Appendix A

Air Quality Emissions Calculation Files

Road Construction Emissions Model **Version 9.0.0**

Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a
yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types.
Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new project.

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type

Project Name	Carmel Valley Manor Sewer Main Extension Project	
Construction Start Year	2020	Enter a Year between 2014 and 2040 (inclusive)
Project Type For 4: Other Linear Project Type, please provide project specific off-road equipment population and vehicle trip data	4	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction
Project Construction Time	6.00	months
Working Days per Month	22.00	days (assume 22 if unknown)
Predominant Soil/Site Type: Enter 1, 2, or 3 (for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)	1	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the Ione formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)
Project Length	2.05	miles
Total Project Area	3.72	acres
Maximum Area Disturbed/Day	0.10	acres
Water Trucks Used?	1	1. Yes 2. No

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County.

http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pages/googlemaps.aspx#regionalseries

Material Hauling Quantity Input

Material Type	Phase	Haul Truck Capacity (yd^3) (assume 20 if unknown)	Import Volume (yd^3/day)	Export Volume (yd^3/day)
Soil	Grubbing/Land Clearing			
	Grading/Excavation	63.00		126.00
	Drainage/Utilities/Sub-Grade			
	Paving			
Asphalt	Grubbing/Land Clearing			
	Grading/Excavation	63.00		126.00
	Drainage/Utilities/Sub-Grade			
	Paving	63.00	126.00	

Mitigation Options

On-road Fleet Emissions Mitigation	2010 and Newer On-road Vehicles Fleet	Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation). Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard
Off-road Equipment Emissions Mitigation	No Mitigation	

The remaining sections of this sheet contain areas that require modification when 'Other Project Type' is selected.

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F53.

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing		0.60		1/1/2020
Grading/Excavation		2.40		1/20/2020
Drainage/Utilities/Sub-Grade		2.10		4/2/2020
Paving		0.90		6/5/2020
Totals (Months)	6			

Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64.

Soil Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing				0	0.00
Miles/round trip: Grading/Excavation				2	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade				0	0.00
Miles/round trip: Paving				0	0.00

2010+ Model Year Mitigation Option Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.04	0.42	3.03	0.11	0.05	0.02	1,801.75	0.00	0.28	1,886.20
Grading/Excavation (grams/mile)	0.04	0.42	3.03	0.11	0.05	0.02	1,801.75	0.00	0.28	1,886.20
Drainage/Utilities/Sub-Grade (grams/mile)	0.04	0.42	3.03	0.11	0.05	0.02	1,801.75	0.00	0.28	1,886.20
Paving (grams/mile)	0.04	0.42	3.03	0.11	0.05	0.02	1,801.75	0.00	0.28	1,886.20
Grubbing/Land Clearing (grams/trip)	0.00	0.00	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Drainage/Utilities/Sub-Grade (grams/trip)	0.00	0.00	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Asphalt Hauling emission default values can be overridden in cells D91 through D94, and F91 through F94.

Asphalt Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing				0	0.00
Miles/round trip: Grading/Excavation				2	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade				0	0.00
Miles/round trip: Paving				2	0.00

2010+ Model Year Mitigation Option Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.04	0.42	3.03	0.11	0.05	0.02	1,801.75	0.00	0.28	1,886.20
Grading/Excavation (grams/mile)	0.04	0.42	3.03	0.11	0.05	0.02	1,801.75	0.00	0.28	1,886.20
Drainage/Utilities/Sub-Grade (grams/mile)	0.04	0.42	3.03	0.11	0.05	0.02	1,801.75	0.00	0.28	1,886.20
Paving (grams/mile)	0.04	0.42	3.03	0.11	0.05	0.02	1,801.75	0.00	0.28	1,886.20
Grubbing/Land Clearing (grams/trip)	0.00	0.00	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Drainage/Utilities/Sub-Grade (grams/trip)	0.00	0.00	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Worker commute default values can be overridden in cells D121 through D126.

Worker Commute Emissions	User Override of Worker Commute Default Values	Default Values		
User Input				
Miles/ one-way trip	10		Calculated Daily Trips	Calculated Daily VMT
One-way trips/day	12			
No. of employees: Grubbing/Land Clearing	6		72	720.00
No. of employees: Grading/Excavation	6		72	720.00
No. of employees: Drainage/Utilities/Sub-Grade	6		72	720.00
No. of employees: Paving	6		72	720.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.02	1.22	0.11	0.05	0.02	0.00	350.90	0.01	0.01	353.67
Grading/Excavation (grams/mile)	0.02	1.22	0.11	0.05	0.02	0.00	350.90	0.01	0.01	353.67
Draining/Utilities/Sub-Grade (grams/mile)	0.02	1.22	0.11	0.05	0.02	0.00	350.90	0.01	0.01	353.67
Paving (grams/mile)	0.02	1.22	0.11	0.05	0.02	0.00	350.90	0.01	0.01	353.67
Grubbing/Land Clearing (grams/trip)	1.25	3.05	0.37	0.00	0.00	0.00	75.08	0.09	0.04	88.34
Grading/Excavation (grams/trip)	1.25	3.05	0.37	0.00	0.00	0.00	75.08	0.09	0.04	88.34
Draining/Utilities/Sub-Grade (grams/trip)	1.25	3.05	0.37	0.00	0.00	0.00	75.08	0.09	0.04	88.34
Paving (grams/trip)	1.25	3.05	0.37	0.00	0.00	0.00	75.08	0.09	0.04	88.34
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.24	2.42	0.24	0.07	0.03	0.01	568.91	0.02	0.02	575.41
Tons per const. Period - Grubbing/Land Clearing	0.00	0.02	0.00	0.00	0.00	0.00	3.75	0.00	0.00	3.80
Pounds per day - Grading/Excavation	0.24	2.42	0.24	0.07	0.03	0.01	568.91	0.02	0.02	575.41
Tons per const. Period - Grading/Excavation	0.01	0.06	0.01	0.00	0.00	0.00	15.02	0.00	0.00	15.19
Pounds per day - Drainage/Utilities/Sub-Grade	0.24	2.42	0.24	0.07	0.03	0.01	568.91	0.02	0.02	575.41
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.01	0.06	0.01	0.00	0.00	0.00	13.14	0.00	0.00	13.29
Pounds per day - Paving	0.24	2.42	0.24	0.07	0.03	0.01	568.91	0.02	0.02	575.41
Tons per const. Period - Paving	0.00	0.02	0.00	0.00	0.00	0.00	5.63	0.00	0.00	5.70
Total tons per construction project	0.02	0.16	0.02	0.00	0.00	0.00	37.55	0.00	0.00	37.98

Note: Water Truck default values can be overridden in cells D153 through D156, I153 through I156, and F153 through F156.

Water Truck Emissions	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Round Trips/Vehicle/Day	Default Values Round Trips/Vehicle/Day	Calculated Trips/day	User Override of Miles/Round Trip	Default Values Miles/Round Trip	Calculated Daily VMT
User Input								
Grubbing/Land Clearing - Exhaust	1		2.00					0.00
Grading/Excavation - Exhaust	1		2.00					0.00
Drainage/Utilities/Subgrade								0.00
Paving	1		2.00					0.00

2010+ Model Year Mitigation Option Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.04	0.42	3.03	0.11	0.05	0.02	1,801.75	0.00	0.28	1,886.20
Grading/Excavation (grams/mile)	0.04	0.42	3.03	0.11	0.05	0.02	1,801.75	0.00	0.28	1,886.20
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.42	3.03	0.11	0.05	0.02	1,801.75	0.00	0.28	1,886.20
Paving (grams/mile)	0.04	0.42	3.03	0.11	0.05	0.02	1,801.75	0.00	0.28	1,886.20
Grubbing/Land Clearing (grams/trip)	0.00	0.00	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Fugitive dust default values can be overridden in cells D183 through D185.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing			1.00	0.01	0.21	0.00
Fugitive Dust - Grading/Excavation			1.00	0.03	0.21	0.01
Fugitive Dust - Drainage/Utilities/Subgrade			1.00	0.02	0.21	0.00

Values in cells D195 through D228, D246 through D279, D297 through D330, and D348 through D381 are required when 'Other Project Type' is selected.

Off-Road Equipment Emissions

Grubbing/Land Clearing Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Bore/Drill Rigs	0.28	2.08	3.52	0.10	0.09	0.01	909.81	0.29	0.01	919.65
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Concrete/Industrial Saws	0.42	3.69	3.30	0.20	0.20	0.01	592.67	0.04	0.00	594.93
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Paving Equipment	0.21	2.53	2.14	0.11	0.10	0.00	394.53	0.13	0.00	398.78
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Skid Steer Loaders	0.08	1.39	1.06	0.05	0.04	0.00	200.17	0.06	0.00	202.33
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Tractors/Loaders/Backhoes	0.21	2.28	2.11	0.13	0.12	0.00	300.77	0.10	0.00	304.01
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing	pounds per day	1.19	11.97	12.13	0.59	0.55	0.02	2,397.94	0.62	0.02	2,419.70
Grubbing/Land Clearing	tons per phase	0.01	0.08	0.08	0.00	0.00	0.00	15.83	0.00	0.00	15.97

Grading/Excavation	Default Number of Vehicles	Mitigation Option Override of	Default		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Bore/Drill Rigs	0.28	2.08	3.52	0.10	0.09	0.01	909.81	0.29	0.01	919.65
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Concrete/Industrial Saws	0.42	3.69	3.30	0.20	0.20	0.01	592.67	0.04	0.00	594.93
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Paving Equipment	0.21	2.53	2.14	0.11	0.10	0.00	394.53	0.13	0.00	398.78
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Skid Steer Loaders	0.08	1.39	1.06	0.05	0.04	0.00	200.17	0.06	0.00	202.33
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Tractors/Loaders/Backhoes	0.21	2.28	2.11	0.13	0.12	0.00	300.77	0.10	0.00	304.01
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
				pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grading/Excavation	pounds per day	1.19	11.97	12.13	0.59	0.55	0.02	2,397.94	0.62	0.02	2,419.70
Grading/Excavation	tons per phase	0.03	0.32	0.32	0.02	0.01	0.00	63.31	0.02	0.00	63.88

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Bore/Drill Rigs	0.28	2.08	3.52	0.10	0.09	0.01	909.81	0.29	0.01	919.65
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Concrete/Industrial Saws	0.42	3.69	3.30	0.20	0.20	0.01	592.67	0.04	0.00	594.93
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Paving Equipment	0.21	2.53	2.14	0.11	0.10	0.00	394.53	0.13	0.00	398.78
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Skid Steer Loaders	0.08	1.39	1.06	0.05	0.04	0.00	200.17	0.06	0.00	202.33
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Tractors/Loaders/Backhoes	0.21	2.28	2.11	0.13	0.12	0.00	300.77	0.10	0.00	304.01
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles		Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Drainage/Utilities/Sub-Grade		pounds per day		1.19	11.97	12.13	0.59	0.55	0.02	2,397.94	0.62	0.02	2,419.70
	Drainage/Utilities/Sub-Grade		tons per phase		0.03	0.28	0.28	0.01	0.01	0.00	55.39	0.01	0.00	55.90

Paving Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Bore/Drill Rigs	0.28	2.08	3.52	0.10	0.09	0.01	909.81	0.29	0.01	919.65
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Concrete/Industrial Saws	0.42	3.69	3.30	0.20	0.20	0.01	592.67	0.04	0.00	594.93
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Paving Equipment	0.21	2.53	2.14	0.11	0.10	0.00	394.53	0.13	0.00	398.78
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Skid Steer Loaders	0.08	1.39	1.06	0.05	0.04	0.00	200.17	0.06	0.00	202.33
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Tractors/Loaders/Backhoes	0.21	2.28	2.11	0.13	0.12	0.00	300.77	0.10	0.00	304.01
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Paving	pounds per day	1.19	11.97	12.13	0.59	0.55	0.02	2,397.94	0.62	0.02	2,419.70
Paving	tons per phase	0.01	0.12	0.12	0.01	0.01	0.00	23.74	0.01	0.00	23.96
Total Emissions all Phases (tons per construction period) =>		0.08	0.79	0.80	0.04	0.04	0.00	158.26	0.04	0.00	159.70

Equipment default values for horsepower and hours/day can be overridden in cells D403 through D436 and F403 through F436.

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		78		8
Bore/Drill Rigs		221		8
Cement and Mortar Mixers		9		8
Concrete/Industrial Saws		81		8
Cranes		231		8
Crawler Tractors		212		8
Crushing/Proc. Equipment		85		8
Excavators		158		8
Forklifts		89		8
Generator Sets		84		8
Graders		187		8
Off-Highway Tractors		124		8
Off-Highway Trucks		402		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		168		8
Pavers		130		8
Paving Equipment		132		8
Plate Compactors		8		8
Pressure Washers		13		8
Pumps		84		8
Rollers		80		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		247		8
Rubber Tired Loaders		203		8
Scrapers		367		8
Signal Boards		6		8
Skid Steer Loaders		65		8
Surfacing Equipment		263		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		97		8
Trenchers		78		8
Welders		46		8

END OF DATA ENTRY SHEET

Carmel Valley Manor Sewer Extension Project

Monterey County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.60	1000sqft	0.04	1,600.00	0
Other Asphalt Surfaces	0.20	1000sqft	0.00	200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.6	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	298.65	**CH4 Intensity (lb/MWhr)**	0.014	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Carmel Valley Manor Sewer Extension Project - Monterey County, Annual

Project Characteristics - Utility intensity factors per RPS standards

Land Use - Other asphalt surface is the total paved slab per client site plans, with assumed 200 square feet of driveway. Other user defined industrial is representative of the structures to be built on the slab associated with the pump station.

Construction Phase - Phasing based on 6 month timeline per client plans.

Off-road Equipment -

Off-road Equipment - Per client information

Off-road Equipment - per client info

Off-road Equipment -

Off-road Equipment -

Trips and VMT - 4 construction workers on site, per client information. This would require 8 one way trips each day. Vendor trips assumed for delivery of materials.

Grading - Per client info

Architectural Coating - Per MBARD Rule 4.26

Vehicle Trips - Based on 12 round trips per year, with an assumed 10 mile round trip length

Energy Use -

Construction Off-road Equipment Mitigation -

Operational Off-Road Equipment - Per client info on emergency generator

Stationary Sources - Emergency Generators and Fire Pumps - 1 emergency natural gas powered generator to operate only in the case of emergency and to be tested for 30 minutes 12 times per year (monthly)

Fleet Mix - Assumed 50% passenger cars (LDA), and 50% light duty trucks (LDT1)

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1.00	10.00
tblConstructionPhase	NumDays	2.00	50.00
tblConstructionPhase	NumDays	100.00	50.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	5.00	20.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.54	0.50

tblFleetMix	LDT1	0.03	0.50
tblFleetMix	LDT2	0.21	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.5040e-003	0.00
tblFleetMix	MCY	7.7240e-003	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	8.0500e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	4.1550e-003	0.00
tblFleetMix	SBUS	1.2360e-003	0.00
tblFleetMix	UBUS	2.7380e-003	0.00
tblGrading	MaterialExported	0.00	1,000.00
tblGrading	MaterialImported	0.00	1,000.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.014
tblProjectCharacteristics	CO2IntensityFactor	641.35	298.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	84.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.50
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	6.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	5.00	8.00
tblTripsAndVMT	WorkerTripNumber	10.00	8.00
tblTripsAndVMT	WorkerTripNumber	1.00	8.00
tblTripsAndVMT	WorkerTripNumber	0.00	8.00
tblTripsAndVMT	WorkerTripNumber	18.00	8.00
tblVehicleTrips	CC_TL	7.30	5.00

tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	2.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0253	0.2588	0.2110	4.4000e-004	0.0240	0.0126	0.0366	0.0109	0.0119	0.0228	0.0000	38.8740	38.8740	6.3200e-003	0.0000	39.0320
2021	0.0330	0.3177	0.3033	5.3000e-004	7.3300e-003	0.0166	0.0239	2.3500e-003	0.0154	0.0177	0.0000	46.5984	46.5984	0.0117	0.0000	46.8911
Maximum	**0.0330**	**0.3177**	**0.3033**	**5.3000e-004**	**0.0240**	**0.0166**	**0.0366**	**0.0109**	**0.0154**	**0.0228**	**0.0000**	**46.5984**	**46.5984**	**0.0117**	**0.0000**	**46.8911**

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					
2020	0.0253	0.2588	0.2110	4.4000e-004	0.0240	0.0126	0.0366	0.0109	0.0119	0.0228	0.0000	38.8740	38.8740	6.3200e-003	0.0000	39.0320
2021	0.0330	0.3177	0.3033	5.3000e-004	7.3300e-003	0.0166	0.0239	2.3500e-003	0.0154	0.0177	0.0000	46.5984	46.5984	0.0117	0.0000	46.8911
Maximum	**0.0330**	**0.3177**	**0.3033**	**5.3000e-004**	**0.0240**	**0.0166**	**0.0366**	**0.0109**	**0.0154**	**0.0228**	**0.0000**	**46.5984**	**46.5984**	**0.0117**	**0.0000**	**46.8911**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	10-15-2020	1-14-2021	0.3306	0.3306
2	1-15-2021	4-14-2021	0.3046	0.3046
		Highest	0.3306	0.3306

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.6000e-004	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	5.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	7.6000e-004	7.9000e-004	8.4700e-003	2.0000e-005	1.7200e-003	2.0000e-005	1.7400e-003	4.6000e-004	2.0000e-005	4.7000e-004	0.0000	1.4696	1.4696	7.0000e-005	0.0000	1.4712
Stationary	2.2200e-003	2.1000e-004	5.7700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1285	0.1285	2.7000e-004	0.0000	0.1352
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.1400e-003**	**1.0000e-003**	**0.0143**	**2.0000e-005**	**1.7200e-003**	**3.0000e-005**	**1.7500e-003**	**4.6000e-004**	**3.0000e-005**	**4.8000e-004**	**0.0000**	**1.5981**	**1.5981**	**3.4000e-004**	**0.0000**	**1.6065**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.6000e-004	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	5.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	7.6000e-004	7.9000e-004	8.4700e-003	2.0000e-005	1.7200e-003	2.0000e-005	1.7400e-003	4.6000e-004	2.0000e-005	4.7000e-004	0.0000	1.4696	1.4696	7.0000e-005	0.0000	1.4712
Stationary	2.2200e-003	2.1000e-004	5.7700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1285	0.1285	2.7000e-004	0.0000	0.1352
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.1400e-003**	**1.0000e-003**	**0.0143**	**2.0000e-005**	**1.7200e-003**	**3.0000e-005**	**1.7500e-003**	**4.6000e-004**	**3.0000e-005**	**4.8000e-004**	**0.0000**	**1.5981**	**1.5981**	**3.4000e-004**	**0.0000**	**1.6065**

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

3.0 Construction Detail

Construction Phase

Carmel Valley Manor Sewer Extension Project - Monterey County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	10/15/2020	10/28/2020	5	10	
2	Grading	Grading	10/29/2020	1/6/2021	5	50	
3	Building Construction	Building Construction	1/7/2021	3/17/2021	5	50	
4	Architectural Coating	Architectural Coating	2/18/2021	3/17/2021	5	20	
5	Paving	Paving	3/18/2021	4/14/2021	5	20	

Acres of Grading (Site Preparation Phase): 5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.04

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 108 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	8.00	0.00	250.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	8.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6500e-003	0.0000	2.6500e-003	2.9000e-004	0.0000	2.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4300e-003	0.0422	0.0205	5.0000e-005		1.6800e-003	1.6800e-003		1.5400e-003	1.5400e-003	0.0000	4.2796	4.2796	1.3800e-003	0.0000	4.3142
Total	**3.4300e-003**	**0.0422**	**0.0205**	**5.0000e-005**	**2.6500e-003**	**1.6800e-003**	**4.3300e-003**	**2.9000e-004**	**1.5400e-003**	**1.8300e-003**	**0.0000**	**4.2796**	**4.2796**	**1.3800e-003**	**0.0000**	**4.3142**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.6000e-004	1.4600e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.3023	0.3023	1.0000e-005	0.0000	0.3027
Total	**1.8000e-004**	**1.6000e-004**	**1.4600e-003**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**8.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.3023**	**0.3023**	**1.0000e-005**	**0.0000**	**0.3027**

3.2 Site Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6500e-003	0.0000	2.6500e-003	2.9000e-004	0.0000	2.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4300e-003	0.0422	0.0205	5.0000e-005		1.6800e-003	1.6800e-003		1.5400e-003	1.5400e-003	0.0000	4.2796	4.2796	1.3800e-003	0.0000	4.3142
Total	**3.4300e-003**	**0.0422**	**0.0205**	**5.0000e-005**	**2.6500e-003**	**1.6800e-003**	**4.3300e-003**	**2.9000e-004**	**1.5400e-003**	**1.8300e-003**	**0.0000**	**4.2796**	**4.2796**	**1.3800e-003**	**0.0000**	**4.3142**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.6000e-004	1.4600e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.3023	0.3023	1.0000e-005	0.0000	0.3027
Total	**1.8000e-004**	**1.6000e-004**	**1.4600e-003**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**8.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.3023**	**0.3023**	**1.0000e-005**	**0.0000**	**0.3027**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0175	0.0000	0.0175	9.5500e-003	0.0000	9.5500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0200	0.1811	0.1753	2.8000e-004		0.0108	0.0108		0.0103	0.0103	0.0000	23.9374	23.9374	4.5300e-003	0.0000	24.0505
Total	**0.0200**	**0.1811**	**0.1753**	**2.8000e-004**	**0.0175**	**0.0108**	**0.0283**	**9.5500e-003**	**0.0103**	**0.0198**	**0.0000**	**23.9374**	**23.9374**	**4.5300e-003**	**0.0000**	**24.0505**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.8000e-004	0.0347	7.0600e-003	9.0000e-005	2.0800e-003	1.3000e-004	2.2100e-003	5.7000e-004	1.3000e-004	7.0000e-004	0.0000	8.9640	8.9640	3.4000e-004	0.0000	8.9724
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.1000e-004	7.5000e-004	6.7000e-003	2.0000e-005	1.4600e-003	1.0000e-005	1.4800e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.3907	1.3907	6.0000e-005	0.0000	1.3922
Total	**1.7900e-003**	**0.0354**	**0.0138**	**1.1000e-004**	**3.5400e-003**	**1.4000e-004**	**3.6900e-003**	**9.6000e-004**	**1.4000e-004**	**1.1000e-003**	**0.0000**	**10.3547**	**10.3547**	**4.0000e-004**	**0.0000**	**10.3646**

3.3 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0175	0.0000	0.0175	9.5500e-003	0.0000	9.5500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0200	0.1811	0.1753	2.8000e-004		0.0108	0.0108		0.0103	0.0103	0.0000	23.9373	23.9373	4.5300e-003	0.0000	24.0505
Total	**0.0200**	**0.1811**	**0.1753**	**2.8000e-004**	**0.0175**	**0.0108**	**0.0283**	**9.5500e-003**	**0.0103**	**0.0198**	**0.0000**	**23.9373**	**23.9373**	**4.5300e-003**	**0.0000**	**24.0505**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.8000e-004	0.0347	7.0600e-003	9.0000e-005	2.0800e-003	1.3000e-004	2.2100e-003	5.7000e-004	1.3000e-004	7.0000e-004	0.0000	8.9640	8.9640	3.4000e-004	0.0000	8.9724
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.1000e-004	7.5000e-004	6.7000e-003	2.0000e-005	1.4600e-003	1.0000e-005	1.4800e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.3907	1.3907	6.0000e-005	0.0000	1.3922
Total	**1.7900e-003**	**0.0354**	**0.0138**	**1.1000e-004**	**3.5400e-003**	**1.4000e-004**	**3.6900e-003**	**9.6000e-004**	**1.4000e-004**	**1.1000e-003**	**0.0000**	**10.3547**	**10.3547**	**4.0000e-004**	**0.0000**	**10.3646**

3.3 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					1.7200e-003	0.0000	1.7200e-003	8.6000e-004	0.0000	8.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5900e-003	0.0145	0.0151	2.0000e-005		8.1000e-004	8.1000e-004		7.8000e-004	7.8000e-004	0.0000	2.0819	2.0819	3.9000e-004	0.0000	2.0916
Total	**1.5900e-003**	**0.0145**	**0.0151**	**2.0000e-005**	**1.7200e-003**	**8.1000e-004**	**2.5300e-003**	**8.6000e-004**	**7.8000e-004**	**1.6400e-003**	**0.0000**	**2.0819**	**2.0819**	**3.9000e-004**	**0.0000**	**2.0916**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.0000e-005	2.7600e-003	5.8000e-004	1.0000e-005	1.6300e-003	1.0000e-005	1.6400e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	0.7703	0.7703	3.0000e-005	0.0000	0.7710
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	6.0000e-005	5.3000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1169	0.1169	0.0000	0.0000	0.1170
Total	**1.4000e-004**	**2.8200e-003**	**1.1100e-003**	**1.0000e-005**	**1.7600e-003**	**1.0000e-005**	**1.7700e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**0.8872**	**0.8872**	**3.0000e-005**	**0.0000**	**0.8880**

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.7200e-003	0.0000	1.7200e-003	8.6000e-004	0.0000	8.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5900e-003	0.0145	0.0151	2.0000e-005		8.1000e-004	8.1000e-004		7.8000e-004	7.8000e-004	0.0000	2.0819	2.0819	3.9000e-004	0.0000	2.0916
Total	**1.5900e-003**	**0.0145**	**0.0151**	**2.0000e-005**	**1.7200e-003**	**8.1000e-004**	**2.5300e-003**	**8.6000e-004**	**7.8000e-004**	**1.6400e-003**	**0.0000**	**2.0819**	**2.0819**	**3.9000e-004**	**0.0000**	**2.0916**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.0000e-005	2.7600e-003	5.8000e-004	1.0000e-005	1.6300e-003	1.0000e-005	1.6400e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	0.7703	0.7703	3.0000e-005	0.0000	0.7710
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	6.0000e-005	5.3000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1169	0.1169	0.0000	0.0000	0.1170
Total	**1.4000e-004**	**2.8200e-003**	**1.1100e-003**	**1.0000e-005**	**1.7600e-003**	**1.0000e-005**	**1.7700e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**0.8872**	**0.8872**	**3.0000e-005**	**0.0000**	**0.8880**

3.4 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	0.0194	0.1996	0.1816	2.8000e-004		0.0112	0.0112		0.0103	0.0103	0.0000	25.0205	25.0205	8.0900e-003	0.0000	25.2228
Total	**0.0194**	**0.1996**	**0.1816**	**2.8000e-004**		**0.0112**	**0.0112**		**0.0103**	**0.0103**	**0.0000**	**25.0205**	**25.0205**	**8.0900e-003**	**0.0000**	**25.2228**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5000e-004	0.0170	4.4800e-003	4.0000e-005	9.9000e-004	5.0000e-005	1.0400e-003	2.9000e-004	5.0000e-005	3.4000e-004	0.0000	4.0333	4.0333	1.8000e-004	0.0000	4.0378
Worker	8.1000e-004	7.3000e-004	6.6200e-003	2.0000e-005	1.5900e-003	1.0000e-005	1.6000e-003	4.2000e-004	1.0000e-005	4.4000e-004	0.0000	1.4610	1.4610	6.0000e-005	0.0000	1.4625
Total	**1.3600e-003**	**0.0178**	**0.0111**	**6.0000e-005**	**2.5800e-003**	**6.0000e-005**	**2.6400e-003**	**7.1000e-004**	**6.0000e-005**	**7.8000e-004**	**0.0000**	**5.4943**	**5.4943**	**2.4000e-004**	**0.0000**	**5.5003**

3.4 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0194	0.1996	0.1816	2.8000e-004		0.0112	0.0112		0.0103	0.0103	0.0000	25.0205	25.0205	8.0900e-003	0.0000	25.2228
Total	**0.0194**	**0.1996**	**0.1816**	**2.8000e-004**		**0.0112**	**0.0112**		**0.0103**	**0.0103**	**0.0000**	**25.0205**	**25.0205**	**8.0900e-003**	**0.0000**	**25.2228**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5000e-004	0.0170	4.4800e-003	4.0000e-005	9.9000e-004	5.0000e-005	1.0400e-003	2.9000e-004	5.0000e-005	3.4000e-004	0.0000	4.0333	4.0333	1.8000e-004	0.0000	4.0378
Worker	8.1000e-004	7.3000e-004	6.6200e-003	2.0000e-005	1.5900e-003	1.0000e-005	1.6000e-003	4.2000e-004	1.0000e-005	4.4000e-004	0.0000	1.4610	1.4610	6.0000e-005	0.0000	1.4625
Total	**1.3600e-003**	**0.0178**	**0.0111**	**6.0000e-005**	**2.5800e-003**	**6.0000e-005**	**2.6400e-003**	**7.1000e-004**	**6.0000e-005**	**7.8000e-004**	**0.0000**	**5.4943**	**5.4943**	**2.4000e-004**	**0.0000**	**5.5003**

3.5 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	3.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**2.5700e-003**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.9000e-004	2.6500e-003	1.0000e-005	6.4000e-004	1.0000e-005	6.4000e-004	1.7000e-004	1.0000e-005	1.7000e-004	0.0000	0.5844	0.5844	2.0000e-005	0.0000	0.5850
Total	**3.2000e-004**	**2.9000e-004**	**2.6500e-003**	**1.0000e-005**	**6.4000e-004**	**1.0000e-005**	**6.4000e-004**	**1.7000e-004**	**1.0000e-005**	**1.7000e-004**	**0.0000**	**0.5844**	**0.5844**	**2.0000e-005**	**0.0000**	**0.5850**

3.5 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	3.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**2.5700e-003**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.9000e-004	2.6500e-003	1.0000e-005	6.4000e-004	1.0000e-005	6.4000e-004	1.7000e-004	1.0000e-005	1.7000e-004	0.0000	0.5844	0.5844	2.0000e-005	0.0000	0.5850
Total	**3.2000e-004**	**2.9000e-004**	**2.6500e-003**	**1.0000e-005**	**6.4000e-004**	**1.0000e-005**	**6.4000e-004**	**1.7000e-004**	**1.0000e-005**	**1.7000e-004**	**0.0000**	**0.5844**	**0.5844**	**2.0000e-005**	**0.0000**	**0.5850**

3.6 Paving - 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	7.2100e-003	0.0672	0.0709	1.1000e-004		3.5300e-003	3.5300e-003		3.2900e-003	3.2900e-003	0.0000	9.3925	9.3925	2.7400e-003	0.0000	9.4609
Paving	5.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.2600e-003**	**0.0672**	**0.0709**	**1.1000e-004**		**3.5300e-003**	**3.5300e-003**		**3.2900e-003**	**3.2900e-003**	**0.0000**	**9.3925**	**9.3925**	**2.7400e-003**	**0.0000**	**9.4609**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.9000e-004	2.6500e-003	1.0000e-005	6.4000e-004	1.0000e-005	6.4000e-004	1.7000e-004	1.0000e-005	1.7000e-004	0.0000	0.5844	0.5844	2.0000e-005	0.0000	0.5850
Total	**3.2000e-004**	**2.9000e-004**	**2.6500e-003**	**1.0000e-005**	**6.4000e-004**	**1.0000e-005**	**6.4000e-004**	**1.7000e-004**	**1.0000e-005**	**1.7000e-004**	**0.0000**	**0.5844**	**0.5844**	**2.0000e-005**	**0.0000**	**0.5850**

3.6 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.2100e-003	0.0672	0.0709	1.1000e-004		3.5300e-003	3.5300e-003		3.2900e-003	3.2900e-003	0.0000	9.3925	9.3925	2.7400e-003	0.0000	9.4609
Paving	5.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.2600e-003**	**0.0672**	**0.0709**	**1.1000e-004**		**3.5300e-003**	**3.5300e-003**		**3.2900e-003**	**3.2900e-003**	**0.0000**	**9.3925**	**9.3925**	**2.7400e-003**	**0.0000**	**9.4609**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.9000e-004	2.6500e-003	1.0000e-005	6.4000e-004	1.0000e-005	6.4000e-004	1.7000e-004	1.0000e-005	1.7000e-004	0.0000	0.5844	0.5844	2.0000e-005	0.0000	0.5850
Total	**3.2000e-004**	**2.9000e-004**	**2.6500e-003**	**1.0000e-005**	**6.4000e-004**	**1.0000e-005**	**6.4000e-004**	**1.7000e-004**	**1.0000e-005**	**1.7000e-004**	**0.0000**	**0.5844**	**0.5844**	**2.0000e-005**	**0.0000**	**0.5850**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	7.6000e-004	7.9000e-004	8.4700e-003	2.0000e-005	1.7200e-003	2.0000e-005	1.7400e-003	4.6000e-004	2.0000e-005	4.7000e-004	0.0000	1.4696	1.4696	7.0000e-005	0.0000	1.4712
Unmitigated	7.6000e-004	7.9000e-004	8.4700e-003	2.0000e-005	1.7200e-003	2.0000e-005	1.7400e-003	4.6000e-004	2.0000e-005	4.7000e-004	0.0000	1.4696	1.4696	7.0000e-005	0.0000	1.4712

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	3.20	0.00	0.00	4,160	4,160
Other Asphalt Surfaces	0.40	0.00	0.00	520	520
Total	3.60	0.00	0.00	4,680	4,680

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	0.00	5.00	0.00	0.00	100.00	0.00	100	0	0
Other Asphalt Surfaces	0.00	5.00	0.00	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.500000	0.500000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.6000e-004	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	5.0000e-005
Unmitigated	1.6000e-004	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	5.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	5.0000e-005
Total	**1.6000e-004**	**0.0000**	**2.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0000**	**5.0000e-005**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	5.0000e-005
Total	**1.6000e-004**	**0.0000**	**2.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0000**	**5.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

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	0.5	6	84	0.73	CNG

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - CNG (0 - 500 HP)	2.2200e-003	2.1000e-004	5.7700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1285	0.1285	2.7000e-004	0.0000	0.1352
Total	**2.2200e-003**	**2.1000e-004**	**5.7700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.1285**	**0.1285**	**2.7000e-004**	**0.0000**	**0.1352**

11.0 Vegetation

Carmel Valley Manor Sewer Extension Project

Monterey County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.60	1000sqft	0.04	1,600.00	0
Other Asphalt Surfaces	0.20	1000sqft	0.00	200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.6	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	298.65	**CH4 Intensity (lb/MWhr)**	0.014	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Carmel Valley Manor Sewer Extension Project - Monterey County, Winter

Project Characteristics - Utility intensity factors per RPS standards

Land Use - Other asphalt surface is the total paved slab per client site plans, with assumed 200 square feet of driveway. Other user defined industrial is representative of the structures to be built on the slab associated with the pump station.

Construction Phase - Phasing based on 6 month timeline per client plans.

Off-road Equipment -

Off-road Equipment - Per client information

Off-road Equipment - per client info

Off-road Equipment -

Off-road Equipment -

Trips and VMT - 4 construction workers on site, per client information. This would require 8 one way trips each day. Vendor trips assumed for delivery of materials.

Grading - Per client info

Architectural Coating - Per MBARD Rule 4.26

Vehicle Trips - Based on 12 round trips per year, with an assumed 10 mile round trip length

Energy Use -

Construction Off-road Equipment Mitigation -

Operational Off-Road Equipment - Per client info on emergency generator

Stationary Sources - Emergency Generators and Fire Pumps - 1 emergency natural gas powered generator to operate only in the case of emergency and to be tested for 30 minutes 12 times per year (monthly)

Fleet Mix - Assumed 50% passenger cars (LDA), and 50% light duty trucks (LDT1)

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1.00	10.00
tblConstructionPhase	NumDays	2.00	50.00
tblConstructionPhase	NumDays	100.00	50.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	5.00	20.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.54	0.50

tblFleetMix	LDT1	0.03	0.50
tblFleetMix	LDT2	0.21	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.5040e-003	0.00
tblFleetMix	MCY	7.7240e-003	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	8.0500e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	4.1550e-003	0.00
tblFleetMix	SBUS	1.2360e-003	0.00
tblFleetMix	UBUS	2.7380e-003	0.00
tblGrading	MaterialExported	0.00	1,000.00
tblGrading	MaterialImported	0.00	1,000.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.014
tblProjectCharacteristics	CO2IntensityFactor	641.35	298.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	84.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.50
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	6.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	5.00	8.00
tblTripsAndVMT	WorkerTripNumber	10.00	8.00
tblTripsAndVMT	WorkerTripNumber	1.00	8.00
tblTripsAndVMT	WorkerTripNumber	0.00	8.00
tblTripsAndVMT	WorkerTripNumber	18.00	8.00
tblVehicleTrips	CC_TL	7.30	5.00

tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	2.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	0.9492	9.4196	8.2462	0.0167	0.9200	0.4737	1.3938	0.4578	0.4519	0.9097	0.0000	1,638.1828	1,638.1828	0.3080	0.0000	1,644.0964
2021	1.1253	10.2552	9.8234	0.0173	1.6745	0.5449	2.0876	0.6430	0.5089	1.0371	0.0000	1,687.5405	1,687.5405	0.3896	0.0000	1,697.2799
Maximum	**1.1253**	**10.2552**	**9.8234**	**0.0173**	**1.6745**	**0.5449**	**2.0876**	**0.6430**	**0.5089**	**1.0371**	**0.0000**	**1,687.5405**	**1,687.5405**	**0.3896**	**0.0000**	**1,697.2799**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	0.9492	9.4196	8.2462	0.0167	0.9200	0.4737	1.3938	0.4578	0.4519	0.9097	0.0000	1,638.1828	1,638.1828	0.3080	0.0000	1,644.0964
2021	1.1253	10.2552	9.8234	0.0173	1.6745	0.5449	2.0876	0.6430	0.5089	1.0371	0.0000	1,687.5405	1,687.5405	0.3896	0.0000	1,697.2799
Maximum	**1.1253**	**10.2552**	**9.8234**	**0.0173**	**1.6745**	**0.5449**	**2.0876**	**0.6430**	**0.5089**	**1.0371**	**0.0000**	**1,687.5405**	**1,687.5405**	**0.3896**	**0.0000**	**1,697.2799**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.6000e-004	0.0000	1.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		3.9000e-004	3.9000e-004	0.0000		4.2000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	5.7400e-003	6.6900e-003	0.0694	1.2000e-004	0.0137	1.3000e-004	0.0138	3.6300e-003	1.2000e-004	3.7500e-003		12.4049	12.4049	5.8000e-004		12.4194
Stationary	0.3695	0.0356	0.9624	1.3000e-004		2.0400e-003	2.0400e-003		2.0400e-003	2.0400e-003		23.6086	23.6086	0.0494		24.8427
Total	**0.3761**	**0.0423**	**1.0320**	**2.5000e-004**	**0.0137**	**2.1700e-003**	**0.0159**	**3.6300e-003**	**2.1600e-003**	**5.7900e-003**		**36.0139**	**36.0139**	**0.0499**	**0.0000**	**37.2625**

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	lb/day										lb/day					
Area	8.6000e-004	0.0000	1.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		3.9000e-004	3.9000e-004	0.0000		4.2000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	5.7400e-003	6.6900e-003	0.0694	1.2000e-004	0.0137	1.3000e-004	0.0138	3.6300e-003	1.2000e-004	3.7500e-003		12.4049	12.4049	5.8000e-004		12.4194
Stationary	0.3695	0.0356	0.9624	1.3000e-004		2.0400e-003	2.0400e-003		2.0400e-003	2.0400e-003		23.6086	23.6086	0.0494		24.8427
Total	**0.3761**	**0.0423**	**1.0320**	**2.5000e-004**	**0.0137**	**2.1700e-003**	**0.0159**	**3.6300e-003**	**2.1600e-003**	**5.7900e-003**		**36.0139**	**36.0139**	**0.0499**	**0.0000**	**37.2625**

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

3.0 Construction Detail

Construction Phase

Carmel Valley Manor Sewer Extension Project - Monterey County, Winter

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	10/15/2020	10/28/2020	5	10	
2	Grading	Grading	10/29/2020	1/6/2021	5	50	
3	Building Construction	Building Construction	1/7/2021	3/17/2021	5	50	
4	Architectural Coating	Architectural Coating	2/18/2021	3/17/2021	5	20	
5	Paving	Paving	3/18/2021	4/14/2021	5	20	

Acres of Grading (Site Preparation Phase): 5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.04

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 108 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	8.00	0.00	250.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	8.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.6853	8.4307	4.0942	9.7400e-003		0.3353	0.3353		0.3085	0.3085		943.4872	943.4872	0.3051		951.1158
Total	**0.6853**	**8.4307**	**4.0942**	**9.7400e-003**	**0.5303**	**0.3353**	**0.8656**	**0.0573**	**0.3085**	**0.3658**		**943.4872**	**943.4872**	**0.3051**		**951.1158**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0385	0.0358	0.3025	6.7000e-004	0.0657	5.7000e-004	0.0663	0.0174	5.2000e-004	0.0180		66.2664	66.2664	2.8800e-003		66.3385
Total	**0.0385**	**0.0358**	**0.3025**	**6.7000e-004**	**0.0657**	**5.7000e-004**	**0.0663**	**0.0174**	**5.2000e-004**	**0.0180**		**66.2664**	**66.2664**	**2.8800e-003**		**66.3385**

3.2 Site Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.6853	8.4307	4.0942	9.7400e-003		0.3353	0.3353		0.3085	0.3085	0.0000	943.4872	943.4872	0.3051		951.1158
Total	**0.6853**	**8.4307**	**4.0942**	**9.7400e-003**	**0.5303**	**0.3353**	**0.8656**	**0.0573**	**0.3085**	**0.3658**	**0.0000**	**943.4872**	**943.4872**	**0.3051**		**951.1158**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0385	0.0358	0.3025	6.7000e-004	0.0657	5.7000e-004	0.0663	0.0174	5.2000e-004	0.0180		66.2664	66.2664	2.8800e-003		66.3385
Total	**0.0385**	**0.0358**	**0.3025**	**6.7000e-004**	**0.0657**	**5.7000e-004**	**0.0663**	**0.0174**	**5.2000e-004**	**0.0180**		**66.2664**	**66.2664**	**2.8800e-003**		**66.3385**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7613	0.0000	0.7613	0.4151	0.0000	0.4151			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457		1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.7613**	**0.4672**	**1.2285**	**0.4151**	**0.4457**	**0.8608**		**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0434	1.5109	0.3212	4.0100e-003	0.0930	5.9500e-003	0.0989	0.0253	5.6900e-003	0.0310		424.6812	424.6812	0.0168		425.1001
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0385	0.0358	0.3025	6.7000e-004	0.0657	5.7000e-004	0.0663	0.0174	5.2000e-004	0.0180		66.2664	66.2664	2.8800e-003		66.3385
Total	**0.0818**	**1.5467**	**0.6237**	**4.6800e-003**	**0.1587**	**6.5200e-003**	**0.1652**	**0.0427**	**6.2100e-003**	**0.0490**		**490.9476**	**490.9476**	**0.0196**		**491.4386**

3.3 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7613	0.0000	0.7613	0.4151	0.0000	0.4151			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457	0.0000	1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.7613**	**0.4672**	**1.2285**	**0.4151**	**0.4457**	**0.8608**	**0.0000**	**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0434	1.5109	0.3212	4.0100e-003	0.0930	5.9500e-003	0.0989	0.0253	5.6900e-003	0.0310		424.6812	424.6812	0.0168		425.1001
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0385	0.0358	0.3025	6.7000e-004	0.0657	5.7000e-004	0.0663	0.0174	5.2000e-004	0.0180		66.2664	66.2664	2.8800e-003		66.3385
Total	**0.0818**	**1.5467**	**0.6237**	**4.6800e-003**	**0.1587**	**6.5200e-003**	**0.1652**	**0.0427**	**6.2100e-003**	**0.0490**		**490.9476**	**490.9476**	**0.0196**		**491.4386**

3.3 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	lb/day										lb/day					
Fugitive Dust					0.7613	0.0000	0.7613	0.4151	0.0000	0.4151			0.0000			0.0000
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.4338	1,147.4338	0.2138		1,152.7797
Total	**0.7965**	**7.2530**	**7.5691**	**0.0120**	**0.7613**	**0.4073**	**1.1687**	**0.4151**	**0.3886**	**0.8037**		**1,147.4338**	**1,147.4338**	**0.2138**		**1,152.7797**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0405	1.3836	0.3062	3.9600e-003	0.8475	5.2100e-003	0.8527	0.2105	4.9900e-003	0.2155		419.6001	419.6001	0.0166		420.0138
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0355	0.0320	0.2746	6.4000e-004	0.0657	5.5000e-004	0.0663	0.0174	5.1000e-004	0.0179		64.0460	64.0460	2.5600e-003		64.1100
Total	**0.0760**	**1.4155**	**0.5808**	**4.6000e-003**	**0.9132**	**5.7600e-003**	**0.9189**	**0.2279**	**5.5000e-003**	**0.2334**		**483.6460**	**483.6460**	**0.0191**		**484.1238**

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7613	0.0000	0.7613	0.4151	0.0000	0.4151			0.0000			0.0000
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797
Total	**0.7965**	**7.2530**	**7.5691**	**0.0120**	**0.7613**	**0.4073**	**1.1687**	**0.4151**	**0.3886**	**0.8037**	**0.0000**	**1,147.4338**	**1,147.4338**	**0.2138**		**1,152.7797**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0405	1.3836	0.3062	3.9600e-003	0.8475	5.2100e-003	0.8527	0.2105	4.9900e-003	0.2155		419.6001	419.6001	0.0166		420.0138
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0355	0.0320	0.2746	6.4000e-004	0.0657	5.5000e-004	0.0663	0.0174	5.1000e-004	0.0179		64.0460	64.0460	2.5600e-003		64.1100
Total	**0.0760**	**1.4155**	**0.5808**	**4.6000e-003**	**0.9132**	**5.7600e-003**	**0.9189**	**0.2279**	**5.5000e-003**	**0.2334**		**483.6460**	**483.6460**	**0.0191**		**484.1238**

3.4 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	lb/day										lb/day					
Off-Road	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117		1,103.2158	1,103.2158	0.3568		1,112.1358
Total	**0.7750**	**7.9850**	**7.2637**	**0.0114**		**0.4475**	**0.4475**		**0.4117**	**0.4117**		**1,103.2158**	**1,103.2158**	**0.3568**		**1,112.1358**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0230	0.6794	0.1930	1.6600e-003	0.0406	2.1500e-003	0.0427	0.0117	2.0500e-003	0.0137		174.7848	174.7848	8.3300e-003		174.9931
Worker	0.0355	0.0320	0.2746	6.4000e-004	0.0657	5.5000e-004	0.0663	0.0174	5.1000e-004	0.0179		64.0460	64.0460	2.5600e-003		64.1100
Total	**0.0585**	**0.7114**	**0.4676**	**2.3000e-003**	**0.1063**	**2.7000e-003**	**0.1090**	**0.0291**	**2.5600e-003**	**0.0317**		**238.8307**	**238.8307**	**0.0109**		**239.1031**

3.4 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117	0.0000	1,103.2158	1,103.2158	0.3568		1,112.1358
Total	**0.7750**	**7.9850**	**7.2637**	**0.0114**		**0.4475**	**0.4475**		**0.4117**	**0.4117**	**0.0000**	**1,103.2158**	**1,103.2158**	**0.3568**		**1,112.1358**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0230	0.6794	0.1930	1.6600e-003	0.0406	2.1500e-003	0.0427	0.0117	2.0500e-003	0.0137		174.7848	174.7848	8.3300e-003		174.9931
Worker	0.0355	0.0320	0.2746	6.4000e-004	0.0657	5.5000e-004	0.0663	0.0174	5.1000e-004	0.0179		64.0460	64.0460	2.5600e-003		64.1100
Total	**0.0585**	**0.7114**	**0.4676**	**2.3000e-003**	**0.1063**	**2.7000e-003**	**0.1090**	**0.0291**	**2.5600e-003**	**0.0317**		**238.8307**	**238.8307**	**0.0109**		**239.1031**

3.5 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	lb/day										lb/day					
Archit. Coating	0.0375					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**0.2564**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0355	0.0320	0.2746	6.4000e-004	0.0657	5.5000e-004	0.0663	0.0174	5.1000e-004	0.0179		64.0460	64.0460	2.5600e-003		64.1100
Total	**0.0355**	**0.0320**	**0.2746**	**6.4000e-004**	**0.0657**	**5.5000e-004**	**0.0663**	**0.0174**	**5.1000e-004**	**0.0179**		**64.0460**	**64.0460**	**2.5600e-003**		**64.1100**

3.5 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0375					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**0.2564**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0355	0.0320	0.2746	6.4000e-004	0.0657	5.5000e-004	0.0663	0.0174	5.1000e-004	0.0179		64.0460	64.0460	2.5600e-003		64.1100
Total	**0.0355**	**0.0320**	**0.2746**	**6.4000e-004**	**0.0657**	**5.5000e-004**	**0.0663**	**0.0174**	**5.1000e-004**	**0.0179**		**64.0460**	**64.0460**	**2.5600e-003**		**64.1100**

3.6 Paving - 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	lb/day										lb/day					
Off-Road	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286		1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	5.2400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7266**	**6.7178**	**7.0899**	**0.0113**		**0.3534**	**0.3534**		**0.3286**	**0.3286**		**1,035.3425**	**1,035.3425**	**0.3016**		**1,042.8818**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0355	0.0320	0.2746	6.4000e-004	0.0657	5.5000e-004	0.0663	0.0174	5.1000e-004	0.0179		64.0460	64.0460	2.5600e-003		64.1100
Total	**0.0355**	**0.0320**	**0.2746**	**6.4000e-004**	**0.0657**	**5.5000e-004**	**0.0663**	**0.0174**	**5.1000e-004**	**0.0179**		**64.0460**	**64.0460**	**2.5600e-003**		**64.1100**

3.6 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286	0.0000	1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	5.2400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7266**	**6.7178**	**7.0899**	**0.0113**		**0.3534**	**0.3534**		**0.3286**	**0.3286**	**0.0000**	**1,035.3425**	**1,035.3425**	**0.3016**		**1,042.8818**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0355	0.0320	0.2746	6.4000e-004	0.0657	5.5000e-004	0.0663	0.0174	5.1000e-004	0.0179		64.0460	64.0460	2.5600e-003		64.1100
Total	**0.0355**	**0.0320**	**0.2746**	**6.4000e-004**	**0.0657**	**5.5000e-004**	**0.0663**	**0.0174**	**5.1000e-004**	**0.0179**		**64.0460**	**64.0460**	**2.5600e-003**		**64.1100**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.7400e-003	6.6900e-003	0.0694	1.2000e-004	0.0137	1.3000e-004	0.0138	3.6300e-003	1.2000e-004	3.7500e-003		12.4049	12.4049	5.8000e-004		12.4194
Unmitigated	5.7400e-003	6.6900e-003	0.0694	1.2000e-004	0.0137	1.3000e-004	0.0138	3.6300e-003	1.2000e-004	3.7500e-003		12.4049	12.4049	5.8000e-004		12.4194

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	3.20	0.00	0.00	4,160	4,160
Other Asphalt Surfaces	0.40	0.00	0.00	520	520
Total	3.60	0.00	0.00	4,680	4,680

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	0.00	5.00	0.00	0.00	100.00	0.00	100	0	0
Other Asphalt Surfaces	0.00	5.00	0.00	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.500000	0.500000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
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
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
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
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.6000e-004	0.0000	1.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		3.9000e-004	3.9000e-004	0.0000		4.2000e-004
Unmitigated	8.6000e-004	0.0000	1.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		3.9000e-004	3.9000e-004	0.0000		4.2000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.1000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.4000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	1.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		3.9000e-004	3.9000e-004	0.0000		4.2000e-004
Total	**8.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**3.9000e-004**	**3.9000e-004**	**0.0000**		**4.2000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.1000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.4000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	1.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		3.9000e-004	3.9000e-004	0.0000		4.2000e-004
Total	**8.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**3.9000e-004**	**3.9000e-004**	**0.0000**		**4.2000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0.5	6	84	0.73	CNG

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	lb/day										lb/day					
Emergency Generator - CNG (0 - 500 HP)	0.3695	0.0356	0.9624	1.3000e-004		2.0400e-003	2.0400e-003		2.0400e-003	2.0400e-003		23.6086	23.6086	0.0494		24.8427
Total	**0.3695**	**0.0356**	**0.9624**	**1.3000e-004**		**2.0400e-003**	**2.0400e-003**		**2.0400e-003**	**2.0400e-003**		**23.6086**	**23.6086**	**0.0494**		**24.8427**

11.0 Vegetation

Carmel Valley Manor Sewer Extension Project

Monterey County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.60	1000sqft	0.04	1,600.00	0
Other Asphalt Surfaces	0.20	1000sqft	0.00	200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.6	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	298.65	**CH4 Intensity (lb/MWhr)**	0.014	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Carmel Valley Manor Sewer Extension Project - Monterey County, Summer

Project Characteristics - Utility intensity factors per RPS standards

Land Use - Other asphalt surface is the total paved slab per client site plans, with assumed 200 square feet of driveway. Other user defined industrial is representative of the structures to be built on the slab associated with the pump station.

