

Appendix F2

Air Quality Operational Emissions Data

MEMO

To **Jose Campos,**
Office of Community Investment and Infrastructure
Joy Navarette
Planning Department, City and County of San Francisco

From **Michael Keinath**
Sarah Manzano

Subject **OPERATIONAL AIR QUALITY AND GREENHOUSE GAS EMISSIONS
AND PM_{2.5} CONCENTRATION EVALUATIONS FOR CANDLESTICK
POINT- HUNTERS POINT SHIPYARD PHASE II, SAN FRANCISCO,
CALIFORNIA**

Ramboll US Corporation (Ramboll) conducted an evaluation of criteria air pollutant (CAP) and greenhouse gas (GHG) emissions and PM_{2.5} concentration associated with the operation of Candlestick Point – Hunters Point Shipyard Phase II, San Francisco, California (the “Project”) in support of Addendum #5 to the Environmental Impact Report (EIR 2007.0946E). This memorandum provides background and a description of the emissions evaluation methodology and results for the operation of the Project.

Date March 30, 2018

Ramboll
201 California Street
Suite 1200
San Francisco, CA 94111
USA

T +1 415 796 1950
F +1 415 398 5812
www.ramboll.com

PROJECT BACKGROUND

The Candlestick Point (CP) – Hunters Points Shipyard II (HPS2) project is located along the southeastern waterfront in San Francisco, and covers an area of approximately 702 acres. The HPS2 site includes residences, hotels, offices, schools, retail/shared amenities, parks and open spaces, a marina and structured parking land uses. The CP site includes a performance venue, residences, hotel, retail/shared amenities and structured parking lots. The project land use summary for CP and HPS2 is presented in **Tables 1a** and **1b** respectively.

OPERATIONAL EMISSIONS METHODOLOGY AND RESULTS

Ramboll primarily utilized the California Emission Estimator Model version 2016.3.2 (CalEEMod®)¹ to assist in quantifying the criteria pollutant and greenhouse gas emissions for Project operational phases. Emissions associated with the construction phase for HPS2 were estimated separately and described in a separate memorandum. CalEEMod® provides a simple platform to calculate emissions from a land use project. It calculates both the daily maximum and annual average emissions for criteria pollutants and greenhouse gases. The model also provides default values for water, wastewater, solid waste, energy use, and mobile and area sources.

Criteria air pollutants and greenhouse gas emissions for Project operation were estimated from mobile sources, areas sources, and energy usage, while emissions of greenhouse gases were estimated for water use and solid waste in addition. Consistent with the FEIR, emissions of Reactive Organic Gases (ROG) and Nitrogen

¹ CAPCOA. 2017. California Emissions Estimator Model. Version 2016.3.2. Available at: <http://www.caleemod.com/>.

Oxides (NO_x) were calculated under summer conditions and emissions of Particulate Matter PM₁₀ and PM_{2.5} were calculated under winter conditions. CalEEMod® does not calculate emissions for public lighting or transit service, so greenhouse gas emissions from these categories were added directly from the 2010 FEIR. This is conservative, as lighting and transit are likely to be more efficient than when the 2010 FEIR was published.

Operational emissions were based on land use specific CalEEMod® default values for building energy use and consumer products. The carbon intensity of electricity was based on the projected electricity intensity in 2030, based on the State's Renewables Portfolio Standard (RPS) target of 50 percent in 2030, using the average of PG&E's 2013, 2014, and 2015 emissions data as a base, as shown in **Table 2**. All default woodstoves and wood-fired fireplaces in CalEEMod® were assumed to be replaced by natural gas fireplaces.²

Daily mobile trip rate totals were obtained from a traffic study by Fehr & Peers³ for both CP and HPS2. Total trip rates were allocated to specific land uses using the ratio of CalEEMod® default trip rates for each land use. The Saturday and Sunday total trip rates were calculated using the same ratio as CalEEMod® default weekday to weekend trip rates. Trip rates are shown in **Table 3**. Trip lengths for CAP and GHG emissions for CP and HPS2 were consistent with the trip lengths in the 2010 FEIR for CAP emissions and GHG emissions, respectively.⁴ CalEEMod® land use specific default values were used for other mobile source parameters such as trip purposes, vehicle emission factors, and fleet mix.

Water demand for each land use class was obtained from the 2010 FEIR where available. Water demand was allocated between indoor and outdoor usage using CalEEMod default percentages. When water demand from a specific land use was not available from the 2010 FEIR, CalEEMod® default demand was used. Similarly, solid waste generation rate for each land use class was obtained from the 2010 FEIR or CalEEMod® defaults, as shown in Attachment A.⁵

The proposed site also includes 10,000 new trees within the project boundary that will sequester carbon, consistent with the EIR. As discussed in the 2010 FEIR, planting 10,000 new trees in the project site will result in a sequestration of 7,000 tonnes of CO₂ over a 20 year active growing period. Consistent with the 2010 FEIR, this reduction was conservatively not included in the sum of GHG emissions, but was provided for informational purposes.

The average daily emissions estimated due to Project operations for CAP and GHGs are summarized in **Table 4** and **Table 5**, respectively. The estimated emissions sources include area sources (landscaping equipment, consumer products, and architectural coatings), building energy use, mobile sources (vehicle trips from workers, customers, residents, hotel guests, and delivery vehicles), emissions from water usage and solid waste disposal, and emissions from transit and public lighting.

² BAAQMD. 2008. Regulation 6, Rule 3, Particulate Matter and Visible Emissions: Wood-Burning Devices. July. Available at:

<http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/Particulate%20Matter/rq0603.ashx>

³ Trip generation rates are project specific and were provided by the Project Applicant. Total daily trips were calculated by summing the AM and PM peak trips and multiplying by 5, based on the methodology described by the Fehr and Peers.

⁴ Trip lengths were obtained from the Candlestick Point-Hunters Point Shipyard Phase II Development Plan EIR, Appendix H1, PBS&J Air Quality Model Input/Output July 2009 for CAP emissions and from the Candlestick Point-Hunters Point Shipyard Phase II Development Plan EIR, GHG Appendix S (Table 3-20) for GHG emissions.

⁵ CalEEMod® default water and solid waste generation rates were used for different types of schools and hotels for Hunters Point Shipyard Phase II since these land uses were not modelled in the EIR.

PM_{2.5} CONCENTRATION FROM TRAFFIC

Ramboll also analyzed the change in PM_{2.5} concentration from traffic for the 2017 Modified Project Variant by scaling results from the 2010 FEIR by the change in traffic volume and emission factor. Figure 4-3 of Attachment IV of Appendix H3 of the 2010 FEIR shows the roadways and receptors modelled.

Traffic volumes for the 2017 Modified Project Variant were provided by Fehr and Peers and compared against traffic volumes analyzed in the 2010 FEIR for each roadway. AADT generally increased along Innes and Palou Avenue, but AADT generally decreased on Third Street and Gilman Avenue. PM_{2.5} concentrations from the 2010 FEIR were scaled by the percent change in traffic volumes. The changes ranged from a 15% decrease in traffic volumes to a 29% increase in traffic volumes.

PM_{2.5} concentrations were also scaled by the change in emission rates. Since the 2010 FEIR, exhaust emissions of PM_{2.5} have decreased as a result of emissions control requirements. Fleet wide average emission rates for exhaust, tirewear and brakewear were obtained from ARB's Emission FACTor model, EMFAC2014, for year 2030 and compared against emission rates used in the 2010 FEIR. The PM_{2.5} concentrations from the 2010 FEIR were also scaled by this percent change in emission rates, which was a 17% reduction in emissions.

After the scaling, the maximum PM_{2.5} concentration from Project traffic was 0.211 µg/m³. This location is on Innes Avenue, near the intersection with Arelious Walker and is on the roadway segment with the maximum percent increase in AADT.

The background PM_{2.5} concentration at this location was obtained from the City of San Francisco's modelling for the Community Risk Reduction Plan (CRRP). The modeling is documented in *The San Francisco Community Risk Reduction Plan: Technical Support Documentation*.⁶ The background concentration is 8.6 µg/m³.

When the Project traffic PM_{2.5} concentration is combined with background PM_{2.5} concentration, the total PM_{2.5} concentration at this location is 8.8 µg/m³. However, this is a conservative addition because we understand the modelling for the CRRP included impacts from the traffic volumes from the 2010 FEIR.

⁶ BAAQMD. 2012. *The San Francisco Community Risk Reduction Plan: Technical Support Documentation*. December.

TABLES

Table 1a
CalEEMod® Land Uses for Candlestick Point
Candlestick Point Hunters Point Shipyard Phase II 2018 Modified Project Variant
San Francisco, California

Actual Land Use ¹	Land Use Type	Land Use Subtype ²	Unit Amount	Size Metric	Lot Acreages (acres) ³
Additional On - Street parking	Parking	Parking Lot	1,360	spaces	6.04
Community Use	Recreational	Health Club	50	ksf	0.57
FAC/Performance Venue	Recreational	Arena	75	ksf	11.90
Hotel	Recreational	Hotel	150	ksf	3.62
Neighborhood Retail	Retail	Strip Mall	125	ksf	1.42
Parking - Commercial (Structured)	Parking	Unenclosed parking structure	2,189	spaces	9.72
Parking - Residential (Structured)	Parking	Enclosed parking structure	7,218	spaces	32.06
Parks and Open Space	Recreational	City Park	112	acres	112.4
Regional Retail	Retail	Regional Shopping Center	635	ksf	7.82
Research & Development/Office	Commercial	Research and Development	150	ksf	1.70
Residential	Residential	Apartment Mid-rise	7,218	DU	93.75
Total acreage					281.0

Notes:

¹ Land uses associated with 2018 Modified Project Variant.

² Land uses as defined in CalEEMod®. When an exact mapping of a land use was not available in CalEEMod® relative to the project land use type, a category with similar emission characteristics was chosen.

³ Non-default land acreage is based on a total acreage of 281 acres from EIR. CalEEMod® default acres (except acreage for Parks and Open Spaces) are scaled down so that total land acreage adds up to this number.

Abbreviations:

CalEEMod® - CALifornia Emissions Estimator MODel

DU - dwelling units

ksf - thousand square feet

Table 1b
CalEEMod® Land Uses for Hunters Point Shipyard Phase II
Candlestick Point Hunters Point Shipyard Phase II 2018 Modified Project Variant
San Francisco, California

Actual Land Use ¹	Land Use Type	Land Use Subtype ²	Unit Amount	Size Metric	Lot Acreages (acres) ³
Additional On - Street parking	Parking	Parking Lot	1,487	spaces	7.1
Artist Studio	Commercial	General Office Building	255	ksf	3.1
Community Use	Recreational	Health Club	50	ksf	0.6
Hotel	Recreational	Hotel	120	ksf	3.1
Neighborhood Retail and Maker Space	Retail	Strip Mall	301	ksf	3.7
Parking - Commercial (Structured)	Parking	Unenclosed parking structure	7,119	spaces	34.1
Parking - Residential (Structured)	Parking	Enclosed parking structure	3,454	spaces	16.5
Parks and Open Space	Recreational	City Park	249	acres	249.0
Research & Development/Office	Commercial	Research & Development	4,265	ksf	52.1
Regional Retail	Retail	Regional Shopping Center	100	ksf	1.2
Residential	Residential	Apartment Mid-rise	3,454	DU	48.3
School/Institution	Educational	High School	28	ksf	0.5
School/Institution	Educational	Junior High School	345	ksf	1.5
School/Institution	Educational	Junior College	37	ksf	0.2
Total acreage					421.0

Notes:

- ¹ Land uses associated with 2018 Modified Project Variant.
- ² Land uses as defined in CalEEMod®. When an exact mapping of a land use was not available in CalEEMod® relative to the project land use type, a category with similar emission characteristics was chosen.
- ³ Non-default land acreage is based on a total acreage of 421 acres from EIR. CalEEMod® defaults are scaled down so that total land acreage adds up to this number.

Abbreviations:

CalEEMod® - CALifornia Emissions Estimator MODeI
DU - dwelling units
ksf - thousand square feet

Table 2
PG&E Electricity Intensity Factor Derivations
Candlestick Point Hunters Point Shipyard Phase II 2018 Modified Project Variant
San Francisco, California

	2013 ^{1,2}	2014 ^{1,3}	2015 ^{1,4}	Average ⁵	Units
CO ₂ Intensity Factor per Total Energy Delivered	427.3	434.9	405.0	422.4	lbs CO ₂ /MWh delivered
% of Total Energy From Renewables	22.5%	27%	29.5%	26.3%	
CO ₂ Intensity Factor per Total Non-Renewable Energy ⁶	551	596	574	573.4	lbs CO ₂ /MWh delivered
Estimated Intensity Factor for Total Energy Delivered^{7,8}					
2030 RPS (50%) ⁹	275.7	297.9	287.2	286.7	lbs CO ₂ /MWh delivered
	278.2	300.5	289.8	289.3	lbs CO ₂ e/MWh delivered

Notes:

- ¹ Total CO₂ emission factor from The Climate Registry. Available at: <https://www.theclimateregistry.org/our-members/cris-public-reports/>. Accessed: October 2017.
- ² Percent of total energy from eligible renewables is from the PGE 2014 Corporate Responsibility Report. Available at: http://www.pgecorp.com/corp_responsibility/reports/2014/PGE_CRSR_2014.pdf.
- ³ Percent of total energy from eligible renewables is from the PGE 2015 Corporate Responsibility Report. Available at: http://www.pgecorp.com/corp_responsibility/reports/2015/PGE_CRSR_2015.pdf.
- ⁴ Percent of total energy from eligible renewables is from the PGE 2016 Corporate Responsibility Report. Available at: http://www.pgecorp.com/corp_responsibility/reports/2016/PGE_CRSR_Environment.pdf.
- ⁵ This average uses the most recent three years of data available.
- ⁶ The emissions metric presented here is calculated based on the total CO₂ intensity factor divided by the percent of energy delivered from non-renewable sources.
- ⁷ The intensity factor for total energy delivered is estimated by multiplying the percentage of energy delivered from non-renewable energy by the CO₂ emissions per total non-renewable energy metric calculated above. The estimate provided here and the energy reports issued by PGE assume that renewable energy sources do not result in any CO₂ emissions.
- ⁸ Global Warming Potentials (GWP) are based on the IPCC Fourth Assessment Report. CH₄ and N₂O emission factors are from the CalEEMod version 2016.3.2 defaults for PGE, and are conservatively assumed not to change from these estimates. As more renewable energy is integrated into the electricity grid, these intensity factors will also decrease.
- ⁹ Emission factor presented here is based on a 50% projected RPS target for 2030 consistent with SB 350. Available at: <http://www.energy.ca.gov/sb350/>. Accessed: October 2017.

Abbreviations:

CalEEMod® - CALifornia Emissions Estimator MODel
CARB - California Air Resources Board
CO₂ - carbon dioxide
GHG - greenhouse gases
lbs - pounds

MWh - megawatt-hour
RPS - Renewable Portfolio Standards
PGE - Pacific Gas & Electric
SB - Senate Bill
USEPA - US Environmental Protection Agency

Table 3
Adjusted Trip Rates for Project Operation
Candlestick Point Hunters Point Shipyard Phase II 2018 Modified Project Variant
San Francisco, California

Phase	CalEEMod® Land Use Subtype	Units	Size Metric	Percent of Trips in Phase Group ¹	Adjusted Total Trips ²			Trip rate (/size/day)		
					Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
CP	Apartment Mid-rise	7,218	DU	56%	20,222	19,431	17,819	2.75	2.64	2.43
	Arena	75	ksf	1%	338	338	338	4.43	4.43	4.43
	City Park	112	acres	0%	89	1,077	793	0.78	9.42	6.93
	Enclosed parking structure	7,218	spaces	0%	0	0	0	0.00	0.00	0.00
	Health Club	50	ksf	2%	694	23	563	13.63	0.46	11.06
	Hotel	150	rooms	2%	757	759	551	3.38	3.39	2.46
	Parking Lot	1,360	spaces	0%	0	0	0	0.00	0.00	0.00
	Research and Development	150	ksf	1%	512	120	70	3.36	0.79	0.46
	Regional Shopping Center	635	ksf	31%	11,423	13,368	6,752	17.7	20.68	10.45
	Strip Mall	125	ksf	6%	2,334	2,214	1,076	18.3	17.40	8.46
	Unenclosed parking structure	2,189	spaces	0%	0	0	0	0.00	0.00	0.00
	Total³	-	-	100%	36,370	37,331	27,963	-	-	-
HPS Phase II	Apartment Mid-rise	3,454	DU	27%	9,354	8,989	8,243	2.71	2.60	2.39
	City Park	249	acres	1%	192	2,310	1,700	0.77	9.27	6.82
	Enclosed parking structure	3,454	spaces	0%	0	0	0	0.00	0.00	0.00
	General Office Building	255	ksf	3%	1,145	255	109	4.49	1.00	0.43
	Health Club	50	ksf	2%	671	425	544	13.41	8.50	10.89
	High School	300	students	1%	209	75	31	0.70	0.25	0.10
	Hotel	175	rooms	2%	582	584	424	3.33	3.34	2.42
	Junior College	400	students	1%	200	68	0	0.50	0.17	0.00
	Junior High School	1,012	students	2%	668	0	0	0.66	0.00	0.00
	Parking Lot	1,487	spaces	0%	0	0	0	0.00	0.00	0.00
	Regional Shopping Center	100	ksf	5%	1,739	2,035	1,028	17.39	20.35	10.28
	Research & Development	4,265	ksf	41%	14,087	3,300	1,928	3.30	0.77	0.45
	Strip Mall	301	ksf	16%	5,433	5,153	2,504	18.05	17.12	8.32
	Unenclosed parking structure	7,119	spaces	0%	0	0	0	0.00	0.00	0.00
	Total³	-	-	100%	34,280	23,194	16,511	-	-	-

Notes:

¹ CalEEMod® default weekday trip generation rates for each land use were used to allocate the Project-specific total trips among each land use for modeling.

² Adjusted total weekday trips are calculated by multiplying the percent of trips in each phase group by the total trips for that phase group. Saturday and Sunday trip rates are adjusted based on the the ratio of default Saturday and Sunday to weekday CalEEMod® default total trips.

³ Trip generation rates were provided by the Project Applicant. Total daily trips were calculated by summing the AM and PM peak trips and multiplying by 5.

Abbreviations:

CalEEMod® - CALifornia Emissions Estimator MODEL

CP - Candlestick Point

DU - dwelling unit

HPS - Hunters Point Shipyard

ksf - thousand square feet

Table 4
Operational CAP Emissions
Candlestick Point Hunters Point Shipyard Phase II 2018 Modified Project Variant
San Francisco, California

Operational Emissions for Project, Buildout (2032) ¹															
Category	HPS Phase II ²					CP ²					Total Project - HPS Phase II + CP ²				
	ROG	NO _x	CO	PM ₁₀	PM _{2.5}	ROG	NO _x	CO	PM ₁₀	PM _{2.5}	ROG	NO _x	CO	PM ₁₀	PM _{2.5}
	(lb/day)					(lb/day)					(lb/day)				
Area ³	176	3	33	6.2	6.2	178	7	68	12.9	12.9	354	10	100	19.1	19.1
Natural Gas Use	4.6	41.3	31.5	3.2	3.2	2.3	20.1	10.3	1.6	1.6	6.9	61	42	4.8	4.8
Mobile ⁴	33	131	354	184	50	34	137	366	189	51	67	268	720	373	102
Total	213	176	418	193	59	215	164	444	203	66	428	340	862	397	125
Emissions from EIR ⁵	255	119	947	424	81	666	265	2,276	1,029	197	921	384	3,223	1,453	278
Exceeds EIR?											No	No	No	No	No

Notes:

- ¹ Operational emissions calculated with CalEEMod® version 2016.3.2.
- ² Daily ROG and NO_x emissions are reported under summer conditions and daily PM₁₀ and PM_{2.5} emissions are reported under winter conditions. Emissions from fireplaces during summer are not included for ROG and NO_x emissions since the EIR does not report hearth emissions in summer.
- ³ For consumer products, ROG emissions were calculated based on the average emissions factor for the City of San Francisco. San Francisco's ROG emissions from consumer products was 5.30 tons (Ref: <https://www.arb.ca.gov/app/emsmv/emssumcat.php>). San Francisco's square footage was 703,541,231 square feet (Ref: 2011 Land Use data). Therefore, the emission factor was updated as follows: (5.30 tons/day * 2000 lbs/ton)/703,541,231 sq. ft. = 1.51 x 10⁻⁵ lbs/(sq. ft.-day).
- ⁴ Trip rates for Candlestick Point and Hunters Point are based on a study by F&P. The total daily trip rates were calculated based on CalEEMod® default trip generation rates. Trip lengths for CAP emissions are from the EIR AQ section (Appendix H1).
- ⁵ Emissions from Candlestick Point-Hunters Point Shipyard Phase II Development Plan EIR, Section III.H Air Quality, Table III.H-5 (2009).

