APPENDIX B

Community Risk Assessment

PARKSIDE TRAILS PROJECT COMMUNITY RISK ASSESSMENT CUPERTINO, CALIFORNIA

May 1, 2014

♦ ♦ ♦

Prepared for:

Demetri Loukas
Project Manager
David J. Powers & Associates, Inc.
1871 The Alameda, Suite 200
San Jose, CA 95126

Prepared by:

James A. Reyff
and
William Popenuck

ILLINGWORTH & RODKIN, INC.
Acoustics · Air Quality
1 Willowbrook Court, Suite 120
Petaluma, CA 94954
(707) 794-0400

Job No.: 13-233

Introduction

This report presents the results of the community risk assessment completed for the Parkside Trails Project in Cupertino, California. The 42.4-acre project site is located off of Stevens Canyon Road, immediately south of the existing residences on Ricardo Road. The project proposes to subdivide the 42.4-acre site into three parcels, the Residential (8.5 acres), Corridor (4.0 acres), and Park (29.8 acres) parcels, change the General Plan land use designation and zoning on each of these parcels, and construct 18 single-family dwelling units on the Residential parcel. No other development is proposed by the project. The General Plan amendments and rezonings proposed on the Corridor and Park parcels would restrict the use of these parcels to open space. The proposed project also includes several off-site components, including land dedication, trail easements, and a land trade.

The Bay Area Air Quality Management District (BAAQMD) published the *California Environmental Quality Act (CEQA) Air Quality Guidelines* which were used to evaluate air quality impacts associated with the proposed project.[1] These guidelines include significance thresholds and methods to analyze air quality impacts associated with land use projects.

The project would result in emissions of toxic air contaminants (TACs) during construction that could affect nearby sensitive receptors. In addition, the project would place new sensitive receptors near Stevens Canyon Road, which is used by large trucks that access Stevens Creek Quarry. These are considered existing sources of TACs. Two impacts with respect to health risk were evaluated: (1) impacts to existing sensitive receptors from project construction activities, and (2) impacts to new sensitive receptors that will live in close proximity of Stevens Canyon Road.

Discussion of TACs

TACs are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer or serious illness) and include, but are not limited to, criteria air pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a highway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state, and federal level. The identification, regulation, and monitoring of TACs is relatively new compared to that for criteria air pollutants that have established ambient air quality standards. TACs are regulated or evaluated on the basis of risk to human health rather than comparison to an ambient air quality standard or emission-based threshold.

Diesel Particulate Matter

Diesel exhaust, in the form of diesel particulate matter (DPM), is the predominant TAC in urban air with the potential to cause cancer. It is estimated to represent about two-thirds of the cancer risk from TACs (based on the statewide average). According to the California Air

[1] BAAQMD, 2011. *BAAQMD CEQA Air Quality Guidelines*. May.

Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by CARB, and are listed as carcinogens either under the State's Proposition 65 or under the federal Hazardous Air Pollutants programs. California has adopted a comprehensive diesel risk reduction program. The U.S. Environmental Protection Agency (EPA) and CARB have adopted low-sulfur diesel fuel standards in 2006 that reduces diesel particulate matter substantially. CARB recently adopted new regulations requiring the retrofit and/or replacement of construction equipment, on-highway diesel trucks, and diesel buses in order to lower fine particulate matter ($PM_{2.5}$) emissions and reduce statewide cancer risk from diesel exhaust.

Fine Particulate Matter ($PM_{2.5}$)

Particulate matter in excess of state and federal standards represents another challenge for the Bay Area. Elevated concentrations of $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 14, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, and parks. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children. The closest sensitive receptors to the project site are existing single-family residences to the north and east of the site. The project would also include single-family residences.

TAC Thresholds of Significance

The BAAQMD identified significance thresholds for exposure to TACs and $PM_{2.5}$ as part of its May 2011 *CEQA Air Quality Guidelines.*[2] This report uses the thresholds and methodologies from BAAQMD's May 2011 *CEQA Air Quality Guidelines* to determine whether there would be any project health risk impacts.

Single Source Impacts

If emissions of TACs or $PM_{2.5}$ exceed any of the thresholds of significance listed below, the proposed project would result in a significant impact and mitigation would be required.

[2] BAAQMD, 2011. *BAAQMD CEQA Air Quality Guidelines*. May.

- An excess cancer risk level of more than 10 in 1 million, or a non-cancer (chronic or acute) hazard index greater than 1.0.
- An incremental increase of more than 0.3 micrograms per cubic meter ($\mu g/m^3$) annual average $PM_{2.5}$.

Cumulative Source Impacts

A project would have a cumulatively considerable impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000 foot radius of the fence line of a source or from the location of a receptor, plus the contribution from the project, exceeds the following thresholds.

- An excess cancer risk levels of more than 100 in one million or a chronic non-cancer hazard index (from all local sources) greater than 10.0.
- 0.8 $\mu g/m^3$ annual average $PM_{2.5}$.

TAC Sources Considered

Community health risk assessments typically look at all substantial sources of TACs located within 1,000 feet of project sites. These sources include freeways or State highways, busy surface streets, and stationary sources identified by BAAQMD. A review of the project area indicates that there are no listed sources of TACs, highways, or major roadways affecting the site. However, the project site is located adjacent to Steven Canyon Road, which serves Stevens Canyon Quarry. Truck traffic generated by the quarry is assumed to use this roadway and travel by the project site. A health risk assessment of this truck traffic upon the project site was performed. In addition, the construction TAC emissions impact from the project upon existing sensitive receptors was also evaluated.

Steven Creek Roadway Community Risk Impacts

The new project residences would be located near Stevens Canyon Road which is used by heavy-duty diesel haul trucks associated with the Stevens Creek Quarry approximately 0.8 miles southwest of the project site. These trucks would emit DPM and $PM_{2.5}$ as they travel by the new project site. Potential health impacts to the new residents of the project from the DPM truck emissions were evaluated.