Construction Phase - Phasing based on 6 month timeline per client plans.

Off-road Equipment -

Off-road Equipment - Per client information

Off-road Equipment - per client info

Off-road Equipment -

Off-road Equipment -

Trips and VMT - 4 construction workers on site, per client information. This would require 8 one way trips each day. Vendor trips assumed for delivery of materials.

Grading - Per client info

Architectural Coating - Per MBARD Rule 4.26

Vehicle Trips - Based on 12 round trips per year, with an assumed 10 mile round trip length

Energy Use -

Construction Off-road Equipment Mitigation -

Operational Off-Road Equipment - Per client info on emergency generator

Stationary Sources - Emergency Generators and Fire Pumps - 1 emergency natural gas powered generator to operate only in the case of emergency and to be tested for 30 minutes 12 times per year (monthly)

Fleet Mix - Assumed 50% passenger cars (LDA), and 50% light duty trucks (LDT1)

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1.00	10.00
tblConstructionPhase	NumDays	2.00	50.00
tblConstructionPhase	NumDays	100.00	50.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	5.00	20.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.54	0.50

tblFleetMix	LDT1	0.03	0.50
tblFleetMix	LDT2	0.21	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.5040e-003	0.00
tblFleetMix	MCY	7.7240e-003	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	8.0500e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	4.1550e-003	0.00
tblFleetMix	SBUS	1.2360e-003	0.00
tblFleetMix	UBUS	2.7380e-003	0.00
tblGrading	MaterialExported	0.00	1,000.00
tblGrading	MaterialImported	0.00	1,000.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.014
tblProjectCharacteristics	CO2IntensityFactor	641.35	298.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	84.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.50
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	6.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	5.00	8.00
tblTripsAndVMT	WorkerTripNumber	10.00	8.00
tblTripsAndVMT	WorkerTripNumber	1.00	8.00
tblTripsAndVMT	WorkerTripNumber	0.00	8.00
tblTripsAndVMT	WorkerTripNumber	18.00	8.00
tblVehicleTrips	CC_TL	7.30	5.00

tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	2.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	0.9447	9.3774	8.2268	0.0168	0.9200	0.4736	1.3936	0.4578	0.4518	0.9096	0.0000	1,651.1930	1,651.1930	0.3082	0.0000	1,657.0829
2021	1.1182	10.2361	9.8091	0.0175	1.6745	0.5448	2.0875	0.6430	0.5088	1.0370	0.0000	1,701.5199	1,701.5199	0.3891	0.0000	1,711.2477
Maximum	**1.1182**	**10.2361**	**9.8091**	**0.0175**	**1.6745**	**0.5448**	**2.0875**	**0.6430**	**0.5088**	**1.0370**	**0.0000**	**1,701.5199**	**1,701.5199**	**0.3891**	**0.0000**	**1,711.2477**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	0.9447	9.3774	8.2268	0.0168	0.9200	0.4736	1.3936	0.4578	0.4518	0.9096	0.0000	1,651.1930	1,651.1930	0.3082	0.0000	1,657.0829
2021	1.1182	10.2361	9.8091	0.0175	1.6745	0.5448	2.0875	0.6430	0.5088	1.0370	0.0000	1,701.5199	1,701.5199	0.3891	0.0000	1,711.2477
Maximum	**1.1182**	**10.2361**	**9.8091**	**0.0175**	**1.6745**	**0.5448**	**2.0875**	**0.6430**	**0.5088**	**1.0370**	**0.0000**	**1,701.5199**	**1,701.5199**	**0.3891**	**0.0000**	**1,711.2477**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.6000e-004	0.0000	1.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		3.9000e-004	3.9000e-004	0.0000		4.2000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	6.5900e-003	5.3200e-003	0.0656	1.3000e-004	0.0137	1.3000e-004	0.0138	3.6300e-003	1.2000e-004	3.7500e-003		13.2286	13.2286	5.8000e-004		13.2432
Stationary	0.3695	0.0356	0.9624	1.3000e-004		2.0400e-003	2.0400e-003		2.0400e-003	2.0400e-003		23.6086	23.6086	0.0494		24.8427
Total	**0.3770**	**0.0409**	**1.0282**	**2.6000e-004**	**0.0137**	**2.1700e-003**	**0.0159**	**3.6300e-003**	**2.1600e-003**	**5.7900e-003**		**36.8375**	**36.8375**	**0.0499**	**0.0000**	**38.0863**

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	lb/day										lb/day					
Area	8.6000e-004	0.0000	1.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		3.9000e-004	3.9000e-004	0.0000		4.2000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	6.5900e-003	5.3200e-003	0.0656	1.3000e-004	0.0137	1.3000e-004	0.0138	3.6300e-003	1.2000e-004	3.7500e-003		13.2286	13.2286	5.8000e-004		13.2432
Stationary	0.3695	0.0356	0.9624	1.3000e-004		2.0400e-003	2.0400e-003		2.0400e-003	2.0400e-003		23.6086	23.6086	0.0494		24.8427
Total	**0.3770**	**0.0409**	**1.0282**	**2.6000e-004**	**0.0137**	**2.1700e-003**	**0.0159**	**3.6300e-003**	**2.1600e-003**	**5.7900e-003**		**36.8375**	**36.8375**	**0.0499**	**0.0000**	**38.0863**

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

3.0 Construction Detail

Construction Phase

Carmel Valley Manor Sewer Extension Project - Monterey County, Summer

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	10/15/2020	10/28/2020	5	10	
2	Grading	Grading	10/29/2020	1/6/2021	5	50	
3	Building Construction	Building Construction	1/7/2021	3/17/2021	5	50	
4	Architectural Coating	Architectural Coating	2/18/2021	3/17/2021	5	20	
5	Paving	Paving	3/18/2021	4/14/2021	5	20	

Acres of Grading (Site Preparation Phase): 5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.04

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 108 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	8.00	0.00	250.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	8.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.6853	8.4307	4.0942	9.7400e-003		0.3353	0.3353		0.3085	0.3085		943.4872	943.4872	0.3051		951.1158
Total	**0.6853**	**8.4307**	**4.0942**	**9.7400e-003**	**0.5303**	**0.3353**	**0.8656**	**0.0573**	**0.3085**	**0.3658**		**943.4872**	**943.4872**	**0.3051**		**951.1158**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0353	0.0285	0.3074	7.1000e-004	0.0657	5.7000e-004	0.0663	0.0174	5.2000e-004	0.0180		70.7736	70.7736	3.0200e-003		70.8492
Total	**0.0353**	**0.0285**	**0.3074**	**7.1000e-004**	**0.0657**	**5.7000e-004**	**0.0663**	**0.0174**	**5.2000e-004**	**0.0180**		**70.7736**	**70.7736**	**3.0200e-003**		**70.8492**

3.2 Site Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.6853	8.4307	4.0942	9.7400e-003		0.3353	0.3353		0.3085	0.3085	0.0000	943.4872	943.4872	0.3051		951.1158
Total	**0.6853**	**8.4307**	**4.0942**	**9.7400e-003**	**0.5303**	**0.3353**	**0.8656**	**0.0573**	**0.3085**	**0.3658**	**0.0000**	**943.4872**	**943.4872**	**0.3051**		**951.1158**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0353	0.0285	0.3074	7.1000e-004	0.0657	5.7000e-004	0.0663	0.0174	5.2000e-004	0.0180		70.7736	70.7736	3.0200e-003		70.8492
Total	**0.0353**	**0.0285**	**0.3074**	**7.1000e-004**	**0.0657**	**5.7000e-004**	**0.0663**	**0.0174**	**5.2000e-004**	**0.0180**		**70.7736**	**70.7736**	**3.0200e-003**		**70.8492**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7613	0.0000	0.7613	0.4151	0.0000	0.4151			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457		1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.7613**	**0.4672**	**1.2285**	**0.4151**	**0.4457**	**0.8608**		**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0420	1.4761	0.2969	4.0900e-003	0.0930	5.8100e-003	0.0988	0.0253	5.5600e-003	0.0309		433.1842	433.1842	0.0157		433.5759
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0353	0.0285	0.3074	7.1000e-004	0.0657	5.7000e-004	0.0663	0.0174	5.2000e-004	0.0180		70.7736	70.7736	3.0200e-003		70.8492
Total	**0.0773**	**1.5045**	**0.6043**	**4.8000e-003**	**0.1587**	**6.3800e-003**	**0.1651**	**0.0427**	**6.0800e-003**	**0.0488**		**503.9578**	**503.9578**	**0.0187**		**504.4251**

3.3 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7613	0.0000	0.7613	0.4151	0.0000	0.4151			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457	0.0000	1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.7613**	**0.4672**	**1.2285**	**0.4151**	**0.4457**	**0.8608**	**0.0000**	**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0420	1.4761	0.2969	4.0900e-003	0.0930	5.8100e-003	0.0988	0.0253	5.5600e-003	0.0309		433.1842	433.1842	0.0157		433.5759
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0353	0.0285	0.3074	7.1000e-004	0.0657	5.7000e-004	0.0663	0.0174	5.2000e-004	0.0180		70.7736	70.7736	3.0200e-003		70.8492
Total	**0.0773**	**1.5045**	**0.6043**	**4.8000e-003**	**0.1587**	**6.3800e-003**	**0.1651**	**0.0427**	**6.0800e-003**	**0.0488**		**503.9578**	**503.9578**	**0.0187**		**504.4251**

3.3 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	lb/day										lb/day					
Fugitive Dust					0.7613	0.0000	0.7613	0.4151	0.0000	0.4151			0.0000			0.0000
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.4338	1,147.4338	0.2138		1,152.7797
Total	**0.7965**	**7.2530**	**7.5691**	**0.0120**	**0.7613**	**0.4073**	**1.1687**	**0.4151**	**0.3886**	**0.8037**		**1,147.4338**	**1,147.4338**	**0.2138**		**1,152.7797**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0392	1.3540	0.2831	4.0400e-003	0.8475	5.0800e-003	0.8525	0.2105	4.8600e-003	0.2154		428.1229	428.1229	0.0155		428.5093
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0326	0.0254	0.2800	6.9000e-004	0.0657	5.5000e-004	0.0663	0.0174	5.1000e-004	0.0179		68.4024	68.4024	2.7000e-003		68.4698
Total	**0.0718**	**1.3794**	**0.5631**	**4.7300e-003**	**0.9132**	**5.6300e-003**	**0.9188**	**0.2279**	**5.3700e-003**	**0.2333**		**496.5253**	**496.5253**	**0.0182**		**496.9790**

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7613	0.0000	0.7613	0.4151	0.0000	0.4151			0.0000			0.0000
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797
Total	**0.7965**	**7.2530**	**7.5691**	**0.0120**	**0.7613**	**0.4073**	**1.1687**	**0.4151**	**0.3886**	**0.8037**	**0.0000**	**1,147.4338**	**1,147.4338**	**0.2138**		**1,152.7797**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0392	1.3540	0.2831	4.0400e-003	0.8475	5.0800e-003	0.8525	0.2105	4.8600e-003	0.2154		428.1229	428.1229	0.0155		428.5093
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0326	0.0254	0.2800	6.9000e-004	0.0657	5.5000e-004	0.0663	0.0174	5.1000e-004	0.0179		68.4024	68.4024	2.7000e-003		68.4698
Total	**0.0718**	**1.3794**	**0.5631**	**4.7300e-003**	**0.9132**	**5.6300e-003**	**0.9188**	**0.2279**	**5.3700e-003**	**0.2333**		**496.5253**	**496.5253**	**0.0182**		**496.9790**

3.4 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	lb/day										lb/day					
Off-Road	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117		1,103.2158	1,103.2158	0.3568		1,112.1358
Total	**0.7750**	**7.9850**	**7.2637**	**0.0114**		**0.4475**	**0.4475**		**0.4117**	**0.4117**		**1,103.2158**	**1,103.2158**	**0.3568**		**1,112.1358**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0216	0.6735	0.1679	1.7100e-003	0.0406	2.0500e-003	0.0426	0.0117	1.9600e-003	0.0137		180.0513	180.0513	7.6100e-003		180.2415
Worker	0.0326	0.0254	0.2800	6.9000e-004	0.0657	5.5000e-004	0.0663	0.0174	5.1000e-004	0.0179		68.4024	68.4024	2.7000e-003		68.4698
Total	**0.0542**	**0.6989**	**0.4479**	**2.4000e-003**	**0.1063**	**2.6000e-003**	**0.1089**	**0.0291**	**2.4700e-003**	**0.0316**		**248.4537**	**248.4537**	**0.0103**		**248.7112**

3.4 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117	0.0000	1,103.2158	1,103.2158	0.3568		1,112.1358
Total	**0.7750**	**7.9850**	**7.2637**	**0.0114**		**0.4475**	**0.4475**		**0.4117**	**0.4117**	**0.0000**	**1,103.2158**	**1,103.2158**	**0.3568**		**1,112.1358**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0216	0.6735	0.1679	1.7100e-003	0.0406	2.0500e-003	0.0426	0.0117	1.9600e-003	0.0137		180.0513	180.0513	7.6100e-003		180.2415
Worker	0.0326	0.0254	0.2800	6.9000e-004	0.0657	5.5000e-004	0.0663	0.0174	5.1000e-004	0.0179		68.4024	68.4024	2.7000e-003		68.4698
Total	**0.0542**	**0.6989**	**0.4479**	**2.4000e-003**	**0.1063**	**2.6000e-003**	**0.1089**	**0.0291**	**2.4700e-003**	**0.0316**		**248.4537**	**248.4537**	**0.0103**		**248.7112**

3.5 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	lb/day										lb/day					
Archit. Coating	0.0375					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**0.2564**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0326	0.0254	0.2800	6.9000e-004	0.0657	5.5000e-004	0.0663	0.0174	5.1000e-004	0.0179		68.4024	68.4024	2.7000e-003		68.4698
Total	**0.0326**	**0.0254**	**0.2800**	**6.9000e-004**	**0.0657**	**5.5000e-004**	**0.0663**	**0.0174**	**5.1000e-004**	**0.0179**		**68.4024**	**68.4024**	**2.7000e-003**		**68.4698**

3.5 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0375					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**0.2564**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0326	0.0254	0.2800	6.9000e-004	0.0657	5.5000e-004	0.0663	0.0174	5.1000e-004	0.0179		68.4024	68.4024	2.7000e-003		68.4698
Total	**0.0326**	**0.0254**	**0.2800**	**6.9000e-004**	**0.0657**	**5.5000e-004**	**0.0663**	**0.0174**	**5.1000e-004**	**0.0179**		**68.4024**	**68.4024**	**2.7000e-003**		**68.4698**

3.6 Paving - 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	lb/day										lb/day					
Off-Road	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286		1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	5.2400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7266**	**6.7178**	**7.0899**	**0.0113**		**0.3534**	**0.3534**		**0.3286**	**0.3286**		**1,035.3425**	**1,035.3425**	**0.3016**		**1,042.8818**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0326	0.0254	0.2800	6.9000e-004	0.0657	5.5000e-004	0.0663	0.0174	5.1000e-004	0.0179		68.4024	68.4024	2.7000e-003		68.4698
Total	**0.0326**	**0.0254**	**0.2800**	**6.9000e-004**	**0.0657**	**5.5000e-004**	**0.0663**	**0.0174**	**5.1000e-004**	**0.0179**		**68.4024**	**68.4024**	**2.7000e-003**		**68.4698**

3.6 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286	0.0000	1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	5.2400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7266**	**6.7178**	**7.0899**	**0.0113**		**0.3534**	**0.3534**		**0.3286**	**0.3286**	**0.0000**	**1,035.3425**	**1,035.3425**	**0.3016**		**1,042.8818**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0326	0.0254	0.2800	6.9000e-004	0.0657	5.5000e-004	0.0663	0.0174	5.1000e-004	0.0179		68.4024	68.4024	2.7000e-003		68.4698
Total	**0.0326**	**0.0254**	**0.2800**	**6.9000e-004**	**0.0657**	**5.5000e-004**	**0.0663**	**0.0174**	**5.1000e-004**	**0.0179**		**68.4024**	**68.4024**	**2.7000e-003**		**68.4698**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.5900e-003	5.3200e-003	0.0656	1.3000e-004	0.0137	1.3000e-004	0.0138	3.6300e-003	1.2000e-004	3.7500e-003		13.2286	13.2286	5.8000e-004		13.2432
Unmitigated	6.5900e-003	5.3200e-003	0.0656	1.3000e-004	0.0137	1.3000e-004	0.0138	3.6300e-003	1.2000e-004	3.7500e-003		13.2286	13.2286	5.8000e-004		13.2432

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	3.20	0.00	0.00	4,160	4,160
Other Asphalt Surfaces	0.40	0.00	0.00	520	520
Total	3.60	0.00	0.00	4,680	4,680

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	0.00	5.00	0.00	0.00	100.00	0.00	100	0	0
Other Asphalt Surfaces	0.00	5.00	0.00	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.500000	0.500000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
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
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
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
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.6000e-004	0.0000	1.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		3.9000e-004	3.9000e-004	0.0000		4.2000e-004
Unmitigated	8.6000e-004	0.0000	1.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		3.9000e-004	3.9000e-004	0.0000		4.2000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.1000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.4000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	1.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		3.9000e-004	3.9000e-004	0.0000		4.2000e-004
Total	**8.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**3.9000e-004**	**3.9000e-004**	**0.0000**		**4.2000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.1000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.4000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	1.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		3.9000e-004	3.9000e-004	0.0000		4.2000e-004
Total	**8.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**3.9000e-004**	**3.9000e-004**	**0.0000**		**4.2000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0.5	6	84	0.73	CNG

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	lb/day										lb/day					
Emergency Generator - CNG (0 - 500 HP)	0.3695	0.0356	0.9624	1.3000e-004		2.0400e-003	2.0400e-003		2.0400e-003	2.0400e-003		23.6086	23.6086	0.0494		24.8427
Total	**0.3695**	**0.0356**	**0.9624**	**1.3000e-004**		**2.0400e-003**	**2.0400e-003**		**2.0400e-003**	**2.0400e-003**		**23.6086**	**23.6086**	**0.0494**		**24.8427**

11.0 Vegetation

Carmel Valley Manor Sewer Extension Project

Monterey County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.60	1000sqft	0.04	1,600.00	0
Other Asphalt Surfaces	0.20	1000sqft	0.00	200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.6	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	298.65	**CH4 Intensity (lb/MWhr)**	0.014	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Utility intensity factors per RPS standards

Land Use - Other asphalt surface is the total paved slab per client site plans, with assumed 200 square feet of driveway. Other user defined industrial is representative of the structures to be built on the slab associated with the pump station.

Construction Phase - Phasing based on 6 month timeline per client plans.

Off-road Equipment -

Off-road Equipment - Per client information

Off-road Equipment - per client info

Off-road Equipment -

Off-road Equipment -

Trips and VMT - 4 construction workers on site, per client information. This would require 8 one way trips each day. Vendor trips assumed for delivery of materials.

Grading - Per client info

Architectural Coating - Per MBARD Rule 4.26

Vehicle Trips - Based on 12 round trips per year, with an assumed 10 mile round trip length

Energy Use -

Construction Off-road Equipment Mitigation -

Operational Off-Road Equipment - Per client info on emergency generator

Fleet Mix - Assumed 50% passenger cars (LDA), and 50% light duty trucks (LDT1)

Stationary Sources - Emergency Generators and Fire Pumps - 1 emergency natural gas powered generator to operate only in the case of emergency and to be tested for 30 minutes 12 times per year (monthly)

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1.00	10.00
tblConstructionPhase	NumDays	2.00	50.00
tblConstructionPhase	NumDays	100.00	50.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	5.00	20.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.57	0.50

tblFleetMix	LDT1	0.03	0.50
tblFleetMix	LDT2	0.21	0.00
tblFleetMix	LHD1	0.01	0.00
tblFleetMix	LHD2	4.1950e-003	0.00
tblFleetMix	MCY	7.2120e-003	0.00
tblFleetMix	MDV	0.11	0.00
tblFleetMix	MH	5.6600e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	4.1390e-003	0.00
tblFleetMix	SBUS	1.2320e-003	0.00
tblFleetMix	UBUS	2.1090e-003	0.00
tblGrading	MaterialExported	0.00	1,000.00
tblGrading	MaterialImported	0.00	1,000.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.014
tblProjectCharacteristics	CO2IntensityFactor	641.35	298.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	84.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.50
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	6.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	5.00	8.00
tblTripsAndVMT	WorkerTripNumber	10.00	8.00
tblTripsAndVMT	WorkerTripNumber	1.00	8.00
tblTripsAndVMT	WorkerTripNumber	0.00	8.00
tblTripsAndVMT	WorkerTripNumber	18.00	8.00
tblVehicleTrips	CC_TL	7.30	5.00

tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	0.06

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					
2020	0.0253	0.2588	0.2110	4.4000e-004	0.0240	0.0126	0.0366	0.0109	0.0119	0.0228	0.0000	38.8740	38.8740	6.3200e-003	0.0000	39.0320
2021	0.0330	0.3177	0.3033	5.3000e-004	7.3300e-003	0.0166	0.0239	2.3500e-003	0.0154	0.0177	0.0000	46.5984	46.5984	0.0117	0.0000	46.8911
Maximum	**0.0330**	**0.3177**	**0.3033**	**5.3000e-004**	**0.0240**	**0.0166**	**0.0366**	**0.0109**	**0.0154**	**0.0228**	**0.0000**	**46.5984**	**46.5984**	**0.0117**	**0.0000**	**46.8911**

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					
2020	0.0253	0.2588	0.2110	4.4000e-004	0.0240	0.0126	0.0366	0.0109	0.0119	0.0228	0.0000	38.8740	38.8740	6.3200e-003	0.0000	39.0320
2021	0.0330	0.3177	0.3033	5.3000e-004	7.3300e-003	0.0166	0.0239	2.3500e-003	0.0154	0.0177	0.0000	46.5984	46.5984	0.0117	0.0000	46.8911
Maximum	**0.0330**	**0.3177**	**0.3033**	**5.3000e-004**	**0.0240**	**0.0166**	**0.0366**	**0.0109**	**0.0154**	**0.0228**	**0.0000**	**46.5984**	**46.5984**	**0.0117**	**0.0000**	**46.8911**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	10-15-2020	1-14-2021	0.3306	0.3306
2	1-15-2021	4-14-2021	0.3046	0.3046
		Highest	0.3306	0.3306

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.6000e-004	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	5.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.0000e-005	1.0000e-005	1.2000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0328	0.0328	0.0000	0.0000	0.0328
Stationary	2.2200e-003	2.1000e-004	5.7700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1285	0.1285	2.7000e-004	0.0000	0.1352
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.3900e-003**	**2.2000e-004**	**5.9100e-003**	**0.0000**	**5.0000e-005**	**1.0000e-005**	**6.0000e-005**	**1.0000e-005**	**1.0000e-005**	**2.0000e-005**	**0.0000**	**0.1614**	**0.1614**	**2.7000e-004**	**0.0000**	**0.1681**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.6000e-004	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	5.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.0000e-005	1.0000e-005	1.2000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0328	0.0328	0.0000	0.0000	0.0328
Stationary	2.2200e-003	2.1000e-004	5.7700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1285	0.1285	2.7000e-004	0.0000	0.1352
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.3900e-003**	**2.2000e-004**	**5.9100e-003**	**0.0000**	**5.0000e-005**	**1.0000e-005**	**6.0000e-005**	**1.0000e-005**	**1.0000e-005**	**2.0000e-005**	**0.0000**	**0.1614**	**0.1614**	**2.7000e-004**	**0.0000**	**0.1681**

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

3.0 Construction Detail

Construction Phase

Carmel Valley Manor Sewer Extension Project - Monterey County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	10/15/2020	10/28/2020	5	10	
2	Grading	Grading	10/29/2020	1/6/2021	5	50	
3	Building Construction	Building Construction	1/7/2021	3/17/2021	5	50	
4	Architectural Coating	Architectural Coating	2/18/2021	3/17/2021	5	20	
5	Paving	Paving	3/18/2021	4/14/2021	5	20	

Acres of Grading (Site Preparation Phase): 5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.04

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 108 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	8.00	0.00	250.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	8.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6500e-003	0.0000	2.6500e-003	2.9000e-004	0.0000	2.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4300e-003	0.0422	0.0205	5.0000e-005		1.6800e-003	1.6800e-003		1.5400e-003	1.5400e-003	0.0000	4.2796	4.2796	1.3800e-003	0.0000	4.3142
Total	**3.4300e-003**	**0.0422**	**0.0205**	**5.0000e-005**	**2.6500e-003**	**1.6800e-003**	**4.3300e-003**	**2.9000e-004**	**1.5400e-003**	**1.8300e-003**	**0.0000**	**4.2796**	**4.2796**	**1.3800e-003**	**0.0000**	**4.3142**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.6000e-004	1.4600e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.3023	0.3023	1.0000e-005	0.0000	0.3027
Total	**1.8000e-004**	**1.6000e-004**	**1.4600e-003**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**8.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.3023**	**0.3023**	**1.0000e-005**	**0.0000**	**0.3027**

3.2 Site Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6500e-003	0.0000	2.6500e-003	2.9000e-004	0.0000	2.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4300e-003	0.0422	0.0205	5.0000e-005		1.6800e-003	1.6800e-003		1.5400e-003	1.5400e-003	0.0000	4.2796	4.2796	1.3800e-003	0.0000	4.3142
Total	**3.4300e-003**	**0.0422**	**0.0205**	**5.0000e-005**	**2.6500e-003**	**1.6800e-003**	**4.3300e-003**	**2.9000e-004**	**1.5400e-003**	**1.8300e-003**	**0.0000**	**4.2796**	**4.2796**	**1.3800e-003**	**0.0000**	**4.3142**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.6000e-004	1.4600e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.3023	0.3023	1.0000e-005	0.0000	0.3027
Total	**1.8000e-004**	**1.6000e-004**	**1.4600e-003**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**8.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.3023**	**0.3023**	**1.0000e-005**	**0.0000**	**0.3027**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0175	0.0000	0.0175	9.5500e-003	0.0000	9.5500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0200	0.1811	0.1753	2.8000e-004		0.0108	0.0108		0.0103	0.0103	0.0000	23.9374	23.9374	4.5300e-003	0.0000	24.0505
Total	**0.0200**	**0.1811**	**0.1753**	**2.8000e-004**	**0.0175**	**0.0108**	**0.0283**	**9.5500e-003**	**0.0103**	**0.0198**	**0.0000**	**23.9374**	**23.9374**	**4.5300e-003**	**0.0000**	**24.0505**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.8000e-004	0.0347	7.0600e-003	9.0000e-005	2.0800e-003	1.3000e-004	2.2100e-003	5.7000e-004	1.3000e-004	7.0000e-004	0.0000	8.9640	8.9640	3.4000e-004	0.0000	8.9724
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.1000e-004	7.5000e-004	6.7000e-003	2.0000e-005	1.4600e-003	1.0000e-005	1.4800e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.3907	1.3907	6.0000e-005	0.0000	1.3922
Total	**1.7900e-003**	**0.0354**	**0.0138**	**1.1000e-004**	**3.5400e-003**	**1.4000e-004**	**3.6900e-003**	**9.6000e-004**	**1.4000e-004**	**1.1000e-003**	**0.0000**	**10.3547**	**10.3547**	**4.0000e-004**	**0.0000**	**10.3646**

3.3 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0175	0.0000	0.0175	9.5500e-003	0.0000	9.5500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0200	0.1811	0.1753	2.8000e-004		0.0108	0.0108		0.0103	0.0103	0.0000	23.9373	23.9373	4.5300e-003	0.0000	24.0505
Total	**0.0200**	**0.1811**	**0.1753**	**2.8000e-004**	**0.0175**	**0.0108**	**0.0283**	**9.5500e-003**	**0.0103**	**0.0198**	**0.0000**	**23.9373**	**23.9373**	**4.5300e-003**	**0.0000**	**24.0505**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.8000e-004	0.0347	7.0600e-003	9.0000e-005	2.0800e-003	1.3000e-004	2.2100e-003	5.7000e-004	1.3000e-004	7.0000e-004	0.0000	8.9640	8.9640	3.4000e-004	0.0000	8.9724
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.1000e-004	7.5000e-004	6.7000e-003	2.0000e-005	1.4600e-003	1.0000e-005	1.4800e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.3907	1.3907	6.0000e-005	0.0000	1.3922
Total	**1.7900e-003**	**0.0354**	**0.0138**	**1.1000e-004**	**3.5400e-003**	**1.4000e-004**	**3.6900e-003**	**9.6000e-004**	**1.4000e-004**	**1.1000e-003**	**0.0000**	**10.3547**	**10.3547**	**4.0000e-004**	**0.0000**	**10.3646**

3.3 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					1.7200e-003	0.0000	1.7200e-003	8.6000e-004	0.0000	8.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5900e-003	0.0145	0.0151	2.0000e-005		8.1000e-004	8.1000e-004		7.8000e-004	7.8000e-004	0.0000	2.0819	2.0819	3.9000e-004	0.0000	2.0916
Total	**1.5900e-003**	**0.0145**	**0.0151**	**2.0000e-005**	**1.7200e-003**	**8.1000e-004**	**2.5300e-003**	**8.6000e-004**	**7.8000e-004**	**1.6400e-003**	**0.0000**	**2.0819**	**2.0819**	**3.9000e-004**	**0.0000**	**2.0916**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.0000e-005	2.7600e-003	5.8000e-004	1.0000e-005	1.6300e-003	1.0000e-005	1.6400e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	0.7703	0.7703	3.0000e-005	0.0000	0.7710
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	6.0000e-005	5.3000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1169	0.1169	0.0000	0.0000	0.1170
Total	**1.4000e-004**	**2.8200e-003**	**1.1100e-003**	**1.0000e-005**	**1.7600e-003**	**1.0000e-005**	**1.7700e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**0.8872**	**0.8872**	**3.0000e-005**	**0.0000**	**0.8880**

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.7200e-003	0.0000	1.7200e-003	8.6000e-004	0.0000	8.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5900e-003	0.0145	0.0151	2.0000e-005		8.1000e-004	8.1000e-004		7.8000e-004	7.8000e-004	0.0000	2.0819	2.0819	3.9000e-004	0.0000	2.0916
Total	**1.5900e-003**	**0.0145**	**0.0151**	**2.0000e-005**	**1.7200e-003**	**8.1000e-004**	**2.5300e-003**	**8.6000e-004**	**7.8000e-004**	**1.6400e-003**	**0.0000**	**2.0819**	**2.0819**	**3.9000e-004**	**0.0000**	**2.0916**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.0000e-005	2.7600e-003	5.8000e-004	1.0000e-005	1.6300e-003	1.0000e-005	1.6400e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	0.7703	0.7703	3.0000e-005	0.0000	0.7710
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	6.0000e-005	5.3000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1169	0.1169	0.0000	0.0000	0.1170
Total	**1.4000e-004**	**2.8200e-003**	**1.1100e-003**	**1.0000e-005**	**1.7600e-003**	**1.0000e-005**	**1.7700e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**0.8872**	**0.8872**	**3.0000e-005**	**0.0000**	**0.8880**

3.4 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	0.0194	0.1996	0.1816	2.8000e-004		0.0112	0.0112		0.0103	0.0103	0.0000	25.0205	25.0205	8.0900e-003	0.0000	25.2228
Total	**0.0194**	**0.1996**	**0.1816**	**2.8000e-004**		**0.0112**	**0.0112**		**0.0103**	**0.0103**	**0.0000**	**25.0205**	**25.0205**	**8.0900e-003**	**0.0000**	**25.2228**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5000e-004	0.0170	4.4800e-003	4.0000e-005	9.9000e-004	5.0000e-005	1.0400e-003	2.9000e-004	5.0000e-005	3.4000e-004	0.0000	4.0333	4.0333	1.8000e-004	0.0000	4.0378
Worker	8.1000e-004	7.3000e-004	6.6200e-003	2.0000e-005	1.5900e-003	1.0000e-005	1.6000e-003	4.2000e-004	1.0000e-005	4.4000e-004	0.0000	1.4610	1.4610	6.0000e-005	0.0000	1.4625
Total	**1.3600e-003**	**0.0178**	**0.0111**	**6.0000e-005**	**2.5800e-003**	**6.0000e-005**	**2.6400e-003**	**7.1000e-004**	**6.0000e-005**	**7.8000e-004**	**0.0000**	**5.4943**	**5.4943**	**2.4000e-004**	**0.0000**	**5.5003**

3.4 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0194	0.1996	0.1816	2.8000e-004		0.0112	0.0112		0.0103	0.0103	0.0000	25.0205	25.0205	8.0900e-003	0.0000	25.2228
Total	**0.0194**	**0.1996**	**0.1816**	**2.8000e-004**		**0.0112**	**0.0112**		**0.0103**	**0.0103**	**0.0000**	**25.0205**	**25.0205**	**8.0900e-003**	**0.0000**	**25.2228**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5000e-004	0.0170	4.4800e-003	4.0000e-005	9.9000e-004	5.0000e-005	1.0400e-003	2.9000e-004	5.0000e-005	3.4000e-004	0.0000	4.0333	4.0333	1.8000e-004	0.0000	4.0378
Worker	8.1000e-004	7.3000e-004	6.6200e-003	2.0000e-005	1.5900e-003	1.0000e-005	1.6000e-003	4.2000e-004	1.0000e-005	4.4000e-004	0.0000	1.4610	1.4610	6.0000e-005	0.0000	1.4625
Total	**1.3600e-003**	**0.0178**	**0.0111**	**6.0000e-005**	**2.5800e-003**	**6.0000e-005**	**2.6400e-003**	**7.1000e-004**	**6.0000e-005**	**7.8000e-004**	**0.0000**	**5.4943**	**5.4943**	**2.4000e-004**	**0.0000**	**5.5003**

3.5 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	3.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**2.5700e-003**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.9000e-004	2.6500e-003	1.0000e-005	6.4000e-004	1.0000e-005	6.4000e-004	1.7000e-004	1.0000e-005	1.7000e-004	0.0000	0.5844	0.5844	2.0000e-005	0.0000	0.5850
Total	**3.2000e-004**	**2.9000e-004**	**2.6500e-003**	**1.0000e-005**	**6.4000e-004**	**1.0000e-005**	**6.4000e-004**	**1.7000e-004**	**1.0000e-005**	**1.7000e-004**	**0.0000**	**0.5844**	**0.5844**	**2.0000e-005**	**0.0000**	**0.5850**

3.5 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	3.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**2.5700e-003**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.9000e-004	2.6500e-003	1.0000e-005	6.4000e-004	1.0000e-005	6.4000e-004	1.7000e-004	1.0000e-005	1.7000e-004	0.0000	0.5844	0.5844	2.0000e-005	0.0000	0.5850
Total	**3.2000e-004**	**2.9000e-004**	**2.6500e-003**	**1.0000e-005**	**6.4000e-004**	**1.0000e-005**	**6.4000e-004**	**1.7000e-004**	**1.0000e-005**	**1.7000e-004**	**0.0000**	**0.5844**	**0.5844**	**2.0000e-005**	**0.0000**	**0.5850**

3.6 Paving - 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	7.2100e-003	0.0672	0.0709	1.1000e-004		3.5300e-003	3.5300e-003		3.2900e-003	3.2900e-003	0.0000	9.3925	9.3925	2.7400e-003	0.0000	9.4609
Paving	5.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.2600e-003**	**0.0672**	**0.0709**	**1.1000e-004**		**3.5300e-003**	**3.5300e-003**		**3.2900e-003**	**3.2900e-003**	**0.0000**	**9.3925**	**9.3925**	**2.7400e-003**	**0.0000**	**9.4609**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.9000e-004	2.6500e-003	1.0000e-005	6.4000e-004	1.0000e-005	6.4000e-004	1.7000e-004	1.0000e-005	1.7000e-004	0.0000	0.5844	0.5844	2.0000e-005	0.0000	0.5850
Total	**3.2000e-004**	**2.9000e-004**	**2.6500e-003**	**1.0000e-005**	**6.4000e-004**	**1.0000e-005**	**6.4000e-004**	**1.7000e-004**	**1.0000e-005**	**1.7000e-004**	**0.0000**	**0.5844**	**0.5844**	**2.0000e-005**	**0.0000**	**0.5850**

3.6 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.2100e-003	0.0672	0.0709	1.1000e-004		3.5300e-003	3.5300e-003		3.2900e-003	3.2900e-003	0.0000	9.3925	9.3925	2.7400e-003	0.0000	9.4609
Paving	5.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.2600e-003**	**0.0672**	**0.0709**	**1.1000e-004**		**3.5300e-003**	**3.5300e-003**		**3.2900e-003**	**3.2900e-003**	**0.0000**	**9.3925**	**9.3925**	**2.7400e-003**	**0.0000**	**9.4609**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.9000e-004	2.6500e-003	1.0000e-005	6.4000e-004	1.0000e-005	6.4000e-004	1.7000e-004	1.0000e-005	1.7000e-004	0.0000	0.5844	0.5844	2.0000e-005	0.0000	0.5850
Total	**3.2000e-004**	**2.9000e-004**	**2.6500e-003**	**1.0000e-005**	**6.4000e-004**	**1.0000e-005**	**6.4000e-004**	**1.7000e-004**	**1.0000e-005**	**1.7000e-004**	**0.0000**	**0.5844**	**0.5844**	**2.0000e-005**	**0.0000**	**0.5850**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.0000e-005	1.0000e-005	1.2000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0328	0.0328	0.0000	0.0000	0.0328
Unmitigated	1.0000e-005	1.0000e-005	1.2000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0328	0.0328	0.0000	0.0000	0.0328

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.10	0.00	0.00	125	125
Other Asphalt Surfaces	0.01	0.00	0.00	16	16
Total	0.11	0.00	0.00	140	140

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	0.00	5.00	0.00	0.00	100.00	0.00	100	0	0
Other Asphalt Surfaces	0.00	5.00	0.00	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.500000	0.500000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.6000e-004	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	5.0000e-005
Unmitigated	1.6000e-004	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	5.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	5.0000e-005
Total	**1.6000e-004**	**0.0000**	**2.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0000**	**5.0000e-005**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-005	4.0000e-005	0.0000	0.0000	5.0000e-005
Total	**1.6000e-004**	**0.0000**	**2.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0000**	**5.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

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	0.5	6	84	0.73	CNG

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - CNG (0 - 500 HP)	2.2200e-003	2.1000e-004	5.7700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1285	0.1285	2.7000e-004	0.0000	0.1352
Total	**2.2200e-003**	**2.1000e-004**	**5.7700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.1285**	**0.1285**	**2.7000e-004**	**0.0000**	**0.1352**

11.0 Vegetation

Appendix B

Biological Resources Assessment

Rincon Consultants, Inc.

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February 27, 2020
Project No: 19-07437

John Mukhar, PE
MNS Engineers, Inc.
111 N. Market Street, Suite 440
San Jose, California 95113
Via email: jmukhar@mnsengineers.com

Subject: Biological Resources Assessment for the Carmel Valley Manor Sewer Main Extension in Unincorporated Monterey County, California

Dear Mr. Mukhar:

This report documents the findings of a biological resources assessment conducted by Rincon Consultants, Inc. (Rincon) for the Carmel Valley Manor Sewer Main Extension Project (project) located in Monterey County, California. The purpose of this report is to document the existing conditions of the project site and to evaluate the potential for impacts to special-status biological resources for compliance with Monterey County California Environmental Quality Act (CEQA) review process.

Project Location and Description

The project is located in unincorporated Monterey County along the Carmel Valley floor and consists of a linear pipeline alignment in the public right-of-way (ROW) along portions of Valley Greens Drive, Carmel Valley Road, as well as construction of a pump station south of Valley Greens Drive (see Figure 1; Attachment B).

The project would extend the existing wastewater collection system from its current termination point on Valley Greens Drive east to Carmel Valley Road and east on Carmel Valley Road to provide sewer service to the Carmel Valley Manor, located at 8545 Carmel Valley Road. The project alignment begins at County Bridge Number 500, located approximately 360 feet west of Poplar Lane along Valley Greens Drive, continues northeast along Valley Greens Drive until the intersection with Carmel Valley Road, continues east along Carmel Valley Road, and terminates at the intersection of Carmel Valley Road and Carmel Valley Manor. The project site also encompasses a pump station site located on a 1,600-square foot portion of Assessor's Parcel Number 157-031-015-000, which is south of Valley Greens Drive in an undeveloped area across from Hole 14 and adjacent to Hole 13 of the Quail Lodge and Golf Club. The proposed pump station site would connect to the proposed pipeline alignment via incoming and outgoing pipelines. Work at the pump station would occur in landscaped areas, and represents the only work that would occur outside of paved roadways and adjacent ruderal shoulders. Figure 1 and Figure 2 (Attachment B) provide the regional and local context of the project site and surrounding areas.

The project would be constructed from October 2020 to April 2021. Construction would be completed during workdays between 7:30 a.m. and 3:30 p.m. Construction would complete approximately 100 feet of pipeline per day, encompassed within a 300-foot section of roadway. Approximately six workers per day would be on site for construction of the pipeline, and four workers per day for construction of the

pump station. Construction of the pipeline would entail primarily open trench construction within existing paved roadways and ruderal shoulders. The extension of the new force main would be suspended from County Bridge Number 500 across the Carmel River and constructed from the bridge deck, outside the bed and banks of the Carmel River. The gravity sewer would be installed within public rights-of-way at approximately 8 feet in depth, and the force main would be at approximately 4 feet in depth. The open trench for installation of both the force main and gravity sewer would be 3 feet in width, and repaving over the open trench areas once pipeline installation is complete would be 4 feet in width. At the intersection of Valley Greens Drive and Carmel Valley Road the gravity pipeline would be installed at 25 feet in depth to avoid existing utilities in the intersection. This 25-foot depth installation is approximately 300 feet in length. Construction at the Valley Greens Drive and Carmel Valley Road intersection would use the jack and bore method to install the gravity pipeline.

Excavated material acceptable for use as fill would be stockpiled and reused as backfill or loaded onto trucks and disposed of off-site. The material to be stockpiled would be stored within construction staging areas to be determined by the contractor but would not be placed in any areas containing natural vegetation. Excavations would be backfilled once they are no longer needed and would typically remain open for one to five days, depending on the progression of work. Excavations would be plated nightly to allow for vehicle use of the affected lane.

Other general equipment anticipated to be used for the work includes excavators, work trucks, power generators, air compressors, dump trucks, loaders, paving equipment, various other heavy equipment, and various hand and power tools.

Regulatory Background

Regulatory authority over biological resources is shared by Federal, State, and local authorities under a variety of statutes and guidelines. Primary authority for general biological resources lies within the land use control and planning authority of local jurisdictions (in this instance, Kings County and CID). The California Department of Fish and Wildlife (CDFW) is a trustee agency for biological resources throughout the state under CEQA and also has direct jurisdiction under the California Fish and Game Code (CFGC). Under the California and federal Endangered Species Acts (CESA/ESA), the CDFW and the U.S. Fish and Wildlife Service (USFWS) also have direct regulatory authority over species formally listed as Threatened or Endangered as well as native bird species listed under the Federal Migratory Bird Treaty Act (MBTA), and the Bald and Golden Eagle Protection Act (BGEPA). The U.S. Army Corps of Engineers (USACE) has regulatory authority over specific biological resources, namely wetlands and waters of the United States, under Section 404 of the federal Clean Water Act (CWA). The CDFW and Regional Water Quality Control Boards (RWQCB) protect waters and streambeds at the state level. The analysis in this biological resources' assessment is guided by the requirements of these laws, and by the operating standards of the implementing agencies.

The study area is also within the Carmel Valley Master Plan (CVMP) area, within the greater 2010 Monterey County General Plan area.

Methods

The biological resources study for the project consisted of a review of relevant literature and databases query results, a field reconnaissance survey to determine what sensitive biological resources do or may

occur at the site, and an evaluation of the proposed activity in the context of potential occurring biological resources to determine potentially significant impacts under CEQA. The potential presence of special-status species is based on the literature review and a field survey designed to assess habitat suitability and presence of target species. The potential for impacts to these species was evaluated based on these findings, the proposed project description and known construction phase activity associated with the installation of a sewer pipeline. The proposed project would be developed on approximately 5-acres; however, a 23.7-acre study area (see Figure 2; Attachment B) was evaluated to support siting and project design planning that would avoid sensitive biological resources if applicable.

Literature Review

The literature review included database research on special-status biological resource occurrences within the *Seaside, California* U.S. Geological Survey (USGS) 7.5-minute quadrangle and surrounding eight quadrangles. Sources included the CDFW California Natural Diversity Data Base (CNDDB) (CDFW 2020a), Biogeographic Information and Observation System (https://wildlife.ca.gov/Data/BIOS), USFWS National Wetlands Inventory (NWI) (USFWS 2020a), USFWS Information for Planning and Consultation (IPaC) (USWFS 2020b), and USFWS Critical Habitat Portal (http://criticalhabitat.fws.gov) (USFWS 2020c). Other resources included the California Native Plant Society's (CNPS) online Inventory of Rare and Endangered Plants of California (CNPS 2020), CDFW's Special Animals List (August 2019a), and CDFW's Special Vascular Plants, Bryophytes, and Lichens List (January 2020b). Aerial photographs, topographic maps, soil survey maps, geologic maps, and climatic data in the area were also examined. References are included as Attachment A. A review of the information contained within these databases supported by the expert opinion of Rincon's biological staff resulted in a list of special status species and other resources to be evaluated for their presence or potential to occur at the proposed project site.