Abbreviations:

AQ - Air Quality	HPS - Hunters Point Shipyard
CAP - criteria air pollutant	lb/day - pounds per day
CO - Carbon monoxide	NO _x - nitrogen oxides
CP - Candlestick Point	PM ₁₀ - particulate matter less than 10 micrometers in diameter
EIR- Environmental Impact Report	PM _{2.5} - particulate matter less than 2.5 micrometers in diameter
F&P - Fehr and Peers	ROG - reactive organic gases

References:

BAAQMD. 2017. California Environmental Quality Act Air Quality Guidelines. May. Available online at: www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en

Table 5
Operational GHG Emissions
Candlestick Point Hunters Point Shipyard Phase II 2018 Modified Project Variant
San Francisco, California

GHG Emissions ¹	HPS Phase II	CP	Total Project - HPS Phase II + CP
Category	CO ₂ e (MT/yr)		
Area	2,268	4,739	7,008
Natural Gas Use	8,348	4,230	12,578
Electricity Use	9,266	7,850	17,115
Mobile	29,111	32,153	61,264
Water Use	719	426	1,145
Waste Disposal	4,651	4,491	9,141
Public Lighting ²	227	651	878
Transit Service ²	865	865	1,730
Total	55,455	55,405	110,859
GHG Emissions from EIR ³	52,842	101,798	154,639
Exceeds EIR?			No

Notes:

¹ Operational emissions calculated with CalEEMod® version 2016.3.2.

² Emissions from public lighting and transit service are not calculated in CalEEMod®. These emissions were conservatively included from the Candlestick Point-Hunters Point Shipyard Phase II Development Plan EIR, GHG Appendix S. Public lighting emissions are from Table 3-28 therein, while transit service emissions are from Table 3-36.

³ GHG emissions from Candlestick Point-Hunters Point Shipyard Phase II Development Plan EIR, Section III.S Greenhouse Gas Emissions, Table III.S-4 (2009) and from GHG Appendix S, Table 3-36.

Abbreviations:

CP - Candlestick Point

CO₂e - Carbon dioxide equivalent

EIR - Environmental Impact Report

GHG - greenhouse gas

HPS - Hunters Point Shipyard

MT - metric ton

yr - year

ATTACHMENT A
CalEEMod® Output

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

Candlestick Point - Operational - CAP Analysis

San Francisco County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	150.00	1000sqft	1.70	150,000.00	0
Enclosed Parking Structure	7,218.00	Space	32.06	2,887,200.00	0
Parking Lot	1,360.00	Space	6.04	544,000.00	0
Unenclosed Parking Structure	2,189.00	Space	9.72	875,600.00	0
Arena	75.00	1000sqft	11.90	75,000.00	0
City Park	112.40	Acre	112.40	4,896,144.00	0
Health Club	50.00	1000sqft	0.57	50,000.00	0
Hotel	220.00	Room	3.62	150,000.00	0
Apartments Mid Rise	7,218.00	Dwelling Unit	93.75	7,218,000.00	20643
Regional Shopping Center	635.00	1000sqft	7.82	635,000.00	0
Strip Mall	125.00	1000sqft	1.42	125,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	4.6	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2032
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	286.7	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

Project Characteristics - Assumed construction start date is 01/01/2018.

CO2 emissions intensity for 2032 based on a 50% RPS for 2030, calculated by averaging CO2 intensity for 2013, 2014 and 2015 as the baseline.

CH4 and N2O intensity is similar to PG&E.

Land Use - Land uses based on information provided by Client. Total acreage in EIR is 281. Lot acreages have been scaled down accordingly. Acreage for city park remains the same. Assumed zero building area in city parks.

Construction Phase - Zero'ed out construction since this was calculated separately.

Trips and VMT - Not modifying anything here since construction is modeled separately.

On-road Fugitive Dust - Not modifying anything here since construction is modeled separately.

Demolition - Not modifying anything here since construction is modeled separately.

Grading - Not modifying anything here since construction is modeled separately.

Architectural Coating - Not modifying anything here since construction is modeled separately.

Vehicle Trips - Trip rates calculated based on study by F&P. Adjusted total trips are calculated based on CalEEMod default trip generation rates. Trip lengths are from EIR AQ section for Candlestick point.

Woodstoves - No wood-stoves in project location. Assuming there are 7218 natural gas fireplaces, that operate for 4 hours a day for 50 days (200 hours/year).

Consumer Products - ROG emissions factor for consumer products is for the city of San Francisco

Energy Use -

Water And Wastewater - Total water usage is based on EIR for Candlestick point. Indoor and outdoor water usage is calculated based on CalEEMOD ratio.

Solid Waste - Solid waste generation rate is based on EIR waste disposal rate for Candlestick point.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	330.00	0.00
tblConstructionPhase	NumDays	4,650.00	0.00
tblConstructionPhase	NumDays	300.00	0.00
tblConstructionPhase	NumDays	465.00	0.00
tblConstructionPhase	NumDays	330.00	0.00
tblConstructionPhase	NumDays	180.00	0.00
tblConsumerProducts	ROG_EF	2.14E-05	1.51E-05
tblFireplaces	FireplaceDayYear	11.14	50.00
tblFireplaces	FireplaceHourDay	3.50	4.00

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	1,082.70	7,218.00
tblFireplaces	NumberNoFireplace	288.72	0.00
tblFireplaces	NumberWood	1,227.06	0.00
tblGrading	AcresOfGrading	0.00	1,162.50
tblLandUse	LandUseSquareFeet	319,440.00	150,000.00
tblLandUse	LotAcreage	3.44	1.70
tblLandUse	LotAcreage	64.96	32.06
tblLandUse	LotAcreage	12.24	6.04
tblLandUse	LotAcreage	19.70	9.72
tblLandUse	LotAcreage	24.11	11.90
tblLandUse	LotAcreage	1.15	0.57
tblLandUse	LotAcreage	7.33	3.62
tblLandUse	LotAcreage	189.95	93.75
tblLandUse	LotAcreage	14.58	7.82
tblLandUse	LotAcreage	2.87	1.42
tblProjectCharacteristics	CO2IntensityFactor	641.35	286.7
tblSequestration	NumberOfNewTrees	0.00	5,000.00
tblSolidWaste	SolidWasteGenerationRate	3,320.28	7,062.81
tblSolidWaste	SolidWasteGenerationRate	2.06	645.00
tblSolidWaste	SolidWasteGenerationRate	9.67	10.12
tblSolidWaste	SolidWasteGenerationRate	285.00	46.75
tblSolidWaste	SolidWasteGenerationRate	120.45	202.40
tblSolidWaste	SolidWasteGenerationRate	11.40	164.25
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	HO_TL	5.70	7.50
tblVehicleTrips	HS_TL	4.80	7.30
tblVehicleTrips	ST_TR	6.39	2.64
tblVehicleTrips	ST_TR	10.71	4.43
tblVehicleTrips	ST_TR	22.75	9.42
tblVehicleTrips	ST_TR	20.87	0.46
tblVehicleTrips	ST_TR	8.19	3.39
tblVehicleTrips	ST_TR	49.97	20.68
tblVehicleTrips	ST_TR	1.90	0.79
tblVehicleTrips	ST_TR	42.04	17.40

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

tblVehicleTrips	SU_TR	5.86	2.43
tblVehicleTrips	SU_TR	10.71	4.43
tblVehicleTrips	SU_TR	16.74	6.93
tblVehicleTrips	SU_TR	26.73	11.06
tblVehicleTrips	SU_TR	5.95	2.46
tblVehicleTrips	SU_TR	25.24	10.45
tblVehicleTrips	SU_TR	1.11	0.46
tblVehicleTrips	SU_TR	20.43	8.46
tblVehicleTrips	WD_TR	6.65	2.75
tblVehicleTrips	WD_TR	10.71	4.43
tblVehicleTrips	WD_TR	1.89	0.78
tblVehicleTrips	WD_TR	32.93	13.63
tblVehicleTrips	WD_TR	8.17	3.38
tblVehicleTrips	WD_TR	42.70	17.67
tblVehicleTrips	WD_TR	8.11	3.36
tblVehicleTrips	WD_TR	44.32	18.34
tblWater	IndoorWaterUseRate	470,281,756.94	125,564,800.00
tblWater	IndoorWaterUseRate	32,307,758.82	3,431,000.00
tblWater	IndoorWaterUseRate	2,957,157.20	2,262,998.00
tblWater	IndoorWaterUseRate	5,580,689.40	16,424,741.00
tblWater	IndoorWaterUseRate	47,036,051.14	18,104,088.00
tblWater	IndoorWaterUseRate	73,754,092.08	7,774,500.00
tblWater	IndoorWaterUseRate	9,259,065.19	7,081,023.00
tblWater	OutdoorWaterUseRate	296,481,977.20	79,159,747.00
tblWater	OutdoorWaterUseRate	2,062,197.37	219,000.00
tblWater	OutdoorWaterUseRate	133,922,503.70	19,573,473.00
tblWater	OutdoorWaterUseRate	1,812,451.19	1,387,002.00

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

tblWater	OutdoorWaterUseRate	620,076.60	1,825,259.00
tblWater	OutdoorWaterUseRate	28,828,547.47	11,095,912.00
tblWater	OutdoorWaterUseRate	5,674,910.92	218,977.00
tblWoodstoves	NumberCatalytic	144.36	0.00
tblWoodstoves	NumberNoncatalytic	144.36	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

[illegible][illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

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	196.9416	166.5031	663.0873	1.0506		16.2143	16.2143		16.2143	16.2143	0.0000	204,877.2591	204,877.2591	4.9346	3.7364	206,114.0654
Energy	2.3281	20.1488	10.3306	0.1270		1.6085	1.6085		1.6085	1.6085		25,397.2583	25,397.2583	0.4868	0.4656	25,548.1815
Mobile	34.2793	136.7115	362.4319	1.6908	187.7460	1.1868	188.9328	50.3403	1.1057	51.4460		172,754.6645	172,754.6645	6.3744		172,914.0246
Total	233.5490	323.3634	1,035.8497	2.8684	187.7460	19.0095	206.7555	50.3403	18.9285	69.2688	0.0000	403,029.1818	403,029.1818	11.7958	4.2020	404,576.2715

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	196.9416	166.5031	663.0873	1.0506		16.2143	16.2143		16.2143	16.2143	0.0000	204,877.2591	204,877.2591	4.9346	3.7364	206,114.0654
Energy	2.3281	20.1488	10.3306	0.1270		1.6085	1.6085		1.6085	1.6085		25,397.2583	25,397.2583	0.4868	0.4656	25,548.1815
Mobile	34.2793	136.7115	362.4319	1.6908	187.7460	1.1868	188.9328	50.3403	1.1057	51.4460		172,754.6645	172,754.6645	6.3744		172,914.0246
Total	233.5490	323.3634	1,035.8497	2.8684	187.7460	19.0095	206.7555	50.3403	18.9285	69.2688	0.0000	403,029.1818	403,029.1818	11.7958	4.2020	404,576.2715

Candlestick Point - Operational - CAP Analysis - 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
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	1/1/2018	12/31/2017	5	0	
2	Site Preparation	Site Preparation	2/23/2019	2/22/2019	5	0	
3	Grading	Grading	11/2/2019	11/1/2019	5	0	
4	Building Construction	Building Construction	8/14/2021	8/13/2021	5	0	
5	Paving	Paving	6/11/2039	6/10/2039	5	0	
6	Architectural Coating	Architectural Coating	9/15/2040	9/14/2040	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1162.5

Acres of Paving: 47.82

Residential Indoor: 14,616,450; Residential Outdoor: 4,872,150; Non-Residential Indoor: 1,777,500; Non-Residential Outdoor: 592,500; Striped Parking Area: 258,408 (Architectural Coating – sqft)

OffRoad Equipment

Candlestick Point - Operational - CAP Analysis - San Francisco 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

Candlestick Point - Operational - CAP Analysis - San Francisco 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	9,469.00	2,474.00	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	1,894.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

[illegible]

3.4 Grading - 2019

Unmitigated Construction On-Site

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

3.4 Grading - 2019

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

3.4 Grading - 2019

Mitigated Construction Off-Site

[illegible]

3.5 Building Construction - 2021

Unmitigated Construction On-Site

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

3.5 Building Construction - 2021

Mitigated Construction Off-Site

[illegible]

3.6 Paving - 2039

Unmitigated Construction On-Site

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

3.6 Paving - 2039

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

3.6 Paving - 2039

Mitigated Construction Off-Site

[illegible]

3.7 Architectural Coating - 2040

Unmitigated Construction On-Site

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

3.7 Architectural Coating - 2040

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

3.7 Architectural Coating - 2040**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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**

Candlestick Point - Operational - CAP Analysis - 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					
Mitigated	34.2793	136.7115	362.4319	1.6908	187.7460	1.1868	188.9328	50.3403	1.1057	51.4460		172,754.6645	172,754.6645	6.3744		172,914.0246
Unmitigated	34.2793	136.7115	362.4319	1.6908	187.7460	1.1868	188.9328	50.3403	1.1057	51.4460		172,754.6645	172,754.6645	6.3744		172,914.0246

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartment Mid Rise	19,849.50	19,055.52	17,539.74	53,265,026	53,265,026
Arena	332.25	332.25	332.25	654,038	654,038
City Park	87.67	1,058.81	778.93	699,951	699,951
Enclosed Parking Structure	0.00	0.00	0.00		
Health Club	681.50	23.00	553.00	993,795	993,795
Hotel	743.60	745.80	541.20	1,372,610	1,372,610
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	11,220.45	13,131.80	6,635.75	19,210,480	19,210,480
Research & Development	504.00	118.50	69.00	977,469	977,469
Strip Mall	2,292.50	2,175.00	1,057.50	3,268,020	3,268,020
Unenclosed Parking Structure	0.00	0.00	0.00		
Total	35,711.47	36,640.68	27,507.37	80,441,390	80,441,390

4.3 Trip Type Information

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

Land Use	Miles			Trip %			Trip Purpose %		
	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 Mid Rise	10.80	7.30	7.50	31.00	15.00	54.00	86	11	3
Arena	9.50	7.40	7.40	0.00	81.00	19.00	66	28	6
City Park	9.50	7.40	7.40	33.00	48.00	19.00	66	28	6
Enclosed Parking Structure	9.50	7.40	7.40	0.00	0.00	0.00	0	0	0
Health Club	9.50	7.40	7.40	16.90	64.10	19.00	52	39	9
Hotel	9.50	7.40	7.40	19.40	61.60	19.00	58	38	4
Parking Lot	9.50	7.40	7.40	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.40	7.40	16.30	64.70	19.00	54	35	11
Research & Development	9.50	7.40	7.40	33.00	48.00	19.00	82	15	3
Strip Mall	9.50	7.40	7.40	16.60	64.40	19.00	45	40	15
Unenclosed Parking Structure	9.50	7.40	7.40	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Arena	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
City Park	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Enclosed Parking Structure	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Health Club	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Hotel	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Parking Lot	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Regional Shopping Center	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Research & Development	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Strip Mall	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Unenclosed Parking Structure	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615

5.0 Energy Detail

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

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	2.3281	20.1488	10.3306	0.1270		1.6085	1.6085		1.6085	1.6085		25,397.2583	25,397.2583	0.4868	0.4656	25,548.1815
NaturalGas Unmitigated	2.3281	20.1488	10.3306	0.1270		1.6085	1.6085		1.6085	1.6085		25,397.2583	25,397.2583	0.4868	0.4656	25,548.1815

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

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 Mid Rise	172647	1.8619	15.9106	6.7705	0.1016		1.2864	1.2864		1.2864	1.2864		20,311.4404	20,311.4404	0.3893	0.3724	20,432.1411
Arena	5085.62	0.0548	0.4986	0.4188	2.9900e-003		0.0379	0.0379		0.0379	0.0379		598.3078	598.3078	0.0115	0.0110	601.8633
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Health Club	3390.41	0.0366	0.3324	0.2792	1.9900e-003		0.0253	0.0253		0.0253	0.0253		398.8719	398.8719	7.6500e-003	7.3100e-003	401.2422
Hotel	15004.1	0.1618	1.4710	1.2356	8.8300e-003		0.1118	0.1118		0.1118	0.1118		1,765.1894	1,765.1894	0.0338	0.0324	1,775.6790
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	8002.74	0.0863	0.7846	0.6591	4.7100e-003		0.0596	0.0596		0.0596	0.0596		941.4988	941.4988	0.0181	0.0173	947.0937
Research & Development	10171.2	0.1097	0.9972	0.8376	5.9800e-003		0.0758	0.0758		0.0758	0.0758		1,196.6156	1,196.6156	0.0229	0.0219	1,203.7265
Strip Mall	1575.34	0.0170	0.1545	0.1297	9.3000e-004		0.0117	0.0117		0.0117	0.0117		185.3344	185.3344	3.5500e-003	3.4000e-003	186.4358
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		2.3281	20.1488	10.3306	0.1270		1.6085	1.6085		1.6085	1.6085		25,397.2583	25,397.2583	0.4868	0.4656	25,548.1815

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

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 Mid Rise	172.647	1.8619	15.9106	6.7705	0.1016		1.2864	1.2864		1.2864	1.2864		20,311.4404	20,311.4404	0.3893	0.3724	20,432.1411
Arena	5.08562	0.0548	0.4986	0.4188	2.9900e-003		0.0379	0.0379		0.0379	0.0379		598.3078	598.3078	0.0115	0.0110	601.8633
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Health Club	3.39041	0.0366	0.3324	0.2792	1.9900e-003		0.0253	0.0253		0.0253	0.0253		398.8719	398.8719	7.6500e-003	7.3100e-003	401.2422
Hotel	15.0041	0.1618	1.4710	1.2356	8.8300e-003		0.1118	0.1118		0.1118	0.1118		1,765.1894	1,765.1894	0.0338	0.0324	1,775.6790
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	8.00274	0.0863	0.7846	0.6591	4.7100e-003		0.0596	0.0596		0.0596	0.0596		941.4988	941.4988	0.0181	0.0173	947.0937
Research & Development	10.1712	0.1097	0.9972	0.8376	5.9800e-003		0.0758	0.0758		0.0758	0.0758		1,196.6156	1,196.6156	0.0229	0.0219	1,203.7265
Strip Mall	1.57534	0.0170	0.1545	0.1297	9.3000e-004		0.0117	0.0117		0.0117	0.0117		185.3344	185.3344	3.5500e-003	3.4000e-003	186.4358
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		2.3281	20.1488	10.3306	0.1270		1.6085	1.6085		1.6085	1.6085		25,397.2583	25,397.2583	0.4868	0.4656	25,548.1815

6.0 Area Detail**6.1 Mitigation Measures Area**

Candlestick Point - Operational - CAP Analysis - 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					
Mitigated	196.9416	166.5031	663.0873	1.0506		16.2143	16.2143		16.2143	16.2143	0.0000	204,877.2591	204,877.2591	4.9346	3.7364	206,114.0654
Unmitigated	196.9416	166.5031	663.0873	1.0506		16.2143	16.2143		16.2143	16.2143	0.0000	204,877.2591	204,877.2591	4.9346	3.7364	206,114.0654

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	31.7193					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	128.6630					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	18.6819	159.6452	67.9341	1.0190		12.9075	12.9075		12.9075	12.9075	0.0000	203,802.3529	203,802.3529	3.9062	3.7364	205,013.4484
Landscaping	17.8774	6.8579	595.1532	0.0315		3.3068	3.3068		3.3068	3.3068		1,074.9061	1,074.9061	1.0284		1,100.6170
Total	196.9416	166.5031	663.0873	1.0506		16.2143	16.2143		16.2143	16.2143	0.0000	204,877.2591	204,877.2591	4.9346	3.7364	206,114.0654

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

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	31.7193					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	128.6630					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	18.6819	159.6452	67.9341	1.0190		12.9075	12.9075		12.9075	12.9075	0.0000	203,802.3529	203,802.3529	3.9062	3.7364	205,013.4484
Landscaping	17.8774	6.8579	595.1532	0.0315		3.3068	3.3068		3.3068	3.3068		1,074.9061	1,074.9061	1.0284		1,100.6170
Total	196.9416	166.5031	663.0873	1.0506		16.2143	16.2143		16.2143	16.2143	0.0000	204,877.2591	204,877.2591	4.9346	3.7364	206,114.0654

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

Candlestick Point - Operational - CAP Analysis - San Francisco County, Summer

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

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

Candlestick Point - Operational - CAP Analysis

San Francisco County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	150.00	1000sqft	1.70	150,000.00	0
Enclosed Parking Structure	7,218.00	Space	32.06	2,887,200.00	0
Parking Lot	1,360.00	Space	6.04	544,000.00	0
Unenclosed Parking Structure	2,189.00	Space	9.72	875,600.00	0
Arena	75.00	1000sqft	11.90	75,000.00	0
City Park	112.40	Acre	112.40	4,896,144.00	0
Health Club	50.00	1000sqft	0.57	50,000.00	0
Hotel	220.00	Room	3.62	150,000.00	0
Apartments Mid Rise	7,218.00	Dwelling Unit	93.75	7,218,000.00	20643
Regional Shopping Center	635.00	1000sqft	7.82	635,000.00	0
Strip Mall	125.00	1000sqft	1.42	125,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	4.6	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2032
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	286.7	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

Project Characteristics - Assumed construction start date is 01/01/2018.

