

AIR QUALITY CALCULATIONS

ATTACHMENT 2

to the
439 Eccles Avenue Project Environmental Checklist

439 Eccles Ave SSF - San Mateo County, Annual

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

439 Eccles Ave SSF
San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Research & Development	246.23	1000sqft	1.38	294,785.00	0
Enclosed Parking with Elevator	470.00	Space	1.25	178,033.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	70
Climate Zone	5	Operational Year		2026	
Utility Company	Peninsula Clean Energy				
CO2 Intensity (lb/MW hr)	0	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Gross square footage from plans and lot acreage split between the office/R&D building and parking.

Construction Phase - Per preliminary construction schedule.

Trips and VMT -

Demolition -

Grading - Site acreage consistent with plans and earth moving estimates.

Vehicle Trips - Weekday trip rate consistent with transportation study and based on the ITE 11th Edition trip rate for use 760 R&D modified to reflect a 21% trip reduction from implementation of a TDM Plan.

Vehicle Emission Factors -

Energy Use -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	6.00	62.00
tblConstructionPhase	NumDays	220.00	480.00
tblConstructionPhase	PhaseEndDate	10/10/2024	12/27/2024
tblConstructionPhase	PhaseEndDate	8/14/2025	10/30/2026
tblConstructionPhase	PhaseEndDate	8/28/2025	11/12/2026
tblConstructionPhase	PhaseEndDate	9/11/2025	11/25/2026
tblConstructionPhase	PhaseStartDate	10/11/2024	12/28/2024
tblConstructionPhase	PhaseStartDate	8/15/2025	10/30/2026
tblConstructionPhase	PhaseStartDate	8/29/2025	11/12/2026
tblGrading	AcresOfGrading	62.00	2.63
tblGrading	MaterialExported	0.00	40,000.00
tblGrading	MaterialImported	0.00	500.00
tblLandUse	LandUseSquareFeet	246,230.00	294,785.00
tblLandUse	LandUseSquareFeet	188,000.00	178,033.00
tblLandUse	LotAcreage	5.65	1.38
tblLandUse	LotAcreage	4.23	1.25
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	2,000.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	5,063.00	5,062.00
tblVehicleTrips	WD_TR	11.26	7.75

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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
Year	tons/yr									
2024	0.0656	1.0101	0.5841	2.6500e-003	0.2620	0.0281	0.2901	0.1199	0.0261	0.1460
2025	0.2475	2.0573	2.3758	6.6000e-003	0.2392	0.0645	0.3038	0.0652	0.0617	0.1269
2026	1.7837	1.7469	2.0318	5.5400e-003	0.2008	0.0556	0.2565	0.0547	0.0532	0.1079
Maximum Annual	1.7837	2.0573	2.3758	6.6000e-003	0.2620	0.0645	0.3038	0.1199	0.0617	0.1460
Avg Daily	1.0704274	10.486838	10.119316	0.0316239	1.7135043	0.3165812	2.03042735	0.63282051	0.30017094	0.93299145

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
Category	tons/yr									
Area	1.3208	6.0000e-005	6.5600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005
Energy	0.0391	0.3550	0.2982	2.1300e-003		0.0270	0.0270		0.0270	0.0270
Mobile	0.5568	0.5116	5.4422	0.0115	1.3501	7.3800e-003	1.3575	0.3606	6.8500e-003	0.3675
Stationary	0.1641	0.7339	0.4184	7.9000e-004		0.0241	0.0241		0.0241	0.0241
Waste						0.0000	0.0000		0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000
Total Annual	2.0808	1.6006	6.1654	0.0144	1.3501	0.0585	1.4086	0.3606	0.0580	0.4186
Generators Total Annual	0.1641	0.7339	0.4184	7.9000e-004		0.0241	0.0241		0.0241	0.0241
Total Annual with Generators	2.2449	2.3345	6.5838	0.01519	1.3501	0.0826	1.4327	0.3606	0.0821	0.4427
Avg Daily w/o Generators	12.300822	12.791781	36.075616	0.0832329	7.3978082	0.45260274	7.85041096	1.97589041	0.44986301	2.42575342

