2,146.1266	0.1138		11.9538	11.9538		11.9538	11.9538		3,881.4093	3,881.4093	3.6948		3,973.7785
Total	**1,481.3330**	**340.7451**	**6,403.6196**	**15.2444**		**709.3259**	**709.3259**		**709.3259**	**709.3259**	**99,969.6875**	**320,787.7152**	**420,757.4027**	**477.1068**	**5.8100**	**434,416.4369**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Sonoma - Net Reduction in Land Uses

Sonoma-San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	2,260.80	1000sqft	51.90	2,260,800.00	0
Regional Shopping Center	932.72	1000sqft	21.41	932,720.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	75
Climate Zone	4			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	381.37	**CH4 Intensity (lb/MWhr)**	0.023	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Sonoma - Net Reduction in Land Uses - Sonoma-San Francisco County, Annual

Project Characteristics - Sonoma Clean Energy emission factor based on a 36% renewable mix in 2015. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Woodstoves -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	70.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.023
tblProjectCharacteristics	CO2IntensityFactor	641.35	381.37
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblProjectCharacteristics	OperationalYear	2018	2015

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Sonoma - Net Reduction in Land Uses - Sonoma-San Francisco County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	14.1405	2.9000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0571	0.0571	1.7000e-004	0.0000	0.0612
Energy	0.2580	2.3455	1.9703	0.0141		0.1783	0.1783		0.1783	0.1783	0.0000	12,574.6023	12,574.6023	0.6533	0.1519	12,636.2071
Mobile	30.8934	119.5671	331.6258	0.5482	36.8447	1.4532	38.2979	9.9291	1.3802	11.3092	0.0000	49,939.4529	49,939.4529	3.4702	0.0000	50,026.2089
Waste						0.0000	0.0000		0.0000	0.0000	767.8641	0.0000	767.8641	45.3795	0.0000	1,902.3507
Water						0.0000	0.0000		0.0000	0.0000	187.7822	579.6730	767.4552	19.3220	0.4615	1,388.0287
Total	**45.2919**	**121.9129**	**333.6264**	**0.5623**	**36.8447**	**1.6315**	**38.4763**	**9.9291**	**1.5585**	**11.4876**	**955.6463**	**63,093.7852**	**64,049.4315**	**68.8252**	**0.6134**	**65,952.8566**

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	14.1405	2.9000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0571	0.0571	1.7000e-004	0.0000	0.0612
Energy	0.2580	2.3455	1.9703	0.0141		0.1783	0.1783		0.1783	0.1783	0.0000	12,574.6023	12,574.6023	0.6533	0.1519	12,636.2071
Mobile	30.8934	119.5671	331.6258	0.5482	36.8447	1.4532	38.2979	9.9291	1.3802	11.3092	0.0000	49,939.4529	49,939.4529	3.4702	0.0000	50,026.2089
Waste						0.0000	0.0000		0.0000	0.0000	767.8641	0.0000	767.8641	45.3795	0.0000	1,902.3507
Water						0.0000	0.0000		0.0000	0.0000	187.7822	579.6730	767.4552	19.3220	0.4615	1,388.0287
Total	**45.2919**	**121.9129**	**333.6264**	**0.5623**	**36.8447**	**1.6315**	**38.4763**	**9.9291**	**1.5585**	**11.4876**	**955.6463**	**63,093.7852**	**64,049.4315**	**68.8252**	**0.6134**	**65,952.8566**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	30.8934	119.5671	331.6258	0.5482	36.8447	1.4532	38.2979	9.9291	1.3802	11.3092	0.0000	49,939.4529	49,939.4529	3.4702	0.0000	50,026.2089
Unmitigated	30.8934	119.5671	331.6258	0.5482	36.8447	1.4532	38.2979	9.9291	1.3802	11.3092	0.0000	49,939.4529	49,939.4529	3.4702	0.0000	50,026.2089

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	15,441.26	5,629.39	1650.38	31,644,005	31,644,005
Regional Shopping Center	39,827.14	46,608.02	23541.85	67,448,532	67,448,532
Total	55,268.41	52,237.41	25,192.24	99,092,538	99,092,538

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.505833	0.055817	0.184442	0.136229	0.044752	0.009181	0.026533	0.022772	0.002845	0.002337	0.006781	0.000823	0.001655
Regional Shopping Center	0.505833	0.055817	0.184442	0.136229	0.044752	0.009181	0.026533	0.022772	0.002845	0.002337	0.006781	0.000823	0.001655

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	10,021.1916	10,021.1916	0.6044	0.1051	10,067.6227
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	10,021.1916	10,021.1916	0.6044	0.1051	10,067.6227
NaturalGas Mitigated	0.2580	2.3455	1.9703	0.0141		0.1783	0.1783		0.1783	0.1783	0.0000	2,553.4108	2,553.4108	0.0489	0.0468	2,568.5844
NaturalGas Unmitigated	0.2580	2.3455	1.9703	0.0141		0.1783	0.1783		0.1783	0.1783	0.0000	2,553.4108	2,553.4108	0.0489	0.0468	2,568.5844

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					
Industrial Park	4.51256e+007	0.2433	2.2120	1.8581	0.0133		0.1681	0.1681		0.1681	0.1681	0.0000	2,408.0722	2,408.0722	0.0462	0.0442	2,422.3821
Regional Shopping Center	2.72354e+006	0.0147	0.1335	0.1122	8.0000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	145.3386	145.3386	2.7900e-003	2.6600e-003	146.2023
Total		**0.2580**	**2.3456**	**1.9703**	**0.0141**		**0.1783**	**0.1783**		**0.1783**	**0.1783**	**0.0000**	**2,553.4108**	**2,553.4108**	**0.0489**	**0.0468**	**2,568.5844**

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					
Industrial Park	4.51256e+007	0.2433	2.2120	1.8581	0.0133		0.1681	0.1681		0.1681	0.1681	0.0000	2,408.0722	2,408.0722	0.0462	0.0442	2,422.3821
Regional Shopping Center	2.72354e+006	0.0147	0.1335	0.1122	8.0000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	145.3386	145.3386	2.7900e-003	2.6600e-003	146.2023
Total		**0.2580**	**2.3456**	**1.9703**	**0.0141**		**0.1783**	**0.1783**		**0.1783**	**0.1783**	**0.0000**	**2,553.4108**	**2,553.4108**	**0.0489**	**0.0468**	**2,568.5844**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	4.65047e+007	8,044.6787	0.4852	0.0844	8,081.9521
Regional Shopping Center	1.14258e+007	1,976.5129	0.1192	0.0207	1,985.6706
Total		**10,021.1916**	**0.6044**	**0.1051**	**10,067.6227**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	4.65047e+007	8,044.6787	0.4852	0.0844	8,081.9521
Regional Shopping Center	1.14258e+007	1,976.5129	0.1192	0.0207	1,985.6706
Total		**10,021.1916**	**0.6044**	**0.1051**	**10,067.6227**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	14.1405	2.9000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0571	0.0571	1.7000e-004	0.0000	0.0612
Unmitigated	14.1405	2.9000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0571	0.0571	1.7000e-004	0.0000	0.0612

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	1.6652					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	12.4723					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-003	2.9000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0571	0.0571	1.7000e-004	0.0000	0.0612
Total	**14.1405**	**2.9000e-004**	**0.0304**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**0.0571**	**0.0571**	**1.7000e-004**	**0.0000**	**0.0612**

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	1.6652					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	12.4723					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-003	2.9000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0571	0.0571	1.7000e-004	0.0000	0.0612
Total	**14.1405**	**2.9000e-004**	**0.0304**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**0.0571**	**0.0571**	**1.7000e-004**	**0.0000**	**0.0612**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	767.4552	19.3220	0.4615	1,388.0287
Unmitigated	767.4552	19.3220	0.4615	1,388.0287

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	522.81 / 0	655.2294	17.0653	0.4074	1,203.2620
Regional Shopping Center	69.0889 / 42.3448	112.2258	2.2567	0.0541	184.7667
Total		**767.4552**	**19.3220**	**0.4615**	**1,388.0287**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	522.81 / 0	655.2294	17.0653	0.4074	1,203.2620
Regional Shopping Center	69.0889 / 42.3448	112.2258	2.2567	0.0541	184.7667
Total		**767.4552**	**19.3220**	**0.4615**	**1,388.0287**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	767.8641	45.3795	0.0000	1,902.3507
Unmitigated	767.8641	45.3795	0.0000	1,902.3507

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	2803.39	569.0628	33.6307	0.0000	1,409.8291
Regional Shopping Center	979.36	198.8012	11.7488	0.0000	492.5216
Total		**767.8641**	**45.3795**	**0.0000**	**1,902.3507**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	2803.39	569.0628	33.6307	0.0000	1,409.8291
Regional Shopping Center	979.36	198.8012	11.7488	0.0000	492.5216
Total		**767.8641**	**45.3795**	**0.0000**	**1,902.3507**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Sonoma - Net Reduction in Land Uses

Sonoma-San Francisco County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	2,260.80	1000sqft	51.90	2,260,800.00	0
Regional Shopping Center	932.72	1000sqft	21.41	932,720.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	75
Climate Zone	4			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	381.37	**CH4 Intensity (lb/MWhr)**	0.023	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Sonoma Clean Energy emission factor based on a 36% renewable mix in 2015. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Woodstoves -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	70.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.023
tblProjectCharacteristics	CO2IntensityFactor	641.35	381.37
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblProjectCharacteristics	OperationalYear	2018	2015

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5260	0.0000	0.0000	2.3583	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5260**	**0.0000**	**0.0000**	**2.3583**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5260	0.0000	0.0000	2.3583	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5260**	**0.0000**	**0.0000**	**2.3583**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	77.4992	3.2600e-003	0.3373	2.0000e-005		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003		0.6989	0.6989	2.0200e-003		0.7495
Energy	1.4138	12.8523	10.7959	0.0771		0.9768	0.9768		0.9768	0.9768		15,422.7592	15,422.7592	0.2956	0.2828	15,514.4089
Mobile	228.6363	775.4360	2,238.7644	3.8908	261.0569	9.8009	270.8578	70.0769	9.3082	79.3851		390,735.5564	390,735.5564	25.7837		391,380.1493
Total	**307.5492**	**788.2916**	**2,249.8976**	**3.9679**	**261.0569**	**10.7789**	**271.8358**	**70.0769**	**10.2862**	**80.3630**		**406,159.0145**	**406,159.0145**	**26.0813**	**0.2828**	**406,895.3077**

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	lb/day										lb/day					
Area	77.4992	3.2600e-003	0.3373	2.0000e-005		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003		0.6989	0.6989	2.0200e-003		0.7495
Energy	1.4138	12.8523	10.7959	0.0771		0.9768	0.9768		0.9768	0.9768		15,422.7592	15,422.7592	0.2956	0.2828	15,514.4089
Mobile	228.6363	775.4360	2,238.7644	3.8908	261.0569	9.8009	270.8578	70.0769	9.3082	79.3851		390,735.5564	390,735.5564	25.7837		391,380.1493
Total	**307.5492**	**788.2916**	**2,249.8976**	**3.9679**	**261.0569**	**10.7789**	**271.8358**	**70.0769**	**10.2862**	**80.3630**		**406,159.0145**	**406,159.0145**	**26.0813**	**0.2828**	**406,895.3077**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	228.6363	775.4360	2,238.7644	3.8908	261.0569	9.8009	270.8578	70.0769	9.3082	79.3851		390,735.5564	390,735.5564	25.7837		391,380.1493
Unmitigated	228.6363	775.4360	2,238.7644	3.8908	261.0569	9.8009	270.8578	70.0769	9.3082	79.3851		390,735.5564	390,735.5564	25.7837		391,380.1493

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	15,441.26	5,629.39	1650.38	31,644,005	31,644,005
Regional Shopping Center	39,827.14	46,608.02	23541.85	67,448,532	67,448,532
Total	55,268.41	52,237.41	25,192.24	99,092,538	99,092,538

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.505833	0.055817	0.184442	0.136229	0.044752	0.009181	0.026533	0.022772	0.002845	0.002337	0.006781	0.000823	0.001655
Regional Shopping Center	0.505833	0.055817	0.184442	0.136229	0.044752	0.009181	0.026533	0.022772	0.002845	0.002337	0.006781	0.000823	0.001655

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.4138	12.8523	10.7959	0.0771		0.9768	0.9768		0.9768	0.9768		15,422.7592	15,422.7592	0.2956	0.2828	15,514.4089
NaturalGas Unmitigated	1.4138	12.8523	10.7959	0.0771		0.9768	0.9768		0.9768	0.9768		15,422.7592	15,422.7592	0.2956	0.2828	15,514.4089

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	lb/day										lb/day					
Industrial Park	123632	1.3333	12.1208	10.1814	0.0727		0.9212	0.9212		0.9212	0.9212		14,544.9051	14,544.9051	0.2788	0.2667	14,631.3382
Regional Shopping Center	7461.76	0.0805	0.7316	0.6145	4.3900e-003		0.0556	0.0556		0.0556	0.0556		877.8541	877.8541	0.0168	0.0161	883.0708
Total		**1.4138**	**12.8523**	**10.7959**	**0.0771**		**0.9768**	**0.9768**		**0.9768**	**0.9768**		**15,422.7592**	**15,422.7592**	**0.2956**	**0.2828**	**15,514.4089**

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	lb/day										lb/day					
Industrial Park	123.632	1.3333	12.1208	10.1814	0.0727		0.9212	0.9212		0.9212	0.9212		14,544.9051	14,544.9051	0.2788	0.2667	14,631.3382
Regional Shopping Center	7.46176	0.0805	0.7316	0.6145	4.3900e-003		0.0556	0.0556		0.0556	0.0556		877.8541	877.8541	0.0168	0.0161	883.0708
Total		**1.4138**	**12.8523**	**10.7959**	**0.0771**		**0.9768**	**0.9768**		**0.9768**	**0.9768**		**15,422.7592**	**15,422.7592**	**0.2956**	**0.2828**	**15,514.4089**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	77.4992	3.2600e-003	0.3373	2.0000e-005		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003		0.6989	0.6989	2.0200e-003		0.7495
Unmitigated	77.4992	3.2600e-003	0.3373	2.0000e-005		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003		0.6989	0.6989	2.0200e-003		0.7495

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	lb/day										lb/day					
Architectural Coating	9.1245					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	68.3413					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0333	3.2600e-003	0.3373	2.0000e-005		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003		0.6989	0.6989	2.0200e-003		0.7495
Total	**77.4992**	**3.2600e-003**	**0.3373**	**2.0000e-005**		**1.2200e-003**	**1.2200e-003**		**1.2200e-003**	**1.2200e-003**		**0.6989**	**0.6989**	**2.0200e-003**		**0.7495**

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	lb/day										lb/day					
Architectural Coating	9.1245					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	68.3413					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0333	3.2600e-003	0.3373	2.0000e-005		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003		0.6989	0.6989	2.0200e-003		0.7495
Total	**77.4992**	**3.2600e-003**	**0.3373**	**2.0000e-005**		**1.2200e-003**	**1.2200e-003**		**1.2200e-003**	**1.2200e-003**		**0.6989**	**0.6989**	**2.0200e-003**		**0.7495**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Alameda - New Land Uses

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	17,885.29	1000sqft	410.59	17,885,300.00	0
Apartments High Rise	32,553.00	Dwelling Unit	525.05	32,553,000.00	93102
Apartments Low Rise	41,455.00	Dwelling Unit	2,590.94	41,455,000.00	118561
Apartments Mid Rise	41,455.00	Dwelling Unit	1,090.92	41,455,000.00	118561
Single Family Housing	29,238.00	Dwelling Unit	9,492.86	52,628,400.00	83621

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.95	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Alameda - New Land Uses - Alameda County, Annual

Project Characteristics - Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Operational emissions only

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Grading -

Architectural Coating -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating -

Energy Use - CalEEMod Default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards and ZNE standards.

Water And Wastewater -

Solid Waste -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	11,000.00	0.00
tblConstructionPhase	NumDays	155,000.00	0.00
tblConstructionPhase	NumDays	10,000.00	0.00
tblConstructionPhase	NumDays	15,500.00	0.00
tblConstructionPhase	NumDays	11,000.00	0.00
tblConstructionPhase	NumDays	6,000.00	0.00
tblEnergyUse	T24E	502.89	72.42
tblEnergyUse	T24E	274.84	39.58

tblEnergyUse	T24E	502.89	72.42
tblEnergyUse	T24E	4.30	2.45
tblEnergyUse	T24E	246.52	35.50
tblEnergyUse	T24NG	8,824.58	1,270.74
tblEnergyUse	T24NG	25,590.91	3,685.09
tblEnergyUse	T24NG	8,824.58	1,270.74
tblEnergyUse	T24NG	18.41	10.49
tblEnergyUse	T24NG	50,264.25	7,238.05
tblFireplaces	NumberGas	4,882.95	10,416.96
tblFireplaces	NumberGas	6,218.25	13,265.60
tblFireplaces	NumberGas	6,218.25	13,265.60
tblFireplaces	NumberGas	7,309.50	19,881.84
tblFireplaces	NumberWood	5,534.01	0.00
tblFireplaces	NumberWood	7,047.35	0.00
tblFireplaces	NumberWood	7,047.35	0.00
tblFireplaces	NumberWood	12,572.34	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.95
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2040

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Alameda - New Land Uses - Alameda County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	903.3415	20.9386	1,223.5094	0.5886		31.0932	31.0932		31.0932	31.0932	3,299.1867	8,849.9853	12,149.1719	17.2304	0.1301	12,618.6910
Energy	5.6214	48.6422	24.8776	0.3066		3.8839	3.8839		3.8839	3.8839	0.0000	179,753.4239	179,753.4239	8.5648	2.2697	180,643.9074
Mobile	136.8607	1,446.4736	1,519.6979	9.8104	960.6690	4.0365	964.7055	258.0686	3.7750	261.8436	0.0000	914,831.6678	914,831.6678	33.1033	0.0000	915,659.2495
Waste						0.0000	0.0000		0.0000	0.0000	21,287.0797	0.0000	21,287.0797	1,258.0304	0.0000	52,737.8389
Water						0.0000	0.0000		0.0000	0.0000	3,999.5161	12,952.1047	16,951.6208	411.5711	9.8300	30,170.2457
Total	**1,045.8236**	**1,516.0543**	**2,768.0849**	**10.7056**	**960.6690**	**39.0136**	**999.6825**	**258.0686**	**38.7520**	**296.8206**	**28,585.7825**	**1,116,387.1816**	**1,144,972.9641**	**1,728.4999**	**12.2298**	**1,191,829.9325**

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	903.3415	20.9386	1,223.5094	0.5886		31.0932	31.0932		31.0932	31.0932	3,299.1867	8,849.9853	12,149.1719	17.2304	0.1301	12,618.6910
Energy	5.6214	48.6422	24.8776	0.3066		3.8839	3.8839		3.8839	3.8839	0.0000	179,753.4239	179,753.4239	8.5648	2.2697	180,643.9074
Mobile	136.8607	1,446.4736	1,519.6979	9.8104	960.6690	4.0365	964.7055	258.0686	3.7750	261.8436	0.0000	914,831.6678	914,831.6678	33.1033	0.0000	915,659.2495
Waste						0.0000	0.0000		0.0000	0.0000	21,287.0797	0.0000	21,287.0797	1,258.0304	0.0000	52,737.8389
Water						0.0000	0.0000		0.0000	0.0000	3,999.5161	12,952.1047	16,951.6208	411.5711	9.8300	30,170.2457
Total	**1,045.8236**	**1,516.0543**	**2,768.0849**	**10.7056**	**960.6690**	**39.0136**	**999.6825**	**258.0686**	**38.7520**	**296.8206**	**28,585.7825**	**1,116,387.1816**	**1,144,972.9641**	**1,728.4999**	**12.2298**	**1,191,829.9325**

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

3.0 Construction Detail

Construction Phase

Plan Bay Area 2040 Update - Alameda - New Land Uses - Alameda County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	
2	Site Preparation	Site Preparation	7/1/2014	6/30/2014	5	0	
3	Grading	Grading	7/1/2014	6/30/2014	5	0	
4	Building Construction	Building Construction	7/1/2014	6/30/2014	5	0	
5	Paving	Paving	7/1/2014	6/30/2014	5	0	
6	Architectural Coating	Architectural Coating	7/1/2014	6/30/2014	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 340,385,085; Residential Outdoor: 113,461,695; Non-Residential Indoor: 26,827,950; Non-Residential Outdoor: 8,942,650; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Plan Bay Area 2040 Update - Alameda - New Land Uses - Alameda County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	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	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	99,382.00	18,400.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	19,876.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	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**

3.3 Site Preparation - 2014

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	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	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**

3.3 Site Preparation - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive 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	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	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**

3.3 Site Preparation - 2014

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	0.0000	0.0000	0.0000	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**

3.4 Grading - 2014

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	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	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**

3.4 Grading - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive 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	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	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**

3.4 Grading - 2014

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	0.0000	0.0000	0.0000	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**

3.5 Building Construction - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.5 Building Construction - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.5 Building Construction - 2014

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	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	0.0000	0.0000	0.0000	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**

3.7 Architectural Coating - 2014

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	0.0000	0.0000	0.0000	0.0000	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	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**

3.7 Architectural Coating - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000	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	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**

3.7 Architectural Coating - 2014

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	0.0000	0.0000	0.0000	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**

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	136.8607	1,446.4736	1,519.6979	9.8104	960.6690	4.0365	964.7055	258.0686	3.7750	261.8436	0.0000	914,831.6678	914,831.6678	33.1033	0.0000	915,659.2495
Unmitigated	136.8607	1,446.4736	1,519.6979	9.8104	960.6690	4.0365	964.7055	258.0686	3.7750	261.8436	0.0000	914,831.6678	914,831.6678	33.1033	0.0000	915,659.2495

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	136,722.60	162,113.94	118818.45	318,245,868	318,245,868
Apartments Low Rise	273,188.45	296,817.80	251631.85	631,641,930	631,641,930
Apartments Mid Rise	275,675.75	264,897.45	242926.30	622,341,009	622,341,009
General Office Building	197,274.75	43,997.81	18779.55	358,173,118	358,173,118
Single Family Housing	278,345.76	289,748.58	252031.56	637,949,480	637,949,480
Total	1,161,207.31	1,057,575.58	884,187.71	2,568,351,405	2,568,351,405

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
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Apartments High Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Apartments Low Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Apartments Mid Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Single Family Housing	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	124,121.0933	124,121.0933	7.4985	1.2498	124,680.9817
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	124,121.0933	124,121.0933	7.4985	1.2498	124,680.9817
NaturalGas Mitigated	5.6214	48.6422	24.8776	0.3066		3.8839	3.8839		3.8839	3.8839	0.0000	55,632.3306	55,632.3306	1.0663	1.0199	55,962.9257
NaturalGas Unmitigated	5.6214	48.6422	24.8776	0.3066		3.8839	3.8839		3.8839	3.8839	0.0000	55,632.3306	55,632.3306	1.0663	1.0199	55,962.9257

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					
Apartments High Rise	1.26492e+008	0.6821	5.8286	2.4802	0.0372		0.4713	0.4713		0.4713	0.4713	0.0000	6,750.1212	6,750.1212	0.1294	0.1238	6,790.2338
Apartments Low Rise	2.6117e+008	1.4083	12.0343	5.1210	0.0768		0.9730	0.9730		0.9730	0.9730	0.0000	13,937.0381	13,937.0381	0.2671	0.2555	14,019.8590
Apartments Mid Rise	1.61083e+008	0.8686	7.4225	3.1585	0.0474		0.6001	0.6001		0.6001	0.6001	0.0000	8,596.0211	8,596.0211	0.1648	0.1576	8,647.1030
General Office Building	2.05681e+008	1.1091	10.0824	8.4692	0.0605		0.7663	0.7663		0.7663	0.7663	0.0000	10,975.9188	10,975.9188	0.2104	0.2012	11,041.1432
Single Family Housing	2.88083e+008	1.5534	13.2744	5.6487	0.0847		1.0733	1.0733		1.0733	1.0733	0.0000	15,373.2314	15,373.2314	0.2947	0.2818	15,464.5868
Total		**5.6214**	**48.6422**	**24.8776**	**0.3066**		**3.8839**	**3.8839**		**3.8839**	**3.8839**	**0.0000**	**55,632.3305**	**55,632.3305**	**1.0663**	**1.0199**	**55,962.9257**

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					
Apartments High Rise	1.26492e+008	0.6821	5.8286	2.4802	0.0372		0.4713	0.4713		0.4713	0.4713	0.0000	6,750.1212	6,750.1212	0.1294	0.1238	6,790.2338
Apartments Low Rise	2.6117e+008	1.4083	12.0343	5.1210	0.0768		0.9730	0.9730		0.9730	0.9730	0.0000	13,937.0381	13,937.0381	0.2671	0.2555	14,019.8590
Apartments Mid Rise	1.61083e+008	0.8686	7.4225	3.1585	0.0474		0.6001	0.6001		0.6001	0.6001	0.0000	8,596.0211	8,596.0211	0.1648	0.1576	8,647.1030
General Office Building	2.05681e+008	1.1091	10.0824	8.4692	0.0605		0.7663	0.7663		0.7663	0.7663	0.0000	10,975.9188	10,975.9188	0.2104	0.2012	11,041.1432
Single Family Housing	2.88083e+008	1.5534	13.2744	5.6487	0.0847		1.0733	1.0733		1.0733	1.0733	0.0000	15,373.2314	15,373.2314	0.2947	0.2818	15,464.5868
Total		**5.6214**	**48.6422**	**24.8776**	**0.3066**		**3.8839**	**3.8839**		**3.8839**	**3.8839**	**0.0000**	**55,632.3305**	**55,632.3305**	**1.0663**	**1.0199**	**55,962.9257**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.33172e+008	17,997.8710	1.0873	0.1812	18,079.0563
Apartments Low Rise	1.76942e+008	23,913.3812	1.4447	0.2408	24,021.2502
Apartments Mid Rise	1.69589e+008	22,919.6001	1.3846	0.2308	23,022.9864
General Office Building	1.95307e+008	26,395.3848	1.5946	0.2658	26,514.4498
Single Family Housing	2.43399e+008	32,894.8562	1.9873	0.3312	33,043.2391
Total		**124,121.0933**	**7.4985**	**1.2498**	**124,680.9817**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.33172e+008	17,997.8710	1.0873	0.1812	18,079.0563
Apartments Low Rise	1.76942e+008	23,913.3812	1.4447	0.2408	24,021.2502
Apartments Mid Rise	1.69589e+008	22,919.6001	1.3846	0.2308	23,022.9864
General Office Building	1.95307e+008	26,395.3848	1.5946	0.2658	26,514.4498
Single Family Housing	2.43399e+008	32,894.8562	1.9873	0.3312	33,043.2391
Total		**124,121.0933**	**7.4985**	**1.2498**	**124,680.9817**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	903.3415	20.9386	1,223.5094	0.5886		31.0932	31.0932		31.0932	31.0932	3,299.1867	8,849.9853	12,149.1719	17.2304	0.1301	12,618.6910
Unmitigated	903.3415	20.9386	1,223.5094	0.5886		31.0932	31.0932		31.0932	31.0932	3,299.1867	8,849.9853	12,149.1719	17.2304	0.1301	12,618.6910

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	127.6524					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	726.3320					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	17.3483	8.5900	153.6445	0.5319		25.1344	25.1344		25.1344	25.1344	3,299.1867	7,094.6170	10,393.8037	15.5590	0.1301	10,821.5392
Landscaping	32.0088	12.3486	1,069.8649	0.0568		5.9588	5.9588		5.9588	5.9588	0.0000	1,755.3682	1,755.3682	1.6713	0.0000	1,797.1518
Total	**903.3415**	**20.9386**	**1,223.5093**	**0.5886**		**31.0932**	**31.0932**		**31.0932**	**31.0932**	**3,299.1867**	**8,849.9853**	**12,149.1719**	**17.2304**	**0.1301**	**12,618.6910**

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	127.6524					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	726.3320					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	17.3483	8.5900	153.6445	0.5319		25.1344	25.1344		25.1344	25.1344	3,299.1867	7,094.6170	10,393.8037	15.5590	0.1301	10,821.5392
Landscaping	32.0088	12.3486	1,069.8649	0.0568		5.9588	5.9588		5.9588	5.9588	0.0000	1,755.3682	1,755.3682	1.6713	0.0000	1,797.1518
Total	**903.3415**	**20.9386**	**1,223.5093**	**0.5886**		**31.0932**	**31.0932**		**31.0932**	**31.0932**	**3,299.1867**	**8,849.9853**	**12,149.1719**	**17.2304**	**0.1301**	**12,618.6910**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	16,951.6208	411.5711	9.8300	30,170.2457
Unmitigated	16,951.6208	411.5711	9.8300	30,170.2457

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	2120.96 / 1337.13	2,856.3920	69.2434	1.6539	5,080.3262
Apartments Low Rise	2700.96 / 1702.78	3,637.5060	88.1788	2.1061	6,469.6011
Apartments Mid Rise	2700.96 / 1702.78	3,637.5060	88.1788	2.1061	6,469.6011
General Office Building	3178.82 / 1948.31	4,254.7024	103.7781	2.4785	7,587.7406
Single Family Housing	1904.97 / 1200.96	2,565.5144	62.1921	1.4854	4,562.9766
Total		**16,951.6208**	**411.5711**	**9.8300**	**30,170.2457**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	2120.96 / 1337.13	2,856.3920	69.2434	1.6539	5,080.3262
Apartments Low Rise	2700.96 / 1702.78	3,637.5060	88.1788	2.1061	6,469.6011
Apartments Mid Rise	2700.96 / 1702.78	3,637.5060	88.1788	2.1061	6,469.6011
General Office Building	3178.82 / 1948.31	4,254.7024	103.7781	2.4785	7,587.7406
Single Family Housing	1904.97 / 1200.96	2,565.5144	62.1921	1.4854	4,562.9766
Total		**16,951.6208**	**411.5711**	**9.8300**	**30,170.2457**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	21,287.0797	1,258.0304	0.0000	52,737.8389
Unmitigated	21,287.0797	1,258.0304	0.0000	52,737.8389

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	14974.4	3,039.6638	179.6390	0.0000	7,530.6384
Apartments Low Rise	19069.3	3,870.8956	228.7634	0.0000	9,589.9799
Apartments Mid Rise	19069.3	3,870.8956	228.7634	0.0000	9,589.9799
General Office Building	16633.3	3,376.4157	199.5405	0.0000	8,364.9269
Single Family Housing	35120.8	7,129.2091	421.3242	0.0000	17,662.3137
Total		**21,287.0797**	**1,258.0304**	**0.0000**	**52,737.8389**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	14974.4	3,039.6638	179.6390	0.0000	7,530.6384
Apartments Low Rise	19069.3	3,870.8956	228.7634	0.0000	9,589.9799
Apartments Mid Rise	19069.3	3,870.8956	228.7634	0.0000	9,589.9799
General Office Building	16633.3	3,376.4157	199.5405	0.0000	8,364.9269
Single Family Housing	35120.8	7,129.2091	421.3242	0.0000	17,662.3137
Total		**21,287.0797**	**1,258.0304**	**0.0000**	**52,737.8389**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Alameda - New Land Uses

Alameda County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	17,885.29	1000sqft	410.59	17,885,300.00	0
Apartments High Rise	32,553.00	Dwelling Unit	525.05	32,553,000.00	93102
Apartments Low Rise	41,455.00	Dwelling Unit	2,590.94	41,455,000.00	118561
Apartments Mid Rise	41,455.00	Dwelling Unit	1,090.92	41,455,000.00	118561
Single Family Housing	29,238.00	Dwelling Unit	9,492.86	52,628,400.00	83621

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.95	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Alameda - New Land Uses - Alameda County, Summer

Project Characteristics - Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Operational emissions only

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Grading -

Architectural Coating -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating -

Energy Use - CalEEMod Default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards and ZNE standards.

Water And Wastewater -

Solid Waste -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	11,000.00	0.00
tblConstructionPhase	NumDays	155,000.00	0.00
tblConstructionPhase	NumDays	10,000.00	0.00
tblConstructionPhase	NumDays	15,500.00	0.00
tblConstructionPhase	NumDays	11,000.00	0.00
tblConstructionPhase	NumDays	6,000.00	0.00
tblEnergyUse	T24E	502.89	72.42
tblEnergyUse	T24E	274.84	39.58

tblEnergyUse	T24E	502.89	72.42
tblEnergyUse	T24E	4.30	2.45
tblEnergyUse	T24E	246.52	35.50
tblEnergyUse	T24NG	8,824.58	1,270.74
tblEnergyUse	T24NG	25,590.91	3,685.09
tblEnergyUse	T24NG	8,824.58	1,270.74
tblEnergyUse	T24NG	18.41	10.49
tblEnergyUse	T24NG	50,264.25	7,238.05
tblFireplaces	NumberGas	4,882.95	10,416.96
tblFireplaces	NumberGas	6,218.25	13,265.60
tblFireplaces	NumberGas	6,218.25	13,265.60
tblFireplaces	NumberGas	7,309.50	19,881.84
tblFireplaces	NumberWood	5,534.01	0.00
tblFireplaces	NumberWood	7,047.35	0.00
tblFireplaces	NumberWood	7,047.35	0.00
tblFireplaces	NumberWood	12,572.34	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.95
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2040

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	72.8123	0.0000	0.0000	69.0029	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**72.8123**	**0.0000**	**0.0000**	**69.0029**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	72.8123	0.0000	0.0000	69.0029	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**72.8123**	**0.0000**	**0.0000**	**69.0029**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	7,166.8880	1,533.7995	30,547.0992	67.0037		3,122.7822	3,122.7822		3,122.7822	3,122.7822	438,025.2754	1,425,534.8747	1,863,560.1501	2,095.0603	25.7407	1,923,607.3696
Energy	30.8021	266.5326	136.3158	1.6801		21.2814	21.2814		21.2814	21.2814		336,022.7245	336,022.7245	6.4404	6.1604	338,019.5395
Mobile	943.3332	8,699.0992	9,615.5830	62.4351	6,053.4785	24.4873	6,077.9658	1,621.0179	22.8999	1,643.9178		6,412,015.5232	6,412,015.5232	216.6994		6,417,433.0075
Total	**8,141.0232**	**10,499.4312**	**40,298.9980**	**131.1189**	**6,053.4785**	**3,168.5510**	**9,222.0295**	**1,621.0179**	**3,166.9636**	**4,787.9814**	**438,025.2754**	**8,173,573.1223**	**8,611,598.3978**	**2,318.2001**	**31.9011**	**8,679,059.9166**

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	lb/day										lb/day					
Area	7,166.8880	1,533.7995	30,547.0992	67.0037		3,122.7822	3,122.7822		3,122.7822	3,122.7822	438,025.2754	1,425,534.8747	1,863,560.1501	2,095.0603	25.7407	1,923,607.3696
Energy	30.8021	266.5326	136.3158	1.6801		21.2814	21.2814		21.2814	21.2814		336,022.7245	336,022.7245	6.4404	6.1604	338,019.5395
Mobile	943.3332	8,699.0992	9,615.5830	62.4351	6,053.4785	24.4873	6,077.9658	1,621.0179	22.8999	1,643.9178		6,412,015.5232	6,412,015.5232	216.6994		6,417,433.0075
Total	**8,141.0232**	**10,499.4312**	**40,298.9980**	**131.1189**	**6,053.4785**	**3,168.5510**	**9,222.0295**	**1,621.0179**	**3,166.9636**	**4,787.9814**	**438,025.2754**	**8,173,573.1223**	**8,611,598.3978**	**2,318.2001**	**31.9011**	**8,679,059.9166**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	
2	Site Preparation	Site Preparation	7/1/2014	6/30/2014	5	0	
3	Grading	Grading	7/1/2014	6/30/2014	5	0	
4	Building Construction	Building Construction	7/1/2014	6/30/2014	5	0	
5	Paving	Paving	7/1/2014	6/30/2014	5	0	
6	Architectural Coating	Architectural Coating	7/1/2014	6/30/2014	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 340,385,085; Residential Outdoor: 113,461,695; Non-Residential Indoor: 26,827,950; Non-Residential Outdoor: 8,942,650; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Plan Bay Area 2040 Update - Alameda - New Land Uses - Alameda County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Plan Bay Area 2040 Update - Alameda - New Land Uses - Alameda County, Summer

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	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	99,382.00	18,400.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	19,876.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.3 Site Preparation - 2014

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	lb/day										lb/day					
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	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	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**

3.3 Site Preparation - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	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	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**

3.3 Site Preparation - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.4 Grading - 2014

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	lb/day										lb/day					
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	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	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**

3.4 Grading - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	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	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**

3.4 Grading - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.5 Building Construction - 2014

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	lb/day										lb/day					
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	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**

3.5 Building Construction - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	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**

3.5 Building Construction - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	lb/day										lb/day					
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	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.7 Architectural Coating - 2014

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	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	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	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**

3.7 Architectural Coating - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	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	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**

3.7 Architectural Coating - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	943.3332	8,699.0992	9,615.5830	62.4351	6,053.4785	24.4873	6,077.9658	1,621.0179	22.8999	1,643.9178		6,412,015.5232	6,412,015.5232	216.6994		6,417,433.0075
Unmitigated	943.3332	8,699.0992	9,615.5830	62.4351	6,053.4785	24.4873	6,077.9658	1,621.0179	22.8999	1,643.9178		6,412,015.5232	6,412,015.5232	216.6994		6,417,433.0075

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	136,722.60	162,113.94	118818.45	318,245,868	318,245,868
Apartments Low Rise	273,188.45	296,817.80	251631.85	631,641,930	631,641,930
Apartments Mid Rise	275,675.75	264,897.45	242926.30	622,341,009	622,341,009
General Office Building	197,274.75	43,997.81	18779.55	358,173,118	358,173,118
Single Family Housing	278,345.76	289,748.58	252031.56	637,949,480	637,949,480
Total	1,161,207.31	1,057,575.58	884,187.71	2,568,351,405	2,568,351,405

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
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Apartments High Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Apartments Low Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Apartments Mid Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Single Family Housing	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	30.8021	266.5326	136.3158	1.6801		21.2814	21.2814		21.2814	21.2814		336,022.7245	336,022.7245	6.4404	6.1604	338,019.5395
NaturalGas Unmitigated	30.8021	266.5326	136.3158	1.6801		21.2814	21.2814		21.2814	21.2814		336,022.7245	336,022.7245	6.4404	6.1604	338,019.5395

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	lb/day										lb/day					
Apartments High Rise	346555	3.7374	31.9374	13.5904	0.2039		2.5822	2.5822		2.5822	2.5822		40,771.1504	40,771.1504	0.7815	0.7475	41,013.4330
Apartments Low Rise	715535	7.7166	65.9415	28.0602	0.4209		5.3314	5.3314		5.3314	5.3314		84,180.5740	84,180.5740	1.6135	1.5433	84,680.8171
Apartments Mid Rise	441324	4.7594	40.6711	17.3068	0.2596		3.2883	3.2883		3.2883	3.2883		51,920.5002	51,920.5002	0.9951	0.9519	52,229.0377
General Office Building	563509	6.0771	55.2460	46.4067	0.3315		4.1987	4.1987		4.1987	4.1987		66,295.2297	66,295.2297	1.2707	1.2154	66,689.1891
Single Family Housing	789270	8.5117	72.7366	30.9518	0.4643		5.8808	5.8808		5.8808	5.8808		92,855.2702	92,855.2702	1.7797	1.7024	93,407.0627
Total		**30.8021**	**266.5326**	**136.3158**	**1.6801**		**21.2814**	**21.2814**		**21.2814**	**21.2814**		**336,022.7245**	**336,022.7245**	**6.4404**	**6.1604**	**338,019.5396**

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	lb/day										lb/day					
Apartments High Rise	346.555	3.7374	31.9374	13.5904	0.2039		2.5822	2.5822		2.5822	2.5822		40,771.1504	40,771.1504	0.7815	0.7475	41,013.4330
Apartments Low Rise	715.535	7.7166	65.9415	28.0602	0.4209		5.3314	5.3314		5.3314	5.3314		84,180.5740	84,180.5740	1.6135	1.5433	84,680.8171
Apartments Mid Rise	441.324	4.7594	40.6711	17.3068	0.2596		3.2883	3.2883		3.2883	3.2883		51,920.5002	51,920.5002	0.9951	0.9519	52,229.0377
General Office Building	563.509	6.0771	55.2460	46.4067	0.3315		4.1987	4.1987		4.1987	4.1987		66,295.2297	66,295.2297	1.2707	1.2154	66,689.1891
Single Family Housing	789.27	8.5117	72.7366	30.9518	0.4643		5.8808	5.8808		5.8808	5.8808		92,855.2702	92,855.2702	1.7797	1.7024	93,407.0627
Total		**30.8021**	**266.5326**	**136.3158**	**1.6801**		**21.2814**	**21.2814**		**21.2814**	**21.2814**		**336,022.7245**	**336,022.7245**	**6.4404**	**6.1604**	**338,019.5396**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7,166.8880	1,533.7995	30,547.0992	67.0037		3,122.7822	3,122.7822		3,122.7822	3,122.7822	438,025.2754	1,425,534.8747	1,863,560.1501	2,095.0603	25.7407	1,923,607.3696
Unmitigated	7,166.8880	1,533.7995	30,547.0992	67.0037		3,122.7822	3,122.7822		3,122.7822	3,122.7822	438,025.2754	1,425,534.8747	1,863,560.1501	2,095.0603	25.7407	1,923,607.3696

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	lb/day										lb/day					
Architectural Coating	699.4654					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3,979.9014					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2,131.8676	1,396.5927	18,659.7119	66.3732		3,056.5732	3,056.5732		3,056.5732	3,056.5732	438,025.2754	1,404,035.2941	1,842,060.5696	2,074.5898	25.7407	1,901,596.0276
Landscaping	355.6537	137.2068	11,887.3873	0.6305		66.2091	66.2091		66.2091	66.2091		21,499.5806	21,499.5806	20.4705		22,011.3419
Total	**7,166.8880**	**1,533.7995**	**30,547.0992**	**67.0037**		**3,122.7822**	**3,122.7822**		**3,122.7822**	**3,122.7822**	**438,025.2754**	**1,425,534.8747**	**1,863,560.1501**	**2,095.0603**	**25.7407**	**1,923,607.3696**

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	lb/day										lb/day					
Architectural Coating	699.4654					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3,979.9014					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2,131.8676	1,396.5927	18,659.7119	66.3732		3,056.5732	3,056.5732		3,056.5732	3,056.5732	438,025.2754	1,404,035.2941	1,842,060.5696	2,074.5898	25.7407	1,901,596.0276
Landscaping	355.6537	137.2068	11,887.3873	0.6305		66.2091	66.2091		66.2091	66.2091		21,499.5806	21,499.5806	20.4705		22,011.3419
Total	**7,166.8880**	**1,533.7995**	**30,547.0992**	**67.0037**		**3,122.7822**	**3,122.7822**		**3,122.7822**	**3,122.7822**	**438,025.2754**	**1,425,534.8747**	**1,863,560.1501**	**2,095.0603**	**25.7407**	**1,923,607.3696**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Alameda - Net Reduction in Land Uses

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	807.17	1000sqft	18.53	807,170.00	0
Regional Shopping Center	5,523.44	1000sqft	126.80	5,523,440.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Grading -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	220.00	0.00
tblConstructionPhase	NumDays	3,100.00	0.00
tblConstructionPhase	NumDays	200.00	0.00
tblConstructionPhase	NumDays	310.00	0.00
tblConstructionPhase	NumDays	220.00	0.00
tblConstructionPhase	NumDays	120.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Alameda - Net Reduction in Land Uses - Alameda County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	28.0312	5.8000e-004	0.0602	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	0.1131	0.1131	3.3000e-004	0.0000	0.1213
Energy	0.2629	2.3901	2.0077	0.0143		0.1816	0.1816		0.1816	0.1816	0.0000	18,151.4843	18,151.4843	1.0150	0.2264	18,244.3366
Mobile	110.2012	556.2202	1,133.8595	2.3470	153.9275	5.5473	159.4748	41.4374	5.2696	46.7069	0.0000	214,790.8520	214,790.8520	14.6191	0.0000	215,156.3287
Waste						0.0000	0.0000		0.0000	0.0000	1,380.4400	0.0000	1,380.4400	81.5817	0.0000	3,419.9818
Water						0.0000	0.0000		0.0000	0.0000	189.0177	809.2775	998.2952	19.4642	0.4677	1,624.2759
Total	**138.4953**	**558.6109**	**1,135.9273**	**2.3613**	**153.9275**	**5.7292**	**159.6567**	**41.4374**	**5.4514**	**46.8888**	**1,569.4577**	**233,751.7270**	**235,321.1847**	**116.6803**	**0.6941**	**238,445.0442**

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	28.0312	5.8000e-004	0.0602	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	0.1131	0.1131	3.3000e-004	0.0000	0.1213
Energy	0.2629	2.3901	2.0077	0.0143		0.1816	0.1816		0.1816	0.1816	0.0000	18,151.4843	18,151.4843	1.0150	0.2264	18,244.3366
Mobile	110.2012	556.2202	1,133.8595	2.3470	153.9275	5.5473	159.4748	41.4374	5.2696	46.7069	0.0000	214,790.8520	214,790.8520	14.6191	0.0000	215,156.3287
Waste						0.0000	0.0000		0.0000	0.0000	1,380.4400	0.0000	1,380.4400	81.5817	0.0000	3,419.9818
Water						0.0000	0.0000		0.0000	0.0000	189.0177	809.2775	998.2952	19.4642	0.4677	1,624.2759
Total	**138.4953**	**558.6109**	**1,135.9273**	**2.3613**	**153.9275**	**5.7292**	**159.6567**	**41.4374**	**5.4514**	**46.8888**	**1,569.4577**	**233,751.7270**	**235,321.1847**	**116.6803**	**0.6941**	**238,445.0442**

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

3.0 Construction Detail

Construction Phase

Plan Bay Area 2040 Update - Alameda - Net Reduction in Land Uses - Alameda County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	
2	Site Preparation	Site Preparation	7/1/2014	6/30/2014	5	0	
3	Grading	Grading	7/1/2014	6/30/2014	5	0	
4	Building Construction	Building Construction	7/1/2014	6/30/2014	5	0	
5	Paving	Paving	7/1/2014	6/30/2014	5	0	
6	Architectural Coating	Architectural Coating	7/1/2014	6/30/2014	5	0	

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: 9,495,915; Non-Residential Outdoor: 3,165,305; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Plan Bay Area 2040 Update - Alameda - Net Reduction in Land Uses - Alameda County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Plan Bay Area 2040 Update - Alameda - Net Reduction in Land Uses - Alameda County, Annual

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	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	2,107.00	1,038.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	421.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	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**

3.3 Site Preparation - 2014

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	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	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**

3.3 Site Preparation - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive 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	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	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**

3.3 Site Preparation - 2014

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	0.0000	0.0000	0.0000	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**

3.4 Grading - 2014

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	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	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**

3.4 Grading - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive 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	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	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**

3.4 Grading - 2014

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	0.0000	0.0000	0.0000	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**

3.5 Building Construction - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.5 Building Construction - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.5 Building Construction - 2014

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	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	0.0000	0.0000	0.0000	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**

3.7 Architectural Coating - 2014

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	0.0000	0.0000	0.0000	0.0000	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	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**

3.7 Architectural Coating - 2014

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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000	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	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**

3.7 Architectural Coating - 2014

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	0.0000	0.0000	0.0000	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**

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	110.2012	556.2202	1,133.8595	2.3470	153.9275	5.5473	159.4748	41.4374	5.2696	46.7069	0.0000	214,790.8520	214,790.8520	14.6191	0.0000	215,156.3287
Unmitigated	110.2012	556.2202	1,133.8595	2.3470	153.9275	5.5473	159.4748	41.4374	5.2696	46.7069	0.0000	214,790.8520	214,790.8520	14.6191	0.0000	215,156.3287

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	5,512.97	2,009.85	589.23	11,297,811	11,297,811
Regional Shopping Center	235,850.89	276,006.30	139411.63	399,420,964	399,420,964
Total	241,363.86	278,016.15	140,000.86	410,718,775	410,718,775

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.547438	0.047363	0.190248	0.115325	0.021763	0.005234	0.020654	0.039416	0.001932	0.003860	0.005630	0.000257	0.000879
Regional Shopping Center	0.547438	0.047363	0.190248	0.115325	0.021763	0.005234	0.020654	0.039416	0.001932	0.003860	0.005630	0.000257	0.000879

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	15,549.6119	15,549.6119	0.9652	0.1787	15,627.0025
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	15,549.6119	15,549.6119	0.9652	0.1787	15,627.0025
NaturalGas Mitigated	0.2629	2.3901	2.0077	0.0143		0.1816	0.1816		0.1816	0.1816	0.0000	2,601.8724	2,601.8724	0.0499	0.0477	2,617.3340
NaturalGas Unmitigated	0.2629	2.3901	2.0077	0.0143		0.1816	0.1816		0.1816	0.1816	0.0000	2,601.8724	2,601.8724	0.0499	0.0477	2,617.3340

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					
Industrial Park	1.90411e+007	0.1027	0.9334	0.7841	5.6000e-003		0.0709	0.0709		0.0709	0.0709	0.0000	1,016.1078	1,016.1078	0.0195	0.0186	1,022.1460
Regional Shopping Center	2.97161e+007	0.1602	1.4567	1.2236	8.7400e-003		0.1107	0.1107		0.1107	0.1107	0.0000	1,585.7647	1,585.7647	0.0304	0.0291	1,595.1881
Total		**0.2629**	**2.3901**	**2.0077**	**0.0143**		**0.1817**	**0.1817**		**0.1817**	**0.1817**	**0.0000**	**2,601.8724**	**2,601.8724**	**0.0499**	**0.0477**	**2,617.3340**

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					
Industrial Park	1.90411e+007	0.1027	0.9334	0.7841	5.6000e-003		0.0709	0.0709		0.0709	0.0709	0.0000	1,016.1078	1,016.1078	0.0195	0.0186	1,022.1460
Regional Shopping Center	2.97161e+007	0.1602	1.4567	1.2236	8.7400e-003		0.1107	0.1107		0.1107	0.1107	0.0000	1,585.7647	1,585.7647	0.0304	0.0291	1,595.1881
Total		**0.2629**	**2.3901**	**2.0077**	**0.0143**		**0.1817**	**0.1817**		**0.1817**	**0.1817**	**0.0000**	**2,601.8724**	**2,601.8724**	**0.0499**	**0.0477**	**2,617.3340**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	1.17524e+007	2,318.8966	0.1439	0.0267	2,330.4378
Regional Shopping Center	6.70546e+007	13,230.7153	0.8212	0.1521	13,296.5647
Total		**15,549.6119**	**0.9652**	**0.1787**	**15,627.0025**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	1.17524e+007	2,318.8966	0.1439	0.0267	2,330.4378
Regional Shopping Center	6.70546e+007	13,230.7153	0.8212	0.1521	13,296.5647
Total		**15,549.6119**	**0.9652**	**0.1787**	**15,627.0025**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	28.0312	5.8000e-004	0.0602	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	0.1131	0.1131	3.3000e-004	0.0000	0.1213
Unmitigated	28.0312	5.8000e-004	0.0602	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	0.1131	0.1131	3.3000e-004	0.0000	0.1213

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	3.3010					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	24.7242					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.9500e-003	5.8000e-004	0.0602	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	0.1131	0.1131	3.3000e-004	0.0000	0.1213
Total	**28.0312**	**5.8000e-004**	**0.0602**	**0.0000**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.1131**	**0.1131**	**3.3000e-004**	**0.0000**	**0.1213**

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	3.3010					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	24.7242					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.9500e-003	5.8000e-004	0.0602	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	0.1131	0.1131	3.3000e-004	0.0000	0.1213
Total	**28.0312**	**5.8000e-004**	**0.0602**	**0.0000**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.1131**	**0.1131**	**3.3000e-004**	**0.0000**	**0.1213**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	998.2952	19.4642	0.4677	1,624.2759
Unmitigated	998.2952	19.4642	0.4677	1,624.2759

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	186.658 / 0	258.5051	6.0946	0.1459	454.3507
Regional Shopping Center	409.135 / 250.76	739.7901	13.3695	0.3218	1,169.9252
Total		**998.2952**	**19.4642**	**0.4677**	**1,624.2759**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	186.658 / 0	258.5051	6.0946	0.1459	454.3507
Regional Shopping Center	409.135 / 250.76	739.7901	13.3695	0.3218	1,169.9252
Total		**998.2952**	**19.4642**	**0.4677**	**1,624.2759**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1,380.4400	81.5817	0.0000	3,419.9818
Unmitigated	1,380.4400	81.5817	0.0000	3,419.9818

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	1000.89	203.1716	12.0071	0.0000	503.3491
Regional Shopping Center	5799.61	1,177.2684	69.5746	0.0000	2,916.6327
Total		**1,380.4400**	**81.5817**	**0.0000**	**3,419.9818**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	1000.89	203.1716	12.0071	0.0000	503.3491
Regional Shopping Center	5799.61	1,177.2684	69.5746	0.0000	2,916.6327
Total		**1,380.4400**	**81.5817**	**0.0000**	**3,419.9818**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Alameda - Net Reduction in Land Uses

Alameda County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	807.17	1000sqft	18.53	807,170.00	0
Regional Shopping Center	5,523.44	1000sqft	126.80	5,523,440.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Grading -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	220.00	0.00
tblConstructionPhase	NumDays	3,100.00	0.00
tblConstructionPhase	NumDays	200.00	0.00
tblConstructionPhase	NumDays	310.00	0.00
tblConstructionPhase	NumDays	220.00	0.00
tblConstructionPhase	NumDays	120.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	16.2465	0.0000	0.0000	15.1548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**16.2465**	**0.0000**	**0.0000**	**15.1548**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	16.2465	0.0000	0.0000	15.1548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**16.2465**	**0.0000**	**0.0000**	**15.1548**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	153.6289	6.4700e-003	0.6686	5.0000e-005		2.4200e-003	2.4200e-003		2.4200e-003	2.4200e-003		1.3855	1.3855	4.0100e-003		1.4858
Energy	1.4406	13.0962	11.0008	0.0786		0.9953	0.9953		0.9953	0.9953		15,715.4706	15,715.4706	0.3012	0.2881	15,808.8598
Mobile	830.9860	3,588.4532	7,591.5543	16.5426	1,065.3180	36.8020	1,102.1201	285.8567	34.9580	320.8147		1,668,560.2146	1,668,560.2146	106.0833		1,671,212.2966
Total	**986.0555**	**3,601.5559**	**7,603.2237**	**16.6213**	**1,065.3180**	**37.7998**	**1,103.1178**	**285.8567**	**35.9557**	**321.8124**		**1,684,277.0707**	**1,684,277.0707**	**106.3885**	**0.2881**	**1,687,022.6421**

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	lb/day										lb/day					
Area	153.6289	6.4700e-003	0.6686	5.0000e-005		2.4200e-003	2.4200e-003		2.4200e-003	2.4200e-003		1.3855	1.3855	4.0100e-003		1.4858
Energy	1.4406	13.0962	11.0008	0.0786		0.9953	0.9953		0.9953	0.9953		15,715.4706	15,715.4706	0.3012	0.2881	15,808.8598
Mobile	830.9860	3,588.4532	7,591.5543	16.5426	1,065.3180	36.8020	1,102.1201	285.8567	34.9580	320.8147		1,668,560.2146	1,668,560.2146	106.0833		1,671,212.2966
Total	**986.0555**	**3,601.5559**	**7,603.2237**	**16.6213**	**1,065.3180**	**37.7998**	**1,103.1178**	**285.8567**	**35.9557**	**321.8124**		**1,684,277.0707**	**1,684,277.0707**	**106.3885**	**0.2881**	**1,687,022.6421**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	
2	Site Preparation	Site Preparation	7/1/2014	6/30/2014	5	0	
3	Grading	Grading	7/1/2014	6/30/2014	5	0	
4	Building Construction	Building Construction	7/1/2014	6/30/2014	5	0	
5	Paving	Paving	7/1/2014	6/30/2014	5	0	
6	Architectural Coating	Architectural Coating	7/1/2014	6/30/2014	5	0	

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: 9,495,915; Non-Residential Outdoor: 3,165,305; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Plan Bay Area 2040 Update - Alameda - Net Reduction in Land Uses - Alameda County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Plan Bay Area 2040 Update - Alameda - Net Reduction in Land Uses - Alameda County, Summer

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	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	2,107.00	1,038.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	421.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.3 Site Preparation - 2014

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	lb/day										lb/day					
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	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	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**

3.3 Site Preparation - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	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	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**

3.3 Site Preparation - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.4 Grading - 2014

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	lb/day										lb/day					
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	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	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**

3.4 Grading - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	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	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**

3.4 Grading - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.5 Building Construction - 2014

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	lb/day										lb/day					
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	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**

3.5 Building Construction - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	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**

3.5 Building Construction - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	lb/day										lb/day					
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	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	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**

3.6 Paving - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.7 Architectural Coating - 2014

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	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	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	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**

3.7 Architectural Coating - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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 On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	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	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**

3.7 Architectural Coating - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	830.9860	3,588.4532	7,591.5543	16.5426	1,065.3180	36.8020	1,102.1201	285.8567	34.9580	320.8147		1,668,560.2146	1,668,560.2146	106.0833		1,671,212.2966
Unmitigated	830.9860	3,588.4532	7,591.5543	16.5426	1,065.3180	36.8020	1,102.1201	285.8567	34.9580	320.8147		1,668,560.2146	1,668,560.2146	106.0833		1,671,212.2966

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	5,512.97	2,009.85	589.23	11,297,811	11,297,811
Regional Shopping Center	235,850.89	276,006.30	139411.63	399,420,964	399,420,964
Total	241,363.86	278,016.15	140,000.86	410,718,775	410,718,775

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.547438	0.047363	0.190248	0.115325	0.021763	0.005234	0.020654	0.039416	0.001932	0.003860	0.005630	0.000257	0.000879
Regional Shopping Center	0.547438	0.047363	0.190248	0.115325	0.021763	0.005234	0.020654	0.039416	0.001932	0.003860	0.005630	0.000257	0.000879

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.4406	13.0962	11.0008	0.0786		0.9953	0.9953		0.9953	0.9953		15,715.4706	15,715.4706	0.3012	0.2881	15,808.8598
NaturalGas Unmitigated	1.4406	13.0962	11.0008	0.0786		0.9953	0.9953		0.9953	0.9953		15,715.4706	15,715.4706	0.3012	0.2881	15,808.8598

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	lb/day										lb/day					
Industrial Park	52167.5	0.5626	5.1145	4.2962	0.0307		0.3887	0.3887		0.3887	0.3887		6,137.3538	6,137.3538	0.1176	0.1125	6,173.8251
Regional Shopping Center	81414	0.8780	7.9818	6.7047	0.0479		0.6066	0.6066		0.6066	0.6066		9,578.1167	9,578.1167	0.1836	0.1756	9,635.0347
Total		**1.4406**	**13.0962**	**11.0008**	**0.0786**		**0.9953**	**0.9953**		**0.9953**	**0.9953**		**15,715.4706**	**15,715.4706**	**0.3012**	**0.2881**	**15,808.8598**

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	lb/day										lb/day					
Industrial Park	52.1675	0.5626	5.1145	4.2962	0.0307		0.3887	0.3887		0.3887	0.3887		6,137.3538	6,137.3538	0.1176	0.1125	6,173.8251
Regional Shopping Center	81.414	0.8780	7.9818	6.7047	0.0479		0.6066	0.6066		0.6066	0.6066		9,578.1167	9,578.1167	0.1836	0.1756	9,635.0347
Total		**1.4406**	**13.0962**	**11.0008**	**0.0786**		**0.9953**	**0.9953**		**0.9953**	**0.9953**		**15,715.4706**	**15,715.4706**	**0.3012**	**0.2881**	**15,808.8598**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	153.6289	6.4700e-003	0.6686	5.0000e-005		2.4200e-003	2.4200e-003		2.4200e-003	2.4200e-003		1.3855	1.3855	4.0100e-003		1.4858
Unmitigated	153.6289	6.4700e-003	0.6686	5.0000e-005		2.4200e-003	2.4200e-003		2.4200e-003	2.4200e-003		1.3855	1.3855	4.0100e-003		1.4858

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	lb/day										lb/day					
Architectural Coating	18.0878					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	135.4751					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0661	6.4700e-003	0.6686	5.0000e-005		2.4200e-003	2.4200e-003		2.4200e-003	2.4200e-003		1.3855	1.3855	4.0100e-003		1.4858
Total	**153.6289**	**6.4700e-003**	**0.6686**	**5.0000e-005**		**2.4200e-003**	**2.4200e-003**		**2.4200e-003**	**2.4200e-003**		**1.3855**	**1.3855**	**4.0100e-003**		**1.4858**

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	lb/day										lb/day					
Architectural Coating	18.0878					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	135.4751					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0661	6.4700e-003	0.6686	5.0000e-005		2.4200e-003	2.4200e-003		2.4200e-003	2.4200e-003		1.3855	1.3855	4.0100e-003		1.4858
Total	**153.6289**	**6.4700e-003**	**0.6686**	**5.0000e-005**		**2.4200e-003**	**2.4200e-003**		**2.4200e-003**	**2.4200e-003**		**1.3855**	**1.3855**	**4.0100e-003**		**1.4858**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Contra Costa - New Land Uses

Contra Costa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	8,314.99	1000sqft	190.89	8,314,990.00	0
Apartments High Rise	5,357.00	Dwelling Unit	86.40	5,357,000.00	15321
Apartments Low Rise	19,491.50	Dwelling Unit	1,218.22	19,491,500.00	55746
Apartments Mid Rise	19,491.50	Dwelling Unit	512.93	19,491,500.00	55746
Single Family Housing	41,100.00	Dwelling Unit	13,344.16	73,980,000.00	117546

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.95	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Contra Costa - New Land Uses - Contra Costa County, Annual

Project Characteristics - 'Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards and ZNE standards assuming a linear growth in new construction between 2015 and 2040.

Plan Bay Area 2040 Update - Contra Costa - New Land Uses - Contra Costa County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblConstructionPhase	PhaseEndDate	10/28/2052	6/30/2014
tblEnergyUse	T24E	392.47	56.52
tblEnergyUse	T24E	431.22	62.10
tblEnergyUse	T24E	392.47	56.52
tblEnergyUse	T24E	6.40	3.65
tblEnergyUse	T24E	368.92	53.12
tblEnergyUse	T24NG	7,914.07	1,139.63
tblEnergyUse	T24NG	10,164.29	1,463.66
tblEnergyUse	T24NG	7,914.07	1,139.63
tblEnergyUse	T24NG	16.39	9.34
tblEnergyUse	T24NG	32,797.58	4,722.85
tblFireplaces	NumberGas	803.55	1,714.24
tblFireplaces	NumberGas	2,923.72	6,237.27
tblFireplaces	NumberGas	2,923.72	6,237.27
tblFireplaces	NumberGas	10,275.00	27,948.00
tblFireplaces	NumberWood	910.69	0.00
tblFireplaces	NumberWood	3,313.55	0.00
tblFireplaces	NumberWood	3,313.55	0.00
tblFireplaces	NumberWood	17,673.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.95
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2040

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					
2014					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum					**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

	ROG	NOx	CO	SO2	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					
2014					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Contra Costa - New Land Uses - Contra Costa County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	615.7323	13.9228	761.7070	0.4804		24.7801	24.7801		24.7801	24.7801	2,797.7854	6,296.7586	9,094.5439	14.1667	0.0964	9,477.4493
Energy	3.2282	27.8161	13.4247	0.1761		2.2304	2.2304		2.2304	2.2304	0.0000	120,658.4939	120,658.4939	5.9716	1.4789	121,248.5021
Mobile	80.1436	472.4941	952.2820	5.1837	636.1090	2.1866	638.2956	170.5392	2.0348	172.5740	0.0000	478,410.2112	478,410.2112	13.1750	0.0000	478,739.5849
Waste						0.0000	0.0000		0.0000	0.0000	15,731.5276	0.0000	15,731.5276	929.7067	0.0000	38,974.1938
Water						0.0000	0.0000		0.0000	0.0000	2,234.9311	7,240.1162	9,475.0473	229.9863	5.4931	16,861.6311
Total	**699.1040**	**514.2330**	**1,727.4137**	**5.8402**	**636.1090**	**29.1971**	**665.3061**	**170.5392**	**29.0453**	**199.5845**	**20,764.2441**	**612,605.5799**	**633,369.8240**	**1,193.0061**	**7.0684**	**665,301.3612**

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	615.7323	13.9228	761.7070	0.4804		24.7801	24.7801		24.7801	24.7801	2,797.7854	6,296.7586	9,094.5439	14.1667	0.0964	9,477.4493
Energy	3.2282	27.8161	13.4247	0.1761		2.2304	2.2304		2.2304	2.2304	0.0000	120,658.4939	120,658.4939	5.9716	1.4789	121,248.5021
Mobile	80.1436	472.4941	952.2820	5.1837	636.1090	2.1866	638.2956	170.5392	2.0348	172.5740	0.0000	478,410.2112	478,410.2112	13.1750	0.0000	478,739.5849
Waste						0.0000	0.0000		0.0000	0.0000	15,731.5276	0.0000	15,731.5276	929.7067	0.0000	38,974.1938
Water						0.0000	0.0000		0.0000	0.0000	2,234.9311	7,240.1162	9,475.0473	229.9863	5.4931	16,861.6311
Total	**699.1040**	**514.2330**	**1,727.4137**	**5.8402**	**636.1090**	**29.1971**	**665.3061**	**170.5392**	**29.0453**	**199.5845**	**20,764.2441**	**612,605.5799**	**633,369.8240**	**1,193.0061**	**7.0684**	**665,301.3612**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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

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				0.00	10.80	7.30				

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	80.1436	472.4941	952.2820	5.1837	636.1090	2.1866	638.2956	170.5392	2.0348	172.5740	0.0000	478,410.2112	478,410.2112	13.1750	0.0000	478,739.5849
Unmitigated	80.1436	472.4941	952.2820	5.1837	636.1090	2.1866	638.2956	170.5392	2.0348	172.5740	0.0000	478,410.2112	478,410.2112	13.1750	0.0000	478,739.5849

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	22,499.40	26,677.86	19553.05	52,371,306	52,371,306
Apartments Low Rise	128,448.99	139,559.14	118313.41	296,988,269	296,988,269
Apartments Mid Rise	129,618.48	124,550.69	114220.19	292,615,119	292,615,119
General Office Building	91,714.34	20,454.88	8730.74	166,517,059	166,517,059
Single Family Housing	391,272.00	407,301.00	354282.00	896,768,713	896,768,713
Total	763,553.20	718,543.56	615,099.38	1,705,260,466	1,705,260,466

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
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.610313	0.034164	0.184108	0.106158	0.010619	0.004825	0.011002	0.027530	0.001689	0.001441	0.005033	0.002507	0.000611
Apartments High Rise	0.610313	0.034164	0.184108	0.106158	0.010619	0.004825	0.011002	0.027530	0.001689	0.001441	0.005033	0.002507	0.000611
Apartments Low Rise	0.610313	0.034164	0.184108	0.106158	0.010619	0.004825	0.011002	0.027530	0.001689	0.001441	0.005033	0.002507	0.000611
Apartments Mid Rise	0.610313	0.034164	0.184108	0.106158	0.010619	0.004825	0.011002	0.027530	0.001689	0.001441	0.005033	0.002507	0.000611
Single Family Housing	0.610313	0.034164	0.184108	0.106158	0.010619	0.004825	0.011002	0.027530	0.001689	0.001441	0.005033	0.002507	0.000611

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Plan Bay Area 2040 Update - Contra Costa - New Land Uses - Contra Costa County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	88,710.6350	88,710.6350	5.3593	0.8932	89,110.7930
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	88,710.6350	88,710.6350	5.3593	0.8932	89,110.7930
NaturalGas Mitigated	3.2282	27.8161	13.4247	0.1761		2.2304	2.2304		2.2304	2.2304	0.0000	31,947.8589	31,947.8589	0.6123	0.5857	32,137.7091
NaturalGas Unmitigated	3.2282	27.8161	13.4247	0.1761		2.2304	2.2304		2.2304	2.2304	0.0000	31,947.8589	31,947.8589	0.6123	0.5857	32,137.7091

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					
Apartments High Rise	2.30063e+007	0.1241	1.0601	0.4511	6.7700e-003		0.0857	0.0857		0.0857	0.0857	0.0000	1,227.7055	1,227.7055	0.0235	0.0225	1,235.0012
Apartments Low Rise	9.00246e+007	0.4854	4.1482	1.7652	0.0265		0.3354	0.3354		0.3354	0.3354	0.0000	4,804.0561	4,804.0561	0.0921	0.0881	4,832.6042
Apartments Mid Rise	8.37088e+007	0.4514	3.8572	1.6414	0.0246		0.3119	0.3119		0.3119	0.3119	0.0000	4,467.0193	4,467.0193	0.0856	0.0819	4,493.5646
General Office Building	7.81609e+007	0.4215	3.8314	3.2184	0.0230		0.2912	0.2912		0.2912	0.2912	0.0000	4,170.9636	4,170.9636	0.0799	0.0765	4,195.7496
Single Family Housing	3.2378e+008	1.7459	14.9193	6.3486	0.0952		1.2062	1.2062		1.2062	1.2062	0.0000	17,278.1144	17,278.1144	0.3312	0.3168	17,380.7896
Total		**3.2282**	**27.8161**	**13.4247**	**0.1761**		**2.2304**	**2.2304**		**2.2304**	**2.2304**	**0.0000**	**31,947.8589**	**31,947.8589**	**0.6123**	**0.5857**	**32,137.7091**

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					
Apartments High Rise	2.30063e+007	0.1241	1.0601	0.4511	6.7700e-003		0.0857	0.0857		0.0857	0.0857	0.0000	1,227.7055	1,227.7055	0.0235	0.0225	1,235.0012
Apartments Low Rise	9.00246e+007	0.4854	4.1482	1.7652	0.0265		0.3354	0.3354		0.3354	0.3354	0.0000	4,804.0561	4,804.0561	0.0921	0.0881	4,832.6042
Apartments Mid Rise	8.37088e+007	0.4514	3.8572	1.6414	0.0246		0.3119	0.3119		0.3119	0.3119	0.0000	4,467.0193	4,467.0193	0.0856	0.0819	4,493.5646
General Office Building	7.81609e+007	0.4215	3.8314	3.2184	0.0230		0.2912	0.2912		0.2912	0.2912	0.0000	4,170.9636	4,170.9636	0.0799	0.0765	4,195.7496
Single Family Housing	3.2378e+008	1.7459	14.9193	6.3486	0.0952		1.2062	1.2062		1.2062	1.2062	0.0000	17,278.1144	17,278.1144	0.3312	0.3168	17,380.7896
Total		**3.2282**	**27.8161**	**13.4247**	**0.1761**		**2.2304**	**2.2304**		**2.2304**	**2.2304**	**0.0000**	**31,947.8589**	**31,947.8589**	**0.6123**	**0.5857**	**32,137.7091**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	2.18299e+007	2,950.2616	0.1782	0.0297	2,963.5697
Apartments Low Rise	8.36345e+007	11,303.0250	0.6829	0.1138	11,354.0110
Apartments Mid Rise	7.94283e+007	10,734.5573	0.6485	0.1081	10,782.9790
General Office Building	1.28633e+008	17,384.4588	1.0502	0.1750	17,462.8770
Single Family Housing	3.42871e+008	46,338.3323	2.7994	0.4666	46,547.3564
Total		**88,710.6350**	**5.3593**	**0.8932**	**89,110.7930**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	2.18299e+007	2,950.2616	0.1782	0.0297	2,963.5697
Apartments Low Rise	8.36345e+007	11,303.0250	0.6829	0.1138	11,354.0110
Apartments Mid Rise	7.94283e+007	10,734.5573	0.6485	0.1081	10,782.9790
General Office Building	1.28633e+008	17,384.4588	1.0502	0.1750	17,462.8770
Single Family Housing	3.42871e+008	46,338.3323	2.7994	0.4666	46,547.3564
Total		**88,710.6350**	**5.3593**	**0.8932**	**89,110.7930**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	615.7323	13.9228	761.7070	0.4804		24.7801	24.7801		24.7801	24.7801	2,797.7854	6,296.7586	9,094.5439	14.1667	0.0964	9,477.4493
Unmitigated	615.7323	13.9228	761.7070	0.4804		24.7801	24.7801		24.7801	24.7801	2,797.7854	6,296.7586	9,094.5439	14.1667	0.0964	9,477.4493

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	87.6260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	494.5730					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	14.6353	6.6316	130.0162	0.4469		21.2618	21.2618		21.2618	21.2618	2,797.7854	5,260.3258	8,058.1112	13.1799	0.0964	8,416.3476
Landscaping	18.8980	7.2912	631.6908	0.0335		3.5184	3.5184		3.5184	3.5184	0.0000	1,036.4328	1,036.4328	0.9868	0.0000	1,061.1017
Total	**615.7323**	**13.9228**	**761.7070**	**0.4804**		**24.7801**	**24.7801**		**24.7801**	**24.7801**	**2,797.7854**	**6,296.7586**	**9,094.5439**	**14.1667**	**0.0964**	**9,477.4493**

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	87.6260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	494.5730					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	14.6353	6.6316	130.0162	0.4469		21.2618	21.2618		21.2618	21.2618	2,797.7854	5,260.3258	8,058.1112	13.1799	0.0964	8,416.3476
Landscaping	18.8980	7.2912	631.6908	0.0335		3.5184	3.5184		3.5184	3.5184	0.0000	1,036.4328	1,036.4328	0.9868	0.0000	1,061.1017
Total	**615.7323**	**13.9228**	**761.7070**	**0.4804**		**24.7801**	**24.7801**		**24.7801**	**24.7801**	**2,797.7854**	**6,296.7586**	**9,094.5439**	**14.1667**	**0.0964**	**9,477.4493**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9,475.0473	229.9863	5.4931	16,861.6311
Unmitigated	9,475.0473	229.9863	5.4931	16,861.6311

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	349.03 / 220.041	470.0548	11.3949	0.2722	836.0307
Apartments Low Rise	1269.95 / 800.62	1,710.2991	41.4603	0.9903	3,041.9064
Apartments Mid Rise	1269.95 / 800.62	1,710.2991	41.4603	0.9903	3,041.9064
General Office Building	1477.85 / 905.782	1,978.0383	48.2471	1.1523	3,527.5890
Single Family Housing	2677.83 / 1688.2	3,606.3562	87.4237	2.0881	6,414.1986
Total		**9,475.0473**	**229.9863**	**5.4931**	**16,861.6311**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	349.03 / 220.041	470.0548	11.3949	0.2722	836.0307
Apartments Low Rise	1269.95 / 800.62	1,710.2991	41.4603	0.9903	3,041.9064
Apartments Mid Rise	1269.95 / 800.62	1,710.2991	41.4603	0.9903	3,041.9064
General Office Building	1477.85 / 905.782	1,978.0383	48.2471	1.1523	3,527.5890
Single Family Housing	2677.83 / 1688.2	3,606.3562	87.4237	2.0881	6,414.1986
Total		**9,475.0473**	**229.9863**	**5.4931**	**16,861.6311**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	15,731.5276	929.7067	0.0000	38,974.1938
Unmitigated	15,731.5276	929.7067	0.0000	38,974.1938

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	2464.22	500.2144	29.5618	0.0000	1,239.2600
Apartments Low Rise	8966.09	1,820.0352	107.5610	0.0000	4,509.0603
Apartments Mid Rise	8966.09	1,820.0352	107.5610	0.0000	4,509.0603
General Office Building	7732.94	1,569.7169	92.7676	0.0000	3,888.9073
Single Family Housing	49369.3	10,021.5258	592.2552	0.0000	24,827.9060
Total		**15,731.5276**	**929.7066**	**0.0000**	**38,974.1938**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	2464.22	500.2144	29.5618	0.0000	1,239.2600
Apartments Low Rise	8966.09	1,820.0352	107.5610	0.0000	4,509.0603
Apartments Mid Rise	8966.09	1,820.0352	107.5610	0.0000	4,509.0603
General Office Building	7732.94	1,569.7169	92.7676	0.0000	3,888.9073
Single Family Housing	49369.3	10,021.5258	592.2552	0.0000	24,827.9060
Total		**15,731.5276**	**929.7066**	**0.0000**	**38,974.1938**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Contra Costa - New Land Uses

Contra Costa County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	8,314.99	1000sqft	190.89	8,314,990.00	0
Apartments High Rise	5,357.00	Dwelling Unit	86.40	5,357,000.00	15321
Apartments Low Rise	19,491.50	Dwelling Unit	1,218.22	19,491,500.00	55746
Apartments Mid Rise	19,491.50	Dwelling Unit	512.93	19,491,500.00	55746
Single Family Housing	41,100.00	Dwelling Unit	13,344.16	73,980,000.00	117546

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.95	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Contra Costa - New Land Uses - Contra Costa County, Summer

Project Characteristics - 'Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards and ZNE standards assuming a linear growth in new construction between 2015 and 2040.

Plan Bay Area 2040 Update - Contra Costa - New Land Uses - Contra Costa County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblConstructionPhase	PhaseEndDate	10/28/2052	6/30/2014
tblEnergyUse	T24E	392.47	56.52
tblEnergyUse	T24E	431.22	62.10
tblEnergyUse	T24E	392.47	56.52
tblEnergyUse	T24E	6.40	3.65
tblEnergyUse	T24E	368.92	53.12
tblEnergyUse	T24NG	7,914.07	1,139.63
tblEnergyUse	T24NG	10,164.29	1,463.66
tblEnergyUse	T24NG	7,914.07	1,139.63
tblEnergyUse	T24NG	16.39	9.34
tblEnergyUse	T24NG	32,797.58	4,722.85
tblFireplaces	NumberGas	803.55	1,714.24
tblFireplaces	NumberGas	2,923.72	6,237.27
tblFireplaces	NumberGas	2,923.72	6,237.27
tblFireplaces	NumberGas	10,275.00	27,948.00
tblFireplaces	NumberWood	910.69	0.00
tblFireplaces	NumberWood	3,313.55	0.00
tblFireplaces	NumberWood	3,313.55	0.00
tblFireplaces	NumberWood	17,673.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.95
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2040

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	4,997.6511	1,119.0190	21,007.2189	50.0845		2,330.3792	2,330.3792		2,330.3792	2,330.3792	328,462.3394	1,053,720.4577	1,382,182.7971	1,567.5334	19.0855	1,427,058.6053
Energy	17.6887	152.4172	73.5597	0.9648		12.2213	12.2213		12.2213	12.2213		192,967.0479	192,967.0479	3.6985	3.5377	194,113.7545
Mobile	567.4343	2,764.4703	6,070.6236	32.8329	3,910.7834	12.9867	3,923.7701	1,045.4601	12.0848	1,057.5449		3,337,043.9618	3,337,043.9618	86.1561		3,339,197.8634
Total	**5,582.7741**	**4,035.9065**	**27,151.4022**	**83.8822**	**3,910.7834**	**2,355.5871**	**6,266.3705**	**1,045.4601**	**2,354.6852**	**3,400.1454**	**328,462.3394**	**4,583,731.4674**	**4,912,193.8067**	**1,657.3880**	**22.6232**	**4,960,370.2233**

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	lb/day										lb/day					
Area	4,997.6511	1,119.0190	21,007.2189	50.0845		2,330.3792	2,330.3792		2,330.3792	2,330.3792	328,462.3394	1,053,720.4577	1,382,182.7971	1,567.5334	19.0855	1,427,058.6053
Energy	17.6887	152.4172	73.5597	0.9648		12.2213	12.2213		12.2213	12.2213		192,967.0479	192,967.0479	3.6985	3.5377	194,113.7545
Mobile	567.4343	2,764.4703	6,070.6236	32.8329	3,910.7834	12.9867	3,923.7701	1,045.4601	12.0848	1,057.5449		3,337,043.9618	3,337,043.9618	86.1561		3,339,197.8634
Total	**5,582.7741**	**4,035.9065**	**27,151.4022**	**83.8822**	**3,910.7834**	**2,355.5871**	**6,266.3705**	**1,045.4601**	**2,354.6852**	**3,400.1454**	**328,462.3394**	**4,583,731.4674**	**4,912,193.8067**	**1,657.3880**	**22.6232**	**4,960,370.2233**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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

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				0.00	10.80	7.30				

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	567.4343	2,764.4703	6,070.6236	32.8329	3,910.7834	12.9867	3,923.7701	1,045.4601	12.0848	1,057.5449		3,337,043.9618	3,337,043.9618	86.1561		3,339,197.8634
Unmitigated	567.4343	2,764.4703	6,070.6236	32.8329	3,910.7834	12.9867	3,923.7701	1,045.4601	12.0848	1,057.5449		3,337,043.9618	3,337,043.9618	86.1561		3,339,197.8634

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	22,499.40	26,677.86	19553.05	52,371,306	52,371,306
Apartments Low Rise	128,448.99	139,559.14	118313.41	296,988,269	296,988,269
Apartments Mid Rise	129,618.48	124,550.69	114220.19	292,615,119	292,615,119
General Office Building	91,714.34	20,454.88	8730.74	166,517,059	166,517,059
Single Family Housing	391,272.00	407,301.00	354282.00	896,768,713	896,768,713
Total	763,553.20	718,543.56	615,099.38	1,705,260,466	1,705,260,466

4.3 Trip Type Information

Plan Bay Area 2040 Update - Contra Costa - New Land Uses - Contra Costa County, Summer

	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
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.610313	0.034164	0.184108	0.106158	0.010619	0.004825	0.011002	0.027530	0.001689	0.001441	0.005033	0.002507	0.000611
Apartments High Rise	0.610313	0.034164	0.184108	0.106158	0.010619	0.004825	0.011002	0.027530	0.001689	0.001441	0.005033	0.002507	0.000611
Apartments Low Rise	0.610313	0.034164	0.184108	0.106158	0.010619	0.004825	0.011002	0.027530	0.001689	0.001441	0.005033	0.002507	0.000611
Apartments Mid Rise	0.610313	0.034164	0.184108	0.106158	0.010619	0.004825	0.011002	0.027530	0.001689	0.001441	0.005033	0.002507	0.000611
Single Family Housing	0.610313	0.034164	0.184108	0.106158	0.010619	0.004825	0.011002	0.027530	0.001689	0.001441	0.005033	0.002507	0.000611

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	17.6887	152.4172	73.5597	0.9648		12.2213	12.2213		12.2213	12.2213		192,967.0479	192,967.0479	3.6985	3.5377	194,113.7545
NaturalGas Unmitigated	17.6887	152.4172	73.5597	0.9648		12.2213	12.2213		12.2213	12.2213		192,967.0479	192,967.0479	3.6985	3.5377	194,113.7545

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	lb/day										lb/day					
Apartments High Rise	63031	0.6798	5.8087	2.4718	0.0371		0.4696	0.4696		0.4696	0.4696		7,415.4175	7,415.4175	0.1421	0.1360	7,459.4837
Apartments Low Rise	246643	2.6599	22.7298	9.6723	0.1451		1.8377	1.8377		1.8377	1.8377		29,016.7966	29,016.7966	0.5562	0.5320	29,189.2289
Apartments Mid Rise	229339	2.4733	21.1352	8.9937	0.1349		1.7088	1.7088		1.7088	1.7088		26,981.0735	26,981.0735	0.5171	0.4947	27,141.4086
General Office Building	214139	2.3094	20.9941	17.6350	0.1260		1.5956	1.5956		1.5956	1.5956		25,192.8787	25,192.8787	0.4829	0.4619	25,342.5873
Single Family Housing	887067	9.5664	81.7494	34.7870	0.5218		6.6095	6.6095		6.6095	6.6095		104,360.8816	104,360.8816	2.0003	1.9133	104,981.0461
Total		**17.6887**	**152.4172**	**73.5598**	**0.9648**		**12.2212**	**12.2212**		**12.2212**	**12.2212**		**192,967.0479**	**192,967.0479**	**3.6985**	**3.5377**	**194,113.7545**

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	lb/day										lb/day					
Apartments High Rise	63.031	0.6798	5.8087	2.4718	0.0371		0.4696	0.4696		0.4696	0.4696		7,415.4175	7,415.4175	0.1421	0.1360	7,459.4837
Apartments Low Rise	246.643	2.6599	22.7298	9.6723	0.1451		1.8377	1.8377		1.8377	1.8377		29,016.7966	29,016.7966	0.5562	0.5320	29,189.2289
Apartments Mid Rise	229.339	2.4733	21.1352	8.9937	0.1349		1.7088	1.7088		1.7088	1.7088		26,981.0735	26,981.0735	0.5171	0.4947	27,141.4086
General Office Building	214.139	2.3094	20.9941	17.6350	0.1260		1.5956	1.5956		1.5956	1.5956		25,192.8787	25,192.8787	0.4829	0.4619	25,342.5873
Single Family Housing	887.067	9.5664	81.7494	34.7870	0.5218		6.6095	6.6095		6.6095	6.6095		104,360.8816	104,360.8816	2.0003	1.9133	104,981.0461
Total		**17.6887**	**152.4172**	**73.5598**	**0.9648**		**12.2212**	**12.2212**		**12.2212**	**12.2212**		**192,967.0479**	**192,967.0479**	**3.6985**	**3.5377**	**194,113.7545**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4,997.6511	1,119.0190	21,007.2189	50.0845		2,330.3792	2,330.3792		2,330.3792	2,330.3792	328,462.3394	1,053,720.4577	1,382,182.7971	1,567.5334	19.0855	1,427,058.6053
Unmitigated	4,997.6511	1,119.0190	21,007.2189	50.0845		2,330.3792	2,330.3792		2,330.3792	2,330.3792	328,462.3394	1,053,720.4577	1,382,182.7971	1,567.5334	19.0855	1,427,058.6053

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	lb/day										lb/day					
Architectural Coating	480.1425					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2,709.9888					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,597.5418	1,038.0061	13,988.4325	49.7122		2,291.2863	2,291.2863		2,291.2863	2,291.2863	328,462.3394	1,041,026.3294	1,369,488.6688	1,555.4477	19.0855	1,414,062.3347
Landscaping	209.9780	81.0129	7,018.7864	0.3723		39.0929	39.0929		39.0929	39.0929		12,694.1283	12,694.1283	12.0857		12,996.2707
Total	**4,997.6511**	**1,119.0190**	**21,007.2189**	**50.0845**		**2,330.3792**	**2,330.3792**		**2,330.3792**	**2,330.3792**	**328,462.3394**	**1,053,720.4577**	**1,382,182.7971**	**1,567.5334**	**19.0855**	**1,427,058.6053**

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	lb/day										lb/day					
Architectural Coating	480.1425					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2,709.9888					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,597.5418	1,038.0061	13,988.4325	49.7122		2,291.2863	2,291.2863		2,291.2863	2,291.2863	328,462.3394	1,041,026.3294	1,369,488.6688	1,555.4477	19.0855	1,414,062.3347
Landscaping	209.9780	81.0129	7,018.7864	0.3723		39.0929	39.0929		39.0929	39.0929		12,694.1283	12,694.1283	12.0857		12,996.2707
Total	**4,997.6511**	**1,119.0190**	**21,007.2189**	**50.0845**		**2,330.3792**	**2,330.3792**		**2,330.3792**	**2,330.3792**	**328,462.3394**	**1,053,720.4577**	**1,382,182.7971**	**1,567.5334**	**19.0855**	**1,427,058.6053**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Contra Costa - Net Reduction in Land Uses

Contra Costa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Regional Shopping Center	84.00	1000sqft	1.93	84,000.00	0
Industrial Park	840.75	1000sqft	19.30	840,750.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled

Grading -

Off-road Equipment -

Energy Use - Using Historical Data for reduced land uses

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Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Parking	150.00	0.00
tblConstructionPhase	NumDays	20.00	1.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

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					
2011	10.7162	1.9700e-003	3.7900e-003	1.0000e-005	3.0000e-004	1.6000e-004	4.6000e-004	8.0000e-005	1.6000e-004	2.4000e-004	0.0000	0.4493	0.4493	4.0000e-005	0.0000	0.4504
Maximum	**10.7162**	**1.9700e-003**	**3.7900e-003**	**1.0000e-005**	**3.0000e-004**	**1.6000e-004**	**4.6000e-004**	**8.0000e-005**	**1.6000e-004**	**2.4000e-004**	**0.0000**	**0.4493**	**0.4493**	**4.0000e-005**	**0.0000**	**0.4504**

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					
2011	10.7162	1.9700e-003	3.7900e-003	1.0000e-005	3.0000e-004	1.6000e-004	4.6000e-004	8.0000e-005	1.6000e-004	2.4000e-004	0.0000	0.4493	0.4493	4.0000e-005	0.0000	0.4504
Maximum	**10.7162**	**1.9700e-003**	**3.7900e-003**	**1.0000e-005**	**3.0000e-004**	**1.6000e-004**	**4.6000e-004**	**8.0000e-005**	**1.6000e-004**	**2.4000e-004**	**0.0000**	**0.4493**	**0.4493**	**4.0000e-005**	**0.0000**	**0.4504**

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

Plan Bay Area 2040 Update - Contra Costa - Net Reduction in Land Uses - Contra Costa County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	4.0947	9.0000e-005	8.7900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0165	0.0165	5.0000e-005	0.0000	0.0177
Energy	0.0918	0.8346	0.7011	5.0100e-003		0.0634	0.0634		0.0634	0.0634	0.0000	4,524.0120	4,524.0120	0.2418	0.0582	4,547.4053
Mobile	3.8447	15.0520	44.3468	0.0916	6.6709	0.1591	6.8300	1.7914	0.1507	1.9421	0.0000	8,337.4409	8,337.4409	0.4395	0.0000	8,348.4289
Waste						0.0000	0.0000		0.0000	0.0000	229.5280	0.0000	229.5280	13.5647	0.0000	568.6458
Water						0.0000	0.0000		0.0000	0.0000	63.6556	216.8546	280.5102	6.5515	0.1569	491.0448
Total	**8.0312**	**15.8868**	**45.0566**	**0.0967**	**6.6709**	**0.2225**	**6.8934**	**1.7914**	**0.2142**	**2.0055**	**293.1835**	**13,078.3240**	**13,371.5076**	**20.7976**	**0.2151**	**13,955.5426**

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	4.0947	9.0000e-005	8.7900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0165	0.0165	5.0000e-005	0.0000	0.0177
Energy	0.0918	0.8346	0.7011	5.0100e-003		0.0634	0.0634		0.0634	0.0634	0.0000	4,524.0120	4,524.0120	0.2418	0.0582	4,547.4053
Mobile	3.8447	15.0520	44.3468	0.0916	6.6709	0.1591	6.8300	1.7914	0.1507	1.9421	0.0000	8,337.4409	8,337.4409	0.4395	0.0000	8,348.4289
Waste						0.0000	0.0000		0.0000	0.0000	229.5280	0.0000	229.5280	13.5647	0.0000	568.6458
Water						0.0000	0.0000		0.0000	0.0000	63.6556	216.8546	280.5102	6.5515	0.1569	491.0448
Total	**8.0312**	**15.8868**	**45.0566**	**0.0967**	**6.6709**	**0.2225**	**6.8934**	**1.7914**	**0.2142**	**2.0055**	**293.1835**	**13,078.3240**	**13,371.5076**	**20.7976**	**0.2151**	**13,955.5426**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/2/2011	1/3/2011	5	1	

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: 1,387,125; Non-Residential Outdoor: 462,375; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	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
Architectural Coating	1	76.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2011

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	10.7155					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8000e-004	1.6900e-003	9.9000e-004	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	0.1277	0.1277	2.0000e-005	0.0000	0.1282
Total	**10.7158**	**1.6900e-003**	**9.9000e-004**	**0.0000**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**	**0.0000**	**0.1277**	**0.1277**	**2.0000e-005**	**0.0000**	**0.1282**

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	3.3000e-004	2.9000e-004	2.7900e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.3216	0.3216	2.0000e-005	0.0000	0.3221
Total	**3.3000e-004**	**2.9000e-004**	**2.7900e-003**	**0.0000**	**3.0000e-004**	**0.0000**	**3.0000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.3216**	**0.3216**	**2.0000e-005**	**0.0000**	**0.3221**

3.2 Architectural Coating - 2011

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	10.7155					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8000e-004	1.6900e-003	9.9000e-004	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	0.1277	0.1277	2.0000e-005	0.0000	0.1282
Total	**10.7158**	**1.6900e-003**	**9.9000e-004**	**0.0000**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**	**0.0000**	**0.1277**	**0.1277**	**2.0000e-005**	**0.0000**	**0.1282**

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	3.3000e-004	2.9000e-004	2.7900e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.3216	0.3216	2.0000e-005	0.0000	0.3221
Total	**3.3000e-004**	**2.9000e-004**	**2.7900e-003**	**0.0000**	**3.0000e-004**	**0.0000**	**3.0000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.3216**	**0.3216**	**2.0000e-005**	**0.0000**	**0.3221**

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	3.8447	15.0520	44.3468	0.0916	6.6709	0.1591	6.8300	1.7914	0.1507	1.9421	0.0000	8,337.4409	8,337.4409	0.4395	0.0000	8,348.4289
Unmitigated	3.8447	15.0520	44.3468	0.0916	6.6709	0.1591	6.8300	1.7914	0.1507	1.9421	0.0000	8,337.4409	8,337.4409	0.4395	0.0000	8,348.4289

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	5,742.32	2,093.47	613.75	11,767,824	11,767,824
Regional Shopping Center	3,586.80	4,197.48	2120.16	6,074,360	6,074,360
Total	9,329.12	6,290.95	2,733.91	17,842,184	17,842,184

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Regional Shopping Center	0.541884	0.047901	0.190388	0.144410	0.023837	0.005291	0.011169	0.021845	0.001497	0.002070	0.005874	0.002682	0.001153
Industrial Park	0.541884	0.047901	0.190388	0.144410	0.023837	0.005291	0.011169	0.021845	0.001497	0.002070	0.005874	0.002682	0.001153

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,615.4051	3,615.4051	0.2244	0.0416	3,633.3991
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,615.4051	3,615.4051	0.2244	0.0416	3,633.3991
NaturalGas Mitigated	0.0918	0.8346	0.7011	5.0100e-003		0.0634	0.0634		0.0634	0.0634	0.0000	908.6069	908.6069	0.0174	0.0167	914.0063
NaturalGas Unmitigated	0.0918	0.8346	0.7011	5.0100e-003		0.0634	0.0634		0.0634	0.0634	0.0000	908.6069	908.6069	0.0174	0.0167	914.0063

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					
Industrial Park	1.67814e+007	0.0905	0.8226	0.6910	4.9400e-003		0.0625	0.0625		0.0625	0.0625	0.0000	895.5178	895.5178	0.0172	0.0164	900.8394
Regional Shopping Center	245280	1.3200e-003	0.0120	0.0101	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0891	13.0891	2.5000e-004	2.4000e-004	13.1669
Total		**0.0918**	**0.8346**	**0.7011**	**5.0100e-003**		**0.0634**	**0.0634**		**0.0634**	**0.0634**	**0.0000**	**908.6069**	**908.6069**	**0.0174**	**0.0167**	**914.0063**

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					
Industrial Park	1.67814e+007	0.0905	0.8226	0.6910	4.9400e-003		0.0625	0.0625		0.0625	0.0625	0.0000	895.5178	895.5178	0.0172	0.0164	900.8394
Regional Shopping Center	245280	1.3200e-003	0.0120	0.0101	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0891	13.0891	2.5000e-004	2.4000e-004	13.1669
Total		**0.0918**	**0.8346**	**0.7011**	**5.0100e-003**		**0.0634**	**0.0634**		**0.0634**	**0.0634**	**0.0000**	**908.6069**	**908.6069**	**0.0174**	**0.0167**	**914.0063**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	1.72942e+007	3,412.3704	0.2118	0.0392	3,429.3538
Regional Shopping Center	1.029e+006	203.0348	0.0126	2.3300e-003	204.0453
Total		**3,615.4051**	**0.2244**	**0.0416**	**3,633.3991**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	1.72942e+007	3,412.3704	0.2118	0.0392	3,429.3538
Regional Shopping Center	1.029e+006	203.0348	0.0126	2.3300e-003	204.0453
Total		**3,615.4051**	**0.2244**	**0.0416**	**3,633.3991**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.0947	9.0000e-005	8.7900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0165	0.0165	5.0000e-005	0.0000	0.0177
Unmitigated	4.0947	9.0000e-005	8.7900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0165	0.0165	5.0000e-005	0.0000	0.0177

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	0.4822					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.6116					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.7000e-004	9.0000e-005	8.7900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0165	0.0165	5.0000e-005	0.0000	0.0177
Total	**4.0947**	**9.0000e-005**	**8.7900e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0165**	**0.0165**	**5.0000e-005**	**0.0000**	**0.0177**

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	0.4822					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.6116					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.7000e-004	9.0000e-005	8.7900e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0165	0.0165	5.0000e-005	0.0000	0.0177
Total	**4.0947**	**9.0000e-005**	**8.7900e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0165**	**0.0165**	**5.0000e-005**	**0.0000**	**0.0177**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	280.5102	6.5515	0.1569	491.0448
Unmitigated	280.5102	6.5515	0.1569	491.0448

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	194.423 / 0	269.2595	6.3482	0.1520	473.2527
Regional Shopping Center	6.22209 / 3.81354	11.2507	0.2033	4.8900e-003	17.7921
Total		**280.5102**	**6.5515**	**0.1569**	**491.0448**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	194.423 / 0	269.2595	6.3482	0.1520	473.2527
Regional Shopping Center	6.22209 / 3.81354	11.2507	0.2033	4.8900e-003	17.7921
Total		**280.5102**	**6.5515**	**0.1569**	**491.0448**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	229.5280	13.5647	0.0000	568.6458
Unmitigated	229.5280	13.5647	0.0000	568.6458

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	1042.53	211.6242	12.5066	0.0000	524.2899
Regional Shopping Center	88.2	17.9038	1.0581	0.0000	44.3559
Total		**229.5280**	**13.5647**	**0.0000**	**568.6458**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	1042.53	211.6242	12.5066	0.0000	524.2899
Regional Shopping Center	88.2	17.9038	1.0581	0.0000	44.3559
Total		**229.5280**	**13.5647**	**0.0000**	**568.6458**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Contra Costa - Net Reduction in Land Uses

Contra Costa County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Regional Shopping Center	84.00	1000sqft	1.93	84,000.00	0
Industrial Park	840.75	1000sqft	19.30	840,750.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled

Grading -

Off-road Equipment -

Energy Use - Using Historical Data for reduced land uses

Plan Bay Area 2040 Update - Contra Costa - Net Reduction in Land Uses - Contra Costa County, Summer

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Parking	150.00	0.00
tblConstructionPhase	NumDays	20.00	1.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2011	21,432.3378	3.8855	8.0627	0.0108	0.6243	0.3171	0.9415	0.1656	0.3166	0.4822	0.0000	1,053.1990	1,053.1990	0.0977	0.0000	1,055.6408
Maximum	**21,432.3378**	**3.8855**	**8.0627**	**0.0108**	**0.6243**	**0.3171**	**0.9415**	**0.1656**	**0.3166**	**0.4822**	**0.0000**	**1,053.1990**	**1,053.1990**	**0.0977**	**0.0000**	**1,055.6408**

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	lb/day										lb/day					
2011	21,432.3378	3.8855	8.0627	0.0108	0.6243	0.3171	0.9415	0.1656	0.3166	0.4822	0.0000	1,053.1990	1,053.1990	0.0977	0.0000	1,055.6408
Maximum	**21,432.3378**	**3.8855**	**8.0627**	**0.0108**	**0.6243**	**0.3171**	**0.9415**	**0.1656**	**0.3166**	**0.4822**	**0.0000**	**1,053.1990**	**1,053.1990**	**0.0977**	**0.0000**	**1,055.6408**

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

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	lb/day										lb/day					
Area	22.4415	9.5000e-004	0.0977	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.9000e-004		0.2170
Energy	0.5031	4.5734	3.8416	0.0274		0.3476	0.3476		0.3476	0.3476		5,488.0419	5,488.0419	0.1052	0.1006	5,520.6546
Mobile	30.7312	99.3344	319.6890	0.6782	47.6640	1.0932	48.7571	12.7623	1.0355	13.7978		68,002.7642	68,002.7642	3.3883		68,087.4719
Total	**53.6758**	**103.9088**	**323.6283**	**0.7057**	**47.6640**	**1.4411**	**49.1051**	**12.7623**	**1.3834**	**14.1457**		**73,491.0084**	**73,491.0084**	**3.4941**	**0.1006**	**73,608.3436**

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	lb/day										lb/day					
Area	22.4415	9.5000e-004	0.0977	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.9000e-004		0.2170
Energy	0.5031	4.5734	3.8416	0.0274		0.3476	0.3476		0.3476	0.3476		5,488.0419	5,488.0419	0.1052	0.1006	5,520.6546
Mobile	30.7312	99.3344	319.6890	0.6782	47.6640	1.0932	48.7571	12.7623	1.0355	13.7978		68,002.7642	68,002.7642	3.3883		68,087.4719
Total	**53.6758**	**103.9088**	**323.6283**	**0.7057**	**47.6640**	**1.4411**	**49.1051**	**12.7623**	**1.3834**	**14.1457**		**73,491.0084**	**73,491.0084**	**3.4941**	**0.1006**	**73,608.3436**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/2/2011	1/3/2011	5	1	

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: 1,387,125; Non-Residential Outdoor: 462,375; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	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
Architectural Coating	1	76.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2011

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	lb/day										lb/day					
Archit. Coating	21,431.0813					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5646	3.3702	1.9835	2.9700e-003		0.3100	0.3100		0.3100	0.3100		281.4481	281.4481	0.0505		282.7109
Total	**21,431.6458**	**3.3702**	**1.9835**	**2.9700e-003**		**0.3100**	**0.3100**		**0.3100**	**0.3100**		**281.4481**	**281.4481**	**0.0505**		**282.7109**

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	lb/day										lb/day					
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
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
Worker	0.6919	0.5153	6.0792	7.8100e-003	0.6243	7.1000e-003	0.6314	0.1656	6.5800e-003	0.1722		771.7510	771.7510	0.0472		772.9298
Total	**0.6919**	**0.5153**	**6.0792**	**7.8100e-003**	**0.6243**	**7.1000e-003**	**0.6314**	**0.1656**	**6.5800e-003**	**0.1722**		**771.7510**	**771.7510**	**0.0472**		**772.9298**

3.2 Architectural Coating - 2011

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	lb/day										lb/day					
Archit. Coating	21,431.0813					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5646	3.3702	1.9835	2.9700e-003		0.3100	0.3100		0.3100	0.3100	0.0000	281.4481	281.4481	0.0505		282.7109
Total	**21,431.6458**	**3.3702**	**1.9835**	**2.9700e-003**		**0.3100**	**0.3100**		**0.3100**	**0.3100**	**0.0000**	**281.4481**	**281.4481**	**0.0505**		**282.7109**

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	lb/day										lb/day					
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
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
Worker	0.6919	0.5153	6.0792	7.8100e-003	0.6243	7.1000e-003	0.6314	0.1656	6.5800e-003	0.1722		771.7510	771.7510	0.0472		772.9298
Total	**0.6919**	**0.5153**	**6.0792**	**7.8100e-003**	**0.6243**	**7.1000e-003**	**0.6314**	**0.1656**	**6.5800e-003**	**0.1722**		**771.7510**	**771.7510**	**0.0472**		**772.9298**

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	lb/day										lb/day					
Mitigated	30.7312	99.3344	319.6890	0.6782	47.6640	1.0932	48.7571	12.7623	1.0355	13.7978		68,002.7642	68,002.7642	3.3883		68,087.4719
Unmitigated	30.7312	99.3344	319.6890	0.6782	47.6640	1.0932	48.7571	12.7623	1.0355	13.7978		68,002.7642	68,002.7642	3.3883		68,087.4719

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	5,742.32	2,093.47	613.75	11,767,824	11,767,824
Regional Shopping Center	3,586.80	4,197.48	2120.16	6,074,360	6,074,360
Total	9,329.12	6,290.95	2,733.91	17,842,184	17,842,184

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Plan Bay Area 2040 Update - Contra Costa - Net Reduction in Land Uses - Contra Costa County, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Regional Shopping Center	0.541884	0.047901	0.190388	0.144410	0.023837	0.005291	0.011169	0.021845	0.001497	0.002070	0.005874	0.002682	0.001153
Industrial Park	0.541884	0.047901	0.190388	0.144410	0.023837	0.005291	0.011169	0.021845	0.001497	0.002070	0.005874	0.002682	0.001153

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.5031	4.5734	3.8416	0.0274		0.3476	0.3476		0.3476	0.3476		5,488.0419	5,488.0419	0.1052	0.1006	5,520.6546
NaturalGas Unmitigated	0.5031	4.5734	3.8416	0.0274		0.3476	0.3476		0.3476	0.3476		5,488.0419	5,488.0419	0.1052	0.1006	5,520.6546

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	lb/day										lb/day					
Industrial Park	45976.4	0.4958	4.5075	3.7863	0.0270		0.3426	0.3426		0.3426	0.3426		5,408.9831	5,408.9831	0.1037	0.0992	5,441.1260
Regional Shopping Center	672	7.2500e-003	0.0659	0.0553	4.0000e-004		5.0100e-003	5.0100e-003		5.0100e-003	5.0100e-003		79.0588	79.0588	1.5200e-003	1.4500e-003	79.5286
Total		**0.5031**	**4.5734**	**3.8416**	**0.0274**		**0.3476**	**0.3476**		**0.3476**	**0.3476**		**5,488.0419**	**5,488.0419**	**0.1052**	**0.1006**	**5,520.6546**

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	lb/day										lb/day					
Industrial Park	45.9764	0.4958	4.5075	3.7863	0.0270		0.3426	0.3426		0.3426	0.3426		5,408.9831	5,408.9831	0.1037	0.0992	5,441.1260
Regional Shopping Center	0.672	7.2500e-003	0.0659	0.0553	4.0000e-004		5.0100e-003	5.0100e-003		5.0100e-003	5.0100e-003		79.0588	79.0588	1.5200e-003	1.4500e-003	79.5286
Total		**0.5031**	**4.5734**	**3.8416**	**0.0274**		**0.3476**	**0.3476**		**0.3476**	**0.3476**		**5,488.0419**	**5,488.0419**	**0.1052**	**0.1006**	**5,520.6546**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	22.4415	9.5000e-004	0.0977	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.9000e-004		0.2170
Unmitigated	22.4415	9.5000e-004	0.0977	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.9000e-004		0.2170

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	lb/day										lb/day					
Architectural Coating	2.6422					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	19.7897					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.6600e-003	9.5000e-004	0.0977	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.9000e-004		0.2170
Total	**22.4415**	**9.5000e-004**	**0.0977**	**1.0000e-005**		**3.5000e-004**	**3.5000e-004**		**3.5000e-004**	**3.5000e-004**		**0.2024**	**0.2024**	**5.9000e-004**		**0.2170**

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	lb/day										lb/day					
Architectural Coating	2.6422					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	19.7897					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.6600e-003	9.5000e-004	0.0977	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.9000e-004		0.2170
Total	**22.4415**	**9.5000e-004**	**0.0977**	**1.0000e-005**		**3.5000e-004**	**3.5000e-004**		**3.5000e-004**	**3.5000e-004**		**0.2024**	**0.2024**	**5.9000e-004**		**0.2170**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Marin - New Land Uses

Marin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	448.00	Dwelling Unit	28.00	448,000.00	1281
Apartments Mid Rise	448.00	Dwelling Unit	11.79	448,000.00	1281
Single Family Housing	2,031.00	Dwelling Unit	659.42	3,655,800.00	5809

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	69
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	119.18	**CH4 Intensity (lb/MWhr)**	0.007	**N2O Intensity (lb/MWhr)**	0.001

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Marin - New Land Uses - Marin County, Annual

Project Characteristics - 'Marin Clean Energy emission factor based on an 80% renewable mix per MCE's implementation plan. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards and ZNE standards assuming a linear growth in new construction between 2015 and 2040.