CO2 emissions intensity for 2032 based on a 50% RPS for 2030, calculated by averaging CO2 intensity for 2013, 2014 and 2015 as the baseline.

CH4 and N2O intensity is similar to PG&E.

Land Use - Land uses based on information provided by Client. Total acreage in EIR is 281. Lot acreages have been scaled down accordingly. Acreage for city park remains the same. Assumed zero building area in city parks.

Construction Phase - Zero'ed out construction since this was calculated separately.

Trips and VMT - Not modifying anything here since construction is modeled separately.

On-road Fugitive Dust - Not modifying anything here since construction is modeled separately.

Demolition - Not modifying anything here since construction is modeled separately.

Grading - Not modifying anything here since construction is modeled separately.

Architectural Coating - Not modifying anything here since construction is modeled separately.

Vehicle Trips - Trip rates calculated based on study by F&P. Adjusted total trips are calculated based on CalEEMod default trip generation rates. Trip lengths are from EIR AQ section for Candlestick point.

Woodstoves - No wood-stoves in project location. Assuming there are 7218 natural gas fireplaces, that operate for 4 hours a day for 50 days (200 hours/year).

Consumer Products - ROG emissions factor for consumer products is for the city of San Francisco

Energy Use -

Water And Wastewater - Total water usage is based on EIR for Candlestick point. Indoor and outdoor water usage is calculated based on CalEEMOD ratio.

Solid Waste - Solid waste generation rate is based on EIR waste disposal rate for Candlestick point.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	330.00	0.00
tblConstructionPhase	NumDays	4,650.00	0.00
tblConstructionPhase	NumDays	300.00	0.00
tblConstructionPhase	NumDays	465.00	0.00
tblConstructionPhase	NumDays	330.00	0.00
tblConstructionPhase	NumDays	180.00	0.00
tblConsumerProducts	ROG_EF	2.14E-05	1.51E-05
tblFireplaces	FireplaceDayYear	11.14	50.00
tblFireplaces	FireplaceHourDay	3.50	4.00

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	1,082.70	7,218.00
tblFireplaces	NumberNoFireplace	288.72	0.00
tblFireplaces	NumberWood	1,227.06	0.00
tblGrading	AcresOfGrading	0.00	1,162.50
tblLandUse	LandUseSquareFeet	319,440.00	150,000.00
tblLandUse	LotAcreage	3.44	1.70
tblLandUse	LotAcreage	64.96	32.06
tblLandUse	LotAcreage	12.24	6.04
tblLandUse	LotAcreage	19.70	9.72
tblLandUse	LotAcreage	24.11	11.90
tblLandUse	LotAcreage	1.15	0.57
tblLandUse	LotAcreage	7.33	3.62
tblLandUse	LotAcreage	189.95	93.75
tblLandUse	LotAcreage	14.58	7.82
tblLandUse	LotAcreage	2.87	1.42
tblProjectCharacteristics	CO2IntensityFactor	641.35	286.7
tblSequestration	NumberOfNewTrees	0.00	5,000.00
tblSolidWaste	SolidWasteGenerationRate	3,320.28	7,062.81
tblSolidWaste	SolidWasteGenerationRate	2.06	645.00
tblSolidWaste	SolidWasteGenerationRate	9.67	10.12
tblSolidWaste	SolidWasteGenerationRate	285.00	46.75
tblSolidWaste	SolidWasteGenerationRate	120.45	202.40
tblSolidWaste	SolidWasteGenerationRate	11.40	164.25
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	HO_TL	5.70	7.50
tblVehicleTrips	HS_TL	4.80	7.30
tblVehicleTrips	ST_TR	6.39	2.64
tblVehicleTrips	ST_TR	10.71	4.43
tblVehicleTrips	ST_TR	22.75	9.42
tblVehicleTrips	ST_TR	20.87	0.46
tblVehicleTrips	ST_TR	8.19	3.39
tblVehicleTrips	ST_TR	49.97	20.68
tblVehicleTrips	ST_TR	1.90	0.79
tblVehicleTrips	ST_TR	42.04	17.40

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

tblVehicleTrips	SU_TR	5.86	2.43
tblVehicleTrips	SU_TR	10.71	4.43
tblVehicleTrips	SU_TR	16.74	6.93
tblVehicleTrips	SU_TR	26.73	11.06
tblVehicleTrips	SU_TR	5.95	2.46
tblVehicleTrips	SU_TR	25.24	10.45
tblVehicleTrips	SU_TR	1.11	0.46
tblVehicleTrips	SU_TR	20.43	8.46
tblVehicleTrips	WD_TR	6.65	2.75
tblVehicleTrips	WD_TR	10.71	4.43
tblVehicleTrips	WD_TR	1.89	0.78
tblVehicleTrips	WD_TR	32.93	13.63
tblVehicleTrips	WD_TR	8.17	3.38
tblVehicleTrips	WD_TR	42.70	17.67
tblVehicleTrips	WD_TR	8.11	3.36
tblVehicleTrips	WD_TR	44.32	18.34
tblWater	IndoorWaterUseRate	470,281,756.94	125,564,800.00
tblWater	IndoorWaterUseRate	32,307,758.82	3,431,000.00
tblWater	IndoorWaterUseRate	2,957,157.20	2,262,998.00
tblWater	IndoorWaterUseRate	5,580,689.40	16,424,741.00
tblWater	IndoorWaterUseRate	47,036,051.14	18,104,088.00
tblWater	IndoorWaterUseRate	73,754,092.08	7,774,500.00
tblWater	IndoorWaterUseRate	9,259,065.19	7,081,023.00
tblWater	OutdoorWaterUseRate	296,481,977.20	79,159,747.00
tblWater	OutdoorWaterUseRate	2,062,197.37	219,000.00
tblWater	OutdoorWaterUseRate	133,922,503.70	19,573,473.00
tblWater	OutdoorWaterUseRate	1,812,451.19	1,387,002.00

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

tblWater	OutdoorWaterUseRate	620,076.60	1,825,259.00
tblWater	OutdoorWaterUseRate	28,828,547.47	11,095,912.00
tblWater	OutdoorWaterUseRate	5,674,910.92	218,977.00
tblWoodstoves	NumberCatalytic	144.36	0.00
tblWoodstoves	NumberNoncatalytic	144.36	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

[illegible][illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

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	196.9416	166.5031	663.0873	1.0506		16.2143	16.2143		16.2143	16.2143	0.0000	204,877.2591	204,877.2591	4.9346	3.7364	206,114.0654
Energy	2.3281	20.1488	10.3306	0.1270		1.6085	1.6085		1.6085	1.6085		25,397.2583	25,397.2583	0.4868	0.4656	25,548.1815
Mobile	31.3330	142.9407	365.6197	1.6132	187.7460	1.1898	188.9358	50.3403	1.1087	51.4489		164,915.5202	164,915.5202	6.4691		165,077.2484
Total	230.6027	329.5926	1,039.0376	2.7907	187.7460	19.0126	206.7586	50.3403	18.9314	69.2717	0.0000	395,190.0375	395,190.0375	11.8906	4.2020	396,739.4952

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	196.9416	166.5031	663.0873	1.0506		16.2143	16.2143		16.2143	16.2143	0.0000	204,877.2591	204,877.2591	4.9346	3.7364	206,114.0654
Energy	2.3281	20.1488	10.3306	0.1270		1.6085	1.6085		1.6085	1.6085		25,397.2583	25,397.2583	0.4868	0.4656	25,548.1815
Mobile	31.3330	142.9407	365.6197	1.6132	187.7460	1.1898	188.9358	50.3403	1.1087	51.4489		164,915.5202	164,915.5202	6.4691		165,077.2484
Total	230.6027	329.5926	1,039.0376	2.7907	187.7460	19.0126	206.7586	50.3403	18.9314	69.2717	0.0000	395,190.0375	395,190.0375	11.8906	4.2020	396,739.4952

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2018	12/31/2017	5	0	
2	Site Preparation	Site Preparation	2/23/2019	2/22/2019	5	0	
3	Grading	Grading	11/2/2019	11/1/2019	5	0	
4	Building Construction	Building Construction	8/14/2021	8/13/2021	5	0	
5	Paving	Paving	6/11/2039	6/10/2039	5	0	
6	Architectural Coating	Architectural Coating	9/15/2040	9/14/2040	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1162.5

Acres of Paving: 47.82

Residential Indoor: 14,616,450; Residential Outdoor: 4,872,150; Non-Residential Indoor: 1,777,500; Non-Residential Outdoor: 592,500; Striped Parking Area: 258,408 (Architectural Coating – sqft)

OffRoad Equipment

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

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

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

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	9,469.00	2,474.00	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	1,894.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

[illegible]

3.4 Grading - 2019

Unmitigated Construction On-Site

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

3.4 Grading - 2019

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

3.4 Grading - 2019

Mitigated Construction Off-Site

[illegible]

3.5 Building Construction - 2021

Unmitigated Construction On-Site

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

3.5 Building Construction - 2021

Mitigated Construction Off-Site

[illegible]

3.6 Paving - 2039

Unmitigated Construction On-Site

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

3.6 Paving - 2039

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

3.6 Paving - 2039

Mitigated Construction Off-Site

[illegible]

3.7 Architectural Coating - 2040

Unmitigated Construction On-Site

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

3.7 Architectural Coating - 2040

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

3.7 Architectural Coating - 2040**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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**

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	31.3330	142.9407	365.6197	1.6132	187.7460	1.1898	188.9358	50.3403	1.1087	51.4489		164,915.5 202	164,915.5 202	6.4691		165,077.2 484
Unmitigated	31.3330	142.9407	365.6197	1.6132	187.7460	1.1898	188.9358	50.3403	1.1087	51.4489		164,915.5 202	164,915.5 202	6.4691		165,077.2 484

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	19,849.50	19,055.52	17539.74	53,265,026	53,265,026
Arena	332.25	332.25	332.25	654,038	654,038
City Park	87.67	1,058.81	778.93	699,951	699,951
Enclosed Parking Structure	0.00	0.00	0.00		
Health Club	681.50	23.00	553.00	993,795	993,795
Hotel	743.60	745.80	541.20	1,372,610	1,372,610
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	11,220.45	13,131.80	6635.75	19,210,480	19,210,480
Research & Development	504.00	118.50	69.00	977,469	977,469
Strip Mall	2,292.50	2,175.00	1057.50	3,268,020	3,268,020
Unenclosed Parking Structure	0.00	0.00	0.00		
Total	35,711.47	36,640.68	27,507.37	80,441,390	80,441,390

4.3 Trip Type Information

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

Land Use	Miles			Trip %			Trip Purpose %		
	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 Mid Rise	10.80	7.30	7.50	31.00	15.00	54.00	86	11	3
Arena	9.50	7.40	7.40	0.00	81.00	19.00	66	28	6
City Park	9.50	7.40	7.40	33.00	48.00	19.00	66	28	6
Enclosed Parking Structure	9.50	7.40	7.40	0.00	0.00	0.00	0	0	0
Health Club	9.50	7.40	7.40	16.90	64.10	19.00	52	39	9
Hotel	9.50	7.40	7.40	19.40	61.60	19.00	58	38	4
Parking Lot	9.50	7.40	7.40	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.40	7.40	16.30	64.70	19.00	54	35	11
Research & Development	9.50	7.40	7.40	33.00	48.00	19.00	82	15	3
Strip Mall	9.50	7.40	7.40	16.60	64.40	19.00	45	40	15
Unenclosed Parking Structure	9.50	7.40	7.40	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Arena	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
City Park	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Enclosed Parking Structure	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Health Club	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Hotel	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Parking Lot	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Regional Shopping Center	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Research & Development	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Strip Mall	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Unenclosed Parking Structure	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615

5.0 Energy Detail

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

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	2.3281	20.1488	10.3306	0.1270		1.6085	1.6085		1.6085	1.6085		25,397.2583	25,397.2583	0.4868	0.4656	25,548.1815
NaturalGas Unmitigated	2.3281	20.1488	10.3306	0.1270		1.6085	1.6085		1.6085	1.6085		25,397.2583	25,397.2583	0.4868	0.4656	25,548.1815

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

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 Mid Rise	172647	1.8619	15.9106	6.7705	0.1016		1.2864	1.2864		1.2864	1.2864		20,311.4404	20,311.4404	0.3893	0.3724	20,432.1411
Arena	5085.62	0.0548	0.4986	0.4188	2.9900e-003		0.0379	0.0379		0.0379	0.0379		598.3078	598.3078	0.0115	0.0110	601.8633
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Health Club	3390.41	0.0366	0.3324	0.2792	1.9900e-003		0.0253	0.0253		0.0253	0.0253		398.8719	398.8719	7.6500e-003	7.3100e-003	401.2422
Hotel	15004.1	0.1618	1.4710	1.2356	8.8300e-003		0.1118	0.1118		0.1118	0.1118		1,765.1894	1,765.1894	0.0338	0.0324	1,775.6790
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	8002.74	0.0863	0.7846	0.6591	4.7100e-003		0.0596	0.0596		0.0596	0.0596		941.4988	941.4988	0.0181	0.0173	947.0937
Research & Development	10171.2	0.1097	0.9972	0.8376	5.9800e-003		0.0758	0.0758		0.0758	0.0758		1,196.6156	1,196.6156	0.0229	0.0219	1,203.7265
Strip Mall	1575.34	0.0170	0.1545	0.1297	9.3000e-004		0.0117	0.0117		0.0117	0.0117		185.3344	185.3344	3.5500e-003	3.4000e-003	186.4358
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		2.3281	20.1488	10.3306	0.1270		1.6085	1.6085		1.6085	1.6085		25,397.2583	25,397.2583	0.4868	0.4656	25,548.1815

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

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 Mid Rise	172.647	1.8619	15.9106	6.7705	0.1016		1.2864	1.2864		1.2864	1.2864		20,311.4404	20,311.4404	0.3893	0.3724	20,432.1411
Arena	5.08562	0.0548	0.4986	0.4188	2.9900e-003		0.0379	0.0379		0.0379	0.0379		598.3078	598.3078	0.0115	0.0110	601.8633
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Health Club	3.39041	0.0366	0.3324	0.2792	1.9900e-003		0.0253	0.0253		0.0253	0.0253		398.8719	398.8719	7.6500e-003	7.3100e-003	401.2422
Hotel	15.0041	0.1618	1.4710	1.2356	8.8300e-003		0.1118	0.1118		0.1118	0.1118		1,765.1894	1,765.1894	0.0338	0.0324	1,775.6790
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	8.00274	0.0863	0.7846	0.6591	4.7100e-003		0.0596	0.0596		0.0596	0.0596		941.4988	941.4988	0.0181	0.0173	947.0937
Research & Development	10.1712	0.1097	0.9972	0.8376	5.9800e-003		0.0758	0.0758		0.0758	0.0758		1,196.6156	1,196.6156	0.0229	0.0219	1,203.7265
Strip Mall	1.57534	0.0170	0.1545	0.1297	9.3000e-004		0.0117	0.0117		0.0117	0.0117		185.3344	185.3344	3.5500e-003	3.4000e-003	186.4358
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		2.3281	20.1488	10.3306	0.1270		1.6085	1.6085		1.6085	1.6085		25,397.2583	25,397.2583	0.4868	0.4656	25,548.1815

6.0 Area Detail**6.1 Mitigation Measures Area**

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	196.9416	166.5031	663.0873	1.0506		16.2143	16.2143		16.2143	16.2143	0.0000	204,877.2591	204,877.2591	4.9346	3.7364	206,114.0654
Unmitigated	196.9416	166.5031	663.0873	1.0506		16.2143	16.2143		16.2143	16.2143	0.0000	204,877.2591	204,877.2591	4.9346	3.7364	206,114.0654

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	31.7193					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	128.6630					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	18.6819	159.6452	67.9341	1.0190		12.9075	12.9075		12.9075	12.9075	0.0000	203,802.3529	203,802.3529	3.9062	3.7364	205,013.4484
Landscaping	17.8774	6.8579	595.1532	0.0315		3.3068	3.3068		3.3068	3.3068		1,074.9061	1,074.9061	1.0284		1,100.6170
Total	196.9416	166.5031	663.0873	1.0506		16.2143	16.2143		16.2143	16.2143	0.0000	204,877.2591	204,877.2591	4.9346	3.7364	206,114.0654

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

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	31.7193					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	128.6630					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	18.6819	159.6452	67.9341	1.0190		12.9075	12.9075		12.9075	12.9075	0.0000	203,802.3529	203,802.3529	3.9062	3.7364	205,013.4484
Landscaping	17.8774	6.8579	595.1532	0.0315		3.3068	3.3068		3.3068	3.3068		1,074.9061	1,074.9061	1.0284		1,100.6170
Total	196.9416	166.5031	663.0873	1.0506		16.2143	16.2143		16.2143	16.2143	0.0000	204,877.2591	204,877.2591	4.9346	3.7364	206,114.0654

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

Candlestick Point - Operational - CAP Analysis - San Francisco County, Winter

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

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

Hunters Point Shipyard Phase II - Operational - CAP Analysis

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	255.00	1000sqft	3.10	255,000.00	0
Research & Development	4,265.00	1000sqft	52.10	4,265,000.00	0
High School	300.00	Student	0.50	27,857.00	0
Junior College (2Yr)	400.00	Student	0.20	37,142.00	0
Junior High School	1,012.00	Student	1.50	345,000.00	0
Enclosed Parking Structure	3,454.00	Space	16.50	1,381,600.00	0
Parking Lot	1,487.00	Space	7.10	594,800.00	0
Unenclosed Parking Structure	7,119.00	Space	34.10	2,847,600.00	0
City Park	249.00	Acre	249.00	10,846,440.00	0
Health Club	50.00	1000sqft	0.60	50,000.00	0
Hotel	175.00	Room	3.10	120,000.00	0
Apartments Mid Rise	3,454.00	Dwelling Unit	48.30	3,454,000.00	9878
Regional Shopping Center	100.00	1000sqft	1.20	100,000.00	0
Strip Mall	301.00	1000sqft	3.70	301,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	4.6	Precipitation Freq (Days)	64
Climate Zone	5	Operational Year	2032		
Utility Company	Pacific Gas & Electric Company				

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

CO2 Intensity (lb/MWahr)	286.7	CH4 Intensity (lb/MWahr)	0.029	N2O Intensity (lb/MWahr)	0.006
-------------------------------------	-------	-------------------------------------	-------	-------------------------------------	-------

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Based on construction schedule, assumed start date is 01/01/2018.

CO2 emissions intensity for 2032 based on a 50% RPS for 2030, calculated by averaging CO2 intensity for 2013,2014 and 2015 as the baseline. CH4 and N2O intensity is similar to PG&E.

Land Use - Land uses based on information provided by Client. Total acreage in EIR is 421. Lot acreages have been scaled down accordingly. Acreage for city park remains the same. Assumed zero building area in city parks.

