Appendix A Air Quality, Greenhouse Gas Emissions Analysis, and Health Risk Assessment

CalEEMod Inputs - Nicholas Elementary School Project, Construction

Name:	Nicholas Elementary School Project, Construction
Land Use Scale:	Project/site
Land Use Subtypes:	Educational Elementary School
Project Location:	6601 Steiner Drive
County:	Sacramento
Land Use Setting:	Suburban
TAZ:	732
Operational Year:	2025
Electric Utility:	Sacramento Municipal Utility District (SMUD)
Gas Utility:	Pacific Gas & Electric (PG&E)
Air Basin:	Sacramento Valley
Air District:	Sacramento Metropolitant AQMD

Proiect Site Acreage	10.00
Disturbed Site Acreage	9.00

Project Components				
Demolition	**Building Square Feet (SQFT)**	***Tons***		
Building Demolition	46,849	2,155		
Asphalt Demolition	91,514	1,356		
New Construction	**Building Square Feet (SQFT)**	**Building Footprint (BSF)**	**Acres**	**Stories/Levels**
New Classrooms	52,184	52,184	1.20	1
Other Land Uses	**SQFT**	**Building Footprint**	**Acres**	**Number of Stalls**
Parking Lot	56,972	NA	1.31	97
Total Non-Parking Asphalt	31,409	NA	0.72	
Total Non-Asphalt Hardscape	89,920	NA	2.06	

CalEEMod Land Use Inputs

Land Use Type	Land Use Subtype	Size Metric	Size	Lot Acreage	Building Square Feet	Landscape Area Square Feet	Special Landscape Area Square Feet
Educational	Elementary School	1000 sqft	52.18	1.20	52,184	158,637	0
Parking	Parking Lot	1000 sqft	56.97	1.31	0	0	0
Parking	Other Asphalt Surfaces	1000 sqft	31.41	0.72	0	0	0
Parking	Other Non-Asphalt Surfaces	1000 sqft	89.92	2.06	0	0	0
				5.29	**52,184**	**158,637**	**0**

Demolition

Component	Amount to be Demolished (Tons)	Haul Truck Capacity (Tons)[1]	Haul Distance (miles)[1]	Total Trip Ends	Duration (days)	Trip Ends/Day
Building Demolition Debris Haul	2,155	20	20	216	31	7
Asphalt Demolition Debris Haul	1,356	20	20	136	31	4
Total	3,511			352		11

Notes:
[1] CalEEMod default used.

Architectural Coating[1]

	Non-Residential
Interior Painted (%):	100%
Exterior Painted (%):	100%

	< 50 flat / ≤ 100 nonflat
SMAQMD Rule 442 CalEEMod Default	**grams/liter**
Interior Paint VOC content:	75
Exterior Paint VOC content:	75

Notes:
[1] CalEEMod default used.

Structures	Land Use Square Feet	CalEEMod Factor[1]	Total Paintable Surface Area	Paintable Interior Area[2]	Paintable Exterior Area[2]
Educational	52,184	2.0	104,368	78,276	26,092
				78,276	**26,092**
Parking[3]					
All Paved Surfaces	178,301	6%		-	10,698
			Totals	**78,276**	**36,790**

Notes:
[1] CalEEMod assumes the total surface for painting equals 2.0 times the floor square footage for non-residential use.
[2] CalEEMod methodology calculates the paintable interior and exterior areas by multiplying the total paintable surface area by 75 and 25 percent, respectively.
[3] Architectural coatings for the parking lot is based on CalEEMod default.

CalEEMod Construction Measures/Required Basic Construction Emission Control Practices (BMPs)

C-10-A	Water Exposed Surfaces	Frequency per day:	2	
		PM10:	61	% Reduction
		PM2.5:	61	% Reduction
C-11	Limit Vehicle Speeds on Unpaved Roads	Miles per hour speed limit:	25	
		PM10:	44	% Reduction
		PM2.5:	44	% Reduction
C-12	Sweep Paved Roads	PM10:	9	% Reduction
		PM2.5:	9	% Reduction

Demo Haul Trip Calculation

Source: CalEEMod User's Guide Version 2022.1, Appendix C

Conversion factors

0.046	ton/SF
1.2641662	tons/cy
20	tons
15.82070459	CY
0.791035229	CY/ton

Building	BSF Demo	Tons/SF	Tons[1]	Haul Truck (CY)	Haul Truck (Ton)[2]	Round Trips	Total Trip Ends
Combined Building Demo	46,849	0.046	2,155	16	20	108	216

Notes:

[1] Tonnage of building demolition debris to be hauled offsite provided by Applicant.

[2] CalEEMod default haul truck capacity used.

Pavement Volume to Weight Conversion

Component	Total SF of Area[1]	Assumed Thickness (foot)[2]	Debris Volume (cu. ft)	Weight of Crushed Asphalt (lbs/cf)[3]	AC Mass (lbs)	AC Mass (tons)
Asphalt Demo	91,514	0.333	30,505	89	2,711,526	1,355.76

[1] Based on information provided by applicant.

[2] Pavements and Surface Materials. Nonpoint Education for Municipal Officials, Technical Paper Number 8. University of Connecticut Cooperative Extension System, 1999.

[3] https://www.calrecycle.ca.gov/swfacilities/cdi/Tools/Calculations

Construction Activities and Schedule Assumptions: Nicholas Elementary School Project

*based on overall construction duration provided by the Applicant

Default Construction Schedule

Construction Activities	Phase Type	Start Date	End Date	CalEEMod Duration (Workday)
Demolition	Demolition	8/1/2023	8/29/2023	20
Site Preparation	Site Preparation	8/30/2023	9/13/2023	10
Grading	Grading	9/14/2023	10/12/2023	20
Building Construction	Building Construction	10/13/2023	8/30/2024	230
Paving	Paving	8/31/2024	9/28/2024	20
Architectural Coating	Architectural Coating	9/29/2024	10/27/2024	20

Normalization Calculations

CalEEMod Default Duration		Construction Duration	
8/1/2023	10/27/2024	8/1/2023	6/27/2025
total calendar days	453	total calendar days	696
years of construction	1.24	years of construction	2
months of construction	14.89	months of construction	23

Normalization Factor: 1.54

New Construction Schedule (CalEEMod)

Construction Activities	Start Date	End Date	CalEEMod Duration (Workday)
Demolition	8/1/2023	9/12/2023	31
Site Preparation	9/13/2023	10/3/2023	15
Grading	10/4/2023	11/15/2023	31
Building Construction	11/16/2023	3/24/2025	353
Asphalt Paving	3/25/2025	5/6/2025	31
Architectural Coating	5/7/2025	6/18/2025	31

CalEEMod Construction Off-Road Equipment Inputs

**Used CalEEMod default equipment.*

General Construction Hours: Mon-Fri and 8:00 AM to 7:00 PM (with 1 hr break)

Water Truck Vendor Trip Calculation

Amount of Water (gal/acre/day)[1]	Water Truck Capacity (gallons)[2]
10,000	4,000

Notes:

[1] *Based on data provided in Guidance for Application for Dust Control Permit Maricopa County Air Quality Department. 2005, June. Guidance for Application of Dust Control Permit. https://www.epa.gov/sites/default/files/2019-04/documents/mr_guidanceforapplicationfordustcontrolpermit.pdf)*

[2] *Based on standard water truck capacity: McLellan Industries. 2022, January (access). Water Trucks. https://www.mclellanindustries.com/trucks/water-trucks/*

[3] *Assumes that dozers, tractors/loaders/backhoes, and graders can disturb 0.50 acres per day and scrapers can disturb 1 acre per day.*

[4] *Water truck trip distances are assumed to be 4356 feet per acre of disturbance, which assumes a water spray of 10 feet in width*

Construction Equipment Details					
CalEEMod Equipment	**# of Equipment**	**hr/day**	**hp**	**load factor**	**total trips/Day**
Demolition					
Concrete/Industrial Saws	1	8	33	0.73	
Rubber Tired Dozers	2	8	367	0.4	
Excavators	3	8	36	0.38	
Worker Trips/Day					15
Vendor Trips					0
Hauling Trips					11
Water Trucks		Acres Disturbed:	1		6
Site Preparation					
Tractors/Loaders/Backhoes	4	8	84	0.37	
Rubber Tired Dozers	3	8	367	0.4	
Worker Trips/Day					18
Vendor Trips					0
Hauling Trips					0
Water Trucks		Acres Disturbed:	3.50		18
Grading					
Graders	1	8	148	0.41	
Rubber Tired Dozers	1	8	367	0.4	
Tractors/Loaders/Backhoes	3	8	84	0.37	
Excavators	1	8	36	0.38	
Worker Trips					15
Vendor Trips					0
Hauling Trips					0
Water Trucks		Acres Disturbed:	2.50		14

Building Construction						
	Concrete/Industrial Saws	1	7	367	0.29	
	Forklifts	3	8	82	0.2	
	Generator Sets	1	8	14	0.74	
	Tractors/Loaders/Backhoes	3	7	84	0.37	
	Welders	1	8	46	0.45	
	Worker Trips					22
	Vendor Trips					9
	Hauling Trips					0
Asphalt Paving						
	Pavers	2	8	81	0.42	
	Paving Equipment	2	8	89	0.36	
	Rollers	2	8	36	0.38	
	Worker Trips					15
	Vendor Trips					0
	Hauling Trips					0
Architectural Coating						
	Air Compressors	1	6	37	0.48	
	Worker Trips					4
	Vendor Trips					0
	Hauling Trips					0

Construction Trips Worksheet

Phase Name	Worker Trips	Vendor Trips	Onsite Truck Trips (Water Trucks)	Haul Truck Trips	Start Date	End Date	Workdays
	One-Way Trips per Day						
Demolition	15	0	6	11	8/1/2023	9/12/2023	31
Site Preparation	18	18	18	0	9/13/2023	10/3/2023	15
Grading	15	14	14	0	10/4/2023	11/15/2023	31
Building Construction	22	9	0	0	11/16/2023	3/24/2025	353
Asphalt Paving	15	0	0	0	3/25/2025	5/6/2025	31
Architectural Coating	4	0	0	0	5/7/2025	6/18/2025	31

Minor Project Health Effects Tool

Latitude	38.507882	**<-- Step 1: Input latitude (Please chose a value between 38.0 and 39.7)**
Longitude	-121.443833	**<-- Step 2: Input longitude (Please chose a value between -122.5 and -120.0)**

PM2.5 Health Endpoint	Age Range[1]	Incidences Across the Reduced Sacramento 4-km Modeling Domain Resulting from Project Emissions (per year)[2,5] (Mean)	Incidences Across the 5-Air-District Region Resulting from Project Emissions (per year)[2] (Mean)	Percent of Background Health Incidences Across the 5-Air-District Region[3]	Total Number of Health Incidences Across the 5-Air-District Region (per year)[4]
Respiratory					
Emergency Room Visits, Asthma	0 - 99	1.1	1.0	0.0056%	18419
Hospital Admissions, Asthma	0 - 64	0.073	0.068	0.0037%	1846
Hospital Admissions, All Respiratory	65 - 99	0.34	0.30	0.0016%	19644
Cardiovascular					
Hospital Admissions, All Cardiovascular (less Myocardial Infarctions)	65 - 99	0.19	0.17	0.00072%	24037
Acute Myocardial Infarction, Nonfatal	18 - 24	0.000095	0.000087	0.0023%	4
Acute Myocardial Infarction, Nonfatal	25 - 44	0.0084	0.0079	0.0026%	308
Acute Myocardial Infarction, Nonfatal	45 - 54	0.021	0.019	0.0026%	741
Acute Myocardial Infarction, Nonfatal	55 - 64	0.034	0.032	0.0026%	1239
Acute Myocardial Infarction, Nonfatal	65 - 99	0.12	0.11	0.0022%	5052
Mortality					
Mortality, All Cause	30 - 99	2.3	2.1	0.0046%	44766

Ozone Health Endpoint	Age Range[1]	Incidences Across the Reduced Sacramento 4-km Modeling Domain Resulting from Project Emissions (per year)[2,5] (Mean)	Incidences Across the 5-Air-District Region Resulting from Project Emissions (per year)[2] (Mean)	Percent of Background Health Incidences Across the 5-Air-District Region[3]	Total Number of Health Incidences Across the 5-Air-District Region (per year)[4]
Respiratory					
Hospital Admissions, All Respiratory	65 - 99	0.083	0.068	0.00035%	19644
Emergency Room Visits, Asthma	0 - 17	0.44	0.38	0.0065%	5859
Emergency Room Visits, Asthma	18 - 99	0.69	0.60	0.0047%	12560
Mortality					
Mortality, Non-Accidental	0 - 99	0.052	0.044	0.00015%	30386

1. Affected age ranges are shown. Other age ranges are available, but the endpoints and age ranges shown here are the ones used by the USEPA in their health assessments. The age ranges are consistent with the epidemiological study that is the basis of the health function.

2. Health effects are shown in terms of incidences of each health endpoint and how it compares to the base (2035 base year health effect incidences, or "background health incidence") values. Health effects are shown for the Reduced Sacramento 4-km Modeling Domain and the 5-Air-District Region.

3. The percent of background health incidence uses the mean incidence. The background health incidence is an estimate of the average number of people that are affected by the health endpoint in a given population over a given period of time. In this case, the background incidence rates cover the 5-Air-District Region (estimated 2035 population of 3,271,451 persons). Health incidence rates and other health data are typically collected by the government as well as the World Health Organization. The background incidence rates used here are obtained from BenMAP.

4. The total number of health incidences across the 5-Air-District Region is calculated based on the modeling data. The information is presented to assist in providing overall health context.

5. The technical specifications and map for the Reduced Sacramento 4-km Modeling Domain are included in Appendix A, Table A-1 and Appendix B, Figure B-2 of the *Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District.*

Sac Metro Air District Minor Project Health Effects Tool, version 2, published June 2020

Nicholas Elementary School Rebuild Project Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Nicholas Elementary School Rebuild Project
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	36.6
Location	38.50807315894761, -121.44424948205754
County	Sacramento
City	Unincorporated
Air District	Sacramento Metropolitan AQMD
Air Basin	Sacramento Valley
TAZ	732
EDFZ	13
Electric Utility	Sacramento Municipal Utility District
Gas Utility	Pacific Gas & Electric

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Elementary School	52.0	1000sqft	1.20	52,184	158,637	0.00	—	—
Parking Lot	97.0	Space	1.31	0.00	0.00	0.00	—	—
Other Asphalt Surfaces	0.72	Acre	0.72	0.00	0.00	0.00	—	—

Other Non-Asphalt Surfaces	2.06	Acre	2.06	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.84	13.5	40.5	37.0	0.05	1.81	76.7	78.5	1.66	10.9	12.5	—	5,729	5,729	0.25	0.17	2.54	5,762
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.82	4.03	40.5	36.7	0.05	1.81	76.7	78.5	1.66	10.9	12.5	—	5,705	5,705	0.25	0.09	0.05	5,737
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.12	1.43	8.45	10.3	0.02	0.36	7.47	7.78	0.33	0.99	1.27	—	2,064	2,064	0.09	0.05	0.52	2,080
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.20	0.26	1.54	1.88	< 0.005	0.07	1.36	1.42	0.06	0.18	0.23	—	342	342	0.01	0.01	0.09	344

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	4.84	4.04	40.5	37.0	0.05	1.81	76.7	78.5	1.66	10.9	12.5	—	5,729	5,729	0.25	0.17	2.54	5,762
2024	1.57	1.31	11.8	14.7	0.03	0.50	0.29	0.79	0.46	0.07	0.53	—	2,904	2,904	0.13	0.06	1.68	2,928
2025	1.02	13.5	7.50	10.9	0.01	0.35	0.15	0.50	0.32	0.04	0.36	—	1,682	1,682	0.06	0.02	0.65	1,689
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	4.82	4.03	40.5	36.7	0.05	1.81	76.7	78.5	1.66	10.9	12.5	—	5,705	5,705	0.25	0.09	0.05	5,737
2024	1.56	1.30	11.8	14.3	0.03	0.50	0.29	0.79	0.46	0.07	0.53	—	2,875	2,875	0.12	0.06	0.04	2,897
2025	1.47	1.22	11.0	14.2	0.03	0.44	0.29	0.72	0.40	0.07	0.47	—	2,866	2,866	0.12	0.06	0.04	2,888
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.86	0.72	7.01	6.68	0.01	0.31	7.47	7.78	0.28	0.99	1.27	—	1,149	1,149	0.05	0.03	0.22	1,159
2024	1.12	0.93	8.45	10.3	0.02	0.36	0.20	0.56	0.33	0.05	0.38	—	2,064	2,064	0.09	0.05	0.52	2,080
2025	0.34	1.43	2.50	3.33	0.01	0.10	0.06	0.16	0.09	0.01	0.11	—	623	623	0.03	0.01	0.14	628
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.16	0.13	1.28	1.22	< 0.005	0.06	1.36	1.42	0.05	0.18	0.23	—	190	190	0.01	< 0.005	0.04	192
2024	0.20	0.17	1.54	1.88	< 0.005	0.07	0.04	0.10	0.06	0.01	0.07	—	342	342	0.01	0.01	0.09	344
2025	0.06	0.26	0.46	0.61	< 0.005	0.02	0.01	0.03	0.02	< 0.005	0.02	—	103	103	< 0.005	< 0.005	0.02	104

3. Construction Emissions Details

3.1. Demolition (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.39	2.84	27.3	23.5	0.03	1.20	—	1.20	1.10	—	1.10	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	2.49	2.49	—	0.38	0.38	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.14	0.06	< 0.005	< 0.005	6.56	6.56	< 0.005	0.66	0.66	—	29.0	29.0	0.01	< 0.005	0.04	30.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.24	2.32	1.99	< 0.005	0.10	—	0.10	0.09	—	0.09	—	291	291	0.01	< 0.005	—	292
Demolition	—	—	—	—	—	—	0.21	0.21	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.56	0.56	< 0.005	0.06	0.06	—	2.46	2.46	< 0.005	< 0.005	< 0.005	2.59
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.42	0.36	< 0.005	0.02	—	0.02	0.02	—	0.02	—	48.2	48.2	< 0.005	< 0.005	—	48.3
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.10	0.10	< 0.005	0.01	0.01	—	0.41	0.41	< 0.005	< 0.005	< 0.005	0.43
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	1.05	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	177	177	0.01	0.01	0.77	180
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.11	0.03	1.64	0.59	0.01	0.01	0.21	0.22	0.01	0.06	0.07	—	848	848	0.08	0.13	1.73	892
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.7	13.7	< 0.005	< 0.005	0.03	13.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.15	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	72.0	72.0	0.01	0.01	0.06	75.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.26	2.26	< 0.005	< 0.005	< 0.005	2.30
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.9	11.9	< 0.005	< 0.005	0.01	12.5

3.3. Site Preparation (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.70	3.95	39.7	35.5	0.05	1.81	—	1.81	1.66	—	1.66	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.04	0.02	0.65	0.28	< 0.005	< 0.005	68.9	68.9	< 0.005	6.89	6.89	—	227	227	0.03	0.04	0.41	239
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	4.70	3.95	39.7	35.5	0.05	1.81	—	1.81	1.66	—	1.66	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.04	0.01	0.69	0.29	< 0.005	< 0.005	68.9	68.9	< 0.005	6.89	6.89	—	226	226	0.03	0.04	0.01	238
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.63	1.46	< 0.005	0.07	—	0.07	0.07	—	0.07	—	218	218	0.01	< 0.005	—	218
Dust From Material Movement	—	—	—	—	—	—	0.32	0.32	—	0.16	0.16	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	2.83	2.83	< 0.005	0.28	0.28	—	9.32	9.32	< 0.005	< 0.005	0.01	9.79
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.30	0.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	36.0	36.0	< 0.005	< 0.005	—	36.2
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.52	0.52	< 0.005	0.05	0.05	—	1.54	1.54	< 0.005	< 0.005	< 0.005	1.62
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	1.22	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	206	206	0.01	0.01	0.90	210
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.90	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	183	183	< 0.005	0.01	0.02	185
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.72	7.72	< 0.005	< 0.005	0.02	7.83
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.28	1.28	< 0.005	< 0.005	< 0.005	1.30
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.43	2.04	20.0	19.7	0.03	0.94	—	0.94	0.87	—	0.87	—	2,958	2,958	0.12	0.02	—	2,968

Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.03	0.01	0.45	0.20	< 0.005	< 0.005	38.3	38.3	< 0.005	3.83	3.83	—	133	133	0.02	0.02	0.01	139
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.70	1.67	< 0.005	0.08	—	0.08	0.07	—	0.07	—	251	251	0.01	< 0.005	—	252
Dust From Material Movement	—	—	—	—	—	—	0.23	0.23	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	3.25	3.25	< 0.005	0.33	0.33	—	11.3	11.3	< 0.005	< 0.005	0.01	11.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.31	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	41.6	41.6	< 0.005	< 0.005	—	41.7
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.59	0.59	< 0.005	0.06	0.06	—	1.87	1.87	< 0.005	< 0.005	< 0.005	1.96
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.07	0.72	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	146	146	< 0.005	0.01	0.02	148
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	0.03	13.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.11	2.11	< 0.005	< 0.005	< 0.005	2.14
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.50	1.26	11.8	13.2	0.02	0.55	—	0.55	0.51	—	0.51	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	1.06	1.19	< 0.005	0.05	—	0.05	0.05	—	0.05	—	216	216	0.01	< 0.005	—	217
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.02	0.19	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	35.7	35.7	< 0.005	< 0.005	—	35.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.10	1.13	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	229	229	0.01	0.01	0.03	232
Vendor	0.03	0.01	0.55	0.19	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	256	256	0.02	0.04	0.02	268
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	21.2	21.2	< 0.005	< 0.005	0.04	21.5
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.1	23.1	< 0.005	< 0.005	0.03	24.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.51	3.51	< 0.005	< 0.005	0.01	3.56
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.82	3.82	< 0.005	< 0.005	< 0.005	4.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	0.86	8.04	9.39	0.02	0.36	—	0.36	0.33	—	0.33	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.47	1.71	< 0.005	0.07	—	0.07	0.06	—	0.06	—	284	284	0.01	< 0.005	—	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.07	1.42	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	254	254	0.01	0.01	1.04	258
Vendor	0.03	0.01	0.48	0.17	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	252	252	0.02	0.04	0.65	264
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.10	1.05	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	225	225	0.01	0.01	0.03	228
Vendor	0.03	0.01	0.51	0.18	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	252	252	0.02	0.04	0.02	263
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.77	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	166	166	< 0.005	0.01	0.32	168
Vendor	0.02	0.01	0.36	0.12	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	181	181	0.01	0.03	0.20	189
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.4	27.4	< 0.005	< 0.005	0.05	27.8
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.9	29.9	< 0.005	< 0.005	0.03	31.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.70	2.12	< 0.005	0.07	—	0.07	0.06	—	0.06	—	389	389	0.02	< 0.005	—	391
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.31	0.39	< 0.005	0.01	—	0.01	0.01	—	0.01	—	64.5	64.5	< 0.005	< 0.005	—	64.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.97	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	221	221	0.01	0.01	0.02	224
Vendor	0.03	0.01	0.48	0.17	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	247	247	0.02	0.04	0.02	259
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.16	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	36.8	36.8	< 0.005	< 0.005	0.07	37.3
Vendor	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.2	40.2	< 0.005	0.01	0.05	42.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.10	6.10	< 0.005	< 0.005	0.01	6.18
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.65	6.65	< 0.005	< 0.005	0.01	6.96
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.63	0.85	< 0.005	0.03	—	0.03	0.03	—	0.03	—	128	128	0.01	< 0.005	—	129
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.12	0.15	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	21.3	21.3	< 0.005	< 0.005	—	21.3
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.04	0.90	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	170	170	< 0.005	0.01	0.65	173
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.67	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	151	151	< 0.005	0.01	0.02	153
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.2	13.2	< 0.005	< 0.005	0.02	13.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.18	2.18	< 0.005	< 0.005	< 0.005	2.21
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	13.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.3	11.3	< 0.005	< 0.005	—	11.4
Architectural Coatings	—	1.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.88	1.88	< 0.005	< 0.005	—	1.88
Architectural Coatings	—	0.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.26	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	49.8	49.8	< 0.005	< 0.005	0.19	50.5

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.85	3.85	< 0.005	< 0.005	0.01	3.90
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.64	0.64	< 0.005	< 0.005	< 0.005	0.65
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	8/1/2023	9/12/2023	5.00	31.0	—
Site Preparation	Site Preparation	9/13/2023	10/3/2023	5.00	15.0	—
Grading	Grading	10/4/2023	11/15/2023	5.00	31.0	—
Building Construction	Building Construction	11/16/2023	3/24/2025	5.00	353	—
Paving	Paving	3/25/2025	5/6/2025	5.00	31.0	—
Architectural Coating	Architectural Coating	5/7/2025	6/18/2025	5.00	31.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	14.3	LDA,LDT1,LDT2
Demolition	Vendor	0.00	8.80	HHDT,MHDT
Demolition	Hauling	11.0	20.0	HHDT
Demolition	Onsite truck	6.00	0.82	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	14.3	LDA,LDT1,LDT2
Site Preparation	Vendor	0.00	8.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	18.0	2.89	HHDT
Grading	—	—	—	—
Grading	Worker	14.0	14.3	LDA,LDT1,LDT2
Grading	Vendor	0.00	8.80	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	14.0	2.06	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	21.9	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	8.55	8.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	14.3	LDA,LDT1,LDT2
Paving	Vendor	0.00	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—

Architectural Coating	Worker	4.38	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	8.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	78,276	26,092	10,698

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Ton of Debris)	Material Exported (Ton of Debris)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	3,511	—
Site Preparation	0.00	0.00	15.0	0.00	—
Grading	0.00	0.00	20.0	0.00	—
Paving	0.00	0.00	0.00	0.00	4.09

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Elementary School	0.00	0%
Parking Lot	1.31	100%
Other Asphalt Surfaces	0.72	100%
Other Non-Asphalt Surfaces	2.06	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	375	0.01	< 0.005
2024	0.00	375	0.01	< 0.005
2025	0.00	375	0.01	< 0.005

8. User Changes to Default Data

Screen	Justification
Land Use	Updated to match PD
Construction: Trips and VMT	Matching the PD
Construction: Architectural Coatings	Adjusted to match PD
Construction: Construction Phases	Adjusted schedule to match August 2023 to June 2025.

