
APPENDIX B

CALEEMOD ASSESSMENT AND RESULTS



EMC PLANNING GROUP INC.
A LAND USE PLANNING & DESIGN FIRM

301 Lighthouse Avenue Suite C Monterey California 93940
Tel 831-649-1799 Fax 831-649-8399 www.emcplanning.com

To: Polaris Kinison Brown, Principal Planner
From: Tanya Kalaskar, Associate Planner
Cc: File
Date: August 14, 2020

Re: 1212-1224 South Winchester Boulevard Hotel – Criteria Air Pollutant and GHG Emissions Modeling Assessment

PROJECT DESCRIPTION

The proposed project is the construction and operations of a hotel on a 0.69-acre site located at 1212-1224 South Winchester Boulevard in the City of San José. Existing development on the project site consists of a single-family residence with an event decorator office at 1212 South Winchester Boulevard and a commercial office building located at 1224 South Winchester Boulevard.

The proposed project includes demolition of the existing structures to accommodate a six-story hotel with up to 119 guestrooms. Grading for the proposed project includes excavation of 11,000 cubic yards of soil to accommodate an underground parking garage. The excavated soils would be disposed of off-site. The first floor of the hotel building would contain the main lobby reception area, guest luggage storage, coffee station and bar area, two office rooms, accounting, management, employees break room, men's and women's locker rooms, fire control room, laundry, security, fire pump room, electrical room, and 11 guest rooms. The second floor of the hotel would include 18 guest rooms, a gym and lockers, jacuzzi, steam room, restaurant area and kitchen. Floors three through six would include the remaining guest rooms. A total of 69 parking spaces would be provided by one underground parking level covering an area of 20,531.4 square feet. The proposed project includes the removal of 16 trees. The landscape plan

MEMORANDUM

indicates planting of 46 new trees. The project site is located within the San Francisco Bay Area Air Basin, which is within the jurisdiction of the Bay Area Air Quality Management District (air district). An initial study is being prepared to evaluate the environmental impacts of the proposed project.

SCOPE OF ASSESSMENT

This assessment provides an estimate of the proposed project's construction and operational criteria air pollutants and greenhouse gas (GHG) emissions using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 software, a modeling platform recommended by the California Air Resources Board (CARB) and accepted by the air district. Model results are attached to this assessment. Unless otherwise noted, data inputs to the model take into account the type and size of existing and proposed uses utilizing CalEEMod default land uses based on the size metrics provided in the project plans (Carpira Design Group 2020) and trip generation information provided in the transportation analysis prepared for the proposed project (Hexagon Transportation Consultants 2020).

Emissions Model

The CalEEMod software utilizes emissions models USEPA AP-42 emission factors, CARB vehicle emission models studies and studies commissioned by other California agencies such as the California Energy Commission and CalRecycle. The CalEEMod platform allows calculations of both construction and operational criteria pollutant and GHG emissions from land use projects. The model also calculates indirect emissions from processes "downstream" of the proposed project such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

CalEEMod is capable of estimating changes in the carbon sequestration potential of a site based on changes in natural vegetation communities and the net number of new trees that would be planted as part of the project. The model calculates a one-time only loss in the carbon sequestration potential of the site that would result from changes in land use such as converting vegetation to built or paved surfaces, and can provide an estimate of the change in the carbon sequestration potential that would result from planting new trees greater than the number of trees to be removed (net number of new trees).

The project site is already developed and there are no natural vegetation communities on the site. However, the project plans include proposed tree plantings for the project site (Carpira Design Group 2020). Therefore, this assessment includes quantification of the change in carbon sequestration potential from removing existing trees and planting new trees on the site.

Existing and Proposed Emissions Sources

The size and type of the existing and proposed sources of criteria air pollutants and GHG emissions on the project site and their respective CalEEMod land use default categories are presented in [Table 1, Project Characteristics](#).

Table 1 **Project Characteristics**

Project Components	CalEEMod Land Use ¹	Existing ²	Proposed ²
Single-family Home	Single Family Housing	1 unit ³	-
Commercial Office Building	General Office Building	8,483 ⁴	-
Hotel	Hotel	-	119 rooms ⁵
Underground Parking Garage	Enclosed Parking with Elevator	-	69 spaces ⁶
Impervious Surfaces (on- and off-site)	Other Asphalt Surfaces	-	11,880.10
Pervious Surfaces (landscaping) ⁷	Other Non-Asphalt Surfaces	-	2,681

SOURCE: Trinity Consultants 2017, Carpira Design Group 2020, Cord Associates 2020, Google Earth 2020.

NOTES:

1. CalEEMod default land use subtype. Descriptions of the model default land use categories and subtypes are found in the User's Guide for CalEEMod Version 2016.3.2 available online at: <http://www.aqmd.gov/caleemod/user's-guide>
2. Expressed in units of square feet unless otherwise noted.
3. The area of the single-family home and event decorator office is estimated at approximately 3,000 square feet using Google Earth.
4. According to the project-specific construction spreadsheet, existing structures on the project site cover an area of 11,483 square feet. Area of the commercial office building equals total area of existing structure minus area of single-family home and event decorator office, or 8,483 square feet.
5. The hotel covers an area of 86,548.50 square feet, excluding parking.
6. The underground parking garage covers an area of 20,531.40 square feet.
7. Pervious surfaces are not substantial sources of operational emissions and are included in the model only to capture GHG emissions from construction activities.