Heavy Duty Diesel Truck Emissions

It was assumed that the haul truck traffic would consist of 645 daily round trips, 5 days per week, well into the future (i.e., 70 years). *Fehr & Peers Traffic Consultants* predicted the volume of truck traffic to be 15% of the traffic surveyed for the project in the area of the project driveway.[3] As part of this study and to support the field review findings, *Fehr & Peers* conducted a Thursday through Saturday (June 8-10), 72-hour machine speed count survey approximately 25 feet north of the proposed driveway. The measured average daily

[3] Fehr & Peers. 2012. Parkside Trails in Cupertino, California – Focused Transportation Impact Analysis, June 13, 2012

traffic (ADT) volume at this location was 4,300 vehicles, consistent with the 4,780 ADT published online by the City of Cupertino. This would equate to 645 daily truck trips.

DPM and $PM_{2.5}$ emissions from heavy-duty diesel trucks traveling on Stevens Canyon Road were calculated using emission factors from CARB's EMFAC2011 on-road emissions model, assuming a default Santa Clara County traffic mix and a speed of 25 mph. The year 2017 was assumed to be the first full year of residency at the site and was used as the year of analysis for generating emission rates. DPM is considered to be the $PM_{2.5}$ running exhaust, whereas total $PM_{2.5}$ includes exhaust, brake wear, and tire wear. Although, DPM emission rates from heavy-duty diesel trucks are anticipated to decrease in the future due to improvements in exhaust systems and turnover of the fleet from older, more polluting vehicles, to newer cleaner vehicles, it was assumed that the emissions calculated for 2017 would occur in all future years. Emission rates for truck traffic are included in *Attachment 1*.

Dispersion Modeling

The U.S. EPA ISCST3 dispersion model was used to predict concentrations of DPM and $PM_{2.5}$ at the locations of the new project residences. Modeling was conducted using a one-year data set (2006) of hourly meteorological data from the Lehigh Quarry prepared and processed by BAAQMD. Truck emissions were modeled as two line sources (a series of volume sources along a line) with the line sources representing northbound and southbound travel routes within about 1,000 feet of the project site.

DPM and $PM_{2.5}$ concentrations were predicted at a receptor height of 1.5 meters (4.9 feet) for each new residential location of the project. Local terrain elevations in the project area were included in the modeling using U.S. Geological Survey (USGS) 10 meter (32.8 feet) digital terrain data for the project area. Modeled truck routes, receptors, and location of maximum impacts are shown on *Figure 1*.

Cancer Risk, $PM_{2.5}$, and Hazards

Using the maximum-modeled annual average DPM concentration, the maximum individual cancer risk at the project site was computed using the most recent methods recommended by BAAQMD.[4] The factors used to compute cancer risk are highly dependent on modeled concentrations, exposure period or duration, and the type of receptor. The exposure level is determined by the modeled concentration; however, it has to be averaged over a representative exposure period. The averaging period is dependent on many factors, but mostly the type of sensitive receptor that would reside at a site. This assessment conservatively assumed long-term residential exposures of nearly continuous exposures of 70 years for residential land uses, as recommended by the BAAQMD. It should be noted that the cancer risk calculations for 70-year residential exposures reflect use of BAAQMD's most recent cancer risk calculation method, adopted in January 2010. This includes applying the BAAQMD recommended age sensitivity factor of 1.7 to the DPM concentrations. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs.

[4] BAAQMD, *Air Toxics NSR Program Health Risk Screening Analysis (HSRA) Guidelines*, January 2010.

The maximum-modeled DPM concentration occurred at a new residence close to Stevens Canyon Road. The location of this receptor is identified on *Figure 1*. The maximum DPM concentration was 0.0084 $\mu g/m^3$, resulting in increased cancer risks of 4.5 in one million. This predicted excess cancer risks is below the BAAQMD significance threshold of 10 in one million and be considered a less than significant impact. For non-cancer health effects the maximum hazard index (HI) at this location was 0.002, which is much lower than the BAAQMD significance criterion of a HI greater than 1.0

The modeled-maximum annual $PM_{2.5}$ concentration was 0.013 $\mu g/m^3$ occurring at the same residence having the maximum cancer risk. This $PM_{2.5}$ concentration is well below the BAAQMD threshold of 0.3 $\mu g/m^3$ used to judge the significance of impacts for $PM_{2.5}$.

The project would have *a less-than-significant* impact with respect to community risk caused by truck traffic.

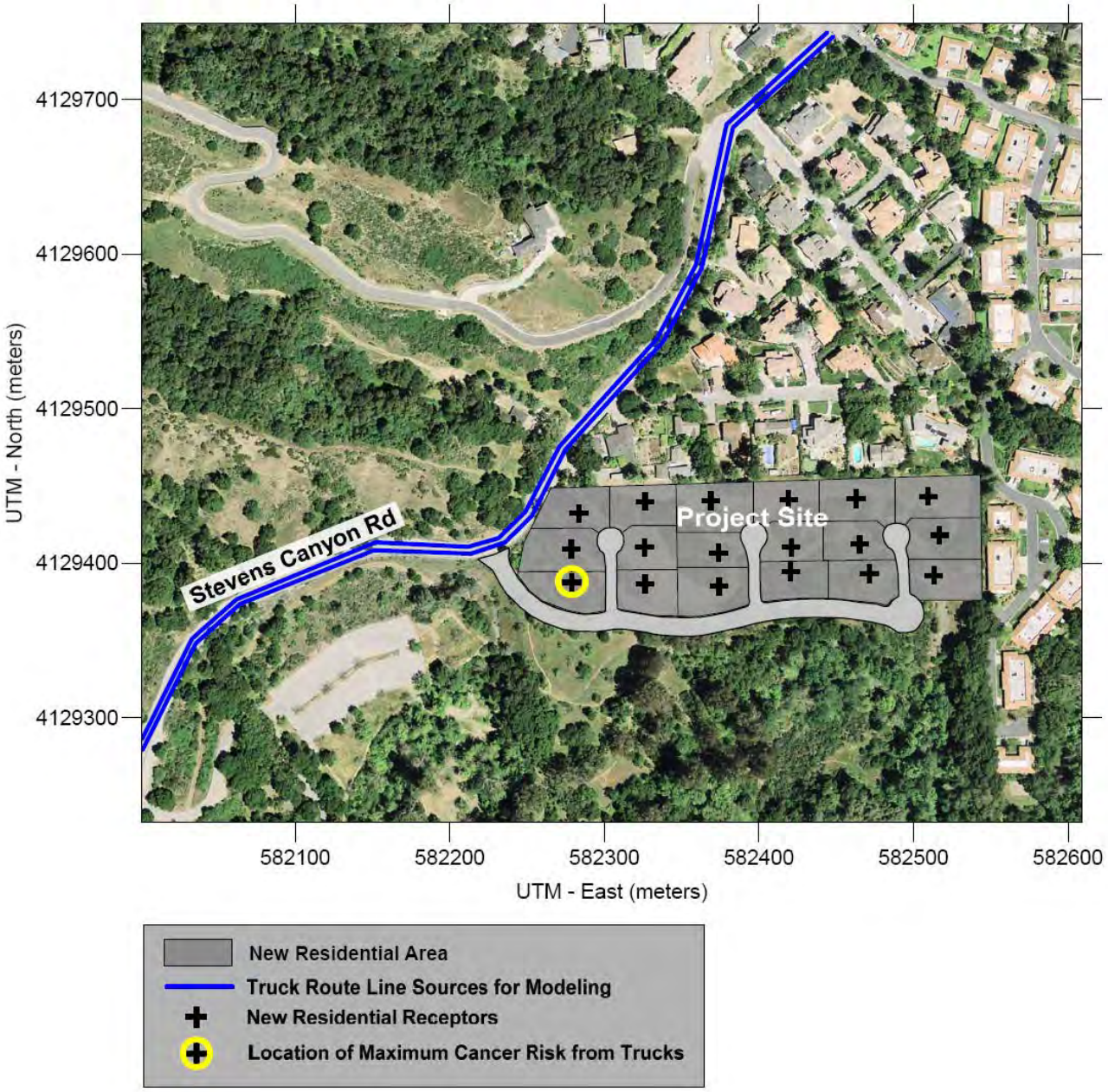
Attachment 1 includes the emission calculations, modeling information, and cancer risk calculations.