Field Survey

A biological resource reconnaissance-level site visit was conducted to assess the habitat suitability for potential special-status species, map vegetation communities and land-cover types, document and map the presence of any sensitive biological, identify potential jurisdictional waters or wetlands, document any wildlife connectivity/movement features, and record all observations of plant and wildlife species within the study area. Rincon Biologist Samantha Kehr conducted the site visit on February 18, 2020, between the hours of 1200 pm and 1530 pm. The temperature onsite was approximately 65°F. The biologist walked meandering transects over the entire 23.7-acre study area, inspecting the site for the potential to support special status species or biological resources. Site photos from the survey are included as Attachment D.

All plant vegetation communities observed within the study area were documented. The survey included a directed search for special-status plants that would have been apparent and identifiable during the time of the survey; however, the survey did not constitute a protocol-level floristic survey. Limitations to the compilation of a comprehensive floral checklist were imposed by seasonal factors, such as blooming period and emergence of some of the annual species. Floral nomenclature for native and non-native plants in this report follows Baldwin et al. (2012) as updated by The Jepson Online Interchange (University of California, Berkeley 2018).

Wildlife species observed directly or detected from calls, tracks, scat, nests, or other sign were documented. The detection of wildlife species was limited by seasonal and temporal factors. The survey was conducted in the late winter; therefore, potentially occurring spring migrants may not have been

observed. As the survey was performed during the day, identification of nocturnal animals was limited to sign if present on-site.

Existing Setting

Topography and Soils

At an elevation range of approximately 80 feet to 100 feet above mean sea level, the topography of the project area and its immediate surroundings is characterized by low-lying, agricultural pasture lands. The study area is depicted over the *Salinas, California* USGS 7.5-minute quadrangle. Adjacent land uses include recreational use (golf courses), commercial development, rural residential, small scale agriculture (row crop cultivation), and undeveloped land. The study area occurs primarily along the northern edge of the Carmel Valley floor, with the north side of Carmel Valley Road steeply sloped up toward the ridge top.

The study area contains six soil map units (USDA 2019): Tujunga fine sand, 0 to 5 percent slopes; Pico fine sandy loam; Xerorthents, dissected; Lockwood channery loam, 2 to 9 percent slopes, MLRA 14; Santa Lucia-Reliz association; and Corducci and Typic Xerofluvents, 0 to 5 percent slopes, occasionally flooded, MLRA 14.

- **Tujunga fine sand, 0 to 5 percent slopes** is an excessively drained sandy soil that occurs on alluvial fans and flood plains. It is formed in sandy alluvium derived from sedimentary rock. A typical profile consists of fine sand to 60 inches.
- **Pico fine sandy loam** is a well drained loamy soil that occurs on flood plans. It is formed from coarse-loamy alluvium derived from sedimentary rock. A typical profile consists of fine sandy loam to 55 inches and stratified sand to silty clay loam between 55 to 72 inches.
- **Xerorthents, dissected** is found on Alluvial fans, terraces. It is formed in mixed unconsolidated alluvium. A typical profile consist of 60 inches of loam.
- **Lockwood channery loam, 2 to 9 percent slopes, MLRA 14** is a well drained loamy soil that occurs on terraces and alluvial fans. It is formed from fine-loamy alluvium derived from shale. A typical profile consists of channery loam to 40 inches and channery clay loam between 40 to 82 inches.
- **Santa Lucia-Reliz association** is a well drained loamy soil that occurs on hill slopes. It is formed from shaly clayey residuum weathered from shale. A typical profile consists of channery clay loam to 24 inches and unweathered bedrock between 24 to 29 inches.
- **Corducci and Typic Xerofluvents, 0 to 5 percent slopes, occasionally flooded, MLRA 14** is a somewhat excessively drained sandy soil that occurs on stream terraces, flood plains, and alluvial fans. It is formed from mixed alluvium derived from igneous and sedimentary rock. A typical profile consists of fine sand 0 to 5 inches, fine sand 5 to 35 inches, sand 35 to 45 inches, and coarse sand 45 to 59 inches.

None of the soils mapped within the project site are listed as hydric soils.

Vegetation and Other Land Cover Types

Seven (7) terrestrial vegetation communities or other land cover types were identified within the BSA during field surveys. The mapping is presented in a land-cover map atlas (Attachment B, Figure 3), and provides a reasonable approximation of the types and acreages of the various vegetation communities and land-cover types that occur within the Study Area.

The vegetation community characterizations for this analysis were based on the classification systems presented in *A Manual of California Vegetation, Second Edition* ([MCV2] Sawyer et al. 2009) but have been modified slightly to most accurately reflect the existing site conditions. The *Preliminary Description of Terrestrial Natural Communities of California* (Holland 1986) has been superseded by the MCV2, but is included for comparison.

Coast Live Oak Woodland

The study area contains approximately 2.24 acres of coast live oak (*Quercus agrifolia)* woodland. This vegetation community most closely corresponds with the *Quercus agrifolia* Woodland Alliance and *Alnus rhombifolia* Forest Alliance in the Manual of California Vegetation system (Sawyer et al. 2009). It primarily occurs along the north side of Carmel Valley Road and consists of a canopy dominated by coast live oak, with some Monterey pine (*Pinus radiata*) and California buckeye (*Aesculus californica*). The understory varies but typically contains black sage (*Salvia mellifera*), coyote brush (*Baccharis pilularis*), California blackberry (*Rubus ursinus*), redberry (*Rhamnus crocea*), poison oak (*Toxicodendron diversilobum*), California man-root (*Marah fabacea*), and coast morning glory (*Calystegia macrostegia*).

California Sagebrush – Black Sage Scrub

The study area contains approximately 0.55 acre of California sagebrush - black sage scrub. California sagebrush (*Artemisia californica*) and black sage (*Salvia mellifera*) are dominant, with some coyote brush, pampas grass (*Cortaderia jubata*), poison oak, and sticky monkeyflower (*Diplacus aurantiacus*). A small area around a roadside drainage in the communities also had California coffee berry (*Frangula californica*), California buckeye, elderberry (*Sambucus nigra*) and willow (*Salix* sp.).

Black Cottonwood Riparian Forest

The study area contains approximately 0.28 acre of black cottonwood (*Populus trichocarpa*) riparian forest. This vegetation community most closely corresponds with the *Populus trichocarpa* Forest Alliance in the Manual of California Vegetation system (Sawyer et al. 2009). This community occurs within the riparian corridor of the Carmel River and is dominated by black cottonwood, arroyo willow (*Salix lasiolepis*), polished willow (*Salix laevigata*), California box elder (*Acer negundo*), and sycamore (*Platanus racemosa*) trees. The understory is composed of willow (*Salix* spp.), blackberry (*Rubus* spp), and California man-root.

Landscaped

The study area contains approximately 6.90 acres of landscaped areas. This land cover type is not naturally occurring and is not described in either the Holland (1986) or Sawyer et al. (2009) classification systems. It consists of primarily non-native species in ornamental plantings. Tree species found in this community are highly variable, and typically consist of either non-native (ornamental) species or native species that were planted, and not part of a natural community. The most commonly occurring tree

species within this community include Monterey cypress (*Hesperocyparis macrocarpa*), eucalyptus (*Eucalyptus* spp.), Monterey pine, coast live oak, California sycamore (*Platanus racemose*), coast redwood (*Sequoia sempervirens*), golden wattle (*Acacia pycnantha*), and Peruvian pepper (*Schinus mole*). Bushes and shrubs in this community are variable by occurrence and include lavender (*Lavandula* sp.), lantanas (*Lantana* spp.), and juniper (*Juniperus* spp.) among other ornamental species.

Monterey pine and Monterey cypress are native species considered sensitive when occurring in natural stands or woodlands; however, there are few naturally occurring stands of these species. Most individuals present within the study area are ornamental plantings or offspring established or recruited from ornamental plantings, and don't function as a natural community.

Developed

The study area contains approximately 12.26 acres of developed lands, the largest community or land cover type in the study area. This land cover type is not naturally occurring and is not described in either the Holland (1986) or Sawyer et al. (2009) classification systems. This community consists of areas that have been modified such that most or all vegetation has been removed or only small areas of landscape vegetation are present. Parking lots, roads, sidewalks, structures, paved and unpaved pathways are included within this community. In some cases, vegetation from adjacent areas may overhang.

Agriculture

The BSA contain approximately 0.07 acre of agricultural lands. This land cover type is not naturally occurring and is not described in either the Holland (1986) or Sawyer et al. (2009) classification systems. This land cover type includes planted crop lands and actively farmed land. Within the study area this land cover type was comprised of disked fields along the south side of Carmel Valley Road. This community provides foraging opportunities for some wildlife such as songbirds and bats but provides very little habitat value in terms of shelter.

Ruderal

The study area contains approximately 1.28 acres of ruderal lands. Habitats that have been heavily disturbed or altered such that natural vegetation has largely been removed are mapped as ruderal areas. These sites do not correspond well with either the Holland (1986) or Sawyer et al. (2009) classification systems. Ruderal areas have had visible disturbance of soil or vegetation and are mostly bare and colonized by weeds and disturbance-tolerant natives, such as plantain (*Plantago lanceolata*), wild radish (*Raphanus sativa*), field mustards (*Hirschfeldia* spp., *Brassica* spp.), milk thistle (*Silybum marianum*), and non-native annual grasses. The ruderal habitats are primarily found along the edges of the road.

General Wildlife

The study area and its surroundings provide habitat for wildlife species that commonly occur in Carmel Valley, urban, grassland, and agricultural habitats as well as the Carmel River and riparian corridor. Avian species observed/detected on or adjacent to the site include mallard (*Anas platyrhynchos*), cinnamon teal (*Spatula cyanoptera*), belted kingfisher (*Megaceryle alcyon*), American crow (Corvus brachyrhynchos), scrub jay (*Aphelocoma californica*), chestnut-backed chickadee (*Poecile rufescens*), yellow-rumped warbler (*Setophaga coronata*), black phoebe (*Sayornis nigricans*), red-tailed hawk (*Buteo*

jamaicensis), red-shouldered hawk (*Buteo lineatus*), California quail (*Callipepla californica*), and great blue heron (*Ardea herodias*). Terrestrial species observed/detected include California ground squirrel (*Otospermophilus beecheyi*) and western fence lizard (*Sceloporus occidentalis*). One unidentified species of bumble bee (*Bombus* sp.) was observed in a landscaped area with ornamental flowers.

Special-Status Biological Resources

This section discusses sensitive biological resources observed on the study area and evaluates the potential for the study area to support other sensitive biological resources.

Special-Status Species

Local, state, and federal agencies regulate special-status species and may require an assessment of their presence or potential presence to be conducted prior to the approval of proposed development on a property. Assessments for the potential occurrence of special-status species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDB species occurrence records from other sites in the vicinity of the study area, and previous reports for the study area. The potential for each special status species to occur in the study area was evaluated according to the following criteria:

- **Not expected.** Habitat on and adjacent to the site is clearly unsuitable for the species' requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- **Low Potential.** Few of the habitat components meeting the species' requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- **Moderate Potential.** Some of the habitat components meeting the species' requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High Potential.** All of the habitat components meeting the species' requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present.** Species is observed on the site or has been recorded (e.g., CNDDB, other reports) on the site recently (within the last 5 years).

For the purpose of this report, special-status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by the USFWS under the ESA; those listed or candidates for listing as Rare, Threatened, or Endangered under the CESA or Native Plant Protection Act; those identified as Fully Protected by the California Fish and Game Code (Sections 3511, 4700, 5050, and 5515); those identified as Species of Special Concern (SSC) by the CDFW; and plants occurring on lists 1 and 2 of the California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) system per the following definitions:

- **Rank 1A** = Plants presumed extinct in California;
- **Rank 1B.1** = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat);
- **Rank 1B.2** = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened);
- **Rank 1B.3** = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known);
- **Rank 2** = Rare, threatened or endangered in California, but more common elsewhere

Based on a query of the CNDDB, there are 56 special-status plant species, 30 special-status wildlife species, and one sensitive natural community documented within the *Salinas, California* USGS 7.5-minute quad and the eight surrounding quads. An additional sensitive species observed during the reconnaissance survey was added to the evaluation. All 86 sensitive resources have been evaluated for potential to occur within the study area (Attachment C).

Special-Status Plant Species

Fifty-six (56) special status plant species known to occur in the region were evaluated for their potential to occur in the study area (see Attachment C). None of these species would be expected to occur within the disturbance footprint of the paved roadway or ruderal shoulder. Based on the presence of two natural vegetation communities in areas adjacent to proposed work areas, 12 special status plants have the potential to occur adjacent to the project, including;

- **Present adjacent to project site**
  - Monterey cypress (Hesperocyparis macrocarpa) 1B.2
  - Monterey pine (*Pinus radiata*) 1B.1
- **Moderate Potential adjacent to project site**
  - Hospital Canyon larkspur (*Delphinium californicum* ssp. *interius*) 1B.2
  - Carmel Valley bush-mallow (*Malacothamnus palmeri* var. *involucratus*) 1B.2
  - Carmel Valley malacothrix (*Malacothrix saxatilis* var. *arachnoidea*) 1B.2
- **Low Potential adjacent to project site**
  - Hickman's onion (*Allium hickmanii*) 1B.2
  - pink Johnny-nip (*Castilleja ambigua* var. *insalutata*) 1B.1
  - Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*) 1B.1
  - Jolon clarkia (*Clarkia jolonensis*) 1B.2
  - San Francisco collinsia (*Collinsia multicolor*) 1B.2
  - Hutchinson's larkspur (*Delphinium hutchinsoniae*) 1B.2
  - marsh microseris (*Microseris paludosa*) 1B.2

No federal or state listed plants are expected to occur in the study area. The remaining 44 special status plant species known to occur in the region could be excluded based on known range and elevation, and

the lack of the species' specific habitat requirements within the study area (e.g. sandy openings in maritime chaparral).

Special-Status Wildlife Species

Rincon identified 30 special-status wildlife species that have been documented within the nine-quadrangle search radius. These species were reviewed for potential to occur within the study area (see Attachment C), and 14 species were found to have potential to occur or were observed in the study area. None of these species would be expected to occur within the proposed work area on the existing paved road or ruderal shoulder or within the landscaped area at the pump station. These species are discussed in further detail below.

Western Bumble bee

Western bumble bee (*Bombus occidentalis*) is a state candidate for listing (Endangered). The historic range of this species covered much of the western United States, from the Pacific coast to the Colorado Rocky Mountains. Western bumble bee are eusocial insects living in a colony with workers and one queen. They typically nest underground in rodent burrows or other cavities which may be lined with grass or bird feathers (Hatfield et al., 2015). The flight period for queens is early February through late November in California, peaking in late June through late September. The flight period for males and worker females is early April to early November. Most of the colony dies off at the start of winter, including the queen. A cast of reproductive females will continue to forage (gather nectar) and hibernate over the winter. These females will become queens and start new colonies the following spring. This species has a wide variety of plant associations, including but not limited to, species in the genera: *Melilotus, Cirsium, Trifolium, Centaurea, Chrysothamnus*, and *Eriogonum* (Koch, Strange, and Williams, 2012).

There are two known occurrences within five miles of the study area, flowering plants are present, and an unidentified species of bumble bee (*Bombus* sp.) was observed within the study area during the site visit. Therefore, this species has a low potential to occur within the study area and may incidentally move through the project site.

Smith's Blue Butterfly

Smith's blue butterfly (*Euphilotes enoptes smithi*) occur in scattered populations in association with coastal dune, coastal scrub, chaparral, and grassland habitats (Scott 1986). They spend their entire lives in association with two host buckwheat plants: cliff buckwheat (*Erigonum parviflorum*) and seaside buckwheat (E. *latifolium*). Both buckwheat host plants are utilized as larval and adult food plants.

There are two known occurrences of this species within five miles of the study area. California sagebrush black sage scrub provides suitable habitat for this species, although no host plants were observed in the study area. Therefore, this species has a moderate potential to occur within the study area and may incidentally move through the project site during the adult flight period between mid-June through early September.

Steelhead- South-Central California Coast DPS

The study area is located within the known range of the federally threatened steelhead (*Oncorhynchus mykiss irideus*) south-central California coast (SCCC) Distinct Population Segment (DPS). This DPS listed by NMFS in 2006 includes steelhead populations in the Carmel River (NMFS 2011).

Steelhead are capable of surviving in a wide range of temperature conditions within freshwater and estuarine environments but prefer temperatures less than 57 degrees Fahrenheit. Eggs tend to experience mortality at temperatures greater than 55 degrees Fahrenheit, and steelhead appear to have difficulty obtaining sufficient oxygen from water temperatures greater than 70 degrees Fahrenheit. Elevated summer water temperatures have been identified as a problem (CDFW 1996). Steelhead do best where dissolved oxygen concentrations are at least seven parts per million. In streams, deep low-velocity pools are important wintering habitats. Spawning habitat consists of gravel substrates that are free of excessive silt.

SCCC steelhead were not observed in the study area during the site visit, however the Carmel River is federally designated critical habitat for SCCC steelhead (Federal Register 65: 7764-7787), and there is a CNDDB record for this species in the Carmel River within the study area. Therefore, this species has a high potential to occur in the study area and could be present in Carmel River under Bridge 500 when work occurs.

California Tiger Salamander

California tiger salamander (*Ambystoma californiense*) (CTS) is a federally and state threatened species found primarily in grasslands and low foothill and oak woodland habitats located within approximately 2,200 feet (671 meters [m]) of breeding pools (Trenham and Shaffer 2005). CTS breed in long-lasting rain pools (e.g., seasonal ponds, vernal pools, slow-moving streams) that are often turbid, and occasionally in permanent ponds lacking fish predators. Adults spend 90 percent of their lives underground. Potential and known breeding habitat includes wetland and open water habitats. During the non-breeding season, adults occur in upland habitats and occupy small mammal burrows (ground squirrel, pocket gopher, etc.) and other subterranean cover (e.g., cracks, root hollows, etc.). They migrate nocturnally to aquatic sites to breed during relatively warm winter or spring rains. Juveniles emigrate at night from the drying pools to upland refuge sites, such as rodent burrows and cracks in the soil.

There are 11 known occurrences of this species within five miles of the study area, however there is no suitable breeding habitat and there are significant barriers for movement (the Carmel River and developed areas) over much of the study area. Therefore, this species has a low potential to occur in the study area during upland movement and may incidentally occur within roadways where work is proposed during dispersal in rain events and at night.

Foothill Yellow-Legged Frog

Foothill yellow-legged frog (*Rana boylii*) (FYLF) is a state candidate threatened and species of special concern. This species is typically found in partly-shaded, shallow streams with rocky substrates in a variety of habitat types. The species requires some cobble-sized substrate for egg laying and a water source persisting for at least 15 weeks for larval metamorphosis. During periods of inactivity, especially during the cold season, it will seek cover under rocks in streams or on shore within a short distance to water source. Significant seasonal movements and/or migrations from breeding areas do not generally occur. Foothill yellow-legged frog typically will not stray more than 33 feet from a breeding water source

(Zeiner 1990). The Carmel River in the study area is suitable habitat for this species and there is one occurrence approximately 0.6 miles east of the study area. This occurrence is historical (1904) and possibly extirpated. Therefore, this species has a low potential to occur in the study area within the Carmel River and may incidentally occur within roadways where work is proposed during dispersal in rain events and at night.

California Red-Legged Frog

California red-legged frog (*Rana draytonii*) (CRLF) is a federally threatened species that occurs in lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. It typically inhabits quiet pools of streams, marshes, and ponds. All life history stages are most likely to be encountered in and around breeding sites, which include coastal lagoons, marshes, springs, permanent and semi-permanent natural ponds, and ponded and backwater portions of streams, as well as artificial impoundments such as stock ponds, irrigation ponds, and siltation ponds. Eggs are typically deposited in permanent pools, attached to emergent vegetation. This species typically requires 11 to 20 weeks of permanent water for larval development and must have access to estivation habitat. Suitable upland habitat must provide sufficient moisture to prevent desiccation and sufficient cover to provide protection from predators. Typical upland habitat consists of downed woody vegetation, leaf litter, and small mammal burrows, densely vegetated areas, and even, man-made structures (i.e., culverts, livestock troughs, spring-boxes, abandoned sheds) (USFWS 2002).

There are 31 known occurrences of this species within five miles, including numerous sightings in the Carmel River, one of which is within the study area. Additionally, CRLF have also been reported at the Tehama Golf Course, near the headwaters of an ephemeral drainage that flows under the Valley Greens Drive Carmel Valley Road intersection.

Upland habitat within the remainder of the study area is generally marginal or unsuitable for long term usage: the ephemeral drainage is dry for most of the year, and surrounding lands, including those near the Carmel River are too developed to provide suitable upland habitat. Therefore, this species has a high potential to occur in the study area within the Carmel River and may incidentally occur within roadways where work is proposed during dispersal in rain events and at night.

Coast Range Newt

Coast range newt (*Taricha torosa*) is a CDFW species of special concern that inhabits terrestrial habitats such as oak woodlands, annual grassland, and chaparral where sufficient moisture is present. As adults they will migrate over 0.62 mile to breed in ponds, reservoirs and slow-moving streams. There are two known occurrences within five miles and the Carmel River provides suitable habitat. Therefore, this species has a low potential to occur in the study area within the Carmel River and may incidentally occur within roadways where work is proposed during dispersal in rain events and at night.

California Legless Lizard

The northern California legless lizard (*Anniella pulchra*) is CDFW species of special concern that is typically found in coastal dune, valley-foothill chaparral, and coastal scrub vegetation communities, and areas with sandy or loose organic soils or high amounts of leaf litter. The species prefers moist warm loose soil with plant cover, and moisture is an essential component of their habitat requirements (Nafis 2020). Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands.

There are seven known occurrences within five miles of the study area, including one in Carmel Valley approximately 0.66 mile east of the study area. Therefore, this species has a low potential to occur in the study area but is not expected within proposed work areas.

Western Pond Turtle

Western pond turtle (*Emys marmorata*) is a CDFW species of special concern that is found in ponds, lakes, rivers, creeks, marshes, and irrigation ditches, with abundant vegetation. It requires basking sites of logs, rocks, cattail mats, or exposed banks. Western pond turtle is active from approximately February to November. It will estivate during summer droughts by burying itself in soft bottom mud. When creeks and ponds dry up in summer, some turtles will travel along the creek until they find an isolated deep pool, others stay within moist mats of algae in shallow pools, and many turtles move to woodlands above the creek or pond and bury themselves in loose soil. Pond turtle will overwinter underground until temperatures warm up and the heavy winter flows of the creek subside. They return to the creek in the spring.

There are seven known occurrences within five miles, including numerous sightings in the Carmel River, one of which is within the study area. Therefore, this species has a high potential to occur in the study area within the Carmel River and may nest in landscaped areas in the vicinity of the golf course but is not expected in proposed work areas.

Two-Striped Gartersnake

The two-striped garter snake (*Thamnophis hammondii*) is a CDFW species of special concern that occurs from Monterey County south along the coast, mostly west of the South Coast Ranges, into San Diego County west of the Peninsular Ranges. It is primarily an aquatic species that occurs near ponds, pools, creeks, cattle tanks, and other sources of water within oak woodland, chaparral, scrub communities, and coniferous forest habitats. It is often found in rocky areas also. Depending upon weather conditions, two-striped garter snake can be active during January through November and typically breeds March through April.

There are no occurrences in the CNDDB within five miles of the study area, however this species is known to occur in the Carmel River watershed (Shihadeh et al. 2016). Therefore, two-striped garter snake has a high potential to occur in the study area within the Carmel River and may incidentally occur within roadways where work is proposed during dispersal.

Townsend's Big-Eared Bat

Townsend's big-eared bat (*Corynorhinus townsendii*) is a CDFW species of special concern found throughout California in a wide variety of habitats, most commonly in mesic sites. This species is found in all but subalpine and alpine habitats and may be found at any season throughout its range (Zeiner et al. 1990). Day and night roosts for these species can include open buildings with deep cover to protect bats from high temperatures. There is one known occurrence within five miles, and bat sign (night roost) was observed on the Carmel River bridge at Valley Greens Drive. There are no suitable day roosts within the study area. Therefore, Townsend's big-eared bat has a moderate potential to occur in the study area in riparian corridor at night while foraging but is not expected to occur in proposed work areas.

Monterey Dusky-Footed Woodrat

Monterey dusky-footed woodrat (*Neotoma macrotis Luciana*) is a subspecies of the dusky-footed wood rat (N. *fuscipes*) and a CDFW species of special concern. The Monterey dusky-footed woodrat occurs throughout Monterey and northern San Luis Obispo counties where appropriate habitat is available. Dusky-footed woodrats can be found in chaparral, streamside thickets, and deciduous or mixed woodland habitats (Burt and Grossenheider 1980). In forest habitats, they are generally found where there is moderate canopy with a dense to moderate understory. Dusky-footed woodrats construct nests (middens) out of sticks, grass, leaves, and other debris and the availability of these nest building items may limit the abundance of woodrats (Zeiner et al. 1990).

There are no known occurrences within five miles of the study area, however oak woodlands provide suitable habitats for this species. Therefore, this species has a low potential to occur in the study area within oak woodlands but is not expected to occur in proposed work areas.

American Badger

American badger (*Taxidea taxus*) is a CDFW species of special concern that is found in dry, open habitats including grassland and open woodland. It is a highly specialized, semi-fossorial mustelid (Quinn 2008). Suitable burrowing habitat requires dry, sandy soil. The species is most abundant in drier open stages of most shrub, forest, and herbaceous habitats with suitable soils to support burrows (Zeiner et al. 1990). Breeding occurs in summer and early fall, with young being born from March to April.

There are two occurrences recorded on the CNDDB within five miles of the study area, and badgers have been observed in Carmel Valley (Counts 2007). Therefore, this species has a low potential to occur in the study area during upland movement but is not expected to occur in proposed work areas.

Nesting Birds

Native bird nests are protected by CFGC Section 3503. Natural and landscaped areas adjacent to the project site contain suitable nesting habitat for a variety of native avian species. Coast live oak woodlands, California sagebrush black sage scrub, and the Carmel River riparian corridor provide suitable nesting habitat for sensitive bird species, including oak titmouse (*Baeolophus inornatus*), Townsend's warbler (*Setophaga townsendi*), lesser goldfinch (*Spinus psaltria*), and Nuttall's Woodpecker (*Picoides nuttallii*). Landscaped areas, ruderal vegetation, and developed areas also provide habitat for many native urban species, including house finch (*Haemorhous mexicanus*), black phoebe, American Crow, mallard, and California towhee (*Melozone crissalis*).

Special-Status Vegetation Communities and Critical Habitat

Sensitive Natural Communities

Plant communities are also considered sensitive biological resources if they have limited distributions, have high wildlife value, include sensitive species, or are particularly susceptible to disturbance. CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in CNDDB. CNDDB vegetation alliances are ranked 1 through 5 based on NatureServe's (2010) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Some alliances with the rank of 4 and 5 have also been included in the 2019 sensitive natural communities list under CDFW's revised ranking methodology (2019b).

The black cottonwood forest is considered a sensitive vegetation community by CDFW with a rank of G5 S5. Additionally, the black cottonwood arroyo willow alliance is also considered sensitive.

Critical Habitat

The Carmel River (Hydrologic unit 3307) was federally designated as critical habitat for SCCC steelhead in 2005 (NMFS 2005). The Carmel River (Core population 1) is one of five major watersheds containing SCCC Steelhead. This watershed provides suitable spawning and rearing sites, with adequate water quality, shade, and submerged logs and debris, which are essential for the conservation of the species. The Carmel River, and its lower reaches are identified in the south central California coast steelhead recovery plan as an important corridor for movement between estuarine and marine habitats and extensive spawning and rearing habitats in the upper watershed (NMFS 2013).

Jurisdictional Waters and Wetlands

Two potentially jurisdictional features were mapped within the study area the Carmel River and an ephemeral drainage (Attachment B, Figure 3).

The ephemeral drainage/ditch cannels surface water from a steep canyon north of the Valley Greens Drive Carmel Valley Road Intersection, east of Tehma (road). The drainage is canalized just before flowing through a culvert under Carmel Valley Road into a roadside ditch. This ditch then flows south along the east side of Williams Ranch Road and into the Carmel River; 0.02 acre of ephemeral drainage/ditch was mapped within the study area. The ephemeral drainage/ditch may potentially be jurisdictional under the federal CWA, Sections 1600 et seq. of the CFGC, and/or the Porter-Cologne Water Quality Control Act.

The Carmel River is approximately 35 feet wide and was actively flowing during the site visit; 0.06 acre of the Carmel River and 0.28 acre of the riparian area were mapped within the study area. The Carmel River and riparian corridor are subject to USACE jurisdiction under the CWA, RWQCB jurisdiction under the CWA and Porter-Cologne, and CDFW jurisdiction under the CFGC.

Wildlife Movement

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Other corridors may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

Habitats within a habitat linkage do not necessarily need to be identical to those habitats being linked. Rather, the linkage needs only to contain sufficient cover and forage to allow temporary utilization by species moving between core habitat areas. Habitat linkages are typically contiguous strips of natural areas, though dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Some species may require specific physical resources (such as rock outcroppings, vernal pools, or oak trees) within the habitat link for the linkage to serve as an effective movement corridor, while other more mobile or aerial species may only require discontinuous patches of suitable habitat to permit

effective dispersal and/or migration. Wildlife movement corridors may occur at either large or small scales.

Wildlife movement corridors can be both large and small scale. Riparian corridors and waterways including the Carmel River provide local scale opportunities for wildlife movement through the project area. Undeveloped areas within the study area also act as corridors for wildlife movement, particularly for relatively disturbance tolerant species such as fox, coyote, raccoon, skunk, deer, and bobcat. On a larger scale an Essential Connectivity Area is mapped within the study area in the Biogeographic Information and Observation System (Spencer et al. 2010). This linkage connects Point Lobos State Reserve along the coastline with Big Sur and Los Padres National Forest along the Santa Lucia Mountain Range. The study area occurs primarily within developed areas and Carmel Valley Road is a significant local barrier for wildlife movement.

Local Policies and Ordinances

Monterey County 2010 General Plan. The 2010 General Conservation and Open Space Element provide goals, policies, and objectives pertaining to biological resources applicable to this project. Goal OS-5 is focused on the avoidance, minimization and mitigation of significant impacts to biological resources. The associated policies with this goal include the promotion of conservation of listed species; conservation and maintenance of critical habitat; and avoidance, minimization, and mitigation of impacts to listed species and critical habitat. The Carmel Valley Master Plan (CVMP; Monterey County, 2013) Policy CV-3.11 discourages the removal of native oak, madrone and redwood tree in the CVMP Area and requires a permit for the removal of these species.

Monterey County Ordinances. Some resources are afforded protection through local ordinances such as those that protect trees, riparian corridors, and environmentally sensitive habitats. The County of Monterey Zoning Ordinance 21.64.260 calls for the protection and preservation of oaks and other types of native trees.

Habitat Conservation Plans

The study area is not within any Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP) areas.

Impact Analysis and Mitigation Measures

This section discusses the potential impacts and effects to biological resources that may occur from implementation of the proposed project.

Special-Status Species

The proposed project would have a significant effect on biological resources if it would:

a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.*

Special-Status Plants

Literature review and database searches identified 12 special status plants have the potential to occur within the study area. None are expected to occur within the proposed work areas composed of paved roadway and ruderal shoulder, and one are federal or state listed species. Impacts to CRPR 1B.1 or 1B.2 plant species would only be considered significant if the loss of individuals represented a population-level impact that would jeopardize the viability of a local or regional population. Many of the non-listed species have a wider distribution beyond the Carmel Valley. Impacts to a small number of individuals of these species from project development would not jeopardize the viability of regional populations. Additionally, the proposed project would occur primarily in developed, ruderal, or landscaped areas, and impacts to natural communities is not expected. Therefore, **impacts to special-status plant species would be less than significant.**

Special-Status Wildlife

As discussed above, the study area contains potentially suitable habitat for special-status species and nesting birds, but none of the species are expected to inhabit the proposed work areas comprised of paved roadway and ruderal shoulder. Some of the species have a low potential to incidentally occur within roadways when dispersing or foraging, and others may be present within the Carmel River under Bridge 500 during construction. Potential impacts for each species with potential to occur on-site are discussed below.

Western Bumble bee

Impacts to western bumble bee may occur if a colony is present in undeveloped areas adjacent to the work area. Since the sewer line will be installed in the existing road a colony is not expected to occur in the work area, but foraging individuals at the proposed pump station site could be injured or killed during construction. With the implementation of a mitigation measures (worker training program) impacts to western bumble bee would be reduced to less than significant with mitigation.

Smith's Blue Butterfly

No Smith's blue butterfly host plants were observed in the study area, therefore no impacts to the host plant or larva/eggs are expected. If work occurs during the adult flight period (mid-June through early September) impacts through injury or mortality may occur if individuals enter the work area. With the implementation of mitigation (worker training program) impacts to Smith's blue butterfly would be reduced to less than significant with mitigation.

Steelhead- South-Central California Coast DPS

The sewer line crossing the Carmel River at Valley Greens Drive will be constructed from the existing bridge outside of the bed and bank of the Carmel River, therefore no direct impacts to steelhead are expected. However, impacts could occur if equipment, spills, debris, etc. inadvertently enter the river. Prior to the issuance of a general construction permit, a Storm Water Pollution Prevention Plan (SWPPP) will be required and would reduce the potential for impacts to steelhead. With the implementation of mitigation (worker training program) and spill/debris prevention as required by the SWPPP, impacts to steelhead would be reduced to less than significant with mitigation.

California Tiger Salamander

There is a low potential for California tiger salamander to occur in the work area during upland movement, which could occur overnight during rain events. Impacts could include injury or mortality if individuals fall into open excavations or take refuge under equipment or construction materials. With the implementation of mitigation (a worker training program and prevention of entrapment) impacts to California tiger salamander would be reduced to less than significant with mitigation.

Foothill Yellow-Legged Frog

Foothill yellow-legged frog are not expected to occur outside of the Carmel River and the riparian corridor. Therefore, impacts to this species would only occur if equipment, spills, debris, etc. inadvertently enter the river. Prior to the issuance of a general construction permit, a Storm Water Pollution Prevention Plan (SWPPP) will be required and would reduce the potential for impacts to foothill yellow-legged frog. With the implementation of mitigation (a worker training program) and spill/debris prevention as required by the SWPPP, impacts to foothill yellow-legged frog would be reduced to less than significant with mitigation.

California Red-Legged Frog

There is a high potential for California red-legged frog to occur in the Carmel River, however no impacts to the River or riparian corridor are expected. There is a low potential for California red-legged frog to occur in the work area during upland movement, which could occur overnight during rain events. Impacts could include injury or mortality if individuals fall into open excavations or take refuge under equipment or construction materials. With the implementation of mitigation (worker training program and prevention of entrapment) and spill/debris prevention as required by the SWPPP, impacts to California red-legged frog would be reduced to less than significant with mitigation.

Coast Range Newt

Impacts to coast range newt may occur if individuals are present in the Carmel River, however no impacts to the River or riparian corridor are expected. Direct impacts may occur if individuals are present in the work area as a result of mortality during active construction. Impacts to non-listed species such as coast range newt (SSC) would be considered significant under CEQA if it would threaten the continued existence of the population, which is unlikely due to the low potential for this species to occur in the work area (developed road, ruderal, and landscaped areas). Direct impacts to the coast range newt from project activities would be considered less-than-significant

California Legless Lizard

There is a low potential for California legless lizard to occur in undeveloped areas, primarily in coast live oak woodland, California sagebrush - black sage scrub, and black cottonwood riparian forest, and potentially landscaped areas. California legless lizard are not expected to occur in the work area however (developed road, ruderal). Direct impacts may occur if individuals are present in landscaped areas as a result of mortality during staging or active construction. Impacts to non-listed species such as California legless lizard (SSC) would be considered significant under CEQA if it would threaten the continued existence of the population, which is unlikely due to the low potential for this species to occur in the work area (mainly developed road and ruderal). Direct impacts to California legless lizard from project activities would be considered less-than-significant

Western Pond Turtle

There is a high potential for western pond turtle to occur in the Carmel River, however no impacts to the River or riparian corridor are expected. Because the surrounding area is heavily managed as a golf course, there is a low potential for western pond turtle to nest in landscaped areas adjacent to the river. Impacts could include injury or mortality if individuals fall into open excavations or nests are unearthed during excavations. Western pond turtle is a non-listed species (SSC), however due to the regional significance of this species impacts to individuals would be considered significant under CEQA. With the implementation of mitigation (worker training program and prevention of entrapment) and spill/debris prevention as required by the SWPPP, impacts to western pond turtle would be reduced to less than significant with mitigation.

Two-Striped Gartersnake

There is a high potential for two-striped garter snake to occur in the Carmel River, however no impacts to the River or riparian corridor are expected. Therefore, no direct impacts to two-striped garter snake are expected. Impacts could occur if equipment, spills, debris, etc. inadvertently enter the river. Impacts to non-listed species such as two-striped garter snake (SSC) would be considered significant under CEQA if it would threaten the continued existence of the population, which is unlikely due to the aquatic nature of this species and improbability of it to occur in the work area (mainly developed road and ruderal). Direct impacts to two-striped garter snake from project activities would be considered less-than-significant.

Townsend's Big-Eared Bat

There is a moderate potential for Townsend's big-eared bat to use the bridge at Valley Greens Drive as a night roost, however this species requires cave or cave like structures for day roosting. The bridge does not provide suitable day roosting habitat, and construction would occur between 7:30 a.m. and 3:30 p.m. Impacts to Townsend's big-eared bat would only occur if active construction occurred at night, or construction lighting was left on overnight and directed at the underside of the bridge. Because nighttime construction would not occur, impacts would be less than significant.

Monterey Dusky-Footed Woodrat

There is a low potential for Monterey dusky-footed woodrat in adjacent coast live oak woodland and black cottonwood riparian forest, however no impacts to these areas are expected. Direct impacts to Monterey dusky-footed woodrat from project activities would be considered less-than-significant.

American Badger

There is a low potential for American badger in California sagebrush – black sage scrub and greater vicinity within open grasslands and agricultural areas, however no impacts to these habitats are expected. Direct impacts to American badger from project activities would be considered less-than-significant.

Nesting Birds

Native bird nests protected by CFGC Section 3503 are likely to occur within the site. Impacts may occur through removal of vegetation if active nests are present. Impacts may also occur if active nests are

present in undeveloped and landscaped areas adjacent to active construction or staging through disturbance and nest abandonment. With the implementation of a worker training program and a preconstruction survey impacts to nesting birds would be reduced to less than significant with mitigation.

Mitigation Measures

BIO 1(a) Worker Environmental Awareness Program (WEAP)

Prior to initiation of construction activities (including staging and mobilization) all personnel associated with project construction shall attend a Worker Environmental Awareness Program (WEAP) training, conducted by a qualified biologist, to aid workers in recognizing special status resources that may occur in the construction area. The specifics of this program shall include identification of the sensitive species and habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employers, and other personnel involved with construction. All employees shall sign a form provided by the trainer indicating they have attended the WEAP and understand the information presented to them. The form shall be submitted to CAWD to document compliance.

BIO 1(b) Western Bumble Bee Preconstruction Survey

A qualified biologist(s) shall conduct a pre-construction survey prior to the onset of work activities at the pump station site. The pre-construction survey effort shall be conducted for a minimum of one hour. If bumble bees of any species are observed, they shall be photographed for identification following the USFWS guidance in Appendix A *Standardized Bee Photography in the Survey Protocols for the Rusty Patched Bumble Bee* (*Bombus affinis*) (USFWS, 2019d). If construction begins between March 1st and November 1st, the ground shall also be searched during the survey for active bumble bee colonies. No capture or handling of bumble bees shall be conducted, and western bumble bee shall be avoided. Foraging bees shall be allowed to leave work areas undisturbed, and bee colonies shall be avoided during the active season from March 1 through November 1.

BIO 1(c) Spill/Debris Prevention

All refueling, maintenance, and staging equipment and vehicles shall occur at as far from the Carmel River, riparian habitat, and the ephemeral drainage/ ditch as is feasible, and in a location from which a spill would not drain directly toward these habitats (e.g., on a slope that drains away from the water), or in a containment structure. Prior to the onset of work, a plan shall be developed for prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur. Should any debris or equipment from the work area fall into the River or riparian corridor it shall be removed immediately.

BIO 1(d) Wildlife Entrapment Prevention

To prevent the inadvertent entrapment of individuals, all excavated, steep-walled holes or trenches shall be covered at the end of each workday with plywood or similar materials. If this is not possible, one or more escape ramps constructed of earth fill or wooden planks (no greater 45 degrees) shall be

established in the hole. Before such holes or trenches are filled, they shall be thoroughly inspected for any animals. Any wildlife observed shall be allowed to leave the excavation of its own accord. If listed species are observed in excavations all work shall stop and USFWS and/or CDFW shall be contacted immediately. Take of listed species, including disturbance, handling or relocating, is illegal without state and/or federal take authorization.

BIO 1(e) Trash Disposal

During project activities, all trash that may attract wildlife shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.

BIO 1(f) Nesting Bird Survey

If construction requires any vegetation trimming or tree removals that are scheduled to occur during the nesting bird season (February 1 through September 1), pre-construction surveys shall be conducted by a qualified biologist no more than one week prior to construction to determine the presence/absence of nesting birds within the project site. If active nests are found the qualified biologist shall establish an appropriate buffer, taking into account the species sensitivity and physical location of the nest (line of site to the work area), to be in compliance with CFGC 3503 and 3503.5. In no cases shall the buffer be smaller than 50 feet for non-raptor bird species and 200 feet for raptor species. To prevent encroachment, the established buffer(s) shall be clearly marked by high visibility material. The established buffer(s) shall remain in effect until the young have fledged or the nest has been abandoned as confirmed by the qualified biologist.

Sensitive Plant Communities and Critical Habitat

The proposed project would have a significant effect on biological resources if it would:

b) *Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.*

No project elements are proposed within the black cottonwood riparian habitat or the Carmel River (SCCC steelhead critical habitat), however impacts may occur if construction equipment, workers, debris, or spills inadvertently enter the riparian area or active channel. With the implementation of a worker training program and spill/debris prevention impacts to sensitive natural communities and critical habitat would be reduced to less than significant with mitigation.

Jurisdictional Waters and Wetlands

The proposed project would have a significant effect on biological resources if it would:

c) *Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*

No project elements are proposed within the Carmel River; however, impacts may occur if construction equipment, workers, debris, or spills inadvertently enter the riparian area. With the implementation of a

worker training program and spill/debris prevention impacts to the Carmel River would be reduced to less than significant with mitigation.

The proposed project includes jack and bore drilling 25 feet deep under the Valley Greens Drive Carmel Valley Road intersection to install the sewer line. This will likely require drilling underneath the potentially jurisdictional ephemeral drainage. Due to the depth of the drilling (25 feet deep) and construction of the culvert (concreate) the potential for an inadvertent release of drilling fluid (frac-out) is very low, however if it were to occur, it would be a violation of CFGC. There will be no permanent or temporary impacts to this feature, therefore CDFW, USACE, and RWQCB permitting is not expected. Impacts would be less than significant.

Wildlife Movement

The proposed project would have a significant effect on biological resources if it would:

d) Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors or impede the use of wildlife nursery sites.

No significant wildlife movement corridors or habitat linkages are present in the study area. Due to the relatively small size of the project footprint, and its location within existing development, the project is not likely to interfere substantially with the movement of wildlife species. Impacts to wildlife movement would be **less than significant**.

Local Policies and Ordinance

The proposed project would have a significant effect on biological resources if it would:

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

The Carmel Valley master Plan includes policies to protect biological resources and open space such as the Carmel River. The proposed project would occur entirely within the developed road and adjacent landscaped or ruderal areas, and would avoid impacts to the Carmel River, therefore no conflicts with local policies or ordinances protecting biological resources are expected.

Habitat Conservation Plan

The proposed project would have a significant effect on biological resources if it would:

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan.

The project is not within any applicable habitat conservation plan areas, therefore no conflicts with state, regional, or local habitat conservation plans are expected.

Sincerely,
Rincon Consultants, Inc.

Samantha Kehr
Senior Biologist

David Daitch, Ph.D.
Program Manager/Senior Biologist

Attachments

Attachment A References
Attachment B Figures
Attachment C Special Status Species Evaluation Tables
Attachment D Representative Site Photographs

Attachment A

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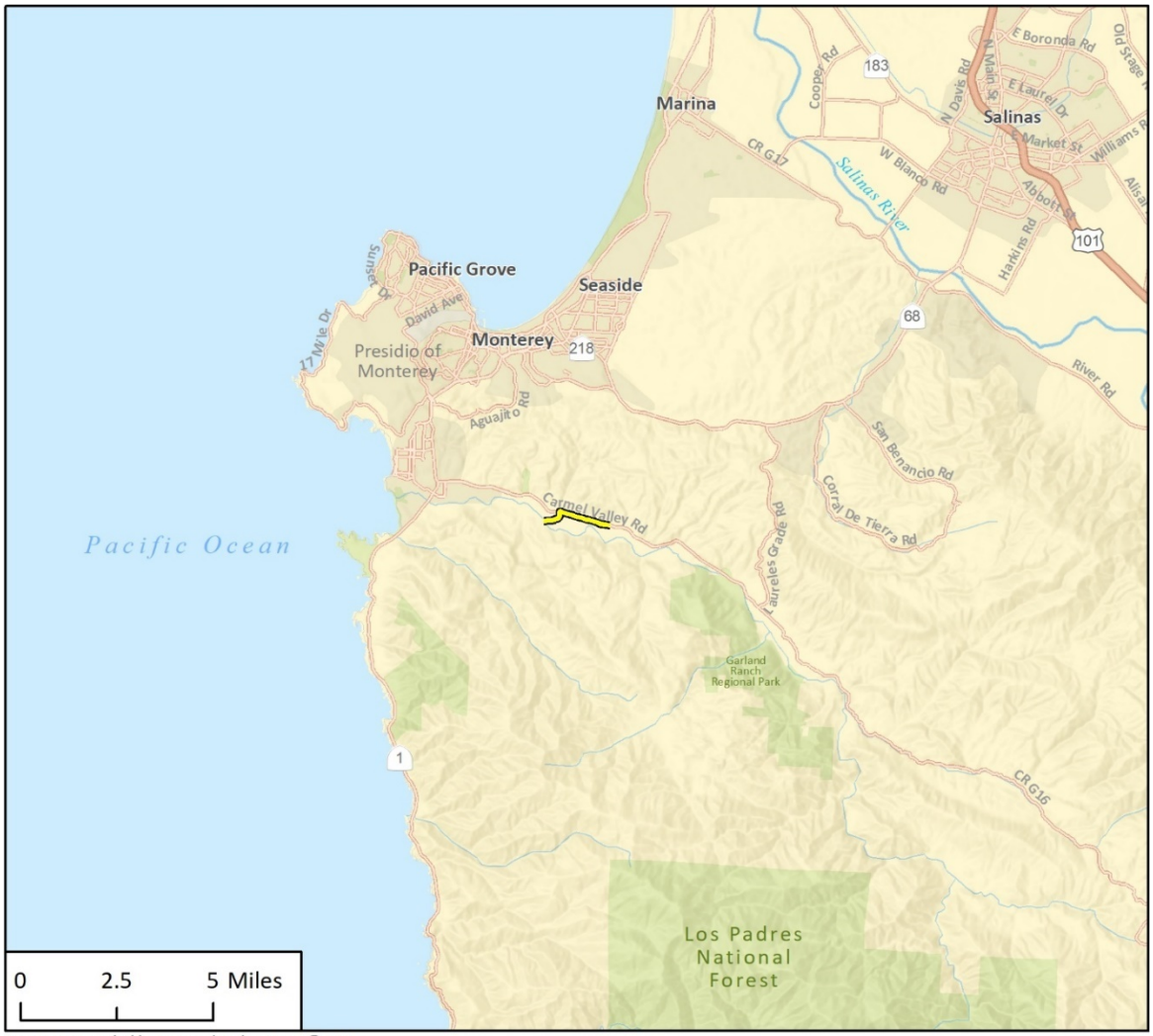
Attachment B

Figures

Figure 1 Regional Location



Imagery provided by Esri and its licensors © 2020.