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Plan Bay Area 2040 Update - Marin - New Land Uses - Marin County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	700.00	0.00
tblEnergyUse	T24E	274.84	39.58
tblEnergyUse	T24E	502.89	72.42
tblEnergyUse	T24E	246.52	35.50
tblEnergyUse	T24NG	25,590.91	3,865.09
tblEnergyUse	T24NG	8,824.58	1,270.74
tblEnergyUse	T24NG	50,264.25	7,238.05
tblFireplaces	NumberGas	67.20	143.36
tblFireplaces	NumberGas	67.20	143.36
tblFireplaces	NumberGas	507.75	1,381.08
tblFireplaces	NumberWood	76.16	0.00
tblFireplaces	NumberWood	76.16	0.00
tblFireplaces	NumberWood	873.33	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.007
tblProjectCharacteristics	CO2IntensityFactor	641.35	119.18
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.001
tblProjectCharacteristics	OperationalYear	2018	2040

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Marin - New Land Uses - Marin County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	22.2446	0.5177	27.1190	0.0199		1.0167	1.0167		1.0167	1.0167	118.0561	243.7080	361.7640	0.5897	3.8200e-003	377.6433
Energy	0.1330	1.1361	0.4834	7.2500e-003		0.0919	0.0919		0.0919	0.0919	0.0000	2,432.1642	2,432.1642	0.0908	0.0335	2,444.4138
Mobile	2.7630	10.2463	31.9705	0.1619	21.3463	0.0760	21.4223	5.7150	0.0707	5.7857	0.0000	14,889.4754	14,889.4754	0.4033	0.0000	14,899.5576
Waste						0.0000	0.0000		0.0000	0.0000	578.9181	0.0000	578.9181	34.2131	0.0000	1,434.2450
Water						0.0000	0.0000		0.0000	0.0000	60.5022	78.5320	139.0342	6.2188	0.1474	338.4251
Total	**25.1405**	**11.9000**	**59.5729**	**0.1891**	**21.3463**	**1.1846**	**22.5309**	**5.7150**	**1.1793**	**6.8943**	**757.4763**	**17,643.8796**	**18,401.3559**	**41.5156**	**0.1847**	**19,494.2847**

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	22.2446	0.5177	27.1190	0.0199		1.0167	1.0167		1.0167	1.0167	118.0561	243.7080	361.7640	0.5897	3.8200e-003	377.6433
Energy	0.1330	1.1361	0.4834	7.2500e-003		0.0919	0.0919		0.0919	0.0919	0.0000	2,432.1642	2,432.1642	0.0908	0.0335	2,444.4138
Mobile	2.7630	10.2463	31.9705	0.1619	21.3463	0.0760	21.4223	5.7150	0.0707	5.7857	0.0000	14,889.4754	14,889.4754	0.4033	0.0000	14,899.5576
Waste						0.0000	0.0000		0.0000	0.0000	578.9181	0.0000	578.9181	34.2131	0.0000	1,434.2450
Water						0.0000	0.0000		0.0000	0.0000	60.5022	78.5320	139.0342	6.2188	0.1474	338.4251
Total	**25.1405**	**11.9000**	**59.5729**	**0.1891**	**21.3463**	**1.1846**	**22.5309**	**5.7150**	**1.1793**	**6.8943**	**757.4763**	**17,643.8796**	**18,401.3559**	**41.5156**	**0.1847**	**19,494.2847**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	2.7630	10.2463	31.9705	0.1619	21.3463	0.0760	21.4223	5.7150	0.0707	5.7857	0.0000	14,889.4754	14,889.4754	0.4033	0.0000	14,899.5576
Unmitigated	2.7630	10.2463	31.9705	0.1619	21.3463	0.0760	21.4223	5.7150	0.0707	5.7857	0.0000	14,889.4754	14,889.4754	0.4033	0.0000	14,899.5576

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,952.32	3,207.68	2719.36	6,826,091	6,826,091
Apartments Mid Rise	2,979.20	2,862.72	2625.28	6,725,576	6,725,576
Single Family Housing	19,335.12	20,127.21	17507.22	44,314,775	44,314,775
Total	25,266.64	26,197.61	22,851.86	57,866,442	57,866,442

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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.608155	0.036349	0.195929	0.105551	0.011757	0.005346	0.011845	0.014259	0.002138	0.001733	0.005453	0.000811	0.000673
Apartments Mid Rise	0.608155	0.036349	0.195929	0.105551	0.011757	0.005346	0.011845	0.014259	0.002138	0.001733	0.005453	0.000811	0.000673
Single Family Housing	0.608155	0.036349	0.195929	0.105551	0.011757	0.005346	0.011845	0.014259	0.002138	0.001733	0.005453	0.000811	0.000673

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,116.4562	1,116.4562	0.0656	9.3700e-003	1,120.8872
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,116.4562	1,116.4562	0.0656	9.3700e-003	1,120.8872
NaturalGas Mitigated	0.1330	1.1361	0.4834	7.2500e-003		0.0919	0.0919		0.0919	0.0919	0.0000	1,315.7080	1,315.7080	0.0252	0.0241	1,323.5266
NaturalGas Unmitigated	0.1330	1.1361	0.4834	7.2500e-003		0.0919	0.0919		0.0919	0.0919	0.0000	1,315.7080	1,315.7080	0.0252	0.0241	1,323.5266

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					
Apartments Low Rise	2.90308e+006	0.0157	0.1338	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	154.9194	154.9194	2.9700e-003	2.8400e-003	155.8400
Apartments Mid Rise	1.74081e+006	9.3900e-003	0.0802	0.0341	5.1000e-004		6.4900e-003	6.4900e-003		6.4900e-003	6.4900e-003	0.0000	92.8963	92.8963	1.7800e-003	1.7000e-003	93.4484
Single Family Housing	2.00115e+007	0.1079	0.9221	0.3924	5.8900e-003		0.0746	0.0746		0.0746	0.0746	0.0000	1,067.8922	1,067.8922	0.0205	0.0196	1,074.2382
Total		**0.1330**	**1.1361**	**0.4834**	**7.2500e-003**		**0.0919**	**0.0919**		**0.0919**	**0.0919**	**0.0000**	**1,315.7080**	**1,315.7080**	**0.0252**	**0.0241**	**1,323.5266**

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					
Apartments Low Rise	2.90308e+006	0.0157	0.1338	0.0569	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	154.9194	154.9194	2.9700e-003	2.8400e-003	155.8400
Apartments Mid Rise	1.74081e+006	9.3900e-003	0.0802	0.0341	5.1000e-004		6.4900e-003	6.4900e-003		6.4900e-003	6.4900e-003	0.0000	92.8963	92.8963	1.7800e-003	1.7000e-003	93.4484
Single Family Housing	2.00115e+007	0.1079	0.9221	0.3924	5.8900e-003		0.0746	0.0746		0.0746	0.0746	0.0000	1,067.8922	1,067.8922	0.0205	0.0196	1,074.2382
Total		**0.1330**	**1.1361**	**0.4834**	**7.2500e-003**		**0.0919**	**0.0919**		**0.0919**	**0.0919**	**0.0000**	**1,315.7080**	**1,315.7080**	**0.0252**	**0.0241**	**1,323.5266**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.9122e+006	103.3718	6.0700e-003	8.7000e-004	103.7821
Apartments Mid Rise	1.83273e+006	99.0759	5.8200e-003	8.3000e-004	99.4691
Single Family Housing	1.69076e+007	914.0085	0.0537	7.6700e-003	917.6360
Total		**1,116.4562**	**0.0656**	**9.3700e-003**	**1,120.8872**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.9122e+006	103.3718	6.0700e-003	8.7000e-004	103.7821
Apartments Mid Rise	1.83273e+006	99.0759	5.8200e-003	8.3000e-004	99.4691
Single Family Housing	1.69076e+007	914.0085	0.0537	7.6700e-003	917.6360
Total		**1,116.4562**	**0.0656**	**9.3700e-003**	**1,120.8872**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	22.2446	0.5177	27.1190	0.0199		1.0167	1.0167		1.0167	1.0167	118.0561	243.7080	361.7640	0.5897	3.8200e-003	377.6433
Unmitigated	22.2446	0.5177	27.1190	0.0199		1.0167	1.0167		1.0167	1.0167	118.0561	243.7080	361.7640	0.5897	3.8200e-003	377.6433

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	3.2042					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	17.7771					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.6162	0.2680	5.4811	0.0188		0.8962	0.8962		0.8962	0.8962	118.0561	208.2070	326.2631	0.5559	3.8200e-003	341.2975
Landscaping	0.6472	0.2498	21.6378	1.1500e-003		0.1205	0.1205		0.1205	0.1205	0.0000	35.5010	35.5010	0.0338	0.0000	36.3458
Total	**22.2446**	**0.5177**	**27.1190**	**0.0199**		**1.0167**	**1.0167**		**1.0167**	**1.0167**	**118.0561**	**243.7080**	**361.7640**	**0.5897**	**3.8200e-003**	**377.6433**

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	3.2042					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	17.7771					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.6162	0.2680	5.4811	0.0188		0.8962	0.8962		0.8962	0.8962	118.0561	208.2070	326.2631	0.5559	3.8200e-003	341.2975
Landscaping	0.6472	0.2498	21.6378	1.1500e-003		0.1205	0.1205		0.1205	0.1205	0.0000	35.5010	35.5010	0.0338	0.0000	36.3458
Total	**22.2446**	**0.5177**	**27.1190**	**0.0199**		**1.0167**	**1.0167**		**1.0167**	**1.0167**	**118.0561**	**243.7080**	**361.7640**	**0.5897**	**3.8200e-003**	**377.6433**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	139.0342	6.2188	0.1474	338.4251
Unmitigated	139.0342	6.2188	0.1474	338.4251

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	29.189 / 18.4018	21.2803	0.9518	0.0226	51.7986
Apartments Mid Rise	29.189 / 18.4018	21.2803	0.9518	0.0226	51.7986
Single Family Housing	132.328 / 83.4241	96.4737	4.3151	0.1023	234.8279
Total		**139.0342**	**6.2188**	**0.1474**	**338.4251**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	29.189 / 18.4018	21.2803	0.9518	0.0226	51.7986
Apartments Mid Rise	29.189 / 18.4018	21.2803	0.9518	0.0226	51.7986
Single Family Housing	132.328 / 83.4241	96.4737	4.3151	0.1023	234.8279
Total		**139.0342**	**6.2188**	**0.1474**	**338.4251**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	578.9181	34.2131	0.0000	1,434.2450
Unmitigated	578.9181	34.2131	0.0000	1,434.2450

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	206.08	41.8324	2.4722	0.0000	103.6379
Apartments Mid Rise	206.08	41.8324	2.4722	0.0000	103.6379
Single Family Housing	2439.78	495.2533	29.2686	0.0000	1,226.9691
Total		**578.9181**	**34.2131**	**0.0000**	**1,434.2450**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	206.08	41.8324	2.4722	0.0000	103.6379
Apartments Mid Rise	206.08	41.8324	2.4722	0.0000	103.6379
Single Family Housing	2439.78	495.2533	29.2686	0.0000	1,226.9691
Total		**578.9181**	**34.2131**	**0.0000**	**1,434.2450**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Marin - New Land Uses

Marin County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	448.00	Dwelling Unit	28.00	448,000.00	1281
Apartments Mid Rise	448.00	Dwelling Unit	11.79	448,000.00	1281
Single Family Housing	2,031.00	Dwelling Unit	659.42	3,655,800.00	5809

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	69
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	119.18	**CH4 Intensity (lb/MWhr)**	0.007	**N2O Intensity (lb/MWhr)**	0.001

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Marin - New Land Uses - Marin County, Summer

Project Characteristics - 'Marin Clean Energy emission factor based on an 80% renewable mix per MCE's implementation plan. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards and ZNE standards assuming a linear growth in new construction between 2015 and 2040.

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Plan Bay Area 2040 Update - Marin - New Land Uses - Marin County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	700.00	0.00
tblEnergyUse	T24E	274.84	39.58
tblEnergyUse	T24E	502.89	72.42
tblEnergyUse	T24E	246.52	35.50
tblEnergyUse	T24NG	25,590.91	3,865.09
tblEnergyUse	T24NG	8,824.58	1,270.74
tblEnergyUse	T24NG	50,264.25	7,238.05
tblFireplaces	NumberGas	67.20	143.36
tblFireplaces	NumberGas	67.20	143.36
tblFireplaces	NumberGas	507.75	1,381.08
tblFireplaces	NumberWood	76.16	0.00
tblFireplaces	NumberWood	76.16	0.00
tblFireplaces	NumberWood	873.33	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.007
tblProjectCharacteristics	CO2IntensityFactor	641.35	119.18
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.001
tblProjectCharacteristics	OperationalYear	2018	2040

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5257	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5257**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5257	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5257**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	185.7392	43.9120	797.2782	1.9908		92.5496	92.5496		92.5496	92.5496	13,077.4788	41,639.2832	54,716.7620	62.3382	0.7554	56,500.3302
Energy	0.7285	6.2251	2.6490	0.0397		0.5033	0.5033		0.5033	0.5033		7,946.9577	7,946.9577	0.1523	0.1457	7,994.1825
Mobile	18.2442	57.3859	192.6675	0.9908	128.3995	0.4388	128.8382	34.2599	0.4082	34.6681		100,394.6855	100,394.6855	2.5669		100,458.8588
Total	**204.7118**	**107.5230**	**992.5947**	**3.0214**	**128.3995**	**93.4917**	**221.8911**	**34.2599**	**93.4611**	**127.7210**	**13,077.4788**	**149,980.9264**	**163,058.4052**	**65.0574**	**0.9011**	**164,953.3715**

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	lb/day										lb/day					
Area	185.7392	43.9120	797.2782	1.9908		92.5496	92.5496		92.5496	92.5496	13,077.4788	41,639.2832	54,716.7620	62.3382	0.7554	56,500.3302
Energy	0.7285	6.2251	2.6490	0.0397		0.5033	0.5033		0.5033	0.5033		7,946.9577	7,946.9577	0.1523	0.1457	7,994.1825
Mobile	18.2442	57.3859	192.6675	0.9908	128.3995	0.4388	128.8382	34.2599	0.4082	34.6681		100,394.6855	100,394.6855	2.5669		100,458.8588
Total	**204.7118**	**107.5230**	**992.5947**	**3.0214**	**128.3995**	**93.4917**	**221.8911**	**34.2599**	**93.4611**	**127.7210**	**13,077.4788**	**149,980.9264**	**163,058.4052**	**65.0574**	**0.9011**	**164,953.3715**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	18.2442	57.3859	192.6675	0.9908	128.3995	0.4388	128.8382	34.2599	0.4082	34.6681		100,394.6855	100,394.6855	2.5669		100,458.8588
Unmitigated	18.2442	57.3859	192.6675	0.9908	128.3995	0.4388	128.8382	34.2599	0.4082	34.6681		100,394.6855	100,394.6855	2.5669		100,458.8588

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,952.32	3,207.68	2719.36	6,826,091	6,826,091
Apartments Mid Rise	2,979.20	2,862.72	2625.28	6,725,576	6,725,576
Single Family Housing	19,335.12	20,127.21	17507.22	44,314,775	44,314,775
Total	25,266.64	26,197.61	22,851.86	57,866,442	57,866,442

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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.608155	0.036349	0.195929	0.105551	0.011757	0.005346	0.011845	0.014259	0.002138	0.001733	0.005453	0.000811	0.000673
Apartments Mid Rise	0.608155	0.036349	0.195929	0.105551	0.011757	0.005346	0.011845	0.014259	0.002138	0.001733	0.005453	0.000811	0.000673
Single Family Housing	0.608155	0.036349	0.195929	0.105551	0.011757	0.005346	0.011845	0.014259	0.002138	0.001733	0.005453	0.000811	0.000673

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.7285	6.2251	2.6490	0.0397		0.5033	0.5033		0.5033	0.5033		7,946.9577	7,946.9577	0.1523	0.1457	7,994.1825
NaturalGas Unmitigated	0.7285	6.2251	2.6490	0.0397		0.5033	0.5033		0.5033	0.5033		7,946.9577	7,946.9577	0.1523	0.1457	7,994.1825

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	lb/day										lb/day					
Apartments Low Rise	7953.64	0.0858	0.7330	0.3119	4.6800e-003		0.0593	0.0593		0.0593	0.0593		935.7229	935.7229	0.0179	0.0172	941.2834
Apartments Mid Rise	4769.35	0.0514	0.4395	0.1870	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.0996	561.0996	0.0108	0.0103	564.4339
Single Family Housing	54826.1	0.5913	5.0526	2.1501	0.0323		0.4085	0.4085		0.4085	0.4085		6,450.1352	6,450.1352	0.1236	0.1183	6,488.4652
Total		**0.7285**	**6.2251**	**2.6490**	**0.0397**		**0.5033**	**0.5033**		**0.5033**	**0.5033**		**7,946.9577**	**7,946.9577**	**0.1523**	**0.1457**	**7,994.1825**

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	lb/day										lb/day					
Apartments Low Rise	7.95364	0.0858	0.7330	0.3119	4.6800e-003		0.0593	0.0593		0.0593	0.0593		935.7229	935.7229	0.0179	0.0172	941.2834
Apartments Mid Rise	4.76935	0.0514	0.4395	0.1870	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.0996	561.0996	0.0108	0.0103	564.4339
Single Family Housing	54.8261	0.5913	5.0526	2.1501	0.0323		0.4085	0.4085		0.4085	0.4085		6,450.1352	6,450.1352	0.1236	0.1183	6,488.4652
Total		**0.7285**	**6.2251**	**2.6490**	**0.0397**		**0.5033**	**0.5033**		**0.5033**	**0.5033**		**7,946.9577**	**7,946.9577**	**0.1523**	**0.1457**	**7,994.1825**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	185.7392	43.9120	797.2782	1.9908		92.5496	92.5496		92.5496	92.5496	13,077.4788	41,639.2832	54,716.7620	62.3382	0.7554	56,500.3302
Unmitigated	185.7392	43.9120	797.2782	1.9908		92.5496	92.5496		92.5496	92.5496	13,077.4788	41,639.2832	54,716.7620	62.3382	0.7554	56,500.3302

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	lb/day										lb/day					
Architectural Coating	17.5572					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	97.4085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	63.5826	41.1369	556.8578	1.9780		91.2104	91.2104		91.2104	91.2104	13,077.4788	41,204.4706	54,281.9494	61.9243	0.7554	56,055.1709
Landscaping	7.1908	2.7751	240.4204	0.0128		1.3391	1.3391		1.3391	1.3391		434.8126	434.8126	0.4139		445.1594
Total	**185.7392**	**43.9120**	**797.2782**	**1.9908**		**92.5496**	**92.5496**		**92.5496**	**92.5496**	**13,077.4788**	**41,639.2832**	**54,716.7620**	**62.3382**	**0.7554**	**56,500.3302**

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	lb/day										lb/day					
Architectural Coating	17.5572					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	97.4085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	63.5826	41.1369	556.8578	1.9780		91.2104	91.2104		91.2104	91.2104	13,077.4788	41,204.4706	54,281.9494	61.9243	0.7554	56,055.1709
Landscaping	7.1908	2.7751	240.4204	0.0128		1.3391	1.3391		1.3391	1.3391		434.8126	434.8126	0.4139		445.1594
Total	**185.7392**	**43.9120**	**797.2782**	**1.9908**		**92.5496**	**92.5496**		**92.5496**	**92.5496**	**13,077.4788**	**41,639.2832**	**54,716.7620**	**62.3382**	**0.7554**	**56,500.3302**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Marin - Net Reduction in Land Uses

Marin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	112.00	1000sqft	2.57	112,000.00	0
Industrial Park	40.32	1000sqft	0.93	40,320.00	0
Regional Shopping Center	134.39	1000sqft	3.09	134,390.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	69
Climate Zone	5			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.75	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Marin - Net Reduction in Land Uses - Marin County, Annual

Project Characteristics - Marin Clean Energy emission factor based on a 50% renewable mix in 2015. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.75
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2015

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Marin - Net Reduction in Land Uses - Marin County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	1.2695	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.1200e-003	5.1200e-003	1.0000e-005	0.0000	5.4900e-003
Energy	0.0233	0.2116	0.1777	1.2700e-003		0.0161	0.0161		0.0161	0.0161	0.0000	750.2032	750.2032	0.0358	9.4600e-003	753.9186
Mobile	3.0095	9.8838	32.0750	0.0621	4.6786	0.1306	4.8092	1.2622	0.1239	1.3860	0.0000	5,644.5587	5,644.5587	0.2870	0.0000	5,651.7333
Waste						0.0000	0.0000		0.0000	0.0000	59.9371	0.0000	59.9371	3.5422	0.0000	148.4917
Water						0.0000	0.0000		0.0000	0.0000	12.4315	37.2873	49.7188	1.2791	0.0305	90.7924
Total	**4.3023**	**10.0954**	**32.2554**	**0.0634**	**4.6786**	**0.1467**	**4.8253**	**1.2622**	**0.1399**	**1.4021**	**72.3687**	**6,432.0543**	**6,504.4230**	**5.1441**	**0.0400**	**6,644.9415**

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	1.2695	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.1200e-003	5.1200e-003	1.0000e-005	0.0000	5.4900e-003
Energy	0.0233	0.2116	0.1777	1.2700e-003		0.0161	0.0161		0.0161	0.0161	0.0000	750.2032	750.2032	0.0358	9.4600e-003	753.9186
Mobile	3.0095	9.8838	32.0750	0.0621	4.6786	0.1306	4.8092	1.2622	0.1239	1.3860	0.0000	5,644.5587	5,644.5587	0.2870	0.0000	5,651.7333
Waste						0.0000	0.0000		0.0000	0.0000	59.9371	0.0000	59.9371	3.5422	0.0000	148.4917
Water						0.0000	0.0000		0.0000	0.0000	12.4315	37.2873	49.7188	1.2791	0.0305	90.7924
Total	**4.3023**	**10.0954**	**32.2554**	**0.0634**	**4.6786**	**0.1467**	**4.8253**	**1.2622**	**0.1399**	**1.4021**	**72.3687**	**6,432.0543**	**6,504.4230**	**5.1441**	**0.0400**	**6,644.9415**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Excavators	3	8.00	158	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	3.0095	9.8838	32.0750	0.0621	4.6786	0.1306	4.8092	1.2622	0.1239	1.3860	0.0000	5,644.5587	5,644.5587	0.2870	0.0000	5,651.7333
Unmitigated	3.0095	9.8838	32.0750	0.0621	4.6786	0.1306	4.8092	1.2622	0.1239	1.3860	0.0000	5,644.5587	5,644.5587	0.2870	0.0000	5,651.7333

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	1,235.36	275.52	117.60	2,242,926	2,242,926
Industrial Park	275.39	100.40	29.43	564,352	564,352
Regional Shopping Center	5,738.45	6,715.47	3392.00	9,718,252	9,718,252
Total	7,249.20	7,091.39	3,539.04	12,525,530	12,525,530

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 Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.560293	0.050856	0.204480	0.119666	0.023268	0.004913	0.010313	0.009578	0.001992	0.006870	0.006201	0.000656	0.000914
Industrial Park	0.560293	0.050856	0.204480	0.119666	0.023268	0.004913	0.010313	0.009578	0.001992	0.006870	0.006201	0.000656	0.000914
Regional Shopping Center	0.560293	0.050856	0.204480	0.119666	0.023268	0.004913	0.010313	0.009578	0.001992	0.006870	0.006201	0.000656	0.000914

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	519.8719	519.8719	0.0314	5.2400e-003	522.2185
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	519.8719	519.8719	0.0314	5.2400e-003	522.2185
NaturalGas Mitigated	0.0233	0.2116	0.1777	1.2700e-003		0.0161	0.0161		0.0161	0.0161	0.0000	230.3314	230.3314	4.4100e-003	4.2200e-003	231.7001
NaturalGas Unmitigated	0.0233	0.2116	0.1777	1.2700e-003		0.0161	0.0161		0.0161	0.0161	0.0000	230.3314	230.3314	4.4100e-003	4.2200e-003	231.7001

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 Office Building	2.64208e+006	0.0143	0.1295	0.1088	7.8000e-004		9.8400e-003	9.8400e-003		9.8400e-003	9.8400e-003	0.0000	140.9915	140.9915	2.7000e-003	2.5800e-003	141.8293
Industrial Park	951149	5.1300e-003	0.0466	0.0392	2.8000e-004		3.5400e-003	3.5400e-003		3.5400e-003	3.5400e-003	0.0000	50.7569	50.7569	9.7000e-004	9.3000e-004	51.0586
Regional Shopping Center	723018	3.9000e-003	0.0354	0.0298	2.1000e-004		2.6900e-003	2.6900e-003		2.6900e-003	2.6900e-003	0.0000	38.5830	38.5830	7.4000e-004	7.1000e-004	38.8123
Total		**0.0233**	**0.2116**	**0.1777**	**1.2700e-003**		**0.0161**	**0.0161**		**0.0161**	**0.0161**	**0.0000**	**230.3314**	**230.3314**	**4.4100e-003**	**4.2200e-003**	**231.7001**

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 Office Building	2.64208e+006	0.0143	0.1295	0.1088	7.8000e-004		9.8400e-003	9.8400e-003		9.8400e-003	9.8400e-003	0.0000	140.9915	140.9915	2.7000e-003	2.5800e-003	141.8293
Industrial Park	951149	5.1300e-003	0.0466	0.0392	2.8000e-004		3.5400e-003	3.5400e-003		3.5400e-003	3.5400e-003	0.0000	50.7569	50.7569	9.7000e-004	9.3000e-004	51.0586
Regional Shopping Center	723018	3.9000e-003	0.0354	0.0298	2.1000e-004		2.6900e-003	2.6900e-003		2.6900e-003	2.6900e-003	0.0000	38.5830	38.5830	7.4000e-004	7.1000e-004	38.8123
Total		**0.0233**	**0.2116**	**0.1777**	**1.2700e-003**		**0.0161**	**0.0161**		**0.0161**	**0.0161**	**0.0000**	**230.3314**	**230.3314**	**4.4100e-003**	**4.2200e-003**	**231.7001**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	1.63072e+006	220.2404	0.0133	2.2200e-003	221.2345
Industrial Park	587059	79.2865	4.7900e-003	8.0000e-004	79.6444
Regional Shopping Center	1.63149e+006	220.3450	0.0133	2.2200e-003	221.3396
Total		**519.8719**	**0.0314**	**5.2400e-003**	**522.2185**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	1.63072e+006	220.2404	0.0133	2.2200e-003	221.2345
Industrial Park	587059	79.2865	4.7900e-003	8.0000e-004	79.6444
Regional Shopping Center	1.63149e+006	220.3450	0.0133	2.2200e-003	221.3396
Total		**519.8719**	**0.0314**	**5.2400e-003**	**522.2185**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2695	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.1200e-003	5.1200e-003	1.0000e-005	0.0000	5.4900e-003
Unmitigated	1.2695	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.1200e-003	5.1200e-003	1.0000e-005	0.0000	5.4900e-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	0.1495					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1198					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.7000e-004	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.1200e-003	5.1200e-003	1.0000e-005	0.0000	5.4900e-003
Total	**1.2695**	**3.0000e-005**	**2.7300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.1200e-003**	**5.1200e-003**	**1.0000e-005**	**0.0000**	**5.4900e-003**

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	0.1495					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1198					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.7000e-004	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.1200e-003	5.1200e-003	1.0000e-005	0.0000	5.4900e-003
Total	**1.2695**	**3.0000e-005**	**2.7300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.1200e-003**	**5.1200e-003**	**1.0000e-005**	**0.0000**	**5.4900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	49.7188	1.2791	0.0305	90.7924
Unmitigated	49.7188	1.2791	0.0305	90.7924

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	19.9062 / 12.2006	26.6298	0.6499	0.0155	47.5017
Industrial Park	9.324 / 0	9.7720	0.3042	7.2400e-003	19.5362
Regional Shopping Center	9.95461 / 6.10121	13.3170	0.3250	7.7600e-003	23.7545
Total		**49.7188**	**1.2791**	**0.0305**	**90.7924**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	19.9062 / 12.2006	26.6298	0.6499	0.0155	47.5017
Industrial Park	9.324 / 0	9.7720	0.3042	7.2400e-003	19.5362
Regional Shopping Center	9.95461 / 6.10121	13.3170	0.3250	7.7600e-003	23.7545
Total		**49.7188**	**1.2791**	**0.0305**	**90.7924**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	59.9371	3.5422	0.0000	148.4917
Unmitigated	59.9371	3.5422	0.0000	148.4917

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	104.16	21.1435	1.2496	0.0000	52.3822
Industrial Park	50	10.1496	0.5998	0.0000	25.1451
Regional Shopping Center	141.11	28.6441	1.6928	0.0000	70.9644
Total		**59.9371**	**3.5422**	**0.0000**	**148.4917**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	104.16	21.1435	1.2496	0.0000	52.3822
Industrial Park	50	10.1496	0.5998	0.0000	25.1451
Regional Shopping Center	141.11	28.6441	1.6928	0.0000	70.9644
Total		**59.9371**	**3.5422**	**0.0000**	**148.4917**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Marin - Net Reduction in Land Uses

Marin County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	112.00	1000sqft	2.57	112,000.00	0
Industrial Park	40.32	1000sqft	0.93	40,320.00	0
Regional Shopping Center	134.39	1000sqft	3.09	134,390.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	69
Climate Zone	5			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.75	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Marin Clean Energy emission factor based on a 50% renewable mix in 2015. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.75
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2015

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5257	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5257**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5257	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5257**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	6.9578	2.9000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0628	0.0628	1.8000e-004		0.0673
Energy	0.1275	1.1594	0.9739	6.9600e-003		0.0881	0.0881		0.0881	0.0881		1,391.2158	1,391.2158	0.0267	0.0255	1,399.4831
Mobile	22.8081	63.1781	217.2496	0.4472	33.0312	0.8838	33.9150	8.8789	0.8381	9.7171		44,800.3701	44,800.3701	2.1489		44,854.0913
Total	**29.8934**	**64.3377**	**218.2537**	**0.4542**	**33.0312**	**0.9720**	**34.0032**	**8.8789**	**0.9264**	**9.8053**		**46,191.6487**	**46,191.6487**	**2.1757**	**0.0255**	**46,253.6417**

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	lb/day										lb/day					
Area	6.9578	2.9000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0628	0.0628	1.8000e-004		0.0673
Energy	0.1275	1.1594	0.9739	6.9600e-003		0.0881	0.0881		0.0881	0.0881		1,391.2158	1,391.2158	0.0267	0.0255	1,399.4831
Mobile	22.8081	63.1781	217.2496	0.4472	33.0312	0.8838	33.9150	8.8789	0.8381	9.7171		44,800.3701	44,800.3701	2.1489		44,854.0913
Total	**29.8934**	**64.3377**	**218.2537**	**0.4542**	**33.0312**	**0.9720**	**34.0032**	**8.8789**	**0.9264**	**9.8053**		**46,191.6487**	**46,191.6487**	**2.1757**	**0.0255**	**46,253.6417**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Excavators	3	8.00	158	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	22.8081	63.1781	217.2496	0.4472	33.0312	0.8838	33.9150	8.8789	0.8381	9.7171		44,800.3701	44,800.3701	2.1489		44,854.0913
Unmitigated	22.8081	63.1781	217.2496	0.4472	33.0312	0.8838	33.9150	8.8789	0.8381	9.7171		44,800.3701	44,800.3701	2.1489		44,854.0913

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	1,235.36	275.52	117.60	2,242,926	2,242,926
Industrial Park	275.39	100.40	29.43	564,352	564,352
Regional Shopping Center	5,738.45	6,715.47	3392.00	9,718,252	9,718,252
Total	7,249.20	7,091.39	3,539.04	12,525,530	12,525,530

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 Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.560293	0.050856	0.204480	0.119666	0.023268	0.004913	0.010313	0.009578	0.001992	0.006870	0.006201	0.000656	0.000914
Industrial Park	0.560293	0.050856	0.204480	0.119666	0.023268	0.004913	0.010313	0.009578	0.001992	0.006870	0.006201	0.000656	0.000914
Regional Shopping Center	0.560293	0.050856	0.204480	0.119666	0.023268	0.004913	0.010313	0.009578	0.001992	0.006870	0.006201	0.000656	0.000914

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1275	1.1594	0.9739	6.9600e-003		0.0881	0.0881		0.0881	0.0881		1,391.2158	1,391.2158	0.0267	0.0255	1,399.4831
NaturalGas Unmitigated	0.1275	1.1594	0.9739	6.9600e-003		0.0881	0.0881		0.0881	0.0881		1,391.2158	1,391.2158	0.0267	0.0255	1,399.4831

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	lb/day										lb/day					
General Office Building	7238.58	0.0781	0.7097	0.5961	4.2600e-003		0.0539	0.0539		0.0539	0.0539		851.5971	851.5971	0.0163	0.0156	856.6577
Industrial Park	2605.89	0.0281	0.2555	0.2146	1.5300e-003		0.0194	0.0194		0.0194	0.0194		306.5750	306.5750	5.8800e-003	5.6200e-003	308.3968
Regional Shopping Center	1980.87	0.0214	0.1942	0.1631	1.1700e-003		0.0148	0.0148		0.0148	0.0148		233.0437	233.0437	4.4700e-003	4.2700e-003	234.4286
Total		**0.1275**	**1.1593**	**0.9739**	**6.9600e-003**		**0.0881**	**0.0881**		**0.0881**	**0.0881**		**1,391.2158**	**1,391.2158**	**0.0267**	**0.0255**	**1,399.4831**

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	lb/day										lb/day					
General Office Building	7.23858	0.0781	0.7097	0.5961	4.2600e-003		0.0539	0.0539		0.0539	0.0539		851.5971	851.5971	0.0163	0.0156	856.6577
Industrial Park	2.60589	0.0281	0.2555	0.2146	1.5300e-003		0.0194	0.0194		0.0194	0.0194		306.5750	306.5750	5.8800e-003	5.6200e-003	308.3968
Regional Shopping Center	1.98087	0.0214	0.1942	0.1631	1.1700e-003		0.0148	0.0148		0.0148	0.0148		233.0437	233.0437	4.4700e-003	4.2700e-003	234.4286
Total		**0.1275**	**1.1593**	**0.9739**	**6.9600e-003**		**0.0881**	**0.0881**		**0.0881**	**0.0881**		**1,391.2158**	**1,391.2158**	**0.0267**	**0.0255**	**1,399.4831**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.9578	2.9000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0628	0.0628	1.8000e-004		0.0673
Unmitigated	6.9578	2.9000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0628	0.0628	1.8000e-004		0.0673

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	lb/day										lb/day					
Architectural Coating	0.8192					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.1356					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9900e-003	2.9000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0628	0.0628	1.8000e-004		0.0673
Total	**6.9578**	**2.9000e-004**	**0.0303**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0628**	**0.0628**	**1.8000e-004**		**0.0673**

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	lb/day										lb/day					
Architectural Coating	0.8192					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.1356					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9900e-003	2.9000e-004	0.0303	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0628	0.0628	1.8000e-004		0.0673
Total	**6.9578**	**2.9000e-004**	**0.0303**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0628**	**0.0628**	**1.8000e-004**		**0.0673**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Napa - New Land Uses

Napa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	2,449.00	1000sqft	56.22	2,449,000.00	0
Apartments Low Rise	49.00	Dwelling Unit	3.06	49,000.00	140
Apartments Mid Rise	49.00	Dwelling Unit	1.29	49,000.00	140
Single Family Housing	3,284.00	Dwelling Unit	1,066.23	5,911,200.00	9392

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.6	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	119.18	**CH4 Intensity (lb/MWhr)**	0.007	**N2O Intensity (lb/MWhr)**	0.001

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Napa - New Land Uses - Napa County, Annual

Project Characteristics - Marin Clean Energy emission factor based on an 80% renewable mix per MCE's implementation plan. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards and ZNE standards assuming a linear growth in new construction between 2015 and 2040.

Fleet Mix -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Plan Bay Area 2040 Update - Napa - New Land Uses - Napa County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	431.22	62.10
tblEnergyUse	T24E	392.47	56.52
tblEnergyUse	T24E	6.40	3.65
tblEnergyUse	T24E	368.92	53.12
tblEnergyUse	T24NG	10,164.29	1,462.66
tblEnergyUse	T24NG	7,914.07	1,139.63
tblEnergyUse	T24NG	16.39	9.34
tblEnergyUse	T24NG	32,797.58	4,722.85
tblFireplaces	NumberGas	7.35	15.68
tblFireplaces	NumberGas	7.35	15.68
tblFireplaces	NumberGas	821.00	2,233.12
tblFireplaces	NumberWood	8.33	0.00
tblFireplaces	NumberWood	8.33	0.00
tblFireplaces	NumberWood	1,412.12	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.007
tblProjectCharacteristics	CO2IntensityFactor	641.35	119.18
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.001
tblProjectCharacteristics	OperationalYear	2018	2040

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Napa - New Land Uses - Napa County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	40.1751	0.6597	32.9021	0.0283		1.4273	1.4273		1.4273	1.4273	169.8216	323.7594	493.5810	0.8385	5.1800e-003	516.0869
Energy	0.2660	2.3407	1.4637	0.0145		0.1838	0.1838		0.1838	0.1838	0.0000	6,183.6077	6,183.6077	0.2590	0.0781	6,213.3446
Mobile	5.7660	48.0006	69.0448	0.3965	45.4297	0.1655	45.5952	12.1773	0.1544	12.3317	0.0000	36,870.8402	36,870.8402	1.3535	0.0000	36,904.6785
Waste						0.0000	0.0000		0.0000	0.0000	1,272.2032	0.0000	1,272.2032	75.1851	0.0000	3,151.8297
Water						0.0000	0.0000		0.0000	0.0000	207.9983	268.5387	476.5369	21.3792	0.5067	1,162.0101
Total	**46.2070**	**51.0010**	**103.4107**	**0.4392**	**45.4297**	**1.7766**	**47.2063**	**12.1773**	**1.7655**	**13.9429**	**1,650.0231**	**43,646.7460**	**45,296.7691**	**99.0153**	**0.5899**	**47,947.9498**

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	40.1751	0.6597	32.9021	0.0283		1.4273	1.4273		1.4273	1.4273	169.8216	323.7594	493.5810	0.8385	5.1800e-003	516.0869
Energy	0.2660	2.3407	1.4637	0.0145		0.1838	0.1838		0.1838	0.1838	0.0000	6,183.6077	6,183.6077	0.2590	0.0781	6,213.3446
Mobile	5.7660	48.0006	69.0448	0.3965	45.4297	0.1655	45.5952	12.1773	0.1544	12.3317	0.0000	36,870.8402	36,870.8402	1.3535	0.0000	36,904.6785
Waste						0.0000	0.0000		0.0000	0.0000	1,272.2032	0.0000	1,272.2032	75.1851	0.0000	3,151.8297
Water						0.0000	0.0000		0.0000	0.0000	207.9983	268.5387	476.5369	21.3792	0.5067	1,162.0101
Total	**46.2070**	**51.0010**	**103.4107**	**0.4392**	**45.4297**	**1.7766**	**47.2063**	**12.1773**	**1.7655**	**13.9429**	**1,650.0231**	**43,646.7460**	**45,296.7691**	**99.0153**	**0.5899**	**47,947.9498**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	5.7660	48.0006	69.0448	0.3965	45.4297	0.1655	45.5952	12.1773	0.1544	12.3317	0.0000	36,870.8402	36,870.8402	1.3535	0.0000	36,904.6785
Unmitigated	5.7660	48.0006	69.0448	0.3965	45.4297	0.1655	45.5952	12.1773	0.1544	12.3317	0.0000	36,870.8402	36,870.8402	1.3535	0.0000	36,904.6785

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	322.91	350.84	297.43	746,604	746,604
Apartments Mid Rise	325.85	313.11	287.14	735,610	735,610
General Office Building	27,012.47	6,024.54	2571.45	49,043,989	49,043,989
Single Family Housing	31,263.68	32,544.44	28308.08	71,654,220	71,654,220
Total	58,924.91	39,232.93	31,464.10	122,180,423	122,180,423

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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556
Apartments Low Rise	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556
Apartments Mid Rise	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556
Single Family Housing	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,551.2691	3,551.2691	0.2086	0.0298	3,565.3633
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,551.2691	3,551.2691	0.2086	0.0298	3,565.3633
NaturalGas Mitigated	0.2660	2.3407	1.4637	0.0145		0.1838	0.1838		0.1838	0.1838	0.0000	2,632.3386	2,632.3386	0.0505	0.0483	2,647.9812
NaturalGas Unmitigated	0.2660	2.3407	1.4637	0.0145		0.1838	0.1838		0.1838	0.1838	0.0000	2,632.3386	2,632.3386	0.0505	0.0483	2,647.9812

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					
Apartments Low Rise	226265	1.2200e-003	0.0104	4.4400e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	12.0744	12.0744	2.3000e-004	2.2000e-004	12.1461
Apartments Mid Rise	210437	1.1300e-003	9.7000e-003	4.1300e-003	6.0000e-005		7.8000e-004	7.8000e-004		7.8000e-004	7.8000e-004	0.0000	11.2297	11.2297	2.2000e-004	2.1000e-004	11.2965
General Office Building	2.30206e+007	0.1241	1.1285	0.9479	6.7700e-003		0.0858	0.0858		0.0858	0.0858	0.0000	1,228.4669	1,228.4669	0.0236	0.0225	1,235.7671
Single Family Housing	2.58709e+007	0.1395	1.1921	0.5073	7.6100e-003		0.0964	0.0964		0.0964	0.0964	0.0000	1,380.5676	1,380.5676	0.0265	0.0253	1,388.7716
Total		**0.2660**	**2.3407**	**1.4638**	**0.0145**		**0.1838**	**0.1838**		**0.1838**	**0.1838**	**0.0000**	**2,632.3386**	**2,632.3386**	**0.0505**	**0.0483**	**2,647.9812**

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					
Apartments Low Rise	226265	1.2200e-003	0.0104	4.4400e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	12.0744	12.0744	2.3000e-004	2.2000e-004	12.1461
Apartments Mid Rise	210437	1.1300e-003	9.7000e-003	4.1300e-003	6.0000e-005		7.8000e-004	7.8000e-004		7.8000e-004	7.8000e-004	0.0000	11.2297	11.2297	2.2000e-004	2.1000e-004	11.2965
General Office Building	2.30206e+007	0.1241	1.1285	0.9479	6.7700e-003		0.0858	0.0858		0.0858	0.0858	0.0000	1,228.4669	1,228.4669	0.0236	0.0225	1,235.7671
Single Family Housing	2.58709e+007	0.1395	1.1921	0.5073	7.6100e-003		0.0964	0.0964		0.0964	0.0964	0.0000	1,380.5676	1,380.5676	0.0265	0.0253	1,388.7716
Total		**0.2660**	**2.3407**	**1.4638**	**0.0145**		**0.1838**	**0.1838**		**0.1838**	**0.1838**	**0.0000**	**2,632.3386**	**2,632.3386**	**0.0505**	**0.0483**	**2,647.9812**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	210250	11.3659	6.7000e-004	1.0000e-004	11.4111
Apartments Mid Rise	199676	10.7943	6.3000e-004	9.0000e-005	10.8372
General Office Building	3.7886e+007	2,048.0862	0.1203	0.0172	2,056.2146
Single Family Housing	2.73963e+007	1,481.0227	0.0870	0.0124	1,486.9006
Total		**3,551.2691**	**0.2086**	**0.0298**	**3,565.3633**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	210250	11.3659	6.7000e-004	1.0000e-004	11.4111
Apartments Mid Rise	199676	10.7943	6.3000e-004	9.0000e-005	10.8372
General Office Building	3.7886e+007	2,048.0862	0.1203	0.0172	2,056.2146
Single Family Housing	2.73963e+007	1,481.0227	0.0870	0.0124	1,486.9006
Total		**3,551.2691**	**0.2086**	**0.0298**	**3,565.3633**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	40.1751	0.6597	32.9021	0.0283		1.4273	1.4273		1.4273	1.4273	169.8216	323.7594	493.5810	0.8385	5.1800e-003	516.0869
Unmitigated	40.1751	0.6597	32.9021	0.0283		1.4273	1.4273		1.4273	1.4273	169.8216	323.7594	493.5810	0.8385	5.1800e-003	516.0869

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	5.5071					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	33.0335					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.8847	0.3709	7.8784	0.0269		1.2880	1.2880		1.2880	1.2880	169.8216	282.6961	452.5177	0.7993	5.1800e-003	474.0447
Landscaping	0.7498	0.2888	25.0238	1.3300e-003		0.1393	0.1393		0.1393	0.1393	0.0000	41.0633	41.0633	0.0392	0.0000	42.0423
Total	**40.1751**	**0.6597**	**32.9021**	**0.0283**		**1.4273**	**1.4273**		**1.4273**	**1.4273**	**169.8216**	**323.7594**	**493.5810**	**0.8385**	**5.1800e-003**	**516.0869**

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	5.5071					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	33.0335					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.8847	0.3709	7.8784	0.0269		1.2880	1.2880		1.2880	1.2880	169.8216	282.6961	452.5177	0.7993	5.1800e-003	474.0447
Landscaping	0.7498	0.2888	25.0238	1.3300e-003		0.1393	0.1393		0.1393	0.1393	0.0000	41.0633	41.0633	0.0392	0.0000	42.0423
Total	**40.1751**	**0.6597**	**32.9021**	**0.0283**		**1.4273**	**1.4273**		**1.4273**	**1.4273**	**169.8216**	**323.7594**	**493.5810**	**0.8385**	**5.1800e-003**	**516.0869**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	476.5369	21.3792	0.5067	1,162.0101
Unmitigated	476.5369	21.3792	0.5067	1,162.0101

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	3.19255 / 2.01269	2.3275	0.1041	2.4700e-003	5.6655
Apartments Mid Rise	3.19255 / 2.01269	2.3275	0.1041	2.4700e-003	5.6655
General Office Building	435.27 / 266.778	315.8900	14.1937	0.3364	770.9771
Single Family Housing	213.966 / 134.891	155.9919	6.9773	0.1654	379.7021
Total		**476.5369**	**21.3792**	**0.5067**	**1,162.0102**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	3.19255 / 2.01269	2.3275	0.1041	2.4700e-003	5.6655
Apartments Mid Rise	3.19255 / 2.01269	2.3275	0.1041	2.4700e-003	5.6655
General Office Building	435.27 / 266.778	315.8900	14.1937	0.3364	770.9771
Single Family Housing	213.966 / 134.891	155.9919	6.9773	0.1654	379.7021
Total		**476.5369**	**21.3792**	**0.5067**	**1,162.0102**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1,272.2032	75.1851	0.0000	3,151.8297
Unmitigated	1,272.2032	75.1851	0.0000	3,151.8297

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	22.54	4.5754	0.2704	0.0000	11.3354
Apartments Mid Rise	22.54	4.5754	0.2704	0.0000	11.3354
General Office Building	2277.57	462.3261	27.3227	0.0000	1,145.3934
Single Family Housing	3944.64	800.7263	47.3216	0.0000	1,983.7655
Total		**1,272.2032**	**75.1851**	**0.0000**	**3,151.8297**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	22.54	4.5754	0.2704	0.0000	11.3354
Apartments Mid Rise	22.54	4.5754	0.2704	0.0000	11.3354
General Office Building	2277.57	462.3261	27.3227	0.0000	1,145.3934
Single Family Housing	3944.64	800.7263	47.3216	0.0000	1,983.7655
Total		**1,272.2032**	**75.1851**	**0.0000**	**3,151.8297**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Napa - New Land Uses

Napa County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	2,449.00	1000sqft	56.22	2,449,000.00	0
Apartments Low Rise	49.00	Dwelling Unit	3.06	49,000.00	140
Apartments Mid Rise	49.00	Dwelling Unit	1.29	49,000.00	140
Single Family Housing	3,284.00	Dwelling Unit	1,066.23	5,911,200.00	9392

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.6	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	119.18	**CH4 Intensity (lb/MWhr)**	0.007	**N2O Intensity (lb/MWhr)**	0.001

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Napa - New Land Uses - Napa County, Summer

Project Characteristics - Marin Clean Energy emission factor based on an 80% renewable mix per MCE's implementation plan. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards and ZNE standards assuming a linear growth in new construction between 2015 and 2040.

Fleet Mix -

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Plan Bay Area 2040 Update - Napa - New Land Uses - Napa County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	431.22	62.10
tblEnergyUse	T24E	392.47	56.52
tblEnergyUse	T24E	6.40	3.65
tblEnergyUse	T24E	368.92	53.12
tblEnergyUse	T24NG	10,164.29	1,462.66
tblEnergyUse	T24NG	7,914.07	1,139.63
tblEnergyUse	T24NG	16.39	9.34
tblEnergyUse	T24NG	32,797.58	4,722.85
tblFireplaces	NumberGas	7.35	15.68
tblFireplaces	NumberGas	7.35	15.68
tblFireplaces	NumberGas	821.00	2,233.12
tblFireplaces	NumberWood	8.33	0.00
tblFireplaces	NumberWood	8.33	0.00
tblFireplaces	NumberWood	1,412.12	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.007
tblProjectCharacteristics	CO2IntensityFactor	641.35	119.18
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.001
tblProjectCharacteristics	OperationalYear	2018	2040

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5258	0.0000	0.0000	2.3581	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5258**	**0.0000**	**0.0000**	**2.3581**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5258	0.0000	0.0000	2.3581	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5258**	**0.0000**	**0.0000**	**2.3581**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	306.3000	59.1307	1,038.2740	2.7140		126.0675	126.0675		126.0675	126.0675	17,856.0681	56,448.9163	74,304.9844	85.0254	1.0257	76,736.2703
Energy	1.4575	12.8256	8.0205	0.0795		1.0070	1.0070		1.0070	1.0070		15,899.4880	15,899.4880	0.3047	0.2915	15,993.9707
Mobile	41.6907	300.8461	456.5135	2.6390	299.8834	1.0507	300.9341	80.1288	0.9805	81.1092		270,343.1535	270,343.1535	9.3021		270,575.7068
Total	**349.4481**	**372.8024**	**1,502.8080**	**5.4325**	**299.8834**	**128.1252**	**428.0086**	**80.1288**	**128.0550**	**208.1837**	**17,856.0681**	**342,691.5578**	**360,547.6259**	**94.6322**	**1.3172**	**363,305.9478**

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	lb/day										lb/day					
Area	306.3000	59.1307	1,038.2740	2.7140		126.0675	126.0675		126.0675	126.0675	17,856.0681	56,448.9163	74,304.9844	85.0254	1.0257	76,736.2703
Energy	1.4575	12.8256	8.0205	0.0795		1.0070	1.0070		1.0070	1.0070		15,899.4880	15,899.4880	0.3047	0.2915	15,993.9707
Mobile	41.6907	300.8461	456.5135	2.6390	299.8834	1.0507	300.9341	80.1288	0.9805	81.1092		270,343.1535	270,343.1535	9.3021		270,575.7068
Total	**349.4481**	**372.8024**	**1,502.8080**	**5.4325**	**299.8834**	**128.1252**	**428.0086**	**80.1288**	**128.0550**	**208.1837**	**17,856.0681**	**342,691.5578**	**360,547.6259**	**94.6322**	**1.3172**	**363,305.9478**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	41.6907	300.8461	456.5135	2.6390	299.8834	1.0507	300.9341	80.1288	0.9805	81.1092		270,343.1535	270,343.1535	9.3021		270,575.7068
Unmitigated	41.6907	300.8461	456.5135	2.6390	299.8834	1.0507	300.9341	80.1288	0.9805	81.1092		270,343.1535	270,343.1535	9.3021		270,575.7068

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	322.91	350.84	297.43	746,604	746,604
Apartments Mid Rise	325.85	313.11	287.14	735,610	735,610
General Office Building	27,012.47	6,024.54	2571.45	49,043,989	49,043,989
Single Family Housing	31,263.68	32,544.44	28308.08	71,654,220	71,654,220
Total	58,924.91	39,232.93	31,464.10	122,180,423	122,180,423

4.3 Trip Type Information

Plan Bay Area 2040 Update - Napa - New Land Uses - Napa County, Summer

	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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556
Apartments Low Rise	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556
Apartments Mid Rise	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556
Single Family Housing	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.4575	12.8256	8.0205	0.0795		1.0070	1.0070		1.0070	1.0070		15,899.4880	15,899.4880	0.3047	0.2915	15,993.9707
NaturalGas Unmitigated	1.4575	12.8256	8.0205	0.0795		1.0070	1.0070		1.0070	1.0070		15,899.4880	15,899.4880	0.3047	0.2915	15,993.9707

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	lb/day										lb/day					
Apartments Low Rise	619.905	6.6900e-003	0.0571	0.0243	3.6000e-004		4.6200e-003	4.6200e-003		4.6200e-003	4.6200e-003		72.9300	72.9300	1.4000e-003	1.3400e-003	73.3634
Apartments Mid Rise	576.539	6.2200e-003	0.0531	0.0226	3.4000e-004		4.3000e-003	4.3000e-003		4.3000e-003	4.3000e-003		67.8282	67.8282	1.3000e-003	1.2400e-003	68.2312
General Office Building	63070.1	0.6802	6.1834	5.1940	0.0371		0.4699	0.4699		0.4699	0.4699		7,420.0161	7,420.0161	0.1422	0.1360	7,464.1096
Single Family Housing	70879.1	0.7644	6.5320	2.7796	0.0417		0.5281	0.5281		0.5281	0.5281		8,338.7138	8,338.7138	0.1598	0.1529	8,388.2666
Total		**1.4575**	**12.8256**	**8.0205**	**0.0795**		**1.0070**	**1.0070**		**1.0070**	**1.0070**		**15,899.4880**	**15,899.4880**	**0.3048**	**0.2915**	**15,993.9707**

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	lb/day										lb/day					
Apartments Low Rise	0.619905	6.6900e-003	0.0571	0.0243	3.6000e-004		4.6200e-003	4.6200e-003		4.6200e-003	4.6200e-003		72.9300	72.9300	1.4000e-003	1.3400e-003	73.3634
Apartments Mid Rise	0.576539	6.2200e-003	0.0531	0.0226	3.4000e-004		4.3000e-003	4.3000e-003		4.3000e-003	4.3000e-003		67.8282	67.8282	1.3000e-003	1.2400e-003	68.2312
General Office Building	63.0701	0.6802	6.1834	5.1940	0.0371		0.4699	0.4699		0.4699	0.4699		7,420.0161	7,420.0161	0.1422	0.1360	7,464.1096
Single Family Housing	70.8791	0.7644	6.5320	2.7796	0.0417		0.5281	0.5281		0.5281	0.5281		8,338.7138	8,338.7138	0.1598	0.1529	8,388.2666
Total		**1.4575**	**12.8256**	**8.0205**	**0.0795**		**1.0070**	**1.0070**		**1.0070**	**1.0070**		**15,899.4880**	**15,899.4880**	**0.3048**	**0.2915**	**15,993.9707**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	306.3000	59.1307	1,038.2740	2.7140		126.0675	126.0675		126.0675	126.0675	17,856.0681	56,448.9163	74,304.9844	85.0254	1.0257	76,736.2703
Unmitigated	306.3000	59.1307	1,038.2740	2.7140		126.0675	126.0675		126.0675	126.0675	17,856.0681	56,448.9163	74,304.9844	85.0254	1.0257	76,736.2703

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	lb/day										lb/day					
Architectural Coating	30.1760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	181.0055					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	86.7872	55.9220	760.2320	2.6993		124.5193	124.5193		124.5193	124.5193	17,856.0681	55,945.9765	73,802.0446	84.5458	1.0257	76,221.3408
Landscaping	8.3313	3.2087	278.0420	0.0148		1.5482	1.5482		1.5482	1.5482		502.9399	502.9399	0.4796		514.9295
Total	**306.3000**	**59.1307**	**1,038.2740**	**2.7140**		**126.0675**	**126.0675**		**126.0675**	**126.0675**	**17,856.0681**	**56,448.9163**	**74,304.9844**	**85.0254**	**1.0257**	**76,736.2703**

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	lb/day										lb/day					
Architectural Coating	30.1760					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	181.0055					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	86.7872	55.9220	760.2320	2.6993		124.5193	124.5193		124.5193	124.5193	17,856.0681	55,945.9765	73,802.0446	84.5458	1.0257	76,221.3408
Landscaping	8.3313	3.2087	278.0420	0.0148		1.5482	1.5482		1.5482	1.5482		502.9399	502.9399	0.4796		514.9295
Total	**306.3000**	**59.1307**	**1,038.2740**	**2.7140**		**126.0675**	**126.0675**		**126.0675**	**126.0675**	**17,856.0681**	**56,448.9163**	**74,304.9844**	**85.0254**	**1.0257**	**76,736.2703**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Napa - Net Reduction in Land Uses

Napa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	10.25	1000sqft	0.24	10,250.00	0
Regional Shopping Center	124.60	1000sqft	2.86	124,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.6	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2040

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Napa - Net Reduction in Land Uses - Napa County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	0.5971	1.0000e-005	1.2300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5600e-003
Energy	3.0700e-003	0.0279	0.0234	1.7000e-004		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	373.1033	373.1033	0.0219	4.5000e-003	374.9895
Mobile	0.5104	4.4088	5.5489	0.0307	3.4036	0.0130	3.4166	0.9123	0.0121	0.9244	0.0000	2,859.6244	2,859.6244	0.1153	0.0000	2,862.5072
Waste						0.0000	0.0000		0.0000	0.0000	29.1373	0.0000	29.1373	1.7220	0.0000	72.1865
Water						0.0000	0.0000		0.0000	0.0000	3.6801	16.2911	19.9712	0.3790	9.1100e-003	32.1613
Total	**1.1106**	**4.4367**	**5.5736**	**0.0309**	**3.4036**	**0.0151**	**3.4187**	**0.9123**	**0.0142**	**0.9266**	**32.8174**	**3,249.0212**	**3,281.8386**	**2.2381**	**0.0136**	**3,341.8470**

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	0.5971	1.0000e-005	1.2300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5600e-003
Energy	3.0700e-003	0.0279	0.0234	1.7000e-004		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	373.1033	373.1033	0.0219	4.5000e-003	374.9895
Mobile	0.5104	4.4088	5.5489	0.0307	3.4036	0.0130	3.4166	0.9123	0.0121	0.9244	0.0000	2,859.6244	2,859.6244	0.1153	0.0000	2,862.5072
Waste						0.0000	0.0000		0.0000	0.0000	29.1373	0.0000	29.1373	1.7220	0.0000	72.1865
Water						0.0000	0.0000		0.0000	0.0000	3.6801	16.2911	19.9712	0.3790	9.1100e-003	32.1613
Total	**1.1106**	**4.4367**	**5.5736**	**0.0309**	**3.4036**	**0.0151**	**3.4187**	**0.9123**	**0.0142**	**0.9266**	**32.8174**	**3,249.0212**	**3,281.8386**	**2.2381**	**0.0136**	**3,341.8470**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	0.5104	4.4088	5.5489	0.0307	3.4036	0.0130	3.4166	0.9123	0.0121	0.9244	0.0000	2,859.6244	2,859.6244	0.1153	0.0000	2,862.5072
Unmitigated	0.5104	4.4088	5.5489	0.0307	3.4036	0.0130	3.4166	0.9123	0.0121	0.9244	0.0000	2,859.6244	2,859.6244	0.1153	0.0000	2,862.5072

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	70.01	25.52	7.48	143,467	143,467
Regional Shopping Center	5,320.42	6,226.26	3144.90	9,010,300	9,010,300
Total	5,390.43	6,251.78	3,152.39	9,153,768	9,153,768

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Plan Bay Area 2040 Update - Napa - Net Reduction in Land Uses - Napa County, Annual

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556
Regional Shopping Center	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	342.7701	342.7701	0.0213	3.9400e-003	344.4761
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	342.7701	342.7701	0.0213	3.9400e-003	344.4761
NaturalGas Mitigated	3.0700e-003	0.0279	0.0234	1.7000e-004		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	30.3332	30.3332	5.8000e-004	5.6000e-004	30.5134
NaturalGas Unmitigated	3.0700e-003	0.0279	0.0234	1.7000e-004		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	30.3332	30.3332	5.8000e-004	5.6000e-004	30.5134

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					
Industrial Park	204590	1.1000e-003	0.0100	8.4200e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.9177	10.9177	2.1000e-004	2.0000e-004	10.9826
Regional Shopping Center	363832	1.9600e-003	0.0178	0.0150	1.1000e-004		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003	0.0000	19.4155	19.4155	3.7000e-004	3.6000e-004	19.5308
Total		**3.0600e-003**	**0.0279**	**0.0234**	**1.7000e-004**		**2.1200e-003**	**2.1200e-003**		**2.1200e-003**	**2.1200e-003**	**0.0000**	**30.3332**	**30.3332**	**5.8000e-004**	**5.6000e-004**	**30.5134**

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					
Industrial Park	204590	1.1000e-003	0.0100	8.4200e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.9177	10.9177	2.1000e-004	2.0000e-004	10.9826
Regional Shopping Center	363832	1.9600e-003	0.0178	0.0150	1.1000e-004		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003	0.0000	19.4155	19.4155	3.7000e-004	3.6000e-004	19.5308
Total		**3.0600e-003**	**0.0279**	**0.0234**	**1.7000e-004**		**2.1200e-003**	**2.1200e-003**		**2.1200e-003**	**2.1200e-003**	**0.0000**	**30.3332**	**30.3332**	**5.8000e-004**	**5.6000e-004**	**30.5134**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	210843	41.6019	2.5800e-003	4.8000e-004	41.8090
Regional Shopping Center	1.52635e+006	301.1682	0.0187	3.4600e-003	302.6671
Total		**342.7701**	**0.0213**	**3.9400e-003**	**344.4761**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	210843	41.6019	2.5800e-003	4.8000e-004	41.8090
Regional Shopping Center	1.52635e+006	301.1682	0.0187	3.4600e-003	302.6671
Total		**342.7701**	**0.0213**	**3.9400e-003**	**344.4761**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5971	1.0000e-005	1.2300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5600e-003
Unmitigated	0.5971	1.0000e-005	1.2300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5600e-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	0.0703					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5267					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1000e-004	1.0000e-005	1.2300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5600e-003
Total	**0.5971**	**1.0000e-005**	**1.2300e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.4100e-003**	**2.4100e-003**	**1.0000e-005**	**0.0000**	**2.5600e-003**

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	0.0703					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5267					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1000e-004	1.0000e-005	1.2300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5600e-003
Total	**0.5971**	**1.0000e-005**	**1.2300e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.4100e-003**	**2.4100e-003**	**1.0000e-005**	**0.0000**	**2.5600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	19.9712	0.3790	9.1100e-003	32.1613
Unmitigated	19.9712	0.3790	9.1100e-003	32.1613

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	2.37031 / 0	3.2827	0.0774	1.8500e-003	5.7697
Regional Shopping Center	9.22944 / 5.65675	16.6885	0.3016	7.2600e-003	26.3917
Total		**19.9712**	**0.3790**	**9.1100e-003**	**32.1613**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	2.37031 / 0	3.2827	0.0774	1.8500e-003	5.7697
Regional Shopping Center	9.22944 / 5.65675	16.6885	0.3016	7.2600e-003	26.3917
Total		**19.9712**	**0.3790**	**9.1100e-003**	**32.1613**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	29.1373	1.7220	0.0000	72.1865
Unmitigated	29.1373	1.7220	0.0000	72.1865

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	12.71	2.5800	0.1525	0.0000	6.3919
Regional Shopping Center	130.83	26.5573	1.5695	0.0000	65.7946
Total		**29.1373**	**1.7220**	**0.0000**	**72.1865**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	12.71	2.5800	0.1525	0.0000	6.3919
Regional Shopping Center	130.83	26.5573	1.5695	0.0000	65.7946
Total		**29.1373**	**1.7220**	**0.0000**	**72.1865**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Napa - Net Reduction in Land Uses

Napa County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	10.25	1000sqft	0.24	10,250.00	0
Regional Shopping Center	124.60	1000sqft	2.86	124,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.6	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2040

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5258	0.0000	0.0000	2.3581	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5258**	**0.0000**	**0.0000**	**2.3581**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5258	0.0000	0.0000	2.3581	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5258**	**0.0000**	**0.0000**	**2.3581**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	3.2723	1.2000e-004	0.0137	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0314
Energy	0.0168	0.1527	0.1283	9.2000e-004		0.0116	0.0116		0.0116	0.0116		183.2142	183.2142	3.5100e-003	3.3600e-003	184.3029
Mobile	3.9318	29.1229	37.9419	0.2145	23.5611	0.0864	23.6475	6.2955	0.0806	6.3761		21,992.8221	21,992.8221	0.8269		22,013.4951
Total	**7.2210**	**29.2757**	**38.0838**	**0.2154**	**23.5611**	**0.0981**	**23.6592**	**6.2955**	**0.0923**	**6.3878**		**22,176.0658**	**22,176.0658**	**0.8305**	**3.3600e-003**	**22,197.8295**

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	lb/day										lb/day					
Area	3.2723	1.2000e-004	0.0137	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0314
Energy	0.0168	0.1527	0.1283	9.2000e-004		0.0116	0.0116		0.0116	0.0116		183.2142	183.2142	3.5100e-003	3.3600e-003	184.3029
Mobile	3.9318	29.1229	37.9419	0.2145	23.5611	0.0864	23.6475	6.2955	0.0806	6.3761		21,992.8221	21,992.8221	0.8269		22,013.4951
Total	**7.2210**	**29.2757**	**38.0838**	**0.2154**	**23.5611**	**0.0981**	**23.6592**	**6.2955**	**0.0923**	**6.3878**		**22,176.0658**	**22,176.0658**	**0.8305**	**3.3600e-003**	**22,197.8295**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	3.9318	29.1229	37.9419	0.2145	23.5611	0.0864	23.6475	6.2955	0.0806	6.3761		21,992.8221	21,992.8221	0.8269		22,013.4951
Unmitigated	3.9318	29.1229	37.9419	0.2145	23.5611	0.0864	23.6475	6.2955	0.0806	6.3761		21,992.8221	21,992.8221	0.8269		22,013.4951

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	70.01	25.52	7.48	143,467	143,467
Regional Shopping Center	5,320.42	6,226.26	3144.90	9,010,300	9,010,300
Total	5,390.43	6,251.78	3,152.39	9,153,768	9,153,768

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556
Regional Shopping Center	0.632746	0.030342	0.163267	0.091257	0.010061	0.004294	0.015559	0.040787	0.003923	0.001391	0.004851	0.000964	0.000556

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0168	0.1527	0.1283	9.2000e-004		0.0116	0.0116		0.0116	0.0116		183.2142	183.2142	3.5100e-003	3.3600e-003	184.3029
NaturalGas Unmitigated	0.0168	0.1527	0.1283	9.2000e-004		0.0116	0.0116		0.0116	0.0116		183.2142	183.2142	3.5100e-003	3.3600e-003	184.3029

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	lb/day										lb/day					
Industrial Park	560.521	6.0400e-003	0.0550	0.0462	3.3000e-004		4.1800e-003	4.1800e-003		4.1800e-003	4.1800e-003		65.9436	65.9436	1.2600e-003	1.2100e-003	66.3355
Regional Shopping Center	996.8	0.0108	0.0977	0.0821	5.9000e-004		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003		117.2706	117.2706	2.2500e-003	2.1500e-003	117.9675
Total		**0.0168**	**0.1527**	**0.1283**	**9.2000e-004**		**0.0116**	**0.0116**		**0.0116**	**0.0116**		**183.2142**	**183.2142**	**3.5100e-003**	**3.3600e-003**	**184.3029**

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	lb/day										lb/day					
Industrial Park	0.560521	6.0400e-003	0.0550	0.0462	3.3000e-004		4.1800e-003	4.1800e-003		4.1800e-003	4.1800e-003		65.9436	65.9436	1.2600e-003	1.2100e-003	66.3355
Regional Shopping Center	0.9968	0.0108	0.0977	0.0821	5.9000e-004		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003		117.2706	117.2706	2.2500e-003	2.1500e-003	117.9675
Total		**0.0168**	**0.1527**	**0.1283**	**9.2000e-004**		**0.0116**	**0.0116**		**0.0116**	**0.0116**		**183.2142**	**183.2142**	**3.5100e-003**	**3.3600e-003**	**184.3029**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.2723	1.2000e-004	0.0137	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0314
Unmitigated	3.2723	1.2000e-004	0.0137	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0314

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	lb/day										lb/day					
Architectural Coating	0.3853					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8858					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.2500e-003	1.2000e-004	0.0137	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0314
Total	**3.2723**	**1.2000e-004**	**0.0137**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0295**	**0.0295**	**8.0000e-005**		**0.0314**

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	lb/day										lb/day					
Architectural Coating	0.3853					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8858					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.2500e-003	1.2000e-004	0.0137	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0314
Total	**3.2723**	**1.2000e-004**	**0.0137**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**		**0.0295**	**0.0295**	**8.0000e-005**		**0.0314**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - San Francisco - New Land Uses

San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	5,306.29	1000sqft	121.82	5,306,290.00	0
Apartments High Rise	54,859.00	Dwelling Unit	884.82	54,859,000.00	156897
Apartments Low Rise	18,622.00	Dwelling Unit	1,163.88	18,622,000.00	53259
Apartments Mid Rise	18,622.00	Dwelling Unit	490.05	18,622,000.00	53259
Single Family Housing	7,274.00	Dwelling Unit	2,361.69	13,093,200.00	20804
Regional Shopping Center	7,219.39	1000sqft	165.73	7,219,390.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	4.6	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.94	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - San Francisco - New Land Uses - San Francisco County, Annual

Project Characteristics - Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards and ZNE standards assuming a linear growth in new construction between 2015 and 2040.

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Plan Bay Area 2040 Update - San Francisco - New Land Uses - San Francisco County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	502.89	72.42
tblEnergyUse	T24E	274.84	39.58
tblEnergyUse	T24E	502.89	72.42
tblEnergyUse	T24E	4.30	2.45
tblEnergyUse	T24E	2.35	1.34
tblEnergyUse	T24E	246.52	35.50
tblEnergyUse	T24NG	8,824.58	1,270.74
tblEnergyUse	T24NG	25,590.91	3,685.09
tblEnergyUse	T24NG	8,824.58	1,270.74
tblEnergyUse	T24NG	18.41	10.49
tblEnergyUse	T24NG	3.92	2.23
tblEnergyUse	T24NG	50,264.25	7,238.05
tblFireplaces	NumberGas	8,228.85	17,554.88
tblFireplaces	NumberGas	2,793.30	5,959.04
tblFireplaces	NumberGas	2,793.30	5,959.04
tblFireplaces	NumberGas	1,818.50	4,946.32
tblFireplaces	NumberWood	9,326.03	0.00
tblFireplaces	NumberWood	3,165.74	0.00
tblFireplaces	NumberWood	3,165.74	0.00
tblFireplaces	NumberWood	3,127.82	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.94
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2040

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Plan Bay Area 2040 Update - San Francisco - New Land Uses - San Francisco County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**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)
		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	571.8839	13.5422	819.1662	0.3329		17.9044	17.9044		17.9044	17.9044	1,809.2715	5,502.4256	7,311.6971	9.6882	0.0788	7,577.3769
Energy	3.0018	25.8933	12.6880	0.1637		2.0740	2.0740		2.0740	2.0740	0.0000	106,552.0149	106,552.0149	5.2120	1.3184	107,075.1952
Mobile	100.7123	532.8463	1,161.5615	5.9916	703.8461	2.8662	706.7123	189.3129	2.6654	191.9783	0.0000	557,910.5121	557,910.5121	21.5627	0.0000	558,449.5802
Waste						0.0000	0.0000		0.0000	0.0000	12,914.3399	0.0000	12,914.3399	763.2156	0.0000	31,994.7304
Water						0.0000	0.0000		0.0000	0.0000	2,523.0175	8,174.6846	10,697.7020	259.6320	6.2011	19,036.4359
Total	**675.5980**	**572.2818**	**1,993.4157**	**6.4882**	**703.8461**	**22.8446**	**726.6906**	**189.3129**	**22.6438**	**211.9566**	**17,246.6289**	**678,139.6371**	**695,386.2660**	**1,059.3104**	**7.5983**	**724,133.3187**

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	571.8839	13.5422	819.1662	0.3329		17.9044	17.9044		17.9044	17.9044	1,809.2715	5,502.4256	7,311.6971	9.6882	0.0788	7,577.3769
Energy	3.0018	25.8933	12.6880	0.1637		2.0740	2.0740		2.0740	2.0740	0.0000	106,552.0149	106,552.0149	5.2120	1.3184	107,075.1952
Mobile	100.7123	532.8463	1,161.5615	5.9916	703.8461	2.8662	706.7123	189.3129	2.6654	191.9783	0.0000	557,910.5121	557,910.5121	21.5627	0.0000	558,449.5802
Waste						0.0000	0.0000		0.0000	0.0000	12,914.3399	0.0000	12,914.3399	763.2156	0.0000	31,994.7304
Water						0.0000	0.0000		0.0000	0.0000	2,523.0175	8,174.6846	10,697.7020	259.6320	6.2011	19,036.4359
Total	**675.5980**	**572.2818**	**1,993.4157**	**6.4882**	**703.8461**	**22.8446**	**726.6906**	**189.3129**	**22.6438**	**211.9566**	**17,246.6289**	**678,139.6371**	**695,386.2660**	**1,059.3104**	**7.5983**	**724,133.3187**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	100.7123	532.8463	1,161.5615	5.9916	703.8461	2.8662	706.7123	189.3129	2.6654	191.9783	0.0000	557,910.5121	557,910.5121	21.5627	0.0000	558,449.5802
Unmitigated	100.7123	532.8463	1,161.5615	5.9916	703.8461	2.8662	706.7123	189.3129	2.6654	191.9783	0.0000	557,910.5121	557,910.5121	21.5627	0.0000	558,449.5802

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	230,407.80	273,197.82	200235.35	536,314,627	536,314,627
Apartments Low Rise	122,718.98	133,333.52	113035.54	283,739,863	283,739,863
Apartments Mid Rise	123,836.30	118,994.58	109124.92	279,561,796	279,561,796
General Office Building	58,528.38	13,053.47	5571.60	106,264,446	106,264,446
Regional Shopping Center	308,267.95	360,752.92	182217.40	522,061,562	522,061,562
Single Family Housing	69,248.48	72,085.34	62701.88	158,712,789	158,712,789
Total	913,007.89	971,417.65	672,886.70	1,886,655,083	1,886,655,083

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
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663
Apartments High Rise	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663
Apartments Low Rise	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663
Apartments Mid Rise	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663
Single Family Housing	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663
Regional Shopping Center	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Plan Bay Area 2040 Update - San Francisco - New Land Uses - San Francisco County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	76,844.6726	76,844.6726	4.6426	0.7738	77,191.3170
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	76,844.6726	76,844.6726	4.6426	0.7738	77,191.3170
NaturalGas Mitigated	3.0018	25.8933	12.6880	0.1637		2.0740	2.0740		2.0740	2.0740	0.0000	29,707.3423	29,707.3423	0.5694	0.5446	29,883.8782
NaturalGas Unmitigated	3.0018	25.8933	12.6880	0.1637		2.0740	2.0740		2.0740	2.0740	0.0000	29,707.3423	29,707.3423	0.5694	0.5446	29,883.8782

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					
Apartments High Rise	2.13168e+008	1.1494	9.8224	4.1798	0.0627		0.7942	0.7942		0.7942	0.7942	0.0000	11,375.4462	11,375.4462	0.2180	0.2086	11,443.0448
Apartments Low Rise	1.1732e+008	0.6326	5.4059	2.3004	0.0345		0.4371	0.4371		0.4371	0.4371	0.0000	6,260.6567	6,260.6567	0.1200	0.1148	6,297.8607
Apartments Mid Rise	7.23603e+007	0.3902	3.3343	1.4188	0.0213		0.2696	0.2696		0.2696	0.2696	0.0000	3,861.4185	3,861.4185	0.0740	0.0708	3,884.3650
General Office Building	6.10223e+007	0.3290	2.9913	2.5127	0.0180		0.2273	0.2273		0.2273	0.2273	0.0000	3,256.3842	3,256.3842	0.0624	0.0597	3,275.7353
Regional Shopping Center	2.11528e+007	0.1141	1.0369	0.8710	6.2200e-003		0.0788	0.0788		0.0788	0.0788	0.0000	1,128.7946	1,128.7946	0.0216	0.0207	1,135.5025
Single Family Housing	7.16711e+007	0.3865	3.3025	1.4053	0.0211		0.2670	0.2670		0.2670	0.2670	0.0000	3,824.6421	3,824.6421	0.0733	0.0701	3,847.3700
Total		**3.0018**	**25.8933**	**12.6880**	**0.1637**		**2.0740**	**2.0740**		**2.0740**	**2.0740**	**0.0000**	**29,707.3423**	**29,707.3423**	**0.5694**	**0.5446**	**29,883.8782**

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					
Apartments High Rise	2.13168e+008	1.1494	9.8224	4.1798	0.0627		0.7942	0.7942		0.7942	0.7942	0.0000	11,375.4462	11,375.4462	0.2180	0.2086	11,443.0448
Apartments Low Rise	1.1732e+008	0.6326	5.4059	2.3004	0.0345		0.4371	0.4371		0.4371	0.4371	0.0000	6,260.6567	6,260.6567	0.1200	0.1148	6,297.8607
Apartments Mid Rise	7.23603e+007	0.3902	3.3343	1.4188	0.0213		0.2696	0.2696		0.2696	0.2696	0.0000	3,861.4185	3,861.4185	0.0740	0.0708	3,884.3650
General Office Building	6.10223e+007	0.3290	2.9913	2.5127	0.0180		0.2273	0.2273		0.2273	0.2273	0.0000	3,256.3842	3,256.3842	0.0624	0.0597	3,275.7353
Regional Shopping Center	2.11528e+007	0.1141	1.0369	0.8710	6.2200e-003		0.0788	0.0788		0.0788	0.0788	0.0000	1,128.7946	1,128.7946	0.0216	0.0207	1,135.5025
Single Family Housing	7.16711e+007	0.3865	3.3025	1.4053	0.0211		0.2670	0.2670		0.2670	0.2670	0.0000	3,824.6421	3,824.6421	0.0733	0.0701	3,847.3700
Total		**3.0018**	**25.8933**	**12.6880**	**0.1637**		**2.0740**	**2.0740**		**2.0740**	**2.0740**	**0.0000**	**29,707.3423**	**29,707.3423**	**0.5694**	**0.5446**	**29,883.8782**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	2.24424e+008	30,329.3727	1.8323	0.3054	30,466.1877
Apartments Low Rise	7.94843e+007	10,741.7691	0.6490	0.1082	10,790.2250
Apartments Mid Rise	7.61811e+007	10,295.3677	0.6220	0.1037	10,341.8099
General Office Building	5.79447e+007	7,830.8368	0.4731	0.0789	7,866.1615
Regional Shopping Center	7.00281e+007	9,463.8270	0.5718	0.0953	9,506.5181
Single Family Housing	6.05542e+007	8,183.4993	0.4944	0.0824	8,220.4149
Total		**76,844.6726**	**4.6426**	**0.7738**	**77,191.3170**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	2.24424e+008	30,329.3727	1.8323	0.3054	30,466.1877
Apartments Low Rise	7.94843e+007	10,741.7691	0.6490	0.1082	10,790.2250
Apartments Mid Rise	7.61811e+007	10,295.3677	0.6220	0.1037	10,341.8099
General Office Building	5.79447e+007	7,830.8368	0.4731	0.0789	7,866.1615
Regional Shopping Center	7.00281e+007	9,463.8270	0.5718	0.0953	9,506.5181
Single Family Housing	6.05542e+007	8,183.4993	0.4944	0.0824	8,220.4149
Total		**76,844.6726**	**4.6426**	**0.7738**	**77,191.3170**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	571.8839	13.5422	819.1662	0.3329		17.9044	17.9044		17.9044	17.9044	1,809.2715	5,502.4256	7,311.6971	9.6882	0.0788	7,577.3769
Unmitigated	571.8839	13.5422	819.1662	0.3329		17.9044	17.9044		17.9044	17.9044	1,809.2715	5,502.4256	7,311.6971	9.6882	0.0788	7,577.3769

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	80.5832					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	459.7628					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	9.5548	5.0615	84.4078	0.2939		13.8120	13.8120		13.8120	13.8120	1,809.2715	4,296.8786	6,106.1501	8.5403	0.0788	6,343.1337
Landscaping	21.9831	8.4807	734.7584	0.0390		4.0924	4.0924		4.0924	4.0924	0.0000	1,205.5470	1,205.5470	1.1479	0.0000	1,234.2432
Total	**571.8839**	**13.5422**	**819.1662**	**0.3329**		**17.9044**	**17.9044**		**17.9044**	**17.9044**	**1,809.2715**	**5,502.4256**	**7,311.6971**	**9.6882**	**0.0788**	**7,577.3769**

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	80.5832					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	459.7628					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	9.5548	5.0615	84.4078	0.2939		13.8120	13.8120		13.8120	13.8120	1,809.2715	4,296.8786	6,106.1501	8.5403	0.0788	6,343.1337
Landscaping	21.9831	8.4807	734.7584	0.0390		4.0924	4.0924		4.0924	4.0924	0.0000	1,205.5470	1,205.5470	1.1479	0.0000	1,234.2432
Total	**571.8839**	**13.5422**	**819.1662**	**0.3329**		**17.9044**	**17.9044**		**17.9044**	**17.9044**	**1,809.2715**	**5,502.4256**	**7,311.6971**	**9.6882**	**0.0788**	**7,577.3769**

7.0 Water Detail

7.1 Mitigation Measures Water

Plan Bay Area 2040 Update - San Francisco - New Land Uses - San Francisco County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	10,697.7020	259.6320	6.2011	19,036.4359
Unmitigated	10,697.7020	259.6320	6.2011	19,036.4359

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	3574.28 / 2253.35	4,813.5284	116.6904	2.7871	8,561.3491
Apartments Low Rise	1213.3 / 764.905	1,633.9621	39.6108	0.9461	2,906.1675
Apartments Mid Rise	1213.3 / 764.905	1,633.9621	39.6108	0.9461	2,906.1675
General Office Building	943.107 / 578.033	1,262.2716	30.7893	0.7353	2,251.1322
Regional Shopping Center	534.758 / 327.755	715.7306	17.4581	0.4169	1,276.4322
Single Family Housing	473.93 / 298.782	638.2473	15.4725	0.3696	1,135.1875
Total		**10,697.7020**	**259.6320**	**6.2011**	**19,036.4359**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	3574.28 / 2253.35	4,813.5284	116.6904	2.7871	8,561.3491
Apartments Low Rise	1213.3 / 764.905	1,633.9621	39.6108	0.9461	2,906.1675
Apartments Mid Rise	1213.3 / 764.905	1,633.9621	39.6108	0.9461	2,906.1675
General Office Building	943.107 / 578.033	1,262.2716	30.7893	0.7353	2,251.1322
Regional Shopping Center	534.758 / 327.755	715.7306	17.4581	0.4169	1,276.4322
Single Family Housing	473.93 / 298.782	638.2473	15.4725	0.3696	1,135.1875
Total		**10,697.7020**	**259.6320**	**6.2011**	**19,036.4359**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12,914.3399	763.2156	0.0000	31,994.7304
Unmitigated	12,914.3399	763.2156	0.0000	31,994.7304

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	25235.1	5,122.5054	302.7314	0.0000	12,690.7902
Apartments Low Rise	8566.12	1,738.8450	102.7628	0.0000	4,307.9148
Apartments Mid Rise	8566.12	1,738.8450	102.7628	0.0000	4,307.9148
General Office Building	4934.85	1,001.7300	59.2005	0.0000	2,481.7436
Regional Shopping Center	7580.36	1,538.7446	90.9372	0.0000	3,812.1746
Single Family Housing	8737.68	1,773.6701	104.8209	0.0000	4,394.1925
Total		**12,914.3399**	**763.2156**	**0.0000**	**31,994.7304**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	25235.1	5,122.5054	302.7314	0.0000	12,690.7902
Apartments Low Rise	8566.12	1,738.8450	102.7628	0.0000	4,307.9148
Apartments Mid Rise	8566.12	1,738.8450	102.7628	0.0000	4,307.9148
General Office Building	4934.85	1,001.7300	59.2005	0.0000	2,481.7436
Regional Shopping Center	7580.36	1,538.7446	90.9372	0.0000	3,812.1746
Single Family Housing	8737.68	1,773.6701	104.8209	0.0000	4,394.1925
Total		**12,914.3399**	**763.2156**	**0.0000**	**31,994.7304**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - San Francisco - New Land Uses

San Francisco County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	5,306.29	1000sqft	121.82	5,306,290.00	0
Apartments High Rise	54,859.00	Dwelling Unit	884.82	54,859,000.00	156897
Apartments Low Rise	18,622.00	Dwelling Unit	1,163.88	18,622,000.00	53259
Apartments Mid Rise	18,622.00	Dwelling Unit	490.05	18,622,000.00	53259
Single Family Housing	7,274.00	Dwelling Unit	2,361.69	13,093,200.00	20804
Regional Shopping Center	7,219.39	1000sqft	165.73	7,219,390.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	4.6	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.94	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - San Francisco - New Land Uses - San Francisco County, Summer

Project Characteristics - Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards and ZNE standards assuming a linear growth in new construction between 2015 and 2040.