Stormwater Pump Station/Lift Station

The stormwater wet well is planned to be an 8-foot diameter pre-cast concrete manhole that is approximately 10-feet deep. The 20 horsepower (HP) stormwater pumps will be two submersible solids-handling pumps capable of pumping the stormwater that has been filtered through a manual trash rack on the inlet pipe. The lift station wet well is planned to be 4-foot inside diameter pre-cast concrete or fiberglass structure that is approximately 8.6-feet deep. The 1 HP pumps will be submersible grinder pumps capable of pumping the wastewater. Grinder pumps were required due to the small flow rate from this development. A trailer-mounted diesel backup generator (Brand: Magnum; Model: MMG 25 A; KW: 23 KVA; Amp 240) will be tested weekly adjacent to the sanitary sewer lift station. The diesel backup generator would be a source of diesel particulate matter emissions when tested. However, this engine is smaller than 50 HP and would be exempt from BAAQMD permitting (note that BAAQMD permits stationary sources). Sources that are exempt from BAAQMD permitting requirements are considered to have less than significant impacts to air quality.

Sanitary sewer lift stations have the potential to emit odors. The design and use of the proposed sanitary sewer lift station was reviewed to determine if planned operation would result in a significant odor impact. BAAQMD considers odor impacts to be significant if they result in frequent complaints. This station would serve only the project; therefore, quantities of wastewater would be very low (less than 13 gallons per minute during peak flows). As a result, the potential for any odors is very low. Frequent odors would not occur.

FIGURE 1 – Project Site, Residential Receptor Locations, and Modeled Truck Route



Construction TAC Impacts

Construction activity is anticipated to include grading, building construction, paving, and application of architectural coatings. During grading, and some building construction activities, substantial amounts of dust could be generated. Most of the dust would result during grading activities. The amount of dust generated would be highly variable and would be dependent on the size of the area disturbed at any given time, amount of activity, soil conditions, and meteorological conditions. To address fugitive dust emissions that lead to elevated PM_{10} and $PM_{2.5}$ levels near construction sites, the BAAQMD *CEQA Air Quality*

Guidelines identify best control measures. If included in construction projects, these impacts will be considered less than significant. Best Management Practices recommended by BAAQMD are as follows:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a TAC. Since project construction activities would include grading, and building construction that would last longer than 6 months and would be located near existing residences, an assessment of community risk assessment was conducted.

<u>On-Site Construction TAC Emissions</u>

The health risk assessment focused on modeling on-site construction activity using construction fleet information included in the project design features. Construction period emissions were modeled using the California Emissions Estimator Model, Version 2013.2.2 (CalEEMod) along with projected construction activity. The number and types of construction equipment and diesel vehicles, along with the anticipated length of their use for different phases of construction, were based on site-specific construction activity schedules. Construction of the project is expected to occur for about a 12 month period beginning in April 2015. The CalEEMod model provided total annual $PM_{2.5}$ exhaust emissions (assumed to be diesel particulate matter) for the off-road construction equipment and for exhaust emissions from on-road vehicles, with total emissions of 0.0411 tons (82 pounds). The on-

road emissions are a result of haul truck travel during site preparation and construction activities, worker travel, and vendor deliveries during building construction. A trip length of 0.3 miles was used to represent vehicle travel while at or near the construction site. It was assumed that these emissions from on-road vehicles traveling at or near the site would occur at the construction site. Fugitive $PM_{2.5}$ dust emissions were calculated by CalEEMod as 0.0172 tons (34 pounds) for the overall construction period. The project emission calculations are provided in *Attachment 1*.

Dispersion Modeling

The U.S. EPA ISCST3 dispersion model was used to predict concentrations of DPM and $PM_{2.5}$ at existing sensitive receptors in the vicinity of the project site. The ISCST3 modeling utilized two area sources to represent the on-site construction emissions, one for DPM exhaust emissions and the other for fugitive $PM_{2.5}$ dust emissions. To represent the construction equipment exhaust emissions, an emission release height of 6 meters (20 feet) was used for the area source. The elevated source height reflects the height of the equipment exhaust pipes and buoyancy of the exhaust plume. For modeling fugitive $PM_{2.5}$ emissions, a near ground level release height of 2 meters (6.5 feet) was used for the area source. Emissions from truck travel around the project site were also included in the modeled area sources. Construction emissions were modeled as occurring daily between 7 AM - 4 PM.