Project Location

N

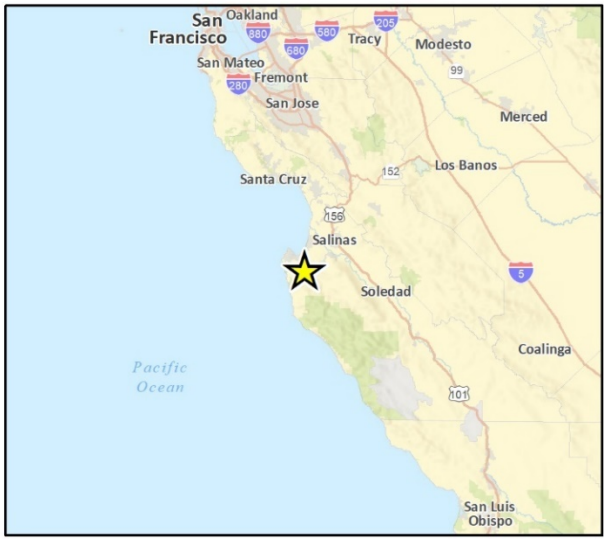


Figure 2 Project Site Plans

Source: MNS ENGINEERS INC

Figure 3a Study Area

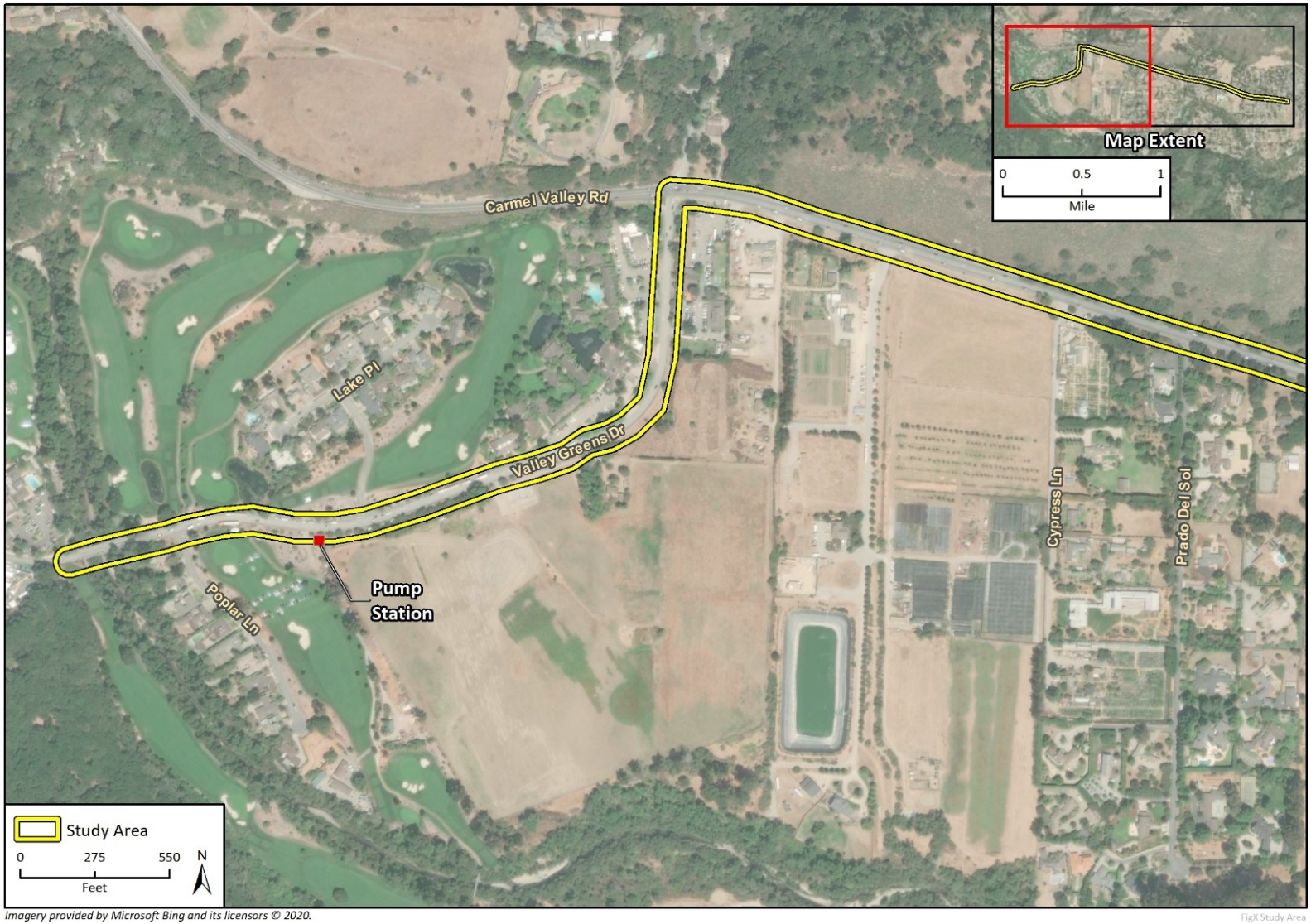


Figure 3b Study Area

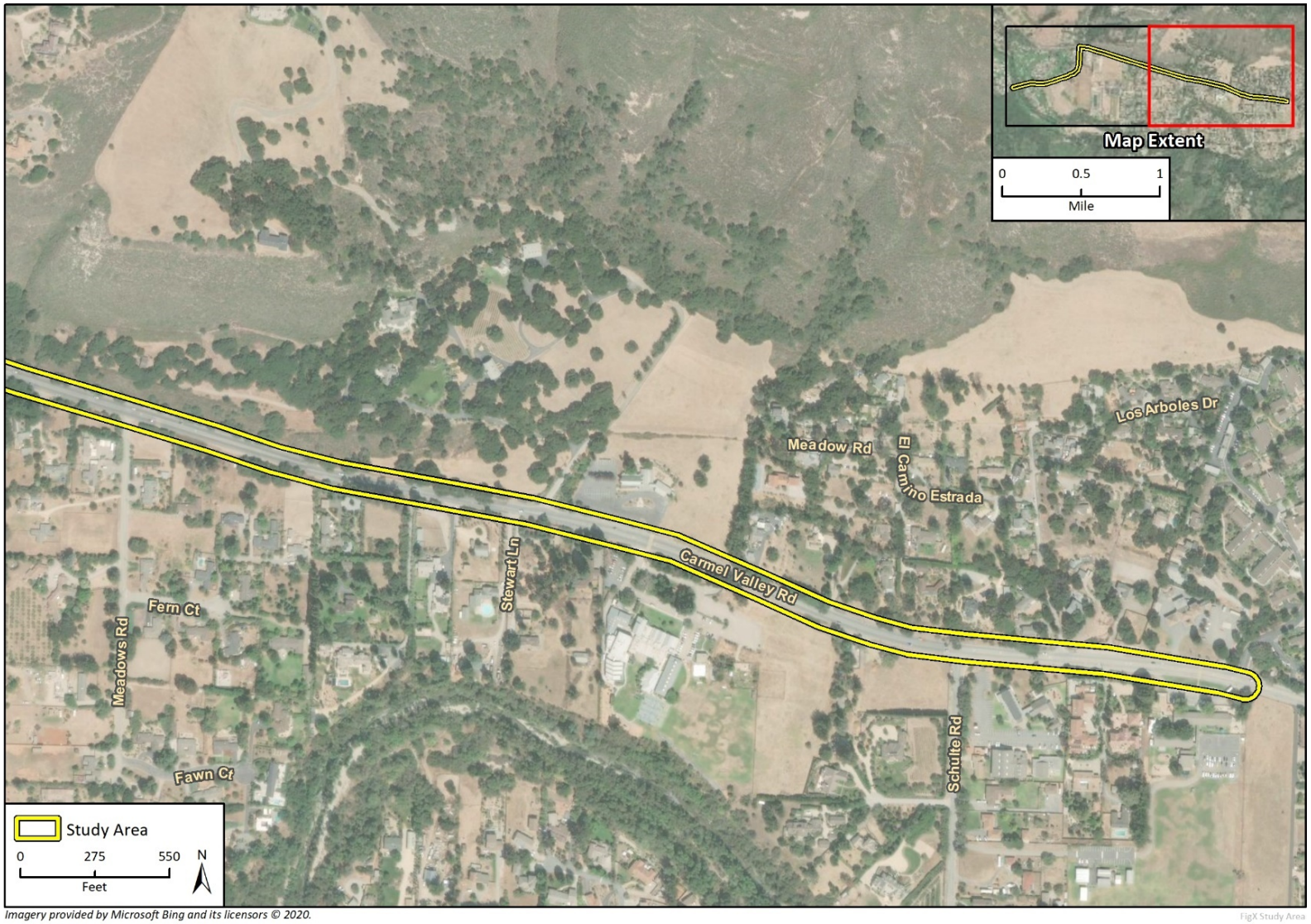


Figure 4a Biological Resources

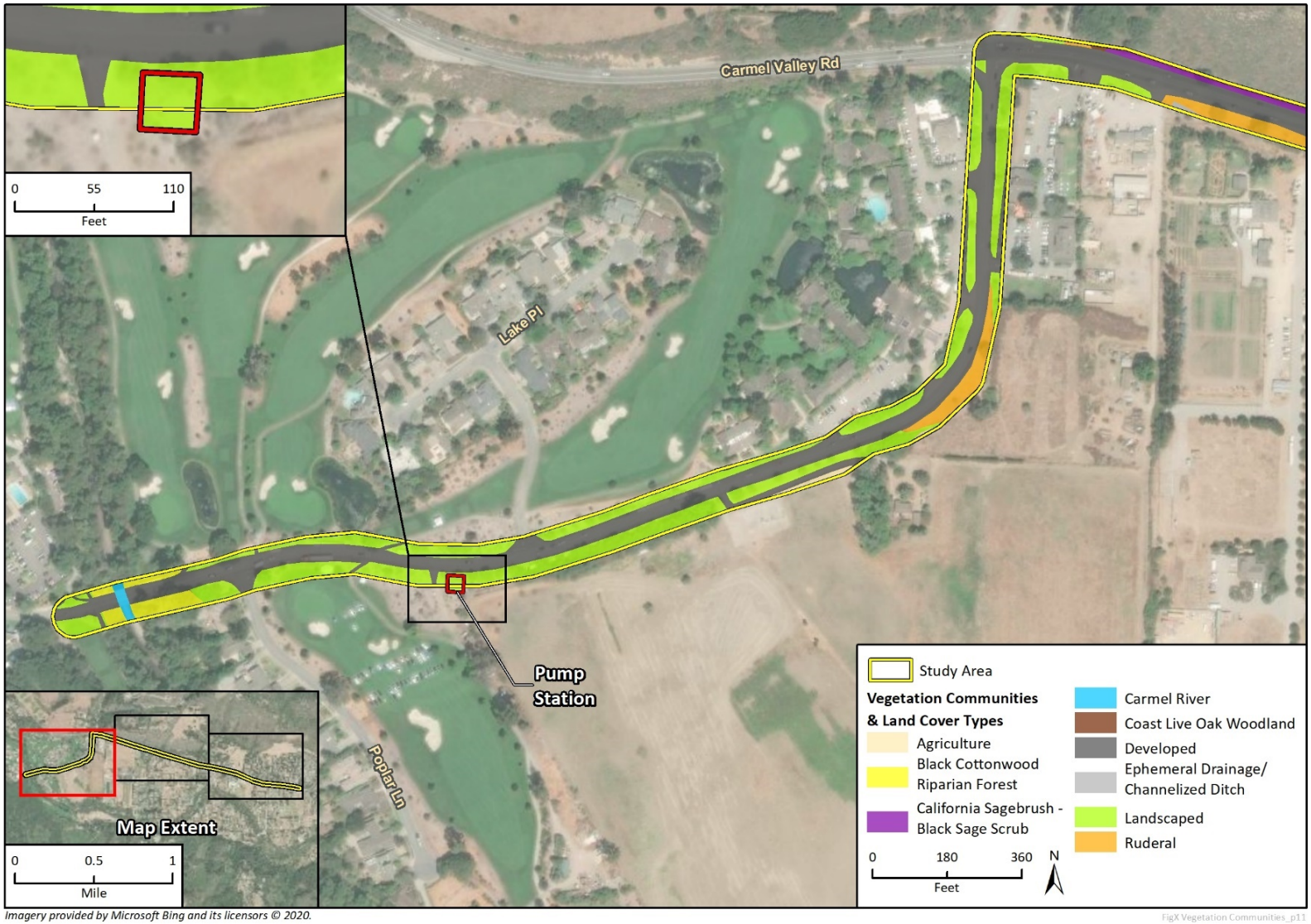


Figure 4b Biological Resources

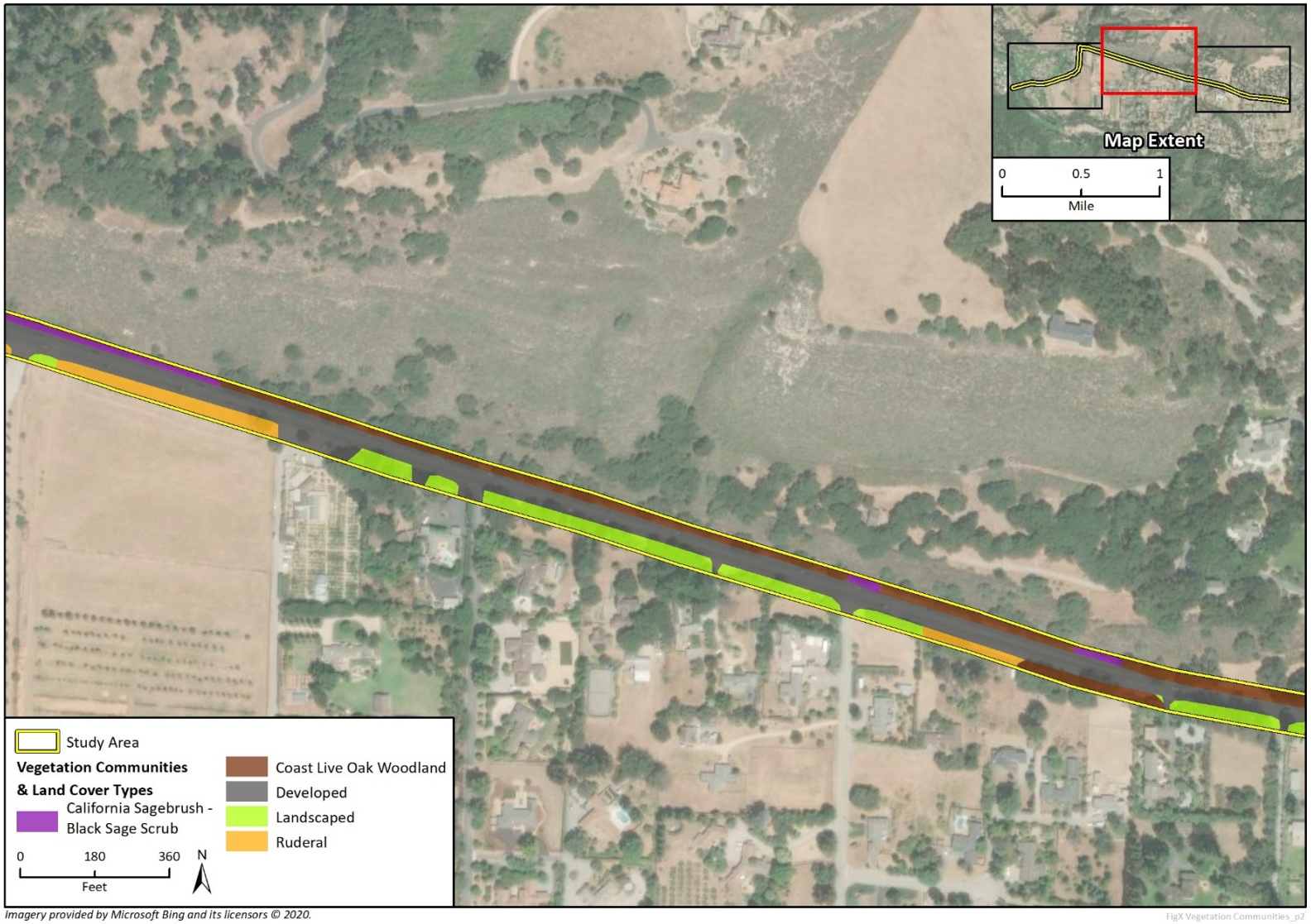
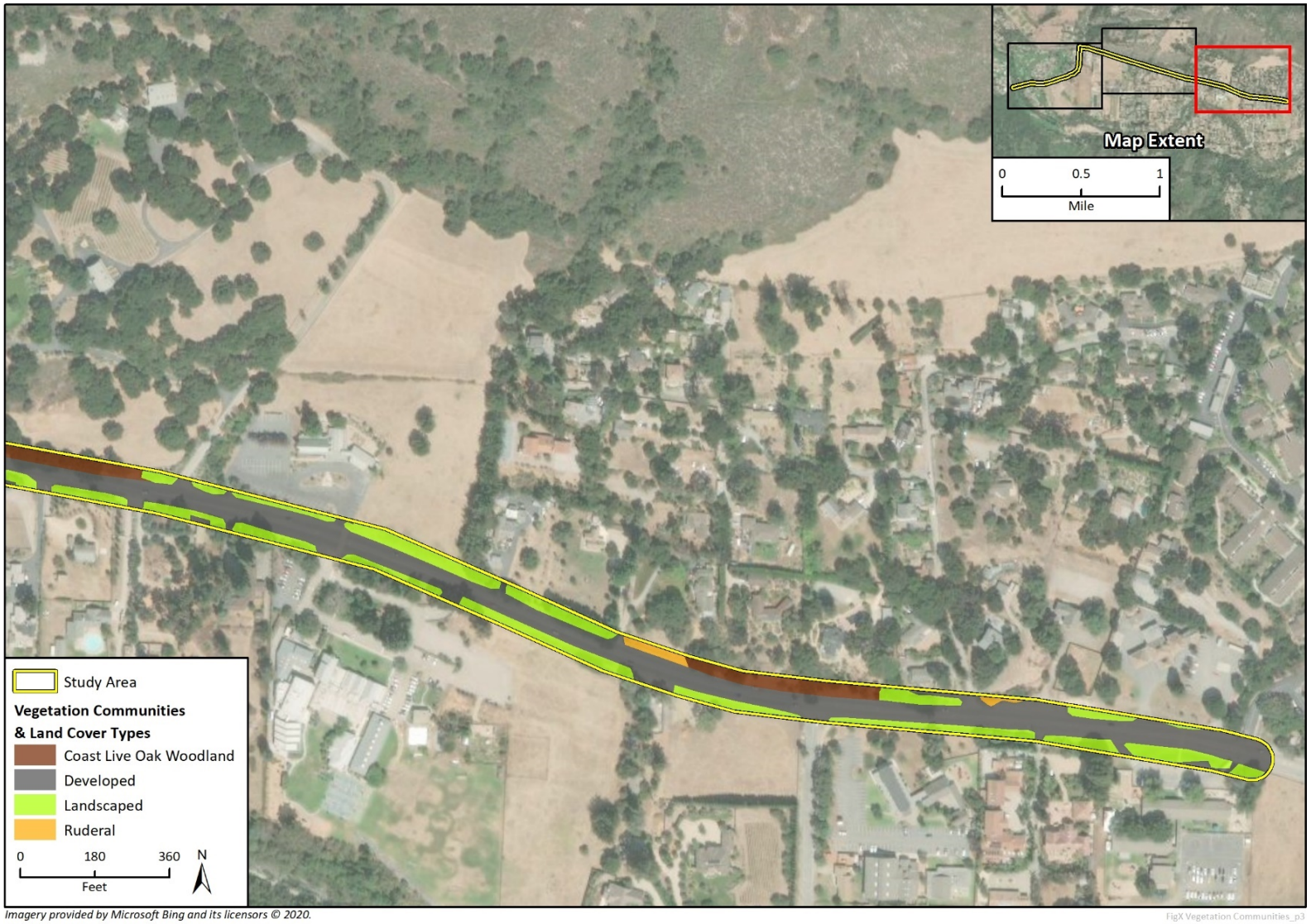


Figure 4c Biological Resources



Attachment C

Special Status Species Evaluation Tables

Special Status Plant Species in the Regional Vicinity (Nine Quad) of the Study Area

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Agrostis lacuna-vernalis vernal pool bent grass	None/None G1/S1 1B.1 BLM_S-Sensitive | SB_SBBG-Santa Barbara Botanic Garden	Vernal pools (mima mounds). 115 - 145 m. annual herb. Blooms Apr-May	Not Expected	Vernal pools are not present and there are no known occurrences within 5 miles.
Allium hickmanii Hickman's onion	None/None G2/S2 1B.2 BLM_S-Sensitive | SB_SBBG-Santa Barbara Botanic Garden | USFS_S-Sensitive	Closed-cone coniferous forest, Chaparral (maritime), Coastal prairie, Coastal scrub, Valley and foothill grassland. 5 - 200 m. perennial bulbiferous herb. Blooms Mar-May	Low Potential	Valley and foothill grasslands occur within the study area and there are 9 known occurrences within 5 miles.
Arctostaphylos edmundsii Little Sur manzanita	None/None G2/S2 1B.2 USFS_S-Sensitive	Coastal bluff scrub, Chaparral. sandy. 10 - 105 m. perennial evergreen shrub. Blooms Nov-Apr(May)	Not Expected	There are no known occurrences within 5 miles, and no species of manzanita were observed during the site visit.
Arctostaphylos hookeri ssp. *hookeri* Hooker's manzanita	None/None G3T2/S2 1B.2 BLM_S-Sensitive	Closed-cone coniferous forest, Chaparral, Cismontane woodland, Coastal scrub. sandy. 60 - 536 m. perennial evergreen shrub. Blooms Jan-Jun	Not Expected	There are 10 known occurrences within 5 miles, however no species of manzanita were observed during the site visit.
Arctostaphylos montereyensis Toro manzanita	None/None G2?/S2? 1B.2 BLM_S-Sensitive | SB_SBBG-Santa Barbara Botanic Garden	Chaparral (maritime), Cismontane woodland, Coastal scrub. sandy. 30 - 730 m. perennial evergreen shrub. Blooms Feb-Mar	Not Expected	There are 9 known occurrences within 5 miles, however no species of manzanita were observed during the site visit.
Arctostaphylos pajaroensis Pajaro manzanita	None/None G1/S1 1B.1 BLM_S-Sensitive	Chaparral (sandy). 30 - 760 m. perennial evergreen shrub. Blooms Dec-Mar	Not Expected	There are 2 known occurrences within 5 miles, however no species of manzanita were observed during the site visit.
Arctostaphylos pumila sandmat manzanita	None/None G1/S1 1B.2 BLM_S-Sensitive | SB_SBBG-Santa Barbara Botanic Garden	Closed-cone coniferous forest, Chaparral (maritime), Cismontane woodland, Coastal dunes, Coastal scrub. sandy, openings. 3 - 205 m. perennial evergreen shrub. Blooms Feb-May	Not Expected	There are 5 known occurrences within 5 miles, however no species of manzanita were observed during the site visit.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Astragalus tener var. *tener* alkali milk-vetch	None/None G2T1/S1 1B.2	Playas, Valley and foothill grassland (adobe clay), Vernal pools. alkaline. 1 - 60 m. annual herb. Blooms Mar-Jun	Not Expected	Vernal pools and alkali soils are not present and there are no known occurrences within 5 miles.
Astragalus tener var. *titi* coastal dunes milk-vetch	FE/CE G2T1/S1 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	Coastal bluff scrub (sandy), Coastal dunes, Coastal prairie (mesic). often vernally mesic areas. 1 - 50 m. annual herb. Blooms Mar-May	Not Expected	Natural coastal dune/scrub habitats are present, however there are no known occurrences within 5 miles.
Bryoria spiralifera twisted horsehair lichen	None/None G3/S1S2 1B.1	North Coast coniferous forest (immediate coast). Usually on conifers. 0 - 30 m. fruticose lichen (epiphytic). Blooms	Not Expected	There is 1 known occurrence within 5 miles, however north Coast coniferous forests are not present.
Castilleja ambigua var. *insalutata* pink Johnny-nip	None/None G4T2/S2 1B.1	Coastal prairie, Coastal scrub. 0 - 100 m. annual herb (hemiparasitic). Blooms May-Aug	Low Potential	There are 4 known occurrences within 5 miles and coastal scrub habitats are present.
Centromadia parryi ssp. *congdonii* Congdon's tarplant	None/None G3T1T2/S1S2 1B.1 BLM_S-Sensitive | SB_RSABG-Rancho Santa Ana Botanic Garden	Valley and foothill grassland (alkaline). 0 - 230 m. annual herb. Blooms May-Oct(Nov)	Low Potential	There are 2 known occurrences within 5 miles and this species is known to occur in disturbed areas, however there are no known occurrences from Carmel Valley.
Chorizanthe minutiflora Fort Ord spineflower	None/None G1/S1 1B.2 SB_SBBG-Santa Barbara Botanic Garden	Chaparral (maritime), Coastal scrub. Sandy openings. 55 - 150 m. annual herb. Blooms Apr-Jul	Not Expected	There is one known occurrence within 5 miles, and suitable Coastal scrub habitat is present, however there are no known occurrences from Carmel Valley and this species is only known from the former Fort Ord.
Chorizanthe pungens var. *pungens* Monterey spineflower	FT/None G2T2/S2 1B.2 SB_SBBG-Santa Barbara Botanic Garden | SB_UCBBG-UC Berkeley Botanical Garden	Chaparral (maritime), Cismontane woodland, Coastal dunes, Coastal scrub, Valley and foothill grassland. sandy. 3 - 450 m. annual herb. Blooms Apr-Jun(Jul-Aug)	Not Expected	There are 4 known occurrences within 5 miles, however suitable habitats with sandy bare soils are not present, there are no known occurrences from Carmel Valley.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Chorizanthe robusta var. *robusta* robust spineflower	FE/None G2T1/S1 1B.1 BLM_S-Sensitive	Chaparral (maritime), Cismontane woodland (openings), Coastal dunes, Coastal scrub. sandy or gravelly. 3 - 300 m. annual herb. Blooms Apr-Sep	Not Expected	Coastal scrub habitats are present, however there are no known occurrences within 5 miles and this species is only known from the Fort Ord National Monument.
Clarkia jolonensis Jolon clarkia	None/None G2/S2 1B.2 SB_SBBG-Santa Barbara Botanic Garden | USFS_S-Sensitive	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland. 20 - 660 m. annual herb. Blooms Apr-Jun	Low Potential	There are 4 known occurrences within 5 miles and suitable Coastal scrub habitat is present, however there are no known occurrences from Carmel Valley.
Collinsia multicolor San Francisco collinsia	None/None G2/S2 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden | SB_UCSC-UC Santa Cruz	Closed-cone coniferous forest, Coastal scrub. sometimes serpentinite. 30 - 250 m. annual herb. Blooms (Feb)Mar-May	Low Potential	There is one known occurrence within 5 miles from the Monterey Regional Airport, and suitable Coastal scrub habitat is present, however there are no known occurrences from Carmel Valley.
Cordylanthus rigidus ssp. *littoralis* seaside bird's-beak	None/CE G5T2/S2 1B.1 BLM_S-Sensitive | SB_RSABG-Rancho Santa Ana Botanic Garden | SB_SBBG-Santa Barbara Botanic Garden	Closed-cone coniferous forest, Chaparral (maritime), Cismontane woodland, Coastal dunes, Coastal scrub. sandy, often disturbed sites. 0 - 515 m. annual herb (hemiparasitic). Blooms Apr-Oct	Not expected	There are 4 known occurrences within 5 miles, however suitable habitats with sandy bare soils are not present, there are no known occurrences from Carmel Valley.
Delphinium californicum ssp. *interius* Hospital Canyon larkspur	None/None G3T3/S3 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	Chaparral (openings), Cismontane woodland (mesic), Coastal scrub. 195 - 1095 m. perennial herb. Blooms Apr-Jun	Moderate Potential	There is one known occurrence within the study area and suitable Coastal scrub habitat is present, however the occurrence is from 1988 from an unspecified location (accuracy is 1 mile).
Delphinium hutchinsoniae Hutchinson's larkspur	None/None G2/S2 1B.2 USFS_S-Sensitive	Broadleafed upland forest, Chaparral, Coastal prairie, Coastal scrub. 0 - 427 m. perennial herb. Blooms Mar-Jun	Low Potential	There are 9 known occurrences within 5 miles and suitable Coastal scrub habitat is present, however there are no known occurrences from Carmel Valley.
Delphinium umbraculorum umbrella larkspur	None/None G3/S3 1B.3 BLM_S-Sensitive | USFS_S-Sensitive	Chaparral, Cismontane woodland. 400 - 1600 m. perennial herb. Blooms Apr-Jun	Not expected	Suitable habitats are not present and there are no known occurrences within 5 miles.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Ericameria fasciculata Eastwood's goldenbush	None/None G2/S2 1B.1 BLM_S-Sensitive	Closed-cone coniferous forest, Chaparral (maritime), Coastal dunes, Coastal scrub. sandy, openings. 30 - 275 m. perennial evergreen shrub. Blooms Jul-Oct	Not expected	There are 5 known occurrences within 5 miles, however no species of goldenbush were observed during the site visit.
Eriogonum nortonii Pinnacles buckwheat	None/None G2/S2 1B.3	Chaparral, Valley and foothill grassland. sandy, often on recent burns. 300 - 975 m. annual herb. Blooms (Apr)May-Aug(Sep)	Not Expected	There are 4 known occurrences within 5 miles however the site is out of this species elevation range.
Erysimum ammophilum sand-loving wallflower	None/None G2/S2 1B.2 BLM_S-Sensitive | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | SB_SBBG-Santa Barbara Botanic Garden	Chaparral (maritime), Coastal dunes, Coastal scrub. sandy, openings. 0 - 60 m. perennial herb. Blooms Feb-Jun	Not Expected	There are 3 known occurrences within 5 miles, however suitable habitats with sandy bare soils are not present, there are no known occurrences from Carmel Valley.
Erysimum menziesii Menzies wallflower	FE/CE G1/S1 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden | SB_UCBBG-UC Berkeley Botanical Garden	Coastal dunes. 0 - 35 m. perennial herb. Blooms Mar-Sep	Not Expected	There are no known occurrences within 5 miles and coastal dunes are not present.
Fritillaria liliacea fragrant fritillary	None/None G2/S2 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Cismontane woodland, Coastal prairie, Coastal scrub, Valley and foothill grassland. Often serpentinite. 3 - 410 m. perennial bulbiferous herb. Blooms Feb-Apr	Not Expected	There is one known occurrences within 5 miles and suitable Coastal scrub habitat is present, however there are no known occurrences from Carmel Valley.
Galium clementis Santa Lucia bedstraw	None/None G2/S2 1B.3 USFS_S-Sensitive	Lower montane coniferous forest, Upper montane coniferous forest. granitic or serpentinite, rocky. 1130 - 1780 m. perennial herb. Blooms (Apr)May-Jul	Not Expected	There are no known occurrences within 5 miles and the site is out of this species elevation range.
Gilia tenuiflora ssp. *arenaria* Monterey gilia	FE/CT G3G4T2/S2 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	Chaparral (maritime), Cismontane woodland, Coastal dunes, Coastal scrub. sandy, openings. 0 - 45 m. annual herb. Blooms Apr-Jun	Not Expected	There are 4 known occurrences within 5 miles, however suitable habitats with sandy bare soils are not present, there are no known occurrences from Carmel Valley.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Hesperocyparis goveniana Gowen cypress	FT/None G1/S1 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden | SB_UCSC-UC Santa Cruz	Closed-cone coniferous forest, Chaparral (maritime). 30 - 300 m. perennial evergreen tree. Blooms	Not Expected	There is 1 known occurrence within 5 miles, however there are no known occurrences from Carmel Valley.
Hesperocyparis macrocarpa Monterey cypress	None/None G1/S1 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	Closed-cone coniferous forest. 10 - 30 m. perennial evergreen tree. Blooms	Present	This species was observed within landscaped areas.
Horkelia cuneata var. *sericea* Kellogg's horkelia	None/None G4T1?/S1? 1B.1 SB_UCSC-UC Santa Cruz | USFS_S-Sensitive	Closed-cone coniferous forest, Chaparral (maritime), Coastal dunes, Coastal scrub. sandy or gravelly, openings. 10 - 200 m. perennial herb. Blooms Apr-Sep	Not Expected	There are 4 known occurrences within 5 miles, however suitable habitats with sandy bare soils are not present, there are no known occurrences from Carmel Valley.
Horkelia marinensis Point Reyes horkelia	None/None G2/S2 1B.2	Coastal dunes, Coastal prairie, Coastal scrub. sandy. 5 - 755 m. perennial herb. Blooms May-Sep	Not Expected	Suitable Coastal scrub habitat is present, however there are no known occurrences within 5 miles.
Lasthenia conjugens Contra Costa goldfields	FE/None G1/S1 1B.1 SB_UCBBG-UC Berkeley Botanical Garden	Cismontane woodland, Playas (alkaline), Valley and foothill grassland, Vernal pools. mesic. 0 - 470 m. annual herb. Blooms Mar-Jun	Not Expected	Venal pools are not present and there are no known occurrences within 5 miles.
Layia carnosa beach layia	FE/CE G2/S2 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden | SB_SBBG-Santa Barbara Botanic Garden	Coastal dunes, Coastal scrub (sandy). 0 - 60 m. annual herb. Blooms Mar-Jul	Not Expected	Dune habitats are not present and there are no known occurrences within 5 miles.
Legenere limosa legenere	None/None G2/S2 1B.1 BLM_S-Sensitive | SB_UCBBG-UC Berkeley Botanical Garden	Vernal pools. 1 - 880 m. annual herb. Blooms Apr-Jun	Not Expected	Venal pools are not present and there are no known occurrences within 5 miles.
Lupinus tidestromii Tidestrom's lupine	FE/CE G1/S1 1B.1	Coastal dunes. 0 - 100 m. perennial rhizomatous herb. Blooms Apr-Jun	Not Expected	There is one known occurrence within 5 miles, however dune habitats are not present .

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Malacothamnus palmeri var. *involucratus* Carmel Valley bush-mallow	None/None G3T2Q/S2 1B.2 BLM_S-Sensitive | USFS_S-Sensitive	Chaparral, Cismontane woodland, Coastal scrub. 30 - 1100 m. perennial deciduous shrub. Blooms Apr-Oct	Moderate Potential	There are 9 known occurrences within 5 miles one of which is approximately 0.12 miles to the east of Carmel Valley Manor.
Malacothamnus palmeri var. *palmeri* Santa Lucia bush-mallow	None/None G3T2Q/S2 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden | SB_SBBG-Santa Barbara Botanic Garden | USFS_S-Sensitive	Chaparral (rocky). 60 - 360 m. perennial deciduous shrub. Blooms May-Jul	Not Expected	Rocky chaparral habitats are not present and there are no known occurrences within 5 miles.
Malacothrix saxatilis var. *arachnoidea* Carmel Valley malacothrix	None/None G5T2/S2 1B.2 BLM_S-Sensitive | USFS_S-Sensitive	Chaparral (rocky), Coastal scrub. 25 - 1036 m. perennial rhizomatous herb. Blooms (Mar)Jun-Dec	Moderate Potential	There are 3 known occurrences within 5 miles one of which is within the study area along Carmel Valley Rd.
Meconella oregana Oregon meconella	None/None G2G3/S2 1B.1	Coastal prairie, Coastal scrub. 250 - 620 m. annual herb. Blooms Mar-Apr	Not Expected	Coastal scrub habitats are present however there are no known occurrences within 5 miles.
Microseris paludosa marsh microseris	None/None G2/S2 1B.2 SB_SBBG-Santa Barbara Botanic Garden | SB_UCSC-UC Santa Cruz	Closed-cone coniferous forest, Cismontane woodland, Coastal scrub, Valley and foothill grassland. 5 - 355 m. perennial herb. Blooms Apr-Jun(Jul)	Low Potential	There are 4 known occurrences within 5 miles and suitable Coastal scrub habitat is present, however there are no known occurrences from Carmel Valley.
Monardella sinuata ssp. *nigrescens* northern curly-leaved monardella	None/None G3T2/S2 1B.2 SB_SBBG-Santa Barbara Botanic Garden	Chaparral (SCR Co.), Coastal dunes, Coastal scrub, Lower montane coniferous forest (SCR Co., ponderosa pine sandhills). Sandy. 0 - 300 m. annual herb. Blooms (Apr)May-Jul(Aug-Sep)	Not Expected	There are 4 known occurrences within 5 miles, however suitable habitats with sandy bare soils are not present, there are no known occurrences from Carmel Valley.
Monolopia gracilens woodland woolythreads	None/None G3/S3 1B.2	Broadleafed upland forest (openings), Chaparral (openings), Cismontane woodland, North Coast coniferous forest (openings), Valley and foothill grassland. Serpentine. 100 - 1200 m. annual herb. Blooms (Feb)Mar-Jul	Not Expected	There is one known occurrence within 5 miles, however suitable habitats on serpentine soils are not present.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Pinus radiata Monterey pine	None/None G1/S1 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden | SB_UCSC-UC Santa Cruz	Closed-cone coniferous forest, Cismontane woodland. 25 - 185 m. perennial evergreen tree. Blooms	Present	This species was observed within landscaped areas.
Piperia yadonii Yadon's rein orchid	FE/None G1/S1 1B.1	Coastal bluff scrub, Closed-cone coniferous forest, Chaparral (maritime). sandy. 10 - 755 m. perennial herb. Blooms (Feb)May-Aug	Not Expected	There are 12 known occurrences within 5 miles, however suitable habitats with sandy bare soils are not present, there are no known occurrences from Carmel Valley.
Plagiobothrys chorisianus var. *chorisianus* Choris' popcornflower	None/None G3T1Q/S1 1B.2 SB_UCSC-UC Santa Cruz	Chaparral, Coastal prairie, Coastal scrub. mesic. 3 - 160 m. annual herb. Blooms Mar-Jun	Not Expected	Coastal scrub habitats are present however there are no known occurrences within 5 miles.
Plagiobothrys uncinatus hooked popcornflower	None/None G2/S2 1B.2 BLM_S-Sensitive | USFS_S-Sensitive	Chaparral (sandy), Cismontane woodland, Valley and foothill grassland. 300 - 760 m. annual herb. Blooms Apr-May	Not Expected	sandy chaparral habitats are not present and there are no known occurrences within 5 miles.
Potentilla hickmanii Hickman's cinquefoil	FE/CE G1/S1 1B.1	Coastal bluff scrub, Closed-cone coniferous forest, Meadows and seeps (vernally mesic), Marshes and swamps (freshwater). 10 - 149 m. perennial herb. Blooms Apr-Aug	Not Expected	There is one known occurrence within 5 miles, however suitable mesic sites are not present.
Ramalina thrausta angel's hair lichen	None/None G5/S2? 2B.1	North Coast coniferous forest. On dead twigs and other lichens. 75 - 430 m. fruticose lichen (epiphytic). Blooms	Not Expected	Coniferous forest are not present and there are no known occurrences within 5 miles.
Rosa pinetorum pine rose	None/None G2/S2 1B.2	Closed-cone coniferous forest, Cismontane woodland. 2 - 945 m. perennial shrub. Blooms May-Jul	Not Expected	There are 4 known occurrences within 5 miles, however coniferous forests are not present.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Stebbinsoseris decipiens Santa Cruz microseris	None/None G2/S2 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden | SB_UCSC-UC Santa Cruz	Broadleafed upland forest, Closed-cone coniferous forest, Chaparral, Coastal prairie, Coastal scrub, Valley and foothill grassland. open areas, sometimes serpentinite. 10 - 500 m. annual herb. Blooms Apr-May	Not Expected	There are 2 known occurrences within 5 miles, however suitable habitats with open areas are not present, there are no known occurrences from Carmel Valley.
Tortula californica California screw-moss	None/None G2G3/S2S3 1B.2 BLM_S-Sensitive	Chenopod scrub, Valley and foothill grassland. sandy, soil. 10 - 1460 m. moss. Blooms	Not Expected	Suitable habitats are not present and there are no known occurrences within 5 miles.
Trifolium buckwestiorum Santa Cruz clover	None/None G2/S2 1B.1 BLM_S-Sensitive | SB_SBBG-Santa Barbara Botanic Garden | SB_UCSC-UC Santa Cruz | SB_USDA-US Dept of Agriculture	Broadleafed upland forest, Cismontane woodland, Coastal prairie. gravelly, margins. 105 - 610 m. annual herb. Blooms Apr-Oct	Not Expected	There are 2 known occurrences within 5 miles, however suitable woodlands are not present.
Trifolium hydrophilum saline clover	None/None G2/S2 1B.2	Marshes and swamps, Valley and foothill grassland (mesic, alkaline), Vernal pools. 0 - 300 m. annual herb. Blooms Apr-Jun	Not Expected	Suitable habitats are not present and there are no known occurrences within 5 miles.
Trifolium polyodon Pacific Grove clover	None/CR G1/S1 1B.1 BLM_S-Sensitive | SB_USDA-US Dept of Agriculture	Closed-cone coniferous forest, Coastal prairie, Meadows and seeps, Valley and foothill grassland. mesic, sometimes granitic. 5 - 425 m. annual herb. Blooms Apr-Jun(Jul)	Not Expected	There are 9 known occurrences within 5 miles, however suitable woodlands are not present.
Trifolium trichocalyx Monterey clover	FE/CE G1/S1 1B.1 SB_USDA-US Dept of Agriculture	Closed-cone coniferous forest (sandy, openings, burned areas). 30 - 305 m. annual herb. Blooms Apr-Jun	Not Expected	Suitable habitats are not present and there are no known occurrences within 5 miles.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale

Regional Vicinity refers to within a 9-quad search radius of site.

FE = Federally Endangered FT = Federally Threatened FC = Federal Candidate Species

SE = State Endangered ST = State Threatened SC = State Candidate SR = State Rare

CRPR (CNPS California Rare Plant Rank):

1A=Presumed Extinct in California

1B=Rare, Threatened, or Endangered in California and elsewhere

2A=Plants presumed extirpated in California, but more common elsewhere

2B=Plants Rare, Threatened, or Endangered in California, but more common elsewhere

CRPR Threat Code Extension:

.1=Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2=Fairly endangered in California (20-80% occurrences threatened)

.3=Not very endangered in California (<20% of occurrences threatened)

Special Status Animal Species in the Regional Vicinity (Nine Quad) of the Study area

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Invertebrates				
Bombus occidentalis western bumble bee	None/Candidate Endangered G2G3/S1 USFS_S-Sensitive | XERCES_IM-Imperiled	Once common & widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease.	Low Potential	There are two known occurrences within 5 miles and flowering plants are present year-round within developed and landscaped areas. One unidentified species of bumble bee was observed within the study area during the site visit.
Danaus plexippus pop. 1 monarch - California overwintering population	None/None G4T2T3/S2S3 USFS_S-Sensitive	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	Not Expected	There are 6 known occurrences within 5 miles, however the site does not contain suitable wintering habitat.
Euphilotes enoptes smithi Smith's blue butterfly	Endangered/None G5T1T2/S1S2 XERCES_CI-Critically Imperiled	Most commonly associated with coastal dunes & coastal sage scrub plant communities in Monterey & Santa Cruz counties. Hostplant: *Eriogonum latifolium* and *Eriogonum parvifolium* are utilized as both larval and adult foodplants.	Moderate Potential	There are 28 known occurrences within 5 miles, one of which is within the Study area along Carmel Valley Rd.
Fish				
Eucyclogobius newberryi tidewater goby	Endangered/None G3/S3 AFS_EN-Endangered | CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	Not Expected	Brackish water habitats are not present and there are no known occurrences within 5 miles.
Oncorhynchus mykiss irideus pop. 9 steelhead - south-central California coast DPS	Threatened/None G5T2Q/S2 AFS_TH-Threatened	Federal listing refers to runs in coastal basins from the Pajaro River south to, but not including, the Santa Maria River.	High Potential	There is a known occurrence in the Carmel River within the study area.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Amphibians				
Ambystoma californiense California tiger salamander	Threatened/Threatened G2G3/S2S3 CDFW_WL-Watch List | IUCN_VU-Vulnerable	Central Valley DPS federally listed as threatened. Santa Barbara and Sonoma counties DPS federally listed as endangered. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	Low Potential	There are 11 known occurrences within 5 miles, however there are barriers for movement (the Carmel River and developed areas) over much of the study area.
Rana boylii foothill yellow-legged frog	None/Candidate Threatened G3/S3 BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_NT-Near Threatened | USFS_S-Sensitive	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	Low Potential	There are 5 known occurrences within 5 miles, including one from the Carmel River approximately 0.6 miles east of the study area. However this occurrence is historical (1904) and possibly extirpated.
Rana draytonii California red-legged frog	Threatened/None G2G3/S2S3 CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	High Potential	There are 31 known occurrences within 5 miles, including numerous sightings in the Carmel River, one of which is within the study area.
Spea hammondii western spadefoot	None/None G3/S3 BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_NT-Near Threatened	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Not Expected	Vernal pools are not present and there are no known occurrences within 5 miles.
Taricha torosa Coast Range newt	None/None G4/S4 CDFW_SSC-Species of Special Concern	Coastal drainages from Mendocino County to San Diego County. Lives in terrestrial habitats & will migrate over 1 km to breed in ponds, reservoirs & slow moving streams.	Low Potential	There are 2 known occurrences within 5 miles and the Carmel River provides suitable habitat.
Reptiles				
Anniella pulchra northern California legless lizard	None/None G3/S3 CDFW_SSC-Species of Special Concern | USFS_S-Sensitive	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.	Low Potential	There are 7 known occurrences within 5 miles, including one in Carmel Valley approximately 0.66 mile east of the study area.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Emys marmorata western pond turtle	None/None G3G4/S3 BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable | USFS_S-Sensitive	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	High Potential	There are 7 known occurrences within 5 miles, including numerous sightings in the Carmel River, one of which is within the study area.
Phrynosoma blainvillii coast horned lizard	None/None G3G4/S3S4 BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	Not Expected	There is one known occurrence within 5 miles, however the site does not contain suitable open sandy areas.
Thamnophis hammondii two-striped gartersnake	None/None G4/S3S4 BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	High Potential	There are no occurrences in the CNDDB within 5 miles, however this species is known to occur in the Carmel River watershed (Shihadeh et al. 2016).
Birds				
Agelaius tricolor tricolored blackbird	None/Threatened G2G3/S1S2 BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_EN-Endangered | NABCI_RWL-Red Watch List | USFWS_BCC-Birds of Conservation Concern	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	Not Expected	There are 5 known occurrences within 5 miles, however none are from the Carmel Valley and suitable emergent vegetation for nesting is not present.
Athene cunicularia burrowing owl	None/None G4/S3 BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Not Expected	There is one known occurrence within 5 miles, however there are no known occurrences in CNDDB or ebird within the Carmel Valley, and the study area is largely developed or landscaped.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Buteo regalis ferruginous hawk	None/None G4/S3S4 CDFW_WL-Watch List | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	Not Expected	There are no known occurrences within 5 miles and the study area does not provide suitable wintering habitat.
Charadrius alexandrinus nivosus western snowy plover	Threatened/None G3T3/S2S3 CDFW_SSC-Species of Special Concern | NABCI_RWL-Red Watch List | USFWS_BCC-Birds of Conservation Concern	Sandy beaches, salt pond levees & shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	Not Expected	There are no known occurrences within 5 miles and the study area does not provide suitable breeding habitat.
Coturnicops noveboracensis yellow rail	None/None G4/S1S2 CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | NABCI_RWL-Red Watch List | USFS_S-Sensitive | USFWS_BCC-Birds of Conservation Concern	Summer resident in eastern Sierra Nevada in Mono County. Freshwater marshlands.	Not Expected	There is one known occurrence within 5 miles, however marshes are not present.
Cypseloides niger black swift	None/None G4/S2 CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | NABCI_YWL-Yellow Watch List | USFWS_BCC-Birds of Conservation Concern	Coastal belt of Santa Cruz and Monterey counties; central & southern Sierra Nevada; San Bernardino & San Jacinto mountains. Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above the surf; forages widely.	Not Expected	There is one known occurrence within 5 miles, however cliff breeding habitats are not present.
Eremophila alpestris actia California horned lark	None/None G5T4Q/S4 CDFW_WL-Watch List | IUCN_LC-Least Concern	Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills. Short-grass prairie, bald hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	Not Expected	There are no known occurrences within 5 miles and the study area does not provide suitable breeding or foraging habitat.
Falco mexicanus prairie falcon	None/None G5/S4 CDFW_WL-Watch List | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	Not Expected	There are no known occurrences within 5 miles and cliff breeding habitats are not present.
Laterallus jamaicensis coturniculus	None/Threatened G3G4T1/S1 BLM_S-Sensitive | CDFW_FP-	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater	Not Expected	There are no known occurrences within 5 miles and marshes are

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
California black rail	Fully Protected | IUCN_NT-Near Threatened | NABCI_RWL-Red Watch List | USFWS_BCC-Birds of Conservation Concern	marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.		not present.
Oceanodroma homochroa ashy storm-petrel	None/None G2/S2 BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_EN-Endangered | NABCI_RWL-Red Watch List | USFWS_BCC-Birds of Conservation Concern	Colonial nester on off-shore islands. Usually nests on driest part of islands. Forages over open ocean. Nest sites on islands are in crevices beneath loosely piled rocks or driftwood, or in caves.	Not Expected	There are no known occurrences within 5 miles and suitable breeding habitats are not present.
Pelecanus occidentalis californicus California brown pelican	Delisted/Delisted G4T3T4/S3 BLM_S-Sensitive | CDFW_FP-Fully Protected | USFS_S-Sensitive	Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Roosts communally.	Not Expected	There are 2 known occurrences within 5 miles, however suitable breeding habitats are not present.
Riparia riparia bank swallow	None/Threatened G5/S2 BLM_S-Sensitive | IUCN_LC-Least Concern	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	Not Expected	There are no known occurrences within 5 miles and suitable breeding habitats are not present.
Mammals				
Corynorhinus townsendii Townsend's big-eared bat	None/None G3G4/S2 BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive | WBWG_H-High Priority	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Low Potential	There is one known occurrence within 5 miles and bat sign was observed on the Carmel River Bridge.
Neotoma macrotis luciana Monterey dusky-footed woodrat	None/None G5T3/S3 CDFW_SSC-Species of Special Concern | IUCN_DD-Data Deficient	Forest habitats of moderate canopy and moderate to dense understory. Also in chaparral habitats. Nests constructed of grass, leaves, sticks, feathers, etc. Population may be limited by availability of nest materials.	Low Potential	There are no known occurrences within 5 miles however oak woodlands provide suitable habitats for this species.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Sorex ornatus salarius Monterey shrew	None/None G5T1T2/S1S2 CDFW_SSC-Species of Special Concern	Riparian, wetland & upland areas in the vicinity of the Salinas River delta. Prefers moist microhabitats. feeds on insects & other invertebrates found under logs, rocks & litter.	Low Potential	There are 4 known occurrences within 5 miles and suitable riparian habitat is present, however there are no known occurrences from Carmel Valley.
Taxidea taxus American badger	None/None G5/S3 CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Low Potential	There are 2 known occurrences within 5 miles and suitable is present in the vicinity of the study area, however there are no known occurrences from Carmel Valley.