METHODOLOGY

Unless otherwise noted, the calculated emissions estimates are based primarily on model default emissions factors for construction and operations of the project. Construction and

operational criteria air pollutant and GHG emissions estimates are derived for existing conditions and proposed project conditions based on the size metrics presented in Table 1.

Modeling Scenarios

Two modeling scenarios were conducted for the proposed project: Baseline (Existing) Emissions and Proposed Project Emissions.

Baseline (Existing) Emissions

Baseline GHG emissions are those generated under existing conditions. This scenario consists of unmitigated GHG emissions volumes that are generated by the existing single-family home and commercial office on the project site (refer to Table 1). Adjustments are made to the model to account for low carbon intensity efficiencies that are explained in greater detail under the Operational Data Inputs discussion.

Proposed Project Emissions

This scenario estimates unmitigated emissions anticipated through compliance with state regulations. This scenario includes model adjustments to account for mandatory compliance with State requirements for Model Water Efficient Landscape Ordinance (MWELO) and the current Title 24 Building Energy Efficiency Standards (BEES). These model adjustments are explained in greater detail under the Operational Data Inputs discussion.

Assumptions

Unless otherwise noted, data inputs for the model scenarios are based on the following primary assumptions:

1. Operational GHG emissions generated by the existing single-family home and event decorator office at 1212 South Winchester Boulevard are estimated using the CalEEMod default land use subtype "Single Family Housing", which is defined as a detached home on an individual lot. The event decorator office appears to be home office and is included as part of the single-family home.
2. The area of the existing single-family home and event decorator office at 1212 South Winchester Boulevard is estimated at 3,000 square feet using Google Earth.

3. Operational GHG emissions generated by the existing commercial office building at 1224 South Winchester Boulevard is estimated using the CalEEMod default land use subtype “General Office Building”, which is defined as a building that houses multiple tenants where affairs of businesses commercial or industrial organizations or professional persons or firms are conducted.
4. Construction of the proposed project is anticipated to begin in January 2021.
5. The anticipated operational year of the proposed project is 2023.
6. Construction and operational emissions for proposed conditions were estimated as follows:
 - a. Emissions generated by the proposed hotel are assumed to be similar to emissions that would be generated by the CalEEMod default land use subtype “Hotel”, which is defined as a place of lodging that provides sleeping accommodations and supporting facilities such as restaurants, cocktail lounges, meeting and banquet rooms or convention facilities, limited recreational facilities and other retail and service shops. The model default trip generation rate for “Hotel” has been modified based on information provided in the transportation analysis prepared for the proposed project (Hexagon Transportation Consultants 2020);
 - b. Emissions generated by the proposed underground parking garage are assumed to be similar to emissions that would be generated by the CalEEMod default land subtype “Enclosed Parking with Elevator”, which is defined as an enclosed parking structure that may be above or below ground, is not covered in asphalt, includes an elevator, and will require lighting and ventilation;
 - c. Emissions generated by the proposed on-site and off-site paving are assumed to be similar to emissions that would be generated by the CalEEMod default land use subtype “Other Asphalt Surfaces”, which is defined as an asphalt surface not used as a parking lot; and
 - d. Emissions generated by construction and curing of the proposed landscaping are assumed to be similar to emissions that would be generated by the CalEEMod default land use subtype “Other Non-Asphalt Surfaces”.

7. The proposed project includes the use of an emergency generator and a fire pump. Model inputs for the emergency generator and fire pump are based on the size and horsepower provided by the applicant (Henry Cord, email message, July 6, 2020), and are assumed to be diesel-fueled. The model data input assumes that each equipment would be run for an average of 24 hours per year for maintenance.

Operational Emissions Data Input

The following adjustments were made to the model inputs:

- Each air district (or county) assigns trip lengths for urban and rural settings, which are incorporated into the CalEEMod defaults. Based on the site's location, the model defaults were set to "urban."
- The model's default CO₂ intensity factor of 641 pounds/megawatt hour is adjusted to 290 pounds/megawatt hour to reflect Pacific Gas & Electric (PG&E) energy intensity projections for 2020, which is the horizon year for the provider's energy intensity factor projections. The intensity factor has been falling, in significant part due to the increasing percentage of Pacific Gas & Electric's energy portfolio obtained from renewable energy. Emissions intensity data is from PG&E's *Greenhouse Gas Factors: Guidance for PG&E Customers*, dated November 2015.
- As noted previously, the model default trip generation rates for the proposed hotel are adjusted based on information provided in the transportation analysis prepared for the proposed project (Hexagon Transportation Consultants 2020).
- The Title 24 BEES defaults in CalEEMod Version 2016.3.2 are the 2016 BEES. Title 24 BEES are updated every three years. The 2019 BEES became effective on January 1, 2020. Projects are constructed after January 1, 2020 will be required to comply with the 2019 BEES. Adjustments were made to the energy mitigation screen under the proposed project scenario to account for Title 24 increases in energy efficiencies that have occurred since CalEEMod Version 2016.3.2 was released. Compliance with the 2019 BEES increases building energy efficiencies by 30 percent over the 2016 BEES for non-residential buildings (California Energy Commission 2018).

- The water mitigation screen for the proposed project includes an adjustment to reflect required compliance with the State requirements for MWEL.