Nicholas Elementary School Rebuild Project Custom Report

With Mitigation Measure AQ-2

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Nicholas Elementary School Rebuild Project
Construction Start Date	8/1/2023
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	36.6
Location	38.50807315894761, -121.44424948205754
County	Sacramento
City	Unincorporated
Air District	Sacramento Metropolitan AQMD
Air Basin	Sacramento Valley
TAZ	732
EDFZ	13
Electric Utility	Sacramento Municipal Utility District
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.7

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Elementary School	52.0	1000sqft	1.20	52,184	158,637	0.00	—	—

Parking Lot	97.0	Space	1.31	0.00	0.00	0.00	—	—
Other Asphalt Surfaces	0.72	Acre	0.72	0.00	0.00	0.00	—	—
Other Non-Asphalt Surfaces	2.06	Acre	2.06	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.84	0.74	15.5	29.8	0.05	0.22	76.7	76.8	0.21	10.9	11.0	—	5,729	5,729	0.25	0.17	2.54	5,762
2024	0.77	0.69	9.81	16.6	0.03	0.12	0.29	0.41	0.12	0.07	0.19	—	2,904	2,904	0.13	0.06	1.68	2,928
2025	0.58	13.5	6.83	11.5	0.01	0.10	0.15	0.26	0.10	0.04	0.13	—	1,682	1,682	0.06	0.02	0.65	1,689
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.79	0.73	15.5	29.5	0.05	0.13	76.7	76.8	0.12	10.9	11.0	—	5,705	5,705	0.25	0.09	0.05	5,737
2024	0.76	0.67	9.87	16.2	0.03	0.12	0.29	0.41	0.12	0.07	0.19	—	2,875	2,875	0.12	0.06	0.04	2,897
2025	0.74	0.69	9.77	16.1	0.03	0.12	0.29	0.40	0.11	0.07	0.18	—	2,866	2,866	0.12	0.06	0.04	2,888
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2023	0.22	0.20	3.58	5.95	0.01	0.04	7.47	7.51	0.04	0.99	1.03	—	1,149	1,149	0.05	0.03	0.22	1,159
2024	0.55	0.48	7.05	11.6	0.02	0.09	0.20	0.29	0.08	0.05	0.13	—	2,064	2,064	0.09	0.05	0.52	2,080
2025	0.18	1.31	2.24	3.69	0.01	0.03	0.06	0.09	0.03	0.01	0.04	—	623	623	0.03	0.01	0.14	628
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.04	0.04	0.65	1.09	< 0.005	0.01	1.36	1.37	0.01	0.18	0.19	—	190	190	0.01	< 0.005	0.04	192
2024	0.10	0.09	1.29	2.12	< 0.005	0.02	0.04	0.05	0.02	0.01	0.02	—	342	342	0.01	0.01	0.09	344
2025	0.03	0.24	0.41	0.67	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	—	103	103	< 0.005	< 0.005	0.02	104

3. Construction Emissions Details

3.2. Demolition (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	0.59	11.6	18.3	0.03	0.20	—	0.20	0.19	—	0.19	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	2.49	2.49	—	0.38	0.38	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.14	0.06	< 0.005	< 0.005	6.56	6.56	< 0.005	0.66	0.66	—	29.0	29.0	0.01	< 0.005	0.04	30.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	0.99	1.56	< 0.005	0.02	—	0.02	0.02	—	0.02	—	291	291	0.01	< 0.005	—	292

Demolitio	—	—	—	—	—	—	0.21	0.21	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.56	0.56	< 0.005	0.06	0.06	—	2.46	2.46	< 0.005	< 0.005	< 0.005	2.59
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.18	0.28	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	48.2	48.2	< 0.005	< 0.005	—	48.3
Demolitio n	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.10	0.10	< 0.005	0.01	0.01	—	0.41	0.41	< 0.005	< 0.005	< 0.005	0.43
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	1.05	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	177	177	0.01	0.01	0.77	180
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.11	0.03	1.64	0.59	0.01	0.01	0.21	0.22	0.01	0.06	0.07	—	848	848	0.08	0.13	1.73	892
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.7	13.7	< 0.005	< 0.005	0.03	13.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.15	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	72.0	72.0	0.01	0.01	0.06	75.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.26	2.26	< 0.005	< 0.005	< 0.005	2.30
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.9	11.9	< 0.005	< 0.005	0.01	12.5

3.4. Site Preparation (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	0.64	14.7	28.3	0.05	0.10	—	0.10	0.10	—	0.10	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.04	0.02	0.65	0.28	< 0.005	< 0.005	68.9	68.9	< 0.005	6.89	6.89	—	227	227	0.03	0.04	0.41	239
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	0.64	14.7	28.3	0.05	0.10	—	0.10	0.10	—	0.10	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.04	0.01	0.69	0.29	< 0.005	< 0.005	68.9	68.9	< 0.005	6.89	6.89	—	226	226	0.03	0.04	0.01	238
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.61	1.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	218	218	0.01	< 0.005	—	218
Dust From Material Movement	—	—	—	—	—	—	0.32	0.32	—	0.16	0.16	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	2.83	2.83	< 0.005	0.28	0.28	—	9.32	9.32	< 0.005	< 0.005	0.01	9.79
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.11	0.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	36.0	36.0	< 0.005	< 0.005	—	36.2
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.52	0.52	< 0.005	0.05	0.05	—	1.54	1.54	< 0.005	< 0.005	< 0.005	1.62
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	1.22	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	206	206	0.01	0.01	0.90	210
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.90	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	183	183	< 0.005	0.01	0.02	185
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.72	7.72	< 0.005	< 0.005	0.02	7.83
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.28	1.28	< 0.005	< 0.005	< 0.005	1.30
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Grading (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	0.48	10.0	17.8	0.03	0.09	—	0.09	0.08	—	0.08	—	2,958	2,958	0.12	0.02	—	2,968
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.03	0.01	0.45	0.20	< 0.005	< 0.005	38.3	38.3	< 0.005	3.83	3.83	—	133	133	0.02	0.02	0.01	139
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.85	1.51	< 0.005	0.01	—	0.01	0.01	—	0.01	—	251	251	0.01	< 0.005	—	252
Dust From Material Movement	—	—	—	—	—	—	0.23	0.23	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	3.25	3.25	< 0.005	0.33	0.33	—	11.3	11.3	< 0.005	< 0.005	0.01	11.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.16	0.28	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	41.6	41.6	< 0.005	< 0.005	—	41.7

Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.59	0.59	< 0.005	0.06	0.06	—	1.87	1.87	< 0.005	< 0.005	< 0.005	1.96
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.07	0.72	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	146	146	< 0.005	0.01	0.02	148
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	0.03	13.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.11	2.11	< 0.005	< 0.005	< 0.005	2.14
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.66	0.59	9.30	15.0	0.02	0.13	—	0.13	0.12	—	0.12	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.84	1.35	< 0.005	0.01	—	0.01	0.01	—	0.01	—	216	216	0.01	< 0.005	—	217
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.15	0.25	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	35.7	35.7	< 0.005	< 0.005	—	35.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.10	1.13	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	229	229	0.01	0.01	0.03	232
Vendor	0.03	0.01	0.55	0.19	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	256	256	0.02	0.04	0.02	268
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	21.2	21.2	< 0.005	< 0.005	0.04	21.5
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.1	23.1	< 0.005	< 0.005	0.03	24.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.51	3.51	< 0.005	< 0.005	0.01	3.56
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.82	3.82	< 0.005	< 0.005	< 0.005	4.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	0.58	9.26	15.0	0.02	0.12	—	0.12	0.11	—	0.11	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	0.58	9.26	15.0	0.02	0.12	—	0.12	0.11	—	0.11	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.46	0.41	6.63	10.7	0.02	0.09	—	0.09	0.08	—	0.08	—	1,717	1,717	0.07	0.01	—	1,723

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.08	1.21	1.96	< 0.005	0.02	—	0.02	0.01	—	0.01	—	284	284	0.01	< 0.005	—	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.07	1.42	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	254	254	0.01	0.01	1.04	258
Vendor	0.03	0.01	0.48	0.17	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	252	252	0.02	0.04	0.65	264
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.10	1.05	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	225	225	0.01	0.01	0.03	228
Vendor	0.03	0.01	0.51	0.18	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	252	252	0.02	0.04	0.02	263
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.77	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	166	166	< 0.005	0.01	0.32	168
Vendor	0.02	0.01	0.36	0.12	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	181	181	0.01	0.03	0.20	189
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.4	27.4	< 0.005	< 0.005	0.05	27.8
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.9	29.9	< 0.005	< 0.005	0.03	31.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.56	9.21	15.0	0.02	0.11	—	0.11	0.11	—	0.11	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	1.50	2.43	< 0.005	0.02	—	0.02	0.02	—	0.02	—	389	389	0.02	< 0.005	—	391
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.27	0.44	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.5	64.5	< 0.005	< 0.005	—	64.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.09	0.08	0.08	0.97	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	221	221	0.01	0.01	0.02	224
Vendor	0.03	0.01	0.48	0.17	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	247	247	0.02	0.04	0.02	259
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.16	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	36.8	36.8	< 0.005	< 0.005	0.07	37.3
Vendor	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.2	40.2	< 0.005	0.01	0.05	42.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.10	6.10	< 0.005	< 0.005	0.01	6.18
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.65	6.65	< 0.005	< 0.005	0.01	6.96
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.46	6.78	10.6	0.01	0.10	—	0.10	0.10	—	0.10	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.46	6.78	10.6	0.01	0.10	—	0.10	0.10	—	0.10	—	1,511	1,511	0.06	0.01	—	1,517

Paving	—	0.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.58	0.90	< 0.005	0.01	—	0.01	0.01	—	0.01	—	128	128	0.01	< 0.005	—	129
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	21.3	21.3	< 0.005	< 0.005	—	21.3
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.04	0.90	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	170	170	< 0.005	0.01	0.65	173
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.67	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	151	151	< 0.005	0.01	0.02	153
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.2	13.2	< 0.005	< 0.005	0.02	13.4

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.18	2.18	< 0.005	< 0.005	< 0.005	2.21
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	13.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.3	11.3	< 0.005	< 0.005	—	11.4
Architectural Coatings	—	1.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.88	1.88	< 0.005	< 0.005	—	1.88
Architectural Coatings	—	0.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.26	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	49.8	49.8	< 0.005	< 0.005	0.19	50.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.85	3.85	< 0.005	< 0.005	0.01	3.90
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.64	0.64	< 0.005	< 0.005	< 0.005	0.65
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	8/1/2023	9/12/2023	5.00	31.0	—
Site Preparation	Site Preparation	9/13/2023	10/3/2023	5.00	15.0	—
Grading	Grading	10/4/2023	11/15/2023	5.00	31.0	—
Building Construction	Building Construction	11/16/2023	3/24/2025	5.00	353	—
Paving	Paving	3/25/2025	5/6/2025	5.00	31.0	—
Architectural Coating	Architectural Coating	5/7/2025	6/18/2025	5.00	31.0	—

5.2. Off-Road Equipment

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Rubber Tired Dozers	Diesel	Tier 4 Interim	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Interim	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Tier 4 Interim	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Tier 4 Interim	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Interim	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74

Building Construction	Tractors/Loaders/Backh	Diesel	Tier 4 Interim	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Tier 4 Interim	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Interim	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Demolition	Excavators	Diesel	Tier 4 Interim	3.00	8.00	36.0	0.38
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38

5.3. Construction Vehicles

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	14.3	LDA,LDT1,LDT2
Demolition	Vendor	0.00	8.80	HHDT,MHDT
Demolition	Hauling	11.0	20.0	HHDT
Demolition	Onsite truck	6.00	0.82	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	14.3	LDA,LDT1,LDT2
Site Preparation	Vendor	0.00	8.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	18.0	2.89	HHDT
Grading	—	—	—	—
Grading	Worker	14.0	14.3	LDA,LDT1,LDT2
Grading	Vendor	0.00	8.80	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT

Grading	Onsite truck	14.0	2.06	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	21.9	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	8.55	8.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	14.3	LDA,LDT1,LDT2
Paving	Vendor	0.00	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	4.38	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	8.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	78,276	26,092	10,698

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Ton of Debris)	Material Exported (Ton of Debris)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	3,511	—
Site Preparation	0.00	0.00	15.0	0.00	—
Grading	0.00	0.00	20.0	0.00	—
Paving	0.00	0.00	0.00	0.00	4.09

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Elementary School	0.00	0%
Parking Lot	1.31	100%
Other Asphalt Surfaces	0.72	100%
Other Non-Asphalt Surfaces	2.06	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	375	0.01	< 0.005
2024	0.00	375	0.01	< 0.005
2025	0.00	375	0.01	< 0.005

1. Construction Health Risk Assessment

1.1 INTRODUCTION

The Sacramento City Unified School District (District), the project applicant, is proposing the redevelopment and modernization of the existing Nicholas Elementary School campus (proposed project or project). The approximately 10.1-acre project site is bound by residential uses that face Sitton Way to the north, residential uses and the Allegheny Wesleyan Methodist Church along Steiner Drive to the west, residential uses facing Frawley Way to the south, and residential uses and a facility owned by California American Water along Vernace Way to the east of the project site. Nicholas Elementary School is in an urban area surrounded by residential, commercial, and institutional uses. The project is a school redevelopment project that would result in demolition of existing school buildings and construction of new school buildings. The proposed project would involve building and asphalt demolition, site preparation, grading, building construction, architectural coating, and paving activities. The following provides the background methodology used for the construction health risk assessment for the proposed project.

Project construction is estimated to start approximately August 2023 and construction activities would end approximately June 2025. The nearest sensitive receptors to the project site include the single-family residences surrounding the project site, as well as the Sacramento Accelerated Academy and Calvary Christian schools to the north. Guidance from the California Environmental Protection Agency (Cal/EPA), Office of Environmental Health Hazard Assessment (OEHHA), and California Air Pollution Control Officers Association (CAPCOA) recommend the completion of health risk assessments (HRA) to determine the impacts of hazardous air emissions upon sensitive receptors in the vicinity of the project. As a result, a site-specific construction health risk assessment (HRA) has been prepared for the proposed project. This HRA considers the health impact to sensitive receptors (nearby residents and off-site students) from exposure to construction diesel equipment exhaust (diesel particulate matter or DPM).

1.2 METHODOLOGY AND SIGNIFICANCE THRESHOLDS

For this HRA, the Sacramento Metropolitan Air Quality Management District (Sac Metro AQMD) significance thresholds provided below were deemed to be appropriate for analyzing project impacts:

- Excess cancer risk of more than 10 in a million
- Non-cancer hazard index (chronic or acute) greater than 1.0

The methodology used in this HRA is consistent with the following OEHHA guidance document:

- OEHHA. 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments.* February, 2015.

Potential exposure to DPM from project construction was evaluated for off-site sensitive receptors in close proximity to the site. Pollutant concentrations were estimated using an air dispersion model, and excess lifetime cancer risks and chronic non-cancer hazard indexes were calculated. These risks were then compared to the significance thresholds utilized for this HRA.

It should be noted that these health impacts are based on conservative (i.e., health protective) assumptions. The United States Environmental Protection Agency (USEPA, 2005) and the Office of Environmental Health Hazard Assessment (OEHHA, 2015) note that conservative assumptions used in a risk assessment are intended to ensure that the estimated risks do not underestimate the actual risks. Therefore, the estimated risks may not necessarily represent actual risks experienced by populations at or near a site. The use of conservative assumptions tends to produce upper-bound estimates of exposure and thus risk.

For residential-based receptors, the following conservative assumptions were used:

- It was assumed that maximum-exposed off-site residential receptors (both children and adults) stood outdoors and are subject to DPM at their residence for 8 hours per day, and approximately 260 construction days per year. In reality, California residents typically will spend on average 2 hours per day outdoors at their residences (USEPA, 2011). This would result in lower exposures to construction related DPM emissions and lower estimated risk values.

- The calculated risk for infants from third trimester to age 2 is multiplied by a factor of 10 to account for early life exposure and uncertainty in child versus adult exposure impacts (OEHHA, 2015).

For school-based receptors (students), the following conservative assumptions were used:

- It was assumed that maximum-exposed off-site student receptors (both children and adults) stood outdoors and are subject to DPM at their school for 8 hours per day, and approximately 180 school days per year. In reality, students are expected to be inside for most of a given day where air ventilation systems would filter particulates originating from outside. This would result in lower exposures to construction related DPM emissions and lower estimated risk values.

- The calculated risk for children from age 2 to age 16 is multiplied by a factor of 3 to account for early life exposure and uncertainty in child versus adult exposure impacts (OEHHA, 2015).

1.3 CONSTRUCTION EMISSIONS

Construction emissions were calculated as average daily emissions in pounds per day, using the proposed construction schedule and the latest version of California Emissions Estimation Model, known as CalEEMod Version 2022.1 (CAPCOA, 2022). DPM emissions were based on the CalEEMod construction runs, using maximum daily exhaust PM_{10} construction emissions presented in pounds (lbs) per day.

The daily emission rates from construction equipment used during the proposed project were determined by multiplying the daily pounds per day of each construction activity by the total workdays for that activity, adding all total pounds of emissions across the total project construction duration, then dividing that total emission estimate by the total construction workdays. The off-site hauling emission rates were adjusted to evaluate

localized emissions from the 0.8-mile haul route within 1,000 feet of the project site. The CalEEMod construction emissions output and emission rate calculations are provided in Attachment A of this HRA.

1.4 DISPERSION MODELING

Air quality modeling was performed using the AERMOD atmospheric dispersion model to assess the impact of emitted compounds on sensitive receptors near the project. The model is a steady state Gaussian plume model and is an approved model by Sacramento Metropolitan AQMD for estimating ground level impacts from point and fugitive sources in simple and complex terrain. The on-site construction emissions for the project were modeled as poly-area sources. The off-site mobile sources were modeled as adjacent line volume sources. The model requires additional input parameters, including chemical emission data and local meteorology. Inputs for the construction emission rates are those described in Section 1.3. Meteorological data obtained from the Sacramento Metropolitan AQMD for the nearest representative meteorological station (Sacramento Executive Airport) with the five latest available years (2014 to 2018) of record were used to represent local weather conditions and prevailing winds. The prevailing wind direction at the Sacramento Executive Airport meteorological station is to the southwest, and the wind rose is provided in Attachment B.

The modeling analysis also considered the spatial distribution and elevation of each emitting source in relation to the sensitive receptors. To accommodate the model's Cartesian grid format, direction-dependent calculations were obtained by identifying the Universal Transverse Mercator (UTM) coordinates for each source location. In addition, digital elevation model (DEM) data for the area were obtained and included in the model runs to account for complex terrain. An emission release height of 4.15 meters was used as representative of the stack exhaust height for off-road construction equipment and diesel truck traffic, and an initial vertical dispersion parameter of 1.93 m was used, per California Air Resources Board (CARB) guidance (2000).

To determine contaminant impacts during construction hours, the model's Hour-By-Day-of-Week (HRDOW) scalar option was invoked to predict ground-level concentrations for construction emissions generated between the hours of 7:00 AM and 4:00 PM with a 1-hour lunch break.

A unit emission rate of 1 gram per second was used for all modeling runs. The unit emission rates were proportioned over the poly-area sources for on-site construction emissions and divided between the volume sources for off-site hauling emissions. The maximum modeled concentrations from the output files were then multiplied by the emission rates calculated in Attachment A to obtain the maximum flagpole-level concentrations at the off-site maximum exposed receptors (MERs). The Residential, School, and Worker MER locations correspond with the maximum AERMOD predicted DPM concentrations at nearby off-site resident, student, and worker locations from the on-site emission source because the calculated on-site emission rates are approximately 2 orders of magnitude higher than the calculated off-site emission rates (see Attachment A). Therefore, the maximum concentrations associated with the on-site emission sources produce the highest overall ground-level MER concentrations and, consequently, highest calculated health risks.

The air dispersion model output for the emission sources is presented in Attachment B. The model output DPM concentrations from the construction emission sources are provided in Attachment C.

1.5 RISK CHARACTERIZATION

1.5.1 Carcinogenic Chemical Risk

Carcinogenic compounds are not considered to have threshold levels (i.e., dose levels below which there are no risks). Therefore, any exposure will have some associated risk. The Sac Metro AQMD has established a maximum incremental cancer risk of 10 in a million (1×10^{-5} or 10×10^{-6}) for CEQA projects and the OEHHA also sets a typical risk management level as 10 in a million (OEHHA, 2015).

Health risks associated with exposure to carcinogenic compounds can be defined in terms of the probability of developing cancer as a result of exposure to a chemical at a given concentration. The cancer risk probability is determined by multiplying the chemical's annual concentration by its cancer potency factor (CPF), a measure of the carcinogenic potential of a chemical when a dose is received through the inhalation pathway. It is an upper-limit estimate of the probability of contracting cancer as a result of continuous exposure to an ambient concentration of one microgram per cubic meter ($\mu g/m^3$), averaged over a lifetime of 70 years.

Recent guidance from OEHHA recommends a refinement to the standard point estimate approach with the use of age-specific breathing rates and age sensitivity factors (ASFs) to assess risk for susceptible subpopulations such as children. For the inhalation pathway, the procedure requires the incorporation of several discrete variates to effectively quantify dose for each age group. Once determined, contaminant dose is multiplied by the cancer potency factor in units of inverse dose expressed in milligrams per kilogram per day $(mg/kg/day)^{-1}$ to derive the cancer risk estimate. Therefore, the following dose algorithm was used to accommodate the unique exposures associated with each receptor type.

$$\text{Dose}_{\text{AIR,per age group}} = \left(C_{air} \times EF \times \left[\frac{BR}{BW}\right] \times A \times CF\right)$$

Where:

Dose_{AIR}	=	dose by inhalation (mg/kg-day), per age group
C_{air}	=	concentration of contaminant in air ($\mu g/m^3$)
EF	=	exposure frequency (number of days/365 days)
BR/BW	=	daily breathing rate normalized to body weight (L/kg-day)
A	=	inhalation absorption factor (default = 1)
CF	=	conversion factor ($1x10^{-6}$, µg to mg, L to m^3)

The inhalation absorption factor (A) is a unitless factor that is only used if the cancer potency factor included a correction for absorption across the lung. The default value of 1 was used for this assessment. For residential receptors, the exposure frequency (EF) of 0.96 is used to represent 350 days per year to allow for a two-week period away from home each year (OEHHA, 2015). For students, the EF of 0.49 is used to represent 180 days per year accounting for the average annual days school would be in-session. For workers, the EF of 0.71 is used to represent 260 days per year accounting for the average annual days a full-time employee could be at work. The 95th percentile daily breathing rates (BR/BW), exposure duration (ED), age sensitivity factors (ASFs), and fraction of time at home (FAH) for the various age groups are provided herein:

Age Groups	BR/BW (L/kg-day)	ED	ASF	FAH
Residential MER				
Third trimester	361	0.25	10	0.85
0-2 age group	1,090	1.63	10	0.85
School MERs				
2-9 age group	861	1.88	3	N/A
2-16 age group	745	1.88	3	N/A
Worker MER				
16-30 age group	335	1.88	1	N/A

For construction analysis, the exposure duration spans the length of construction (e.g., 492 workdays or 1.88 years). In addition, the construction duration was considered in the risk calculations to account for the number of days the MERs are exposed to construction emissions. As the length of construction is longer than 0.25 year, the third trimester and 0-2 age bins apply to the construction analysis for the off-site residential MER. Because two schools of differing age ranges were identified near the project site, Calvary Christian Preschool and Sacramento Accelerated Academy High School, the 2-9 age bin was utilized for the Calvary Christian school MER while the 2-16 age bin was utilized for the Sacramento Accelerated Academy school MER.

To calculate the overall cancer risk, the risk for each appropriate age group is calculated per the following equation:

$$\text{Cancer Risk}_{\text{AIR}} = \text{Dose}_{\text{AIR}} \times \text{CPF} \times \text{ASF} \times \text{FAH} \times \frac{\text{ED}}{AT}$$

Where:

Dose_{AIR}	=	dose by inhalation (mg/kg-day), per age group
CPF	=	cancer potency factor, chemical-specific $(\text{mg/kg-day})^{-1}$
ASF	=	age sensitivity factor, per age group
FAH	=	fraction of time at home, per age group (for residential receptors only)
ED	=	exposure duration (years)
AT	=	averaging time period over which exposure duration is averaged (70 years)

The CPFs used in the assessment were obtained from OEHHA guidance. The excess lifetime cancer risks during project construction to the MERs were calculated based on the factors provided above. The cancer risks for each age group are summed, as applicable, to estimate the total cancer risk for each toxic chemical species. The final step converts the cancer risk in scientific notation to a whole number that expresses the cancer risk in "chances per million" by multiplying the cancer risk by a factor of $1x10^6$ (i.e., 1 million).

The calculated results are provided in Attachment C.

1.5.2 Non-Carcinogenic Hazards

An evaluation was also conducted of the potential non-cancer effects of chronic chemical exposures. Adverse health effects are evaluated by comparing the annual receptor level concentration of each chemical compound

with the appropriate reference exposure limit (REL). Available RELs promulgated by OEHHA were considered in the assessment.

The hazard index approach was used to quantify non-carcinogenic impacts. The hazard index assumes that chronic sub-threshold exposures adversely affect a specific organ or organ system (toxicological endpoint). Target organs presented in regulatory guidance were used for each discrete chemical exposure. To calculate the hazard index, each chemical concentration or dose is divided by the appropriate toxicity value. This ratio is summed for compounds affecting the same toxicological endpoint. A health hazard is presumed to exist where the total equals or exceeds one.

The chronic hazard analysis for DPM is provided in Attachment C. The calculations contain the relevant exposure concentrations and corresponding reference dose values used in the evaluation of non-carcinogenic exposures.