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Plan Bay Area 2040 Update - San Francisco - New Land Uses - San Francisco County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	502.89	72.42
tblEnergyUse	T24E	274.84	39.58
tblEnergyUse	T24E	502.89	72.42
tblEnergyUse	T24E	4.30	2.45
tblEnergyUse	T24E	2.35	1.34
tblEnergyUse	T24E	246.52	35.50
tblEnergyUse	T24NG	8,824.58	1,270.74
tblEnergyUse	T24NG	25,590.91	3,685.09
tblEnergyUse	T24NG	8,824.58	1,270.74
tblEnergyUse	T24NG	18.41	10.49
tblEnergyUse	T24NG	3.92	2.23
tblEnergyUse	T24NG	50,264.25	7,238.05
tblFireplaces	NumberGas	8,228.85	17,554.88
tblFireplaces	NumberGas	2,793.30	5,959.04
tblFireplaces	NumberGas	2,793.30	5,959.04
tblFireplaces	NumberGas	1,818.50	4,946.32
tblFireplaces	NumberWood	9,326.03	0.00
tblFireplaces	NumberWood	3,165.74	0.00
tblFireplaces	NumberWood	3,165.74	0.00
tblFireplaces	NumberWood	3,127.82	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.94
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2040

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5256	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5256**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5256	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5256**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Plan Bay Area 2040 Update - San Francisco - New Land Uses - San Francisco County, Summer

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

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	lb/day										lb/day					
Area	4,487.1706	938.7394	19,383.0337	40.3638		1,883.2744	1,883.2744		1,883.2744	1,883.2744	263,310.6527	865,124.1055	1,128,434.7582	1,261.2811	15.5899	1,164,612.5775
Energy	16.4481	141.8811	69.5232	0.8972		11.3642	11.3642		11.3642	11.3642		179,434.1887	179,434.1887	3.4392	3.2896	180,500.4763
Mobile	696.5388	3,286.9472	7,537.1980	39.4751	4,607.6563	18.0800	4,625.7363	1,235.2668	16.8127	1,252.0795		4,048,543.5585	4,048,543.5585	149.4212		4,052,279.0894
Total	**5,200.1575**	**4,367.5677**	**26,989.7549**	**80.7360**	**4,607.6563**	**1,912.7185**	**6,520.3749**	**1,235.2668**	**1,911.4513**	**3,146.7180**	**263,310.6527**	**5,093,101.8527**	**5,356,412.5054**	**1,414.1415**	**18.8795**	**5,397,392.1433**

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	lb/day										lb/day					
Area	4,487.1706	938.7394	19,383.0337	40.3638		1,883.2744	1,883.2744		1,883.2744	1,883.2744	263,310.6527	865,124.1055	1,128,434.7582	1,261.2811	15.5899	1,164,612.5775
Energy	16.4481	141.8811	69.5232	0.8972		11.3642	11.3642		11.3642	11.3642		179,434.1887	179,434.1887	3.4392	3.2896	180,500.4763
Mobile	696.5388	3,286.9472	7,537.1980	39.4751	4,607.6563	18.0800	4,625.7363	1,235.2668	16.8127	1,252.0795		4,048,543.5585	4,048,543.5585	149.4212		4,052,279.0894
Total	**5,200.1575**	**4,367.5677**	**26,989.7549**	**80.7360**	**4,607.6563**	**1,912.7185**	**6,520.3749**	**1,235.2668**	**1,911.4513**	**3,146.7180**	**263,310.6527**	**5,093,101.8527**	**5,356,412.5054**	**1,414.1415**	**18.8795**	**5,397,392.1433**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	696.5388	3,286.9472	7,537.1980	39.4751	4,607.6563	18.0800	4,625.7363	1,235.2668	16.8127	1,252.0795		4,048,543.5585	4,048,543.5585	149.4212		4,052,279.0894
Unmitigated	696.5388	3,286.9472	7,537.1980	39.4751	4,607.6563	18.0800	4,625.7363	1,235.2668	16.8127	1,252.0795		4,048,543.5585	4,048,543.5585	149.4212		4,052,279.0894

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	230,407.80	273,197.82	200235.35	536,314,627	536,314,627
Apartments Low Rise	122,718.98	133,333.52	113035.54	283,739,863	283,739,863
Apartments Mid Rise	123,836.30	118,994.58	109124.92	279,561,796	279,561,796
General Office Building	58,528.38	13,053.47	5571.60	106,264,446	106,264,446
Regional Shopping Center	308,267.95	360,752.92	182217.40	522,061,562	522,061,562
Single Family Housing	69,248.48	72,085.34	62701.88	158,712,789	158,712,789
Total	913,007.89	971,417.65	672,886.70	1,886,655,083	1,886,655,083

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
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663
Apartments High Rise	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663
Apartments Low Rise	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663
Apartments Mid Rise	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663
Single Family Housing	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663
Regional Shopping Center	0.598130	0.035642	0.192395	0.093881	0.011711	0.005394	0.038948	0.010487	0.004523	0.001760	0.005537	0.000928	0.000663

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Plan Bay Area 2040 Update - San Francisco - New Land Uses - San Francisco County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	16.4481	141.8811	69.5232	0.8972		11.3642	11.3642		11.3642	11.3642		179,434.1887	179,434.1887	3.4392	3.2896	180,500.4763
NaturalGas Unmitigated	16.4481	141.8811	69.5232	0.8972		11.3642	11.3642		11.3642	11.3642		179,434.1887	179,434.1887	3.4392	3.2896	180,500.4763

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	lb/day										lb/day					
Apartments High Rise	584021	6.2983	53.8216	22.9028	0.3435		4.3515	4.3515		4.3515	4.3515		68,708.3999	68,708.3999	1.3169	1.2597	69,116.6996
Apartments Low Rise	321425	3.4664	29.6216	12.6049	0.1891		2.3949	2.3949		2.3949	2.3949		37,814.7546	37,814.7546	0.7248	0.6933	38,039.4687
Apartments Mid Rise	198247	2.1380	18.2699	7.7744	0.1166		1.4771	1.4771		1.4771	1.4771		23,323.2072	23,323.2072	0.4470	0.4276	23,461.8053
General Office Building	167184	1.8030	16.3906	13.7681	0.0983		1.2457	1.2457		1.2457	1.2457		19,668.7623	19,668.7623	0.3770	0.3606	19,785.6439
Regional Shopping Center	57952.9	0.6250	5.6817	4.7726	0.0341		0.4318	0.4318		0.4318	0.4318		6,817.9896	6,817.9896	0.1307	0.1250	6,858.5055
Single Family Housing	196359	2.1176	18.0958	7.7004	0.1155		1.4631	1.4631		1.4631	1.4631		23,101.0752	23,101.0752	0.4428	0.4235	23,238.3533
Total		**16.4481**	**141.8811**	**69.5232**	**0.8972**		**11.3642**	**11.3642**		**11.3642**	**11.3642**		**179,434.1887**	**179,434.1887**	**3.4392**	**3.2896**	**180,500.4763**

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	lb/day										lb/day					
Apartments High Rise	584.021	6.2983	53.8216	22.9028	0.3435		4.3515	4.3515		4.3515	4.3515		68,708.3999	68,708.3999	1.3169	1.2597	69,116.6996
Apartments Low Rise	321.425	3.4664	29.6216	12.6049	0.1891		2.3949	2.3949		2.3949	2.3949		37,814.7546	37,814.7546	0.7248	0.6933	38,039.4687
Apartments Mid Rise	198.247	2.1380	18.2699	7.7744	0.1166		1.4771	1.4771		1.4771	1.4771		23,323.2072	23,323.2072	0.4470	0.4276	23,461.8053
General Office Building	167.184	1.8030	16.3906	13.7681	0.0983		1.2457	1.2457		1.2457	1.2457		19,668.7623	19,668.7623	0.3770	0.3606	19,785.6439
Regional Shopping Center	57.9529	0.6250	5.6817	4.7726	0.0341		0.4318	0.4318		0.4318	0.4318		6,817.9896	6,817.9896	0.1307	0.1250	6,858.5055
Single Family Housing	196.359	2.1176	18.0958	7.7004	0.1155		1.4631	1.4631		1.4631	1.4631		23,101.0752	23,101.0752	0.4428	0.4235	23,238.3533
Total		**16.4481**	**141.8811**	**69.5232**	**0.8972**		**11.3642**	**11.3642**		**11.3642**	**11.3642**		**179,434.1887**	**179,434.1887**	**3.4392**	**3.2896**	**180,500.4763**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4,487.1706	938.7394	19,383.0337	40.3638		1,883.2744	1,883.2744		1,883.2744	1,883.2744	263,310.6527	865,124.1055	1,128,434.7582	1,261.2811	15.5899	1,164,612.5775
Unmitigated	4,487.1706	938.7394	19,383.0337	40.3638		1,883.2744	1,883.2744		1,883.2744	1,883.2744	263,310.6527	865,124.1055	1,128,434.7582	1,261.2811	15.5899	1,164,612.5775

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	lb/day										lb/day					
Architectural Coating	441.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2,519.2482					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,282.1141	844.5091	11,219.0511	39.9307		1,837.8036	1,837.8036		1,837.8036	1,837.8036	263,310.6527	850,358.6824	1,113,669.3351	1,247.2223	15.5899	1,149,495.6861
Landscaping	244.2562	94.2304	8,163.9826	0.4330		45.4708	45.4708		45.4708	45.4708		14,765.4232	14,765.4232	14.0587		15,116.8914
Total	**4,487.1706**	**938.7394**	**19,383.0337**	**40.3638**		**1,883.2744**	**1,883.2744**		**1,883.2744**	**1,883.2744**	**263,310.6527**	**865,124.1055**	**1,128,434.7583**	**1,261.2811**	**15.5899**	**1,164,612.5775**

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	lb/day										lb/day					
Architectural Coating	441.5520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2,519.2482					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,282.1141	844.5091	11,219.0511	39.9307		1,837.8036	1,837.8036		1,837.8036	1,837.8036	263,310.6527	850,358.6824	1,113,669.3351	1,247.2223	15.5899	1,149,495.6861
Landscaping	244.2562	94.2304	8,163.9826	0.4330		45.4708	45.4708		45.4708	45.4708		14,765.4232	14,765.4232	14.0587		15,116.8914
Total	**4,487.1706**	**938.7394**	**19,383.0337**	**40.3638**		**1,883.2744**	**1,883.2744**		**1,883.2744**	**1,883.2744**	**263,310.6527**	**865,124.1055**	**1,128,434.7583**	**1,261.2811**	**15.5899**	**1,164,612.5775**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - San Francisco - Net Reduction in Land Uses

San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	3,488.21	1000sqft	80.08	3,488,210.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	4.6	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - San Francisco - Net Reduction in Land Uses - San Francisco County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	15.4454	3.2000e-004	0.0332	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0623	0.0623	1.8000e-004	0.0000	0.0668
Energy	0.4437	4.0337	3.3883	0.0242		0.3066	0.3066		0.3066	0.3066	0.0000	14,412.3240	14,412.3240	0.7062	0.1957	14,488.2939
Mobile	9.5901	36.4877	109.5425	0.2534	18.3771	0.5539	18.9310	4.9700	0.5256	5.4956	0.0000	23,117.6087	23,117.6087	1.2887	0.0000	23,149.8268
Waste						0.0000	0.0000		0.0000	0.0000	878.0131	0.0000	878.0131	51.8891	0.0000	2,175.2402
Water						0.0000	0.0000		0.0000	0.0000	255.9124	861.2255	1,117.1379	26.3381	0.6305	1,963.4906
Total	**25.4792**	**40.5217**	**112.9640**	**0.2776**	**18.3771**	**0.8606**	**19.2376**	**4.9700**	**0.8323**	**5.8023**	**1,133.9254**	**38,391.2206**	**39,525.1460**	**80.2223**	**0.8262**	**41,776.9184**

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	15.4454	3.2000e-004	0.0332	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0623	0.0623	1.8000e-004	0.0000	0.0668
Energy	0.4437	4.0337	3.3883	0.0242		0.3066	0.3066		0.3066	0.3066	0.0000	14,412.3240	14,412.3240	0.7062	0.1957	14,488.2939
Mobile	9.5901	36.4877	109.5425	0.2534	18.3771	0.5539	18.9310	4.9700	0.5256	5.4956	0.0000	23,117.6087	23,117.6087	1.2887	0.0000	23,149.8268
Waste						0.0000	0.0000		0.0000	0.0000	878.0131	0.0000	878.0131	51.8891	0.0000	2,175.2402
Water						0.0000	0.0000		0.0000	0.0000	255.9124	861.2255	1,117.1379	26.3381	0.6305	1,963.4906
Total	**25.4792**	**40.5217**	**112.9640**	**0.2776**	**18.3771**	**0.8606**	**19.2376**	**4.9700**	**0.8323**	**5.8023**	**1,133.9254**	**38,391.2206**	**39,525.1460**	**80.2223**	**0.8262**	**41,776.9184**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	9.5901	36.4877	109.5425	0.2534	18.3771	0.5539	18.9310	4.9700	0.5256	5.4956	0.0000	23,117.6087	23,117.6087	1.2887	0.0000	23,149.8268
Unmitigated	9.5901	36.4877	109.5425	0.2534	18.3771	0.5539	18.9310	4.9700	0.5256	5.4956	0.0000	23,117.6087	23,117.6087	1.2887	0.0000	23,149.8268

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	23,824.47	8,685.64	2546.39	48,823,839	48,823,839
Total	23,824.47	8,685.64	2,546.39	48,823,839	48,823,839

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.609525	0.047630	0.185192	0.080591	0.018926	0.004422	0.023841	0.008261	0.004343	0.007543	0.008489	0.000865	0.000371

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	10,021.1831	10,021.1831	0.6220	0.1152	10,071.0586
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	10,021.1831	10,021.1831	0.6220	0.1152	10,071.0586
NaturalGas Mitigated	0.4437	4.0337	3.3883	0.0242		0.3066	0.3066		0.3066	0.3066	0.0000	4,391.1410	4,391.1410	0.0842	0.0805	4,417.2353
NaturalGas Unmitigated	0.4437	4.0337	3.3883	0.0242		0.3066	0.3066		0.3066	0.3066	0.0000	4,391.1410	4,391.1410	0.0842	0.0805	4,417.2353

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					
Industrial Park	8.22869e+007	0.4437	4.0337	3.3883	0.0242		0.3066	0.3066		0.3066	0.3066	0.0000	4,391.1410	4,391.1410	0.0842	0.0805	4,417.2353
Total		**0.4437**	**4.0337**	**3.3883**	**0.0242**		**0.3066**	**0.3066**		**0.3066**	**0.3066**	**0.0000**	**4,391.1410**	**4,391.1410**	**0.0842**	**0.0805**	**4,417.2353**

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					
Industrial Park	8.22869e+007	0.4437	4.0337	3.3883	0.0242		0.3066	0.3066		0.3066	0.3066	0.0000	4,391.1410	4,391.1410	0.0842	0.0805	4,417.2353
Total		**0.4437**	**4.0337**	**3.3883**	**0.0242**		**0.3066**	**0.3066**		**0.3066**	**0.3066**	**0.0000**	**4,391.1410**	**4,391.1410**	**0.0842**	**0.0805**	**4,417.2353**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	5.07883e+007	10,021.1831	0.6220	0.1152	10,071.0586
Total		**10,021.1831**	**0.6220**	**0.1152**	**10,071.0586**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	5.07883e+007	10,021.1831	0.6220	0.1152	10,071.0586
Total		**10,021.1831**	**0.6220**	**0.1152**	**10,071.0586**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	15.4454	3.2000e-004	0.0332	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0623	0.0623	1.8000e-004	0.0000	0.0668
Unmitigated	15.4454	3.2000e-004	0.0332	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0623	0.0623	1.8000e-004	0.0000	0.0668

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	1.8189					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	13.6232					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.2800e-003	3.2000e-004	0.0332	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0623	0.0623	1.8000e-004	0.0000	0.0668
Total	**15.4454**	**3.2000e-004**	**0.0332**	**0.0000**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.0623**	**0.0623**	**1.8000e-004**	**0.0000**	**0.0668**

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	1.8189					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	13.6232					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.2800e-003	3.2000e-004	0.0332	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.0623	0.0623	1.8000e-004	0.0000	0.0668
Total	**15.4454**	**3.2000e-004**	**0.0332**	**0.0000**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.0623**	**0.0623**	**1.8000e-004**	**0.0000**	**0.0668**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1,117.1379	26.3381	0.6305	1,963.4906
Unmitigated	1,117.1379	26.3381	0.6305	1,963.4906

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	806.649 / 0	1,117.1379	26.3381	0.6305	1,963.4906
Total		**1,117.1379**	**26.3381**	**0.6305**	**1,963.4906**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	806.649 / 0	1,117.1379	26.3381	0.6305	1,963.4906
Total		**1,117.1379**	**26.3381**	**0.6305**	**1,963.4906**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	878.0131	51.8891	0.0000	2,175.2402
Unmitigated	878.0131	51.8891	0.0000	2,175.2402

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	4325.38	878.0131	51.8891	0.0000	2,175.2402
Total		**878.0131**	**51.8891**	**0.0000**	**2,175.2402**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	4325.38	878.0131	51.8891	0.0000	2,175.2402
Total		**878.0131**	**51.8891**	**0.0000**	**2,175.2402**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - San Francisco - Net Reduction in Land Uses

San Francisco County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	3,488.21	1000sqft	80.08	3,488,210.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	4.6	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5256	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5256**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5256	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5256**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	84.6506	3.5700e-003	0.3684	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.7634	0.7634	2.2100e-003		0.8187
Energy	2.4313	22.1023	18.5659	0.1326		1.6798	1.6798		1.6798	1.6798		26,522.7636	26,522.7636	0.5084	0.4863	26,680.3751
Mobile	72.0386	242.5278	776.8485	1.8709	134.1543	3.8907	138.0450	36.1571	3.6919	39.8490		188,141.9420	188,141.9420	10.0636		188,393.5316
Total	**159.1205**	**264.6337**	**795.7829**	**2.0035**	**134.1543**	**5.5718**	**139.7261**	**36.1571**	**5.3730**	**41.5301**		**214,665.4690**	**214,665.4690**	**10.5741**	**0.4863**	**215,074.7253**

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	lb/day										lb/day					
Area	84.6506	3.5700e-003	0.3684	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.7634	0.7634	2.2100e-003		0.8187
Energy	2.4313	22.1023	18.5659	0.1326		1.6798	1.6798		1.6798	1.6798		26,522.7636	26,522.7636	0.5084	0.4863	26,680.3751
Mobile	72.0386	242.5278	776.8485	1.8709	134.1543	3.8907	138.0450	36.1571	3.6919	39.8490		188,141.9420	188,141.9420	10.0636		188,393.5316
Total	**159.1205**	**264.6337**	**795.7829**	**2.0035**	**134.1543**	**5.5718**	**139.7261**	**36.1571**	**5.3730**	**41.5301**		**214,665.4690**	**214,665.4690**	**10.5741**	**0.4863**	**215,074.7253**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	72.0386	242.5278	776.8485	1.8709	134.1543	3.8907	138.0450	36.1571	3.6919	39.8490		188,141.9420	188,141.9420	10.0636		188,393.5316
Unmitigated	72.0386	242.5278	776.8485	1.8709	134.1543	3.8907	138.0450	36.1571	3.6919	39.8490		188,141.9420	188,141.9420	10.0636		188,393.5316

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	23,824.47	8,685.64	2546.39	48,823,839	48,823,839
Total	23,824.47	8,685.64	2,546.39	48,823,839	48,823,839

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.609525	0.047630	0.185192	0.080591	0.018926	0.004422	0.023841	0.008261	0.004343	0.007543	0.008489	0.000865	0.000371

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.4313	22.1023	18.5659	0.1326		1.6798	1.6798		1.6798	1.6798		26,522.7636	26,522.7636	0.5084	0.4863	26,680.3751
NaturalGas Unmitigated	2.4313	22.1023	18.5659	0.1326		1.6798	1.6798		1.6798	1.6798		26,522.7636	26,522.7636	0.5084	0.4863	26,680.3751

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	lb/day										lb/day					
Industrial Park	225443	2.4313	22.1023	18.5659	0.1326		1.6798	1.6798		1.6798	1.6798		26,522.7636	26,522.7636	0.5084	0.4863	26,680.3751
Total		**2.4313**	**22.1023**	**18.5659**	**0.1326**		**1.6798**	**1.6798**		**1.6798**	**1.6798**		**26,522.7636**	**26,522.7636**	**0.5084**	**0.4863**	**26,680.3751**

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	lb/day										lb/day					
Industrial Park	225.443	2.4313	22.1023	18.5659	0.1326		1.6798	1.6798		1.6798	1.6798		26,522.7636	26,522.7636	0.5084	0.4863	26,680.3751
Total		**2.4313**	**22.1023**	**18.5659**	**0.1326**		**1.6798**	**1.6798**		**1.6798**	**1.6798**		**26,522.7636**	**26,522.7636**	**0.5084**	**0.4863**	**26,680.3751**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	84.6506	3.5700e-003	0.3684	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.7634	0.7634	2.2100e-003		0.8187
Unmitigated	84.6506	3.5700e-003	0.3684	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.7634	0.7634	2.2100e-003		0.8187

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	lb/day										lb/day					
Architectural Coating	9.9665					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	74.6477					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0364	3.5700e-003	0.3684	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.7634	0.7634	2.2100e-003		0.8187
Total	**84.6506**	**3.5700e-003**	**0.3684**	**3.0000e-005**		**1.3300e-003**	**1.3300e-003**		**1.3300e-003**	**1.3300e-003**		**0.7634**	**0.7634**	**2.2100e-003**		**0.8187**

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	lb/day										lb/day					
Architectural Coating	9.9665					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	74.6477					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0364	3.5700e-003	0.3684	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.7634	0.7634	2.2100e-003		0.8187
Total	**84.6506**	**3.5700e-003**	**0.3684**	**3.0000e-005**		**1.3300e-003**	**1.3300e-003**		**1.3300e-003**	**1.3300e-003**		**0.7634**	**0.7634**	**2.2100e-003**		**0.8187**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - San Mateo - New Land Uses

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	28,769.53	1000sqft	660.46	28,769,530.00	0
Apartments High Rise	8,777.00	Dwelling Unit	141.56	8,777,000.00	25102
Apartments Low Rise	11,741.00	Dwelling Unit	733.81	11,741,000.00	33579
Apartments Mid Rise	11,741.00	Dwelling Unit	308.97	11,741,000.00	33579
Single Family Housing	11,598.00	Dwelling Unit	3,765.58	20,876,400.00	33170

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	148.97	**CH4 Intensity (lb/MWhr)**	0.009	**N2O Intensity (lb/MWhr)**	0.002

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - San Mateo - New Land Uses - San Mateo County, Annual

Project Characteristics - Peninsula Clean Energy emission factor based on a 75% renewable mix. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix. (http://www.peninsulacleanenergy.com/resources/technical-study/)

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards and ZNE standards assuming a linear growth in new construction between 2015 and 2040.

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Plan Bay Area 2040 Update - San Mateo - New Land Uses - San Mateo County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	502.89	72.42
tblEnergyUse	T24E	274.84	39.58
tblEnergyUse	T24E	502.89	72.42
tblEnergyUse	T24E	4.30	2.45
tblEnergyUse	T24E	246.52	35.50
tblEnergyUse	T24NG	8,824.58	1,270.74
tblEnergyUse	T24NG	25,590.91	3,685.09
tblEnergyUse	T24NG	8,824.58	1,270.74
tblEnergyUse	T24NG	18.41	10.50
tblEnergyUse	T24NG	50,264.25	7,238.05
tblFireplaces	NumberGas	1,316.55	2,808.64
tblFireplaces	NumberGas	1,761.15	3,757.12
tblFireplaces	NumberGas	1,761.15	3,757.12
tblFireplaces	NumberGas	2,899.50	7,886.64
tblFireplaces	NumberWood	1,492.09	0.00
tblFireplaces	NumberWood	1,995.97	0.00
tblFireplaces	NumberWood	1,995.97	0.00
tblFireplaces	NumberWood	4,987.14	0.00
tblLandUse	BuildingSpaceSquareFeet	28,769,500.00	28,769,530.00
tblLandUse	LandUseSquareFeet	28,769,500.00	28,769,530.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.009
tblProjectCharacteristics	CO2IntensityFactor	641.35	148.97
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.002
tblProjectCharacteristics	OperationalYear	2018	2040

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	387.7686	6.5272	375.5541	0.1937		10.1618	10.1618		10.1618	10.1618	1,097.4904	2,805.7102	3,903.2006	5.6818	0.0417	4,057.6640
Energy	3.2305	28.5800	18.8894	0.1762		2.2320	2.2320		2.2320	2.2320	0.0000	68,781.4824	68,781.4824	2.8367	1.0803	69,174.3391
Mobile	77.8591	237.7830	865.1942	3.8236	471.5824	1.6824	473.2648	126.8214	1.5655	128.3869	0.0000	352,975.6349	352,975.6349	12.5249	0.0000	353,288.7569
Waste						0.0000	0.0000		0.0000	0.0000	11,271.3127	0.0000	11,271.3127	666.1155	0.0000	27,924.2002
Water						0.0000	0.0000		0.0000	0.0000	2,528.7580	4,081.5826	6,610.3405	259.9743	6.1875	14,953.5818
Total	**468.8581**	**272.8901**	**1,259.6377**	**4.1935**	**471.5824**	**14.0762**	**485.6586**	**126.8214**	**13.9593**	**140.7807**	**14,897.5611**	**428,644.4101**	**443,541.9712**	**947.1331**	**7.3095**	**469,398.5420**

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	387.7686	6.5272	375.5541	0.1937		10.1618	10.1618		10.1618	10.1618	1,097.4904	2,805.7102	3,903.2006	5.6818	0.0417	4,057.6640
Energy	3.2305	28.5800	18.8894	0.1762		2.2320	2.2320		2.2320	2.2320	0.0000	68,781.4824	68,781.4824	2.8367	1.0803	69,174.3391
Mobile	77.8591	237.7830	865.1942	3.8236	471.5824	1.6824	473.2648	126.8214	1.5655	128.3869	0.0000	352,975.6349	352,975.6349	12.5249	0.0000	353,288.7569
Waste						0.0000	0.0000		0.0000	0.0000	11,271.3127	0.0000	11,271.3127	666.1155	0.0000	27,924.2002
Water						0.0000	0.0000		0.0000	0.0000	2,528.7580	4,081.5826	6,610.3405	259.9743	6.1875	14,953.5818
Total	**468.8581**	**272.8901**	**1,259.6377**	**4.1935**	**471.5824**	**14.0762**	**485.6586**	**126.8214**	**13.9593**	**140.7807**	**14,897.5611**	**428,644.4101**	**443,541.9712**	**947.1331**	**7.3095**	**469,398.5420**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	77.8591	237.7830	865.1942	3.8236	471.5824	1.6824	473.2648	126.8214	1.5655	128.3869	0.0000	352,975.6349	352,975.6349	12.5249	0.0000	353,288.7569
Unmitigated	77.8591	237.7830	865.1942	3.8236	471.5824	1.6824	473.2648	126.8214	1.5655	128.3869	0.0000	352,975.6349	352,975.6349	12.5249	0.0000	353,288.7569

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	36,863.40	43,709.46	32036.05	85,806,039	85,806,039
Apartments Low Rise	77,373.19	84,065.56	71267.87	178,895,378	178,895,378
Apartments Mid Rise	78,077.65	75,024.99	68802.26	176,261,146	176,261,146
General Office Building	317,327.92	70,773.04	30208.01	576,142,308	576,142,308
Single Family Housing	110,412.96	114,936.18	99974.76	253,058,967	253,058,967
Total	620,055.12	388,509.23	302,288.95	1,270,163,838	1,270,163,838

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
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.439771	0.051539	0.277940	0.149346	0.016860	0.007937	0.030341	0.007301	0.004762	0.002815	0.009681	0.000729	0.000979
Apartments High Rise	0.439771	0.051539	0.277940	0.149346	0.016860	0.007937	0.030341	0.007301	0.004762	0.002815	0.009681	0.000729	0.000979
Apartments Low Rise	0.439771	0.051539	0.277940	0.149346	0.016860	0.007937	0.030341	0.007301	0.004762	0.002815	0.009681	0.000729	0.000979
Apartments Mid Rise	0.439771	0.051539	0.277940	0.149346	0.016860	0.007937	0.030341	0.007301	0.004762	0.002815	0.009681	0.000729	0.000979
Single Family Housing	0.439771	0.051539	0.277940	0.149346	0.016860	0.007937	0.030341	0.007301	0.004762	0.002815	0.009681	0.000729	0.000979

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Plan Bay Area 2040 Update - San Mateo - New Land Uses - San Mateo County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	36,810.6948	36,810.6948	2.2239	0.4942	37,013.5650
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	36,810.6948	36,810.6948	2.2239	0.4942	37,013.5650
NaturalGas Mitigated	3.2305	28.5800	18.8894	0.1762		2.2320	2.2320		2.2320	2.2320	0.0000	31,970.7876	31,970.7876	0.6128	0.5861	32,160.7741
NaturalGas Unmitigated	3.2305	28.5800	18.8894	0.1762		2.2320	2.2320		2.2320	2.2320	0.0000	31,970.7876	31,970.7876	0.6128	0.5861	32,160.7741

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					
Apartments High Rise	3.41051e+007	0.1839	1.5715	0.6687	0.0100		0.1271	0.1271		0.1271	0.1271	0.0000	1,819.9802	1,819.9802	0.0349	0.0334	1,830.7954
Apartments Low Rise	7.39694e+007	0.3989	3.4084	1.4504	0.0218		0.2756	0.2756		0.2756	0.2756	0.0000	3,947.2866	3,947.2866	0.0757	0.0724	3,970.7433
Apartments Mid Rise	4.56225e+007	0.2460	2.1022	0.8946	0.0134		0.1700	0.1700		0.1700	0.1700	0.0000	2,434.5889	2,434.5889	0.0467	0.0446	2,449.0565
General Office Building	3.31137e+008	1.7855	16.2322	13.6351	0.0974		1.2337	1.2337		1.2337	1.2337	0.0000	17,670.7469	17,670.7469	0.3387	0.3240	17,775.7553
Single Family Housing	1.14276e+008	0.6162	5.2656	2.2407	0.0336		0.4257	0.4257		0.4257	0.4257	0.0000	6,098.1852	6,098.1852	0.1169	0.1118	6,134.4236
Total		**3.2305**	**28.5800**	**18.8894**	**0.1762**		**2.2320**	**2.2320**		**2.2320**	**2.2320**	**0.0000**	**31,970.7877**	**31,970.7877**	**0.6128**	**0.5861**	**32,160.7740**

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					
Apartments High Rise	3.41051e+007	0.1839	1.5715	0.6687	0.0100		0.1271	0.1271		0.1271	0.1271	0.0000	1,819.9802	1,819.9802	0.0349	0.0334	1,830.7954
Apartments Low Rise	7.39694e+007	0.3989	3.4084	1.4504	0.0218		0.2756	0.2756		0.2756	0.2756	0.0000	3,947.2866	3,947.2866	0.0757	0.0724	3,970.7433
Apartments Mid Rise	4.56225e+007	0.2460	2.1022	0.8946	0.0134		0.1700	0.1700		0.1700	0.1700	0.0000	2,434.5889	2,434.5889	0.0467	0.0446	2,449.0565
General Office Building	3.31137e+008	1.7855	16.2322	13.6351	0.0974		1.2337	1.2337		1.2337	1.2337	0.0000	17,670.7469	17,670.7469	0.3387	0.3240	17,775.7553
Single Family Housing	1.14276e+008	0.6162	5.2656	2.2407	0.0336		0.4257	0.4257		0.4257	0.4257	0.0000	6,098.1852	6,098.1852	0.1169	0.1118	6,134.4236
Total		**3.2305**	**28.5800**	**18.8894**	**0.1762**		**2.2320**	**2.2320**		**2.2320**	**2.2320**	**0.0000**	**31,970.7877**	**31,970.7877**	**0.6128**	**0.5861**	**32,160.7740**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	3.5906e+007	2,426.2282	0.1466	0.0326	2,439.5996
Apartments Low Rise	5.01141e+007	3,386.2934	0.2046	0.0455	3,404.9559
Apartments Mid Rise	4.80315e+007	3,245.5674	0.1961	0.0436	3,263.4543
General Office Building	3.14163e+008	21,228.5320	1.2825	0.2850	21,345.5262
Single Family Housing	9.65505e+007	6,524.0738	0.3942	0.0876	6,560.0291
Total		**36,810.6948**	**2.2239**	**0.4942**	**37,013.5650**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	3.5906e+007	2,426.2282	0.1466	0.0326	2,439.5996
Apartments Low Rise	5.01141e+007	3,386.2934	0.2046	0.0455	3,404.9559
Apartments Mid Rise	4.80315e+007	3,245.5674	0.1961	0.0436	3,263.4543
General Office Building	3.14163e+008	21,228.5320	1.2825	0.2850	21,345.5262
Single Family Housing	9.65505e+007	6,524.0738	0.3942	0.0876	6,560.0291
Total		**36,810.6948**	**2.2239**	**0.4942**	**37,013.5650**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	387.7686	6.5272	375.5541	0.1937		10.1618	10.1618		10.1618	10.1618	1,097.4904	2,805.7102	3,903.2006	5.6818	0.0417	4,057.6640
Unmitigated	387.7686	6.5272	375.5541	0.1937		10.1618	10.1618		10.1618	10.1618	1,097.4904	2,805.7102	3,903.2006	5.6818	0.0417	4,057.6640

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	52.4057					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	319.8797					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.7622	2.7825	51.0787	0.1765		8.3550	8.3550		8.3550	8.3550	1,097.4904	2,273.2636	3,370.7540	5.1741	0.0417	3,512.5265
Landscaping	9.7210	3.7446	324.4754	0.0172		1.8068	1.8068		1.8068	1.8068	0.0000	532.4466	532.4466	0.5076	0.0000	545.1375
Total	**387.7685**	**6.5272**	**375.5541**	**0.1937**		**10.1618**	**10.1618**		**10.1618**	**10.1618**	**1,097.4904**	**2,805.7102**	**3,903.2006**	**5.6818**	**0.0417**	**4,057.6640**

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	52.4057					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	319.8797					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.7622	2.7825	51.0787	0.1765		8.3550	8.3550		8.3550	8.3550	1,097.4904	2,273.2636	3,370.7540	5.1741	0.0417	3,512.5265
Landscaping	9.7210	3.7446	324.4754	0.0172		1.8068	1.8068		1.8068	1.8068	0.0000	532.4466	532.4466	0.5076	0.0000	545.1375
Total	**387.7685**	**6.5272**	**375.5541**	**0.1937**		**10.1618**	**10.1618**		**10.1618**	**10.1618**	**1,097.4904**	**2,805.7102**	**3,903.2006**	**5.6818**	**0.0417**	**4,057.6640**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	6,610.3405	259.9743	6.1875	14,953.5818
Unmitigated	6,610.3405	259.9743	6.1875	14,953.5818

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	571.857 / 360.518	475.7749	18.6518	0.4439	1,074.3627
Apartments Low Rise	764.973 / 482.266	636.4444	24.9505	0.5939	1,437.1759
Apartments Mid Rise	764.973 / 482.266	636.4444	24.9505	0.5939	1,437.1759
General Office Building	5113.31 / 3133.96	4,232.9840	166.7750	3.9693	9,585.1956
Single Family Housing	755.656 / 476.392	628.6928	24.6466	0.5866	1,419.6717
Total		**6,610.3405**	**259.9743**	**6.1875**	**14,953.5818**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	571.857 / 360.518	475.7749	18.6518	0.4439	1,074.3627
Apartments Low Rise	764.973 / 482.266	636.4444	24.9505	0.5939	1,437.1759
Apartments Mid Rise	764.973 / 482.266	636.4444	24.9505	0.5939	1,437.1759
General Office Building	5113.31 / 3133.96	4,232.9840	166.7750	3.9693	9,585.1956
Single Family Housing	755.656 / 476.392	628.6928	24.6466	0.5866	1,419.6717
Total		**6,610.3405**	**259.9743**	**6.1875**	**14,953.5818**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11,271.3127	666.1155	0.0000	27,924.2002
Unmitigated	11,271.3127	666.1155	0.0000	27,924.2002

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	4037.42	819.5598	48.4346	0.0000	2,030.4247
Apartments Low Rise	5400.86	1,096.3258	64.7910	0.0000	2,716.1007
Apartments Mid Rise	5400.86	1,096.3258	64.7910	0.0000	2,716.1007
General Office Building	26755.6	5,431.1531	320.9720	0.0000	13,455.4520
Single Family Housing	13931.4	2,827.9483	167.1270	0.0000	7,006.1222
Total		**11,271.3127**	**666.1155**	**0.0000**	**27,924.2003**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	4037.42	819.5598	48.4346	0.0000	2,030.4247
Apartments Low Rise	5400.86	1,096.3258	64.7910	0.0000	2,716.1007
Apartments Mid Rise	5400.86	1,096.3258	64.7910	0.0000	2,716.1007
General Office Building	26755.6	5,431.1531	320.9720	0.0000	13,455.4520
Single Family Housing	13931.4	2,827.9483	167.1270	0.0000	7,006.1222
Total		**11,271.3127**	**666.1155**	**0.0000**	**27,924.2003**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - San Mateo - New Land Uses

San Mateo County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	28,769.53	1000sqft	660.46	28,769,530.00	0
Apartments High Rise	8,777.00	Dwelling Unit	141.56	8,777,000.00	25102
Apartments Low Rise	11,741.00	Dwelling Unit	733.81	11,741,000.00	33579
Apartments Mid Rise	11,741.00	Dwelling Unit	308.97	11,741,000.00	33579
Single Family Housing	11,598.00	Dwelling Unit	3,765.58	20,876,400.00	33170

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	148.97	**CH4 Intensity (lb/MWhr)**	0.009	**N2O Intensity (lb/MWhr)**	0.002

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - San Mateo - New Land Uses - San Mateo County, Summer

Project Characteristics - Peninsula Clean Energy emission factor based on a 75% renewable mix. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix. (http://www.peninsulacleanenergy.com/resources/technical-study/)

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards and ZNE standards assuming a linear growth in new construction between 2015 and 2040.

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Plan Bay Area 2040 Update - San Mateo - New Land Uses - San Mateo County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	502.89	72.42
tblEnergyUse	T24E	274.84	39.58
tblEnergyUse	T24E	502.89	72.42
tblEnergyUse	T24E	4.30	2.45
tblEnergyUse	T24E	246.52	35.50
tblEnergyUse	T24NG	8,824.58	1,270.74
tblEnergyUse	T24NG	25,590.91	3,685.09
tblEnergyUse	T24NG	8,824.58	1,270.74
tblEnergyUse	T24NG	18.41	10.50
tblEnergyUse	T24NG	50,264.25	7,238.05
tblFireplaces	NumberGas	1,316.55	2,808.64
tblFireplaces	NumberGas	1,761.15	3,757.12
tblFireplaces	NumberGas	1,761.15	3,757.12
tblFireplaces	NumberGas	2,899.50	7,886.64
tblFireplaces	NumberWood	1,492.09	0.00
tblFireplaces	NumberWood	1,995.97	0.00
tblFireplaces	NumberWood	1,995.97	0.00
tblFireplaces	NumberWood	4,987.14	0.00
tblLandUse	BuildingSpaceSquareFeet	28,769,500.00	28,769,530.00
tblLandUse	LandUseSquareFeet	28,769,500.00	28,769,530.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.009
tblProjectCharacteristics	CO2IntensityFactor	641.35	148.97
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.002
tblProjectCharacteristics	OperationalYear	2018	2040

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5255	0.0000	0.0000	2.3578	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5255**	**0.0000**	**0.0000**	**2.3578**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5255	0.0000	0.0000	2.3578	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5255**	**0.0000**	**0.0000**	**2.3578**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Plan Bay Area 2040 Update - San Mateo - New Land Uses - San Mateo County, Summer

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

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	lb/day										lb/day					
Area	2,832.9612	489.3911	9,601.8220	21.5160		1,002.3330	1,002.3330		1,002.3330	1,002.3330	140,775.7129	456,403.6133	597,179.3262	672.9381	8.2478	616,460.6350
Energy	17.7013	156.6026	103.5037	0.9655		12.2300	12.2300		12.2300	12.2300		193,105.5388	193,105.5388	3.7012	3.5403	194,253.0685
Mobile	554.4583	1,485.8009	5,700.1378	25.9226	3,188.9485	10.9170	3,199.8654	854.5311	10.1585	864.6896		2,636,010.2997	2,636,010.2997	88.8247		2,638,230.9165
Total	**3,405.1208**	**2,131.7947**	**15,405.4635**	**48.4041**	**3,188.9485**	**1,025.4800**	**4,214.4285**	**854.5311**	**1,024.7216**	**1,879.2527**	**140,775.7129**	**3,285,519.4518**	**3,426,295.1647**	**765.4639**	**11.7881**	**3,448,944.6200**

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	lb/day										lb/day					
Area	2,832.9612	489.3911	9,601.8220	21.5160		1,002.3330	1,002.3330		1,002.3330	1,002.3330	140,775.7129	456,403.6133	597,179.3262	672.9381	8.2478	616,460.6350
Energy	17.7013	156.6026	103.5037	0.9655		12.2300	12.2300		12.2300	12.2300		193,105.5388	193,105.5388	3.7012	3.5403	194,253.0685
Mobile	554.4583	1,485.8009	5,700.1378	25.9226	3,188.9485	10.9170	3,199.8654	854.5311	10.1585	864.6896		2,636,010.2997	2,636,010.2997	88.8247		2,638,230.9165
Total	**3,405.1208**	**2,131.7947**	**15,405.4635**	**48.4041**	**3,188.9485**	**1,025.4800**	**4,214.4285**	**854.5311**	**1,024.7216**	**1,879.2527**	**140,775.7129**	**3,285,519.4518**	**3,426,295.1647**	**765.4639**	**11.7881**	**3,448,944.6200**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	554.4583	1,485.8009	5,700.1378	25.9226	3,188.9485	10.9170	3,199.8654	854.5311	10.1585	864.6896		2,636,010.2997	2,636,010.2997	88.8247		2,638,230.9165
Unmitigated	554.4583	1,485.8009	5,700.1378	25.9226	3,188.9485	10.9170	3,199.8654	854.5311	10.1585	864.6896		2,636,010.2997	2,636,010.2997	88.8247		2,638,230.9165

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	36,863.40	43,709.46	32036.05	85,806,039	85,806,039
Apartments Low Rise	77,373.19	84,065.56	71267.87	178,895,378	178,895,378
Apartments Mid Rise	78,077.65	75,024.99	68802.26	176,261,146	176,261,146
General Office Building	317,327.92	70,773.04	30208.01	576,142,308	576,142,308
Single Family Housing	110,412.96	114,936.18	99974.76	253,058,967	253,058,967
Total	620,055.12	388,509.23	302,288.95	1,270,163,838	1,270,163,838

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
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.439771	0.051539	0.277940	0.149346	0.016860	0.007937	0.030341	0.007301	0.004762	0.002815	0.009681	0.000729	0.000979
Apartments High Rise	0.439771	0.051539	0.277940	0.149346	0.016860	0.007937	0.030341	0.007301	0.004762	0.002815	0.009681	0.000729	0.000979
Apartments Low Rise	0.439771	0.051539	0.277940	0.149346	0.016860	0.007937	0.030341	0.007301	0.004762	0.002815	0.009681	0.000729	0.000979
Apartments Mid Rise	0.439771	0.051539	0.277940	0.149346	0.016860	0.007937	0.030341	0.007301	0.004762	0.002815	0.009681	0.000729	0.000979
Single Family Housing	0.439771	0.051539	0.277940	0.149346	0.016860	0.007937	0.030341	0.007301	0.004762	0.002815	0.009681	0.000729	0.000979

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	17.7013	156.6026	103.5037	0.9655		12.2300	12.2300		12.2300	12.2300		193,105.5388	193,105.5388	3.7012	3.5403	194,253.0685
NaturalGas Unmitigated	17.7013	156.6026	103.5037	0.9655		12.2300	12.2300		12.2300	12.2300		193,105.5388	193,105.5388	3.7012	3.5403	194,253.0685

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	lb/day										lb/day					
Apartments High Rise	93438.7	1.0077	8.6110	3.6643	0.0550		0.6962	0.6962		0.6962	0.6962		10,992.7929	10,992.7929	0.2107	0.2015	11,058.1176
Apartments Low Rise	202656	2.1855	18.6761	7.9473	0.1192		1.5100	1.5100		1.5100	1.5100		23,841.8555	23,841.8555	0.4570	0.4371	23,983.5357
Apartments Mid Rise	124993	1.3480	11.5190	4.9017	0.0735		0.9313	0.9313		0.9313	0.9313		14,705.0680	14,705.0680	0.2819	0.2696	14,792.4528
General Office Building	907225	9.7838	88.9437	74.7127	0.5337		6.7597	6.7597		6.7597	6.7597		106,732.4062	106,732.4062	2.0457	1.9568	107,366.6635
Single Family Housing	313084	3.3764	28.8528	12.2778	0.1842		2.3328	2.3328		2.3328	2.3328		36,833.4162	36,833.4162	0.7060	0.6753	37,052.2988
Total		**17.7013**	**156.6026**	**103.5037**	**0.9655**		**12.2300**	**12.2300**		**12.2300**	**12.2300**		**193,105.5388**	**193,105.5388**	**3.7012**	**3.5403**	**194,253.0685**

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	lb/day										lb/day					
Apartments High Rise	93.4387	1.0077	8.6110	3.6643	0.0550		0.6962	0.6962		0.6962	0.6962		10,992.7929	10,992.7929	0.2107	0.2015	11,058.1176
Apartments Low Rise	202.656	2.1855	18.6761	7.9473	0.1192		1.5100	1.5100		1.5100	1.5100		23,841.8555	23,841.8555	0.4570	0.4371	23,983.5357
Apartments Mid Rise	124.993	1.3480	11.5190	4.9017	0.0735		0.9313	0.9313		0.9313	0.9313		14,705.0680	14,705.0680	0.2819	0.2696	14,792.4528
General Office Building	907.225	9.7838	88.9437	74.7127	0.5337		6.7597	6.7597		6.7597	6.7597		106,732.4062	106,732.4062	2.0457	1.9568	107,366.6635
Single Family Housing	313.084	3.3764	28.8528	12.2778	0.1842		2.3328	2.3328		2.3328	2.3328		36,833.4162	36,833.4162	0.7060	0.6753	37,052.2988
Total		**17.7013**	**156.6026**	**103.5037**	**0.9655**		**12.2300**	**12.2300**		**12.2300**	**12.2300**		**193,105.5388**	**193,105.5388**	**3.7012**	**3.5403**	**194,253.0685**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2,832.9612	489.3911	9,601.8220	21.5160		1,002.3330	1,002.3330		1,002.3330	1,002.3330	140,775.7129	456,403.6133	597,179.3262	672.9381	8.2478	616,460.6350
Unmitigated	2,832.9612	489.3911	9,601.8220	21.5160		1,002.3330	1,002.3330		1,002.3330	1,002.3330	140,775.7129	456,403.6133	597,179.3262	672.9381	8.2478	616,460.6350

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	lb/day										lb/day					
Architectural Coating	287.1543					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1,752.7655					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	685.0306	447.7843	5,996.5402	21.3247		982.2575	982.2575		982.2575	982.2575	140,775.7129	449,882.2588	590,657.9717	666.7206	8.2478	609,783.8432
Landscaping	108.0108	41.6069	3,605.2819	0.1913		20.0755	20.0755		20.0755	20.0755		6,521.3545	6,521.3545	6.2175		6,676.7919
Total	**2,832.9612**	**489.3912**	**9,601.8220**	**21.5160**		**1,002.3331**	**1,002.3331**		**1,002.3331**	**1,002.3331**	**140,775.7129**	**456,403.6133**	**597,179.3262**	**672.9381**	**8.2478**	**616,460.6350**

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	lb/day										lb/day					
Architectural Coating	287.1543					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1,752.7655					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	685.0306	447.7843	5,996.5402	21.3247		982.2575	982.2575		982.2575	982.2575	140,775.7129	449,882.2588	590,657.9717	666.7206	8.2478	609,783.8432
Landscaping	108.0108	41.6069	3,605.2819	0.1913		20.0755	20.0755		20.0755	20.0755		6,521.3545	6,521.3545	6.2175		6,676.7919
Total	**2,832.9612**	**489.3912**	**9,601.8220**	**21.5160**		**1,002.3331**	**1,002.3331**		**1,002.3331**	**1,002.3331**	**140,775.7129**	**456,403.6133**	**597,179.3262**	**672.9381**	**8.2478**	**616,460.6350**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - San Mateo - Net Reduction in Land Uses

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	1,747.18	1000sqft	40.11	1,747,180.00	0
Regional Shopping Center	1,405.69	1000sqft	32.27	1,405,690.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - San Mateo - Net Reduction in Land Uses - San Mateo County, Annual

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	70.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - San Mateo - Net Reduction in Land Uses - San Mateo County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	13.9605	2.9000e-004	0.0300	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0563	0.0563	1.6000e-004	0.0000	0.0604
Energy	0.2630	2.3911	2.0085	0.0144		0.1817	0.1817		0.1817	0.1817	0.0000	10,989.5929	10,989.5929	0.5704	0.1441	11,046.8014
Mobile	25.8144	75.5978	277.0333	0.5922	46.7765	1.0165	47.7930	12.5750	0.9622	13.5372	0.0000	53,839.0632	53,839.0632	2.6242	0.0000	53,904.6687
Waste						0.0000	0.0000		0.0000	0.0000	739.3885	0.0000	739.3885	43.6966	0.0000	1,831.8037
Water						0.0000	0.0000		0.0000	0.0000	161.2152	586.6117	747.8269	16.5948	0.3977	1,281.2168
Total	**40.0379**	**77.9892**	**279.0718**	**0.6065**	**46.7765**	**1.1983**	**47.9748**	**12.5750**	**1.1441**	**13.7190**	**900.6037**	**65,415.3241**	**66,315.9278**	**63.4862**	**0.5418**	**68,064.5510**

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	13.9605	2.9000e-004	0.0300	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0563	0.0563	1.6000e-004	0.0000	0.0604
Energy	0.2630	2.3911	2.0085	0.0144		0.1817	0.1817		0.1817	0.1817	0.0000	10,989.5929	10,989.5929	0.5704	0.1441	11,046.8014
Mobile	25.8144	75.5978	277.0333	0.5922	46.7765	1.0165	47.7930	12.5750	0.9622	13.5372	0.0000	53,839.0632	53,839.0632	2.6242	0.0000	53,904.6687
Waste						0.0000	0.0000		0.0000	0.0000	739.3885	0.0000	739.3885	43.6966	0.0000	1,831.8037
Water						0.0000	0.0000		0.0000	0.0000	161.2152	586.6117	747.8269	16.5948	0.3977	1,281.2168
Total	**40.0379**	**77.9892**	**279.0718**	**0.6065**	**46.7765**	**1.1983**	**47.9748**	**12.5750**	**1.1441**	**13.7190**	**900.6037**	**65,415.3241**	**66,315.9278**	**63.4862**	**0.5418**	**68,064.5510**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	25.8144	75.5978	277.0333	0.5922	46.7765	1.0165	47.7930	12.5750	0.9622	13.5372	0.0000	53,839.0632	53,839.0632	2.6242	0.0000	53,904.6687
Unmitigated	25.8144	75.5978	277.0333	0.5922	46.7765	1.0165	47.7930	12.5750	0.9622	13.5372	0.0000	53,839.0632	53,839.0632	2.6242	0.0000	53,904.6687

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	11,933.24	4,350.48	1275.44	24,454,960	24,454,960
Regional Shopping Center	60,022.96	70,242.33	35479.62	101,650,793	101,650,793
Total	71,956.20	74,592.81	36,755.06	126,105,753	126,105,753

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Plan Bay Area 2040 Update - San Mateo - Net Reduction in Land Uses - San Mateo County, Annual

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.541400	0.048669	0.219726	0.125322	0.019975	0.005320	0.017963	0.006094	0.003356	0.003822	0.007367	0.000343	0.000643
Regional Shopping Center	0.541400	0.048669	0.219726	0.125322	0.019975	0.005320	0.017963	0.006094	0.003356	0.003822	0.007367	0.000343	0.000643

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	8,386.5816	8,386.5816	0.5206	0.0964	8,428.3217
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	8,386.5816	8,386.5816	0.5206	0.0964	8,428.3217
NaturalGas Mitigated	0.2630	2.3911	2.0085	0.0144		0.1817	0.1817		0.1817	0.1817	0.0000	2,603.0112	2,603.0112	0.0499	0.0477	2,618.4796
NaturalGas Unmitigated	0.2630	2.3911	2.0085	0.0144		0.1817	0.1817		0.1817	0.1817	0.0000	2,603.0112	2,603.0112	0.0499	0.0477	2,618.4796

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					
Industrial Park	4.1216e+007	0.2222	2.0204	1.6971	0.0121		0.1536	0.1536		0.1536	0.1536	0.0000	2,199.4415	2,199.4415	0.0422	0.0403	2,212.5116
Regional Shopping Center	7.56261e+006	0.0408	0.3707	0.3114	2.2200e-003		0.0282	0.0282		0.0282	0.0282	0.0000	403.5698	403.5698	7.7400e-003	7.4000e-003	405.9680
Total		**0.2630**	**2.3911**	**2.0085**	**0.0143**		**0.1817**	**0.1817**		**0.1817**	**0.1817**	**0.0000**	**2,603.0112**	**2,603.0112**	**0.0499**	**0.0477**	**2,618.4796**

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					
Industrial Park	4.1216e+007	0.2222	2.0204	1.6971	0.0121		0.1536	0.1536		0.1536	0.1536	0.0000	2,199.4415	2,199.4415	0.0422	0.0403	2,212.5116
Regional Shopping Center	7.56261e+006	0.0408	0.3707	0.3114	2.2200e-003		0.0282	0.0282		0.0282	0.0282	0.0000	403.5698	403.5698	7.7400e-003	7.4000e-003	405.9680
Total		**0.2630**	**2.3911**	**2.0085**	**0.0143**		**0.1817**	**0.1817**		**0.1817**	**0.1817**	**0.0000**	**2,603.0112**	**2,603.0112**	**0.0499**	**0.0477**	**2,618.4796**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	2.54389e+007	5,019.4256	0.3116	0.0577	5,044.4074
Regional Shopping Center	1.70651e+007	3,367.1560	0.2090	0.0387	3,383.9144
Total		**8,386.5816**	**0.5206**	**0.0964**	**8,428.3217**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	2.54389e+007	5,019.4256	0.3116	0.0577	5,044.4074
Regional Shopping Center	1.70651e+007	3,367.1560	0.2090	0.0387	3,383.9144
Total		**8,386.5816**	**0.5206**	**0.0964**	**8,428.3217**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	13.9605	2.9000e-004	0.0300	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0563	0.0563	1.6000e-004	0.0000	0.0604
Unmitigated	13.9605	2.9000e-004	0.0300	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0563	0.0563	1.6000e-004	0.0000	0.0604

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	1.6440					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	12.3135					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.9600e-003	2.9000e-004	0.0300	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0563	0.0563	1.6000e-004	0.0000	0.0604
Total	**13.9605**	**2.9000e-004**	**0.0300**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**0.0563**	**0.0563**	**1.6000e-004**	**0.0000**	**0.0604**

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	1.6440					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	12.3135					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.9600e-003	2.9000e-004	0.0300	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0563	0.0563	1.6000e-004	0.0000	0.0604
Total	**13.9605**	**2.9000e-004**	**0.0300**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**0.0563**	**0.0563**	**1.6000e-004**	**0.0000**	**0.0604**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	747.8269	16.5948	0.3977	1,281.2168
Unmitigated	747.8269	16.5948	0.3977	1,281.2168

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	404.035 / 0	559.5538	13.1923	0.3158	983.4762
Regional Shopping Center	104.123 / 63.8173	188.2732	3.4025	0.0819	297.7406
Total		**747.8269**	**16.5948**	**0.3977**	**1,281.2168**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	404.035 / 0	559.5538	13.1923	0.3158	983.4762
Regional Shopping Center	104.123 / 63.8173	188.2732	3.4025	0.0819	297.7406
Total		**747.8269**	**16.5948**	**0.3977**	**1,281.2168**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	739.3885	43.6966	0.0000	1,831.8037
Unmitigated	739.3885	43.6966	0.0000	1,831.8037

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	2166.5	439.7799	25.9903	0.0000	1,089.5361
Regional Shopping Center	1475.97	299.6086	17.7064	0.0000	742.2676
Total		**739.3885**	**43.6966**	**0.0000**	**1,831.8037**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	2166.5	439.7799	25.9903	0.0000	1,089.5361
Regional Shopping Center	1475.97	299.6086	17.7064	0.0000	742.2676
Total		**739.3885**	**43.6966**	**0.0000**	**1,831.8037**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - San Mateo - Net Reduction in Land Uses

San Mateo County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	1,747.18	1000sqft	40.11	1,747,180.00	0
Regional Shopping Center	1,405.69	1000sqft	32.27	1,405,690.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - San Mateo - Net Reduction in Land Uses - San Mateo County, Summer

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	70.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5255	0.0000	0.0000	2.3578	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5255**	**0.0000**	**0.0000**	**2.3578**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5255	0.0000	0.0000	2.3578	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5255**	**0.0000**	**0.0000**	**2.3578**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	76.5127	3.2200e-003	0.3330	2.0000e-005		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003		0.6900	0.6900	2.0000e-003		0.7400
Energy	1.4412	13.1020	11.0056	0.0786		0.9958	0.9958		0.9958	0.9958		15,722.3492	15,722.3492	0.3014	0.2882	15,815.7793
Mobile	189.7740	480.0982	1,842.7039	4.1887	328.2154	6.8279	335.0433	87.9200	6.4636	94.3836		419,890.2072	419,890.2072	19.3795		420,374.6938
Total	**267.7279**	**493.2034**	**1,854.0426**	**4.2673**	**328.2154**	**7.8249**	**336.0402**	**87.9200**	**7.4605**	**95.3806**		**435,613.2464**	**435,613.2464**	**19.6828**	**0.2882**	**436,191.2130**

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	lb/day										lb/day					
Area	76.5127	3.2200e-003	0.3330	2.0000e-005		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003		0.6900	0.6900	2.0000e-003		0.7400
Energy	1.4412	13.1020	11.0056	0.0786		0.9958	0.9958		0.9958	0.9958		15,722.3492	15,722.3492	0.3014	0.2882	15,815.7793
Mobile	189.7740	480.0982	1,842.7039	4.1887	328.2154	6.8279	335.0433	87.9200	6.4636	94.3836		419,890.2072	419,890.2072	19.3795		420,374.6938
Total	**267.7279**	**493.2034**	**1,854.0426**	**4.2673**	**328.2154**	**7.8249**	**336.0402**	**87.9200**	**7.4605**	**95.3806**		**435,613.2464**	**435,613.2464**	**19.6828**	**0.2882**	**436,191.2130**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	189.7740	480.0982	1,842.7039	4.1887	328.2154	6.8279	335.0433	87.9200	6.4636	94.3836		419,890.2072	419,890.2072	19.3795		420,374.6938
Unmitigated	189.7740	480.0982	1,842.7039	4.1887	328.2154	6.8279	335.0433	87.9200	6.4636	94.3836		419,890.2072	419,890.2072	19.3795		420,374.6938

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	11,933.24	4,350.48	1275.44	24,454,960	24,454,960
Regional Shopping Center	60,022.96	70,242.33	35479.62	101,650,793	101,650,793
Total	71,956.20	74,592.81	36,755.06	126,105,753	126,105,753

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.541400	0.048669	0.219726	0.125322	0.019975	0.005320	0.017963	0.006094	0.003356	0.003822	0.007367	0.000343	0.000643
Regional Shopping Center	0.541400	0.048669	0.219726	0.125322	0.019975	0.005320	0.017963	0.006094	0.003356	0.003822	0.007367	0.000343	0.000643

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.4412	13.1020	11.0056	0.0786		0.9958	0.9958		0.9958	0.9958		15,722.3492	15,722.3492	0.3014	0.2882	15,815.7793
NaturalGas Unmitigated	1.4412	13.1020	11.0056	0.0786		0.9958	0.9958		0.9958	0.9958		15,722.3492	15,722.3492	0.3014	0.2882	15,815.7793

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	lb/day										lb/day					
Industrial Park	112920	1.2178	11.0706	9.2993	0.0664		0.8414	0.8414		0.8414	0.8414		13,284.7627	13,284.7627	0.2546	0.2436	13,363.7074
Regional Shopping Center	20719.5	0.2235	2.0313	1.7063	0.0122		0.1544	0.1544		0.1544	0.1544		2,437.5865	2,437.5865	0.0467	0.0447	2,452.0719
Total		**1.4412**	**13.1020**	**11.0056**	**0.0786**		**0.9958**	**0.9958**		**0.9958**	**0.9958**		**15,722.3492**	**15,722.3492**	**0.3013**	**0.2882**	**15,815.7793**

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	lb/day										lb/day					
Industrial Park	112.92	1.2178	11.0706	9.2993	0.0664		0.8414	0.8414		0.8414	0.8414		13,284.7627	13,284.7627	0.2546	0.2436	13,363.7074
Regional Shopping Center	20.7195	0.2235	2.0313	1.7063	0.0122		0.1544	0.1544		0.1544	0.1544		2,437.5865	2,437.5865	0.0467	0.0447	2,452.0719
Total		**1.4412**	**13.1020**	**11.0056**	**0.0786**		**0.9958**	**0.9958**		**0.9958**	**0.9958**		**15,722.3492**	**15,722.3492**	**0.3013**	**0.2882**	**15,815.7793**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	76.5127	3.2200e-003	0.3330	2.0000e-005		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003		0.6900	0.6900	2.0000e-003		0.7400
Unmitigated	76.5127	3.2200e-003	0.3330	2.0000e-005		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003		0.6900	0.6900	2.0000e-003		0.7400

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	lb/day										lb/day					
Architectural Coating	9.0084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	67.4714					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0329	3.2200e-003	0.3330	2.0000e-005		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003		0.6900	0.6900	2.0000e-003		0.7400
Total	**76.5127**	**3.2200e-003**	**0.3330**	**2.0000e-005**		**1.2000e-003**	**1.2000e-003**		**1.2000e-003**	**1.2000e-003**		**0.6900**	**0.6900**	**2.0000e-003**		**0.7400**

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	lb/day										lb/day					
Architectural Coating	9.0084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	67.4714					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0329	3.2200e-003	0.3330	2.0000e-005		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003		0.6900	0.6900	2.0000e-003		0.7400
Total	**76.5127**	**3.2200e-003**	**0.3330**	**2.0000e-005**		**1.2000e-003**	**1.2000e-003**		**1.2000e-003**	**1.2000e-003**		**0.6900**	**0.6900**	**2.0000e-003**		**0.7400**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Santa Clara - New Land Uses

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	54,248.81	1000sqft	1,245.38	54,248,800.00	0
Apartments High Rise	41,888.00	Dwelling Unit	675.61	41,888,000.00	119800
Apartments Low Rise	70,470.00	Dwelling Unit	4,404.38	70,470,000.00	201544
Apartments Mid Rise	70,470.00	Dwelling Unit	1,854.47	70,470,000.00	201544
Single Family Housing	20,855.00	Dwelling Unit	6,771.10	37,539,000.00	59645

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	59.59	**CH4 Intensity (lb/MWhr)**	0.004	**N2O Intensity (lb/MWhr)**	0.001

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Santa Clara - New Land Uses - Santa Clara County, Annual

Project Characteristics - Silicon Valley Clean Energy emission factor based on a 90% renewable mix. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.(https://www.svcleanenergy.org/files/managed/Document/376/SVCEA%20CCA%20Implementation%20Plan%20071416%20%20NO%20Appendices.pdf)

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards and ZNE standards assuming a linear growth in new construction between 2015 and 2040.

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Plan Bay Area 2040 Update - Santa Clara - New Land Uses - Santa Clara County, Annual

Table Name	Column Name	Default Value	New Value
tblEnergyUse	T24E	392.47	56.52
tblEnergyUse	T24E	431.22	62.10
tblEnergyUse	T24E	392.47	56.52
tblEnergyUse	T24E	6.40	3.65
tblEnergyUse	T24E	368.92	53.12
tblEnergyUse	T24NG	7,914.07	1,139.63
tblEnergyUse	T24NG	10,164.29	1,463.66
tblEnergyUse	T24NG	7,914.07	1,139.63
tblEnergyUse	T24NG	16.39	9.34
tblEnergyUse	T24NG	32,797.58	4,722.85
tblFireplaces	NumberGas	6,283.20	13,404.16
tblFireplaces	NumberGas	10,570.50	22,550.40
tblFireplaces	NumberGas	10,570.50	22,550.40
tblFireplaces	NumberGas	5,213.75	14,181.40
tblFireplaces	NumberWood	7,120.96	0.00
tblFireplaces	NumberWood	11,979.90	0.00
tblFireplaces	NumberWood	11,979.90	0.00
tblFireplaces	NumberWood	8,967.65	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.004
tblProjectCharacteristics	CO2IntensityFactor	641.35	59.59
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.001
tblProjectCharacteristics	OperationalYear	2018	2040

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					
2014					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum					**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

	ROG	NOx	CO	SO2	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					
2014					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Santa Clara - New Land Uses - Santa Clara County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	1,321.6841	28.1475	1,689.0259	0.7155		38.2996	38.2996		38.2996	38.2996	3,920.2617	11,545.5123	15,465.7740	20.8543	0.1664	16,036.7062
Energy	7.9925	69.7993	40.0623	0.4360		5.5221	5.5221		5.5221	5.5221	0.0000	127,033.6342	127,033.6342	4.7337	2.2546	127,823.8347
Mobile	189.6313	1,030.1695	2,293.9994	11.9928	1,518.0315	5.1553	1,523.1868	406.2477	4.7965	411.0441	0.0000	1,107,337.2118	1,107,337.2118	29.5270	0.0000	1,108,075.3858
Waste						0.0000	0.0000		0.0000	0.0000	32,397.9991	0.0000	32,397.9991	1,914.6669	0.0000	80,264.6715
Water						0.0000	0.0000		0.0000	0.0000	7,269.1141	4,701.6767	11,970.7908	746.9233	17.7079	35,920.8360
Total	**1,519.3080**	**1,128.1162**	**4,023.0876**	**13.1442**	**1,518.0315**	**48.9769**	**1,567.0084**	**406.2477**	**48.6181**	**454.8658**	**43,587.3749**	**1,250,618.0350**	**1,294,205.4099**	**2,716.7052**	**20.1288**	**1,368,121.4342**

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	1,321.6841	28.1475	1,689.0259	0.7155		38.2996	38.2996		38.2996	38.2996	3,920.2617	11,545.5123	15,465.7740	20.8543	0.1664	16,036.7062
Energy	7.9925	69.7993	40.0623	0.4360		5.5221	5.5221		5.5221	5.5221	0.0000	127,033.6342	127,033.6342	4.7337	2.2546	127,823.8347
Mobile	189.6313	1,030.1695	2,293.9994	11.9928	1,518.0315	5.1553	1,523.1868	406.2477	4.7965	411.0441	0.0000	1,107,337.2118	1,107,337.2118	29.5270	0.0000	1,108,075.3858
Waste						0.0000	0.0000		0.0000	0.0000	32,397.9991	0.0000	32,397.9991	1,914.6669	0.0000	80,264.6715
Water						0.0000	0.0000		0.0000	0.0000	7,269.1141	4,701.6767	11,970.7908	746.9233	17.7079	35,920.8360
Total	**1,519.3080**	**1,128.1162**	**4,023.0876**	**13.1442**	**1,518.0315**	**48.9769**	**1,567.0084**	**406.2477**	**48.6181**	**454.8658**	**43,587.3749**	**1,250,618.0350**	**1,294,205.4099**	**2,716.7052**	**20.1288**	**1,368,121.4342**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	10000	

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

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				0.00	10.80	7.30				

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	189.6313	1,030.1695	2,293.9994	11.9928	1,518.0315	5.1553	1,523.1868	406.2477	4.7965	411.0441	0.0000	1,107,337.2118	1,107,337.2118	29.5270	0.0000	1,108,075.3858
Unmitigated	189.6313	1,030.1695	2,293.9994	11.9928	1,518.0315	5.1553	1,523.1868	406.2477	4.7965	411.0441	0.0000	1,107,337.2118	1,107,337.2118	29.5270	0.0000	1,108,075.3858

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	175,929.60	208,602.24	152891.20	409,507,047	409,507,047
Apartments Low Rise	464,397.30	504,565.20	427752.90	1,073,737,952	1,073,737,952
Apartments Mid Rise	468,625.50	450,303.30	412954.20	1,057,927,172	1,057,927,172
General Office Building	598,364.37	133,452.07	56961.25	1,086,393,647	1,086,393,647
Single Family Housing	198,539.60	206,673.05	179770.10	455,039,210	455,039,210
Total	1,905,856.37	1,503,595.86	1,230,329.65	4,082,605,027	4,082,605,027

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
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.621663	0.033362	0.179130	0.101130	0.011078	0.005126	0.013709	0.024709	0.002299	0.001422	0.005077	0.000653	0.000642
Apartments High Rise	0.621663	0.033362	0.179130	0.101130	0.011078	0.005126	0.013709	0.024709	0.002299	0.001422	0.005077	0.000653	0.000642
Apartments Low Rise	0.621663	0.033362	0.179130	0.101130	0.011078	0.005126	0.013709	0.024709	0.002299	0.001422	0.005077	0.000653	0.000642
Apartments Mid Rise	0.621663	0.033362	0.179130	0.101130	0.011078	0.005126	0.013709	0.024709	0.002299	0.001422	0.005077	0.000653	0.000642
Single Family Housing	0.621663	0.033362	0.179130	0.101130	0.011078	0.005126	0.013709	0.024709	0.002299	0.001422	0.005077	0.000653	0.000642

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Plan Bay Area 2040 Update - Santa Clara - New Land Uses - Santa Clara County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	47,935.4342	47,935.4342	3.2177	0.8044	48,255.5936
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	47,935.4342	47,935.4342	3.2177	0.8044	48,255.5936
NaturalGas Mitigated	7.9925	69.7993	40.0623	0.4360		5.5221	5.5221		5.5221	5.5221	0.0000	79,098.2000	79,098.2000	1.5161	1.4501	79,568.2411
NaturalGas Unmitigated	7.9925	69.7993	40.0623	0.4360		5.5221	5.5221		5.5221	5.5221	0.0000	79,098.2000	79,098.2000	1.5161	1.4501	79,568.2411

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					
Apartments High Rise	1.79893e+008	0.9700	8.2892	3.5273	0.0529		0.6702	0.6702		0.6702	0.6702	0.0000	9,599.8002	9,599.8002	0.1840	0.1760	9,656.8470
Apartments Low Rise	3.25477e+008	1.7550	14.9975	6.3819	0.0957		1.2126	1.2126		1.2126	1.2126	0.0000	17,368.6906	17,368.6906	0.3329	0.3184	17,471.9041
Apartments Mid Rise	3.02643e+008	1.6319	13.9453	5.9342	0.0890		1.1275	1.1275		1.1275	1.1275	0.0000	16,150.1604	16,150.1604	0.3095	0.2961	16,246.1327
General Office Building	5.09939e+008	2.7497	24.9970	20.9975	0.1500		1.8998	1.8998		1.8998	1.8998	0.0000	27,212.2721	27,212.2721	0.5216	0.4989	27,373.9810
Single Family Housing	1.64293e+008	0.8859	7.5703	3.2214	0.0483		0.6121	0.6121		0.6121	0.6121	0.0000	8,767.2768	8,767.2768	0.1680	0.1607	8,819.3763
Total		**7.9925**	**69.7993**	**40.0623**	**0.4360**		**5.5221**	**5.5221**		**5.5221**	**5.5221**	**0.0000**	**79,098.2000**	**79,098.2000**	**1.5161**	**1.4501**	**79,568.2411**

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					
Apartments High Rise	1.79893e+008	0.9700	8.2892	3.5273	0.0529		0.6702	0.6702		0.6702	0.6702	0.0000	9,599.8002	9,599.8002	0.1840	0.1760	9,656.8470
Apartments Low Rise	3.25477e+008	1.7550	14.9975	6.3819	0.0957		1.2126	1.2126		1.2126	1.2126	0.0000	17,368.6906	17,368.6906	0.3329	0.3184	17,471.9041
Apartments Mid Rise	3.02643e+008	1.6319	13.9453	5.9342	0.0890		1.1275	1.1275		1.1275	1.1275	0.0000	16,150.1604	16,150.1604	0.3095	0.2961	16,246.1327
General Office Building	5.09939e+008	2.7497	24.9970	20.9975	0.1500		1.8998	1.8998		1.8998	1.8998	0.0000	27,212.2721	27,212.2721	0.5216	0.4989	27,373.9810
Single Family Housing	1.64293e+008	0.8859	7.5703	3.2214	0.0483		0.6121	0.6121		0.6121	0.6121	0.0000	8,767.2768	8,767.2768	0.1680	0.1607	8,819.3763
Total		**7.9925**	**69.7993**	**40.0623**	**0.4360**		**5.5221**	**5.5221**		**5.5221**	**5.5221**	**0.0000**	**79,098.2000**	**79,098.2000**	**1.5161**	**1.4501**	**79,568.2411**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.70694e+008	4,613.7971	0.3097	0.0774	4,644.6126
Apartments Low Rise	3.02374e+008	8,173.0413	0.5486	0.1372	8,227.6288
Apartments Mid Rise	2.87167e+008	7,761.9911	0.5210	0.1303	7,813.8333
General Office Building	8.39229e+008	22,683.9967	1.5227	0.3807	22,835.5025
Single Family Housing	1.7398e+008	4,702.6079	0.3157	0.0789	4,734.0165
Total		**47,935.4342**	**3.2177**	**0.8044**	**48,255.5937**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.70694e+008	4,613.7971	0.3097	0.0774	4,644.6126
Apartments Low Rise	3.02374e+008	8,173.0413	0.5486	0.1372	8,227.6288
Apartments Mid Rise	2.87167e+008	7,761.9911	0.5210	0.1303	7,813.8333
General Office Building	8.39229e+008	22,683.9967	1.5227	0.3807	22,835.5025
Single Family Housing	1.7398e+008	4,702.6079	0.3157	0.0789	4,734.0165
Total		**47,935.4342**	**3.2177**	**0.8044**	**48,255.5937**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1,321.6841	28.1475	1,689.0259	0.7155		38.2996	38.2996		38.2996	38.2996	3,920.2617	11,545.5123	15,465.7740	20.8543	0.1664	16,036.7062
Unmitigated	1,321.6841	28.1475	1,689.0259	0.7155		38.2996	38.2996		38.2996	38.2996	3,920.2617	11,545.5123	15,465.7740	20.8543	0.1664	16,036.7062

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	183.4126					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1,072.5120					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	20.6792	10.7630	182.8048	0.6356		29.9109	29.9109		29.9109	29.9109	3,920.2617	9,074.1138	12,994.3755	18.5004	0.1664	13,506.4591
Landscaping	45.0803	17.3845	1,506.2211	0.0799		8.3887	8.3887		8.3887	8.3887	0.0000	2,471.3985	2,471.3985	2.3539	0.0000	2,530.2471
Total	**1,321.6841**	**28.1475**	**1,689.0259**	**0.7155**		**38.2996**	**38.2996**		**38.2996**	**38.2996**	**3,920.2617**	**11,545.5123**	**15,465.7740**	**20.8543**	**0.1664**	**16,036.7062**

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	183.4126					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1,072.5120					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	20.6792	10.7630	182.8048	0.6356		29.9109	29.9109		29.9109	29.9109	3,920.2617	9,074.1138	12,994.3755	18.5004	0.1664	13,506.4591
Landscaping	45.0803	17.3845	1,506.2211	0.0799		8.3887	8.3887		8.3887	8.3887	0.0000	2,471.3985	2,471.3985	2.3539	0.0000	2,530.2471
Total	**1,321.6841**	**28.1475**	**1,689.0259**	**0.7155**		**38.2996**	**38.2996**		**38.2996**	**38.2996**	**3,920.2617**	**11,545.5123**	**15,465.7740**	**20.8543**	**0.1664**	**16,036.7062**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	11,970.7908	746.9233	17.7079	35,920.8360
Unmitigated	11,970.7908	746.9233	17.7079	35,920.8360

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	2729.17 / 1720.56	1,427.7722	88.9678	2.1093	4,280.5280
Apartments Low Rise	4591.4 / 2894.58	2,402.0032	149.6744	3.5485	7,201.3180
Apartments Mid Rise	4591.4 / 2894.58	2,402.0032	149.6744	3.5485	7,201.3180
General Office Building	9641.84 / 5909.52	5,028.1597	314.3118	7.4515	15,106.5029
Single Family Housing	1358.79 / 856.627	710.8525	44.2949	1.0502	2,131.1691
Total		**11,970.7908**	**746.9233**	**17.7079**	**35,920.8360**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	2729.17 / 1720.56	1,427.7722	88.9678	2.1093	4,280.5280
Apartments Low Rise	4591.4 / 2894.58	2,402.0032	149.6744	3.5485	7,201.3180
Apartments Mid Rise	4591.4 / 2894.58	2,402.0032	149.6744	3.5485	7,201.3180
General Office Building	9641.84 / 5909.52	5,028.1597	314.3118	7.4515	15,106.5029
Single Family Housing	1358.79 / 856.627	710.8525	44.2949	1.0502	2,131.1691
Total		**11,970.7908**	**746.9233**	**17.7079**	**35,920.8360**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	32,397.9991	1,914.6669	0.0000	80,264.6715
Unmitigated	32,397.9991	1,914.6669	0.0000	80,264.6715

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	19268.5	3,911.3273	231.1528	0.0000	9,690.1479
Apartments Low Rise	32416.2	6,580.1957	388.8784	0.0000	16,302.1562
Apartments Mid Rise	32416.2	6,580.1957	388.8784	0.0000	16,302.1562
General Office Building	50451.4	10,241.1742	605.2361	0.0000	25,372.0756
Single Family Housing	25050.9	5,085.1063	300.5212	0.0000	12,598.1357
Total		**32,397.9991**	**1,914.6669**	**0.0000**	**80,264.6715**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	19268.5	3,911.3273	231.1528	0.0000	9,690.1479
Apartments Low Rise	32416.2	6,580.1957	388.8784	0.0000	16,302.1562
Apartments Mid Rise	32416.2	6,580.1957	388.8784	0.0000	16,302.1562
General Office Building	50451.4	10,241.1742	605.2361	0.0000	25,372.0756
Single Family Housing	25050.9	5,085.1063	300.5212	0.0000	12,598.1357
Total		**32,397.9991**	**1,914.6669**	**0.0000**	**80,264.6715**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Santa Clara - New Land Uses

Santa Clara County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	54,248.81	1000sqft	1,245.38	54,248,800.00	0
Apartments High Rise	41,888.00	Dwelling Unit	675.61	41,888,000.00	119800
Apartments Low Rise	70,470.00	Dwelling Unit	4,404.38	70,470,000.00	201544
Apartments Mid Rise	70,470.00	Dwelling Unit	1,854.47	70,470,000.00	201544
Single Family Housing	20,855.00	Dwelling Unit	6,771.10	37,539,000.00	59645

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	59.59	**CH4 Intensity (lb/MWhr)**	0.004	**N2O Intensity (lb/MWhr)**	0.001

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Santa Clara - New Land Uses - Santa Clara County, Summer

Project Characteristics - Silicon Valley Clean Energy emission factor based on a 90% renewable mix. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.(https://www.svcleanenergy.org/files/managed/Document/376/SVCEA%20CCA%20Implementation%20Plan%20071416%20%20NO%20Appendices.pdf)

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards and ZNE standards assuming a linear growth in new construction between 2015 and 2040.

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Plan Bay Area 2040 Update - Santa Clara - New Land Uses - Santa Clara County, Summer

Table Name	Column Name	Default Value	New Value
tblEnergyUse	T24E	392.47	56.52
tblEnergyUse	T24E	431.22	62.10
tblEnergyUse	T24E	392.47	56.52
tblEnergyUse	T24E	6.40	3.65
tblEnergyUse	T24E	368.92	53.12
tblEnergyUse	T24NG	7,914.07	1,139.63
tblEnergyUse	T24NG	10,164.29	1,463.66
tblEnergyUse	T24NG	7,914.07	1,139.63
tblEnergyUse	T24NG	16.39	9.34
tblEnergyUse	T24NG	32,797.58	4,722.85
tblFireplaces	NumberGas	6,283.20	13,404.16
tblFireplaces	NumberGas	10,570.50	22,550.40
tblFireplaces	NumberGas	10,570.50	22,550.40
tblFireplaces	NumberGas	5,213.75	14,181.40
tblFireplaces	NumberWood	7,120.96	0.00
tblFireplaces	NumberWood	11,979.90	0.00
tblFireplaces	NumberWood	11,979.90	0.00
tblFireplaces	NumberWood	8,967.65	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.004
tblProjectCharacteristics	CO2IntensityFactor	641.35	59.59
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.001
tblProjectCharacteristics	OperationalYear	2018	2040

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	10,094.9994	1,977.2946	40,471.4071	85.3545		3,981.3321	3,981.3321		3,981.3321	3,981.3321	557,100.2847	1,826,050.1094	2,383,150.3941	2,667.5806	32.9227	2,459,650.8573
Energy	43.7945	382.4620	219.5194	2.3888		30.2580	30.2580		30.2580	30.2580		477,758.0305	477,758.0305	9.1570	8.7589	480,597.1076
Mobile	1,355.6623	6,318.8692	15,167.0746	79.0459	9,807.4917	32.1726	9,839.6643	2,617.2167	29.9328	2,647.1495		8,038,148.2756	8,038,148.2756	203.0483		8,043,224.4819
Total	**11,494.4562**	**8,678.6257**	**55,858.0011**	**166.7892**	**9,807.4917**	**4,043.7628**	**13,851.2544**	**2,617.2167**	**4,041.5229**	**6,658.7396**	**557,100.2847**	**10,341,956.4154**	**10,899,056.7001**	**2,879.7859**	**41.6816**	**10,983,472.4468**

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	lb/day										lb/day					
Area	10,094.9994	1,977.2946	40,471.4071	85.3545		3,981.3321	3,981.3321		3,981.3321	3,981.3321	557,100.2847	1,826,050.1094	2,383,150.3941	2,667.5806	32.9227	2,459,650.8573
Energy	43.7945	382.4620	219.5194	2.3888		30.2580	30.2580		30.2580	30.2580		477,758.0305	477,758.0305	9.1570	8.7589	480,597.1076
Mobile	1,355.6623	6,318.8692	15,167.0746	79.0459	9,807.4917	32.1726	9,839.6643	2,617.2167	29.9328	2,647.1495		8,038,148.2756	8,038,148.2756	203.0483		8,043,224.4819
Total	**11,494.4562**	**8,678.6257**	**55,858.0011**	**166.7892**	**9,807.4917**	**4,043.7628**	**13,851.2544**	**2,617.2167**	**4,041.5229**	**6,658.7396**	**557,100.2847**	**10,341,956.4154**	**10,899,056.7001**	**2,879.7859**	**41.6816**	**10,983,472.4468**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	10000	

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

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				0.00	10.80	7.30				

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	1,355.6623	6,318.8692	15,167.0746	79.0459	9,807.4917	32.1726	9,839.6643	2,617.2167	29.9328	2,647.1495		8,038,148.2756	8,038,148.2756	203.0483		8,043,224.4819
Unmitigated	1,355.6623	6,318.8692	15,167.0746	79.0459	9,807.4917	32.1726	9,839.6643	2,617.2167	29.9328	2,647.1495		8,038,148.2756	8,038,148.2756	203.0483		8,043,224.4819

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	175,929.60	208,602.24	152891.20	409,507,047	409,507,047
Apartments Low Rise	464,397.30	504,565.20	427752.90	1,073,737,952	1,073,737,952
Apartments Mid Rise	468,625.50	450,303.30	412954.20	1,057,927,172	1,057,927,172
General Office Building	598,364.37	133,452.07	56961.25	1,086,393,647	1,086,393,647
Single Family Housing	198,539.60	206,673.05	179770.10	455,039,210	455,039,210
Total	1,905,856.37	1,503,595.86	1,230,329.65	4,082,605,027	4,082,605,027

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
Apartments High Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.621663	0.033362	0.179130	0.101130	0.011078	0.005126	0.013709	0.024709	0.002299	0.001422	0.005077	0.000653	0.000642
Apartments High Rise	0.621663	0.033362	0.179130	0.101130	0.011078	0.005126	0.013709	0.024709	0.002299	0.001422	0.005077	0.000653	0.000642
Apartments Low Rise	0.621663	0.033362	0.179130	0.101130	0.011078	0.005126	0.013709	0.024709	0.002299	0.001422	0.005077	0.000653	0.000642
Apartments Mid Rise	0.621663	0.033362	0.179130	0.101130	0.011078	0.005126	0.013709	0.024709	0.002299	0.001422	0.005077	0.000653	0.000642
Single Family Housing	0.621663	0.033362	0.179130	0.101130	0.011078	0.005126	0.013709	0.024709	0.002299	0.001422	0.005077	0.000653	0.000642

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	43.7945	382.4620	219.5194	2.3888		30.2580	30.2580		30.2580	30.2580		477,758.0305	477,758.0305	9.1570	8.7589	480,597.1076
NaturalGas Unmitigated	43.7945	382.4620	219.5194	2.3888		30.2580	30.2580		30.2580	30.2580		477,758.0305	477,758.0305	9.1570	8.7589	480,597.1076

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	lb/day										lb/day					
Apartments High Rise	492859	5.3151	45.4203	19.3278	0.2899		3.6723	3.6723		3.6723	3.6723		57,983.3881	57,983.3881	1.1114	1.0630	58,327.9543
Apartments Low Rise	891718	9.6166	82.1779	34.9693	0.5245		6.6442	6.6442		6.6442	6.6442		104,907.9678	104,907.9678	2.0107	1.9233	105,531.3834
Apartments Mid Rise	829158	8.9419	76.4126	32.5160	0.4877		6.1780	6.1780		6.1780	6.1780		97,547.9697	97,547.9697	1.8697	1.7884	98,127.6485
General Office Building	1.39709e+006	15.0667	136.9698	115.0547	0.8218		10.4097	10.4097		10.4097	10.4097		164,363.8098	164,363.8098	3.1503	3.0133	165,340.5418
Single Family Housing	450117	4.8542	41.4813	17.6516	0.2648		3.3538	3.3538		3.3538	3.3538		52,954.8950	52,954.8950	1.0150	0.9708	53,269.5795
Total		**43.7945**	**382.4620**	**219.5194**	**2.3888**		**30.2580**	**30.2580**		**30.2580**	**30.2580**		**477,758.0304**	**477,758.0304**	**9.1570**	**8.7589**	**480,597.1076**

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	lb/day										lb/day					
Apartments High Rise	492.859	5.3151	45.4203	19.3278	0.2899		3.6723	3.6723		3.6723	3.6723		57,983.3881	57,983.3881	1.1114	1.0630	58,327.9543
Apartments Low Rise	891.718	9.6166	82.1779	34.9693	0.5245		6.6442	6.6442		6.6442	6.6442		104,907.9678	104,907.9678	2.0107	1.9233	105,531.3834
Apartments Mid Rise	829.158	8.9419	76.4126	32.5160	0.4877		6.1780	6.1780		6.1780	6.1780		97,547.9697	97,547.9697	1.8697	1.7884	98,127.6485
General Office Building	1397.09	15.0667	136.9698	115.0547	0.8218		10.4097	10.4097		10.4097	10.4097		164,363.8098	164,363.8098	3.1503	3.0133	165,340.5418
Single Family Housing	450.117	4.8542	41.4813	17.6516	0.2648		3.3538	3.3538		3.3538	3.3538		52,954.8950	52,954.8950	1.0150	0.9708	53,269.5795
Total		**43.7945**	**382.4620**	**219.5194**	**2.3888**		**30.2580**	**30.2580**		**30.2580**	**30.2580**		**477,758.0304**	**477,758.0304**	**9.1570**	**8.7589**	**480,597.1076**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10,094.9994	1,977.2946	40,471.4071	85.3545		3,981.3321	3,981.3321		3,981.3321	3,981.3321	557,100.2847	1,826,050.1094	2,383,150.3941	2,667.5806	32.9227	2,459,650.8573
Unmitigated	10,094.9994	1,977.2946	40,471.4071	85.3545		3,981.3321	3,981.3321		3,981.3321	3,981.3321	557,100.2847	1,826,050.1094	2,383,150.3941	2,667.5806	32.9227	2,459,650.8573

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	lb/day										lb/day					
Architectural Coating	1,005.0008					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5,876.7781					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2,712.3279	1,784.1341	23,735.6176	84.4668		3,888.1250	3,888.1250		3,888.1250	3,888.1250	557,100.2847	1,795,780.6588	2,352,880.9435	2,638.7497	32.9227	2,428,660.6351
Landscaping	500.8926	193.1605	16,735.7895	0.8878		93.2072	93.2072		93.2072	93.2072		30,269.4506	30,269.4506	28.8309		30,990.2223
Total	**10,094.9994**	**1,977.2946**	**40,471.4071**	**85.3545**		**3,981.3321**	**3,981.3321**		**3,981.3321**	**3,981.3321**	**557,100.2847**	**1,826,050.1094**	**2,383,150.3941**	**2,667.5806**	**32.9227**	**2,459,650.8573**

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	lb/day										lb/day					
Architectural Coating	1,005.0008					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5,876.7781					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2,712.3279	1,784.1341	23,735.6176	84.4668		3,888.1250	3,888.1250		3,888.1250	3,888.1250	557,100.2847	1,795,780.6588	2,352,880.9435	2,638.7497	32.9227	2,428,660.6351
Landscaping	500.8926	193.1605	16,735.7895	0.8878		93.2072	93.2072		93.2072	93.2072		30,269.4506	30,269.4506	28.8309		30,990.2223
Total	**10,094.9994**	**1,977.2946**	**40,471.4071**	**85.3545**		**3,981.3321**	**3,981.3321**		**3,981.3321**	**3,981.3321**	**557,100.2847**	**1,826,050.1094**	**2,383,150.3941**	**2,667.5806**	**32.9227**	**2,459,650.8573**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Santa Clara - Net Reduction in Land Uses

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	6,463.48	1000sqft	148.38	6,463,480.00	0
Regional Shopping Center	10,626.74	1000sqft	243.96	10,626,700.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Santa Clara - Net Reduction in Land Uses - Santa Clara County, Annual

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	400.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Santa Clara - Net Reduction in Land Uses - Santa Clara County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	75.6732	1.5700e-003	0.1624	1.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	0.3054	0.3054	8.8000e-004	0.0000	0.3275
Energy	0.8630	7.8452	6.5899	0.0471		0.5962	0.5962		0.5962	0.5962	0.0000	60,459.4537	60,459.4537	3.3863	0.7533	60,768.6068
Mobile	200.5448	687.6310	2,177.3336	4.2361	319.7017	7.4018	327.1035	85.6386	7.0075	92.6461	0.0000	385,165.4275	385,165.4275	20.5200	0.0000	385,678.4286
Waste						0.0000	0.0000		0.0000	0.0000	3,891.8970	0.0000	3,891.8970	230.0045	0.0000	9,642.0101
Water						0.0000	0.0000		0.0000	0.0000	723.9182	2,769.3856	3,493.3038	74.5252	1.7875	5,889.1023
Total	**277.0810**	**695.4777**	**2,184.0859**	**4.2832**	**319.7017**	**7.9986**	**327.7003**	**85.6386**	**7.6043**	**93.2429**	**4,615.8152**	**448,394.5722**	**453,010.3874**	**328.4369**	**2.5408**	**461,978.4753**

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	75.6732	1.5700e-003	0.1624	1.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	0.3054	0.3054	8.8000e-004	0.0000	0.3275
Energy	0.8630	7.8452	6.5899	0.0471		0.5962	0.5962		0.5962	0.5962	0.0000	60,459.4537	60,459.4537	3.3863	0.7533	60,768.6068
Mobile	200.5448	687.6310	2,177.3336	4.2361	319.7017	7.4018	327.1035	85.6386	7.0075	92.6461	0.0000	385,165.4275	385,165.4275	20.5200	0.0000	385,678.4286
Waste						0.0000	0.0000		0.0000	0.0000	3,891.8970	0.0000	3,891.8970	230.0045	0.0000	9,642.0101
Water						0.0000	0.0000		0.0000	0.0000	723.9182	2,769.3856	3,493.3038	74.5252	1.7875	5,889.1023
Total	**277.0810**	**695.4777**	**2,184.0859**	**4.2832**	**319.7017**	**7.9986**	**327.7003**	**85.6386**	**7.6043**	**93.2429**	**4,615.8152**	**448,394.5722**	**453,010.3874**	**328.4369**	**2.5408**	**461,978.4753**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	200.5448	687.6310	2,177.3336	4.2361	319.7017	7.4018	327.1035	85.6386	7.0075	92.6461	0.0000	385,165.4275	385,165.4275	20.5200	0.0000	385,678.4286
Unmitigated	200.5448	687.6310	2,177.3336	4.2361	319.7017	7.4018	327.1035	85.6386	7.0075	92.6461	0.0000	385,165.4275	385,165.4275	20.5200	0.0000	385,678.4286

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	44,145.57	16,094.07	4718.34	90,468,151	90,468,151
Regional Shopping Center	453,761.80	531,018.20	268218.92	768,460,006	768,460,006
Total	497,907.37	547,112.26	272,937.26	858,928,157	858,928,157

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Plan Bay Area 2040 Update - Santa Clara - Net Reduction in Land Uses - Santa Clara County, Annual

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.581066	0.044264	0.192756	0.115658	0.019411	0.004878	0.012376	0.018919	0.001909	0.001745	0.005487	0.000584	0.000947
Regional Shopping Center	0.581066	0.044264	0.192756	0.115658	0.019411	0.004878	0.012376	0.018919	0.001909	0.001745	0.005487	0.000584	0.000947

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	51,919.0552	51,919.0552	3.2226	0.5968	52,177.4569
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	51,919.0552	51,919.0552	3.2226	0.5968	52,177.4569
NaturalGas Mitigated	0.8630	7.8452	6.5899	0.0471		0.5962	0.5962		0.5962	0.5962	0.0000	8,540.3986	8,540.3986	0.1637	0.1566	8,591.1499
NaturalGas Unmitigated	0.8630	7.8452	6.5899	0.0471		0.5962	0.5962		0.5962	0.5962	0.0000	8,540.3986	8,540.3986	0.1637	0.1566	8,591.1499

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					
Industrial Park	1.29011e+008	0.6957	6.3241	5.3122	0.0379		0.4806	0.4806		0.4806	0.4806	0.0000	6,884.5215	6,884.5215	0.1320	0.1262	6,925.4328
Regional Shopping Center	3.103e+007	0.1673	1.5211	1.2777	9.1300e-003		0.1156	0.1156		0.1156	0.1156	0.0000	1,655.8771	1,655.8771	0.0317	0.0304	1,665.7171
Total		**0.8630**	**7.8452**	**6.5899**	**0.0471**		**0.5962**	**0.5962**		**0.5962**	**0.5962**	**0.0000**	**8,540.3986**	**8,540.3986**	**0.1637**	**0.1566**	**8,591.1499**

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					
Industrial Park	1.29011e+008	0.6957	6.3241	5.3122	0.0379		0.4806	0.4806		0.4806	0.4806	0.0000	6,884.5215	6,884.5215	0.1320	0.1262	6,925.4328
Regional Shopping Center	3.103e+007	0.1673	1.5211	1.2777	9.1300e-003		0.1156	0.1156		0.1156	0.1156	0.0000	1,655.8771	1,655.8771	0.0317	0.0304	1,665.7171
Total		**0.8630**	**7.8452**	**6.5899**	**0.0471**		**0.5962**	**0.5962**		**0.5962**	**0.5962**	**0.0000**	**8,540.3986**	**8,540.3986**	**0.1637**	**0.1566**	**8,591.1499**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	1.32954e+008	26,233.4675	1.6283	0.3015	26,364.0318
Regional Shopping Center	1.30177e+008	25,685.5877	1.5943	0.2952	25,813.4251
Total		**51,919.0552**	**3.2226**	**0.5968**	**52,177.4569**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	1.32954e+008	26,233.4675	1.6283	0.3015	26,364.0318
Regional Shopping Center	1.30177e+008	25,685.5877	1.5943	0.2952	25,813.4251
Total		**51,919.0552**	**3.2226**	**0.5968**	**52,177.4569**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	75.6732	1.5700e-003	0.1624	1.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	0.3054	0.3054	8.8000e-004	0.0000	0.3275
Unmitigated	75.6732	1.5700e-003	0.1624	1.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	0.3054	0.3054	8.8000e-004	0.0000	0.3275

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	8.9115					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	66.7457					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0161	1.5700e-003	0.1624	1.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	0.3054	0.3054	8.8000e-004	0.0000	0.3275
Total	**75.6732**	**1.5700e-003**	**0.1624**	**1.0000e-005**		**5.9000e-004**	**5.9000e-004**		**5.9000e-004**	**5.9000e-004**	**0.0000**	**0.3054**	**0.3054**	**8.8000e-004**	**0.0000**	**0.3275**

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	8.9115					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	66.7457					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0161	1.5700e-003	0.1624	1.0000e-005		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	0.3054	0.3054	8.8000e-004	0.0000	0.3275
Total	**75.6732**	**1.5700e-003**	**0.1624**	**1.0000e-005**		**5.9000e-004**	**5.9000e-004**		**5.9000e-004**	**5.9000e-004**	**0.0000**	**0.3054**	**0.3054**	**8.8000e-004**	**0.0000**	**0.3275**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3,493.3038	74.5252	1.7875	5,889.1023
Unmitigated	3,493.3038	74.5252	1.7875	5,889.1023

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	1494.68 / 0	2,070.0011	48.8032	1.1684	3,638.2507
Regional Shopping Center	787.146 / 482.445	1,423.3027	25.7220	0.6191	2,250.8517
Total		**3,493.3038**	**74.5252**	**1.7875**	**5,889.1023**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	1494.68 / 0	2,070.0011	48.8032	1.1684	3,638.2507
Regional Shopping Center	787.146 / 482.445	1,423.3027	25.7220	0.6191	2,250.8517
Total		**3,493.3038**	**74.5252**	**1.7875**	**5,889.1023**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3,891.8970	230.0045	0.0000	9,642.0101
Unmitigated	3,891.8970	230.0045	0.0000	9,642.0101

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	8014.72	1,626.9157	96.1480	0.0000	4,030.6149
Regional Shopping Center	11158	2,264.9813	133.8566	0.0000	5,611.3953
Total		**3,891.8970**	**230.0045**	**0.0000**	**9,642.0101**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	8014.72	1,626.9157	96.1480	0.0000	4,030.6149
Regional Shopping Center	11158	2,264.9813	133.8566	0.0000	5,611.3953
Total		**3,891.8970**	**230.0045**	**0.0000**	**9,642.0101**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Santa Clara - Net Reduction in Land Uses

Santa Clara County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	6,463.48	1000sqft	148.38	6,463,480.00	0
Regional Shopping Center	10,626.74	1000sqft	243.96	10,626,700.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	400.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5256	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5256**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5256	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5256**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	414.7382	0.0175	1.8049	1.3000e-004		6.5300e-003	6.5300e-003		6.5300e-003	6.5300e-003		3.7402	3.7402	0.0108		4.0110
Energy	4.7286	42.9871	36.1092	0.2579		3.2670	3.2670		3.2670	3.2670		51,584.5366	51,584.5366	0.9887	0.9457	51,891.0777
Mobile	1,522.2045	4,407.6077	14,893.4343	30.1026	2,216.2989	49.3644	2,265.6633	591.9877	46.7324	638.7201		3,017,127.3518	3,017,127.3518	152.1685		3,020,931.5634
Total	**1,941.6713**	**4,450.6123**	**14,931.3484**	**30.3606**	**2,216.2989**	**52.6380**	**2,268.9368**	**591.9877**	**50.0060**	**641.9937**		**3,068,715.6287**	**3,068,715.6287**	**153.1680**	**0.9457**	**3,072,826.6520**

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	lb/day										lb/day					
Area	414.7382	0.0175	1.8049	1.3000e-004		6.5300e-003	6.5300e-003		6.5300e-003	6.5300e-003		3.7402	3.7402	0.0108		4.0110
Energy	4.7286	42.9871	36.1092	0.2579		3.2670	3.2670		3.2670	3.2670		51,584.5366	51,584.5366	0.9887	0.9457	51,891.0777
Mobile	1,522.2045	4,407.6077	14,893.4343	30.1026	2,216.2989	49.3644	2,265.6633	591.9877	46.7324	638.7201		3,017,127.3518	3,017,127.3518	152.1685		3,020,931.5634
Total	**1,941.6713**	**4,450.6123**	**14,931.3484**	**30.3606**	**2,216.2989**	**52.6380**	**2,268.9368**	**591.9877**	**50.0060**	**641.9937**		**3,068,715.6287**	**3,068,715.6287**	**153.1680**	**0.9457**	**3,072,826.6520**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	1,522.2045	4,407.6077	14,893.4343	30.1026	2,216.2989	49.3644	2,265.6633	591.9877	46.7324	638.7201		3,017,127.3518	3,017,127.3518	152.1685		3,020,931.5634
Unmitigated	1,522.2045	4,407.6077	14,893.4343	30.1026	2,216.2989	49.3644	2,265.6633	591.9877	46.7324	638.7201		3,017,127.3518	3,017,127.3518	152.1685		3,020,931.5634

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	44,145.57	16,094.07	4718.34	90,468,151	90,468,151
Regional Shopping Center	453,761.80	531,018.20	268218.92	768,460,006	768,460,006
Total	497,907.37	547,112.26	272,937.26	858,928,157	858,928,157

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Plan Bay Area 2040 Update - Santa Clara - Net Reduction in Land Uses - Santa Clara County, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.581066	0.044264	0.192756	0.115658	0.019411	0.004878	0.012376	0.018919	0.001909	0.001745	0.005487	0.000584	0.000947
Regional Shopping Center	0.581066	0.044264	0.192756	0.115658	0.019411	0.004878	0.012376	0.018919	0.001909	0.001745	0.005487	0.000584	0.000947

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.7286	42.9871	36.1092	0.2579		3.2670	3.2670		3.2670	3.2670		51,584.5366	51,584.5366	0.9887	0.9457	51,891.0777
NaturalGas Unmitigated	4.7286	42.9871	36.1092	0.2579		3.2670	3.2670		3.2670	3.2670		51,584.5366	51,584.5366	0.9887	0.9457	51,891.0777

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	lb/day										lb/day					
Industrial Park	353455	3.8118	34.6525	29.1081	0.2079		2.6336	2.6336		2.6336	2.6336		41,582.9366	41,582.9366	0.7970	0.7624	41,830.0432
Regional Shopping Center	85013.6	0.9168	8.3347	7.0011	0.0500		0.6334	0.6334		0.6334	0.6334		10,001.6000	10,001.6000	0.1917	0.1834	10,061.0345
Total		**4.7286**	**42.9871**	**36.1092**	**0.2579**		**3.2670**	**3.2670**		**3.2670**	**3.2670**		**51,584.5366**	**51,584.5366**	**0.9887**	**0.9457**	**51,891.0777**

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	lb/day										lb/day					
Industrial Park	353.455	3.8118	34.6525	29.1081	0.2079		2.6336	2.6336		2.6336	2.6336		41,582.9366	41,582.9366	0.7970	0.7624	41,830.0432
Regional Shopping Center	85.0136	0.9168	8.3347	7.0011	0.0500		0.6334	0.6334		0.6334	0.6334		10,001.6000	10,001.6000	0.1917	0.1834	10,061.0345
Total		**4.7286**	**42.9871**	**36.1092**	**0.2579**		**3.2670**	**3.2670**		**3.2670**	**3.2670**		**51,584.5366**	**51,584.5366**	**0.9887**	**0.9457**	**51,891.0777**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	414.7382	0.0175	1.8049	1.3000e-004		6.5300e-003	6.5300e-003		6.5300e-003	6.5300e-003		3.7402	3.7402	0.0108		4.0110
Unmitigated	414.7382	0.0175	1.8049	1.3000e-004		6.5300e-003	6.5300e-003		6.5300e-003	6.5300e-003		3.7402	3.7402	0.0108		4.0110

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	lb/day										lb/day					
Architectural Coating	48.8299					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	365.7299					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.1784	0.0175	1.8049	1.3000e-004		6.5300e-003	6.5300e-003		6.5300e-003	6.5300e-003		3.7402	3.7402	0.0108		4.0110
Total	**414.7382**	**0.0175**	**1.8049**	**1.3000e-004**		**6.5300e-003**	**6.5300e-003**		**6.5300e-003**	**6.5300e-003**		**3.7402**	**3.7402**	**0.0108**		**4.0110**

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	lb/day										lb/day					
Architectural Coating	48.8299					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	365.7299					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.1784	0.0175	1.8049	1.3000e-004		6.5300e-003	6.5300e-003		6.5300e-003	6.5300e-003		3.7402	3.7402	0.0108		4.0110
Total	**414.7382**	**0.0175**	**1.8049**	**1.3000e-004**		**6.5300e-003**	**6.5300e-003**		**6.5300e-003**	**6.5300e-003**		**3.7402**	**3.7402**	**0.0108**		**4.0110**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Solano - New Land Uses

Solano-San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	311.93	1000sqft	7.16	311,930.00	0
Apartments Low Rise	1,738.00	Dwelling Unit	108.63	1,738,000.00	4971
Apartments Mid Rise	1,738.00	Dwelling Unit	45.74	1,738,000.00	4971
Single Family Housing	17,538.00	Dwelling Unit	5,694.16	31,568,400.00	50159

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.94	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Solano - New Land Uses - Solano-San Francisco County, Annual

Project Characteristics - Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards and ZNE standards assuming a linear growth in new construction between 2015 and 2040.