Construction Emissions Data Inputs

CalEEMod estimates construction emissions associated with land use development projects and allows for the input of project-specific construction information including phasing and equipment information. Modeling of construction emissions is based on the available project-specific construction information (Henry Cord, email message, July 6, 2020). The spreadsheet containing project-specific construction schedule, construction phases, type of construction equipment, hours of operation of each equipment, and area to be demolished is attached to this assessment. The modeled volume of dust from material movement during construction is based on information provided in the project plans: 11,000 cubic yards of excavated soils to be exported from the site. The model's default construction hauling trip length of 20 miles was used to calculate emissions for hauling equipment.

The modeling results for construction emissions are attached to this assessment. The air district recommends amortizing the short-term construction GHG emissions over a 30-year time period to yield an annual emissions volume.

Carbon Sequestration Potential Data Inputs

CalEEMod calculates the change in carbon sequestration potential based upon the net number of trees (the difference between trees removed and new tree plantings) on a site, averaged over a 20-year growth cycle. The proposed project includes removal of 16 existing trees and planting of 46 new trees, for a net total of 30 trees (Carpira Design Group 2020). Changes in sequestration potential are reported in metric tons of carbon dioxide equivalent (MT CO₂e).

RESULTS

Detailed model results for criteria air pollutants and GHG emissions are included as attachments to this assessment.

Criteria Air Pollutant Emissions

Construction Emissions

The unmitigated criteria air pollutant emissions resulting from project construction are summarized in [Table 2, Construction Criteria Air Pollutant Emissions](#).

Table 2 Construction Criteria Air Pollutant Emissions

Emissions	Reactive Organic Gases (ROG)	Nitrogen Oxides (NO _x)	Exhaust Respirable Particulate Matter (PM ₁₀)	Exhaust Fine Particulate Matter (PM _{2.5})
Total Annual Emissions (tons/year) ¹	0.69	3.71	0.08	0.08
Average Daily Emissions (pounds/day) ^{1,2}	4.31	23.19	0.50	0.50

SOURCE: EMC Planning Group 2020

NOTES:

1. Results may vary due to rounding.
2. CalEEMod estimates construction criteria air pollutant emissions in tons per year. A U.S. ton is equal to 2,000 pounds. The emissions estimates in ton per year are multiplied by 2,000 pounds to arrive at emissions volume in pounds per year. CalEEMod estimates a total of 320 construction days (see Section 3.0 of the attached CalEEMod results). Average daily emissions (in pounds per day) are computed by dividing the annual construction emissions (in pounds per year) by the number of construction days.

Operational Emissions

Unmitigated operational criteria air pollutant emissions generated by the proposed project are summarized in [Table 3, Operational Criteria Air Pollutant Emissions](#).

Table 3 Operational Criteria Air Pollutant Emissions

Emissions	Reactive Organic Gases (ROG)	Nitrogen Oxides (NO_x)	Respirable Particulate Matter (PM₁₀)	Fine Particulate Matter (PM_{2.5})
Total Annual Emissions (tons/year) ¹	0.71	1.48	1.05	0.30
Average Daily Emissions (pounds/day) ^{1,2,3}	3.89	8.11	5.75	1.64

SOURCE: EMC Planning Group 2020

NOTES:

1. Results may vary due to rounding.
2. CalEEMod estimates operational criteria air pollutant emissions in tons per year. A U.S. ton is equal to 2,000 pounds. The emissions estimates in ton per year are multiplied by 2,000 pounds to arrive at emissions volume in pounds per year. Average daily emissions (in pounds per day) are computed by dividing the annual operational emissions (in pounds per year) by the number of operational days (conservatively assuming 365 days of operation).
3. Includes reductions from compliance with 2019 BEES. Compliance with MWELO does not result in reduction of criteria air pollutant emissions.

GHG Emissions

Baseline Emissions

Baseline (existing) uses generate approximately 118.57 MT CO_{2e} of GHG emissions per year.

Construction Emissions

Construction activity would generate a total of 748.63 MT CO_{2e} of unmitigated GHG emissions. When averaged over a 30-year operational lifetime, the annual amortized emissions equal 24.95 MT CO_{2e} per year.

Operational Emissions

The unmitigated operational GHG emissions estimates are summarized in [Table 4, Unmitigated Operational GHG Emissions](#).

Table 4 Annual Operational GHG Emissions

Emissions Sources	GHG Emissions^{1,2}
Area	0.00
Energy ³	243.93
Mobile	1,075.11
Stationary	0.92
Waste	32.76
Water ⁴	6.42
Total	1,359.14

SOURCE: EMC Planning Group 2020

NOTES:

1. Results may vary due to rounding.
2. Expressed in MT CO₂e per year.
3. Results include emissions reductions from compliance with 2019 BEES.
4. Results include emissions reductions from compliance with MWEL0.

Carbon Sequestration Potential

Model results indicating the change in carbon sequestration potential on the project site are shown in Section 2.3 of the model results for annual emissions. The model estimates a net gain in sequestration potential of 21.24 MT CO₂e. Averaged over a 30-year lifetime, the annual gain in sequestration potential associated with the proposed project would be equivalent to 0.71 MT CO₂e per year (21.24 MT CO₂e / 30 years). This amount is deducted from the project's annual operational GHG emissions.

GHG Emissions Attributable to the Proposed Project

The total GHG emissions that would be attributable to the proposed project consist of amortized construction emissions added to the unmitigated operational emissions, less the baseline emissions and amortized annual gain in carbon sequestration potential on the site. The net GHG emissions attributable to the proposed project annually are presented in [Table 5, Summary of Annual GHG Emissions Attributable to the Project](#).