Construction Phase - Zero'ed out construction since this was calculated separately.

Off-road Equipment -

Trips and VMT - Not modifying anything here since construction is modeled separately.

On-road Fugitive Dust - Not modifying anything here since construction is modeled separately.

Demolition -

Grading - Not modifying anything here since construction is modeled separately.

Architectural Coating - Not modifying anything here since construction is modeled separately.

Vehicle Trips - Trip rates calculated based on traffic data from F&P on 3/28/2018. Adjusted total trips are calculated based on CalEEMod default trip generation rates. Trip lengths are from EIR AQ section for Hunters point.

Woodstoves - No wood-stoves in project location. Assuming there are 3454 natural gas fireplaces, that operate for 4 hours a day for 50 days (200 hours/year).

Consumer Products - Consumer product emissions factor for San Francisco.

Energy Use -

Water And Wastewater - Water usage for Hunters Point is based on EIR water usage.

Solid Waste - Solid water disposal rate for Hunter's point is based on EIR disposal rates.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	550.00	0.00
tblConstructionPhase	NumDays	7,750.00	0.00
tblConstructionPhase	NumDays	500.00	0.00
tblConstructionPhase	NumDays	775.00	0.00

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

tblConstructionPhase	NumDays	550.00	0.00
tblConstructionPhase	NumDays	300.00	0.00
tblConsumerProducts	ROG_EF	2.14E-05	1.51E-05
tblFireplaces	FireplaceDayYear	11.14	50.00
tblFireplaces	FireplaceHourDay	3.50	4.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	518.10	3,454.00
tblFireplaces	NumberNoFireplace	138.16	0.00
tblFireplaces	NumberWood	587.18	0.00
tblGrading	AcresOfGrading	0.00	1,937.50
tblLandUse	LandUseSquareFeet	39,798.29	27,857.00
tblLandUse	LandUseSquareFeet	17,460.89	37,142.00
tblLandUse	LandUseSquareFeet	118,972.42	345,000.00
tblLandUse	LandUseSquareFeet	254,100.00	120,000.00
tblLandUse	LotAcreage	5.85	3.10
tblLandUse	LotAcreage	97.91	52.10
tblLandUse	LotAcreage	0.91	0.50
tblLandUse	LotAcreage	0.40	0.20
tblLandUse	LotAcreage	2.73	1.50
tblLandUse	LotAcreage	31.09	16.50
tblLandUse	LotAcreage	13.38	7.10
tblLandUse	LotAcreage	64.07	34.10
tblLandUse	LotAcreage	1.15	0.60
tblLandUse	LotAcreage	5.83	3.10
tblLandUse	LotAcreage	90.89	48.30
tblLandUse	LotAcreage	2.30	1.20
tblLandUse	LotAcreage	6.91	3.70

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

tblProjectCharacteristics	CO2IntensityFactor	641.35	286.7
tblSequestration	NumberOfNewTrees	0.00	5,000.00
tblSolidWaste	SolidWasteGenerationRate	1,588.84	3,379.74
tblSolidWaste	SolidWasteGenerationRate	21.41	22.44
tblSolidWaste	SolidWasteGenerationRate	237.15	238.43
tblSolidWaste	SolidWasteGenerationRate	285.00	46.75
tblSolidWaste	SolidWasteGenerationRate	54.75	54.00
tblSolidWaste	SolidWasteGenerationRate	95.81	161.00
tblSolidWaste	SolidWasteGenerationRate	73.00	72.00
tblSolidWaste	SolidWasteGenerationRate	184.69	182.16
tblSolidWaste	SolidWasteGenerationRate	324.11	4,670.18
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	HO_TL	5.70	7.50
tblVehicleTrips	HS_TL	4.80	7.30
tblVehicleTrips	ST_TR	6.39	2.60
tblVehicleTrips	ST_TR	22.75	9.27
tblVehicleTrips	ST_TR	2.46	1.00
tblVehicleTrips	ST_TR	20.87	8.50
tblVehicleTrips	ST_TR	0.61	0.25
tblVehicleTrips	ST_TR	8.19	3.34
tblVehicleTrips	ST_TR	0.42	0.17
tblVehicleTrips	ST_TR	49.97	20.35
tblVehicleTrips	ST_TR	1.90	0.77
tblVehicleTrips	ST_TR	42.04	17.12
tblVehicleTrips	SU_TR	5.86	2.39
tblVehicleTrips	SU_TR	16.74	6.82
tblVehicleTrips	SU_TR	1.05	0.43
tblVehicleTrips	SU_TR	26.73	10.89
tblVehicleTrips	SU_TR	0.25	0.10

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

tblVehicleTrips	SU_TR	5.95	2.42
tblVehicleTrips	SU_TR	0.04	0.00
tblVehicleTrips	SU_TR	25.24	10.28
tblVehicleTrips	SU_TR	1.11	0.45
tblVehicleTrips	SU_TR	20.43	8.32
tblVehicleTrips	WD_TR	6.65	2.71
tblVehicleTrips	WD_TR	1.89	0.77
tblVehicleTrips	WD_TR	11.03	4.49
tblVehicleTrips	WD_TR	32.93	13.41
tblVehicleTrips	WD_TR	1.71	0.70
tblVehicleTrips	WD_TR	8.17	3.33
tblVehicleTrips	WD_TR	1.23	0.50
tblVehicleTrips	WD_TR	1.62	0.66
tblVehicleTrips	WD_TR	42.70	17.39
tblVehicleTrips	WD_TR	8.11	3.30
tblVehicleTrips	WD_TR	44.32	18.05
tblWater	IndoorWaterUseRate	225,042,004.50	64,193,343.00
tblWater	IndoorWaterUseRate	45,322,105.74	4,525,996.00
tblWater	IndoorWaterUseRate	2,957,157.20	2,262,998.00
tblWater	IndoorWaterUseRate	1,321,488.00	1,321,500.00
tblWater	IndoorWaterUseRate	4,439,184.75	4,439,225.00
tblWater	IndoorWaterUseRate	856,440.00	856,400.00
tblWater	IndoorWaterUseRate	2,453,330.88	2,453,088.00
tblWater	IndoorWaterUseRate	7,407,252.15	7,407,300.00
tblWater	IndoorWaterUseRate	2,097,074,684.82	221,054,950.00
tblWater	IndoorWaterUseRate	22,295,828.97	10,898,661.00
tblWater	OutdoorWaterUseRate	141,874,307.18	40,469,374.00

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

tblWater	OutdoorWaterUseRate	296,678,856.07	57,332,268.00
tblWater	OutdoorWaterUseRate	27,778,064.81	2,774,004.00
tblWater	OutdoorWaterUseRate	1,812,451.19	1,387,002.00
tblWater	OutdoorWaterUseRate	3,398,112.00	3,398,100.00
tblWater	OutdoorWaterUseRate	493,242.75	493,325.00
tblWater	OutdoorWaterUseRate	1,339,560.00	1,339,600.00
tblWater	OutdoorWaterUseRate	6,308,565.12	6,308,808.00
tblWater	OutdoorWaterUseRate	4,539,928.74	4,539,900.00
tblWater	OutdoorWaterUseRate	13,665,185.50	6,679,739.00
tblWoodstoves	NumberCatalytic	69.08	0.00
tblWoodstoves	NumberNoncatalytic	69.08	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

[illegible][illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

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	184.6982	79.6883	318.6617	0.5028		7.7638	7.7638		7.7638	7.7638	0.0000	98,042.0003	98,042.0003	2.3689	1.7880	98,634.0326
Energy	4.5949	41.2861	31.5247	0.2506		3.1747	3.1747		3.1747	3.1747		50,126.4517	50,126.4517	0.9608	0.9190	50,424.3281
Mobile	32.9219	131.3792	351.6770	1.6463	182.9812	1.1531	184.1343	49.0627	1.0745	50.1371		168,195.5356	168,195.5356	6.1944		168,350.3948
Total	222.2150	252.3535	701.8634	2.3997	182.9812	12.0916	195.0728	49.0627	12.0129	61.0756	0.0000	316,363.9876	316,363.9876	9.5240	2.7069	317,408.7556

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	184.6982	79.6883	318.6617	0.5028		7.7638	7.7638		7.7638	7.7638	0.0000	98,042.0003	98,042.0003	2.3689	1.7880	98,634.0326
Energy	4.5949	41.2861	31.5247	0.2506		3.1747	3.1747		3.1747	3.1747		50,126.4517	50,126.4517	0.9608	0.9190	50,424.3281
Mobile	32.9219	131.3792	351.6770	1.6463	182.9812	1.1531	184.1343	49.0627	1.0745	50.1371		168,195.5356	168,195.5356	6.1944		168,350.3948
Total	222.2150	252.3535	701.8634	2.3997	182.9812	12.0916	195.0728	49.0627	12.0129	61.0756	0.0000	316,363.9876	316,363.9876	9.5240	2.7069	317,408.7556

Hunters Point Shipyard Phase II - Operational - CAP Analysis - 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
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	1/1/2018	12/31/2017	5	0	
2	Site Preparation	Site Preparation	2/23/2019	2/22/2019	5	0	
3	Grading	Grading	11/2/2019	11/1/2019	5	0	
4	Building Construction	Building Construction	8/14/2021	8/13/2021	5	0	
5	Paving	Paving	6/11/2039	6/10/2039	5	0	
6	Architectural Coating	Architectural Coating	9/15/2040	9/14/2040	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1937.5

Acres of Paving: 57.7

Residential Indoor: 6,994,350; Residential Outdoor: 2,331,450; Non-Residential Indoor: 8,251,499; Non-Residential Outdoor: 2,750,500; Striped Parking Area: 289,440 (Architectural Coating – sqft)

OffRoad Equipment

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco 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

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco 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	10,887.00	3,839.00	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	2,177.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

[illegible]

3.4 Grading - 2019

Unmitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

3.4 Grading - 2019

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

3.4 Grading - 2019

Mitigated Construction Off-Site

[illegible]

3.5 Building Construction - 2021

Unmitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

3.5 Building Construction - 2021

Mitigated Construction Off-Site

[illegible]

3.6 Paving - 2039

Unmitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

3.6 Paving - 2039

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

3.6 Paving - 2039

Mitigated Construction Off-Site

[illegible]

3.7 Architectural Coating - 2040

Unmitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

3.7 Architectural Coating - 2040

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

3.7 Architectural Coating - 2040**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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**

Hunters Point Shipyard Phase II - Operational - CAP Analysis - 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					
Mitigated	32.9219	131.3792	351.6770	1.6463	182.9812	1.1531	184.1343	49.0627	1.0745	50.1371		168,195.5356	168,195.5356	6.1944		168,350.3948
Unmitigated	32.9219	131.3792	351.6770	1.6463	182.9812	1.1531	184.1343	49.0627	1.0745	50.1371		168,195.5356	168,195.5356	6.1944		168,350.3948

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	9,360.34	8,980.40	8255.06	25,109,480	25,109,480
City Park	191.73	2,308.23	1698.18	1,526,867	1,526,867
Enclosed Parking Structure	0.00	0.00	0.00		
General Office Building	1,144.95	255.00	109.65	2,096,224	2,096,224
Health Club	670.50	425.00	544.50	1,078,243	1,078,243
High School	210.00	75.00	30.00	433,060	433,060
Hotel	582.75	584.50	423.50	1,075,531	1,075,531
Junior College (2Yr)	200.00	68.00	0.00	392,334	392,334
Junior High School	667.92	0.00	0.00	1,075,852	1,075,852
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	1,739.00	2,035.00	1028.00	2,977,164	2,977,164
Research & Development	14,074.50	3,284.05	1919.25	27,284,592	27,284,592
Strip Mall	5,433.05	5,153.12	2504.32	7,744,217	7,744,217
Unenclosed Parking Structure	0.00	0.00	0.00		
Total	34,274.74	23,168.30	16,512.46	70,793,563	70,793,563

4.3 Trip Type Information

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

Land Use	Miles			Trip %			Trip Purpose %		
	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 Mid Rise	10.80	7.30	7.50	31.00	15.00	54.00	86	11	3
City Park	9.50	7.40	7.40	33.00	48.00	19.00	66	28	6
Enclosed Parking Structure	9.50	7.40	7.40	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.40	7.40	33.00	48.00	19.00	77	19	4
Health Club	9.50	7.40	7.40	16.90	64.10	19.00	52	39	9
High School	9.50	7.40	7.40	77.80	17.20	5.00	75	19	6
Hotel	9.50	7.40	7.40	19.40	61.60	19.00	58	38	4
Junior College (2Yr)	9.50	7.40	7.40	6.40	88.60	5.00	92	7	1
Junior High School	9.50	7.40	7.40	72.80	22.20	5.00	63	25	12
Parking Lot	9.50	7.40	7.40	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.40	7.40	16.30	64.70	19.00	54	35	11
Research & Development	9.50	7.40	7.40	33.00	48.00	19.00	82	15	3
Strip Mall	9.50	7.40	7.40	16.60	64.40	19.00	45	40	15
Unenclosed Parking Structure	9.50	7.40	7.40	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
City Park	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Enclosed Parking Structure	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
General Office Building	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Health Club	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
High School	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Hotel	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Junior College (2Yr)	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Junior High School	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Parking Lot	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Regional Shopping Center	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Research & Development	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Strip Mall	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Unenclosed Parking Structure	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Hunters Point Shipyard Phase II - Operational - CAP Analysis - 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	4.5949	41.2861	31.5247	0.2506		3.1747	3.1747		3.1747	3.1747		50,126.45 17	50,126.45 17	0.9608	0.9190	50,424.32 81
NaturalGas Unmitigated	4.5949	41.2861	31.5247	0.2506		3.1747	3.1747		3.1747	3.1747		50,126.45 17	50,126.45 17	0.9608	0.9190	50,424.32 81

5.2 Energy by Land Use - NaturalGas

Unmitigated

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

	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 Mid Rise	82616.2	0.8910	7.6137	3.2399	0.0486		0.6156	0.6156		0.6156	0.6156		9,719.5504	9,719.5504	0.1863	0.1782	9,777.3089
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	13504.5	0.1456	1.3240	1.1121	7.9400e-003		0.1006	0.1006		0.1006	0.1006		1,588.7671	1,588.7671	0.0305	0.0291	1,598.2084
Health Club	3390.41	0.0366	0.3324	0.2792	1.9900e-003		0.0253	0.0253		0.0253	0.0253		398.8719	398.8719	7.6500e-003	7.3100e-003	401.2422
High School	1257	0.0136	0.1232	0.1035	7.4000e-004		9.3700e-003	9.3700e-003		9.3700e-003	9.3700e-003		147.8823	147.8823	2.8300e-003	2.7100e-003	148.7611
Hotel	12003.3	0.1295	1.1768	0.9885	7.0600e-003		0.0894	0.0894		0.0894	0.0894		1,412.1515	1,412.1515	0.0271	0.0259	1,420.5432
Junior College (2Yr)	3480.15	0.0375	0.3412	0.2866	2.0500e-003		0.0259	0.0259		0.0259	0.0259		409.4299	409.4299	7.8500e-003	7.5100e-003	411.8630
Junior High School	15567.5	0.1679	1.5262	1.2820	9.1600e-003		0.1160	0.1160		0.1160	0.1160		1,831.4746	1,831.4746	0.0351	0.0336	1,842.3582
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1260.27	0.0136	0.1236	0.1038	7.4000e-004		9.3900e-003	9.3900e-003		9.3900e-003	9.3900e-003		148.2675	148.2675	2.8400e-003	2.7200e-003	149.1486
Research & Development	289202	3.1189	28.3531	23.8166	0.1701		2.1548	2.1548		2.1548	2.1548		34,023.7712	34,023.7712	0.6521	0.6238	34,225.9574
Strip Mall	3793.42	0.0409	0.3719	0.3124	2.2300e-003		0.0283	0.0283		0.0283	0.0283		446.2853	446.2853	8.5500e-003	8.1800e-003	448.9373
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		4.5949	41.2861	31.5247	0.2506		3.1747	3.1747		3.1747	3.1747		50,126.4517	50,126.4517	0.9608	0.9190	50,424.3281

5.2 Energy by Land Use - NaturalGas

Mitigated

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

	Natural Gas 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 Mid Rise	82.6162	0.8910	7.6137	3.2399	0.0486		0.6156	0.6156		0.6156	0.6156		9,719.5504	9,719.5504	0.1863	0.1782	9,777.3089
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	13.5045	0.1456	1.3240	1.1121	7.9400e-003		0.1006	0.1006		0.1006	0.1006		1,588.7671	1,588.7671	0.0305	0.0291	1,598.2084
Health Club	3.39041	0.0366	0.3324	0.2792	1.9900e-003		0.0253	0.0253		0.0253	0.0253		398.8719	398.8719	7.6500e-003	7.3100e-003	401.2422
High School	1.257	0.0136	0.1232	0.1035	7.4000e-004		9.3700e-003	9.3700e-003		9.3700e-003	9.3700e-003		147.8823	147.8823	2.8300e-003	2.7100e-003	148.7611
Hotel	12.0033	0.1295	1.1768	0.9885	7.0600e-003		0.0894	0.0894		0.0894	0.0894		1,412.1515	1,412.1515	0.0271	0.0259	1,420.5432
Junior College (2Yr)	3.48015	0.0375	0.3412	0.2866	2.0500e-003		0.0259	0.0259		0.0259	0.0259		409.4299	409.4299	7.8500e-003	7.5100e-003	411.8630
Junior High School	15.5675	0.1679	1.5262	1.2820	9.1600e-003		0.1160	0.1160		0.1160	0.1160		1,831.4746	1,831.4746	0.0351	0.0336	1,842.3582
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.26027	0.0136	0.1236	0.1038	7.4000e-004		9.3900e-003	9.3900e-003		9.3900e-003	9.3900e-003		148.2675	148.2675	2.8400e-003	2.7200e-003	149.1486
Research & Development	289.202	3.1189	28.3531	23.8166	0.1701		2.1548	2.1548		2.1548	2.1548		34,023.7712	34,023.7712	0.6521	0.6238	34,225.9574
Strip Mall	3.79342	0.0409	0.3719	0.3124	2.2300e-003		0.0283	0.0283		0.0283	0.0283		446.2853	446.2853	8.5500e-003	8.1800e-003	448.9373
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		4.5949	41.2861	31.5247	0.2506		3.1747	3.1747		3.1747	3.1747		50,126.4517	50,126.4517	0.9608	0.9190	50,424.3281

6.0 Area Detail

6.1 Mitigation Measures Area

Hunters Point Shipyard Phase II - Operational - CAP Analysis - 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					
Mitigated	184.6982	79.6883	318.6617	0.5028		7.7638	7.7638		7.7638	7.7638	0.0000	98,042.00 03	98,042.00 03	2.3689	1.7880	98,634.03 26
Unmitigated	184.6982	79.6883	318.6617	0.5028		7.7638	7.7638		7.7638	7.7638	0.0000	98,042.00 03	98,042.00 03	2.3689	1.7880	98,634.03 26

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	29.5915					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	137.4880					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	8.9398	76.3944	32.5082	0.4876		6.1766	6.1766		6.1766	6.1766	0.0000	97,524.70 59	97,524.70 59	1.8692	1.7880	98,104.24 65
Landscaping	8.6790	3.2939	286.1535	0.0152		1.5872	1.5872		1.5872	1.5872		517.2944	517.2944	0.4997		529.7862
Total	184.6982	79.6883	318.6617	0.5028		7.7637	7.7637		7.7637	7.7637	0.0000	98,042.00 03	98,042.00 03	2.3689	1.7880	98,634.03 26

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

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	29.5915					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	137.4880					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	8.9398	76.3944	32.5082	0.4876		6.1766	6.1766		6.1766	6.1766	0.0000	97,524.7059	97,524.7059	1.8692	1.7880	98,104.2465
Landscaping	8.6790	3.2939	286.1535	0.0152		1.5872	1.5872		1.5872	1.5872		517.2944	517.2944	0.4997		529.7862
Total	184.6982	79.6883	318.6617	0.5028		7.7637	7.7637		7.7637	7.7637	0.0000	98,042.0003	98,042.0003	2.3689	1.7880	98,634.0326

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

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Summer

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

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

Hunters Point Shipyard Phase II - Operational - CAP Analysis

San Francisco County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	255.00	1000sqft	3.10	255,000.00	0
Research & Development	4,265.00	1000sqft	52.10	4,265,000.00	0
High School	300.00	Student	0.50	27,857.00	0
Junior College (2Yr)	400.00	Student	0.20	37,142.00	0
Junior High School	1,012.00	Student	1.50	345,000.00	0
Enclosed Parking Structure	3,454.00	Space	16.50	1,381,600.00	0
Parking Lot	1,487.00	Space	7.10	594,800.00	0
Unenclosed Parking Structure	7,119.00	Space	34.10	2,847,600.00	0
City Park	249.00	Acre	249.00	10,846,440.00	0
Health Club	50.00	1000sqft	0.60	50,000.00	0
Hotel	175.00	Room	3.10	120,000.00	0
Apartments Mid Rise	3,454.00	Dwelling Unit	48.30	3,454,000.00	9878
Regional Shopping Center	100.00	1000sqft	1.20	100,000.00	0
Strip Mall	301.00	1000sqft	3.70	301,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	4.6	Precipitation Freq (Days)	64
Climate Zone	5	Operational Year	2032		
Utility Company	Pacific Gas & Electric Company				

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

CO2 Intensity (lb/MWahr)	286.7	CH4 Intensity (lb/MWahr)	0.029	N2O Intensity (lb/MWahr)	0.006
------------------------------------	-------	------------------------------------	-------	------------------------------------	-------

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Based on construction schedule, assumed start date is 01/01/2018.