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/2/2024	9/27/2024	5	20	
2	Mobilization and Site Preparation	Site Preparation	9/28/2024	10/2/2024	5	3	
3	Grading	Grading	10/3/2024	12/27/2024	5	62	

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4	Building Construction	Building Construction	12/28/2024	10/30/2026	5	480
5	Paving	Paving	10/30/2026	11/12/2026	5	10
6	Architectural Coating	Architectural Coating	11/12/2026	11/25/2026	5	10

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 2.63

Acres of Paving: 1.25

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 442,178; Non-Residential Outdoor: 147,393; Striped Parking Area: 10,682

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mobilization and Site Preparation	Graders	1	8.00	187	0.41
Mobilization and Site Preparation	Scrapers	1	8.00	367	0.48
Mobilization and Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Mobilization and Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	183.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	5,062.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	169.00	77.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	34.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									

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Fugitive Dust					0.0198	0.0000	0.0198	3.0000e-003	0.0000	3.0000e-003
Off-Road	0.0144	0.1389	0.1349	2.4000e-004		6.3100e-003	6.3100e-003		5.8900e-003	5.8900e-003
Total	0.0144	0.1389	0.1349	2.4000e-004	0.0198	6.3100e-003	0.0261	3.0000e-003	5.8900e-003	8.8900e-003

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Hauling	2.1000e-004	0.0142	4.8300e-003	6.0000e-005	1.5400e-003	9.0000e-005	1.6300e-003	4.2000e-004	9.0000e-005	5.1000e-004
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	1.6000e-004	2.3700e-003	1.0000e-005	1.0200e-003	0.0000	1.0300e-003	2.7000e-004	0.0000	2.8000e-004
Total	4.8000e-004	0.0143	7.2000e-003	7.0000e-005	2.5600e-003	9.0000e-005	2.6600e-003	6.9000e-004	9.0000e-005	7.9000e-004

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Fugitive Dust					0.0198	0.0000	0.0198	3.0000e-003	0.0000	3.0000e-003
Off-Road	0.0144	0.1389	0.1349	2.4000e-004		6.3100e-003	6.3100e-003		5.8900e-003	5.8900e-003
Total	0.0144	0.1389	0.1349	2.4000e-004	0.0198	6.3100e-003	0.0261	3.0000e-003	5.8900e-003	8.8900e-003

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Hauling	2.1000e-004	0.0142	4.8300e-003	6.0000e-005	1.5400e-003	9.0000e-005	1.6300e-003	4.2000e-004	9.0000e-005	5.1000e-004
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	1.6000e-004	2.3700e-003	1.0000e-005	1.0200e-003	0.0000	1.0300e-003	2.7000e-004	0.0000	2.8000e-004
Total	4.8000e-004	0.0143	7.2000e-003	7.0000e-005	2.5600e-003	9.0000e-005	2.6600e-003	6.9000e-004	9.0000e-005	7.9000e-004

3.3 Mobilization and Site Preparation - 2024

Unmitigated Construction On-Site

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004
Off-Road	1.8600e-003	0.0197	0.0144	4.0000e-005		7.5000e-004	7.5000e-004		6.9000e-004	6.9000e-004
Total	1.8600e-003	0.0197	0.0144	4.0000e-005	2.3900e-003	7.5000e-004	3.1400e-003	2.6000e-004	6.9000e-004	9.5000e-004

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	2.2000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	3.0000e-005	0.0000	3.0000e-005
Total	2.0000e-005	2.0000e-005	2.2000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	3.0000e-005	0.0000	3.0000e-005

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004
Off-Road	1.8600e-003	0.0197	0.0144	4.0000e-005		7.5000e-004	7.5000e-004		6.9000e-004	6.9000e-004
Total	1.8600e-003	0.0197	0.0144	4.0000e-005	2.3900e-003	7.5000e-004	3.1400e-003	2.6000e-004	6.9000e-004	9.5000e-004

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	2.2000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	3.0000e-005	0.0000	3.0000e-005