Table 5 **Summary of Annual GHG Emissions Attributable to the Project^{1,2}**

Annual Operations³	Amortized Construction	Annual Project Emissions⁴	Baseline Emissions⁵	Sequestration Potential⁵	Net Project Emissions
1,359.14	24.95	1,384.09	<118.57>	<0.71>	1,264.81

SOURCE: EMC Planning Group 2020

NOTES:

1. Results may vary due to rounding.
2. Expressed in MT CO₂e per year.
3. Unmitigated Operational GHG emissions (See Table 4).
4. Sum of amortized construction and unmitigated operational emissions.
5. <Brackets> Indicate deductions.

SOURCES

1. Trinity Consultants. November 2017. *California Emissions Estimator (CalEEMod) Version 2016.3.2*. Available online at: <http://www.aqmd.gov/caleemod/home>
2. Trinity Consultants. November 2017. *CalEEMod User's Guide (Version 2016.3.2)*. Available online at: <http://www.aqmd.gov/caleemod/user's-guide>
3. Bay Area Air Quality Management District. May 2017. *California Environmental Quality Act Air Quality Guidelines*. http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en
4. Google, Inc. 2020. Google Earth.
5. Carpira Design Group. May 15, 2020. *Project Plans*. Concord, CA.
6. Hexagon Transportation Consultants. *1212 South Winchester Hotel Development Transportation Analysis*. June 18, 2020. Gilroy, CA.
7. Pacific Gas & Electric. November 2015. *Greenhouse Gas Factors: Guidance for PG&E Customers*; Accessed December 13, 2019. https://www.ca-ilg.org/sites/main/files/file-attachments/ghg_emission_factor_guidance.pdf?1436996158
8. California Energy Commission. March 2018. *2019 Building Energy Efficiency Standards Frequently Asked Questions*. https://www2.energy.ca.gov/title24/2019standards/documents/Title_24_2019_Building_Standards_FAQ_ada.pdf

9. Cord, Henry, Cord Associates. Email message to consultant, 6 July 2020.

Air Quality Construction Information Data Request

Project Name: Winchester Hotel						Complete ALL Portions in Yellow		
See Equipment Type TAB for type, horsepower and load factor								
Project Size 119 Dwelling Units .69 acres total project acres disturbed _____ s.f. residential _____ s.f. retail _____ 78749 s.f. office/commercial 119 hotel rooms _____ 7,700 s.f. other, specify: hotel lobby. Etc. _____ 20,531 s.f. parking garage 67 spaces _____ s.f. parking lot _____ spaces						Pile Driving? Y/N? No Project include OPERATIONAL GENERATOR OR FIRE PUMP on-site? Y/N? <u> Y </u> IF YES (if BOTH separate values) --> Fire Pump / Generator Kilowatts/Horsepower: Pump 48/100 Generator 75/150 Fuel Type: Electric / Diesel Location in project (Plans Desired if Available): 1st Floor		
Construction Hours 7 am to 5 pm						DO NOT MULTIPLY EQUIPMENT HOURS/DAY BY THE QUANTITY OF EQUIPMENT		
Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Annual Hours	Comments
Demolition		Start Date: 1/1/2021	Total phase: 20		Overall Import/Export Volumes			
		End Date: 2/1/2021						
Demolition Volume								
2	Concrete/Industrial Saws	81	0.73	8	3	1.2	48	Square footage of buildings to be demolished
1	Excavators	158	0.38	8	10	4	80	11483 square feet
1	Rubber-Tired Dozers	247	0.4	8	10	4	80	Square footage of pavement to be demolished
3	Tractors/Loaders/Backhoes	97	0.37	8	7	2.8	168	12345 square feet
Any pavement demolished and hauled? 515 tons								
Site Preparation		Start Date: 2/1/2021	Total phase: 10					
		End Date: 2/15/2021						
1	Graders	187	0.41	8	5	4	40	
1	Rubber Tired Dozers	247	0.4	8	5	4	40	
3	Tractors/Loaders/Backhoes	97	0.37	8	10	8	240	
Grading / Excavation		Start Date: 2/15/2021	Total phase: 40					
		End Date: 4/15/2021						
Soil Hauling Volume								
2	Excavators	158	0.38	8	40	8	640	Export volume = 11,000 cubic yards
1	Graders	187	0.41	8	10	2	80	Import volume = 0 cubic yards
1	Rubber Tired Dozers	247	0.4	8	20	4	160	
	Concrete/Industrial Saws	81	0.73	0	0	0	0	
2	Tractors/Loaders/Backhoes	97	0.37	8	30	6	480	
Other Equipment?								
Trenching/Foundation		Start Date: 4/15/2021	Total phase: 10					
		End Date: 4/31/2021						
1	Tractor/Loader/Backhoe	97	0.37	8	10	8	80	
1	Excavators	158	0.38	8	10	8	80	
Other Equipment?								
Building - Exterior		Start Date: 5/1/2021	Total phase: 160					
		End Date: 2/1/2022						
1	Cranes	231	0.29	8	80	4	640	Electric? (Y/N) N Otherwise assumed diesel
2	Forklifts	89	0.2	8	160	8	2560	Liquid Propane (LPG)? (Y/N) N Otherwise Assumed diesel
0	Generator Sets	84	0.74			0	0	Or temporary line power? (Y/N) Y
1	Tractors/Loaders/Backhoes	97	0.37	4	80	2	320	
0	Welders	46	0.45			0	0	
Other Equipment?								
Building - Interior/Architectural Coating		Start Date: 2/1/2022	Total phase: 60					
		End Date: 5/1/2022						
1	Air Compressors	78	0.48	4	60	4	240	
1	Aerial Lift	62	0.31	8	60	8	480	Electric
Other Equipment?								
Paving		Start Date: 5/1/2022	Total phase: 20					
		Start Date: 6/1/2022						
2	Cement and Mortar Mixers	9	0.56	8	10	4	160	Asphalt? _____ cubic yards or _____ round trips?
	Pavers	130	0.42			0	0	
	Paving Equipment	132	0.36			0	0	
	Rollers	80	0.38			0	0	
2	Tractors/Loaders/Backhoes	97	0.37	8	10	4	160	
Other Equipment?								
Additional Phases		Start Date: _____	Total phase: _____					
		Start Date: _____						
					#DIV/0!	0		
					#DIV/0!	0		
					#DIV/0!	0		
					#DIV/0!	0		
					#DIV/0!	0		
Equipment types listed in "Equipment Types" worksheet tab.								
Equipment listed in this sheet is to provide an example of inputs								
It is assumed that water trucks would be used during grading								
Add or subtract phases and equipment, as appropriate								
Modify horsepower or load factor, as appropriate								