CO2 emissions intensity for 2032 based on a 50% RPS for 2030, calculated by averaging CO2 intensity for 2013,2014 and 2015 as the baseline. CH4 and N2O intensity is similar to PG&E.

Land Use - Land uses based on information provided by Client. Total acreage in EIR is 421. Lot acreages have been scaled down accordingly. Acreage for city park remains the same. Assumed zero building area in city parks.

Construction Phase - Zero'ed out construction since this was calculated separately.

Off-road Equipment -

Trips and VMT - Not modifying anything here since construction is modeled separately.

On-road Fugitive Dust - Not modifying anything here since construction is modeled separately.

Demolition -

Grading - Not modifying anything here since construction is modeled separately.

Architectural Coating - Not modifying anything here since construction is modeled separately.

Vehicle Trips - Trip rates calculated based on traffic data from F&P on 3/28/2018. Adjusted total trips are calculated based on CalEEMod default trip generation rates. Trip lengths are from EIR AQ section for Hunters point.

Woodstoves - No wood-stoves in project location. Assuming there are 3454 natural gas fireplaces, that operate for 4 hours a day for 50 days (200 hours/year).

Consumer Products - Consumer product emissions factor for San Francisco.

Energy Use -

Water And Wastewater - Water usage for Hunters Point is based on EIR water usage.

Solid Waste - Solid water disposal rate for Hunter's point is based on EIR disposal rates.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	550.00	0.00
tblConstructionPhase	NumDays	7,750.00	0.00
tblConstructionPhase	NumDays	500.00	0.00
tblConstructionPhase	NumDays	775.00	0.00

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

tblConstructionPhase	NumDays	550.00	0.00
tblConstructionPhase	NumDays	300.00	0.00
tblConsumerProducts	ROG_EF	2.14E-05	1.51E-05
tblFireplaces	FireplaceDayYear	11.14	50.00
tblFireplaces	FireplaceHourDay	3.50	4.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	518.10	3,454.00
tblFireplaces	NumberNoFireplace	138.16	0.00
tblFireplaces	NumberWood	587.18	0.00
tblGrading	AcresOfGrading	0.00	1,937.50
tblLandUse	LandUseSquareFeet	39,798.29	27,857.00
tblLandUse	LandUseSquareFeet	17,460.89	37,142.00
tblLandUse	LandUseSquareFeet	118,972.42	345,000.00
tblLandUse	LandUseSquareFeet	254,100.00	120,000.00
tblLandUse	LotAcreage	5.85	3.10
tblLandUse	LotAcreage	97.91	52.10
tblLandUse	LotAcreage	0.91	0.50
tblLandUse	LotAcreage	0.40	0.20
tblLandUse	LotAcreage	2.73	1.50
tblLandUse	LotAcreage	31.09	16.50
tblLandUse	LotAcreage	13.38	7.10
tblLandUse	LotAcreage	64.07	34.10
tblLandUse	LotAcreage	1.15	0.60
tblLandUse	LotAcreage	5.83	3.10
tblLandUse	LotAcreage	90.89	48.30
tblLandUse	LotAcreage	2.30	1.20
tblLandUse	LotAcreage	6.91	3.70

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

tblProjectCharacteristics	CO2IntensityFactor	641.35	286.7
tblSequestration	NumberOfNewTrees	0.00	5,000.00
tblSolidWaste	SolidWasteGenerationRate	1,588.84	3,379.74
tblSolidWaste	SolidWasteGenerationRate	21.41	22.44
tblSolidWaste	SolidWasteGenerationRate	237.15	238.43
tblSolidWaste	SolidWasteGenerationRate	285.00	46.75
tblSolidWaste	SolidWasteGenerationRate	54.75	54.00
tblSolidWaste	SolidWasteGenerationRate	95.81	161.00
tblSolidWaste	SolidWasteGenerationRate	73.00	72.00
tblSolidWaste	SolidWasteGenerationRate	184.69	182.16
tblSolidWaste	SolidWasteGenerationRate	324.11	4,670.18
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CC_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	CNW_TL	7.30	7.40
tblVehicleTrips	HO_TL	5.70	7.50
tblVehicleTrips	HS_TL	4.80	7.30
tblVehicleTrips	ST_TR	6.39	2.60
tblVehicleTrips	ST_TR	22.75	9.27
tblVehicleTrips	ST_TR	2.46	1.00
tblVehicleTrips	ST_TR	20.87	8.50
tblVehicleTrips	ST_TR	0.61	0.25
tblVehicleTrips	ST_TR	8.19	3.34
tblVehicleTrips	ST_TR	0.42	0.17
tblVehicleTrips	ST_TR	49.97	20.35
tblVehicleTrips	ST_TR	1.90	0.77
tblVehicleTrips	ST_TR	42.04	17.12
tblVehicleTrips	SU_TR	5.86	2.39
tblVehicleTrips	SU_TR	16.74	6.82
tblVehicleTrips	SU_TR	1.05	0.43
tblVehicleTrips	SU_TR	26.73	10.89
tblVehicleTrips	SU_TR	0.25	0.10

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

tblVehicleTrips	SU_TR	5.95	2.42
tblVehicleTrips	SU_TR	0.04	0.00
tblVehicleTrips	SU_TR	25.24	10.28
tblVehicleTrips	SU_TR	1.11	0.45
tblVehicleTrips	SU_TR	20.43	8.32
tblVehicleTrips	WD_TR	6.65	2.71
tblVehicleTrips	WD_TR	1.89	0.77
tblVehicleTrips	WD_TR	11.03	4.49
tblVehicleTrips	WD_TR	32.93	13.41
tblVehicleTrips	WD_TR	1.71	0.70
tblVehicleTrips	WD_TR	8.17	3.33
tblVehicleTrips	WD_TR	1.23	0.50
tblVehicleTrips	WD_TR	1.62	0.66
tblVehicleTrips	WD_TR	42.70	17.39
tblVehicleTrips	WD_TR	8.11	3.30
tblVehicleTrips	WD_TR	44.32	18.05
tblWater	IndoorWaterUseRate	225,042,004.50	64,193,343.00
tblWater	IndoorWaterUseRate	45,322,105.74	4,525,996.00
tblWater	IndoorWaterUseRate	2,957,157.20	2,262,998.00
tblWater	IndoorWaterUseRate	1,321,488.00	1,321,500.00
tblWater	IndoorWaterUseRate	4,439,184.75	4,439,225.00
tblWater	IndoorWaterUseRate	856,440.00	856,400.00
tblWater	IndoorWaterUseRate	2,453,330.88	2,453,088.00
tblWater	IndoorWaterUseRate	7,407,252.15	7,407,300.00
tblWater	IndoorWaterUseRate	2,097,074,684.82	221,054,950.00
tblWater	IndoorWaterUseRate	22,295,828.97	10,898,661.00
tblWater	OutdoorWaterUseRate	141,874,307.18	40,469,374.00

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

tblWater	OutdoorWaterUseRate	296,678,856.07	57,332,268.00
tblWater	OutdoorWaterUseRate	27,778,064.81	2,774,004.00
tblWater	OutdoorWaterUseRate	1,812,451.19	1,387,002.00
tblWater	OutdoorWaterUseRate	3,398,112.00	3,398,100.00
tblWater	OutdoorWaterUseRate	493,242.75	493,325.00
tblWater	OutdoorWaterUseRate	1,339,560.00	1,339,600.00
tblWater	OutdoorWaterUseRate	6,308,565.12	6,308,808.00
tblWater	OutdoorWaterUseRate	4,539,928.74	4,539,900.00
tblWater	OutdoorWaterUseRate	13,665,185.50	6,679,739.00
tblWoodstoves	NumberCatalytic	69.08	0.00
tblWoodstoves	NumberNoncatalytic	69.08	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

[illegible][illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

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	184.6982	79.6883	318.6617	0.5028		7.7638	7.7638		7.7638	7.7638	0.0000	98,042.0003	98,042.0003	2.3689	1.7880	98,634.0326
Energy	4.5949	41.2861	31.5247	0.2506		3.1747	3.1747		3.1747	3.1747		50,126.4517	50,126.4517	0.9608	0.9190	50,424.3281
Mobile	30.1250	137.4525	354.2433	1.5707	182.9812	1.1561	184.1373	49.0627	1.0772	50.1399		160,565.6474	160,565.6474	6.2836		160,722.7363
Total	219.4182	258.4268	704.4297	2.3241	182.9812	12.0945	195.0757	49.0627	12.0157	61.0784	0.0000	308,734.0994	308,734.0994	9.6132	2.7069	309,781.0970

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	184.6982	79.6883	318.6617	0.5028		7.7638	7.7638		7.7638	7.7638	0.0000	98,042.0003	98,042.0003	2.3689	1.7880	98,634.0326
Energy	4.5949	41.2861	31.5247	0.2506		3.1747	3.1747		3.1747	3.1747		50,126.4517	50,126.4517	0.9608	0.9190	50,424.3281
Mobile	30.1250	137.4525	354.2433	1.5707	182.9812	1.1561	184.1373	49.0627	1.0772	50.1399		160,565.6474	160,565.6474	6.2836		160,722.7363
Total	219.4182	258.4268	704.4297	2.3241	182.9812	12.0945	195.0757	49.0627	12.0157	61.0784	0.0000	308,734.0994	308,734.0994	9.6132	2.7069	309,781.0970

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2018	12/31/2017	5	0	
2	Site Preparation	Site Preparation	2/23/2019	2/22/2019	5	0	
3	Grading	Grading	11/2/2019	11/1/2019	5	0	
4	Building Construction	Building Construction	8/14/2021	8/13/2021	5	0	
5	Paving	Paving	6/11/2039	6/10/2039	5	0	
6	Architectural Coating	Architectural Coating	9/15/2040	9/14/2040	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1937.5

Acres of Paving: 57.7

Residential Indoor: 6,994,350; Residential Outdoor: 2,331,450; Non-Residential Indoor: 8,251,499; Non-Residential Outdoor: 2,750,500; Striped Parking Area: 289,440 (Architectural Coating – sqft)

OffRoad Equipment

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

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

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

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	10,887.00	3,839.00	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	2,177.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

[illegible]

3.4 Grading - 2019

Unmitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

3.4 Grading - 2019

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

3.4 Grading - 2019

Mitigated Construction Off-Site

[illegible]

3.5 Building Construction - 2021

Unmitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

3.5 Building Construction - 2021

Mitigated Construction Off-Site

[illegible]

3.6 Paving - 2039

Unmitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

3.6 Paving - 2039

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

3.6 Paving - 2039

Mitigated Construction Off-Site

[illegible]

3.7 Architectural Coating - 2040

Unmitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

3.7 Architectural Coating - 2040

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

3.7 Architectural Coating - 2040**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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**

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	30.1250	137.4525	354.2433	1.5707	182.9812	1.1561	184.1373	49.0627	1.0772	50.1399		160,565.6 474	160,565.6 474	6.2836		160,722.7 363
Unmitigated	30.1250	137.4525	354.2433	1.5707	182.9812	1.1561	184.1373	49.0627	1.0772	50.1399		160,565.6 474	160,565.6 474	6.2836		160,722.7 363

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	9,360.34	8,980.40	8255.06	25,109,480	25,109,480
City Park	191.73	2,308.23	1698.18	1,526,867	1,526,867
Enclosed Parking Structure	0.00	0.00	0.00		
General Office Building	1,144.95	255.00	109.65	2,096,224	2,096,224
Health Club	670.50	425.00	544.50	1,078,243	1,078,243
High School	210.00	75.00	30.00	433,060	433,060
Hotel	582.75	584.50	423.50	1,075,531	1,075,531
Junior College (2Yr)	200.00	68.00	0.00	392,334	392,334
Junior High School	667.92	0.00	0.00	1,075,852	1,075,852
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	1,739.00	2,035.00	1028.00	2,977,164	2,977,164
Research & Development	14,074.50	3,284.05	1919.25	27,284,592	27,284,592
Strip Mall	5,433.05	5,153.12	2504.32	7,744,217	7,744,217
Unenclosed Parking Structure	0.00	0.00	0.00		
Total	34,274.74	23,168.30	16,512.46	70,793,563	70,793,563

4.3 Trip Type Information

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

Land Use	Miles			Trip %			Trip Purpose %		
	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 Mid Rise	10.80	7.30	7.50	31.00	15.00	54.00	86	11	3
City Park	9.50	7.40	7.40	33.00	48.00	19.00	66	28	6
Enclosed Parking Structure	9.50	7.40	7.40	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.40	7.40	33.00	48.00	19.00	77	19	4
Health Club	9.50	7.40	7.40	16.90	64.10	19.00	52	39	9
High School	9.50	7.40	7.40	77.80	17.20	5.00	75	19	6
Hotel	9.50	7.40	7.40	19.40	61.60	19.00	58	38	4
Junior College (2Yr)	9.50	7.40	7.40	6.40	88.60	5.00	92	7	1
Junior High School	9.50	7.40	7.40	72.80	22.20	5.00	63	25	12
Parking Lot	9.50	7.40	7.40	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.40	7.40	16.30	64.70	19.00	54	35	11
Research & Development	9.50	7.40	7.40	33.00	48.00	19.00	82	15	3
Strip Mall	9.50	7.40	7.40	16.60	64.40	19.00	45	40	15
Unenclosed Parking Structure	9.50	7.40	7.40	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
City Park	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Enclosed Parking Structure	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
General Office Building	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Health Club	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
High School	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Hotel	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Junior College (2Yr)	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Junior High School	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Parking Lot	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Regional Shopping Center	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Research & Development	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Strip Mall	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Unenclosed Parking Structure	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	4.5949	41.2861	31.5247	0.2506		3.1747	3.1747		3.1747	3.1747		50,126.4517	50,126.4517	0.9608	0.9190	50,424.3281
NaturalGas Unmitigated	4.5949	41.2861	31.5247	0.2506		3.1747	3.1747		3.1747	3.1747		50,126.4517	50,126.4517	0.9608	0.9190	50,424.3281

5.2 Energy by Land Use - NaturalGas

Unmitigated

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

	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 Mid Rise	82616.2	0.8910	7.6137	3.2399	0.0486		0.6156	0.6156		0.6156	0.6156		9,719.5504	9,719.5504	0.1863	0.1782	9,777.3089
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	13504.5	0.1456	1.3240	1.1121	7.9400e-003		0.1006	0.1006		0.1006	0.1006		1,588.7671	1,588.7671	0.0305	0.0291	1,598.2084
Health Club	3390.41	0.0366	0.3324	0.2792	1.9900e-003		0.0253	0.0253		0.0253	0.0253		398.8719	398.8719	7.6500e-003	7.3100e-003	401.2422
High School	1257	0.0136	0.1232	0.1035	7.4000e-004		9.3700e-003	9.3700e-003		9.3700e-003	9.3700e-003		147.8823	147.8823	2.8300e-003	2.7100e-003	148.7611
Hotel	12003.3	0.1295	1.1768	0.9885	7.0600e-003		0.0894	0.0894		0.0894	0.0894		1,412.1515	1,412.1515	0.0271	0.0259	1,420.5432
Junior College (2Yr)	3480.15	0.0375	0.3412	0.2866	2.0500e-003		0.0259	0.0259		0.0259	0.0259		409.4299	409.4299	7.8500e-003	7.5100e-003	411.8630
Junior High School	15567.5	0.1679	1.5262	1.2820	9.1600e-003		0.1160	0.1160		0.1160	0.1160		1,831.4746	1,831.4746	0.0351	0.0336	1,842.3582
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1260.27	0.0136	0.1236	0.1038	7.4000e-004		9.3900e-003	9.3900e-003		9.3900e-003	9.3900e-003		148.2675	148.2675	2.8400e-003	2.7200e-003	149.1486
Research & Development	289202	3.1189	28.3531	23.8166	0.1701		2.1548	2.1548		2.1548	2.1548		34,023.7712	34,023.7712	0.6521	0.6238	34,225.9574
Strip Mall	3793.42	0.0409	0.3719	0.3124	2.2300e-003		0.0283	0.0283		0.0283	0.0283		446.2853	446.2853	8.5500e-003	8.1800e-003	448.9373
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		4.5949	41.2861	31.5247	0.2506		3.1747	3.1747		3.1747	3.1747		50,126.4517	50,126.4517	0.9608	0.9190	50,424.3281

5.2 Energy by Land Use - NaturalGas

Mitigated

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

	Natural Gas 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 Mid Rise	82.6162	0.8910	7.6137	3.2399	0.0486		0.6156	0.6156		0.6156	0.6156		9,719.5504	9,719.5504	0.1863	0.1782	9,777.3089
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	13.5045	0.1456	1.3240	1.1121	7.9400e-003		0.1006	0.1006		0.1006	0.1006		1,588.7671	1,588.7671	0.0305	0.0291	1,598.2084
Health Club	3.39041	0.0366	0.3324	0.2792	1.9900e-003		0.0253	0.0253		0.0253	0.0253		398.8719	398.8719	7.6500e-003	7.3100e-003	401.2422
High School	1.257	0.0136	0.1232	0.1035	7.4000e-004		9.3700e-003	9.3700e-003		9.3700e-003	9.3700e-003		147.8823	147.8823	2.8300e-003	2.7100e-003	148.7611
Hotel	12.0033	0.1295	1.1768	0.9885	7.0600e-003		0.0894	0.0894		0.0894	0.0894		1,412.1515	1,412.1515	0.0271	0.0259	1,420.5432
Junior College (2Yr)	3.48015	0.0375	0.3412	0.2866	2.0500e-003		0.0259	0.0259		0.0259	0.0259		409.4299	409.4299	7.8500e-003	7.5100e-003	411.8630
Junior High School	15.5675	0.1679	1.5262	1.2820	9.1600e-003		0.1160	0.1160		0.1160	0.1160		1,831.4746	1,831.4746	0.0351	0.0336	1,842.3582
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.26027	0.0136	0.1236	0.1038	7.4000e-004		9.3900e-003	9.3900e-003		9.3900e-003	9.3900e-003		148.2675	148.2675	2.8400e-003	2.7200e-003	149.1486
Research & Development	289.202	3.1189	28.3531	23.8166	0.1701		2.1548	2.1548		2.1548	2.1548		34,023.7712	34,023.7712	0.6521	0.6238	34,225.9574
Strip Mall	3.79342	0.0409	0.3719	0.3124	2.2300e-003		0.0283	0.0283		0.0283	0.0283		446.2853	446.2853	8.5500e-003	8.1800e-003	448.9373
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		4.5949	41.2861	31.5247	0.2506		3.1747	3.1747		3.1747	3.1747		50,126.4517	50,126.4517	0.9608	0.9190	50,424.3281

6.0 Area Detail

6.1 Mitigation Measures Area

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	184.6982	79.6883	318.6617	0.5028		7.7638	7.7638		7.7638	7.7638	0.0000	98,042.00 03	98,042.00 03	2.3689	1.7880	98,634.03 26
Unmitigated	184.6982	79.6883	318.6617	0.5028		7.7638	7.7638		7.7638	7.7638	0.0000	98,042.00 03	98,042.00 03	2.3689	1.7880	98,634.03 26

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	29.5915					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	137.4880					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	8.9398	76.3944	32.5082	0.4876		6.1766	6.1766		6.1766	6.1766	0.0000	97,524.70 59	97,524.70 59	1.8692	1.7880	98,104.24 65
Landscaping	8.6790	3.2939	286.1535	0.0152		1.5872	1.5872		1.5872	1.5872		517.2944	517.2944	0.4997		529.7862
Total	184.6982	79.6883	318.6617	0.5028		7.7637	7.7637		7.7637	7.7637	0.0000	98,042.00 03	98,042.00 03	2.3689	1.7880	98,634.03 26

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

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	29.5915					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	137.4880					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	8.9398	76.3944	32.5082	0.4876		6.1766	6.1766		6.1766	6.1766	0.0000	97,524.7059	97,524.7059	1.8692	1.7880	98,104.2465
Landscaping	8.6790	3.2939	286.1535	0.0152		1.5872	1.5872		1.5872	1.5872		517.2944	517.2944	0.4997		529.7862
Total	184.6982	79.6883	318.6617	0.5028		7.7637	7.7637		7.7637	7.7637	0.0000	98,042.0003	98,042.0003	2.3689	1.7880	98,634.0326

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

Hunters Point Shipyard Phase II - Operational - CAP Analysis - San Francisco County, Winter

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

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

Candlestick Point - Operational - GHG Analysis

San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	150.00	1000sqft	1.70	150,000.00	0
Enclosed Parking Structure	7,218.00	Space	32.06	2,887,200.00	0
Parking Lot	1,360.00	Space	6.04	544,000.00	0
Unenclosed Parking Structure	2,189.00	Space	9.72	875,600.00	0
Arena	75.00	1000sqft	11.90	75,000.00	0
City Park	112.40	Acre	112.40	4,896,144.00	0
Health Club	50.00	1000sqft	0.57	50,000.00	0
Hotel	220.00	Room	3.62	150,000.00	0
Apartments Mid Rise	7,218.00	Dwelling Unit	93.75	7,218,000.00	20643
Regional Shopping Center	635.00	1000sqft	7.82	635,000.00	0
Strip Mall	125.00	1000sqft	1.42	125,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	4.6	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2032
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	286.7	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

Project Characteristics - Assumed construction start date is 01/01/2018.