1.6 CONSTRUCTION HRA RESULTS

The calculated results are provided in Attachment C and the results are summarized in Table 1.

TABLE 1. CONSTRUCTION RISK SUMMARY - UNMITIGATED

Receptor	Cancer Risk (per million)	Chronic Hazards
Residential MER	28.1	0.025
School MER – Sacramento Accelerated Academy	0.2	0.001
School MER – Calvary Christian	0.2	0.001
Worker MER	0.2	0.005
Maximally Impacted MER	28.1	0.025
Sac Metro AQMD Threshold	10	1.0
Exceeds Threshold?	Yes	No

Note: MER = Maximum Exposed Receptor. Cancer risk calculated using 2015 OEHHA HRA guidance.

Cancer risk during project construction for the Residential, School, and Worker MERs were calculated to be 28.1, 0.2, and 0.2 in a million, respectively. Chronic hazards during project construction for the Residential, School, and Worker MERs were calculated to be 0.025, 0.001, and 0.005, respectively. As illustrated in Table 1, the Residential MER cancer risk would exceed the 10 in a million-significance threshold. No other MER impacts would exceed Sac Metro AQMD thresholds. Therefore, mitigation would be required to reduce the Residential MER cancer risk impact to less than significant levels. As such, MM AQ-1 is included to ensure that off-road equipment used during project construction which is greater than 50 horsepower meets Tier 4 Interim emissions standards. Mitigated results for the Residential MER are contained in Table 2.

TABLE 2. CONSTRUCTION RISK SUMMARY - MITIGATED

Receptor	Cancer Risk (per million)	Chronic Hazards

TABLE 2. CONSTRUCTION RISK SUMMARY - MITIGATED

Residential MER	5.8	0.005
Sac Metro AQMD Threshold	10	1.0
Exceeds Threshold?	No	No

Note: MER = Maximum Exposed Receptor. Cancer risk calculated using 2015 OEHHA HRA guidance. Modeling incorporates use of off-road construction equipment that meets the United States Environmental Protection Agency (US EPA) Tier 4 Interim emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower.

Cancer risk during mitigated project construction for the Residential MER was calculated to be 5.8 in a million and chronic hazard was calculated to be 0.005. As illustrated in Table 2, neither of these risks would exceed the Sac Metro AQMD significance thresholds. In accordance with the latest 2015 OEHHA guidance, the calculated total cancer risk conservatively assumes that the risk for the Residential MER consists of a pregnant woman in the third trimester that subsequently gives birth to an infant during the approximately 1.88-year cumulative construction period; therefore, calculated risk values for the entire construction duration were multiplied by a factor of 10 for the Residential MER. Similarly, student receptors were assumed to be first exposed at age 3 for Calvary Christian school and age 14 at Sacramento Accelerated Academy; therefore, calculated risk values for the full construction duration for students were multiplied by a factor of 3. In addition, it was conservatively assumed that all residents and students were outdoors 8 hours a day and exposed to all the daily construction emissions.

For non-carcinogenic effects, the chronic hazard index identified for each toxicological endpoint totaled less than one for all the off-site sensitive receptors. Therefore, chronic non-carcinogenic hazards are less than significant. Because cancer risks and chronic non-carcinogenic hazards for the MERs would not exceed Sac Metro AQMD significance threshold, construction activities associated with the proposed project would be **less than significant after mitigation**.

2. References

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Sacramento Metropolitan Air Quality Management District (Sac Metro AQMD). 2020, April. Chapter 5, TAC Emissions. https://www.airquality.org/LandUseTransportation/Documents/Ch5TAC4-2020.pdf.

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Attachment A. Emission Rate Calculations

Onsite Construction PM10 Exhaust Emissions - Unmitigated

Year	Construction Activity	Days of Activity	Average Daily Emissions (lbs/day)	Total Average Daily Emissions (lbs/day)	Total Construction Days	Average Daily Emissions (lbs/hr)	Emission Rate (g/s)
2023	Demolition	31	1.21				
2023	Site Preparation	15	1.82				
2023	Grading	31	0.95				
2023	Building Construction	32	0.55	279.63	492	7.10E-02	8.95E-03
2024	Building Construction	262	0.50				
2025	Building Construction	59	0.43				
2025	Paving	31	0.35				
2025	Architectural Coating	31	0.03				

Offsite Construction PM10 Exhaust Emissions - Unmitigated

Year	Construction Activity	Days of Activity	Average Daily Emissions (lbs/day)	Total Annual Emissions (lbs/year)	Total Construction Days	Average Daily Emissions (lbs/hr)	Hauling Emissions w/in 1,000 ft (lbs/day) [3]	Emission Rate (g/s)
2023	Demolition	31	0.01					
2023	Site Preparation	15	0.00					
2023	Grading	31	0.00					
2023	Building Construction	32	0.01	2.08	492	5.27E-04	2.11E-05	2.66E-06
2024	Building Construction	262	0.01					
2025	Building Construction	59	0.01					
2025	Paving	31	0.00					
2025	Architectural Coating	31	0.00					

Note: Emissions evenly distributed over all modeled volume sources.

Hauling Length (miles) [3]	20.00	miles
Haul Length within 1,000 ft of Site (mile) [4]	0.80	miles
Hours per work day (7:00 AM to 4:00 PM, 1-hour of breaks) [5]	8.00	hours

[1] DPM emissions taken as PM_{10} exhaust emissions from CalEEMod average daily emissions.

[2] Construction durations determined for each year to adjust receptor exposures to the exposure durations for each construction year (see App C - Risk Calculations).

[3] Based on CalEEMod default 20 mile hauling distance.

[4] Emissions from CalEEMod offsite average daily emissions, which is based on proportioned haul truck trip distances , are adjusted to evaluate emissions from the 0.59-mile route within 1,000 of the project site.

[5] Work hours applied in By Hour/Day (HRDOW) variable emissions module in air dispersion model (see App C - Air Dispersion Model Output Files).

3.1. Demolition (2023)

Construction On-Site

Category	lbs/day	PM10E
Off-Road Equipment		1.200
Demolition		0.000
Onsite truck		0.005
Total		1.205

Construction Off-Site

Category	lbs/day	PM10E
Worker		0.000
Vendor		0.000
Hauling		0.010
Total		0.010

3.3. Site Preparation (2023)

Construction On-Site

Category	lbs/day	PM10E
Off-Road Equipment		1.810
Dust From Material Movement		0.000
Onsite truck		0.005
Total		1.815

Construction Off-Site

Category	lbs/day	PM10E
Worker		0.000
Vendor		0.000
Hauling		0.000
Total		0.000

3.5. Grading (2023)

Construction On-Site

Category	lbs/day	PM10E
Off-Road Equipment		0.940
Dust from Material Movement		0.000
Onsite Truck		0.005
Total		0.945

Construction Off-Site

Category	lbs/day	PM10E
Worker		0.000
Vendor		0.000
Hauling		0.000
Total		0.000

3.7. Building Construction (2023)

Construction On-Site

		PM10E
Category	lbs/day	
Off-Road Equipment		0.550
Onsite truck		0.000
Total		0.550

Construction Off-Site

		PM10E
Category	lbs/day	
Worker		0.000
Vendor		0.005
Hauling		0.000
Total		0.005

3.9. Building Construction (2024)

Construction On-Site

		PM10E
Category	lbs/day	
Off-Road Equipment		0.500
Onsite truck		0.000
Total		0.500

Construction Off-Site

		PM10E
Category	lbs/day	
Worker		0.000
Vendor		0.005
Hauling		0.000
Total		0.005

3.11. Building Construction (2025)

Construction On-Site

		PM10E
Category	lbs/day	
Off-Road Equipment		0.430
Onsite truck		0.000
Total		0.430

Construction Off-Site

		PM10E
Category	lbs/day	
Worker		0.000
Vendor		0.005
Hauling		0.000
Total		0.005

3.13. Paving (2025)

Construction On-Site

Category	lbs/day	PM10E
Off-Road Equipment		0.350
Paving		0.000
Onsite truck		0.000
Total		0.350

Construction Off-Site

Category	lbs/day	PM10E
Worker		0.000
Vendor		0.000
Hauling		0.000
Total		0.000

3.15. Architectural Coating (2025)

Construction On-Site

Category	lbs/day	PM10E
Off-Road Equipment		0.030
Architectural Coatings		0.000
Onsite truck		0.000
Total		0.030

Construction Off-Site

Category	lbs/day	PM10E
Worker		0.000
Vendor		0.000
Hauling		0.000
Total		0.000

Onsite Construction PM10 Exhaust Emissions - Mitigated

Year	Construction Activity	Days of Activity	Average Daily Emissions (lbs/day)	Total Average Daily Emissions (lbs/day)	Total Construction Days	Average Daily Emissions (lbs/hr)	Emission Rate (g/s)
2023	Demolition	31	0.22				
2023	Site Preparation	15	0.11				
2023	Grading	31	0.10				
2023	Building Construction	32	0.13	57.31	492	1.46E-02	1.83E-03
2024	Building Construction	262	0.12				
2025	Building Construction	59	0.11				
2025	Paving	31	0.10				
2025	Architectural Coating	31	0.03				

Offsite Construction PM10 Exhaust Emissions - Mitigated

Year	Construction Activity	Days of Activity	Average Daily Emissions (lbs/day)	Total Annual Emissions (lbs/year)	Total Construction Days	Average Daily Emissions (lbs/hr)	Hauling Emissions w/in 1,000 ft (lbs/day) [3]	Emission Rate (g/s)
2023	Demolition	31	0.01					
2023	Site Preparation	15	0.00					
2023	Grading	31	0.00					
2023	Building Construction	32	0.01	2.08	492	5.27E-04	2.11E-05	2.66E-06
2024	Building Construction	262	0.01					
2025	Building Construction	59	0.01					
2025	Paving	31	0.00					
2025	Architectural Coating	31	0.00					

Note: Emissions evenly distributed over all modeled volume sources.

Hauling Length (miles) [3]	20.00	miles
Haul Length within 1,000 ft of Site (mile) [4]	0.80	miles
Hours per work day (7:00 AM to 4:00 PM, 1-hour of breaks) [5]	8.00	hours

[1] DPM emissions taken as PM_{10} exhaust emissions from CalEEMod average daily emissions.

[2] Construction durations determined for each year to adjust receptor exposures to the exposure durations for each construction year (see App C - Risk Calculations).

[3] Based on CalEEMod default 20 mile hauling distance.

[4] Emissions from CalEEMod offsite average daily emissions, which is based on proportioned haul truck trip distances , are adjusted to evaluate emissions from the 0.59-mile route within 1,000 of the project site.

[5] Work hours applied in By Hour/Day (HRDOW) variable emissions module in air dispersion model (see App C - Air Dispersion Model Output Files).

3.1. Demolition (2023)

Construction On-Site

Category	lbs/day	PM10E
Off-Road Equipment		0.210
Demolition		0.000
Onsite truck		0.005
Total		0.215

Construction Off-Site

Category	lbs/day	PM10E
Worker		0.000
Vendor		0.000
Hauling		0.010
Total		0.010

3.3. Site Preparation (2023)

Construction On-Site

Category	lbs/day	PM10E
Off-Road Equipment		0.100
Dust From Material Movement		0.000
Onsite truck		0.005
Total		0.105

Construction Off-Site

Category	lbs/day	PM10E
Worker		0.000
Vendor		0.000
Hauling		0.000
Total		0.000

3.5. Grading (2023)

Construction On-Site

Category	lbs/day	PM10E
Off-Road Equipment		0.090
Dust from Material Movement		0.000
Onsite Truck		0.005
Total		0.095

Construction Off-Site

Category	lbs/day	PM10E
Worker		0.000
Vendor		0.000
Hauling		0.000
Total		0.000

3.7. Building Construction (2023)

Construction On-Site

		PM10E
Category	lbs/day	
Off-Road Equipment		0.130
Onsite truck		0.000
Total		0.130

Construction Off-Site

		PM10E
Category	lbs/day	
Worker		0.000
Vendor		0.005
Hauling		0.000
Total		0.005

3.9. Building Construction (2024)

Construction On-Site

		PM10E
Category	lbs/day	
Off-Road Equipment		0.120
Onsite truck		0.000
Total		0.120

Construction Off-Site

		PM10E
Category	lbs/day	
Worker		0.000
Vendor		0.005
Hauling		0.000
Total		0.005

3.11. Building Construction (2025)

Construction On-Site

		PM10E
Category	lbs/day	
Off-Road Equipment		0.110
Onsite truck		0.000
Total		0.110

Construction Off-Site

		PM10E
Category	lbs/day	
Worker		0.000
Vendor		0.005
Hauling		0.000
Total		0.005

3.13. Paving (2025)

Construction On-Site

Category	lbs/day	PM10E
Off-Road Equipment		0.100
Paving		0.000
Onsite truck		0.000
Total		0.100

Construction Off-Site

Category	lbs/day	PM10E
Worker		0.000
Vendor		0.000
Hauling		0.000
Total		0.000

3.15. Architectural Coating (2025)

Construction On-Site

Category	lbs/day	PM10E
Off-Road Equipment		0.030
Architectural Coatings		0.000
Onsite truck		0.000
Total		0.030

Construction Off-Site

Category	lbs/day	PM10E
Worker		0.000
Vendor		0.000
Hauling		0.000
Total		0.000

Attachment B. Air Dispersion Model Output

Control Pathway

AERMOD

Dispersion Options

Titles

Nicholas Elementary School Reconstruction Project
Construction HRA

Dispersion Options

☐ Regulatory Default ☒ Non-Default Options

☒ Flat & Elevated Terrain
☐ No Stack-Tip Downwash (NOSTD)
☐ Run in Screening Mode
☐ Conversion of NOx to NO2 (OLM or PVMRM)
☐ No Checks for Non-Sequential Met Data
☒ Fast All Sources (FASTALL)
☐ Fast Area Sources (FASTAREA)
☐ Optimized Area Source Plume Depletion
☐ Gas Deposition

BETA Options:

☐ Capped and Horizontal Stack Releases
☐ Adjusted Friction Velocity (u*) in AERMET (ADJ_U*)
☐ Low Wind Options

☐ SCIM (Sampled Chronological Input Model)
☐ Ignore Urban Night / Daytime Transition (NOURBTRAN)

Dispersion Coefficient

Urban

Population:
Name (Optional):
Roughness Length:

Output Type

☒ Concentration
☐ Total Deposition (Dry & Wet)
☐ Dry Deposition
☐ Wet Deposition

Plume Depletion

☐ Dry Removal
☐ Wet Removal

Output Warnings

☐ No Output Warnings
☐ Non-fatal Warnings for Non-sequential Met Data

Pollutant / Averaging Time / Terrain Options

Pollutant Type

PM2.5

Averaging Time Options

Hours ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 6 ☐ 8 ☐ 12 ☐ 24

☐ Month ☐ Period ☒ Annual

Exponential Decay

☐ Yes ☒ No

Terrain Height Options

☐ Flat ☒ Elevated

SO: Meters
RE: Meters
TG: Meters

Flagpole Receptors

☐ Yes ☒ No

Default Height = 0.00 m

Control Pathway

Optional Files

Re-Start File	Init File	Multi-Year Analyses	Event Input File	Error Listing File
☐	☐	☐	☐	■

Detailed Error Listing File

Filename: SCUS-04.err

Source Pathway - Source Inputs

Polygon Area Sources

Source Type: AREA POLY

Source: ONSITE (Project Site)

Base Elevation (Optional)	Release Height [m]	Emission Rate [g/ (s-m^2)]	Initial Vertical Dim. [m]	Number of Vertices (or sides)	X Coordinate for Vertices [m]	Y Coordinate for Vertices [m]
7.62	4.15	0.00002	1.93	10	635831.20	4263392.26
		0.00002			635832.45	4263247.05
		0.00002			635804.64	4263246.53
		0.00002			635804.81	4263234.44
		0.00002			635719.14	4263232.02
		0.00002			635684.62	4263197.03
		0.00002			635601.73	4263278.63
		0.00002			635567.54	4263317.36
		0.00002			635543.84	4263364.62
		0.00002			635537.67	4263387.36

Source Pathway - Source Inputs

AERMOD

Line Volume Sources

Source Type: LINE VOLUME

Source: 47TH (47th Ave)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
20.00	1.00000		635325.17	4263594.48	7.32	4.15
			636055.91	4263609.46	7.62	4.15
			636055.35	4263609.17	7.62	4.15

Source Type: LINE VOLUME

Source: STEINER (Steiner Drive)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
10.00	1.00000		635676.88	4263194.27	7.62	4.15
			635581.60	4263290.93	7.32	4.15
			635561.46	4263315.52	7.18	4.15
			635539.11	4263362.22	7.36	4.15
			635531.96	4263383.77	7.44	4.15
			635526.77	4263414.77	7.33	4.15
			635524.77	4263444.56	7.60	4.15
			635522.91	4263520.42	7.62	4.15
			635522.49	4263587.10	7.62	4.15

Source Pathway - Source Inputs

Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
47TH	L0000001	635335.17	4263594.68	7.32	4.15	0.02703	20.00		9.30	3.86
	L0000002	635355.17	4263595.09	7.32	4.15	0.02703	20.00		9.30	3.86
	L0000003	635375.16	4263595.50	7.32	4.15	0.02703	20.00		9.30	3.86
	L0000004	635395.16	4263595.91	7.32	4.15	0.02703	20.00		9.30	3.86
	L0000005	635415.15	4263596.32	7.32	4.15	0.02703	20.00		9.30	3.86
	L0000006	635435.15	4263596.73	7.32	4.15	0.02703	20.00		9.30	3.86
	L0000007	635455.14	4263597.14	7.33	4.15	0.02703	20.00		9.30	3.86
	L0000008	635475.14	4263597.55	7.53	4.15	0.02703	20.00		9.30	3.86
	L0000009	635495.14	4263597.96	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000010	635515.13	4263598.37	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000011	635535.13	4263598.78	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000012	635555.12	4263599.19	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000013	635575.12	4263599.60	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000014	635595.12	4263600.01	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000015	635615.11	4263600.42	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000016	635635.11	4263600.83	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000017	635655.10	4263601.24	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000018	635675.10	4263601.65	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000019	635695.09	4263602.06	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000020	635715.09	4263602.47	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000021	635735.09	4263602.88	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000022	635755.08	4263603.29	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000023	635775.08	4263603.70	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000024	635795.07	4263604.11	7.62	4.15	0.02703	20.00		9.30	3.86

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
47TH	L0000025	635815.07	4263604.52	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000026	635835.06	4263604.93	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000027	635855.06	4263605.34	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000028	635875.06	4263605.75	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000029	635895.05	4263606.16	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000030	635915.05	4263606.57	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000031	635935.04	4263606.98	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000032	635955.04	4263607.39	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000033	635975.04	4263607.80	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000034	635995.03	4263608.21	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000035	636015.03	4263608.62	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000036	636035.02	4263609.03	7.62	4.15	0.02703	20.00		9.30	3.86
	L0000037	636055.02	4263609.44	7.62	4.15	0.02703	20.00		9.30	3.86

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
STEINER	L0000483	635673.37	4263197.83	7.62	4.15	0.02222	10.00		4.65	3.86
	L0000484	635666.35	4263204.95	7.62	4.15	0.02222	10.00		4.65	3.86
	L0000485	635659.33	4263212.07	7.60	4.15	0.02222	10.00		4.65	3.86
	L0000486	635652.31	4263219.19	7.60	4.15	0.02222	10.00		4.65	3.86
	L0000487	635645.29	4263226.32	7.62	4.15	0.02222	10.00		4.65	3.86
	L0000488	635638.27	4263233.44	7.62	4.15	0.02222	10.00		4.65	3.86
	L0000489	635631.25	4263240.56	7.59	4.15	0.02222	10.00		4.65	3.86
	L0000490	635624.23	4263247.68	7.52	4.15	0.02222	10.00		4.65	3.86
	L0000491	635617.21	4263254.80	7.45	4.15	0.02222	10.00		4.65	3.86
	L0000492	635610.19	4263261.93	7.38	4.15	0.02222	10.00		4.65	3.86

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
STEINER	L0000493	635603.17	4263269.05	7.32	4.15	0.02222	10.00		4.65	3.86
	L0000494	635596.15	4263276.17	7.32	4.15	0.02222	10.00		4.65	3.86
	L0000495	635589.13	4263283.29	7.32	4.15	0.02222	10.00		4.65	3.86
	L0000496	635582.11	4263290.42	7.32	4.15	0.02222	10.00		4.65	3.86
	L0000497	635575.72	4263298.11	7.32	4.15	0.02222	10.00		4.65	3.86
	L0000498	635569.39	4263305.84	7.27	4.15	0.02222	10.00		4.65	3.86
	L0000499	635563.05	4263313.58	7.21	4.15	0.02222	10.00		4.65	3.86
	L0000500	635558.23	4263322.28	7.19	4.15	0.02222	10.00		4.65	3.86
	L0000501	635553.91	4263331.30	7.22	4.15	0.02222	10.00		4.65	3.86
	L0000502	635549.59	4263340.32	7.28	4.15	0.02222	10.00		4.65	3.86
	L0000503	635545.28	4263349.34	7.32	4.15	0.02222	10.00		4.65	3.86
	L0000504	635540.96	4263358.36	7.33	4.15	0.02222	10.00		4.65	3.86
	L0000505	635537.31	4263367.65	7.37	4.15	0.02222	10.00		4.65	3.86
	L0000506	635534.16	4263377.14	7.41	4.15	0.02222	10.00		4.65	3.86
	L0000507	635531.46	4263386.74	7.39	4.15	0.02222	10.00		4.65	3.86
	L0000508	635529.81	4263396.60	7.36	4.15	0.02222	10.00		4.65	3.86
	L0000509	635528.16	4263406.47	7.33	4.15	0.02222	10.00		4.65	3.86
	L0000510	635526.66	4263416.35	7.43	4.15	0.02222	10.00		4.65	3.86
	L0000511	635526.00	4263426.32	7.53	4.15	0.02222	10.00		4.65	3.86
	L0000512	635525.33	4263436.30	7.62	4.15	0.02222	10.00		4.65	3.86
	L0000513	635524.73	4263446.28	7.62	4.15	0.02222	10.00		4.65	3.86
	L0000514	635524.49	4263456.28	7.62	4.15	0.02222	10.00		4.65	3.86
	L0000515	635524.24	4263466.28	7.62	4.15	0.02222	10.00		4.65	3.86
	L0000516	635524.00	4263476.27	7.62	4.15	0.02222	10.00		4.65	3.86
	L0000517	635523.75	4263486.27	7.62	4.15	0.02222	10.00		4.65	3.86

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
STEINER	L0000518	635523.51	4263496.27	7.62	4.15	0.02222	10.00		4.65	3.86
	L0000519	635523.26	4263506.27	7.62	4.15	0.02222	10.00		4.65	3.86
	L0000520	635523.02	4263516.26	7.62	4.15	0.02222	10.00		4.65	3.86
	L0000521	635522.88	4263526.26	7.62	4.15	0.02222	10.00		4.65	3.86
	L0000522	635522.81	4263536.26	7.62	4.15	0.02222	10.00		4.65	3.86
	L0000523	635522.75	4263546.26	7.62	4.15	0.02222	10.00		4.65	3.86
	L0000524	635522.69	4263556.26	7.62	4.15	0.02222	10.00		4.65	3.86
	L0000525	635522.62	4263566.26	7.62	4.15	0.02222	10.00		4.65	3.86
	L0000526	635522.56	4263576.26	7.62	4.15	0.02222	10.00		4.65	3.86
	L0000527	635522.50	4263586.26	7.62	4.15	0.02222	10.00		4.65	3.86

Receptor Pathway

Receptor Networks

Note: Terrain Elavations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)
Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	635549.76	4263409.57		7.41	
2	635566.26	4263411.30		7.56	
3	635584.25	4263409.82		7.62	
4	635602.97	4263410.31		7.62	
5	635622.19	4263414.01		7.62	
6	635639.19	4263413.76		7.62	
7	635655.95	4263411.79		7.62	
8	635674.67	4263413.76		7.62	
9	635693.15	4263411.54		7.62	
10	635709.66	4263412.03		7.62	
11	635727.65	4263412.03		7.62	
12	635744.40	4263411.79		7.62	
13	635546.76	4263455.71		7.62	
14	635566.24	4263453.83		7.62	
15	635585.09	4263453.62		7.62	
16	635601.85	4263454.46		7.62	
17	635619.02	4263456.34		7.62	
18	635636.82	4263454.46		7.62	
19	635655.04	4263453.83		7.62	
20	635672.22	4263456.55		7.62	
21	635547.39	4263485.24		7.62	
22	635500.69	4263481.26		7.62	
23	635500.90	4263461.58		7.61	
24	635499.85	4263444.82		7.52	
25	635501.32	4263426.39		7.44	
26	635503.41	4263406.70		7.33	
27	635500.71	4263499.35		7.62	
28	635498.40	4263517.86		7.62	
29	635563.91	4263485.82		7.62	
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31	635785.99	4263422.01	7.62
32	635800.78	4263435.63	7.62
33	635819.04	4263421.72	7.62
34	635768.02	4263464.91	7.62
35	635745.98	4263479.99	7.62
36	635742.79	4263459.12	7.62
37	635723.66	4263460.86	7.62
38	635725.69	4263482.60	7.62
39	635708.29	4263484.92	7.62
40	635707.71	4263458.25	7.62
41	635689.16	4263457.67	7.62
42	635689.45	4263491.88	7.62
43	635673.21	4263486.95	7.62
44	635655.53	4263484.34	7.62
45	635636.11	4263487.82	7.62
46	635619.29	4263487.24	7.62
47	635602.48	4263484.34	7.62
48	635585.08	4263483.47	7.62
49	635501.00	4263538.50	7.62
50	635501.42	4263553.79	7.62
51	635497.02	4263572.44	7.62
52	635549.18	4263563.22	7.62
53	635564.26	4263560.08	7.62
54	635544.36	4263532.43	7.62
55	635566.36	4263532.43	7.62
56	635583.32	4263530.75	7.62
57	635582.69	4263561.96	7.62
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60	635616.84	4263563.01	7.62
61	635619.14	4263533.89	7.62
62	635636.95	4263562.38	7.62
63	635636.95	4263532.43	7.62
64	635652.66	4263562.59	7.62
65	635653.29	4263529.70	7.62
66	635670.88	4263563.43	7.62
67	635671.93	4263538.08	7.62
68	635688.79	4263561.86	7.62