The model used a one-year data set (2006) of hourly meteorological data from the Lehigh Quarry prepared and provided by BAAQMD. Annual DPM and $PM_{2.5}$ concentrations from construction activities in 2015 and 2016 were calculated by the model. DPM and $PM_{2.5}$ concentrations were calculated at nearby sensitive receptors at a receptor height of 1.5 meters (4.9 feet). Local terrain elevations in the project vicinity were included in the modeling using USGS 10 meter (32.8 feet) digital terrain data for the project area. *Figure 2* shows the project site, the construction area used in the modeling, and locations of nearby residential receptors

Cancer Risk and Hazards

The maximum-modeled DPM concentration occurred at a residence adjacent to the northern project site boundary. The location of this receptor is identified on *Figure 2*. Increased cancer risks were calculated using the modeled annual concentrations and BAAQMD recommended risk assessment methods for both a child exposure (3rd trimester through 2 years of age) and adult exposure. Since the modeling was conducted under the conservative assumption that emissions occurred for a full year during each construction year, the default BAAQMD exposure period of 350 days per year was used.

Results of this assessment indicate that for project construction the incremental child cancer risk at the maximally exposed individual (MEI) receptor would be 2.0 in one million and the adult incremental cancer risk would be 0.1 in one million. These predicted excess cancer risks are below the BAAQMD significance threshold of 10 in one million and are considered a *less than significant impact*.

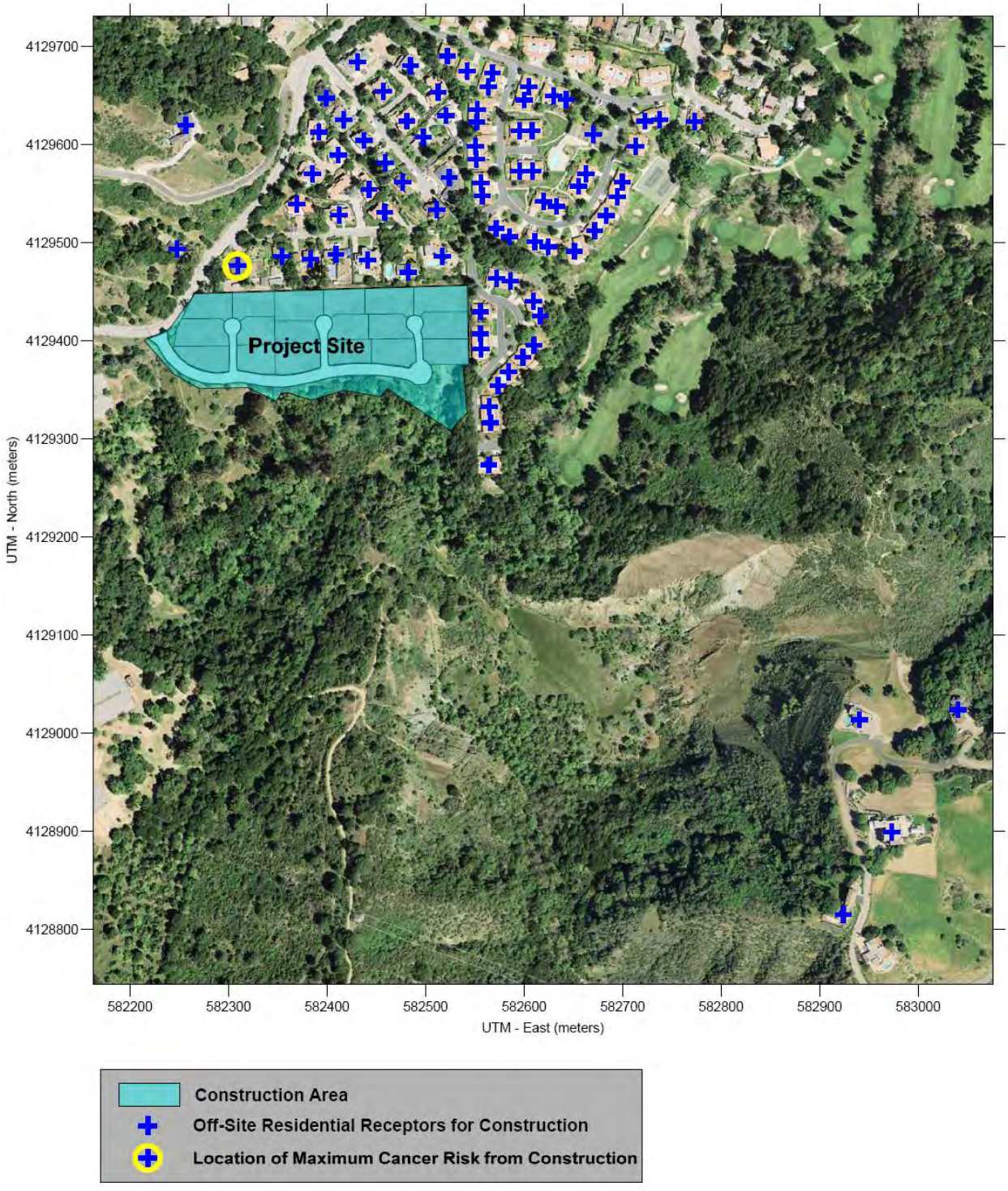
The modeled maximum annual $PM_{2.5}$ concentration was 0.041 $\mu g/m^3$ occurring at a residence adjacent to the northern project site boundary. This $PM_{2.5}$ concentration is well below the BAAQMD threshold of 0.3 $\mu g/m^3$ used to judge the significance of health impacts from $PM_{2.5}$.

Potential non-cancer health effects due to chronic exposure to DPM were also evaluated. The chronic inhalation reference exposure level (REL) for DPM is 5 $\mu g/m^3$. The maximum predicted annual DPM concentration was 0.018 $\mu g/m^3$, which is much lower than the REL. The HI, which is the ratio of the annual DPM concentration to the REL, is 0.004. This HI is much lower than the BAAQMD significance criterion of a HI greater than 1.0.

The project would have *a less-than-significant* impact with respect to community risk caused by construction activities.

Attachment 1 includes the emission calculations used for the area source modeling and the cancer risk calculations.