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Plan Bay Area 2040 Update - Solano - New Land Uses - Solano-San Francisco County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	431.22	62.10
tblEnergyUse	T24E	392.47	56.52
tblEnergyUse	T24E	6.40	3.65
tblEnergyUse	T24E	368.92	53.12
tblEnergyUse	T24NG	10,164.29	1,463.66
tblEnergyUse	T24NG	7,914.07	1,139.63
tblEnergyUse	T24NG	16.39	9.34
tblEnergyUse	T24NG	32,797.58	4,722.85
tblFireplaces	NumberGas	260.70	556.16
tblFireplaces	NumberGas	260.70	556.16
tblFireplaces	NumberGas	4,384.50	11,925.84
tblFireplaces	NumberWood	295.46	0.00
tblFireplaces	NumberWood	295.46	0.00
tblFireplaces	NumberWood	7,541.34	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.94
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2040

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Solano - New Land Uses - Solano-San Francisco County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	172.5310	3.9103	199.5742	0.1596		8.0960	8.0960		8.0960	8.0960	952.9734	1,882.5547	2,835.5281	4.7288	0.0298	2,962.6398
Energy	0.8443	7.2238	3.1335	0.0461		0.5834	0.5834		0.5834	0.5834	0.0000	30,745.6967	30,745.6967	1.5128	0.3786	30,896.3516
Mobile	23.6302	198.3493	252.2560	1.6023	164.8110	0.6206	165.4316	44.1154	0.5787	44.6940	0.0000	148,474.1672	148,474.1672	4.7075	0.0000	148,591.8540
Waste						0.0000	0.0000		0.0000	0.0000	4,659.8260	0.0000	4,659.8260	275.3878	0.0000	11,544.5218
Water						0.0000	0.0000		0.0000	0.0000	451.9558	1,466.0917	1,918.0475	46.5088	1.1108	3,411.7980
Total	**197.0055**	**209.4834**	**454.9638**	**1.8079**	**164.8110**	**9.2999**	**174.1109**	**44.1154**	**9.2580**	**53.3733**	**6,064.7552**	**182,568.5103**	**188,633.2655**	**332.8457**	**1.5193**	**197,407.1652**

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	172.5310	3.9103	199.5742	0.1596		8.0960	8.0960		8.0960	8.0960	952.9734	1,882.5547	2,835.5281	4.7288	0.0298	2,962.6398
Energy	0.8443	7.2238	3.1335	0.0461		0.5834	0.5834		0.5834	0.5834	0.0000	30,745.6967	30,745.6967	1.5128	0.3786	30,896.3516
Mobile	23.6302	198.3493	252.2560	1.6023	164.8110	0.6206	165.4316	44.1154	0.5787	44.6940	0.0000	148,474.1672	148,474.1672	4.7075	0.0000	148,591.8540
Waste						0.0000	0.0000		0.0000	0.0000	4,659.8260	0.0000	4,659.8260	275.3878	0.0000	11,544.5218
Water						0.0000	0.0000		0.0000	0.0000	451.9558	1,466.0917	1,918.0475	46.5088	1.1108	3,411.7980
Total	**197.0055**	**209.4834**	**454.9638**	**1.8079**	**164.8110**	**9.2999**	**174.1109**	**44.1154**	**9.2580**	**53.3733**	**6,064.7552**	**182,568.5103**	**188,633.2655**	**332.8457**	**1.5193**	**197,407.1652**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	23.6302	198.3493	252.2560	1.6023	164.8110	0.6206	165.4316	44.1154	0.5787	44.6940	0.0000	148,474.1672	148,474.1672	4.7075	0.0000	148,591.8540
Unmitigated	23.6302	198.3493	252.2560	1.6023	164.8110	0.6206	165.4316	44.1154	0.5787	44.6940	0.0000	148,474.1672	148,474.1672	4.7075	0.0000	148,591.8540

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	11,453.42	12,444.08	10549.66	26,481,575	26,481,575
Apartments Mid Rise	11,557.70	11,105.82	10184.68	26,091,634	26,091,634
General Office Building	3,440.59	767.35	327.53	6,246,750	6,246,750
Single Family Housing	166,961.76	173,801.58	151177.56	382,664,956	382,664,956
Total	193,413.47	198,118.83	172,239.43	441,484,915	441,484,915

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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.610976	0.032380	0.175368	0.095785	0.010224	0.004582	0.009330	0.049791	0.003299	0.001549	0.005509	0.000616	0.000591
Apartments Low Rise	0.610976	0.032380	0.175368	0.095785	0.010224	0.004582	0.009330	0.049791	0.003299	0.001549	0.005509	0.000616	0.000591
Apartments Mid Rise	0.610976	0.032380	0.175368	0.095785	0.010224	0.004582	0.009330	0.049791	0.003299	0.001549	0.005509	0.000616	0.000591
Single Family Housing	0.610976	0.032380	0.175368	0.095785	0.010224	0.004582	0.009330	0.049791	0.003299	0.001549	0.005509	0.000616	0.000591

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	22,389.7156	22,389.7156	1.3527	0.2255	22,490.7150
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	22,389.7156	22,389.7156	1.3527	0.2255	22,490.7150
NaturalGas Mitigated	0.8443	7.2238	3.1335	0.0461		0.5834	0.5834		0.5834	0.5834	0.0000	8,355.9812	8,355.9812	0.1602	0.1532	8,405.6366
NaturalGas Unmitigated	0.8443	7.2238	3.1335	0.0461		0.5834	0.5834		0.5834	0.5834	0.0000	8,355.9812	8,355.9812	0.1602	0.1532	8,405.6366

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					
Apartments Low Rise	8.02723e+006	0.0433	0.3699	0.1574	2.3600e-003		0.0299	0.0299		0.0299	0.0299	0.0000	428.3636	428.3636	8.2100e-003	7.8500e-003	430.9092
Apartments Mid Rise	7.46407e+006	0.0403	0.3439	0.1464	2.2000e-003		0.0278	0.0278		0.0278	0.0278	0.0000	398.3110	398.3110	7.6300e-003	7.3000e-003	400.6780
General Office Building	2.93214e+006	0.0158	0.1437	0.1207	8.6000e-004		0.0109	0.0109		0.0109	0.0109	0.0000	156.4703	156.4703	3.0000e-003	2.8700e-003	157.4001
Single Family Housing	1.38162e+008	0.7450	6.3663	2.7091	0.0406		0.5147	0.5147		0.5147	0.5147	0.0000	7,372.8362	7,372.8362	0.1413	0.1352	7,416.6493
Total		**0.8443**	**7.2238**	**3.1335**	**0.0461**		**0.5834**	**0.5834**		**0.5834**	**0.5834**	**0.0000**	**8,355.9812**	**8,355.9812**	**0.1602**	**0.1532**	**8,405.6366**

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					
Apartments Low Rise	8.02723e+006	0.0433	0.3699	0.1574	2.3600e-003		0.0299	0.0299		0.0299	0.0299	0.0000	428.3636	428.3636	8.2100e-003	7.8500e-003	430.9092
Apartments Mid Rise	7.46407e+006	0.0403	0.3439	0.1464	2.2000e-003		0.0278	0.0278		0.0278	0.0278	0.0000	398.3110	398.3110	7.6300e-003	7.3000e-003	400.6780
General Office Building	2.93214e+006	0.0158	0.1437	0.1207	8.6000e-004		0.0109	0.0109		0.0109	0.0109	0.0000	156.4703	156.4703	3.0000e-003	2.8700e-003	157.4001
Single Family Housing	1.38162e+008	0.7450	6.3663	2.7091	0.0406		0.5147	0.5147		0.5147	0.5147	0.0000	7,372.8362	7,372.8362	0.1413	0.1352	7,416.6493
Total		**0.8443**	**7.2238**	**3.1335**	**0.0461**		**0.5834**	**0.5834**		**0.5834**	**0.5834**	**0.0000**	**8,355.9812**	**8,355.9812**	**0.1602**	**0.1532**	**8,405.6366**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	7.45745e+006	1,007.8238	0.0609	0.0102	1,012.3701
Apartments Mid Rise	7.08238e+006	957.1369	0.0578	9.6400e-003	961.4546
General Office Building	4.82556e+006	652.1418	0.0394	6.5700e-003	655.0836
Single Family Housing	1.46308e+008	19,772.6131	1.1946	0.1991	19,861.8068
Total		**22,389.7156**	**1.3527**	**0.2255**	**22,490.7150**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	7.45745e+006	1,007.8238	0.0609	0.0102	1,012.3701
Apartments Mid Rise	7.08238e+006	957.1369	0.0578	9.6400e-003	961.4546
General Office Building	4.82556e+006	652.1418	0.0394	6.5700e-003	655.0836
Single Family Housing	1.46308e+008	19,772.6131	1.1946	0.1991	19,861.8068
Total		**22,389.7156**	**1.3527**	**0.2255**	**22,490.7150**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	172.5310	3.9103	199.5742	0.1596		8.0960	8.0960		8.0960	8.0960	952.9734	1,882.5547	2,835.5281	4.7288	0.0298	2,962.6398
Unmitigated	172.5310	3.9103	199.5742	0.1596		8.0960	8.0960		8.0960	8.0960	952.9734	1,882.5547	2,835.5281	4.7288	0.0298	2,962.6398

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	24.8318					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	138.0842					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.9685	2.1172	44.2255	0.1513		7.2307	7.2307		7.2307	7.2307	952.9734	1,627.6747	2,580.6480	4.4862	0.0298	2,701.6944
Landscaping	4.6465	1.7931	155.3488	8.2400e-003		0.8653	0.8653		0.8653	0.8653	0.0000	254.8801	254.8801	0.2426	0.0000	260.9454
Total	**172.5310**	**3.9103**	**199.5742**	**0.1596**		**8.0960**	**8.0960**		**8.0960**	**8.0960**	**952.9734**	**1,882.5547**	**2,835.5281**	**4.7288**	**0.0298**	**2,962.6398**

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	24.8318					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	138.0842					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.9685	2.1172	44.2255	0.1513		7.2307	7.2307		7.2307	7.2307	952.9734	1,627.6747	2,580.6480	4.4862	0.0298	2,701.6944
Landscaping	4.6465	1.7931	155.3488	8.2400e-003		0.8653	0.8653		0.8653	0.8653	0.0000	254.8801	254.8801	0.2426	0.0000	260.9454
Total	**172.5310**	**3.9103**	**199.5742**	**0.1596**		**8.0960**	**8.0960**		**8.0960**	**8.0960**	**952.9734**	**1,882.5547**	**2,835.5281**	**4.7288**	**0.0298**	**2,962.6398**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1,918.0475	46.5088	1.1108	3,411.7980
Unmitigated	1,918.0475	46.5088	1.1108	3,411.7980

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	113.238 / 71.389	152.4985	3.6969	0.0883	271.2340
Apartments Mid Rise	113.238 / 71.389	152.4985	3.6969	0.0883	271.2340
General Office Building	55.4405 / 33.9797	74.2026	1.8100	0.0432	132.3327
Single Family Housing	1142.67 / 720.38	1,538.8480	37.3050	0.8910	2,736.9974
Total		**1,918.0475**	**46.5088**	**1.1109**	**3,411.7981**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	113.238 / 71.389	152.4985	3.6969	0.0883	271.2340
Apartments Mid Rise	113.238 / 71.389	152.4985	3.6969	0.0883	271.2340
General Office Building	55.4405 / 33.9797	74.2026	1.8100	0.0432	132.3327
Single Family Housing	1142.67 / 720.38	1,538.8480	37.3050	0.8910	2,736.9974
Total		**1,918.0475**	**46.5088**	**1.1109**	**3,411.7981**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4,659.8260	275.3878	0.0000	11,544.5218
Unmitigated	4,659.8260	275.3878	0.0000	11,544.5218

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	799.48	162.2872	9.5909	0.0000	402.0597
Apartments Mid Rise	799.48	162.2872	9.5909	0.0000	402.0597
General Office Building	290.09	58.8857	3.4800	0.0000	145.8867
Single Family Housing	21066.8	4,276.3660	252.7260	0.0000	10,594.5157
Total		**4,659.8260**	**275.3878**	**0.0000**	**11,544.5218**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	799.48	162.2872	9.5909	0.0000	402.0597
Apartments Mid Rise	799.48	162.2872	9.5909	0.0000	402.0597
General Office Building	290.09	58.8857	3.4800	0.0000	145.8867
Single Family Housing	21066.8	4,276.3660	252.7260	0.0000	10,594.5157
Total		**4,659.8260**	**275.3878**	**0.0000**	**11,544.5218**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Solano - New Land Uses

Solano-San Francisco County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	311.93	1000sqft	7.16	311,930.00	0
Apartments Low Rise	1,738.00	Dwelling Unit	108.63	1,738,000.00	4971
Apartments Mid Rise	1,738.00	Dwelling Unit	45.74	1,738,000.00	4971
Single Family Housing	17,538.00	Dwelling Unit	5,694.16	31,568,400.00	50159

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.94	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Solano - New Land Uses - Solano-San Francisco County, Summer

Project Characteristics - Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards and ZNE standards assuming a linear growth in new construction between 2015 and 2040.

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306.

Plan Bay Area 2040 Update - Solano - New Land Uses - Solano-San Francisco County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	431.22	62.10
tblEnergyUse	T24E	392.47	56.52
tblEnergyUse	T24E	6.40	3.65
tblEnergyUse	T24E	368.92	53.12
tblEnergyUse	T24NG	10,164.29	1,463.66
tblEnergyUse	T24NG	7,914.07	1,139.63
tblEnergyUse	T24NG	16.39	9.34
tblEnergyUse	T24NG	32,797.58	4,722.85
tblFireplaces	NumberGas	260.70	556.16
tblFireplaces	NumberGas	260.70	556.16
tblFireplaces	NumberGas	4,384.50	11,925.84
tblFireplaces	NumberWood	295.46	0.00
tblFireplaces	NumberWood	295.46	0.00
tblFireplaces	NumberWood	7,541.34	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.94
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2040

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5257	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5257**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5257	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5257**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	1,442.8222	341.7283	6,092.4693	15.5977		724.7948	724.7948		724.7948	724.7948	102,549.4682	325,240.9934	427,790.4616	488.5434	5.9055	441,763.8908
Energy	4.6265	39.5826	17.1701	0.2524		3.1965	3.1965		3.1965	3.1965		50,470.6441	50,470.6441	0.9674	0.9253	50,770.5659
Mobile	158.5735	1,138.2376	1,539.9159	9.7973	986.3281	3.5903	989.9184	263.2930	3.3477	266.6407		1,000,069.6672	1,000,069.6672	29.5354		1,000,808.0521
Total	**1,606.0221**	**1,519.5485**	**7,649.5553**	**25.6474**	**986.3281**	**731.5815**	**1,717.9096**	**263.2930**	**731.3389**	**994.6319**	**102,549.4682**	**1,375,781.3047**	**1,478,330.7729**	**519.0461**	**6.8308**	**1,493,342.5088**

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	lb/day										lb/day					
Area	1,442.8222	341.7283	6,092.4693	15.5977		724.7948	724.7948		724.7948	724.7948	102,549.4682	325,240.9934	427,790.4616	488.5434	5.9055	441,763.8908
Energy	4.6265	39.5826	17.1701	0.2524		3.1965	3.1965		3.1965	3.1965		50,470.6441	50,470.6441	0.9674	0.9253	50,770.5659
Mobile	158.5735	1,138.2376	1,539.9159	9.7973	986.3281	3.5903	989.9184	263.2930	3.3477	266.6407		1,000,069.6672	1,000,069.6672	29.5354		1,000,808.0521
Total	**1,606.0221**	**1,519.5485**	**7,649.5553**	**25.6474**	**986.3281**	**731.5815**	**1,717.9096**	**263.2930**	**731.3389**	**994.6319**	**102,549.4682**	**1,375,781.3047**	**1,478,330.7729**	**519.0461**	**6.8308**	**1,493,342.5088**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	158.5735	1,138.2376	1,539.9159	9.7973	986.3281	3.5903	989.9184	263.2930	3.3477	266.6407		1,000,069.6672	1,000,069.6672	29.5354		1,000,808.0521
Unmitigated	158.5735	1,138.2376	1,539.9159	9.7973	986.3281	3.5903	989.9184	263.2930	3.3477	266.6407		1,000,069.6672	1,000,069.6672	29.5354		1,000,808.0521

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	11,453.42	12,444.08	10549.66	26,481,575	26,481,575
Apartments Mid Rise	11,557.70	11,105.82	10184.68	26,091,634	26,091,634
General Office Building	3,440.59	767.35	327.53	6,246,750	6,246,750
Single Family Housing	166,961.76	173,801.58	151177.56	382,664,956	382,664,956
Total	193,413.47	198,118.83	172,239.43	441,484,915	441,484,915

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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.610976	0.032380	0.175368	0.095785	0.010224	0.004582	0.009330	0.049791	0.003299	0.001549	0.005509	0.000616	0.000591
Apartments Low Rise	0.610976	0.032380	0.175368	0.095785	0.010224	0.004582	0.009330	0.049791	0.003299	0.001549	0.005509	0.000616	0.000591
Apartments Mid Rise	0.610976	0.032380	0.175368	0.095785	0.010224	0.004582	0.009330	0.049791	0.003299	0.001549	0.005509	0.000616	0.000591
Single Family Housing	0.610976	0.032380	0.175368	0.095785	0.010224	0.004582	0.009330	0.049791	0.003299	0.001549	0.005509	0.000616	0.000591

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.6265	39.5826	17.1701	0.2524		3.1965	3.1965		3.1965	3.1965		50,470.6441	50,470.6441	0.9674	0.9253	50,770.5659
NaturalGas Unmitigated	4.6265	39.5826	17.1701	0.2524		3.1965	3.1965		3.1965	3.1965		50,470.6441	50,470.6441	0.9674	0.9253	50,770.5659

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	lb/day										lb/day					
Apartments Low Rise	21992.4	0.2372	2.0268	0.8625	0.0129		0.1639	0.1639		0.1639	0.1639		2,587.3428	2,587.3428	0.0496	0.0474	2,602.7181
Apartments Mid Rise	20449.5	0.2205	1.8846	0.8019	0.0120		0.1524	0.1524		0.1524	0.1524		2,405.8234	2,405.8234	0.0461	0.0441	2,420.1200
General Office Building	8033.27	0.0866	0.7876	0.6616	4.7300e-003		0.0599	0.0599		0.0599	0.0599		945.0901	945.0901	0.0181	0.0173	950.7063
Single Family Housing	378525	4.0821	34.8837	14.8441	0.2227		2.8204	2.8204		2.8204	2.8204		44,532.3879	44,532.3879	0.8535	0.8164	44,797.0216
Total		**4.6265**	**39.5826**	**17.1701**	**0.2524**		**3.1965**	**3.1965**		**3.1965**	**3.1965**		**50,470.6441**	**50,470.6441**	**0.9674**	**0.9253**	**50,770.5659**

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	lb/day										lb/day					
Apartments Low Rise	21.9924	0.2372	2.0268	0.8625	0.0129		0.1639	0.1639		0.1639	0.1639		2,587.3428	2,587.3428	0.0496	0.0474	2,602.7181
Apartments Mid Rise	20.4495	0.2205	1.8846	0.8019	0.0120		0.1524	0.1524		0.1524	0.1524		2,405.8234	2,405.8234	0.0461	0.0441	2,420.1200
General Office Building	8.03327	0.0866	0.7876	0.6616	4.7300e-003		0.0599	0.0599		0.0599	0.0599		945.0901	945.0901	0.0181	0.0173	950.7063
Single Family Housing	378.525	4.0821	34.8837	14.8441	0.2227		2.8204	2.8204		2.8204	2.8204		44,532.3879	44,532.3879	0.8535	0.8164	44,797.0216
Total		**4.6265**	**39.5826**	**17.1701**	**0.2524**		**3.1965**	**3.1965**		**3.1965**	**3.1965**		**50,470.6441**	**50,470.6441**	**0.9674**	**0.9253**	**50,770.5659**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1,442.8222	341.7283	6,092.4693	15.5977		724.7948	724.7948		724.7948	724.7948	102,549.4682	325,240.9934	427,790.4616	488.5434	5.9055	441,763.8908
Unmitigated	1,442.8222	341.7283	6,092.4693	15.5977		724.7948	724.7948		724.7948	724.7948	102,549.4682	325,240.9934	427,790.4616	488.5434	5.9055	441,763.8908

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	lb/day										lb/day					
Architectural Coating	136.0648					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	756.6255					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	498.5038	321.8047	4,366.3720	15.5062		715.1805	715.1805		715.1805	715.1805	102,549.4682	322,119.2471	424,668.7153	485.5719	5.9055	438,567.8569
Landscaping	51.6281	19.9236	1,726.0973	0.0916		9.6143	9.6143		9.6143	9.6143		3,121.7463	3,121.7463	2.9715		3,196.0339
Total	**1,442.8222**	**341.7283**	**6,092.4693**	**15.5977**		**724.7948**	**724.7948**		**724.7948**	**724.7948**	**102,549.4682**	**325,240.9934**	**427,790.4616**	**488.5434**	**5.9055**	**441,763.8908**

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	lb/day										lb/day					
Architectural Coating	136.0648					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	756.6255					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	498.5038	321.8047	4,366.3720	15.5062		715.1805	715.1805		715.1805	715.1805	102,549.4682	322,119.2471	424,668.7153	485.5719	5.9055	438,567.8569
Landscaping	51.6281	19.9236	1,726.0973	0.0916		9.6143	9.6143		9.6143	9.6143		3,121.7463	3,121.7463	2.9715		3,196.0339
Total	**1,442.8222**	**341.7283**	**6,092.4693**	**15.5977**		**724.7948**	**724.7948**		**724.7948**	**724.7948**	**102,549.4682**	**325,240.9934**	**427,790.4616**	**488.5434**	**5.9055**	**441,763.8908**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Solano - Net Reduction in Land Uses

Solano-San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	73.45	1000sqft	1.69	73,450.00	0
Regional Shopping Center	640.43	1000sqft	14.70	640,430.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Solano - Net Reduction in Land Uses - Solano-San Francisco County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	3.1610	7.0000e-005	6.7900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0128	0.0128	4.0000e-005	0.0000	0.0137
Energy	0.0180	0.1635	0.1374	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	2,024.1118	2,024.1118	0.1180	0.0245	2,034.3577
Mobile	13.2246	58.7941	131.1642	0.2751	17.7347	0.5154	18.2501	4.7597	0.4890	5.2486	0.0000	25,150.0883	25,150.0883	1.7056	0.0000	25,192.7277
Waste						0.0000	0.0000		0.0000	0.0000	154.9897	0.0000	154.9897	9.1596	0.0000	383.9804
Water						0.0000	0.0000		0.0000	0.0000	20.4386	88.8615	109.3001	2.1048	0.0506	176.9946
Total	**16.4036**	**58.9577**	**131.3084**	**0.2761**	**17.7347**	**0.5279**	**18.2625**	**4.7597**	**0.5014**	**5.2611**	**175.4283**	**27,263.0743**	**27,438.5027**	**13.0880**	**0.0751**	**27,788.0741**

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	3.1610	7.0000e-005	6.7900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0128	0.0128	4.0000e-005	0.0000	0.0137
Energy	0.0180	0.1635	0.1374	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	2,024.1118	2,024.1118	0.1180	0.0245	2,034.3577
Mobile	13.2246	58.7941	131.1642	0.2751	17.7347	0.5154	18.2501	4.7597	0.4890	5.2486	0.0000	25,150.0883	25,150.0883	1.7056	0.0000	25,192.7277
Waste						0.0000	0.0000		0.0000	0.0000	154.9897	0.0000	154.9897	9.1596	0.0000	383.9804
Water						0.0000	0.0000		0.0000	0.0000	20.4386	88.8615	109.3001	2.1048	0.0506	176.9946
Total	**16.4036**	**58.9577**	**131.3084**	**0.2761**	**17.7347**	**0.5279**	**18.2625**	**4.7597**	**0.5014**	**5.2611**	**175.4283**	**27,263.0743**	**27,438.5027**	**13.0880**	**0.0751**	**27,788.0741**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Excavators	3	8.00	158	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	13.2246	58.7941	131.1642	0.2751	17.7347	0.5154	18.2501	4.7597	0.4890	5.2486	0.0000	25,150.0883	25,150.0883	1.7056	0.0000	25,192.7277
Unmitigated	13.2246	58.7941	131.1642	0.2751	17.7347	0.5154	18.2501	4.7597	0.4890	5.2486	0.0000	25,150.0883	25,150.0883	1.7056	0.0000	25,192.7277

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	501.66	182.89	53.62	1,028,066	1,028,066
Regional Shopping Center	27,346.36	32,002.29	16164.45	46,311,930	46,311,930
Total	27,848.02	32,185.18	16,218.07	47,339,997	47,339,997

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.542018	0.045082	0.176705	0.136457	0.028531	0.006368	0.010341	0.038449	0.003099	0.002866	0.007968	0.000581	0.001536
Regional Shopping Center	0.542018	0.045082	0.176705	0.136457	0.028531	0.006368	0.010341	0.038449	0.003099	0.002866	0.007968	0.000581	0.001536

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,846.0839	1,846.0839	0.1146	0.0212	1,855.2719
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,846.0839	1,846.0839	0.1146	0.0212	1,855.2719
NaturalGas Mitigated	0.0180	0.1635	0.1374	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	178.0279	178.0279	3.4100e-003	3.2600e-003	179.0859
NaturalGas Unmitigated	0.0180	0.1635	0.1374	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	178.0279	178.0279	3.4100e-003	3.2600e-003	179.0859

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					
Industrial Park	1.46606e+006	7.9100e-003	0.0719	0.0604	4.3000e-004		5.4600e-003	5.4600e-003		5.4600e-003	5.4600e-003	0.0000	78.2347	78.2347	1.5000e-003	1.4300e-003	78.6996
Regional Shopping Center	1.87006e+006	0.0101	0.0917	0.0770	5.5000e-004		6.9700e-003	6.9700e-003		6.9700e-003	6.9700e-003	0.0000	99.7933	99.7933	1.9100e-003	1.8300e-003	100.3863
Total		**0.0180**	**0.1635**	**0.1374**	**9.8000e-004**		**0.0124**	**0.0124**		**0.0124**	**0.0124**	**0.0000**	**178.0279**	**178.0279**	**3.4100e-003**	**3.2600e-003**	**179.0859**

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					
Industrial Park	1.46606e+006	7.9100e-003	0.0719	0.0604	4.3000e-004		5.4600e-003	5.4600e-003		5.4600e-003	5.4600e-003	0.0000	78.2347	78.2347	1.5000e-003	1.4300e-003	78.6996
Regional Shopping Center	1.87006e+006	0.0101	0.0917	0.0770	5.5000e-004		6.9700e-003	6.9700e-003		6.9700e-003	6.9700e-003	0.0000	99.7933	99.7933	1.9100e-003	1.8300e-003	100.3863
Total		**0.0180**	**0.1635**	**0.1374**	**9.8000e-004**		**0.0124**	**0.0124**		**0.0124**	**0.0124**	**0.0000**	**178.0279**	**178.0279**	**3.4100e-003**	**3.2600e-003**	**179.0859**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	1.51087e+006	298.1131	0.0185	3.4300e-003	299.5968
Regional Shopping Center	7.84527e+006	1,547.9708	0.0961	0.0178	1,555.6750
Total		**1,846.0839**	**0.1146**	**0.0212**	**1,855.2719**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	1.51087e+006	298.1131	0.0185	3.4300e-003	299.5968
Regional Shopping Center	7.84527e+006	1,547.9708	0.0961	0.0178	1,555.6750
Total		**1,846.0839**	**0.1146**	**0.0212**	**1,855.2719**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.1610	7.0000e-005	6.7900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0128	0.0128	4.0000e-005	0.0000	0.0137
Unmitigated	3.1610	7.0000e-005	6.7900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0128	0.0128	4.0000e-005	0.0000	0.0137

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	0.3722					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.7881					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.7000e-004	7.0000e-005	6.7900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0128	0.0128	4.0000e-005	0.0000	0.0137
Total	**3.1610**	**7.0000e-005**	**6.7900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0128**	**0.0128**	**4.0000e-005**	**0.0000**	**0.0137**

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	0.3722					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.7881					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.7000e-004	7.0000e-005	6.7900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0128	0.0128	4.0000e-005	0.0000	0.0137
Total	**3.1610**	**7.0000e-005**	**6.7900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0128**	**0.0128**	**4.0000e-005**	**0.0000**	**0.0137**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	109.3001	2.1048	0.0506	176.9946
Unmitigated	109.3001	2.1048	0.0506	176.9946

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	16.9853 / 0	23.5232	0.5546	0.0133	41.3445
Regional Shopping Center	47.4383 / 29.0751	85.7769	1.5502	0.0373	135.6501
Total		**109.3001**	**2.1048**	**0.0506**	**176.9946**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	16.9853 / 0	23.5232	0.5546	0.0133	41.3445
Regional Shopping Center	47.4383 / 29.0751	85.7769	1.5502	0.0373	135.6501
Total		**109.3001**	**2.1048**	**0.0506**	**176.9946**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	154.9897	9.1596	0.0000	383.9804
Unmitigated	154.9897	9.1596	0.0000	383.9804

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	91.08	18.4884	1.0926	0.0000	45.8043
Regional Shopping Center	672.45	136.5013	8.0670	0.0000	338.1761
Total		**154.9897**	**9.1596**	**0.0000**	**383.9804**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	91.08	18.4884	1.0926	0.0000	45.8043
Regional Shopping Center	672.45	136.5013	8.0670	0.0000	338.1761
Total		**154.9897**	**9.1596**	**0.0000**	**383.9804**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Solano - Net Reduction in Land Uses

Solano-San Francisco County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	73.45	1000sqft	1.69	73,450.00	0
Regional Shopping Center	640.43	1000sqft	14.70	640,430.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	435	**CH4 Intensity (lb/MWhr)**	0.027	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EFs based on 2014 reports. http://www.pgecurrents.com/2016/02/05/pge%E2%80%99s-carbon-emissions-remain-among-nation%E2%80%99s-lowest/

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.027
tblProjectCharacteristics	CO2IntensityFactor	641.35	435
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2015

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5257	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5257**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5257	0.0000	0.0000	2.3580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5257**	**0.0000**	**0.0000**	**2.3580**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	17.3242	7.3000e-004	0.0754	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1562	0.1562	4.5000e-004		0.1675
Energy	0.0986	0.8961	0.7527	5.3800e-003		0.0681	0.0681		0.0681	0.0681		1,075.2998	1,075.2998	0.0206	0.0197	1,081.6898
Mobile	101.6336	378.3475	888.3375	1.9472	122.2021	3.4111	125.6131	32.7052	3.2356	35.9409		196,201.5946	196,201.5946	12.4465		196,512.7576
Total	**119.0564**	**379.2443**	**889.1656**	**1.9526**	**122.2021**	**3.4794**	**125.6815**	**32.7052**	**3.3040**	**36.0092**		**197,277.0506**	**197,277.0506**	**12.4676**	**0.0197**	**197,594.6149**

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	lb/day										lb/day					
Area	17.3242	7.3000e-004	0.0754	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1562	0.1562	4.5000e-004		0.1675
Energy	0.0986	0.8961	0.7527	5.3800e-003		0.0681	0.0681		0.0681	0.0681		1,075.2998	1,075.2998	0.0206	0.0197	1,081.6898
Mobile	101.6336	378.3475	888.3375	1.9472	122.2021	3.4111	125.6131	32.7052	3.2356	35.9409		196,201.5946	196,201.5946	12.4465		196,512.7576
Total	**119.0564**	**379.2443**	**889.1656**	**1.9526**	**122.2021**	**3.4794**	**125.6815**	**32.7052**	**3.3040**	**36.0092**		**197,277.0506**	**197,277.0506**	**12.4676**	**0.0197**	**197,594.6149**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Excavators	3	8.00	158	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	101.6336	378.3475	888.3375	1.9472	122.2021	3.4111	125.6131	32.7052	3.2356	35.9409		196,201.5946	196,201.5946	12.4465		196,512.7576
Unmitigated	101.6336	378.3475	888.3375	1.9472	122.2021	3.4111	125.6131	32.7052	3.2356	35.9409		196,201.5946	196,201.5946	12.4465		196,512.7576

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	501.66	182.89	53.62	1,028,066	1,028,066
Regional Shopping Center	27,346.36	32,002.29	16164.45	46,311,930	46,311,930
Total	27,848.02	32,185.18	16,218.07	47,339,997	47,339,997

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Plan Bay Area 2040 Update - Solano - Net Reduction in Land Uses - Solano-San Francisco County, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.542018	0.045082	0.176705	0.136457	0.028531	0.006368	0.010341	0.038449	0.003099	0.002866	0.007968	0.000581	0.001536
Regional Shopping Center	0.542018	0.045082	0.176705	0.136457	0.028531	0.006368	0.010341	0.038449	0.003099	0.002866	0.007968	0.000581	0.001536

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0986	0.8961	0.7527	5.3800e-003		0.0681	0.0681		0.0681	0.0681		1,075.2998	1,075.2998	0.0206	0.0197	1,081.6898
NaturalGas Unmitigated	0.0986	0.8961	0.7527	5.3800e-003		0.0681	0.0681		0.0681	0.0681		1,075.2998	1,075.2998	0.0206	0.0197	1,081.6898

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	lb/day										lb/day					
Industrial Park	4016.61	0.0433	0.3938	0.3308	2.3600e-003		0.0299	0.0299		0.0299	0.0299		472.5421	472.5421	9.0600e-003	8.6600e-003	475.3502
Regional Shopping Center	5123.44	0.0553	0.5023	0.4219	3.0100e-003		0.0382	0.0382		0.0382	0.0382		602.7577	602.7577	0.0116	0.0111	606.3395
Total		**0.0986**	**0.8961**	**0.7527**	**5.3700e-003**		**0.0681**	**0.0681**		**0.0681**	**0.0681**		**1,075.2998**	**1,075.2998**	**0.0206**	**0.0197**	**1,081.6898**

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	lb/day										lb/day					
Industrial Park	4.01661	0.0433	0.3938	0.3308	2.3600e-003		0.0299	0.0299		0.0299	0.0299		472.5421	472.5421	9.0600e-003	8.6600e-003	475.3502
Regional Shopping Center	5.12344	0.0553	0.5023	0.4219	3.0100e-003		0.0382	0.0382		0.0382	0.0382		602.7577	602.7577	0.0116	0.0111	606.3395
Total		**0.0986**	**0.8961**	**0.7527**	**5.3700e-003**		**0.0681**	**0.0681**		**0.0681**	**0.0681**		**1,075.2998**	**1,075.2998**	**0.0206**	**0.0197**	**1,081.6898**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	17.3242	7.3000e-004	0.0754	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1562	0.1562	4.5000e-004		0.1675
Unmitigated	17.3242	7.3000e-004	0.0754	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1562	0.1562	4.5000e-004		0.1675

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	lb/day										lb/day					
Architectural Coating	2.0397					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	15.2770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.4500e-003	7.3000e-004	0.0754	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1562	0.1562	4.5000e-004		0.1675
Total	**17.3242**	**7.3000e-004**	**0.0754**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**		**0.1562**	**0.1562**	**4.5000e-004**		**0.1675**

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	lb/day										lb/day					
Architectural Coating	2.0397					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	15.2770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.4500e-003	7.3000e-004	0.0754	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1562	0.1562	4.5000e-004		0.1675
Total	**17.3242**	**7.3000e-004**	**0.0754**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**		**0.1562**	**0.1562**	**4.5000e-004**		**0.1675**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Sonoma - New Land Uses

Sonoma-San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	837.80	1000sqft	19.23	837,800.00	0
Apartments Low Rise	6,860.00	Dwelling Unit	428.75	6,860,000.00	19620
Apartments Mid Rise	6,860.00	Dwelling Unit	180.53	6,860,000.00	19620
Single Family Housing	12,407.00	Dwelling Unit	4,028.25	22,332,600.00	35484

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	75
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.94	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Sonoma - New Land Uses - Sonoma-San Francisco County, Annual

Project Characteristics - Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards and ZNE standards assuming a linear growth in new construction between 2015 and 2040.

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306

Plan Bay Area 2040 Update - Sonoma - New Land Uses - Sonoma-San Francisco County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	431.22	62.10
tblEnergyUse	T24E	392.47	56.52
tblEnergyUse	T24E	6.40	3.65
tblEnergyUse	T24E	368.92	53.13
tblEnergyUse	T24NG	10,164.29	1,463.66
tblEnergyUse	T24NG	7,914.07	1,139.63
tblEnergyUse	T24NG	16.39	9.34
tblEnergyUse	T24NG	32,797.58	4,722.85
tblFireplaces	NumberGas	1,029.00	2,195.20
tblFireplaces	NumberGas	1,029.00	2,195.20
tblFireplaces	NumberGas	3,101.75	8,436.76
tblFireplaces	NumberWood	1,166.20	0.00
tblFireplaces	NumberWood	1,166.20	0.00
tblFireplaces	NumberWood	5,335.01	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.94
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2040

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Sonoma - New Land Uses - Sonoma-San Francisco County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	180.1144	4.2468	232.6439	0.1460		7.5341	7.5341		7.5341	7.5341	849.8010	1,918.2376	2,768.0386	4.3050	0.0294	2,884.4123
Energy	0.8992	7.7073	3.4397	0.0491		0.6213	0.6213		0.6213	0.6213	0.0000	32,394.2514	32,394.2514	1.5900	0.3997	32,553.1202
Mobile	23.8151	204.9227	285.6039	1.6546	183.3924	0.7157	184.1081	49.2984	0.6673	49.9657	0.0000	153,890.8211	153,890.8211	4.8202	0.0000	154,011.3250
Waste						0.0000	0.0000		0.0000	0.0000	4,464.5081	0.0000	4,464.5081	263.8449	0.0000	11,060.6299
Water						0.0000	0.0000		0.0000	0.0000	587.2955	1,904.4803	2,491.7758	60.4359	1.4435	4,432.8321
Total	**204.8287**	**216.8768**	**521.6875**	**1.8496**	**183.3924**	**8.8711**	**192.2635**	**49.2984**	**8.8227**	**58.1211**	**5,901.6046**	**190,107.7903**	**196,009.3949**	**334.9960**	**1.8726**	**204,942.3195**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	180.1144	4.2468	232.6439	0.1460		7.5341	7.5341		7.5341	7.5341	849.8010	1,918.2376	2,768.0386	4.3050	0.0294	2,884.4123
Energy	0.8992	7.7073	3.4397	0.0491		0.6213	0.6213		0.6213	0.6213	0.0000	32,394.2514	32,394.2514	1.5900	0.3997	32,553.1202
Mobile	23.8151	204.9227	285.6039	1.6546	183.3924	0.7157	184.1081	49.2984	0.6673	49.9657	0.0000	153,890.8211	153,890.8211	4.8202	0.0000	154,011.3250
Waste						0.0000	0.0000		0.0000	0.0000	4,464.5081	0.0000	4,464.5081	263.8449	0.0000	11,060.6299
Water						0.0000	0.0000		0.0000	0.0000	587.2955	1,904.4803	2,491.7758	60.4359	1.4435	4,432.8321
Total	**204.8287**	**216.8768**	**521.6875**	**1.8496**	**183.3924**	**8.8711**	**192.2635**	**49.2984**	**8.8227**	**58.1211**	**5,901.6046**	**190,107.7903**	**196,009.3949**	**334.9960**	**1.8726**	**204,942.3195**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Excavators	3	8.00	158	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	23.8151	204.9227	285.6039	1.6546	183.3924	0.7157	184.1081	49.2984	0.6673	49.9657	0.0000	153,890.8211	153,890.8211	4.8202	0.0000	154,011.3250
Unmitigated	23.8151	204.9227	285.6039	1.6546	183.3924	0.7157	184.1081	49.2984	0.6673	49.9657	0.0000	153,890.8211	153,890.8211	4.8202	0.0000	154,011.3250

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	45,207.40	49,117.60	41640.20	104,524,512	104,524,512
Apartments Mid Rise	45,619.00	43,835.40	40199.60	102,985,390	102,985,390
General Office Building	9,240.93	2,060.99	879.69	16,777,891	16,777,891
Single Family Housing	118,114.64	122,953.37	106948.34	270,710,692	270,710,692
Total	218,181.97	217,967.36	189,667.83	494,998,484	494,998,484

4.3 Trip Type Information

Plan Bay Area 2040 Update - Sonoma - New Land Uses - Sonoma-San Francisco County, Annual

	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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.633644	0.029850	0.160723	0.084957	0.010113	0.004172	0.033873	0.032642	0.003322	0.001200	0.004059	0.000902	0.000543
Apartments Low Rise	0.633644	0.029850	0.160723	0.084957	0.010113	0.004172	0.033873	0.032642	0.003322	0.001200	0.004059	0.000902	0.000543
Apartments Mid Rise	0.633644	0.029850	0.160723	0.084957	0.010113	0.004172	0.033873	0.032642	0.003322	0.001200	0.004059	0.000902	0.000543
Single Family Housing	0.633644	0.029850	0.160723	0.084957	0.010113	0.004172	0.033873	0.032642	0.003322	0.001200	0.004059	0.000902	0.000543

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	23,495.2507	23,495.2507	1.4195	0.2366	23,601.2372
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	23,495.2507	23,495.2507	1.4195	0.2366	23,601.2372
NaturalGas Mitigated	0.8992	7.7073	3.4397	0.0491		0.6213	0.6213		0.6213	0.6213	0.0000	8,899.0007	8,899.0007	0.1706	0.1632	8,951.8830
NaturalGas Unmitigated	0.8992	7.7073	3.4397	0.0491		0.6213	0.6213		0.6213	0.6213	0.0000	8,899.0007	8,899.0007	0.1706	0.1632	8,951.8830

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					
Apartments Low Rise	3.1684e+007	0.1709	1.4600	0.6213	9.3200e-003		0.1180	0.1180		0.1180	0.1180	0.0000	1,690.7793	1,690.7793	0.0324	0.0310	1,700.8268
Apartments Mid Rise	2.94612e+007	0.1589	1.3575	0.5777	8.6700e-003		0.1098	0.1098		0.1098	0.1098	0.0000	1,572.1598	1,572.1598	0.0301	0.0288	1,581.5024
General Office Building	7.87532e+006	0.0425	0.3861	0.3243	2.3200e-003		0.0293	0.0293		0.0293	0.0293	0.0000	420.2571	420.2571	8.0500e-003	7.7000e-003	422.7544
Single Family Housing	9.77405e+007	0.5270	4.5037	1.9165	0.0288		0.3641	0.3641		0.3641	0.3641	0.0000	5,215.8045	5,215.8045	0.1000	0.0956	5,246.7994
Total		**0.8992**	**7.7073**	**3.4397**	**0.0491**		**0.6213**	**0.6213**		**0.6213**	**0.6213**	**0.0000**	**8,899.0007**	**8,899.0007**	**0.1706**	**0.1631**	**8,951.8830**

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					
Apartments Low Rise	3.1684e+007	0.1709	1.4600	0.6213	9.3200e-003		0.1180	0.1180		0.1180	0.1180	0.0000	1,690.7793	1,690.7793	0.0324	0.0310	1,700.8268
Apartments Mid Rise	2.94612e+007	0.1589	1.3575	0.5777	8.6700e-003		0.1098	0.1098		0.1098	0.1098	0.0000	1,572.1598	1,572.1598	0.0301	0.0288	1,581.5024
General Office Building	7.87532e+006	0.0425	0.3861	0.3243	2.3200e-003		0.0293	0.0293		0.0293	0.0293	0.0000	420.2571	420.2571	8.0500e-003	7.7000e-003	422.7544
Single Family Housing	9.77405e+007	0.5270	4.5037	1.9165	0.0288		0.3641	0.3641		0.3641	0.3641	0.0000	5,215.8045	5,215.8045	0.1000	0.0956	5,246.7994
Total		**0.8992**	**7.7073**	**3.4397**	**0.0491**		**0.6213**	**0.6213**		**0.6213**	**0.6213**	**0.0000**	**8,899.0007**	**8,899.0007**	**0.1706**	**0.1631**	**8,951.8830**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	2.9435e+007	3,977.9468	0.2403	0.0401	3,995.8912
Apartments Mid Rise	2.79546e+007	3,777.8822	0.2282	0.0380	3,794.9242
General Office Building	1.29608e+007	1,751.5608	0.1058	0.0176	1,759.4621
Single Family Housing	1.03504e+008	13,987.8609	0.8451	0.1409	14,050.9598
Total		**23,495.2507**	**1.4195**	**0.2366**	**23,601.2372**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	2.9435e+007	3,977.9468	0.2403	0.0401	3,995.8912
Apartments Mid Rise	2.79546e+007	3,777.8822	0.2282	0.0380	3,794.9242
General Office Building	1.29608e+007	1,751.5608	0.1058	0.0176	1,759.4621
Single Family Housing	1.03504e+008	13,987.8609	0.8451	0.1409	14,050.9598
Total		**23,495.2507**	**1.4195**	**0.2366**	**23,601.2372**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	180.1144	4.2468	232.6439	0.1460		7.5341	7.5341		7.5341	7.5341	849.8010	1,918.2376	2,768.0386	4.3050	0.0294	2,884.4123
Unmitigated	180.1144	4.2468	232.6439	0.1460		7.5341	7.5341		7.5341	7.5341	849.8010	1,918.2376	2,768.0386	4.3050	0.0294	2,884.4123

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	25.8158					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	144.0755					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.4457	2.0174	39.4925	0.1358		6.4583	6.4583		6.4583	6.4583	849.8010	1,601.3336	2,451.1346	4.0033	0.0294	2,559.9667
Landscaping	5.7775	2.2295	193.1514	0.0102		1.0758	1.0758		1.0758	1.0758	0.0000	316.9040	316.9040	0.3017	0.0000	324.4456
Total	**180.1144**	**4.2468**	**232.6439**	**0.1460**		**7.5342**	**7.5342**		**7.5342**	**7.5342**	**849.8010**	**1,918.2376**	**2,768.0386**	**4.3050**	**0.0294**	**2,884.4123**

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	25.8158					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	144.0755					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.4457	2.0174	39.4925	0.1358		6.4583	6.4583		6.4583	6.4583	849.8010	1,601.3336	2,451.1346	4.0033	0.0294	2,559.9667
Landscaping	5.7775	2.2295	193.1514	0.0102		1.0758	1.0758		1.0758	1.0758	0.0000	316.9040	316.9040	0.3017	0.0000	324.4456
Total	**180.1144**	**4.2468**	**232.6439**	**0.1460**		**7.5342**	**7.5342**		**7.5342**	**7.5342**	**849.8010**	**1,918.2376**	**2,768.0386**	**4.3050**	**0.0294**	**2,884.4123**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2,491.7758	60.4359	1.4435	4,432.8321
Unmitigated	2,491.7758	60.4359	1.4435	4,432.8321

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	446.957 / 281.777	601.9214	14.5919	0.3485	1,070.5783
Apartments Mid Rise	446.957 / 281.777	601.9214	14.5919	0.3485	1,070.5783
General Office Building	148.905 / 91.2646	199.2977	4.8613	0.1161	355.4270
Single Family Housing	808.366 / 509.622	1,088.6354	26.3909	0.6303	1,936.2485
Total		**2,491.7758**	**60.4359**	**1.4435**	**4,432.8321**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	446.957 / 281.777	601.9214	14.5919	0.3485	1,070.5783
Apartments Mid Rise	446.957 / 281.777	601.9214	14.5919	0.3485	1,070.5783
General Office Building	148.905 / 91.2646	199.2977	4.8613	0.1161	355.4270
Single Family Housing	808.366 / 509.622	1,088.6354	26.3909	0.6303	1,936.2485
Total		**2,491.7758**	**60.4359**	**1.4435**	**4,432.8321**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4,464.5081	263.8449	0.0000	11,060.6299
Unmitigated	4,464.5081	263.8449	0.0000	11,060.6299

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	3155.6	640.5583	37.8559	0.0000	1,586.9560
Apartments Mid Rise	3155.6	640.5583	37.8559	0.0000	1,586.9560
General Office Building	779.15	158.1604	9.3470	0.0000	391.8357
Single Family Housing	14903.3	3,025.2312	178.7860	0.0000	7,494.8821
Total		**4,464.5081**	**263.8449**	**0.0000**	**11,060.6299**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	3155.6	640.5583	37.8559	0.0000	1,586.9560
Apartments Mid Rise	3155.6	640.5583	37.8559	0.0000	1,586.9560
General Office Building	779.15	158.1604	9.3470	0.0000	391.8357
Single Family Housing	14903.3	3,025.2312	178.7860	0.0000	7,494.8821
Total		**4,464.5081**	**263.8449**	**0.0000**	**11,060.6299**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Sonoma - New Land Uses

Sonoma-San Francisco County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	837.80	1000sqft	19.23	837,800.00	0
Apartments Low Rise	6,860.00	Dwelling Unit	428.75	6,860,000.00	19620
Apartments Mid Rise	6,860.00	Dwelling Unit	180.53	6,860,000.00	19620
Single Family Housing	12,407.00	Dwelling Unit	4,028.25	22,332,600.00	35484

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	75
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	297.94	**CH4 Intensity (lb/MWhr)**	0.018	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Sonoma - New Land Uses - Sonoma-San Francisco County, Summer

Project Characteristics - Pacific Gas & Electric emission factor based on a 50% renewable mix per SB350. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - New land uses added between 2015 and 2040.

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips - **

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - CalEEMod default uses a 2013 Title 24 standard. Energy efficiencies here adjusted to reflect 2016 standards and ZNE standards assuming a linear growth in new construction between 2015 and 2040.

Woodstoves - All new fireplaces assumed to be natural gas per BAAQMD Regulation 6 Rule 3 Section 6-3-306

Plan Bay Area 2040 Update - Sonoma - New Land Uses - Sonoma-San Francisco County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	0.00
tblEnergyUse	T24E	431.22	62.10
tblEnergyUse	T24E	392.47	56.52
tblEnergyUse	T24E	6.40	3.65
tblEnergyUse	T24E	368.92	53.13
tblEnergyUse	T24NG	10,164.29	1,463.66
tblEnergyUse	T24NG	7,914.07	1,139.63
tblEnergyUse	T24NG	16.39	9.34
tblEnergyUse	T24NG	32,797.58	4,722.85
tblFireplaces	NumberGas	1,029.00	2,195.20
tblFireplaces	NumberGas	1,029.00	2,195.20
tblFireplaces	NumberGas	3,101.75	8,436.76
tblFireplaces	NumberWood	1,166.20	0.00
tblFireplaces	NumberWood	1,166.20	0.00
tblFireplaces	NumberWood	5,335.01	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.018
tblProjectCharacteristics	CO2IntensityFactor	641.35	297.94
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblProjectCharacteristics	OperationalYear	2018	2040

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5260	0.0000	0.0000	2.3583	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5260**	**0.0000**	**0.0000**	**2.3583**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5260	0.0000	0.0000	2.3583	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5260**	**0.0000**	**0.0000**	**2.3583**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	1,481.3330	340.7451	6,403.6196	15.2444		709.3259	709.3259		709.3259	709.3259	99,969.6875	320,787.7152	420,757.4027	477.1068	5.8100	434,416.4369
Energy	4.9271	42.2315	18.8476	0.2688		3.4042	3.4042		3.4042	3.4042		53,750.5155	53,750.5155	1.0302	0.9854	54,069.9279
Mobile	157.1267	1,178.4635	1,726.7304	10.0607	1,117.4078	4.1688	1,121.5765	299.2306	3.8868	303.1175		1,030,786.1812	1,030,786.1812	30.6265		1,031,551.8443
Total	**1,643.3869**	**1,561.4400**	**8,149.1976**	**25.5738**	**1,117.4078**	**716.8989**	**1,834.3066**	**299.2306**	**716.6169**	**1,015.8475**	**99,969.6875**	**1,405,324.4118**	**1,505,294.0994**	**508.7635**	**6.7954**	**1,520,038.2091**

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	lb/day										lb/day					
Area	1,481.3330	340.7451	6,403.6196	15.2444		709.3259	709.3259		709.3259	709.3259	99,969.6875	320,787.7152	420,757.4027	477.1068	5.8100	434,416.4369
Energy	4.9271	42.2315	18.8476	0.2688		3.4042	3.4042		3.4042	3.4042		53,750.5155	53,750.5155	1.0302	0.9854	54,069.9279
Mobile	157.1267	1,178.4635	1,726.7304	10.0607	1,117.4078	4.1688	1,121.5765	299.2306	3.8868	303.1175		1,030,786.1812	1,030,786.1812	30.6265		1,031,551.8443
Total	**1,643.3869**	**1,561.4400**	**8,149.1976**	**25.5738**	**1,117.4078**	**716.8989**	**1,834.3066**	**299.2306**	**716.6169**	**1,015.8475**	**99,969.6875**	**1,405,324.4118**	**1,505,294.0994**	**508.7635**	**6.7954**	**1,520,038.2091**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Excavators	3	8.00	158	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	157.1267	1,178.4635	1,726.7304	10.0607	1,117.4078	4.1688	1,121.5765	299.2306	3.8868	303.1175		1,030,786.1812	1,030,786.1812	30.6265		1,031,551.8443
Unmitigated	157.1267	1,178.4635	1,726.7304	10.0607	1,117.4078	4.1688	1,121.5765	299.2306	3.8868	303.1175		1,030,786.1812	1,030,786.1812	30.6265		1,031,551.8443

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	45,207.40	49,117.60	41640.20	104,524,512	104,524,512
Apartments Mid Rise	45,619.00	43,835.40	40199.60	102,985,390	102,985,390
General Office Building	9,240.93	2,060.99	879.69	16,777,891	16,777,891
Single Family Housing	118,114.64	122,953.37	106948.34	270,710,692	270,710,692
Total	218,181.97	217,967.36	189,667.83	494,998,484	494,998,484

4.3 Trip Type Information

Plan Bay Area 2040 Update - Sonoma - New Land Uses - Sonoma-San Francisco County, Summer

	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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.633644	0.029850	0.160723	0.084957	0.010113	0.004172	0.033873	0.032642	0.003322	0.001200	0.004059	0.000902	0.000543
Apartments Low Rise	0.633644	0.029850	0.160723	0.084957	0.010113	0.004172	0.033873	0.032642	0.003322	0.001200	0.004059	0.000902	0.000543
Apartments Mid Rise	0.633644	0.029850	0.160723	0.084957	0.010113	0.004172	0.033873	0.032642	0.003322	0.001200	0.004059	0.000902	0.000543
Single Family Housing	0.633644	0.029850	0.160723	0.084957	0.010113	0.004172	0.033873	0.032642	0.003322	0.001200	0.004059	0.000902	0.000543

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.9271	42.2315	18.8476	0.2688		3.4042	3.4042		3.4042	3.4042		53,750.5155	53,750.5155	1.0302	0.9854	54,069.9279
NaturalGas Unmitigated	4.9271	42.2315	18.8476	0.2688		3.4042	3.4042		3.4042	3.4042		53,750.5155	53,750.5155	1.0302	0.9854	54,069.9279

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	lb/day										lb/day					
Apartments Low Rise	86805.5	0.9361	7.9997	3.4041	0.0511		0.6468	0.6468		0.6468	0.6468		10,212.4118	10,212.4118	0.1957	0.1872	10,273.0991
Apartments Mid Rise	80715.5	0.8705	7.4385	3.1653	0.0475		0.6014	0.6014		0.6014	0.6014		9,495.9426	9,495.9426	0.1820	0.1741	9,552.3722
General Office Building	21576.2	0.2327	2.1153	1.7769	0.0127		0.1608	0.1608		0.1608	0.1608		2,538.3787	2,538.3787	0.0487	0.0465	2,553.4630
Single Family Housing	267782	2.8879	24.6780	10.5013	0.1575		1.9952	1.9952		1.9952	1.9952		31,503.7824	31,503.7824	0.6038	0.5776	31,690.9936
Total		**4.9271**	**42.2315**	**18.8476**	**0.2688**		**3.4042**	**3.4042**		**3.4042**	**3.4042**		**53,750.5155**	**53,750.5155**	**1.0302**	**0.9854**	**54,069.9279**

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	lb/day										lb/day					
Apartments Low Rise	86.8055	0.9361	7.9997	3.4041	0.0511		0.6468	0.6468		0.6468	0.6468		10,212.4118	10,212.4118	0.1957	0.1872	10,273.0991
Apartments Mid Rise	80.7155	0.8705	7.4385	3.1653	0.0475		0.6014	0.6014		0.6014	0.6014		9,495.9426	9,495.9426	0.1820	0.1741	9,552.3722
General Office Building	21.5762	0.2327	2.1153	1.7769	0.0127		0.1608	0.1608		0.1608	0.1608		2,538.3787	2,538.3787	0.0487	0.0465	2,553.4630
Single Family Housing	267.782	2.8879	24.6780	10.5013	0.1575		1.9952	1.9952		1.9952	1.9952		31,503.7824	31,503.7824	0.6038	0.5776	31,690.9936
Total		**4.9271**	**42.2315**	**18.8476**	**0.2688**		**3.4042**	**3.4042**		**3.4042**	**3.4042**		**53,750.5155**	**53,750.5155**	**1.0302**	**0.9854**	**54,069.9279**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1,481.3330	340.7451	6,403.6196	15.2444		709.3259	709.3259		709.3259	709.3259	99,969.6875	320,787.7152	420,757.4027	477.1068	5.8100	434,416.4369
Unmitigated	1,481.3330	340.7451	6,403.6196	15.2444		709.3259	709.3259		709.3259	709.3259	99,969.6875	320,787.7152	420,757.4027	477.1068	5.8100	434,416.4369

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	lb/day										lb/day					
Architectural Coating	141.4562					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	789.4546					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	486.2282	315.9734	4,257.4931	15.1306		697.3721	697.3721		697.3721	697.3721	99,969.6875	316,906.3059	416,875.9934	473.4120	5.8100	430,442.6584
Landscaping	64.1941	24.7717	2,146.1266	0.1138		11.9538	11.9538		11.9538	11.9538		3,881.4093	3,881.4093	3.6948		3,973.7785
Total	**1,481.3330**	**340.7451**	**6,403.6196**	**15.2444**		**709.3259**	**709.3259**		**709.3259**	**709.3259**	**99,969.6875**	**320,787.7152**	**420,757.4027**	**477.1068**	**5.8100**	**434,416.4369**

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	lb/day										lb/day					
Architectural Coating	141.4562					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	789.4546					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	486.2282	315.9734	4,257.4931	15.1306		697.3721	697.3721		697.3721	697.3721	99,969.6875	316,906.3059	416,875.9934	473.4120	5.8100	430,442.6584
Landscaping	64.1941	24.7717	2,146.1266	0.1138		11.9538	11.9538		11.9538	11.9538		3,881.4093	3,881.4093	3.6948		3,973.7785
Total	**1,481.3330**	**340.7451**	**6,403.6196**	**15.2444**		**709.3259**	**709.3259**		**709.3259**	**709.3259**	**99,969.6875**	**320,787.7152**	**420,757.4027**	**477.1068**	**5.8100**	**434,416.4369**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Sonoma - Net Reduction in Land Uses

Sonoma-San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	2,260.80	1000sqft	51.90	2,260,800.00	0
Regional Shopping Center	932.72	1000sqft	21.41	932,720.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	75
Climate Zone	4			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	381.37	**CH4 Intensity (lb/MWhr)**	0.023	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Plan Bay Area 2040 Update - Sonoma - Net Reduction in Land Uses - Sonoma-San Francisco County, Annual

Project Characteristics - Sonoma Clean Energy emission factor based on a 36% renewable mix in 2015. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Woodstoves -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	70.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.023
tblProjectCharacteristics	CO2IntensityFactor	641.35	381.37
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblProjectCharacteristics	OperationalYear	2018	2015

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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	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					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Plan Bay Area 2040 Update - Sonoma - Net Reduction in Land Uses - Sonoma-San Francisco County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		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	14.1405	2.9000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0571	0.0571	1.7000e-004	0.0000	0.0612
Energy	0.2580	2.3455	1.9703	0.0141		0.1783	0.1783		0.1783	0.1783	0.0000	12,574.6023	12,574.6023	0.6533	0.1519	12,636.2071
Mobile	30.8934	119.5671	331.6258	0.5482	36.8447	1.4532	38.2979	9.9291	1.3802	11.3092	0.0000	49,939.4529	49,939.4529	3.4702	0.0000	50,026.2089
Waste						0.0000	0.0000		0.0000	0.0000	767.8641	0.0000	767.8641	45.3795	0.0000	1,902.3507
Water						0.0000	0.0000		0.0000	0.0000	187.7822	579.6730	767.4552	19.3220	0.4615	1,388.0287
Total	**45.2919**	**121.9129**	**333.6264**	**0.5623**	**36.8447**	**1.6315**	**38.4763**	**9.9291**	**1.5585**	**11.4876**	**955.6463**	**63,093.7852**	**64,049.4315**	**68.8252**	**0.6134**	**65,952.8566**

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	14.1405	2.9000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0571	0.0571	1.7000e-004	0.0000	0.0612
Energy	0.2580	2.3455	1.9703	0.0141		0.1783	0.1783		0.1783	0.1783	0.0000	12,574.6023	12,574.6023	0.6533	0.1519	12,636.2071
Mobile	30.8934	119.5671	331.6258	0.5482	36.8447	1.4532	38.2979	9.9291	1.3802	11.3092	0.0000	49,939.4529	49,939.4529	3.4702	0.0000	50,026.2089
Waste						0.0000	0.0000		0.0000	0.0000	767.8641	0.0000	767.8641	45.3795	0.0000	1,902.3507
Water						0.0000	0.0000		0.0000	0.0000	187.7822	579.6730	767.4552	19.3220	0.4615	1,388.0287
Total	**45.2919**	**121.9129**	**333.6264**	**0.5623**	**36.8447**	**1.6315**	**38.4763**	**9.9291**	**1.5585**	**11.4876**	**955.6463**	**63,093.7852**	**64,049.4315**	**68.8252**	**0.6134**	**65,952.8566**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	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**

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	30.8934	119.5671	331.6258	0.5482	36.8447	1.4532	38.2979	9.9291	1.3802	11.3092	0.0000	49,939.4529	49,939.4529	3.4702	0.0000	50,026.2089
Unmitigated	30.8934	119.5671	331.6258	0.5482	36.8447	1.4532	38.2979	9.9291	1.3802	11.3092	0.0000	49,939.4529	49,939.4529	3.4702	0.0000	50,026.2089

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	15,441.26	5,629.39	1650.38	31,644,005	31,644,005
Regional Shopping Center	39,827.14	46,608.02	23541.85	67,448,532	67,448,532
Total	55,268.41	52,237.41	25,192.24	99,092,538	99,092,538

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.505833	0.055817	0.184442	0.136229	0.044752	0.009181	0.026533	0.022772	0.002845	0.002337	0.006781	0.000823	0.001655
Regional Shopping Center	0.505833	0.055817	0.184442	0.136229	0.044752	0.009181	0.026533	0.022772	0.002845	0.002337	0.006781	0.000823	0.001655

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	10,021.1916	10,021.1916	0.6044	0.1051	10,067.6227
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	10,021.1916	10,021.1916	0.6044	0.1051	10,067.6227
NaturalGas Mitigated	0.2580	2.3455	1.9703	0.0141		0.1783	0.1783		0.1783	0.1783	0.0000	2,553.4108	2,553.4108	0.0489	0.0468	2,568.5844
NaturalGas Unmitigated	0.2580	2.3455	1.9703	0.0141		0.1783	0.1783		0.1783	0.1783	0.0000	2,553.4108	2,553.4108	0.0489	0.0468	2,568.5844

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					
Industrial Park	4.51256e+007	0.2433	2.2120	1.8581	0.0133		0.1681	0.1681		0.1681	0.1681	0.0000	2,408.0722	2,408.0722	0.0462	0.0442	2,422.3821
Regional Shopping Center	2.72354e+006	0.0147	0.1335	0.1122	8.0000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	145.3386	145.3386	2.7900e-003	2.6600e-003	146.2023
Total		**0.2580**	**2.3456**	**1.9703**	**0.0141**		**0.1783**	**0.1783**		**0.1783**	**0.1783**	**0.0000**	**2,553.4108**	**2,553.4108**	**0.0489**	**0.0468**	**2,568.5844**

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					
Industrial Park	4.51256e+007	0.2433	2.2120	1.8581	0.0133		0.1681	0.1681		0.1681	0.1681	0.0000	2,408.0722	2,408.0722	0.0462	0.0442	2,422.3821
Regional Shopping Center	2.72354e+006	0.0147	0.1335	0.1122	8.0000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	145.3386	145.3386	2.7900e-003	2.6600e-003	146.2023
Total		**0.2580**	**2.3456**	**1.9703**	**0.0141**		**0.1783**	**0.1783**		**0.1783**	**0.1783**	**0.0000**	**2,553.4108**	**2,553.4108**	**0.0489**	**0.0468**	**2,568.5844**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	4.65047e+007	8,044.6787	0.4852	0.0844	8,081.9521
Regional Shopping Center	1.14258e+007	1,976.5129	0.1192	0.0207	1,985.6706
Total		**10,021.1916**	**0.6044**	**0.1051**	**10,067.6227**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	4.65047e+007	8,044.6787	0.4852	0.0844	8,081.9521
Regional Shopping Center	1.14258e+007	1,976.5129	0.1192	0.0207	1,985.6706
Total		**10,021.1916**	**0.6044**	**0.1051**	**10,067.6227**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	14.1405	2.9000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0571	0.0571	1.7000e-004	0.0000	0.0612
Unmitigated	14.1405	2.9000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0571	0.0571	1.7000e-004	0.0000	0.0612

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	1.6652					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	12.4723					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-003	2.9000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0571	0.0571	1.7000e-004	0.0000	0.0612
Total	**14.1405**	**2.9000e-004**	**0.0304**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**0.0571**	**0.0571**	**1.7000e-004**	**0.0000**	**0.0612**

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	1.6652					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	12.4723					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-003	2.9000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0571	0.0571	1.7000e-004	0.0000	0.0612
Total	**14.1405**	**2.9000e-004**	**0.0304**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**0.0571**	**0.0571**	**1.7000e-004**	**0.0000**	**0.0612**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	767.4552	19.3220	0.4615	1,388.0287
Unmitigated	767.4552	19.3220	0.4615	1,388.0287

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	522.81 / 0	655.2294	17.0653	0.4074	1,203.2620
Regional Shopping Center	69.0889 / 42.3448	112.2258	2.2567	0.0541	184.7667
Total		**767.4552**	**19.3220**	**0.4615**	**1,388.0287**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	522.81 / 0	655.2294	17.0653	0.4074	1,203.2620
Regional Shopping Center	69.0889 / 42.3448	112.2258	2.2567	0.0541	184.7667
Total		**767.4552**	**19.3220**	**0.4615**	**1,388.0287**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	767.8641	45.3795	0.0000	1,902.3507
Unmitigated	767.8641	45.3795	0.0000	1,902.3507

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	2803.39	569.0628	33.6307	0.0000	1,409.8291
Regional Shopping Center	979.36	198.8012	11.7488	0.0000	492.5216
Total		**767.8641**	**45.3795**	**0.0000**	**1,902.3507**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	2803.39	569.0628	33.6307	0.0000	1,409.8291
Regional Shopping Center	979.36	198.8012	11.7488	0.0000	492.5216
Total		**767.8641**	**45.3795**	**0.0000**	**1,902.3507**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Plan Bay Area 2040 Update - Sonoma - Net Reduction in Land Uses

Sonoma-San Francisco County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	2,260.80	1000sqft	51.90	2,260,800.00	0
Regional Shopping Center	932.72	1000sqft	21.41	932,720.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	75
Climate Zone	4			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	381.37	**CH4 Intensity (lb/MWhr)**	0.023	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Sonoma Clean Energy emission factor based on a 36% renewable mix in 2015. Non-renewable emission factor calculated from PGE 2014 emission factors and reported renewable mix.

Land Use - Land uses reduced between 2015 and 2040

Construction Phase - Construction not modeled. Modeling operational emissions only.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use - Using Historical Data for reduced land uses

Woodstoves -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	70.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.023
tblProjectCharacteristics	CO2IntensityFactor	641.35	381.37
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblProjectCharacteristics	OperationalYear	2018	2015

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5260	0.0000	0.0000	2.3583	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5260**	**0.0000**	**0.0000**	**2.3583**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	lb/day										lb/day					
2014	0.0000	0.0000	0.0000	0.0000	0.0000	2.5260	0.0000	0.0000	2.3583	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5260**	**0.0000**	**0.0000**	**2.3583**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

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	lb/day										lb/day					
Area	77.4992	3.2600e-003	0.3373	2.0000e-005		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003		0.6989	0.6989	2.0200e-003		0.7495
Energy	1.4138	12.8523	10.7959	0.0771		0.9768	0.9768		0.9768	0.9768		15,422.7592	15,422.7592	0.2956	0.2828	15,514.4089
Mobile	228.6363	775.4360	2,238.7644	3.8908	261.0569	9.8009	270.8578	70.0769	9.3082	79.3851		390,735.5564	390,735.5564	25.7837		391,380.1493
Total	**307.5492**	**788.2916**	**2,249.8976**	**3.9679**	**261.0569**	**10.7789**	**271.8358**	**70.0769**	**10.2862**	**80.3630**		**406,159.0145**	**406,159.0145**	**26.0813**	**0.2828**	**406,895.3077**

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	lb/day										lb/day					
Area	77.4992	3.2600e-003	0.3373	2.0000e-005		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003		0.6989	0.6989	2.0200e-003		0.7495
Energy	1.4138	12.8523	10.7959	0.0771		0.9768	0.9768		0.9768	0.9768		15,422.7592	15,422.7592	0.2956	0.2828	15,514.4089
Mobile	228.6363	775.4360	2,238.7644	3.8908	261.0569	9.8009	270.8578	70.0769	9.3082	79.3851		390,735.5564	390,735.5564	25.7837		391,380.1493
Total	**307.5492**	**788.2916**	**2,249.8976**	**3.9679**	**261.0569**	**10.7789**	**271.8358**	**70.0769**	**10.2862**	**80.3630**		**406,159.0145**	**406,159.0145**	**26.0813**	**0.2828**	**406,895.3077**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2014	6/30/2014	5	0	

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	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
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

3.2 Demolition - 2014

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	lb/day										lb/day					
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	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	lb/day										lb/day					
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	0.0000	0.0000	0.0000	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**

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	lb/day										lb/day					
Mitigated	228.6363	775.4360	2,238.7644	3.8908	261.0569	9.8009	270.8578	70.0769	9.3082	79.3851		390,735.5564	390,735.5564	25.7837		391,380.1493
Unmitigated	228.6363	775.4360	2,238.7644	3.8908	261.0569	9.8009	270.8578	70.0769	9.3082	79.3851		390,735.5564	390,735.5564	25.7837		391,380.1493

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	15,441.26	5,629.39	1650.38	31,644,005	31,644,005
Regional Shopping Center	39,827.14	46,608.02	23541.85	67,448,532	67,448,532
Total	55,268.41	52,237.41	25,192.24	99,092,538	99,092,538

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.505833	0.055817	0.184442	0.136229	0.044752	0.009181	0.026533	0.022772	0.002845	0.002337	0.006781	0.000823	0.001655
Regional Shopping Center	0.505833	0.055817	0.184442	0.136229	0.044752	0.009181	0.026533	0.022772	0.002845	0.002337	0.006781	0.000823	0.001655

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.4138	12.8523	10.7959	0.0771		0.9768	0.9768		0.9768	0.9768		15,422.7592	15,422.7592	0.2956	0.2828	15,514.4089
NaturalGas Unmitigated	1.4138	12.8523	10.7959	0.0771		0.9768	0.9768		0.9768	0.9768		15,422.7592	15,422.7592	0.2956	0.2828	15,514.4089

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	lb/day										lb/day					
Industrial Park	123632	1.3333	12.1208	10.1814	0.0727		0.9212	0.9212		0.9212	0.9212		14,544.9051	14,544.9051	0.2788	0.2667	14,631.3382
Regional Shopping Center	7461.76	0.0805	0.7316	0.6145	4.3900e-003		0.0556	0.0556		0.0556	0.0556		877.8541	877.8541	0.0168	0.0161	883.0708
Total		**1.4138**	**12.8523**	**10.7959**	**0.0771**		**0.9768**	**0.9768**		**0.9768**	**0.9768**		**15,422.7592**	**15,422.7592**	**0.2956**	**0.2828**	**15,514.4089**

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	lb/day										lb/day					
Industrial Park	123.632	1.3333	12.1208	10.1814	0.0727		0.9212	0.9212		0.9212	0.9212		14,544.9051	14,544.9051	0.2788	0.2667	14,631.3382
Regional Shopping Center	7.46176	0.0805	0.7316	0.6145	4.3900e-003		0.0556	0.0556		0.0556	0.0556		877.8541	877.8541	0.0168	0.0161	883.0708
Total		**1.4138**	**12.8523**	**10.7959**	**0.0771**		**0.9768**	**0.9768**		**0.9768**	**0.9768**		**15,422.7592**	**15,422.7592**	**0.2956**	**0.2828**	**15,514.4089**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	77.4992	3.2600e-003	0.3373	2.0000e-005		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003		0.6989	0.6989	2.0200e-003		0.7495
Unmitigated	77.4992	3.2600e-003	0.3373	2.0000e-005		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003		0.6989	0.6989	2.0200e-003		0.7495

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	lb/day										lb/day					
Architectural Coating	9.1245					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	68.3413					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0333	3.2600e-003	0.3373	2.0000e-005		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003		0.6989	0.6989	2.0200e-003		0.7495
Total	**77.4992**	**3.2600e-003**	**0.3373**	**2.0000e-005**		**1.2200e-003**	**1.2200e-003**		**1.2200e-003**	**1.2200e-003**		**0.6989**	**0.6989**	**2.0200e-003**		**0.7495**

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	lb/day										lb/day					
Architectural Coating	9.1245					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	68.3413					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0333	3.2600e-003	0.3373	2.0000e-005		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003		0.6989	0.6989	2.0200e-003		0.7495
Total	**77.4992**	**3.2600e-003**	**0.3373**	**2.0000e-005**		**1.2200e-003**	**1.2200e-003**		**1.2200e-003**	**1.2200e-003**		**0.6989**	**0.6989**	**2.0200e-003**		**0.7495**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix E

Transportation Projects Located within Midcentury Sea Level Rise Inundation Zone, by County

Table 2.5-13 Proposed Transportation Projects within Midcentury Sea Level Rise Inundation Zone, by County

RTP ID	Project Name	Inundated Acres	Total Project Acres	% Inundated
Alameda County				
17-01-0009	New Alameda Point Ferry Terminal	<1	4	1%
17-01-0015	7th Street Grade Separation East	<1	2	3%
17-01-0016	Oakland Army Base Transportation Infrastructure Improvements	20	700	3%
17-01-0017	Outer Harbor Intermodal Terminal (OHIT) Phases 2 and 3	<1%	180	<1%
17-01-0023	I-880 Industrial Parkway Interchange Reconstruction	1	20	8%
17-01-0025	Oakland International Airport Perimeter Dike	20	90	20%
17-01-0037	Ashby I-80 Interchange with Bicycle and Pedestrian Ramps	<1	20	<1%
17-01-0054	Union City Boulevard Widening (Whipple to City Limit)	<1	6	6%
17-01-0056	Thornton Avenue Widening (Gateway Boulevard to Hickory Street)	6	20	40%
17-01-0060	East Bay BRT	<1	170	<1%
17-10-0042	Albany/Berkeley Ferry Terminal	<1	160	<1%
Contra Costa County				
17-02-0040	Martinez Intermodal Project: Phase 3	<1	4	9%
17-02-0041	Privately Run Ferry Service including Small-Scale (non-WETA complying) Landside Improvements from Antioch, Martinez, and Hercules to San Francisco	<1	1,300	<1%
Marin County				
17-03-0006	Implement Marin Sonoma Narrows HOV Lane and corridor improvements Phase 2	3	130	2%
17-03-0009	Access Improvements to Richmond San Rafael Bridge	8	50	16%
17-03-0015	SMART Downtown San Rafael to Larkspur Rail Extension	20	50	50%
Napa County				
17-04-0008	State Route 29 Improvements	1	80	1%
San Francisco County				
17-05-0018	Downtown San Francisco Ferry Terminal Expansion - Phase II	<1	4	3%
17-05-0019	Establish new ferry terminal at Mission Bay 16th Street	<1	4	6%
17-05-0027	Hunters Point Shipyard and Candlestick Point Local Roads Phase 1	40	820	5%
17-05-0031	Southeast Waterfront Transportation Improvements - Phase 1	6	2,500	<1%
17-05-0032	Geneva-Harney Bus Rapid Transit	7	130	5%
17-05-0042	Historic Streetcar Extension - Fort Mason to 4th & King	<1	20	<1%
17-10-0038	Caltrain/HSR Downtown San Francisco Extension	<1	40	2%
San Mateo County				
17-06-0008	Add northbound and southbound modified auxiliary lanes and/ or implementation of HOT lanes on US 101 from Oyster Point to San Francisco County line	1	130	<1%
17-06-0009	Improve operations at US 101 near Route 92 - Phased	<1	4	20%
17-06-0010	Improve US 101/Woodside Road Interchange	2	20	9%
17-06-0011	US 101 Produce Avenue Interchange	7	20	40%
17-06-0012	US 101 Interchange at Peninsula Avenue	7	20	40%
17-06-0016	Improve access to and from the west side of Dumbarton Bridge on Route 84 connecting to US 101 per Gateway 2020 Study - Phased	7	60	10%
17-06-0017	Route 101/Holly St Interchange Access Improvements	2	20	9%
17-06-0037	Widen Millbrae Avenue between Rollins Road and US 101 southbound on-ramp and resurface intersection of Millbrae Avenue and Rollins Road	2	2	100%

Table 2.5-13 Proposed Transportation Projects within Midcentury Sea Level Rise Inundation Zone, by County

RTP ID	Project Name	Inundated Acres	Total Project Acres	% Inundated
17-06-0040	Extend Blomquist Street over Redwood Creek to East Bayshore and Bair Island Road	1	9	10%
Santa Clara County				
17-07-0034	US 101 Interchanges Improvements: San Antonio Rd. to Charleston Rd./Rengstorff Avenue	10	40	30%
17-07-0042	SR 237/Great America Parkway WB Off- Ramps Improvements	6	20	30%
17-07-0068	237 Westbound Additional Lane from McCarthy to North First	20	50	30%
Solano County				
17-08-0009	I-80/I-680/SR12 Interchange (Packages 2-7)	1	330	<1%
17-08-0016	Vallejo Station Parking Structure Phase B	<1	4	3%
17-10-0061	I-680 Express Lanes: I-80 westbound to I-680 southbound and I-680 northbound to I-80 eastbound direct connectors	<1	20	<1%
Sonoma County				
17-09-0006	Implement Marin Sonoma Narrows Phase 2 (Sonoma County)	<1	190	<1%
17-09-0013	Petaluma Crosstown Connector and Rainier Interchange	<1	30	1%
Multi-County				
17-05-0030	Treasure Island Mobility Management Program: Intermodal Terminal, Congestion Toll, Transit Service, Transit Capital (Alameda and San Francisco)	40	940	5%
17-06-0007	Modify existing lanes on US 101 to accommodate HOV/T lane (San Mateo and Santa Clara)	90	680	10%
17-06-0015	Construct auxiliary lanes (one in each direction) on US 101 from Marsh Road to Embarcadero Road (San Mateo and Santa Clara)	5	130	4%
17-07-0021	Alviso Wetlands Doubletrack (Alameda, Santa Clara)	60	70	80%
17-07-0075	US 101 Express Lanes: Whipple Avenue in San Mateo County to Cochrane Road in Morgan Hill (San Mateo and Santa Clara)	60	1,000	6%
17-10-0005	BART Metro Program + Bay Fair Connector (Alameda, San Francisco, San Mateo, Santa Clara)	30	3,000	<1%
17-10-0007	California HSR in the Bay Area (San Francisco and San Mateo)	10	2,400	<1%
17-10-0008	Caltrain Electrification Phase 1 + CBOSS (San Francisco and San Mateo)	2	1,200	<1%
17-10-0036	I-580 Access Improvements Project (Contra Costa and Marin)	<1	140	<1%
Region Total	**All Inundated Projects**	**510**	**24,900**	**2%**

Notes: BART = Bay Area Rapid Transit, BRT = bus rapid transit, CBOSS = Communications Based Overlay Signal System, HOT = high occupancy toll, HOV = high occupancy vehicle, HSR = high speed rail,

Number less than 1 are shown as "<1." Whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100, over 1,000,000 to the nearest 1,000). Figures may not sum due to independent rounding.

These projects were represented as point projects in MTC's GIS-based maps of each transportation project, therefore they are considered 100% inundated as the point is located within the sea level rise inundation zone. includes low-lying hydraulically disconnected zones

% Inundated represents the sum of all areas within the sea level rise inundation zone and low-lying hydraulically disconnected zone for a given project. Inundation calculations are based on based on MTC GIS files identifying transportation project locations. The projects were mapped to the best of MTC's ability based on the information submitted by the project sponsor. The exact project locations may change as the projects are further developed.

Source: MTC 2017, NOAA 2012, Data compiled by Ascent Environmental 2017

Appendix F

Sea Level Rise Adaptation Strategies

SEA LEVEL RISE ADAPTATION STRATEGIES

Each of the adaptation strategies presented below has the potential to reduce significant impacts to less than significant levels, although the ultimate outcome will depend on the vulnerability and risk of inundation associated with the specific project or development. Additional adaptation strategies not included within this list may also have the potential to reduce significant impacts. Many transportation and development projects will require a combination of several adaptation strategies. The selection of the appropriate adaptation strategy, or strategies, would be made during subsequent project-level analysis and planning. In many cases, particularly with respect to land use development projects, implementation of the selected adaptation strategies may require coordination and collaboration with multiple agencies and stakeholders.

Some adaptation strategies, particularly those involving the construction of new structures such as floodwalls, may have secondary environmental impacts and require their own CEQA evaluations. Therefore, adaptation strategies specific to transportation projects and land use development projects will be developed as part of subsequent project-level environmental analyses, and the adaptation measures themselves will be subject to separate CEQA/NEPA compliance.

Many of the adaptation strategies presented below can be applied to multiple asset types—for example, providing an alternative transportation mode would be an option for impacted local streets and roads, state highways and commuter rail. Therefore, the strategies are organized according to their outcome, specifically: protection, functional inundation, or inundation. For example, strategies such as relocating an asset or building a levee would protect an asset against inundation, while conducting partial/temporary closure or providing an alternative transportation mode would allow for the asset to function if inundated. Some strategies may result in a variety of outcomes, from protection to inundation, depending on the goals at hand, and so are included as a fourth category ("Strategies with a Range of Outcomes"). The suite of options discussed below includes adaptation that is both asset-specific (e.g., elevation of a single road segment) and that which applies to multiple assets (e.g., construction of a floodwall), along with structural and non-structural/policy strategies. While some strategies are specific to transportation or development assets (e.g., structures, infrastructure), others may apply to both. The applicability of each adaptation strategy is noted in parentheses at the end of each adaptation strategy definition.

PROTECTION STRATEGIES

This subset of adaptation strategies focuses on protecting transportation projects and land use development projects from the impacts of sea level rise through both structural and non-structural (policy) approaches. If implemented, the following strategies would help minimize or avoid the damage to transportation assets and new development expected to be regularly inundated by rising sea levels:

Update building/design codes: Counties and communities should adopt updated building codes within their respective Building Ordinances that require transportation and development projects to consider sea level rise and include adaptation strategies. For example, the building codes can require the implementation of structural measures, such as improving drainage, or raising road surfaces or the first floor elevation of new structures (e.g., transit stations, residential buildings), or making any structures (e.g., rail and transit stations, residential buildings) more resilient to flooding through specific construction techniques and materials. (*Transportation projects, land use development projects.*)

Apply zoning restrictions in high-risk-areas: Local jurisdictions should amend their zoning codes or create specific shoreline zoning ordinances to limit development (i.e., designate open space or low-density residential) or specify design requirements in areas subject to sea level rise. Overlay zoning districts that delineate areas with special characteristics (e.g., sea level rise or coastal storm surge inundation hazard) and apply additional regulations are another tool to guide development towards areas that are at low risk for sea level rise. (*Land use development projects*.)

Establish setbacks/buffers: Minimum setbacks from the shoreline can limit development in areas at risk for sea level rise. Setbacks can be applied uniformly or vary with the scale of development, increasing for larger developments to minimize the property and residents/employees placed at risk. In the case of sea level rise, setbacks and buffers guide development to lower-risk areas. Buffers also restrict development adjacent to sensitive natural areas, such as tidal wetlands. In areas with tidal wetlands, buffers can preserve the storm surge and wave dissipation properties of tidal wetlands while allowing wetlands and beaches room to migrate landward as sea levels rise. (*Transportation projects, land use development projects.*)

Implement conditional development in high-risk-areas: Local jurisdictions can require that developers meet specific conditions to obtain a permit to develop in areas at risk for sea level rise. Such conditions include building design that is flood proof/resilient, raised foundations or first floor elevations, impact fees to fund emergency preparedness/response, buffers and other coastal protection measures, protection measures that have limited redirection of flood impact onto other adjacent areas, and the removal of structures as sea levels rise, among others. (*Land use development projects.)*

Encourage cluster development in low-risk areas: This strategy involves the use of incentives (e.g., density bonuses, reduced development impact fees, tax incentives, streamlined permitting) to focus development in areas not expected to be regularly inundated by sea level rise. This will increase the density of development in areas not at risk for regular inundation, thereby decreasing the density of new development in high-risk areas. (*Land use development projects*.)