Regional Vicinity refers to within a 9-quad search radius of site.

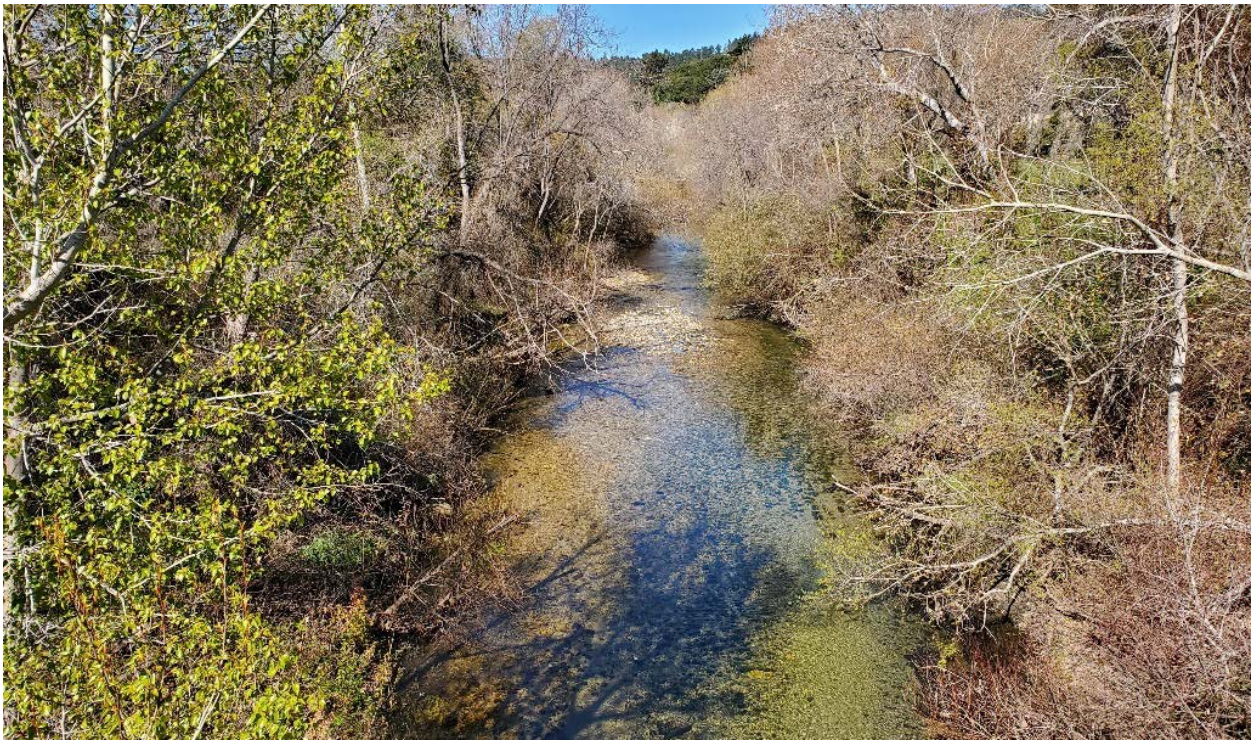
FE = Federally Endangered FT = Federally Threatened FC = Federal Candidate Species FS=Federally Sensitive

SE = State Endangered ST = State Threatened SC = State Candidate SS=State Sensitive

SSC = CDFW Species of Special Concern SFP = State Fully Protected

Attachment D

Representative Site Photographs



Photograph 1. The Carmel River and black cottonwood riparian forest from the bridge at Valley Greens Drive, facing west.

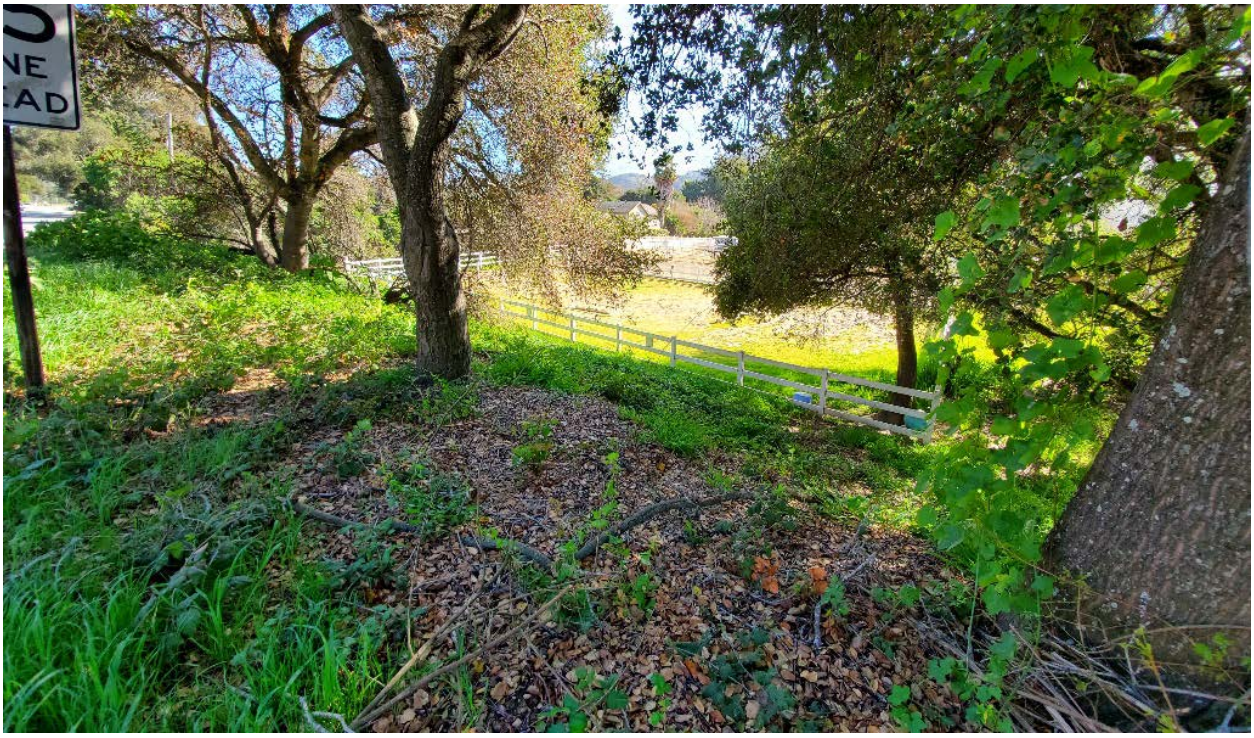
Photograph 2. The edge of riparian habitat along the west bank of the Carmel river from the bridge at Valley Greens Drive, facing west.

Photograph 3. The underside of the bridge at Valley Greens Drive, facing west.

Photograph 4. Bat sign on the underside of the bridge at Valley Greens Drive.

Photograph 5. The ephemeral drainage on the north side of Carmel Valley Road (prior to entering the study area), facing north.

Photograph 6. The ephemeral drainage/channelized ditch on the south side of Carmel Valley Road (on the edge of the study area), facing east



Photograph 7. Landscaped areas on the side of Carmel Valley Road, facing south east.

Photograph 8. Oak woodlands on the slope above the north side of Carmel Valley Road, facing north.

Photograph 5. Developed and landscaped areas on the south side of Carmel Valley Road, facing south east.

Photograph 6. California sagebrush – black sage scrub on the slope above the north side of Carmel Valley Road, facing north.

Appendix C

Energy Use Calculations

Carmel Valley Manor Sewer Extension Project

Last Updated: 2/26/2020

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

HP: 0 to 100	0.0588	HP: Greater than 100	0.0529

Values above are expressed in gallons per horsepower-hour/BSFC.

CONSTRUCTION EQUIPMENT

Construction Equipment	#	Hours per Day	Horsepower	Load Factor	Construction Phase	Fuel Used (gallons)
Graders	1	8	187	0.41	Site Prep	324.22
Tractors/Loaders/Backhoes	1	8	97	0.37	Site Prep	168.72
Concrete/Industrial Saws	1	8	81	0.73	Grading	1,389.89
Rubber Tired Dozer	1	1	247	0.40	Grading	261.12
Tractors/Loaders/Backhoes	1	6	97	0.37	Grading	632.71
Cranes	1	4	231	0.29	Building	708.20
Forklifts	2	6	89	0.20	Building	627.60
Tractors/Loaders/Backhoes	2	8	97	0.37	Building	1,687.24
Air Compressors	1	6	78	0.48	Arch Coating	264.02
Pavers	1	7	130	0.42	Paving	404.05
Cement and Mortar Mixers	4	6	9	0.56	Paving	142.16
Rollers	1	7	80	0.38	Paving	250.10
Tractors/Loaders/Backhoes	1	7	97	0.37	Paving	295.27
					Total Fuel Used	**7,155.31**
						(Gallons)

Construction Phase	Days of Operation
Site Preparation Phase	10
Grading Phase	50
Building Construction Phase	50
Paving Phase	20
Architectural Coating Phase	20
Total Days	150

WORKER TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Site Prep Phase	24.0	8	10.8	36.00
Grading Phase	24.0	8	10.8	180.00
Building Phase	24.0	8	10.8	180.00
Paving Phase	24.0	8	10.8	72.00
Architectural Coating Phase	24.0	8	10.8	72.00
			Total	**540.00**

HAULING AND VENDOR TRIPS

Trip Class	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
HAULING TRIPS				
Site Prep Phase	7.4	0	20.0	0.00
Grading Phase	7.4	250	20.0	675.68
Building Phase	7.4	0	20.0	0.00
Paving Phase	7.4	0	20.0	0.00
Architectural Coating Phase	7.4	0	20.0	0.00
			Total	**675.68**
VENDOR TRIPS				
Site Prep Phase	7.4	0	14.7	0.00
Grading Phase	7.4	0	14.7	0.00
Building Phase	7.4	0	14.7	0.00
Paving Phase	7.4	0	14.7	0.00
Architectural Coating Phase	7.4	0	14.7	0.00
			Total	**-**

Total Gasoline Consumption (gallons)	**540.00**
Total Diesel Consumption (gallons)	**7,830.99**

8,370.99

Sources:

[1] United States Environmental Protection Agency. 2018. *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES2014b* . July 2018. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100UXEN.pdf.

[2] United States Department of Transportation, Bureau of Transportation Statistics. 2018. *National Transportation Statistics 2018* . Available at: https://www.bts.gov/sites/bts.dot.gov/files/docs/browse-statistical-products-and-data/national-transportation-statistics/223001/ntsentire2018q4.pdf.

Wastewater Pumping Energy Calculations

Because CalEEMod does not provide an appropriate proxy for the pump station, GHG emissions from energy usage were calculated separately using energy emissions factors for PG&E adjusted for the 2030 RPS. Conversions of CH4 and NO2 to CO2e were made using U.S. EPA's Greenhouse Gas Equivalencies Calculator.

Activity	**Energy Usage (kWH/year)**	**Energy Usage (MWH/year)**
Increased Pumping	**78,314.4**	**78.3144**
Total	**78,314**	**78**

	Emissions Factors (lbs/MWh)	Emissions (lbs)	Emissions (MT)	Emissions (MT CO2e)	
CO2	298.35	23365.10124	10.6	10.6	
CH4	0.014	1.0964016	0.0	0.015	
N2O	0.003	0.2349432	0.00	0.037	
			Total	**10.7**	**MT CO2e**

- Greenhouse gas conversions performed using the U.S. EPA's Greenhouse Gas Equivalencies Calculator. Available at: https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator

Appendix D

N2O Calculation Sheet

N2O Operational GHG Emission Mobile Calculations

Project Code & Title: 19-07437; Carmel Valley Manor Sewer Extension Project

Vehicle Population Breakdown*	
320264	Gasoline vehicles
16777	Diesel vehicles
95.0%	Gasoline vehicle %
5.0%	Diesel vehicle %

VMT per Vehicle Type	
4,160	Project VMT (CalEEMod output)
3953	Gasoline vehicle VMT
207	Diesel vehicle VMT

Gasoline Vehicles	
95.0%	Gasoline vehicle %
0.00222	Tons per year mobile NOX emissions (annual output in CalEEMod)
0.00	Gasoline vehicle tons per year NOX emissions
0.0008	Tons per year N2O emissions for gasoline vehicles**
0.0008	Metric tons per year N2O emissions for gasoline vehicles

Diesel Vehicles	
1.60	grams N2O per gallon of fuel for diesel vehicles**
17.73	Diesel average miles per gallon*
0.09023	grams per mile N2O for diesel vehicles
18.7	grams per year N2O for diesel vehicles
0.0000187	Metric tons per year N2O emissions for diesel vehicles

CO2e Emissions from N2O	
0.0008	Metric tons per year from gasoline + diesel vehicles
298	GWP of N2O***
0.2	**CO2e emissions per year from N2O emissions from gasoline + diesel vehicles**

Sources
***Vehicle population source:** EMFAC2017 (v1.0.2) Emissions Inventory Region Type: County Region: Monterey Calendar Year: 2022 Season: Annual Vehicle Classification: EMFAC2011 Categories ****Methodology source:** EMFAC2017 Volume III - Technical Documentation https://www.arb.ca.gov/msei/emfac2011-faq.htm *****GWP source:** Intergovernmental Panel on Climate Change (IPCC). 2007. AR4 Climate Change 2007: The Physical Science Basis. Contrbution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.

Appendix E

CalEEMod Output Files for Sewage Treatment Options

Septic System Emissions

Monterey County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.00	1000sqft	0.02	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.6	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	298.65	**CH4 Intensity (lb/MWhr)**	0.014	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Adjusted for 2030 RPS.

Land Use -

Water And Wastewater - All treated by septic systems.

Septic System Emissions - Monterey County, Annual

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.014
tblProjectCharacteristics	CO2IntensityFactor	641.35	298.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblWater	AerobicPercent	87.46	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	0.00	100.00
tblWater	SepticTankPercent	10.33	100.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0519	0.5168	0.4434	6.9000e-004	1.8700e-003	0.0304	0.0322	6.7000e-004	0.0281	0.0287	0.0000	60.5018	60.5018	0.0183	0.0000	60.9585
Maximum	**0.0519**	**0.5168**	**0.4434**	**6.9000e-004**	**1.8700e-003**	**0.0304**	**0.0322**	**6.7000e-004**	**0.0281**	**0.0287**	**0.0000**	**60.5018**	**60.5018**	**0.0183**	**0.0000**	**60.9585**

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					
2020	0.0519	0.5168	0.4434	6.9000e-004	1.8700e-003	0.0304	0.0322	6.7000e-004	0.0281	0.0287	0.0000	60.5017	60.5017	0.0183	0.0000	60.9584
Maximum	**0.0519**	**0.5168**	**0.4434**	**6.9000e-004**	**1.8700e-003**	**0.0304**	**0.0322**	**6.7000e-004**	**0.0281**	**0.0287**	**0.0000**	**60.5017**	**60.5017**	**0.0183**	**0.0000**	**60.9584**

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

Septic System Emissions - Monterey County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-4-2020	6-3-2020	0.3139	0.3139
2	6-4-2020	9-3-2020	0.2509	0.2509
		Highest	0.3139	0.3139

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	9.0000e-005	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	2.0000e-005	0.0000	6.6000e-004
Total	**9.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**9.0000e-005**	**9.0000e-005**	**2.0000e-005**	**0.0000**	**6.9000e-004**

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	9.0000e-005	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	2.0000e-005	0.0000	6.6000e-004
Total	**9.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**9.0000e-005**	**9.0000e-005**	**2.0000e-005**	**0.0000**	**6.9000e-004**

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

3.0 Construction Detail

Construction Phase

Septic System Emissions - Monterey County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/4/2020	3/17/2020	5	10	
2	Site Preparation	Site Preparation	3/18/2020	3/18/2020	5	1	
3	Grading	Grading	3/19/2020	3/20/2020	5	2	
4	Building Construction	Building Construction	3/21/2020	8/7/2020	5	100	
5	Paving	Paving	8/8/2020	8/14/2020	5	5	
6	Architectural Coating	Architectural Coating	8/15/2020	8/21/2020	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.02

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 60 (Architectural Coating – sqft)

OffRoad Equipment

Septic System Emissions - Monterey County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	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	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	4.3400e-003	0.0394	0.0381	6.0000e-005		2.3400e-003	2.3400e-003		2.2300e-003	2.2300e-003	0.0000	5.2038	5.2038	9.8000e-004	0.0000	5.2284
Total	**4.3400e-003**	**0.0394**	**0.0381**	**6.0000e-005**		**2.3400e-003**	**2.3400e-003**		**2.2300e-003**	**2.2300e-003**	**0.0000**	**5.2038**	**5.2038**	**9.8000e-004**	**0.0000**	**5.2284**

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	2.0000e-004	1.8200e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3779	0.3779	2.0000e-005	0.0000	0.3783
Total	**2.2000e-004**	**2.0000e-004**	**1.8200e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.0000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3779**	**0.3779**	**2.0000e-005**	**0.0000**	**0.3783**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	4.3400e-003	0.0394	0.0381	6.0000e-005		2.3400e-003	2.3400e-003		2.2300e-003	2.2300e-003	0.0000	5.2038	5.2038	9.8000e-004	0.0000	5.2284
Total	**4.3400e-003**	**0.0394**	**0.0381**	**6.0000e-005**		**2.3400e-003**	**2.3400e-003**		**2.2300e-003**	**2.2300e-003**	**0.0000**	**5.2038**	**5.2038**	**9.8000e-004**	**0.0000**	**5.2284**

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	2.0000e-004	1.8200e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3779	0.3779	2.0000e-005	0.0000	0.3783
Total	**2.2000e-004**	**2.0000e-004**	**1.8200e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.0000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3779**	**0.3779**	**2.0000e-005**	**0.0000**	**0.3783**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4000e-004	4.2200e-003	2.0500e-003	0.0000		1.7000e-004	1.7000e-004		1.5000e-004	1.5000e-004	0.0000	0.4280	0.4280	1.4000e-004	0.0000	0.4314
Total	**3.4000e-004**	**4.2200e-003**	**2.0500e-003**	**0.0000**	**2.7000e-004**	**1.7000e-004**	**4.4000e-004**	**3.0000e-005**	**1.5000e-004**	**1.8000e-004**	**0.0000**	**0.4280**	**0.4280**	**1.4000e-004**	**0.0000**	**0.4314**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0189	0.0189	0.0000	0.0000	0.0189
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0189**	**0.0189**	**0.0000**	**0.0000**	**0.0189**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4000e-004	4.2200e-003	2.0500e-003	0.0000		1.7000e-004	1.7000e-004		1.5000e-004	1.5000e-004	0.0000	0.4280	0.4280	1.4000e-004	0.0000	0.4314
Total	**3.4000e-004**	**4.2200e-003**	**2.0500e-003**	**0.0000**	**2.7000e-004**	**1.7000e-004**	**4.4000e-004**	**3.0000e-005**	**1.5000e-004**	**1.8000e-004**	**0.0000**	**0.4280**	**0.4280**	**1.4000e-004**	**0.0000**	**0.4314**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0189	0.0189	0.0000	0.0000	0.0189
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0189**	**0.0189**	**0.0000**	**0.0000**	**0.0189**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.7000e-004	7.8700e-003	7.6200e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.5000e-004	4.5000e-004	0.0000	1.0408	1.0408	2.0000e-004	0.0000	1.0457
Total	**8.7000e-004**	**7.8700e-003**	**7.6200e-003**	**1.0000e-005**	**7.5000e-004**	**4.7000e-004**	**1.2200e-003**	**4.1000e-004**	**4.5000e-004**	**8.6000e-004**	**0.0000**	**1.0408**	**1.0408**	**2.0000e-004**	**0.0000**	**1.0457**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	4.0000e-005	3.6000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0756	0.0756	0.0000	0.0000	0.0757
Total	**4.0000e-005**	**4.0000e-005**	**3.6000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0756**	**0.0756**	**0.0000**	**0.0000**	**0.0757**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.7000e-004	7.8700e-003	7.6200e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.5000e-004	4.5000e-004	0.0000	1.0408	1.0408	2.0000e-004	0.0000	1.0457
Total	**8.7000e-004**	**7.8700e-003**	**7.6200e-003**	**1.0000e-005**	**7.5000e-004**	**4.7000e-004**	**1.2200e-003**	**4.1000e-004**	**4.5000e-004**	**8.6000e-004**	**0.0000**	**1.0408**	**1.0408**	**2.0000e-004**	**0.0000**	**1.0457**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	4.0000e-005	3.6000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0756	0.0756	0.0000	0.0000	0.0757
Total	**4.0000e-005**	**4.0000e-005**	**3.6000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0756**	**0.0756**	**0.0000**	**0.0000**	**0.0757**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0431	0.4426	0.3694	5.7000e-004		0.0261	0.0261		0.0240	0.0240	0.0000	50.0302	50.0302	0.0162	0.0000	50.4348
Total	**0.0431**	**0.4426**	**0.3694**	**5.7000e-004**		**0.0261**	**0.0261**		**0.0240**	**0.0240**	**0.0000**	**50.0302**	**50.0302**	**0.0162**	**0.0000**	**50.4348**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0431	0.4426	0.3694	5.7000e-004		0.0261	0.0261		0.0240	0.0240	0.0000	50.0302	50.0302	0.0162	0.0000	50.4347
Total	**0.0431**	**0.4426**	**0.3694**	**5.7000e-004**		**0.0261**	**0.0261**		**0.0240**	**0.0240**	**0.0000**	**50.0302**	**50.0302**	**0.0162**	**0.0000**	**50.4347**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

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

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9300e-003	0.0181	0.0178	3.0000e-005		9.9000e-004	9.9000e-004		9.2000e-004	9.2000e-004	0.0000	2.3482	2.3482	6.8000e-004	0.0000	2.3653
Paving	3.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.9600e-003**	**0.0181**	**0.0178**	**3.0000e-005**		**9.9000e-004**	**9.9000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**2.3482**	**2.3482**	**6.8000e-004**	**0.0000**	**2.3653**

3.6 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	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	1.8000e-004	1.6400e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3401	0.3401	1.0000e-005	0.0000	0.3405
Total	**2.0000e-004**	**1.8000e-004**	**1.6400e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3401**	**0.3401**	**1.0000e-005**	**0.0000**	**0.3405**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9300e-003	0.0181	0.0178	3.0000e-005		9.9000e-004	9.9000e-004		9.2000e-004	9.2000e-004	0.0000	2.3482	2.3482	6.8000e-004	0.0000	2.3653
Paving	3.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.9600e-003**	**0.0181**	**0.0178**	**3.0000e-005**		**9.9000e-004**	**9.9000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**2.3482**	**2.3482**	**6.8000e-004**	**0.0000**	**2.3653**

3.6 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	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	1.8000e-004	1.6400e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3401	0.3401	1.0000e-005	0.0000	0.3405
Total	**2.0000e-004**	**1.8000e-004**	**1.6400e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3401**	**0.3401**	**1.0000e-005**	**0.0000**	**0.3405**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1000e-004	4.2100e-003	4.5800e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6396
Total	**8.2000e-004**	**4.2100e-003**	**4.5800e-003**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**0.6383**	**0.6383**	**5.0000e-005**	**0.0000**	**0.6396**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1000e-004	4.2100e-003	4.5800e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6396
Total	**8.2000e-004**	**4.2100e-003**	**4.5800e-003**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**0.6383**	**0.6383**	**5.0000e-005**	**0.0000**	**0.6396**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other 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
Other Asphalt Surfaces	0.543895	0.028716	0.205211	0.131753	0.021859	0.005504	0.019097	0.027308	0.004155	0.002738	0.007724	0.001236	0.000805

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	9.0000e-005	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	9.0000e-005	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**8.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**8.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	7.0000e-005	2.0000e-005	0.0000	6.6000e-004
Unmitigated	7.0000e-005	2.0000e-005	0.0000	6.6000e-004

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0.0001 / 0	7.0000e-005	2.0000e-005	0.0000	6.6000e-004
Total		**7.0000e-005**	**2.0000e-005**	**0.0000**	**6.6000e-004**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0.0001 / 0	7.0000e-005	2.0000e-005	0.0000	6.6000e-004
Total		**7.0000e-005**	**2.0000e-005**	**0.0000**	**6.6000e-004**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

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

Anaerobic Digestor with Cogeneration Emissions

Monterey County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.00	1000sqft	0.02	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.6	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	298.65	**CH4 Intensity (lb/MWhr)**	0.014	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Adjusted for 2030 RPS.

Land Use -

Water And Wastewater - All treated by anaerobic digestors with cogeneration.

Anaerobic Digestor with Cogeneration Emissions - Monterey County, Annual

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.014
tblProjectCharacteristics	CO2IntensityFactor	641.35	298.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaDigestCogenCombDigestGasPercent	0.00	100.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	0.00	100.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0519	0.5168	0.4434	6.9000e-004	1.8700e-003	0.0304	0.0322	6.7000e-004	0.0281	0.0287	0.0000	60.5018	60.5018	0.0183	0.0000	60.9585
Maximum	**0.0519**	**0.5168**	**0.4434**	**6.9000e-004**	**1.8700e-003**	**0.0304**	**0.0322**	**6.7000e-004**	**0.0281**	**0.0287**	**0.0000**	**60.5018**	**60.5018**	**0.0183**	**0.0000**	**60.9585**

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					
2020	0.0519	0.5168	0.4434	6.9000e-004	1.8700e-003	0.0304	0.0322	6.7000e-004	0.0281	0.0287	0.0000	60.5017	60.5017	0.0183	0.0000	60.9584
Maximum	**0.0519**	**0.5168**	**0.4434**	**6.9000e-004**	**1.8700e-003**	**0.0304**	**0.0322**	**6.7000e-004**	**0.0281**	**0.0287**	**0.0000**	**60.5017**	**60.5017**	**0.0183**	**0.0000**	**60.9584**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-4-2020	6-3-2020	0.3139	0.3139
2	6-4-2020	9-3-2020	0.2509	0.2509
		Highest	0.3139	0.3139

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	9.0000e-005	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	4.0000e-005	7.0000e-005	1.0000e-004	0.0000	0.0000	1.3000e-004
Total	**9.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**4.0000e-005**	**9.0000e-005**	**1.2000e-004**	**0.0000**	**0.0000**	**1.6000e-004**

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	9.0000e-005	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	4.0000e-005	7.0000e-005	1.0000e-004	0.0000	0.0000	1.3000e-004
Total	**9.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**4.0000e-005**	**9.0000e-005**	**1.2000e-004**	**0.0000**	**0.0000**	**1.6000e-004**

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

3.0 Construction Detail

Construction Phase

Anaerobic Digestor with Cogeneration Emissions - Monterey County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/4/2020	3/17/2020	5	10	
2	Site Preparation	Site Preparation	3/18/2020	3/18/2020	5	1	
3	Grading	Grading	3/19/2020	3/20/2020	5	2	
4	Building Construction	Building Construction	3/21/2020	8/7/2020	5	100	
5	Paving	Paving	8/8/2020	8/14/2020	5	5	
6	Architectural Coating	Architectural Coating	8/15/2020	8/21/2020	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.02

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 60 (Architectural Coating – sqft)

OffRoad Equipment

Anaerobic Digestor with Cogeneration Emissions - Monterey County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	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	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	4.3400e-003	0.0394	0.0381	6.0000e-005		2.3400e-003	2.3400e-003		2.2300e-003	2.2300e-003	0.0000	5.2038	5.2038	9.8000e-004	0.0000	5.2284
Total	**4.3400e-003**	**0.0394**	**0.0381**	**6.0000e-005**		**2.3400e-003**	**2.3400e-003**		**2.2300e-003**	**2.2300e-003**	**0.0000**	**5.2038**	**5.2038**	**9.8000e-004**	**0.0000**	**5.2284**

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	2.0000e-004	1.8200e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3779	0.3779	2.0000e-005	0.0000	0.3783
Total	**2.2000e-004**	**2.0000e-004**	**1.8200e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.0000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3779**	**0.3779**	**2.0000e-005**	**0.0000**	**0.3783**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	4.3400e-003	0.0394	0.0381	6.0000e-005		2.3400e-003	2.3400e-003		2.2300e-003	2.2300e-003	0.0000	5.2038	5.2038	9.8000e-004	0.0000	5.2284
Total	**4.3400e-003**	**0.0394**	**0.0381**	**6.0000e-005**		**2.3400e-003**	**2.3400e-003**		**2.2300e-003**	**2.2300e-003**	**0.0000**	**5.2038**	**5.2038**	**9.8000e-004**	**0.0000**	**5.2284**

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	2.0000e-004	1.8200e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3779	0.3779	2.0000e-005	0.0000	0.3783
Total	**2.2000e-004**	**2.0000e-004**	**1.8200e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.0000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3779**	**0.3779**	**2.0000e-005**	**0.0000**	**0.3783**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4000e-004	4.2200e-003	2.0500e-003	0.0000		1.7000e-004	1.7000e-004		1.5000e-004	1.5000e-004	0.0000	0.4280	0.4280	1.4000e-004	0.0000	0.4314
Total	**3.4000e-004**	**4.2200e-003**	**2.0500e-003**	**0.0000**	**2.7000e-004**	**1.7000e-004**	**4.4000e-004**	**3.0000e-005**	**1.5000e-004**	**1.8000e-004**	**0.0000**	**0.4280**	**0.4280**	**1.4000e-004**	**0.0000**	**0.4314**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0189	0.0189	0.0000	0.0000	0.0189
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0189**	**0.0189**	**0.0000**	**0.0000**	**0.0189**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4000e-004	4.2200e-003	2.0500e-003	0.0000		1.7000e-004	1.7000e-004		1.5000e-004	1.5000e-004	0.0000	0.4280	0.4280	1.4000e-004	0.0000	0.4314
Total	**3.4000e-004**	**4.2200e-003**	**2.0500e-003**	**0.0000**	**2.7000e-004**	**1.7000e-004**	**4.4000e-004**	**3.0000e-005**	**1.5000e-004**	**1.8000e-004**	**0.0000**	**0.4280**	**0.4280**	**1.4000e-004**	**0.0000**	**0.4314**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0189	0.0189	0.0000	0.0000	0.0189
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0189**	**0.0189**	**0.0000**	**0.0000**	**0.0189**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.7000e-004	7.8700e-003	7.6200e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.5000e-004	4.5000e-004	0.0000	1.0408	1.0408	2.0000e-004	0.0000	1.0457
Total	**8.7000e-004**	**7.8700e-003**	**7.6200e-003**	**1.0000e-005**	**7.5000e-004**	**4.7000e-004**	**1.2200e-003**	**4.1000e-004**	**4.5000e-004**	**8.6000e-004**	**0.0000**	**1.0408**	**1.0408**	**2.0000e-004**	**0.0000**	**1.0457**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	4.0000e-005	3.6000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0756	0.0756	0.0000	0.0000	0.0757
Total	**4.0000e-005**	**4.0000e-005**	**3.6000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0756**	**0.0756**	**0.0000**	**0.0000**	**0.0757**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.7000e-004	7.8700e-003	7.6200e-003	1.0000e-005		4.7000e-004	4.7000e-004		4.5000e-004	4.5000e-004	0.0000	1.0408	1.0408	2.0000e-004	0.0000	1.0457
Total	**8.7000e-004**	**7.8700e-003**	**7.6200e-003**	**1.0000e-005**	**7.5000e-004**	**4.7000e-004**	**1.2200e-003**	**4.1000e-004**	**4.5000e-004**	**8.6000e-004**	**0.0000**	**1.0408**	**1.0408**	**2.0000e-004**	**0.0000**	**1.0457**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	4.0000e-005	3.6000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0756	0.0756	0.0000	0.0000	0.0757
Total	**4.0000e-005**	**4.0000e-005**	**3.6000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0756**	**0.0756**	**0.0000**	**0.0000**	**0.0757**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0431	0.4426	0.3694	5.7000e-004		0.0261	0.0261		0.0240	0.0240	0.0000	50.0302	50.0302	0.0162	0.0000	50.4348
Total	**0.0431**	**0.4426**	**0.3694**	**5.7000e-004**		**0.0261**	**0.0261**		**0.0240**	**0.0240**	**0.0000**	**50.0302**	**50.0302**	**0.0162**	**0.0000**	**50.4348**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0431	0.4426	0.3694	5.7000e-004		0.0261	0.0261		0.0240	0.0240	0.0000	50.0302	50.0302	0.0162	0.0000	50.4347
Total	**0.0431**	**0.4426**	**0.3694**	**5.7000e-004**		**0.0261**	**0.0261**		**0.0240**	**0.0240**	**0.0000**	**50.0302**	**50.0302**	**0.0162**	**0.0000**	**50.4347**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

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

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9300e-003	0.0181	0.0178	3.0000e-005		9.9000e-004	9.9000e-004		9.2000e-004	9.2000e-004	0.0000	2.3482	2.3482	6.8000e-004	0.0000	2.3653
Paving	3.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.9600e-003**	**0.0181**	**0.0178**	**3.0000e-005**		**9.9000e-004**	**9.9000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**2.3482**	**2.3482**	**6.8000e-004**	**0.0000**	**2.3653**

3.6 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	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	1.8000e-004	1.6400e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3401	0.3401	1.0000e-005	0.0000	0.3405
Total	**2.0000e-004**	**1.8000e-004**	**1.6400e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3401**	**0.3401**	**1.0000e-005**	**0.0000**	**0.3405**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9300e-003	0.0181	0.0178	3.0000e-005		9.9000e-004	9.9000e-004		9.2000e-004	9.2000e-004	0.0000	2.3482	2.3482	6.8000e-004	0.0000	2.3653
Paving	3.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.9600e-003**	**0.0181**	**0.0178**	**3.0000e-005**		**9.9000e-004**	**9.9000e-004**		**9.2000e-004**	**9.2000e-004**	**0.0000**	**2.3482**	**2.3482**	**6.8000e-004**	**0.0000**	**2.3653**

3.6 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	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	1.8000e-004	1.6400e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3401	0.3401	1.0000e-005	0.0000	0.3405
Total	**2.0000e-004**	**1.8000e-004**	**1.6400e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3401**	**0.3401**	**1.0000e-005**	**0.0000**	**0.3405**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1000e-004	4.2100e-003	4.5800e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6396
Total	**8.2000e-004**	**4.2100e-003**	**4.5800e-003**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**0.6383**	**0.6383**	**5.0000e-005**	**0.0000**	**0.6396**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1000e-004	4.2100e-003	4.5800e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.6383	0.6383	5.0000e-005	0.0000	0.6396
Total	**8.2000e-004**	**4.2100e-003**	**4.5800e-003**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**0.6383**	**0.6383**	**5.0000e-005**	**0.0000**	**0.6396**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other 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
Other Asphalt Surfaces	0.543895	0.028716	0.205211	0.131753	0.021859	0.005504	0.019097	0.027308	0.004155	0.002738	0.007724	0.001236	0.000805

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	9.0000e-005	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	9.0000e-005	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**8.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**8.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.0000e-004	0.0000	0.0000	1.3000e-004
Unmitigated	1.0000e-004	0.0000	0.0000	1.3000e-004

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0.0001 / 0	1.0000e-004	0.0000	0.0000	1.3000e-004
Total		**1.0000e-004**	**0.0000**	**0.0000**	**1.3000e-004**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0.0001 / 0	1.0000e-004	0.0000	0.0000	1.3000e-004
Total		**1.0000e-004**	**0.0000**	**0.0000**	**1.3000e-004**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix F

Noise Measurement Data

Noise Measurement 1

Data Logger 2		
Duration (seconds)	3	
Weighting	A	
Response	SLOW	
Range	40-100	
L05	65.4	
L10	60.5	
L50	45.4	
L90	41.2	
L95	40.1	
Lmax	78.6	
Time	2/25/2020 16:00	
SEL	88.9	
Leq	59.4	

Leq (Manual) **58.44038**

No.s	Date Time	dB	Sound Energy
1	2/25/2020 15:56	43.6	68726.02958
2	2/25/2020 15:56	43.4	65632.84872
3	2/25/2020 15:56	41.4	41411.52794
4	2/25/2020 15:56	40.1	30698.78977
5	2/25/2020 15:56	39.9	29317.11663
6	2/25/2020 15:56	43.2	62678.88393
7	2/25/2020 15:56	41	37767.76235
8	2/25/2020 15:56	40.4	32894.34588
9	2/25/2020 15:56	41.1	38647.48655
10	2/25/2020 15:56	43.2	62678.88393
11	2/25/2020 15:56	47.9	184978.5006
12	2/25/2020 15:56	53.9	736412.6747
13	2/25/2020 15:56	54	753565.9295
14	2/25/2020 15:56	56.5	1340050.776
15	2/25/2020 15:56	51.5	423761.2634
16	2/25/2020 15:57	44.3	80746.04412
17	2/25/2020 15:57	48.9	232874.135
18	2/25/2020 15:57	45.1	97078.09708
19	2/25/2020 15:57	43.1	61252.13834
20	2/25/2020 15:57	43.6	68726.02958
21	2/25/2020 15:57	45.8	114056.8189
22	2/25/2020 15:57	42.7	55862.6141
23	2/25/2020 15:57	45.5	106444.0168
24	2/25/2020 15:57	44.2	78908.03976
25	2/25/2020 15:57	46	119432.1512
26	2/25/2020 15:57	42.7	55862.6141
27	2/25/2020 15:57	43.1	61252.13834

28	2/25/2020 15:57	42.9	58495.33799
29	2/25/2020 15:57	47	150356.1701
30	2/25/2020 15:57	43.6	68726.02958
31	2/25/2020 15:57	44.9	92708.86298
32	2/25/2020 15:57	43.5	67161.63416
33	2/25/2020 15:57	43.9	73641.26747
34	2/25/2020 15:57	46.8	143589.0277
35	2/25/2020 15:57	50	300000
36	2/25/2020 15:58	45.5	106444.0168
37	2/25/2020 15:58	43.9	73641.26747
38	2/25/2020 15:58	49.6	273603.2518
39	2/25/2020 15:58	41.5	42376.12634
40	2/25/2020 15:58	41.6	43363.19312
41	2/25/2020 15:58	44.4	82626.8611
42	2/25/2020 15:58	43.1	61252.13834
43	2/25/2020 15:58	42.5	53348.3823
44	2/25/2020 15:58	45.7	111460.5687
45	2/25/2020 15:58	42.7	55862.6141
46	2/25/2020 15:58	41.4	41411.52794
47	2/25/2020 15:58	42.8	57163.82154
48	2/25/2020 15:58	41.6	43363.19312
49	2/25/2020 15:58	41.5	42376.12634
50	2/25/2020 15:58	42.1	48654.30292
51	2/25/2020 15:58	41.9	46464.49857
52	2/25/2020 15:58	41.7	44373.25165
53	2/25/2020 15:58	41.8	45406.83745
54	2/25/2020 15:58	41.2	39547.70216
55	2/25/2020 15:58	42.7	55862.6141
56	2/25/2020 15:59	44.1	77111.87348
57	2/25/2020 15:59	41.9	46464.49857
58	2/25/2020 15:59	43.2	62678.88393
59	2/25/2020 15:59	44.1	77111.87348
60	2/25/2020 15:59	47	150356.1701
61	2/25/2020 15:59	51	377677.6235
62	2/25/2020 15:59	54.3	807460.4412
63	2/25/2020 15:59	66.4	13095474.97
64	2/25/2020 15:59	59.3	2553414.115
65	2/25/2020 15:59	52.5	533483.823
66	2/25/2020 15:59	50.2	314138.5644
67	2/25/2020 15:59	50.1	306987.8977
68	2/25/2020 15:59	51.7	443732.5165
69	2/25/2020 15:59	58.1	1936962.687
70	2/25/2020 15:59	54.2	789080.3976
71	2/25/2020 15:59	48.5	212383.7353
72	2/25/2020 15:59	49.2	249529.1313
73	2/25/2020 15:59	51.2	395477.0216
74	2/25/2020 15:59	48.2	198208.0344

75	2/25/2020 15:59	48.7	222393.0724
76	2/25/2020 16:00	52.7	558626.141
77	2/25/2020 16:00	54.6	865209.4509
78	2/25/2020 16:00	54.4	826268.611
79	2/25/2020 16:00	55.8	1140568.189
80	2/25/2020 16:00	51.8	454068.3745
81	2/25/2020 16:00	52.2	497876.0722
82	2/25/2020 16:00	50.8	360679.3304
83	2/25/2020 16:00	50	300000
84	2/25/2020 16:00	50.7	352469.2665
85	2/25/2020 16:00	49	238298.4704
86	2/25/2020 16:00	54.3	807460.4412
87	2/25/2020 16:00	55.4	1040210.551
88	2/25/2020 16:00	63.1	6125213.834
89	2/25/2020 16:00	70.1	30698789.77
90	2/25/2020 16:00	60.6	3444460.864
91	2/25/2020 16:00	53.1	612521.3834
92	2/25/2020 16:00	47.8	180767.8758
93	2/25/2020 16:00	46.6	137126.4569
94	2/25/2020 16:00	47.4	164862.2622
95	2/25/2020 16:00	49.1	243849.1548
96	2/25/2020 16:01	50.9	369080.6312
97	2/25/2020 16:01	56.9	1469336.458
98	2/25/2020 16:01	67.7	17665309.66
99	2/25/2020 16:01	61.1	3864748.655
100	2/25/2020 16:01	53.7	703268.6446
101	2/25/2020 16:01	49	238298.4704
102	2/25/2020 16:01	46.8	143589.0277
103	2/25/2020 16:01	45.5	106444.0168
104	2/25/2020 16:01	44.1	77111.87348
105	2/25/2020 16:01	47.5	168702.3976
106	2/25/2020 16:01	47.3	161109.5389
107	2/25/2020 16:01	47.4	164862.2622
108	2/25/2020 16:01	53.7	703268.6446
109	2/25/2020 16:01	56.8	1435890.277
110	2/25/2020 16:01	56.6	1371264.569
111	2/25/2020 16:01	66.6	13712645.69
112	2/25/2020 16:01	70	30000000
113	2/25/2020 16:01	64.8	9059855.161
114	2/25/2020 16:01	71.2	39547702.16
115	2/25/2020 16:01	66.4	13095474.97
116	2/25/2020 16:02	67.9	18497850.06
117	2/25/2020 16:02	71.8	45406837.45
118	2/25/2020 16:02	60.5	3366055.363
119	2/25/2020 16:02	54.2	789080.3976
120	2/25/2020 16:02	56	1194321.512
121	2/25/2020 16:02	50	300000

122	2/25/2020 16:02	48.4	207549.2913
123	2/25/2020 16:02	50.2	314138.5644
124	2/25/2020 16:02	49.3	255341.4115
125	2/25/2020 16:02	48.5	212383.7353
126	2/25/2020 16:02	47.9	184978.5006
127	2/25/2020 16:02	46.8	143589.0277
128	2/25/2020 16:02	43.9	73641.26747
129	2/25/2020 16:02	43.7	70326.86446
130	2/25/2020 16:02	44	75356.59295
131	2/25/2020 16:02	44.1	77111.87348
132	2/25/2020 16:02	44.5	84551.48794
133	2/25/2020 16:02	44.8	90598.55161
134	2/25/2020 16:02	48.7	222393.0724
135	2/25/2020 16:02	48.4	207549.2913
136	2/25/2020 16:03	53.1	612521.3834
137	2/25/2020 16:03	65.2	9933933.644
138	2/25/2020 16:03	65.2	9933933.644
139	2/25/2020 16:03	56.8	1435890.277
140	2/25/2020 16:03	61.7	4437325.165
141	2/25/2020 16:03	49.3	255341.4115
142	2/25/2020 16:03	47.8	180767.8758
143	2/25/2020 16:03	47.2	157442.2381
144	2/25/2020 16:03	50	300000
145	2/25/2020 16:03	50.2	314138.5644
146	2/25/2020 16:03	52.3	509473.0957
147	2/25/2020 16:03	52.7	558626.141
148	2/25/2020 16:03	49.6	273603.2518
149	2/25/2020 16:03	49.9	293171.1663
150	2/25/2020 16:03	48.9	232874.135
151	2/25/2020 16:03	47.5	168702.3976
152	2/25/2020 16:03	45.5	106444.0168
153	2/25/2020 16:03	44	75356.59295
154	2/25/2020 16:03	43.9	73641.26747
155	2/25/2020 16:03	44.1	77111.87348
156	2/25/2020 16:04	46.1	122214.0833
157	2/25/2020 16:04	46.7	140320.5424
158	2/25/2020 16:04	47.1	153858.4152
159	2/25/2020 16:04	46	119432.1512
160	2/25/2020 16:04	44.5	84551.48794
161	2/25/2020 16:04	44.1	77111.87348
162	2/25/2020 16:04	43.7	70326.86446
163	2/25/2020 16:04	43.3	64138.86269
164	2/25/2020 16:04	43.5	67161.63416
165	2/25/2020 16:04	43.5	67161.63416
166	2/25/2020 16:04	42.3	50947.30957
167	2/25/2020 16:04	41.4	41411.52794
168	2/25/2020 16:04	41.8	45406.83745

169	2/25/2020 16:04	44.7	88536.2768
170	2/25/2020 16:04	43.9	73641.26747
171	2/25/2020 16:04	43.7	70326.86446
172	2/25/2020 16:04	41	37767.76235
173	2/25/2020 16:04	42.3	50947.30957
174	2/25/2020 16:04	43.3	64138.86269
175	2/25/2020 16:04	47.9	184978.5006
176	2/25/2020 16:05	42	47546.79577
177	2/25/2020 16:05	41.2	39547.70216
178	2/25/2020 16:05	41.3	40468.88648
179	2/25/2020 16:05	42.5	53348.3823
180	2/25/2020 16:05	46.1	122214.0833
181	2/25/2020 16:05	48.4	207549.2913
182	2/25/2020 16:05	52.2	497876.0722
183	2/25/2020 16:05	62.1	4865430.292
184	2/25/2020 16:05	66.8	14358902.77
185	2/25/2020 16:05	60.8	3606793.304
186	2/25/2020 16:05	58	1892872.033
187	2/25/2020 16:05	58.9	2328741.35
188	2/25/2020 16:05	52.5	533483.823
189	2/25/2020 16:05	45	94868.32981
190	2/25/2020 16:05	40.1	30698.78977
191	2/25/2020 16:05	40.5	33660.55363
192	2/25/2020 16:05	41.2	39547.70216
193	2/25/2020 16:05	45	94868.32981
194	2/25/2020 16:05	45	94868.32981
195	2/25/2020 16:05	40	30000
196	2/25/2020 16:06	38.7	22239.30724
197	2/25/2020 16:06	38.7	22239.30724
198	2/25/2020 16:06	39.3	25534.14115
199	2/25/2020 16:06	41.6	43363.19312
200	2/25/2020 16:06	42.4	52134.02486
201	2/25/2020 16:06	41.8	45406.83745
202	2/25/2020 16:06	42.1	48654.30292
203	2/25/2020 16:06	40.5	33660.55363
204	2/25/2020 16:06	40.5	33660.55363
205	2/25/2020 16:06	41.1	38647.48655
206	2/25/2020 16:06	40.7	35246.92665
207	2/25/2020 16:06	41.3	40468.88648
208	2/25/2020 16:06	42.9	58495.33799
209	2/25/2020 16:06	42.2	49787.60722
210	2/25/2020 16:06	41	37767.76235
211	2/25/2020 16:06	40.7	35246.92665
212	2/25/2020 16:06	40.9	36908.06312
213	2/25/2020 16:06	40.8	36067.93304
214	2/25/2020 16:06	39.6	27360.32518
215	2/25/2020 16:06	39.3	25534.14115