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Total	2.0000e-005	2.0000e-005	2.2000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	3.0000e-005	0.0000	3.0000e-005
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3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Fugitive Dust					0.1904	0.0000	0.1904	0.1031	0.0000	0.1031
Off-Road	0.0404	0.4284	0.2697	6.4000e-004		0.0177	0.0177		0.0163	0.0163
Total	0.0404	0.4284	0.2697	6.4000e-004	0.1904	0.0177	0.2081	0.1031	0.0163	0.1194

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Hauling	5.8400e-003	0.3919	0.1336	1.5900e-003	0.0425	2.6100e-003	0.0451	0.0117	2.5000e-003	0.0142
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	3.9000e-004	5.6500e-003	2.0000e-005	2.4400e-003	1.0000e-005	2.4500e-003	6.5000e-004	1.0000e-005	6.6000e-004
Total	6.4700e-003	0.3923	0.1393	1.6100e-003	0.0449	2.6200e-003	0.0476	0.0123	2.5100e-003	0.0148

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Fugitive Dust					0.1904	0.0000	0.1904	0.1031	0.0000	0.1031
Off-Road	0.0404	0.4284	0.2697	6.4000e-004		0.0177	0.0177		0.0163	0.0163
Total	0.0404	0.4284	0.2697	6.4000e-004	0.1904	0.0177	0.2081	0.1031	0.0163	0.1194

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									

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Category	tons/yr									
Hauling	5.8400e-003	0.3919	0.1336	1.5900e-003	0.0425	2.6100e-003	0.0451	0.0117	2.5000e-003	0.0142
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	3.9000e-004	5.6500e-003	2.0000e-005	2.4400e-003	1.0000e-005	2.4500e-003	6.5000e-004	1.0000e-005	6.6000e-004
Total	6.4700e-003	0.3923	0.1393	1.6100e-003	0.0449	2.6200e-003	0.0476	0.0123	2.5100e-003	0.0148

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Off-Road	1.6000e-003	0.0128	0.0141	3.0000e-005		5.4000e-004	5.4000e-004		5.2000e-004	5.2000e-004
Total	1.6000e-003	0.0128	0.0141	3.0000e-005		5.4000e-004	5.4000e-004		5.2000e-004	5.2000e-004

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	3.5900e-003	1.3000e-003	2.0000e-005	5.0000e-004	2.0000e-005	5.2000e-004	1.5000e-004	2.0000e-005	1.6000e-004
Worker	3.5000e-004	2.1000e-004	3.0800e-003	1.0000e-005	1.3300e-003	1.0000e-005	1.3400e-003	3.5000e-004	1.0000e-005	3.6000e-004
Total	4.3000e-004	3.8000e-003	4.3800e-003	3.0000e-005	1.8300e-003	3.0000e-005	1.8600e-003	5.0000e-004	3.0000e-005	5.2000e-004

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Off-Road	1.6000e-003	0.0128	0.0141	3.0000e-005		5.4000e-004	5.4000e-004		5.2000e-004	5.2000e-004
Total	1.6000e-003	0.0128	0.0141	3.0000e-005		5.4000e-004	5.4000e-004		5.2000e-004	5.2000e-004

Mitigated Construction Off-Site

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	3.5900e-003	1.3000e-003	2.0000e-005	5.0000e-004	2.0000e-005	5.2000e-004	1.5000e-004	2.0000e-005	1.6000e-004
Worker	3.5000e-004	2.1000e-004	3.0800e-003	1.0000e-005	1.3300e-003	1.0000e-005	1.3400e-003	3.5000e-004	1.0000e-005	3.6000e-004
Total	4.3000e-004	3.8000e-003	4.3800e-003	3.0000e-005	1.8300e-003	3.0000e-005	1.8600e-003	5.0000e-004	3.0000e-005	5.2000e-004

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Off-Road	0.1944	1.5690	1.8279	3.2700e-003		0.0613	0.0613		0.0587	0.0587
Total	0.1944	1.5690	1.8279	3.2700e-003		0.0613	0.0613		0.0587	0.0587

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0101	0.4630	0.1690	2.0200e-003	0.0656	2.4400e-003	0.0681	0.0190	2.3400e-003	0.0213
Worker	0.0430	0.0252	0.3788	1.3200e-003	0.1736	7.6000e-004	0.1744	0.0462	7.0000e-004	0.0469
Total	0.0530	0.4882	0.5478	3.3400e-003	0.2392	3.2000e-003	0.2424	0.0652	3.0400e-003	0.0682