Transfer of development rights: For this strategy, a local jurisdiction would create a voluntary program that allows property owners to transfer development rights from sensitive areas, such as those subject to sea level rise, to areas more appropriate for development. A property owner with development rights in an area likely to be inundated would sell the development rights to an owner or developer of a property in a low-risk area, increasing the density of development in lower-risk areas. As a result, less new development would be likely to occur in higher-risk areas. *(Land use development projects.)*

Create rolling easements: Rolling easements establish a boundary from the shoreline that moves inland as sea levels rise, allowing wetlands and beaches to migrate inland. This strategy allows development along the coast but transfers the risk to property owners, requiring the removal of certain structures as the shoreline moves landward over time. Communication of risk is important for this strategy to be effective. Rolling easements may be appropriate where the restriction of development and the purchase of land by local governments are infeasible. (*Land use development projects.*)

Prioritize infrastructure investments in low-risk areas: Local jurisdictions can guide new development away from areas at risk of inundation from sea level rise by prioritizing investments in supporting infrastructure (e.g., municipal sewer) in lower-risk areas. Transportation agencies can adopt a similar approach, focusing first on the planning and construction of new projects that are not subject to sea level rise. (*Transportation projects, land use development projects.)*

Incorporate open space into the urban fabric: Designating low-lying areas as open space (e.g., parks, natural areas) can reduce the risk of sea level rise by restricting development in high-risk areas. Open space can be designed or allowed to be periodically inundated, such as during extreme tides (e.g., King Tides). *(Land use development projects.)*

Raise elevation: This strategy involves elevating the surface or grade of new transportation or development projects (e.g., local road, railroad tracks, buildings, structures) above the expected sea level rise inundation level. Consideration of changes to overland flow and increased flooding to adjacent areas would be applied to manage any potential negative impacts of this strategy. (*Transportation projects, land use development projects.*)

Elevate mechanical/electrical equipment: Transportation assets, buildings and other infrastructure with mechanical and/or electrical equipment at grade may malfunction if inundated. This strategy involves elevating any critical components, such as switchgears or substations—for existing or planned assets—to

ensure that they are above flood levels and not at risk of inundation from sea level rise. (*Transportation projects, land use development projects.*)

Relocate: The movement of transportation assets, structures, and functions from areas subject to sea level rise to lower-risk areas may be a possible strategy. Relocation may occur before an asset experiences inundation, or it may be planned as a response to sea level rise. (*Transportation projects, land use development projects.*)

Build/raise levee (engineered flood protection): Building a new levee or raising the elevation of existing levees is a form of engineered flood protection designed to protect inland areas from inundation and erosion resulting from sea level rise. Levees are earthen structures constructed with sloped sidewalls, where the base is wider than the top. The level of protection will depend on the height of the levee relative to existing conditions and the rate of sea level rise, as well as the condition of the levee. This strategy could be implemented at the local or regional level, the latter involving the collaboration of multiple local jurisdictions and/or transportation agencies. (*Transportation projects, land use development projects.*)

Construct floodwall (engineered flood protection): Floodwalls are also a form of engineered flood protection; however, in contrast to levees, floodwalls are concrete or steel structures. Floodwalls are often built in lieu of or on top of levees, typically where space does not allow for a levee's broad base. As with levees, the construction of floodwalls could be implemented at the local or regional level. (*Transportation projects, land use development projects.*)

Create berm: Berms are non-engineered earthen structures that provide protection from wave erosion and provide flood protection to inland development and infrastructure. Expansive networks of berms currently exist along the San Francisco Bay shoreline that protect marshes, ponds, and agricultural areas, and may provide multiple lines of flood defense for developed areas. However, because berms are not engineered and experience settlement, erosion, and failure, they are highly vulnerable to sea level rise and storm surge. The effectiveness of berms in providing protection from sea level rise and storm surge events may depend on regular and routine maintenance. (*Transportation projects, land use development projects.*)

FUNCTIONAL INUNDATION STRATEGIES

The following strategies focus on physical and operational measures designed to allow transportation and land use development projects to continue functioning with sea level rise:

Increase maintenance at flooding hotspots: Transportation and development assets that are allowed to flood frequently are likely to experience greater wear and tear and therefore, have greater maintenance needs. This strategy entails planning for an increased level and/or frequency of maintenance in targeted areas of transportation and development projects that are anticipated to flood regularly with sea level rise. (*Transportation projects, land use development projects.*)

Use corrosion-resistant materials: Some materials are more resistant to the corrosive effects of saltwater, and incorporating them into certain parts of infrastructure that are likely to be permanently inundated, such as bridge touchdowns or building foundations, may prolong asset life. (*Transportation projects, land use development projects.*)

Retrofit/make waterproof: Bridge tollbooths, ferry terminals, and other structures can be upgraded to withstand periodic inundation and continue to function, either in conjunction with sea level rise or following storm events. (*Transportation projects, land use development projects.*)

INUNDATION STRATEGIES

The strategies below plan and allow for inundation, focusing on alternatives where assets experience flooding from sea level rise. These strategies are primarily aimed at transportation assets, although the

implementation of partial or temporary closures may be adapted to address commercial development as well:

Provide alternative transportation mode: Commuters and other passengers can be offered a different mode of transportation when assets experience flooding from sea level rise depending on the road, rail, BART, and ferry options available and appropriate. Providing alternatives for goods movement is considered less viable. This strategy may include the identification of emergency measures to maintain mobility and safety in the event that longer-term closures are needed to repair damage. *(Transportation projects.)*

Conduct partial or temporary closure: The closure of part or all of a transportation asset is a management option, particularly during extreme events. The level of service required would determine the adequacy of this adaptation strategy, as it is unlikely that recurring closure would be acceptable for some assets. In the case of such closures, commuters and other passengers could use nearby assets (e.g., adjacent transit stations) or alternative transportation modes or routes; alternate routes for goods traffic are less likely to be readily available. *(Transportation projects.)*

Construct low-water crossings: For roads likely to flood frequently from sea level rise or extreme tide levels such as King Tides, this strategy offers an alternative to raising road elevations. Low-water crossings allow vehicles to travel safely over a waterway during low tide or normal flow conditions, either via a bridge or causeway under dry conditions; however, under extreme high tide or high flow conditions, vehicles may either travel safely over the crossing with "wet wheels," or the crossing may be closed to traffic if inundation exceeds a certain depth. The creation of low-water crossings acknowledges access limitations due to frequent inundation, and the crossings can be designed to avoid blocking drainage pathways. This strategy is most appropriate for local streets and roads with low traffic volumes and likely requires the availability of alternative routes or transportation modes, as low-water crossings can effectively close affected roadways. *(Transportation projects.)*

Develop emergency management plan: An emergency management plan can designate alternative transportation modes or routes for use during periodic inundation associated with extreme coastal flood events. This plan may be coupled with a community's Hazard Mitigation Plan. *(Transportation projects.)*

STRATEGIES WITH A RANGE OF OUTCOMES

The specific outcome of the following strategies, in terms of their respective abilities to mitigate the impacts of sea level rise, depends on the specific goals of the local jurisdiction, transportation agencies, or other implementing entity, as well as asset- and site-specific conditions. The outcome could range from protection to inundation:

Revise planning guidance/policy: The review and revision of existing guidance and policies on sea level rise and flood management for specific assets can facilitate proactive planning and adaptation. The incorporation of sea level rise into general and specific plans is a tool for local jurisdictions to address the impacts of sea level rise comprehensively and devise the most appropriate strategies for adaptation over the long-term. Caltrans currently applies their internal guidance on incorporating sea level rise when planning new transportation projects, pursuant to requirements for state agencies. Other agencies charged with implementing transportation projects can adopt a similar approach. *(Transportation projects, land use development projects.)*

Form multi-jurisdictional partnerships: Partnerships between cities, regional entities, federal and state agencies, transportation providers, ports, and others may lead to the development of regional strategies that address sea level rise impacts for multiple transportation and/or development projects. Such partnerships may also facilitate cost-sharing or implementation of structural and/or policy solutions needed to address vulnerabilities and risks to sea level rise. In some cases, existing partnerships could expand their focus to address adaptation solutions in conjunction with other planning activities. MTC and ABAG have been partnering with BCDC, and other local, state, and federal agencies and stakeholders on the Adapting to

Rising Tides Project focused in Alameda County. This effort can serve as an example for continued and expanded partnerships in other counties, or as the foundation for the development of regional partnerships in coordination with the Joint Policy Committee. *(Transportation projects, land use development projects.)*

Create a comprehensive sea level rise plan: For local jurisdictions and/or transportation agencies likely to experience sea level rise impacts for multiple assets, the creation of a plan that assesses risk and vulnerability and develops appropriate adaptation strategies represents a comprehensive, proactive approach. Comprehensive sea level rise plans can also be created at the regional level for multiple jurisdictions or partnerships, which may facilitate creative solutions and cost-sharing for any new investments. MTC, ABAG and BCDC, through the Joint Policy Committee, along with other agencies and stakeholders, collaborated on the Adapting to Rising Tides Project focused in Alameda County, which can be used as an example plan for other counties, or as the foundation for the development of a wider-scale regional plan, potentially. *(Transportation projects, land use development projects.)*

Create or update hazard mitigation plans: Mitigation plans identify policies and actions that can be implemented over the long term to minimize risk and the loss of life and property. The Federal Emergency Management Agency (FEMA) requires a hazard mitigation plan as a condition for granting non-emergency funds to a local jurisdiction. In 2010, ABAG adopted the Multi-Jurisdictional Local Hazard Mitigation Plan for the San Francisco Bay Area, an update of its 2005 plan. ABAG's plan includes references to sea level rise hazards. Hazard mitigation plans incorporate a range of hazards and can be created or updated to include sea level rise; such plans may be prepared by individual or multiple local jurisdictions (cities and counties). For hazard mitigation plans to be effective, they must be regularly updated and approved. *(Land use development projects.)*

Create/restore/enhance wetlands: Tidal wetlands can mitigate the impacts of sea level rise by serving as open space buffers that restrict development in high-risk areas and by helping to dissipate storm surge and wave energy associated with storm events. The creation of a sediment management program that considers wetland processes such as vertical accretion, as well as planning for wetland transgression or migration, is one example of a way in which local jurisdictions and/or transportation agencies can support the creation, restoration, or enhancement of wetlands. This strategy is most appropriate where shoreline and/or flood protection structures (e.g., bulkheads, floodwalls) do not impede the migration of wetlands to higher ground as sea levels rise. *(Transportation projects, land use development projects.)*

Beach nourishment: The ongoing replenishment of sand from off-site locations can preserve beaches—both natural and artificial—that are subject to erosion and land loss from rising sea levels. This form of soft shoreline protection can maintain a barrier between rising sea levels and transportation and development. In addition to inundation, beach nourishment can protect against storm surge by dissipating wave energy *(Transportation projects, land use development projects.)*

Construct shoreline armoring (engineered shore protection): Revetment and bulkheads are forms of engineered shoreline protection structures that harden the shoreline to reduce erosion and prevent land loss. However, these structures alone do not provide flood protection, and sea level rise, coupled with storm surge, can compromise their functionality and stability. *(Transportation projects, land use development projects.)*

Improve drainage: A number of structural strategies can be employed to facilitate drainage and mitigate the impacts of temporary inundation associated with extreme tide events and storm surge on transportation assets, structures, and infrastructure. The inclusion of more under-drains and/or cross-drains in new roadways could improve the drainage of transportation projects. For development, the installation of backflow/flex valves and/or construction of perimeter wall or piling/column foundations could reduce the impacts of inundation on structures and infrastructure. *(Transportation projects, land use development projects.)*

Build causeway: Causeways represent an alternative for roads or rail tracks likely to be regularly inundated, as they typically traverse open water or wetlands on elevated embankment. While some causeways are designed to avoid all inundation, others may function only at low tide. *(Transportation projects.)*

Appendix G

Air Quality Analysis Methodology

Appendix G: Air Quality Analysis Methodology

Submitted by the Bay Area Air Quality Management District

1.1 LOCAL POLLUTANT METHODOLOGY

To estimate and evaluate potential health risks due to increased toxic air contaminant (TAC) and fine particulate matter ($PM_{2.5}$) concentrations throughout the Transit Priority Project (TPP) areas[1], a geospatial analysis was designed and conducted using ArcGIS software and health risk data on stationary and mobile sources of TAC and/or $PM_{2.5}$ emissions. The health risk data was derived from the Bay Area Air Quality Management District (BAAQMD). Stationary sources of pollution in the Bay Area are required to obtain annual permits to operate from BAAQMD; accordingly, BAAQMD maintains a database which houses the geographic location of every permitted stationary source in the Bay Area and associated emissions information. In addition, BAAQMD estimated the health risks associated with exposure to mobile sources of TACs and/or $PM_{2.5}$ including major roadways, freeways, and railroads and rail stations. This information is integrated into the geospatial analysis. Additional information on the methodology used by BAAQMD to estimate potential health risks from the various stationary and mobile sources of TAC's and/or $PM_{2.5}$ is detailed below.

The potential health risks due to increased TAC and/or $PM_{2.5}$ concentrations within the TPP areas are assessed cumulatively. The geospatial analysis was conducted using a 20 meter by 20 meter receptor grid. The maximum potential health risks for each cell in the receptor grid were estimated by summing all TAC's and or $PM_{2.5}$ concentrations from all sources, both mobile and stationary, which were present in any given cell. The final result from the geospatial analysis identifies areas where the cumulative cancer risk and $PM_{2.5}$ concentrations of the data sets exceed MTC's air quality significance thresholds for TACs and $PM_{2.5}$. Additional information on the geospatial analysis is detailed below.

Stationary Sources

BAAQMD developed a geographical database of estimated cancer risks and $PM_{2.5}$ concentrations for stationary sources permitted by BAAQMD in the year 2014. Using emissions data specific to each stationary source, BAAQMD calculated screening-level cancer risks (referred to as screening values) using health effect values adopted by the Office of Environmental Health Hazard Assessment (OEHHA); health protective assumptions relating to the extent of an individual's exposure, including age sensitivity factors and breathing rates; and a conservative modeling procedure to establish the extent to which a TAC is dispersed in the atmosphere after its release from the source. For permitted sources which emit $PM_{2.5}$, the screening-level health risk and $PM_{2.5}$ concentrations (referred to as screening values) are based on the same screening-level dispersion modeling procedure that was used to develop the trigger levels in BAAQMD's Regulation 2, Rule 5, Table 2-5-1, Toxic Air Contaminant Trigger Levels. For more specific information on the methodology used to estimate cancer risks and $PM_{2.5}$ concentrations from stationary sources, refer to BAAQMD's

[1] The geospatial analysis also included a 1,000 foot "area of influence" around the TPP areas. The area of influence is defined as the areas containing sources of TAC and/or PM2.5 that should be evaluated in relation to the TPP areas. Including the area of influence ensures that the geospatial analysis conducted to evaluate cumulative health risks takes into account sources of pollution *outside* of the TPP areas that may, however, impact the TPP areas themselves. In this document, the term "TPP areas" refers to both the TPP areas as defined by the Sustainable Communities Strategy for the Bay Area, as well as the 1,000 foot area of influence.

"Recommended Methods for Screening and Modeling Local Risks and Hazards" document[2]. The estimated health risk screening values represent cancer risks and concentrations near the fence-line of the plant. The database was initially created to provide jurisdictions and interested stakeholders with information on BAAQMD's stationary sources for land use planning and environmental review documents. The screening values are intentionally conservative and are based upon worst-case assumptions and are not intended to be used to assess the actual health risk for all land development projects, but rather are intended to be used at the screening level.

For the purpose of the local pollutant analysis, BAAQMD staff updated and refined the database's stationary source data. Select screening values in the database were updated in 2016 with BAAQMD's most current emissions inventory data. Other refinements to the stationary source data include:

- Removing facilities that have cease operations;
- Assessing and correcting the geographic location of stationary sources;
- Developing specific risks for individual sources at universities and company campuses; and
- Including decay factors for all sources including gas stations and diesel engines to reflect decreasing cancer risk and $PM_{2.5}$ values based on distances from the source.

Closed Stationary Sources: BAAQMD maintains permit records that are updated annually. Over time, some facilities close, or are transferred to a different plant number. BAAQMD staff reviewed BAAQMD permit records and removed any facilities that ceased operations since 2014.

Geographic Location of Stationary Sources: The geographic location of stationary sources in the database is based on information from BAAQMD permit records. The location is expressed in Universal Transverse Mercador (UTM) coordinates, and typically represents the coordinate location of each permitted source. However, the coordinates were collected over many years, and were sometimes recorded in different datums (a set of reference points on the Earth's surface against which position measurements are made). Due to the difference in datums used over several years, the geographic representation of the stationary source is inaccurate in some cases. To address this issue, BAAQMD staff geocoded (process of finding associated geographic coordinates, typically expressed in latitude and longitude, from other geographic data such as street addresses or zip codes) stationary source facility addresses using Google Earth. In most cases, the geocoded locations represent the approximate centroid location of the facility based on the street address, but occasionally, the actual sources, such as a boiler or exhaust vent, are shown. Corrected locations of stationary sources are included in the local pollutant analysis. BAAQMD staff manually moved (using Google Earth) the location of permitted stationary sources which do not have a "true" address in BAAQMD permit files (for example: intersection of x road, y drive; or San Francisco International Airport) to the correct geographic location, and recorded the coordinates provided by Google Earth.

Decay Factors: Decay factors are included in the local pollutant analysis for all sources. Source specific decay factors were developed for gas stations and diesel engines to account for decreased cancer risks and $PM_{2.5}$ concentrations based on distance from a source. The further away a sensitive receptor is from a source, the less exposure they will experience. For all other source categories, generic decay factors were developed to conservatively reduce the screening values from the fence line of the facility out to at least 1,000 feet in every direction.

Diesel engines: To develop the decay factors for stationary back-up diesel engines, BAAQMD staff analyzed thousands of health risk values determined from over 150 air dispersion modeling runs. The modeling runs

[2] Available at http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/Risk%20Modeling%20Approach%20May%202012.ashx?la=en

included assumptions for a worst-case stationary diesel engine exhaust configuration which addressed more than two dozen building dimensions for downwash considerations, and six different meteorological data sets. Modeling was conducted using AERMOD, an atmospheric dispersion model created by US EPA. The worst-case stationary diesel engine health risk values and the corresponding diesel engine decay factors for the worst case diesel engine health risk values were determined from the modeling data. The decay factors represent the decreased cancer risk and $PM_{2.5}$ concentrations (that BAAQMD staff would conservatively expect to see) from the fenceline of a facility out to 1,000 feet (in every direction).

To verify the accuracy of the decay factors, BAAQMD staff reviewed several BAAQMD permit applications and compared the residential cancer risk from the Health Risk Screening Assessment (HRSA) to the estimated health risks of the screening values adjusted to the closest resident (according to the HRA) using the decay factors. The results are detailed in **Table 1**. The values do not include the latest OEHHA exposures factors that account for early life stage exposures (i.e, age sensitivity values and breathing rates). In the majority of cases, the screening value results (adjusted with the decay factors) compared fairly well with the HRSA risks. In only three cases (15 percent of the sample), the cancer risks from the screening values (adjusted using the decay factors) were actually below the HRSA risk. However, in these three cases, the cancer risks from both the HRSA and the screening values were quite low (all less than nine chances in one million), and the estimates were fairly comparable. Overall, based on this assessment, BAAQMD staff feels that the screening values, when adjusted with the decay factors, are a conservative estimate in comparison to the actual HRA values.

TABLE 1: DECAY FACTOR ANALYSIS

Plant No	*Application No*	*Project Description*	*Plant Name*	*City*	*County*	*Distance from stack to receptor boundary*	*Stack height*	*Estimated Risk from Google Earth Using Multiplier*	*HRA Risk Resident (million)*
19245	18676	1 generator 250 bhp	New Enterprises Associates, Inc.	Menlo Park	San Mateo	800 ft	12 ft	2.32	1.28
19223	18614	1 generator 1482 bhp	Advent Software	San Francisco	San Francisco	310 ft	14.5 ft	6.7	4.49
19180	18462	3 generators sets with abatements - 2937 bhp	San Francisco PUC	San Francisco	San Francisco	260 ft	7.3 ft 26.5 ft 26.5 ft	3.56	2.5
19216	18596	1 generator - 99 bhp	City of Novato	Novato	Marin	246 ft	7 ft	5.83	3.6
19187	18514	1 generator - 130 bhp	Walnut Creek Endoscopy Center	Walnut Creek	Contra Costa	260 ft	9 ft	5.1	0.78
19181	18461	3 generators sets with 3 abatement - 2937 bhp	Comstock Data Center	Santa Clara	Santa Clara	200 ft	21 ft	7.63	3.3
19236	18645	1 generator - 385 bhp	Marin County	San Rafael	Marin	790 ft	8 ft	2.76	2.4
19232	18637	1 generator - 49 bhp	Verizon Wireless	Danville	Contra Costa	303 ft	8 ft	7.4	0.32
19096	18163	1 generator - 145 bhp	Marin County	Mill Valley	Marin	27 ft	8 ft	8.16	2.2
19143	18341	1 generator - 2220 bhp	Myers' Peninsula Ventures	South San Francisco	San Mateo	840 ft	11 ft	0.57	2.8
19156	18379	1 generator - 315 bhp	North Bay Regional Surgery Center	Novato	Marin	218 ft	8 ft	2.48	8.3
19131	18308	1 generator - 916 bhp	City of Sebastopol	Sebastopol	Sonoma	780 ft	12 ft	2.89	0.48
19201	18540	1 generator - 157 bhp	BioSeek	South San Francisco	San Mateo	5000 ft	30 ft	0.16	0.17

TABLE 1: DECAY FACTOR ANALYSIS

Plant No	*Application No*	*Project Description*	*Plant Name*	*City*	*County*	*Distance from stack to receptor boundary*	*Stack height*	*Estimated Risk from Google Earth Using Multiplier*	*HRA Risk Resident (million)*
19110	18227	1 generator - 399 bhp	Richmond Hall of Justice	Richmond	Contra Costa	504 ft	9 ft	1.02	2.3
19157	18380	1 generator - 364 bhp	List Labs	Campbell	Santa Clara	683 ft	10 ft	1.41	0.34
19164	18388	1 generator - 314 bhp	Kindred Hospital	San Leandro	Alameda	526 ft	14 ft	3.75	0.43
19170	18405	1 generator - 619 bhp	North Coast County Water District	San Bruno	San Mateo	100 ft	13 ft	10.96	3.1
19135	18319	1 generator - 157 bhp	Kasier Hospital	Napa	Napa	308 ft	7 ft	4.12	0.4
19136	18320	1 generator - 157 bhp	Kasier Hospital	Fairfield	Solano	1048 ft	7 ft	0.4	0.3

Source: BAAQMD, 2013

Table 2 lists the decay factors which were used in the geospatial analysis to calculate cancer risks and $PM_{2.5}$ concentrations out to 1,000 feet in every direction.

TABLE 2: DIESEL ENGINE DECAY FACTORS

Distance in meters	*Diesel Engine Distance Adjustment*
20	.90
25	.85
30	.73
35	.64
40	.58
50	.50
60	.41
70	.31
80	.28
90	.25
100	.22
110	.18
120	.16
130	.15
140	.14
150	.12
160	.10
180	.09
200	.08
220	.07
240	.06
260	.05
280	.04
300	.03
305	.02

Source: BAAQMD, 2013

Gas stations: Similar to diesel engines, BAAQMD staff created decay factors for gas stations based upon numerous modeling runs using meteorological data collected from five counties throughout the Bay Area. Emissions of benzene, ethylbenzene, hexane, xylene, and toluene were estimated based on actual throughput data when available otherwise permitted limits were used. TAC emission factors used in the health risk calculations depended on the type of emission controls at the various facilities. A worst-case Chi/Q (predicted concentration based on an emission rate of one g/s) was used, which was derived from worst-case AERMOD modeling results based upon a number of factors, including: building dimensions around the meteorological towers which were used to collect/process the meteorological data; no complex terrain or flagpole receptors; over 4,000 receptor locations; assigned vent and volume parameters; and assigned emission ratios between vent and volumes.

Table 3 lists the decay factors that were used in the geospatial analysis to calculate cancer risks and $PM_{2.5}$ concentrations from gas stations out to 1,000 feet in every direction. The decay factor is only applied to cancer risks associated with gas stations; gas stations do not generate $PM_{2.5}$ emissions.

TABLE 3: GAS STATION DECAY FACTORS	
Distance in meters	*Gas Station Distance Adjustment*
20	1.0
25	.728
30	.559
35	.445
40	.365
45	.305
50	.260
55	.225
60	.197
65	.174
70	.155
75	.139
80	.126
85	.114
90	.104
95	.096
100	.088
110	.076
115	.071
120	.066
125	.062
130	.058
135	.055
140	.052
145	.049
150	.046
155	.044
160	.042
165	.040
170	.038
175	.036
180	.034
185	.033
190	.031
195	.030
200	.029
205	.028
210	.027
215	.026
220	.025
225	.024
230	.023
235	.022
240	.022
245	.021

TABLE 3: GAS STATION DECAY FACTORS	
Distance in meters	*Gas Station Distance Adjustment*
250	.020
255	.020
260	.019
265	.018
270	.018
275	.017
280	.017
285	.016
290	.016
295	.015
300	.015
305	.015
Source: BAAQMD, 2013	

Table 4 presents decay factors that were applied to all other sources that were not gas stations or diesel generators to calculate cancer risks and $PM_{2.5}$ concentrations out to 1,000 feet in every direction.

TABLE 4: GENERIC DECAY FACTORS	
Distance in feet	*Generic Distance Adjustment Multiplier*
33	0.883
49	0.855
66	0.827
82	0.801
98	0.775
115	0.750
131	0.726
148	0.702
164	0.679
180	0.658
197	0.636
213	0.616
230	0.596
246	0.577
262	0.558
279	0.540
295	0.523
312	0.506
328	0.489
344	0.474
361	0.458
377	0.444
394	0.429

TABLE 4: GENERIC DECAY FACTORS	
Distance in feet	*Generic Distance Adjustment Multiplier*
410	0.415
427	0.402
443	0.389
459	0.376
476	0.364
492	0.353
509	0.341
525	0.330
541	0.319
558	0.309
574	0.299
591	0.290
607	0.280
623	0.271
640	0.262
656	0.254
673	0.246
689	0.238
705	0.230
722	0.223
738	0.216
755	0.209
771	0.202
787	0.195
804	0.189
820	0.183
837	0.177
853	0.171
869	0.166
886	0.160
902	0.155
919	0.150
935	0.145
951	0.141
968	0.136
984	0.132

Generic Decay Factors: For all other source types (that are not diesel engines or gas stations), a generic decay factor was developed to conservatively reduce exposure point concentrations and associated risks away from the source. BAAQMD conducted various modeling analysis using the EPA's SCREEN model, accounting for atmospheric dispersion, for both stack (point) and area source dimensions and associated release parameters. BAAQMD found that the area sources produced the most conservative and consistent decay factors compared to stacks where peak downwind concentrations were dependent on the height of the stack and release strength. Area source dimensions were modeled from five to 50 feet in length with release heights from ground level to 20 feet. Rural land use option was selected over urban option since it produced a more gradual, conservative decay factors.

MOBILE SOURCE DATA

BAAQMD provided estimated cancer risk and $PM_{2.5}$ concentration data for mobile sources located in and within 1,000 feet of TPP areas for use in the local pollutant analysis. Mobile sources include freeways, roadways with over 30,000 annual average daily trips (AADT), and railroads/rail stations.

Roadways: BAAQMD conducted air dispersion modeling to estimate cancer risks and $PM_{2.5}$ concentrations for roadways based on annual average daily traffic (AADT) for each of the nine Bay Area counties. Information (specific to each county) included in the air dispersion modeling includes AADT, percentage of heavy trucks and truck profiles, ARB emission factors (EMFAC 2014) and conservative meteorological data representing specific areas. BAAQMD initially used 30,000 AADT as a cutoff for inclusion of those roadways in the local pollutant analysis.

Freeways: BAAQMD staff mapped each State freeway link in the Bay Area, where freeway links are defined by Caltrans mileposts. BAAQMD staff modeled cancer risks and $PM_{2.5}$ concentrations for each link using the CALINE3 model developed by the California Department of Transportation. The cancer risks and $PM_{2.5}$ concentrations were modeled on a 20 meter by 20 meter domain spanning the entire Bay Area. Information specific to each county is incorporated in the modeling including: AADT, fleet mix and profiles, vehicle speeds, and meteorological data. This information was incorporated into the model to represent exposures to individuals on the first floor of buildings.

BAAQMD staff updated the freeway modeling using EMFAC2014. $PM_{2.5}$ emissions from exhaust, and tire and brake wear, as well as emissions from re-suspended road dust are included as part of the EMFAC2014 update. For additional information on the methodology used in the freeway modeling see BAAQMD's document entitled "*Recommended Methods for Screening and Modeling Local Risks and Hazards."*

Railroads/Rail Stations: Similar to the methodology used for freeways, BAAQMD staff estimated cancer risk and $PM_{2.5}$ concentrations from railroads and rail stations using the CALINE3 model. Rail emissions were estimated for existing freight and passenger lines as well as proposed future lines in Marin County (i.e., SMART line) and eBART along Highway 4 in Contra Costa County. Emissions for freight corridors were estimated based on fuel consumption along specific lines provided by industry. Passenger rail emissions were weighted based on the rail activity, idling times, and speeds of individual trains. Freight and passenger emissions that run on parallel or share tracks were aggregated to estimate total emissions along rail corridors. Site-specific meteorological conditions for each rail link were then input into the model to estimate receptor-specific cancer risk and $PM_{2.5}$ concentrations. Cancer risk and $PM_{2.5}$ concentrations were estimated on a similar 20 meter by 20 meter grid spanning used for roadways and freeways analysis.

GIS CUMULATIVE ANALYSIS

BAAQMD staff conducted a geospatial analysis using GIS software to evaluate potential increased cancer risks and $PM_{2.5}$ concentrations due to TAC and $PM_{2.5}$ emissions from mobile and stationary sources in Transit Priority Project (TPP) areas[3]. The geospatial analysis was designed and executed in ArcGIS 10.1 using BAAQMD's estimated cancer risk and $PM_{2.5}$ concentration data on stationary and mobile sources of TACs and $PM_{2.5}$ (described above). BAAQMD contracted with Arini Graphics for assistance in designing and executing the geospatial analysis.

The geospatial analysis identifies areas where the cumulative cancer risk and $PM_{2.5}$ concentrations of the

[3] The geospatial analysis also included a 1,000 foot "area of influence" around the TPP areas. The area of influence is defined as the areas containing sources of TAC and/or PM2.5 that should be evaluated in relation to the TPP areas. Including the area of influence ensures that the geospatial analysis conducted to evaluate cumulative health risks takes into account sources of pollution *outside* of the TPP areas that may, however, impact the TPP areas themselves. In this document, the term "TPP areas" refers to both the TPP areas as defined by the Sustainable Communities Strategy for the Bay Area, as well as the 1,000 foot area of influence.

data sets exceed MTC's air quality significance thresholds for TACs and $PM_{2.5}$ using a spatial additive process. The spatial additive process involves three data sets: a regularized raster dataset representing the spatial extent of the TPP areas, to which all pollution values associated with the stationary and mobile sources are added; raster datasets representing the TAC/$PM_{2.5}$ plumes associated with each stationary source that were decayed to a specified distance (described in section above); and raster datasets representing TAC emissions and $PM_{2.5}$ concentrations generated by mobile sources, including freeways, major roadways (defined as roads with AADT counts exceeding 30,000), and railroads/rail stations.

DISTANCE RECOMMENDATION FROM SENSITIVE RECEPTORS SUMMARY

To help identify the appropriate distances that sensitive receptors should be protected from these stationary and mobile sources, MTC utilized work prepared by the California Air Resource's Board (ARB) 2005 *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook), and BAAQMD permit data. ARB developed the Handbook to bring attention to the potential health impacts associated with locating sensitive receptors in close proximity to air pollution sources. Using available health data, air quality modeling, and monitoring studies, the Handbook provides recommendations for how far sensitive land uses should be located away from some specific sources of air pollution. The ARB recommended distances are based primarily on data showing that air pollution exposure from TACs and $PM_{2.5}$ can be reduced as much as 80 percent when sensitive land uses are set back the recommended distance. The distance recommendations were based on existing health studies and data available at that time. ARB distance recommendations were only made when the relative exposure and health risk from a source could be reasonably characterized from the available data. For each source type, the Handbook summarizes the key health and distance related findings that helped form the distance recommendation for that source.

ARB recommends using local air pollution source data, where appropriate and if available, to better determine specific health risk near local TAC and $PM_{2.5}$ sources, especially for sources not included in ARB's Handbook, or to identify more appropriate distance recommendations than they provide in the Handbook.

For sources of TACs and $PM_{2.5}$ not included in ARB's Land Use Handbook or for sources where Air District data was more site specific than ARB's data, MTC worked with BAAQMD to develop distance recommendations for siting new sensitive land uses for use in this analysis. BAAQMD provided site specific stationary source permit data or existing studies to support the distance recommendations for diesel generators, refineries, sea ports, airports, railroads, rail stations, and ferry terminals.

The specific set distances recommended for avoiding locating sensitive land uses are listed below in Table 2.2-10. For detailed explanations of set distances recommended by ARB, see the 2005 Air Quality and Land Use Handbook: A Community Health Perspective. Recommended distances used for this analysis and how they are derived are described in detail below.

Diesel Generators

The ARB's Handbook does not contain a distance recommendation for diesel generators. There are over 3,000 diesel generators in the Bay Area, many of which may pose some increased cancer risk and $PM_{2.5}$ concentration to nearby sensitive receptors. Installations of new generators in the Bay Area are required to obtain and meet Air District permit requirements. Under Air District permitting requirements, new generators are required to install Toxic Best Available Control Technology (T-BACT) and demonstrate an increased cancer risk impact of less than 10 in a million to the closest sensitive receptor. However, many older existing generators operating in the Bay Area may not have T-BACT installed and generate much higher cancer risks than 10 in a million.

A 350 foot distance for siting new sensitive residents near existing diesel generators that have an estimated cancer risk of over 10 in a million is used for this analysis, based on MTC/ABAG consultation with the BAAQMD. The methodology used for developing this distance recommendation for diesel generators is

consistent with ARB's methodology. ARB's set distance recommendations are based upon the distance at which risk would be reduced by 80 percent. BAAQMD analyzed their inventory of diesel generators in the stationary source screening tool and estimated the distance, using the diesel multiplier tool[4], where cancer risk tends to drops off by approximately 80 percent. Location of sensitive receptors within 350 feet of diesel generators may result in a potentially significant impact.

Railroad and Rail Stations

The ARB's Handbook does not contain distance recommendations for railroad lines or rail stations. Most of the passenger rail lines in the Bay Area are located within TPP areas and will likely attract new land use development with sensitive receptors as part of the proposed land use plan. Rail lines, including Caltrain, Amtrak, Capital Corridor, and the future SMART line in Marin County, generate diesel PM emissions, a known TAC and $PM_{2.5}$ source, from locomotive exhaust.

BAAQMD estimated cancer risk and $PM_{2.5}$ concentrations for railroads and rail stations within the Bay Area. Rail emissions were estimated along existing freight and passenger lines. Emissions along freight corridors were estimated based on fuel consumption; and passenger rail emissions were estimated based on the rail activity, idling times at stations, and speeds of individual trains. Freight and passenger emissions that run on parallel or shared tracks were aggregated to estimate total emissions along rail corridors. The emissions and train activity data were combined with county-specific meteorological data for each rail link in the dispersion modeling to estimate cancer risk and $PM_{2.5}$ concentrations at various distances from the edge of the rail lines (up to 1,000 feet).

Based on BAAQMD's dispersion modeling, the maximum distance where the estimated cancer risk[5] dropped below the threshold occurs at approximately 200 feet. Therefore, this analysis uses a set distance of 200 feet from every railroad line and rail station. Location of sensitive receptors within 200 feet of railroad lines and rail stations may result in a potentially significant impact.

Ferry Terminals

The ARB Handbook does not contain distance recommendations for ferry terminals. The six ferry terminals in the Bay Area are located within TPP areas and could potentially include future new land use developments with sensitive receptors. Similar to rail stations, the primary TAC of concern at ferry terminals is diesel PM from ferry boat exhaust.

BAAQMD estimated cancer risk and $PM_{2.5}$ concentrations by extrapolating air dispersion modeling values from excursion vessels originating in San Francisco. Cancer risk and PM2.5 concentrations estimated from excursion fleet were ratioed based on the activity data (departures and arrivals) at each of the region's ferry terminals. The maximum distance where the estimated cancer risk[6] dropped below the cumulative threshold is at approximately 500 feet. Based on BAAQMD modeling, this analysis uses a set distance of 500 feet from every ferry terminal. Location of sensitive receptors within 500 feet of ferry terminals may result in a potentially significant impact.

Port of Oakland and UP Railyard

The ARB's Handbook recommends that lead agencies "avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones." ARB does not contain more specific distance recommendation, rather the Handbook recommends consulting with the local air district or ARB on the

[4] Available on BAAQMD's website, http://baaqmd-s/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx

[5] The cancer risk threshold was triggered sooner than the PM2.5 threshold in the railroad modeling estimates.

[6] The cancer risk threshold was triggered sooner than the PM2.5 threshold in the ferry terminal modeling estimates.

status of any pending analyses of health risks associated with a specific port. It should be noted that ARB has prepared health risk assessments for several ports in the state, including the Port of Oakland, as part of a larger West Oakland Study.

In 2008, ARB completed a health risk assessment (HRA) for the West Oakland community. The study was designed to evaluate the potential public health risk to both residents of West Oakland and the broader Bay Area from exposure to diesel PM. The West Oakland HRA looked at emissions from the Port, railyard and the freeways individually and collectively. The report concluded that the "zone of impact" for potential risk levels above 100 in a million resulting from either the Port or the surrounding freeways encompass the entire West Oakland community (approximately 0.5 miles from Port property). The emissions from on-road heavy-duty trucks result in the largest contribution, over 71 percent, to the overall potential cancer risks levels in the West Oakland community.

ARB acknowledges, however, that the estimates for truck emissions in their HRA are uncertain, especially relative to the other categories of emissions studied, i.e. the Port and UP Railyard. Their uncertainty is due to limitations in the availability of data describing the magnitude and intensity of trucking operations in the West Oakland community. These data limitations may have led to an overestimate in the overall magnitude of truck-related emissions in the West Oakland community, and an underestimate of the fraction of total trucking emissions and risks attributable to trucks that service the Port of Oakland.

Based in part on the 2008 West Oakland HRA, and on Air District monitoring data that demonstrates TAC and $PM_{2.5}$ pollution levels are similar to background levels at approximately half mile from the Port and UP Railyard, this analysis uses a set distance of half a mile of the Port of Oakland and sensitive new land uses. Location of sensitive receptors within a half a mile of the Port of Oakland may result in a potentially significant impact.

Other Ports

For smaller ports in the region, including ports in Richmond, Redwood City, and Benicia, MTC recommends a set distance of 1,000 feet between these ports and sensitive land uses. These smaller ports have limited TAC and $PM_{2.5}$ emissions relative to the Port of Oakland. Cancer risk and $PM_{2.5}$ exposure from diesel truck activity associated with these ports are estimated to be significantly lower than found at the Port of Oakland. The Port of Richmond produces 6.3 tons per year of diesel PM, Benicia 5.0 tons per year, and Redwood City 10.2 tons per year[7] – compared to nearly 250 tons per year from the Port of Oakland. The small ports in the region, therefore, are not considered a substantial source of PM relative to the Port of Oakland. A distance of 1,000 feet is comparable to the distance ARB recommends for other large sources of PM, and the point at which, for most sources, pollution drops to background levels. Location of sensitive receptors within 1,000 feet of other ports may result in a potentially significant impact.

Refineries

In regards to refineries, ARB recommends that lead agencies "avoid siting new sensitive land uses immediately downwind of petroleum refineries." ARB also recommends that lead agencies consult with local air districts and other local agencies to determine an appropriate separation.

A petroleum refinery is a complex facility where crude oil is converted into petroleum products (primarily gasoline, diesel fuel, and jet fuel), which are then transported through a system of pipelines and storage tanks for final distribution by delivery truck to fueling facilities throughout the state. In California, most crude oil is delivered either by ship or via pipeline from oil production fields within the state. The crude oil then

[7] *SF Bay Area Seaports Air Emissions Inventory*, Bay Area Air Quality Management District, 2009: http://www.baaqmd.gov/Divisions/Planning-and-Research/Emission-Inventory/Small-Ports-Inventory.aspx

goes through numerous complex chemical and physical processes, which include distillation, catalytic cracking, reforming, and finishing. These refining processes have the potential to emit TACs and $PM_{2.5}$, and are subject to extensive controls by local air district regulations.

According to ARB and Air District staff, there is no current air quality modeling or monitoring data that provides a quantifiable basis for recommending a specific separation between refineries and new sensitive land uses. In the Bay Area, refineries were last analyzed for emissions and cancer risk in the 1990s, as part of ARB's Air Toxics "Hot Spots" Program, enacted by the state legislature in 1987. Since then, oil refining facilities in the Bay Area have changed substantially, thereby making the findings from the 1990's assessment obsolete. However, in view of the amount of, and potentially hazardous nature of, many of the pollutants released as part of the oil refining process, ARB suggest that the siting of new sensitive land uses immediately "downwind" of refineries should be avoided.

BAAQMD does not have current facility wide health risk assessments on which a set distance recommendation for Bay Area refineries and locating new sensitive land uses could be made. Therefore, this analysis considers a set distance of a half mile to be a precautionary distance where cancer risk would be expected to fall below 100 in a million and a $PM_{2.5}$ concentration of 0.8 ug/m3. Location of sensitive receptors within a half a mile of refineries may result in a potentially significant impact.

Airports

ARB's Land Use Hand book makes no mention of airports. However, airports are significant sources of air pollution. Airports generate numerous pollutants, including lead, 1,3-butadiene, diesel PM, ultrafine PM (UFP), and $PM_{2.5}$, from a complex mix of mobile and stationary sources such as jet fuel, transport equipment, and power generation. Daily airport runway congestion especially contributes to local pollution levels that may compromise the health of residents living nearby and downwind from airports.

The South Coast Air Quality Management District prepared a *General Aviation Airport Air Monitoring Study* in August 2010[8], which studied the Van Nuys and Santa Monica Airports, and found that overall, the most significant airport-related impacts on air quality were observed for lead and for UFPs. However, diesel PM has been attributed as the leading driver for cancer risk[9] from airports, according to a Berkeley study that reviewed CEQA-prepared health risk assessments for Los Angeles (LAX), San Diego (SDIA) and the proposed El Toro (OCX) airport.

MTC/ABAG has not been able to identify any set distance recommendations from the limited studies surrounding air emissions from airports. Therefore, this analysis considers a set distance of a half mile to be a precautionary distance where cancer risk would be expected to fall below 100 in a million and a $PM_{2.5}$ concentration of 0.8 ug/m3. Location of sensitive receptors within a half a mile of airports may result in a potentially significant impact.

[8] http://www.smgov.net/uploadedFiles/GA%20report_final%20(081710).pdf

[9] Vanderbilt, Pamela; Lowe, John *Health Risk Assessment of Air Toxics from Airports: The State of the Science & Strategies for the Future,* Airport Air Quality Symposium, February 28, 2002

1.2 TOXIC AIR CONTAMINANT MITIGATION MEASURES

The following section provides background information on air quality mitigation measures recommended in the DEIR to address localized impacts related to Toxic Air Contaminants (TACs), listed under Mitigation Measure 2.2(d).

Mitigation Measure Point 1: Install air filtration to reduce cancer risks and $PM_{2.5}$ exposure for residents and other sensitive populations in buildings that are in close proximity to freeways, major roadways, diesel generators, distribution centers, railyards, railroads, rail stations, and/or ferry terminals. Air filtration devices should be rated MERV-13 or higher. MERV-13 air filters are considered high efficiency filters able to remove 80 percent of fine particulate matter from indoor air.[10] MERV 13 air filters may reduce $PM_{2.5}$ concentrations from diesel PM from stationary and mobile sources by approximately 53 percent; and cancer risk by 42 percent. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system is required.

Air filtration protects residents and other sensitive receptors from exposure to pollutants by reducing the pollutant concentration in indoor air circulated from outdoor air. Air filtration places a control on a building's mechanical ventilation system that filters particles from the air. The effectiveness of a filter depends on its (1) efficiency to remove particles from passing air; (2) a ventilation system's air flow rate; and (3) the path the clean air follows after it leaves the filter. To ensure adequate health protection to sensitive receptors, a ventilation system should meet the following minimal design standards:

- A MERV-13, or higher, rating that represents a minimum of 90 percent efficiency to capture fine particulates;
- At least one air exchange(s) per hour of fresh outside filtered air;
- At least four air exchange(s) / hour recirculation; and
- At least 0.25 air exchange(s) per hour in unfiltered infiltration.[11]

The effectiveness of air filtration is highly variable and based upon a building's design and maintenance. For example, the presence of operable windows, the placement of the air intakes, operation and maintenance of the ventilation system, and proper sealings will impact the effectiveness of air filtration and thus residents' exposure to TACs and $PM_{2.5}$ from nearby sources of emissions. In addition, residential behavior such as unvented cooking, cigarette smoking (that affect indoor air quality), and opening and closing windows as well as the amount of time occupants spend outdoors versus indoors impact the effectiveness of air filtration. BAAQMD recommends that the homeowners/lease agreement and other property documents require cleaning, maintenance, and monitoring of the buildings for air flow leaks, assurance that new owners and tenants are provided information on the ventilation system, and that fees associated with owning or leasing a unit(s) in the building include funds for cleaning, maintenance, monitoring, and replacements of the filters, as needed.

The Air Resources Board (ARB) recently studied the effectiveness of air filtration, along with other mitigation measures, as a strategy to reduce exposure to nearby traffic pollution.[12] The study finds that the use of air

[10] EPA webpage on residential air cleaners, http://www.epa.gov/iaq/pubs/residair.html,

[11] DPH, *Assessment and Mitigation of Air Pollutant Health Effects from Intra-Urban Roadways: Guidance for Land Use Planning and Environmental Review*. May 2008. Original reference: Fisk WJ, Faulker D, Palonen J, Seppanen O. Performance and Costs of Particle Air Filtration Technologies Indoor Air 2002; 12(4):223-234.

[12] "Status of Research on Potential Mitigation Concepts to Reduce Exposure to Nearby Traffic Pollution," ARB, August 2012.

filtration tends to be relatively effective and represents a promising mitigation measure; however, additional research on the issue is needed. The study notes that air filtration could be especially effective in residences with consideration to California's requirement that new homes have mechanical ventilation systems installed. ARB is funding a project entitled, "Reducing In-Home Exposure to Air Pollution," that will measure the benefits of air filtration in reducing exposure to indoor and outdoor air pollutants.

Installation of MERV-13 filters in residential buildings represents a feasible option that is recommended by a number of entities. The City and County of San Francisco requires MERV-13 filters be installed in residential buildings located in air pollutant exposure zone areas as defined by San Francisco's Health Code Article 38.[13] In addition, the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE), recommends, in their green building guide, that a minimum of MERV-13 rated air filtration be required in building locations where the air quality is designated to be in non-attainment with the National Ambient Air Quality Standards for $PM_{2.5}$.[14] The United States Green Building Council (USGBS) requires that new construction be equipped with a MERV-13 or higher rated air filter in new construction for buildings and homes to receive air filtration green building credit points.[15]

Mitigation Measure Point 2: Phase residential developments located within the set distance of 500 feet from freeways until 2023, or as late as feasible. In 2008, ARB adopted a regulation that requires diesel trucks to retrofit or replace their engines so that by 2023, nearly all trucks would have a 2010 or newer model year engine. Therefore, starting in 2014, PM emissions from diesel trucks will decline by approximately 80 percent by 2023.

This measure allows proposed projects to avoid exposing sensitive receptors to high levels of diesel particulate matter from heavy duty trucks on freeways. As ARB's On-Road Heavy Duty Diesel Vehicles Regulation gets implemented, diesel particulate matter emissions will decrease over time, which will reduce cancer risk near freeways.

Mitigation Measure Point 3: Design buildings and sites to limit exposure from sources of TAC and/or $PM_{2.5}$ emissions. Design the site layout to locate sensitive receptors as far as possible from any freeways, roadways, diesel generators, distribution centers, and railroads/railyards. Locate operable windows, balconies, and building air intakes as far away as is feasible from emission sources. If near a distribution center, residents shall not be located immediately adjacent to a loading dock or where trucks concentrate to deliver goods.

Building design can be an important factor in improving indoor air quality, especially when considering the location of the air intake for air ventilation. In general, $PM_{2.5}$ concentrations decrease with distance and with building height, therefore air intake locations should be located farthest away from emission sources as possible to provide the cleanest ventilation to building occupants.

Other minimal design features may further improve indoor air quality. For example, operable windows and balconies should be installed away from high volume roadways or other sources of air pollution. If emissions sources are located on the west of the building, these amenities should be installed on the east side of the building where the exposure concentrations are likely to be lower. Similarly, if mechanical ventilation is installed in a building, the project sponsor can consider installing inoperable windows along the side of the

[13] City and County of San Francisco 2014 Green Building Requirements Summary and Verification Form, http://sfdbi.org/Modules/ShowDocument.aspx?documentid=354

[14] ASHRAE Journal's Guide to Standard 189.1, Balancing Environmental Responsibility, Resource Efficiency and Occupant Comfort, June 2010.

[15] LEED 2009 for New Construction Rating System, http://new.usgbc.org/leed/rating-systems

building downwind of the source. This strategy will reduce the possibility of higher polluted air from entering the building and also increases the efficiency and performance standard of the mechanical filter.

Mitigation Measure Point 4: Plant trees and/or vegetation between sensitive receptors and pollution sources. Large, evergreen trees (those with foliage year-round) with long-life spans work best in trapping $PM_{2.5}$. In addition, trees with branches and leaves that have a sticky surface and trees with a fine, complex foliage structure that allow significant in-canopy airflow also perform well. Specific tree recommendations include: Pine (*Pinus nigra* var. *maritima*), Cypress (X *Cupressocyparis leylandii*), Hybrid popular (*Populus deltoids X trichocarpa*), and Redwoods *(Sequoia sempervirens*).

Planting certain trees can be an effective strategy for reducing exposure to air pollution. With certain trees, coarse and fine particulates become trapped and filtered by the leaves, stems, and twigs of the trees. Trapped pollution particles are eventually washed to the ground by rainfall. Trees also lower the air temperature by providing shade over streets and parking lots, thereby reducing evaporative emissions from vehicles and energy consumed on air conditioning during summer months.

Research supports a reduction in particulate matter concentration ranging from 0.5 to 5 percent from planting trees near a source of $PM_{2.5}$. District staff recommends taking a 0.5 percent reduction from $PM_{2.5}$ concentration estimates when implementing this measure. If taking a larger reduction, the reasons for doing so should be supported and documented.

The effectiveness of $PM_{2.5}$ removal depends on the tree species planted. As mentioned, large, evergreen trees (those with foliage year-round) with long-life spans are best, and trees with branches and leaves that have a sticky surface are better at trapping particulate matter than those without. Trees with a fine, complex foliage structure that allows significant in-canopy airflow will also perform better at trapping particulate matter.

Specific tree recommendations include:

- Pine (Pinus nigra var. maritima),
- Cypress (X Cupressocyparis leylandii),
- Hybrid popular (Populus deltoids X trichocarpa),
- Redwoods (Sequoia sempervirens),

In addition to the type of tree, the placement of the trees, relative to major roadways, and how densely they are planted are important considerations in using trees as a strategy to reduce air pollution exposure. The $PM_{2.5}$ removal effectiveness of trees is greatest when the trees are planted closest to the edge of the roadway or stationary source, for this is where pollution concentrations are highest. Beyond 500 feet, concentrations begin to diminish considerably, thereby diminishing the need for or effectiveness of tree planting as a strategy. Ideally, trees should be planted within 500 feet from a roadway to be considered an effective strategy. In regards to density, trees should be planted so that they are grouped as close together as possible to ensure a rather dense collection of tree stands. The denser the trees, the more effective the foliage, trunks and canopies will be in collecting particulate matter.

Some trees emit various “biogenic volatile organic compounds” or BVOCs. BVOCs, such as isoprenes and monoterpenes, contribute to the formation of ozone. Only “low emitting” BVOC trees should be considered in a tree planting strategy. Oak trees, in particular, would not be recommended due their ability to emit large volumes of BVOCs. The amount of BVOCs that are emitted by a tree species should be determined before utilizing the species in a tree planting strategy.

Mitigation Measure Point 5: Plan sensitive receptors away from truck activity areas including loading docks and delivery areas. Requiring loading dock electrification and/or prohibiting all idling of heavy duty diesel trucks should be considered as appropriate.

Residences should not be located immediately adjacent to a loading dock on a neighboring parcel or a planned loading dock within a mixed use development. If loading docks are not used in the development but there will be areas where trucks concentrate to deliver goods, then a separation should be provided between the two uses. Requiring loading dock electrification and/or prohibiting all idling of heavy duty diesel trucks are complimentary measures that could be implemented to ensure adverse health impacts do not occur.

Mitigation Measure Point 6: If within the project site, replace or retrofit diesel generators that are not equipped with Best Available Control Technology to meet ARB's Tier 4 emission standards. New or retrofitted diesel generators may reduce $PM_{2.5}$ emissions by up to 90 percent.

This strategy reduces emissions by retrofitting or replacing generators to meet ARB's most stringent emission standards. This measure may be applied to generators used to provide electricity in construction sites and to back-up generators (also known as stationary, standby, or emergency generators) used to provide emergency power in buildings.

Generators replaced or retrofitted to meet ARB's Tier 4 emission standards can reduce $PM_{2.5}$ emissions, and therefore $PM_{2.5}$ concentrations and cancer risk, by up to 90 percent. Actual emission reductions and reductions in $PM_{2.5}$ concentrations and cancer risk depend on the number of, size, frequency and intensity-of-use of the generators.

Generators, specifically older ones, can have significant diesel particulate matter emissions. As part of its diesel risk reduction program, the California Air Resources Board adopted an air toxics control measure for generators, in 2004. The measure requires that new generators, including back-up generators and generators used in construction, be certified to meet emission standards set by ARB and EPA (ARB and EPA have identical emission standards for generators). ARB/EPA emission standards apply to generators with more than 50 engine horse power and are set forth as Tiers 1 through 4, with Tier 4 engines being the cleanest. Generator engines certified at Tier 4 reduce PM emissions 85 to 90 percent over a non-tiered engine (whereas Tier 1 only reduces PM emissions by 25 percent). To achieve ARB's emission standards, older generators may be replaced with a new generator or retrofitted with control technologies such as diesel particulate filters. Engines meeting the Tier 4 standard began to be manufactured in 2008. By 2015, all new generator engines must meet Tier 4 emission standards.

To implement this measure, existing generators may be replaced, retrofitted, or otherwise upgraded to meet ARB Tier 4 emissions standards.

Mitigation Measure Point 7: If within the project site, reduce emissions from diesel trucks through the following measures:

- Install electrical hook-ups for diesel trucks at loading docks. The provision of electrical outlets at loading docks provide truck operators, whose trucks are equipped to utilize grid power, the ability to shut off their main engines while maintaining power refrigeration systems. Grocery stores, delivery centers, shopping malls, and other commercial land uses attract heavy-duty delivery trucks which may contain perishable items that must be kept refrigerated, or at a fixed temperature. While the frequency of heavy-duty trucks delivering goods in one place produces a high amount of air pollution in and of itself, the impact is exacerbated when truck operators must keep the main engine of the truck running while delivering refrigerated goods. The provision of electrical outlets at loading docks would give truck operators, whose trucks are equipped to utilize grid power, the ability to shut off their main engines while maintaining power to the refrigeration systems. Installing electrical outlets can lead to localized reductions in diesel emissions, thereby decreasing the potential for health risks to those that live and work in the area.

- Require trucks to use Transportation Refrigeration Units (TRU) that meet Tier 4 emission standards. TRUs are refrigeration systems powered by diesel internal combustion engines designed to refrigerate perishable products that are transported in various containers, including semi-trailers, truck vans, shipping containers, and rail cars. Although TRU engines are relatively small, ranging from nine to 36 horsepower, significant numbers of these engines congregate at distribution centers, truck stops, and other facilities, resulting in the potential for health risks to those that live and work nearby. The use of TRU's in lieu of running the main engine on delivery trucks, maintains refrigeration while minimizing diesel emissions. This measure may result in a 50 to 80 percent reduction in diesel particulate emissions at the project-level, relative to trucks without TRUs. Require truck-intensive projects to use advanced exhaust technology (e.g. hybrid) or alternative fuels.

- The use of hybrid and battery-electric vehicles or the use of clean fuels such as propane or natural gas has the potential to dramatically decrease $PM_{2.5}$ and TAC emissions in new development projects or land uses that include a fleet of heavy-duty trucks. Requiring advanced drive trains or alternative fuels has the potential to decrease diesel emissions from heavy-duty trucks by 35 to 100 percent at the project-level.

- Truck manufacturers have begun offering diesel electric hybrids for all but the heaviest trucks; gasoline hybrids are available for lighter weight heavy-duty trucks. The availability of propane and natural gas powered trucks is somewhat limited in terms of weight class and usage, although there are some well-established markets for natural gas buses and garbage trucks. Trucks powered by battery or fuel cell hybrid electrics are currently limited to demonstration projects, but when commercialized will present the lowest emission option.

- Prohibit trucks from idling for more than two minutes as feasible. Clear signage to this effect shall be provided for truck drivers.

- Prohibiting trucks from idling for more than two minutes reduces emissions by limiting the amount of time that trucks operate while idling. This measure could apply to all types and sizes of trucks that spend extended periods of time idling when loading and unloading, staging, or when not in active use. Limiting truck idling times has the potential to decrease local diesel idling emissions from heavy-duty trucks by up to 60 percent at the project-level.

- An idling measure can be enforced by ARB, local air quality management districts and local police departments. BAAQMD has an active enforcement program to regulate ARB's five minute idling measure at the Port of Oakland. BAAQMD also responds to idling complaints throughout BAAQMD's jurisdiction, including at sea ports, rail yards, and distribution yards within BAAQMD's designated CARE areas.

- Establish truck routes to avoid residential neighborhoods or other land uses serving sensitive populations. A truck route program, along with truck calming, parking and delivery restrictions, should be implemented to direct traffic activity at non-permitted sources of TAC and/or $PM_{2.5}$ emissions, as well as large construction projects. This strategy can reduce exposure from truck activity, but unlike the measures above, it does not directly reduce emissions of toxic air contaminants and particulate matter.

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Appendix H

Noise Data

Representative Construction Equipment and Levels (LEQ)

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L_{eq} dBA)
threshold	3,873	55.0
Center	5000	52.8
Staging Area	3000	57.2

Equipment	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Jackhammer	85	0.4
Impact Pile Driver	95	0.4
Crane	85	0.16
Dump Truck	84	0.4
Compressor (air)	80	0.4
Front End Loader	80	0.4
Backhoe	80	0.4
Man Lift	85	0.4
Compactor (ground)	80	0.2
Generator	82	0.4
Pumps	77	0.5
Pickup Truck	55	0.4

Ground Type	hard
Source Height	8
Receiver Height	5
Ground Factor[2]	0.00

Predicted Noise Level [3]	L_{eq} dBA at 50 feet[3]
Jackhammer	81.0
Impact Pile Driver	91.0
Crane	77.0
Dump Truck	80.0
Compressor (air)	76.0
Front End Loader	76.0
Backhoe	76.0
Man Lift	81.0
Compactor (ground)	73.0
Generator	78.0
Pumps	74.0
Pickup Truck	51.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
92.8

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[2] Based on Figure 6-5 from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 6-23).

[3] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 12-3).

L_{eq}(equip) = E.L.+10*log (U.F.) - 20*log (D/50) - 10*G*log (D/50)

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects (FTA 2006: pg 6-23); and

D = Distance from source to receiver.

Representative Construction Equipment and Levels (LMAX)

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L_{eq} dBA)
threshold	6,269	55.0
Center	5000	57.0
Staging Area	3000	61.4

Equipment	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Jackhammer	85	1
Impact Pile Driver	95	1
Crane	85	1
Dump Truck	84	1
Compressor (air)	80	1
Front End Loader	80	1
Backhoe	80	1
Man Lift	85	1
Compactor (ground)	80	1
Generator	82	1
Pumps	77	1
Pickup Truck	55	1

Ground Type	hard
Source Height	8
Receiver Height	5
Ground Factor[2]	0.00

Predicted Noise Level [3]	L_{eq} dBA at 50 feet[3]
Jackhammer	85.0
Impact Pile Driver	95.0
Crane	85.0
Dump Truck	84.0
Compressor (air)	80.0
Front End Loader	80.0
Backhoe	80.0
Man Lift	85.0
Compactor (ground)	80.0
Generator	82.0
Pumps	77.0
Pickup Truck	55.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
97.0

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[2] Based on Figure 6-5 from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 6-23).

[3] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 12-3).

L_{eq}(equip) = E.L.+10*log (U.F.) - 20*log (D/50) - 10*G*log (D/50)

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects (FTA 2006: pg 6-23); and

D = Distance from source to receiver.

Equipment Description	Acoustical Usage Factor (%)	Spec 721.560 Lmax @ 50ft (dBA slow)	Actual Measured Lmax @ 50ft (dBA slow)	No. of Actual Data Samples (count)	Spec 721.560 LmaxCalc	Spec 721.560 Leq	Distance	Actual Measured LmaxCalc	Actual Measured Leq
Auger Drill Rig	20	85	84	36	79.0	72.0	100	78.0	71.0
Backhoe	40	80	78	372	74.0	70.0	100	72.0	68.0
Bar Bender	20	80	na	0	74.0	67.0	100		
Blasting	na	94	na	0	88.0		100		
Boring Jack Power Unit	50	80	83	1	74.0	71.0	100	77.0	74.0
Chain Saw	20	85	84	46	79.0	72.0	100	78.0	71.0
Clam Shovel (dropping)	20	93	87	4	87.0	80.0	100	81.0	74.0
Compactor (ground)	20	80	83	57	74.0	67.0	100	77.0	70.0
Compressor (air)	40	80	78	18	74.0	70.0	100	72.0	68.0
Concrete Batch Plant	15	83	na	0	77.0	68.7	100		
Concrete Mixer Truck	40	85	79	40	79.0	75.0	100	73.0	69.0
Concrete Pump Truck	20	82	81	30	76.0	69.0	100	75.0	68.0
Concrete Saw	20	90	90	55	84.0	77.0	100	84.0	77.0
Crane	16	85	81	405	79.0	71.0	100	75.0	67.0
Dozer	40	85	82	55	79.0	75.0	100	76.0	72.0
Drill Rig Truck	20	84	79	22	78.0	71.0	100	73.0	66.0
Drum Mixer	50	80	80	1	74.0	71.0	100	74.0	71.0
Dump Truck	40	84	76	31	78.0	74.0	100	70.0	66.0
Excavator	40	85	81	170	79.0	75.0	100	75.0	71.0
Flat Bed Truck	40	84	74	4	78.0	74.0	100	68.0	64.0
Front End Loader	40	80	79	96	74.0	70.0	100	73.0	69.0
Generator	50	82	81	19	76.0	73.0	100	75.0	72.0
Generator (<25KVA, VMS s	50	70	73	74	64.0	61.0	100	67.0	64.0
Gradall	40	85	83	70	79.0	75.0	100	77.0	73.0
Grader	40	85	na	0	79.0	75.0	100		
Grapple (on Backhoe)	40	85	87	1	79.0	75.0	100	81.0	77.0
Horizontal Boring Hydr. Jac	25	80	82	6	74.0	68.0	100	76.0	70.0
Hydra Break Ram	10	90	na	0	84.0	74.0	100		
Impact Pile Driver	20	95	101	11	89.0	82.0	100	95.0	88.0
Jackhammer	20	85	89	133	79.0	72.0	100	83.0	76.0
Man Lift	20	85	75	23	79.0	72.0	100	69.0	62.0
Mounted Impact Hammer (	20	90	90	212	84.0	77.0	100	84.0	77.0
Pavement Scarafier	20	85	90	2	79.0	72.0	100	84.0	77.0
Paver	50	85	77	9	79.0	76.0	100	71.0	68.0
Pickup Truck	40	55	75	1	49.0	45.0	100	69.0	65.0
Pneumatic Tools	50	85	85	90	79.0	76.0	100	79.0	76.0
Pumps	50	77	81	17	71.0	68.0	100	75.0	72.0
Refrigerator Unit	100	82	73	3	76.0	76.0	100	67.0	67.0
Rivit Buster/chipping gun	20	85	79	19	79.0	72.0	100	73.0	66.0
Rock Drill	20	85	81	3	79.0	72.0	100	75.0	68.0
Roller	20	85	80	16	79.0	72.0	100	74.0	67.0
Sand Blasting (Single Nozzl	20	85	96	9	79.0	72.0	100	90.0	83.0
Scraper	40	85	84	12	79.0	75.0	100	78.0	74.0
Shears (on backhoe)	40	85	96	5	79.0	75.0	100	90.0	86.0
Slurry Plant	100	78	78	1	72.0	72.0	100	72.0	72.0
Slurry Trenching Machine	50	82	80	75	76.0	73.0	100	74.0	71.0
Soil Mix Drill Rig	50	80	na	0	74.0	71.0	100		
Tractor	40	84	na	0	78.0	74.0	100		
Vacuum Excavator (Vac-tru	40	85	85	149	79.0	75.0	100	79.0	75.0
Vacuum Street Sweeper	10	80	82	19	74.0	64.0	100	76.0	66.0
Ventilation Fan	100	85	79	13	79.0	79.0	100	73.0	73.0
Vibrating Hopper	50	85	87	1	79.0	76.0	100	81.0	78.0
Vibratory Concrete Mixer	20	80	80	1	74.0	67.0	100	74.0	67.0
Vibratory Pile Driver	20	95	101	44	89.0	82.0	100	95.0	88.0
Warning Horn	5	85	83	12	79.0	66.0	100	77.0	64.0
Welder / Torch	40	73	74	5	67.0	63.0	100	68.0	64.0

Source:
FHWA Roadway Construction Noise Model, January 2006. Table 9.1
U.S. Department of Transportation
CA/T Construction Spec. 721.560

Distance Propagation Calculations for Stationary Sources of Ground Vibration

KEY: Orange cells are for input.

Grey cells are intermediate calculations performed by the model.

Green cells are data to present in a written analysis (output).

STEP 1: Determine units in which to perform calculation.

— If vibration decibels (VdB), then use Table A and proceed to Steps 2A and 3A.

— If peak particle velocity (PPV), then use Table B and proceed to Steps 2B and 3B.

STEP 2A: Identify the vibration source and enter the reference vibration level (VdB) and distance.

STEP 3A: Select the distance to the receiver.

Table A. Propagation of vibration decibels (VdB) with distance

Noise Source/ID	Reference Noise Level			Attenuated Noise Level at Receptor		
	vibration level (VdB)	@	distance (ft)	vibration level (VdB)	@	distance (ft)
Impact pile driver	112	@	25	71.7	@	550

STEP 2B: Identify the vibration source and enter the reference peak particle velocity (PPV) and distance.

STEP 3B: Select the distance to the receiver.

Table B. Propagation of peak particle velocity (PPV) with distance

Noise Source/ID	Reference Noise Level			Attenuated Noise Level at Receptor		
	vibration level (PPV)	@	distance (ft)	vibration level (PPV)	@	distance (ft)
Impact pile driver	1.518	@	25	0.537	@	50

Notes:

Computation of propagated vibration levels is based on the equations presented on pg. 12-11 of FTA 2006. Estimates of attenuated vibration levels do not account for reductions from intervening underground barriers or other underground structures of any type, or changes in soil type.

Sources:

Federal Transit Association (FTA). 2006 (May). Transit Noise and Vibration Impact Assessment. FTA-VA-90-1003-06. Washington, D.C. Available: <http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf>. Accessed: September 24, 2010.

Baseline (2015)

Project:

Noise Level Descriptor: Ldn
Site Conditions: Soft
Traffic Input: ADT
Traffic K-Factor:

				Input											Output				
		Segment Description and Location				Distance to Directional Centerline, (feet)[4]		Traffic Distribution Characteristics							Ldn,	Distance to Contour, (feet)[3]			
County	Facility Type			ADT	Speed (mph)	Near	Far	% Auto	% Medium	% Heavy	% Day	% Eve	% Night		(dBA)[5,6,7]	70 dBA	65 dBA	60 dBA	55 dBA
Existing Conditions																			
Alameda	Freeway			51,529	60	106	112	91.7%	6.0%	2.3%	64.5%	9.2%	26.3%		75.9	268	577	1243	2678
	Expressway			21,236	50	106	112	96.2%	3.1%	0.7%	62.9%	9.0%	28.1%		69.1	95	205	441	949
	Major Arterial			9,862	30	106	112	88.7%	9.7%	1.6%	65.6%	9.9%	24.5%		61.2	28	60	130	281
	Collector and Other			4,179	18	106	124	90.2%	8.4%	1.3%	66.1%	9.9%	24.0%		54.4	10	22	48	104
Contra Costa	Freeway			38,305	60	106	106	92.1%	6.0%	1.8%	64.5%	9.3%	26.2%		74.6	215	463	997	2148
	Expressway			15,844	55	106	106	95.8%	3.6%	0.6%	62.7%	9.3%	28.0%		69.2	94	203	437	942
	Major Arterial			6,505	35	106	106	91.5%	7.6%	1.0%	65.1%	9.9%	25.0%		60.3	24	52	112	241
	Collector and Other			3,929	18	106	124	91.1%	7.8%	1.1%	65.6%	9.9%	24.4%		53.8	9	20	44	95
Marin	Freeway			32,113	60	106	106	88.3%	7.8%	3.9%	64.6%	9.4%	26.0%		74.5	211	455	980	2111
	Major Arterial			7,166	35	106	106	88.6%	9.9%	1.5%	66.3%	9.8%	23.9%		61.2	27	59	128	275
	Collector and Other			2,523	30	106	118	88.5%	9.8%	1.7%	66.3%	9.7%	24.0%		55.1	11	24	52	113
Napa	Freeway			30,648	63	106	106	91.0%	6.8%	2.1%	64.1%	9.3%	26.5%		74.4	209	451	972	2095
	Expressway			21,145	55	106	112	89.1%	8.4%	2.5%	64.4%	9.4%	26.1%		71.2	130	281	604	1302
	Major Arterial			6,447	35	106	106	90.2%	8.1%	1.7%	64.8%	9.5%	25.7%		60.8	26	56	120	258
	Collector and Other			1,999	30	106	118	91.4%	7.4%	1.2%	64.6%	9.5%	25.9%		53.6	9	19	42	90
San Francisco	Freeway			60,818	45	106	112	85.8%	10.8%	3.4%	66.0%	9.2%	24.8%		73.8	194	418	901	1941
	Expressway			19,001	45	106	112	91.8%	6.2%	1.9%	64.6%	10.4%	24.9%		67.8	78	167	360	776
	Major Arterial			13,348	25	106	112	76.2%	20.2%	3.6%	67.4%	9.5%	23.1%		63.4	40	86	185	398
	Collector and Other			2,823	18	106	118	79.1%	18.5%	2.4%	67.3%	9.8%	22.9%		55.3	12	25	54	116
San Mateo	Freeway			44,271	45	106	112	84.8%	10.3%	4.9%	65.2%	9.5%	25.3%		72.8	168	362	779	1678
	Expressway			23,108	45	106	112	90.4%	8.4%	1.2%	65.1%	9.8%	25.1%		68.7	89	191	412	887
	Major Arterial			7,619	30	106	106	89.6%	9.0%	1.4%	65.9%	9.8%	24.3%		60.0	23	49	105	227
	Collector and Other			3,584	20	106	118	88.9%	9.8%	1.4%	66.3%	9.7%	24.0%		54.3	10	22	47	101
Santa Clara	Freeway			33,725	60	106	106	89.9%	7.7%	2.4%	65.5%	9.2%	25.4%		74.3	204	439	945	2037
	Expressway			23,497	45	106	112	89.1%	9.4%	1.5%	65.3%	9.6%	25.1%		68.9	93	200	430	927
	Major Arterial			9,088	30	106	112	89.2%	9.5%	1.3%	65.9%	9.8%	24.3%		60.6	26	55	119	257
	Collector and Other			4,505	18	106	130	89.4%	9.0%	1.6%	66.4%	9.8%	23.8%		54.9	12	25	54	116
Solano	Freeway			38,814	65	106	106	96.4%	2.7%	0.9%	62.9%	9.0%	28.1%		75.3	240	517	1113	2398
	Expressway			14,106	50	106	106	92.6%	6.0%	1.5%	63.7%	9.6%	26.7%		67.9	77	167	359	774
	Major Arterial			3,952	35	106	106	95.0%	4.4%	0.6%	64.1%	9.5%	26.4%		57.6	16	34	73	158
	Collector and Other			3,817	18	106	124	94.8%	4.6%	0.7%	65.5%	9.9%	24.7%		52.1	7	16	34	74
Sonoma	Freeway			20,654	60	106	106	89.6%	7.3%	3.1%	64.5%	9.3%	26.2%		72.4	153	329	708	1526
	Expressway			23,266	50	106	106	91.5%	5.5%	3.0%	63.8%	9.6%	26.6%		70.5	115	248	534	1150
	Major Arterial			5,561	35	106	106	90.3%	8.1%	1.6%	64.7%	9.7%	25.6%		60.1	23	50	108	232
	Collector and Other			4,370	30	106	118	90.2%	8.3%	1.5%	65.2%	9.7%	25.1%		57.3	16	34	73	158

Proposed Plan (2040)

Project:

Noise Level Descriptor: Ldn
Site Conditions: Soft
Traffic Input: ADT
Traffic K-Factor:

				Input											Output				
		Segment Description and Location				Distance to Directional Centerline, (feet)[4]		Traffic Distribution Characteristics							Ldn,	Distance to Contour, (feet)[3]			
County	Facility Type			ADT	Speed (mph)	Near	Far	% Auto	% Medium	% Heavy	% Day	% Eve	% Night		(dBA)[5,6,7]	70 dBA	65 dBA	60 dBA	55 dBA
Existing Conditions																			
Alameda	Freeway			55,077	60	106	112	91.9%	5.8%	2.3%	64.7%	9.1%	26.2%		76.1	278	600	1292	2783
	Expressway			33,641	50	106	112	95.0%	3.9%	1.1%	63.9%	8.8%	27.3%		71.3	132	285	614	1322
	Major Arterial			12,125	30	106	112	88.7%	9.7%	1.5%	66.0%	9.9%	24.1%		62.0	32	68	147	317
	Collector and Other			5,242	18	106	124	90.8%	8.2%	1.0%	66.4%	9.9%	23.7%		55.0	11	25	53	114
Contra Costa	Freeway			39,472	60	106	106	91.8%	6.2%	2.0%	64.8%	9.3%	25.9%		74.8	220	475	1023	2203
	Expressway			15,138	55	106	106	96.7%	2.8%	0.5%	63.0%	9.5%	27.4%		68.8	89	191	411	886
	Major Arterial			8,251	35	106	106	90.8%	8.2%	1.1%	65.3%	9.9%	24.7%		61.5	29	62	133	287
	Collector and Other			4,776	18	106	124	90.8%	8.1%	1.1%	66.1%	9.9%	24.1%		54.6	11	23	50	108
Marin	Freeway			34,115	60	106	106	89.0%	7.2%	3.8%	64.7%	9.5%	25.8%		74.7	217	467	1007	2170
	Major Arterial			7,733	35	106	106	88.3%	10.1%	1.5%	66.5%	9.8%	23.7%		61.6	29	62	135	290
	Collector and Other			2,641	30	106	118	88.2%	9.8%	2.0%	66.8%	9.6%	23.6%		55.4	12	25	55	118
Napa	Freeway			35,691	63	106	106	90.8%	7.0%	2.2%	64.5%	9.3%	26.2%		75.0	228	491	1058	2279
	Expressway			25,291	55	106	112	88.7%	8.7%	2.6%	64.9%	9.4%	25.7%		72.0	147	317	683	1472
	Major Arterial			7,314	35	106	106	90.0%	8.3%	1.7%	65.1%	9.5%	25.4%		61.3	28	60	130	280
	Collector and Other			2,306	30	106	118	90.7%	8.0%	1.3%	64.9%	9.6%	25.5%		54.4	10	22	47	101
San Francisco	Freeway			64,157	45	106	112	85.5%	11.1%	3.5%	66.5%	9.1%	24.4%		74.0	201	433	933	2011
	Expressway			29,211	45	106	112	92.3%	5.8%	1.9%	62.0%	12.1%	25.9%		69.7	104	224	483	1040
	Major Arterial			15,776	25	106	112	76.2%	20.3%	3.6%	67.8%	9.5%	22.7%		64.1	44	95	205	442
	Collector and Other			4,008	18	106	118	79.1%	18.3%	2.6%	66.0%	10.6%	23.3%		56.9	15	32	69	149
San Mateo	Freeway			44,783	60	106	112	83.8%	11.0%	5.2%	65.6%	9.4%	25.0%		76.2	281	605	1303	2808
	Expressway			28,594	45	106	112	87.7%	10.9%	1.4%	65.4%	10.1%	24.5%		69.9	107	230	496	1068
	Major Arterial			8,845	30	106	106	88.4%	10.1%	1.5%	66.3%	9.8%	23.9%		60.8	26	55	120	258
	Collector and Other			4,192	20	106	118	87.9%	10.8%	1.3%	66.5%	9.7%	23.8%		55.1	11	25	53	114
Santa Clara	Freeway			38,155	60	106	106	89.6%	7.9%	2.5%	65.5%	9.3%	25.2%		74.8	222	478	1029	2218
	Expressway			27,419	45	106	112	88.8%	9.5%	1.7%	65.6%	9.6%	24.9%		69.7	104	223	481	1036
	Major Arterial			11,417	30	106	112	88.8%	9.8%	1.4%	66.2%	9.8%	23.9%		61.6	30	65	140	302
	Collector and Other			5,509	18	106	124	89.7%	9.3%	1.0%	66.8%	9.8%	23.4%		55.4	12	26	56	121
Solano	Freeway			43,255	65	106	106	96.5%	2.6%	0.9%	63.3%	9.0%	27.8%		75.8	257	553	1191	2565
	Expressway			16,850	50	106	112	92.0%	6.4%	1.6%	64.1%	9.6%	26.3%		68.6	88	189	408	879
	Major Arterial			4,815	35	106	106	94.9%	4.5%	0.6%	64.3%	9.4%	26.2%		58.5	18	39	84	180
	Collector and Other			4,509	18	106	124	95.4%	4.2%	0.4%	66.1%	9.8%	24.1%		52.1	7	16	34	74
Sonoma	Freeway			21,762	60	106	106	90.0%	7.0%	3.0%	65.1%	9.1%	25.8%		72.5	155	335	722	1555
	Expressway			27,350	55	106	106	90.7%	6.0%	3.3%	64.4%	9.5%	26.1%		72.5	154	333	717	1545
	Major Arterial			6,582	35	106	106	89.7%	8.5%	1.7%	65.2%	9.7%	25.1%		60.9	26	56	122	262
	Collector and Other			5,138	30	106	118	89.9%	8.3%	1.8%	65.7%	9.7%	24.6%		58.0	18	38	83	178

Baseline + Proposed Plan

Project:

County	Facility Type	Segment Description and Location		Existing Conditions	Existing + Project Conditions	Δ Existing – Existing + Project	Cumulative Conditions	Cumulative +Project Conditions	Δ Cumulative – Cumulative + Project
Summary of Net Changes									
Alameda	Freeway			75.9	76.1	0.2			
	Expressway			69.1	71.3	2.2			
	Major Arterial			61.2	62.0	0.8			
	Collector and Other			54.4	55.0	0.6			
Contra Costa	Freeway			74.6	74.8	0.2			
	Expressway			69.2	68.8	-0.4			
	Major Arterial			60.3	61.5	1.1			
	Collector and Other			53.8	54.6	0.9			
Marin	Freeway			74.5	74.7	0.2			
	Major Arterial			61.2	61.6	0.3			
	Collector and Other			55.1	55.4	0.3			
Napa	Freeway			74.4	75.0	0.5			
	Expressway			71.2	72.0	0.8			
	Major Arterial			60.8	61.3	0.5			
	Collector and Other			53.6	54.4	0.8			
San Francisco	Freeway			73.8	74.0	0.2			
	Expressway			67.8	69.7	1.9			
	Major Arterial			63.4	64.1	0.7			
	Collector and Other			55.3	56.9	1.6			
San Mateo	Freeway			72.8	76.2	3.4			
	Expressway			68.7	69.9	1.2			
	Major Arterial			60.0	60.8	0.8			
	Collector and Other			54.3	55.1	0.8			
Santa Clara	Freeway			74.3	74.8	0.6			
	Expressway			68.9	69.7	0.7			
	Major Arterial			60.6	61.6	1.0			
	Collector and Other			54.9	55.4	0.5			
Solano	Freeway			75.3	75.8	0.4			
	Expressway			67.9	68.6	0.7			
	Major Arterial			57.6	58.5	0.9			
	Collector and Other			52.1	52.1	0.0			
Sonoma	Freeway			72.4	72.5	0.1			
	Expressway			70.5	72.5	1.9			
	Major Arterial			60.1	60.9	0.8			
	Collector and Other			57.3	58.0	0.8			

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Citation	Reference	
1	Caltrans Technical Noise Supplement. 2009 (November). Table (5-11), Pg 5-60.	Caltrans Technical Noise Supplement. 2013 (September). Table (4-2), Pg 4-17.
2	Caltrans Technical Noise Supplement. 2009 (November). Equation (5-26), Pg 5-60.	Caltrans Technical Noise Supplement. 2013 (September). Equation (4-5), Pg 4-17.
3	Caltrans Technical Noise Supplement. 2009 (November). Equation (2-16), Pg 2-32.	NOT THE SAME. Does not exist in 2013 document. Consider revising. Original cita
4	Caltrans Technical Noise Supplement. 2009 (November). Equation (5-11), Pg 5-47, 48.	Does not exist in 2013 document.
5	Caltrans Technical Noise Supplement. 2009 (November). Equation (2-26), Pg 2-55, 56.	Caltrans Technical Noise Supplement. 2013 (September). Equation (2-23), Pg 2-5
6	Caltrans Technical Noise Supplement. 2009 (November). Equation (2-27), Pg 2-57.	Caltrans Technical Noise Supplement. 2013 (September). Equation (2-24), Pg 2-5
7	Caltrans Technical Noise Supplement. 2009 (November). Pg 2-53.	Caltrans Technical Noise Supplement. 2013 (September). Pg 2-57.
8	Caltrans Technical Noise Supplement. 2009 (November). Equation (5-7), Pg 5-45.	Does not exist in 2013 document.
9	Caltrans Technical Noise Supplement. 2009 (November). Equation (5-8), Pg 5-45.	Does not exist in 2013 document.
10	Caltrans Technical Noise Supplement. 2009 (November). Equation (5-9), Pg 5-45.	Does not exist in 2013 document.
11	Caltrans Technical Noise Supplement. 2009 (November). Equation (5-13), Pg 5-49.	Does not exist in 2013 document.
12	Caltrans Technical Noise Supplement. 2009 (November). Equation (5-14), Pg 5-49.	Does not exist in 2013 document.
13	Federal Highway Administration Traffic Noise Model Technical Manual. Report No. FHWA-PD-96-010. 1998 (January). Equation (16), Pg 67	
14	Federal Highway Administration Traffic Noise Model Technical Manual. Report No. FHWA-PD-96-010. 1998 (January). Equation (20), Pg 69	
15	Federal Highway Administration Traffic Noise Model Technical Manual. Report No. FHWA-PD-96-010. 1998 (January). Equation (18), Pg 69	

Appendix I

Geology and Seismicity Data Tables

Table I-1 Transportation Projects within Alquist-Priolo Zones

RTPID	Title	Acres within Alquist-Priolo Zones
Alameda County		**190**
17-01-0020	SR-262 Mission Boulevard Cross Connector Improvements	6
17-01-0029	SR-84/I-680 Interchange Improvements and SR-84 Widening	40
17-01-0034	I-580 Greenville Road Interchange Improvements	20
17-01-0047	I-880 to Mission Boulevard East-West Connector	<1
17-01-0050	SR-84 Mowry Avenue Widening (Peralta Blvd to Mission Blvd)	2
17-01-0055	SR-84 Peralta Boulevard Widening (Fremont Blvd to Mowry Ave)	3
17-01-0058	Irvington BART Station	2
17-10-0005	BART Metro Program + Bay Fair Connector	40
17-10-0058	I-680 Express Lanes: Northbound from SR-84 to SR-237	80
Contra Costa County		**20**
17-02-0021	Reconstruct I-80/San Pablo Dam Road Interchange	4
17-02-0027	Construct Additional Auxiliary Lanes on I-680 - South of I-680/SR-24 Interchange	<1
17-10-0003	San Pablo Avenue BRT	3
17-10-0005	BART Metro Program + Bay Fair Connector	20
Napa County		**20**
17-04-0010	SR29 Gateway	20
San Mateo County		**30**
17-06-0036	Widen Skyline Boulevard (Route 35) to 4-lane roadway from I-280 to Sneath Lane - Phased	30
Solano County		**30**
17-08-0009	I-80/I-680/SR12 Interchange (Packages 2-7)	20
17-08-0011	Provide auxiliary lanes on I-80 in eastbound and westbound directions from I-680 to Airbase Parkway	2
17-10-0061	I-680 Express Lanes: I-80 westbound to I-680 southbound and I-680 northbound to I-80 eastbound direct connectors	6
Sonoma County		**7**
17-09-0014	Farmers Lane extension between Bennett Valley Rd and Yolanda Avenue	7

Notes: Whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100). Figures may not sum due to independent rounding.