FIGURE 2 – Project Site, Construction Area, and Off-Site Residential Receptors



Attachment 1

Project Name:		Parkside Trails Residential Parcel			Fill Out Cells in Yellow			
2013-2014								
Qty	Description	Horsepower	Load Factor	Hours/ Day	Work Days	Total Annual Hours	HP hours	Comments
Start Year	2015							
Demolition		Start Date: *April 2015*						Hauling volume = 2000 cubic yards?
1	Excavator	168	0.38	8	80	640	40,858	or Demolition volume
1	Rubber Tire Loader	164	0.36	8	80	640	37,786	
Mass Grading / Excavation		Start Date: *May 2015*						Hauling volume
1	Excavator	168	0.38	8	10	80	5,107	Export volume = 0 cubic yards?
1	Water Truck	189	0.34	4	10	40	2,570	Import volume = 0 cubic yards?
1	Rubber Tire Loader	164	0.36	4	10	40	2,362	
1	Blade	174	0.4	8	10	80	5,568	
1	Scraper	313	0.48	8	10	80	12,019	
Trenching		Start Date: *Sept 2015*						
2	Tractor/Loader/Backhoe	108	0.37	8	5	80	3,197	
Building - Exterior		Start Date: *October 2015*						
2	Forklift	125	0.2	4	150	1200	30,000	
0	Aerial Lift	60	0.31			0	-	LPG ?
		Start Date: *Feb 2016*						
Building - Interior								
0	Aerial Lift	60	0.31			0	-	LPG ?
Paving		Start Date: *Oct 2015*						
1	Paving Equipment	104	0.42	8	2	16	699	
1	Roller	95	0.38	8	2	16	578	
0	Skid Steer Loader	44	0.37			0	-	
1	Surfacing Equipment	362	0.30	8	2	16	1,738	

Construction Emissions for Modeling

Parkside Trails, Cupertino, CA
DPM Construction Emissions and Modeling Emission Rates

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2015	Construction	0.0328	CON_DPM	65.6	0.01997	2.52E-03	32,930	7.64E-08
2016	Construction	0.0083	CON_DPM	16.6	0.00505	6.36E-04	32,930	1.93E-08
Total		***0.0411***		***82***	***0.0250***	***0.0032***		

Notes:
Emissions assumed to be evenly distributed over each construction areas

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

Parkside Trails, Cupertino, CA
PM2.5 Fugitive Dust Construction Emissions for Modeling

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate $g/s/m^2$
2015	Construction	CON_FUG	0.0172	34.4	0.01047	1.32E-03	32,930	4.01E-08
2016	Construction	CON_FUG	0.00003	0.1	0.00002	2.30E-06	32,930	6.99E-11
Total				***34.5***	***0.0105***	***0.0013***		

Notes:
Emissions assumed to be evenly distributed over each construction areas

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

Parkside Trails, Cupertino, CA - Construction Health Impact Summary

Construction Year	Maximum Concentrations: Exhaust PM2.5/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million): Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2015	0.0181	0.0226	1.6	0.1	0.004	0.041
2016	0.0046	0.0000	0.4	0.0	0.001	0.005
Total	-	-	**2.0**	**0.1**	-	-
Maximum Annual	0.0181	0.0226	-	-	**0.004**	**0.041**

Project Construction Health Risk Calculations

Parkside Trails, Cupertino, CA - Construction Impacts
Maximum DPM Cancer Risk Calculations From Construction
Off-Site Residential Receptor Locations - 1.5 meters

Cancer Risk (per million) = CPF x Inhalation Dose x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$

Inhalation Dose = C_{air} x DBR x A x EF x ED x 10^{-6} / AT

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
ED = Exposure duration (years)
AT = Averaging time period over which exposure is averaged.
10^{-6} = Conversion factor

Values

Parameter	Child	Adult
CPF =	1.10E+00	1.10E+00
DBR =	581	302
A =	1	1
EF =	350	350
AT =	25,550	25,550

Construction Cancer Risk by Year - Maximum Impact Receptor Location

	Exposure	Child - Exposure Information			Child	Adult - Exposure Information			Adult		
	Exposure Duration	DPM Conc (ug/m3)		Exposure Adjust	Cancer Risk	Modeled DPM Conc (ug/m3)		Exposure Adjust	Cancer Risk	Fugitive	Total
Year	(years)	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	PM2.5	PM2.5
1	1	2015	0.0181	10	1.58	2015	0.0181	1	0.08	0.0226	0.041
2	1		0.0046	10	0.40	2016	0.0046	1	0.02	0.00004	0.005
3	1		0.0000	4.75	0.00		0.0000	1	0.00		
4	1		0.0000	3	0.00		0.0000	1	0.00		
5	1		0.0000	3	0.00		0.0000	1	0.00		
6	1		0.0000	3	0.00		0.0000	1	0.00		
7	1		0.0000	3	0.00		0.0000	1	0.00		
8	1		0.0000	3	0.00		0.0000	1	0.00		
9	1		0.0000	3	0.00		0.0000	1	0.00		
10	1		0.0000	3	0.00		0.0000	1	0.00		
11	1		0.0000	3	0.00		0.0000	1	0.00		
12	1		0.0000	3	0.00		0.0000	1	0.00		
13	1		0.0000	3	0.00		0.0000	1	0.00		
14	1		0.0000	3	0.00		0.0000	1	0.00		
15	1		0.0000	3	0.00		0.0000	1	0.00		
16	1		0.0000	3	0.00		0.0000	1	0.00		
17	1		0.0000	1.5	0.00		0.0000	1	0.00		
18	1		0.0000	1	0.00		0.0000	1	0.00		
.•	.•	.•	.•	.•	.•	.•	.•	.•	.•		
.•	.•	.•	.•	.•	.•	.•	.•	.•	.•		
.•	.•	.•	.•	.•	.•	.•	.•	.•	.•		
65	1		0.0000	1	0.00		0.0000	1	0.00		
66	1		0.0000	1	0.00		0.0000	1	0.00		
67	1		0.0000	1	0.00		0.0000	1	0.00		
68	1		0.0000	1	0.00		0.0000	1	0.00		
69	1		0.0000	1	0.00		0.0000	1	0.00		
70	1		0.0000	1	0.00		0.0000	1	0.00		
Total Increased Cancer Risk					**1.98**				**0.10**		

Parkside Trails, Cupertino, CA - Operational Emissions - Quarry Trucks on Stevens Canyon Road - 2017

Trucks	Vehicle Type[1]	Daily Number Round Trucks	Total Annual Round Trips[2]	Travel Speed (mph)	Emission Factor[3] DPM (g/mi)	Emission Factor[3] PM2.5 (g/mi)	Operation[4] Schedule (hrs/day)	Round Trip Travel Distance (feet)	Round Trip Travel Distance (miles)	Annual Emissions DPM (lb/year)	Annual Emissions PM2.5 (lb/year)	Average Hourly Emissions DPM (lb/hr)	Average Hourly Emissions PM2.5 (lb/hr)
Quarry Trucks	HHDT	645	167,700	25	0.05935	0.09511	12	4642	0.88	19.29	30.92	0.004	0.0071

[1] HHDT = heavy heavy duty truck

[2] Annual trips - Based on 5 days per week operation

[3] Emission factor from EMFAC2011 for Santa Clara County in 2017 and assumes all trucks are diesel. PM2.5 includes tire and brake wear.