CO2 emissions intensity for 2032 based on a 50% RPS for 2030, calculated by averaging CO2 intensity for 2013, 2014 and 2015 as the baseline.

CH4 and N2O intensity is similar to PG&E.

Land Use - Land uses based on information provided by Client. Total acreage in EIR is 281. Lot acreages have been scaled down accordingly. Acreage for city park remains the same. Assumed zero building area in city parks.

Construction Phase - Zero'ed out construction since this was calculated separately.

Trips and VMT - Not modifying anything here since construction is modeled separately.

On-road Fugitive Dust - Not modifying anything here since construction is modeled separately.

Demolition - Not modifying anything here since construction is modeled separately.

Grading - Not modifying anything here since construction is modeled separately.

Architectural Coating - Not modifying anything here since construction is modeled separately.

Vehicle Trips - Trip rates calculated based on study by F&P. Adjusted total trips are calculated based on CalEEMod default trip generation rates. Trip lengths are from EIR AQ section for Candlestick point.

Woodstoves - No wood-stoves in project location. Assuming there are 7218 natural gas fireplaces, that operate for 4 hours a day for 50 days (200 hours/year).

Consumer Products - ROG emissions factor for consumer products is for the city of San Francisco

Energy Use -

Water And Wastewater - Total water usage is based on EIR for Candlestick point. Indoor and outdoor water usage is calculated based on CalEEMOD ratio.

Solid Waste - Solid waste generation rate is based on EIR waste disposal rate for Candlestick point.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	330.00	0.00
tblConstructionPhase	NumDays	4,650.00	0.00
tblConstructionPhase	NumDays	300.00	0.00
tblConstructionPhase	NumDays	465.00	0.00
tblConstructionPhase	NumDays	330.00	0.00
tblConstructionPhase	NumDays	180.00	0.00
tblConsumerProducts	ROG_EF	2.14E-05	1.51E-05
tblFireplaces	FireplaceDayYear	11.14	50.00
tblFireplaces	FireplaceHourDay	3.50	4.00

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	1,082.70	7,218.00
tblFireplaces	NumberNoFireplace	288.72	0.00
tblFireplaces	NumberWood	1,227.06	0.00
tblGrading	AcresOfGrading	0.00	1,162.50
tblLandUse	LandUseSquareFeet	319,440.00	150,000.00
tblLandUse	LotAcreage	3.44	1.70
tblLandUse	LotAcreage	64.96	32.06
tblLandUse	LotAcreage	12.24	6.04
tblLandUse	LotAcreage	19.70	9.72
tblLandUse	LotAcreage	24.11	11.90
tblLandUse	LotAcreage	1.15	0.57
tblLandUse	LotAcreage	7.33	3.62
tblLandUse	LotAcreage	189.95	93.75
tblLandUse	LotAcreage	14.58	7.82
tblLandUse	LotAcreage	2.87	1.42
tblProjectCharacteristics	CO2IntensityFactor	641.35	286.7
tblSequestration	NumberOfNewTrees	0.00	5,000.00
tblSolidWaste	SolidWasteGenerationRate	3,320.28	7,062.81
tblSolidWaste	SolidWasteGenerationRate	2.06	645.00
tblSolidWaste	SolidWasteGenerationRate	9.67	10.12
tblSolidWaste	SolidWasteGenerationRate	285.00	46.75
tblSolidWaste	SolidWasteGenerationRate	120.45	202.40
tblSolidWaste	SolidWasteGenerationRate	11.40	164.25
tblVehicleTrips	CC_TL	7.30	9.10
tblVehicleTrips	CC_TL	7.30	9.50
tblVehicleTrips	CC_TL	7.30	9.50

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

[illegible]

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

tblVehicleTrips	HO_TL	5.70	9.10
tblVehicleTrips	HS_TL	4.80	9.50
tblVehicleTrips	HW_TL	10.80	14.90
tblVehicleTrips	ST_TR	6.39	2.64
tblVehicleTrips	ST_TR	10.71	4.43
tblVehicleTrips	ST_TR	22.75	9.42
tblVehicleTrips	ST_TR	20.87	0.46
tblVehicleTrips	ST_TR	8.19	3.39
tblVehicleTrips	ST_TR	49.97	20.68
tblVehicleTrips	ST_TR	1.90	0.79
tblVehicleTrips	ST_TR	42.04	17.40
tblVehicleTrips	SU_TR	5.86	2.43
tblVehicleTrips	SU_TR	10.71	4.43
tblVehicleTrips	SU_TR	16.74	6.93
tblVehicleTrips	SU_TR	26.73	11.06
tblVehicleTrips	SU_TR	5.95	2.46
tblVehicleTrips	SU_TR	25.24	10.45
tblVehicleTrips	SU_TR	1.11	0.46
tblVehicleTrips	SU_TR	20.43	8.46
tblVehicleTrips	WD_TR	6.65	2.75
tblVehicleTrips	WD_TR	10.71	4.43
tblVehicleTrips	WD_TR	1.89	0.78
tblVehicleTrips	WD_TR	32.93	13.63
tblVehicleTrips	WD_TR	8.17	3.38
tblVehicleTrips	WD_TR	42.70	17.67
tblVehicleTrips	WD_TR	8.11	3.36
tblVehicleTrips	WD_TR	44.32	18.34

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

tblWater	IndoorWaterUseRate	470,281,756.94	125,564,800.00
tblWater	IndoorWaterUseRate	32,307,758.82	3,431,000.00
tblWater	IndoorWaterUseRate	2,957,157.20	2,262,998.00
tblWater	IndoorWaterUseRate	5,580,689.40	16,424,741.00
tblWater	IndoorWaterUseRate	47,036,051.14	18,104,088.00
tblWater	IndoorWaterUseRate	73,754,092.08	7,774,500.00
tblWater	IndoorWaterUseRate	9,259,065.19	7,081,023.00
tblWater	OutdoorWaterUseRate	296,481,977.20	79,159,747.00
tblWater	OutdoorWaterUseRate	2,062,197.37	219,000.00
tblWater	OutdoorWaterUseRate	133,922,503.70	19,573,473.00
tblWater	OutdoorWaterUseRate	1,812,451.19	1,387,002.00
tblWater	OutdoorWaterUseRate	620,076.60	1,825,259.00
tblWater	OutdoorWaterUseRate	28,828,547.47	11,095,912.00
tblWater	OutdoorWaterUseRate	5,674,910.92	218,977.00
tblWoodstoves	NumberCatalytic	144.36	0.00
tblWoodstoves	NumberNoncatalytic	144.36	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00

2.0 Emissions Summary

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

2.1 Overall Construction

Unmitigated Construction

[illegible]

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

2.1 Overall Construction**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2039	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	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	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

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	31.3458	4.6083	55.2621	0.0283		0.6203	0.6203		0.6203	0.6203	0.0000	4,709.922 1	4,709.922 1	0.1726	0.0847	4,739.488 5
Energy	0.4249	3.6772	1.8853	0.0232		0.2936	0.2936		0.2936	0.2936	0.0000	11,986.266 8	11,986.266 8	0.8677	0.2399	12,079.46 04
Mobile	5.8475	26.4061	72.3049	0.3464	39.1447	0.2492	39.3939	10.5303	0.2323	10.7626	0.0000	32,122.71 89	32,122.71 89	1.2135	0.0000	32,153.05 70
Waste						0.0000	0.0000		0.0000	0.0000	1,812.573 3	0.0000	1,812.573 3	107.1200	0.0000	4,490.573 6
Water						0.0000	0.0000		0.0000	0.0000	57.3097	178.7647	236.0744	5.9043	0.1427	426.2161
Total	37.6181	34.6916	129.4524	0.3979	39.1447	1.1631	40.3078	10.5303	1.1462	11.6765	1,869.883 0	48,997.67 25	50,867.55 55	115.2781	0.4674	53,888.79 55

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

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	31.3458	4.6083	55.2621	0.0283		0.6203	0.6203		0.6203	0.6203	0.0000	4,709.9221	4,709.9221	0.1726	0.0847	4,739.4885
Energy	0.4249	3.6772	1.8853	0.0232		0.2936	0.2936		0.2936	0.2936	0.0000	11,986.2668	11,986.2668	0.8677	0.2399	12,079.4604
Mobile	5.8475	26.4061	72.3049	0.3464	39.1447	0.2492	39.3939	10.5303	0.2323	10.7626	0.0000	32,122.7189	32,122.7189	1.2135	0.0000	32,153.0570
Waste						0.0000	0.0000		0.0000	0.0000	1,812.5733	0.0000	1,812.5733	107.1200	0.0000	4,490.5736
Water						0.0000	0.0000		0.0000	0.0000	57.3097	178.7647	236.0744	5.9043	0.1427	426.2161
Total	37.6181	34.6916	129.4524	0.3979	39.1447	1.1631	40.3078	10.5303	1.1462	11.6765	1,869.8830	48,997.6725	50,867.5555	115.2781	0.4674	53,888.7955

[illegible]

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

2.3 Vegetation**Vegetation**

	CO2e
Category	MT
New Trees	3,670.000 0
Total	3,670.000 0

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	1/1/2018	12/31/2017	5	0	
2	Site Preparation	Site Preparation	2/23/2019	2/22/2019	5	0	
3	Grading	Grading	11/2/2019	11/1/2019	5	0	
4	Building Construction	Building Construction	8/14/2021	8/13/2021	5	0	
5	Paving	Paving	6/11/2039	6/10/2039	5	0	
6	Architectural Coating	Architectural Coating	9/15/2040	9/14/2040	5	0	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 1162.5****Acres of Paving: 47.82**

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

Residential Indoor: 14,616,450; Residential Outdoor: 4,872,150; Non-Residential Indoor: 1,777,500; Non-Residential Outdoor: 592,500; Striped Parking Area: 258,408 (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
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

Candlestick Point - Operational - GHG Analysis - San Francisco 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	9,469.00	2,474.00	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	1,894.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

[illegible]

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

[illegible]

3.4 Grading - 2019

Unmitigated Construction On-Site

[illegible]

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

3.4 Grading - 2019

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

3.4 Grading - 2019

Mitigated Construction Off-Site

[illegible]

3.5 Building Construction - 2021

Unmitigated Construction On-Site

[illegible]

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

3.5 Building Construction - 2021

Mitigated Construction Off-Site

[illegible]

3.6 Paving - 2039

Unmitigated Construction On-Site

[illegible]

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

3.6 Paving - 2039

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

3.6 Paving - 2039

Mitigated Construction Off-Site

[illegible]

3.7 Architectural Coating - 2040

Unmitigated Construction On-Site

[illegible]

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

3.7 Architectural Coating - 2040

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

3.7 Architectural Coating - 2040**Mitigated Construction Off-Site**

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

Candlestick Point - Operational - GHG Analysis - 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					
Mitigated	5.8475	26.4061	72.3049	0.3464	39.1447	0.2492	39.3939	10.5303	0.2323	10.7626	0.0000	32,122.71 89	32,122.71 89	1.2135	0.0000	32,153.05 70
Unmitigated	5.8475	26.4061	72.3049	0.3464	39.1447	0.2492	39.3939	10.5303	0.2323	10.7626	0.0000	32,122.71 89	32,122.71 89	1.2135	0.0000	32,153.05 70

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	19,849.50	19,055.52	17539.74	68,718,465	68,718,465
Arena	332.25	332.25	332.25	804,123	804,123
City Park	87.67	1,058.81	778.93	968,917	968,917
Enclosed Parking Structure	0.00	0.00	0.00		
Health Club	681.50	23.00	553.00	1,324,021	1,324,021
Hotel	743.60	745.80	541.20	1,840,645	1,840,645
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	11,220.45	13,131.80	6635.75	25,552,800	25,552,800
Research & Development	504.00	118.50	69.00	1,353,294	1,353,294
Strip Mall	2,292.50	2,175.00	1057.50	4,348,889	4,348,889
Unenclosed Parking Structure	0.00	0.00	0.00		
Total	35,711.47	36,640.68	27,507.37	104,911,153	104,911,153

4.3 Trip Type Information

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

Land Use	Miles			Trip %			Trip Purpose %		
	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 Mid Rise	14.90	9.50	9.10	31.00	15.00	54.00	86	11	3
Arena	14.90	9.10	9.10	0.00	81.00	19.00	66	28	6
City Park	14.90	9.50	9.10	33.00	48.00	19.00	66	28	6
Enclosed Parking Structure	14.90	9.50	9.10	0.00	0.00	0.00	0	0	0
Health Club	14.90	9.50	9.10	16.90	64.10	19.00	52	39	9
Hotel	14.90	9.50	9.10	19.40	61.60	19.00	58	38	4
Parking Lot	14.90	9.50	9.10	0.00	0.00	0.00	0	0	0
Regional Shopping Center	14.90	9.50	9.10	16.30	64.70	19.00	54	35	11
Research & Development	14.90	9.50	9.10	33.00	48.00	19.00	82	15	3
Strip Mall	14.90	9.50	9.10	16.60	64.40	19.00	45	40	15
Unenclosed Parking Structure	14.90	9.50	9.10	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Arena	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
City Park	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Enclosed Parking Structure	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Health Club	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Hotel	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Parking Lot	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Regional Shopping Center	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Research & Development	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Strip Mall	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Unenclosed Parking Structure	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615

5.0 Energy Detail

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

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	7,781.4658	7,781.4658	0.7871	0.1629	7,849.6724
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	7,781.4658	7,781.4658	0.7871	0.1629	7,849.6724
NaturalGas Mitigated	0.4249	3.6772	1.8853	0.0232		0.2936	0.2936		0.2936	0.2936	0.0000	4,204.8009	4,204.8009	0.0806	0.0771	4,229.7880
NaturalGas Unmitigated	0.4249	3.6772	1.8853	0.0232		0.2936	0.2936		0.2936	0.2936	0.0000	4,204.8009	4,204.8009	0.0806	0.0771	4,229.7880

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

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 Mid Rise	6.30162e+007	0.3398	2.9037	1.2356	0.0185		0.2348	0.2348		0.2348	0.2348	0.0000	3,362.7868	3,362.7868	0.0645	0.0617	3,382.7701
Arena	1.85625e+006	0.0100	0.0910	0.0764	5.5000e-004		6.9200e-003	6.9200e-003		6.9200e-003	6.9200e-003	0.0000	99.0566	99.0566	1.9000e-003	1.8200e-003	99.6452
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Health Club	1.2375e+006	6.6700e-003	0.0607	0.0510	3.6000e-004		4.6100e-003	4.6100e-003		4.6100e-003	4.6100e-003	0.0000	66.0377	66.0377	1.2700e-003	1.2100e-003	66.4301
Hotel	5.4765e+006	0.0295	0.2685	0.2255	1.6100e-003		0.0204	0.0204		0.0204	0.0204	0.0000	292.2469	292.2469	5.6000e-003	5.3600e-003	293.9836
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2.921e+006	0.0158	0.1432	0.1203	8.6000e-004		0.0109	0.0109		0.0109	0.0109	0.0000	155.8757	155.8757	2.9900e-003	2.8600e-003	156.8020
Research & Development	3.7125e+006	0.0200	0.1820	0.1529	1.0900e-003		0.0138	0.0138		0.0138	0.0138	0.0000	198.1131	198.1131	3.8000e-003	3.6300e-003	199.2904
Strip Mall	575000	3.1000e-003	0.0282	0.0237	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003	0.0000	30.6842	30.6842	5.9000e-004	5.6000e-004	30.8665
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.4249	3.6772	1.8853	0.0232		0.2936	0.2936		0.2936	0.2936	0.0000	4,204.8009	4,204.8009	0.0806	0.0771	4,229.7880

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

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 Mid Rise	6.30162e+007	0.3398	2.9037	1.2356	0.0185		0.2348	0.2348		0.2348	0.2348	0.0000	3,362.7868	3,362.7868	0.0645	0.0617	3,382.7701
Arena	1.85625e+006	0.0100	0.0910	0.0764	5.5000e-004		6.9200e-003	6.9200e-003		6.9200e-003	6.9200e-003	0.0000	99.0566	99.0566	1.9000e-003	1.8200e-003	99.6452
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Health Club	1.2375e+006	6.6700e-003	0.0607	0.0510	3.6000e-004		4.6100e-003	4.6100e-003		4.6100e-003	4.6100e-003	0.0000	66.0377	66.0377	1.2700e-003	1.2100e-003	66.4301
Hotel	5.4765e+006	0.0295	0.2685	0.2255	1.6100e-003		0.0204	0.0204		0.0204	0.0204	0.0000	292.2469	292.2469	5.6000e-003	5.3600e-003	293.9836
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2.921e+006	0.0158	0.1432	0.1203	8.6000e-004		0.0109	0.0109		0.0109	0.0109	0.0000	155.8757	155.8757	2.9900e-003	2.8600e-003	156.8020
Research & Development	3.7125e+006	0.0200	0.1820	0.1529	1.0900e-003		0.0138	0.0138		0.0138	0.0138	0.0000	198.1131	198.1131	3.8000e-003	3.6300e-003	199.2904
Strip Mall	575000	3.1000e-003	0.0282	0.0237	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003	0.0000	30.6842	30.6842	5.9000e-004	5.6000e-004	30.8665
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.4249	3.6772	1.8853	0.0232		0.2936	0.2936		0.2936	0.2936	0.0000	4,204.8009	4,204.8009	0.0806	0.0771	4,229.7880

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	3.04743e+007	3,963.0314	0.4009	0.0829	3,997.7684
Arena	567000	73.7355	7.4600e-003	1.5400e-003	74.3818
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking Structure	1.63704e+007	2,128.8907	0.2153	0.0446	2,147.5510
Health Club	378000	49.1570	4.9700e-003	1.0300e-003	49.5879
Hotel	1.2255e+006	159.3701	0.0161	3.3400e-003	160.7670
Parking Lot	190400	24.7606	2.5000e-003	5.2000e-004	24.9776
Regional Shopping Center	6.6548e+006	865.4230	0.0875	0.0181	873.0087
Research & Development	1.134e+006	147.4710	0.0149	3.0900e-003	148.7636
Strip Mall	1.31e+006	170.3589	0.0172	3.5700e-003	171.8521
Unenclosed Parking Structure	1.5323e+006	199.2679	0.0202	4.1700e-003	201.0145
Total		7,781.4658	0.7871	0.1629	7,849.6724