Source: CGS 2015; MTC 2016

Table I-2 PDAs within Liquefaction Zones

	PDA Name	Liquefaction Potential (Acres)					
		High	Low	Medium	Very High	Very Low	Water
1	Highway 29 Corridor	0.00	6.99	345.01	0.54	17.62	0.00
2	Highway 29 Corridor	0.00	0.00	4.32	0.00	0.00	0.00
3	Naval Air Station	0.00	0.00	1.61	345.65	0.00	2.55
4	Naval Air Station	0.00	0.00	1.48	398.70	0.00	1.88
5	Naval Air Station	0.00	0.00	2.22	43.10	0.00	0.00
6	Naval Air Station	0.00	0.00	41.41	208.09	0.00	0.12
7	Northern Waterfront	0.00	0.00	0.00	32.30	0.00	0.15
8	Northern Waterfront	0.00	0.00	231.39	58.89	0.00	0.69
9	Northern Waterfront	0.00	0.00	3.68	0.00	0.00	0.00
10	San Pablo & Solano Mixed Use Neighborhood	0.00	32.35	27.13	0.52	17.17	0.00
11	San Pablo & Solano Mixed Use Neighborhood	0.00	1.14	0.91	0.15	0.49	0.00
12	Castro Valley BART	0.00	123.92	120.19	0.00	11.79	0.00
13	Castro Valley BART	0.00	5.54	3.51	0.00	0.00	0.00
14	East 14th Street and Mission Boulevard	0.00	1.09	691.38	3.81	89.90	0.00
15	East 14th Street and Mission Boulevard	0.00	0.00	23.03	0.00	0.82	0.00
16	Hesperian Boulevard	0.91	0.00	430.31	0.49	0.00	0.00
17	Hesperian Boulevard	0.00	0.00	7.04	0.00	0.00	0.00
18	Hesperian Boulevard	0.00	0.00	16.14	0.00	0.00	0.00
19	Meekland Avenue Corridor	0.00	0.00	79.94	0.00	0.00	0.00
20	Meekland Avenue Corridor	0.00	0.00	84.68	0.00	0.00	0.00
21	Meekland Avenue Corridor	0.00	0.00	5.21	0.00	0.00	0.00
22	Meekland Avenue Corridor	0.00	0.00	1.63	0.00	0.00	0.00
23	Hillcrest eBART Station	37.88	100.25	26.07	10.43	27.58	0.00
24	Hillcrest eBART Station	0.00	70.13	0.00	0.00	0.00	0.00
25	Hillcrest eBART Station	7.36	0.57	32.59	1.16	11.54	0.00
26	Hillcrest eBART Station	0.00	55.94	0.00	0.00	0.00	0.00

Table I-2 PDAs within Liquefaction Zones

	PDA Name	Liquefaction Potential (Acres)					
		High	Low	Medium	Very High	Very Low	Water
27	Rivertown Waterfront	15.44	84.19	91.65	15.62	0.00	0.91
28	Rivertown Waterfront	5.78	173.02	22.29	29.28	0.00	0.05
29	Rivertown Waterfront	0.00	0.47	0.57	0.91	0.00	0.00
30	Rivertown Waterfront	1.83	5.98	3.14	3.39	0.00	0.00
31	Villages of Belmont	0.00	6.03	9.24	1.51	16.65	0.00
32	Villages of Belmont	0.00	54.63	171.02	12.82	269.47	0.00
33	Villages of Belmont	0.00	0.00	0.00	0.00	0.15	0.00
34	Villages of Belmont	0.00	0.54	1.16	0.00	11.59	0.00
35	Downtown	0.00	112.33	4.72	22.09	9.29	0.62
36	Downtown	0.00	4.32	0.12	4.57	0.20	0.00
37	Northern Gateway - Benicia's Industrial Park	0.00	586.28	127.70	134.65	617.49	25.38
38	Adeline Street	0.00	25.30	31.83	0.00	0.00	0.00
39	Adeline Street	0.00	3.58	1.53	0.00	0.00	0.00
40	Downtown	0.00	66.22	64.35	3.78	0.07	0.00
41	Downtown	0.00	10.18	4.60	0.54	0.44	0.00
42	San Pablo Avenue	0.00	8.13	91.45	0.94	0.00	0.00
43	San Pablo Avenue	0.00	0.37	4.69	0.10	0.00	0.00
44	South Shattuck	0.00	18.41	0.00	0.00	0.00	0.00
45	South Shattuck	0.00	2.74	0.00	0.00	0.00	0.00
46	Southside/Telegraph Avenue	0.00	187.48	2.30	0.00	10.45	0.00
47	Southside/Telegraph Avenue	0.00	3.61	0.00	0.00	0.00	0.00
48	University Avenue	0.00	34.72	36.13	2.97	0.00	0.00
49	University Avenue	0.00	0.17	2.00	0.25	0.00	0.00
50	Burlingame El Camino Real	0.00	95.18	475.92	33.75	336.41	0.00
51	Burlingame El Camino Real	0.00	3.85	8.62	0.64	4.18	0.00
52	Central Redevelopment Area	0.00	0.00	30.94	0.00	0.00	0.00

Table I-2 PDAs within Liquefaction Zones

	PDA Name	Liquefaction Potential (Acres)					
		High	Low	Medium	Very High	Very Low	Water
53	Central Redevelopment Area	0.00	0.00	203.34	8.60	0.00	2.47
54	Central Redevelopment Area	0.00	0.00	11.64	0.30	0.00	0.25
55	Contra Costa Centre	0.00	0.00	1.21	0.00	0.00	0.00
56	Contra Costa Centre	0.00	0.00	91.70	0.00	2.20	0.00
57	Contra Costa Centre	0.00	0.00	4.79	0.00	0.12	0.00
58	North Richmond	294.28	0.00	262.90	436.59	0.00	21.03
59	North Richmond	43.39	0.00	2.99	30.22	0.00	0.00
60	Pittsburg/Bay Point BART Station	0.00	140.60	32.44	0.00	0.22	1.53
61	Pittsburg/Bay Point BART Station	0.00	130.00	0.00	2.45	13.64	0.47
62	Pittsburg/Bay Point BART Station	0.00	3.63	0.25	0.00	0.00	0.00
63	Pittsburg/Bay Point BART Station	0.00	10.30	0.00	0.00	0.86	0.00
64	Pittsburg/Bay Point BART Station	0.00	34.92	0.00	0.12	37.73	0.00
65	Downtown El Sobrante	0.00	0.00	99.81	4.40	58.64	0.00
66	Downtown El Sobrante	0.00	0.00	2.37	0.00	5.36	0.00
67	El Camino Real	32.54	0.00	1.68	0.00	53.97	1.75
68	El Camino Real	32.57	0.00	4.42	0.00	203.76	0.42
69	El Camino Real	0.07	0.00	0.00	0.00	0.00	0.00
70	El Camino Real	1.83	0.00	0.00	0.00	0.96	0.00
71	El Camino Real	5.61	4.15	1.48	0.00	36.00	0.00
72	El Camino Real	170.65	9.17	26.34	0.00	549.49	0.00
73	El Camino Real	0.05	0.00	0.00	0.00	0.00	0.00
74	El Camino Real	24.88	0.00	2.59	0.00	28.29	0.00
75	El Camino Real (Unincorporated Colma)	0.00	0.00	8.23	0.00	39.76	0.00
76	El Camino Real (Unincorporated Colma)	0.00	0.00	0.49	0.00	0.47	0.00
77	El Camino Real (North Fair Oaks)	0.00	0.00	149.99	0.00	0.00	0.00
78	El Camino Real (North Fair Oaks)	0.00	0.00	366.58	0.00	0.00	0.00

Table I-2 PDAs within Liquefaction Zones

	PDA Name	Liquefaction Potential (Acres)					
		High	Low	Medium	Very High	Very Low	Water
79	El Camino Real (North Fair Oaks)	0.00	0.00	2.59	0.00	0.00	0.00
80	El Camino Real (North Fair Oaks)	0.00	0.00	7.49	0.00	0.00	0.00
81	Downtown/SMART Transit Area	5.31	304.01	0.00	113.12	26.49	4.87
82	Downtown/SMART Transit Area	0.22	26.59	0.00	1.53	7.17	0.00
83	Community Reuse Area/Los Medanos	0.00	219.80	184.39	19.27	6.15	6.77
84	Community Reuse Area/Los Medanos	0.00	20.93	12.60	0.00	21.03	0.00
85	Community Reuse Area/Los Medanos	0.00	131.02	102.87	13.81	155.35	0.00
86	Community Reuse Area/Los Medanos	0.00	8.13	12.85	0.00	150.93	0.00
87	Community Reuse Area/Los Medanos	0.00	555.74	490.68	14.13	193.80	0.00
88	Community Reuse Area/Los Medanos	0.00	44.60	41.44	7.59	257.83	0.00
89	Downtown	0.00	71.39	111.64	0.00	6.03	0.02
90	Downtown	0.00	224.57	20.58	0.00	0.00	0.54
91	Downtown	0.00	5.83	20.68	0.00	3.09	0.00
92	Downtown	0.00	15.10	0.89	0.00	0.00	0.00
93	Downtown and Cotati Depot	0.00	2.08	0.12	0.00	84.61	0.00
94	Downtown and Cotati Depot	0.00	0.00	20.88	0.00	0.00	0.82
95	Downtown and Cotati Depot	0.00	0.00	0.17	0.00	20.14	0.00
96	Downtown and Cotati Depot	0.00	0.00	3.88	0.00	0.00	0.00
97	Mission Boulevard	0.00	11.49	8.80	0.00	648.43	0.00
98	Mission Boulevard	0.00	0.00	0.00	0.00	21.20	0.00
99	Bayshore	0.00	0.00	0.00	0.00	29.08	0.00
100	Bayshore	0.00	155.87	0.00	0.44	180.09	0.30
101	Bayshore	0.00	0.00	0.00	0.00	6.84	0.00
102	Bayshore	0.00	1.56	0.00	0.94	2.47	0.00
103	Downtown	0.00	0.00	423.69	21.33	97.73	0.00
104	Downtown	0.00	0.00	3.63	0.00	0.00	0.00

Table I-2 PDAs within Liquefaction Zones

	PDA Name	Liquefaction Potential (Acres)					
		High	Low	Medium	Very High	Very Low	Water
105	Downtown	0.00	8.33	126.69	0.00	0.00	0.00
106	Downtown	0.00	0.00	3.51	0.00	0.00	0.00
107	Downtown Specific Plan Area	0.00	0.00	14.73	1.01	0.00	0.00
108	Downtown Specific Plan Area	0.00	0.00	267.61	1.68	0.00	0.00
109	Downtown Specific Plan Area	0.00	0.00	15.30	0.00	0.00	0.00
110	Transit Center/Dublin Crossings	0.00	12.33	49.35	0.00	4.82	0.00
111	Transit Center/Dublin Crossings	0.00	1.48	200.16	0.00	0.00	0.00
112	Transit Center/Dublin Crossings	0.00	0.00	11.84	0.00	0.00	0.00
113	Town Center	0.00	0.00	24.74	0.00	71.46	0.35
114	Town Center	0.00	0.00	295.07	7.49	70.05	0.52
115	Town Center	0.00	0.00	2.13	0.00	24.96	0.00
116	Town Center	0.00	0.00	99.68	0.00	79.15	0.00
117	San Pablo Avenue Corridor	0.00	3.46	101.46	0.00	4.35	0.00
118	San Pablo Avenue Corridor	0.00	0.00	9.61	0.00	0.00	0.00
119	San Pablo Avenue Corridor	0.00	63.21	44.55	2.55	11.66	0.00
120	San Pablo Avenue Corridor	0.00	7.44	1.51	0.00	0.02	0.00
121	Mixed-Use Core	0.00	0.00	348.71	156.07	0.00	0.25
122	Mixed-Use Core	0.00	0.00	62.39	16.51	0.00	0.00
123	Ravenswood	0.00	0.00	36.05	288.79	0.00	1.93
124	Ravenswood	0.00	0.00	1.16	9.79	0.00	0.00
125	Downtown South (Jefferson Street)	0.00	0.00	273.08	3.16	0.00	0.00
126	Downtown South (Jefferson Street)	0.00	0.00	12.55	0.00	0.00	0.00
127	Fairfield-Vacaville Train Station	0.00	1064.63	244.58	38.52	1267.67	7.86
128	Fairfield-Vacaville Train Station	0.00	295.81	0.00	0.00	0.00	3.36
129	Fairfield-Vacaville Train Station	0.00	0.07	0.00	0.00	0.00	0.00
130	North Texas Street Core	0.00	0.00	171.44	0.00	0.00	0.00

Table I-2 PDAs within Liquefaction Zones

	PDA Name	Liquefaction Potential (Acres)					
		High	Low	Medium	Very High	Very Low	Water
131	North Texas Street Core	0.00	0.00	10.38	0.00	0.00	0.00
132	West Texas Street Gateway	0.00	0.00	287.93	4.25	0.00	0.00
133	West Texas Street Gateway	0.00	0.00	24.51	0.00	0.00	0.00
134	Centerville	758.59	0.00	299.29	81.35	0.00	0.10
135	Centerville	35.26	0.00	467.30	0.00	0.00	0.05
136	Centerville	15.67	0.00	14.18	0.32	0.00	0.00
137	Centerville	1.61	0.00	21.70	0.00	0.00	0.00
138	City Center	0.00	1.53	460.01	0.00	0.00	0.00
139	City Center	0.00	2.97	403.32	0.00	0.00	2.27
140	City Center	0.00	0.00	69.88	0.00	0.00	0.00
141	City Center	0.00	0.00	121.11	0.00	0.00	0.57
142	Irvington District	0.00	59.90	582.62	4.79	10.33	0.00
143	Irvington District	0.00	198.18	471.77	11.61	11.96	0.00
144	Irvington District	0.00	0.00	4.18	0.00	0.00	0.00
145	Irvington District	0.00	0.00	32.12	0.30	0.00	0.00
146	Warm Springs	0.00	0.00	1163.07	0.00	0.00	0.00
147	Warm Springs	0.00	0.00	353.51	0.00	0.00	0.00
148	Warm Springs	0.00	0.00	50.16	0.00	0.00	0.00
149	Warm Springs	0.00	0.00	61.73	0.00	0.00	0.00
150	Downtown	0.00	34.20	51.60	0.00	0.00	0.00
151	Downtown	0.00	81.47	51.97	0.00	0.00	0.00
152	Downtown	0.00	1.80	6.10	0.00	0.00	0.00
153	Downtown	0.00	12.95	13.94	0.00	0.00	0.00
154	The Cannery	0.00	0.00	18.90	0.00	0.00	0.00
155	The Cannery	0.00	0.00	95.88	0.00	0.00	0.00
156	The Cannery	0.00	0.00	9.32	0.00	0.00	0.00

Table I-2 PDAs within Liquefaction Zones

	PDA Name	Liquefaction Potential (Acres)					
		High	Low	Medium	Very High	Very Low	Water
157	Downtown	0.00	0.00	0.17	0.79	5.19	0.00
158	Downtown	0.00	0.00	252.00	6.08	28.84	0.00
159	Downtown	0.00	0.00	0.00	0.00	1.43	0.00
160	Downtown	0.00	0.00	9.56	0.07	0.05	0.00
161	South Hayward BART	0.00	0.00	53.28	0.00	0.00	0.00
162	South Hayward BART	0.00	0.00	0.27	0.00	0.00	0.00
163	South Hayward BART	0.00	0.00	39.76	0.00	0.99	0.00
164	South Hayward BART	0.00	0.00	96.74	0.00	6.42	0.00
165	South Hayward BART	0.00	0.00	7.12	0.00	0.02	0.00
166	South Hayward BART	0.00	0.00	28.37	0.00	3.76	0.00
167	Mission Boulevard Corridor	0.00	0.00	154.71	0.00	21.00	0.00
168	Mission Boulevard Corridor	0.00	0.00	68.42	0.00	19.87	0.00
169	Mission Boulevard Corridor	0.00	0.00	3.11	0.00	0.15	0.00
170	Mission Boulevard Corridor	0.00	0.00	2.05	0.00	0.25	0.00
171	Central Hercules	0.00	21.23	103.61	3.61	110.88	0.00
172	Central Hercules	0.00	0.32	3.71	0.07	8.62	0.00
173	Waterfront District	0.00	13.27	55.35	2.10	0.00	0.00
174	Waterfront District	0.00	81.08	39.26	50.46	0.00	0.00
175	Waterfront District	0.00	0.57	1.56	0.00	0.00	0.00
176	Waterfront District	0.00	0.00	0.00	0.79	0.00	0.00
177	Downtown	0.00	0.00	66.30	3.81	53.89	0.00
178	Downtown	0.00	0.00	117.75	9.81	41.19	0.00
179	Downtown	0.00	0.00	2.45	0.00	0.57	0.00
180	Downtown	0.00	0.00	5.14	0.15	2.47	0.00
181	Downtown	0.00	0.00	225.09	0.00	0.00	0.00
182	Downtown	0.00	0.00	27.26	0.00	0.00	0.00

Table I-2 PDAs within Liquefaction Zones

	PDA Name	Liquefaction Potential (Acres)					
		High	Low	Medium	Very High	Very Low	Water
183	East Side	6.60	1550.95	295.32	10.90	106.53	1.33
184	East Side	0.00	200.30	85.97	1.36	0.00	0.00
185	East Side	0.00	29.50	0.00	0.00	0.00	0.00
186	East Side	0.00	39.46	0.00	0.00	0.00	0.00
187	Isabel Avenue/BART Station Planning Area	27.92	256.99	360.82	59.70	277.67	0.00
188	Isabel Avenue/BART Station Planning Area	0.00	43.24	94.00	2.57	8.06	0.00
189	Downtown	0.00	0.00	0.00	0.00	1.58	0.00
190	Downtown	0.00	0.86	108.26	32.00	40.25	1.48
191	Downtown	0.00	0.00	1.68	1.16	3.81	0.00
192	Urbanized 101 Corridor	0.00	0.00	0.00	95.21	267.27	0.00
193	Urbanized 101 Corridor	0.00	0.00	0.00	31.63	125.48	0.00
194	Urbanized 101 Corridor	0.00	0.00	0.00	1.61	1.63	0.00
195	Urbanized 101 Corridor	0.00	0.00	0.00	0.40	0.37	0.00
196	El Camino Real Corridor and Downtown	0.00	0.00	128.05	8.18	0.00	0.00
197	El Camino Real Corridor and Downtown	0.00	0.00	22.46	0.00	0.00	0.00
198	Transit Station Area	0.00	0.40	53.37	40.50	125.80	0.00
199	Transit Station Area	0.00	0.00	1.83	11.74	3.78	0.00
200	Downtown	0.00	17.94	4.94	0.00	0.00	0.00
201	Downtown	0.00	52.76	84.31	0.00	5.98	0.00
202	Downtown	0.00	2.79	1.51	0.00	0.00	0.00
203	Downtown	0.00	3.41	8.13	0.00	0.00	0.00
204	Moraga Center	0.00	0.00	93.06	3.24	51.20	0.00
205	Moraga Center	0.00	0.00	15.47	4.03	13.05	0.00
206	Transit Area	0.00	0.00	342.41	0.00	0.00	0.00
207	Transit Area	0.00	0.00	67.01	0.00	0.00	0.00
208	Whisman Station	0.00	0.00	143.17	0.00	0.00	0.00

Table I-2 PDAs within Liquefaction Zones

	PDA Name	Liquefaction Potential (Acres)					
		High	Low	Medium	Very High	Very Low	Water
209	Whisman Station	0.00	0.00	8.45	0.00	0.00	0.00
210	Downtown	0.00	0.00	16.28	0.59	0.00	0.00
211	Downtown	0.00	0.00	581.46	9.32	0.00	0.00
212	Downtown	0.00	0.00	2.59	0.00	0.00	0.00
213	Downtown	0.00	0.00	81.64	0.27	0.00	0.00
214	San Antonio	0.00	106.13	2.72	0.00	0.00	0.00
215	San Antonio	0.00	14.16	0.00	0.00	0.00	0.00
216	El Camino Real	0.00	89.62	167.76	2.94	0.00	0.00
217	El Camino Real	0.00	3.68	21.13	0.49	0.00	0.00
218	North Bayshore	0.00	0.00	134.67	38.99	0.00	0.00
219	North Bayshore	0.00	0.00	315.21	0.00	0.00	0.00
220	North Bayshore	0.00	0.00	22.24	0.00	0.00	0.00
221	North Bayshore	0.00	0.00	139.94	0.00	0.00	0.00
222	Downtown Napa and Soscol Gateway Corridor	242.98	0.00	223.43	6.99	31.28	22.31
223	Downtown Napa and Soscol Gateway Corridor	34.50	0.00	12.97	2.57	0.20	0.00
224	Dumbarton Transit Oriented Development	0.00	0.00	195.11	0.00	7.04	0.00
225	Old Town Mixed Use Area	0.00	0.00	52.29	0.00	0.00	0.00
226	Old Town Mixed Use Area	0.00	0.00	0.44	0.00	0.00	0.00
227	Employment Area	8.77	0.00	563.72	37.76	0.00	13.89
228	Employment Area	0.00	0.00	132.84	0.00	0.00	0.00
229	Downtown	1.90	1.48	142.04	0.00	0.00	0.00
230	Downtown	0.00	0.00	0.62	0.00	0.00	0.00
231	Potential Planning Area	23.25	0.00	196.75	1.01	0.00	0.00
232	Potential Planning Area	0.00	0.00	11.52	0.00	0.00	0.00
233	TOD Corridors - San Antonio/Central Estuary	0.00	0.00	0.84	86.71	0.00	5.16
234	TOD Corridors - San Antonio/Central Estuary	0.00	239.00	239.94	177.54	50.53	4.79

Table I-2 PDAs within Liquefaction Zones

	PDA Name	Liquefaction Potential (Acres)					
		High	Low	Medium	Very High	Very Low	Water
235	TOD Corridors - San Antonio/Central Estuary	0.00	0.00	0.12	58.47	0.00	2.05
236	TOD Corridors - San Antonio/Central Estuary	0.00	10.90	34.89	28.64	0.74	0.07
237	TOD Corridors - International Boulevard	0.00	0.00	840.31	6.52	0.00	0.00
238	TOD Corridors - International Boulevard	0.00	0.00	28.05	0.02	0.00	0.00
239	TOD Corridors	0.00	1.93	450.42	0.02	188.64	0.00
240	TOD Corridors	0.00	202.11	1297.10	57.60	2500.97	7.36
241	TOD Corridors	0.00	0.00	41.17	0.00	0.00	0.00
242	TOD Corridors	0.00	6.20	39.04	0.91	51.05	0.00
243	Coliseum BART Station Area	0.00	0.00	9.69	312.14	0.00	20.02
244	Coliseum BART Station Area	1.16	0.00	539.48	365.72	0.00	16.70
245	Coliseum BART Station Area	0.00	0.00	0.40	1.88	0.00	0.00
246	Coliseum BART Station Area	0.52	0.00	55.13	120.86	0.00	3.41
247	Downtown & Jack London Square	0.00	0.00	0.00	2.08	0.00	0.00
248	Downtown & Jack London Square	0.00	115.25	791.08	267.89	53.08	9.04
249	Downtown & Jack London Square	0.00	0.00	0.00	13.05	0.00	0.12
250	Downtown & Jack London Square	0.00	3.24	38.75	31.09	4.72	0.25
251	Eastmont Town Center	0.00	72.72	494.14	11.12	101.68	0.00
252	Eastmont Town Center	0.00	16.78	33.38	0.07	2.84	0.00
253	Fruitvale and Dimond Areas	0.00	0.00	1.06	14.01	0.00	0.00
254	Fruitvale and Dimond Areas	0.00	26.51	1078.69	49.62	266.63	0.00
255	Fruitvale and Dimond Areas	0.00	0.00	0.12	0.89	0.00	0.00
256	Fruitvale and Dimond Areas	0.00	1.04	71.71	3.53	7.02	0.00
257	MacArthur Transit Village	0.00	32.89	866.23	20.71	172.58	0.07
258	MacArthur Transit Village	0.00	0.69	51.47	0.74	6.28	0.00
259	West Oakland	0.00	0.00	551.27	275.62	0.00	0.00
260	West Oakland	0.00	0.00	742.25	26.22	0.00	0.00

Table I-2 PDAs within Liquefaction Zones

	PDA Name	Liquefaction Potential (Acres)					
		High	Low	Medium	Very High	Very Low	Water
261	West Oakland	0.00	0.00	44.01	29.90	0.00	0.00
262	West Oakland	0.00	0.00	28.00	3.68	0.00	0.00
263	Golden Gate/North Oakland	0.00	0.00	2.89	0.00	0.00	0.00
264	Golden Gate/North Oakland	0.00	0.00	901.19	6.84	0.00	0.00
265	Golden Gate/North Oakland	0.00	0.00	0.30	0.00	0.00	0.00
266	Golden Gate/North Oakland	0.00	0.00	22.96	0.42	0.00	0.00
267	Downtown	0.00	11.14	0.00	2.32	9.27	0.00
268	Downtown	0.00	23.03	0.00	3.09	105.71	0.00
269	Downtown	0.00	0.00	0.00	0.00	0.62	0.00
270	California Avenue	0.00	0.42	114.41	2.17	0.00	0.00
271	California Avenue	0.00	0.00	2.62	0.00	0.00	0.00
272	Central, Turning Basin/Lower Reach	5.71	0.00	96.00	4.57	0.00	3.21
273	Central, Turning Basin/Lower Reach	157.28	0.00	69.41	0.00	0.00	6.28
274	Central, Turning Basin/Lower Reach	0.35	0.00	41.93	0.40	0.00	0.17
275	Central, Turning Basin/Lower Reach	11.47	0.00	5.31	0.00	0.00	0.42
276	Old Town San Pablo Avenue	0.00	13.39	100.82	6.08	116.24	0.00
277	Old Town San Pablo Avenue	0.00	0.00	0.69	0.02	2.79	0.00
278	Appian Way Corridor	0.00	0.44	0.00	0.00	132.74	0.00
279	Appian Way Corridor	0.00	0.00	0.00	0.00	7.81	0.00
280	Railroad Avenue eBART Station	0.00	455.32	53.45	5.66	16.70	0.00
281	Railroad Avenue eBART Station	0.00	484.30	0.00	0.00	0.00	0.00
282	Railroad Avenue eBART Station	0.00	36.70	0.67	0.00	0.15	0.00
283	Railroad Avenue eBART Station	0.00	17.94	0.00	0.00	0.00	0.00
284	Downtown	0.00	298.43	5.86	38.05	45.00	10.50
285	Downtown	0.00	13.49	0.00	0.57	0.67	0.00
286	Hacienda	0.00	0.00	543.75	0.00	0.00	0.00

Table I-2 PDAs within Liquefaction Zones

	PDA Name	Liquefaction Potential (Acres)					
		High	Low	Medium	Very High	Very Low	Water
287	Hacienda	0.00	0.00	196.30	0.00	0.00	0.00
288	Hacienda	0.00	0.00	95.21	0.00	0.00	0.00
289	Hacienda	0.00	0.00	34.17	0.00	0.00	0.00
290	Diablo Valley College	0.00	0.00	18.11	2.64	36.25	0.00
291	Diablo Valley College	0.00	0.00	0.00	0.00	0.77	0.00
292	Buskirk Avenue Corridor	0.00	0.00	295.34	0.00	0.00	0.00
293	Buskirk Avenue Corridor	0.00	0.00	18.73	0.00	0.00	0.00
294	Buskirk Avenue Corridor	0.00	0.00	6.42	0.00	0.00	0.00
295	Central Richmond & 23rd Street Corridor	0.00	111.47	47.32	0.00	114.06	0.00
296	Central Richmond & 23rd Street Corridor	0.00	283.08	44.18	0.00	93.85	0.00
297	Central Richmond & 23rd Street Corridor	0.00	8.99	8.75	0.00	3.98	0.00
298	Central Richmond & 23rd Street Corridor	0.00	38.13	7.09	0.00	12.80	0.00
299	Central Richmond & 23rd Street Corridor	0.00	28.49	11.49	0.00	0.00	0.00
300	Central Richmond & 23rd Street Corridor	0.00	8.48	0.00	0.00	0.00	0.00
301	Central Richmond & 23rd Street Corridor	0.00	1.04	1.53	0.00	0.00	0.00
302	Central Richmond & 23rd Street Corridor	0.00	0.47	0.00	0.00	0.00	0.00
303	South Richmond	0.00	46.13	12.01	319.88	89.67	27.48
304	South Richmond	0.00	315.82	20.14	153.03	167.56	0.59
305	South Richmond	0.00	20.63	38.08	39.14	123.97	23.47
306	South Richmond	0.00	7.64	0.37	10.63	4.60	0.07
307	Sonoma Mountain Village	0.00	0.07	77.54	0.00	1.31	0.00
308	Sonoma Mountain Village	0.00	0.00	98.59	0.00	0.00	0.00
309	Sonoma Mountain Village	0.00	0.00	0.10	0.00	0.00	0.00
310	Central Rohnert Park	0.00	0.00	321.73	0.00	0.00	0.00
311	Central Rohnert Park	0.00	0.00	40.23	0.00	0.00	0.00
312	Central Rohnert Park	0.00	0.00	37.26	0.00	0.00	0.00

Table I-2 PDAs within Liquefaction Zones

	PDA Name	Liquefaction Potential (Acres)					
		High	Low	Medium	Very High	Very Low	Water
313	Central Rohnert Park	0.00	0.00	5.88	0.00	0.00	0.00
314	Downtown	0.00	0.00	145.47	24.88	0.00	0.32
315	Downtown	0.00	0.00	17.22	3.78	0.00	0.00
316	Broadway/Veterens Boulevard Corridor	0.00	0.00	218.84	144.56	0.00	0.74
317	Broadway/Veterens Boulevard Corridor	0.00	0.00	6.77	42.85	0.00	0.10
318	Broadway/Veterens Boulevard Corridor	0.00	0.00	2.05	1.95	0.00	0.00
319	Broadway/Veterens Boulevard Corridor	0.00	0.00	5.07	4.25	0.00	0.00
320	El Camino Real Corridor	0.00	0.00	25.67	0.25	0.00	0.00
321	El Camino Real Corridor	0.00	0.00	137.24	2.08	0.00	0.00
322	El Camino Real Corridor	0.00	0.00	0.12	0.10	0.00	0.00
323	El Camino Real Corridor	0.00	0.00	13.07	0.00	0.00	0.00
324	City Center	0.00	0.00	427.20	8.18	0.00	0.00
325	City Center	0.00	0.00	20.36	0.00	0.00	0.00
326	North Camino Ramon	0.00	0.00	242.14	0.00	1.95	0.00
327	North Camino Ramon	0.00	0.00	58.22	0.00	0.00	0.00
328	Transit Corridors	0.00	0.00	0.00	0.00	15.69	0.00
329	Transit Corridors	0.00	1.58	44.11	29.43	712.85	0.00
330	Transit Corridors	0.00	0.00	0.00	0.00	14.28	0.00
331	Transit Corridors	0.00	0.00	0.27	0.37	45.62	0.00
332	Railroad Corridor	0.00	0.00	52.56	0.00	13.07	0.00
333	Railroad Corridor	0.00	0.12	3.41	0.00	0.00	0.00
334	El Camino Real Focus Area	0.00	0.00	260.25	0.00	0.00	0.00
335	El Camino Real Focus Area	0.00	0.00	56.27	0.00	0.00	0.00
336	Santa Clara Station Focus Area	0.00	0.00	235.79	0.00	0.00	0.00
337	Santa Clara Station Focus Area	0.00	0.00	19.74	0.00	0.00	0.00
338	Core Area	10.45	20.09	78.83	6.35	559.99	4.18

Table I-2 PDAs within Liquefaction Zones

	PDA Name	Liquefaction Potential (Acres)					
		High	Low	Medium	Very High	Very Low	Water
339	Core Area	0.49	0.25	1.93	0.00	20.83	0.00
340	Bayview/Hunters Point Shipyard/Candlestick Point	0.00	0.00	0.00	5.86	0.07	1.01
341	Bayview/Hunters Point Shipyard/Candlestick Point	0.00	103.91	267.84	640.03	1064.40	2.05
342	Bayview/Hunters Point Shipyard/Candlestick Point	0.00	0.00	0.00	25.48	0.00	0.96
343	Bayview/Hunters Point Shipyard/Candlestick Point	0.00	13.62	7.51	607.71	88.96	5.07
344	19th Avenue	2.15	0.07	0.00	0.00	39.86	0.00
345	19th Avenue	36.57	43.29	6.10	0.00	925.66	0.00
346	19th Avenue	0.00	0.00	0.00	0.00	0.54	0.00
347	19th Avenue	0.10	11.71	0.00	0.00	97.09	0.00
348	Market-Octavia/Upper Market	0.00	0.00	188.29	113.32	109.10	0.00
349	Market-Octavia/Upper Market	0.00	0.00	6.52	2.97	5.12	0.00
350	Mission-San Jose Corridor	0.02	49.45	0.00	36.87	1692.52	0.27
351	Mission-San Jose Corridor	0.00	0.22	0.00	0.89	20.16	0.00
352	Balboa Park	0.00	2.59	0.00	0.00	201.49	0.00
353	Balboa Park	0.00	0.00	0.00	0.00	3.78	0.00
354	Downtown-Van Ness-Geary	0.00	21.30	935.39	535.50	782.04	0.00
355	Downtown-Van Ness-Geary	0.00	0.47	35.51	24.34	21.82	0.00
356	Eastern Neighborhoods	0.00	6.35	247.90	962.97	927.41	0.00
357	Eastern Neighborhoods	0.00	0.00	12.78	67.29	65.61	0.00
358	Mission Bay	0.00	0.00	7.46	197.76	1.95	0.00
359	Mission Bay	0.00	0.00	5.19	75.64	2.17	0.00
360	Port of San Francisco	0.00	0.00	0.00	73.59	0.00	1.11
361	Port of San Francisco	0.00	0.00	4.25	609.61	11.64	10.28
362	Port of San Francisco	0.00	0.00	0.07	49.27	0.00	3.76
363	Transit Center District	0.00	0.00	7.88	125.43	2.27	0.00
364	Transit Center District	0.00	0.00	0.00	14.08	0.00	0.00

Table I-2 PDAs within Liquefaction Zones

	PDA Name	Liquefaction Potential (Acres)					
		High	Low	Medium	Very High	Very Low	Water
365	Treasure Island & Yerba Buena Island	0.00	0.00	0.00	10.30	60.71	1.63
366	Treasure Island & Yerba Buena Island	0.00	0.00	0.00	323.71	58.44	1.51
367	Treasure Island & Yerba Buena Island	0.00	0.00	0.00	0.00	5.81	0.20
368	Treasure Island & Yerba Buena Island	0.00	0.00	0.00	83.84	8.40	0.32
369	San Francisco/San Mateo Bi-County Area	0.00	1.66	0.00	371.40	48.09	0.57
370	San Francisco/San Mateo Bi-County Area	0.00	3.39	0.00	134.08	3.14	0.00
371	San Francisco/San Mateo Bi-County Area	0.00	3.83	0.00	54.61	0.96	0.00
372	San Francisco/San Mateo Bi-County Area	0.00	26.00	0.00	25.13	277.80	1.21
373	San Francisco/San Mateo Bi-County Area	0.00	5.34	0.00	0.37	36.62	0.00
374	Greater Downtown	0.00	0.00	615.96	18.29	0.00	0.00
375	Greater Downtown	0.00	0.00	48.75	0.42	0.00	0.00
376	Oakridge/Almaden Plaza Urban Village	0.00	1.56	64.59	0.00	0.00	0.00
377	Oakridge/Almaden Plaza Urban Village	9.49	0.00	138.06	64.37	0.74	0.12
378	Oakridge/Almaden Plaza Urban Village	0.00	0.00	32.77	0.00	0.00	0.00
379	Oakridge/Almaden Plaza Urban Village	0.00	0.00	51.97	15.77	0.00	0.12
380	Capitol/Tully/King Urban Villages	0.00	0.00	101.14	0.00	0.00	0.00
381	Capitol/Tully/King Urban Villages	0.00	0.00	113.47	0.00	0.00	0.00
382	Capitol/Tully/King Urban Villages	0.00	0.00	20.24	0.00	0.00	0.00
383	Capitol/Tully/King Urban Villages	0.00	0.00	18.73	0.00	0.00	0.00
384	Saratoga TOD Corridor	0.00	0.00	137.44	0.00	0.00	0.00
385	Saratoga TOD Corridor	0.00	0.00	17.87	0.00	0.00	0.00
386	Saratoga TOD Corridor	0.00	0.00	2.97	0.00	0.00	0.00
387	Winchester Boulevard TOD Corridor	0.00	0.00	256.27	0.00	0.00	0.00
388	Winchester Boulevard TOD Corridor	0.00	0.00	4.87	0.00	0.00	0.00
389	Winchester Boulevard TOD Corridor	0.00	0.00	37.88	0.00	0.00	0.00
390	Bascom TOD Corridor	0.00	0.00	0.64	0.00	0.00	0.00

Table I-2 PDAs within Liquefaction Zones

	PDA Name	Liquefaction Potential (Acres)					
		High	Low	Medium	Very High	Very Low	Water
391	Bascom TOD Corridor	0.00	0.00	202.75	0.00	0.00	0.00
392	Bascom TOD Corridor	0.00	0.00	10.60	0.00	0.00	0.00
393	Bascom Urban Village	0.00	67.41	32.30	1.06	0.00	0.00
394	Bascom Urban Village	0.00	10.38	3.04	0.02	0.00	0.00
395	Camden Urban Village	0.00	67.73	0.00	0.00	0.00	0.00
396	Camden Urban Village	0.00	40.92	0.00	0.00	0.00	0.00
397	Blossom Hill/Snell Urban Village	0.00	0.00	56.71	0.00	0.00	0.00
398	Blossom Hill/Snell Urban Village	0.00	0.00	7.09	0.00	0.00	0.00
399	Capitol Corridor Urban Villages	0.00	46.13	125.90	0.00	0.00	0.00
400	Capitol Corridor Urban Villages	0.00	0.64	26.61	0.00	0.00	0.00
401	Westgate/El Paseo Urban Village	0.00	0.00	168.13	0.00	0.00	0.00
402	Westgate/El Paseo Urban Village	0.00	0.00	9.37	0.00	0.00	0.00
403	Cottle Transit Village (Hitachi)	0.00	0.00	150.19	0.00	0.00	0.00
404	Cottle Transit Village (Hitachi)	0.00	0.00	45.52	0.00	0.00	0.00
405	North San Jose	416.69	0.00	644.10	654.70	0.00	4.20
406	North San Jose	796.25	0.00	1488.17	463.47	0.00	20.81
407	North San Jose	93.80	0.00	31.83	47.20	0.00	0.00
408	North San Jose	115.10	0.00	192.91	52.61	0.00	1.95
409	Downtown "Frame"	0.00	0.00	148.07	0.07	0.00	0.00
410	Downtown "Frame"	0.00	0.00	2045.02	43.52	0.00	0.00
411	Downtown "Frame"	0.00	0.00	14.11	0.00	0.00	0.00
412	Downtown "Frame"	0.00	0.00	194.57	0.00	0.00	0.00
413	Berryessa Station	32.12	0.00	157.83	5.36	0.00	0.00
414	Berryessa Station	41.61	0.00	263.51	38.80	0.00	0.00
415	Berryessa Station	0.57	0.00	17.22	0.05	0.00	0.00
416	Berryessa Station	12.08	0.00	82.98	11.64	0.00	0.00

Table I-2 PDAs within Liquefaction Zones

	PDA Name	Liquefaction Potential (Acres)					
		High	Low	Medium	Very High	Very Low	Water
417	Communications Hill	0.00	0.00	139.12	0.00	373.89	0.96
418	Communications Hill	0.00	0.25	818.68	0.00	239.79	0.00
419	Communications Hill	0.00	0.00	0.12	0.00	0.32	0.00
420	Communications Hill	0.00	0.00	0.07	0.00	0.00	0.00
421	West San Carlos and Southwest Expressway Corridors	0.00	0.00	1247.09	15.84	0.00	0.00
422	West San Carlos and Southwest Expressway Corridors	0.00	0.00	80.83	1.56	0.00	0.00
423	East Santa Clara/Alum Rock Corridor	2.45	0.00	44.13	1.88	0.00	0.00
424	East Santa Clara/Alum Rock Corridor	0.00	50.98	704.30	15.05	0.00	0.00
425	East Santa Clara/Alum Rock Corridor	0.00	0.00	3.85	0.00	0.00	0.00
426	East Santa Clara/Alum Rock Corridor	0.00	6.77	68.23	0.02	0.00	0.00
427	Stevens Creek TOD Corridor	0.00	0.00	203.07	3.19	0.00	0.00
428	Stevens Creek TOD Corridor	0.00	0.00	51.20	1.24	0.00	0.00
429	Bay Fair BART Village	0.00	0.00	0.10	0.00	0.00	0.00
430	Bay Fair BART Village	0.00	0.00	128.94	0.00	0.00	0.00
431	Bay Fair BART Village	0.00	0.00	39.34	0.00	0.00	0.00
432	East 14th Street	0.00	0.00	141.22	0.00	0.00	0.00
433	East 14th Street	0.00	0.00	5.09	0.00	0.00	0.00
434	Downtown Transit Oriented Development	0.00	0.00	480.55	13.79	0.00	0.00
435	Downtown Transit Oriented Development	0.00	0.00	23.20	0.00	0.00	0.00
436	Downtown	0.00	64.77	22.46	4.74	0.00	0.00
437	Downtown	0.00	5.44	3.41	1.38	0.00	0.00
438	Rail Corridor	0.00	0.00	0.00	84.29	0.00	0.00
439	Rail Corridor	0.00	0.00	135.51	140.97	0.00	0.00
440	Rail Corridor	0.00	0.00	0.00	22.83	0.00	0.00
441	Rail Corridor	0.00	0.00	87.62	26.79	0.00	0.00
442	El Camino Real	0.00	19.84	65.98	0.99	5.41	0.00

Table I-2 PDAs within Liquefaction Zones

	PDA Name	Liquefaction Potential (Acres)					
		High	Low	Medium	Very High	Very Low	Water
443	El Camino Real	0.00	2.57	42.40	1.80	1.31	0.00
444	Grand Boulevard Initiative	0.00	0.00	0.00	0.02	0.00	0.00
445	Grand Boulevard Initiative	0.00	338.51	381.65	49.69	206.58	0.00
446	Grand Boulevard Initiative	0.00	8.97	17.03	2.62	2.72	0.00
447	San Pablo Avenue & 23rd Street Corridors	0.00	0.00	4.97	0.00	0.00	0.00
448	San Pablo Avenue & 23rd Street Corridors	7.83	0.54	79.72	84.16	95.31	0.00
449	San Pablo Avenue & 23rd Street Corridors	0.05	0.00	3.63	2.10	5.54	0.00
450	Rumrill Boulevard	0.00	0.00	35.51	19.64	0.00	0.00
451	Rumrill Boulevard	0.00	0.00	0.15	0.00	0.00	0.00
452	Downtown	0.00	0.12	0.42	0.00	0.00	0.00
453	Downtown	0.00	18.56	176.68	189.95	92.94	1.43
454	Downtown	0.00	0.00	0.07	0.00	0.00	0.00
455	Downtown	0.00	0.17	3.53	10.97	1.06	0.10
456	Downtown Station Area	0.00	0.00	209.20	3.78	0.00	0.00
457	Downtown Station Area	0.00	0.00	407.65	12.58	0.00	0.00
458	Downtown Station Area	0.00	0.00	26.17	0.82	0.00	0.00
459	Downtown Station Area	0.00	0.00	16.88	0.00	0.00	0.00
460	Mendocino Avenue/Santa Rosa Avenue Corridor	0.00	0.00	1005.12	2.20	337.15	0.00
461	Mendocino Avenue/Santa Rosa Avenue Corridor	0.00	0.00	64.87	0.00	37.26	0.00
462	Sebastopol Road Corridor	0.00	8.28	564.02	0.00	227.71	0.00
463	Sebastopol Road Corridor	0.00	0.00	38.35	0.00	0.00	0.00
464	Sebastopol Road Corridor	0.00	0.00	39.93	0.00	7.09	0.00
465	Sebastopol Road Corridor	0.00	0.00	1.63	0.00	0.00	0.00
466	North Santa Rosa Station	0.00	66.13	324.75	0.00	77.54	0.00
467	North Santa Rosa Station	0.00	0.00	371.60	0.00	114.26	0.00
468	North Santa Rosa Station	0.00	0.30	16.90	0.00	2.10	0.00

Table I-2 PDAs within Liquefaction Zones

	PDA Name	Liquefaction Potential (Acres)					
		High	Low	Medium	Very High	Very Low	Water
469	North Santa Rosa Station	0.00	0.00	12.36	0.00	3.19	0.00
470	Roseland	0.00	11.07	820.04	0.00	541.01	0.00
471	Roseland	0.00	0.00	52.73	0.00	29.55	0.00
472	Downtown	0.00	0.44	1.43	0.00	23.15	0.00
473	Downtown	0.00	0.02	8.08	5.07	146.71	0.00
474	Downtown	0.00	0.00	0.00	0.00	0.17	0.00
475	Downtown	0.00	0.02	0.32	0.00	6.82	0.00
476	Downtown & Waterfront	0.00	0.00	45.12	308.54	0.00	3.36
477	Downtown & Waterfront	0.00	0.00	0.00	8.99	0.00	0.05
478	Lawrence Station Transit Village	0.00	0.00	81.47	0.00	0.00	0.00
479	Lawrence Station Transit Village	0.00	0.00	201.27	0.00	0.00	0.00
480	Lawrence Station Transit Village	0.00	0.00	0.52	0.00	0.00	0.00
481	Lawrence Station Transit Village	0.00	0.00	73.39	0.00	0.00	0.00
482	Downtown & Caltrain Station	0.00	0.00	2.69	0.00	0.00	0.00
483	Downtown & Caltrain Station	0.00	0.00	235.74	0.00	0.00	0.00
484	Downtown & Caltrain Station	0.00	0.00	35.34	0.00	0.00	0.00
485	El Camino Real Corridor	0.00	119.18	245.89	0.00	0.00	0.00
486	El Camino Real Corridor	0.00	14.31	32.57	0.00	0.00	0.00
487	East Sunnyvale	0.00	0.00	422.62	0.00	0.00	0.00
488	East Sunnyvale	0.00	0.00	36.70	0.00	0.00	0.00
489	Tasman Crossing	0.00	0.00	6.47	0.00	0.00	0.00
490	Tasman Crossing	0.00	0.00	159.70	0.00	0.00	0.00
491	Tasman Crossing	0.00	0.00	1.80	0.00	0.00	0.00
492	Tasman Crossing	0.00	0.00	28.86	0.00	0.00	0.00
493	Intermodal Station District	0.00	0.00	14.78	0.00	0.00	0.00
494	Intermodal Station District	0.00	0.00	84.09	0.00	0.00	0.00

Table I-2 PDAs within Liquefaction Zones

	PDA Name	Liquefaction Potential (Acres)					
		High	Low	Medium	Very High	Very Low	Water
495	Intermodal Station District	0.00	0.00	42.58	0.00	0.00	1.53
496	Downtown	0.00	0.00	109.94	5.86	50.14	0.00
497	Downtown	0.00	0.00	1.41	0.00	0.07	0.00
498	Allison Area	0.00	0.00	121.21	39.22	18.11	0.00
499	Allison Area	0.00	0.00	8.80	2.45	20.31	0.00
500	Waterfront & Downtown	0.00	0.00	15.10	23.85	1.09	0.15
501	Waterfront & Downtown	0.00	17.84	0.00	48.83	75.76	0.79
502	Waterfront & Downtown	0.00	4.08	0.00	0.07	9.17	0.00
503	Sonoma Boulevard	0.00	4.42	0.91	60.24	2.72	0.00
504	Sonoma Boulevard	0.00	6.30	0.00	15.32	14.01	0.00
505	Sonoma Boulevard	0.00	0.02	0.00	3.14	0.00	0.00
506	Sonoma Boulevard	0.00	0.15	0.00	1.16	0.44	0.00
507	Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas	0.00	77.39	0.00	0.00	0.00	0.00
508	Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas	0.00	327.09	110.97	1.61	0.00	0.00
509	Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas	0.00	4.37	0.00	0.00	0.00	0.00
510	Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas	0.00	10.50	18.48	2.10	0.00	0.00
511	Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas	0.00	243.42	16.70	0.00	6.03	0.00
512	Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas	0.00	7.07	0.00	0.00	0.00	0.00
513	Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas	0.00	41.88	0.00	0.00	0.00	0.00
514	Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas	0.00	0.64	0.00	0.00	0.00	0.00
515	Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas	0.00	0.00	8.57	0.00	0.00	0.00
516	Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas	0.00	0.00	107.07	0.00	0.00	0.00
517	Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas	0.00	0.00	5.07	0.00	0.00	0.00
518	Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas	23.45	1.51	1353.07	7.76	96.49	0.49
519	Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas	2.30	82.36	1880.59	12.43	17.96	3.11
520	Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas	0.00	0.00	55.10	0.00	0.44	0.00

Table I-2 PDAs within Liquefaction Zones

	PDA Name	Liquefaction Potential (Acres)					
		High	Low	Medium	Very High	Very Low	Water
521	Santa Clara Valley Transportation Authority City Cores, Corridors & Station Areas	0.00	9.02	80.28	5.46	3.58	0.00
522	Core Area	0.00	0.00	249.30	9.61	163.88	0.00
523	Core Area	0.00	0.00	50.41	0.00	223.23	0.00
524	Core Area	0.00	0.00	31.78	1.68	18.41	0.00
525	Core Area	0.00	0.00	2.22	0.00	41.17	0.00
526	West Contra Costa Transportation Advisory Committee San Pablo Avenue Corridor	0.00	46.85	32.84	65.48	182.76	0.02
527	West Contra Costa Transportation Advisory Committee San Pablo Avenue Corridor	0.00	1.80	2.72	3.58	9.49	0.00
528	West Contra Costa Transportation Advisory Committee San Pablo Avenue Corridor	0.00	0.00	0.00	0.00	118.91	0.00
529	West Contra Costa Transportation Advisory Committee San Pablo Avenue Corridor	0.00	15.47	18.93	0.00	47.67	0.00
530	West Contra Costa Transportation Advisory Committee San Pablo Avenue Corridor	0.00	2.82	4.55	0.00	5.51	0.00
531	West Contra Costa Transportation Advisory Committee San Pablo Avenue Corridor	0.00	6.18	14.26	0.27	43.66	0.00
532	West Contra Costa Transportation Advisory Committee San Pablo Avenue Corridor	0.00	1.38	5.71	0.00	2.55	0.00
533	Station Area/Downtown Specific Plan Area	0.00	13.24	29.55	0.47	3.66	0.00
534	Station Area/Downtown Specific Plan Area	0.00	0.00	73.37	6.77	226.97	0.00
535	Station Area/Downtown Specific Plan Area	0.00	0.00	0.32	0.00	0.00	0.00
536	Station Area/Downtown Specific Plan Area	0.00	0.00	19.64	0.17	14.28	0.00

Table I-3 Transportation Projects within Liquefaction Zones

RTPID	Title	Liquefaction Zone (Acres)						
		Very Low	Low	Medium	High	Very High	Water	Not Mapped
Alameda County		**380**	**240**	**2,000**	**60**	**850**	**10**	
17-01-0009	New Alameda Point Ferry Terminal					2	2	
17-01-0015	7th Street Grade Separation East					<1		
17-01-0016	Oakland Army Base Transportation Infrastructure Improvements					350	<1	
17-01-0017	Outer Harbor Intermodal Terminal (OHIT) Phases 2 and 3					170	<1	
17-01-0018	7th Street Grade Separation West					6		
17-01-0020	SR-262 Mission Boulevard Cross Connector Improvements			20				
17-01-0021	I-880 Whipple Road Interchange Improvements			20				
17-01-0023	I-880 Industrial Parkway Interchange Reconstruction			20				
17-01-0024	I-880 A Street Interchange Reconstruction			20				
17-01-0025	Oakland International Airport Perimeter Dike			20		7	1	
17-01-0027	Middle Harbor Road Improvements			2		50	<1	
17-01-0028	I-580/I-680 Interchange Improvement Project			13				
17-01-0029	SR-84/I-680 Interchange Improvements and SR-84 Widening	50	9	60		4		
17-01-0030	I-880 Broadway/Jackson Interchange Improvements			10				
17-01-0031	I-880 at 23rd/29th Avenue Interchange Improvements			40				
17-01-0032	SR-84 Widening (Ruby Hill Drive to Concannon Boulevard)	9	10	20	6	6		
17-01-0033	I-580 Vasco Road Interchange Improvements		<1	20				
17-01-0034	I-580 Greenville Road Interchange Improvements		10	6				
17-01-0035	I-580 First Street Interchange Improvements	10		7				
17-01-0036	SR-92/Clawiter Road/Whitesell Street Interchange Improvements			20				
17-01-0037	Ashby I-80 Interchange with Bicycle and Pedestrian Ramps					20		
17-01-0038	I-580 Interchange Improvement at Hacienda/Fallon Road - Phase 2			20				
17-01-0039	I-580 SR-84/Isabel Interchange Improvements Phase 2		10	5		<1		
17-01-0040	I-80 Gilman Street Interchange Improvements			1		20		
17-01-0041	I-880 Winton Avenue Interchange Improvements			20				

Table I-3 Transportation Projects within Liquefaction Zones

RTPID	Title	Liquefaction Zone (Acres)						
		Very Low	Low	Medium	High	Very High	Water	Not Mapped
17-01-0042	I-680 Overcrossing Widening and Improvements at Stoneridge Drive			4				
17-01-0043	42nd Ave & High St Access Improvement at I-880 On/Off Ramp			20		<1		
17-01-0044	I-680 Sunol Interchange Modification	20						
17-01-0045	Santa Rita Road I-580 Overcrossing Widening			4				
17-01-0046	Coliseum City Transit Hub			<1		1		
17-01-0047	I-880 to Mission Boulevard East-West Connector			20	30	30	1	
17-01-0048	Dublin Boulevard - North Canyons Parkway Extension	8	5	20		<1		
17-01-0049	Fruitvale Avenue (Miller Sweeney) Lifeline Bridge Project						<1	
17-01-0050	SR-84 Mowry Avenue Widening (Peralta Blvd to Mission Blvd)			20				
17-01-0051	Tassajara Road Widening from N. Dublin Ranch Drive to City Limit	9		10				
17-01-0053	Dougherty Road Widening		10	10	3	<1		
17-01-0052	Auto Mall Parkway Widening and Improvements			30		<1		
17-01-0054	Union City Boulevard Widening (Whipple to City Limit)			5			<1	
17-01-0055	SR-84 Peralta Boulevard Widening (Fremont Blvd to Mowry Ave)			40				
17-01-0056	Thornton Avenue Widening (Gateway Boulevard to Hickory Street)			20				
17-01-0057	Dublin Boulevard Widening - Sierra Court_to Dublin Court			5				
17-01-0058	Irvington BART Station			3				
17-01-0059	Union City Intermodal Station Phase 4			3				
17-01-0060	East Bay BRT		30	130		7		
17-02-0027	Construct Additional Auxiliary Lanes on I-680 - South of I-680/SR-24 Interchange			<1				
17-02-0033	Widen Camino Tassajara Road, Windemere to County Line	<1						
17-10-0003	San Pablo Avenue BRT		10	120		1		
17-10-0005	BART Metro Program + Bay Fair Connector	180680	100	1,000	10	120	4	
17-10-0041	Central Bay Ferry Service Enhancement					<1		
17-10-0042	Albany/Berkeley Ferry Terminal					<1	<1	

Table I-3 Transportation Projects within Liquefaction Zones

RTPID	Title	Liquefaction Zone (Acres)						
		Very Low	Low	Medium	High	Very High	Water	Not Mapped
17-10-0057	I-880 Express Lanes: Northbound from Hegenberger to Lewelling and bridge improvements			120	6	2		
17-10-0058	I-680 Express Lanes: Northbound from SR-84 to SR-237	100	30	100		<1		
17-10-0064	Hayward Maintenance Complex Phase 1			3				
Contra Costa County		**680**	**660**	**620**	**3**	**40**	**330**	**8**
17-01-0053	Dougherty Road Widening			<1				
17-02-0012	I-680 Northbound Managed Lane Completion through 680/24 and Operational Improvements between N. Main and Treat Blvd	70		40		<1		
17-02-0013	I-680 Northbound HOV lane extension between N. Main and SR-242	<1		70				
17-02-0014	Kirker Pass Road Northbound Truck Climbing Lane, Clearbrook Drive to Crest of Kirker Pass Road	20	4					
17-02-0015	Vasco Road Byron Highway Connector Road (Formerly named: SR-239: Airport Connector)	9	40			2		
17-02-0016	Construct SR 242/Clayton Road on and off-ramps			20				
17-02-0019	I-680/SR4 Interchange Improvements - Phases 1-3		20	<1				
17-02-0020	SR-4 Operational Improvements - Initial Phases	40	20	3		<1		
17-02-0021	Reconstruct I-80/San Pablo Dam Road Interchange	20						
17-02-0022	I-680 Southbound HOV Lane between N. Main and Livorna	20		20		<1		
17-02-0023	State Route 4 Widening and Balfour Road IC Construction	20		30		<1		
17-02-0024	I-80/SR-4 Interchange Improvements - New Eastbound Willow Avenue Ramps	<1	1	20				
17-02-0026	I-80/Central Avenue Interchange Modification - Phases 1 & 2	7	1	6		4		
17-02-0027	Construct Additional Auxiliary Lanes on I-680 - South of I-680/SR-24 Interchange	80	3	60		4		
17-02-0028	I-80 Eastbound and Westbound Pinole Valley Road On-ramp Improvement	5	3	9				
17-02-0029	Eastbound SR-24: Construct Auxiliary Lane, Wilder Road to Camino Pablo	10	10					

Table I-3 Transportation Projects within Liquefaction Zones

RTPID	Title	Liquefaction Zone (Acres)						
		Very Low	Low	Medium	High	Very High	Water	Not Mapped
17-02-0030	Widen Brentwood Boulevard - Havenwood Way to north city limit; and Chestnut to Fir		<1	20	3	<1		
17-02-0031	Widen Willow Pass Road, Lynwood Drive to SR 4	10	10	6		<1		
17-02-0032	Widen Ygnacio Valley Road-Kirker Pass Road, Cowell to Michigan	20	4	2				
17-02-0033	Widen Camino Tassajara Road, Windemere to County Line	4		8				
17-02-0034	West Leland Road Extension	30	5					
17-02-0035	Lone Tree Way Widening			20	<1			
17-02-0036	Pittsburg-Antioch Highway Widening		50	4				
17-02-0037	Widen Main St, SR 160 to Big Break Rd			20				
17-02-0038	Main Street Bypass			9				
17-02-0039	Hercules Train Station - All Phases		3			1		
17-02-0040	Martinez Intermodal Project: Phase 3					4		
17-02-0041	Privately Run Ferry Service including Small-Scale (non-WETA complying) Landside Improvements from Antioch, Martinez, and Hercules to San Francisco			<1		<1	330	8
17-02-0044	Landside Improvements for Richmond Ferry Service					4		
17-02-0046	Civic Center Railroad Platform Park & Ride Complex		2					
17-02-0047	East County Rail Extension (eBART), Phase 1	10	180	10		2		
17-02-0050	Brentwood Intermodal Transit Center		<1	4				
17-02-0052	Widen San Ramon Valley Boulevard from 2 to 4 lanes - Jewel Terrace to Podva Road			10				
17-10-0003	San Pablo Avenue BRT	30	20	50		7		
17-10-0005	BART Metro Program + Bay Fair Connector	240	280	160		2		
17-10-0036	I-580 Access Improvements Project	20	<1			10		
17-10-0060	I-680 Express Lanes: Northbound from Rudgear to SR 242 and operational improvements	2		30				

Table I-3 Transportation Projects within Liquefaction Zones

RTPID	Title	Liquefaction Zone (Acres)						
		Very Low	Low	Medium	High	Very High	Water	Not Mapped
Marin County		**80**		**100**	**2**	**80**	**<1**	
17-03-0006	Implement Marin Sonoma Narrows HOV Lane and corridor improvements Phase 2 (Marin County)	30		70	2	30		
17-03-0009	Access Improvements to Richmond San Rafael Bridge	30		4		13	<1	
17-03-0011	Widen Novato Boulevard between Diablo Avenue and Grant Avenue			10		<1		
17-03-0013	San Rafael Transit Center (SRTC) Relocation Project			<1		2		
17-03-0015	SMART Downtown San Rafael to Larkspur Rail Extension	10		4		30		
17-10-0036	I-580 Access Improvements Project	6				5	<1	
Napa County		**30**	**7**	**70**		**4**		
17-04-0008	State Route 29 Improvements	30	7	40		4		
17-04-0009	Soscol Junction	2						
17-04-0010	SR29 Gateway			30				
San Francisco County		**1,400**	**130**	**470**		**1,700**	**10**	
17-05-0018	Downtown San Francisco Ferry Terminal Expansion - Phase II					1	<1	
17-05-0019	Establish new ferry terminal at Mission Bay 16th Street					3		
17-05-0021	Geary Boulevard Bus Rapid Transit	10		120		9		
17-05-0022	Presidio Parkway	10	1	6		10		
17-05-0023	Yerba Buena Island (YBI) I-80 Interchange Improvement	10						
17-05-0024	Balboa Park Station Area - Southbound I-280 Off-Ramp Realignment at Ocean Avenue	10						
17-05-0025	Balboa Park Station Area - Closure of Northbound I-280 On-Ramp from Geneva Avenue	10						
17-05-0027	Hunters Point Shipyard and Candlestick Point Local Roads Phase 1	120	<1	5		610	9	
17-05-0030	Treasure Island Mobility Management Program: Intermodal Terminal, Congestion Toll, Transit Service, Transit Capital	130		40		560	3	
17-05-0031	Southeast Waterfront Transportation Improvements - Phase 1	870	110	240		390	<1	
17-05-0032	Geneva-Harney Bus Rapid Transit	50	7			50	<1	

Table I-3 Transportation Projects within Liquefaction Zones

RTPID	Title	Liquefaction Zone (Acres)						
		Very Low	Low	Medium	High	Very High	Water	Not Mapped
17-05-0033	Van Ness Avenue Bus Rapid Transit	4		20		7		
17-05-0040	T-Third Mission Bay Loop	<1		1		3		
17-05-0041	T-Third Phase II: Central Subway	5	<1	5		20		
17-05-0042	Historic Streetcar Extension - Fort Mason to 4th & King	1		6		10		
17-06-0008	Add northbound and southbound modified auxiliary lanes and/ or implementation of HOT lanes on US 101 from Oyster Point to San Francisco County line	<1	<1					
17-10-0005	BART Metro Program + Bay Fair Connector	110	6	20		50	<1	
17-10-0007	California HSR in the Bay Area	50	7	20		50	<1	
17-10-0008	Caltrain Electrification Phase 1 + CBOSS	4	<1	2		4		
17-10-0038	Caltrain/HSR Downtown San Francisco Extension (capital cost is $3.999 billion)	4		10		20		
17-10-0039	Implement Transbay Transit Center/Caltrain Downtown Extension (Phase 1 - Transbay Transit Center)					2		
San Mateo County		**380**	**250**	**850**	**50**	**700**	**10**	
17-05-0031	Southeast Waterfront Transportation Improvements - Phase 1		<1			<1		
17-05-0032	Geneva-Harney Bus Rapid Transit	1	17			<1		
17-06-0007	Modify existing lanes on US 101 to accommodate HOV/T lane	5	2	70		300	2	
17-06-0008	Add northbound and southbound modified auxiliary lanes and/ or implementation of HOT lanes on US 101 from Oyster Point to San Francisco County line	30	5	2		90	1	
17-06-0009	Improve operations at US 101 near Route 92 - Phased					2		
17-06-0010	Improve US 101/Woodside Road Interchange			9		2		
17-06-0011	US 101 Produce Avenue Interchange					10		
17-06-0012	US 101 Interchange at Peninsula Avenue		3	2		8		
17-06-0013	Reconstruct US 101/Broadway Interchange					10		
17-06-0014	Reconstruct US 101/Willow Road Interchange			10				

Table I-3 Transportation Projects within Liquefaction Zones

RTPID	Title	Liquefaction Zone (Acres)						
		Very Low	Low	Medium	High	Very High	Water	Not Mapped
17-06-0015	Construct auxiliary lanes (one in each direction) on US 101 from Marsh Road to Embarcadero Road			70		50	<1	
17-06-0016	Improve access to and from the west side of Dumbarton Bridge on Route 84 connecting to US 101 per Gateway 2020 Study - Phased			30		20		
17-06-0017	Route 101/Holly St Interchange Access Improvements					10		
17-06-0019	State Route 92-82 (El Camino) Interchange Improvement			20				
17-06-0020	Hwy 1 operational & safety improvements in County Midcoast (acceleration/deceleration lanes; turn lanes; bike lanes; pedestrian crossings; and trails)	40	70	90		2		
17-06-0023	Route 1 Improvements in Half Moon Bay		30	60		<1	<1	
17-06-0024	Reconstruct US 101/Sierra Point Parkway Interchange (includes extension of Lagoon Way to US 101)					7	<1	
17-06-0025	US 101/University Avenue Interchange Improvements			3		9		
17-06-0032	Route 1 San Pedro Creek Bridge Replacement and Creek Widening Project			4		<1		
17-06-0033	Widen Route 92 between SR 1 and Pilarcitos Creek alignment, includes widening of travel lanes and shoulders	7	9	60		9		
17-06-0034	Construct Route 1 (Calera Parkway) northbound and southbound lanes from Fassler Avenue to Westport Drive in Pacifica	8	3	20				
17-06-0035	I-280 improvements near D Street exit	20	2					
17-06-0036	Widen Skyline Boulevard (Route 35) to 4-lane roadway from I-280 to Sneath Lane - Phased	30	2					
17-06-0037	Widen Millbrae Avenue between Rollins Road and US 101 soutbound on-ramp and resurface intersection of Millbrae Avenue and Rollins Road					2		
17-06-0040	Extend Blomquist Street over Redwood Creek to East Bayshore and Bair Island Road			2		4	1	
17-07-0028	I-280 Mainline Improvements from County line to Sunnyvale			<1		<1		
17-07-0075	US 101 Express Lanes: Whipple Avenue in San Mateo County to Cochrane Road in Morgan Hill			50		30	<1	

Table I-3 Transportation Projects within Liquefaction Zones

RTPID	Title	Liquefaction Zone (Acres)						
		Very Low	Low	Medium	High	Very High	Water	Not Mapped
17-10-0005	BART Metro Program + Bay Fair Connector	150680	7	30	50	20	1	
17-10-0007	California HSR in the Bay Area	80	80	270		100	2	
17-10-0008	Caltrain Electrification Phase 1 + CBOSS	2020	10	50		10	2	
Santa Clara County		**460**	**690**	**3,300**	**200**	**170**	**10**	
17-06-0007	Modify existing lanes on US 101 to accommodate HOV/T lane			2		10		
17-06-0015	Construct auxiliary lanes (one in each direction) on US 101 from Marsh Road to Embarcadero Road			10		2		
17-07-0012	BART Silicon Valley Extension - San Jose (Berryessa) to Santa Clara (escalated capital cost is $5.175 billion)			70		<1		
17-07-0013	Implement El Camino Rapid Transit Project		60	260		2		
17-07-0021	Alviso Wetlands Doubletrack			50	4	10	2	
17-07-0023	US 101/Zanker Rd./Skyport Dr./Fourth St. Interchange Improvements			13				
17-07-0024	Lawrence/Stevens Creek/I-280 Interchange			20		2		
17-07-0025	I-280/Winchester Blvd Interchange Improvements			20				
17-07-0026	I-280/Wolfe Road Interchange Improvements		7	10				
17-07-0027	US 101/Mabury Rd./Taylor St. Interchange Improvements			10	<1			
17-07-0028	I-280 Mainline Improvements from County line to Sunnyvale	100	20	30		2		
17-07-0029	I-280/Saratoga Avenue Interchange Improvements			20				
17-07-0030	I-280 Northbound Braided Ramps between Foothill Expressway and SR 85		9	7		2		
17-07-0031	US 101 Southbound/Trimble Rd./De La Cruz Blvd./Central Expressway Interchange Improvements			10				
17-07-0032	I-680/ Alum Rock/ McKee Road Interchange Improvements			10				
17-07-0033	SR 237/Mathilda Avenue and US 101/Mathilda Avenue Interchange Improvement			30				

Table I-3 Transportation Projects within Liquefaction Zones

RTPID	Title	Liquefaction Zone (Acres)						
		Very Low	Low	Medium	High	Very High	Water	Not Mapped
17-07-0034	US 101 Interchanges Improvements: San Antonio Rd. to Charleston Rd./Rengstorff Avenue			30				
17-07-0035	US 101/Buena Vista Avenue Interchange Improvements		3	20				
17-07-0036	SR 85 Northbound to Eastbound SR 237 Connector Ramp and Northbound SR 85 Auxiliary Lane			10		2		
17-07-0037	SR 85/El Camino Real Interchange Improvements			10				
17-07-0038	US 101/Blossom Hill Rd. Interchange Improvements			10				
17-07-0039	US 101/Old Oakland Rd. Interchange Improvements			10				
17-07-0040	US 101/Shoreline Blvd. Interchange Improvements			10				
17-07-0042	SR 237/Great America Parkway WB Off- Ramps Improvements			20	1	<1		
17-07-0043	SR 237/El Camino Real/Grant Rd. Intersection Improvements			10				
17-07-0044	Double Lane Southbound US 101 off-ramp to Southbound SR 87			5		8		
17-07-0051	Widen Calaveras Blvd. overpass from 4 to 6 lanes			<1				
17-07-0061	Extend Capitol Expressway light rail to Eastridge Transit Center - Phase II			40				
17-07-0062	Extend light-rail transit from Winchester Station to Route 85 (Vasona Junction)		10	20				
17-07-0068	237 WB Additional Lane from McCarthy to North First			20	20	9		
17-07-0069	US 101/SR 25 Interchange	3			10			
17-07-0074	SR 85 Express Lanes: US 101 (South San Jose) to Mountain View		270	290	<1	9	4	
17-07-0075	US 101 Express Lanes: Whipple Avenue in San Mateo County to Cochrane Road in Morgan Hill	90	<1	650	30	50	2	
17-07-0078	Envision Expressway (Tier 1 Expressway Plan) Major and Minor Projects	20	4	50		4		
17-07-0080	Alum Rock/Santa Clara Street Bus Rapid Transit		8	40				
17-07-0087	Widen San Tomas Expressway to 8 Lanes from Stevens Creek Blvd to Campbell Ave			30		20		
17-07-0088	Senter Road Widening from Umbarger to Lewis			7				

Table I-3 Transportation Projects within Liquefaction Zones

RTPID	Title	Liquefaction Zone (Acres)						
		Very Low	Low	Medium	High	Very High	Water	Not Mapped
17-07-0089	South Bascom Complete Streets		30	70		<1		
17-07-0090	Widen Brokaw Bridge over Coyote Creek				<1	1		
17-07-0091	Widen Oakland Road from 4-lanes to 6-lanes between US 101 and Montague Expressway			50	2	4		
17-10-0005	BART Metro Program + Bay Fair Connector			310		2	3	
17-10-0007	California HSR in the Bay Area	240	270	930	120	20	<1	<1
17-10-0008	Caltrain Electrification Phase 1 + CBOSS		<1	70		1		
17-10-0058	I-680 Express Lanes: Northbound from SR-84 to SR-237			50	7			
Solano County		**120**	**190**	**570**		**40**	**410**	
17-02-0041	Privately Run Ferry Service including Small-Scale (non-WETA complying) Landside Improvements from Antioch, Martinez, and Hercules to San Francisco						320	
17-08-0009	I-80/I-680/SR12 Interchange (Packages 2-7)	40		290		4		
17-08-0010	Improve Interchanges and widen roadways serving Solano County Fairgrounds, including Redwood Parkway	40	20	10			<1	
17-08-0011	Provide auxiliary lanes on I-80 in eastbound and westbound directions from I-680 to Airbase Parkway	10	20	30		<1		
17-08-0012	Construct 4-lane Jepson Parkway from Route 12 to Leisure Town Road at I-80	9	130	60		20		
17-08-0014	Construct train station building and support facilities at the new Fairfield / Vacaville multimodal station		3					
17-08-0016	Vallejo Station Parking Structure Phase B					4	<1	
17-08-0017	I-80 WB Truck Scales	3		10				
17-10-0040	North Bay Ferry Service Enhancement						90	
17-10-0059	I-80 Express Lanes in both directions: Airbase Parkway to I-505	30	30	160		6		
17-10-0061	I-680 Express Lanes: I-80 westbound to I-680 southbound and I-680 northbound to I-80 eastbound direct connectors			9		<1		

Table I-3 Transportation Projects within Liquefaction Zones

RTPID	Title	Liquefaction Zone (Acres)						
		Very Low	Low	Medium	High	Very High	Water	Not Mapped
Sonoma County		**180**	**40**	**200**	**10**	**10**	**<1**	
17-03-0006	Implement Marin Sonoma Narrows HOV Lane and corridor improvements Phase 2 (Marin County)				<1	<1		
17-09-0006	Implement Marin Sonoma Narrows Phase 2 (Sonoma County)	50	1	120	2	5	<1	
17-09-0008	Arata Lane Interchange	5		10				
17-09-0009	Cotati US 101/Railroad Avenue Improvements (incl. Penngrove)	10	3					
17-09-0010	Hearn Avenue Interchange	20						
17-09-0011	Shiloh Road Interchange Reconstruction	3	10			<1		
17-09-0012	Cotati Highway 116 Cotati Corridor Improvements	20	5	10				
17-09-0013	Petaluma Crosstown Connector and Rainier Interchange	5		20	<1	<1		
17-09-0014	Farmers Lane extension between Bennett Valley Rd and Yolanda Avenue	30		6				
17-09-0015	Road Diet Extension - Petaluma Boulevard South	3		7	9			
17-09-0016	SMART Petaluma Infill Station			4				
17-09-0018	SMART Rail Extension to Windsor + Environmental to Cloverdale + Bike Path	30	20	20		3	<1	

Note: Whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100). Figures may not sum due to independent rounding.

Source: MTC 2016; USGS 2006

Table I-4 Transportation Projects within Landslide Zones

RTPID	Title	Few Landslides (acres)	Mostly Landslides (acres)	Surficial Deposits (acres)
	Alameda County	**540**	**50**	**3,000**
17-01-0009	New Alameda Point Ferry Terminal			<1
17-01-0015	7th Street Grade Separation East			<1
17-01-0016	Oakland Army Base Transportation Infrastructure Improvements			330
17-01-0017	Outer Harbor Intermodal Terminal (OHIT) Phases 2 and 3			160
17-01-0018	7th Street Grade Separation West			6
17-01-0020	I-580 Integrated Corridor Mobility (ICM)			20
17-01-0021	SR-262 Mission Boulevard Cross Connector Improvements			20
17-01-0023	I-880 Industrial Parkway Interchange Reconstruction			20
17-01-0024	I-880 A Street Interchange Reconstruction			20
17-01-0025	Oakland International Airport Perimeter Dike			20
17-01-0027	Middle Harbor Road Improvements			50
17-01-0028	I-580/I-680 Interchange Improvement Project			10
17-01-0029	SR-84/I-680 Interchange Improvements and SR-84 Widening	80	<1	50
17-01-0030	I-880 Broadway/Jackson Interchange Improvements			11
17-01-0031	I-880 at 23rd/29th Avenue Interchange Improvements			40
17-01-0032	SR-84 Widening (Ruby Hill Drive to Concannon Boulevard)	6	2	40
17-01-0033	I-580 Vasco Road Interchange Improvements			20
17-01-0034	I-580 Greenville Road Interchange Improvements			20
17-01-0035	I-580 First Street Interchange Improvements	5		10
17-01-0036	SR-92/Clawiter Road/Whitesell Street Interchange Improvements			20
17-01-0037	Ashby I-80 Interchange with Bicycle and Pedestrian Ramps			20
17-01-0038	I-580 Interchange Improvement at Hacienda/Fallon Road - Phase 2			20
17-01-0039	I-580 SR-84/Isabel Interchange Improvements Phase 2			20
17-01-0040	I-80 Gilman Street Interchange Improvements			20
17-01-0041	I-880 Winton Avenue Interchange Improvements			20
17-01-0042	I-680 Overcrossing Widening and Improvements at Stoneridge Drive			4

Table I-4 Transportation Projects within Landslide Zones

RTPID	Title	Few Landslides (acres)	Mostly Landslides (acres)	Surficial Deposits (acres)
17-01-0043	42nd Ave & High St Access Improvement at I-880 On/Off Ramp			20
17-01-0044	I-680 Sunol Interchange Modification	20		
17-01-0045	Santa Rita Road I-580 Overcrossing Widening			4
17-01-0046	Coliseum City Transit Hub			2
17-01-0047	I-880 to Mission Boulevard East-West Connector			80
17-01-0048	Dublin Boulevard - North Canyons Parkway Extension	9		20
17-01-0049	Fruitvale Avenue (Miller Sweeney) Lifeline Bridge Project			2
17-01-0050	SR-84 Mowry Avenue Widening (Peralta Blvd to Mission Blvd)			20
17-01-0051	Tassajara Road Widening from N. Dublin Ranch Drive to City Limit	5		20
17-01-0052	Auto Mall Parkway Widening and Improvements			30
17-01-0053	Dougherty Road Widening	4		30
17-01-0054	Union City Boulevard Widening (Whipple to City Limit)			6
17-01-0055	SR-84 Peralta Boulevard Widening (Fremont Blvd to Mowry Ave)			40
17-01-0056	Thornton Avenue Widening (Gateway Boulevard to Hickory Street)			20
17-01-0057	Dublin Boulevard Widening - Sierra Court_to Dublin Court			5
17-01-0058	Irvington BART Station			3
17-01-0059	Union City Intermodal Station Phase 4			3
17-01-0060	East Bay BRT			170
17-02-0027	Construct Additional Auxiliary Lanes on I-680 - South of I-680/SR-24 Interchange			<1
17-02-0033	Widen Camino Tassajara Road, Windemere to County Line			<1
17-05-0030	Treasure Island Mobility Management Program: Intermodal Terminal, Congestion Toll, Transit Service, Transit Capital			90
17-10-0003	San Pablo Avenue BRT	20		110
17-10-0005	BART Metro Program + Bay Fair Connector	310	40	1,000
17-10-0041	Central Bay Ferry Service Enhancement			<1
17-10-0057	I-880 Express Lanes: Northbound from Hegenberger to Lewelling and bridge improvements			130
17-10-0058	I-680 Express Lanes: Northbound from SR-84 to SR-237	90	<1	150

Table I-4 Transportation Projects within Landslide Zones

RTPID	Title	Few Landslides (acres)	Mostly Landslides (acres)	Surficial Deposits (acres)
17-10-0064	Hayward Maintenance Complex Phase 1			3
Contra Costa County		**530**	**80**	**1,400**
17-01-0053	Dougherty Road Widening	<1		<1
17-02-0012	I-680 Northbound Managed Lane Completion through 680/24 and Operational Improvements between N. Main and Treat Blvd	20		90
17-02-0013	I-680 Northbound HOV lane extension between N. Main and SR-242			70
17-02-0014	Kirker Pass Road Northbound Truck Climbing Lane, Clearbrook Drive to Crest of Kirker Pass Road	10	2	6
17-02-0015	Vasco Road Byron Highway Connector Road (Formerly named: SR-239: Airport Connector)	<1		50
17-02-0016	Construct SR 242/Clayton Road on and off-ramps			20
17-02-0019	I-680/SR4 Interchange Improvements - Phases 1-3			20
17-02-0020	SR-4 Operational Improvements - Initial Phases	20		40
17-02-0021	Reconstruct I-80/San Pablo Dam Road Interchange	10		3
17-02-0022	I-680 Southbound HOV Lane between N. Main and Livorna	4		40
17-02-0023	State Route 4 Widening and Balfour Road IC Construction	10		40
17-02-0024	I-80/SR-4 Interchange Improvements - New Eastbound Willow Avenue Ramps	<1		20
17-02-0026	I-80/Central Avenue Interchange Modification - Phases 1 & 2	2		20
17-02-0027	Construct Additional Auxiliary Lanes on I-680 - South of I-680/SR-24 Interchange	50	10	80
17-02-0028	I-80 Eastbound and Westbound Pinole Valley Road On-ramp Improvement	2	1	10
17-02-0029	Eastbound SR-24: Construct Auxiliary Lane, Wilder Road to Camino Pablo	20	8	<1
17-02-0030	Widen Brentwood Boulevard - Havenwood Way to north city limit; and Chestnut to Fir			20
17-02-0031	Widen Willow Pass Road, Lynwood Drive to SR 4	2		30
17-02-0032	Widen Ygnacio Valley Road-Kirker Pass Road, Cowell to Michigan	10		20
17-02-0033	Widen Camino Tassajara Road, Windemere to County Line			10
17-02-0034	West Leland Road Extension	20	4	9
17-02-0035	Lone Tree Way Widening			20
17-02-0036	Pittsburg-Antioch Highway Widening			60
17-02-0037	Widen Main St, SR 160 to Big Break Rd			20

Table I-4 Transportation Projects within Landslide Zones

RTPID	Title	Few Landslides (acres)	Mostly Landslides (acres)	Surficial Deposits (acres)
17-02-0038	Main Street Bypass			9
17-02-0039	Hercules Train Station - All Phases			4
17-02-0040	Martinez Intermodal Project: Phase 3			4
17-02-0041	Privately Run Ferry Service including Small-Scale (non-WETA complying) Landside Improvements from Antioch, Martinez, and Hercules to San Francisco			<1
17-02-0044	Landside Improvements for Richmond Ferry Service			4
17-02-0046	Civic Center Railroad Platform Park & Ride Complex			2
17-02-0047	East County Rail Extension (eBART), Phase 1			210
17-02-0050	Brentwood Intermodal Transit Center			4
17-02-0052	Widen San Ramon Valley Boulevard from 2 to 4 lanes - Jewel Terrace to Podva Road			10
17-10-0003	San Pablo Avenue BRT	47		60
17-10-0005	BART Metro Program + Bay Fair Connector	270	40	370
17-10-0036	I-580 Access Improvements Project	20	3	10
17-10-0060	I-680 Express Lanes: Northbound from Rudgear to SR 242 and operational improvements	<1		30
Marin County		**60**	**30**	**170**
17-03-0006	Implement Marin Sonoma Narrows HOV Lane and corridor improvements Phase 2 (Marin County)	20	30	90
17-03-0009	Access Improvements to Richmond San Rafael Bridge	20	<1	30
17-03-0011	Widen Novato Boulevard between Diablo Avenue and Grant Avenue			10
17-03-0013	San Rafael Transit Center (SRTC) Relocation Project			2
17-03-0015	SMART Downtown San Rafael to Larkspur Rail Extension	20	1	30
17-10-0036	I-580 Access Improvements Project	7		5
Napa County		**2**		**110**
17-04-0008	State Route 29 Improvements			80
17-04-0009	Soscol Junction	2		
17-04-0010	SR29 Gateway			30
San Francisco County		**660**	**40**	**3,000**
17-05-0018	Downtown San Francisco Ferry Terminal Expansion - Phase II			1

Table I-4 Transportation Projects within Landslide Zones

RTPID	Title	Few Landslides (acres)	Mostly Landslides (acres)	Surficial Deposits (acres)
17-05-0019	Establish new ferry terminal at Mission Bay 16th Street			5
17-05-0021	Geary Boulevard Bus Rapid Transit	10		130
17-05-0022	Presidio Parkway	9		20
17-05-0023	Yerba Buena Island (YBI) I-80 Interchange Improvement	4		7
17-05-0024	Balboa Park Station Area - Southbound I-280 Off-Ramp Realignment at Ocean Avenue	<1		9
17-05-0025	Balboa Park Station Area - Closure of Northbound I-280 On-Ramp from Geneva Avenue	<1		10
17-05-0027	Hunters Point Shipyard and Candlestick Point Local Roads Phase 1	110	20	590
17-05-0030	Treasure Island Mobility Management Program: Intermodal Terminal, Congestion Toll, Transit Service, Transit Capital	50		560
17-05-0031	Southeast Waterfront Transportation Improvements - Phase 1	410	20	1,200
17-05-0032	Geneva-Harney Bus Rapid Transit	20		100
17-05-0033	Van Ness Avenue Bus Rapid Transit	1		30
17-05-0040	T-Third Mission Bay Loop	1		2
17-05-0041	T-Third Phase II: Central Subway	2		20
17-05-0042	Historic Streetcar Extension - Fort Mason to 4th & King	<1		20
17-06-0008	Add northbound and southbound modified auxiliary lanes and/ or implementation of HOT lanes on US 101 from Oyster Point to San Francisco County line	<1		<1
17-10-0005	BART Metro Program + Bay Fair Connector	4		190
17-10-0007	California HSR in the Bay Area	30		100
17-10-0008	Caltrain Electrification Phase 1 + CBOSS	2		8
17-10-0038	Caltrain/HSR Downtown San Francisco Extension (capital cost is $3.999 billion)	4		30
17-10-0039	Implement Transbay Transit Center/Caltrain Downtown Extension (Phase 1 - Transbay Transit Center)			2
17-10-0041	Central Bay Ferry Service Enhancement			<1
17-10-0042	Albany/Berkeley Ferry Terminal			<1
San Mateo County		**140**	**30**	**2,000**
17-05-0031	Southeast Waterfront Transportation Improvements - Phase 1	<1		<1
17-05-0032	Geneva-Harney Bus Rapid Transit			20
17-06-0007	Modify existing lanes on US 101 to accommodate HOV/T lane	2	<1	380

Table I-4 Transportation Projects within Landslide Zones

RTPID	Title	Few Landslides (acres)	Mostly Landslides (acres)	Surficial Deposits (acres)
17-06-0008	Add northbound and southbound modified auxiliary lanes and/ or implementation of HOT lanes on US 101 from Oyster Point to San Francisco County line	10	4	110
17-06-0009	Improve operations at US 101 near Route 92 - Phased			2
17-06-0010	Improve US 101/Woodside Road Interchange			10
17-06-0011	US 101 Produce Avenue Interchange			10
17-06-0012	US 101 Interchange at Peninsula Avenue			10
17-06-0013	Reconstruct US 101/Broadway Interchange			10
17-06-0014	Reconstruct US 101/Willow Road Interchange			10
17-06-0015	Construct auxiliary lanes (one in each direction) on US 101 from Marsh Road to Embarcadero Road			110
17-06-0016	Improve access to and from the west side of Dumbarton Bridge on Route 84 connecting to US 101 per Gateway 2020 Study - Phased			60
17-06-0017	Route 101/Holly St Interchange Access Improvements			10
17-06-0019	State Route 92-82 (El Camino) Interchange Improvement			20
17-06-0020	Hwy 1 operational & safety improvements in County Midcoast (acceleration/deceleration lanes; turn lanes; bike lanes; pedestrian crossings; and trails)	40		140
17-06-0023	Route 1 Improvements in Half Moon Bay			90
17-06-0024	Reconstruct US 101/Sierra Point Parkway Interchange (includes extension of Lagoon Way to US 101)			10
17-06-0025	US 101/University Avenue Interchange Improvements			10
17-06-0032	Route 1 San Pedro Creek Bridge Replacement and Creek Widening Project			5
17-06-0033	Widen Route 92 between SR 1 and Pilarcitos Creek alignment, includes widening of travel lanes and shoulders	30	10	40
17-06-0034	Construct Route 1 (Calera Parkway) northbound and southbound lanes from Fassler Avenue to Westport Drive in Pacifica	7	4	20
17-06-0035	I-280 improvements near D Street exit			20
17-06-0036	Widen Skyline Boulevard (Route 35) to 4-lane roadway from I-280 to Sneath Lane - Phased	30		2
17-06-0037	Widen Millbrae Avenue between Rollins Road and US 101 soutbound on-ramp and resurface intersection of Millbrae Avenue and Rollins Road			2
17-06-0040	Extend Blomquist Street over Redwood Creek to East Bayshore and Bair Island Road			7
17-07-0028	I-280 Mainline Improvements from County line to Sunnyvale			1

Table I-4 Transportation Projects within Landslide Zones

RTPID	Title	Few Landslides (acres)	Mostly Landslides (acres)	Surficial Deposits (acres)
17-07-0075	US 101 Express Lanes: Whipple Avenue in San Mateo County to Cochrane Road in Morgan Hill			70
17-10-0005	BART Metro Program + Bay Fair Connector			250
17-10-0007	California HSR in the Bay Area	10	10	500
17-10-0008	Caltrain Electrification Phase 1 + CBOSS	2	1	85
Santa Clara County		**320**	**110**	**4,400**
17-06-0007	Modify existing lanes on US 101 to accommodate HOV/T lane			10
17-07-0012	BART Silicon Valley Extension - San Jose (Berryessa) to Santa Clara (escalated capital cost is $5.175 billion)			80
17-07-0013	Implement El Camino Rapid Transit Project			320
17-06-0015	Construct auxiliary lanes (one in each direction) on US 101 from Marsh Road to Embarcadero Road			10
17-07-0021	Alviso Wetlands Doubletrack			70
17-07-0023	US 101/Zanker Rd./Skyport Dr./Fourth St. Interchange Improvements			10
17-07-0024	Lawrence/Stevens Creek/I-280 Interchange			20
17-07-0025	I-280/Winchester Blvd Interchange Improvements			20
17-07-0026	I-280/Wolfe Road Interchange Improvements			20
17-07-0027	US 101/Mabury Rd./Taylor St. Interchange Improvements			10
17-07-0028	I-280 Mainline Improvements from County line to Sunnyvale	130		30
17-07-0029	I-280/Saratoga Avenue Interchange Improvements			20
17-07-0030	I-280 Northbound Braided Ramps between Foothill Expressway and SR 85			20
17-07-0031	US 101 Southbound/Trimble Rd./De La Cruz Blvd./Central Expressway Interchange Improvements			10
17-07-0032	I-680/ Alum Rock/ McKee Road Interchange Improvements			10
17-07-0033	SR 237/Mathilda Avenue and US 101/Mathilda Avenue Interchange Improvement			30
17-07-0034	US 101 Interchanges Improvements: San Antonio Rd. to Charleston Rd./Rengstorff Avenue			30
17-07-0035	US 101/Buena Vista Avenue Interchange Improvements			20
17-07-0036	SR 85 Northbound to Eastbound SR 237 Connector Ramp and Northbound SR 85 Auxiliary Lane			10
17-07-0037	SR 85/El Camino Real Interchange Improvements			10
17-07-0038	US 101/Blossom Hill Rd. Interchange Improvements			10

Table I-4 Transportation Projects within Landslide Zones

RTPID	Title	Few Landslides (acres)	Mostly Landslides (acres)	Surficial Deposits (acres)
17-07-0039	US 101/Old Oakland Rd. Interchange Improvements			10
17-07-0040	US 101/Shoreline Blvd. Interchange Improvements			10
17-07-0042	SR 237/Great America Parkway WB Off- Ramps Improvements			20
17-07-0043	SR 237/El Camino Real/Grant Rd. Intersection Improvements			10
17-07-0044	Double Lane Southbound US 101 off-ramp to Southbound SR 87			10
17-07-0051	Widen Calaveras Blvd. overpass from 4 to 6 lanes			<1
17-07-0061	Extend Capitol Expressway light rail to Eastridge Transit Center - Phase II			40
17-07-0062	Extend light-rail transit from Winchester Station to Route 85 (Vasona Junction)			30
17-07-0068	237 WB Additional Lane from McCarthy to North First			50
17-07-0069	US 101/SR 25 Interchange	5		10
17-07-0074	SR 85 Express Lanes: US 101 (South San Jose) to Mountain View			580
17-07-0075	US 101 Express Lanes: Whipple Avenue in San Mateo County to Cochrane Road in Morgan Hill	30		790
17-07-0078	Envision Expressway (Tier 1 Expressway Plan) Major and Minor Projects	20	<1	60
17-07-0080	Alum Rock/Santa Clara Street Bus Rapid Transit			50
17-07-0087	Widen San Tomas Expressway to 8 Lanes from Stevens Creek Blvd to Campbell Ave			50
17-07-0088	Senter Road Widening from Umbarger to Lewis			7
17-07-0089	South Bascom Complete Streets			100
17-07-0090	Widen Brokaw Bridge over Coyote Creek			2
17-07-0091	Widen Oakland Road from 4-lanes to 6-lanes between US 101 and Montague Expressway			50
17-10-0005	BART Metro Program + Bay Fair Connector			320
17-10-0007	California HSR in the Bay Area	140	110	1,300
17-10-0008	Caltrain Electrification Phase 1 + CBOSS			70
17-10-0058	I-680 Express Lanes: Northbound from SR-84 to SR-237			60
Solano County		**80**	**20**	**820**
17-08-0009	I-80/I-680/SR12 Interchange (Packages 2-7)	9	20	300
17-08-0010	Improve Interchanges and widen roadways serving Solano County Fairgrounds, including Redwood Parkway	30		30

Table I-4 Transportation Projects within Landslide Zones

RTPID	Title	Few Landslides (acres)	Mostly Landslides (acres)	Surficial Deposits (acres)
17-08-0011	Provide auxiliary lanes on I-80 in eastbound and westbound directions from I-680 to Airbase Parkway	2		60
17-08-0012	Construct 4-lane Jepson Parkway from Route 12 to Leisure Town Road at I-80	3		220
17-08-0014	Construct train station building and support facilities at the new Fairfield / Vacaville multimodal station			3
17-08-0016	Vallejo Station Parking Structure Phase B			2
17-08-0017	I-80 WB Truck Scales			10
17-10-0059	I-80 Express Lanes in both directions: Airbase Parkway to I-505	40		180
17-10-0061	I-680 Express Lanes: I-80 westbound to I-680 southbound and I-680 northbound to I-80 eastbound direct connectors			10
Sonoma County		**120**	**40**	**290**
17-03-0006	Implement Marin Sonoma Narrows HOV Lane and corridor improvements Phase 2 (Marin County)			<1
17-09-0006	Implement Marin Sonoma Narrows Phase 2 (Sonoma County)	10	30	140
17-09-0008	Arata Lane Interchange			20
17-09-0009	Cotati US 101/Railroad Avenue Improvements (incl. Penngrove)	20		
17-09-0010	Hearn Avenue Interchange			20
17-09-0011	Shiloh Road Interchange Reconstruction			20
17-09-0012	Cotati Highway 116 Cotati Corridor Improvements	7		30
17-09-0013	Petaluma Crosstown Connector and Rainier Interchange	8		20
17-09-0014	Farmers Lane extension between Bennett Valley Rd and Yolanda Avenue	30	2	8
17-09-0015	Road Diet Extension - Petaluma Boulevard South	2	<1	20
17-09-0016	SMART Petaluma Infill Station			4
17-09-0018	SMART Rail Extension to Windsor + Environmental to Cloverdale + Bike Path	40		30

Note: Whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100). Figures may not sum due to independent rounding.

Source: MTC 2016; USGS 1997

Appendix J

Transportation Projects Located within Flood Hazard Areas

RTPID	Title	100-year flood zone (acres)	500-year flood zone (acres)
Alameda County		**140**	**200**
17-01-0020	SR-262 Mission Boulevard Cross Connector Improvements	<1	
17-01-0023	I-880 Industrial Parkway Interchange Reconstruction	7	3
17-01-0024	I-880 A Street Interchange Reconstruction		2
17-01-0025	Oakland International Airport Perimeter Dike		<1
17-01-0029	SR-84/I-680 Interchange Improvements and SR-84 Widening	9	2
17-01-0032	SR-84 Widening (Ruby Hill Drive to Concannon Boulevard)	4	
17-01-0038	I-580 Interchange Improvement at Hacienda/Fallon Road - Phase 2		<1
17-01-0039	I-580 SR-84/Isabel Interchange Improvements Phase 2	<1	3
17-01-0040	I-80 Gilman Street Interchange Improvements		8
17-01-0042	I-680 Overcrossing Widening and Improvements at Stoneridge Drive	<1	
17-01-0043	42nd Ave & High St Access Improvement at I-880 On/Off Ramp		5
17-01-0045	Santa Rita Road I-580 Overcrossing Widening		<1
17-01-0046	Coliseum City Transit Hub		2
17-01-0047	I-880 to Mission Boulevard East-West Connector	<1	2
17-01-0049	Fruitvale Avenue (Miller Sweeney) Lifeline Bridge Project	2	
17-01-0052	Auto Mall Parkway Widening and Improvements	1	12
17-01-0054	Union City Boulevard Widening (Whipple to City Limit)	<1	
17-01-0055	SR-84 Peralta Boulevard Widening (Fremont Blvd to Mowry Ave)		1
17-01-0056	Thornton Avenue Widening (Gateway Boulevard to Hickory Street)	17	<1
17-01-0057	Dublin Boulevard Widening - Sierra Court to Dublin Court		5
17-01-0060	East Bay BRT	2	30
17-07-0021	Alviso Wetlands Doubletrack	<1	
17-10-0003	San Pablo Avenue BRT		<1
17-10-0041	Central Bay Ferry Service Enhancement	70	
17-10-0057	I-880 Express Lanes: Northbound from Hegenberger to Lewelling and bridge improvements	3	6
17-10-0058	I-680 Express Lanes: Northbound from SR-84 to SR-237	<1	<1
Contra Costa County		**350**	**40**
17-02-0012	I-680 Northbound Managed Lane Completion through 680/24 and Operational Improvements between N. Main and Treat Blvd	<1	<1
17-02-0013	I-680 Northbound HOV lane extension between N. Main and SR-242	1	8
17-02-0015	Vasco Road Byron Highway Connector Road (Formerly named: SR-239: Airport Connector)	20	
17-02-0016	Construct SR 242/Clayton Road on and off-ramps	<1	
17-02-0019	I-680/SR4 Interchange Improvements - Phases 1-3		
17-02-0020	SR-4 Operational Improvements - Initial Phases	<1	
17-02-0022	I-680 Southbound HOV Lane between N. Main and Livorna	<1	<1
17-02-0023	State Route 4 Widening and Balfour Road IC Construction	<1	<1
17-02-0024	I-80/SR-4 Interchange Improvements - New Eastbound Willow Avenue Ramps	1	
17-02-0026	I-80/Central Avenue Interchange Modification - Phases 1 & 2	6	

RTPID	Title	100-year flood zone (acres)	500-year flood zone (acres)
17-02-0027	Construct Additional Auxiliary Lanes on I-680 - South of I-680/SR-24 Interchange	<1	
17-02-0029	Eastbound SR-24: Construct Auxiliary Lane, Wilder Road to Camino Pablo		<1
17-02-0030	Widen Brentwood Boulevard - Havenwood Way to north city limit; and Chestnut to Fir	<1	
17-02-0031	Widen Willow Pass Road, Lynwood Drive to SR 4	1	
17-02-0032	Widen Ygnacio Valley Road-Kirker Pass Road, Cowell to Michigan	<1	
17-02-0034	West Leland Road Extension		
17-02-0035	Lone Tree Way Widening		
17-02-0036	Pittsburg-Antioch Highway Widening	10	<1
17-02-0040	Martinez Intermodal Project: Phase 3		4
17-02-0041	Privately Run Ferry Service including Small-Scale (non-WETA complying) Landside Improvements from Antioch, Martinez, and Hercules to San Francisco	300	
17-02-0047	East County Rail Extension (eBART), Phase 1	4	10
17-10-0003	San Pablo Avenue BRT	<1	3
17-10-0005	BART Metro Program + Bay Fair Connector	9	10
17-10-0060	I-680 Express Lanes: Northbound from Rudgear to SR 242 and operational improvements	<1	1.21
Marin County		**40**	**40**
17-03-0006	Implement Marin Sonoma Narrows HOV Lane and corridor improvements Phase 2 (Marin County)	<1	
17-03-0009	Access Improvements to Richmond San Rafael Bridge	9	20
17-03-0011	Widen Novato Boulevard between Diablo Avenue and Grant Avenue	<1	10
17-03-0013	San Rafael Transit Center (SRTC) Relocation Project	<1	2
17-03-0015	SMART Downtown San Rafael to Larkspur Rail Extension	30	10
Napa County		**10**	**<1**
17-04-0008	State Route 29 Improvements	10	<1
San Mateo County		**250**	**150**
17-06-0007	Modify existing lanes on US 101 to accommodate HOV/T lane	3040	20
17-06-0008	Add northbound and southbound modified auxiliary lanes and/ or implementation of HOT lanes on US 101 from Oyster Point to San Francisco County line	<1	10
17-06-0010	Improve US 101/Woodside Road Interchange		<1
17-06-0011	US 101 Produce Avenue Interchange		10
17-06-0013	Reconstruct US 101/Broadway Interchange	10	
17-06-0014	Reconstruct US 101/Willow Road Interchange		2
17-06-0015	Construct auxiliary lanes (one in each direction) on US 101 from Marsh Road to Embarcadero Road	<110	15
17-06-0016	Improve access to and from the west side of Dumbarton Bridge on Route 84 connecting to US 101 per Gateway 2020 Study - Phased	50	
17-06-0017	Route 101/Holly St Interchange Access Improvements	<1	3
17-06-0020	Hwy 1 operational & safety improvements in County Midcoast (acceleration/deceleration lanes; turn lanes; bike lanes; pedestrian crossings; and trails)	3	4
17-06-0032	Route 1 San Pedro Creek Bridge Replacement and Creek Widening Project	<1	<1

RTPID	Title	100-year flood zone (acres)	500-year flood zone (acres)
17-06-0033	Widen Route 92 between SR 1 and Pilarcitos Creek alignment, includes widening of travel lanes and shoulders	10	
17-06-0034	Construct Route 1 (Calera Parkway) northbound and southbound lanes from Fassler Avenue to Westport Drive in Pacifica	<1	2.05
17-06-0037	Widen Millbrae Avenue between Rollins Road and US 101 southbound on-ramp and resurface intersection of Millbrae Avenue and Rollins Road	<1	
17-07-0075	US 101 Express Lanes: Whipple Avenue in San Mateo County to Cochrane Road in Morgan Hill	<1	10
17-10-0005	BART Metro Program + Bay Fair Connector	30	10
17-10-0007	California HSR in the Bay Area	90	40
17-10-0008	Caltrain Electrification Phase 1 + CBOSS	20	9
Santa Clara County		**430**	**2,100**
17-06-0007	Modify existing lanes on US 101 to accommodate HOV/T lane	10	
17-06-0015	Construct auxiliary lanes (one in each direction) on US 101 from Marsh Road to Embarcadero Road	10	2
17-07-0012	BART Silicon Valley Extension - San Jose (Berryessa) to Santa Clara (escalated capital cost is $5.175 billion)	1	30
17-07-0013	Implement El Camino Rapid Transit Project	<1	280
17-07-0021	Alviso Wetlands Doubletrack	70	1
17-07-0023	US 101/Zanker Rd./Skyport Dr./Fourth St. Interchange Improvements		10
17-07-0024	Lawrence/Stevens Creek/I-280 Interchange	1	
17-07-0026	I-280/Wolfe Road Interchange Improvements		20
17-07-0027	US 101/Mabury Rd./Taylor St. Interchange Improvements	<1	
17-07-0028	I-280 Mainline Improvements from County line to Sunnyvale	<1	100
17-07-0030	I-280 Northbound Braided Ramps between Foothill Expressway and SR 85	3	10
17-07-0031	US 101 Southbound/Trimble Rd./De La Cruz Blvd./Central Expressway Interchange Improvements		10
17-07-0032	I-680/ Alum Rock/ McKee Road Interchange Improvements		10
17-07-0033	SR 237/Mathilda Avenue and US 101/Mathilda Avenue Interchange Improvement	<1	30
17-07-0034	US 101 Interchanges Improvements: San Antonio Rd. to Charleston Rd./Rengstorff Avenue	20	8
17-07-0035	US 101/Buena Vista Avenue Interchange Improvements		3
17-07-0036	SR 85 Northbound to Eastbound SR 237 Connector Ramp and Northbound SR 85 Auxiliary Lane	<1	10
17-07-0037	SR 85/El Camino Real Interchange Improvements	<1	10
17-07-0039	US 101/Old Oakland Rd. Interchange Improvements		<1
17-07-0040	US 101/Shoreline Blvd. Interchange Improvements		10
17-07-0042	SR 237/Great America Parkway WB Off- Ramps Improvements	3	10
17-07-0043	SR 237/El Camino Real/Grant Rd. Intersection Improvements		10
17-07-0044	Double Lane Southbound US 101 off-ramp to Southbound SR 87		10
17-07-0051	Widen Calaveras Blvd. overpass from 4 to 6 lanes		<1
17-07-0061	Extend Capitol Expressway light rail to Eastridge Transit Center - Phase II	<1	40

RTPID	Title	100-year flood zone (acres)	500-year flood zone (acres)
17-07-0062	Extend light-rail transit from Winchester Station to Route 85 (Vasona Junction)		5
17-07-0068	237 WB Additional Lane from McCarthy to North First	20	30
17-07-0069	US 101/SR 25 Interchange	10	3
17-07-0074	SR 85 Express Lanes: US 101 (South San Jose) to Mountain View	10	240
17-07-0075	US 101 Express Lanes: Whipple Avenue in San Mateo County to Cochrane Road in Morgan Hill	120	300
17-07-0078	Envision Expressway (Tier 1 Expressway Plan) Major and Minor Projects	<1	50
17-07-0080	Alum Rock/Santa Clara Street Bus Rapid Transit	<1	20
17-07-0087	Widen San Tomas Expressway to 8 Lanes from Stevens Creek Blvd to Campbell Ave		5
17-07-0089	South Bascom Complete Streets	<1	
17-07-0090	Widen Brokaw Bridge over Coyote Creek	2	
17-07-0091	Widen Oakland Road from 4-lanes to 6-lanes between US 101 and Montague Expressway	<1	2
17-10-0005	BART Metro Program + Bay Fair Connector	7	170
17-10-0007	California HSR in the Bay Area	140	570
17-10-0008	Caltrain Electrification Phase 1 + CBOSS	<1	50
17-10-0058	I-680 Express Lanes: Northbound from SR-84 to SR-237		50
Solano County		**420**	**110**
17-02-0041	Privately Run Ferry Service including Small-Scale (non-WETA complying) Landside Improvements from Antioch, Martinez, and Hercules to San Francisco	320	
17-08-0009	I-80/I-680/SR12 Interchange (Packages 2-7)	20	60
17-08-0010	Improve Interchanges and widen roadways serving Solano County Fairgrounds, including Redwood Parkway	20	
17-08-0011	Provide auxiliary lanes on I-80 in eastbound and westbound directions from I-680 to Airbase Parkway	<1	4
17-08-0012	Construct 4-lane Jepson Parkway from Route 12 to Leisure Town Road at I-80	8	40
17-08-0016	Vallejo Station Parking Structure Phase B	<1	
17-10-0040	North Bay Ferry Service Enhancement	60	
17-10-0059	I-80 Express Lanes in both directions: Airbase Parkway to I-505	1	3
17-10-0061	I-680 Express Lanes: I-80 westbound to I-680 southbound and I-680 northbound to I-80 eastbound direct connectors	<1	6
Sonoma County		**20**	**40**
17-09-0006	Implement Marin Sonoma Narrows Phase 2 (Sonoma County)	6	20
17-09-0011	Shiloh Road Interchange Reconstruction	2	1
17-09-0012	Cotati Highway 116 Cotati Corridor Improvements	<1	20
17-09-0013	Petaluma Crosstown Connector and Rainier Interchange	3	1
17-09-0015	Road Diet Extension - Petaluma Boulevard South	<1	2
17-09-0018	SMART Rail Extension to Windsor + Environmental to Cloverdale + Bike Path	5.07	5

Notes: Whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100). Figures may not sum due to independent rounding.