Complete one sheet for each project component

Winchester Hotel Existing Conditions - Bay Area AQMD Air District, Annual

Winchester Hotel_Existing Conditions

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	8.48	1000sqft	0.19	8,483.00	0
Single Family Housing	1.00	Dwelling Unit	0.32	3,000.00	3

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Adjusted PG&E CO2 Intensity Factor for 2020

Land Use - total size of ext structures = 11,483 sf from construction data sheet

Construction Phase - no construction. Existing Conditions

2.0 Emissions Summary

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
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Category	tons/yr										MT/yr					
Area	0.0575	2.2000e-004	0.0161	2.0000e-005		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.1271	0.0435	0.1706	2.5000e-004	1.0000e-005	0.1791
Energy	9.1000e-004	8.1500e-003	6.2900e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	29.9217	29.9217	2.2700e-003	6.0000e-004	30.1566
Mobile	0.0237	0.1142	0.2701	8.7000e-004	0.0714	9.7000e-004	0.0723	0.0192	9.1000e-004	0.0201	0.0000	79.8345	79.8345	3.1300e-003	0.0000	79.9128
Waste						0.0000	0.0000		0.0000	0.0000	1.8574	0.0000	1.8574	0.1098	0.0000	4.6016
Water						0.0000	0.0000		0.0000	0.0000	0.4988	1.5634	2.0622	0.0514	1.2400e-003	3.7171
Total	0.0821	0.1226	0.2925	9.4000e-004	0.0714	2.8800e-003	0.0742	0.0192	2.8200e-003	0.0220	2.4833	111.3630	113.8463	0.1668	1.8500e-003	118.5671

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Unmitigated	0.0237	0.1142	0.2701	8.7000e-004	0.0714	9.7000e-004	0.0723	0.0192	9.1000e-004	0.0201	0.0000	79.8345	79.8345	3.1300e-003	0.0000	79.9128

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT
General Office Building	93.57	20.87	8.91	169,882
Single Family Housing	9.52	9.91	8.62	21,819
Total	103.09	30.78	17.53	191,701

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
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General Office Building	0.573139	0.040894	0.193976	0.114604	0.017740	0.005371	0.017133	0.024527	0.002545	0.002442	0.005942	0.000877	0.000812
Single Family Housing	0.573139	0.040894	0.193976	0.114604	0.017740	0.005371	0.017133	0.024527	0.002545	0.002442	0.005942	0.000877	0.000812

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	20.9602	20.9602	2.1000e-003	4.3000e-004	21.1418
NaturalGas Unmitigated	9.1000e-004	8.1500e-003	6.2900e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	8.9615	8.9615	1.7000e-004	1.6000e-004	9.0147

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	138867	7.5000e-004	6.8100e-003	5.7200e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4105	7.4105	1.4000e-004	1.4000e-004	7.4545
Single Family Housing	29065.1	1.6000e-004	1.3400e-003	5.7000e-004	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5510	1.5510	3.0000e-005	3.0000e-005	1.5602
Total		9.1000e-004	8.1500e-003	6.2900e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004	0.0000	8.9615	8.9615	1.7000e-004	1.7000e-004	9.0147

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	151252	19.8959	1.9900e-003	4.1000e-004	20.0684
Single Family Housing	8090.57	1.0643	1.1000e-004	2.0000e-005	1.0735

Total		20.9602	2.1000e-003	4.3000e-004	21.1418
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6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Unmitigated	0.0575	2.2000e-004	0.0161	2.0000e-005		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.1271	0.0435	0.1706	2.5000e-004	1.0000e-005	0.1791

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	6.5400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0449					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.8900e-003	1.3000e-004	8.5700e-003	2.0000e-005		1.2400e-003	1.2400e-003		1.2400e-003	1.2400e-003	0.1271	0.0312	0.1583	2.4000e-004	1.0000e-005	0.1665
Landscaping	2.3000e-004	9.0000e-005	7.5300e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0123	0.0123	1.0000e-005	0.0000	0.0126
Total	0.0575	2.2000e-004	0.0161	2.0000e-005		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.1271	0.0435	0.1706	2.5000e-004	1.0000e-005	0.1791

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	2.0622	0.0514	1.2400e-003	3.7171