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	3.04743e+007	3,963.0314	0.4009	0.0829	3,997.7684
Arena	567000	73.7355	7.4600e-003	1.5400e-003	74.3818
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking Structure	1.63704e+007	2,128.8907	0.2153	0.0446	2,147.5510
Health Club	378000	49.1570	4.9700e-003	1.0300e-003	49.5879
Hotel	1.2255e+006	159.3701	0.0161	3.3400e-003	160.7670
Parking Lot	190400	24.7606	2.5000e-003	5.2000e-004	24.9776
Regional Shopping Center	6.6548e+006	865.4230	0.0875	0.0181	873.0087
Research & Development	1.134e+006	147.4710	0.0149	3.0900e-003	148.7636
Strip Mall	1.31e+006	170.3589	0.0172	3.5700e-003	171.8521
Unenclosed Parking Structure	1.5323e+006	199.2679	0.0202	4.1700e-003	201.0145
Total		7,781.4658	0.7871	0.1629	7,849.6724

6.0 Area Detail**6.1 Mitigation Measures Area**

Candlestick Point - Operational - GHG Analysis - 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					
Mitigated	31.3458	4.6083	55.2621	0.0283		0.6203	0.6203		0.6203	0.6203	0.0000	4,709.922 1	4,709.922 1	0.1726	0.0847	4,739.488 5
Unmitigated	31.3458	4.6083	55.2621	0.0283		0.6203	0.6203		0.6203	0.6203	0.0000	4,709.922 1	4,709.922 1	0.1726	0.0847	4,739.488 5

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	5.7888					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	23.4810					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.4671	3.9911	1.6984	0.0255		0.3227	0.3227		0.3227	0.3227	0.0000	4,622.159 6	4,622.159 6	0.0886	0.0847	4,649.626 8
Landscaping	1.6090	0.6172	53.5638	2.8400e-003		0.2976	0.2976		0.2976	0.2976	0.0000	87.7625	87.7625	0.0840	0.0000	89.8617
Total	31.3458	4.6083	55.2621	0.0283		0.6203	0.6203		0.6203	0.6203	0.0000	4,709.922 1	4,709.922 1	0.1726	0.0847	4,739.488 5

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

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	5.7888					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	23.4810					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.4671	3.9911	1.6984	0.0255		0.3227	0.3227		0.3227	0.3227	0.0000	4,622.1596	4,622.1596	0.0886	0.0847	4,649.6268
Landscaping	1.6090	0.6172	53.5638	2.8400e-003		0.2976	0.2976		0.2976	0.2976	0.0000	87.7625	87.7625	0.0840	0.0000	89.8617
Total	31.3458	4.6083	55.2621	0.0283		0.6203	0.6203		0.6203	0.6203	0.0000	4,709.9221	4,709.9221	0.1726	0.0847	4,739.4885

7.0 Water Detail**7.1 Mitigation Measures Water**

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	236.0744	5.9043	0.1427	426.2161
Unmitigated	236.0744	5.9043	0.1427	426.2161

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	125.565 / 79.1597	164.2226	4.1041	0.0992	296.3909
Arena	3.431 / 0.219	3.6025	0.1121	2.6900e-003	7.2062
City Park	0 / 19.5735	8.9090	9.0000e-004	1.9000e-004	8.9871
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Health Club	2.263 / 1.387	2.9417	0.0740	1.7900e-003	5.3235
Hotel	16.4247 / 1.82526	17.5992	0.5365	0.0129	34.8537
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	18.1041 / 11.0959	23.5333	0.5917	0.0143	42.5883
Research & Development	7.7745 / 0	7.9372	0.2539	6.1000e-003	16.1010
Strip Mall	7.08102 / 0.218977	7.3289	0.2313	5.5500e-003	14.7654
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		236.0744	5.9043	0.1427	426.2161

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	125.565 / 79.1597	164.2226	4.1041	0.0992	296.3909
Arena	3.431 / 0.219	3.6025	0.1121	2.6900e-003	7.2062
City Park	0 / 19.5735	8.9090	9.0000e-004	1.9000e-004	8.9871
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Health Club	2.263 / 1.387	2.9417	0.0740	1.7900e-003	5.3235
Hotel	16.4247 / 1.82526	17.5992	0.5365	0.0129	34.8537
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	18.1041 / 11.0959	23.5333	0.5917	0.0143	42.5883
Research & Development	7.7745 / 0	7.9372	0.2539	6.1000e-003	16.1010
Strip Mall	7.08102 / 0.218977	7.3289	0.2313	5.5500e-003	14.7654
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		236.0744	5.9043	0.1427	426.2161

8.0 Waste Detail**8.1 Mitigation Measures Waste**

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1,812.573 3	107.1200	0.0000	4,490.573 6
Unmitigated	1,812.573 3	107.1200	0.0000	4,490.573 6

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	7062.81	1,433.6866	84.7285	0.0000	3,551.8979
Arena	645	130.9292	7.7377	0.0000	324.3715
City Park	10.12	2.0543	0.1214	0.0000	5.0894
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Health Club	46.75	9.4898	0.5608	0.0000	23.5107
Hotel	202.4	41.0854	2.4281	0.0000	101.7873
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	666.75	135.3442	7.9986	0.0000	335.3096
Research & Development	164.25	33.3413	1.9704	0.0000	82.6016
Strip Mall	131.25	26.6426	1.5745	0.0000	66.0058
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Total		1,812.5733	107.1200	0.0000	4,490.5736

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	7062.81	1,433.6866	84.7285	0.0000	3,551.8979
Arena	645	130.9292	7.7377	0.0000	324.3715
City Park	10.12	2.0543	0.1214	0.0000	5.0894
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Health Club	46.75	9.4898	0.5608	0.0000	23.5107
Hotel	202.4	41.0854	2.4281	0.0000	101.7873
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	666.75	135.3442	7.9986	0.0000	335.3096
Research & Development	164.25	33.3413	1.9704	0.0000	82.6016
Strip Mall	131.25	26.6426	1.5745	0.0000	66.0058
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Total		1,812.5733	107.1200	0.0000	4,490.5736

9.0 Operational Offroad

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

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

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

Candlestick Point - Operational - GHG Analysis - San Francisco County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	3,670.000 0	0.0000	0.0000	3,670.000 0

11.2 Net New Trees**Species Class**

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Mixed Hardwood	5000	3,670.000 0	0.0000	0.0000	3,670.000 0
Total		3,670.000 0	0.0000	0.0000	3,670.000 0

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

Hunters Point Shipyard Phase II - Operational - GHG Analysis

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	255.00	1000sqft	3.10	255,000.00	0
Research & Development	4,265.00	1000sqft	52.10	4,265,000.00	0
High School	300.00	Student	0.50	27,857.00	0
Junior College (2Yr)	400.00	Student	0.20	37,142.00	0
Junior High School	1,012.00	Student	1.50	345,000.00	0
Enclosed Parking Structure	3,454.00	Space	16.50	1,381,600.00	0
Parking Lot	1,487.00	Space	7.10	594,800.00	0
Unenclosed Parking Structure	7,119.00	Space	34.10	2,847,600.00	0
City Park	249.00	Acre	249.00	10,846,440.00	0
Health Club	50.00	1000sqft	0.60	50,000.00	0
Hotel	175.00	Room	3.10	120,000.00	0
Apartments Mid Rise	3,454.00	Dwelling Unit	48.30	3,454,000.00	9878
Regional Shopping Center	100.00	1000sqft	1.20	100,000.00	0
Strip Mall	301.00	1000sqft	3.70	301,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	4.6	Precipitation Freq (Days)	64
Climate Zone	5	Operational Year		2032	
Utility Company	Pacific Gas & Electric Company				

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

CO2 Intensity (lb/MWhr)	286.7	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006
-----------------------------------	-------	-----------------------------------	-------	-----------------------------------	-------

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Based on construction schedule, assumed start date is 01/01/2018.

CO2 emissions intensity for 2032 based on a 50% RPS for 2030, calculated by averaging CO2 intensity for 2013,2014 and 2015 as the baseline. CH4 and N2O intensity is similar to PG&E.

Land Use - Land uses based on information provided by Client. Total acreage in EIR is 421. Lot acreages have been scaled down accordingly. Acreage for city park remains the same. Assumed zero building area in city parks.

Construction Phase - Zero'ed out construction since this was calculated separately.

Off-road Equipment -

Trips and VMT - Not modifying anything here since construction is modeled separately.

On-road Fugitive Dust - Not modifying anything here since construction is modeled separately.

Demolition -

Grading - Not modifying anything here since construction is modeled separately.

Architectural Coating - Not modifying anything here since construction is modeled separately.

Vehicle Trips - Trip rates provided by F&P on 3/28/2018. Adjusted total trips are calculated based on CalEEMod default trip generation rates. Trip lengths are from EIR GHG section for Hunters point.

Woodstoves - No wood-stoves in project location. Assuming there are 3454 natural gas fireplaces, that operate for 4 hours a day for 50 days (200 hours/year).

Consumer Products - Consumer product emissions factor for San Francisco.

Energy Use -

Water And Wastewater - Water usage for Hunters Point is based on EIR water usage.

Solid Waste - Solid water disposal rate for Hunter's point is based on EIR disposal rates.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	550.00	0.00
tblConstructionPhase	NumDays	7,750.00	0.00
tblConstructionPhase	NumDays	500.00	0.00
tblConstructionPhase	NumDays	775.00	0.00
tblConstructionPhase	NumDays	550.00	0.00

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

tblConstructionPhase	NumDays	300.00	0.00
tblConsumerProducts	ROG_EF	2.14E-05	1.51E-05
tblFireplaces	FireplaceDayYear	11.14	50.00
tblFireplaces	FireplaceHourDay	3.50	4.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	518.10	3,454.00
tblFireplaces	NumberNoFireplace	138.16	0.00
tblFireplaces	NumberWood	587.18	0.00
tblGrading	AcresOfGrading	0.00	1,937.50
tblLandUse	LandUseSquareFeet	39,798.29	27,857.00
tblLandUse	LandUseSquareFeet	17,460.89	37,142.00
tblLandUse	LandUseSquareFeet	118,972.42	345,000.00
tblLandUse	LandUseSquareFeet	254,100.00	120,000.00
tblLandUse	LotAcreage	5.85	3.10
tblLandUse	LotAcreage	97.91	52.10
tblLandUse	LotAcreage	0.91	0.50
tblLandUse	LotAcreage	0.40	0.20
tblLandUse	LotAcreage	2.73	1.50
tblLandUse	LotAcreage	31.09	16.50
tblLandUse	LotAcreage	13.38	7.10
tblLandUse	LotAcreage	64.07	34.10
tblLandUse	LotAcreage	1.15	0.60
tblLandUse	LotAcreage	5.83	3.10
tblLandUse	LotAcreage	90.89	48.30
tblLandUse	LotAcreage	2.30	1.20
tblLandUse	LotAcreage	6.91	3.70
tblProjectCharacteristics	CO2IntensityFactor	641.35	286.7

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

tblSequestration	NumberOfNewTrees	0.00	5,000.00
tblSolidWaste	SolidWasteGenerationRate	1,588.84	3,379.74
tblSolidWaste	SolidWasteGenerationRate	21.41	22.44
tblSolidWaste	SolidWasteGenerationRate	237.15	238.43
tblSolidWaste	SolidWasteGenerationRate	285.00	46.75
tblSolidWaste	SolidWasteGenerationRate	54.75	54.00
tblSolidWaste	SolidWasteGenerationRate	95.81	161.00
tblSolidWaste	SolidWasteGenerationRate	73.00	72.00
tblSolidWaste	SolidWasteGenerationRate	184.69	182.16
tblSolidWaste	SolidWasteGenerationRate	324.11	4,670.18
tblVehicleTrips	CC_TL	7.30	9.50
tblVehicleTrips	CC_TL	7.30	9.50
tblVehicleTrips	CC_TL	7.30	9.50
tblVehicleTrips	CC_TL	7.30	9.50
tblVehicleTrips	CC_TL	7.30	9.50
tblVehicleTrips	CC_TL	7.30	9.50
tblVehicleTrips	CC_TL	7.30	9.50
tblVehicleTrips	CC_TL	7.30	9.50
tblVehicleTrips	CC_TL	7.30	9.50
tblVehicleTrips	CC_TL	7.30	9.50
tblVehicleTrips	CC_TL	7.30	9.50
tblVehicleTrips	CC_TL	7.30	9.50
tblVehicleTrips	CC_TL	7.30	9.50
tblVehicleTrips	CC_TL	7.30	9.50
tblVehicleTrips	CC_TL	7.30	9.50
tblVehicleTrips	CNW_TL	7.30	9.10
tblVehicleTrips	CNW_TL	7.30	9.10
tblVehicleTrips	CNW_TL	7.30	9.10
tblVehicleTrips	CNW_TL	7.30	9.10

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

tblVehicleTrips	CNW_TL	7.30	9.10
tblVehicleTrips	CNW_TL	7.30	9.10
tblVehicleTrips	CNW_TL	7.30	9.10
tblVehicleTrips	CNW_TL	7.30	9.10
tblVehicleTrips	CNW_TL	7.30	9.10
tblVehicleTrips	CNW_TL	7.30	9.10
tblVehicleTrips	CNW_TL	7.30	9.10
tblVehicleTrips	CNW_TL	7.30	9.10
tblVehicleTrips	CNW_TL	7.30	9.10
tblVehicleTrips	CW_TL	9.50	14.90
tblVehicleTrips	CW_TL	9.50	14.90
tblVehicleTrips	CW_TL	9.50	14.90
tblVehicleTrips	CW_TL	9.50	14.90
tblVehicleTrips	CW_TL	9.50	14.90
tblVehicleTrips	CW_TL	9.50	14.90
tblVehicleTrips	CW_TL	9.50	14.90
tblVehicleTrips	CW_TL	9.50	14.90
tblVehicleTrips	CW_TL	9.50	14.90
tblVehicleTrips	CW_TL	9.50	14.90
tblVehicleTrips	CW_TL	9.50	14.90
tblVehicleTrips	CW_TL	9.50	14.90
tblVehicleTrips	CW_TL	9.50	14.90
tblVehicleTrips	CW_TL	9.50	14.90
tblVehicleTrips	HO_TL	5.70	9.10
tblVehicleTrips	HS_TL	4.80	9.50
tblVehicleTrips	HW_TL	10.80	14.90
tblVehicleTrips	ST_TR	6.39	2.60
tblVehicleTrips	ST_TR	22.75	9.27

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

tblVehicleTrips	ST_TR	2.46	1.00
tblVehicleTrips	ST_TR	20.87	8.50
tblVehicleTrips	ST_TR	0.61	0.25
tblVehicleTrips	ST_TR	8.19	3.34
tblVehicleTrips	ST_TR	0.42	0.17
tblVehicleTrips	ST_TR	49.97	20.35
tblVehicleTrips	ST_TR	1.90	0.77
tblVehicleTrips	ST_TR	42.04	17.12
tblVehicleTrips	SU_TR	5.86	2.39
tblVehicleTrips	SU_TR	16.74	6.82
tblVehicleTrips	SU_TR	1.05	0.43
tblVehicleTrips	SU_TR	26.73	10.89
tblVehicleTrips	SU_TR	0.25	0.10
tblVehicleTrips	SU_TR	5.95	2.42
tblVehicleTrips	SU_TR	0.04	0.00
tblVehicleTrips	SU_TR	25.24	10.28
tblVehicleTrips	SU_TR	1.11	0.45
tblVehicleTrips	SU_TR	20.43	8.32
tblVehicleTrips	WD_TR	6.65	2.71
tblVehicleTrips	WD_TR	1.89	0.77
tblVehicleTrips	WD_TR	11.03	4.49
tblVehicleTrips	WD_TR	32.93	13.41
tblVehicleTrips	WD_TR	1.71	0.70
tblVehicleTrips	WD_TR	8.17	3.33
tblVehicleTrips	WD_TR	1.23	0.50
tblVehicleTrips	WD_TR	1.62	0.66
tblVehicleTrips	WD_TR	42.70	17.39

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

tblVehicleTrips	WD_TR	8.11	3.30
tblVehicleTrips	WD_TR	44.32	18.05
tblWater	IndoorWaterUseRate	225,042,004.50	64,193,343.00
tblWater	IndoorWaterUseRate	45,322,105.74	4,525,996.00
tblWater	IndoorWaterUseRate	2,957,157.20	2,262,998.00
tblWater	IndoorWaterUseRate	1,321,488.00	1,321,500.00
tblWater	IndoorWaterUseRate	4,439,184.75	4,439,225.00
tblWater	IndoorWaterUseRate	856,440.00	856,400.00
tblWater	IndoorWaterUseRate	2,453,330.88	2,453,088.00
tblWater	IndoorWaterUseRate	7,407,252.15	7,407,300.00
tblWater	IndoorWaterUseRate	2,097,074,684.82	221,054,950.00
tblWater	IndoorWaterUseRate	22,295,828.97	10,898,661.00
tblWater	OutdoorWaterUseRate	141,874,307.18	40,469,374.00
tblWater	OutdoorWaterUseRate	296,678,856.07	57,332,268.00
tblWater	OutdoorWaterUseRate	27,778,064.81	2,774,004.00
tblWater	OutdoorWaterUseRate	1,812,451.19	1,387,002.00
tblWater	OutdoorWaterUseRate	3,398,112.00	3,398,100.00
tblWater	OutdoorWaterUseRate	493,242.75	493,325.00
tblWater	OutdoorWaterUseRate	1,339,560.00	1,339,600.00
tblWater	OutdoorWaterUseRate	6,308,565.12	6,308,808.00
tblWater	OutdoorWaterUseRate	4,539,928.74	4,539,900.00
tblWater	OutdoorWaterUseRate	13,665,185.50	6,679,739.00
tblWoodstoves	NumberCatalytic	69.08	0.00
tblWoodstoves	NumberNoncatalytic	69.08	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

[illegible]

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

2.1 Overall Construction**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2039	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	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	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

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	31.4966	2.2063	26.5665	0.0136		0.2973	0.2973		0.2973	0.2973	0.0000	2,254.0585	2,254.0585	0.0832	0.0406	2,268.2221
Energy	0.8386	7.5347	5.7533	0.0457		0.5794	0.5794		0.5794	0.5794	0.0000	17,484.0259	17,484.0259	1.0881	0.3444	17,613.8518
Mobile	5.1972	23.4704	65.0777	0.3136	35.4883	0.2251	35.7134	9.5467	0.2098	9.7565	0.0000	29,083.3650	29,083.3650	1.0956	0.0000	29,110.7554
Waste						0.0000	0.0000		0.0000	0.0000	1,877.2097	0.0000	1,877.2097	110.9399	0.0000	4,650.7075
Water						0.0000	0.0000		0.0000	0.0000	101.3352	281.5309	382.8660	10.4366	0.2517	718.7718
Total	37.5324	33.2115	97.3975	0.3729	35.4883	1.1017	36.5900	9.5467	1.0864	10.6331	1,978.5448	49,102.9802	51,081.5250	123.6434	0.6366	54,362.3086

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

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	31.4966	2.2063	26.5665	0.0136		0.2973	0.2973		0.2973	0.2973	0.0000	2,254.0585	2,254.0585	0.0832	0.0406	2,268.2221
Energy	0.8386	7.5347	5.7533	0.0457		0.5794	0.5794		0.5794	0.5794	0.0000	17,484.0259	17,484.0259	1.0881	0.3444	17,613.8518
Mobile	5.1972	23.4704	65.0777	0.3136	35.4883	0.2251	35.7134	9.5467	0.2098	9.7565	0.0000	29,083.3650	29,083.3650	1.0956	0.0000	29,110.7554
Waste						0.0000	0.0000		0.0000	0.0000	1,877.2097	0.0000	1,877.2097	110.9399	0.0000	4,650.7075
Water						0.0000	0.0000		0.0000	0.0000	101.3352	281.5309	382.8660	10.4366	0.2517	718.7718
Total	37.5324	33.2115	97.3975	0.3729	35.4883	1.1017	36.5900	9.5467	1.0864	10.6331	1,978.5448	49,102.9802	51,081.5250	123.6434	0.6366	54,362.3086