69	635689.53	4263535.74	7.62
70	635710.23	4263535.49	7.62
71	635710.23	4263561.86	7.62
72	635774.41	4263572.00	7.62
73	635790.75	4263571.37	7.62
74	635809.40	4263566.76	7.62
75	635808.77	4263554.40	7.62
76	635796.20	4263547.90	7.62
77	635753.46	4263529.47	7.62
78	635773.36	4263520.04	7.62
79	635790.96	4263510.40	7.62
80	635803.11	4263494.90	7.62
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82	635833.45	4263478.28	7.62
83	635850.27	4263466.68	7.62
84	635869.41	4263467.26	7.62
85	635843.89	4263499.74	7.62
86	635856.36	4263495.97	7.62
87	635865.93	4263495.68	7.62
88	635888.26	4263569.63	7.62
89	635904.90	4263569.10	7.62
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92	635958.12	4263570.15	7.62
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98	636062.97	4263572.83	7.62
99	635897.08	4263528.17	7.62
100	635921.73	4263540.35	7.62
101	635937.39	4263540.06	7.62
102	635955.37	4263539.77	7.62
103	635973.93	4263540.64	7.62
104	635990.75	4263542.09	7.62
105	636009.32	4263542.38	7.62
106	636027.30	4263542.09	7.62

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108	636062.39	4263543.25	7.62
109	636079.21	4263542.38	7.62
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113	635893.72	4263505.40	7.62
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131	635867.32	4263268.44	7.62
132	635869.37	4263250.69	7.62
133	635903.84	4263258.20	7.62
134	635902.14	4263238.75	7.62
135	635901.79	4263221.00	7.62
136	635870.05	4263230.55	7.62
137	635871.41	4263211.78	7.62
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141	635826.01	4263217.58	7.62
142	635802.12	4263217.24	7.62
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146	635728.04	4263212.12	7.62
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154	635679.31	4263154.64	7.52
155	635667.78	4263167.01	7.62
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157	635638.64	4263196.36	7.38
158	635629.62	4263208.10	7.43
159	635613.90	4263222.36	7.41
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161	635621.02	4263168.06	7.32
162	635609.07	4263185.04	7.32
163	635596.28	4263197.20	7.24
164	635551.46	4263214.76	7.06
165	635539.46	4263302.58	7.01
166	635520.57	4263286.71	7.01
167	635507.92	4263270.67	6.83
168	635514.51	4263314.87	7.01
169	635496.51	4263316.12	6.85
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171	635477.95	4263357.79	6.89
172	635499.16	4263358.32	7.23
173	635516.98	4263362.06	7.47
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325	635940.73	4263420.83	7.62
326	635961.63	4263421.64	7.62
327	635974.89	4263422.84	7.62
328	635997.79	4263424.05	7.62
329	636010.65	4263422.44	7.62
330	636032.35	4263424.45	7.62
331	636050.03	4263424.85	7.62
332	636063.29	4263426.46	7.62
333	636086.60	4263425.25	7.62
334	635959.21	4263363.77	7.62

335	635973.28	4263369.80	7.62
336	635995.78	4263367.39	7.62
337	636012.66	4263368.59	7.62
338	636031.55	4263368.99	7.62
339	636048.02	4263370.20	7.62
340	636067.71	4263371.81	7.62
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342	635965.24	4263312.74	7.62
343	635988.15	4263324.39	7.62
344	636006.63	4263328.01	7.62
345	636026.32	4263325.19	7.62
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348	635995.38	4263288.62	7.62
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352	635949.30	4263225.48	7.62
353	635978.34	4263231.00	7.62
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356	635969.63	4263192.38	7.62
357	635986.76	4263181.93	7.62
358	636003.60	4263202.55	7.62
359	636003.31	4263278.33	7.62
360	636016.08	4263261.49	7.62
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363	635929.41	4263184.04	7.62
364	635915.34	4263164.35	7.61
365	635907.30	4263146.26	7.43
366	635958.74	4263144.65	7.41
367	635950.30	4263124.96	7.32
368	635994.51	4263163.14	7.60
369	635902.88	4263104.06	7.31
370	635901.68	4263129.38	7.32
371	635870.73	4263101.65	7.28
372	635866.31	4263123.75	7.32

373	635867.11	4263141.04	7.38
374	635871.13	4263155.91	7.53
375	635820.09	4263147.47	7.44
376	635820.49	4263128.17	7.32
377	635825.12	4263110.19	7.32
378	635802.25	4263096.76	7.23
379	635793.65	4263114.38	7.32
380	635778.75	4263124.66	7.32
381	635767.21	4263139.14	7.36
382	635754.83	4263153.41	7.50
383	635706.93	4263123.14	7.32
384	635721.62	4263110.16	7.32
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386	635686.43	4263103.33	7.30
387	635675.50	4263116.99	7.32
388	635661.49	4263131.00	7.31
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390	635458.51	4263353.51	6.49
391	635466.85	4263312.35	6.53
392	635470.75	4263292.32	6.57
393	635472.42	4263271.74	6.59
394	635475.75	4263249.48	6.62
395	635502.46	4263248.37	6.75
396	635503.01	4263232.24	6.85
397	635504.13	4263213.88	6.91
398	635502.46	4263194.41	6.89
399	635554.75	4263171.04	7.01
400	635572.55	4263160.47	7.01
401	635588.13	4263148.79	7.08
402	635603.15	4263131.55	7.01
403	635637.64	4263098.72	7.04
404	635662.67	4263078.14	7.04
405	635332.31	4263659.61	7.47
406	635332.31	4263679.61	7.62
407	635352.31	4263659.61	7.37
408	635352.31	4263679.61	7.46
409	635372.31	4263659.61	7.32
410	635372.31	4263679.61	7.35

411	635905.45	4263730.56	7.62
412	635905.45	4263750.56	7.62
413	635905.45	4263770.56	7.62
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436	636005.45	4263730.56	7.62
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441	635584.68	4263252.74	7.32
442	635578.92	4263247.15	7.32
443	635556.74	4263245.97	7.14
444	635561.82	4263240.04	7.19
445	635567.58	4263234.28	7.25

Plant Boundary Receptors

Meteorology Pathway

AERMOD

Met Input Data

Surface Met Data

Filename: ..\Met Stations\Sac Executive Airport\14-18.SFC
Format Type: Default AERMET format

Profile Met Data

Filename: ..\Met Stations\Sac Executive Airport\14-18.PFL
Format Type: Default AERMET format

Wind Speed

☐ Wind Speeds are Vector Mean (Not Scalar Means)

Wind Direction

Rotation Adjustment [deg]:

Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 7.30 [m]

Meteorological Station Data

Stations	Station No.	Year	X Coordinate [m]	Y Coordinate [m]	Station Name
Surface		2014			SACRAMENTO/EXECUTIVE ARPT
Upper Air		2014			OAKLAND/WSO AP

Data Period

Data Period to Process

Start Date: 1/1/2014 Start Hour: 1 End Date: 12/25/2018 End Hour: 24

Wind Speed Categories

Stability Category	Wind Speed [m/s]	Stability Category	Wind Speed [m/s]
A	1.54	D	8.23
B	3.09	E	10.8
C	5.14	F	No Upper Bound