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.50718 / 0.923757	1.9762	0.0493	1.1900e-003	3.5626
Single Family Housing	0.065154 / 0.0410754	0.0860	2.1300e-003	5.0000e-005	0.1545
Total		2.0622	0.0514	1.2400e-003	3.7171

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	1.8574	0.1098	0.0000	4.6016

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	7.89	1.6016	0.0947	0.0000	3.9679
Single Family Housing	1.26	0.2558	0.0151	0.0000	0.6337
Total		1.8574	0.1098	0.0000	4.6016

Winchester Hotel_Proposed Project - Bay Area AQMD Air District, Annual

Winchester Hotel_Proposed Project

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	69.00	Space	0.00	20,531.40	0
Other Asphalt Surfaces	11.88	1000sqft	0.27	11,880.10	0
Other Non-Asphalt Surfaces	2.68	1000sqft	0.06	2,681.00	0
Hotel	119.00	Room	0.36	86,548.50	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Adjusted CO2 Intensity Factor for 2020

Land Use - from site plans. bldg footprint = ground floor acreage. Paving includes on-site and off-site

Construction Phase - adjusted per construction data sheet

Off-road Equipment - per construction data sheet

Trips and VMT - 409 Round cement trips added to vendor trips of bldg construction phase

Demolition - from construction data sheet

Grading - soil export = 11,000 cy

Vehicle Trips - trip generation from Hexagon

Sequestration - 30 net new trees

Construction Off-road Equipment Mitigation -

Energy Mitigation - compliance with 2019 BEES

Water Mitigation - compliance with MWEL0

Operational Off-Road Equipment -

Stationary Sources - Emergency Generators and Fire Pumps - from applicant construction data sheet. Fire pump and generator assuming 2 hours of operation per month for maintenance

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	5.00	60.00
tblConstructionPhase	NumDays	100.00	160.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	2.00	40.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	1.00	10.00
tblGrading	AcresOfGrading	20.00	0.00
tblGrading	AcresOfGrading	5.00	0.50
tblGrading	MaterialExported	0.00	11,000.00
tblLandUse	LandUseSquareFeet	27,600.00	20,531.40
tblLandUse	LandUseSquareFeet	11,880.00	11,880.10
tblLandUse	LandUseSquareFeet	2,680.00	2,681.00
tblLandUse	LandUseSquareFeet	172,788.00	86,548.50
tblLandUse	LotAcreage	0.62	0.00
tblLandUse	LotAcreage	3.97	0.36
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblSequestration	NumberOfNewTrees	0.00	30.00
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	100.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	150.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	24.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	24.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	VendorTripNumber	20.00	225.00
tblVehicleTrips	ST_TR	8.19	12.23
tblVehicleTrips	SU_TR	5.95	12.23
tblVehicleTrips	WD_TR	8.17	12.23

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.3786	3.6408	1.7198	7.8100e-003	0.3313	0.0819	0.4132	0.1322	0.0759	0.2081	0.0000	731.8801	731.8801	0.0806	0.0000	733.8941
2022	0.3149	0.0714	0.1032	1.7000e-004	2.3700e-003	3.4000e-003	5.7700e-003	6.3000e-004	3.2400e-003	3.8700e-003	0.0000	14.6675	14.6675	3.0800e-003	0.0000	14.7445
Maximum	0.3786	3.6408	1.7198	7.8100e-003	0.3313	0.0819	0.4132	0.1322	0.0759	0.2081	0.0000	731.8801	731.8801	0.0806	0.0000	733.8941

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3863	2.0000e-005	1.8600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6200e-003	3.6200e-003	1.0000e-005	0.0000	3.8600e-003
Energy	0.0151	0.1376	0.1156	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	242.2356	242.2356	0.0121	4.6600e-003	243.9267
Mobile	0.3102	1.3392	3.2715	0.0117	1.0290	9.6800e-003	1.0387	0.2762	9.0300e-003	0.2852	0.0000	1,074.1375	1,074.1375	0.0389	0.0000	1,075.1095
Stationary	1.9700e-003	5.5000e-003	7.1500e-003	1.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	0.9139	0.9139	1.3000e-004	0.0000	0.9171
Waste						0.0000	0.0000		0.0000	0.0000	13.2249	0.0000	13.2249	0.7816	0.0000	32.7640
Water						0.0000	0.0000		0.0000	0.0000	0.9577	2.2936	3.2513	0.0986	2.3700e-003	6.4223
Total	0.7137	1.4824	3.3961	0.0125	1.0290	0.0204	1.0495	0.2762	0.0198	0.2960	14.1825	1,319.5843	1,333.7668	0.9313	7.0300e-003	1,359.1436

2.3 Vegetation

Vegetation

	CO2e
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Category	MT
New Trees	21.2400
Total	21.2400

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	1/4/2021	1/29/2021	5	20	
2	Site Preparation	Site Preparation	2/1/2021	2/12/2021	5	10	
3	Grading	Grading	2/15/2021	4/9/2021	5	40	
4	Trenching	Trenching	4/12/2021	4/23/2021	5	10	
5	Building Construction	Building Construction	4/26/2021	12/3/2021	5	160	
6	Architectural Coating	Architectural Coating	12/6/2021	2/25/2022	5	60	
7	Paving	Paving	2/28/2022	3/25/2022	5	20	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.33

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 129,823; Non-Residential Outdoor: 43,274; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40