[illegible]

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

2.3 Vegetation**Vegetation**

	CO2e
Category	MT
New Trees	3,670.000 0
Total	3,670.000 0

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	1/1/2018	12/31/2017	5	0	
2	Site Preparation	Site Preparation	2/23/2019	2/22/2019	5	0	
3	Grading	Grading	11/2/2019	11/1/2019	5	0	
4	Building Construction	Building Construction	8/14/2021	8/13/2021	5	0	
5	Paving	Paving	6/11/2039	6/10/2039	5	0	
6	Architectural Coating	Architectural Coating	9/15/2040	9/14/2040	5	0	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 1937.5****Acres of Paving: 57.7**

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

Residential Indoor: 6,994,350; Residential Outdoor: 2,331,450; Non-Residential Indoor: 8,251,499; Non-Residential Outdoor: 2,750,500; Striped Parking Area: 289,440 (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
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	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
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
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

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco 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
Building Construction	9	10,887.00	3,839.00	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
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2,177.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

[illegible]

3.4 Grading - 2019

Unmitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

3.4 Grading - 2019

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

3.4 Grading - 2019

Mitigated Construction Off-Site

[illegible]

3.5 Building Construction - 2021

Unmitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

3.5 Building Construction - 2021

Mitigated Construction Off-Site

[illegible]

3.6 Paving - 2039

Unmitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

3.6 Paving - 2039

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

3.6 Paving - 2039

Mitigated Construction Off-Site

[illegible]

3.7 Architectural Coating - 2040

Unmitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

3.7 Architectural Coating - 2040

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

[illegible]

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

3.7 Architectural Coating - 2040**Mitigated Construction Off-Site**

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

Hunters Point Shipyard Phase II - Operational - GHG Analysis - 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					
Mitigated	5.1972	23.4704	65.0777	0.3136	35.4883	0.2251	35.7134	9.5467	0.2098	9.7565	0.0000	29,083.3650	29,083.3650	1.0956	0.0000	29,110.7554
Unmitigated	5.1972	23.4704	65.0777	0.3136	35.4883	0.2251	35.7134	9.5467	0.2098	9.7565	0.0000	29,083.3650	29,083.3650	1.0956	0.0000	29,110.7554

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	9,360.34	8,980.40	8255.06	32,394,331	32,394,331
City Park	191.73	2,308.23	1698.18	2,113,585	2,113,585
Enclosed Parking Structure	0.00	0.00	0.00		
General Office Building	1,144.95	255.00	109.65	2,902,056	2,902,056
Health Club	670.50	425.00	544.50	1,436,530	1,436,530
High School	210.00	75.00	30.00	655,660	655,660
Hotel	582.75	584.50	423.50	1,442,267	1,442,267
Junior College (2Yr)	200.00	68.00	0.00	511,625	511,625
Junior High School	667.92	0.00	0.00	1,614,901	1,614,901
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	1,739.00	2,035.00	1028.00	3,960,071	3,960,071
Research & Development	14,074.50	3,284.05	1919.25	37,775,169	37,775,169
Strip Mall	5,433.05	5,153.12	2504.32	10,305,547	10,305,547
Unenclosed Parking Structure	0.00	0.00	0.00		
Total	34,274.74	23,168.30	16,512.46	95,111,743	95,111,743

4.3 Trip Type Information

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

Land Use	Miles			Trip %			Trip Purpose %		
	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 Mid Rise	14.90	9.50	9.10	31.00	15.00	54.00	86	11	3
City Park	14.90	9.50	9.10	33.00	48.00	19.00	66	28	6
Enclosed Parking Structure	14.90	9.50	9.10	0.00	0.00	0.00	0	0	0
General Office Building	14.90	9.50	9.10	33.00	48.00	19.00	77	19	4
Health Club	14.90	9.50	9.10	16.90	64.10	19.00	52	39	9
High School	14.90	9.50	9.10	77.80	17.20	5.00	75	19	6
Hotel	14.90	9.50	9.10	19.40	61.60	19.00	58	38	4
Junior College (2Yr)	14.90	9.50	9.10	6.40	88.60	5.00	92	7	1
Junior High School	14.90	9.50	9.10	72.80	22.20	5.00	63	25	12
Parking Lot	14.90	9.50	9.10	0.00	0.00	0.00	0	0	0
Regional Shopping Center	14.90	9.50	9.10	16.30	64.70	19.00	54	35	11
Research & Development	14.90	9.50	9.10	33.00	48.00	19.00	82	15	3
Strip Mall	14.90	9.50	9.10	16.60	64.40	19.00	45	40	15
Unenclosed Parking Structure	14.90	9.50	9.10	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
City Park	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Enclosed Parking Structure	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
General Office Building	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Health Club	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
High School	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Hotel	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Junior College (2Yr)	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Junior High School	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Parking Lot	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Regional Shopping Center	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Research & Development	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Strip Mall	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615
Unenclosed Parking Structure	0.601538	0.036054	0.193096	0.092568	0.012113	0.005314	0.035718	0.009816	0.004313	0.002228	0.005671	0.000957	0.000615

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Hunters Point Shipyard Phase II - Operational - GHG Analysis - 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	9,185.0296	9,185.0296	0.9291	0.1922	9,265.5388
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	9,185.0296	9,185.0296	0.9291	0.1922	9,265.5388
NaturalGas Mitigated	0.8386	7.5347	5.7533	0.0457		0.5794	0.5794		0.5794	0.5794	0.0000	8,298.9963	8,298.9963	0.1591	0.1522	8,348.3130
NaturalGas Unmitigated	0.8386	7.5347	5.7533	0.0457		0.5794	0.5794		0.5794	0.5794	0.0000	8,298.9963	8,298.9963	0.1591	0.1522	8,348.3130

5.2 Energy by Land Use - NaturalGas**Unmitigated**

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

	Natural Gas 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 Mid Rise	3.01549e+007	0.1626	1.3895	0.5913	8.8700e-003		0.1123	0.1123		0.1123	0.1123	0.0000	1,609.1806	1,609.1806	0.0308	0.0295	1,618.7431
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	4.92915e+006	0.0266	0.2416	0.2030	1.4500e-003		0.0184	0.0184		0.0184	0.0184	0.0000	263.0382	263.0382	5.0400e-003	4.8200e-003	264.6013
Health Club	1.2375e+006	6.6700e-003	0.0607	0.0510	3.6000e-004		4.6100e-003	4.6100e-003		4.6100e-003	4.6100e-003	0.0000	66.0377	66.0377	1.2700e-003	1.2100e-003	66.4301
High School	458805	2.4700e-003	0.0225	0.0189	1.3000e-004		1.7100e-003	1.7100e-003		1.7100e-003	1.7100e-003	0.0000	24.4836	24.4836	4.7000e-004	4.5000e-004	24.6291
Hotel	4.3812e+006	0.0236	0.2148	0.1804	1.2900e-003		0.0163	0.0163		0.0163	0.0163	0.0000	233.7975	233.7975	4.4800e-003	4.2900e-003	235.1869
Junior College (2Yr)	1.27026e+006	6.8500e-003	0.0623	0.0523	3.7000e-004		4.7300e-003	4.7300e-003		4.7300e-003	4.7300e-003	0.0000	67.7857	67.7857	1.3000e-003	1.2400e-003	68.1885
Junior High School	5.68215e+006	0.0306	0.2785	0.2340	1.6700e-003		0.0212	0.0212		0.0212	0.0212	0.0000	303.2212	303.2212	5.8100e-003	5.5600e-003	305.0231
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	460000	2.4800e-003	0.0226	0.0189	1.4000e-004		1.7100e-003	1.7100e-003		1.7100e-003	1.7100e-003	0.0000	24.5474	24.5474	4.7000e-004	4.5000e-004	24.6932
Research & Development	1.05559e+008	0.5692	5.1745	4.3465	0.0311		0.3933	0.3933		0.3933	0.3933	0.0000	5,633.0169	5,633.0169	0.1080	0.1033	5,666.4911
Strip Mall	1.3846e+006	7.4700e-003	0.0679	0.0570	4.1000e-004		5.1600e-003	5.1600e-003		5.1600e-003	5.1600e-003	0.0000	73.8875	73.8875	1.4200e-003	1.3500e-003	74.3266
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.8386	7.5347	5.7533	0.0457		0.5794	0.5794		0.5794	0.5794	0.0000	8,298.9963	8,298.9963	0.1591	0.1521	8,348.3130

5.2 Energy by Land Use - Natural Gas

Mitigated

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

	Natural Gas 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 Mid Rise	3.01549e+007	0.1626	1.3895	0.5913	8.8700e-003		0.1123	0.1123		0.1123	0.1123	0.0000	1,609.1806	1,609.1806	0.0308	0.0295	1,618.7431
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	4.92915e+006	0.0266	0.2416	0.2030	1.4500e-003		0.0184	0.0184		0.0184	0.0184	0.0000	263.0382	263.0382	5.0400e-003	4.8200e-003	264.6013
Health Club	1.2375e+006	6.6700e-003	0.0607	0.0510	3.6000e-004		4.6100e-003	4.6100e-003		4.6100e-003	4.6100e-003	0.0000	66.0377	66.0377	1.2700e-003	1.2100e-003	66.4301
High School	458805	2.4700e-003	0.0225	0.0189	1.3000e-004		1.7100e-003	1.7100e-003		1.7100e-003	1.7100e-003	0.0000	24.4836	24.4836	4.7000e-004	4.5000e-004	24.6291
Hotel	4.3812e+006	0.0236	0.2148	0.1804	1.2900e-003		0.0163	0.0163		0.0163	0.0163	0.0000	233.7975	233.7975	4.4800e-003	4.2900e-003	235.1869
Junior College (2Yr)	1.27026e+006	6.8500e-003	0.0623	0.0523	3.7000e-004		4.7300e-003	4.7300e-003		4.7300e-003	4.7300e-003	0.0000	67.7857	67.7857	1.3000e-003	1.2400e-003	68.1885
Junior High School	5.68215e+006	0.0306	0.2785	0.2340	1.6700e-003		0.0212	0.0212		0.0212	0.0212	0.0000	303.2212	303.2212	5.8100e-003	5.5600e-003	305.0231
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	460000	2.4800e-003	0.0226	0.0189	1.4000e-004		1.7100e-003	1.7100e-003		1.7100e-003	1.7100e-003	0.0000	24.5474	24.5474	4.7000e-004	4.5000e-004	24.6932
Research & Development	1.05559e+008	0.5692	5.1745	4.3465	0.0311		0.3933	0.3933		0.3933	0.3933	0.0000	5,633.0169	5,633.0169	0.1080	0.1033	5,666.4911
Strip Mall	1.3846e+006	7.4700e-003	0.0679	0.0570	4.1000e-004		5.1600e-003	5.1600e-003		5.1600e-003	5.1600e-003	0.0000	73.8875	73.8875	1.4200e-003	1.3500e-003	74.3266
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.8386	7.5347	5.7533	0.0457		0.5794	0.5794		0.5794	0.5794	0.0000	8,298.9963	8,298.9963	0.1591	0.1521	8,348.3130

5.3 Energy by Land Use - Electricity

Unmitigated

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.45828e+007	1,896.4132	0.1918	0.0397	1,913.0357
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking Structure	7.83367e+006	1,018.7294	0.1031	0.0213	1,027.6588
General Office Building	3.1824e+006	413.8550	0.0419	8.6600e-003	417.4825
Health Club	378000	49.1570	4.9700e-003	1.0300e-003	49.5879
High School	123685	16.0846	1.6300e-003	3.4000e-004	16.2256
Hotel	980400	127.4961	0.0129	2.6700e-003	128.6136
Junior College (2Yr)	379591	49.3639	4.9900e-003	1.0300e-003	49.7966
Junior High School	1.5318e+006	199.2028	0.0202	4.1700e-003	200.9489
Parking Lot	208180	27.0728	2.7400e-003	5.7000e-004	27.3101
Regional Shopping Center	1.048e+006	136.2871	0.0138	2.8500e-003	137.4817
Research & Development	3.22434e+007	4,193.0908	0.4241	0.0878	4,229.8443
Strip Mall	3.15448e+006	410.2241	0.0415	8.5900e-003	413.8199
Unenclosed Parking Structure	4.9833e+006	648.0529	0.0656	0.0136	653.7333
Total		9,185.0296	0.9291	0.1922	9,265.5388

5.3 Energy by Land Use - Electricity

Mitigated

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.45828e+007	1,896.4132	0.1918	0.0397	1,913.0357
City Park	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking Structure	7.83367e+006	1,018.7294	0.1031	0.0213	1,027.6588
General Office Building	3.1824e+006	413.8550	0.0419	8.6600e-003	417.4825
Health Club	378000	49.1570	4.9700e-003	1.0300e-003	49.5879
High School	123685	16.0846	1.6300e-003	3.4000e-004	16.2256
Hotel	980400	127.4961	0.0129	2.6700e-003	128.6136
Junior College (2Yr)	379591	49.3639	4.9900e-003	1.0300e-003	49.7966
Junior High School	1.5318e+006	199.2028	0.0202	4.1700e-003	200.9489
Parking Lot	208180	27.0728	2.7400e-003	5.7000e-004	27.3101
Regional Shopping Center	1.048e+006	136.2871	0.0138	2.8500e-003	137.4817
Research & Development	3.22434e+007	4,193.0908	0.4241	0.0878	4,229.8443
Strip Mall	3.15448e+006	410.2241	0.0415	8.5900e-003	413.8199
Unenclosed Parking Structure	4.9833e+006	648.0529	0.0656	0.0136	653.7333
Total		9,185.0296	0.9291	0.1922	9,265.5388

6.0 Area Detail

6.1 Mitigation Measures Area

Hunters Point Shipyard Phase II - Operational - GHG Analysis - 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					
Mitigated	31.4966	2.2063	26.5665	0.0136		0.2973	0.2973		0.2973	0.2973	0.0000	2,254.0585	2,254.0585	0.0832	0.0406	2,268.2221
Unmitigated	31.4966	2.2063	26.5665	0.0136		0.2973	0.2973		0.2973	0.2973	0.0000	2,254.0585	2,254.0585	0.0832	0.0406	2,268.2221

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	5.4005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	25.0916					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2235	1.9099	0.8127	0.0122		0.1544	0.1544		0.1544	0.1544	0.0000	2,211.8231	2,211.8231	0.0424	0.0406	2,224.9669
Landscaping	0.7811	0.2965	25.7538	1.3700e-003		0.1429	0.1429		0.1429	0.1429	0.0000	42.2353	42.2353	0.0408	0.0000	43.2553
Total	31.4966	2.2063	26.5665	0.0136		0.2973	0.2973		0.2973	0.2973	0.0000	2,254.0585	2,254.0585	0.0832	0.0406	2,268.2221

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

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	5.4005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	25.0916					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.2235	1.9099	0.8127	0.0122		0.1544	0.1544		0.1544	0.1544	0.0000	2,211.823 1	2,211.823 1	0.0424	0.0406	2,224.966 9
Landscaping	0.7811	0.2965	25.7538	1.3700e-003		0.1429	0.1429		0.1429	0.1429	0.0000	42.2353	42.2353	0.0408	0.0000	43.2553
Total	31.4966	2.2063	26.5665	0.0136		0.2973	0.2973		0.2973	0.2973	0.0000	2,254.058 5	2,254.058 5	0.0832	0.0406	2,268.222 1

7.0 Water Detail**7.1 Mitigation Measures Water**

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	382.8660	10.4366	0.2517	718.7718
Unmitigated	382.8660	10.4366	0.2517	718.7718

7.2 Water by Land Use**Unmitigated**

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	64.1933 / 40.4694	83.9567	2.0982	0.0507	151.5259
City Park	0 / 57.3323	26.0952	2.6400e-003	5.5000e-004	26.3239
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	4.526 / 2.774	5.8833	0.1479	3.5800e-003	10.6470
Health Club	2.263 / 1.387	2.9417	0.0740	1.7900e-003	5.3235
High School	1.3215 / 3.3981	2.8958	0.0433	1.0700e-003	4.2971
Hotel	4.43923 / 0.493325	4.7567	0.1450	3.4900e-003	9.4202
Junior College (2Yr)	0.8564 / 1.3396	1.4841	0.0280	6.8000e-004	2.3887
Junior High School	2.45309 / 6.30881	5.3759	0.0804	1.9800e-003	7.9770
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	7.4073 / 4.5399	9.6287	0.2421	5.8500e-003	17.4250
Research & Development	221.055 / 0	225.6810	7.2188	0.1733	457.8053
Strip Mall	10.8987 / 6.67974	14.1671	0.3562	8.6100e-003	25.6381
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		382.8660	10.4366	0.2517	718.7718

7.2 Water by Land Use

Mitigated

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	64.1933 / 40.4694	83.9567	2.0982	0.0507	151.5259
City Park	0 / 57.3323	26.0952	2.6400e-003	5.5000e-004	26.3239
Enclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	4.526 / 2.774	5.8833	0.1479	3.5800e-003	10.6470
Health Club	2.263 / 1.387	2.9417	0.0740	1.7900e-003	5.3235
High School	1.3215 / 3.3981	2.8958	0.0433	1.0700e-003	4.2971
Hotel	4.43923 / 0.493325	4.7567	0.1450	3.4900e-003	9.4202
Junior College (2Yr)	0.8564 / 1.3396	1.4841	0.0280	6.8000e-004	2.3887
Junior High School	2.45309 / 6.30881	5.3759	0.0804	1.9800e-003	7.9770
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	7.4073 / 4.5399	9.6287	0.2421	5.8500e-003	17.4250
Research & Development	221.055 / 0	225.6810	7.2188	0.1733	457.8053
Strip Mall	10.8987 / 6.67974	14.1671	0.3562	8.6100e-003	25.6381
Unenclosed Parking Structure	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		382.8660	10.4366	0.2517	718.7718

8.0 Waste Detail

8.1 Mitigation Measures Waste

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1,877.209 7	110.9399	0.0000	4,650.707 5
Unmitigated	1,877.209 7	110.9399	0.0000	4,650.707 5

8.2 Waste by Land Use**Unmitigated**

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	3379.74	686.0567	40.5448	0.0000	1,699.6764
City Park	22.44	4.5551	0.2692	0.0000	11.2851
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
General Office Building	238.43	48.3991	2.8603	0.0000	119.9068
Health Club	46.75	9.4898	0.5608	0.0000	23.5107
High School	54	10.9615	0.6478	0.0000	27.1567
Hotel	161	32.6816	1.9314	0.0000	80.9671
Junior College (2Yr)	72	14.6154	0.8637	0.0000	36.2089
Junior High School	182.16	36.9768	2.1853	0.0000	91.6085
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	105	21.3141	1.2596	0.0000	52.8047
Research & Development	4670.18	948.0043	56.0255	0.0000	2,348.6406
Strip Mall	316.05	64.1553	3.7915	0.0000	158.9420
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Total		1,877.2097	110.9399	0.0000	4,650.7075

8.2 Waste by Land Use

Mitigated

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	3379.74	686.0567	40.5448	0.0000	1,699.6764
City Park	22.44	4.5551	0.2692	0.0000	11.2851
Enclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
General Office Building	238.43	48.3991	2.8603	0.0000	119.9068
Health Club	46.75	9.4898	0.5608	0.0000	23.5107
High School	54	10.9615	0.6478	0.0000	27.1567
Hotel	161	32.6816	1.9314	0.0000	80.9671
Junior College (2Yr)	72	14.6154	0.8637	0.0000	36.2089
Junior High School	182.16	36.9768	2.1853	0.0000	91.6085
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	105	21.3141	1.2596	0.0000	52.8047
Research & Development	4670.18	948.0043	56.0255	0.0000	2,348.6406
Strip Mall	316.05	64.1553	3.7915	0.0000	158.9420
Unenclosed Parking Structure	0	0.0000	0.0000	0.0000	0.0000
Total		1,877.2097	110.9399	0.0000	4,650.7075

9.0 Operational Offroad

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

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

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

Hunters Point Shipyard Phase II - Operational - GHG Analysis - San Francisco County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	3,670.000 0	0.0000	0.0000	3,670.000 0

11.2 Net New Trees**Species Class**

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Mixed Hardwood	5000	3,670.000 0	0.0000	0.0000	3,670.000 0
Total		3,670.000 0	0.0000	0.0000	3,670.000 0