Parkside Trails, Cupertino, CA - Quarry Trucks on Stevens Canyon Road - 2017
DPM Cancer Risk and PM2.5 From Trucks

Modeling Information	
Model:	ISCST3
Sources	Quarry Haul Trucks
Source Type	Line-Volume
Number of Sources	2 (1 northbound & 1 southbound)
Receptor Height (m)	1.5 m
Meteorological Data	2006 Lehigh Quarry - prepared by BAAQMD
Line-Volume Source Parameters	
Length of Line Source =	693 m (2,272 feet)
Volume Dimensions (L x W)*	12 fet x 2,272 feet
Number of volume sources =	96
Release Height (m)	3.4 m (11 feet)

* The line source is made up of a series of individual volume sources along the travel route

Cancer Risk Calculation Method

Inhalation Dose = C_{air} x DBR x A x HD x EF x ED x 10^{-6} / AT

Where: C_{air} = concentration in air (µg/m^3)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
HD = daily exposure (hours/day/24)
ED = Exposure duration (years)
AT = Averaging time period over which exposure is averaged.
10^{-6} = Conversion factor

Inhalation Dose Factors

	Value[1]							
Exposure Type	DBR (L/kg BW-day)	A (-)	Exposure (hr/day)	Exposure (days/week)	Exposure (week/year)	EF (days/yr)	ED (Years)	AT (days)
Residential (70-Year)	302	1	24	7	50	350	70	25,550

[1] Default values recommended by Bay Area Air Quality Management District

Cancer Risk (per million) = Inhalation Dose x CRAF x CPF x 10^6
= URF x Cair

Where: CPF = Cancer potency factor (mg/kg-day)$^{-1}$
CRAF = Cancer Risk Adjustment Factor
URF =Unit risk factor (cancer risk per µg/m^3)

Unit Risk Factor for DPM

Exposure Type	CPF (mg/kg-day)$^{-1}$	CRAF (-)	URF *DPM*
Residential (70-Yr Exposure)	1.10E+00	1.7	**541.5**

Model Results and Maximum Cancer Risks				
	Annual Average Concentration		DPM	DPM*
Receptor Type	PM2.5 (µg/m3)	DPM (µg/m3)	Cancer Risk (per million)	Hazard Index (-)
On-Site Residential (70-year exposure)	0.01344	0.00837	**4.53**	**0.002**

* Based on a chronic Reference Exposure Level (REL) of 5 µg/m^3

Parkside Trails

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	18.00	Dwelling Unit	8.50	32,400.00	51

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2016
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on project description

Construction Phase - Based on provided construction schedule. Used CalEEMod default duration for architectual coating

Off-road Equipment - Based on construction list

Off-road Equipment - Based on construction list

Off-road Equipment - Based on construction list

Off-road Equipment - Based on construction list

Off-road Equipment - Based on construction list

Off-road Equipment - Used CalEEMod default

Grading - Based on construction list

Trips and VMT - Assume 3 cement trucks per home = 54 roundtrips or 108 one-way trips at 0.3 miles for on or near site travel Assume round trips 5 trips for asphalt

Architectural Coating - Low VOC paints

Vehicle Trips -

Construction Off-road Equipment Mitigation - Tier 2 if necessary and BMPs

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	150.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	150.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2

tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	230.00	150.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	20.00	2.00
tblConstructionPhase	NumDays	10.00	80.00
tblConstructionPhase	PhaseEndDate	10/30/2015	2/26/2016
tblConstructionPhase	PhaseEndDate	4/4/2016	4/27/2016
tblConstructionPhase	PhaseEndDate	8/4/2015	5/14/2015
tblConstructionPhase	PhaseEndDate	4/29/2016	10/2/2015
tblConstructionPhase	PhaseEndDate	5/21/2015	9/7/2015
tblConstructionPhase	PhaseStartDate	10/3/2015	2/1/2016
tblConstructionPhase	PhaseStartDate	9/8/2015	10/1/2015
tblConstructionPhase	PhaseStartDate	7/22/2015	5/1/2015
tblConstructionPhase	PhaseStartDate	4/28/2016	10/1/2015
tblConstructionPhase	PhaseStartDate	5/15/2015	9/1/2015
tblGrading	MaterialExported	0.00	2,000.00
tblLandUse	LotAcreage	5.84	8.50
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.48	0.48
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.30	0.30
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Surfacing Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblTripsAndVMT	HaulingTripLength	20.00	0.30
tblTripsAndVMT	HaulingTripLength	20.00	0.30
tblTripsAndVMT	HaulingTripLength	20.00	0.30

tblTripsAndVMT	HaulingTripLength	20.00	0.30
tblTripsAndVMT	HaulingTripLength	20.00	0.30
tblTripsAndVMT	HaulingTripLength	20.00	0.30
tblTripsAndVMT	HaulingTripNumber	0.00	108.00
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripLength	7.30	0.30
tblTripsAndVMT	VendorTripLength	7.30	0.30
tblTripsAndVMT	VendorTripLength	7.30	0.30
tblTripsAndVMT	VendorTripLength	7.30	0.30
tblTripsAndVMT	VendorTripLength	7.30	0.30
tblTripsAndVMT	VendorTripLength	7.30	0.30
tblTripsAndVMT	WorkerTripLength	12.40	0.30
tblTripsAndVMT	WorkerTripLength	12.40	0.30
tblTripsAndVMT	WorkerTripLength	12.40	0.30
tblTripsAndVMT	WorkerTripLength	12.40	0.30
tblTripsAndVMT	WorkerTripLength	12.40	0.30
tblTripsAndVMT	WorkerTripLength	12.40	0.30