216	2/25/2020 16:07	38.3	20282.48926
217	2/25/2020 16:07	38.9	23287.4135
218	2/25/2020 16:07	39.2	24952.91313
219	2/25/2020 16:07	39.1	24384.91548
220	2/25/2020 16:07	47.9	184978.5006
221	2/25/2020 16:07	42.8	57163.82154
222	2/25/2020 16:07	42.2	49787.60722
223	2/25/2020 16:07	40.3	32145.57916
224	2/25/2020 16:07	40.9	36908.06312
225	2/25/2020 16:07	41.3	40468.88648
226	2/25/2020 16:07	41.3	40468.88648
227	2/25/2020 16:07	42.1	48654.30292
228	2/25/2020 16:07	45.6	108923.4164
229	2/25/2020 16:07	45.5	106444.0168
230	2/25/2020 16:07	46.1	122214.0833
231	2/25/2020 16:07	44.4	82626.8611
232	2/25/2020 16:07	49.2	249529.1313
233	2/25/2020 16:07	45.8	114056.8189
234	2/25/2020 16:07	45.9	116713.5435
235	2/25/2020 16:07	49.4	261289.077
236	2/25/2020 16:08	50.4	328943.4588
237	2/25/2020 16:08	55.5	1064440.168
238	2/25/2020 16:08	63.8	7196498.757
239	2/25/2020 16:08	70.8	36067933.04
240	2/25/2020 16:08	60.8	3606793.304
241	2/25/2020 16:08	58.5	2123837.353
242	2/25/2020 16:08	55	948683.2981
243	2/25/2020 16:08	55.8	1140568.189
244	2/25/2020 16:08	61.2	3954770.216
245	2/25/2020 16:08	68.9	23287413.5
246	2/25/2020 16:08	54.9	927088.6298
247	2/25/2020 16:08	53	598578.6945
248	2/25/2020 16:08	55.1	970780.9708
249	2/25/2020 16:08	56.5	1340050.776
250	2/25/2020 16:08	59.7	2799762.902
251	2/25/2020 16:08	60.5	3366055.363
252	2/25/2020 16:08	52.7	558626.141
253	2/25/2020 16:08	51.6	433631.9312
254	2/25/2020 16:08	47	150356.1701
255	2/25/2020 16:08	47	150356.1701
256	2/25/2020 16:09	45.4	104021.0551
257	2/25/2020 16:09	43.7	70326.86446
258	2/25/2020 16:09	47.8	180767.8758
259	2/25/2020 16:09	40.8	36067.93304
260	2/25/2020 16:09	42.3	50947.30957
261	2/25/2020 16:09	42	47546.79577
262	2/25/2020 16:09	44	75356.59295

263	2/25/2020 16:09	44.1	77111.87348
264	2/25/2020 16:09	45.1	97078.09708
265	2/25/2020 16:09	42.7	55862.6141
266	2/25/2020 16:09	42.5	53348.3823
267	2/25/2020 16:09	42.3	50947.30957
268	2/25/2020 16:09	43	59857.86945
269	2/25/2020 16:09	46.5	134005.0776
270	2/25/2020 16:09	43.1	61252.13834
271	2/25/2020 16:09	41.7	44373.25165
272	2/25/2020 16:09	40.5	33660.55363
273	2/25/2020 16:09	41.7	44373.25165
274	2/25/2020 16:09	42	47546.79577
275	2/25/2020 16:09	41.9	46464.49857
276	2/25/2020 16:10	43	59857.86945
277	2/25/2020 16:10	48.3	202824.8926
278	2/25/2020 16:10	49	238298.4704
279	2/25/2020 16:10	51.3	404688.8648
280	2/25/2020 16:10	59.6	2736032.518
281	2/25/2020 16:10	65.6	10892341.64
282	2/25/2020 16:10	64.3	8074604.412
283	2/25/2020 16:10	73.2	62678883.93
284	2/25/2020 16:10	67.8	18076787.58
285	2/25/2020 16:10	66.4	13095474.97
286	2/25/2020 16:10	62.8	5716382.154
287	2/25/2020 16:10	61	3776776.235
288	2/25/2020 16:10	68.2	19820803.44
289	2/25/2020 16:10	55.7	1114605.687
290	2/25/2020 16:10	56	1194321.512
291	2/25/2020 16:10	59.4	2612890.77
292	2/25/2020 16:10	66.7	14032054.24
293	2/25/2020 16:10	60.2	3141385.644
294	2/25/2020 16:10	56	1194321.512
295	2/25/2020 16:10	55.3	1016532.468
296	2/25/2020 16:11	51.3	404688.8648
297	2/25/2020 16:11	47.5	168702.3976
298	2/25/2020 16:11	47.6	172631.9812
299	2/25/2020 16:11	52.7	558626.141
300	2/25/2020 16:11	67.4	16486226.22

Noise Measurement 2

Data Logger 2		
Duration (seconds)		3
Weighting	A	
Response	SLOW	
Range	40-100	
L05		81.4
L10		79.8
L50		73.8
L90		57.2
L95		53.7
Lmax		87.8
Time		2/25/2020 16:41
SEL		105.5
Leq		76.0

Leq (Manual) **76.2543**

No.s	Date Time	dB	Sound Energy
1	2/25/2020 16:28	75.6	108923416.4
2	2/25/2020 16:29	74.1	77111873.48
3	2/25/2020 16:29	79.4	261289077
4	2/25/2020 16:29	77.5	168702397.6
5	2/25/2020 16:29	65	9486832.981
6	2/25/2020 16:29	60.2	3141385.644
7	2/25/2020 16:29	76.7	140320542.4
8	2/25/2020 16:29	60.4	3289434.588
9	2/25/2020 16:29	56	1194321.512
10	2/25/2020 16:29	66.3	12797385.56
11	2/25/2020 16:29	79.3	255341411.5
12	2/25/2020 16:29	76.2	125060815
13	2/25/2020 16:29	74.2	78908039.76
14	2/25/2020 16:29	81.3	404688864.8
15	2/25/2020 16:29	79.2	249529131.3
16	2/25/2020 16:29	79.5	267375281.4
17	2/25/2020 16:29	79.7	279976290.2
18	2/25/2020 16:29	77.8	180767875.8
19	2/25/2020 16:29	79.5	267375281.4
20	2/25/2020 16:29	79.5	267375281.4
21	2/25/2020 16:29	70.2	31413856.44
22	2/25/2020 16:30	79.5	267375281.4
23	2/25/2020 16:30	75.1	97078097.08
24	2/25/2020 16:30	70	30000000
25	2/25/2020 16:30	57.2	1574422.381
26	2/25/2020 16:30	58.2	1982080.344
27	2/25/2020 16:30	66.9	14693364.58
28	2/25/2020 16:30	79.4	261289077

29	2/25/2020 16:30	75.7	111460568.7
30	2/25/2020 16:30	65.9	11671354.35
31	2/25/2020 16:30	83.1	612521383.4
32	2/25/2020 16:30	63.1	6125213.834
33	2/25/2020 16:30	76.9	146933645.8
34	2/25/2020 16:30	82.1	486543029.2
35	2/25/2020 16:30	77.5	168702397.6
36	2/25/2020 16:30	76	119432151.2
37	2/25/2020 16:30	84.8	905985516.1
38	2/25/2020 16:30	77.3	161109538.9
39	2/25/2020 16:30	74.6	86520945.09
40	2/25/2020 16:30	62.1	4865430.292
41	2/25/2020 16:30	55	948683.2981
42	2/25/2020 16:31	62.9	5849533.799
43	2/25/2020 16:31	68.5	21238373.53
44	2/25/2020 16:31	74.9	92708862.98
45	2/25/2020 16:31	78.5	212383735.3
46	2/25/2020 16:31	76.5	134005077.6
47	2/25/2020 16:31	78.8	227573272.5
48	2/25/2020 16:31	71	37767762.35
49	2/25/2020 16:31	71.4	41411527.94
50	2/25/2020 16:31	75.6	108923416.4
51	2/25/2020 16:31	76.7	140320542.4
52	2/25/2020 16:31	75.5	106444016.8
53	2/25/2020 16:31	81.3	404688864.8
54	2/25/2020 16:31	72.9	58495337.99
55	2/25/2020 16:31	83.5	671616341.6
56	2/25/2020 16:31	84.6	865209450.9
57	2/25/2020 16:31	77.5	168702397.6
58	2/25/2020 16:31	69.6	27360325.18
59	2/25/2020 16:31	68.5	21238373.53
60	2/25/2020 16:31	58	1892872.033
61	2/25/2020 16:31	57.1	1538584.152
62	2/25/2020 16:32	53.9	736412.6747
63	2/25/2020 16:32	66.1	12221408.33
64	2/25/2020 16:32	67.7	17665309.66
65	2/25/2020 16:32	60.5	3366055.363
66	2/25/2020 16:32	75.9	116713543.5
67	2/25/2020 16:32	77	150356170.1
68	2/25/2020 16:32	59.2	2495291.313
69	2/25/2020 16:32	53.9	736412.6747
70	2/25/2020 16:32	58.4	2075492.913
71	2/25/2020 16:32	71.2	39547702.16
72	2/25/2020 16:32	64.9	9270886.298
73	2/25/2020 16:32	67.5	16870239.76
74	2/25/2020 16:32	84	753565929.5
75	2/25/2020 16:32	75.1	97078097.08

76	2/25/2020 16:32	76.3	127973855.6
77	2/25/2020 16:32	72.7	55862614.1
78	2/25/2020 16:32	74.7	88536276.8
79	2/25/2020 16:32	67.4	16486226.22
80	2/25/2020 16:32	78.5	212383735.3
81	2/25/2020 16:32	78.2	198208034.4
82	2/25/2020 16:33	59.4	2612890.77
83	2/25/2020 16:33	57.6	1726319.812
84	2/25/2020 16:33	70.2	31413856.44
85	2/25/2020 16:33	64.6	8652094.509
86	2/25/2020 16:33	74.4	82626861.1
87	2/25/2020 16:33	79.8	286497775.8
88	2/25/2020 16:33	74.3	80746044.12
89	2/25/2020 16:33	78.6	217330788
90	2/25/2020 16:33	61.2	3954770.216
91	2/25/2020 16:33	61	3776776.235
92	2/25/2020 16:33	73.2	62678883.93
93	2/25/2020 16:33	60.6	3444460.864
94	2/25/2020 16:33	76.5	134005077.6
95	2/25/2020 16:33	69.2	24952913.13
96	2/25/2020 16:33	79.8	286497775.8
97	2/25/2020 16:33	79.7	279976290.2
98	2/25/2020 16:33	72.9	58495337.99
99	2/25/2020 16:33	74.4	82626861.1
100	2/25/2020 16:33	75.1	97078097.08
101	2/25/2020 16:33	75.7	111460568.7
102	2/25/2020 16:34	72.1	48654302.92
103	2/25/2020 16:34	77.4	164862262.2
104	2/25/2020 16:34	73.3	64138862.69
105	2/25/2020 16:34	60.4	3289434.588
106	2/25/2020 16:34	56.8	1435890.277
107	2/25/2020 16:34	52.6	545910.2576
108	2/25/2020 16:34	59.1	2438491.548
109	2/25/2020 16:34	75.9	116713543.5
110	2/25/2020 16:34	74.9	92708862.98
111	2/25/2020 16:34	65.1	9707809.708
112	2/25/2020 16:34	75.7	111460568.7
113	2/25/2020 16:34	66.8	14358902.77
114	2/25/2020 16:34	69.1	24384915.48
115	2/25/2020 16:34	80.1	306987897.7
116	2/25/2020 16:34	57.1	1538584.152
117	2/25/2020 16:34	50.7	352469.2665
118	2/25/2020 16:34	51.7	443732.5165
119	2/25/2020 16:34	58.4	2075492.913
120	2/25/2020 16:34	71.9	46464498.57
121	2/25/2020 16:34	77.5	168702397.6
122	2/25/2020 16:35	80.2	314138564.4

123	2/25/2020 16:35	81.7	443732516.5
124	2/25/2020 16:35	62.9	5849533.799
125	2/25/2020 16:35	55.2	993393.3644
126	2/25/2020 16:35	68.7	22239307.24
127	2/25/2020 16:35	79.5	267375281.4
128	2/25/2020 16:35	78.5	212383735.3
129	2/25/2020 16:35	70.4	32894345.88
130	2/25/2020 16:35	80	300000000
131	2/25/2020 16:35	63.8	7196498.757
132	2/25/2020 16:35	80.1	306987897.7
133	2/25/2020 16:35	61	3776776.235
134	2/25/2020 16:35	69.5	26737528.14
135	2/25/2020 16:35	77.4	164862262.2
136	2/25/2020 16:35	72.8	57163821.54
137	2/25/2020 16:35	63.3	6413886.269
138	2/25/2020 16:35	71.7	44373251.65
139	2/25/2020 16:35	73.2	62678883.93
140	2/25/2020 16:35	61.3	4046888.648
141	2/25/2020 16:35	76.5	134005077.6
142	2/25/2020 16:36	59.7	2799762.902
143	2/25/2020 16:36	71	37767762.35
144	2/25/2020 16:36	72.6	54591025.76
145	2/25/2020 16:36	78.9	232874135
146	2/25/2020 16:36	76.9	146933645.8
147	2/25/2020 16:36	73.5	67161634.16
148	2/25/2020 16:36	74.9	92708862.98
149	2/25/2020 16:36	70.7	35246926.65
150	2/25/2020 16:36	76.8	143589027.7
151	2/25/2020 16:36	81.2	395477021.6
152	2/25/2020 16:36	80.8	360679330.4
153	2/25/2020 16:36	68.5	21238373.53
154	2/25/2020 16:36	76.6	137126456.9
155	2/25/2020 16:36	77.4	164862262.2
156	2/25/2020 16:36	79.5	267375281.4
157	2/25/2020 16:36	76.2	125060815
158	2/25/2020 16:36	79.7	279976290.2
159	2/25/2020 16:36	83.3	641388626.9
160	2/25/2020 16:36	70.3	32145579.16
161	2/25/2020 16:36	56.2	1250608.15
162	2/25/2020 16:37	64.7	8853627.68
163	2/25/2020 16:37	73.8	71964987.57
164	2/25/2020 16:37	75.7	111460568.7
165	2/25/2020 16:37	66.8	14358902.77
166	2/25/2020 16:37	57.8	1807678.758
167	2/25/2020 16:37	51.5	423761.2634
168	2/25/2020 16:37	47.7	176653.0966
169	2/25/2020 16:37	47	150356.1701

170	2/25/2020 16:37	47	150356.1701
171	2/25/2020 16:37	46.8	143589.0277
172	2/25/2020 16:37	54.2	789080.3976
173	2/25/2020 16:37	69.5	26737528.14
174	2/25/2020 16:37	77.6	172631981.2
175	2/25/2020 16:37	68.7	22239307.24
176	2/25/2020 16:37	73.1	61252138.34
177	2/25/2020 16:37	78.3	202824892.6
178	2/25/2020 16:37	73.2	62678883.93
179	2/25/2020 16:37	79.9	293171166.3
180	2/25/2020 16:37	76.8	143589027.7
181	2/25/2020 16:37	79.2	249529131.3
182	2/25/2020 16:38	77.5	168702397.6
183	2/25/2020 16:38	76.2	125060815
184	2/25/2020 16:38	75.1	97078097.08
185	2/25/2020 16:38	69.8	28649777.58
186	2/25/2020 16:38	69	23829847.04
187	2/25/2020 16:38	74.6	86520945.09
188	2/25/2020 16:38	74.1	77111873.48
189	2/25/2020 16:38	75	94868329.81
190	2/25/2020 16:38	73.5	67161634.16
191	2/25/2020 16:38	78.5	212383735.3
192	2/25/2020 16:38	77.8	180767875.8
193	2/25/2020 16:38	72.5	53348382.3
194	2/25/2020 16:38	68.6	21733078.8
195	2/25/2020 16:38	76.7	140320542.4
196	2/25/2020 16:38	70.6	34444608.64
197	2/25/2020 16:38	74.7	88536276.8
198	2/25/2020 16:38	77.8	180767875.8
199	2/25/2020 16:38	78.6	217330788
200	2/25/2020 16:38	70.4	32894345.88
201	2/25/2020 16:38	78.7	222393072.4
202	2/25/2020 16:39	69.3	25534141.15
203	2/25/2020 16:39	71.5	42376126.34
204	2/25/2020 16:39	66.1	12221408.33
205	2/25/2020 16:39	79	238298470.4
206	2/25/2020 16:39	82.6	545910257.6
207	2/25/2020 16:39	63.6	6872602.958
208	2/25/2020 16:39	73.1	61252138.34
209	2/25/2020 16:39	83.5	671616341.6
210	2/25/2020 16:39	75.6	108923416.4
211	2/25/2020 16:39	77.8	180767875.8
212	2/25/2020 16:39	68.4	20754929.13
213	2/25/2020 16:39	76.1	122214083.3
214	2/25/2020 16:39	76.1	122214083.3
215	2/25/2020 16:39	64.2	7890803.976
216	2/25/2020 16:39	76.7	140320542.4

217	2/25/2020 16:39	68.2	19820803.44
218	2/25/2020 16:39	75.9	116713543.5
219	2/25/2020 16:39	65.8	11405681.89
220	2/25/2020 16:39	80.8	360679330.4
221	2/25/2020 16:39	81.9	464644985.7
222	2/25/2020 16:40	59.8	2864977.758
223	2/25/2020 16:40	56.7	1403205.424
224	2/25/2020 16:40	54.6	865209.4509
225	2/25/2020 16:40	53.7	703268.6446
226	2/25/2020 16:40	65.3	10165324.68
227	2/25/2020 16:40	60.9	3690806.312
228	2/25/2020 16:40	59.5	2673752.814
229	2/25/2020 16:40	75	94868329.81
230	2/25/2020 16:40	73.9	73641267.47
231	2/25/2020 16:40	64.7	8853627.68
232	2/25/2020 16:40	79.7	279976290.2
233	2/25/2020 16:40	68.9	23287413.5
234	2/25/2020 16:40	68.6	21733078.8
235	2/25/2020 16:40	67.7	17665309.66
236	2/25/2020 16:40	56.1	1222140.833
237	2/25/2020 16:40	60.5	3366055.363
238	2/25/2020 16:40	76.3	127973855.6
239	2/25/2020 16:40	80.9	369080631.2
240	2/25/2020 16:40	75	94868329.81
241	2/25/2020 16:40	82.7	558626141
242	2/25/2020 16:41	77.9	184978500.6
243	2/25/2020 16:41	81.8	454068374.5
244	2/25/2020 16:41	81.4	414115279.4
245	2/25/2020 16:41	79.1	243849154.8
246	2/25/2020 16:41	76.2	125060815
247	2/25/2020 16:41	79.5	267375281.4
248	2/25/2020 16:41	74.9	92708862.98
249	2/25/2020 16:41	80.3	321455791.6
250	2/25/2020 16:41	75.7	111460568.7
251	2/25/2020 16:41	76.2	125060815
252	2/25/2020 16:41	61.5	4237612.634
253	2/25/2020 16:41	70.3	32145579.16
254	2/25/2020 16:41	72.5	53348382.3
255	2/25/2020 16:41	75.5	106444016.8
256	2/25/2020 16:41	69.4	26128907.7
257	2/25/2020 16:41	67.8	18076787.58
258	2/25/2020 16:41	80.8	360679330.4
259	2/25/2020 16:41	73.2	62678883.93
260	2/25/2020 16:41	84.6	865209450.9
261	2/25/2020 16:41	72.9	58495337.99
262	2/25/2020 16:42	77.1	153858415.2
263	2/25/2020 16:42	72.3	50947309.57

264	2/25/2020 16:42	60.1	3069878.977
265	2/25/2020 16:42	56.7	1403205.424
266	2/25/2020 16:42	65.6	10892341.64
267	2/25/2020 16:42	78.7	222393072.4
268	2/25/2020 16:42	75.9	116713543.5
269	2/25/2020 16:42	75.4	104021055.1
270	2/25/2020 16:42	77.6	172631981.2
271	2/25/2020 16:42	76.5	134005077.6
272	2/25/2020 16:42	79	238298470.4
273	2/25/2020 16:42	77.2	157442238.1
274	2/25/2020 16:42	77.5	168702397.6
275	2/25/2020 16:42	78.4	207549291.3
276	2/25/2020 16:42	75.8	114056818.9
277	2/25/2020 16:42	73	59857869.45
278	2/25/2020 16:42	59.8	2864977.758
279	2/25/2020 16:42	60.5	3366055.363
280	2/25/2020 16:42	55.2	993393.3644
281	2/25/2020 16:42	52.6	545910.2576
282	2/25/2020 16:43	50.9	369080.6312
283	2/25/2020 16:43	52.4	521340.2486
284	2/25/2020 16:43	59.3	2553414.115
285	2/25/2020 16:43	78.5	212383735.3
286	2/25/2020 16:43	81.5	423761263.4
287	2/25/2020 16:43	65.8	11405681.89
288	2/25/2020 16:43	58.8	2275732.725
289	2/25/2020 16:43	79.2	249529131.3
290	2/25/2020 16:43	83.1	612521383.4
291	2/25/2020 16:43	78.9	232874135
292	2/25/2020 16:43	67.3	16110953.89
293	2/25/2020 16:43	77.8	180767875.8
294	2/25/2020 16:43	64.8	9059855.161
295	2/25/2020 16:43	75.6	108923416.4
296	2/25/2020 16:43	75.4	104021055.1
297	2/25/2020 16:43	72.7	55862614.1
298	2/25/2020 16:43	61.6	4336319.312
299	2/25/2020 16:43	75.8	114056818.9
300	2/25/2020 16:43	82.7	558626141

Noise Measurement 3

Data Logger 2		
Duration (seconds)		3
Weighting	A	
Response	SLOW	
Range	40-100	
L05		80.6
L10		79.4
L50		75.0
L90		64.5
L95		60.8
Lmax		97.7
Time		2/26/2020 15:51
SEL		105.5
Leq		76.0

Leq (Manual) **76.17889**

No.s	Date Time	dB	Sound Energy
1	2/26/2020 15:49	68.6	21733078.8
2	2/26/2020 15:49	75.9	116713543.5
3	2/26/2020 15:49	72.9	58495337.99
4	2/26/2020 15:49	71	37767762.35
5	2/26/2020 15:49	77.4	164862262.2
6	2/26/2020 15:49	70	30000000
7	2/26/2020 15:49	78.6	217330788
8	2/26/2020 15:49	78.3	202824892.6
9	2/26/2020 15:49	71.6	43363193.12
10	2/26/2020 15:49	70.7	35246926.65
11	2/26/2020 15:49	75.8	114056818.9
12	2/26/2020 15:49	65.4	10402105.51
13	2/26/2020 15:49	78.2	198208034.4
14	2/26/2020 15:49	73.8	71964987.57
15	2/26/2020 15:50	73.1	61252138.34
16	2/26/2020 15:50	75	94868329.81
17	2/26/2020 15:50	76.6	137126456.9
18	2/26/2020 15:50	78.9	232874135
19	2/26/2020 15:50	76	119432151.2
20	2/26/2020 15:50	79.7	279976290.2
21	2/26/2020 15:50	75.3	101653246.8
22	2/26/2020 15:50	73.4	65632848.72
23	2/26/2020 15:50	78.6	217330788
24	2/26/2020 15:50	77.8	180767875.8
25	2/26/2020 15:50	77.2	157442238.1
26	2/26/2020 15:50	77.4	164862262.2
27	2/26/2020 15:50	75.7	111460568.7
28	2/26/2020 15:50	74	75356592.95

29	2/26/2020 15:50	77.6	172631981.2
30	2/26/2020 15:50	74.2	78908039.76
31	2/26/2020 15:50	76.2	125060815
32	2/26/2020 15:50	78.9	232874135
33	2/26/2020 15:50	75.7	111460568.7
34	2/26/2020 15:50	77.2	157442238.1
35	2/26/2020 15:51	79.9	293171166.3
36	2/26/2020 15:51	74.1	77111873.48
37	2/26/2020 15:51	73.3	64138862.69
38	2/26/2020 15:51	70.6	34444608.64
39	2/26/2020 15:51	72.5	53348382.3
40	2/26/2020 15:51	73.5	67161634.16
41	2/26/2020 15:51	73.3	64138862.69
42	2/26/2020 15:51	74.4	82626861.1
43	2/26/2020 15:51	72.5	53348382.3
44	2/26/2020 15:51	68.9	23287413.5
45	2/26/2020 15:51	56.8	1435890.277
46	2/26/2020 15:51	71	37767762.35
47	2/26/2020 15:51	76.4	130954749.7
48	2/26/2020 15:51	65	9486832.981
49	2/26/2020 15:51	61	3776776.235
50	2/26/2020 15:51	69.4	26128907.7
51	2/26/2020 15:51	75.2	99339336.44
52	2/26/2020 15:51	76.8	143589027.7
53	2/26/2020 15:51	78.4	207549291.3
54	2/26/2020 15:51	79	238298470.4
55	2/26/2020 15:52	77.2	157442238.1
56	2/26/2020 15:52	78.5	212383735.3
57	2/26/2020 15:52	80.5	336605536.3
58	2/26/2020 15:52	85.2	993393364.4
59	2/26/2020 15:52	76	119432151.2
60	2/26/2020 15:52	68.6	21733078.8
61	2/26/2020 15:52	70.9	36908063.12
62	2/26/2020 15:52	74.7	88536276.8
63	2/26/2020 15:52	69.4	26128907.7
64	2/26/2020 15:52	74.7	88536276.8
65	2/26/2020 15:52	68.9	23287413.5
66	2/26/2020 15:52	69.6	27360325.18
67	2/26/2020 15:52	65.9	11671354.35
68	2/26/2020 15:52	69.7	27997629.02
69	2/26/2020 15:52	73.8	71964987.57
70	2/26/2020 15:52	72.4	52134024.86
71	2/26/2020 15:52	76	119432151.2
72	2/26/2020 15:52	77.1	153858415.2
73	2/26/2020 15:52	75	94868329.81
74	2/26/2020 15:52	76.7	140320542.4
75	2/26/2020 15:53	73.4	65632848.72

76	2/26/2020 15:53	74.4	82626861.1
77	2/26/2020 15:53	77.8	180767875.8
78	2/26/2020 15:53	71.2	39547702.16
79	2/26/2020 15:53	75.9	116713543.5
80	2/26/2020 15:53	76.2	125060815
81	2/26/2020 15:53	75.4	104021055.1
82	2/26/2020 15:53	73	59857869.45
83	2/26/2020 15:53	76.5	134005077.6
84	2/26/2020 15:53	77.6	172631981.2
85	2/26/2020 15:53	62.1	4865430.292
86	2/26/2020 15:53	71.3	40468886.48
87	2/26/2020 15:53	69.4	26128907.7
88	2/26/2020 15:53	72.8	57163821.54
89	2/26/2020 15:53	74	75356592.95
90	2/26/2020 15:53	78	189287203.3
91	2/26/2020 15:53	78.2	198208034.4
92	2/26/2020 15:53	80.1	306987897.7
93	2/26/2020 15:53	71.4	41411527.94
94	2/26/2020 15:53	69.8	28649777.58
95	2/26/2020 15:54	68.9	23287413.5
96	2/26/2020 15:54	79.1	243849154.8
97	2/26/2020 15:54	72.1	48654302.92
98	2/26/2020 15:54	80.6	344446086.4
99	2/26/2020 15:54	77.8	180767875.8
100	2/26/2020 15:54	69.2	24952913.13
101	2/26/2020 15:54	72.4	52134024.86
102	2/26/2020 15:54	78.7	222393072.4
103	2/26/2020 15:54	74	75356592.95
104	2/26/2020 15:54	66.4	13095474.97
105	2/26/2020 15:54	80	300000000
106	2/26/2020 15:54	77.2	157442238.1
107	2/26/2020 15:54	77.4	164862262.2
108	2/26/2020 15:54	74.8	90598551.61
109	2/26/2020 15:54	68.3	20282489.26
110	2/26/2020 15:54	65	9486832.981
111	2/26/2020 15:54	72.8	57163821.54
112	2/26/2020 15:54	67.2	15744223.81
113	2/26/2020 15:54	63.4	6563284.872
114	2/26/2020 15:54	56.3	1279738.556
115	2/26/2020 15:55	63.4	6563284.872
116	2/26/2020 15:55	74.6	86520945.09
117	2/26/2020 15:55	65.6	10892341.64
118	2/26/2020 15:55	75.9	116713543.5
119	2/26/2020 15:55	78.7	222393072.4
120	2/26/2020 15:55	81.3	404688864.8
121	2/26/2020 15:55	80.6	344446086.4
122	2/26/2020 15:55	71.8	45406837.45

123	2/26/2020 15:55	70.2	31413856.44
124	2/26/2020 15:55	60.5	3366055.363
125	2/26/2020 15:55	68	18928720.33
126	2/26/2020 15:55	76.4	130954749.7
127	2/26/2020 15:55	75.3	101653246.8
128	2/26/2020 15:55	73.8	71964987.57
129	2/26/2020 15:55	78.2	198208034.4
130	2/26/2020 15:55	74.5	84551487.94
131	2/26/2020 15:55	76	119432151.2
132	2/26/2020 15:55	78.4	207549291.3
133	2/26/2020 15:55	79.5	267375281.4
134	2/26/2020 15:55	77	150356170.1
135	2/26/2020 15:56	77	150356170.1
136	2/26/2020 15:56	68.2	19820803.44
137	2/26/2020 15:56	78.9	232874135
138	2/26/2020 15:56	69.7	27997629.02
139	2/26/2020 15:56	76.5	134005077.6
140	2/26/2020 15:56	82.4	521340248.6
141	2/26/2020 15:56	75.2	99339336.44
142	2/26/2020 15:56	77.4	164862262.2
143	2/26/2020 15:56	77.8	180767875.8
144	2/26/2020 15:56	78.9	232874135
145	2/26/2020 15:56	73.1	61252138.34
146	2/26/2020 15:56	77.8	180767875.8
147	2/26/2020 15:56	75.4	104021055.1
148	2/26/2020 15:56	67.7	17665309.66
149	2/26/2020 15:56	74.3	80746044.12
150	2/26/2020 15:56	69.1	24384915.48
151	2/26/2020 15:56	59.5	2673752.814
152	2/26/2020 15:56	69.3	25534141.15
153	2/26/2020 15:56	75.8	114056818.9
154	2/26/2020 15:56	72.8	57163821.54
155	2/26/2020 15:57	84.3	807460441.2
156	2/26/2020 15:57	69.9	29317116.63
157	2/26/2020 15:57	65.9	11671354.35
158	2/26/2020 15:57	72.4	52134024.86
159	2/26/2020 15:57	73.7	70326864.46
160	2/26/2020 15:57	64.7	8853627.68
161	2/26/2020 15:57	60.4	3289434.588
162	2/26/2020 15:57	55.7	1114605.687
163	2/26/2020 15:57	53.7	703268.6446
164	2/26/2020 15:57	55.5	1064440.168
165	2/26/2020 15:57	65.4	10402105.51
166	2/26/2020 15:57	81.5	423761263.4
167	2/26/2020 15:57	68.8	22757327.25
168	2/26/2020 15:57	81.9	464644985.7
169	2/26/2020 15:57	79.1	243849154.8

170	2/26/2020 15:57	80.8	360679330.4
171	2/26/2020 15:57	74.1	77111873.48
172	2/26/2020 15:57	77.9	184978500.6
173	2/26/2020 15:57	76.8	143589027.7
174	2/26/2020 15:57	78.6	217330788
175	2/26/2020 15:58	76.5	134005077.6
176	2/26/2020 15:58	77.3	161109538.9
177	2/26/2020 15:58	78.9	232874135
178	2/26/2020 15:58	68.1	19369626.87
179	2/26/2020 15:58	62.7	5586261.41
180	2/26/2020 15:58	63.2	6267888.393
181	2/26/2020 15:58	73.4	65632848.72
182	2/26/2020 15:58	65.7	11146056.87
183	2/26/2020 15:58	65	9486832.981
184	2/26/2020 15:58	76.7	140320542.4
185	2/26/2020 15:58	77.5	168702397.6
186	2/26/2020 15:58	77.6	172631981.2
187	2/26/2020 15:58	77.2	157442238.1
188	2/26/2020 15:58	65.6	10892341.64
189	2/26/2020 15:58	62.7	5586261.41
190	2/26/2020 15:58	75.3	101653246.8
191	2/26/2020 15:58	71.6	43363193.12
192	2/26/2020 15:58	78.5	212383735.3
193	2/26/2020 15:58	73.7	70326864.46
194	2/26/2020 15:58	72.1	48654302.92
195	2/26/2020 15:59	77.9	184978500.6
196	2/26/2020 15:59	78.1	193696268.7
197	2/26/2020 15:59	77.7	176653096.6
198	2/26/2020 15:59	72.8	57163821.54
199	2/26/2020 15:59	75.3	101653246.8
200	2/26/2020 15:59	77.3	161109538.9
201	2/26/2020 15:59	76.2	125060815
202	2/26/2020 15:59	69.5	26737528.14
203	2/26/2020 15:59	69.7	27997629.02
204	2/26/2020 15:59	81.9	464644985.7
205	2/26/2020 15:59	74.7	88536276.8
206	2/26/2020 15:59	70.7	35246926.65
207	2/26/2020 15:59	76.7	140320542.4
208	2/26/2020 15:59	73.9	73641267.47
209	2/26/2020 15:59	71.9	46464498.57
210	2/26/2020 15:59	75.1	97078097.08
211	2/26/2020 15:59	66.3	12797385.56
212	2/26/2020 15:59	76.2	125060815
213	2/26/2020 15:59	76.5	134005077.6
214	2/26/2020 15:59	82.1	486543029.2
215	2/26/2020 16:00	79.9	293171166.3
216	2/26/2020 16:00	70.3	32145579.16

217	2/26/2020 16:00	62.8	5716382.154
218	2/26/2020 16:00	60.2	3141385.644
219	2/26/2020 16:00	73.7	70326864.46
220	2/26/2020 16:00	75.3	101653246.8
221	2/26/2020 16:00	79.8	286497775.8
222	2/26/2020 16:00	78.7	222393072.4
223	2/26/2020 16:00	76.2	125060815
224	2/26/2020 16:00	68.9	23287413.5
225	2/26/2020 16:00	76.9	146933645.8
226	2/26/2020 16:00	80.1	306987897.7
227	2/26/2020 16:00	69.9	29317116.63
228	2/26/2020 16:00	73.3	64138862.69
229	2/26/2020 16:00	79.9	293171166.3
230	2/26/2020 16:00	76	119432151.2
231	2/26/2020 16:00	77	150356170.1
232	2/26/2020 16:00	77	150356170.1
233	2/26/2020 16:00	78.5	212383735.3
234	2/26/2020 16:00	73.5	67161634.16
235	2/26/2020 16:01	78.7	222393072.4
236	2/26/2020 16:01	75	94868329.81
237	2/26/2020 16:01	69.2	24952913.13
238	2/26/2020 16:01	71.6	43363193.12
239	2/26/2020 16:01	59.2	2495291.313
240	2/26/2020 16:01	64.6	8652094.509
241	2/26/2020 16:01	73.7	70326864.46
242	2/26/2020 16:01	77.8	180767875.8
243	2/26/2020 16:01	81.7	443732516.5
244	2/26/2020 16:01	63.8	7196498.757
245	2/26/2020 16:01	67.9	18497850.06
246	2/26/2020 16:01	74.6	86520945.09
247	2/26/2020 16:01	77.6	172631981.2
248	2/26/2020 16:01	72.1	48654302.92
249	2/26/2020 16:01	65.2	9933933.644
250	2/26/2020 16:01	82.6	545910257.6
251	2/26/2020 16:01	66.4	13095474.97
252	2/26/2020 16:01	77.9	184978500.6
253	2/26/2020 16:01	64.8	9059855.161
254	2/26/2020 16:01	65.1	9707809.708
255	2/26/2020 16:02	73	59857869.45
256	2/26/2020 16:02	78	189287203.3
257	2/26/2020 16:02	78.8	227573272.5
258	2/26/2020 16:02	72.9	58495337.99
259	2/26/2020 16:02	78.6	217330788
260	2/26/2020 16:02	69.6	27360325.18
261	2/26/2020 16:02	76.2	125060815
262	2/26/2020 16:02	67.5	16870239.76
263	2/26/2020 16:02	60.8	3606793.304

264	2/26/2020 16:02	73.4	65632848.72
265	2/26/2020 16:02	70.5	33660553.63
266	2/26/2020 16:02	77.1	153858415.2
267	2/26/2020 16:02	80.9	369080631.2
268	2/26/2020 16:02	73.8	71964987.57
269	2/26/2020 16:02	74	75356592.95
270	2/26/2020 16:02	77.5	168702397.6
271	2/26/2020 16:02	75.9	116713543.5
272	2/26/2020 16:02	81.3	404688864.8
273	2/26/2020 16:02	78.1	193696268.7
274	2/26/2020 16:02	77.1	153858415.2
275	2/26/2020 16:03	78.5	212383735.3
276	2/26/2020 16:03	75	94868329.81
277	2/26/2020 16:03	77.2	157442238.1
278	2/26/2020 16:03	77.6	172631981.2
279	2/26/2020 16:03	81.2	395477021.6
280	2/26/2020 16:03	77.2	157442238.1
281	2/26/2020 16:03	64.8	9059855.161
282	2/26/2020 16:03	77.9	184978500.6
283	2/26/2020 16:03	77.9	184978500.6
284	2/26/2020 16:03	75.6	108923416.4
285	2/26/2020 16:03	70	30000000
286	2/26/2020 16:03	78.5	212383735.3
287	2/26/2020 16:03	60.7	3524692.665
288	2/26/2020 16:03	64.2	7890803.976
289	2/26/2020 16:03	81.2	395477021.6
290	2/26/2020 16:03	79.2	249529131.3
291	2/26/2020 16:03	75.3	101653246.8
292	2/26/2020 16:03	83.4	656328487.2
293	2/26/2020 16:03	74.8	90598551.61
294	2/26/2020 16:03	64.9	9270886.298
295	2/26/2020 16:04	63.3	6413886.269
296	2/26/2020 16:04	76	119432151.2
297	2/26/2020 16:04	80.1	306987897.7
298	2/26/2020 16:04	79.6	273603251.8
299	2/26/2020 16:04	61.1	3864748.655
300	2/26/2020 16:04	65.7	11146056.87

Noise Measurement 4

Data Logger 2	
Duration (seconds)	3
Weighting	A
Response	SLOW
Range	40-100
L05	76
L10	75.1
L50	69.2
L90	53.3
L95	50.9
Lmax	85.5
Time	2/26/2020 16:46
SEL	99.5
Leq	70

Leq (Manual) **71.41745**

No.s	Date Time	dB	Sound Energy
1	2/26/2020 16:43	76.3	127973855.6
2	2/26/2020 16:43	70.1	30698789.77
3	2/26/2020 16:43	75.2	99339336.44
4	2/26/2020 16:43	57.5	1687023.976
5	2/26/2020 16:43	69.5	26737528.14
6	2/26/2020 16:43	73.3	64138862.69
7	2/26/2020 16:43	74	75356592.95
8	2/26/2020 16:43	61.8	4540683.745
9	2/26/2020 16:43	70.1	30698789.77
10	2/26/2020 16:43	73.6	68726029.58
11	2/26/2020 16:43	73.7	70326864.46
12	2/26/2020 16:43	76.6	137126456.9
13	2/26/2020 16:43	76.5	134005077.6
14	2/26/2020 16:43	70.1	30698789.77
15	2/26/2020 16:43	70.3	32145579.16
16	2/26/2020 16:43	69.8	28649777.58
17	2/26/2020 16:43	57.8	1807678.758
18	2/26/2020 16:43	56.4	1309547.497
19	2/26/2020 16:43	69	23829847.04
20	2/26/2020 16:44	60.8	3606793.304
21	2/26/2020 16:44	67.2	15744223.81
22	2/26/2020 16:44	68.5	21238373.53
23	2/26/2020 16:44	75.6	108923416.4
24	2/26/2020 16:44	69.9	29317116.63
25	2/26/2020 16:44	65.8	11405681.89
26	2/26/2020 16:44	64.4	8262686.11
27	2/26/2020 16:44	69.3	25534141.15
28	2/26/2020 16:44	51.1	386474.8655

29	2/26/2020 16:44	59.2	2495291.313
30	2/26/2020 16:44	71.5	42376126.34
31	2/26/2020 16:44	63.6	6872602.958
32	2/26/2020 16:44	76.7	140320542.4
33	2/26/2020 16:44	77.2	157442238.1
34	2/26/2020 16:44	70.5	33660553.63
35	2/26/2020 16:44	63.6	6872602.958
36	2/26/2020 16:44	50.1	306987.8977
37	2/26/2020 16:44	48	189287.2033
38	2/26/2020 16:44	50.2	314138.5644
39	2/26/2020 16:44	70.9	36908063.12
40	2/26/2020 16:45	55.5	1064440.168
41	2/26/2020 16:45	59.4	2612890.77
42	2/26/2020 16:45	75.4	104021055.1
43	2/26/2020 16:45	56.2	1250608.15
44	2/26/2020 16:45	68.3	20282489.26
45	2/26/2020 16:45	67.4	16486226.22
46	2/26/2020 16:45	66.2	12506081.5
47	2/26/2020 16:45	63.9	7364126.747
48	2/26/2020 16:45	54	753565.9295
49	2/26/2020 16:45	53.9	736412.6747
50	2/26/2020 16:45	63.3	6413886.269
51	2/26/2020 16:45	72.8	57163821.54
52	2/26/2020 16:45	73.6	68726029.58
53	2/26/2020 16:45	70.9	36908063.12
54	2/26/2020 16:45	74.1	77111873.48
55	2/26/2020 16:45	71	37767762.35
56	2/26/2020 16:45	74.3	80746044.12
57	2/26/2020 16:45	74.5	84551487.94
58	2/26/2020 16:45	73.5	67161634.16
59	2/26/2020 16:45	73.8	71964987.57
60	2/26/2020 16:46	68	18928720.33
61	2/26/2020 16:46	67.1	15385841.52
62	2/26/2020 16:46	70.9	36908063.12
63	2/26/2020 16:46	67.1	15385841.52
64	2/26/2020 16:46	69.7	27997629.02
65	2/26/2020 16:46	68.1	19369626.87
66	2/26/2020 16:46	59.6	2736032.518
67	2/26/2020 16:46	58.9	2328741.35
68	2/26/2020 16:46	74.7	88536276.8
69	2/26/2020 16:46	70.7	35246926.65
70	2/26/2020 16:46	82.8	571638215.4
71	2/26/2020 16:46	73.6	68726029.58
72	2/26/2020 16:46	72.4	52134024.86
73	2/26/2020 16:46	71.2	39547702.16
74	2/26/2020 16:46	67.5	16870239.76
75	2/26/2020 16:46	77.9	184978500.6

76	2/26/2020 16:46	66.8	14358902.77
77	2/26/2020 16:46	59.2	2495291.313
78	2/26/2020 16:46	66.4	13095474.97
79	2/26/2020 16:46	70.9	36908063.12
80	2/26/2020 16:47	71.1	38647486.55
81	2/26/2020 16:47	71.7	44373251.65
82	2/26/2020 16:47	62.7	5586261.41
83	2/26/2020 16:47	70	30000000
84	2/26/2020 16:47	59.5	2673752.814
85	2/26/2020 16:47	71.4	41411527.94
86	2/26/2020 16:47	61.4	4141152.794
87	2/26/2020 16:47	59.1	2438491.548
88	2/26/2020 16:47	67.6	17263198.12
89	2/26/2020 16:47	59.7	2799762.902
90	2/26/2020 16:47	68.7	22239307.24
91	2/26/2020 16:47	73.5	67161634.16
92	2/26/2020 16:47	71.4	41411527.94
93	2/26/2020 16:47	68.8	22757327.25
94	2/26/2020 16:47	56.7	1403205.424
95	2/26/2020 16:47	69.7	27997629.02
96	2/26/2020 16:47	70.4	32894345.88
97	2/26/2020 16:47	74.5	84551487.94
98	2/26/2020 16:47	67.3	16110953.89
99	2/26/2020 16:47	72.2	49787607.22
100	2/26/2020 16:48	74.5	84551487.94
101	2/26/2020 16:48	70.4	32894345.88
102	2/26/2020 16:48	63.4	6563284.872
103	2/26/2020 16:48	52	475467.9577
104	2/26/2020 16:48	67.8	18076787.58
105	2/26/2020 16:48	56.1	1222140.833
106	2/26/2020 16:48	46.7	140320.5424
107	2/26/2020 16:48	48.2	198208.0344
108	2/26/2020 16:48	57	1503561.701
109	2/26/2020 16:48	78.2	198208034.4
110	2/26/2020 16:48	74.2	78908039.76
111	2/26/2020 16:48	68.7	22239307.24
112	2/26/2020 16:48	72.8	57163821.54
113	2/26/2020 16:48	76.3	127973855.6
114	2/26/2020 16:48	72	47546795.77
115	2/26/2020 16:48	73.4	65632848.72
116	2/26/2020 16:48	69.7	27997629.02
117	2/26/2020 16:48	71.8	45406837.45
118	2/26/2020 16:48	75.9	116713543.5
119	2/26/2020 16:48	59.7	2799762.902
120	2/26/2020 16:49	49.6	273603.2518
121	2/26/2020 16:49	50.4	328943.4588
122	2/26/2020 16:49	63.2	6267888.393

123	2/26/2020 16:49	54.1	771118.7348
124	2/26/2020 16:49	70.4	32894345.88
125	2/26/2020 16:49	68.5	21238373.53
126	2/26/2020 16:49	67.1	15385841.52
127	2/26/2020 16:49	77.3	161109538.9
128	2/26/2020 16:49	74.9	92708862.98
129	2/26/2020 16:49	77.9	184978500.6
130	2/26/2020 16:49	65.5	10644401.68
131	2/26/2020 16:49	56.3	1279738.556
132	2/26/2020 16:49	52.9	584953.3799
133	2/26/2020 16:49	51.5	423761.2634
134	2/26/2020 16:49	51.8	454068.3745
135	2/26/2020 16:49	56.6	1371264.569
136	2/26/2020 16:49	67	15035617.01
137	2/26/2020 16:49	52.1	486543.0292
138	2/26/2020 16:49	51.7	443732.5165
139	2/26/2020 16:49	69.3	25534141.15
140	2/26/2020 16:50	75.1	97078097.08
141	2/26/2020 16:50	53.3	641388.6269
142	2/26/2020 16:50	46.6	137126.4569
143	2/26/2020 16:50	45.1	97078.09708
144	2/26/2020 16:50	50.1	306987.8977
145	2/26/2020 16:50	73.6	68726029.58
146	2/26/2020 16:50	56.7	1403205.424
147	2/26/2020 16:50	51	377677.6235
148	2/26/2020 16:50	69.9	29317116.63
149	2/26/2020 16:50	64.9	9270886.298
150	2/26/2020 16:50	76.7	140320542.4
151	2/26/2020 16:50	53.3	641388.6269
152	2/26/2020 16:50	68.2	19820803.44
153	2/26/2020 16:50	69.9	29317116.63
154	2/26/2020 16:50	65.5	10644401.68
155	2/26/2020 16:50	68.7	22239307.24
156	2/26/2020 16:50	61.3	4046888.648
157	2/26/2020 16:50	69.7	27997629.02
158	2/26/2020 16:50	57.8	1807678.758
159	2/26/2020 16:50	72.3	50947309.57
160	2/26/2020 16:51	72.6	54591025.76
161	2/26/2020 16:51	73.9	73641267.47
162	2/26/2020 16:51	73.2	62678883.93
163	2/26/2020 16:51	72.9	58495337.99
164	2/26/2020 16:51	72	47546795.77
165	2/26/2020 16:51	76.5	134005077.6
166	2/26/2020 16:51	72	47546795.77
167	2/26/2020 16:51	70.6	34444608.64
168	2/26/2020 16:51	75.8	114056818.9
169	2/26/2020 16:51	73.4	65632848.72

170	2/26/2020 16:51	71.4	41411527.94
171	2/26/2020 16:51	70.2	31413856.44
172	2/26/2020 16:51	75.8	114056818.9
173	2/26/2020 16:51	73.2	62678883.93
174	2/26/2020 16:51	63.3	6413886.269
175	2/26/2020 16:51	54.5	845514.8794
176	2/26/2020 16:51	52.7	558626.141
177	2/26/2020 16:51	55.4	1040210.551
178	2/26/2020 16:51	62.4	5213402.486
179	2/26/2020 16:51	75.1	97078097.08
180	2/26/2020 16:52	75.1	97078097.08
181	2/26/2020 16:52	75.1	97078097.08
182	2/26/2020 16:52	72.5	53348382.3
183	2/26/2020 16:52	69.9	29317116.63
184	2/26/2020 16:52	71.9	46464498.57
185	2/26/2020 16:52	69	23829847.04
186	2/26/2020 16:52	70.9	36908063.12
187	2/26/2020 16:52	61.8	4540683.745
188	2/26/2020 16:52	65.1	9707809.708
189	2/26/2020 16:52	77.8	180767875.8
190	2/26/2020 16:52	71.6	43363193.12
191	2/26/2020 16:52	72.6	54591025.76
192	2/26/2020 16:52	70.8	36067933.04
193	2/26/2020 16:52	65.9	11671354.35
194	2/26/2020 16:52	69.2	24952913.13
195	2/26/2020 16:52	69.7	27997629.02
196	2/26/2020 16:52	66.4	13095474.97
197	2/26/2020 16:52	55.8	1140568.189
198	2/26/2020 16:52	51.1	386474.8655
199	2/26/2020 16:52	50.9	369080.6312
200	2/26/2020 16:53	60.4	3289434.588
201	2/26/2020 16:53	66.1	12221408.33
202	2/26/2020 16:53	56	1194321.512
203	2/26/2020 16:53	69.4	26128907.7
204	2/26/2020 16:53	72	47546795.77
205	2/26/2020 16:53	73.3	64138862.69
206	2/26/2020 16:53	73.7	70326864.46
207	2/26/2020 16:53	71.6	43363193.12
208	2/26/2020 16:53	60.5	3366055.363
209	2/26/2020 16:53	68.5	21238373.53
210	2/26/2020 16:53	72.1	48654302.92
211	2/26/2020 16:53	64.8	9059855.161
212	2/26/2020 16:53	73.7	70326864.46
213	2/26/2020 16:53	74.3	80746044.12
214	2/26/2020 16:53	59.9	2931711.663
215	2/26/2020 16:53	51.3	404688.8648
216	2/26/2020 16:53	64.3	8074604.412