Site Preparation	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
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	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Trenching	Excavators	1	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Architectural Coating	Aerial Lifts	1	8.00	63	0.31
Architectural Coating	Air Compressors	1	4.00	78	0.48
Paving	Cement and Mortar Mixers	2	8.00	9	0.56
Paving	Pavers	0	7.00	130	0.42
Paving	Rollers	0	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	7	18.00	0.00	108.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	1,375.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	51.00	225.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0117	0.0000	0.0117	1.7800e-003	0.0000	1.7800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0261	0.2489	0.2144	3.6000e-004		0.0132	0.0132		0.0124	0.0124	0.0000	30.9856	30.9856	7.1700e-003	0.0000	31.1648
Total	0.0261	0.2489	0.2144	3.6000e-004	0.0117	0.0132	0.0249	1.7800e-003	0.0124	0.0142	0.0000	30.9856	30.9856	7.1700e-003	0.0000	31.1648

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.3000e-004	0.0146	3.1100e-003	4.0000e-005	9.1000e-004	5.0000e-005	9.6000e-004	2.5000e-004	4.0000e-005	2.9000e-004	0.0000	4.0853	4.0853	2.1000e-004	0.0000	4.0905
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.8000e-004	4.0400e-003	1.0000e-005	1.4200e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2024	1.2024	3.0000e-005	0.0000	1.2031
Total	9.8000e-004	0.0150	7.1500e-003	5.0000e-005	2.3300e-003	6.0000e-005	2.3900e-003	6.3000e-004	5.0000e-005	6.8000e-004	0.0000	5.2877	5.2877	2.4000e-004	0.0000	5.2936

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0304	0.0000	0.0304	0.0166	0.0000	0.0166	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.1129	0.0629	1.2000e-004		5.2800e-003	5.2800e-003		4.8600e-003	4.8600e-003	0.0000	10.7580	10.7580	3.4800e-003	0.0000	10.8450
Total	0.0103	0.1129	0.0629	1.2000e-004	0.0304	5.2800e-003	0.0357	0.0166	4.8600e-003	0.0214	0.0000	10.7580	10.7580	3.4800e-003	0.0000	10.8450

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	1.4000e-004	1.4600e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4342	0.4342	1.0000e-005	0.0000	0.4344
Total	2.0000e-004	1.4000e-004	1.4600e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4342	0.4342	1.0000e-005	0.0000	0.4344

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1211	0.0000	0.1211	0.0663	0.0000	0.0663	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0467	0.4999	0.3374	6.3000e-004		0.0231	0.0231		0.0212	0.0212	0.0000	55.7233	55.7233	0.0180	0.0000	56.1738
Total	0.0467	0.4999	0.3374	6.3000e-004	0.1211	0.0231	0.1441	0.0663	0.0212	0.0875	0.0000	55.7233	55.7233	0.0180	0.0000	56.1738

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.4200e-003	0.1855	0.0395	5.4000e-004	0.0116	5.7000e-004	0.0122	3.1900e-003	5.5000e-004	3.7400e-003	0.0000	52.0123	52.0123	2.6500e-003	0.0000	52.0787
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.2000e-004	6.4000e-004	6.7300e-003	2.0000e-005	2.3700e-003	2.0000e-005	2.3900e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	2.0040	2.0040	4.0000e-005	0.0000	2.0051
Total	6.3400e-003	0.1862	0.0463	5.6000e-004	0.0140	5.9000e-004	0.0146	3.8200e-003	5.6000e-004	4.3800e-003	0.0000	54.0163	54.0163	2.6900e-003	0.0000	54.0838

3.5 Trenching - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.0800e-003	0.0203	0.0277	4.0000e-005		1.0800e-003	1.0800e-003		9.9000e-004	9.9000e-004	0.0000	3.6337	3.6337	1.1800e-003	0.0000	3.6631
Total	2.0800e-003	0.0203	0.0277	4.0000e-005		1.0800e-003	1.0800e-003		9.9000e-004	9.9000e-004	0.0000	3.6337	3.6337	1.1800e-003	0.0000	3.6631

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	5.0000e-005	5.6000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1670	0.1670	0.0000	0.0000	0.1671
Total	8.0000e-005	5.0000e-005	5.6000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1670	0.1670	0.0000	0.0000	0.1671

3.6 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0612	0.6524	0.4359	8.3000e-004		0.0336	0.0336		0.0309	0.0309	0.0000	72.9558	72.9558	0.0236	0.0000	73.5457
Total	0.0612	0.6524	0.4359	8.3000e-004		0.0336	0.0336		0.0309	0.0309	0.0000	72.9558	72.9558	0.0236	0.0000	73.5457

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0571	1.8801	0.4693	4.8600e-003	0.1180	4.0900e-003	0.1221	0.0341	3.9100e-003	0.0381	0.0000	466.8191	466.8191	0.0230	0.0000	467.3928
Worker	0.0125	8.6400e-003	0.0915	3.0000e-004	0.0322	2.1000e-004	0.0325	8.5800e-003	1.9000e-004	8.7700e-003	0.0000	27.2540	27.2540	6.1000e-004	0.0000	27.2693
Total	0.0697	1.8887	0.5608	5.1600e-003	0.1503	4.3000e-003	0.1546	0.0427	4.1000e-003	0.0468	0.0000	494.0731	494.0731	0.0236	0.0000	494.6621

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1529					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8300e-003	0.0162	0.0231	4.0000e-005		7.4000e-004	7.4000e-004		7.3000e-004	7.3000e-004	0.0000	3.1774	3.1774	5.9000e-004	0.0000	3.1923
Total	0.1547	0.0162	0.0231	4.0000e-005		7.4000e-004	7.4000e-004		7.3000e-004	7.3000e-004	0.0000	3.1774	3.1774	5.9000e-004	0.0000	3.1923