Source: FEMA 2016; MTC 2016

Appendix K

Biological Resources Data Tables

Table K-1 Special-Status Species Evaluated for Plan Bay Area 2040

Common Name	*Scientific Name*	Status				Habitat Associations
		FESA	CESA	CRPR	Other	
Plants						
San Mateo thorn-mint	*Acanthomintha duttonii*	E	E	1B.1	—	Chaparral, valley and foothill grassland.
Blasdale's bent grass	*Agrostis blasdalei*	—	—	1B.2	—	Coastal dunes, coastal bluff scrub, coastal prairie.
Franciscan onion	*Allium peninsulare* var. *franciscanum*	—	—	1B.2	—	Cismontane woodland, valley and foothill grassland.
Napa false indigo	*Amorpha californica* var. *napensis*	—	—	1B.2	—	Broadleafed upland forest, chaparral, cismontane woodland.
Large-flowered fiddleneck	*Amsinckia grandiflora*	E	E	1B.1	—	Cismontane woodland, valley and foothill grassland.
Bent-flowered fiddleneck	*Amsinckia lunaris*	—	—	1B.2	—	Cismontane woodland, valley and foothill grassland, coastal bluff scrub.
Mt. Diablo manzanita	*Arctostaphylos auriculata*	—	—	1B.3	—	Chaparral, cismontane woodland.
Franciscan manzanita	*Arctostaphylos franciscana*	E	E	1B.1	—	Chaparral.
San Bruno Mountain manzanita	*Arctostaphylos imbricata*	—	E	1B.1	—	Chaparral, coastal scrub.
Mt. Tamalpais manzanita	*Arctostaphylos montana* ssp. *montana*	—	—	1B.3	—	Chaparral, valley and foothill grassland.
Presidio manzanita	*Arctostaphylos montana* ssp. *ravenii*	E	E	1B.1	—	Chaparral, coastal prairie, coastal scrub.
Montara manzanita	*Arctostaphylos montaraensis*	—	—	1B.2	—	Chaparral, coastal scrub.
Pacific manzanita	*Arctostaphylos pacifica*	—	E	1B.2	—	Coastal scrub, chaparral.
Pallid manzanita	*Arctostaphylos pallida*	T	E	1B.1	—	Broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub.
Kings Mountain manzanita	*Arctostaphylos regismontana*	—	—	1B.2	—	Broadleaved upland forest, chaparral, north coast coniferous forest.
Rincon Ridge manzanita	*Arctostaphylos stanfordiana* ssp. *decumbens*	—	—	1B.1	—	Chaparral, cismontane woodland.
Marsh sandwort	*Arenaria paludicola*	E	E	1B.1	—	Freshwater marsh, Marsh & swamp, Wetland.
Clara Hunt's milk-vetch	*Astragalus claranus*	E	T	1B.1	—	Cismontane woodland, valley and foothill grassland, chaparral.
Coastal marsh milk-vetch	*Astragalus pycnostachyus* var. *pycnostachyus*	—	—	1B.2	—	Coastal dunes,marshes and swamps, coastal scrub.
Alkali milk-vetch	*Astragalus tener* var. *tener*	—	—	1B.2	–	Alkali playa, valley and foothill grassland, vernal pools.
Heartscale	*Atriplex cordulata* var. *cordulata*	—	—	1B.2	—	Chenopod scrub, valley and foothill grassland, meadows and seeps.
Brittlescale	*Atriplex depressa*	—	—	1B.2	—	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland, vernal pools.

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		FESA	CESA	CRPR	Other	
Lesser saltscale	*Atriplex minuscula*	—	—	1B.1	—	Chenopod scrub, playas, valley and foothill grassland.
Vernal pool smallscale	*Atriplex persistens*	—	—	1B.1	—	Vernal pool, Wetland.
Big-scale balsamroot	*Balsamorhiza macrolepis*	—	—	1B.2	—	Chaparral, valley and foothill grassland, cismontane woodland.
Sonoma sunshine	*Blennosperma bakeri*	E	E	1B.1	—	Vernal pools, valley and foothill grassland.
Big tarplant	*Blepharizonia plumosa*	—	—	1B.1	—	Valley and foothill grassland.
Narrow-anthered brodiaea	*Brodiaea leptandra*	—	—	1B.2	—	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland.
Round-leaved filaree	*California macrophylla*	—	—	1B.2	—	Cismontane woodland, valley and foothill grassland.
Mt. Diablo fairy-lantern	*Calochortus pulchellus*	—	—	1B.2	—	Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland.
Coastal bluff morning-glory	*Calystegia purpurata* ssp. *saxicola*	—	—	1B.2	—	Coastal dunes, coastal scrub, coastal bluff scrub, north coast coniferous forest.
Bristly sedge	*Carex comosa*	—	—	2B.1	—	Marshes and swamps, coastal prairie, valley and foothill grassland.
Lyngbye's sedge	*Carex lyngbyei*	—	—	2B.2	—	Marshes and swamps (brackish or freshwater).
Humboldt Bay owl's-clover	*Castilleja ambigua* var. *humboldtiensis*	—	—	1B.2	—	Marshes and swamps.
Rincon Ridge ceanothus	*Ceanothus confusus*	—	—	1B.1	—	Closed-cone coniferous forest, chaparral, cismontane woodland.
Calistoga ceanothus	*Ceanothus divergens*	—	—	1B.2	—	Chaparral.
Coyote ceanothus	*Ceanothus ferrisiae*	E	E	1B.1	—	Chaparral, valley and foothill grassland, coastal scrub.
Vine Hill ceanothus	*Ceanothus foliosus* var. *vineatus*	—	—	1B.1	—	Chaparral.
Holly-leaved ceanothus	*Ceanothus purpureus*	—	—	1B.2	—	Chaparral, cismontane woodland.
Sonoma ceanothus	*Ceanothus sonomensis*	—	—	1B.2	—	Chaparral.
Congdon's tarplant	*Centromadia parryi* ssp. *congdonii*	—	—	1B.1	—	Valley and foothill grassland.
Pappose tarplant	*Centromadia parryi* ssp. *parryi*	—	—	1B.2	—	Chaparral, coastal prairie, meadows and seeps, coastal salt marsh, valley and foothill grassland.
Point Reyes salty bird's-beak	*Chloropyron maritimum* ssp. *palustre*	—	—	1B.2	—	Coastal salt marsh.
Hispid salty bird's-beak	*Chloropyron molle* ssp. *Hispidum*	—	—	1B.2	—	Alkali playa, Meadow & Seep, Wetland.
Soft salty bird's-beak	*Chloropyron molle* ssp. *molle*	E	R	1B.2	—	Coastal salt marsh.

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		FESA	CESA	CRPR	Other	
Palmate-bracted salty bird's-beak	*Chloropyron palmatum*	E	E	1B.1	—	Chenopod scrub, valley and foothill grassland.
San Francisco Bay spineflower	*Chorizanthe cuspidata* var. *cuspidata*	—	—	1B.2	—	Coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub.
Robust spineflower	*Chorizanthe robusta* var. *robusta*	E	E	1B.1	—	Cismontane woodland, coastal dunes, coastal scrub, chaparral.
Sonoma spineflower	*Chorizanthe valida*	E	E	1B.1	—	Coastal prairie.
Bolander's water-hemlock	*Cicuta maculata* var. *bolanderi*	—	—	2B.1	—	Marshes and swamps, fresh or brackish water.
Franciscan thistle	*Cirsium andrewsii*	—	—	1B.2	—	Coastal bluff scrub, broadleaved upland forest, coastal scrub, coastal prairie.
Mt. Hamilton fountain thistle	*Cirsium fontinale* var. *campylon*	—	—	1B.2	—	Cismontane woodland, chaparral, valley and foothill grassland.
Crystal Springs fountain thistle	*Cirsium fontinale* var. *fontinale*	E	E	1B.1	—	Valley and foothill grassland, chaparral, cismontane woodland, meadows and seeps.
Suisun thistle	*Cirsium hydrophilum* var. *hydrophilum*	E	E	1B.1	—	Marshes and swamps.
Mt. Tamalpais thistle	*Cirsium hydrophilum* var. *vaseyi*	—	—	1B.2	—	Broadleafed upland forest, chaparral, meadows and seeps.
Compact cobwebby thistle	*Cirsium occidentale* var. *compactum*	—	—	1B.2	—	Chaparral, coastal dunes, coastal prairie, coastal scrub.
Lost thistle	*Cirsium praeteriens*	—	—	1A	—	Little information exists on this plant; it was collected from the Palo Alto area at the turn of the 20th Century.
Raiche's red ribbons	*Clarkia concinna* ssp. *Raichei*	—	—	1B.1	—	Coastal bluff scrub.
Presidio clarkia	*Clarkia franciscana*	E	E	1B.1	—	Coastal scrub, valley and foothill grassland.
Round-headed Chinese-houses	*Collinsia corymbosa*	—	—	1B.2	—	Coastal dunes.
San Francisco collinsia	*Collinsia multicolor*	—	—	1B.2	—	Closed-cone coniferous forest, coastal scrub.
Hoover's cryptantha	*Cryptantha hooveri*	—	—	1A	—	Valley and foothill grassland, inland dunes.
Peruvian dodder	*Cuscuta obtusiflora* var. *glandulosa*	—	—	2B.2	—	Marsh & swamp, Wetland.
Livermore tarplant	*Deinandra bacigalupii*	—	CE	1B.1	—	Meadows and seeps.
Baker's larkspur	*Delphinium bakeri*	E	E	1B.1	—	Broadleafed upland forest, coastal scrub, valley and foothill grassland.

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		FESA	CESA	CRPR	Other	
Hospital Canyon larkspur	*Delphinium californicum* ssp. *Interius*	—	—	1B.2	—	Chaparral, Cismontane woodland, Coastal scrub, Meadow & Seep.
Golden larkspur	*Delphinium luteum*	E	R	1B.1	—	Chaparral, coastal prairie, coastal scrub.
Recurved larkspur	*Delphinium recurvatum*	—	—	1B.2	—	Chenopod scrub, Cismontane woodland, Valley & foothill grassland.
Western leatherwood	*Dirca occidentalis*	—	—	1B.2	—	Broadleafed upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, north coast coniferous forest, riparian forest, riparian woodland.
Dwarf downingia	*Downingia pusilla*	—	—	2B.2	—	Valley and foothill grassland (mesic sites), vernal pools.
Santa Clara Valley dudleya	*Dudleya abramsii* ssp. *setchellii*	E	E	1B.1	—	Valley and foothill grassland, cismontane woodland.
Greene's narrow-leaved daisy	*Erigeron greenei*	—	—	1B.2	—	Chaparral.
Tiburon buckwheat	*Eriogonum luteolum* var. *caninum*	—	—	1B.2	—	Chaparral, valley and foothill grassland, cismontane woodland, coastal prairie.
Antioch Dunes buckwheat	*Eriogonum nudum* var. *psychicola*	—	—	1B.1	—	Interior dunes.
Mt. Diablo buckwheat	*Eriogonum truncatum*	—	—	1B.1	—	Chaparral, coastal scrub, valley and foothill grassland.
San Mateo woolly sunflower	*Eriophyllum latilobum*	E	E	1B.1	—	Cismontane woodland, coastal scrub, lower montane coniferous forest.
Hoover's button-celery	*Eryngium aristulatum* var. *hooveri*	—	—	1B.1	—	Vernal pools.
Contra Costa wallflower	*Erysimum capitatum* var. *angustatum*	E	E	1B.1	—	Inland dunes.
Bluff wallflower	*Erysimum concinnum*	—	—	1B.2	—	Coastal bluff scrub, Coastal dunes, Coastal prairie.
Diamond-petaled California poppy	*Eschscholzia rhombipetala*	—	—	1B.1	—	Valley and foothill grassland.
San Joaquin spearscale	*Extriplex joaquinana*	—	—	1B.2		Chenopod scrub, alkali meadow, playas, valley and foothill grassland.
Minute pocket moss	*Fissidens pauperculus*	—	—	1B.2	—	North coast coniferous forest.
Hillsborough chocolate lily	*Fritillaria biflora* var. *ineziana*	—	—	1B.1	—	Cismontane woodland, valley and foothill grassland.
Marin checker lily	*Fritillaria lanceolata* var. *tristulis*	—	—	1B.1	—	Coastal bluff scrub, coastal scrub, coastal prairie.
Fragrant fritillary	*Fritillaria liliacea*	—	—	1B.2	—	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland.
Adobe-lily	*Fritillaria pluriflora*	—	—	1B.2	—	Chaparral, cismontane woodland, foothill grassland.
Blue coast gilia	*Gilia capitata* ssp. *chamissonis*	—	—	1B.1	—	Coastal dunes, coastal scrub.

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Common Name	*Scientific Name*	Status				Habitat Associations
		FESA	CESA	CRPR	Other	
Woolly-headed gilia	*Gilia capitata* ssp. *tomentosa*	—	—	1B.1	—	Coastal bluff scrub, valley and foothill grassland.
Dark-eyed gilia	*Gilia millefoliata*	—	—	1B.2	—	Coastal dunes.
Diablo helianthella	*Helianthella castanea*	—	—	1B.2	—	Broadleaved upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland.
Congested-headed hayfield tarplant	*Hemizonia congesta* ssp. *congesta*	—	—	1B.2	—	Valley and foothill grassland.
Short-leaved evax	*Hesperevax sparsiflora* var. *brevifolia*	—	—	1B.2	—	Coastal bluff scrub, coastal dunes, coastal prairie.
Brewer's western flax	*Hesperolinon breweri*	—	—	1B.2	—	Chaparral, cismontane woodland, valley and foothill grassland.
Marin western flax	*Hesperolinon congestum*	T	T	1B.1	—	Chaparral, valley and foothill grassland.
Water star-grass	*Heteranthera dubia*	—	—	2B.2	—	Marshes and swamps.
Woolly rose-mallow	*Hibiscus lasiocarpos* var. *occidentalis*	—	—	1B.2	—	Marshes and swamps (freshwater).
Loma Prieta hoita	*Hoita strobilina*	—	—	1B.1	—	Chaparral, cismontane woodland, riparian woodland.
Santa Cruz tarplant	*Holocarpha macradenia*	T	E	1B.1	—	Coastal prairie, coastal scrub, valley and foothill grassland.
Kellogg's horkelia	*Horkelia cuneata* var. *sericea*	—	—	1B.1	—	Closed-cone coniferous forest, coastal scrub, coastal dunes, chaparral.
Point Reyes horkelia	*Horkelia marinensis*	—	—	1B.2	—	Coastal dunes, coastal prairie, coastal scrub.
Thin-lobed horkelia	*Horkelia tenuiloba*	—	—	1B.2	—	Broadleaved upland forest, chaparral, valley and foothill grassland.
Carquinez goldenbush	*Isocoma arguta*	—	—	1B.1	—	Valley and foothill grassland.
Northern California black walnut	*Juglans hindsii*	—	—	1B.1	—	Riparian forest, riparian woodland. Few extant native stands remain; widely naturalized.
Small groundcone	*Kopsiopsis hookeri*	—	—	2B.3	—	North coast coniferous forest.
Burke's goldfields	*Lasthenia burkei*	E	E	1B.1	—	Vernal pools, meadows and seeps.
Baker's goldfields	*Lasthenia californica* ssp. *bakeri*	—	—	1B.2	—	Closed-cone coniferous forest, coastal scrub, meadows and seeps, marshes and swamps.
Perennial goldfields	*Lasthenia californica* ssp. *macrantha*	—	—	1B.2	—	Coastal bluff scrub, coastal dunes, coastal scrub.
Contra Costa goldfields	*Lasthenia conjugens*	E	E	1B.1	—	Valley and foothill grassland, vernal pools, alkaline playas, cismontane woodland.
Delta tule pea	*Lathyrus jepsonii* var. *jepsonii*	—	—	1B.2		Freshwater and brackish marshes.
Beach layia	*Layia carnosa*	E	E	1B.1	—	Coastal dunes, coastal scrub.
Colusa layia	*Layia septentrionalis*	—	—	1B.2	—	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland.
Legenere	*Legenere limosa*	—	—	1B.1	—	Vernal pools.

Table K-1 Special-Status Species Evaluated for Plan Bay Area 2040

Common Name	*Scientific Name*	Status				Habitat Associations
		FESA	CESA	CRPR	Other	
Coast yellow leptosiphon	*Leptosiphon croceus*	—	CE	1B.1	—	Coastal bluff scrub, coastal prairie.
Jepson's leptosiphon	*Leptosiphon jepsonii*	—	—	1B.2	—	Chaparral, cismontane woodland.
Rose leptosiphon	*Leptosiphon rosaceus*	—	—	1B.1	—	Coastal bluff scrub.
Crystal Springs lessingia	*Lessingia arachnoidea*	—	—	1B.2	—	Coastal sage scrub, valley and foothill grassland, cismontane woodland.
San Francisco lessingia	*Lessingia germanorum*	E	E	1B.1	—	Coastal scrub.
Smooth lessingia	*Lessingia micradenia* var. *glabrata*	—	—	1B.2	—	Chaparral, cismontane woodland.
Tamalpais lessingia	*Lessingia micradenia* var. *micradenia*	—	—	1B.2	—	Chaparral, valley and foothill grassland.
Mason's lilaeopsis	*Lilaeopsis masonii*	—	R	1B.1	—	Freshwater and brackish marshes, riparian scrub.
Pitkin Marsh lily	*Lilium pardalinum* ssp. *pitkinense*	E	E	1B.1	—	Cismontane woodland, meadows and seeps, marshes and swamps.
Ornduff's meadowfoam	*Limnanthes douglasii* ssp. *ornduffii*	—	—	1B.1	—	Meadows and seeps, agricultural fields.
Sebastopol meadowfoam	*Limnanthes vinculans*	E	E	1B.1	—	Meadows and seeps, vernal pools, valley and foothill grassland.
Delta mudwort	*Limosella australis*	—	—	2B.1	—	Riparian scrub, marshes and swamps.
Showy golden madia	*Madia radiata*	—	—	1B.1	—	Valley and foothill grassland, cismontane woodland.
Arcuate bush-mallow	*Malacothamnus arcuatus*	—	—	1B.2	—	Chaparral, cismontane woodland.
Hall's bush-mallow	*Malacothamnus hallii*	—	—	1B.2	—	Chaparral, coastal scrub.
Marsh microseris	*Microseris paludosa*	—	—	1B.2		Closed-cone coniferous forest,cismontane woodland, coastal scrub, valley and foothill grassland.
Northern curly-leaved monardella	*Monardella sinuata* ssp. *nigrescens*	—	—	1B.2	—	Coastal dunes, coastal scrub, chaparral, lower montane coniferous forest.
Woodland woollythreads	*Monolopia gracilens*	—	—	1B.2	—	Chaparral, valley and foothill grassland, cismontane woodland, broadleafed upland forest, north coast coniferous forest.
Baker's navarretia	*Navarretia leucocephala* ssp. *bakeri*	—	—	1B.1	—	Cismontane woodland, meadows and seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest.
Many-flowered navarretia	*Navarretia leucocephala* ssp. *plieantha*	E	E	1B.2	—	Vernal pools.
Shining navarretia	*Navarretia nigelliformis* ssp. *radians*	—	—	1B.2	—	Cismontane woodland, valley and foothill grassland, vernal pools.
Prostrate vernal pool navarretia	*Navarretia prostrata*	—	—	1B.1	—	Coastal scrub, valley and foothill grassland, vernal pools, meadows and seeps.

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Common Name	*Scientific Name*	Status				Habitat Associations
		FESA	CESA	CRPR	Other	
Antioch Dunes evening-primrose	*Oenothera deltoides* ssp. *howellii*	E	E	1B.1	—	Interior dunes.
White-rayed pentachaeta	*Pentachaeta bellidiflora*	E	E	1B.1	—	Valley and foothill grassland, cismontane woodland.
Choris' popcornflower	*Plagiobothrys chorisianus* var. *chorisianus*	—	—	1B.2	—	Chaparral, coastal scrub, coastal prairie.
San Francisco popcornflower	*Plagiobothrys diffusus*	—	E	1B.1	—	Valley and foothill grassland, coastal prairie.
Hairless popcornflower	*Plagiobothrys glaber*	—	—	1A	—	Meadows and seeps, marshes and swamps.
Bearded popcornflower	*Plagiobothrys hystriculus*	—	—	1B.1	—	Vernal pools, valley and foothill grassland.
Petaluma popcornflower	*Plagiobothrys mollis* var. *vestitus*	—	—	1A	—	Valley and foothill grassland, marshes and swamps.
Calistoga popcorn flower	*Plagiobothrys strictus*	E	T	1B.1	—	Meadow & seep, Valley & footfill grassland, Vernal pool, Wetland.
Napa blue grass	*Poa napensis*	E	E	1B.1	—	Meadows and seeps, valley and foothill grassland.
Oregon polemonium	*Polemonium carneum*	—	—	2B.2	—	Coastal prairie, coastal scrub, lower montane coniferous forest.
Hickman's cinquefoil	*Potentilla hickmanii*	E	E	1B.1	—	Coastal bluff scrub, closed-cone coniferous forest, meadows and seeps, marshes and swamps.
California alkali grass	*Puccinellia simplex*	—	—	1B.2	—	Meadows and seeps, chenopod scrub, valley and foothill grasslands, vernal pools.
Tamalpais oak	*Quercus parvula* var. *tamalpaisensis*	—	—	1B.3	—	Lower montane coniferous forest.
California beaked-rush	*Rhynchospora californica*	—	—	1B.1	—	Freshwater marsh, Lower montane coniferous forest, Marsh & swamp, Meadow & seep, Wetland.
Brownish beaked-rush	*Rhynchospora capitellata*	—	—	2B.2	—	Lower montane coniferous forest, Marsh & swamp, Meadow & seep, Upper montane coniferous forest, Wetland.
Round-headed beacked-rush	*Rhynchospora globularis*	—	—	2B.2	—	Freshwater marsh, Marsh & swamp, Wetland.
Adobe sanicle	*Sanicula maritima*	—	R	1B.1		Meadows and seeps, valley and foothill grassland, chaparral, coastal prairie.
Chaparral ragwort	*Senecio aphanactis*	—	—	2B.2		Chaparral, cismontane woodland, coastal scrub.
Point Reyes checkerbloom	*Sidalcea calycosa* ssp. *rhizomata*	—	—	1B.2	—	Marshes and swamps.
Marin checkerbloon	*Sidalcea hickmanii* ssp. *Viridis*	—	—	1B.1	—	Chaparral, Ultramafic
San Francisco campion	*Silene verecunda* ssp. *verecunda*	—	—	1B.2	—	Coastal scrub, valley and foothill grassland, coastal bluff scrub, chaparral, coastal prairie.
Metcalf Canyon jewelflower	*Streptanthus albidus* ssp. *albidus*	E	E	1B.1	—	Valley and foothill grassland.

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Common Name	*Scientific Name*	Status				Habitat Associations
		FESA	CESA	CRPR	Other	
Most beautiful jewelflower	*Streptanthus albidus* ssp. *peramoenus*	—	—	1B.2	—	Chaparral, valley and foothill grassland, cismontane woodland.
Mt. Tamalpais bristly jewelflower	*Streptanthus glandulosus* ssp. *pulchellus*	—	—	1B.2	—	Chaparral, valley and foothill grassland.
Slender-leaved pondweed	*Stuckenia filiformis* ssp. *alpina*	—	—	2B.2	—	Marshes and swamps.
California seablite	*Suaeda californica*	E	E	1B.1	—	Marshes and swamps.
Suisun Marsh aster	*Symphyotrichum lentum*	—	—	1B.2	—	Marshes and swamps (brackish and freshwater).
Two-fork clover	*Trifolium amoenum*	E	E	1B.1	—	Valley and foothill grassland, coastal bluff scrub.
Saline clover	*Trifolium hydrophilum*	—	—	1B.2	—	Marshes and swamps, valley and foothill grassland, vernal pools.
San Francisco owl's-clover	*Triphysaria floribunda*	—	—	1B.2	—	Coastal prairie, coastal scrub, valley and foothill grassland.
Coastal triquetrella	*Triquetrella californica*	—	—	1B.2	—	Coastal bluff scrub, coastal scrub.
Caper-fruited tropidocarpum	*Tropidocarpum capparideum*	—	—	1B.1	—	Valley and foothill grassland.
Oval-leaved viburnum	*Viburnum ellipticum*	—	—	2B.3	—	Chaparral, cismontane woodland, lower montane coniferous forest.
Invertebrates						
Lange's metalmark butterfly	*Apodemia mormo langei*	E	E	—	—	Interior dunes.
Vernal pool fairy shrimp	*Branchinecta lynchi*	T	T	—	—	Endemic to the grasslands of the Central Valley, Central Coast mtns, and South Coast mtns, in astatic rain-filled pools.
San Bruno elfin butterfly	*Callophrys mossii bayensis*	E	E		—	Coastal, mountainous areas with grassy ground cover, mainly in the vicinity of San Bruno Mountain, San Mateo County.
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	T	T	—	—	Occurs only in the Central Valley of California, in association with blue elderberry (Sambucus mexicana).
Bay checkerspot butterfly	*Euphydryas editha bayensis*	T	T	—	—	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay.
Vernal pool tadpole shrimp	*Lepidurus packardi*	E	E		—	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water.
Mission blue butterfly	*Plebejus icarioides missionensis*	E	E	—	—	Inhabits grasslands of the San Francisco peninsula.
Callippe silverspot butterfly	*Speyeria callippe callippe*	E	E	—	—	Restricted to the northern coastal scrub of the San Francisco peninsula.
Myrtle's silverspot butterfly	*Speyeria zerene myrtleae*	E	E	—	—	Restricted to the foggy, coastal dunes/hills of the Point Reyes peninsula; extirpated from coastal San Mateo County.
California freshwater shrimp	*Syncaris pacifica*	E	E	—	—	Endemic to Marin, Napa, & Sonoma counties. Found in low elevation, low gradient streams where riparian cover is moderate to heavy.

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Common Name	*Scientific Name*	Status				Habitat Associations
		FESA	CESA	CRPR	Other	
Fish						
Sacramento perch	*Archoplites interruptus*	—	—	—	SSC	Historically found in the sloughs, slow-moving rivers, and lakes of the Central Valley.
Tidewater goby	*Eucyclogobius newberryi*	E	E	—	SSC	Brackish water habitats along the Calif coast from Agua Hedionda Lagoon, San Diego Co. to the mouth of the Smith River.
Delta smelt	*Hypomesus transpacificus*	T	E	—	—	Sacramento-San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait & San Pablo Bay.
Russian River tule perch	*Hysterocarpus traski pomo*	—	—	—	SSC	Low elevation streams of the Russian River system.
Navarro roach	*Lavinia symmetricus navarroensis*	—	—	—	SSC	Habitat generalists. Found in warm intermittent streams as well as cold, well-aerated streams.
Tomales roach	*Lavinia symmetricus* ssp. *2*	—	—	—	SSC	Tributaries to Tomales Bay.
Hardhead	*Mylopharodon conocephalus*	—	—	—	SSC	Low to mid-elevation streams in the Sacramento-San Joaquin drainage. Also present in the Russian River.
Coho salmon - central California coast ESU	*Oncorhynchus kisutch*	E	E	—	—	Aquatic
Steelhead - central California coast DPS	*Oncorhynchus mykiss irideus*	T	T	—	—	Aquatic, Sacramento/San Joaquin flowing waters
Steelhead - south-central California coast DPS	*Oncorhynchus mykiss irideus*	T	T	—	—	Aquatic, Sacramento/San Joaquin flowing waters
Steelhead - Central Valley DPS	*Oncorhynchus mykiss irideus*	T	T	—	—	Aquatic, Sacramento/San Joaquin flowing waters
Sacramento splittail	*Pogonichthys macrolepidotus*	—	—	—	SSC	Endemic to the lakes and rivers of the Central Valley, but now confined to the Delta, Suisun Bay & associated marshes.
Longfin smelt	*Spirinchus thaleichthys*	C	T	—	SSC	Euryhaline, nektonic & anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column.
Amphibians and Reptiles						
California tiger salamander	*Ambystoma californiense*	T	T	—	CDFW WL	Central Valley DPS federally listed as threatened. Santa Barbara & Sonoma counties DPS federally listed as endangered.
Silvery legless lizard	*Anniella pulchra pulchra*	—	—	—	SSC	Sandy or loose loamy soils under sparse vegetation.
California giant salamander	*Dicamptodon ensatus*	—	—	—	SSC	Known from wet coastal forests near streams and seeps from Mendocino Co. south to Monterey Co. and east to Napa Co.
Western pond turtle	*Emys marmorata*	—	—	—	SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams & irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation.
Alameda whipsnake	*Masticophis lateralis euryxanthus*	T	T	—	—	Typically found in chaparral and scrub habitats but will also use adjacent grassland, oak savanna and woodland habitats.
Foothill yellow-legged frog	*Rana boylii*	—	—	—	SSC	Partly-shaded, shallow streams & riffles with a rocky substrate in a variety of habitats.

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Common Name	*Scientific Name*	Status				Habitat Associations
		FESA	CESA	CRPR	Other	
California red-legged frog	*Rana draytonii*	T	T	—	SSC	Lowlands & foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.
Western spadefoot	*Spea hammondii*	—	—	—	SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands.
San Francisco gartersnake	*Thamnophis sirtalis tetrataenia*	E	E	—	FP	Vicinity of freshwater marshes, ponds and slow-moving streams in San Mateo County & extreme northern Santa Cruz County.
Birds						
Cooper's hawk	*Accipiter cooperii*	—	—	—	CDFW WL	Woodland, chiefly of open, interrupted or marginal type.
Sharp-shinned hawk	*Accipiter striatus*	—	—	—	CDFW WL	Ponderosa pine, black oak, riparian deciduous, mixed conifer & Jeffrey pine habitats. Prefers riparian areas.
Tricolored blackbird	*Agelaius tricolor*	CE	CE	—	SSC	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California.
Golden eagle	*Aquila chrysaetos*	—	—	—	FP; CDFW WL	Rolling foothills, mountain areas, sage-juniper flats, & desert.
Short-eared owl	*Asio flammeus*	—	—	—	SSC	Found in swamp lands, both fresh and salt; lowland meadows; irrigated alfalfa fields.
Burrowing owl	*Athene cunicularia*	—	—	—	SSC	Open, dry annual or perennial grasslands, deserts & scrublands characterized by low-growing vegetation.
Ferruginous hawk	*Buteo regalis*	—	—	—	CDFW WL	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats.
Swainson's hawk	*Buteo swainsoni*	—	T	—	—	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, & agricultural or ranch lands with groves or lines of trees.
Western snowy plover	*Charadrius alexandrinus nivosus*	T	T	—	SSC	Sandy beaches, salt pond levees & shores of large alkali lakes.
Northern harrier	*Circus cyaneus*	—	—		SSC	Coastal salt & fresh-water marsh. Nest & forage in grasslands, from salt grass in desert sink to mountain cienagas.
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	T	E		—	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems.
White-tailed kite	*Elanus leucurus*	—	—	—	FP	Rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland.
California horned lark	*Eremophila alpestris actia*	—	—	—	CDFW WL	Coastal regions, chiefly from Sonoma Co. to San Diego Co. Also main part of San Joaquin Valley & east to foothills.
Merlin	*Falco columbarius*	—	—	—	CDFW WL	Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands & deserts, farms & ranches.

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Common Name	*Scientific Name*	Status				Habitat Associations
		FESA	CESA	CRPR	Other	
Prairie falcon	*Falco mexicanus*	—	—	—	CDFW WL	Inhabits dry, open terrain, either level or hilly.
American peregrine falcon	*Falco peregrinus anatum*	D	D	—	FP	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures.
Saltmarsh common yellowthroat	*Geothlypis trichas sinuosa*	—	—	—	SSC	Resident of the San Francisco Bay region, in fresh and salt water marshes.
Loggerhead shrike	*Lanius ludovicianus*	—	—	—	SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, & riparian woodlands, desert oases, scrub & washes.
California black rail	*Laterallus jamaicensis coturniculus*	—	T	—	FP	Inhabits freshwater marshes, wet meadows & shallow margins of saltwater marshes bordering larger bays.
Song sparrow ("Modesto" population)	*Melospiza melodia*	—	—	—	SSC	Emergent freshwater marsh dominated by tules, and cattails; willow riparian scrub; valley oak riparian woodland with dense understory; and along vegetated irrigation canals and levees.
Suisun song sparrow	*Melospiza melodia maxillaris*	—	—	—	SSC	Resident of brackish-water marshes surrounding Suisun Bay.
Alameda song sparrow	*Melospiza melodia pusillula*	—	—	—	SSC	Resident of salt marshes bordering south arm of San Francisco Bay.
San Pablo song sparrow	*Melospiza melodia samuelis*	—	—	—	SSC	Resident of salt marshes along the north side of San Francisco and San Pablo bays.
Osprey	*Pandion haliaetus*	—	—	—	CDFW WL	Ocean shore, bays, fresh-water lakes, and larger streams.
Double-crested cormorant	*Phalacrocorax auritus*	—	—	—	CDFW WL	Colonial nester on coastal cliffs, offshore islands, & along lake margins in the interior of the state.
Purple martin	*Progne subis*	—	—	—	SSC	Broadleaved upland forest, Lower montane coniferous forest.
Ridgway's rail	*Rallus longirostris obsoletus*	E	E	—	FP	Salt-water & brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay.
Bank swallow	*Riparia riparia*	—	T		—	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert.
Black skimmer	*Rynchops niger*	—	—	—	SSC	Nests on gravel bars, low islets, and sandy beaches, in unvegetated sites. Nesting colonies usually less than 200 pairs.
Yellow warbler	*Setophaga petechia*	—	—	—	SSC	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada.
California least tern	*Sternula antillarum browni*	E	E	—	FP	Nests along the coast from San Francisco Bay south to northern Baja California.
Yellow-headed blackbird	*Xanthocephalus xanthocephalus*	—	—	—	SSC	Nests in freshwater emergent wetlands with dense vegetation & deep water. Often along borders of lakes or ponds.
Mammals						
Pallid bat	*Antrozous pallidus*	—	—	—	SSC	Deserts, grasslands, shrublands, woodlands & forests. Most common in open, dry habitats with rocky areas for roosting.
Point Reyes mountain beaver	*Aplodontia rufa phaea*	—	—	—	SSC	Coastal scrub, Meadow & seep

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Common Name	*Scientific Name*	Status				Habitat Associations
		FESA	CESA	CRPR	Other	
Townsend's big-eared bat	*Corynorhinus townsendii*	—	—	—	SSC	Throughout California in a wide variety of habitats. Most common in mesic sites.
Southern sea otter	*Enhydra lutris nereis*	T	T	—	FP	Nearshore marine environments from about Ano Nuevo, San Mateo Co. to Point Sal, Santa Barbara Co.
Western mastiff bat	*Eumops perotis californicus*	—	—	—	SSC	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral etc
Western red bat	*Lasiurus blossevillii*	—	—	—	SSC	Roosts primarily in trees, 2-40 ft above ground, from sea level up through mixed conifer forests.
San Pablo vole	*Microtus californicus sanpabloensis*	—	—	—	SSC	Saltmarshes of San Pablo Creek, on the south shore of San Pablo Bay.
San Francisco dusky-footed woodrat	*Neotoma fuscipes annectens*	—	—	—	SSC	Forest habitats of moderate canopy & moderate to dense understory. May prefer chaparral & redwood habitats.
Big free-tailed bat	*Nyctinomops macrotis*	—	—	—	SSC	Low-lying arid areas in Southern California.
Salt-marsh harvest mouse	*Reithrodontomys raviventris*	E	E	—	FP	Only in the saline emergent wetlands of San Francisco Bay and its tributaries.
Alameda Island mole	*Scapanus latimanus parvus*	—	—	—	SSC	Only known from Alameda Island. Found in a variety of habitats, especially annual & perennial grasslands.
Suisun shrew	*Sorex ornatus sinuosus*	—	—	—	SSC	Tidal marshes of the northern shores of San Pablo and Suisun bays.
Salt-marsh wandering shrew	*Sorex vagrans halicoetes*	—	—	—	SSC	Salt marshes of the south arm of San Francisco Bay.
American badger	*Taxidea taxus*	—	—	—	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.
San Joaquin kit fox	*Vulpes macrotis mutica*	E	T	—	—	Annual grasslands or grassy open stages with scattered shrubby vegetation.

Status:

Federal Endangered Species Act (FESA):
C = Candidate
E = Endangered
T = Threatened

California Endangered Species Act (CESA):
CE = Candidate Endangered
D = Delisted
E – Endangered
R = Rare
T = Threatened

California Rare Plant Rank (CRPR) category descriptions:
1A = Plants presumed extinct in California and rare/extinct elsewhere
1B = Plants considered rare or endangered in California and elsewhere
2A = Plants presumed extirpated in California, but more common elsewhere
2B = Plants considered rare or endangered in California, but more common elsewhere.
3 = Plants about which more information is needed (a review list); and
4 = Plants of limited distribution (a watch list).

CRPR Threat Ranks:
.1 Seriously threatened in California (>80% of occurrences threatened and/or high degree and immediacy of threat)
.2 Moderately threatened in California (20 to 80% of occurrences threatened/moderate degree and immediacy of threat)
.3 Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

Other:

CDFW WL = California Department of Fish and Wildlife Watch List

FP = California Department of Wildlife Fully Protected

SSC = California Department of Fish and Wildlife Species of Special Concern

Source: CNDDB 2017

Table K-2 Summary of Growth Footprints that Overlap with CNDDB Special-Status Species Occurrences, by County

County	Total Number of Growth Footprints in the Plan Area	Number of Growth Footprints that Intersect a Special-status Species Occurrence
Alameda	3,043	2,376
Contra Costa	1,112	980
Marin	123	69
Napa	87	57
San Francisco	1,500	1,500
San Mateo	861	859
Santa Clara	1,938	1,551
Solano	250	220
Sonoma	503	324
Total	**9,417**	**7,936**

Source: CNDDB 2017

Table K-3 Summary of Transportation Projects That Intersect CNDDB Special-Status Species Occurrences, by County

RTPID	Title	Number of Special-Status Species Occurrences									Total Occurrences	Total Species
		Alameda	Contra Costa	Marin	Napa	San Francisco	San Mateo	Santa Clara	Solano	Sonoma		
17-01-0009	New Alameda Point Ferry Terminal	1									1	1
17-01-0016	Oakland Army Base Transportation Infrastructure Improvements	9									9	9
17-01-0017	Outer Harbor Intermodal Terminal (OHIT) Phases 2 and 3	1									1	1
17-01-0020	SR-262 Mission Boulevard Cross Connector Improvements	3									3	3
17-01-0024	I-880 A Street Interchange Reconstruction	15									15	1
17-01-0025	Oakland International Airport Perimeter Dike	5									5	5
17-01-0027	Middle Harbor Road Improvements	7									7	7
17-01-0028	I-580/I-680 Interchange Improvement Project	10									10	2
17-01-0029	SR-84/I-680 Interchange Improvements and SR-84 Widening	26									26	9
17-01-0030	I-880 Broadway/Jackson Interchange Improvements	6									6	6
17-01-0031	I-880 at 23rd/29th Avenue Interchange Improvements	19									19	10
17-01-0032	SR-84 Widening (Ruby Hill Drive to Concannon Boulevard)	4									4	3
17-01-0033	I-580 Vasco Road Interchange Improvements	3									3	3
17-01-0034	I-580 Greenville Road Interchange Improvements	2									2	2
17-01-0035	I-580 First Street Interchange Improvements	3									3	3
17-01-0036	SR-92/Clawiter Road/Whitesell Street Interchange Improvements	15									15	1
17-01-0037	Ashby I-80 Interchange with Bicycle and Pedestrian Ramps	3									3	3
17-01-0038	I-580 Interchange Improvement at Hacienda/Fallon Road - Phase 2	2									2	2
17-01-0039	I-580 SR-84/Isabel Interchange Improvements Phase 2	2									2	2
17-01-0040	I-80 Gilman Street Interchange Improvements	6									6	4
17-01-0041	I-880 Winton Avenue Interchange Improvements	15									15	1
17-01-0042	I-680 Overcrossing Widening and Improvements at Stoneridge Drive	9									9	1

Table K-3 Summary of Transportation Projects That Intersect CNDDB Special-Status Species Occurrences, by County

RTPID	Title	Number of Special-Status Species Occurrences									Total Occurrences	Total Species
		Alameda	Contra Costa	Marin	Napa	San Francisco	San Mateo	Santa Clara	Solano	Sonoma		
17-01-0043	42nd Ave & High St Access Improvement at I-880 On/Off Ramp	11									11	2
17-01-0044	I-680 Sunol Interchange Modification	9									9	1
17-01-0045	Santa Rita Road I-580 Overcrossing Widening	1									1	1
17-01-0046	Coliseum City Transit Hub	13									13	4
17-01-0047	I-880 to Mission Boulevard East-West Connector	2									2	2
17-01-0048	Dublin Boulevard - North Canyons Parkway Extension	4									4	4
17-01-0049	Fruitvale Avenue (Miller Sweeney) Lifeline Bridge Project	19									19	10
17-01-0050	SR-84 Mowry Avenue Widening (Peralta Blvd to Mission Blvd)	3									3	2
17-01-0051	Tassajara Road Widening from N. Dublin Ranch Drive to City Limit	5									5	5
17-01-0052	Auto Mall Parkway Widening and Improvements	3									3	2
17-01-0053	Dougherty Road Widening	11	9								11	3
17-01-0054	Union City Boulevard Widening (Whipple to City Limit)	1									1	1
17-01-0055	SR-84 Peralta Boulevard Widening (Fremont Blvd to Mowry Ave)	3									3	2
17-01-0056	Thornton Avenue Widening (Gateway Boulevard to Hickory Street)	9									9	7
17-01-0057	Dublin Boulevard Widening - Sierra Court_to Dublin Court	10									10	2
17-01-0058	Irvington BART Station	2									2	1
17-01-0060	East Bay BRT	21									21	12
17-02-0012	I-680 Northbound Managed Lane Completion through 680/24 and Operational Improvements between N. Main and Treat Blvd		34								34	7
17-02-0013	I-680 Northbound HOV lane extension between N. Main and SR-242		12								12	7
17-02-0014	Kirker Pass Road Northbound Truck Climbing Lane, Clearbrook Drive to Crest of Kirker Pass Road		20								20	2

Table K-3 Summary of Transportation Projects That Intersect CNDDB Special-Status Species Occurrences, by County

RTPID	Title	Number of Special-Status Species Occurrences									Total Occurrences	Total Species
		Alameda	Contra Costa	Marin	Napa	San Francisco	San Mateo	Santa Clara	Solano	Sonoma		
17-02-0015	Vasco Road Byron Highway Connector Road (Formerly named: SR-239: Airport Connector)		31								31	12
17-02-0016	Construct SR 242/Clayton Road on and off-ramps		5								5	1
17-02-0019	I-680/SR4 Interchange Improvements - Phases 1-3		7								7	3
17-02-0021	Reconstruct I-80/San Pablo Dam Road Interchange		3								3	1
17-02-0022	I-680 Southbound HOV Lane between N. Main and Livorna		34								34	7
17-02-0023	State Route 4 Widening and Balfour Road IC Construction		1								1	1
17-02-0024	I-80/SR-4 Interchange Improvements - New Eastbound Willow Avenue Ramps		1								1	1
17-02-0026	I-80/Central Avenue Interchange Modification - Phases 1 & 2		6								6	4
17-02-0027	Construct Additional Auxiliary Lanes on I-680 - South of I-680/SR-24 Interchange	9	51								51	6
17-02-0028	I-80 Eastbound and Westbound Pinole Valley Road On-ramp Improvement		3								3	1
17-02-0029	Eastbound SR-24: Construct Auxiliary Lane, Wilder Road to Camino Pablo		32								32	4
17-02-0030	Widen Brentwood Boulevard - Havenwood Way to north city limit; and Chestnut to Fir		1								1	1
17-02-0031	Widen Willow Pass Road, Lynwood Drive to SR 4		24								24	1
17-02-0032	Widen Ygnacio Valley Road-Kirker Pass Road, Cowell to Michigan		20								20	2
17-02-0033	Widen Camino Tassajara Road, Windemere to County Line	1	2								2	2
17-02-0035	Lone Tree Way Widening		1								1	1
17-02-0036	Pittsburg-Antioch Highway Widening		5								5	4
17-02-0037	Widen Main St, SR 160 to Big Break Rd		1								1	1
17-02-0038	Main Street Bypass		2								2	2
17-02-0039	Hercules Train Station - All Phases		2								2	2

Table K-3 Summary of Transportation Projects That Intersect CNDDB Special-Status Species Occurrences, by County

RTPID	Title	Number of Special-Status Species Occurrences									Total Occurrences	Total Species
		Alameda	Contra Costa	Marin	Napa	San Francisco	San Mateo	Santa Clara	Solano	Sonoma		
17-02-0040	Martinez Intermodal Project: Phase 3		7								7	7
17-02-0041	Privately Run Ferry Service including Small-Scale (non-WETA complying) Landside Improvements from Antioch, Martinez, and Hercules to San Francisco		20			7			10		28	20
17-02-0042	Richmond-San Francisco Ferry Service	4	4			7					10	8
17-02-0044	Landside Improvements for Richmond Ferry Service		3								3	1
17-02-0046	Civic Center Railroad Platform Park & Ride Complex		2								2	2
17-02-0047	East County Rail Extension (eBART), Phase 1		19								19	11
17-02-0052	Widen San Ramon Valley Boulevard form 2 to 4 lanse - Jewel Terrace to Podva Road		15								15	2
17-03-0006	Implement Marin Sonoma Narrows HOV Lane and corridor improvements Phase 2 (Marin County)			5						3	5	5
17-03-0009	Access Improvements to Richmond San Rafael Bridge			6							6	6
17-03-0011	Widen Novato Boulevard between Diablo Avenue and Grant Avenue			1							1	1
17-03-0013	San Rafael Transit Center (SRTC) Relocation Project			3							3	3
17-03-0015	SMART Downtown San Rafael to Larkspur Rail Extension			4							4	4
17-04-0008	State Route 29 Improvements				3						3	3
17-05-0018	Downtown San Francisco Ferry Terminal Expansion - Phase II					7					7	7
17-05-0019	Establish new ferry terminal at Mission Bay 16th Street					10					10	10
17-05-0021	Geary Boulevard Bus Rapid Transit					14					14	14
17-05-0022	Presidio Parkway					14					14	14
17-05-0023	Yerba Buena Island (YBI) I-80 Interchange Improvement					2					2	2
17-05-0024	Balboa Park Station Area - Southbound I-280 Off-Ramp Realignment at Ocean Avenue					14					14	8
17-05-0025	Balboa Park Station Area - Closure of Northbound I-280 On-Ramp from Geneva Avenue					14					14	8
17-05-0027	Hunters Point Shipyard and Candlestick Point Local Roads Phase 1					18	14				18	11

Table K-3 Summary of Transportation Projects That Intersect CNDDB Special-Status Species Occurrences, by County

RTPID	Title	Number of Special-Status Species Occurrences									Total Occurrences	Total Species
		Alameda	Contra Costa	Marin	Napa	San Francisco	San Mateo	Santa Clara	Solano	Sonoma		
17-05-0030	Treasure Island Mobility Management Program: Intermodal Terminal, Congestion Toll, Transit Service, Transit Capital	10				9					17	17
17-05-0031	Southeast Waterfront Transportation Improvements - Phase 1					25	14				25	17
17-05-0032	Geneva-Harney Bus Rapid Transit					20	14				20	13
17-05-0033	Van Ness Avenue Bus Rapid Transit					7					7	7
17-05-0040	T-Third Mission Bay Loop					10					10	10
17-05-0041	T-Third Phase II: Central Subway					7					7	7
17-05-0042	Historic Streetcar Extension - Fort Mason to 4th & King					7					7	7
17-06-0007	Modify existing lanes on US 101 to accommodate HOV/T lane						51	5			55	22
17-06-0008	Add northbound and southbound modified auxiliary lanes and/ or implementation of HOT lanes on US 101 from Oyster Point to San Francisco County line					14	19				19	12
17-06-0009	Improve operations at US 101 near Route 92 - Phased						3				3	2
17-06-0010	Improve US 101/Woodside Road Interchange						1				1	1
17-06-0011	US 101 Produce Avenue Interchange						10				10	3
17-06-0012	US 101 Interchange at Peninsula Avenue						3				3	2
17-06-0013	Reconstruct US 101/Broadway Interchange						6				6	5
17-06-0014	Reconstruct US 101/Willow Road Interchange						1				1	1
17-06-0015	Construct auxiliary lanes (one in each direction) on US 101 from Marsh Road to Embarcadero Road						1	2			2	2
17-06-0016	Improve access to and from the west side of Dumbarton Bridge on Route 84 connecting to US 101 per Gateway 2020 Study - Phased						3				3	3
17-06-0017	Route 101/Holly St Interchange Access Improvements						3				3	2
17-06-0019	State Route 92-82 (El Camino) Interchange Improvement						6				6	5
17-06-0020	Hwy 1 operational & safety improvements in County Midcoast (acceleration/deceleration lanes; turn lanes; bike lanes; pedestrian crossings; and trails)						27				27	8

Table K-3 Summary of Transportation Projects That Intersect CNDDB Special-Status Species Occurrences, by County

RTPID	Title	Number of Special-Status Species Occurrences									Total Occurrences	Total Species
		Alameda	Contra Costa	Marin	Napa	San Francisco	San Mateo	Santa Clara	Solano	Sonoma		
17-06-0023	Route 1 Improvements in Half Moon Bay						7				7	5
17-06-0024	Reconstruct US 101/Sierra Point Parkway Interchange (includes extension of Lagoon Way to US 101)						9				9	3
17-06-0025	US 101/University Avenue Interchange Improvements						1				1	1
17-06-0032	Route 1 San Pedro Creek Bridge Replacement and Creek Widening Project						22				22	5
17-06-0033	Widen Route 92 between SR 1 and Pilarcitos Creek alignment, includes widening of travel lanes and shoulders						4				4	3
17-06-0034	Construct Route 1 (Calera Parkway) northbound and southbound lanes from Fassler Avenue to Westport Drive in Pacifica						24				24	7
17-06-0035	I-280 improvements near D Street exit						17				17	11
17-06-0036	Widen Skyline Boulevard (Route 35) to 4-lane roadway from I-280 to Sneath Lane - Phased						22				22	4
17-06-0037	Widen Millbrae Avenue between Rollins Road and US 101 soutbound on-ramp and resurface intersection of Millbrae Avenue and Rollins Road						19				19	2
17-06-0040	Extend Blomquist Street over Redwood Creek to East Bayshore and Bair Island Road						2				2	2
17-07-0012	BART Silicon Valley Extension - San Jose (Berryessa) to Santa Clara (escalated capital cost is $5.175 billion)							9			9	9
17-07-0013	Implement El Camino Rapid Transit Project							22			22	17
17-07-0021	Alviso Wetlands Doubletrack	1						14			14	11
17-07-0023	US 101/Zanker Rd./Skyport Dr./Fourth St. Interchange Improvements							4			4	4
17-07-0024	Lawrence/Stevens Creek/I-280 Interchange							1			1	1
17-07-0025	I-280/Winchester Blvd Interchange Improvements							4			4	4
17-07-0027	US 101/Mabury Rd./Taylor St. Interchange Improvements							4			4	4

Table K-3 Summary of Transportation Projects That Intersect CNDDB Special-Status Species Occurrences, by County

RTPID	Title	Number of Special-Status Species Occurrences									Total Occurrences	Total Species
		Alameda	Contra Costa	Marin	Napa	San Francisco	San Mateo	Santa Clara	Solano	Sonoma		
17-07-0028	I-280 Mainline Improvements from County line to Sunnyvale						3	12			12	5
17-07-0029	I-280/Saratoga Avenue Interchange Improvements							3			3	3
17-07-0031	US 101 Southbound/Trimble Rd./De La Cruz Blvd./Central Expressway Interchange Improvements							3			3	3
17-07-0032	I-680/ Alum Rock/ McKee Road Interchange Improvements							3			3	3
17-07-0034	US 101 Interchanges Improvements: San Antonio Rd. to Charleston Rd./Rengstorff Avenue							2			2	2
17-07-0039	US 101/Old Oakland Rd. Interchange Improvements							4			4	4
17-07-0042	SR 237/Great America Parkway WB Off- Ramps Improvements							2			2	2
17-07-0044	Double Lane Southbound US 101 off-ramp to Southbound SR 87							4			4	4
17-07-0051	Widen Calaveras Blvd. overpass from 4 to 6 lanes							2			2	2
17-07-0061	Extend Capitol Expressway light rail to Eastridge Transit Center - Phase II							6			6	6
17-07-0062	Extend light-rail transit from Winchester Station to Route 85 (Vasona Junction)							1			1	1
17-07-0068	237 WB Additional Lane from McCarthy to North First							2			2	2
17-07-0069	US 101/SR 25 Interchange							1			1	1
17-07-0074	SR 85 Express Lanes: US 101 (South San Jose) to Mountain View							2			2	2
17-07-0075	US 101 Express Lanes: Whipple Avenue in San Mateo County to Cochrane Road in Morgan Hill						2	25			26	19
17-07-0077	BART - Warm Springs to Berryessa Extension (SVBX)	4						7			11	9
17-07-0078	Envision Expressway (Tier 1 Expressway Plan) Major and Minor Projects							7			7	7
17-07-0080	Alum Rock/Santa Clara Street Bus Rapid Transit							10			10	10
17-07-0087	Widen San Tomas Expressway to 8 Lanes from Stevens Creek Blvd to Campbell Ave							3			3	3

Table K-3 Summary of Transportation Projects That Intersect CNDDB Special-Status Species Occurrences, by County

RTPID	Title	Number of Special-Status Species Occurrences									Total Occurrences	Total Species
		Alameda	Contra Costa	Marin	Napa	San Francisco	San Mateo	Santa Clara	Solano	Sonoma		
17-07-0088	Senter Road Widening from Umbarger to Lewis							3			3	3
17-07-0089	South Bascom Complete Streets							5			5	5
17-07-0090	Widen Brokaw Bridge over Coyote Creek							2			2	2
17-07-0091	Widen Oakland Road from 4-lanes to 6-lanes between US 101 and Montague Expressway							4			4	4
17-08-0009	I-80/I-680/SR12 Interchange (Packages 2-7)								18		18	14
17-08-0010	Improve Interchanges and widen roadways serving Solano County Fairgrounds, including Redwood Parkway								5		5	4
17-08-0011	Provide auxiliary lanes on I-80 in eastbound and westbound directions from I-680 to Airbase Parkway								6		6	5
17-08-0012	Construct 4-lane Jepson Parkway from Route 12 to Leisure Town Road at I-80								18		18	14
17-08-0014	Construct train station building and support facilities at the new Fairfield / Vacaville multimodal station								7		7	7
17-08-0016	Vallejo Station Parking Structure Phase B								3		3	3
17-09-0006	Implement Marin Sonoma Narrows Phase 2 (Sonoma County)			3						16	16	16
17-09-0008	Arata Lane Interchange									2	2	2
17-09-0009	Cotati US 101/Railroad Avenue Improvements (incl. Penngrove)									1	1	1
17-09-0011	Shiloh Road Interchange Reconstruction									2	2	2
17-09-0012	Cotati Highway 116 Cotati Corridor Improvements									2	2	1
17-09-0013	Petaluma Crosstown Connector and Rainier Interchange									1	1	1
17-09-0014	Farmers Lane extension between Bennett Valley Rd and Yolanda Avenue									1	1	1
17-09-0015	Road Diet Extension - Petaluma Boulevard South									12	12	12
17-09-0016	SMART Petaluma Infill Station									1	1	1
17-09-0018	SMART Rail Extension to Windsor + Environmental to Cloverdale + Bike Path									4	4	3
17-10-0003	San Pablo Avenue BRT	13	8								17	13

Table K-3 Summary of Transportation Projects That Intersect CNDDB Special-Status Species Occurrences, by County

RTPID	Title	Number of Special-Status Species Occurrences									Total Occurrences	Total Species
		Alameda	Contra Costa	Marin	Napa	San Francisco	San Mateo	Santa Clara	Solano	Sonoma		
17-10-0005	BART Metro Program + Bay Fair Connector	64	56			18	39	12			158	45
17-10-0007	California HSR in the Bay Area					20	53	41			95	39
17-10-0008	Caltrain Electrification Phase 1 + CBOSS					20	51	20			72	31
17-10-0036	I-580 Access Improvements Project		2	1							2	2
17-10-0038	Caltrain/HSR Downtown San Francisco Extension (capital cost is $3.999 billion)					6					6	6
17-10-0039	Implement Transbay Transit Center/Caltrain Downtown Extension (Phase 1 - Transbay Transit Center)					6					6	6
17-10-0040	North Bay Ferry Service Enhancement		4			7			7		15	12
17-10-0041	Central Bay Ferry Service Enhancement	2				8					9	9
17-10-0042	Albany/Berkeley Ferry Terminal	1				7					7	7
17-10-0057	I-880 Express Lanes: Northbound from Hegenberger to Lewelling and bridge improvements	2									2	2
17-10-0058	I-680 Express Lanes: Northbound from SR-84 to SR-237	25									25	8
17-10-0059	I-80 Express Lanes in both directions: Airbase Parkway to I-505								6		6	5
17-10-0060	I-680 Express Lanes: Northbound from Rudgear to SR 242 and operational improvements		12								12	7
17-10-0061	I-680 Express Lanes: I-80 westbound to I-680 southbound and I-680 northbound to I-80 eastbound direct connectors								4		4	4

Source: CNDDB 2017

Table K-4 Amount of Critical Habitat that Intersects Growth Footprints, by Region, County, and TPAs

County		Alameda whipsnake (=striped racer)	California tiger salamander	California red-legged frog	Delta smelt	Bay checkerspot butterfly	Vernal pool fairy shrimp	Vernal pool tadpole shrimp	Contra Costa goldfields	Franciscan manzanita	Steelhead - Central California Coast
		(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Linear Miles)
Alameda	County Total	20		410			2	6	6		
	Within TPA										
Contra Costa	County Total	<1		2	670						
	Within TPA				160						
Marin	County Total										<1
	Within TPA										
Napa	County Total										<1
	Within TPA										
San Francisco	County Total									7	
	Within TPA									7	
San Mateo	County Total			<1		<1					<1
	Within TPA										
Santa Clara	County Total										2
	Within TPA										<1
Solano	County Total				<1		100	100	100		
	Within TPA										
Sonoma	County Total		280								<1
	Within TPA		1								
Regional Total	County Total	**20**	**280**	**412**	**670**	**<1**	**100**	**100**	**100**	**7**	**3**
	Within TPA		**1**		**160**					**7**	**<1**

Notes: Number less than 1 are shown as "<1." Whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100, over 10,000 to the nearest 1,000). Figures may not sum due to independent rounding.

Source: USFWS 2016

Table K-5 Amount of Critical Habitat That Intersects Transportation Projects

RTPID	Title	Alameda whipsnake (=striped racer) (Acres)	California tiger salamander (Acres)	California red-legged frog (Acres)	Delta smelt (Acres)	Bay checkerspot butterfly (Acres)	Vernal pool fairy shrimp (Acres)	Vernal pool tadpole shrimp (Acres)	Contra Costa goldfields (Acres)	Franciscan manzanita (Acres)	Steelhead - California Central Valley (Miles)	Steelhead - Central California Coast (Miles)	Steelhead - South Central California Coast (Miles)
Alameda County													
17-01-0048	Dublin Boulevard - North Canyons Parkway Extension			2									
17-01-0051	Tassajara Road Widening from N. Dublin Ranch Drive to City Limit			5									
17-02-0033	Widen Camino Tassajara Road, Windemere to County Line			<1									
17-10-0005	BART Metro Program + Bay Fair Connector	4										<1	
17-10-0042	Albany/Berkeley Ferry Terminal											<1	
Contra Costa County													
17-02-0015	Vasco Road Byron Highway Connector Road (Formerly named: SR-239: Airport Connector)				20		30		20				
17-02-0023	State Route 4 Widening and Balfour Road IC Construction				40								
17-02-0029	Eastbound SR-24: Construct Auxiliary Lane, Wilder Road to Camino Pablo	<1											
17-02-0030	Widen Brentwood Boulevard - Havenwood Way to north city limit; and Chestnut to Fir				20								
17-02-0033	Widen Camino Tassajara Road, Windemere to County Line			10									
17-02-0035	Lone Tree Way Widening				20								
17-02-0036	Pittsburg-Antioch Highway Widening				60								
17-02-0037	Widen Main St, SR 160 to Big Break Rd				20								
17-02-0038	Main Street Bypass				9								
17-02-0041	Privately Run Ferry Service including Small-Scale (non-WETA complying) Landside Improvements from Antioch, Martinez, and Hercules to San Francisco				280						1		

Table K-5 Amount of Critical Habitat That Intersects Transportation Projects

RTPID	Title	Alameda whipsnake (=striped racer)	California tiger salamander	California red-legged frog	Delta smelt	Bay checkerspot butterfly	Vernal pool fairy shrimp	Vernal pool tadpole shrimp	Contra Costa goldfields	Franciscan manzanita	Steelhead - California Central Valley	Steelhead - Central California Coast	Steelhead - South Central California Coast
		(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Miles)	(Miles)	(Miles)
17-02-0046	Civic Center Railroad Platform Park & Ride Complex				2								
17-02-0047	East County Rail Extension (eBART), Phase 1				210								
17-02-0050	Brentwood Intermodal Transit Center				3								
17-10-0005	BART Metro Program + Bay Fair Connector	30			<1								
17-10-0040	North Bay Ferry Service Enhancement										<1	<1	
Marin County													
17-10-0036	I-580 Access Improvements Project										<1	<1	
San Francisco County													
17-02-0041	Privately Run Ferry Service including Small-Scale (non-WETA complying) Landside Improvements from Antioch, Martinez, and Hercules to San Francisco										<1	<1	
17-02-0042	Richmond-San Francisco Ferry Service											<1	
17-05-0030	Treasure Island Mobility Management Program: Intermodal Terminal, Congestion Toll, Transit Service, Transit Capital											<1	
17-05-0031	Southeast Waterfront Transportation Improvements - Phase 1									40			
17-10-0005	BART Metro Program + Bay Fair Connector											<1	
17-10-0040	North Bay Ferry Service Enhancement										<1	<1	
17-10-0041	Central Bay Ferry Service Enhancement											<1	
San Mateo County													
17-06-0007	Modify existing lanes on US 101 to accommodate HOV/T lane											<1	
17-06-0015	Construct auxiliary lanes (one in each direction) on US 101 from Marsh Road to Embarcadero Road											<1	

Table K-5 Amount of Critical Habitat That Intersects Transportation Projects

RTPID	Title	Alameda whipsnake (=striped racer)	California tiger salamander	California red-legged frog	Delta smelt	Bay checkerspot butterfly	Vernal pool fairy shrimp	Vernal pool tadpole shrimp	Contra Costa goldfields	Franciscan manzanita	Steelhead - California Central Valley	Steelhead - Central California Coast	Steelhead - South Central California Coast
		(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Miles)	(Miles)	(Miles)
17-06-0020	Hwy 1 operational & safety improvements in County Midcoast (acceleration/deceleration lanes; turn lanes; bike lanes; pedestrian crossings; and trails)			30								<1	
17-06-0023	Route 1 Improvements in Half Moon Bay											<1	
17-06-0032	Route 1 San Pedro Creek Bridge Replacement and Creek Widening Project											<1	
17-06-0033	Widen Route 92 between SR 1 and Pilarcitos Creek alignment, includes widening of travel lanes and shoulders			40								<1	
17-07-0075	US 101 Express Lanes: Whipple Avenue in San Mateo County to Cochrane Road in Morgan Hill											<1	
17-10-0007	California HSR in the Bay Area											<1	
17-10-0008	Caltrain Electrification Phase 1 + CBOSS											<1	
Santa Clara County													
17-07-0012	BART Silicon Valley Extension - San Jose (Berryessa) to Santa Clara (escalated capital cost is $5.175 billion)											<1	
17-07-0013	Implement El Camino Rapid Transit Project											<1	
17-07-0021	Alviso Wetlands Doubletrack											<1	
17-07-0028	I-280 Mainline Improvements from County line to Sunnyvale											<1	
17-07-0030	I-280 Northbound Braided Ramps between Foothill Expressway and SR 85											<1	
17-07-0036	SR 85 Northbound to Eastbound SR 237 Connector Ramp and Northbound SR 85 Auxiliary Lane											<1	
17-07-0068	237 WB Additional Lane from McCarthy to North First											<1	

Table K-5 Amount of Critical Habitat That Intersects Transportation Projects

RTPID	Title	Alameda whipsnake (=striped racer)	California tiger salamander	California red-legged frog	Delta smelt	Bay checkerspot butterfly	Vernal pool fairy shrimp	Vernal pool tadpole shrimp	Contra Costa goldfields	Franciscan manzanita	Steelhead - California Central Valley	Steelhead - Central California Coast	Steelhead - South Central California Coast
		(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Miles)	(Miles)	(Miles)
17-07-0074	SR 85 Express Lanes: US 101 (South San Jose) to Mountain View											<1	
17-07-0075	US 101 Express Lanes: Whipple Avenue in San Mateo County to Cochrane Road in Morgan Hill											<1	
17-07-0077	BART - Warm Springs to Berryessa Extension (SVBX)											<1	
17-07-0080	Alum Rock/Santa Clara Street Bus Rapid Transit											<1	
17-07-0090	Widen Brokaw Bridge over Coyote Creek											<1	
17-07-0091	Widen Oakland Road from 4-lanes to 6-lanes between US 101 and Montague Expressway											<1	
17-10-0005	BART Metro Program + Bay Fair Connector											<1	
Solano County													
17-02-0041	Privately Run Ferry Service including Small-Scale (non-WETA complying) Landside Improvements from Antioch, Martinez, and Hercules to San Francisco				320						<1		
17-08-0009	I-80/I-680/SR12 Interchange (Packages 2-7)			<1					20				
17-08-0012	Construct 4-lane Jepson Parkway from Route 12 to Leisure Town Road at I-80						40	40	40				
17-10-0040	North Bay Ferry Service Enhancement											1	
Sonoma County													
17-03-0006	Implement Marin Sonoma Narrows HOV Lane and corridor improvements Phase 2 (Marin County)											<1	
17-09-0006	Implement Marin Sonoma Narrows Phase 2 (Sonoma County)											<1	
17-09-0009	Cotati US 101/Railroad Avenue Improvements (incl. Penngrove)		20										

Table K-5 Amount of Critical Habitat That Intersects Transportation Projects

RTPID	Title	Alameda whipsnake (=striped racer)	California tiger salamander	California red-legged frog	Delta smelt	Bay checkerspot butterfly	Vernal pool fairy shrimp	Vernal pool tadpole shrimp	Contra Costa goldfields	Franciscan manzanita	Steelhead - California Central Valley	Steelhead - Central California Coast	Steelhead - South Central California Coast
		(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Acres)	(Miles)	(Miles)	(Miles)
17-09-0010	Hearn Avenue Interchange		8										
17-09-0012	Cotati Highway 116 Cotati Corridor Improvements		30										
17-09-0013	Petaluma Crosstown Connector and Rainier Interchange											<1	
17-09-0014	Farmers Lane extension between Bennett Valley Rd and Yolanda Avenue		<1										
17-09-0018	SMART Rail Extension to Windsor + Environmental to Cloverdale + Bike Path											<1	
Santa Clara County													
17-10-0007	California HSR in the Bay Area		70	320		4						<1	<1
17-10-0008	Caltrain Electrification Phase 1 + CBOSS											<1	
	Total	**40**	**130**	**410**	**1,000**	**4**	**70**	**40**	**80**	**40**	**2**	**4**	**<1**

Notes: Number less than 1 are shown as "<1." Whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100, over 10,000 to the nearest 1,000). Figures may not sum due to independent rounding.

Source: USFWS 2016

Table K-6 Summary of Land Use Growth Footprints That Overlap With NWI-Mapped Wetland Features, by County

County	Total Number of Growth Footprints in the Plan Area	Number of Growth Footprints that Intersect an NWI Wetland Feature
Alameda	3,043	46
Contra Costa	1,112	62
Marin	123	23
Napa	87	9
San Francisco	1,500	11
San Mateo	861	60
Santa Clara	1,938	34
Solano	250	14
Sonoma	503	11
Regional Total	**9,417**	**270**

Source: NWI 2016

Table K-7 Acres of Mapped NWI-Mapped Wetland Features Within Land Use Growth Footprints, by Region, County, and TPAs

		Estuarine and Marine Deepwater	Estuarine and Marine Wetland	Freshwater Emergent Wetland	Freshwater Forested/ Shrub Wetland	Freshwater Pond	Lake	Riverine
Alameda	County Total	5	2	7	3	1		9
	Within TPAs	4	1	3		<1		5
Contra Costa	County Total	<1	30	20	10	9		20
	Within TPAs	<1	2		<1			3
Marin	County Total	<1	<1			1		2
	Within TPAs	<1						<1
Napa	County Total				<1			10
	Within TPAs							
San Francisco	County Total	5	1			5		
	Within TPAs	3	1			5		
San Mateo	County Total	5	9	3	<1	9	<1	4
	Within TPAs	<1	<1	<1		2		2

Table K-7 Acres of Mapped NWI-Mapped Wetland Features Within Land Use Growth Footprints, by Region, County, and TPAs

Santa Clara	County Total		6	10	7	10		10
	Within TPAs		6	8	5	3		2
Solano	County Total	<1	<1	6	2	6		10
	Within TPAs							
Sonoma	County Total	<1		<1	1	<1		4
	Within TPAs	<1						<1
TOTAL	*County Total*	*20*	*50*	*50*	*30*	*40*	*<1*	*80*
	Within TPAs	*8*	*10*	*10*	*5*	*10*		*10*

Notes: Number less than 1 are shown as "<1." Whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100, over 10,000 to the nearest 1,000). Figures may not sum due to independent rounding.

Source: NWI 2016

RTPID	Title	Estuarine and Marine Deepwater	Estuarine and Marine Wetland	Freshwater Emergent Wetland	Freshwater Forested/ Shrub Wetland	Freshwater Pond	Lake	Riverine
Alameda County								
17-01-0009	New Alameda Point Ferry Terminal	2						
17-01-0016	Oakland Army Base Transportation Infrastructure Improvements	2						
17-01-0017	Outer Harbor Intermodal Terminal (OHIT) Phases 2 and 3	<1						
17-01-0020	SR-262 Mission Boulevard Cross Connector Improvements							<1
17-01-0021	I-880 Whipple Road Interchange Improvements			1				
17-01-0023	I-880 Industrial Parkway Interchange Reconstruction							<1
17-01-0025	Oakland International Airport Perimeter Dike	30	20	1				
17-01-0029	SR-84/I-680 Interchange Improvements and SR-84 Widening			2	<1			2
17-01-0032	SR-84 Widening (Ruby Hill Drive to Concannon Boulevard)				<1	<1		1
17-01-0039	I-580 SR-84/Isabel Interchange Improvements Phase 2			<1				
17-01-0042	I-680 Overcrossing Widening and Improvements at Stoneridge Drive			<1				
17-01-0047	I-880 to Mission Boulevard East-West Connector			<1				2
17-01-0048	Dublin Boulevard - North Canyons Parkway Extension			<1				<1
17-01-0049	Fruitvale Avenue (Miller Sweeney) Lifeline Bridge Project	2						
17-01-0051	Tassajara Road Widening from N. Dublin Ranch Drive to City Limit			<1	<1			
17-01-0054	Union City Boulevard Widening (Whipple to City Limit)		<1					
17-01-0056	Thornton Avenue Widening (Gateway Boulevard to Hickory Street)		4			<1		
17-01-0060	East Bay BRT	<1					<1	<1
17-02-0042	Richmond-San Francisco Ferry Service	60						
17-05-0030	Treasure Island Mobility Management Program: Intermodal Terminal, Congestion Toll, Transit Service, Transit Capital	30	<1					
17-07-0021	Alviso Wetlands Doubletrack		<1					

RTPID	Title	Estuarine and Marine Deepwater	Estuarine and Marine Wetland	Freshwater Emergent Wetland	Freshwater Forested/ Shrub Wetland	Freshwater Pond	Lake	Riverine
17-10-0003	San Pablo Avenue BRT							<1
17-10-0005	BART Metro Program + Bay Fair Connector	10	<1	<1	<1	<1	6	5
17-10-0041	Central Bay Ferry Service Enhancement	80						
17-10-0042	Albany/Berkeley Ferry Terminal	60						
17-10-0057	I-880 Express Lanes: Northbound from Hegenberger to Lewelling and bridge improvements							<1
17-10-0058	I-680 Express Lanes: Northbound from SR-84 to SR-237							2
Contra Costa County								
17-02-0012	I-680 Northbound Managed Lane Completion through 680/24 and Operational Improvements between N. Main and Treat Blvd							<1
17-02-0013	I-680 Northbound HOV lane extension between N. Main and SR-242							<1
17-02-0015	Vasco Road Byron Highway Connector Road (Formerly named: SR-239: Airport Connector)			2				<1
17-02-0016	Construct SR 242/Clayton Road on and off-ramps							<1
17-02-0020	SR-4 Operational Improvements - Initial Phases							<1
17-02-0022	I-680 Southbound HOV Lane between N. Main and Livorna							<1
17-02-0023	State Route 4 Widening and Balfour Road IC Construction			<1				<1
17-02-0024	I-80/SR-4 Interchange Improvements - New Eastbound Willow Avenue Ramps			<1	<1			<1
17-02-0027	Construct Additional Auxiliary Lanes on I-680 - South of I-680/SR-24 Interchange			<1	<1			<1
17-02-0029	Eastbound SR-24: Construct Auxiliary Lane, Wilder Road to Camino Pablo							<1
17-02-0030	Widen Brentwood Boulevard - Havenwood Way to north city limit; and Chestnut to Fir			<1				<1
17-02-0031	Widen Willow Pass Road, Lynwood Drive to SR 4							<1
17-02-0032	Widen Ygnacio Valley Road-Kirker Pass Road, Cowell to Michigan			<1				

RTPID	Title	Estuarine and Marine Deepwater	Estuarine and Marine Wetland	Freshwater Emergent Wetland	Freshwater Forested/ Shrub Wetland	Freshwater Pond	Lake	Riverine
17-02-0034	West Leland Road Extension							1
17-02-0035	Lone Tree Way Widening							<1
17-02-0036	Pittsburg-Antioch Highway Widening							2
17-02-0041	Privately Run Ferry Service including Small-Scale (non-WETA complying) Landside Improvements from Antioch, Martinez, and Hercules to San Francisco	660	3					
17-02-0042	Richmond-San Francisco Ferry Service	40						
17-02-0047	East County Rail Extension (eBART), Phase 1			<1				<1
17-02-0050	Brentwood Intermodal Transit Center							<1
17-10-0003	San Pablo Avenue BRT							<1
17-10-0005	BART Metro Program + Bay Fair Connector							2
17-10-0036	I-580 Access Improvements Project	30	2					
17-10-0040	North Bay Ferry Service Enhancement	350						
Marin County								
17-03-0006	Implement Marin Sonoma Narrows HOV Lane and corridor improvements Phase 2 (Marin County)			<1				6
17-03-0009	Access Improvements to Richmond San Rafael Bridge		<1	<1	<1			1
17-03-0015	SMART Downtown San Rafael to Larkspur Rail Extension	<1						2
17-10-0036	I-580 Access Improvements Project	60						
Napa County								
17-04-0008	State Route 29 Improvements		<1	1				3
17-04-0010	SR29 Gateway							1
San Francisco County								
17-02-0041	Privately Run Ferry Service including Small-Scale (non-WETA complying) Landside Improvements from Antioch, Martinez, and Hercules to San Francisco	50						
17-02-0042	Richmond-San Francisco Ferry Service	100						
17-05-0018	Downtown San Francisco Ferry Terminal Expansion - Phase II	<1						
17-05-0019	Establish new ferry terminal at Mission Bay 16th Street	2						

RTPID	Title	Estuarine and Marine Deepwater	Estuarine and Marine Wetland	Freshwater Emergent Wetland	Freshwater Forested/ Shrub Wetland	Freshwater Pond	Lake	Riverine
17-05-0027	Hunters Point Shipyard and Candlestick Point Local Roads Phase 1	20	9					
17-05-0030	Treasure Island Mobility Management Program: Intermodal Terminal, Congestion Toll, Transit Service, Transit Capital	140						
17-05-0031	Southeast Waterfront Transportation Improvements - Phase 1	10	<1			5		
17-05-0032	Geneva-Harney Bus Rapid Transit		2			<1		
17-05-0042	Historic Streetcar Extension - Fort Mason to 4th & King	<1						
17-10-0005	BART Metro Program + Bay Fair Connector	70						
17-10-0007	California HSR in the Bay Area	<1						
17-10-0040	North Bay Ferry Service Enhancement	220						
17-10-0041	Central Bay Ferry Service Enhancement	70						
17-10-0042	Albany/Berkeley Ferry Terminal	100						
San Mateo County								
17-05-0031	Southeast Waterfront Transportation Improvements - Phase 1					<1		
17-06-0007	Modify existing lanes on US 101 to accommodate HOV/T lane	4	6	<1		<1		2
17-06-0008	Add northbound and southbound modified auxiliary lanes and/ or implementation of HOT lanes on US 101 from Oyster Point to San Francisco County line		<1					<1
17-06-0011	US 101 Produce Avenue Interchange							<1
17-06-0013	Reconstruct US 101/Broadway Interchange		<1					
17-06-0015	Construct auxiliary lanes (one in each direction) on US 101 from Marsh Road to Embarcadero Road	<1						
17-06-0016	Improve access to and from the west side of Dumbarton Bridge on Route 84 connecting to US 101 per Gateway 2020 Study - Phased		<1			<1		
17-06-0017	Route 101/Holly St Interchange Access Improvements							<1
17-06-0019	State Route 92-82 (El Camino) Interchange Improvement							<1

RTPID	Title	Estuarine and Marine Deepwater	Estuarine and Marine Wetland	Freshwater Emergent Wetland	Freshwater Forested/ Shrub Wetland	Freshwater Pond	Lake	Riverine
17-06-0020	Hwy 1 operational & safety improvements in County Midcoast (acceleration/deceleration lanes; turn lanes; bike lanes; pedestrian crossings; and trails)	<1	<1	<1	2			4
17-06-0023	Route 1 Improvements in Half Moon Bay			<1	<1			<1
17-06-0024	Reconstruct US 101/Sierra Point Parkway Interchange (includes extension of Lagoon Way to US 101)	6						
17-06-0032	Route 1 San Pedro Creek Bridge Replacement and Creek Widening Project	<1						
17-06-0033	Widen Route 92 between SR 1 and Pilarcitos Creek alignment, includes widening of travel lanes and shoulders			<1	2	<1		<1
17-06-0034	Construct Route 1 (Calera Parkway) northbound and southbound lanes from Fassler Avenue to Westport Drive in Pacifica							<1
17-06-0040	Extend Blomquist Street over Redwood Creek to East Bayshore and Bair Island Road	1						
17-07-0028	I-280 Mainline Improvements from County line to Sunnyvale							<1
17-07-0075	US 101 Express Lanes: Whipple Avenue in San Mateo County to Cochrane Road in Morgan Hill	<1						
17-10-0005	BART Metro Program + Bay Fair Connector			<1		1		2
17-10-0007	California HSR in the Bay Area		<1	2		3	3	6
17-10-0008	Caltrain Electrification Phase 1 + CBOSS			<1			2	<1
Santa Clara County								
17-06-0007	Modify existing lanes on US 101 to accommodate HOV/T lane							<1
17-06-0015	Construct auxiliary lanes (one in each direction) on US 101 from Marsh Road to Embarcadero Road							<1
17-07-0012	BART Silicon Valley Extension - San Jose (Berryessa) to Santa Clara (escalated capital cost is $5.175 billion)				<1			<1
17-07-0013	Implement El Camino Rapid Transit Project							<1
17-07-0021	Alviso Wetlands Doubletrack	<1	40	<1		<1	<1	
17-07-0024	Lawrence/Stevens Creek/I-280 Interchange				<1			

RTPID	Title	Estuarine and Marine Deepwater	Estuarine and Marine Wetland	Freshwater Emergent Wetland	Freshwater Forested/ Shrub Wetland	Freshwater Pond	Lake	Riverine
17-07-0028	I-280 Mainline Improvements from County line to Sunnyvale				<1			2
17-07-0030	I-280 Northbound Braided Ramps between Foothill Expressway and SR 85				<1			
17-07-0035	US 101/Buena Vista Avenue Interchange Improvements					1		
17-07-0036	SR 85 Northbound to Eastbound SR 237 Connector Ramp and Northbound SR 85 Auxiliary Lane							<1
17-07-0042	SR 237/Great America Parkway WB Off- Ramps Improvements		<1	<1				
17-07-0061	Extend Capitol Expressway light rail to Eastridge Transit Center - Phase II							<1
17-07-0068	237 WB Additional Lane from McCarthy to North First							2
17-07-0069	US 101/SR 25 Interchange			<1				<1
17-07-0074	SR 85 Express Lanes: US 101 (South San Jose) to Mountain View			1	<1	4		1
17-07-0075	US 101 Express Lanes: Whipple Avenue in San Mateo County to Cochrane Road in Morgan Hill		<1	<1	2			1
17-07-0078	Envision Expressway (Tier 1 Expressway Plan) Major and Minor Projects							2
17-07-0080	Alum Rock/Santa Clara Street Bus Rapid Transit							<1
17-07-0089	South Bascom Complete Streets							<1
17-07-0090	Widen Brokaw Bridge over Coyote Creek							<1
17-07-0091	Widen Oakland Road from 4-lanes to 6-lanes between US 101 and Montague Expressway							<1
17-10-0005	BART Metro Program + Bay Fair Connector				1			3
17-10-0007	California HSR in the Bay Area			<1	2	<1		20
17-10-0008	Caltrain Electrification Phase 1 + CBOSS				<1			<1
Solano County								
17-02-0041	Privately Run Ferry Service including Small-Scale (non-WETA complying) Landside Improvements from Antioch, Martinez, and Hercules to San Francisco	310	10					
17-08-0009	I-80/I-680/SR12 Interchange (Packages 2-7)		<1	<1				3

RTPID	Title	Estuarine and Marine Deepwater	Estuarine and Marine Wetland	Freshwater Emergent Wetland	Freshwater Forested/ Shrub Wetland	Freshwater Pond	Lake	Riverine
17-08-0010	Improve Interchanges and widen roadways serving Solano County Fairgrounds, including Redwood Parkway							<1
17-08-0011	Provide auxiliary lanes on I-80 in eastbound and westbound directions from I-680 to Airbase Parkway							<1
17-08-0012	Construct 4-lane Jepson Parkway from Route 12 to Leisure Town Road at I-80			<1	<1			2
17-08-0016	Vallejo Station Parking Structure Phase B	<1						
17-10-0040	North Bay Ferry Service Enhancement	90						
17-10-0059	I-80 Express Lanes in both directions: Airbase Parkway to I-505				<1			<1
17-10-0061	I-680 Express Lanes: I-80 westbound to I-680 southbound and I-680 northbound to I-80 eastbound direct connectors							<1
Sonoma County								
17-09-0006	Implement Marin Sonoma Narrows Phase 2 (Sonoma County)	1		<1				6
17-09-0012	Cotati Highway 116 Cotati Corridor Improvements			<1				
17-09-0013	Petaluma Crosstown Connector and Rainier Interchange				<1			<1
17-09-0014	Farmers Lane extension between Bennett Valley Rd and Yolanda Avenue							<1
17-09-0018	SMART Rail Extension to Windsor + Environmental to Cloverdale + Bike Path			<1	<1		2	<1
Total		**2,600**	**100**	**20**	**10**	**20**	**10**	**100**

Notes: Number less than 1 are shown as "<1." Whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100, over 10,000 to the nearest 1,000). Figures may not sum due to independent rounding.

Source: NWI 2016

Table K-9 Acres of Essential Connectivity Areas Within Land Use Growth Footprints, by Region, County, and TPAs

County		ECA
Alameda	County Total	120
	Within TPA	2
Contra Costa	County Total	80
	Within TPA	9
Marin	County Total	1
	Within TPA	
Napa	County Total	120
	Within TPA	
San Mateo	County Total	100
	Within TPA	
Santa Clara	County Total	550
	Within TPA	
Solano	County Total	70
	Within TPA	
Sonoma	County Total	<1
	Within TPA	
Total	County Total	**1,000**
	Within TPA	**10**

Notes: Number less than 1 are shown as "<1." Whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100, over 10,000 to the nearest 1,000). Figures may not sum due to independent rounding.

Source: CDFW 2010

Table K-10 Acres of Essential Connectivity Areas That Intersect Transportation Projects

RTPID	Title	ECA
Alameda County		
17-01-0029	SR-84/I-680 Interchange Improvements and SR-84 Widening	120
17-01-0044	I-680 Sunol Interchange Modification	20
17-10-0005	BART Metro Program + Bay Fair Connector	200
17-10-0058	I-680 Express Lanes: Northbound from SR-84 to SR-237	90
Contra Costa County		
17-02-0027	Construct Additional Auxiliary Lanes on I-680 - South of I-680/SR-24 Interchange	60
17-02-0029	Eastbound SR-24: Construct Auxiliary Lane, Wilder Road to Camino Pablo	20
17-02-0052	Widen San Ramon Valley Boulevard from 2 to 4 lanes - Jewel Terrace to Podva Road	10
17-10-0005	BART Metro Program + Bay Fair Connector	170
Napa County		
17-04-0008	State Route 29 Improvements	20
17-04-0009	Soscol Junction	2
San Mateo County		

Table K-10 Acres of Essential Connectivity Areas That Intersect Transportation Projects

RTPID	Title	ECA
17-06-0020	Hwy 1 operational & safety improvements in County Midcoast (acceleration/deceleration lanes; turn lanes; bike lanes; pedestrian crossings; and trails)	120
17-06-0023	Route 1 Improvements in Half Moon Bay	70
17-06-0033	Widen Route 92 between SR 1 and Pilarcitos Creek alignment, includes widening of travel lanes and shoulders	80
17-06-0034	Construct Route 1 (Calera Parkway) northbound and southbound lanes from Fassler Avenue to Westport Drive in Pacifica	30
17-06-0036	Widen Skyline Boulevard (Route 35) to 4-lane roadway from I-280 to Sneath Lane - Phased	30
17-07-0028	I-280 Mainline Improvements from County line to Sunnyvale	1
Santa Clara County		
17-07-0028	I-280 Mainline Improvements from County line to Sunnyvale	90
17-07-0075	US 101 Express Lanes: Whipple Avenue in San Mateo County to Cochrane Road in Morgan Hill	220
17-07-0078	Envision Expressway (Tier 1 Expressway Plan) Major and Minor Projects	20
17-10-0007	California HSR in the Bay Area	290
Solano County		
17-08-0009	I-80/I-680/SR12 Interchange (Packages 2-7)	230
17-08-0011	Provide auxiliary lanes on I-80 in eastbound and westbound directions from I-680 to Airbase Parkway	8
17-08-0017	I-80 WB Truck Scales	10
17-10-0061	I-680 Express Lanes: I-80 westbound to I-680 southbound and I-680 northbound to I-80 eastbound direct connectors	10
	Total	**1,900**

Notes: Number less than 1 are shown as "<1." Whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100, over 10,000 to the nearest 1,000). Figures may not sum due to independent rounding.

Source: CDFW 2010

Appendix L

Native American Coordination Materials

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710
(916) 373-5471 FAX

May 20, 2016

Leslie Enriquez
Metropolitan Transportation Commission

Sent by Email: llara@mtc.ca.gov
Number of Pages: 11

RE: DEIR for Plan Bay Area 2040, Entire Bay Region

Dear Ms. Enriquez:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties. Please note that the intent above reference codes is to mitigate impacts to tribal cultural resources, as defined, for California Environmental Quality Act (CEQA) projects.

As of July 1, 2015, Public Resources Code Sections 21080.3.1 and 21080.3.2 require public agencies to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose mitigating impacts to tribal cultural resources:

> Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section. (Public Resources Code Section 21080.3.1(d))

The law does not preclude agencies from initiating consultation with the tribes that are culturally and traditionally affiliated with their jurisdictions. The NAHC believes that in fact that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

In accordance with Public Resources Code Section 21080.3.1(d), formal notification must include a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation. The NAHC believes that agencies should also include with their notification letters information regarding any cultural resources assessment that has been completed on the APE, such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

   - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE;
   - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
   - If the probability is low, moderate, or high that cultural resources are located in the APE.
   - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the potential APE; and

- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

   - Any report that may contain site forms, site significance, and suggested mitigation measurers.

     All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure in accordance with Government Code Section 6254.10.

3. The results of any Sacred Lands File (SFL) check conducted through Native American Heritage Commission. The search request form can be found at http://nahc.ca.gov/wp-content/uploads/2015/04/Sacred-Lands-File-NA-Contact-Form.pdf.

4. Any ethnographic studies conducted for any area including all or part of the potential APE; and

5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a cultural place. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the case that they do, having the information beforehand well help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance we are able to assure that our consultation list contains current information.

If you have any questions, please contact me at my email address: sharaya.souza@nahc.ca.gov

Sincerely,

Sharaya Souza
Staff Services Analyst

Native American Heritage Commission
Tribal Consultation List
Alameda County
May 19, 2016

Amah MutsunTribal Band of Mission San Juan Bautista
Irenne Zwierlein, Chairperson
789 Canada Road — Ohlone/Costanoan
Woodside , CA 94062
amahmutsuntribal@gmail.com
(650) 400-4806 Cell

Coastanoan Rumsen Carmel Tribe
Tony Cerda, Chairperson
244 E. 1st Street — Ohlone/Costanoan
Pomona , CA 91766
rumsen@aol.com
(909) 524-8041 Cell
(909) 629-6081

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28 — Ohlone/Costanoan
Hollister , CA 95024
ams@indiancanyon.org
(831) 637-4238

Muwekma Ohlone Indian Tribe of the SF Bay Area
Rosemary Cambra, Chairperson
P.O. Box 360791 — Ohlone / Costanoan
Milpitas , CA 95036
muwekma@muwekma.org
(408) 314-1898
(510) 581-5194

North Valley Yokuts Tribe
Katherine Erolinda Perez, Chairperson
P.O. Box 717 — Ohlone/Costanoan
Linden , CA 95236 — Northern Valley Yokuts
canutes@verizon.net — Bay Miwok
(209) 887-3415

The Ohlone Indian Tribe
Andrew Galvan
P.O. Box 3152 — Ohlone/Costanoan
Fremont , CA 94539 — Bay Miwok
chochenyo@AOL.com — Plains Miwok
(510) 882-0527 Cell — Patwin

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Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed DEIR for Plan Bay Area 2040, Entire Bay Region.