217	2/26/2020 16:53	64.8	9059855.161
218	2/26/2020 16:53	49.9	293171.1663
219	2/26/2020 16:53	58	1892872.033
220	2/26/2020 16:54	72.4	52134024.86
221	2/26/2020 16:54	72.9	58495337.99
222	2/26/2020 16:54	69.5	26737528.14
223	2/26/2020 16:54	57.8	1807678.758
224	2/26/2020 16:54	68.5	21238373.53
225	2/26/2020 16:54	62.2	4978760.722
226	2/26/2020 16:54	73.7	70326864.46
227	2/26/2020 16:54	69.2	24952913.13
228	2/26/2020 16:54	71.1	38647486.55
229	2/26/2020 16:54	71.7	44373251.65
230	2/26/2020 16:54	68.2	19820803.44
231	2/26/2020 16:54	58.6	2173307.88
232	2/26/2020 16:54	67.7	17665309.66
233	2/26/2020 16:54	72.2	49787607.22
234	2/26/2020 16:54	76	119432151.2
235	2/26/2020 16:54	61.3	4046888.648
236	2/26/2020 16:54	50.4	328943.4588
237	2/26/2020 16:54	50.7	352469.2665
238	2/26/2020 16:54	69.8	28649777.58
239	2/26/2020 16:54	77.8	180767875.8
240	2/26/2020 16:55	72.7	55862614.1
241	2/26/2020 16:55	73.6	68726029.58
242	2/26/2020 16:55	76.7	140320542.4
243	2/26/2020 16:55	71.5	42376126.34
244	2/26/2020 16:55	68.4	20754929.13
245	2/26/2020 16:55	74.7	88536276.8
246	2/26/2020 16:55	69	23829847.04
247	2/26/2020 16:55	66.2	12506081.5
248	2/26/2020 16:55	67.3	16110953.89
249	2/26/2020 16:55	63.1	6125213.834
250	2/26/2020 16:55	72.2	49787607.22
251	2/26/2020 16:55	52.6	545910.2576
252	2/26/2020 16:55	52.9	584953.3799
253	2/26/2020 16:55	66.8	14358902.77
254	2/26/2020 16:55	75	94868329.81
255	2/26/2020 16:55	70.7	35246926.65
256	2/26/2020 16:55	70.6	34444608.64
257	2/26/2020 16:55	74.7	88536276.8
258	2/26/2020 16:55	69	23829847.04
259	2/26/2020 16:55	65.9	11671354.35
260	2/26/2020 16:56	68.9	23287413.5
261	2/26/2020 16:56	64.2	7890803.976
262	2/26/2020 16:56	75.2	99339336.44
263	2/26/2020 16:56	74.3	80746044.12

264	2/26/2020 16:56	72.5	53348382.3
265	2/26/2020 16:56	66.7	14032054.24
266	2/26/2020 16:56	66.8	14358902.77
267	2/26/2020 16:56	69.1	24384915.48
268	2/26/2020 16:56	58.9	2328741.35
269	2/26/2020 16:56	71.4	41411527.94
270	2/26/2020 16:56	70.1	30698789.77
271	2/26/2020 16:56	60.8	3606793.304
272	2/26/2020 16:56	67.5	16870239.76
273	2/26/2020 16:56	79.3	255341411.5
274	2/26/2020 16:56	69.6	27360325.18
275	2/26/2020 16:56	75.1	97078097.08
276	2/26/2020 16:56	70.2	31413856.44
277	2/26/2020 16:56	67.7	17665309.66
278	2/26/2020 16:56	59.5	2673752.814
279	2/26/2020 16:56	69.8	28649777.58
280	2/26/2020 16:57	56.8	1435890.277
281	2/26/2020 16:57	60.1	3069878.977
282	2/26/2020 16:57	61.8	4540683.745
283	2/26/2020 16:57	53.4	656328.4872
284	2/26/2020 16:57	60.2	3141385.644
285	2/26/2020 16:57	71.1	38647486.55
286	2/26/2020 16:57	70.3	32145579.16
287	2/26/2020 16:57	62.8	5716382.154
288	2/26/2020 16:57	69.1	24384915.48
289	2/26/2020 16:57	73.7	70326864.46
290	2/26/2020 16:57	71.7	44373251.65
291	2/26/2020 16:57	71.9	46464498.57
292	2/26/2020 16:57	72.9	58495337.99
293	2/26/2020 16:57	74.8	90598551.61
294	2/26/2020 16:57	71.3	40468886.48
295	2/26/2020 16:57	72.1	48654302.92
296	2/26/2020 16:57	82.6	545910257.6
297	2/26/2020 16:57	75.1	97078097.08
298	2/26/2020 16:57	73.7	70326864.46
299	2/26/2020 16:57	73.3	64138862.69
300	2/26/2020 16:58	75.4	104021055.1

Appendix G

Roadway Construction Noise Model

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 03/06/2020
Case Description: Carmel Valley Manor - Pipeline

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residences on Carmel Valley Road	Residential	76.0	76.0	76.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compactor (ground)	No	20		83.2	50.0	0.0
Paver	No	50		77.2	50.0	0.0
Concrete Saw	No	20		89.6	50.0	0.0

Results

Equipment	Calculated (dBA) Lmax	Leq	Noise Limits (dBA) Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Noise Limit Exceedance (dBA) Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq
Compactor (ground)	83.2	76.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	77.2	74.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Saw	89.6	82.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	89.6	84.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residences on Valley Greens Drive	Residential	59.4	59.4	59.4

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)

Compactor (ground)	No	20	83.2	50.0	0.0
Paver	No	50	77.2	50.0	0.0
Concrete Saw	No	20	89.6	50.0	0.0

Results

			Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compactor (ground)	83.2	76.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	77.2	74.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Saw	89.6	82.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	89.6	84.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 03/06/2020
Case Description: Carmel Valley Manor - Pump Station

**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Residence on Lake Place	Residential	59.4	59.4	59.4

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	50.0	0.0
Compactor (ground)	No	20		83.2	50.0	0.0
Paver	No	50		77.2	50.0	0.0

Results

Equipment	Calculated (dBA) Lmax	Calculated (dBA) Leq	Noise Limits (dBA) Day Lmax	Noise Limits (dBA) Day Leq	Noise Limits (dBA) Evening Lmax	Noise Limits (dBA) Evening Leq	Noise Limits (dBA) Night Lmax	Noise Limits (dBA) Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Noise Limit Exceedance (dBA) Day Leq	Noise Limit Exceedance (dBA) Evening Lmax	Noise Limit Exceedance (dBA) Evening Leq	Noise Limit Exceedance (dBA) Night Lmax	Noise Limit Exceedance (dBA) Night Leq
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compactor (ground)	83.2	76.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	77.2	74.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	83.2	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 03/20/2020
Case Description: Carmel Valley Manor - Pipeline

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residences on Carmel Valley Road	Residential	76.0	76.0	76.0

Equipment

Description	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)
Compactor (ground)	No	20		83.2	40.0	0.0
Paver	No	50		77.2	40.0	0.0
Concrete Saw	No	20		89.6	40.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compactor (ground)	85.2	78.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	79.2	76.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Saw	91.5	84.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	91.5	85.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 03/20/2020
Case Description: Carmel Valley Manor - Pump Station

**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Residence on Lake Place	Residential	59.4	59.4	59.4

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	275.0	0.0
Compactor (ground)	No	20		83.2	275.0	0.0
Paver	No	50		77.2	275.0	0.0

Results

	Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	62.8	58.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compactor (ground)	68.4	61.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	62.4	59.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	68.4	64.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Appendix H

AB 52 Tribal Consultation Files

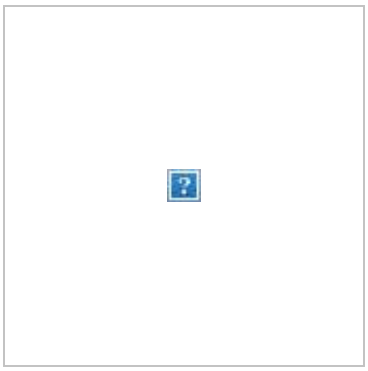
From: Kristina Pacheco
To: ramirez.louise@yahoo.com
Cc: Rachel; Domine Barringer
Subject: Notification of proposed project - Carmel Area Wastewater District
Date: Thursday, April 2, 2020 2:57:00 PM
Attachments: image001.png
Chairperson Miranda-Ramirez.pdf

Chairperson Miranda-Ramirez-

Please review the attached letter regarding a proposed project from our organization. If you have any questions please call our Principal Engineer, Rachél Lather, at 831-624-1248.

Thank you,

Kristina Pacheco
Administrative Assistant/Board Clerk
Carmel Area Wastewater District
(831) 624-1248 x201 office
pacheco@cawd.org



Carmel Area Wastewater District

P.O. Box 221428 Carmel California 93922 ❖ (831) 624-1248 ❖ FAX (831) 624-0811

Barbara Buikema
General Manager
Ed Waggoner
Operations Superintendent
Robert R. Wellington
Legal Counsel

Board of Directors
Gregory D'Ambrosio
Michael K. Rachel
Robert Siegfried
Charlotte F. Townsend
Ken White

April 2, 2020

Chairperson Louise Miranda-Ramirez
Ohlone/Costanoan-Esselen Nation
[redacted]

NOTIFICATION OF PROJECT

FROM: CARMEL AREA WASTEWATER DISTRICT/ RACHEL LATHER

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear Chairperson Miranda-Ramirez,

The Carmel Area Wastewater District has determined that a project application is complete for the Carmel Valley Manor who has decided to undertake the following project: Carmel Valley Manor Sewer Extension. Below please find a description of the proposed project, a map showing the project location, and the name of our project point of contact, pursuant to PRC § 21080.3.1 (d).

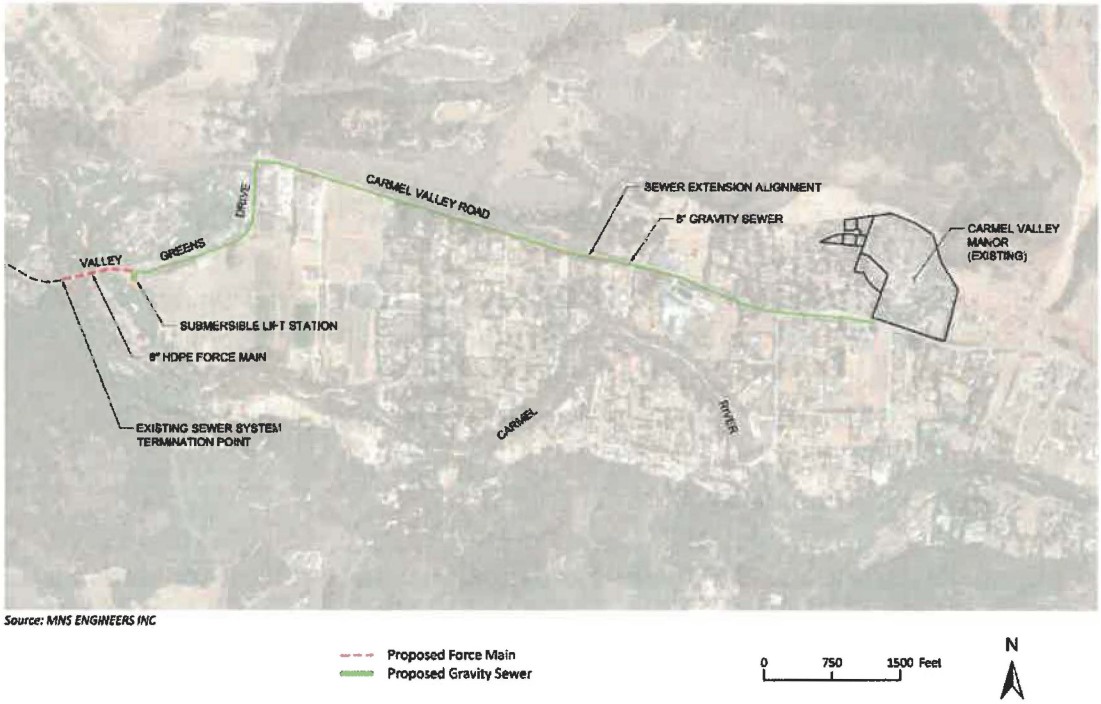
Project Description

The Carmel Valley Manor Sewer Main Extension Project (herein referred to as "proposed project" or "project") would extend sewer service to the existing Carmel Valley Manor senior living facility. This development is currently served by a failing septic system that is considered to be a health concern by the Monterey County Environmental Health Department. Additionally, previously developed parcels directly adjacent to the proposed pipeline alignment would have the opportunity to connect to the municipal sewer system, should their existing septic systems and/or leach fields fail or otherwise become unable to continue to operate. The project includes the installation and operation of approximately 9,900 linear feet (LF) of 8-inch diameter polyvinyl

chloride (PVC) gravity sewer main, approximately 900 LF of 6-inch diameter force main, concrete manholes, and a 250-gallon per minute submersible wastewater pump station. From the proposed gravity-fed sewer, wastewater would be pumped by the proposed pump station into the proposed force main, discharging to the existing collection system at the west abutment of the County Bridge Number 500 crossing over the Carmel River on Valley Greens Drive. Wastewater would be conveyed through the existing collection system to the CAWD Water Pollution Control Plant, which has a design capacity of 4.0 million gallons per day (MGD), a permitted capacity of 3.0 MGD, and an average dry weather flow of 1.2 MGD (CAWD 2020).

Figure 1 shows the proposed gravity pipeline, pump station, and force main pipeline locations.

Figure 1 – Project Infrastructure



Source: MNS ENGINEERS INC

Project Location

The project is located in unincorporated Monterey County and consists of a linear pipeline alignment in the public right-of-way along portions of Valley Greens Drive and Carmel Valley Road. The project would extend the existing wastewater collection system from its current termination point on Valley Greens Drive to Carmel Valley Manor located at 8545 Carmel Valley Road. The project alignment begins at County Bridge Number 500 built in 1963, located approximately 360 feet west of Poplar Lane along Valley Greens Drive, continues northeast along Valley Greens Drive until the intersection with Carmel Valley Road, continues east along Carmel Valley Road, and terminates at the intersection of Carmel Valley Road and Carmel Valley Manor. The

project site also encompasses a pump station site located on a 1,600-square foot portion of Assessor's Parcel Number 157-031-015-000, which is south of Valley Greens Drive in an undeveloped area across from Hole 14 and adjacent to Hole 13 of the Quail Lodge and Golf Club. The proposed pump station site would connect to the proposed pipeline alignment via incoming and outgoing pipelines. Figure 2 and Figure 3 provide the regional and local context of the project site and surrounding areas.

Figure 2 Project Location

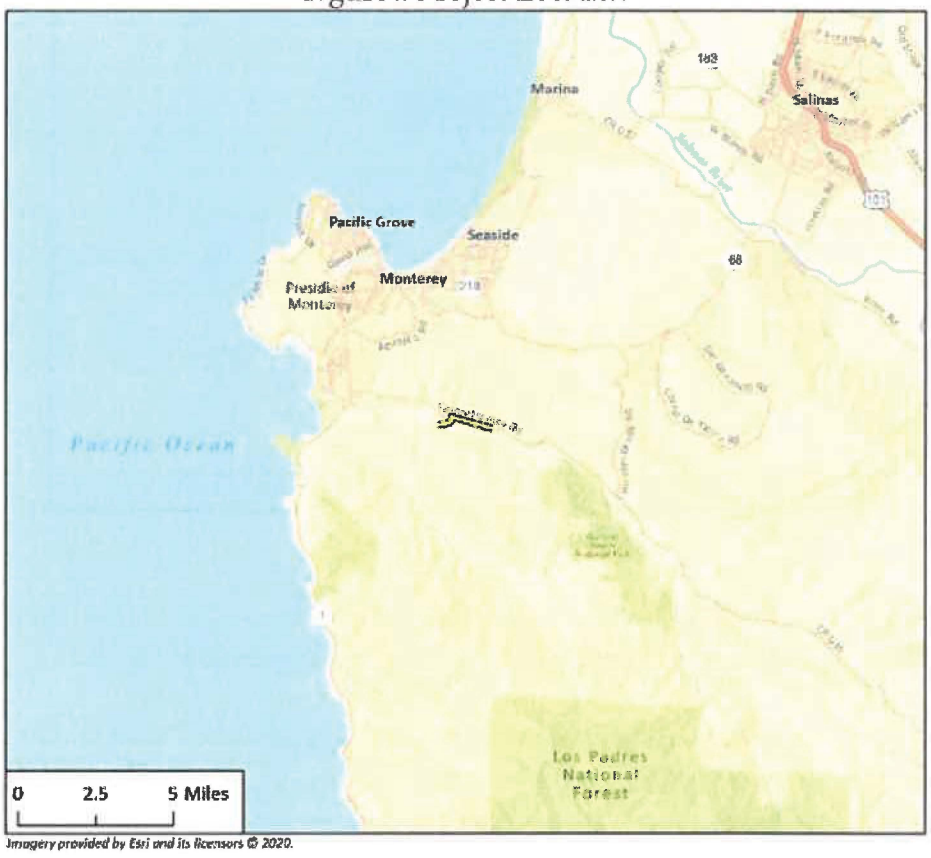
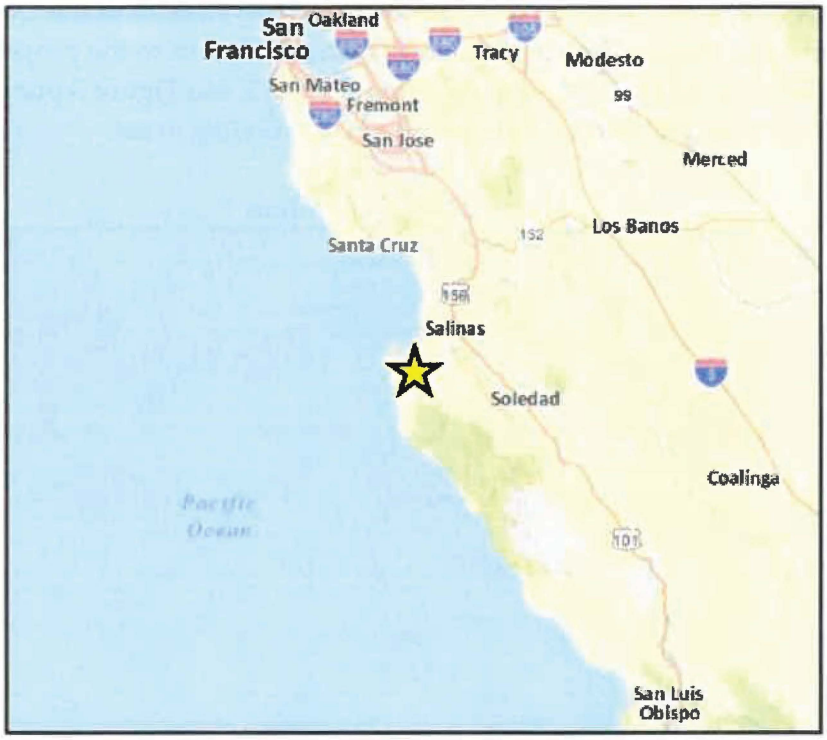


Figure 3 Project Vicinity



Pursuant to PRC § 21080.3.1 (b), you have 30 days from the receipt of this letter to request consultation, in writing, with the Carmel Area Wastewater District.

Any questions or comments should be directed to Rachel Lather, Principal Engineer, at (831) 624-1248 or by email at lather@cawd.org.

Very Respectfully,

B. Buikema, GM
on behalf of

Rachel Lather
Principal Engineer
Carmel Area Wastewater District

Carmel Area Wastewater District

P.O. Box 221428 Carmel California 93922 ❖ (831) 624-1248 ❖ FAX (831) 624-0811

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April 2, 2020

Vice-Chairperson Christianne Arias
Ohlone/Costanoan-Esselen Nation
[redacted]

NOTIFICATION OF PROJECT

FROM: CARMEL AREA WASTEWATER DISTRICT/ RACHEL LATHER

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear Vice-Chairperson Arias,

The Carmel Area Wastewater District has determined that a project application is complete for the Carmel Valley Manor who has decided to undertake the following project: Carmel Valley Manor Sewer Extension. Below please find a description of the proposed project, a map showing the project location, and the name of our project point of contact, pursuant to PRC § 21080.3.1 (d).

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The Carmel Valley Manor Sewer Main Extension Project (herein referred to as "proposed project" or "project") would extend sewer service to the existing Carmel Valley Manor senior living facility. This development is currently served by a failing septic system that is considered to be a health concern by the Monterey County Environmental Health Department. Additionally, previously developed parcels directly adjacent to the proposed pipeline alignment would have the opportunity to connect to the municipal sewer system, should their existing septic systems and/or leach fields fail or otherwise become unable to continue to operate. The project includes the installation and operation of approximately 9,900 linear feet (LF) of 8-inch diameter polyvinyl

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Figure 1 shows the proposed gravity pipeline, pump station, and force main pipeline locations.

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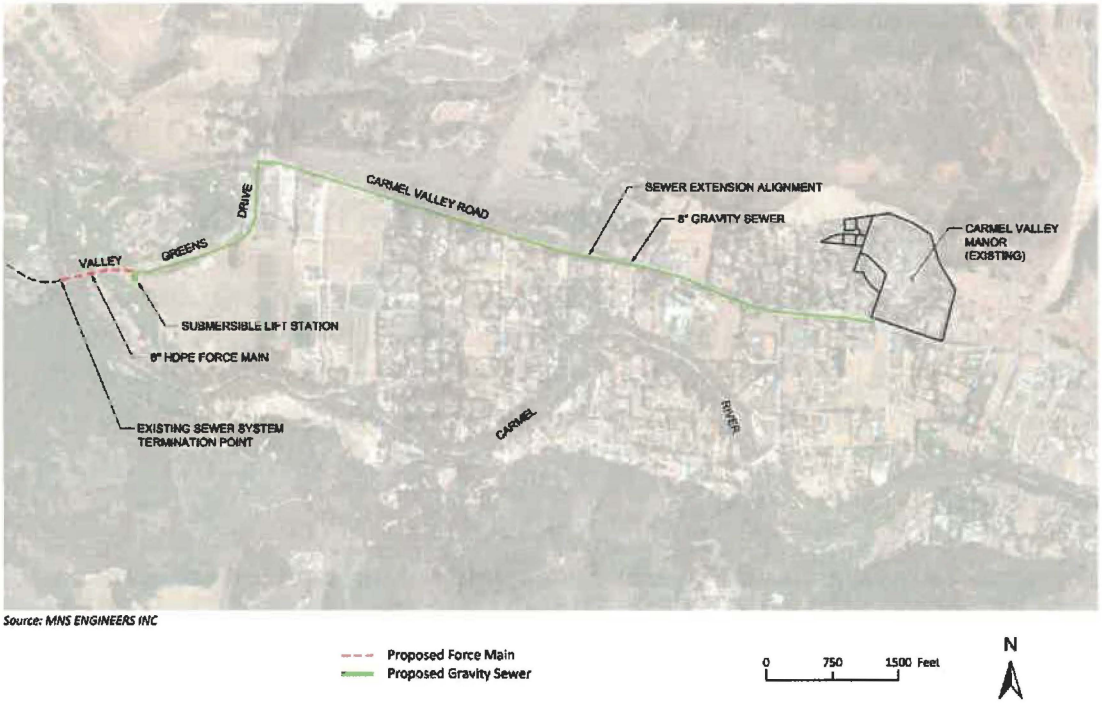

Project Location

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Figure 2 Project Location

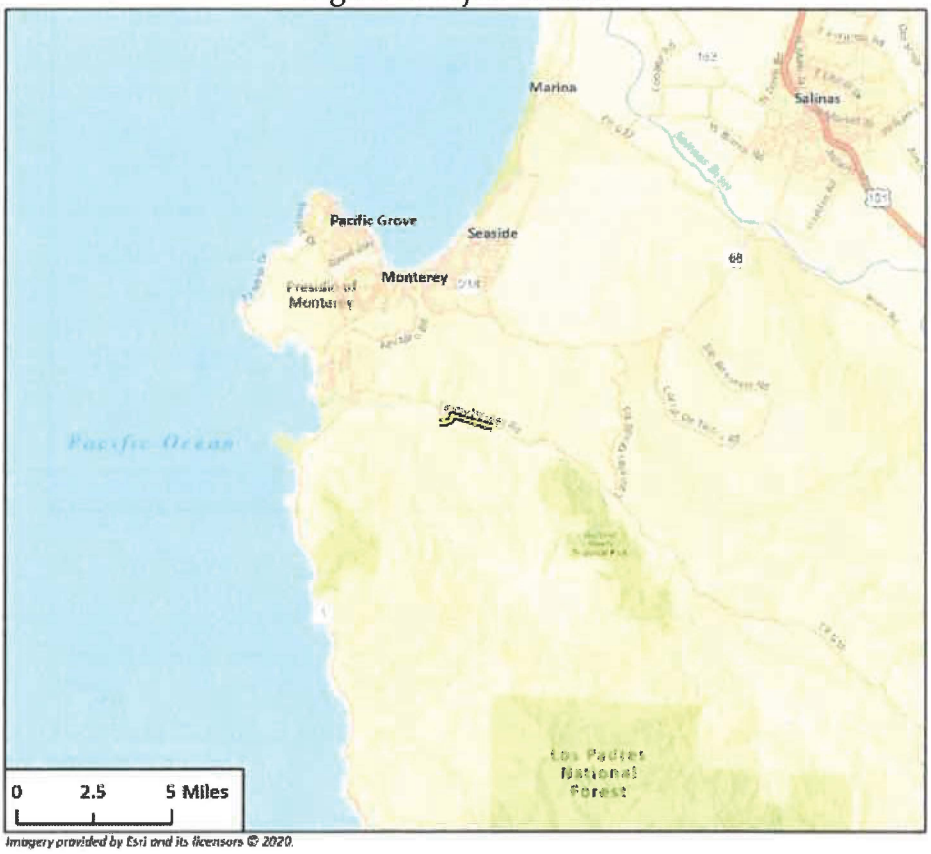


Figure 3 Project Vicinity

Pursuant to PRC § 21080.3.1 (b), you have 30 days from the receipt of this letter to request consultation, in writing, with the Carmel Area Wastewater District.

Any questions or comments should be directed to Rachel Lather, Principal Engineer, at (831) 624-1248 or by email at lather@cawd.org.

Very Respectfully,

B. Brikema, GM
on behalf of

Rachel Lather
Principal Engineer
Carmel Area Wastewater District

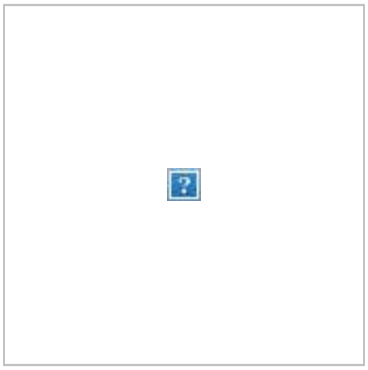
From:	Kristina Pacheco
To:	ams@indiancanyon.org
Cc:	Rachel; Domine Barringer
Subject:	Notification of proposed project - Carmel Area Wastewater District
Date:	Thursday, April 2, 2020 2:59:00 PM
Attachments:	image001.png Chairperson Sayers.pdf

Chairperson Sayers-

Please review the attached letter and map regarding a proposed project from our organization. If you have any questions please call our Principal Engineer, Rachél Lather, at 831-624-1248.

Thanks,

Kristina Pacheco
Administrative Assistant/Board Clerk
Carmel Area Wastewater District
(831) 624-1248 x201 office
pacheco@cawd.org



Carmel Area Wastewater District

P.O. Box 221428 Carmel California 93922 ❖ (831) 624-1248 ❖ FAX (831) 624-0811

Barbara Buikema
General Manager
Ed Waggoner
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Board of Directors
Gregory D'Ambrosio
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Robert Siegfried
Charlotte F. Townsend
Ken White

April 2, 2020

Chairperson Ann Marie Sayers
Indian Canvon Mutsun Band of Costanoan
[redacted]

NOTIFICATION OF PROJECT

FROM: CARMEL AREA WASTEWATER DISTRICT/ RACHEL LATHER

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear Chairperson Sayers,

The Carmel Area Wastewater District has determined that a project application is complete for the Carmel Valley Manor who has decided to undertake the following project: Carmel Valley Manor Sewer Extension. Below please find a description of the proposed project, a map showing the project location, and the name of our project point of contact, pursuant to PRC § 21080.3.1 (d).

Project Description

The Carmel Valley Manor Sewer Main Extension Project (herein referred to as "proposed project" or "project") would extend sewer service to the existing Carmel Valley Manor senior living facility. This development is currently served by a failing septic system that is considered to be a health concern by the Monterey County Environmental Health Department. Additionally, previously developed parcels directly adjacent to the proposed pipeline alignment would have the opportunity to connect to the municipal sewer system, should their existing septic systems and/or leach fields fail or otherwise become unable to continue to operate. The project includes the installation and operation of approximately 9,900 linear feet (LF) of 8-inch diameter polyvinyl

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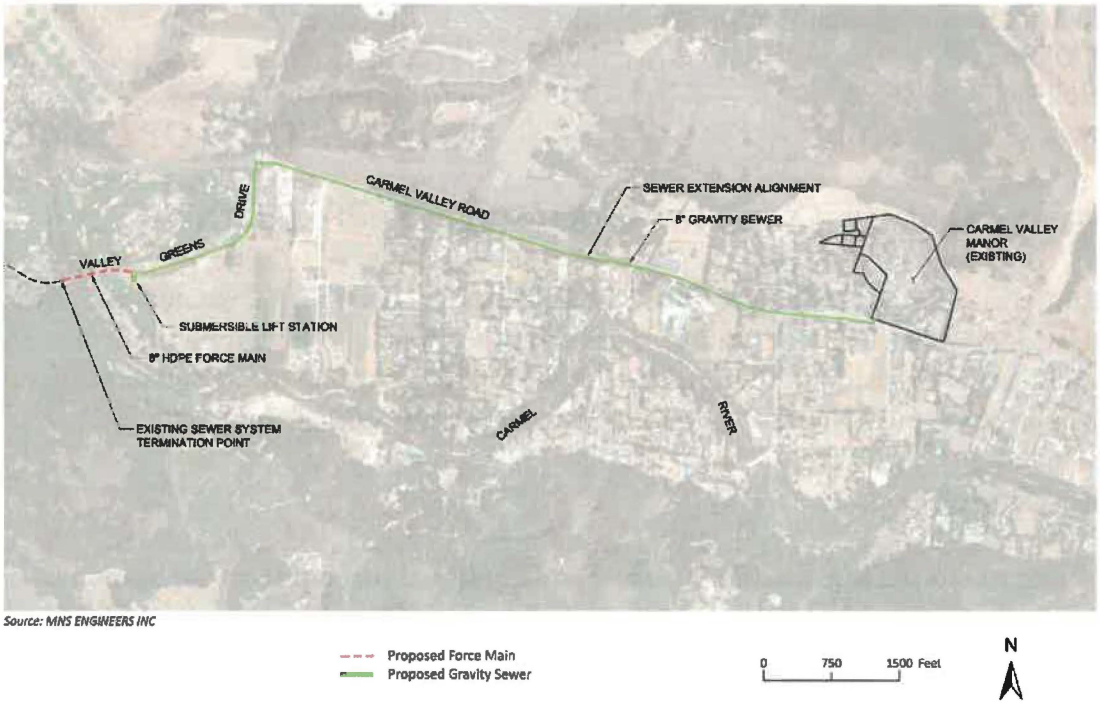
Figure 1 shows the proposed gravity pipeline, pump station, and force main pipeline locations.

Figure 1 – Project Infrastructure



Project Location

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project site also encompasses a pump station site located on a 1,600-square foot portion of Assessor's Parcel Number 157-031-015-000, which is south of Valley Greens Drive in an undeveloped area across from Hole 14 and adjacent to Hole 13 of the Quail Lodge and Golf Club. The proposed pump station site would connect to the proposed pipeline alignment via incoming and outgoing pipelines. Figure 2 and Figure 3 provide the regional and local context of the project site and surrounding areas.

Figure 2 Project Location

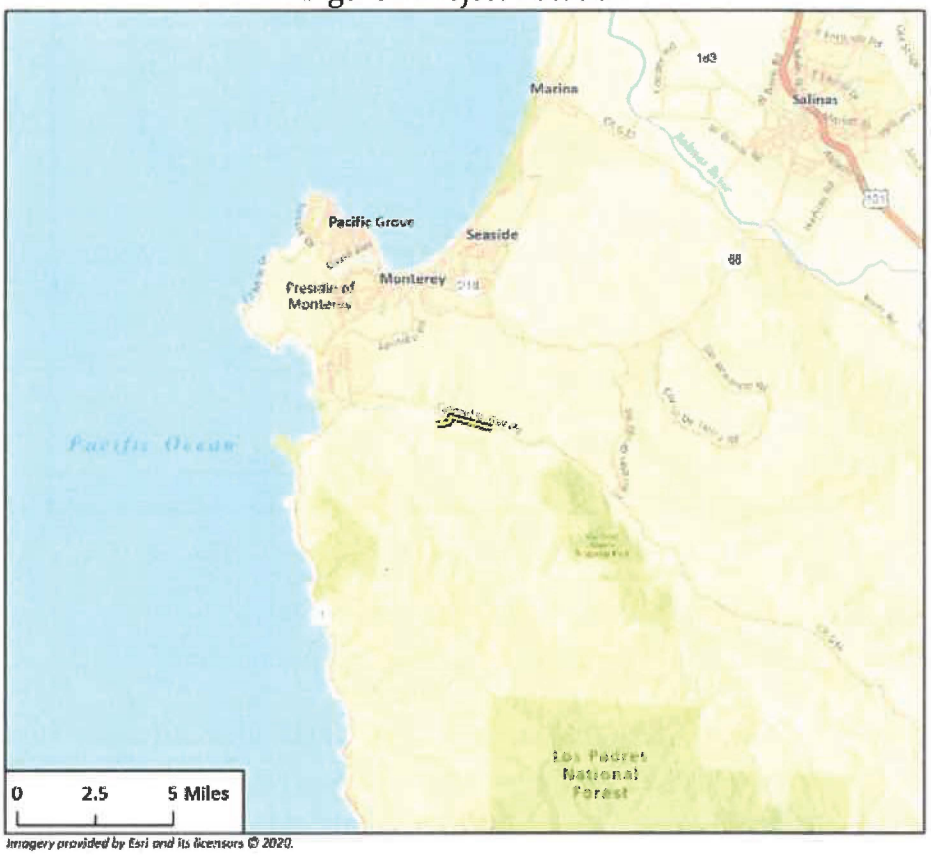
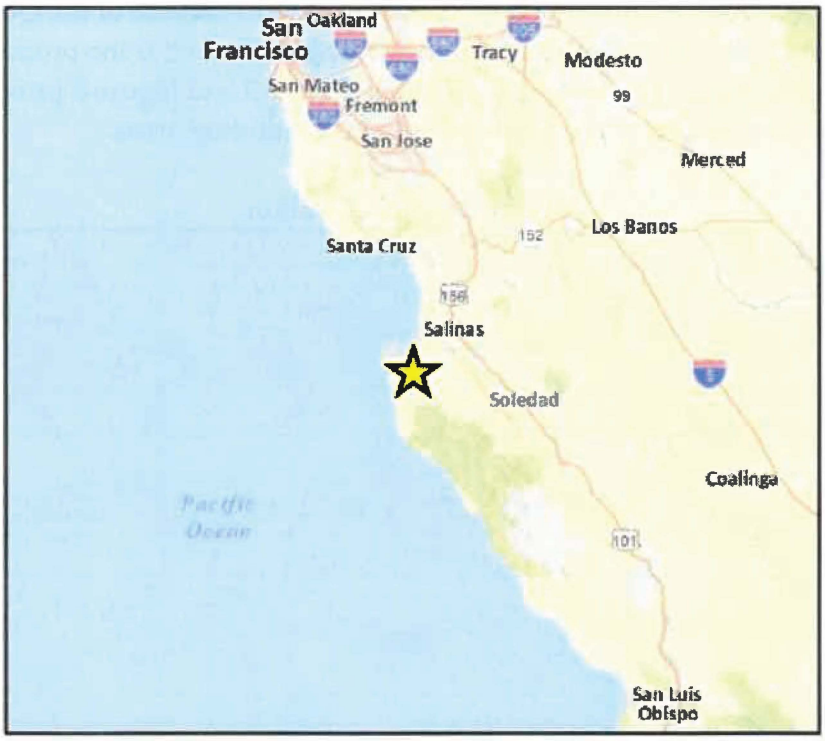


Figure 3 Project Vicinity



Pursuant to PRC § 21080.3.1 (b), you have 30 days from the receipt of this letter to request consultation, in writing, with the Carmel Area Wastewater District.

Any questions or comments should be directed to Rachel Lather, Principal Engineer, at (831) 624-1248 or by email at lather@cawd.org.

Very Respectfully,

J. Nilsen, GM
on behalf of

Rachel Lather
Principal Engineer
Carmel Area Wastewater District

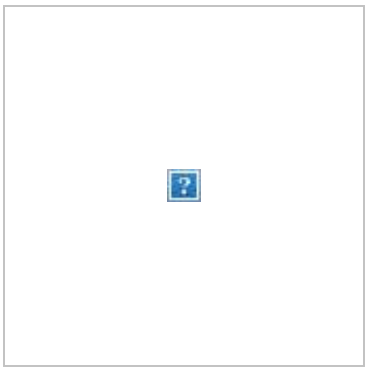
From: Kristina Pacheco
To: CulturalResources@EsselenTribe.com
Cc: Rachel; Domine Barringer
Subject: Notification of proposed project - Carmel Area Wastewater District
Date: Thursday, April 2, 2020 3:01:00 PM
Attachments: image001.png
Sue Morley.pdf

Sue Morley-

Please review the attached letter and map regarding a proposed project from our organization. If you have any questions please call our Principal Engineer, Rachél Lather, at 831-624-1248.

Thank you,

Kristina Pacheco
Administrative Assistant/Board Clerk
Carmel Area Wastewater District
(831) 624-1248 x201 office
pacheco@cawd.org



Carmel Area Wastewater District

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April 2, 2020

Cultural Resources Sue Morley
Esselen Tribe of Monterey County
[redacted]

NOTIFICATION OF PROJECT

FROM: CARMEL AREA WASTEWATER DISTRICT/ RACHEL LATHER

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear Sue Morley,

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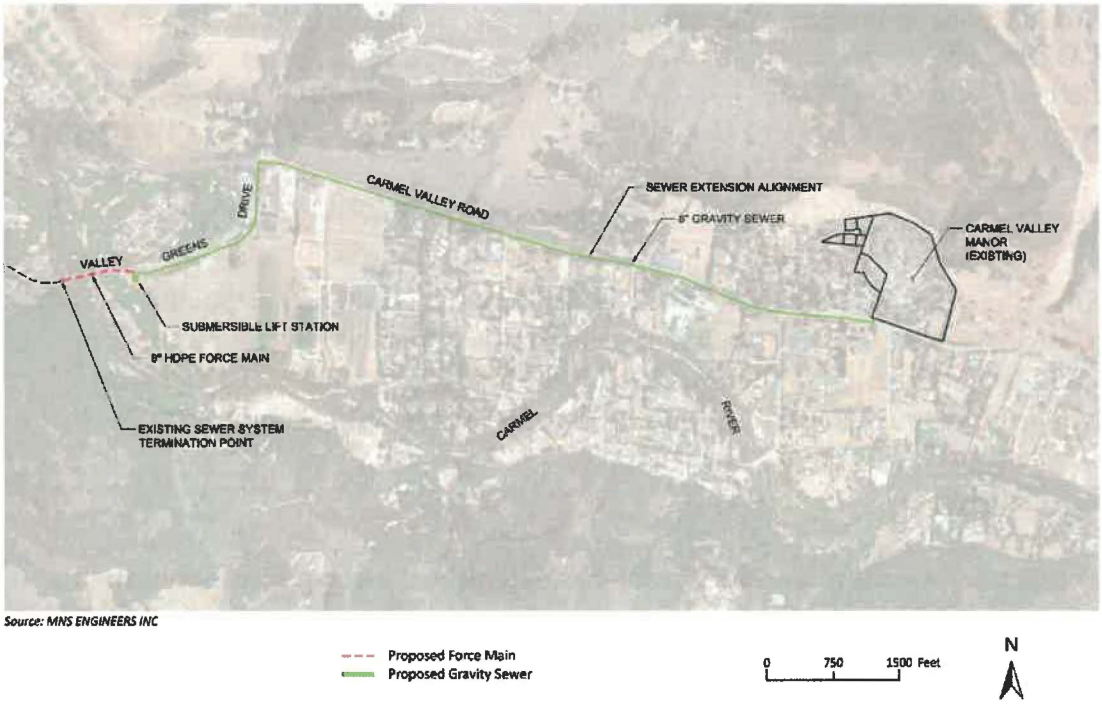
Figure 1 shows the proposed gravity pipeline, pump station, and force main pipeline locations.

Figure 1 – Project Infrastructure



Project Location

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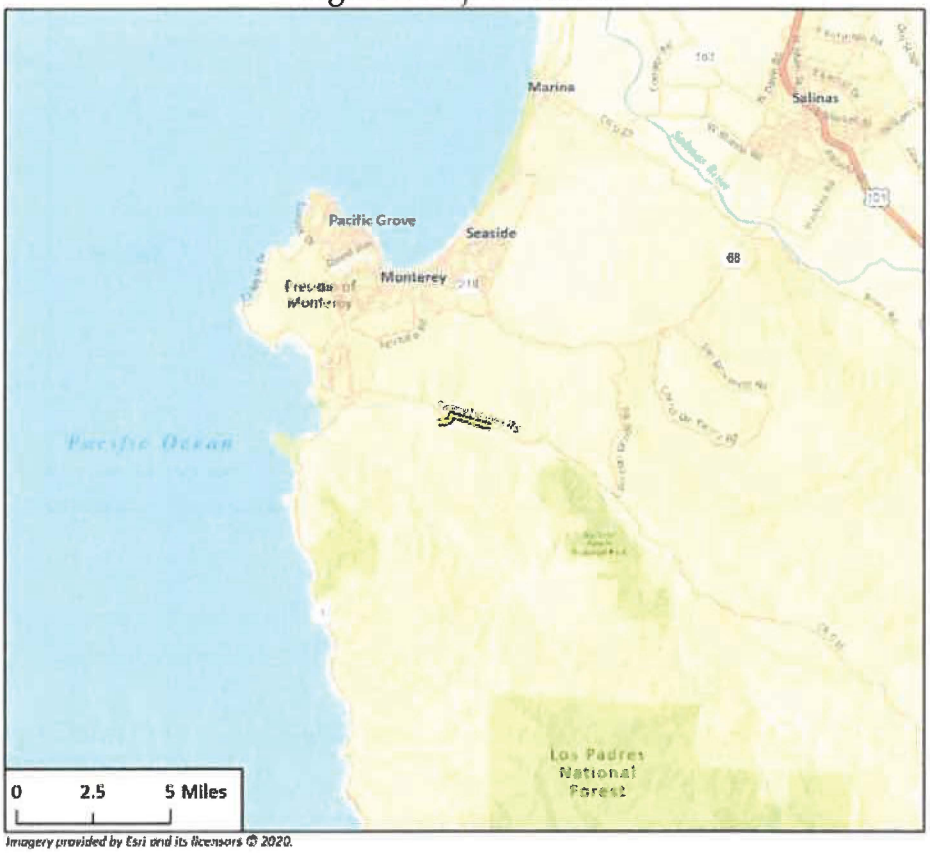

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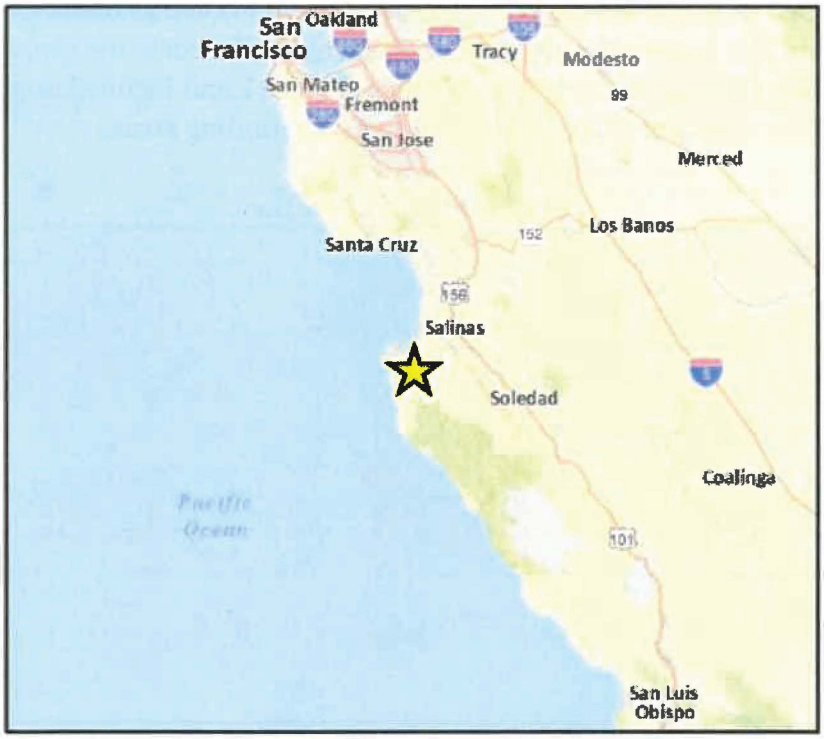

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Any questions or comments should be directed to Rachel Lather, Principal Engineer, at (831) 624-1248 or by email at lather@cawd.org.

Very Respectfully,

B. Buikema, GM
on behalf of

Rachel Lather
Principal Engineer
Carmel Area Wastewater District

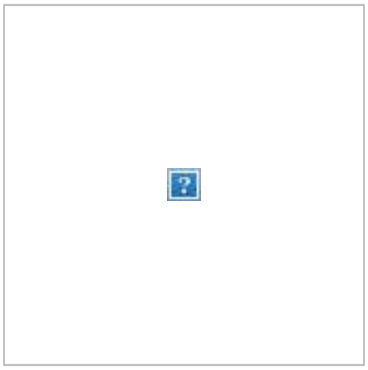
From: Kristina Pacheco
To: TribalChair@EsselenTribe.com
Cc: Rachel; Domine Barringer
Subject: Notification of proposed project - Carmel Area Wastewater District
Date: Thursday, April 2, 2020 2:52:00 PM
Attachments: image001.png
Chairperson Tom Little Bear Nason.pdf

Chairperson Tom Little Bear Nason-

Please review the attached letter and map regarding a proposed project from our organization. If you have any questions please call our Principal Engineer, Rachél Lather, at 831-624-1248.