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.0688	0.7796	0.4483	7.1000e-004	0.0357	0.0356	0.0713	0.0172	0.0328	0.0500	0.0000	67.3541	67.3541	0.0199	0.0000	67.7723
2016	0.3190	0.1087	0.0888	1.0000e-004	1.0000e-004	8.8400e-003	8.9400e-003	3.0000e-005	8.2900e-003	8.3200e-003	0.0000	8.9845	8.9845	2.1400e-003	0.0000	9.0295
Total	**0.3879**	**0.8884**	**0.5371**	**8.1000e-004**	**0.0358**	**0.0445**	**0.0803**	**0.0172**	**0.0411**	**0.0583**	**0.0000**	**76.3386**	**76.3386**	**0.0221**	**0.0000**	**76.8018**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.0260	0.6063	0.4828	7.1000e-004	8.1700e-003	0.0161	0.0243	3.9000e-003	0.0161	0.0200	0.0000	67.3540	67.3540	0.0199	0.0000	67.7722
2016	0.3100	0.0891	0.0840	1.0000e-004	1.0000e-004	3.5000e-003	3.6000e-003	3.0000e-005	3.5000e-003	3.5300e-003	0.0000	8.9845	8.9845	2.1400e-003	0.0000	9.0295
Total	**0.3360**	**0.6954**	**0.5669**	**8.1000e-004**	**8.2700e-003**	**0.0196**	**0.0279**	**3.9300e-003**	**0.0196**	**0.0236**	**0.0000**	**76.3385**	**76.3385**	**0.0221**	**0.0000**	**76.8017**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**13.38**	**21.72**	**-5.54**	**0.00**	**76.90**	**55.83**	**65.23**	**77.18**	**52.19**	**59.56**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2015	7/21/2015	5	80	
2	Grading	Grading	5/1/2015	5/14/2015	5	10	
3	Trenching	Trenching	9/1/2015	9/7/2015	5	5	
4	Building Construction	Building Construction	10/1/2015	4/27/2016	5	150	
5	Paving	Paving	10/1/2015	10/2/2015	5	2	
6	Architectural Coating	Architectural Coating	2/1/2016	2/26/2016	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 65,610; Residential Outdoor: 21,870; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Site Preparation	Excavators	1	8.00	162	0.38
Site Preparation	Rubber Tired Loaders	1	8.00	199	0.36
Grading	Excavators	1	8.00	162	0.38
Building Construction	Cranes	0	7.00	226	0.29
Building Construction	Forklifts	2	4.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Paving	Pavers	0	8.00	125	0.42
Paving	Rollers	1	8.00	80	0.38
Grading	Scrapers	1	8.00	361	0.48
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Grading	Graders	0	8.00	174	0.41
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving	Paving Equipment	1	8.00	130	0.36
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	255	0.40
Building Construction	Welders	0	8.00	46	0.45
Grading	Rubber Tired Loaders	1	4.00	199	0.36
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Surfacing Equipment	1	8.00	253	0.30

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Trenching	2	5.00	0.00	0.00	0.30	0.30	0.30	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	250.00	0.30	0.30	0.30	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	0.30	0.30	0.30	LD_Mix	HDT_Mix	HHDT
Building Construction	2	6.00	2.00	108.00	0.30	0.30	0.30	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	10.00	0.30	0.30	0.30	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	0.30	0.30	0.30	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1000e-004	0.0000	1.1000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0374	0.4683	0.2134	4.6000e-004		0.0190	0.0190		0.0175	0.0175	0.0000	43.7106	43.7106	0.0131	0.0000	43.9846
Total	**0.0374**	**0.4683**	**0.2134**	**4.6000e-004**	**1.1000e-004**	**0.0190**	**0.0191**	**2.0000e-005**	**0.0175**	**0.0175**	**0.0000**	**43.7106**	**43.7106**	**0.0131**	**0.0000**	**43.9846**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4400e-003	3.5300e-003	0.0216	0.0000	3.0000e-005	2.0000e-005	6.0000e-005	1.0000e-005	2.0000e-005	3.0000e-005	0.0000	0.3297	0.3297	1.0000e-005	0.0000	0.3299
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7000e-004	1.5000e-004	2.0000e-003	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0817	0.0817	1.0000e-005	0.0000	0.0819
Total	**2.0100e-003**	**3.6800e-003**	**0.0236**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**1.1000e-004**	**2.0000e-005**	**2.0000e-005**	**4.0000e-005**	**0.0000**	**0.4114**	**0.4114**	**2.0000e-005**	**0.0000**	**0.4118**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0144	0.3928	0.2936	4.6000e-004		0.0101	0.0101		0.0101	0.0101	0.0000	43.7105	43.7105	0.0131	0.0000	43.9845
Total	**0.0144**	**0.3928**	**0.2936**	**4.6000e-004**	**3.0000e-005**	**0.0101**	**0.0101**	**0.0000**	**0.0101**	**0.0101**	**0.0000**	**43.7105**	**43.7105**	**0.0131**	**0.0000**	**43.9845**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4400e-003	3.5300e-003	0.0216	0.0000	3.0000e-005	2.0000e-005	6.0000e-005	1.0000e-005	2.0000e-005	3.0000e-005	0.0000	0.3297	0.3297	1.0000e-005	0.0000	0.3299

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7000e-004	1.5000e-004	2.0000e-003	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0817	0.0817	1.0000e-005	0.0000	0.0819
Total	**2.0100e-003**	**3.6800e-003**	**0.0236**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**1.1000e-004**	**2.0000e-005**	**2.0000e-005**	**4.0000e-005**	**0.0000**	**0.4114**	**0.4114**	**2.0000e-005**	**0.0000**	**0.4118**