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.1000e-004	2.2400e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6680	0.6680	1.0000e-005	0.0000	0.6684
Total	3.1000e-004	2.1000e-004	2.2400e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6680	0.6680	1.0000e-005	0.0000	0.6684

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr										MT/yr					
Archit. Coating	0.3057					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4500e-003	0.0300	0.0461	7.0000e-005		1.3000e-003	1.3000e-003		1.2800e-003	1.2800e-003	0.0000	6.3549	6.3549	1.1800e-003	0.0000	6.3843
Total	0.3092	0.0300	0.0461	7.0000e-005		1.3000e-003	1.3000e-003		1.2800e-003	1.2800e-003	0.0000	6.3549	6.3549	1.1800e-003	0.0000	6.3843

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7000e-004	3.8000e-004	4.1200e-003	1.0000e-005	1.5800e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.2870	1.2870	3.0000e-005	0.0000	1.2877
Total	5.7000e-004	3.8000e-004	4.1200e-003	1.0000e-005	1.5800e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.2870	1.2870	3.0000e-005	0.0000	1.2877

3.8 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.4700e-003	0.0409	0.0509	8.0000e-005		2.0900e-003	2.0900e-003		1.9400e-003	1.9400e-003	0.0000	6.3821	6.3821	1.8600e-003	0.0000	6.4287
Paving	3.5000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.8200e-003	0.0409	0.0509	8.0000e-005		2.0900e-003	2.0900e-003		1.9400e-003	1.9400e-003	0.0000	6.3821	6.3821	1.8600e-003	0.0000	6.4287

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9000e-004	1.9000e-004	2.0600e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6435	0.6435	1.0000e-005	0.0000	0.6438
Total	2.9000e-004	1.9000e-004	2.0600e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6435	0.6435	1.0000e-005	0.0000	0.6438

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Unmitigated	0.3102	1.3392	3.2715	0.0117	1.0290	9.6800e-003	1.0387	0.2762	9.0300e-003	0.2852	0.0000	1,074.1375	1,074.1375	0.0389	0.0000	1,075.1095

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00	
Hotel	1,455.37	1,455.37	1455.37	2,765,102
Other Asphalt Surfaces	0.00	0.00	0.00	
Other Non-Asphalt Surfaces	0.00	0.00	0.00	
Total	1,455.37	1,455.37	1,455.37	2,765,102

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.578638	0.038775	0.193686	0.110919	0.015677	0.005341	0.018293	0.026358	0.002641	0.002200	0.005832	0.000891	0.000749
Hotel	0.578638	0.038775	0.193686	0.110919	0.015677	0.005341	0.018293	0.026358	0.002641	0.002200	0.005832	0.000891	0.000749
Other Asphalt Surfaces	0.578638	0.038775	0.193686	0.110919	0.015677	0.005341	0.018293	0.026358	0.002641	0.002200	0.005832	0.000891	0.000749
Other Non-Asphalt Surfaces	0.578638	0.038775	0.193686	0.110919	0.015677	0.005341	0.018293	0.026358	0.002641	0.002200	0.005832	0.000891	0.000749

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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 Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	92.4004	92.4004	9.2400e-003	1.9100e-003	93.2011
NaturalGas Unmitigated	0.0151	0.1376	0.1156	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8352	149.8352	2.8700e-003	2.7500e-003	150.7256

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	2.80781e+006	0.0151	0.1376	0.1156	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8352	149.8352	2.8700e-003	2.7500e-003	150.7256
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0151	0.1376	0.1156	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	149.8352	149.8352	2.8700e-003	2.7500e-003	150.7256

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	96169.1	12.6503	1.2700e-003	2.6000e-004	12.7599
Hotel	606272	79.7501	7.9800e-003	1.6500e-003	80.4412
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		92.4004	9.2500e-003	1.9100e-003	93.2011

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Unmitigated	0.3863	2.0000e-005	1.8600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6200e-003	3.6200e-003	1.0000e-005	0.0000	3.8600e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0459					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3403					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6200e-003	3.6200e-003	1.0000e-005	0.0000	3.8600e-003
Total	0.3863	2.0000e-005	1.8600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6200e-003	3.6200e-003	1.0000e-005	0.0000	3.8600e-003

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	3.2513	0.0986	2.3700e-003	6.4223

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Hotel	3.01865 / 0.314945	3.2513	0.0986	2.3700e-003	6.4223
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		3.2513	0.0986	2.3700e-003	6.4223

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	13.2249	0.7816	0.0000	32.7640

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Hotel	65.15	13.2249	0.7816	0.0000	32.7640
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		13.2249	0.7816	0.0000	32.7640

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	24	100	0.73	Diesel
Fire Pump	0	0	24	150	0.73	Diesel

10.1 Stationary Sources

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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (100 - 175 HP)	1.9700e-003	5.5000e-003	7.1500e-003	1.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	0.9139	0.9139	1.3000e-004	0.0000	0.9171
Fire Pump - Diesel (100 - 175 HP)	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.9700e-003	5.5000e-003	7.1500e-003	1.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	0.9139	0.9139	1.3000e-004	0.0000	0.9171

11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	21.2400	0.0000	0.0000	21.2400

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	30	21.2400	0.0000	0.0000	21.2400
Total		21.2400	0.0000	0.0000	21.2400