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Off-Road	0.1944	1.5690	1.8279	3.2700e-003		0.0613	0.0613		0.0587	0.0587
Total	0.1944	1.5690	1.8279	3.2700e-003		0.0613	0.0613		0.0587	0.0587

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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0101	0.4630	0.1690	2.0200e-003	0.0656	2.4400e-003	0.0681	0.0190	2.3400e-003	0.0213
Worker	0.0430	0.0252	0.3788	1.3200e-003	0.1736	7.6000e-004	0.1744	0.0462	7.0000e-004	0.0469
Total	0.0530	0.4882	0.5478	3.3400e-003	0.2392	3.2000e-003	0.2424	0.0652	3.0400e-003	0.0682

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Off-Road	0.1616	1.3045	1.5198	2.7200e-003		0.0510	0.0510		0.0488	0.0488
Total	0.1616	1.3045	1.5198	2.7200e-003		0.0510	0.0510		0.0488	0.0488

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.1600e-003	0.3800	0.1410	1.6400e-003	0.0546	2.0200e-003	0.0566	0.0158	1.9300e-003	0.0177
Worker	0.0344	0.0193	0.2996	1.0600e-003	0.1444	6.0000e-004	0.1450	0.0384	5.5000e-004	0.0390
Total	0.0425	0.3992	0.4406	2.7000e-003	0.1989	2.6200e-003	0.2015	0.0542	2.4800e-003	0.0567

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Off-Road	0.1616	1.3045	1.5198	2.7200e-003		0.0510	0.0510		0.0488	0.0488
Total	0.1616	1.3045	1.5198	2.7200e-003		0.0510	0.0510		0.0488	0.0488

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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.1600e-003	0.3800	0.1410	1.6400e-003	0.0546	2.0200e-003	0.0566	0.0158	1.9300e-003	0.0177
Worker	0.0344	0.0193	0.2996	1.0600e-003	0.1444	6.0000e-004	0.1450	0.0384	5.5000e-004	0.0390
Total	0.0425	0.3992	0.4406	2.7000e-003	0.1989	2.6200e-003	0.2015	0.0542	2.4800e-003	0.0567

3.6 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Off-Road	3.9300e-003	0.0372	0.0584	9.0000e-005		1.7500e-003	1.7500e-003		1.6200e-003	1.6200e-003
Paving	0.0000					0.0000	0.0000		0.0000	0.0000
Total	3.9300e-003	0.0372	0.0584	9.0000e-005		1.7500e-003	1.7500e-003		1.6200e-003	1.6200e-003

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	8.0000e-005	1.2300e-003	0.0000	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004
Total	1.4000e-004	8.0000e-005	1.2300e-003	0.0000	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									

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Off-Road	3.9300e-003	0.0372	0.0584	9.0000e-005		1.7500e-003	1.7500e-003		1.6200e-003	1.6200e-003
Paving	0.0000					0.0000	0.0000		0.0000	0.0000
Total	3.9300e-003	0.0372	0.0584	9.0000e-005		1.7500e-003	1.7500e-003		1.6200e-003	1.6200e-003

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	8.0000e-005	1.2300e-003	0.0000	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004
Total	1.4000e-004	8.0000e-005	1.2300e-003	0.0000	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004

3.7 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Archit. Coating	1.5743					0.0000	0.0000		0.0000	0.0000
Off-Road	8.5000e-004	5.7300e-003	9.0500e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004
Total	1.5751	5.7300e-003	9.0500e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	1.8000e-004	2.7800e-003	1.0000e-005	1.3400e-003	1.0000e-005	1.3400e-003	3.6000e-004	1.0000e-005	3.6000e-004
Total	3.2000e-004	1.8000e-004	2.7800e-003	1.0000e-005	1.3400e-003	1.0000e-005	1.3400e-003	3.6000e-004	1.0000e-005	3.6000e-004