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		26.86988	ug/m^3	Res_001	635549.76	4263409.57	7.41	0.00	7.41	
ANNUAL		19.31597	ug/m^3	Res_002	635566.26	4263411.29	7.56	0.00	7.56	
ANNUAL		14.45224	ug/m^3	Res_003	635584.25	4263409.82	7.62	0.00	7.62	
ANNUAL		11.13293	ug/m^3	Res_004	635602.97	4263410.31	7.62	0.00	7.62	
ANNUAL		8.77739	ug/m^3	Res_005	635622.19	4263414.01	7.62	0.00	7.62	
ANNUAL		7.38258	ug/m^3	Res_006	635639.19	4263413.76	7.62	0.00	7.62	
ANNUAL		6.36857	ug/m^3	Res_007	635655.95	4263411.79	7.62	0.00	7.62	
ANNUAL		5.44039	ug/m^3	Res_008	635674.67	4263413.76	7.62	0.00	7.62	
ANNUAL		4.75687	ug/m^3	Res_009	635693.15	4263411.54	7.62	0.00	7.62	
ANNUAL		4.23734	ug/m^3	Res_010	635709.66	4263412.03	7.62	0.00	7.62	
ANNUAL		3.76557	ug/m^3	Res_011	635727.65	4263412.03	7.62	0.00	7.62	
ANNUAL		3.39327	ug/m^3	Res_012	635744.40	4263411.79	7.62	0.00	7.62	
ANNUAL		26.45295	ug/m^3	Res_013	635546.76	4263455.71	7.62	0.00	7.62	
ANNUAL		17.70466	ug/m^3	Res_014	635566.24	4263453.83	7.62	0.00	7.62	
ANNUAL		12.93198	ug/m^3	Res_015	635585.09	4263453.62	7.62	0.00	7.62	
ANNUAL		10.24178	ug/m^3	Res_016	635601.85	4263454.46	7.62	0.00	7.62	
ANNUAL		8.36260	ug/m^3	Res_017	635619.02	4263456.34	7.62	0.00	7.62	
ANNUAL		7.02839	ug/m^3	Res_018	635636.82	4263454.46	7.62	0.00	7.62	
ANNUAL		6.03115	ug/m^3	Res_019	635655.04	4263453.83	7.62	0.00	7.62	
ANNUAL		5.31975	ug/m^3	Res_020	635672.22	4263456.55	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		25.63205	ug/m^3	Res_021	635547.39	4263485.24	7.62	0.00	7.62	
ANNUAL		13.01311	ug/m^3	Res_022	635500.69	4263481.26	7.62	0.00	7.62	
ANNUAL		12.43781	ug/m^3	Res_023	635500.90	4263461.58	7.61	0.00	7.61	
ANNUAL		11.33278	ug/m^3	Res_024	635499.85	4263444.82	7.52	0.00	7.52	
ANNUAL		10.90925	ug/m^3	Res_025	635501.32	4263426.39	7.44	0.00	7.44	
ANNUAL		10.31738	ug/m^3	Res_026	635503.41	4263406.70	7.33	0.00	7.33	
ANNUAL		13.57074	ug/m^3	Res_027	635500.71	4263499.34	7.62	0.00	7.62	
ANNUAL		13.27707	ug/m^3	Res_028	635498.40	4263517.86	7.62	0.00	7.62	
ANNUAL		18.05698	ug/m^3	Res_029	635563.91	4263485.82	7.62	0.00	7.62	
ANNUAL		3.02069	ug/m^3	Res_030	635764.54	4263413.31	7.62	0.00	7.62	
ANNUAL		2.73823	ug/m^3	Res_031	635785.99	4263422.01	7.62	0.00	7.62	
ANNUAL		2.65164	ug/m^3	Res_032	635800.78	4263435.63	7.62	0.00	7.62	
ANNUAL		2.35303	ug/m^3	Res_033	635819.04	4263421.72	7.62	0.00	7.62	
ANNUAL		3.31666	ug/m^3	Res_034	635768.02	4263464.91	7.62	0.00	7.62	
ANNUAL		3.80347	ug/m^3	Res_035	635745.98	4263479.99	7.62	0.00	7.62	
ANNUAL		3.62742	ug/m^3	Res_036	635742.79	4263459.12	7.62	0.00	7.62	
ANNUAL		3.98104	ug/m^3	Res_037	635723.66	4263460.86	7.62	0.00	7.62	
ANNUAL		4.16071	ug/m^3	Res_038	635725.69	4263482.60	7.62	0.00	7.62	
ANNUAL		4.51927	ug/m^3	Res_039	635708.29	4263484.92	7.62	0.00	7.62	
ANNUAL		4.30250	ug/m^3	Res_040	635707.71	4263458.25	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		4.77718	ug/m^3	Res_041	635689.16	4263457.67	7.62	0.00	7.62	
ANNUAL		5.03979	ug/m^3	Res_042	635689.45	4263491.88	7.62	0.00	7.62	
ANNUAL		5.43765	ug/m^3	Res_043	635673.21	4263486.95	7.62	0.00	7.62	
ANNUAL		6.06223	ug/m^3	Res_044	635655.53	4263484.34	7.62	0.00	7.62	
ANNUAL		7.05344	ug/m^3	Res_045	635636.11	4263487.82	7.62	0.00	7.62	
ANNUAL		8.22943	ug/m^3	Res_046	635619.29	4263487.24	7.62	0.00	7.62	
ANNUAL		9.92916	ug/m^3	Res_047	635602.48	4263484.34	7.62	0.00	7.62	
ANNUAL		12.59831	ug/m^3	Res_048	635585.08	4263483.47	7.62	0.00	7.62	
ANNUAL		15.10302	ug/m^3	Res_049	635501.00	4263538.50	7.62	0.00	7.62	
ANNUAL		16.08735	ug/m^3	Res_050	635501.42	4263553.79	7.62	0.00	7.62	
ANNUAL		16.19791	ug/m^3	Res_051	635497.02	4263572.44	7.62	0.00	7.62	
ANNUAL		23.92723	ug/m^3	Res_052	635549.18	4263563.22	7.62	0.00	7.62	
ANNUAL		18.16151	ug/m^3	Res_053	635564.26	4263560.08	7.62	0.00	7.62	
ANNUAL		27.11342	ug/m^3	Res_054	635544.36	4263532.43	7.62	0.00	7.62	
ANNUAL		17.10979	ug/m^3	Res_055	635566.36	4263532.43	7.62	0.00	7.62	
ANNUAL		13.07410	ug/m^3	Res_056	635583.32	4263530.75	7.62	0.00	7.62	
ANNUAL		14.33944	ug/m^3	Res_057	635582.69	4263561.96	7.62	0.00	7.62	
ANNUAL		12.35049	ug/m^3	Res_058	635599.87	4263563.85	7.62	0.00	7.62	
ANNUAL		10.56327	ug/m^3	Res_059	635600.71	4263530.54	7.62	0.00	7.62	
ANNUAL		10.89759	ug/m^3	Res_060	635616.84	4263563.01	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		8.99333	ug/m^3	Res_061	635619.14	4263533.89	7.62	0.00	7.62	
ANNUAL		9.72900	ug/m^3	Res_062	635636.95	4263562.38	7.62	0.00	7.62	
ANNUAL		7.86312	ug/m^3	Res_063	635636.95	4263532.43	7.62	0.00	7.62	
ANNUAL		9.12467	ug/m^3	Res_064	635652.66	4263562.59	7.62	0.00	7.62	
ANNUAL		7.04591	ug/m^3	Res_065	635653.29	4263529.70	7.62	0.00	7.62	
ANNUAL		8.65303	ug/m^3	Res_066	635670.88	4263563.43	7.62	0.00	7.62	
ANNUAL		6.80614	ug/m^3	Res_067	635671.93	4263538.08	7.62	0.00	7.62	
ANNUAL		8.07658	ug/m^3	Res_068	635688.79	4263561.86	7.62	0.00	7.62	
ANNUAL		6.26059	ug/m^3	Res_069	635689.53	4263535.74	7.62	0.00	7.62	
ANNUAL		5.84735	ug/m^3	Res_070	635710.23	4263535.49	7.62	0.00	7.62	
ANNUAL		7.67622	ug/m^3	Res_071	635710.23	4263561.86	7.62	0.00	7.62	
ANNUAL		7.95993	ug/m^3	Res_072	635774.41	4263572.00	7.62	0.00	7.62	
ANNUAL		7.71501	ug/m^3	Res_073	635790.75	4263571.37	7.62	0.00	7.62	
ANNUAL		7.01797	ug/m^3	Res_074	635809.40	4263566.76	7.62	0.00	7.62	
ANNUAL		5.89148	ug/m^3	Res_075	635808.77	4263554.40	7.62	0.00	7.62	
ANNUAL		5.52351	ug/m^3	Res_076	635796.20	4263547.90	7.62	0.00	7.62	
ANNUAL		4.96309	ug/m^3	Res_077	635753.46	4263529.47	7.62	0.00	7.62	
ANNUAL		4.38152	ug/m^3	Res_078	635773.36	4263520.04	7.62	0.00	7.62	
ANNUAL		3.90588	ug/m^3	Res_079	635790.96	4263510.40	7.62	0.00	7.62	
ANNUAL		3.41338	ug/m^3	Res_080	635803.11	4263494.90	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		3.08337	ug/m^3	Res_081	635815.18	4263483.21	7.62	0.00	7.62	
ANNUAL		2.85324	ug/m^3	Res_082	635833.45	4263478.28	7.62	0.00	7.62	
ANNUAL		2.55572	ug/m^3	Res_083	635850.27	4263466.68	7.62	0.00	7.62	
ANNUAL		2.44041	ug/m^3	Res_084	635869.41	4263467.26	7.62	0.00	7.62	
ANNUAL		3.20435	ug/m^3	Res_085	635843.89	4263499.74	7.62	0.00	7.62	
ANNUAL		3.03508	ug/m^3	Res_086	635856.36	4263495.97	7.62	0.00	7.62	
ANNUAL		2.96957	ug/m^3	Res_087	635865.93	4263495.68	7.62	0.00	7.62	
ANNUAL		6.74123	ug/m^3	Res_088	635888.26	4263569.63	7.62	0.00	7.62	
ANNUAL		6.57488	ug/m^3	Res_089	635904.90	4263569.10	7.62	0.00	7.62	
ANNUAL		6.35542	ug/m^3	Res_090	635924.81	4263568.27	7.62	0.00	7.62	
ANNUAL		6.52886	ug/m^3	Res_091	635940.52	4263570.78	7.62	0.00	7.62	
ANNUAL		6.33866	ug/m^3	Res_092	635958.12	4263570.15	7.62	0.00	7.62	
ANNUAL		6.33627	ug/m^3	Res_093	635974.05	4263571.20	7.62	0.00	7.62	
ANNUAL		6.17805	ug/m^3	Res_094	635993.12	4263571.20	7.62	0.00	7.62	
ANNUAL		5.99357	ug/m^3	Res_095	636011.34	4263571.20	7.62	0.00	7.62	
ANNUAL		5.88840	ug/m^3	Res_096	636027.48	4263572.25	7.62	0.00	7.62	
ANNUAL		5.46824	ug/m^3	Res_097	636046.97	4263572.25	7.62	0.00	7.62	
ANNUAL		4.81803	ug/m^3	Res_098	636062.97	4263572.83	7.62	0.00	7.62	
ANNUAL		3.79132	ug/m^3	Res_099	635897.08	4263528.17	7.62	0.00	7.62	
ANNUAL		4.23684	ug/m^3	Res_100	635921.73	4263540.35	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		4.13919	ug/m^3	Res_101	635937.39	4263540.06	7.62	0.00	7.62	
ANNUAL		4.02878	ug/m^3	Res_102	635955.37	4263539.77	7.62	0.00	7.62	
ANNUAL		3.97110	ug/m^3	Res_103	635973.93	4263540.64	7.62	0.00	7.62	
ANNUAL		3.94456	ug/m^3	Res_104	635990.75	4263542.09	7.62	0.00	7.62	
ANNUAL		3.82604	ug/m^3	Res_105	636009.32	4263542.38	7.62	0.00	7.62	
ANNUAL		3.64905	ug/m^3	Res_106	636027.30	4263542.09	7.62	0.00	7.62	
ANNUAL		3.49212	ug/m^3	Res_107	636042.96	4263542.96	7.62	0.00	7.62	
ANNUAL		3.12852	ug/m^3	Res_108	636062.39	4263543.25	7.62	0.00	7.62	
ANNUAL		2.65166	ug/m^3	Res_109	636079.21	4263542.38	7.62	0.00	7.62	
ANNUAL		2.16777	ug/m^3	Res_110	636096.61	4263543.83	7.62	0.00	7.62	
ANNUAL		3.90816	ug/m^3	Res_111	636078.12	4263575.22	7.62	0.00	7.62	
ANNUAL		2.59428	ug/m^3	Res_112	636097.56	4263574.93	7.62	0.00	7.62	
ANNUAL		3.05130	ug/m^3	Res_113	635893.71	4263505.40	7.62	0.00	7.62	
ANNUAL		2.63411	ug/m^3	Res_114	635894.77	4263487.28	7.62	0.00	7.62	
ANNUAL		2.28188	ug/m^3	Res_115	635894.41	4263465.90	7.62	0.00	7.62	
ANNUAL		1.93886	ug/m^3	Res_116	635866.96	4263418.34	7.62	0.00	7.62	
ANNUAL		1.81165	ug/m^3	Res_117	635890.63	4263419.82	7.62	0.00	7.62	
ANNUAL		1.75658	ug/m^3	Res_118	635905.67	4263422.29	7.62	0.00	7.62	
ANNUAL		1.62872	ug/m^3	Res_119	635865.03	4263366.30	7.62	0.00	7.62	
ANNUAL		1.48474	ug/m^3	Res_120	635889.79	4263367.01	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		1.34819	ug/m^3	Res_121	635914.20	4263362.20	7.62	0.00	7.62	
ANNUAL		1.25597	ug/m^3	Res_122	635894.25	4263316.06	7.62	0.00	7.62	
ANNUAL		1.42282	ug/m^3	Res_123	635867.88	4263322.29	7.62	0.00	7.62	
ANNUAL		1.65880	ug/m^3	Res_124	635925.96	4263421.19	7.62	0.00	7.62	
ANNUAL		1.22119	ug/m^3	Res_125	635935.20	4263351.31	7.62	0.00	7.62	
ANNUAL		1.16141	ug/m^3	Res_126	635909.65	4263307.36	7.62	0.00	7.62	
ANNUAL		1.08173	ug/m^3	Res_127	635921.59	4263295.07	7.62	0.00	7.62	
ANNUAL		1.09399	ug/m^3	Res_128	635906.57	4263277.66	7.62	0.00	7.62	
ANNUAL		1.38541	ug/m^3	Res_129	635864.93	4263305.99	7.62	0.00	7.62	
ANNUAL		1.30867	ug/m^3	Res_130	635867.32	4263285.85	7.62	0.00	7.62	
ANNUAL		1.26264	ug/m^3	Res_131	635867.32	4263268.44	7.62	0.00	7.62	
ANNUAL		1.21011	ug/m^3	Res_132	635869.37	4263250.69	7.62	0.00	7.62	
ANNUAL		1.06163	ug/m^3	Res_133	635903.84	4263258.20	7.62	0.00	7.62	
ANNUAL		1.03072	ug/m^3	Res_134	635902.14	4263238.75	7.62	0.00	7.62	
ANNUAL		1.00136	ug/m^3	Res_135	635901.79	4263221.00	7.62	0.00	7.62	
ANNUAL		1.16657	ug/m^3	Res_136	635870.05	4263230.55	7.62	0.00	7.62	
ANNUAL		1.12617	ug/m^3	Res_137	635871.41	4263211.78	7.62	0.00	7.62	
ANNUAL		0.94964	ug/m^3	Res_138	635906.57	4263199.49	7.62	0.00	7.62	
ANNUAL		1.09367	ug/m^3	Res_139	635871.76	4263192.66	7.62	0.00	7.62	
ANNUAL		1.07531	ug/m^3	Res_140	635870.73	4263176.62	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		1.46600	ug/m^3	Res_141	635826.01	4263217.58	7.62	0.00	7.62	
ANNUAL		1.74622	ug/m^3	Res_142	635802.12	4263217.24	7.62	0.00	7.62	
ANNUAL		2.03781	ug/m^3	Res_143	635784.37	4263215.53	7.62	0.00	7.62	
ANNUAL		2.49984	ug/m^3	Res_144	635765.25	4263216.22	7.62	0.00	7.62	
ANNUAL		3.22907	ug/m^3	Res_145	635745.79	4263215.53	7.62	0.00	7.62	
ANNUAL		4.30932	ug/m^3	Res_146	635728.04	4263212.12	7.62	0.00	7.62	
ANNUAL		6.49356	ug/m^3	Res_147	635706.88	4263197.78	7.62	0.00	7.62	
ANNUAL		3.34300	ug/m^3	Res_148	635736.58	4263168.08	7.62	0.00	7.62	
ANNUAL		2.23120	ug/m^3	Res_149	635769.35	4263173.55	7.62	0.00	7.62	
ANNUAL		1.84813	ug/m^3	Res_150	635788.12	4263171.16	7.62	0.00	7.62	
ANNUAL		1.60595	ug/m^3	Res_151	635804.85	4263171.16	7.62	0.00	7.62	
ANNUAL		1.38232	ug/m^3	Res_152	635825.67	4263171.50	7.62	0.00	7.62	
ANNUAL		4.66851	ug/m^3	Res_153	635694.20	4263141.43	7.38	0.00	7.38	
ANNUAL		6.19009	ug/m^3	Res_154	635679.31	4263154.64	7.52	0.00	7.52	
ANNUAL		7.80849	ug/m^3	Res_155	635667.78	4263167.01	7.62	0.00	7.62	
ANNUAL		9.28281	ug/m^3	Res_156	635655.20	4263181.27	7.53	0.00	7.53	
ANNUAL		9.80747	ug/m^3	Res_157	635638.64	4263196.36	7.38	0.00	7.38	
ANNUAL		10.80996	ug/m^3	Res_158	635629.62	4263208.10	7.43	0.00	7.43	
ANNUAL		10.86426	ug/m^3	Res_159	635613.90	4263222.36	7.41	0.00	7.41	
ANNUAL		4.58561	ug/m^3	Res_160	635635.49	4263157.16	7.33	0.00	7.33	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		4.57908	ug/m^3	Res_161	635621.02	4263168.06	7.32	0.00	7.32	
ANNUAL		5.08028	ug/m^3	Res_162	635609.07	4263185.04	7.32	0.00	7.32	
ANNUAL		5.10199	ug/m^3	Res_163	635596.28	4263197.20	7.24	0.00	7.24	
ANNUAL		3.32980	ug/m^3	Res_164	635551.46	4263214.76	7.06	0.00	7.06	
ANNUAL		8.90824	ug/m^3	Res_165	635539.46	4263302.58	7.01	0.00	7.01	
ANNUAL		4.51253	ug/m^3	Res_166	635520.57	4263286.71	7.01	0.00	7.01	
ANNUAL		3.02990	ug/m^3	Res_167	635507.92	4263270.67	6.83	0.00	6.83	
ANNUAL		5.46617	ug/m^3	Res_168	635514.51	4263314.87	7.01	0.00	7.01	
ANNUAL		3.77419	ug/m^3	Res_169	635496.51	4263316.12	6.85	0.00	6.85	
ANNUAL		10.10312	ug/m^3	Res_170	635533.76	4263320.22	7.06	0.00	7.06	
ANNUAL		3.74228	ug/m^3	Res_171	635477.95	4263357.79	6.89	0.00	6.89	
ANNUAL		5.94571	ug/m^3	Res_172	635499.16	4263358.32	7.23	0.00	7.23	
ANNUAL		10.71819	ug/m^3	Res_173	635516.98	4263362.06	7.47	0.00	7.47	
ANNUAL		14.56064	ug/m^3	Res_174	635575.47	4263638.68	7.62	0.00	7.62	
ANNUAL		10.94657	ug/m^3	Res_175	635575.47	4263658.68	7.62	0.00	7.62	
ANNUAL		8.44698	ug/m^3	Res_176	635575.47	4263678.68	7.62	0.00	7.62	
ANNUAL		6.70311	ug/m^3	Res_177	635575.47	4263698.68	7.62	0.00	7.62	
ANNUAL		5.45245	ug/m^3	Res_178	635575.47	4263718.68	7.62	0.00	7.62	
ANNUAL		4.52767	ug/m^3	Res_179	635575.47	4263738.68	7.62	0.00	7.62	
ANNUAL		3.82396	ug/m^3	Res_180	635575.47	4263758.68	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		13.68885	ug/m^3	Res_181	635595.47	4263638.68	7.62	0.00	7.62	
ANNUAL		10.48263	ug/m^3	Res_182	635595.47	4263658.68	7.62	0.00	7.62	
ANNUAL		8.23257	ug/m^3	Res_183	635595.47	4263678.68	7.62	0.00	7.62	
ANNUAL		6.62418	ug/m^3	Res_184	635595.47	4263698.68	7.62	0.00	7.62	
ANNUAL		5.44308	ug/m^3	Res_185	635595.47	4263718.68	7.62	0.00	7.62	
ANNUAL		4.55310	ug/m^3	Res_186	635595.47	4263738.68	7.62	0.00	7.62	
ANNUAL		3.86616	ug/m^3	Res_187	635595.47	4263758.68	7.62	0.00	7.62	
ANNUAL		12.98333	ug/m^3	Res_188	635615.47	4263638.68	7.62	0.00	7.62	
ANNUAL		10.00909	ug/m^3	Res_189	635615.47	4263658.68	7.62	0.00	7.62	
ANNUAL		7.94554	ug/m^3	Res_190	635615.47	4263678.68	7.62	0.00	7.62	
ANNUAL		6.46645	ug/m^3	Res_191	635615.47	4263698.68	7.62	0.00	7.62	
ANNUAL		5.36744	ug/m^3	Res_192	635615.47	4263718.68	7.62	0.00	7.62	
ANNUAL		4.52714	ug/m^3	Res_193	635615.47	4263738.68	7.62	0.00	7.62	
ANNUAL		3.86908	ug/m^3	Res_194	635615.47	4263758.68	7.62	0.00	7.62	
ANNUAL		12.45119	ug/m^3	Res_195	635635.47	4263638.68	7.62	0.00	7.62	
ANNUAL		9.60150	ug/m^3	Res_196	635635.47	4263658.68	7.62	0.00	7.62	
ANNUAL		7.65459	ug/m^3	Res_197	635635.47	4263678.68	7.62	0.00	7.62	
ANNUAL		6.27441	ug/m^3	Res_198	635635.47	4263698.68	7.62	0.00	7.62	
ANNUAL		5.24978	ug/m^3	Res_199	635635.47	4263718.68	7.62	0.00	7.62	
ANNUAL		4.46152	ug/m^3	Res_200	635635.47	4263738.68	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		3.83848	ug/m^3	Res_201	635635.47	4263758.68	7.62	0.00	7.62	
ANNUAL		12.05706	ug/m^3	Res_202	635655.47	4263638.68	7.62	0.00	7.62	
ANNUAL		9.27139	ug/m^3	Res_203	635655.47	4263658.68	7.62	0.00	7.62	
ANNUAL		7.39338	ug/m^3	Res_204	635655.47	4263678.68	7.62	0.00	7.62	
ANNUAL		6.07968	ug/m^3	Res_205	635655.47	4263698.68	7.62	0.00	7.62	
ANNUAL		5.11329	ug/m^3	Res_206	635655.47	4263718.68	7.62	0.00	7.62	
ANNUAL		4.37130	ug/m^3	Res_207	635655.47	4263738.68	7.62	0.00	7.62	
ANNUAL		3.78284	ug/m^3	Res_208	635655.47	4263758.68	7.62	0.00	7.62	
ANNUAL		11.76546	ug/m^3	Res_209	635675.47	4263638.68	7.62	0.00	7.62	
ANNUAL		9.00977	ug/m^3	Res_210	635675.47	4263658.68	7.62	0.00	7.62	
ANNUAL		7.17083	ug/m^3	Res_211	635675.47	4263678.68	7.62	0.00	7.62	
ANNUAL		5.89942	ug/m^3	Res_212	635675.47	4263698.68	7.62	0.00	7.62	
ANNUAL		4.97445	ug/m^3	Res_213	635675.47	4263718.68	7.62	0.00	7.62	
ANNUAL		4.26945	ug/m^3	Res_214	635675.47	4263738.68	7.62	0.00	7.62	
ANNUAL		3.71153	ug/m^3	Res_215	635675.47	4263758.68	7.62	0.00	7.62	
ANNUAL		3.25797	ug/m^3	Res_216	635675.47	4263778.68	7.62	0.00	7.62	
ANNUAL		11.54882	ug/m^3	Res_217	635695.47	4263638.68	7.62	0.00	7.62	
ANNUAL		8.80374	ug/m^3	Res_218	635695.47	4263658.68	7.62	0.00	7.62	
ANNUAL		6.98515	ug/m^3	Res_219	635695.47	4263678.68	7.62	0.00	7.62	
ANNUAL		5.73989	ug/m^3	Res_220	635695.47	4263698.68	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		4.84286	ug/m^3	Res_221	635695.47	4263718.68	7.62	0.00	7.62	
ANNUAL		4.16534	ug/m^3	Res_222	635695.47	4263738.68	7.62	0.00	7.62	
ANNUAL		3.63230	ug/m^3	Res_223	635695.47	4263758.68	7.62	0.00	7.62	
ANNUAL		3.19984	ug/m^3	Res_224	635695.47	4263778.68	7.62	0.00	7.62	
ANNUAL		11.38713	ug/m^3	Res_225	635715.47	4263638.68	7.62	0.00	7.62	
ANNUAL		8.64126	ug/m^3	Res_226	635715.47	4263658.68	7.62	0.00	7.62	
ANNUAL		6.83128	ug/m^3	Res_227	635715.47	4263678.68	7.62	0.00	7.62	
ANNUAL		5.60134	ug/m^3	Res_228	635715.47	4263698.68	7.62	0.00	7.62	
ANNUAL		4.72278	ug/m^3	Res_229	635715.47	4263718.68	7.62	0.00	7.62	
ANNUAL		4.06474	ug/m^3	Res_230	635715.47	4263738.68	7.62	0.00	7.62	
ANNUAL		3.55080	ug/m^3	Res_231	635715.47	4263758.68	7.62	0.00	7.62	
ANNUAL		3.13584	ug/m^3	Res_232	635715.47	4263778.68	7.62	0.00	7.62	
ANNUAL		11.26600	ug/m^3	Res_233	635735.47	4263638.68	7.62	0.00	7.62	
ANNUAL		8.51245	ug/m^3	Res_234	635735.47	4263658.68	7.62	0.00	7.62	
ANNUAL		6.70370	ug/m^3	Res_235	635735.47	4263678.68	7.62	0.00	7.62	
ANNUAL		5.48181	ug/m^3	Res_236	635735.47	4263698.68	7.62	0.00	7.62	
ANNUAL		4.61509	ug/m^3	Res_237	635735.47	4263718.68	7.62	0.00	7.62	
ANNUAL		3.97056	ug/m^3	Res_238	635735.47	4263738.68	7.62	0.00	7.62	
ANNUAL		3.47072	ug/m^3	Res_239	635735.47	4263758.68	7.62	0.00	7.62	
ANNUAL		3.06958	ug/m^3	Res_240	635735.47	4263778.68	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		11.17517	ug/m^3	Res_241	635755.47	4263638.68	7.62	0.00	7.62	
ANNUAL		8.40960	ug/m^3	Res_242	635755.47	4263658.68	7.62	0.00	7.62	
ANNUAL		6.59728	ug/m^3	Res_243	635755.47	4263678.68	7.62	0.00	7.62	
ANNUAL		5.37857	ug/m^3	Res_244	635755.47	4263698.68	7.62	0.00	7.62	
ANNUAL		4.51901	ug/m^3	Res_245	635755.47	4263718.68	7.62	0.00	7.62	
ANNUAL		3.88371	ug/m^3	Res_246	635755.47	4263738.68	7.62	0.00	7.62	
ANNUAL		3.39401	ug/m^3	Res_247	635755.47	4263758.68	7.62	0.00	7.62	
ANNUAL		3.00348	ug/m^3	Res_248	635755.47	4263778.68	7.62	0.00	7.62	
ANNUAL		11.10715	ug/m^3	Res_249	635775.47	4263638.68	7.62	0.00	7.62	
ANNUAL		8.32675	ug/m^3	Res_250	635775.47	4263658.68	7.62	0.00	7.62	
ANNUAL		6.50769	ug/m^3	Res_251	635775.47	4263678.68	7.62	0.00	7.62	
ANNUAL		5.28884	ug/m^3	Res_252	635775.47	4263698.68	7.62	0.00	7.62	
ANNUAL		4.43314	ug/m^3	Res_253	635775.47	4263718.68	7.62	0.00	7.62	
ANNUAL		3.80390	ug/m^3	Res_254	635775.47	4263738.68	7.62	0.00	7.62	
ANNUAL		3.32151	ug/m^3	Res_255	635775.47	4263758.68	7.62	0.00	7.62	
ANNUAL		2.93893	ug/m^3	Res_256	635775.47	4263778.68	7.62	0.00	7.62	
ANNUAL		11.05645	ug/m^3	Res_257	635795.47	4263638.68	7.62	0.00	7.62	
ANNUAL		8.25927	ug/m^3	Res_258	635795.47	4263658.68	7.62	0.00	7.62	
ANNUAL		6.43131	ug/m^3	Res_259	635795.47	4263678.68	7.62	0.00	7.62	
ANNUAL		5.21001	ug/m^3	Res_260	635795.47	4263698.68	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		4.35580	ug/m^3	Res_261	635795.47	4263718.68	7.62	0.00	7.62	
ANNUAL		3.73031	ug/m^3	Res_262	635795.47	4263738.68	7.62	0.00	7.62	
ANNUAL		3.25312	ug/m^3	Res_263	635795.47	4263758.68	7.62	0.00	7.62	
ANNUAL		2.87649	ug/m^3	Res_264	635795.47	4263778.68	7.62	0.00	7.62	
ANNUAL		11.01909	ug/m^3	Res_265	635815.47	4263638.68	7.62	0.00	7.62	
ANNUAL		8.20365	ug/m^3	Res_266	635815.47	4263658.68	7.62	0.00	7.62	
ANNUAL		6.36515	ug/m^3	Res_267	635815.47	4263678.68	7.62	0.00	7.62	
ANNUAL		5.13972	ug/m^3	Res_268	635815.47	4263698.68	7.62	0.00	7.62	
ANNUAL		4.28524	ug/m^3	Res_269	635815.47	4263718.68	7.62	0.00	7.62	
ANNUAL		3.66184	ug/m^3	Res_270	635815.47	4263738.68	7.62	0.00	7.62	
ANNUAL		3.18827	ug/m^3	Res_271	635815.47	4263758.68	7.62	0.00	7.62	
ANNUAL		2.81605	ug/m^3	Res_272	635815.47	4263778.68	7.62	0.00	7.62	
ANNUAL		10.99192	ug/m^3	Res_273	635835.47	4263638.68	7.62	0.00	7.62	
ANNUAL		8.15697	ug/m^3	Res_274	635835.47	4263658.68	7.62	0.00	7.62	
ANNUAL		6.30670	ug/m^3	Res_275	635835.47	4263678.68	7.62	0.00	7.62	
ANNUAL		5.07582	ug/m^3	Res_276	635835.47	4263698.68	7.62	0.00	7.62	
ANNUAL		4.21976	ug/m^3	Res_277	635835.47	4263718.68	7.62	0.00	7.62	
ANNUAL		3.59727	ug/m^3	Res_278	635835.47	4263738.68	7.62	0.00	7.62	
ANNUAL		3.12609	ug/m^3	Res_279	635835.47	4263758.68	7.62	0.00	7.62	
ANNUAL		2.75705	ug/m^3	Res_280	635835.47	4263778.68	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		10.97228	ug/m^3	Res_281	635855.47	4263638.68	7.62	0.00	7.62	
ANNUAL		8.11674	ug/m^3	Res_282	635855.47	4263658.68	7.62	0.00	7.62	
ANNUAL		6.25362	ug/m^3	Res_283	635855.47	4263678.68	7.62	0.00	7.62	
ANNUAL		5.01623	ug/m^3	Res_284	635855.47	4263698.68	7.62	0.00	7.62	
ANNUAL		4.15762	ug/m^3	Res_285	635855.47	4263718.68	7.62	0.00	7.62	
ANNUAL		3.53516	ug/m^3	Res_286	635855.47	4263738.68	7.62	0.00	7.62	
ANNUAL		3.06540	ug/m^3	Res_287	635855.47	4263758.68	7.62	0.00	7.62	
ANNUAL		2.69861	ug/m^3	Res_288	635855.47	4263778.68	7.62	0.00	7.62	
ANNUAL		10.95756	ug/m^3	Res_289	635875.47	4263638.68	7.62	0.00	7.62	