Thank you,

Kristina Pacheco
Administrative Assistant/Board Clerk
Carmel Area Wastewater District
(831) 624-1248 x201 office
pacheco@cawd.org



Carmel Area Wastewater District

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Ken White

April 2, 2020

Chairperson Tom Little Bear Nason
Esselen Tribe of Monterey County
[redacted]

NOTIFICATION OF PROJECT

FROM: CARMEL AREA WASTEWATER DISTRICT/ RACHEL LATHER

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear Chairperson Tom Little Bear Nason,

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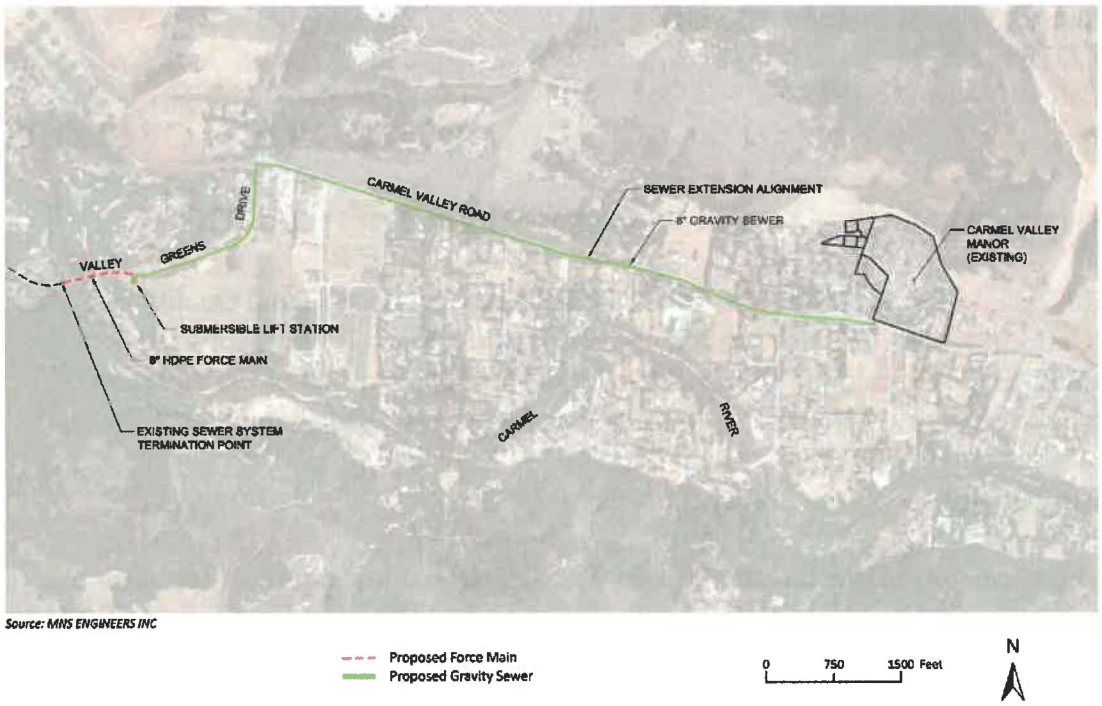

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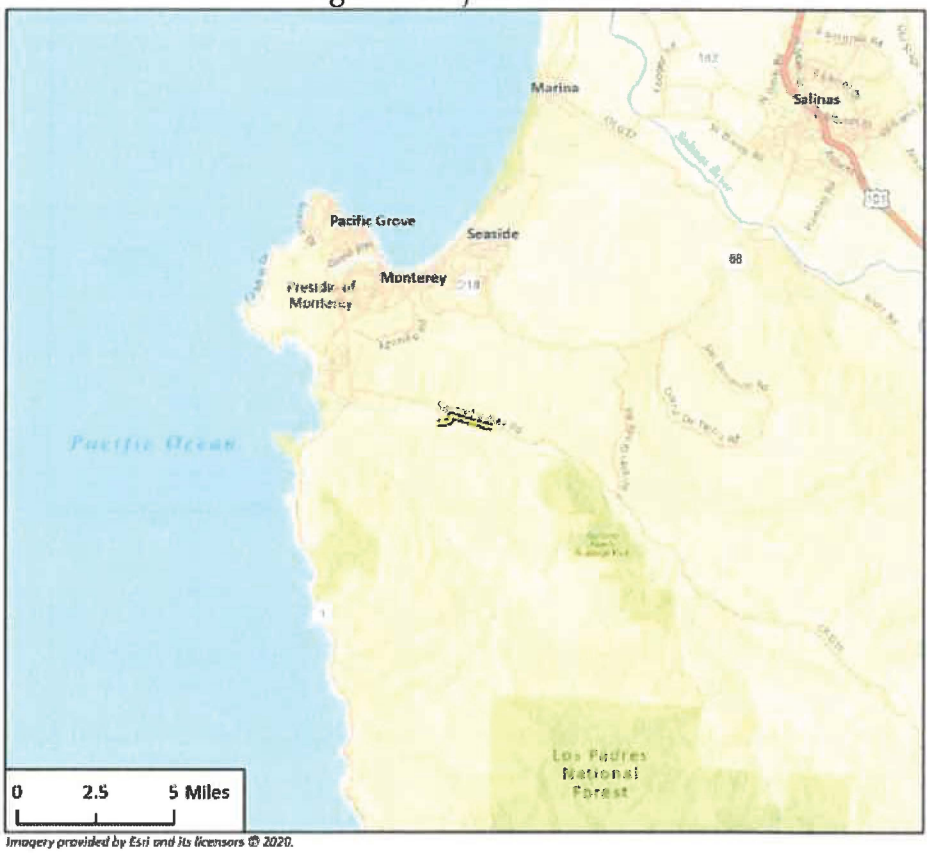

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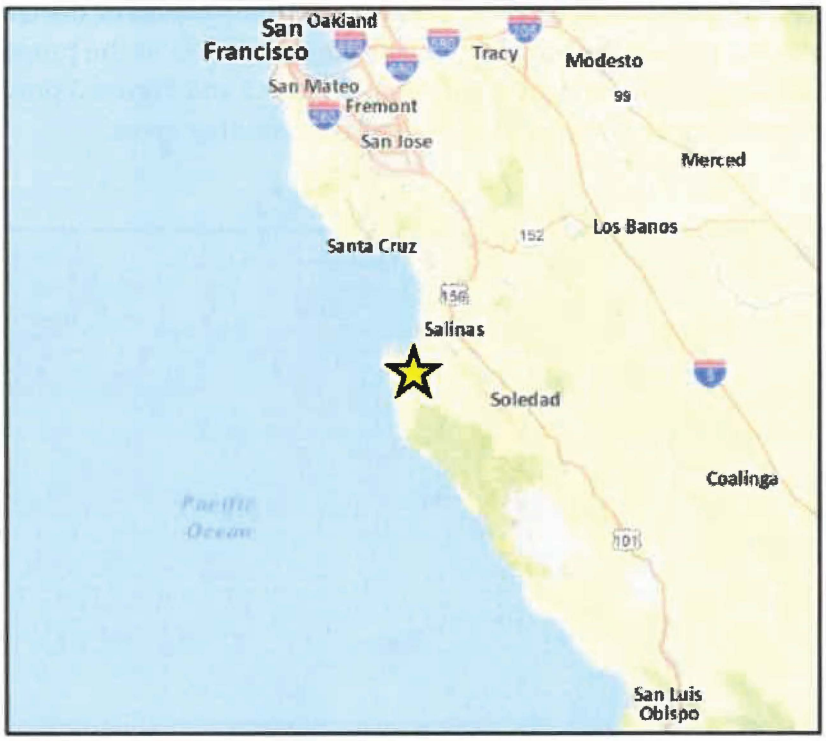

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on behalf of

Rachel Lather
Principal Engineer
Carmel Area Wastewater District

From: Kristina Pacheco
To: "bobburton01@hotmail.com"
Cc: Rachel; Domine Barringer
Subject: Notification of proposed project - Carmel Area Wastewater District
Date: Thursday, April 2, 2020 2:50:00 PM
Attachments: image001.png
Chairperson Burton.pdf

Chairperson Burton-

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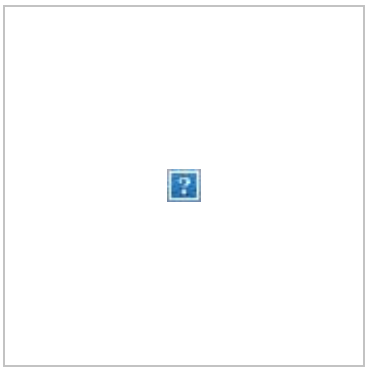

Carmel Area Wastewater District

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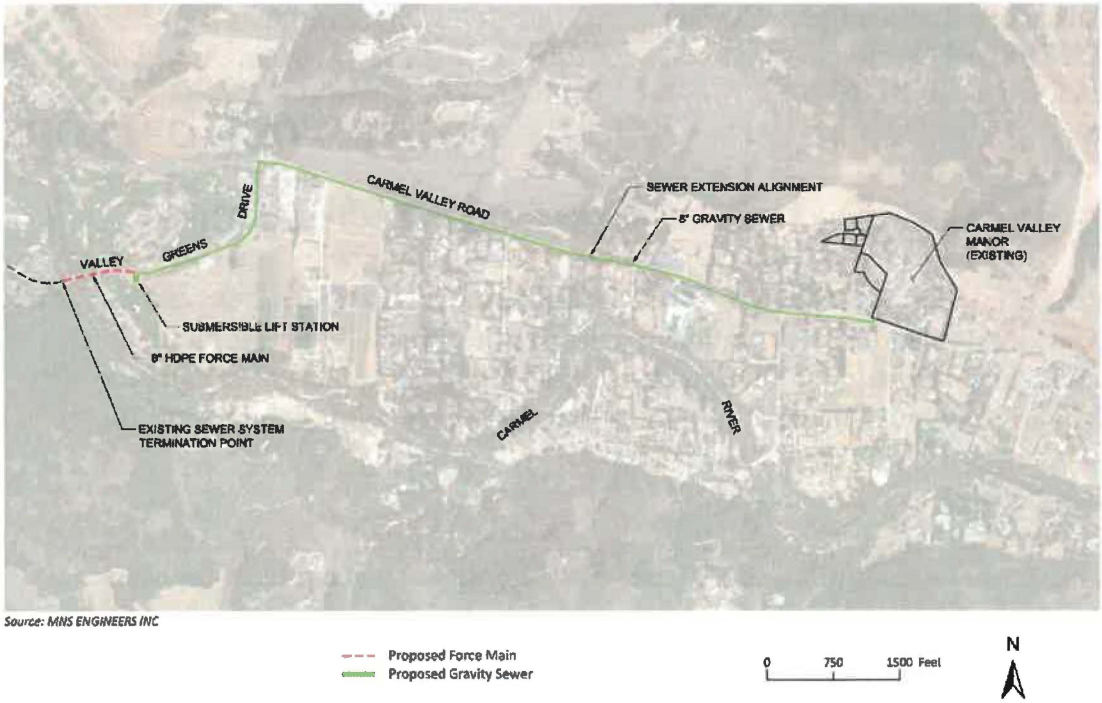

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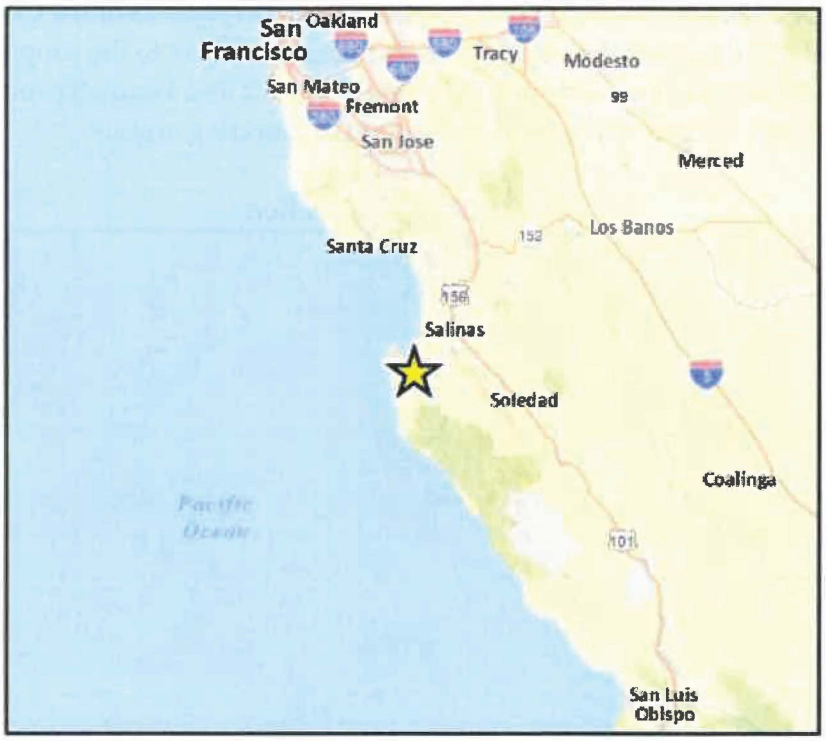

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B. Buikema, GM
on behalf of

Rachel Lather
Principal Engineer
Carmel Area Wastewater District

From: Kristina Pacheco
To: amahmutsuntribal@gmail.com
Cc: Rachel; Domine Barringer
Subject: Notification of proposed project - Carmel Area Wastewater District
Date: Thursday, April 2, 2020 2:48:00 PM
Attachments: Chairperson Zwierlein.pdf
image001.png

Chairperson Zwierlein-

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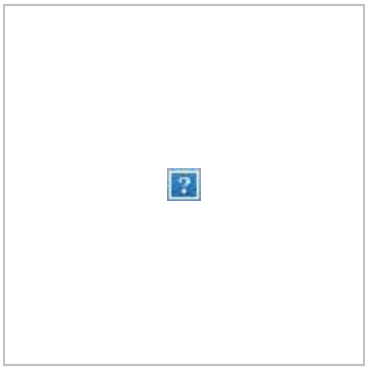

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Chairperson Irene Zwierlein
Amah Mutsun Tribal Band of Mission San Juan Bautista
[redacted]

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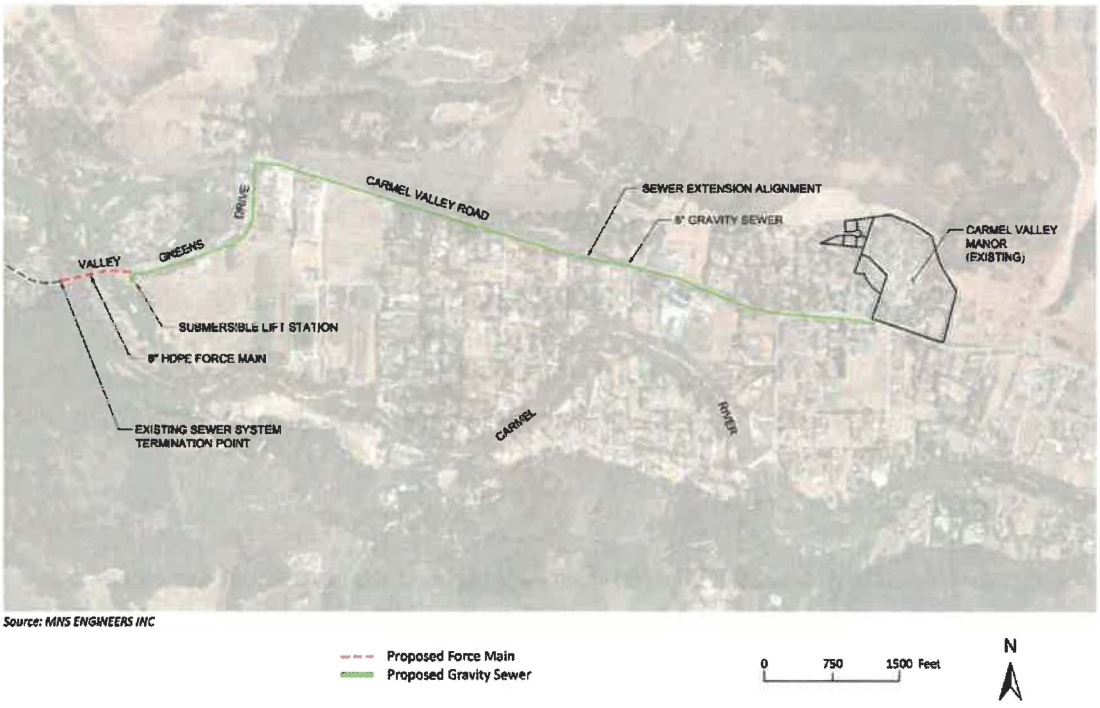

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Figure 2 Project Location

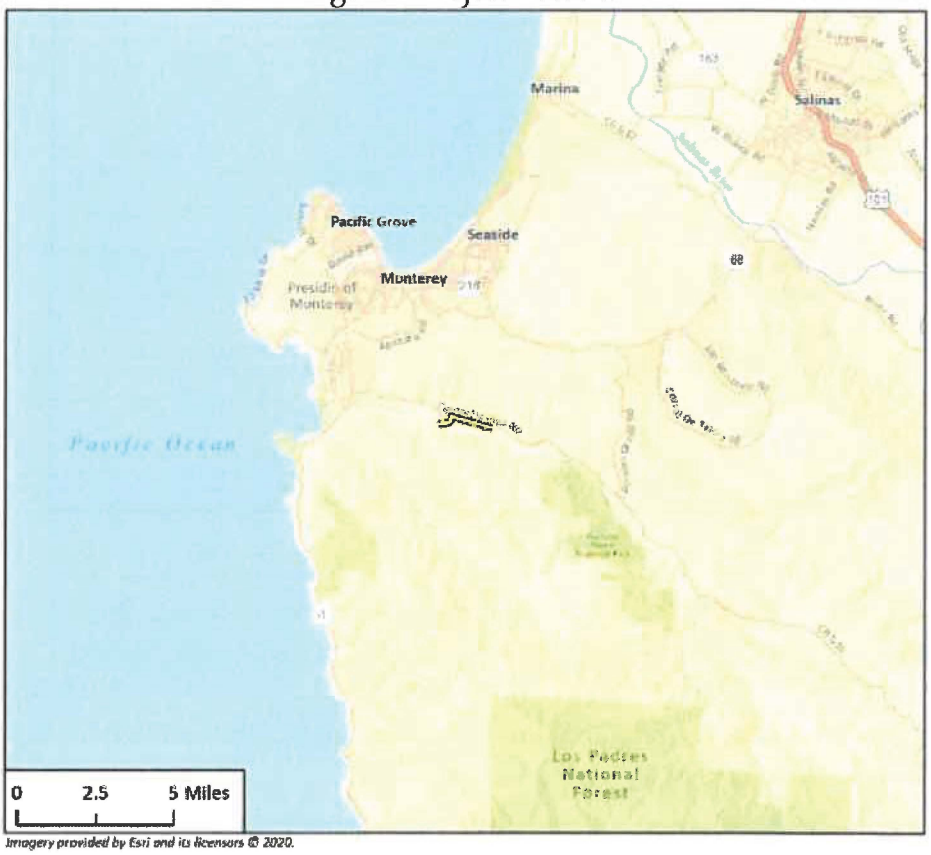
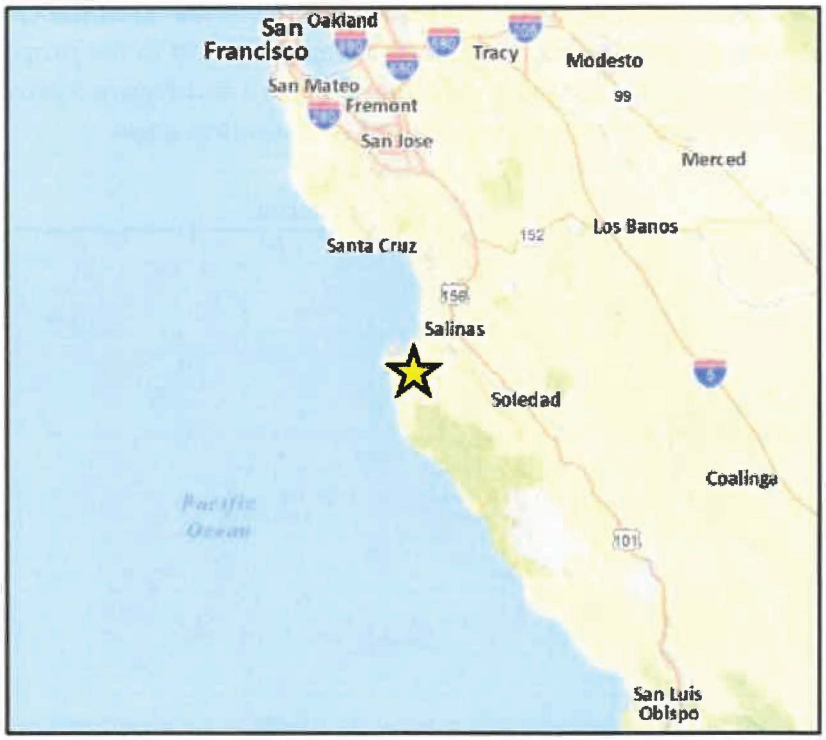


Figure 3 Project Vicinity



Pursuant to PRC § 21080.3.1 (b), you have 30 days from the receipt of this letter to request consultation, in writing, with the Carmel Area Wastewater District.

Any questions or comments should be directed to Rachel Lather, Principal Engineer, at (831) 624-1248 or by email at lather@cawd.org.

Very Respectfully,

B. Buikema, GM
on behalf of

Rachel Lather
Principal Engineer
Carmel Area Wastewater District

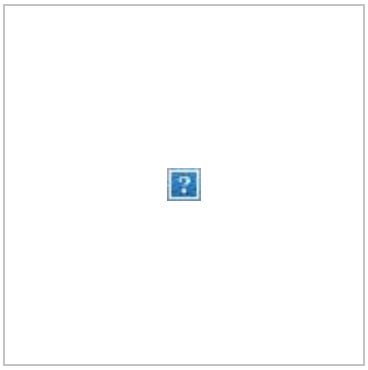
From:	Kristina Pacheco
To:	vlopez@amahmutsun.org
Cc:	Rachel; Barbara Buikema; Domine Barringer
Subject:	Notification of proposed project - Carmel Area Wastewater District
Date:	Thursday, April 2, 2020 2:41:00 PM
Attachments:	image001.png Chairperson Lopez.pdf

Chairperson Lopez-

Please review the attached letter and map regarding a proposed project from our organization. If you have any questions please call our Principal Engineer, Rachél Lather, at 831-624-1248.

Thank you,

Kristina Pacheco
Administrative Assistant/Board Clerk
Carmel Area Wastewater District
(831) 624-1248 x201 office
pacheco@cawd.org



Carmel Area Wastewater District

P.O. Box 221428 Carmel California 93922 ❖ (831) 624-1248 ❖ FAX (831) 624-0811

Barbara Buikema
General Manager
Ed Waggoner
Operations Superintendent
Robert R. Wellington
Legal Counsel

Board of Directors
Gregory D'Ambrosio
Michael K. Rachel
Robert Siegfried
Charlotte F. Townsend
Ken White

April 2, 2020

Chairperson Valentin Lopez
Amah Mutsun Tribal Band
[redacted]

NOTIFICATION OF PROJECT

FROM: CARMEL AREA WASTEWATER DISTRICT/ RACHEL LATHER

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). Formal Notification of determination that a Project Application is Complete or Decision to Undertake a Project, and Notification of Consultation Opportunity, pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear Chairperson Lopez,

The Carmel Area Wastewater District has determined that a project application is complete for the Carmel Valley Manor who has decided to undertake the following project: Carmel Valley Manor Sewer Extension. Below please find a description of the proposed project, a map showing the project location, and the name of our project point of contact, pursuant to PRC § 21080.3.1 (d).

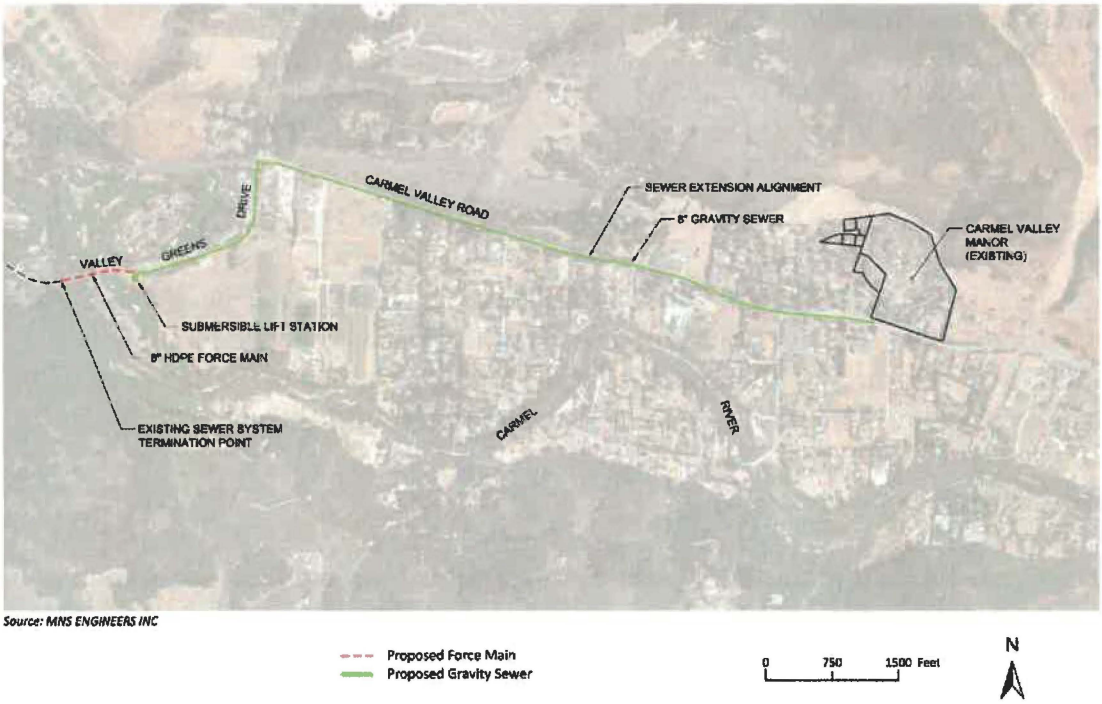
Project Description

The Carmel Valley Manor Sewer Main Extension Project (herein referred to as "proposed project" or "project") would extend sewer service to the existing Carmel Valley Manor senior living facility. This development is currently served by a failing septic system that is considered to be a health concern by the Monterey County Environmental Health Department. Additionally, previously developed parcels directly adjacent to the proposed pipeline alignment would have the opportunity to connect to the municipal sewer system, should their existing septic systems and/or leach fields fail or otherwise become unable to continue to operate. The project includes the installation and operation of approximately 9,900 linear feet (LF) of 8-inch diameter polyvinyl

chloride (PVC) gravity sewer main, approximately 900 LF of 6-inch diameter force main, concrete manholes, and a 250-gallon per minute submersible wastewater pump station. From the proposed gravity-fed sewer, wastewater would be pumped by the proposed pump station into the proposed force main, discharging to the existing collection system at the west abutment of the County Bridge Number 500 crossing over the Carmel River on Valley Greens Drive. Wastewater would be conveyed through the existing collection system to the CAWD Water Pollution Control Plant, which has a design capacity of 4.0 million gallons per day (MGD), a permitted capacity of 3.0 MGD, and an average dry weather flow of 1.2 MGD (CAWD 2020).

Figure 1 shows the proposed gravity pipeline, pump station, and force main pipeline locations.

Figure 1 – Project Infrastructure



Source: MNS ENGINEERS INC

Project Location

The project is located in unincorporated Monterey County and consists of a linear pipeline alignment in the public right-of-way along portions of Valley Greens Drive and Carmel Valley Road. The project would extend the existing wastewater collection system from its current termination point on Valley Greens Drive to Carmel Valley Manor located at 8545 Carmel Valley Road. The project alignment begins at County Bridge Number 500 built in 1963, located approximately 360 feet west of Poplar Lane along Valley Greens Drive, continues northeast along Valley Greens Drive until the intersection with Carmel Valley Road, continues east along Carmel Valley Road, and terminates at the intersection of Carmel Valley Road and Carmel Valley Manor. The

project site also encompasses a pump station site located on a 1,600-square foot portion of Assessor's Parcel Number 157-031-015-000, which is south of Valley Greens Drive in an undeveloped area across from Hole 14 and adjacent to Hole 13 of the Quail Lodge and Golf Club. The proposed pump station site would connect to the proposed pipeline alignment via incoming and outgoing pipelines. Figure 2 and Figure 3 provide the regional and local context of the project site and surrounding areas.

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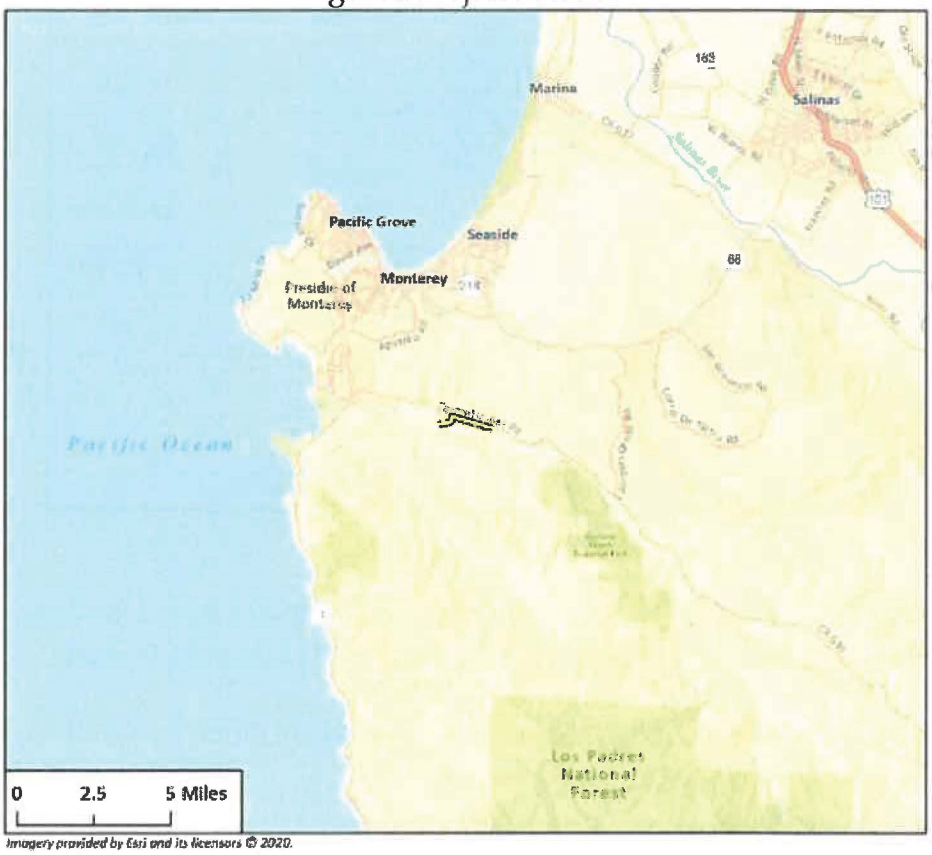
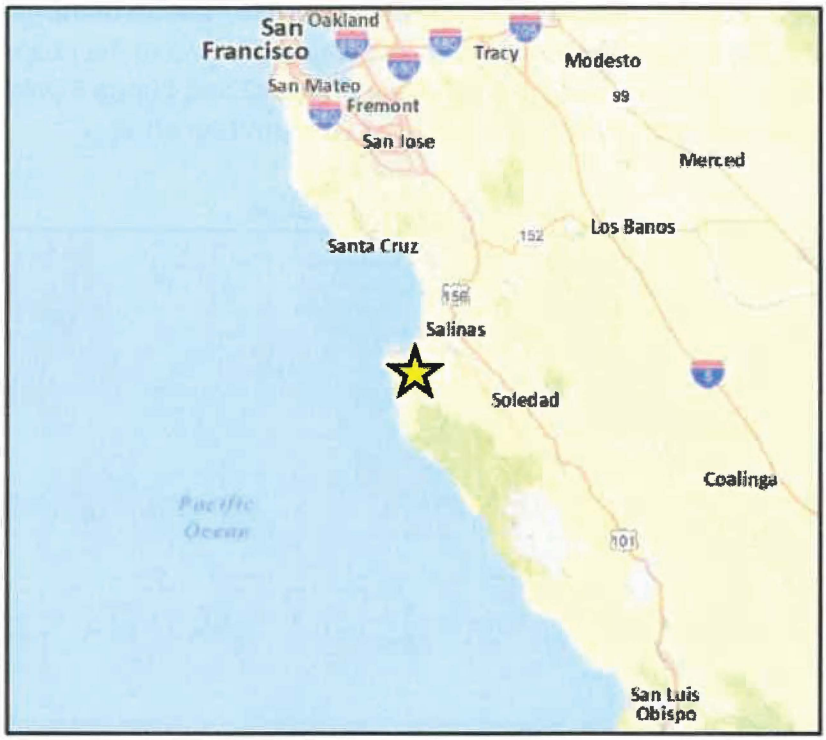


Figure 3 Project Vicinity



Pursuant to PRC § 21080.3.1 (b), you have 30 days from the receipt of this letter to request consultation, in writing, with the Carmel Area Wastewater District.

Any questions or comments should be directed to Rachel Lather, Principal Engineer, at (831) 624-1248 or by email at lather@cawd.org.

Very Respectfully,

K. Buikema, GM
on behalf of

Rachel Lather
Principal Engineer
Carmel Area Wastewater District

Tribal Consultation Contact List

2020 Carmel Area Wastewater District Carmel Valley Manor Annexation

	1 One	2 Two	3 Three	4 Four	5 Five	6 Six	7 Seven	8 Eight
Name of Tribe	**Amah Mutsun Tribal Band** Costanoan Northern Valley	**Amah Mutsun Tribal Band of Mission San Juan Bautista**	**Costanoan Rumsen Carmel Tribe**	**Esselen Tribe of Monterey County**	**Esselen Tribe of Monterey County**	**Indian Canvon Mutsun Band of Costanoan**	**Ohlone/Costanoan-Esselen Nation**	**Ohlone/Costanoan-Esselen Nation**
Tribe	Yokut	Costanoan	Costanoan	Costanoan Esselen	Costanoan Esselen	Costanoan	Esselen Costanoan	Esselen Costanoan
Contact Person	Valentin Lopez	Irene Zwierlein	Bob Burton	Tom Little Bear Nason	Sue Morley	Ann Marie Sayers	Louise Miranda-Ramirez	Christianne Arias
Title	Chairperson	Chairperson	Chairperson	Chairperson	Cultural Resources	Chairperson	Chairperson	Vice Chairperson
Address Line 1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
City								
State								
Zip								
email	vlopez@amahmutsun.org	**amahmutsuntribal@gmail.com**	bobburton01@hotmail.com	**TribalChair@EsselenTribe.com**	CulturalResources@EsselenTribe.com	**ams@indiancanyon.org**	**ramirez.louise@yahoo.com**	
phone number-office	916-743-5833	650-851-7489 Fax:650-332-1526	760-832-4196	831-659-2153 cell: 831-214-5345	831-659-2153 Fax:831-659-0111	831-637-4238	408-629-5189	831-235-4590
	04/20/2020 left message	04/20/20 talked to Irene. She asked that we check the Sonoma State database. If no hits, then provide sensitivity training to crews and contact archaeologist and tribal monitor if anything found.	4/20/2020 Left message describing the project and to call me if he has any concerns or questions.	04/20/2020 Left message to call me if there is any concern about the project.	same number as Tom Nason	4/20/2020 Called but could not leave a message. Sent email to her.	4/20/2020 Spoke with Louise and described the project. Sent her an email with the details and a map of the project. She will call me with any concerns.	4/20/2020 - Left message with my email and phone #.

Ohlone/Costanoan-Esselen Nation

Previously acknowledged as
The San Carlos Band of Mission Indians
The Monterey Band
And known as
O.C.E.N. or Esselen Nation
[redacted]

www.ohlonecostanoanesselennation.org.

April 22, 2020

Rachel Lather, MS, PE
Principal Engineer
Carmel Area Wastewater District
(831) 257-0423

Re: Carmel Valley Manor Sewer Extension, Carmel Valley Road and Valley Greens Drive

Saleki Atsa,

Ohlone/Costanoan-Esselen Nation is an historically documented previously recognized tribe. OCEN is the legal tribal government representative for over 600 enrolled members of Esselen, Carmeleno, Monterey Band, Rumsen, Chalon, Soledad Mission, San Carlos Mission and/or Costanoan Mission Indian descent of Monterey County. Though other indigenous people may have lived in the area, the area is the indigenous homeland of our people. Included with this letter please find a territorial map by Taylor 1856; Levy 1973; and Milliken 1990, identifying Tribal areas.

OCEN TRIBAL GOVERNMENT REQUEST AB52/SB18 CONSULTATION WITH THE LEAD AGENCIES.

Sincerely and Respectfully Yours,

Louise J. Miranda Ramirez
Tribal Chairwoman
Ohlone/Costanoan-Esselen Nation
(408) 629-5189

Cc: OCEN Tribal Council

Ohlone/Costanoan-Esselen Nation

Previously acknowledged as
The San Carlos Band of Mission Indians
The Monterey Band
And known as
O.C.E.N. or Esselen Nation
[redacted]

www.ohlonecostanoanesselennation.org.

CONFIDENTIAL – SUBMITTED AS FORMAL CONSULTATION

April 22, 2020

Rachel Lather, MS, PE
Principal Engineer
Carmel Area Wastewater District
(831) 257-0423

Re: Carmel Valley Manor Sewer Extension, Carmel Valley Road and Valley Greens Drive

Saleki Atsa,

Ohlone/Costanoan-Esselen Nation is an historically documented previously recognized tribe. OCEN is the legal tribal government representative for over 600 enrolled members of Esselen, Carmeleno, Monterey Band, Rumsen, Chalon, Soledad Mission, San Carlos Mission and/or Costanoan Mission Indian descent of Monterey County. Included with this letter please find a territorial map by Taylor 1856; Levy 1973; and Milliken 1990, identifying Tribal areas.

Ohlone/Costanoan-Esselen Nation objects to all excavation in known cultural lands, even when they are described as previously disturbed, and of no significant archaeological value. Please be advised that it is our priority that our ancestor's remains be protected and undisturbed. We desire that all sacred burial items be left with our ancestors on site as culturally determined by OCEN. All cultural items returned to Ohlone/Costanoan-Esselen Nation. We ask for the respect that is afforded all our current day deceased, by no other word these burial sites are cemeteries, respect for our ancestors as you would expect respect for your deceased family members in today's cemeteries. **Our definition of respect is no disturbance.**

This is an archaeologically sensitive zone which follows the Carmel River. As Formal Consultation OCEN request:
1. OCEN's Tribal leadership desires to be provided with archaeological reports/surveys, including subsurface testing, and presence/absence testing.
2. OCEN request to be included in mitigation and recovery programs,
3. OCEN request reburial of any of our ancestral remains,
4. Placement of all cultural items with Ohlone/Costanoan-Esselen Nation
5. And that a Native American Monitor of Ohlone/Costanoan-Esselen Nation, approved by the OCEN Tribal Council be used within our aboriginal territory.

OCEN **requests consultation on <u>all projects</u> affecting our aboriginal homelands, <u>which include all ground disturbance</u>** (but not limited to ground disturbance). It is our request to consult with Lead Agencies on projects to establish a procedure to; 1. provide OCEN with all reports, **<u>2. establish procedure for disturbance of unknown sites especially when in an Archaeological Zone</u>**, 3. procedure for known sites.

Please feel free to contact me at (408) 629-5189. Nimasianexelpasaleki. Thank you for your attention to this matter.

Sincerely and Respectfully Yours,

Louise J. Miranda Ramirez, Chairperson
Ohlone/Costanoan-Esselen Nation
(408) 629-5189

Cc: OCEN Tribal Council

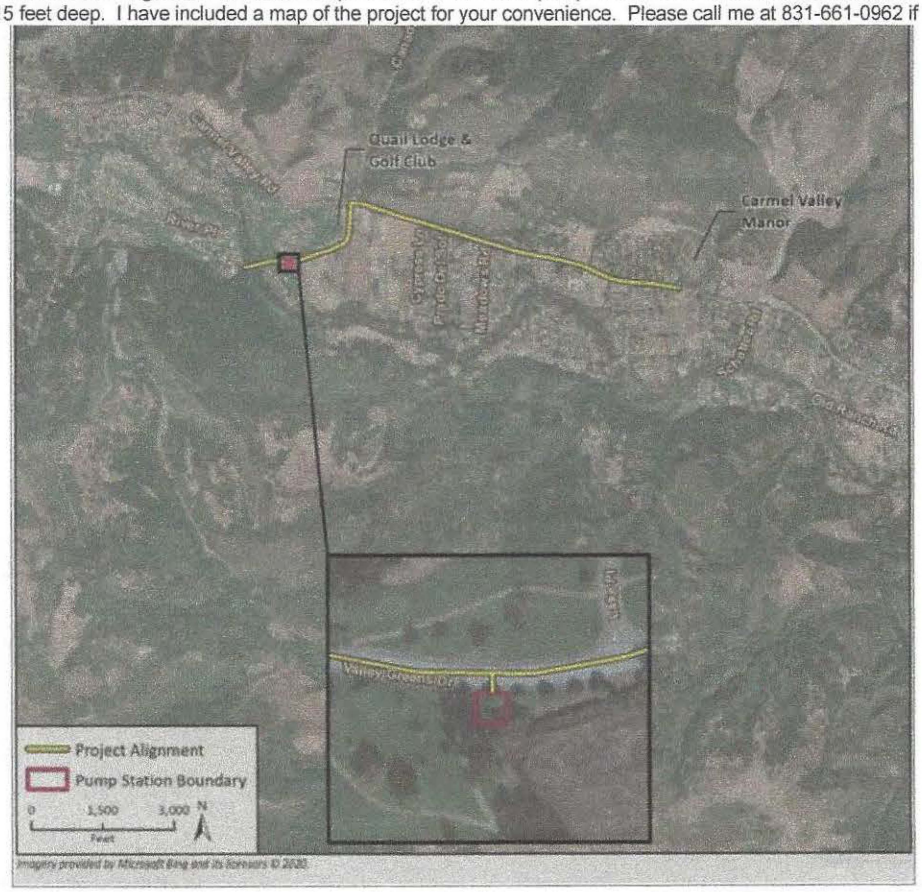
Carmel Valley Manor Sewer Extension - Carmel valley Road and Valley Greens Drive

From: Rachel Lather (lather@cawd.org)

To: ramirez.louise@yahoo.com

Date: Monday, April 20, 2020, 02:52 PM PDT

Louise, it was nice talking to you today about the subject project. As we discussed, the project will be open cut construction within Carmel Valley Road and Valley Greens Drive. The excavation will range from 4 to 8 feet deep. There will also be a pump station constructed that will contain a wet well that is 8 feet in diameter and 15 feet deep. I have included a map of the project for your convenience. Please call me at 831-661-0962 if



you have any concerns or questions.

Rachél Lather, MS, PE

Principal Engineer

(831)257-0423

Distribution of Ohlone/Costanoan-Esselen Nation Tribal Rancherias, Districts, Landgrants and Historic Landmarks

OCEN DIRECT LINEAL DESCENT

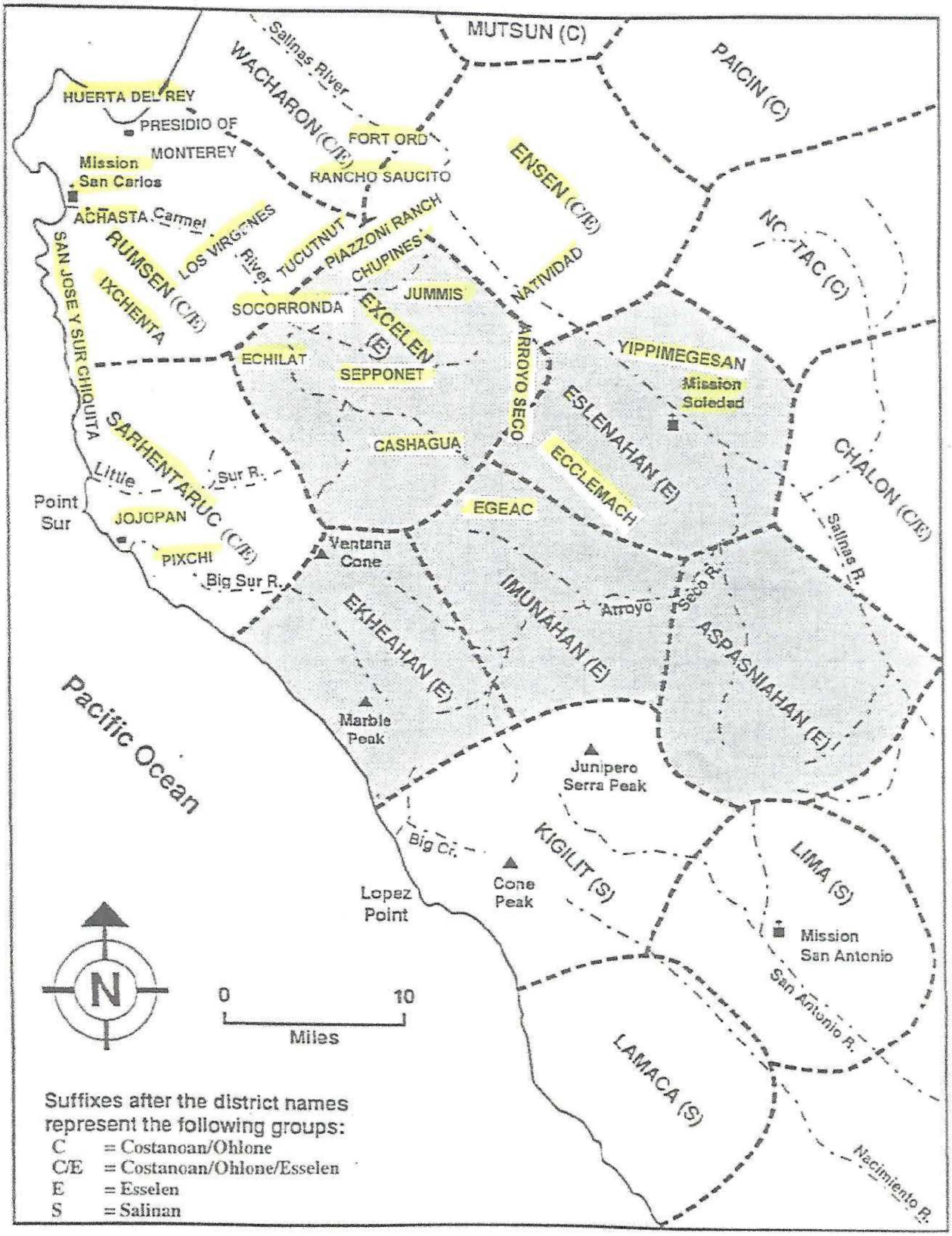


Figure 2:

Map after Taylor 1856; Levy 1973; Hester 1978; Milliken 1990

Carmel Area Wastewater District

P.O. Box 221428 Carmel California 93922 ❖ (831) 624-1248 ❖ FAX (831) 624-0811

Barbara Buikema
General Manager
Ed Waggoner
Operations Superintendent
Robert R. Wellington
Legal Counsel

Board of Directors
Gregory D'Ambrosio
Michael K. Rachel
Robert Siegfried
Charlotte F. Townsend
Ken White

July 1, 2020

Louise Miranda-Ramirez
Chairperson
Ohlone/Costanoan-Esselen Nation
[redacted]

RE: Termination of Assembly Bill 52 Consultation for the Carmel Valley Manor Sewer Main Extension Project, Monterey County, California

Dear Chairperson Ramirez:
The Carmel Area Wastewater District (CAWD) mailed and emailed a letter to your office under Assembly Bill (AB) 52 on April 2, 2020 regarding the Carmel Valley Manor Sewer Main Extension Project (project). The letter was intended to notify you of the project so that you may request to consult on the project under AB 52 should you choose to do so. On April 20, 2020, CAWD followed up via telephone. At that time, we discussed the project and provided a follow up email with the initial AB 52 letter and project map. On April 22, the Ohlone/Costanoan-Esselen Nation (OCEN) responded to request formal consultation under AB 52.

On April 22, 2020, Governor Gavin Newsom issued Executive Order N-54-20, which suspended certain CEQA deadlines for a period of 60 days, until June 21, 2020. With regards to AB 52, the Executive Order suspended the window within which a tribe must request consultation. The Executive Order also suspended the 30-day window within which the lead agency must begin consultation. Although the deadline was suspended until June 21, CAWD attempted to begin consultation via telephone on two separate occasions: April 28, 2020 and May 20, 2020. As of June 30, 2020, no response has been received.

At this time, CAWD has provided your office more than 60 days to respond to our consultation request and is now past the June 21 suspension deadline. CAWD has demonstrated a good faith effort to open consultation with your organization through our attempts to reach you. We have also enclosed the proposed mitigation in the Initial Study-Mitigated Negative Declaration for the project, for your reference. CAWD now considers our consultation obligations under AB 52 to have been met and no further attempts to schedule a consultation meeting with your tribe will be made.

Please contact me at (831)624-1248 if you have questions regarding this letter or the consultation process.

Sincerely,

Rachél Lather

Rachél Lather, Principal Engineer
Carmel Area Wastewater District

Enclosed: Cultural Resources Mitigation Measures

CR-1 Archaeological and Native American Monitoring

During ground disturbance of native soils (soils not consisting of artificial fill) for the construction of the project, a qualified archaeologist working under the direction of an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) and a locally affiliated Native American monitor shall be retained to observe construction activities within the project site. If, during initial monitoring, the qualified archaeologist determines that the construction activities have little or no potential to impact cultural resources, the qualified archaeologist, in consultation with the Native American monitor, may recommend that monitoring be reduced or eliminated. If cultural resources are identified during initial monitoring, work within 50 feet of the find shall halt and Mitigation Measure CR-2 shall be implemented.

CR-2 Unanticipated Archaeological Resources

If archaeological resources are encountered during ground-disturbing activities, work within 50 feet of the find shall be halted and an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeology (National Park Service 1983), shall be contacted immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility. If the discovery proves to be significant under CEQA and cannot be avoided by the project, additional work, such as data recovery excavation, may be warranted to mitigate any significant impacts to historical resources.

In the event that archaeological resources of Native American origin are identified during project construction, a qualified archaeologist will consult with CAWD to begin Native American consultation procedures. As part of this process, it may be determined that archaeological monitoring is required. A Native American monitor may also be required in addition to the archaeologist.