Mitigated Construction On-Site

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Archit. Coating	1.5743					0.0000	0.0000		0.0000	0.0000
Off-Road	8.5000e-004	5.7300e-003	9.0500e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004
Total	1.5751	5.7300e-003	9.0500e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Category	tons/yr									
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	1.8000e-004	2.7800e-003	1.0000e-005	1.3400e-003	1.0000e-005	1.3400e-003	3.6000e-004	1.0000e-005	3.6000e-004
Total	3.2000e-004	1.8000e-004	2.7800e-003	1.0000e-005	1.3400e-003	1.0000e-005	1.3400e-003	3.6000e-004	1.0000e-005	3.6000e-004

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	0.5568	0.5116	5.4422	0.0115	1.3501	7.3800e-003	1.3575	0.3606	6.8500e-003	0.3675						
Unmitigated	0.5568	0.5116	5.4422	0.0115	1.3501	7.3800e-003	1.3575	0.3606	6.8500e-003	0.3675						

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Enclosed Parking with Elevator	0.00	0.00	0.00		
Research & Development	1,908.28	467.84	273.32	3,681,522	3,681,522
Total	1,908.28	467.84	273.32	3,681,522	3,681,522

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

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Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.457911	0.074699	0.239011	0.149017	0.025897	0.006576	0.010546	0.001994	0.001422	0.000553	0.029236	0.000429	0.002710
Research & Development	0.457911	0.074699	0.239011	0.149017	0.025897	0.006576	0.010546	0.001994	0.001422	0.000553	0.029236	0.000429	0.002710

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000						
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000						
NaturalGas Mitigated	0.0391	0.3550	0.2982	2.1300e-003		0.0270	0.0270		0.0270	0.0270						
NaturalGas Unmitigated	0.0391	0.3550	0.2982	2.1300e-003		0.0270	0.0270		0.0270	0.0270						

5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	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
	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Research & Development	7.24287e+006	0.0391	0.3550	0.2982	2.1300e-003		0.0270	0.0270		0.0270	0.0270						
Total		0.0391	0.3550	0.2982	2.1300e-003		0.0270	0.0270		0.0270	0.0270						

Mitigated

Land Use	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
	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Research & Development	7.24287e+006	0.0391	0.3550	0.2982	2.1300e-003		0.0270	0.0270		0.0270	0.0270						
Total		0.0391	0.3550	0.2982	2.1300e-003		0.0270	0.0270		0.0270	0.0270						

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	968500				
Research & Development	2.19025e+006				
Total					

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	968500				
Research & Development	2.19025e+006				
Total					

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	1.3208	6.0000e-005	6.5600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005						
Unmitigated	1.3208	6.0000e-005	6.5600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-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					

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Architectural Coating	0.1574					0.0000	0.0000		0.0000	0.0000						
Consumer Products	1.1628					0.0000	0.0000		0.0000	0.0000						
Landscaping	6.0000e-004	6.0000e-005	6.5600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005						
Total	1.3208	6.0000e-005	6.5600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-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	0.1574					0.0000	0.0000		0.0000	0.0000						
Consumer Products	1.1628					0.0000	0.0000		0.0000	0.0000						
Landscaping	6.0000e-004	6.0000e-005	6.5600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005						
Total	1.3208	6.0000e-005	6.5600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005						

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated				
Unmitigated				

7.2 Water by Land Use

Unmitigated

Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e	
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0				
Research & Development	121.07 / 0				
Total					

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Mitigated

Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr		
Enclosed Parking with Elevator	0 / 0			
Research & Development	121.07 / 0			
Total				

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				
Unmitigated				

8.2 Waste by Land Use

Unmitigated

Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr		
Enclosed Parking with Elevator	0			
Research & Development	18.71			
Total				

Mitigated

Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr		
Enclosed Parking with Elevator	0			
Research & Development	18.71			

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Total					
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9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	2	0	50	2000	0.73	Diesel

Boilers

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

Equipment Type	Number
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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
Equipment Type	tons/yr									
Emergency Generator - Diesel (750 - 9999 HP)	0.1641	0.7339	0.4184	7.9000e-004		0.0241	0.0241		0.0241	0.0241
Total	0.1641	0.7339	0.4184	7.9000e-004		0.0241	0.0241		0.0241	0.0241

11.0 Vegetation