Native American Heritage Commission
Tribal Consultation List
Contra Costa County
May 19, 2016

Amah MutsunTribal Band of Mission San Juan Bautista
Irenne Zwierlein, Chairperson
789 Canada Road — Ohlone/Costanoan
Woodside , CA 94062
amahmutsuntribal@gmail.com
(650) 400-4806 Cell

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28 — Ohlone/Costanoan
Hollister , CA 95024
ams@indiancanyon.org
(831) 637-4238

Muwekma Ohlone Indian Tribe of the SF Bay Area
Rosemary Cambra, Chairperson
P.O. Box 360791 — Ohlone / Costanoan
Milpitas , CA 95036
muwekma@muwekma.org
(408) 314-1898
(510) 581-5194

North Valley Yokuts Tribe
Katherine Erolinda Perez, Chairperson
P.O. Box 717 — Ohlone/Costanoan
Linden , CA 95236 — Northern Valley Yokuts
canutes@verizon.net — Bay Miwok
(209) 887-3415

The Ohlone Indian Tribe
Andrew Galvan
P.O. Box 3152 — Ohlone/Costanoan
Fremont , CA 94539 — Bay Miwok
chochenyo@AOL.com — Plains Miwok
(510) 882-0527 Cell — Patwin

Wilton Rancheria
Raymond Hitchcock, Chairperson
9728 Kent Street — Miwok
Elk Grove , CA 95624
rhitchcock@wiltonrancheria-nsn.gov
(916) 683-6000 Office

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Native American Heritage Commission
Tribal Consultation List
Marin County
May 19, 2016

Federated Indians of Graton Rancheria
Greg Sarris, Chairperson
6400 Redwood Drive, Ste 300 Coast Miwok
Rohnert Park , CA 94928 Southern Pomo
(707) 566-2288 Office
(707) 566-2291 Fax

Federated Indians of Graton Rancheria
Gene Buvelot
6400 Redwood Drive, Ste 300 Coast Miwok
Rohnert Park , CA 94928 Southern Pomo
gbuvelot@gratonrancheria.
(415) 279-4844 Cell
(707) 566-2288 ext 103

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Native American Heritage Commission
Tribal Consultation List
Napa County
May 19, 2016

Cortina Band of Indians
Charlie Wright, Chairperson
P.O. Box 1630 Wintun / Patwin
Williams , CA 95987
(530) 473-3274 Office
(530) 473-3301 Fax

Federated Indians of Graton Rancheria
Greg Sarris, Chairperson
6400 Redwood Drive, Ste 300 Coast Miwok
Rohnert Park , CA 94928 Southern Pomo
(707) 566-2288 Office
(707) 566-2291 Fax

Middletown Rancheria of Pomo Indians
Jose Simon III, Chairperson
P.O. Box 1035 Pomo
Middletown , CA 95461 Lake Miwok
(707) 987-3670 Office
(707) 987-9091 Fax

Yocha Dehe Wintun Nation
Leland Kinter, Chairperson
P.O. Box 18 Wintun (Patwin)
Brooks , CA 95606
lkinter@yochadehe-nsn.gov
(530) 796-3400
(530) 796-2143 Fax

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Native American Heritage Commission
Tribal Consultation List
San Franciscox County
May 19, 2016

Amah MutsunTribal Band of Mission San Juan Bautista
Irenne Zwierlein, Chairperson
789 Canada Road — Ohlone/Costanoan
Woodside , CA 94062
amahmutsuntribal@gmail.com
(650) 400-4806 Cell

Coastanoan Rumsen Carmel Tribe
Tony Cerda, Chairperson
244 E. 1st Street — Ohlone/Costanoan
Pomona , CA 91766
rumsen@aol.com
(909) 524-8041 Cell
(909) 629-6081

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28 — Ohlone/Costanoan
Hollister , CA 95024
ams@indiancanyon.org
(831) 637-4238

Muwekma Ohlone Indian Tribe of the SF Bay Area
Rosemary Cambra, Chairperson
P.O. Box 360791 — Ohlone / Costanoan
Milpitas , CA 95036
muwekma@muwekma.org
(408) 314-1898
(510) 581-5194

The Ohlone Indian Tribe
Andrew Galvan
P.O. Box 3152 — Ohlone/Costanoan
Fremont , CA 94539 — Bay Miwok
chochenyo@AOL.com — Plains Miwok
(510) 882-0527 Cell — Patwin

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Native American Heritage Commission
Tribal Consultation List
San Mateo County
May 19, 2016

Amah MutsunTribal Band of Mission San Juan Bautista
Irenne Zwierlein, Chairperson
789 Canada Road — Ohlone/Costanoan
Woodside , CA 94062
amahmutsuntribal@gmail.com
(650) 400-4806 Cell

Coastanoan Rumsen Carmel Tribe
Tony Cerda, Chairperson
244 E. 1st Street — Ohlone/Costanoan
Pomona , CA 91766
rumsen@aol.com
(909) 524-8041 Cell
(909) 629-6081

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28 — Ohlone/Costanoan
Hollister , CA 95024
ams@indiancanyon.org
(831) 637-4238

Muwekma Ohlone Indian Tribe of the SF Bay Area
Rosemary Cambra, Chairperson
P.O. Box 360791 — Ohlone / Costanoan
Milpitas , CA 95036
muwekma@muwekma.org
(408) 314-1898
(510) 581-5194

The Ohlone Indian Tribe
Andrew Galvan
P.O. Box 3152 — Ohlone/Costanoan
Fremont , CA 94539 — Bay Miwok
chochenyo@AOL.com — Plains Miwok
(510) 882-0527 Cell — Patwin

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Native American Heritage Commission
Tribal Consultation List
Santa Clara County
May 19, 2016

Amah MutsunTribal Band
Valentin Lopez, Chairperson
P.O. Box 5272
Galt , CA 95632
vlopez@amahmutsun.org
(916) 743-5833
Ohlone/Costanoan
Northern Valley Yokuts

The Ohlone Indian Tribe
Andrew Galvan
P.O. Box 3152
Fremont , CA 94539
chochenyo@AOL.com
(510) 882-0527 Cell
Ohlone/Costanoan
Bay Miwok
Plains Miwok
Patwin

Amah MutsunTribal Band of Mission San Juan Bautista
Irenne Zwierlein, Chairperson
789 Canada Road
Woodside , CA 94062
amahmutsuntribal@gmail.com
(650) 400-4806 Cell
Ohlone/Costanoan

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister , CA 95024
ams@indiancanyon.org
(831) 637-4238
Ohlone/Costanoan

Muwekma Ohlone Indian Tribe of the SF Bay Area
Rosemary Cambra, Chairperson
P.O. Box 360791
Milpitas , CA 95036
muwekma@muwekma.org
(408) 314-1898
(510) 581-5194
Ohlone / Costanoan

North Valley Yokuts Tribe
Katherine Erolinda Perez, Chairperson
P.O. Box 717
Linden , CA 95236
canutes@verizon.net
(209) 887-3415
Ohlone/Costanoan
Northern Valley Yokuts
Bay Miwok

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Native American Heritage Commission
Tribal Consultation List
Solano County
May 19, 2016

Cortina Band of Indians
Charlie Wright, Chairperson
P.O. Box 1630
Williams , CA 95987
(530) 473-3274 Office
(530) 473-3301 Fax

Wintun / Patwin

Yocha Dehe Wintun Nation
Leland Kinter, Chairperson
P.O. Box 18
Brooks , CA 95606
lkinter@yochadehe-nsn.gov
(530) 796-3400
(530) 796-2143 Fax

Wintun (Patwin)

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Native American Heritage Commission
Tribal Consultation List
Sonoma County
May 19, 2016

Cloverdale Rancheria of Pomo Indians
Patricia Hermosillo, Chairperson
555 S. Cloverdale Blvd., Suite A — Pomo
Cloverdale , CA 95425
(707) 894-5775

Dry Creek Rancheria of Pomo Indians
Chris Wright, Chairperson
P.O. Box 607 — Pomo
Geyserville , CA 95441
(707) 522-4233

Federated Indians of Graton Rancheria
Greg Sarris, Chairperson
6400 Redwood Drive, Ste 300 — Coast Miwok
Rohnert Park , CA 94928 — Southern Pomo
(707) 566-2288 Office
(707) 566-2291 Fax

Kashia Band of Pomo Indians of the Stewarts Point
Reno Keoni Franklin, Chairperson
1420 Guerneville Rd. Ste 1 — Pomo
Santa Rosa , CA 95403
reno@stewartspoint.com
(707) 591-0580 Office

Lytton Rancheria of California
Marjorie Mejia, Chairperson
437Aviation Blvd — Pomo
Santa Rosa , CA 95403
margiemejia@aol.com
(707) 575-5917

Middletown Rancheria of Pomo Indians
Jose Simon III, Chairperson
P.O. Box 1035 — Pomo
Middletown , CA 95461 — Lake Miwok
(707) 987-3670 Office
(707) 987-9091 Fax

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Cities of San Mateo County

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U.S. Department of Housing and Urban Development

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Cities of Santa Clara County

Tom Bates
Cities of Alameda County

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City and County of San Francisco

Dorene M. Giacopini
U.S. Department of Transportation

Federal D. Glover
Contra Costa County

Scott Haggerty
Alameda County

Anne W. Halsted
San Francisco Bay Conservation and Development Commission

Steve Kinsey
Marin County and Cities

Sam Liccardo
San Jose Mayor's Appointee

Mark Luce
Napa County and Cities

Julie Pierce
Association of Bay Area Governments

Bijan Sartipi
California State Transportation Agency

Libby Schaaf
Oakland Mayor's Appointee

James P. Spering
Solano County and Cities

Adrienne J. Tissier
San Mateo County

Scott Wiener
San Francisco Mayor's Appointee

Amy Worth
Cities of Contra Costa County

Steve Heminger
Executive Director

Alix Bockelman
Deputy Executive Director, Policy

Andrew B. Fremier
Deputy Executive Director, Operations

August 12, 2016

SENT VIA CERTIFIED MAIL; RETURN RECEIPT REQUESTED

Mr. Gene Buvelot
Treasurer/Cultural Resource, Federated Indians of Graton Rancheria
6400 Redwood Drive, Suite 300
Rohnert Park, CA 94928-2341

Subject: CEQA Tribal Cultural Resources; Requirements of AB 52 (Gatto, 2014); Formal Notification of Consultation Opportunity pursuant to Public Resources Code (PRC) Section 21080.3.1

Dear Mr. Buvelot,

This letter is a follow-up to the Tribal Summit to which you were invited June 13, 2016 regarding the Plan Bay Area 2040 project.

On May 16, 2016, MTC released a Notice of Preparation (NOP) for an update of the San Francisco Bay Area Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) Environmental Impact Report (EIR). A copy of the NOP is attached with information describing the RTP/SCS, which is also referred to as Plan Bay Area 2040 (Plan).

The NOP contains a description of the Plan update, a map of the nine-county region, and MTC contact information. Because this project is the update of a planning document that covers the nine Bay Area counties, there is no specific aerial site plan or archeological records search to provide you. However, more information about the Plan and this update is provided at: http://planbayarea.org/plan-bay-area.html. More information about the EIR is provided at: http://planbayarea.org/plan-bay-area/plan-elements/environmental-impact-report.html.

Pursuant to AB 52 (Gatto; 2014) this letter provides you with formal notice that MTC is the lead agency for the above described EIR. Please let us know in writing within 30 days from the date of this letter whether you would like to initiate consultation on the project (PRC 21080.3.1.d).

We look forward to hearing from you.

Sincerely,

Alix A. Bockelman
Deputy Executive Director, Policy

Attachment: Notice of Preparation (NOP)

AB:ll
J:\PROJECT\2017 RTP_SCS\Tribal Consultation\Consultation Requests\NOP Letters\NAHC_NOP_letters.docx

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Cities of Alameda County

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Mark Luce
Napa County and Cities

Julie Pierce
Association of Bay Area Governments

Bijan Sartipi
California State Transportation Agency

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Oakland Mayor's Appointee

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Solano County and Cities

Adrienne J. Tissier
San Mateo County

Scott Wiener
San Francisco Mayor's Appointee

Amy Worth
Cities of Contra Costa County

Steve Heminger
Executive Director

Alix Bockelman
Deputy Executive Director, Policy

Andrew B. Fremier
Deputy Executive Director, Operations

August 12, 2016

SENT VIA CERTIFIED MAIL; RETURN RECEIPT REQUESTED

The Honorable Rosemary Cambra
Chairperson, Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
P.O. Box 360791
Milpitas, CA 95036

Subject: CEQA Tribal Cultural Resources; Requirements of AB 52 (Gatto, 2014); Formal Notification of Consultation Opportunity pursuant to Public Resources Code (PRC) Section 21080.3.1

Dear Chairperson Cambra,

This letter is a follow-up to the Tribal Summit to which you were invited June 13, 2016 regarding the Plan Bay Area 2040 project.

On May 16, 2016, MTC released a Notice of Preparation (NOP) for an update of the San Francisco Bay Area Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) Environmental Impact Report (EIR). A copy of the NOP is attached with information describing the RTP/SCS, which is also referred to as Plan Bay Area 2040 (Plan).

The NOP contains a description of the Plan update, a map of the nine-county region, and MTC contact information. Because this project is the update of a planning document that covers the nine Bay Area counties, there is no specific aerial site plan or archeological records search to provide you. However, more information about the Plan and this update is provided at: http://planbayarea.org/plan-bay-area.html. More information about the EIR is provided at: http://planbayarea.org/plan-bay-area/plan-elements/environmental-impact-report.html.

Pursuant to AB 52 (Gatto; 2014) this letter provides you with formal notice that MTC is the lead agency for the above described EIR. Please let us know in writing within 30 days from the date of this letter whether you would like to initiate consultation on the project (PRC 21080.3.1.d).

We look forward to hearing from you.

Sincerely,

Alix A. Bockelman
Deputy Executive Director, Policy

Attachment: Notice of Preparation (NOP)

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City and County of San Francisco

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San Francisco Bay Conservation and Development Commission

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Marin County and Cities

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Association of Bay Area Governments

Bijan Sartipi
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Libby Schaaf
Oakland Mayor's Appointee

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Solano County and Cities

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San Mateo County

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San Francisco Mayor's Appointee

Amy Worth
Cities of Contra Costa County

Steve Heminger
Executive Director

Alix Bockelman
Deputy Executive Director, Policy

Andrew B. Fremier
Deputy Executive Director, Operations

August 12, 2016

SENT VIA CERTIFIED MAIL; RETURN RECEIPT REQUESTED

The Honorable Tony Cerda
Chairperson, Coastanoan Rumsen Carmel Tribe
244 E. 1st Street
Pomona, CA 91766

Subject: CEQA Tribal Cultural Resources; Requirements of AB 52 (Gatto, 2014); Formal Notification of Consultation Opportunity pursuant to Public Resources Code (PRC) Section 21080.3.1

Dear Chairperson Cerda,

This letter is a follow-up to the Tribal Summit to which you were invited June 13, 2016 regarding the Plan Bay Area 2040 project.

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We look forward to hearing from you.

Sincerely,

Alix A. Bockelman
Deputy Executive Director, Policy

Attachment: Notice of Preparation (NOP)

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Alix Bockelman
Deputy Executive Director, Policy

Andrew B. Fremier
Acting Deputy Executive Director, Operations

August 12, 2016

SENT VIA CERTIFIED MAIL; RETURN RECEIPT REQUESTED

The Honorable Reno Keoni Franklin
Chairperson, Kashia Band of Pomo Indians of the Stewarts Point Rancheria
1420 Guerneville Rd., Ste. 1
Santa Rosa, CA 95403

Subject: CEQA Tribal Cultural Resources; Requirements of AB 52 (Gatto, 2014); Formal Notification of Consultation Opportunity pursuant to Public Resources Code (PRC) Section 21080.3.1

Dear Chairperson Franklin,

This letter is a follow-up to the Tribal Summit to which you were invited June 13, 2016 regarding the Plan Bay Area 2040 project.

On May 16, 2016, MTC released a Notice of Preparation (NOP) for an update of the San Francisco Bay Area Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) Environmental Impact Report (EIR). A copy of the NOP is attached with information describing the RTP/SCS, which is also referred to as Plan Bay Area 2040 (Plan).

The NOP contains a description of the Plan update, a map of the nine-county region, and MTC contact information. Because this project is the update of a planning document that covers the nine Bay Area counties, there is no specific aerial site plan or archeological records search to provide you. However, more information about the Plan and this update is provided at: http://planbayarea.org/plan-bay-area.html. More information about the EIR is provided at: http://planbayarea.org/plan-bay-area/plan-elements/environmental-impact-report.html.

Pursuant to AB 52 (Gatto; 2014) this letter provides you with formal notice that MTC is the lead agency for the above described EIR. Please let us know in writing within 30 days from the date of this letter whether you would like to initiate consultation on the project (PRC 21080.3.1.d).

We look forward to hearing from you.

Sincerely,

Alix A. Bockelman
Deputy Executive Director, Policy

Attachment: Notice of Preparation (NOP)

AB:ll
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Deputy Executive Director, Policy

Andrew B. Fremier
Deputy Executive Director, Operations

August 12, 2016

SENT VIA CERTIFIED MAIL; RETURN RECEIPT REQUESTED

Mr. Andrew Galvan
The Ohlone Indian Tribe
P.O. Box 3152
Fremont, CA 94539

Subject: CEQA Tribal Cultural Resources; Requirements of AB 52 (Gatto, 2014); Formal Notification of Consultation Opportunity pursuant to Public Resources Code (PRC) Section 21080.3.1

Dear Mr. Galvan,

This letter is a follow-up to the Tribal Summit to which you were invited June 13, 2016 regarding the Plan Bay Area 2040 project.

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We look forward to hearing from you.

Sincerely,

Alix A. Bockelman
Deputy Executive Director, Policy

Attachment: Notice of Preparation (NOP)

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Deputy Executive Director, Operations

August 12, 2016

SENT VIA CERTIFIED MAIL; RETURN RECEIPT REQUESTED

The Honorable Patricia Hermosillo
Chairperson, Cloverdale Rancheria of Pomo Indians
555 South Cloverdale Blvd., Suite A
Cloverdale, CA 95425-4043

Subject: CEQA Tribal Cultural Resources; Requirements of AB 52 (Gatto, 2014); Formal Notification of Consultation Opportunity pursuant to Public Resources Code (PRC) Section 21080.3.1

Dear Chairperson Hermosillo,

This letter is a follow-up to the Tribal Summit to which you were invited June 13, 2016 regarding the Plan Bay Area 2040 project.

On May 16, 2016, MTC released a Notice of Preparation (NOP) for an update of the San Francisco Bay Area Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) Environmental Impact Report (EIR). A copy of the NOP is attached with information describing the RTP/SCS, which is also referred to as Plan Bay Area 2040 (Plan).

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We look forward to hearing from you.

Sincerely,

Alix A. Bockelman
Deputy Executive Director, Policy

Attachment: Notice of Preparation (NOP)

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Deputy Executive Director, Operations

August 12, 2016

SENT VIA CERTIFIED MAIL; RETURN RECEIPT REQUESTED

The Honorable Raymond Hitchcock
Chairperson, Wilton Rancheria
9728 Kent Street
Elk Grove, CA 95624

Subject: CEQA Tribal Cultural Resources; Requirements of AB 52 (Gatto, 2014); Formal Notification of Consultation Opportunity pursuant to Public Resources Code (PRC) Section 21080.3.1

Dear Chairperson Hitchcock,

This letter is a follow-up to the Tribal Summit to which you were invited June 13, 2016 regarding the Plan Bay Area 2040 project.

On May 16, 2016, MTC released a Notice of Preparation (NOP) for an update of the San Francisco Bay Area Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) Environmental Impact Report (EIR). A copy of the NOP is attached with information describing the RTP/SCS, which is also referred to as Plan Bay Area 2040 (Plan).

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We look forward to hearing from you.

Sincerely,

Alix A. Bockelman
Deputy Executive Director, Policy

Attachment: Notice of Preparation (NOP)

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Deputy Executive Director, Operations

August 12, 2016

SENT VIA CERTIFIED MAIL; RETURN RECEIPT REQUESTED

The Honorable Leland Kinter
Chairperson, Yocha Dehe Wintun Nation
P.O. Box 18
Brooks, CA 95606

Subject: CEQA Tribal Cultural Resources; Requirements of AB 52 (Gatto, 2014); Formal Notification of Consultation Opportunity pursuant to Public Resources Code (PRC) Section 21080.3.1

Dear Chairperson Kinter,

This letter is a follow-up to the Tribal Summit to which you were invited June 13, 2016 regarding the Plan Bay Area 2040 project.

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We look forward to hearing from you.

Sincerely,

Alix A. Bockelman
Deputy Executive Director, Policy

Attachment: Notice of Preparation (NOP)

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Executive Director

Alix Bockelman
Deputy Executive Director, Policy

Andrew B. Fremier
Deputy Executive Director, Operations

August 12, 2016

SENT VIA CERTIFIED MAIL; RETURN RECEIPT REQUESTED

The Honorable Valentin Lopez
Chairperson, Amah Mutsun Tribal Band
P.O. Box 5272
Galt, CA 95632

Subject: CEQA Tribal Cultural Resources; Requirements of AB 52 (Gatto, 2014); Formal Notification of Consultation Opportunity pursuant to Public Resources Code (PRC) Section 21080.3.1

Dear Chairperson Lopez,

This letter is a follow-up to the Tribal Summit to which you were invited June 13, 2016 regarding the Plan Bay Area 2040 project.

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Sincerely,

Alix A. Bockelman
Deputy Executive Director, Policy

Attachment: Notice of Preparation (NOP)

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Deputy Executive Director, Policy

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Deputy Executive Director, Operations

August 12, 2016

SENT VIA CERTIFIED MAIL; RETURN RECEIPT REQUESTED

The Honorable Marjorie Mejia
Chairperson, Lytton Rancheria
437 Aviation Blvd.
Santa Rosa, CA 95403

Subject: CEQA Tribal Cultural Resources; Requirements of AB 52 (Gatto, 2014); Formal Notification of Consultation Opportunity pursuant to Public Resources Code (PRC) Section 21080.3.1

Dear Chairperson Mejia,

This letter is a follow-up to the Tribal Summit to which you were invited June 13, 2016 regarding the Plan Bay Area 2040 project.

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Sincerely,

Alix A. Bockelman
Deputy Executive Director, Policy

Attachment: Notice of Preparation (NOP)

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Deputy Executive Director, Operations

August 12, 2016

SENT VIA CERTIFIED MAIL; RETURN RECEIPT REQUESTED

The Honorable Katherine Erolinda Perez
Chairperson, North Valley Yokuts Tribe
P.O. Box 717
Linden, CA 95236

Subject: CEQA Tribal Cultural Resources; Requirements of AB 52 (Gatto, 2014); Formal Notification of Consultation Opportunity pursuant to Public Resources Code (PRC) Section 21080.3.1

Dear Chairperson Perez,

This letter is a follow-up to the Tribal Summit to which you were invited June 13, 2016 regarding the Plan Bay Area 2040 project.

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Alix A. Bockelman
Deputy Executive Director, Policy

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Deputy Executive Director, Policy

Andrew B. Fremier
Deputy Executive Director, Operations

August 12, 2016

SENT VIA CERTIFIED MAIL; RETURN RECEIPT REQUESTED

The Honorable Greg Sarris
Chairperson, Federated Indians of Graton Rancheria
6400 Redwood Drive, Suite 300
Rohnert Park, CA 94928-2341

Subject: CEQA Tribal Cultural Resources; Requirements of AB 52 (Gatto, 2014); Formal Notification of Consultation Opportunity pursuant to Public Resources Code (PRC) Section 21080.3.1

Dear Chairperson Sarris,

This letter is a follow-up to the Tribal Summit to which you were invited June 13, 2016 regarding the Plan Bay Area 2040 project.

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We look forward to hearing from you.

Sincerely,

Alix A. Bockelman
Deputy Executive Director, Policy

Attachment: Notice of Preparation (NOP)

AB:ll
J:\PROJECT\2017 RTP_SCS\Tribal Consultation\Consultation Requests\NOP Letters\NAHC_NOP_letters.docx

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Executive Director

Alix Bockelman
Deputy Executive Director, Policy

Andrew B. Fremier
Deputy Executive Director, Operations

August 12, 2016

SENT VIA CERTIFIED MAIL; RETURN RECEIPT REQUESTED

The Honorable Ann Marie Sayers
Chairperson, Indian Canyon Mutsun Band of Costanoan
P.O. Box 28
Hollister, CA 95024

Subject: CEQA Tribal Cultural Resources; Requirements of AB 52 (Gatto, 2014); Formal Notification of Consultation Opportunity pursuant to Public Resources Code (PRC) Section 21080.3.1

Dear Chairperson Sayers,

This letter is a follow-up to the Tribal Summit to which you were invited June 13, 2016 regarding the Plan Bay Area 2040 project.

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Alix A. Bockelman
Deputy Executive Director, Policy

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Deputy Executive Director, Policy

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Deputy Executive Director, Operations

August 12, 2016

SENT VIA CERTIFIED MAIL; RETURN RECEIPT REQUESTED

The Honorable Jose Simon, III
Chairperson, Middletown Rancheria of Pomo Indians
P.O. Box 1035
Middletown, CA 95461

Subject: CEQA Tribal Cultural Resources; Requirements of AB 52 (Gatto, 2014); Formal Notification of Consultation Opportunity pursuant to Public Resources Code (PRC) Section 21080.3.1

Dear Chairperson Simon,

This letter is a follow-up to the Tribal Summit to which you were invited June 13, 2016 regarding the Plan Bay Area 2040 project.

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Andrew B. Fremier
Deputy Executive Director, Operations

August 12, 2016

SENT VIA CERTIFIED MAIL; RETURN RECEIPT REQUESTED

The Honorable Charlie Wright
Chairperson, Cortina Rancheria
P.O. Box 1630
Williams, CA 95987-1630

Subject: CEQA Tribal Cultural Resources; Requirements of AB 52 (Gatto, 2014); Formal Notification of Consultation Opportunity pursuant to Public Resources Code (PRC) Section 21080.3.1

Dear Chairperson Wright,

This letter is a follow-up to the Tribal Summit to which you were invited June 13, 2016 regarding the Plan Bay Area 2040 project.

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August 12, 2016

SENT VIA CERTIFIED MAIL; RETURN RECEIPT REQUESTED

The Honorable Chris Wright
Chairperson, Dry Creek Rancheria Band of Pomo Indians
P.O. Box 607
Geyserville, CA 95441

Subject: CEQA Tribal Cultural Resources; Requirements of AB 52 (Gatto, 2014); Formal Notification of Consultation Opportunity pursuant to Public Resources Code (PRC) Section 21080.3.1

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August 12, 2016

SENT VIA CERTIFIED MAIL; RETURN RECEIPT REQUESTED

The Honorable Irene Zwierlein
Chairperson, Amah Mutsun Tribal Band of Mission San Juan Bautista
789 Canada Road
Woodside, CA 94062

Subject: CEQA Tribal Cultural Resources; Requirements of AB 52 (Gatto, 2014); Formal Notification of Consultation Opportunity pursuant to Public Resources Code (PRC) Section 21080.3.1

Dear Chairperson Zwierlein,

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Plan BayArea 2040

Tribal Summit & Outreach

Monday, June 13, 2016
Santa Rosa, California

PLEASE PRINT LEGIBLY

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Association of Bay Area Governments

NAME	AFFILIATION (IF ANY)	ADDRESS	CITY, STATE	ZIP CODE	PHONE	E-MAIL
Tony Cerda	Costanoan Rumsen	244 E. 1st street	Pomona	91766	(909) 524-8041	rumsen@aol.com
Sam Rodriguez	Costanoan Rumsen	244 E 1st Street	Pomona	91766		SamThunder.s@gmail
Zach Ippoliti	Costanoan Rumsen	244 E 1st Street	Pomona	91760		909Runningbear@gmail.com
Louie Cerda	Costanoan Rumsen	244 E. 1st St.	Pomona	91766	(909) 734-9444	cerdalouie3@gmail.com
Desiree Munoz	Costanoan Rumsen Carmel Tribe	1028 Grand Rd San Francisco CA, 94129			(909) 491-8254	desireemunoz.dm92@gmail.com
Carlamarie Munoz	Costanoan Rumsen Carmel Tribe	P.O. 29395 S.F. 94129	SF CA	94129	909 6443246	carlamarie online@gmail
Brenda Munoz	Costanoan Rumsen Carmel tribe	108 S. acacia ave Rialto, Ca. 92376	Rialto Ca.	92376	909 676-7607	hummingbird_munoz@yahoo.com
Vickey MACIAS	Cloverdale Rancheria	555 S. Cloverdale Blvd cloverdale 95425	Cloverdale	95425	707 894-9860	vpeppermuto@cloverdalerancheria.com
Darlene Marsh	Cloverdale Rancheria	555 S. Cloverdale Blvd Cloverdale, Ca.	Cloverdale	95425	(707) 894-9860	Dmarsh@cloverdalerancheria.com
DINO BELTRAN	KOI NATION	P.O Box 3162 SANTA ROSA.	SANTA ROSA	95402	707 331-9788	kn@koination.com

By providing the above information, I consent to and agree that the information may be used by MTC and ABAG to keep me up to date (via email, postcards and other written correspondence) on Plan Bay Area 2040 and related planning work. I understand that photos and videos may be taken of the participants at this meeting and used online or in publications and I consent to the use of my image in such online places and in such publications. Attendance at this event by a public official will constitute acceptance of a reportable gift.

Plan BayArea 2040

Tribal Summit & Outreach

Monday, June 13, 2016
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Association of Bay Area Governments

NAME	AFFILIATION (IF ANY)	ADDRESS	CITY, STATE	ZIP CODE	PHONE	E-MAIL
STEPHEN YOKOI	CALTRANS	111 GRAND AVE	OAKLAND		510-286-5621	STEPHEN.YOKOI@DOT.CA.GOV
Blesilda Gebreyesus	Caltrans	111 Grand Ave	Oakland		(510) 286-5575	blesilda.gebreyesus@dot.ca.gov
Irenia Quitiquit	Scotts Valley	1005 Parallel Drive	Lakeport, CA	95453	707.263-4265	iquitiquit@supomo.org
BRETT Rushing	Caltrans	111 Grand Ave	Oakland,	94612	510 286 6336	brett_rushing@dot.ca.gov
Chris Barney	SCTA	490 Mendocino Ave.	Santa Rosa	95401	707-565-5375	Cbarney@sctainfo.org
Nina Hapner	Kashia Band of Pomo	1420 Guerneville Rd, Ste-1	Santa Rosa, CA	95403	707.591-0580 x107	nina@stewartspoint.org
Ngozi Ezekwo	CALTRANS	111 GRAND AVE. OAKLAND		94612	510 286-5572	ngozi.ezekwo@dot.ca.gov

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NATIVE AMERICAN TRIBAL SUMMIT & OUTREACH

National Indian Justice Center
Santa Rosa, California
June 13, 2016, 10:00 a.m.

AGENDA

10:00 AM **Registration and Breakfast**

10:30 AM **Welcome and Introductions**
Joseph Myers, Executive Director, *National Indian Justice Center*

10:40 AM **Opening Remarks**
Jake Mackenzie, Vice Mayor, *City of Rohnert Park* & Vice Chair, *MTC*

10:45 AM **California Transportation — Latest Outreach & Coordination with Tribes**
Blesilda H. Gebreyesus, District Branch Chief, Regional Planning & Native American Liaison Branch, *Caltrans District 4*

10:50 AM **Plan Bay Area 2040 Update**
Matt Maloney, Principal, Major Projects, *MTC*

11:10 AM **First Discussion Breakout**
Two tables will be set up for discussions and Q&A. Tribal representatives will be invited to rotate from the first table to the second table for each of two consultation sessions.

- Plan Bay Area 2040 & the 2017 Transportation Improvement Program
  Discussion Leaders: MTC Staff, ABAG Staff
  - ***Plan Bay Area 2040 Scenarios***
  - ***2017 Transportation Improvement Program***
- Local Transportation Consultation
  Discussion Leaders: CMA Staff, Caltrans Staff

11:50 AM **Break**

11:55 AM **Second Discussion Breakout**
Tribal representatives will be invited to rotate to a different table for the second consultation breakout.

- Plan Bay Area 2040 & the Transportation Improvement Program
- Local Transportation Consultation

12:35 PM **Lunch Break**

12:45 PM **Transportation Information Session**: *One-on-One Vital Signs Demonstrations*
MTC Staff

1:00 PM **Close**



Plan Bay Area 2040

Tribal Summit and Outreach

Matt Maloney, Principal, Major Projects, MTC
June 13, 2016

METROPOLITAN TRANSPORTATION COMMISSION

WHO WE ARE

Plan BayArea 2040

Two agencies are charged with helping to plan long-range transportation, land use and housing in the nine-county Bay Area. We share joint responsibility for the study and development of Plan Bay Area 2040.

METROPOLITAN TRANSPORTATION COMMISSION

MTC is the transportation planning organization for the Bay Area. MTC is responsible for travel demand and transportation revenue forecasts and manages the One Bay Area Grant (OBAG) program.

Association of Bay Area Governments

ABAG is the regional land use and housing planning agency and Council of Governments for the Bay Area. ABAG is responsible for population, employment, and housing forecasts.

OUR PARTNERS

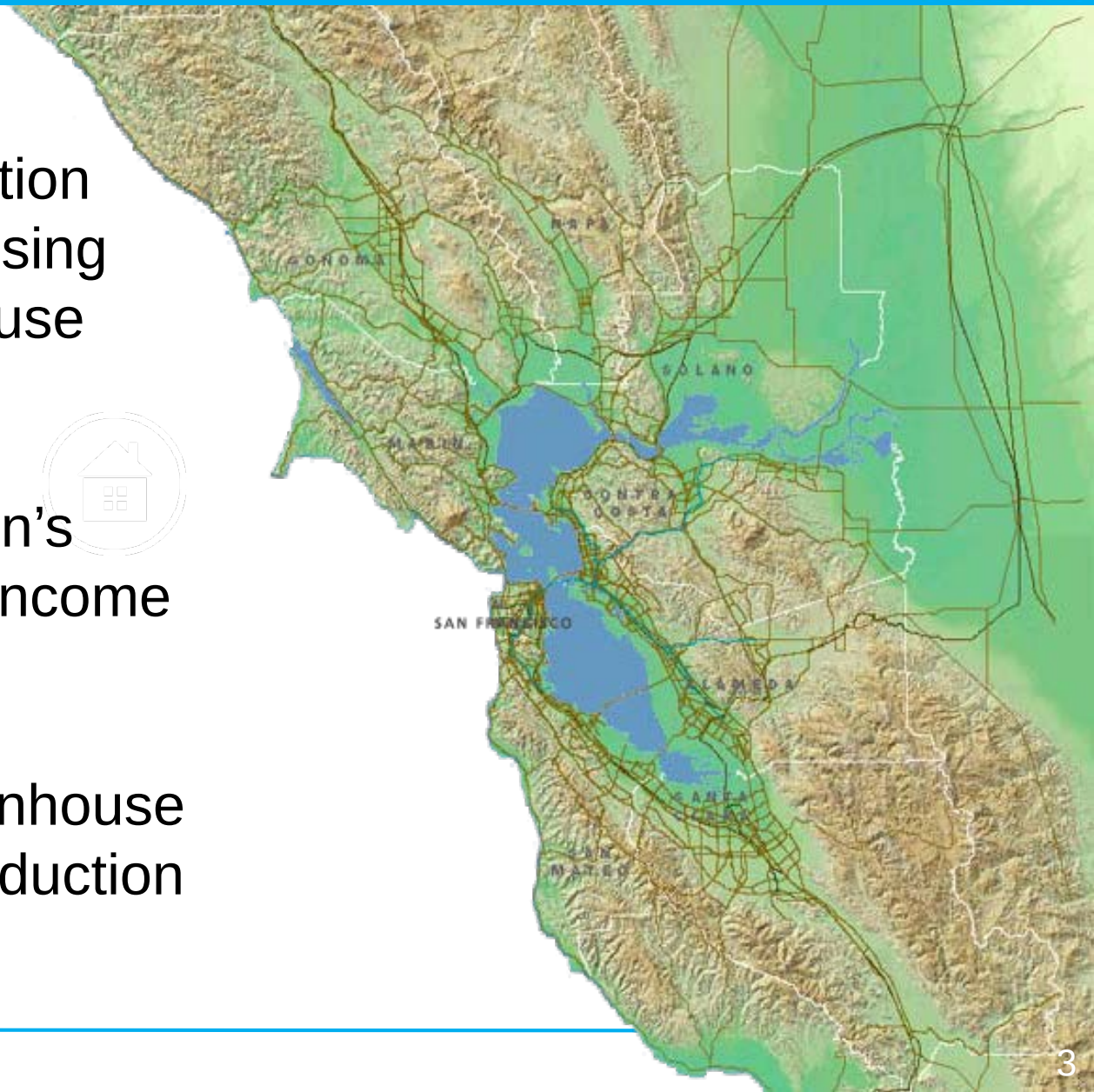
bcdc San Francisco Bay Conservation and Development Commission

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

WHAT IS PLAN BAY AREA?

Plan BayArea 2040

- Aligns transportation investments, housing growth and land use planning
- Houses the region's population at all income levels
- Meets state greenhouse gas emissions reduction targets



WHAT IS PLAN BAY AREA?

Plan BayArea 2040

Plan Bay Area is a roadmap to help Bay Area cities and counties preserve the character of our diverse communities while adapting to the challenges of future population growth.



Promotes a strong regional **economy** by providing communities with the data they need to plan for future job growth, as well as any accompanying education, housing, and transportation needs.



Informs local cities and counties in their decision-making around new **housing** developments by providing housing demand forecasts.

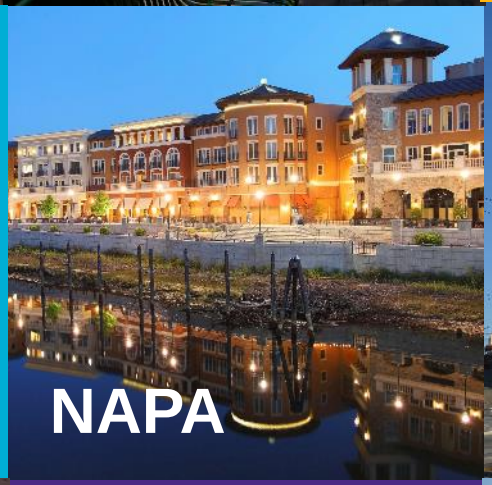


Supports strategic **transportation** investments that aim to decrease traffic congestion, improve travel options, and reduce pollution both locally and regionally.


ALAMEDA


CONTRA
COSTA


MARIN


NAPA


SAN
FRANCISCO


MAIN STREET
SAN MATEO


SANTA
CLARA

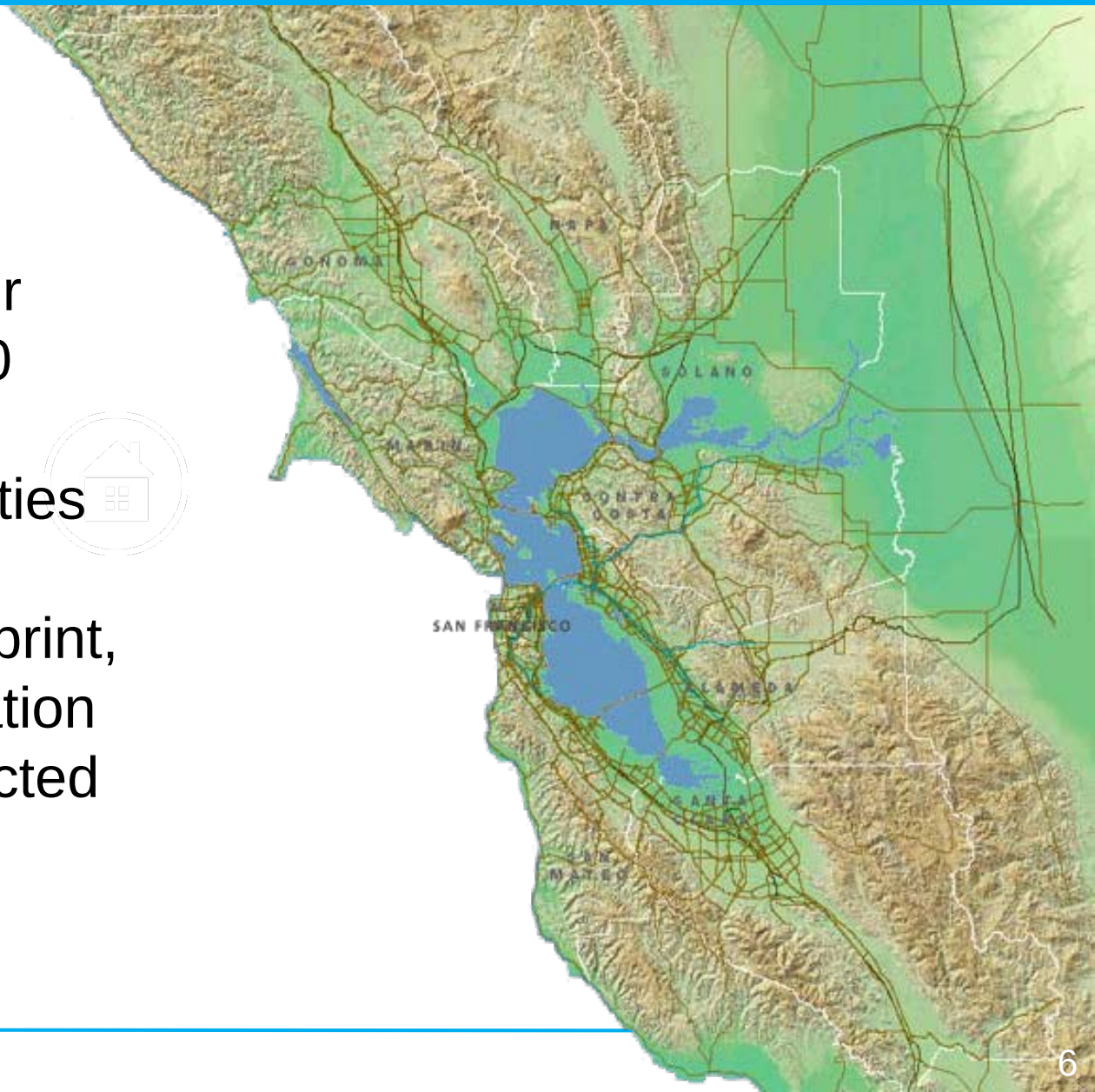

SOLANO


SONOMA

THE SAN FRANCISCO BAY AREA

Plan BayArea 2040

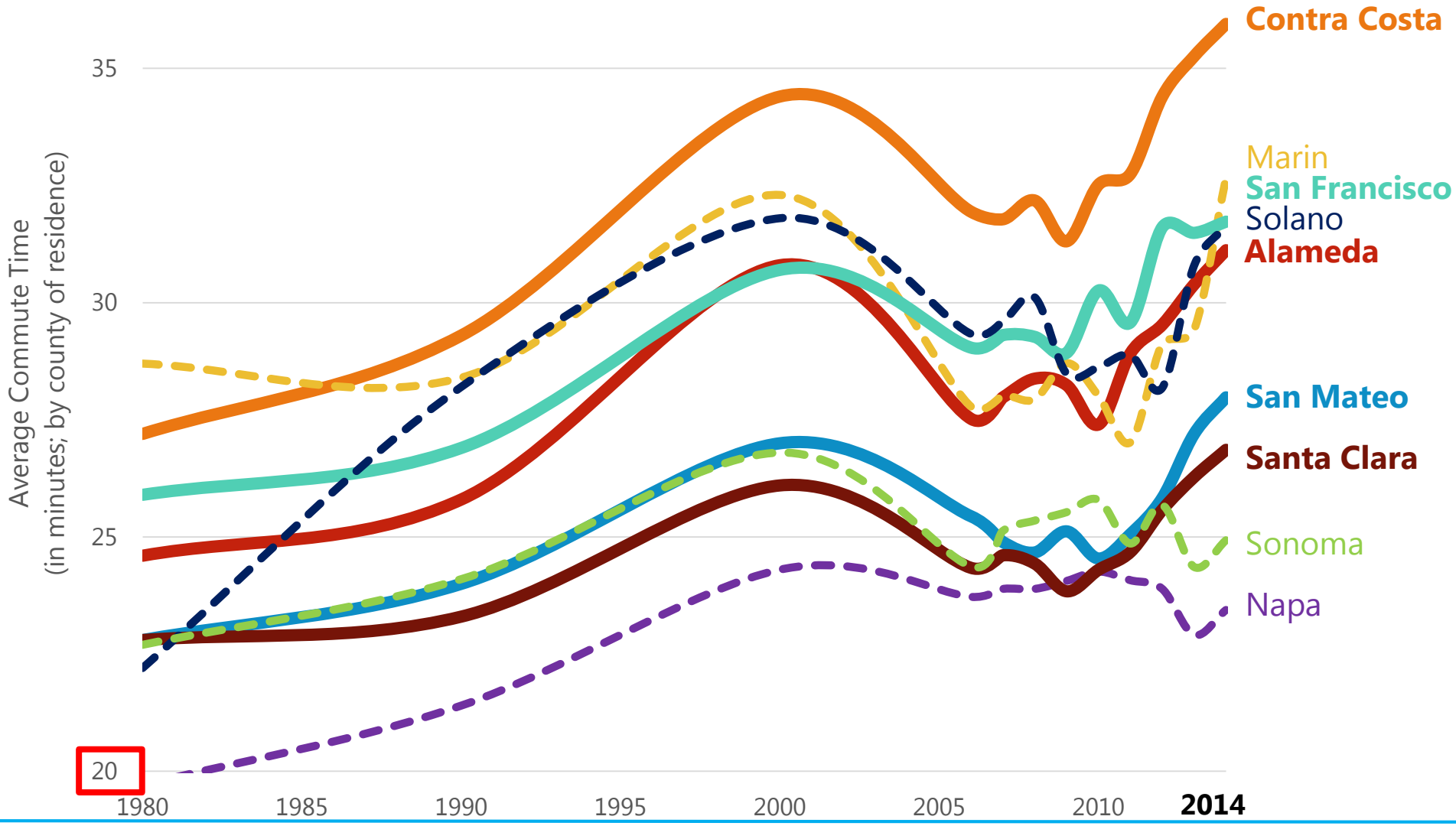
- 7.6 million people today; planning for 9.2 million in 2040
- 9 counties, 101 cities
- Dense urban footprint, mature transportation system *and* protected open space




VITAL SIGNS
MTC ABAG BAAQMD BCDC
bcdc
Image Source: https://www.flickr.com/photos/miwok/7119900747

Commute times are rising all across the region.

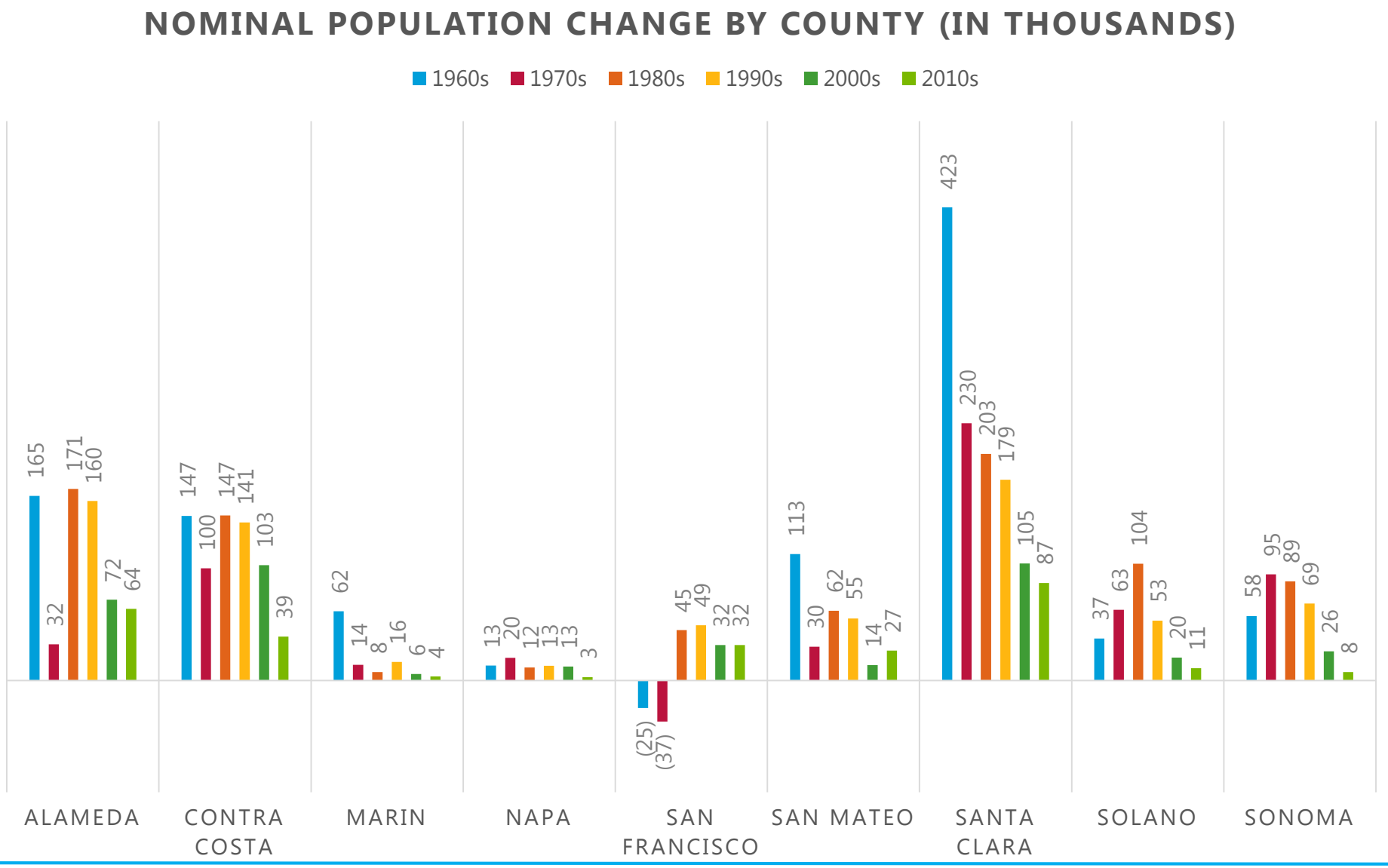
Plan BayArea 2040



Source: US Census/American Community Survey

North Bay growth peaked during the 20th century, particularly during the 1970s and 1980s.

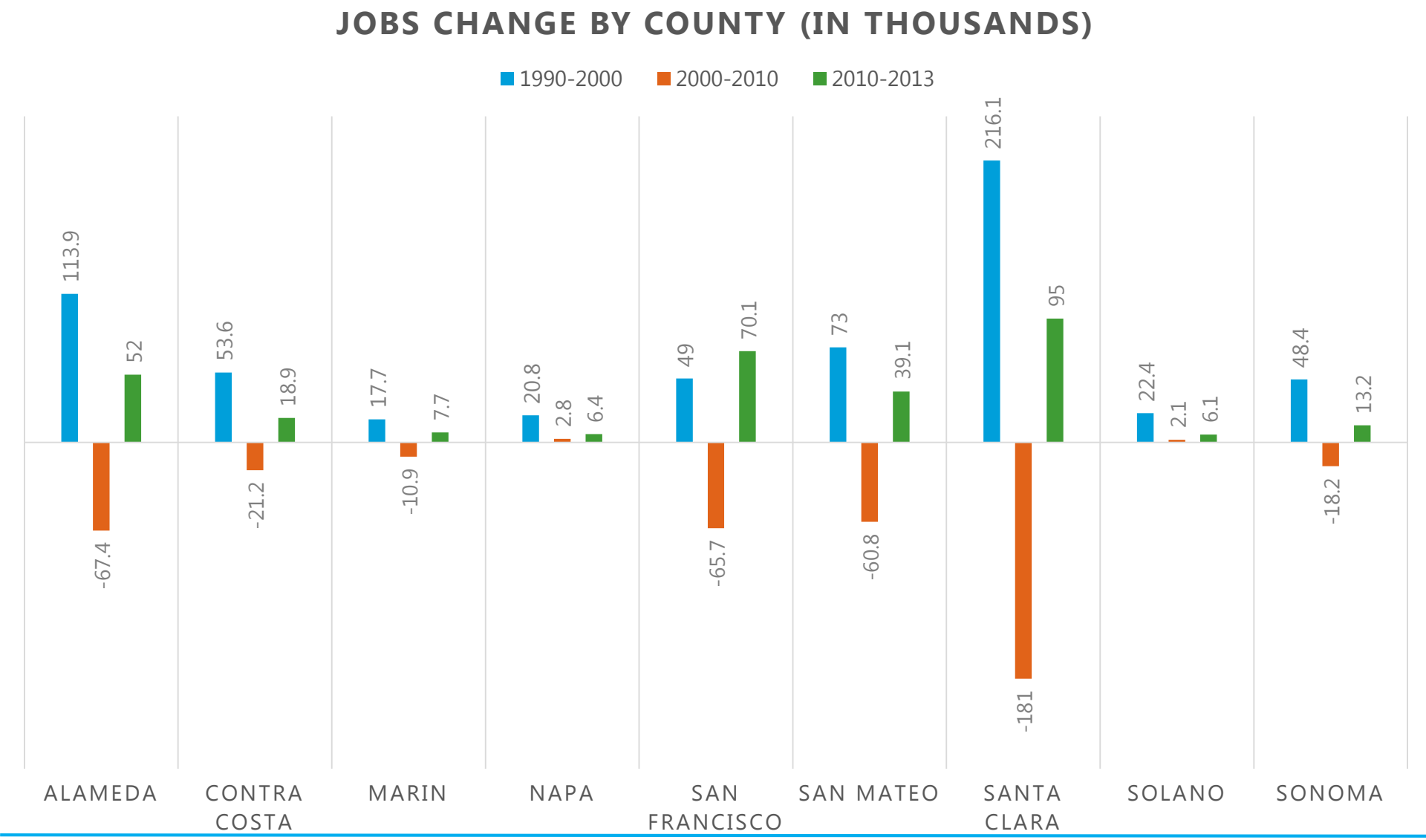
Plan BayArea 2040



Source: California Department of Finance; note that 2010s spans four years between 2010 and 2014

The Great Recession had significant adverse impacts on jobs in every Bay Area county.

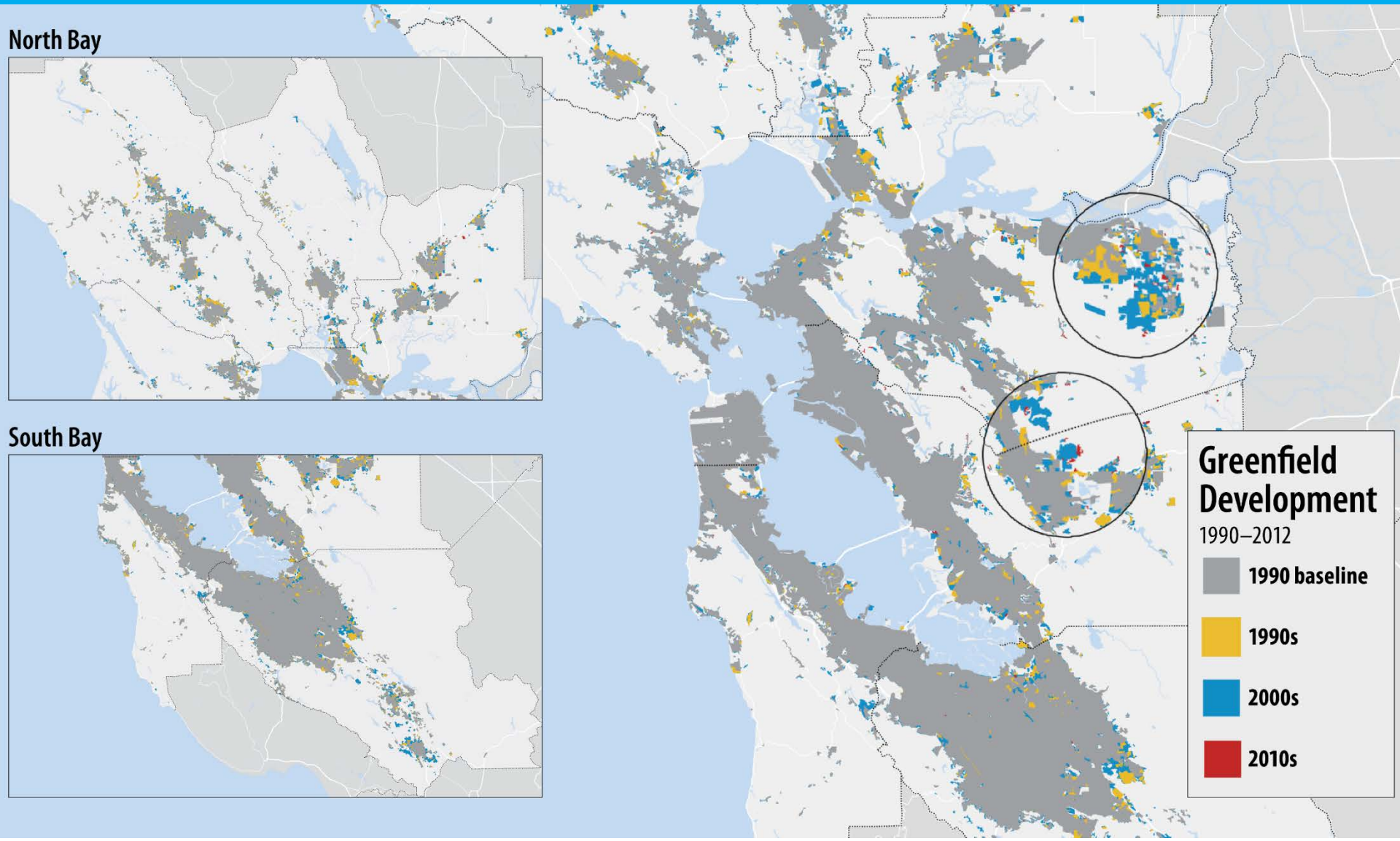
Plan BayArea 2040



Source: California Employment Development Department

Greenfield development is uncommon across the region except for certain areas.

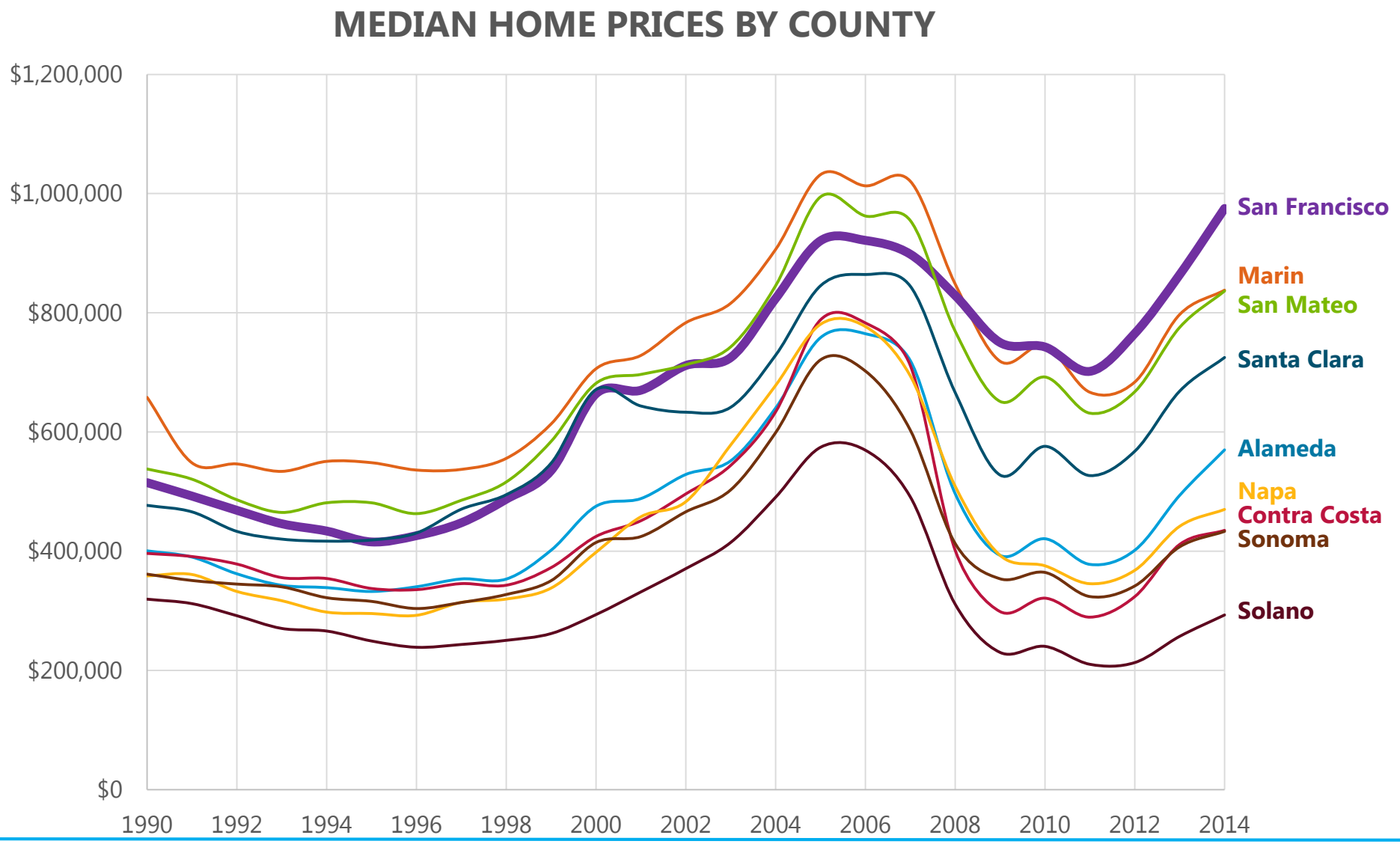
Plan BayArea 2040



Source: Department of Conservation, Farmland Mapping and Monitoring Program

Affordability remains the region's most difficult challenge.

Plan BayArea 2040



Source: Redfin.com for Single-Family Homes, Condos, and Townhomes (1990 – 2014); inflation-adjusted to $2014

PLAN DEVELOPMENT TIMELINE

Plan BayArea 2040

Late 2015/ Early 2016

Scenario Development

- Generate updated Plan Bay Area 2040 regional forecasts for jobs, housing, population, travel demand and transportation revenue
- Assess transportation projects and programs to be included in Plan Bay Area 2040
- Create preliminary scenario concepts for housing, jobs and transportation investments
- Solicit feedback from key stakeholders to refine and improve preliminary scenario concepts for housing, jobs and transportation investments

Feedback on the preliminary scenario sketches helped inform Plan Bay Area 2040 alternative scenarios



Refine Scenario Framework

Spring/ Summer 2016

Preferred Scenario Selection

- Release scenario and targets evaluation
- Conduct public engagement via open houses and online forums
- Present summary of public comments, July 2016
- Adopt preferred scenario based on public input and technical analysis, September 2016



Preferred Scenario

We Are Here



Early 2017

Draft Plan and Draft EIR

- Release Draft Plan Bay Area 2040 and Draft Environmental Impact Report for public comment
- Conduct public workshops to solicit input on Draft Plan Bay Area 2040 and draft Draft Environmental Impact Report (EIR)
- Adopt Plan Bay Area 2040 and final EIR, July 2017



Plan Bay Area 2040

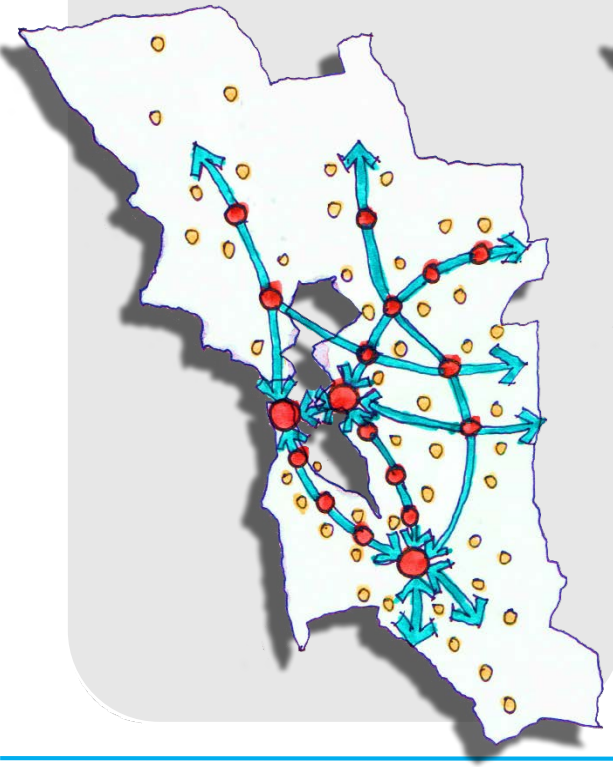
Public Workshops and Outreach

THREE SCENARIOS

Plan BayArea 2040

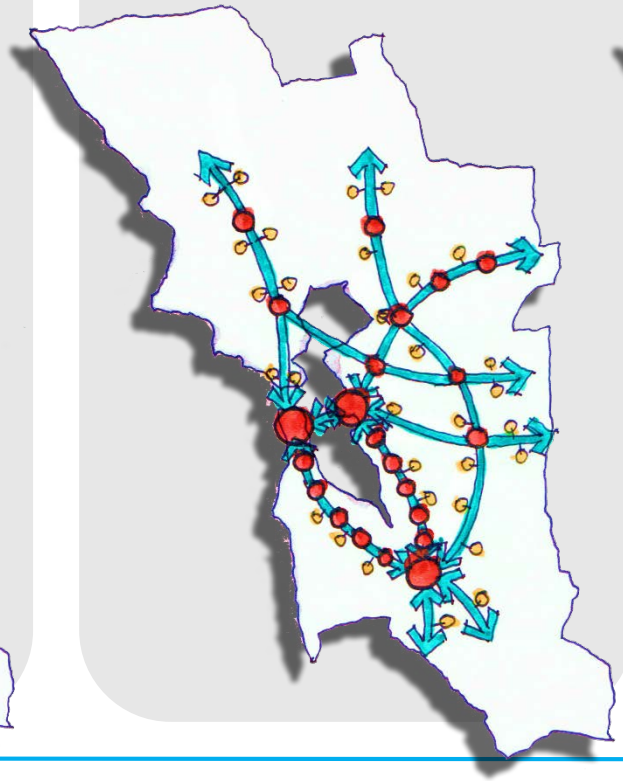
1

Main Streets



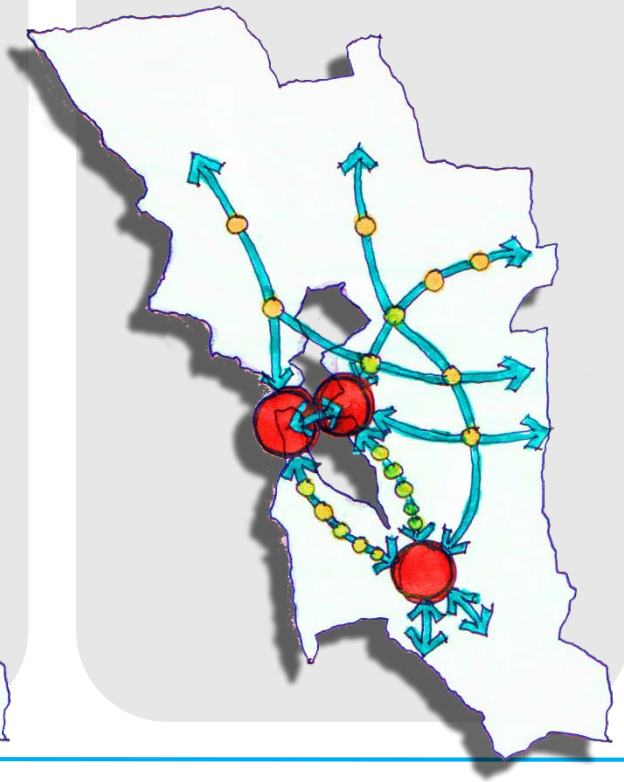
2

Connected Neighborhoods



3

Big Cities



FOCUS ON SONOMA

Plan BayArea 2040

	NO PROJECT	MAIN STREETS	CONNECTED NEIGHBORHOODS	BIG CITIES
POPULATION	**12%** Share of Total Regional Growth	**9%** Share of Total Regional Growth	**10%** Share of Total Regional Growth	**2%** Share of Total Regional Growth
	59% Growth from 2010	**48%** Growth from 2010	**51%** Growth from 2010	**11%** Growth from 2010

FOCUS ON SONOMA

Plan BayArea 2040

	NO PROJECT	MAIN STREETS	CONNECTED NEIGHBORHOODS	BIG CITIES
EMPLOYMENT	**6%** Share of Total Regional Growth	**6%** Share of Total Regional Growth	**5%** Share of Total Regional Growth	**6%** Share of Total Regional Growth
	38% Growth from 2010	**36%** Growth from 2010	**34%** Growth from 2010	**38%** Growth from 2010

FOCUS ON SONOMA

Plan BayArea 2040

	NO PROJECT	MAIN STREETS	CONNECTED NEIGHBORHOODS	BIG CITIES
HOUSING	**~100,000** Growth in Housing Units	**~75,000** Growth in Housing Units	**~80,000** Growth in Housing Units	**~7,000** Growth in Housing Units
	13% Share of Total Regional Growth	**10%** Share of Total Regional Growth	**11%** Share of Total Regional Growth	**1%** Share of Total Regional Growth
	12% Growth in PDAs	**79%** Growth in PDAs	**85%** Growth in PDAs	**69%** Growth in PDAs

FOCUS ON SONOMA

Plan BayArea 2040

	2010	NO PROJECT	MAIN STREETS	CONNECTED NEIGHBORHOODS	BIG CITIES
COMMUTE MODE	**66%** Drive Alone	**66%** Drive Alone	**64%** Drive Alone	**63%** Drive Alone	**67%** Drive Alone
	34% Carpool, Transit, Walk, and Bike	**34%** Carpool, Transit, Walk, and Bike	**36%** Carpool, Transit, Walk, and Bike	**37%** Carpool, Transit, Walk, and Bike	**33%** Carpool, Transit, Walk, and Bike

FOCUS ON SONOMA

Plan BayArea 2040

	2010	NO PROJECT	MAIN STREETS	CONNECTED NEIGHBORHOODS	BIG CITIES
AVERAGE COMMUTE	**73%** Live/ Work in Sonoma County	**71%** Live/ Work in Sonoma County	**74%** Live/ Work in Sonoma County	**72%** Live/ Work in Sonoma County	**81%** Live/ Work in Sonoma County
	31 Min. Avg. Commute Time (One Way)	**37** Min. Avg. Commute Time (One Way)	**32** Min. Avg. Commute Time (One Way)	**34** Min. Avg. Commute Time (One Way)	**26** Min. Avg. Commute Time (One Way)

FOCUS ON SONOMA

Plan BayArea 2040

	2010	NO PROJECT	MAIN STREETS	CONNECTED NEIGHBORHOODS	BIG CITIES
PAVEMENT CONDITION	**51** Overall Score for All Juris-dictions (Index on a scale of 0-100)	**35** Overall Score for All Juris-dictions (Index on a scale of 0-100)	**47** Overall Score for All Juris-dictions (Index on a scale of 0-100)	**45** Overall Score for All Jurisdictions (Index on a scale of 0-100)	**40** Overall Score for All Juris-dictions (Index on a scale of 0-100)

TRANSPORTATION INVESTMENTS

Plan BayArea 2040



- Main Streets- over half the investment on state of good repair. More limited investment on major projects, especially highway capacity and express lanes
- Big Cities- makes largest investment in major capital projects, especially core capacity transit expansion
- Connected Neighborhoods- balanced focus on transit and highway efficiency improvements and state of good repair

TARGETS - SUMMARY

Plan BayArea 2040

Goal		TARGET		No Project	Scenario 1	Scenario 2	Scenario 3
Climate Projection	1	Reduce per-capita CO_2 emissions	-15%	-3%	-15%	-18%	-20%
Open Space & Agricultural Preservation	4	Direct development within urban footprint	100%	71%	77%	100%	100%
Equitable Access	6	Increase share of affordable housing	+15%	-0%	-0%	+1%	+0%
Transportation System Effectiveness	11	Increase non-auto mode share	+10%	+1%	+2%	+3%	+3%
Transportation System Effectiveness	12	Reduce vehicle O&M costs due to pavement conditions	-100%	+57%	-65%	-7%	+20%
Transportation System Effectiveness	13	Reduce per-rider transit delay due to aged infrastructure	-100%	-56%	-76%	-77%	-83%

Project Performance Objectives

Plan BayArea 2040

To inform a robust dialogue about regional priorities and trade-offs in a fiscally-constrained environment

To evaluate proposed major transportation investments on **a level playing field** using the same methodologies

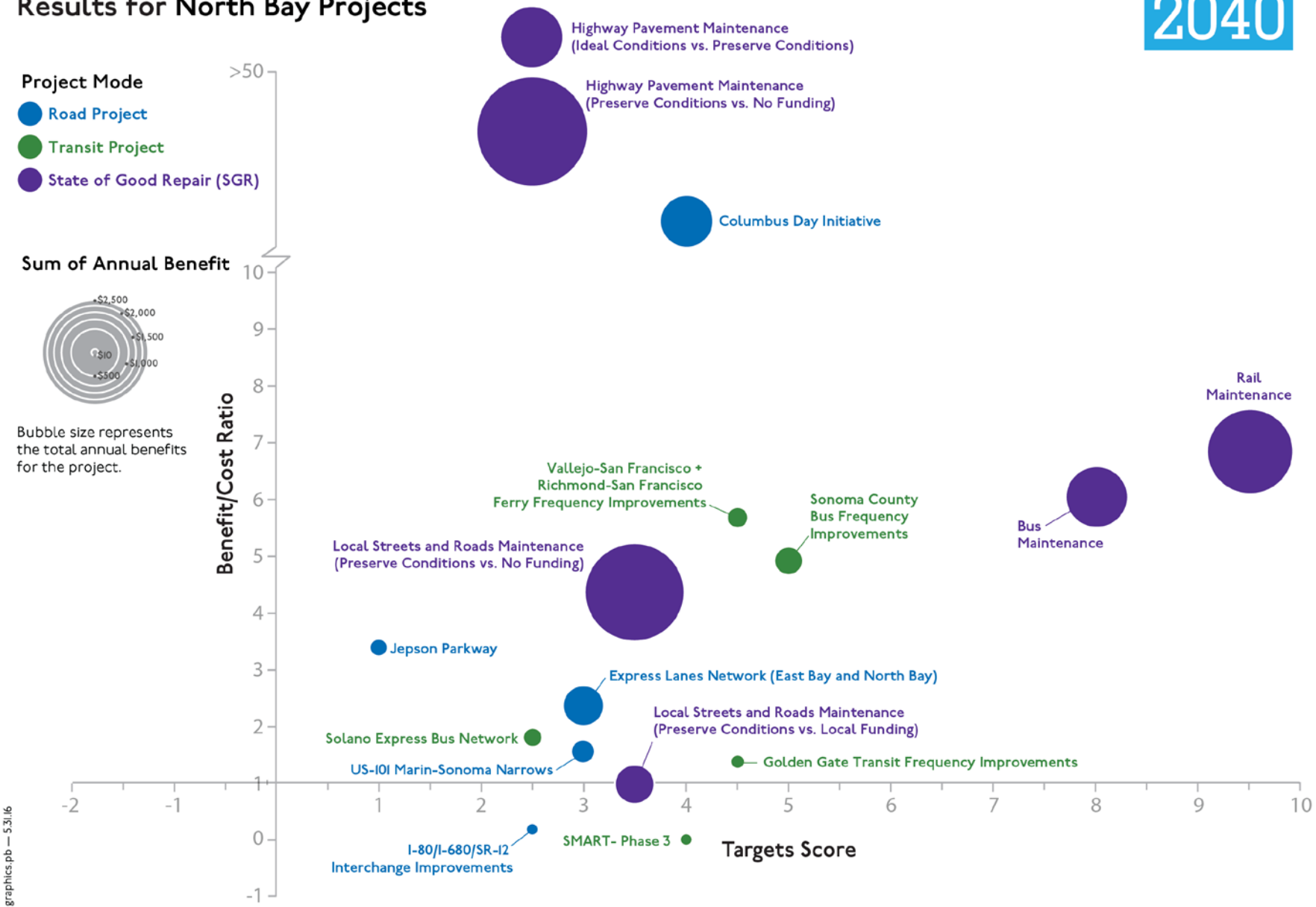
To identify outliers (high-performers and low-performers) with respect to targets support and cost-effectiveness



Image Source: https://www.flickr.com/photos/thomashawk/2442392997

Plan Bay Area 2040

Project Performance Assessment: Results for North Bay Projects

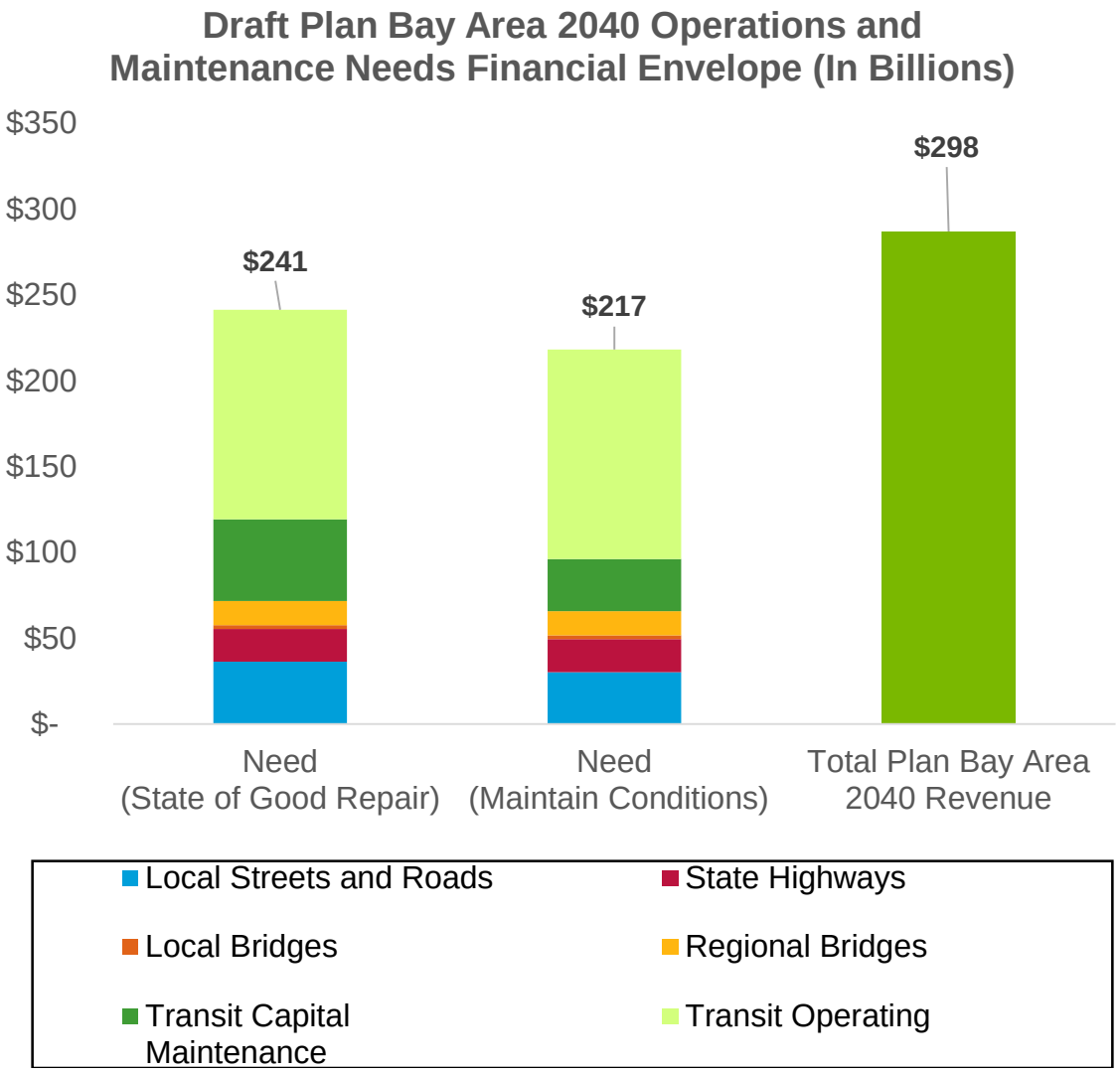


mtc graphics.pb — 5.31.16

REGIONAL TRANSPORTATION REVENUES AND NEEDS

Plan BayArea 2040

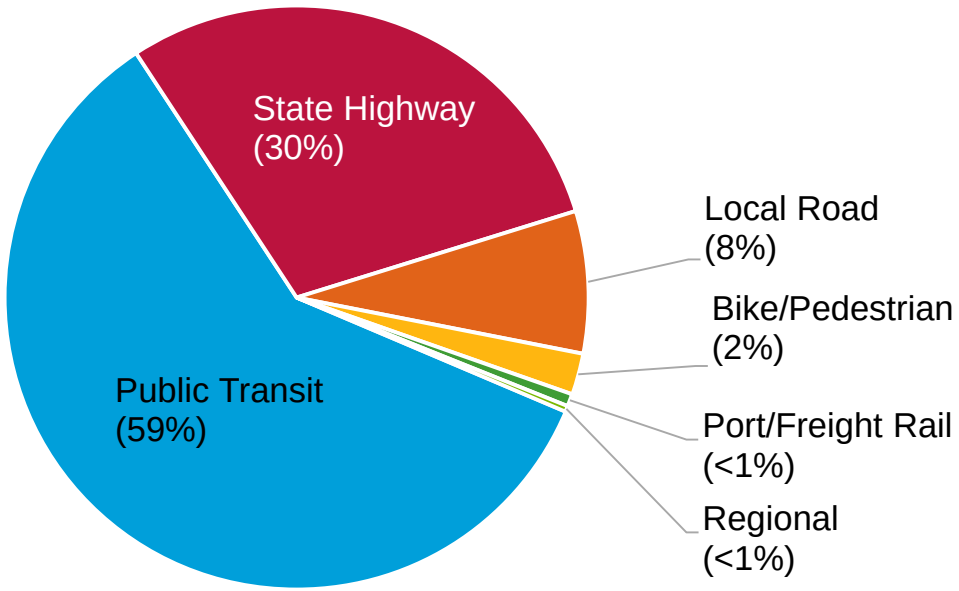
- State of Good Repair Need = $241 Billion
- Maintain Existing Conditions Need = $217 Billion
- Total Draft Revenue Forecast for Plan Bay Area 2040 = $298 Billion
- Approximately 16% (~$47 billion) of Plan revenue is expected to be “discretionary”



Transportation Improvement Program (TIP)

Transportation projects, programs and investment priorities over the next four years.

2015 TIP Investments
(Total Project Costs)

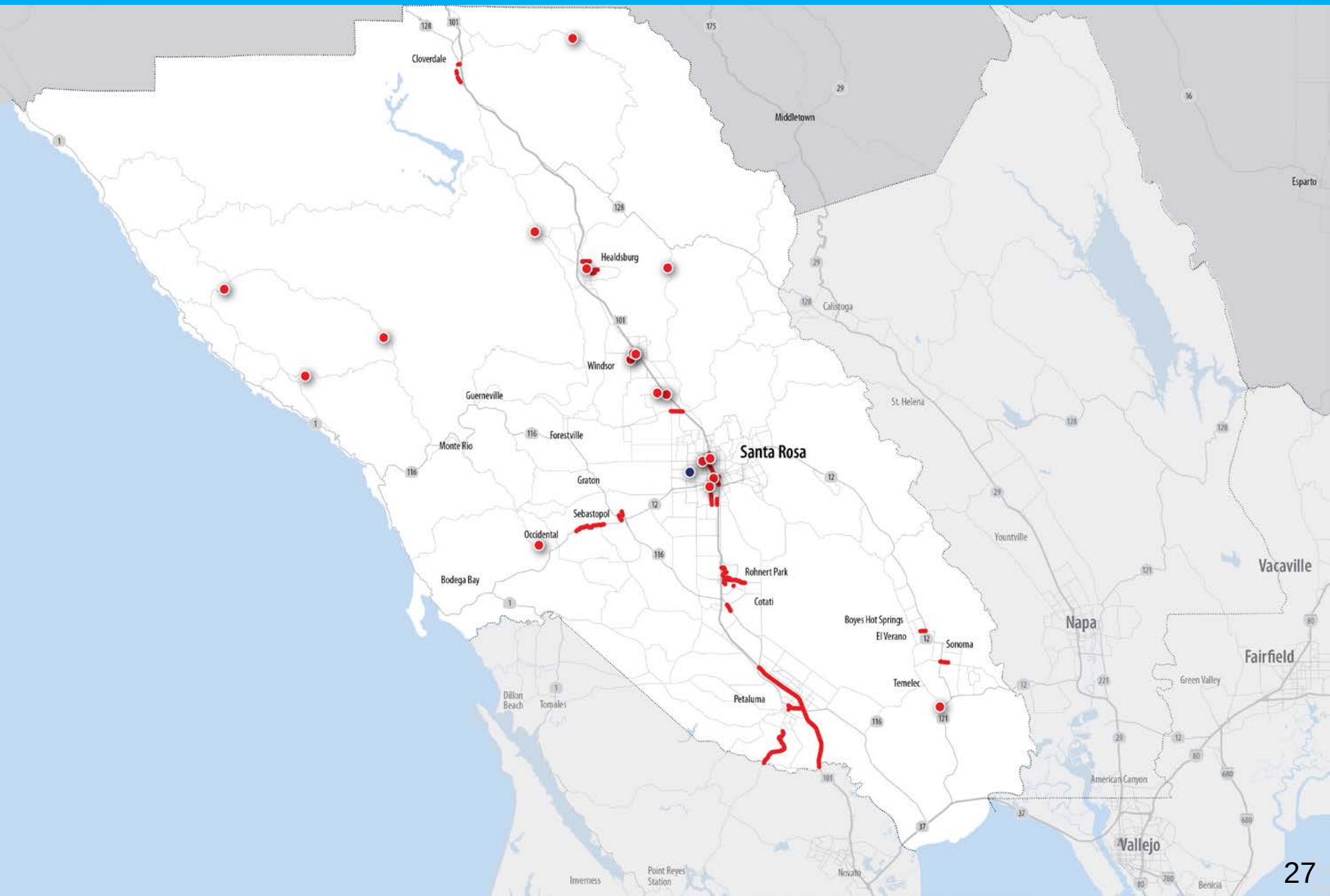


2015 TIP Investments By County
(Millions $, rounded)

County	2015-2018 Committed TIP Investments	Total Project Costs
Alameda	$703	$5,682
Contra Costa	$614	$3,262
Marin	$467	$1,475
Napa	$45	$258
San Francisco	$3,671	$13,315
San Mateo	$930	$2,917
Santa Clara	$1,532	$10,737
Solano	$151	$1,554
Sonoma	$78	$1,146
Multi-County	$3,562	$10,071
Total	**$11,753**	**$50,416**

NEAR-TERM PROJECTS IN SONOMA

Plan BayArea 2040



Draft 2017 TIP (under development)

- ***View the draft (starting June 24)***

  Online at mtc.ca.gov/our-work/fund-invest/transportation-improvement-program

  Copies also available at MTC's offices at 375 Beale Street in San Francisco

- ***Submit comments (June 24 – July 28)***

  Via email info@mtc.ca.gov, fax 415-536-9800 or mail to 375 Beale St, Suite 800, San Francisco, CA 94105

- ***Attend a public hearing (July 13, 9:40 a.m.)***

  Hearing scheduled during MTC's Programming and Allocations Committee meeting

  Bay Area Metro Center at 375 Beale Street in San Francisco

STAY INVOLVED

Plan BayArea 2040



Subscribe to our mailing list to receive updates about Plan Bay Area and other regional initiatives at PlanBayArea.org



Contact MTC and ABAG directly to provide your comments in writing at info@planbayarea.org or join the discussion online on PlanBayArea.org or Facebook and Twitter.



Find an archive of past planning documents, frequently asked questions, regional planning agency calendars, and up-to-date planning information at PlanBayArea.org



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@PlanBayArea

Plan BayArea 2040

Thank You

METROPOLITAN TRANSPORTATION COMMISSION

Association of Bay Area Governments

From:	Leslie Lara
To:	James Sarmento
Cc:	Leslie Lara
Subject:	RE: YD - 11162015-03 -- Request for Consultation re: Plan Bay Area 2040
Date:	Friday, December 2, 2016 1:03:42 PM
Attachments:	3904_A_Joint_MTC_Planning_Committee_with_the_ABAG_Administrative_Committee_16-12-09_Generic.pdf
Importance:	High

Hi, James.

I am very sorry for the delay in response. Your message went into my junk inbox.

Next Friday, December 9, MTC's Planning Committee will meet jointly with ABAG's Administrative Committee to discuss the scoping feedback and alternatives received on the EIR for Plan Bay Area 2040. The agenda is attached. The meeting is scheduled for 9:40 a.m. in the Bay Area Metro Center's Board Room at 375 Beale Street, 1st floor, San Francisco. In case you don't want to make the trek into the city, please note that we webcast all of our committee meetings live on the MTC website. You'll be able to find the link to the live webcast on this page: http://mtc.ca.gov/whats-happening/meetings/live-webcasts.

I think this meeting can give you a pretty good sense on the scope of the project. Also, may I suggest signing up to receive notifications of upcoming planning committee meetings? These are the meetings where Plan Bay Area 2040 is discussed most often. Just let me know and I will add you to the list.

Please let me know if I can answer any other questions or if you need anything else.

Thanks,
— Leslie

Leslie Lara-Enriquez
Public Information Officer (Hablo español)
Metropolitan Transportation Commission | Bay Area Toll Authority
Bay Area Metro Center | 375 Beale Street, Suite 800 | San Francisco, CA | 94105
(415) 778-6700 main | (415) 778-5213 direct | (510) 325-5051 mobile
llara@mtc.ca.gov
www.mtc.ca.gov

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From: James Sarmento [mailto:JSarmento@yochadehe-nsn.gov]
Sent: Tuesday, November 15, 2016 3:41 PM
To: Leslie Lara <llara@mtc.ca.gov>
Subject: Re: YD - 11162015-03 -- Request for Consultation re: Plan Bay Area 2040

Greetings Leslie,
Thank you for reaching out to us. We are currently reviewing the information you sent in your last email. Are there any upcoming meetings planned? I would like to get a sense of the scope of the project and it might be best to go to one of these meetings prior to setting up a consultation.

Thank you
James

James Sarmento
Cultural Resources Manager

Tewe Kewe Cultural Center
PO Box 18 | Brooks, CA 95606
c 530.723.0452 | p 530.796.3400 | f 530.796.2143
jsarmento@yochadehe-nsn.gov
www.yochadehe.org

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From: Leslie Lara <llara@mtc.ca.gov>
Date: Monday, November 14, 2016 at 5:08 PM
To: James Sarmento <jsarmento@yochadehe-nsn.gov>
Cc: Leslie Lara <llara@mtc.ca.gov>
Subject: RE: YD - 11162015-03 -- Request for Consultation re: Plan Bay Area 2040

Hi, Mr. Sarmento.
I just want to follow up on my email below and confirm that you received it. If there is anything I can assist with, please don't hesitate to contact me.
Best,
— Leslie

Leslie Lara-Enriquez
Public Information Officer (Hablo español)
Metropolitan Transportation Commission | Bay Area Toll Authority
Bay Area Metro Center | 375 Beale Street, Suite 800 | San Francisco, CA | 94105
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llara@mtc.ca.gov
www.mtc.ca.gov

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From: Leslie Lara
Sent: Friday, October 21, 2016 12:21 PM
To: jsarmento@yochadehe-nsn.gov
Cc: Leslie Lara <llara@mtc.ca.gov>
Subject: YD - 11162015-03 -- Request for Consultation re: Plan Bay Area 2040

Dear Mr. Sarmento,

I am following up regarding your government's letter dated October 10, 2016 and signed by Tribal Secretary James Kinter, which was received by our Deputy Executive Director Alix A. Bockelman on October 14, 2016.

We are pleased that you have requested a consultation with MTC and I will be more than happy to help arrange this meeting. Please let me know of several dates in the next couple of weeks, as well as a potential location, for the consultation. Also, please let me know who and how many representatives from your government will be participating.

Per Mr. Kinter's request, the project timeline for Plan Bay Area 2040 is available here: http://planbayarea.org/the-plan/Timeline.html. General information about the Plan is available on the project website at http://planbayarea.org/index.php, which I strongly encourage you explore. More detailed information about Plan Bay Area 2040 is available here: http://planbayarea.org/the-plan/plan-details.html. Of course, should you have any questions, please don't hesitate to contact me.

Looking forward to hearing from you soon.

Best,
— Leslie

Leslie Lara-Enriquez
Public Information Officer (Hablo español)
Metropolitan Transportation Commission | Bay Area Toll Authority
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Bay Area Metro Center
375 Beale Street
San Francisco, CA 94105

Meeting Agenda

Joint MTC Planning Committee with the ABAG Administrative Committee

Friday, December 9, 2016 | **9:40 AM** | **Board Room - 1st Floor**

This meeting is scheduled to be webcast live on the Metropolitan Transportation Commission's Web site: http://mtc.ca.gov/whats-happening/meetings and will take place at 9:40 a.m. or immediately following the 9:35 a.m. Legislation Committee meeting.

1. Roll Call / Confirm Quorum

Quorum: A quorum of this committee shall be a majority of its regular voting members (4).

2. ABAG Compensation Announcement - Clerk of the Board

3. ABAG Administrative Committee Approval of Summary Minutes

3a. 15-2114 ABAG - Minutes of the November 4, 2016 Meeting

Action: ABAG Administrative Committee Approval

Attachments: 3a_AC Minutes 20161104 Draft_rev

4. Consent Calendar

4a. 15-2067 Minutes of the November 4, 2016 Meeting

Action: MTC Planning Committee Approval

Attachments: 4a_PLNG Minutes_Nov 2016

5. Approval

5a. 15-2071 Plan Bay Area 2040: Environmental Impact Report (EIR) Scoping Feedback and Alternatives

Presentation on input received during scoping and Committee approval of alternatives to the proposed plan that will be analyzed in the programmatic EIR.

Action: MTC Commission Approval and ABAG Executive Board Approval

Presenter: Ken Kirkey

Attachments: 5a_PBA 2040-EIR Scoping Feedback and Alternatives

6. Public Comment / Other Business

7. Adjournment / Next Meeting

The next meeting of the Planning Committee will be January 13, 2017, 9:30 a.m. at the Board Room on the first floor of the Bay Area Metro Center, 375 Beale Street, San Francisco, CA.

Public Comment: The public is encouraged to comment on agenda items at Committee meetings by completing a request-to-speak card (available from staff) and passing it to the Committee secretary. Public comment may be limited by any of the procedures set forth in Section 3.09 of MTC's Procedures Manual (Resolution No. 1058, Revised) if, in the chair's judgment, it is necessary to maintain the orderly flow of business.

Meeting Conduct: If this meeting is willfully interrupted or disrupted by one or more persons rendering orderly conduct of the meeting unfeasible, the Chair may order the removal of individuals who are willfully disrupting the meeting. Such individuals may be arrested. If order cannot be restored by such removal, the members of the Committee may direct that the meeting room be cleared (except for representatives of the press or other news media not participating in the disturbance), and the session may continue.

Record of Meeting: Committee meetings are recorded. Copies of recordings are available at a nominal charge, or recordings may be listened to at MTC offices by appointment. Audiocasts are maintained on MTC's Web site (mtc.ca.gov) for public review for at least one year.

Accessibility and Title VI: MTC provides services/accommodations upon request to persons with disabilities and individuals who are limited-English proficient who wish to address Commission matters. For accommodations or translations assistance, please call 415.778.6757 or 415.778.6769 for TDD/TTY. We require three working days' notice to accommodate your request.

可及性和法令第六章：MTC 根據要求向希望來委員會討論有關事宜的殘疾人士及英語有限者提供服務/方便。需要便利設施或翻譯協助者，請致電 415.778.6757 或 415.778.6769 TDD / TTY。我們要求您在三個工作日前告知，以滿足您的要求。

Acceso y el Titulo VI: La MTC puede proveer asistencia/facilitar la comunicación a las personas discapacitadas y los individuos con conocimiento limitado del inglés quienes quieran dirigirse a la Comisión. Para solicitar asistencia, por favor llame al número 415.778.6757 o al 415.778.6769 para TDD/TTY. Requerimos que solicite asistencia con tres días hábiles de anticipación para poderle proveer asistencia.

Attachments are sent to Committee members, key staff and others as appropriate. Copies will be available at the meeting.

All items on the agenda are subject to action and/or change by the Committee. Actions recommended by staff are subject to change by the Committee.

Appendix M

Hazards Data Tables

Appendix M Acreage of Fire Hazard Zones within the Transportation Projects Footprint

RTPID	Title	Moderate (acres)	High (acres)	Very High (acres)
Alameda County		**160**	**130**	**<1**
17-01-0029	SR-84/I-680 Interchange Improvements and SR-84 Widening	90	<1	
17-01-0032	SR-84 Widening (Ruby Hill Drive to Concannon Boulevard)			<1
17-01-0034	I-580 Greenville Road Interchange Improvements	3	9	
17-01-0038	I-580 Interchange Improvement at Hacienda/Fallon Road - Phase 2	<1		
17-01-0048	Dublin Boulevard - North Canyons Parkway Extension	20		
17-01-0051	Tassajara Road Widening from N. Dublin Ranch Drive to City Limit	20		
17-02-0033	Widen Camino Tassajara Road, Windemere to County Line	<1		
17-10-0005	BART Metro Program + Bay Fair Connector		100	
17-10-0058	I-680 Express Lanes: Northbound from SR-84 to SR-237	20	30	
Contra Costa County		**50**	**80**	**30**
17-02-0014	Kirker Pass Road Northbound Truck Climbing Lane, Clearbrook Drive to Crest of Kirker Pass Road		10	
17-02-0015	Vasco Road Byron Highway Connector Road (Formerly named: SR-239: Airport Connector)	30		
17-02-0020	SR-4 Operational Improvements - Initial Phases	2	20	
17-02-0031	Widen Willow Pass Road, Lynwood Drive to SR 4	<1	4	
17-02-0033	Widen Camino Tassajara Road, Windemere to County Line	9	3	
17-10-0005	BART Metro Program + Bay Fair Connector	7	50	30
Marin County		**130**		
17-03-0006	Implement Marin Sonoma Narrows HOV Lane and corridor improvements Phase 2 (Marin County)	110		
17-03-0009	Access Improvements to Richmond San Rafael Bridge	10		
17-10-0036	I-580 Access Improvements Project	2		
Napa County		**<1**		
17-04-0008	State Route 29 Improvements	<1		
San Mateo County		**30**	**20**	**80**
17-06-0020	Hwy 1 operational & safety improvements in County Midcoast (acceleration/deceleration lanes; turn lanes; bike lanes; pedestrian crossings; and trails)	6	7	40
17-06-0023	Route 1 Improvements in Half Moon Bay	<1		<1
17-06-0033	Widen Route 92 between SR 1 and Pilarcitos Creek alignment, includes widening of travel lanes and shoulders	20		40
17-06-0036	Widen Skyline Boulevard (Route 35) to 4-lane roadway from I-280 to Sneath Lane - Phased	<1	9	
17-07-0028	I-280 Mainline Improvements from County line to Sunnyvale		<1	
Santa Clara County		**150**	**200**	
17-07-0075	US 101 Express Lanes: Whipple Avenue in San Mateo County to Cochrane Road in Morgan Hill		10	
17-07-0069	US 101/SR 25 Interchange		6	
17-10-0007	California HSR in the Bay Area	150	190	
Solano County			**50**	
17-08-0009	I-80/I-680/SR12 Interchange (Packages 2-7)		20	
17-10-0059	I-80 Express Lanes in both directions: Airbase Parkway to I-505		30	

Sonoma County		**120**		
17-03-0006	Implement Marin Sonoma Narrows HOV Lane and corridor improvements Phase 2 (Marin County)	<1		
17-09-0006	Implement Marin Sonoma Narrows Phase 2 (Sonoma County)	70		
17-09-0009	Cotati US 101/Railroad Avenue Improvements (incl. Penngrove)	20		
17-09-0012	Cotati Highway 116 Cotati Corridor Improvements	10		
17-09-0014	Farmers Lane extension between Bennett Valley Rd and Yolanda Avenue	10		
17-09-0015	Road Diet Extension - Petaluma Boulevard South	2		

Notes: Whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100). Figures may not sum due to independent rounding.
Source: CalFire 2007; MTC 2016