ANNUAL		8.08045	ug/m^3	Res_290	635875.47	4263658.68	7.62	0.00	7.62	
ANNUAL		6.20357	ug/m^3	Res_291	635875.47	4263678.68	7.62	0.00	7.62	
ANNUAL		4.95873	ug/m^3	Res_292	635875.47	4263698.68	7.62	0.00	7.62	
ANNUAL		4.09693	ug/m^3	Res_293	635875.47	4263718.68	7.62	0.00	7.62	
ANNUAL		3.47381	ug/m^3	Res_294	635875.47	4263738.68	7.62	0.00	7.62	
ANNUAL		3.00470	ug/m^3	Res_295	635875.47	4263758.68	7.62	0.00	7.62	
ANNUAL		2.63950	ug/m^3	Res_296	635875.47	4263778.68	7.62	0.00	7.62	
ANNUAL		1.96665	ug/m^3	Res_297	635925.85	4263452.88	7.62	0.00	7.62	
ANNUAL		2.23611	ug/m^3	Res_298	635925.85	4263472.88	7.62	0.00	7.62	
ANNUAL		2.59815	ug/m^3	Res_299	635925.85	4263492.88	7.62	0.00	7.62	
ANNUAL		2.15126	ug/m^3	Res_300	635945.85	4263472.88	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		2.50928	ug/m^3	Res_301	635945.85	4263492.88	7.62	0.00	7.62	
ANNUAL		2.07118	ug/m^3	Res_302	635965.85	4263472.88	7.62	0.00	7.62	
ANNUAL		2.42302	ug/m^3	Res_303	635965.85	4263492.88	7.62	0.00	7.62	
ANNUAL		1.99236	ug/m^3	Res_304	635985.85	4263472.88	7.62	0.00	7.62	
ANNUAL		2.33642	ug/m^3	Res_305	635985.85	4263492.88	7.62	0.00	7.62	
ANNUAL		2.81941	ug/m^3	Res_306	635985.85	4263512.88	7.62	0.00	7.62	
ANNUAL		1.90971	ug/m^3	Res_307	636005.85	4263472.88	7.62	0.00	7.62	
ANNUAL		2.24354	ug/m^3	Res_308	636005.85	4263492.88	7.62	0.00	7.62	
ANNUAL		2.71301	ug/m^3	Res_309	636005.85	4263512.88	7.62	0.00	7.62	
ANNUAL		1.81864	ug/m^3	Res_310	636025.85	4263472.88	7.62	0.00	7.62	
ANNUAL		2.13638	ug/m^3	Res_311	636025.85	4263492.88	7.62	0.00	7.62	
ANNUAL		2.58415	ug/m^3	Res_312	636025.85	4263512.88	7.62	0.00	7.62	
ANNUAL		1.71324	ug/m^3	Res_313	636045.85	4263472.88	7.62	0.00	7.62	
ANNUAL		2.00555	ug/m^3	Res_314	636045.85	4263492.88	7.62	0.00	7.62	
ANNUAL		2.41611	ug/m^3	Res_315	636045.85	4263512.88	7.62	0.00	7.62	
ANNUAL		1.58726	ug/m^3	Res_316	636065.85	4263472.88	7.62	0.00	7.62	
ANNUAL		1.84107	ug/m^3	Res_317	636065.85	4263492.88	7.62	0.00	7.62	
ANNUAL		2.19006	ug/m^3	Res_318	636065.85	4263512.88	7.62	0.00	7.62	
ANNUAL		1.43967	ug/m^3	Res_319	636085.85	4263472.88	7.62	0.00	7.62	
ANNUAL		1.64182	ug/m^3	Res_320	636085.85	4263492.88	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		1.90528	ug/m^3	Res_321	636085.85	4263512.88	7.62	0.00	7.62	
ANNUAL		1.27541	ug/m^3	Res_322	636105.85	4263472.88	7.62	0.00	7.62	
ANNUAL		1.42014	ug/m^3	Res_323	636105.85	4263492.88	7.62	0.00	7.62	
ANNUAL		1.59264	ug/m^3	Res_324	636105.85	4263512.88	7.62	0.00	7.62	
ANNUAL		1.59838	ug/m^3	Res_325	635940.73	4263420.83	7.62	0.00	7.62	
ANNUAL		1.53035	ug/m^3	Res_326	635961.63	4263421.64	7.62	0.00	7.62	
ANNUAL		1.49519	ug/m^3	Res_327	635974.89	4263422.84	7.62	0.00	7.62	
ANNUAL		1.42997	ug/m^3	Res_328	635997.79	4263424.05	7.62	0.00	7.62	
ANNUAL		1.37630	ug/m^3	Res_329	636010.65	4263422.44	7.62	0.00	7.62	
ANNUAL		1.31830	ug/m^3	Res_330	636032.35	4263424.45	7.62	0.00	7.62	
ANNUAL		1.25738	ug/m^3	Res_331	636050.03	4263424.85	7.62	0.00	7.62	
ANNUAL		1.21597	ug/m^3	Res_332	636063.29	4263426.46	7.62	0.00	7.62	
ANNUAL		1.10956	ug/m^3	Res_333	636086.60	4263425.25	7.62	0.00	7.62	
ANNUAL		1.19694	ug/m^3	Res_334	635959.21	4263363.77	7.62	0.00	7.62	
ANNUAL		1.18274	ug/m^3	Res_335	635973.28	4263369.80	7.62	0.00	7.62	
ANNUAL		1.11063	ug/m^3	Res_336	635995.78	4263367.39	7.62	0.00	7.62	
ANNUAL		1.07218	ug/m^3	Res_337	636012.66	4263368.59	7.62	0.00	7.62	
ANNUAL		1.02598	ug/m^3	Res_338	636031.55	4263368.99	7.62	0.00	7.62	
ANNUAL		0.98854	ug/m^3	Res_339	636048.02	4263370.20	7.62	0.00	7.62	
ANNUAL		0.94228	ug/m^3	Res_340	636067.71	4263371.81	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		0.90270	ug/m^3	Res_341	636082.98	4263372.61	7.62	0.00	7.62	
ANNUAL		0.99826	ug/m^3	Res_342	635965.24	4263312.74	7.62	0.00	7.62	
ANNUAL		0.97507	ug/m^3	Res_343	635988.15	4263324.39	7.62	0.00	7.62	
ANNUAL		0.94309	ug/m^3	Res_344	636006.63	4263328.00	7.62	0.00	7.62	
ANNUAL		0.89191	ug/m^3	Res_345	636026.32	4263325.19	7.62	0.00	7.62	
ANNUAL		0.83926	ug/m^3	Res_346	636051.24	4263325.19	7.62	0.00	7.62	
ANNUAL		0.94165	ug/m^3	Res_347	635975.69	4263301.48	7.62	0.00	7.62	
ANNUAL		0.86618	ug/m^3	Res_348	635995.38	4263288.62	7.62	0.00	7.62	
ANNUAL		0.90688	ug/m^3	Res_349	635953.95	4263261.49	7.62	0.00	7.62	
ANNUAL		0.88696	ug/m^3	Res_350	635946.98	4263240.58	7.62	0.00	7.62	
ANNUAL		0.83801	ug/m^3	Res_351	635969.05	4263244.36	7.62	0.00	7.62	
ANNUAL		0.85577	ug/m^3	Res_352	635949.30	4263225.48	7.62	0.00	7.62	
ANNUAL		0.79508	ug/m^3	Res_353	635978.34	4263231.00	7.62	0.00	7.62	
ANNUAL		0.80585	ug/m^3	Res_354	635959.75	4263209.80	7.62	0.00	7.62	
ANNUAL		0.75525	ug/m^3	Res_355	635987.34	4263217.06	7.62	0.00	7.62	
ANNUAL		0.75927	ug/m^3	Res_356	635969.63	4263192.38	7.62	0.00	7.62	
ANNUAL		0.71043	ug/m^3	Res_357	635986.76	4263181.93	7.62	0.00	7.62	
ANNUAL		0.70410	ug/m^3	Res_358	636003.60	4263202.55	7.62	0.00	7.62	
ANNUAL		0.82766	ug/m^3	Res_359	636003.31	4263278.33	7.62	0.00	7.62	
ANNUAL		0.77054	ug/m^3	Res_360	636016.08	4263261.49	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		0.72394	ug/m^3	Res_361	636027.70	4263246.39	7.62	0.00	7.62	
ANNUAL		0.78510	ug/m^3	Res_362	636038.73	4263291.10	7.62	0.00	7.62	
ANNUAL		0.85196	ug/m^3	Res_363	635929.41	4263184.04	7.62	0.00	7.62	
ANNUAL		0.87158	ug/m^3	Res_364	635915.34	4263164.34	7.61	0.00	7.61	
ANNUAL		0.87737	ug/m^3	Res_365	635907.30	4263146.26	7.43	0.00	7.43	
ANNUAL		0.72858	ug/m^3	Res_366	635958.74	4263144.65	7.41	0.00	7.41	
ANNUAL		0.72803	ug/m^3	Res_367	635950.30	4263124.96	7.32	0.00	7.32	
ANNUAL		0.67437	ug/m^3	Res_368	635994.51	4263163.14	7.60	0.00	7.60	
ANNUAL		0.84232	ug/m^3	Res_369	635902.88	4263104.06	7.31	0.00	7.31	
ANNUAL		0.87723	ug/m^3	Res_370	635901.68	4263129.38	7.32	0.00	7.32	
ANNUAL		0.96813	ug/m^3	Res_371	635870.73	4263101.65	7.28	0.00	7.28	
ANNUAL		1.02309	ug/m^3	Res_372	635866.31	4263123.75	7.32	0.00	7.32	
ANNUAL		1.04419	ug/m^3	Res_373	635867.11	4263141.04	7.38	0.00	7.38	
ANNUAL		1.04425	ug/m^3	Res_374	635871.13	4263155.91	7.53	0.00	7.53	
ANNUAL		1.38845	ug/m^3	Res_375	635820.09	4263147.46	7.44	0.00	7.44	
ANNUAL		1.34214	ug/m^3	Res_376	635820.49	4263128.17	7.32	0.00	7.32	
ANNUAL		1.26025	ug/m^3	Res_377	635825.12	4263110.19	7.32	0.00	7.32	
ANNUAL		1.41675	ug/m^3	Res_378	635802.25	4263096.76	7.23	0.00	7.23	
ANNUAL		1.57610	ug/m^3	Res_379	635793.65	4263114.38	7.32	0.00	7.32	
ANNUAL		1.82445	ug/m^3	Res_380	635778.75	4263124.66	7.32	0.00	7.32	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		2.11383	ug/m^3	Res_381	635767.21	4263139.14	7.36	0.00	7.36	
ANNUAL		2.51561	ug/m^3	Res_382	635754.83	4263153.41	7.50	0.00	7.50	
ANNUAL		3.42632	ug/m^3	Res_383	635706.93	4263123.14	7.32	0.00	7.32	
ANNUAL		2.75377	ug/m^3	Res_384	635721.62	4263110.16	7.32	0.00	7.32	
ANNUAL		2.51675	ug/m^3	Res_385	635701.12	4263092.39	7.19	0.00	7.19	
ANNUAL		2.85739	ug/m^3	Res_386	635686.43	4263103.33	7.30	0.00	7.30	
ANNUAL		3.33848	ug/m^3	Res_387	635675.50	4263116.99	7.32	0.00	7.32	
ANNUAL		3.84999	ug/m^3	Res_388	635661.49	4263131.00	7.31	0.00	7.31	
ANNUAL		4.20922	ug/m^3	Res_389	635648.17	4263143.30	7.36	0.00	7.36	
ANNUAL		2.63742	ug/m^3	Res_390	635458.51	4263353.51	6.49	0.00	6.49	
ANNUAL		2.26837	ug/m^3	Res_391	635466.85	4263312.35	6.53	0.00	6.53	
ANNUAL		2.08440	ug/m^3	Res_392	635470.75	4263292.32	6.57	0.00	6.57	
ANNUAL		1.84785	ug/m^3	Res_393	635472.42	4263271.74	6.59	0.00	6.59	
ANNUAL		1.65106	ug/m^3	Res_394	635475.75	4263249.48	6.62	0.00	6.62	
ANNUAL		2.28942	ug/m^3	Res_395	635502.46	4263248.37	6.75	0.00	6.75	
ANNUAL		2.01997	ug/m^3	Res_396	635503.01	4263232.24	6.85	0.00	6.85	
ANNUAL		1.76998	ug/m^3	Res_397	635504.13	4263213.88	6.91	0.00	6.91	
ANNUAL		1.50099	ug/m^3	Res_398	635502.46	4263194.41	6.89	0.00	6.89	
ANNUAL		2.18375	ug/m^3	Res_399	635554.75	4263171.04	7.01	0.00	7.01	
ANNUAL		2.39332	ug/m^3	Res_400	635572.55	4263160.47	7.01	0.00	7.01	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		2.49682	ug/m^3	Res_401	635588.13	4263148.79	7.08	0.00	7.08	
ANNUAL		2.40132	ug/m^3	Res_402	635603.15	4263131.55	7.01	0.00	7.01	
ANNUAL		2.22218	ug/m^3	Res_403	635637.64	4263098.72	7.04	0.00	7.04	
ANNUAL		2.04773	ug/m^3	Res_404	635662.67	4263078.14	7.04	0.00	7.04	
ANNUAL		3.45799	ug/m^3	CC_001	635332.31	4263659.61	7.47	0.00	7.47	
ANNUAL		2.78040	ug/m^3	CC_002	635332.31	4263679.61	7.62	0.00	7.62	
ANNUAL		4.57915	ug/m^3	CC_003	635352.31	4263659.61	7.37	0.00	7.37	
ANNUAL		3.51848	ug/m^3	CC_004	635352.31	4263679.61	7.46	0.00	7.46	
ANNUAL		5.58441	ug/m^3	CC_005	635372.31	4263659.61	7.32	0.00	7.32	
ANNUAL		4.24296	ug/m^3	CC_006	635372.31	4263679.61	7.35	0.00	7.35	
ANNUAL		3.60946	ug/m^3	SAA_001	635905.45	4263730.56	7.62	0.00	7.62	
ANNUAL		3.08466	ug/m^3	SAA_002	635905.45	4263750.56	7.62	0.00	7.62	
ANNUAL		2.68317	ug/m^3	SAA_003	635905.45	4263770.56	7.62	0.00	7.62	
ANNUAL		2.36697	ug/m^3	SAA_004	635905.45	4263790.56	7.62	0.00	7.62	
ANNUAL		2.11192	ug/m^3	SAA_005	635905.45	4263810.56	7.62	0.00	7.62	
ANNUAL		3.53939	ug/m^3	SAA_006	635925.45	4263730.56	7.62	0.00	7.62	
ANNUAL		3.01414	ug/m^3	SAA_007	635925.45	4263750.56	7.62	0.00	7.62	
ANNUAL		2.61388	ug/m^3	SAA_008	635925.45	4263770.56	7.62	0.00	7.62	
ANNUAL		2.30017	ug/m^3	SAA_009	635925.45	4263790.56	7.62	0.00	7.62	
ANNUAL		2.04842	ug/m^3	SAA_010	635925.45	4263810.56	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		3.45862	ug/m^3	SAA_011	635945.45	4263730.56	7.62	0.00	7.62	
ANNUAL		2.93402	ug/m^3	SAA_012	635945.45	4263750.56	7.62	0.00	7.62	
ANNUAL		2.53646	ug/m^3	SAA_013	635945.45	4263770.56	7.62	0.00	7.62	
ANNUAL		2.22663	ug/m^3	SAA_014	635945.45	4263790.56	7.62	0.00	7.62	
ANNUAL		1.97940	ug/m^3	SAA_015	635945.45	4263810.56	7.62	0.00	7.62	
ANNUAL		3.36085	ug/m^3	SAA_016	635965.45	4263730.56	7.62	0.00	7.62	
ANNUAL		2.84000	ug/m^3	SAA_017	635965.45	4263750.56	7.62	0.00	7.62	
ANNUAL		2.44797	ug/m^3	SAA_018	635965.45	4263770.56	7.62	0.00	7.62	
ANNUAL		2.14450	ug/m^3	SAA_019	635965.45	4263790.56	7.62	0.00	7.62	
ANNUAL		1.90384	ug/m^3	SAA_020	635965.45	4263810.56	7.62	0.00	7.62	
ANNUAL		3.23849	ug/m^3	SAA_021	635985.45	4263730.56	7.62	0.00	7.62	
ANNUAL		2.72730	ug/m^3	SAA_022	635985.45	4263750.56	7.62	0.00	7.62	
ANNUAL		2.34574	ug/m^3	SAA_023	635985.45	4263770.56	7.62	0.00	7.62	
ANNUAL		2.05249	ug/m^3	SAA_024	635985.45	4263790.56	7.62	0.00	7.62	
ANNUAL		1.82145	ug/m^3	SAA_025	635985.45	4263810.56	7.62	0.00	7.62	
ANNUAL		3.08324	ug/m^3	SAA_026	636005.45	4263730.56	7.62	0.00	7.62	
ANNUAL		2.59197	ug/m^3	SAA_027	636005.45	4263750.56	7.62	0.00	7.62	
ANNUAL		2.22843	ug/m^3	SAA_028	636005.45	4263770.56	7.62	0.00	7.62	
ANNUAL		1.95068	ug/m^3	SAA_029	636005.45	4263790.56	7.62	0.00	7.62	
ANNUAL		1.73265	ug/m^3	SAA_030	636005.45	4263810.56	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: OFFSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		11.24291	ug/m^3	WKR_001	635584.68	4263252.74	7.32	0.00	7.32	
ANNUAL		8.80480	ug/m^3	WKR_002	635578.92	4263247.15	7.32	0.00	7.32	
ANNUAL		5.48372	ug/m^3	WKR_003	635556.74	4263245.97	7.14	0.00	7.14	
ANNUAL		5.53267	ug/m^3	WKR_004	635561.82	4263240.04	7.19	0.00	7.19	
ANNUAL		5.64239	ug/m^3	WKR_005	635567.58	4263234.28	7.25	0.00	7.25	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
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PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		5.44192	ug/m^3	Res_001	635549.76	4263409.57	7.41	0.00	7.41	
ANNUAL		7.26656	ug/m^3	Res_002	635566.26	4263411.29	7.56	0.00	7.56	
ANNUAL		9.13692	ug/m^3	Res_003	635584.25	4263409.82	7.62	0.00	7.62	
ANNUAL		10.31568	ug/m^3	Res_004	635602.97	4263410.31	7.62	0.00	7.62	
ANNUAL		10.56221	ug/m^3	Res_005	635622.19	4263414.01	7.62	0.00	7.62	
ANNUAL		11.40494	ug/m^3	Res_006	635639.19	4263413.76	7.62	0.00	7.62	
ANNUAL		12.51472	ug/m^3	Res_007	635655.95	4263411.79	7.62	0.00	7.62	
ANNUAL		12.57406	ug/m^3	Res_008	635674.67	4263413.76	7.62	0.00	7.62	
ANNUAL		13.45658	ug/m^3	Res_009	635693.15	4263411.54	7.62	0.00	7.62	
ANNUAL		13.57685	ug/m^3	Res_010	635709.66	4263412.03	7.62	0.00	7.62	
ANNUAL		13.71746	ug/m^3	Res_011	635727.65	4263412.03	7.62	0.00	7.62	
ANNUAL		13.77952	ug/m^3	Res_012	635744.40	4263411.79	7.62	0.00	7.62	
ANNUAL		2.81580	ug/m^3	Res_013	635546.76	4263455.71	7.62	0.00	7.62	
ANNUAL		3.57546	ug/m^3	Res_014	635566.24	4263453.83	7.62	0.00	7.62	
ANNUAL		4.32518	ug/m^3	Res_015	635585.09	4263453.62	7.62	0.00	7.62	
ANNUAL		4.87947	ug/m^3	Res_016	635601.85	4263454.46	7.62	0.00	7.62	
ANNUAL		5.26385	ug/m^3	Res_017	635619.02	4263456.34	7.62	0.00	7.62	
ANNUAL		5.83083	ug/m^3	Res_018	635636.82	4263454.46	7.62	0.00	7.62	
ANNUAL		6.22533	ug/m^3	Res_019	635655.04	4263453.83	7.62	0.00	7.62	
ANNUAL		6.26976	ug/m^3	Res_020	635672.22	4263456.55	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		2.14964	ug/m^3	Res_021	635547.39	4263485.24	7.62	0.00	7.62	
ANNUAL		1.40961	ug/m^3	Res_022	635500.69	4263481.26	7.62	0.00	7.62	
ANNUAL		1.52375	ug/m^3	Res_023	635500.90	4263461.58	7.61	0.00	7.61	
ANNUAL		1.57398	ug/m^3	Res_024	635499.85	4263444.82	7.52	0.00	7.52	
ANNUAL		1.63700	ug/m^3	Res_025	635501.32	4263426.39	7.44	0.00	7.44	
ANNUAL		1.67318	ug/m^3	Res_026	635503.41	4263406.70	7.33	0.00	7.33	
ANNUAL		1.30792	ug/m^3	Res_027	635500.71	4263499.34	7.62	0.00	7.62	
ANNUAL		1.18765	ug/m^3	Res_028	635498.40	4263517.86	7.62	0.00	7.62	
ANNUAL		2.45079	ug/m^3	Res_029	635563.91	4263485.82	7.62	0.00	7.62	
ANNUAL		13.25406	ug/m^3	Res_030	635764.54	4263413.31	7.62	0.00	7.62	
ANNUAL		11.02915	ug/m^3	Res_031	635785.99	4263422.01	7.62	0.00	7.62	
ANNUAL		8.43458	ug/m^3	Res_032	635800.78	4263435.63	7.62	0.00	7.62	
ANNUAL		9.58835	ug/m^3	Res_033	635819.04	4263421.72	7.62	0.00	7.62	
ANNUAL		5.99772	ug/m^3	Res_034	635768.02	4263464.91	7.62	0.00	7.62	
ANNUAL		5.13555	ug/m^3	Res_035	635745.98	4263479.99	7.62	0.00	7.62	
ANNUAL		6.57762	ug/m^3	Res_036	635742.79	4263459.12	7.62	0.00	7.62	
ANNUAL		6.39504	ug/m^3	Res_037	635723.66	4263460.86	7.62	0.00	7.62	
ANNUAL		5.02481	ug/m^3	Res_038	635725.69	4263482.60	7.62	0.00	7.62	
ANNUAL		4.86561	ug/m^3	Res_039	635708.29	4263484.92	7.62	0.00	7.62	
ANNUAL		6.50734	ug/m^3	Res_040	635707.71	4263458.25	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		6.38398	ug/m^3	Res_041	635689.16	4263457.67	7.62	0.00	7.62	
ANNUAL		4.43767	ug/m^3	Res_042	635689.45	4263491.88	7.62	0.00	7.62	
ANNUAL		4.50758	ug/m^3	Res_043	635673.21	4263486.95	7.62	0.00	7.62	
ANNUAL		4.40226	ug/m^3	Res_044	635655.53	4263484.34	7.62	0.00	7.62	
ANNUAL		3.93264	ug/m^3	Res_045	635636.11	4263487.82	7.62	0.00	7.62	
ANNUAL		3.62798	ug/m^3	Res_046	635619.29	4263487.24	7.62	0.00	7.62	
ANNUAL		3.36458	ug/m^3	Res_047	635602.48	4263484.34	7.62	0.00	7.62	
ANNUAL		2.98109	ug/m^3	Res_048	635585.08	4263483.47	7.62	0.00	7.62	
ANNUAL		1.11329	ug/m^3	Res_049	635501.00	4263538.50	7.62	0.00	7.62	
ANNUAL		1.04895	ug/m^3	Res_050	635501.42	4263553.79	7.62	0.00	7.62	
ANNUAL		0.94954	ug/m^3	Res_051	635497.02	4263572.44	7.62	0.00	7.62	
ANNUAL		1.31083	ug/m^3	Res_052	635549.18	4263563.22	7.62	0.00	7.62	
ANNUAL		1.44399	ug/m^3	Res_053	635564.26	4263560.08	7.62	0.00	7.62	
ANNUAL		1.51802	ug/m^3	Res_054	635544.36	4263532.43	7.62	0.00	7.62	
ANNUAL		1.73714	ug/m^3	Res_055	635566.36	4263532.43	7.62	0.00	7.62	
ANNUAL		1.95242	ug/m^3	Res_056	635583.32	4263530.75	7.62	0.00	7.62	
ANNUAL		1.57291	ug/m^3	Res_057	635582.69	4263561.96	7.62	0.00	7.62	
ANNUAL		1.69616	ug/m^3	Res_058	635599.90	4263563.83	7.62	0.00	7.62	
ANNUAL		2.17348	ug/m^3	Res_059	635600.71	4263530.54	7.62	0.00	7.62	
ANNUAL		1.85055	ug/m^3	Res_060	635616.84	4263563.01	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		2.34461	ug/m^3	Res_061	635619.14	4263533.89	7.62	0.00	7.62	
ANNUAL		2.02827	ug/m^3	Res_062	635636.95	4263562.38	7.62	0.00	7.62	
ANNUAL		2.58851	ug/m^3	Res_063	635636.95	4263532.43	7.62	0.00	7.62	
ANNUAL		2.14644	ug/m^3	Res_064	635652.66	4263562.59	7.62	0.00	7.62	
ANNUAL		2.83392	ug/m^3	Res_065	635653.29	4263529.70	7.62	0.00	7.62	
ANNUAL		2.25248	ug/m^3	Res_066	635670.88	4263563.43	7.62	0.00	7.62	
ANNUAL		2.79477	ug/m^3	Res_067	635671.93	4263538.08	7.62	0.00	7.62	
ANNUAL		2.37497	ug/m^3	Res_068	635688.79	4263561.86	7.62	0.00	7.62	
ANNUAL		2.96706	ug/m^3	Res_069	635689.53	4263535.74	7.62	0.00	7.62	
ANNUAL		3.05324	ug/m^3	Res_070	635710.23	4263535.49	7.62	0.00	7.62	
ANNUAL		2.44581	ug/m^3	Res_071	635710.23	4263561.86	7.62	0.00	7.62	
ANNUAL		2.23766	ug/m^3	Res_072	635774.41	4263572.00	7.62	0.00	7.62	
ANNUAL		2.20836	ug/m^3	Res_073	635790.75	4263571.37	7.62	0.00	7.62	
ANNUAL		2.22317	ug/m^3	Res_074	635809.40	4263566.76	7.62	0.00	7.62	
ANNUAL		2.42957	ug/m^3	Res_075	635808.77	4263554.40	7.62	0.00	7.62	
ANNUAL		2.60034	ug/m^3	Res_076	635796.20	4263547.90	7.62	0.00	7.62	
ANNUAL		3.19151	ug/m^3	Res_077	635753.46	4263529.47	7.62	0.00	7.62	
ANNUAL		3.37136	ug/m^3	Res_078	635773.36	4263520.04	7.62	0.00	7.62	
ANNUAL		3.55873	ug/m^3	Res_079	635790.96	4263510.40	7.62	0.00	7.62	
ANNUAL		4.01288	ug/m^3	Res_080	635803.11	4263494.90	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		4.40458	ug/m^3	Res_081	635815.18	4263483.21	7.62	0.00	7.62	
ANNUAL		4.39331	ug/m^3	Res_082	635833.45	4263478.28	7.62	0.00	7.62	
ANNUAL		4.49172	ug/m^3	Res_083	635850.27	4263466.68	7.62	0.00	7.62	
ANNUAL		3.77660	ug/m^3	Res_084	635869.41	4263467.26	7.62	0.00	7.62	
ANNUAL		3.44133	ug/m^3	Res_085	635843.89	4263499.74	7.62	0.00	7.62	
ANNUAL		3.34575	ug/m^3	Res_086	635856.36	4263495.97	7.62	0.00	7.62	
ANNUAL		3.16528	ug/m^3	Res_087	635865.93	4263495.68	7.62	0.00	7.62	
ANNUAL		1.77237	ug/m^3	Res_088	635888.26	4263569.63	7.62	0.00	7.62	
ANNUAL		1.64461	ug/m^3	Res_089	635904.90	4263569.10	7.62	0.00	7.62	
ANNUAL		1.47879	ug/m^3	Res_090	635924.81	4263568.27	7.62	0.00	7.62	
ANNUAL		1.33007	ug/m^3	Res_091	635940.52	4263570.78	7.62	0.00	7.62	
ANNUAL		1.18537	ug/m^3	Res_092	635958.12	4263570.15	7.62	0.00	7.62	
ANNUAL		1.05708	ug/m^3	Res_093	635974.05	4263571.20	7.62	0.00	7.62	
ANNUAL		0.91934	ug/m^3	Res_094	635993.12	4263571.20	7.62	0.00	7.62	
ANNUAL		0.80179	ug/m^3	Res_095	636011.34	4263571.20	7.62	0.00	7.62	
ANNUAL		0.70915	ug/m^3	Res_096	636027.48	4263572.25	7.62	0.00	7.62	
ANNUAL		0.61201	ug/m^3	Res_097	636046.97	4263572.25	7.62	0.00	7.62	
ANNUAL		0.54317	ug/m^3	Res_098	636062.97	4263572.83	7.62	0.00	7.62	
ANNUAL		2.10925	ug/m^3	Res_099	635897.08	4263528.17	7.62	0.00	7.62	
ANNUAL		1.68136	ug/m^3	Res_100	635921.73	4263540.35	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		1.49700	ug/m^3	Res_101	635937.39	4263540.06	7.62	0.00	7.62	
ANNUAL		1.29793	ug/m^3	Res_102	635955.37	4263539.77	7.62	0.00	7.62	
ANNUAL		1.11098	ug/m^3	Res_103	635973.93	4263540.64	7.62	0.00	7.62	
ANNUAL		0.96301	ug/m^3	Res_104	635990.75	4263542.09	7.62	0.00	7.62	
ANNUAL		0.82352	ug/m^3	Res_105	636009.32	4263542.38	7.62	0.00	7.62	
ANNUAL		0.70866	ug/m^3	Res_106	636027.30	4263542.09	7.62	0.00	7.62	
ANNUAL		0.62340	ug/m^3	Res_107	636042.96	4263542.96	7.62	0.00	7.62	
ANNUAL		0.53377	ug/m^3	Res_108	636062.39	4263543.25	7.62	0.00	7.62	
ANNUAL		0.46826	ug/m^3	Res_109	636079.21	4263542.38	7.62	0.00	7.62	
ANNUAL		0.41197	ug/m^3	Res_110	636096.61	4263543.83	7.62	0.00	7.62	
ANNUAL		0.48677	ug/m^3	Res_111	636078.12	4263575.22	7.62	0.00	7.62	
ANNUAL		0.42349	ug/m^3	Res_112	636097.56	4263574.93	7.62	0.00	7.62	
ANNUAL		2.43090	ug/m^3	Res_113	635893.71	4263505.40	7.62	0.00	7.62	
ANNUAL		2.63010	ug/m^3	Res_114	635894.77	4263487.28	7.62	0.00	7.62	
ANNUAL		2.89272	ug/m^3	Res_115	635894.41	4263465.90	7.62	0.00	7.62	
ANNUAL		5.19290	ug/m^3	Res_116	635866.96	4263418.34	7.62	0.00	7.62	
ANNUAL		3.39134	ug/m^3	Res_117	635890.63	4263419.82	7.62	0.00	7.62	
ANNUAL		2.69456	ug/m^3	Res_118	635905.67	4263422.29	7.62	0.00	7.62	
ANNUAL		6.16031	ug/m^3	Res_119	635865.03	4263366.30	7.62	0.00	7.62	
ANNUAL		3.46428	ug/m^3	Res_120	635889.79	4263367.01	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		2.20424	ug/m^3	Res_121	635914.20	4263362.20	7.62	0.00	7.62	
ANNUAL		3.13059	ug/m^3	Res_122	635894.25	4263316.06	7.62	0.00	7.62	
ANNUAL		5.80257	ug/m^3	Res_123	635867.88	4263322.29	7.62	0.00	7.62	
ANNUAL		1.97805	ug/m^3	Res_124	635925.96	4263421.19	7.62	0.00	7.62	
ANNUAL		1.57210	ug/m^3	Res_125	635935.20	4263351.31	7.62	0.00	7.62	
ANNUAL		2.30017	ug/m^3	Res_126	635909.65	4263307.36	7.62	0.00	7.62	
ANNUAL		1.88141	ug/m^3	Res_127	635921.59	4263295.07	7.62	0.00	7.62	
ANNUAL		2.40399	ug/m^3	Res_128	635906.57	4263277.66	7.62	0.00	7.62	
ANNUAL		6.15017	ug/m^3	Res_129	635864.93	4263305.99	7.62	0.00	7.62	
ANNUAL		5.45036	ug/m^3	Res_130	635867.32	4263285.85	7.62	0.00	7.62	
ANNUAL		5.15676	ug/m^3	Res_131	635867.32	4263268.44	7.62	0.00	7.62	
ANNUAL		4.71022	ug/m^3	Res_132	635869.37	4263250.69	7.62	0.00	7.62	
ANNUAL		2.51534	ug/m^3	Res_133	635903.84	4263258.20	7.62	0.00	7.62	
ANNUAL		2.56705	ug/m^3	Res_134	635902.14	4263238.75	7.62	0.00	7.62	
ANNUAL		2.51299	ug/m^3	Res_135	635901.79	4263221.00	7.62	0.00	7.62	
ANNUAL		4.34863	ug/m^3	Res_136	635870.05	4263230.55	7.62	0.00	7.62	
ANNUAL		3.84442	ug/m^3	Res_137	635871.41	4263211.78	7.62	0.00	7.62	
ANNUAL		2.26432	ug/m^3	Res_138	635906.57	4263199.49	7.62	0.00	7.62	
ANNUAL		3.38754	ug/m^3	Res_139	635871.76	4263192.66	7.62	0.00	7.62	
ANNUAL		3.07548	ug/m^3	Res_140	635870.73	4263176.62	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		7.23502	ug/m^3	Res_141	635826.01	4263217.58	7.62	0.00	7.62	
ANNUAL		8.57579	ug/m^3	Res_142	635802.12	4263217.24	7.62	0.00	7.62	
ANNUAL		8.66225	ug/m^3	Res_143	635784.37	4263215.53	7.62	0.00	7.62	
ANNUAL		9.07560	ug/m^3	Res_144	635765.25	4263216.22	7.62	0.00	7.62	
ANNUAL		9.36998	ug/m^3	Res_145	635745.79	4263215.53	7.62	0.00	7.62	
ANNUAL		9.45696	ug/m^3	Res_146	635728.04	4263212.12	7.62	0.00	7.62	
ANNUAL		8.35745	ug/m^3	Res_147	635706.88	4263197.78	7.62	0.00	7.62	
ANNUAL		4.69582	ug/m^3	Res_148	635736.58	4263168.08	7.62	0.00	7.62	
ANNUAL		4.78602	ug/m^3	Res_149	635769.35	4263173.55	7.62	0.00	7.62	
ANNUAL		4.49225	ug/m^3	Res_150	635788.12	4263171.16	7.62	0.00	7.62	
ANNUAL		4.31820	ug/m^3	Res_151	635804.85	4263171.16	7.62	0.00	7.62	
ANNUAL		4.02937	ug/m^3	Res_152	635825.67	4263171.50	7.62	0.00	7.62	
ANNUAL		2.85842	ug/m^3	Res_153	635694.20	4263141.43	7.38	0.00	7.38	
ANNUAL		3.05445	ug/m^3	Res_154	635679.31	4263154.64	7.52	0.00	7.52	
ANNUAL		3.22914	ug/m^3	Res_155	635667.78	4263167.01	7.62	0.00	7.62	
ANNUAL		3.37814	ug/m^3	Res_156	635655.20	4263181.27	7.53	0.00	7.53	
ANNUAL		3.27201	ug/m^3	Res_157	635638.64	4263196.36	7.38	0.00	7.38	
ANNUAL		3.40261	ug/m^3	Res_158	635629.62	4263208.10	7.43	0.00	7.43	
ANNUAL		3.22767	ug/m^3	Res_159	635613.90	4263222.36	7.41	0.00	7.41	
ANNUAL		1.80419	ug/m^3	Res_160	635635.49	4263157.16	7.33	0.00	7.33	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
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PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		1.69450	ug/m^3	Res_161	635621.02	4263168.06	7.32	0.00	7.32	
ANNUAL		1.74870	ug/m^3	Res_162	635609.07	4263185.04	7.32	0.00	7.32	
ANNUAL		1.65827	ug/m^3	Res_163	635596.28	4263197.20	7.24	0.00	7.24	
ANNUAL		0.98548	ug/m^3	Res_164	635551.46	4263214.76	7.06	0.00	7.06	
ANNUAL		1.85532	ug/m^3	Res_165	635539.46	4263302.58	7.01	0.00	7.01	
ANNUAL		1.08574	ug/m^3	Res_166	635520.57	4263286.71	7.01	0.00	7.01	
ANNUAL		0.78244	ug/m^3	Res_167	635507.92	4263270.67	6.83	0.00	6.83	
ANNUAL		1.20045	ug/m^3	Res_168	635514.51	4263314.87	7.01	0.00	7.01	
ANNUAL		0.88717	ug/m^3	Res_169	635496.51	4263316.12	6.85	0.00	6.85	
ANNUAL		1.94467	ug/m^3	Res_170	635533.76	4263320.22	7.06	0.00	7.06	
ANNUAL		0.86382	ug/m^3	Res_171	635477.95	4263357.79	6.89	0.00	6.89	
ANNUAL		1.22402	ug/m^3	Res_172	635499.16	4263358.32	7.23	0.00	7.23	
ANNUAL		1.83957	ug/m^3	Res_173	635516.98	4263362.06	7.47	0.00	7.47	
ANNUAL		0.98965	ug/m^3	Res_174	635575.47	4263638.68	7.62	0.00	7.62	
ANNUAL		0.89556	ug/m^3	Res_175	635575.47	4263658.68	7.62	0.00	7.62	
ANNUAL		0.81310	ug/m^3	Res_176	635575.47	4263678.68	7.62	0.00	7.62	
ANNUAL		0.74052	ug/m^3	Res_177	635575.47	4263698.68	7.62	0.00	7.62	
ANNUAL		0.67634	ug/m^3	Res_178	635575.47	4263718.68	7.62	0.00	7.62	
ANNUAL		0.61940	ug/m^3	Res_179	635575.47	4263738.68	7.62	0.00	7.62	
ANNUAL		0.56869	ug/m^3	Res_180	635575.47	4263758.68	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		1.05654	ug/m^3	Res_181	635595.47	4263638.68	7.62	0.00	7.62	
ANNUAL		0.94850	ug/m^3	Res_182	635595.47	4263658.68	7.62	0.00	7.62	
ANNUAL		0.85499	ug/m^3	Res_183	635595.47	4263678.68	7.62	0.00	7.62	
ANNUAL		0.77362	ug/m^3	Res_184	635595.47	4263698.68	7.62	0.00	7.62	
ANNUAL		0.70249	ug/m^3	Res_185	635595.47	4263718.68	7.62	0.00	7.62	
ANNUAL		0.63999	ug/m^3	Res_186	635595.47	4263738.68	7.62	0.00	7.62	
ANNUAL		0.58488	ug/m^3	Res_187	635595.47	4263758.68	7.62	0.00	7.62	
ANNUAL		1.12334	ug/m^3	Res_188	635615.47	4263638.68	7.62	0.00	7.62	
ANNUAL		1.00083	ug/m^3	Res_189	635615.47	4263658.68	7.62	0.00	7.62	
ANNUAL		0.89606	ug/m^3	Res_190	635615.47	4263678.68	7.62	0.00	7.62	
ANNUAL		0.80584	ug/m^3	Res_191	635615.47	4263698.68	7.62	0.00	7.62	
ANNUAL		0.72779	ug/m^3	Res_192	635615.47	4263718.68	7.62	0.00	7.62	
ANNUAL		0.65985	ug/m^3	Res_193	635615.47	4263738.68	7.62	0.00	7.62	
ANNUAL		0.60050	ug/m^3	Res_194	635615.47	4263758.68	7.62	0.00	7.62	
ANNUAL		1.18818	ug/m^3	Res_195	635635.47	4263638.68	7.62	0.00	7.62	
ANNUAL		1.05146	ug/m^3	Res_196	635635.47	4263658.68	7.62	0.00	7.62	
ANNUAL		0.93570	ug/m^3	Res_197	635635.47	4263678.68	7.62	0.00	7.62	
ANNUAL		0.83699	ug/m^3	Res_198	635635.47	4263698.68	7.62	0.00	7.62	
ANNUAL		0.75233	ug/m^3	Res_199	635635.47	4263718.68	7.62	0.00	7.62	
ANNUAL		0.67926	ug/m^3	Res_200	635635.47	4263738.68	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		0.61591	ug/m^3	Res_201	635635.47	4263758.68	7.62	0.00	7.62	
ANNUAL		1.24880	ug/m^3	Res_202	635655.47	4263638.68	7.62	0.00	7.62	
ANNUAL		1.09909	ug/m^3	Res_203	635655.47	4263658.68	7.62	0.00	7.62	
ANNUAL		0.97327	ug/m^3	Res_204	635655.47	4263678.68	7.62	0.00	7.62	
ANNUAL		0.86685	ug/m^3	Res_205	635655.47	4263698.68	7.62	0.00	7.62	
ANNUAL		0.77615	ug/m^3	Res_206	635655.47	4263718.68	7.62	0.00	7.62	
ANNUAL		0.69838	ug/m^3	Res_207	635655.47	4263738.68	7.62	0.00	7.62	
ANNUAL		0.63138	ug/m^3	Res_208	635655.47	4263758.68	7.62	0.00	7.62	
ANNUAL		1.30288	ug/m^3	Res_209	635675.47	4263638.68	7.62	0.00	7.62	
ANNUAL		1.14236	ug/m^3	Res_210	635675.47	4263658.68	7.62	0.00	7.62	
ANNUAL		1.00814	ug/m^3	Res_211	635675.47	4263678.68	7.62	0.00	7.62	
ANNUAL		0.89510	ug/m^3	Res_212	635675.47	4263698.68	7.62	0.00	7.62	
ANNUAL		0.79918	ug/m^3	Res_213	635675.47	4263718.68	7.62	0.00	7.62	
ANNUAL		0.71733	ug/m^3	Res_214	635675.47	4263738.68	7.62	0.00	7.62	
ANNUAL		0.64708	ug/m^3	Res_215	635675.47	4263758.68	7.62	0.00	7.62	
ANNUAL		0.58643	ug/m^3	Res_216	635675.47	4263778.68	7.62	0.00	7.62	
ANNUAL		1.34820	ug/m^3	Res_217	635695.47	4263638.68	7.62	0.00	7.62	
ANNUAL		1.17996	ug/m^3	Res_218	635695.47	4263658.68	7.62	0.00	7.62	
ANNUAL		1.03946	ug/m^3	Res_219	635695.47	4263678.68	7.62	0.00	7.62	
ANNUAL		0.92131	ug/m^3	Res_220	635695.47	4263698.68	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		0.82122	ug/m^3	Res_221	635695.47	4263718.68	7.62	0.00	7.62	
ANNUAL		0.73601	ug/m^3	Res_222	635695.47	4263738.68	7.62	0.00	7.62	
ANNUAL		0.66302	ug/m^3	Res_223	635695.47	4263758.68	7.62	0.00	7.62	
ANNUAL		0.60013	ug/m^3	Res_224	635695.47	4263778.68	7.62	0.00	7.62	
ANNUAL		1.38328	ug/m^3	Res_225	635715.47	4263638.68	7.62	0.00	7.62	
ANNUAL		1.21080	ug/m^3	Res_226	635715.47	4263658.68	7.62	0.00	7.62	
ANNUAL		1.06649	ug/m^3	Res_227	635715.47	4263678.68	7.62	0.00	7.62	
ANNUAL		0.94495	ug/m^3	Res_228	635715.47	4263698.68	7.62	0.00	7.62	
ANNUAL		0.84193	ug/m^3	Res_229	635715.47	4263718.68	7.62	0.00	7.62	
ANNUAL		0.75416	ug/m^3	Res_230	635715.47	4263738.68	7.62	0.00	7.62	
ANNUAL		0.67900	ug/m^3	Res_231	635715.47	4263758.68	7.62	0.00	7.62	
ANNUAL		0.61422	ug/m^3	Res_232	635715.47	4263778.68	7.62	0.00	7.62	
ANNUAL		1.40739	ug/m^3	Res_233	635735.47	4263638.68	7.62	0.00	7.62	
ANNUAL		1.23411	ug/m^3	Res_234	635735.47	4263658.68	7.62	0.00	7.62	
ANNUAL		1.08848	ug/m^3	Res_235	635735.47	4263678.68	7.62	0.00	7.62	
ANNUAL		0.96538	ug/m^3	Res_236	635735.47	4263698.68	7.62	0.00	7.62	
ANNUAL		0.86070	ug/m^3	Res_237	635735.47	4263718.68	7.62	0.00	7.62	
ANNUAL		0.77134	ug/m^3	Res_238	635735.47	4263738.68	7.62	0.00	7.62	
ANNUAL		0.69461	ug/m^3	Res_239	635735.47	4263758.68	7.62	0.00	7.62	
ANNUAL		0.62832	ug/m^3	Res_240	635735.47	4263778.68	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		1.42049	ug/m^3	Res_241	635755.47	4263638.68	7.62	0.00	7.62	
ANNUAL		1.24954	ug/m^3	Res_242	635755.47	4263658.68	7.62	0.00	7.62	
ANNUAL		1.10494	ug/m^3	Res_243	635755.47	4263678.68	7.62	0.00	7.62	
ANNUAL		0.98203	ug/m^3	Res_244	635755.47	4263698.68	7.62	0.00	7.62	
ANNUAL		0.87699	ug/m^3	Res_245	635755.47	4263718.68	7.62	0.00	7.62	
ANNUAL		0.78693	ug/m^3	Res_246	635755.47	4263738.68	7.62	0.00	7.62	
ANNUAL		0.70926	ug/m^3	Res_247	635755.47	4263758.68	7.62	0.00	7.62	
ANNUAL		0.64195	ug/m^3	Res_248	635755.47	4263778.68	7.62	0.00	7.62	
ANNUAL		1.42316	ug/m^3	Res_249	635775.47	4263638.68	7.62	0.00	7.62	
ANNUAL		1.25693	ug/m^3	Res_250	635775.47	4263658.68	7.62	0.00	7.62	
ANNUAL		1.11535	ug/m^3	Res_251	635775.47	4263678.68	7.62	0.00	7.62	
ANNUAL		0.99415	ug/m^3	Res_252	635775.47	4263698.68	7.62	0.00	7.62	
ANNUAL		0.88997	ug/m^3	Res_253	635775.47	4263718.68	7.62	0.00	7.62	
ANNUAL		0.80009	ug/m^3	Res_254	635775.47	4263738.68	7.62	0.00	7.62	
ANNUAL		0.72220	ug/m^3	Res_255	635775.47	4263758.68	7.62	0.00	7.62	
ANNUAL		0.65441	ug/m^3	Res_256	635775.47	4263778.68	7.62	0.00	7.62	
ANNUAL		1.41583	ug/m^3	Res_257	635795.47	4263638.68	7.62	0.00	7.62	
ANNUAL		1.25613	ug/m^3	Res_258	635795.47	4263658.68	7.62	0.00	7.62	
ANNUAL		1.11909	ug/m^3	Res_259	635795.47	4263678.68	7.62	0.00	7.62	
ANNUAL		1.00098	ug/m^3	Res_260	635795.47	4263698.68	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		0.89875	ug/m^3	Res_261	635795.47	4263718.68	7.62	0.00	7.62	
ANNUAL		0.81000	ug/m^3	Res_262	635795.47	4263738.68	7.62	0.00	7.62	
ANNUAL		0.73264	ug/m^3	Res_263	635795.47	4263758.68	7.62	0.00	7.62	
ANNUAL		0.66499	ug/m^3	Res_264	635795.47	4263778.68	7.62	0.00	7.62	
ANNUAL		1.39870	ug/m^3	Res_265	635815.47	4263638.68	7.62	0.00	7.62	
ANNUAL		1.24678	ug/m^3	Res_266	635815.47	4263658.68	7.62	0.00	7.62	
ANNUAL		1.11556	ug/m^3	Res_267	635815.47	4263678.68	7.62	0.00	7.62	
ANNUAL		1.00169	ug/m^3	Res_268	635815.47	4263698.68	7.62	0.00	7.62	
ANNUAL		0.90250	ug/m^3	Res_269	635815.47	4263718.68	7.62	0.00	7.62	
ANNUAL		0.81576	ug/m^3	Res_270	635815.47	4263738.68	7.62	0.00	7.62	
ANNUAL		0.73973	ug/m^3	Res_271	635815.47	4263758.68	7.62	0.00	7.62	
ANNUAL		0.67290	ug/m^3	Res_272	635815.47	4263778.68	7.62	0.00	7.62	
ANNUAL		1.37170	ug/m^3	Res_273	635835.47	4263638.68	7.62	0.00	7.62	
ANNUAL		1.22857	ug/m^3	Res_274	635835.47	4263658.68	7.62	0.00	7.62	
ANNUAL		1.10426	ug/m^3	Res_275	635835.47	4263678.68	7.62	0.00	7.62	
ANNUAL		0.99569	ug/m^3	Res_276	635835.47	4263698.68	7.62	0.00	7.62	
ANNUAL		0.90046	ug/m^3	Res_277	635835.47	4263718.68	7.62	0.00	7.62	
ANNUAL		0.81668	ug/m^3	Res_278	635835.47	4263738.68	7.62	0.00	7.62	
ANNUAL		0.74277	ug/m^3	Res_279	635835.47	4263758.68	7.62	0.00	7.62	
ANNUAL		0.67744	ug/m^3	Res_280	635835.47	4263778.68	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		1.33399	ug/m^3	Res_281	635855.47	4263638.68	7.62	0.00	7.62	
ANNUAL		1.20091	ug/m^3	Res_282	635855.47	4263658.68	7.62	0.00	7.62	
ANNUAL		1.08457	ug/m^3	Res_283	635855.47	4263678.68	7.62	0.00	7.62	
ANNUAL		0.98235	ug/m^3	Res_284	635855.47	4263698.68	7.62	0.00	7.62	
ANNUAL		0.89209	ug/m^3	Res_285	635855.47	4263718.68	7.62	0.00	7.62	
ANNUAL		0.81215	ug/m^3	Res_286	635855.47	4263738.68	7.62	0.00	7.62	
ANNUAL		0.74117	ug/m^3	Res_287	635855.47	4263758.68	7.62	0.00	7.62	
ANNUAL		0.67804	ug/m^3	Res_288	635855.47	4263778.68	7.62	0.00	7.62	
ANNUAL		1.28484	ug/m^3	Res_289	635875.47	4263638.68	7.62	0.00	7.62	
ANNUAL		1.16331	ug/m^3	Res_290	635875.47	4263658.68	7.62	0.00	7.62	
ANNUAL		1.05626	ug/m^3	Res_291	635875.47	4263678.68	7.62	0.00	7.62	
ANNUAL		0.96142	ug/m^3	Res_292	635875.47	4263698.68	7.62	0.00	7.62	
ANNUAL		0.87707	ug/m^3	Res_293	635875.47	4263718.68	7.62	0.00	7.62	
ANNUAL		0.80183	ug/m^3	Res_294	635875.47	4263738.68	7.62	0.00	7.62	
ANNUAL		0.73455	ug/m^3	Res_295	635875.47	4263758.68	7.62	0.00	7.62	
ANNUAL		0.67430	ug/m^3	Res_296	635875.47	4263778.68	7.62	0.00	7.62	
ANNUAL		2.00481	ug/m^3	Res_297	635925.85	4263452.88	7.62	0.00	7.62	
ANNUAL		1.96383	ug/m^3	Res_298	635925.85	4263472.88	7.62	0.00	7.62	
ANNUAL		1.88719	ug/m^3	Res_299	635925.85	4263492.88	7.62	0.00	7.62	
ANNUAL		1.55462	ug/m^3	Res_300	635945.85	4263472.88	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		1.53213	ug/m^3	Res_301	635945.85	4263492.88	7.62	0.00	7.62	
ANNUAL		1.23839	ug/m^3	Res_302	635965.85	4263472.88	7.62	0.00	7.62	
ANNUAL		1.24226	ug/m^3	Res_303	635965.85	4263492.88	7.62	0.00	7.62	
ANNUAL		0.99665	ug/m^3	Res_304	635985.85	4263472.88	7.62	0.00	7.62	
ANNUAL		1.01211	ug/m^3	Res_305	635985.85	4263492.88	7.62	0.00	7.62	
ANNUAL		1.01675	ug/m^3	Res_306	635985.85	4263512.88	7.62	0.00	7.62	
ANNUAL		0.81145	ug/m^3	Res_307	636005.85	4263472.88	7.62	0.00	7.62	
ANNUAL		0.83081	ug/m^3	Res_308	636005.85	4263492.88	7.62	0.00	7.62	
ANNUAL		0.84347	ug/m^3	Res_309	636005.85	4263512.88	7.62	0.00	7.62	
ANNUAL		0.66875	ug/m^3	Res_310	636025.85	4263472.88	7.62	0.00	7.62	
ANNUAL		0.68810	ug/m^3	Res_311	636025.85	4263492.88	7.62	0.00	7.62	
ANNUAL		0.70365	ug/m^3	Res_312	636025.85	4263512.88	7.62	0.00	7.62	
ANNUAL		0.55812	ug/m^3	Res_313	636045.85	4263472.88	7.62	0.00	7.62	
ANNUAL		0.57561	ug/m^3	Res_314	636045.85	4263492.88	7.62	0.00	7.62	
ANNUAL		0.59124	ug/m^3	Res_315	636045.85	4263512.88	7.62	0.00	7.62	
ANNUAL		0.47163	ug/m^3	Res_316	636065.85	4263472.88	7.62	0.00	7.62	
ANNUAL		0.48651	ug/m^3	Res_317	636065.85	4263492.88	7.62	0.00	7.62	
ANNUAL		0.50092	ug/m^3	Res_318	636065.85	4263512.88	7.62	0.00	7.62	
ANNUAL		0.40330	ug/m^3	Res_319	636085.85	4263472.88	7.62	0.00	7.62	
ANNUAL		0.41556	ug/m^3	Res_320	636085.85	4263492.88	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		0.42802	ug/m^3	Res_321	636085.85	4263512.88	7.62	0.00	7.62	
ANNUAL		0.34863	ug/m^3	Res_322	636105.85	4263472.88	7.62	0.00	7.62	
ANNUAL		0.35855	ug/m^3	Res_323	636105.85	4263492.88	7.62	0.00	7.62	
ANNUAL		0.36909	ug/m^3	Res_324	636105.85	4263512.88	7.62	0.00	7.62	
ANNUAL		1.60523	ug/m^3	Res_325	635940.73	4263420.83	7.62	0.00	7.62	
ANNUAL		1.22525	ug/m^3	Res_326	635961.63	4263421.64	7.62	0.00	7.62	
ANNUAL		1.04694	ug/m^3	Res_327	635974.89	4263422.84	7.62	0.00	7.62	
ANNUAL		0.81414	ug/m^3	Res_328	635997.79	4263424.05	7.62	0.00	7.62	
ANNUAL		0.71202	ug/m^3	Res_329	636010.65	4263422.44	7.62	0.00	7.62	
ANNUAL		0.58214	ug/m^3	Res_330	636032.35	4263424.45	7.62	0.00	7.62	
ANNUAL		0.50003	ug/m^3	Res_331	636050.03	4263424.85	7.62	0.00	7.62	
ANNUAL		0.45015	ug/m^3	Res_332	636063.29	4263426.46	7.62	0.00	7.62	
ANNUAL		0.37775	ug/m^3	Res_333	636086.60	4263425.25	7.62	0.00	7.62	
ANNUAL		1.15547	ug/m^3	Res_334	635959.21	4263363.77	7.62	0.00	7.62	
ANNUAL		0.98345	ug/m^3	Res_335	635973.28	4263369.80	7.62	0.00	7.62	
ANNUAL		0.77029	ug/m^3	Res_336	635995.78	4263367.39	7.62	0.00	7.62	
ANNUAL		0.65541	ug/m^3	Res_337	636012.66	4263368.59	7.62	0.00	7.62	
ANNUAL		0.55553	ug/m^3	Res_338	636031.55	4263368.99	7.62	0.00	7.62	
ANNUAL		0.48669	ug/m^3	Res_339	636048.02	4263370.20	7.62	0.00	7.62	
ANNUAL		0.42044	ug/m^3	Res_340	636067.71	4263371.81	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		0.37827	ug/m^3	Res_341	636082.98	4263372.61	7.62	0.00	7.62	
ANNUAL		1.05965	ug/m^3	Res_342	635965.24	4263312.74	7.62	0.00	7.62	
ANNUAL		0.82687	ug/m^3	Res_343	635988.15	4263324.39	7.62	0.00	7.62	
ANNUAL		0.69300	ug/m^3	Res_344	636006.63	4263328.00	7.62	0.00	7.62	
ANNUAL		0.58639	ug/m^3	Res_345	636026.32	4263325.19	7.62	0.00	7.62	
ANNUAL		0.48340	ug/m^3	Res_346	636051.24	4263325.19	7.62	0.00	7.62	
ANNUAL		0.95484	ug/m^3	Res_347	635975.69	4263301.48	7.62	0.00	7.62	
ANNUAL		0.79808	ug/m^3	Res_348	635995.38	4263288.62	7.62	0.00	7.62	
ANNUAL		1.26494	ug/m^3	Res_349	635953.95	4263261.49	7.62	0.00	7.62	
ANNUAL		1.39804	ug/m^3	Res_350	635946.98	4263240.58	7.62	0.00	7.62	
ANNUAL		1.09237	ug/m^3	Res_351	635969.05	4263244.36	7.62	0.00	7.62	
ANNUAL		1.37496	ug/m^3	Res_352	635949.30	4263225.48	7.62	0.00	7.62	
ANNUAL		1.00761	ug/m^3	Res_353	635978.34	4263231.00	7.62	0.00	7.62	
ANNUAL		1.23481	ug/m^3	Res_354	635959.75	4263209.80	7.62	0.00	7.62	
ANNUAL		0.93519	ug/m^3	Res_355	635987.34	4263217.06	7.62	0.00	7.62	
ANNUAL		1.11992	ug/m^3	Res_356	635969.63	4263192.38	7.62	0.00	7.62	
ANNUAL		0.95490	ug/m^3	Res_357	635986.76	4263181.93	7.62	0.00	7.62	
ANNUAL		0.81673	ug/m^3	Res_358	636003.60	4263202.55	7.62	0.00	7.62	
ANNUAL		0.75221	ug/m^3	Res_359	636003.31	4263278.33	7.62	0.00	7.62	
ANNUAL		0.68861	ug/m^3	Res_360	636016.08	4263261.49	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		0.63815	ug/m^3	Res_361	636027.70	4263246.39	7.62	0.00	7.62	
ANNUAL		0.55165	ug/m^3	Res_362	636038.73	4263291.10	7.62	0.00	7.62	
ANNUAL		1.68561	ug/m^3	Res_363	635929.41	4263184.04	7.62	0.00	7.62	
ANNUAL		1.86433	ug/m^3	Res_364	635915.34	4263164.34	7.61	0.00	7.61	
ANNUAL		1.88448	ug/m^3	Res_365	635907.30	4263146.26	7.43	0.00	7.43	
ANNUAL		1.19457	ug/m^3	Res_366	635958.74	4263144.65	7.41	0.00	7.41	
ANNUAL		1.23591	ug/m^3	Res_367	635950.30	4263124.96	7.32	0.00	7.32	
ANNUAL		0.89164	ug/m^3	Res_368	635994.51	4263163.14	7.60	0.00	7.60	
ANNUAL		1.62141	ug/m^3	Res_369	635902.88	4263104.06	7.31	0.00	7.31	
ANNUAL		1.83416	ug/m^3	Res_370	635901.68	4263129.38	7.32	0.00	7.32	
ANNUAL		1.89298	ug/m^3	Res_371	635870.73	4263101.65	7.28	0.00	7.28	
ANNUAL		2.22066	ug/m^3	Res_372	635866.31	4263123.75	7.32	0.00	7.32	
ANNUAL		2.47989	ug/m^3	Res_373	635867.11	4263141.04	7.38	0.00	7.38	
ANNUAL		2.66610	ug/m^3	Res_374	635871.13	4263155.91	7.53	0.00	7.53	
ANNUAL		3.23365	ug/m^3	Res_375	635820.09	4263147.46	7.44	0.00	7.44	
ANNUAL		2.71736	ug/m^3	Res_376	635820.49	4263128.17	7.32	0.00	7.32	
ANNUAL		2.32150	ug/m^3	Res_377	635825.12	4263110.19	7.32	0.00	7.32	
ANNUAL		2.14972	ug/m^3	Res_378	635802.25	4263096.76	7.23	0.00	7.23	
ANNUAL		2.51083	ug/m^3	Res_379	635793.65	4263114.38	7.32	0.00	7.32	
ANNUAL		2.78567	ug/m^3	Res_380	635778.75	4263124.66	7.32	0.00	7.32	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		3.24049	ug/m^3	Res_381	635767.21	4263139.14	7.36	0.00	7.36	
ANNUAL		3.82569	ug/m^3	Res_382	635754.83	4263153.41	7.50	0.00	7.50	
ANNUAL		2.41583	ug/m^3	Res_383	635706.93	4263123.14	7.32	0.00	7.32	
ANNUAL		2.21945	ug/m^3	Res_384	635721.62	4263110.16	7.32	0.00	7.32	
ANNUAL		1.62983	ug/m^3	Res_385	635701.12	4263092.39	7.19	0.00	7.19	
ANNUAL		1.64820	ug/m^3	Res_386	635686.43	4263103.33	7.30	0.00	7.30	
ANNUAL		1.75018	ug/m^3	Res_387	635675.50	4263116.99	7.32	0.00	7.32	
ANNUAL		1.79429	ug/m^3	Res_388	635661.49	4263131.00	7.31	0.00	7.31	
ANNUAL		1.78870	ug/m^3	Res_389	635648.17	4263143.30	7.36	0.00	7.36	
ANNUAL		0.63388	ug/m^3	Res_390	635458.51	4263353.51	6.49	0.00	6.49	
ANNUAL		0.57024	ug/m^3	Res_391	635466.85	4263312.35	6.53	0.00	6.53	
ANNUAL		0.54227	ug/m^3	Res_392	635470.75	4263292.32	6.57	0.00	6.57	
ANNUAL		0.50281	ug/m^3	Res_393	635472.42	4263271.74	6.59	0.00	6.59	
ANNUAL		0.47310	ug/m^3	Res_394	635475.75	4263249.48	6.62	0.00	6.62	
ANNUAL		0.63698	ug/m^3	Res_395	635502.46	4263248.37	6.75	0.00	6.75	
ANNUAL		0.58898	ug/m^3	Res_396	635503.01	4263232.24	6.85	0.00	6.85	
ANNUAL		0.54340	ug/m^3	Res_397	635504.13	4263213.88	6.91	0.00	6.91	
ANNUAL		0.48638	ug/m^3	Res_398	635502.46	4263194.41	6.89	0.00	6.89	
ANNUAL		0.74466	ug/m^3	Res_399	635554.75	4263171.04	7.01	0.00	7.01	
ANNUAL		0.84828	ug/m^3	Res_400	635572.55	4263160.47	7.01	0.00	7.01	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		0.92696	ug/m^3	Res_401	635588.13	4263148.79	7.08	0.00	7.08	
ANNUAL		0.94988	ug/m^3	Res_402	635603.15	4263131.55	7.01	0.00	7.01	
ANNUAL		1.01359	ug/m^3	Res_403	635637.64	4263098.72	7.04	0.00	7.04	
ANNUAL		1.05285	ug/m^3	Res_404	635662.67	4263078.14	7.04	0.00	7.04	
ANNUAL		0.31351	ug/m^3	CC_001	635332.31	4263659.61	7.47	0.00	7.47	
ANNUAL		0.30980	ug/m^3	CC_002	635332.31	4263679.61	7.62	0.00	7.62	
ANNUAL		0.34804	ug/m^3	CC_003	635352.31	4263659.61	7.37	0.00	7.37	
ANNUAL		0.34233	ug/m^3	CC_004	635352.31	4263679.61	7.46	0.00	7.46	
ANNUAL		0.38687	ug/m^3	CC_005	635372.31	4263659.61	7.32	0.00	7.32	
ANNUAL		0.37835	ug/m^3	CC_006	635372.31	4263679.61	7.35	0.00	7.35	
ANNUAL		0.80153	ug/m^3	SAA_001	635905.45	4263730.56	7.62	0.00	7.62	
ANNUAL		0.73864	ug/m^3	SAA_002	635905.45	4263750.56	7.62	0.00	7.62	
ANNUAL		0.68165	ug/m^3	SAA_003	635905.45	4263770.56	7.62	0.00	7.62	
ANNUAL		0.62997	ug/m^3	SAA_004	635905.45	4263790.56	7.62	0.00	7.62	
ANNUAL		0.58305	ug/m^3	SAA_005	635905.45	4263810.56	7.62	0.00	7.62	
ANNUAL		0.77406	ug/m^3	SAA_006	635925.45	4263730.56	7.62	0.00	7.62	
ANNUAL		0.71698	ug/m^3	SAA_007	635925.45	4263750.56	7.62	0.00	7.62	
ANNUAL		0.66475	ug/m^3	SAA_008	635925.45	4263770.56	7.62	0.00	7.62	
ANNUAL		0.61694	ug/m^3	SAA_009	635925.45	4263790.56	7.62	0.00	7.62	
ANNUAL		0.57320	ug/m^3	SAA_010	635925.45	4263810.56	7.62	0.00	7.62	

Sensitive Receptor Summary

Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		0.74118	ug/m^3	SAA_011	635945.45	4263730.56	7.62	0.00	7.62	
ANNUAL		0.69040	ug/m^3	SAA_012	635945.45	4263750.56	7.62	0.00	7.62	
ANNUAL		0.64337	ug/m^3	SAA_013	635945.45	4263770.56	7.62	0.00	7.62	
ANNUAL		0.59986	ug/m^3	SAA_014	635945.45	4263790.56	7.62	0.00	7.62	
ANNUAL		0.55968	ug/m^3	SAA_015	635945.45	4263810.56	7.62	0.00	7.62	
ANNUAL		0.70373	ug/m^3	SAA_016	635965.45	4263730.56	7.62	0.00	7.62	
ANNUAL		0.65951	ug/m^3	SAA_017	635965.45	4263750.56	7.62	0.00	7.62	
ANNUAL		0.61799	ug/m^3	SAA_018	635965.45	4263770.56	7.62	0.00	7.62	
ANNUAL		0.57911	ug/m^3	SAA_019	635965.45	4263790.56	7.62	0.00	7.62	
ANNUAL		0.54278	ug/m^3	SAA_020	635965.45	4263810.56	7.62	0.00	7.62	
ANNUAL		0.66277	ug/m^3	SAA_021	635985.45	4263730.56	7.62	0.00	7.62	
ANNUAL		0.62516	ug/m^3	SAA_022	635985.45	4263750.56	7.62	0.00	7.62	
ANNUAL		0.58924	ug/m^3	SAA_023	635985.45	4263770.56	7.62	0.00	7.62	
ANNUAL		0.55514	ug/m^3	SAA_024	635985.45	4263790.56	7.62	0.00	7.62	
ANNUAL		0.52287	ug/m^3	SAA_025	635985.45	4263810.56	7.62	0.00	7.62	
ANNUAL		0.61944	ug/m^3	SAA_026	636005.45	4263730.56	7.62	0.00	7.62	
ANNUAL		0.58825	ug/m^3	SAA_027	636005.45	4263750.56	7.62	0.00	7.62	
ANNUAL		0.55788	ug/m^3	SAA_028	636005.45	4263770.56	7.62	0.00	7.62	
ANNUAL		0.52856	ug/m^3	SAA_029	636005.45	4263790.56	7.62	0.00	7.62	
ANNUAL		0.50044	ug/m^3	SAA_030	636005.45	4263810.56	7.62	0.00	7.62	

Sensitive Receptor Summary

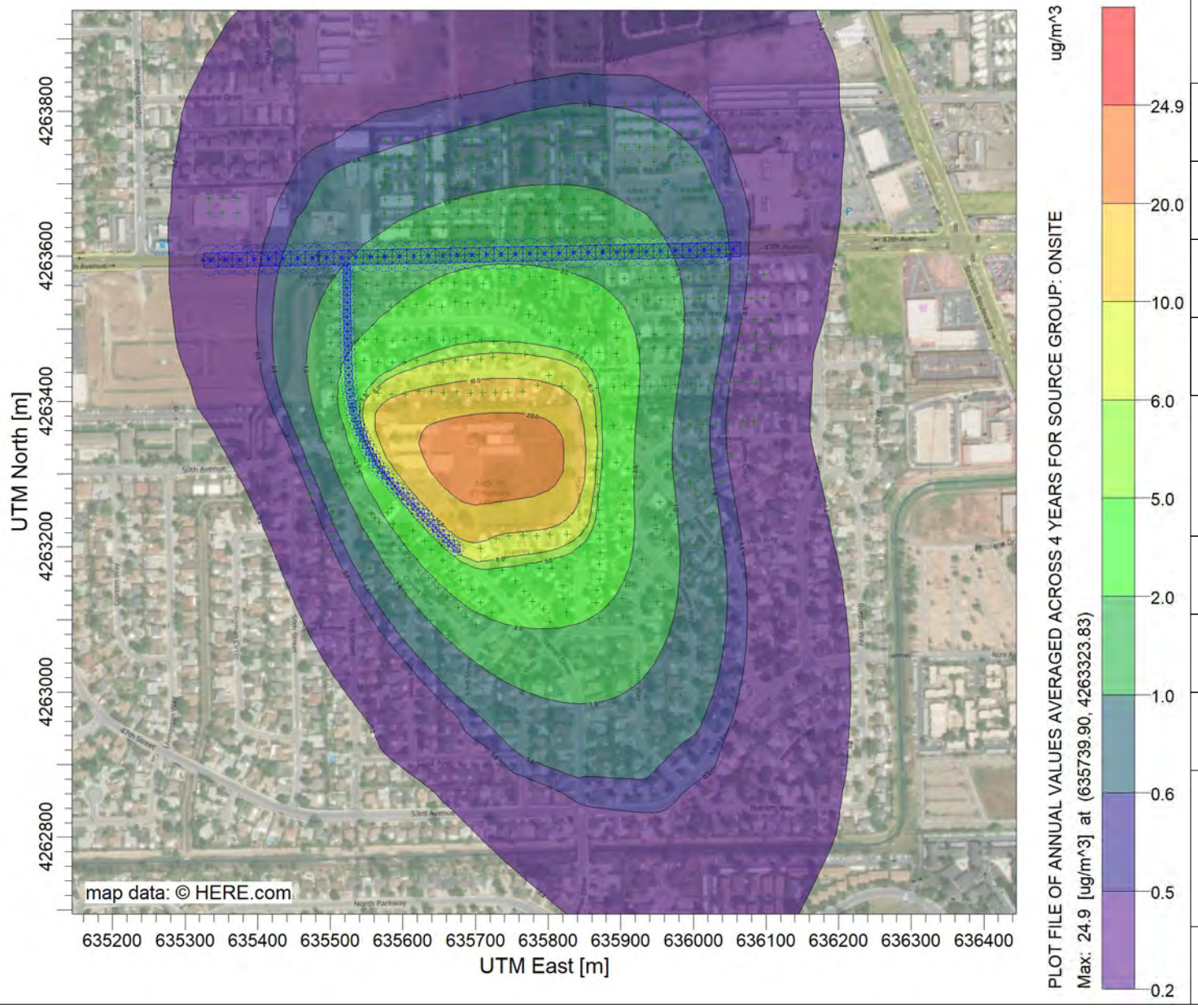
Nicholas Elementary School Reconstruction Project
Construction HRA

PM2.5 - Concentration - Source Group: ONSITE

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
ANNUAL		2.86899	ug/m^3	WKR_001	635584.68	4263252.74	7.32	0.00	7.32	
ANNUAL		2.30402	ug/m^3	WKR_002	635578.92	4263247.15	7.32	0.00	7.32	
ANNUAL		1.44977	ug/m^3	WKR_003	635556.74	4263245.97	7.14	0.00	7.14	
ANNUAL		1.49188	ug/m^3	WKR_004	635561.82	4263240.04	7.19	0.00	7.19	
ANNUAL		1.55400	ug/m^3	WKR_005	635567.58	4263234.28	7.25	0.00	7.25	

PROJECT TITLE:

Nicholas Elementary School Reconstruction Project
Construction HRA



COMMENTS:

SOURCES:
3

RECEPTORS:
2059

OUTPUT TYPE:
Concentration

MAX:
24.9 ug/m^3

COMPANY NAME:

MODELER:

DATE:
3/29/2023

SCALE: 1:8,477
0 0.2 km

PROJECT NO.:

AERMOD View - Lakes Environmental Software

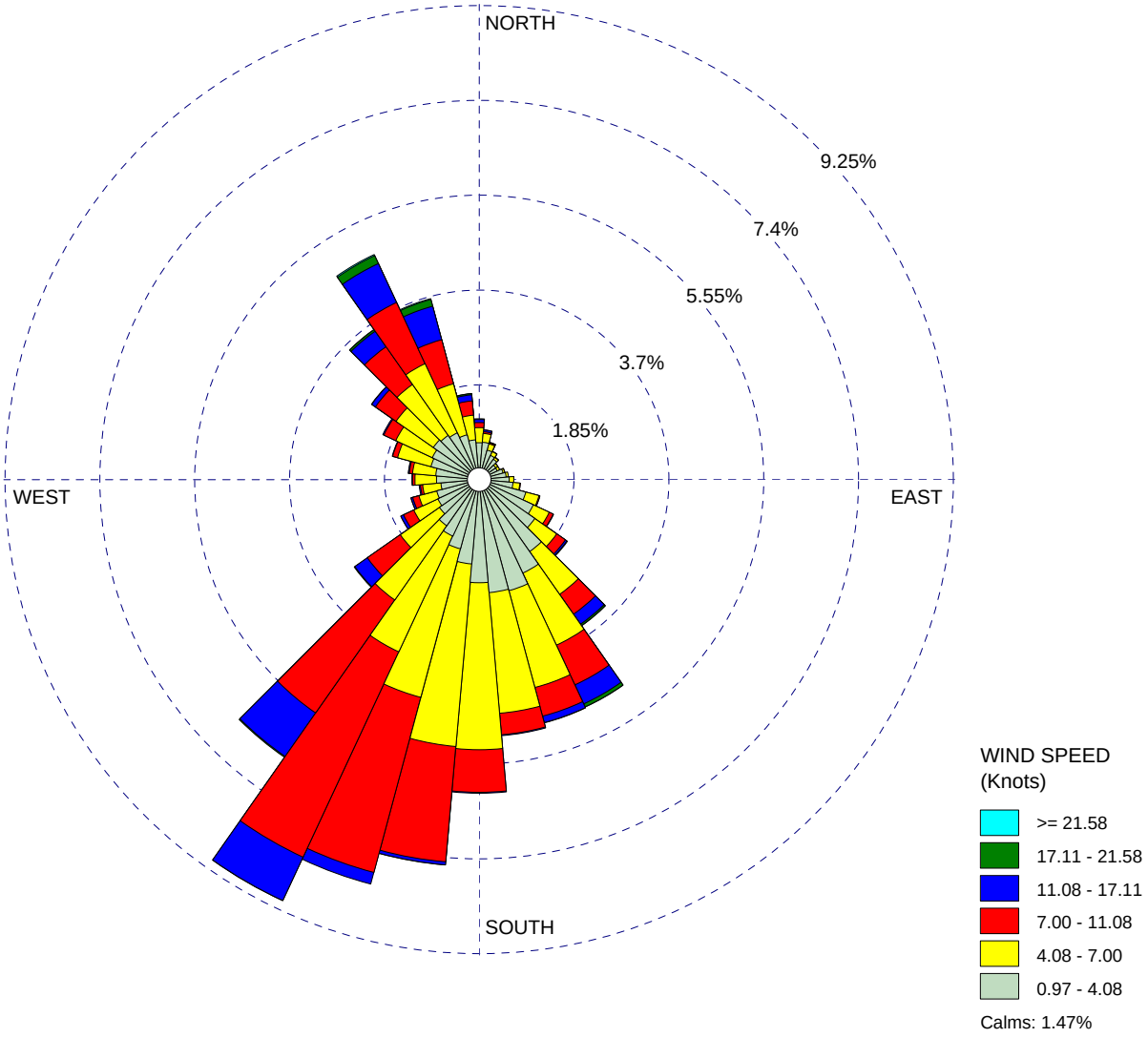
C:\Users\LPark\Documents\SCUS-04\SCUS-04.isc

WIND ROSE PLOT:

Station #23232 - SACRAMENTO/EXECUTIVE ARPT, CA

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD: **Start Date: 1/1/2014 - 00:00** **End Date: 12/25/2018 - 23:59**	COMPANY NAME:	
		MODELER:	
	CALM WINDS: **1.47%**	TOTAL COUNT: **43528 hrs.**	
	AVG. WIND SPEED: **5.55 Knots**	DATE: **3/29/2023**	PROJECT NO.:

WRPLOT View - Lakes Environmental Software

Attachment C. Construction Risk Calculations

Table C1
Residential MER Concentrations for Risk Calculations

Contaminant	Source		Model Output [1] ($\mu g/m^3$)	Emission Rates [2] (g/s)	MEIR Conc. ($\mu g/m^3$)	Total MEIR Conc. Annual Average ($\mu g/m^3$)	Model Output [1] ($\mu g/m^3$)	Emission Rates [2] (g/s)	MEIR Conc. ($\mu g/m^3$)	Total MEIR Conc. Annual Average ($\mu g/m^3$)
(a)	(b)		(c)	(d)	(e)	(f)	(c)	(g)	(h)	(i)
Residential Receptors							**With MM AQ-1, Tier 4 Interim > 50 hp**			
DPM		On-Site Emissions	13.78	8.95E-03	1.23E-01	1.23E-01	13.78	1.83E-03	2.51E-02	2.53E-02
		Truck Route	3.39	2.66E-06	9.02E-06		3.39	2.66E-06	9.02E-06	

Total DPM concentrations used for Cancer Risk and Chronic Hazard calculations

[1] Model Output at the MEIR based on unit emission rates for sources (1 g/s).

[2] Emission Rates from Emission Rate Calculations (Attachment A - Construction Emissions).

Table C2
Residential MER Health Risk Calculations

Source		MEIR Conc. ($\mu g/m^3$) (b)	Weight Fraction (c)	Contaminant (d)	URF $(\mu g/m^3)^{-1}$ (e)	CPF $(mg/kg/day)^{-1}$ (f)	Dose (by age bin) 3rd Trimester (mg/kg-day) (g)	Dose (by age bin) 0 < 2 years (mg/kg-day) (h)	Dose (by age bin) 2 < 9 years (mg/kg-day) (i)	Carcinogenic Risks (by age bin) 3rd Trimester per million (j)	Carcinogenic Risks (by age bin) 0 < 2 years per million (k)	Carcinogenic Risks (by age bin) 2 < 9 years per million (l)	**Total Cancer** per million (m)	**Chronic Hazards** [3] REL ($\mu g/m^3$) (n)	**Chronic Hazards** [3] RESP (o)
Residential Receptors															
	On & Off-Site	1.23E-01	1.0E+00	DPM	3.0E-04	1.1E+00	4.27E-05	1.29E-04		1.36E+00	2.67E+01		28.1	5.0E+00	2.47E-02
												Total	**28.1**		**0.025**
With MM AQ-1, Tier 4 Interim > 50 hp															
	On & Off-Site	2.53E-02	1.0E+00	DPM	3.0E-04	1.1E+00	8.75E-06	2.63E-05		2.79E-01	5.48E+00		5.8	5.0E+00	5.06E-03
												Total	**5.8**		**0.005**

		OEHHA age bin	3rd Trimester	0 < 2 years	2 < 9 years
		exposure year(s)	2023	2023-2025	-
Dose Exposure Factors:		exposure frequency (days/year)	350	350	350
		inhalation rate (L/kg-day) [1]	361	1090	861
		inhalation absorption factor	1	1	1
		conversion factor (mg/µg; m^3/L)	1.0E-06	1.0E-06	1.0E-06
Risk Calculation Factors:		age sensitivity factor	10	10	3
		averaging time (years)	70	70	70
		per million	1.0E+06	1.0E+06	1.0E+06
		fraction of time at home	0.85	0.85	0.72

exposure durations per age bin		exposure durations (year)		
Construction Year	Const Duration [2]	3rd Trimester	0 < 2 years	2 < 9 years
2023	0.42	0.25	0.17	
2024	1.00		1.00	
2025	0.46		0.46	
2026				
2027				
2028				
2029				
2030				
Total	1.88	0.25	1.63	0.00

[1] Inhalation rate taken as the 95th percentile breathing rates (OEHHA, 2015).

[2] Construction durations determined for each year to adjust receptor exposures to the exposure durations for each construction year (see App A - Construction Emissions).

[3] Chronic Hazards for DPM using the chronic reference exposure level (REL) for the Respiratory Toxicological Endpoint.

Table C3
High School MER Concentrations for Risk Calculations

Contaminant	Source		Model Output [1] ($\mu g/m^3$)	Emission Rates [2] (g/s)	Maximum Exposed School Receptor Conc. ($\mu g/m^3$)	Total Maximum Exposed School Receptor Conc. Annual Average ($\mu g/m^3$)
(a)	(b)		(c)	(d)	(e)	(f)
Student Receptors (Sacramento Accelerated Academy; High School) - Unmitigated						
DPM		On-Site Emissions	0.80	6.48E-03	5.19E-03	5.34E-03
		Truck Route	3.61	4.17E-05	1.51E-04	

[1] Model Output at the Maximum Exposed School Receptor based on unit emission rates for sources (1 g/s).

[2] Emission Rates from Emission Rate Calculations (Attachment A - Construction Emissions).

Table C4
High School Health Risk Calculations

Source	MER	Weight	Contaminant			Dose (by age bin)	Exposure Duration[2]	Carcinogenic Risks	**Chronic Hazards [3]**	
	Conc.	Fraction		URF	CPF	High School (ages 14-18)		High School (ages 14-18)	REL	RESP
	($\mu g/m^3$)			$(\mu g/m^3)^{-1}$	$(mg/kg/day)^{-1}$	(mg/kg-day)	(yr)	per million	($\mu g/m^3$)	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Student Receptors (Sacramento Accelerated Academy; High School) - Unmitigated										
On & Off-Site Emissions	5.34E-03	1.0E+00	DPM	3.0E-04	1.1E+00	1.96E-06	1.88	0.17	5.0E+00	1.07E-03
							Total	**0.17**		**0.001**

		High School (14-18 years of ag
	OEHHA age bin	2 < 16 years
	exposure year(s)	2023-2025
Dose Exposure Factors:	exposure frequency (days/year)	180
	8-hour inhalation rate (L/kg-day) [1]	745
	inhalation absorption factor	1
	conversion factor (mg/µg; m^3/L)	1.0E-06
Risk Calculation Factors:	age sensitivity factor	3
	averaging time (years)	70
	per million	1.0E+06

[1] Inhalation rate taken as the 8-hour 95th percentile breathing rates, Moderate Activity (OEHHA, 2015).

[2] Construction durations determined for each year to adjust receptor exposures to the exposure durations for each construction year (see App A - Construction Emissions).

[3] Chronic Hazards for DPM using the chronic reference exposure level (REL) for the Respiratory Toxicological Endpoint.

Table C5
Preschool MER Concentrations for Risk Calculations

Contaminant	Source		Model Output [1] ($\mu g/m^3$)	Emission Rates [2] (g/s)	Maximum Exposed School Receptor Conc. ($\mu g/m^3$)	Total Maximum Exposed School Receptor Conc. Annual Average ($\mu g/m^3$)
(a)	(b)		(c)	(d)	(e)	(f)
Student Receptors (Calvary Christian; Preschool) - Unmitigated						
DPM		On-Site Emissions	0.39	6.48E-03	2.51E-03	2.74E-03
		Truck Route	5.58	4.17E-05	2.33E-04	

[1] Model Output at the Maximum Exposed School Receptor based on unit emission rates for sources (1 g/s).

[2] Emission Rates from Emission Rate Calculations (Attachment A - Construction Emissions).

Table C6
Preschool Health Risk Calculations

Source	MER	Weight	Contaminant			Dose (by age bin)	Exposure Duration[2]	Carcinogenic Risks	**Chronic Hazards [3]**	
	Conc.	Fraction		URF	CPF	Preschool (ages 3-5)		Preschool (ages 3-5)	REL	RESP
	($\mu g/m^3$)			$(\mu g/m^3)^{-1}$	$(mg/kg/day)^{-1}$	(mg/kg-day)	(yr)	per million	($\mu g/m^3$)	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Student Receptors (Calvary Christian; Preschool) - Unmitigated										
On & Off-Site Emissions	5.34E-03	1.0E+00	DPM	3.0E-04	1.1E+00	2.27E-06	1.88	0.19	5.0E+00	1.07E-03
								0.19		**0.001**

	OEHHA age bin	Preschool (3-5 years of age)
	exposure year(s)	2 < 9 years 2023-2025
Dose Exposure Factors:	exposure frequency (days/year)	180
	8-hour inhalation rate (L/kg-day) [1]	861
	inhalation absorption factor	1
	conversion factor (mg/µg; m^3/L)	1.0E-06
Risk Calculation Factors:	age sensitivity factor	3
	averaging time (years)	70
	per million	1.0E+06

[1] Inhalation rate taken as the 8-hour 95th percentile breathing rates, Moderate Activity (OEHHA, 2015).

[2] Construction durations determined for each year to adjust receptor exposures to the exposure durations for each construction year (see App A - Construction Emissions).

[3] Chronic Hazards for DPM using the chronic reference exposure level (REL) for the Respiratory Toxicological Endpoint.

Table C7
Worker MER Concentrations for Risk Calculations

Contaminant	Source		Model Output [1] ($\mu g/m^3$)	Emission Rates [2] (g/s)	MEIR Conc. ($\mu g/m^3$)	Total MEIR Conc. Annual Average ($\mu g/m^3$)
(a)	(b)		(c)	(d)	(e)	(f)
Worker Receptors - Unmitigated						
DPM		On-Site Emissions	2.87	8.95E-03	2.57E-02	2.57E-02
		Truck Route	11.24	2.66E-06	2.99E-05	

[1] Model Output at the MEIR based on unit emission rates for sources (1 g/s).

[2] Emission Rates from Emission Rate Calculations (Attachment A - Construction Emissions).

Table C8
Worker MER Health Risk Calculations

Source	MEIR Conc. ($\mu g/m^3$)	Weight Fraction	Contaminant	URF $(\mu g/m^3)^{-1}$	CPF $(mg/kg/day)^{-1}$	Dose (by age bin)				Carcinogenic Risks (by age bin)				**Total Cancer**	**Chronic Hazards [3]**	
						3rd Trimester	0 < 2 years	2 < 16 years	16 < 30 years	3rd Trimester	0 < 2 years	2 < 9 years	16 < 30 years		REL $(\mu g/m^3)$	RESP
(a)	(b)	(c)	(d)	(e)	(f)	(mg/kg-day) (g)	(mg/kg-day) (h)	(mg/kg-day) (i)	(mg/kg-day) (j)	per million (k)	per million (l)	per million (m)	per million (n)	per million (o)	(p)	(q)
Worker Receptors - Unmitigated																
On & Off-Site	2.57E-02	1.0E+00	DPM	3.0E-04	1.1E+00				6.14E-06				1.73E-01	0.2	5.0E+00	5.14E-03
												Total		**0.2**		**0.005**

		OEHHA age bin	3rd Trimester	0 < 2 years	2 < 16 years	16 < 30 years
		exposure year(s)	-	-	-	2023-2025
Dose Exposure Factors:		exposure frequency (days/year)	-	-	-	260
		inhalation rate (L/kg-day) [1]	-	-	-	335
		inhalation absorption factor	-	-	-	1
		conversion factor (mg/µg; m^3/L)	-	-	-	1.0E-06
Risk Calculation Factors:		age sensitivity factor	-	-	-	1
		averaging time (years)	-	-	-	70
		per million	-	-	-	1.0E+06
		fraction of time at home	-	-	-	-

exposure durations per age bin		exposure durations (year)			
Construction Year	Const Duration [2]	3rd Trimester	0 < 2 years	2 < 16 years	16 < 30 years
2023	0.42				0.42
2024	1.00				1.00
2025	0.46				0.46
2026					
2027					
2028					
2029					
2030					
Total	1.88	0.00	0.00	0.00	1.88

[1] Inhalation rate taken as the 95th percentile breathing rates (OEHHA, 2015).

[2] Construction durations determined for each year to adjust receptor exposures to the exposure durations for each construction year (see App A - Construction Emissions).

[3] Chronic Hazards for DPM using the chronic reference exposure level (REL) for the Respiratory Toxicological Endpoint.