3.3 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0354	0.0000	0.0354	0.0171	0.0000	0.0171	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0170	0.2068	0.1350	1.6000e-004		8.9100e-003	8.9100e-003		8.2000e-003	8.2000e-003	0.0000	15.3541	15.3541	4.5800e-003	0.0000	15.4504
Total	**0.0170**	**0.2068**	**0.1350**	**1.6000e-004**	**0.0354**	**8.9100e-003**	**0.0443**	**0.0171**	**8.2000e-003**	**0.0253**	**0.0000**	**15.3541**	**15.3541**	**4.5800e-003**	**0.0000**	**15.4504**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	4.0000e-005	5.0000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0204	0.0204	0.0000	0.0000	0.0205
Total	**1.4000e-004**	**4.0000e-005**	**5.0000e-004**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0204**	**0.0204**	**0.0000**	**0.0000**	**0.0205**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.9700e-003	0.0000	7.9700e-003	3.8500e-003	0.0000	3.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3300e-003	0.1313	0.0917	1.6000e-004		3.1200e-003	3.1200e-003		3.1200e-003	3.1200e-003	0.0000	15.3541	15.3541	4.5800e-003	0.0000	15.4504
Total	**4.3300e-003**	**0.1313**	**0.0917**	**1.6000e-004**	**7.9700e-003**	**3.1200e-003**	**0.0111**	**3.8500e-003**	**3.1200e-003**	**6.9700e-003**	**0.0000**	**15.3541**	**15.3541**	**4.5800e-003**	**0.0000**	**15.4504**

Mitigated Construction Off-Site

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

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-004	4.0000e-005	5.0000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0204	0.0204	0.0000	0.0000	0.0205
Total	**1.4000e-004**	**4.0000e-005**	**5.0000e-004**	**0.0000**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0204**	**0.0204**	**0.0000**	**0.0000**	**0.0205**

3.4 Trenching - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.7900e-003	0.0171	0.0121	2.0000e-005		1.3400e-003	1.3400e-003		1.2300e-003	1.2300e-003	0.0000	1.4794	1.4794	4.4000e-004	0.0000	1.4887
Total	**1.7900e-003**	**0.0171**	**0.0121**	**2.0000e-005**		**1.3400e-003**	**1.3400e-003**		**1.2300e-003**	**1.2300e-003**	**0.0000**	**1.4794**	**1.4794**	**4.4000e-004**	**0.0000**	**1.4887**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	1.0000e-005	1.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	5.1100e-003	5.1100e-003	0.0000	0.0000	5.1200e-003
Total	**4.0000e-005**	**1.0000e-005**	**1.3000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.1100e-003**	**5.1100e-003**	**0.0000**	**0.0000**	**5.1200e-003**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.2000e-004	0.0150	0.0117	2.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	1.4794	1.4794	4.4000e-004	0.0000	1.4887
Total	**7.2000e-004**	**0.0150**	**0.0117**	**2.0000e-005**		**6.1000e-004**	**6.1000e-004**		**6.1000e-004**	**6.1000e-004**	**0.0000**	**1.4794**	**1.4794**	**4.4000e-004**	**0.0000**	**1.4887**

Mitigated Construction Off-Site

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

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	1.0000e-005	1.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	5.1100e-003	5.1100e-003	0.0000	0.0000	5.1200e-003
Total	**4.0000e-005**	**1.0000e-005**	**1.3000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.1100e-003**	**5.1100e-003**	**0.0000**	**0.0000**	**5.1200e-003**

3.5 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.9600e-003	0.0684	0.0421	5.0000e-005		5.7400e-003	5.7400e-003		5.2900e-003	5.2900e-003	0.0000	4.8009	4.8009	1.4300e-003	0.0000	4.8310
Total	**7.9600e-003**	**0.0684**	**0.0421**	**5.0000e-005**		**5.7400e-003**	**5.7400e-003**		**5.2900e-003**	**5.2900e-003**	**0.0000**	**4.8009**	**4.8009**	**1.4300e-003**	**0.0000**	**4.8310**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.7000e-004	6.7000e-004	4.1000e-003	0.0000	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0627	0.0627	0.0000	0.0000	0.0627
Vendor	6.0000e-004	1.7100e-003	7.8500e-003	0.0000	2.0000e-005	1.0000e-005	3.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1600	0.1600	0.0000	0.0000	0.1600
Worker	5.6000e-004	1.4000e-004	1.9800e-003	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0809	0.0809	1.0000e-005	0.0000	0.0811
Total	**1.4300e-003**	**2.5200e-003**	**0.0139**	**0.0000**	**8.0000e-005**	**1.0000e-005**	**1.0000e-004**	**2.0000e-005**	**1.0000e-005**	**4.0000e-005**	**0.0000**	**0.3035**	**0.3035**	**1.0000e-005**	**0.0000**	**0.3038**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.3800e-003	0.0492	0.0383	5.0000e-005		1.9900e-003	1.9900e-003		1.9900e-003	1.9900e-003	0.0000	4.8009	4.8009	1.4300e-003	0.0000	4.8310
Total	**2.3800e-003**	**0.0492**	**0.0383**	**5.0000e-005**		**1.9900e-003**	**1.9900e-003**		**1.9900e-003**	**1.9900e-003**	**0.0000**	**4.8009**	**4.8009**	**1.4300e-003**	**0.0000**	**4.8310**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.7000e-004	6.7000e-004	4.1000e-003	0.0000	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0627	0.0627	0.0000	0.0000	0.0627

Vendor	6.0000e-004	1.7100e-003	7.8500e-003	0.0000	2.0000e-005	1.0000e-005	3.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1600	0.1600	0.0000	0.0000	0.1600
Worker	5.6000e-004	1.4000e-004	1.9800e-003	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0809	0.0809	1.0000e-005	0.0000	0.0811
Total	**1.4300e-003**	**2.5200e-003**	**0.0139**	**0.0000**	**8.0000e-005**	**1.0000e-005**	**1.0000e-004**	**2.0000e-005**	**1.0000e-005**	**4.0000e-005**	**0.0000**	**0.3035**	**0.3035**	**1.0000e-005**	**0.0000**	**0.3038**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.5300e-003	0.0820	0.0531	6.0000e-005		6.8600e-003	6.8600e-003		6.3100e-003	6.3100e-003	0.0000	6.0476	6.0476	1.8200e-003	0.0000	6.0859
Total	**9.5300e-003**	**0.0820**	**0.0531**	**6.0000e-005**		**6.8600e-003**	**6.8600e-003**		**6.3100e-003**	**6.3100e-003**	**0.0000**	**6.0476**	**6.0476**	**1.8200e-003**	**0.0000**	**6.0859**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2000e-004	7.9000e-004	5.0300e-003	0.0000	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0788	0.0788	0.0000	0.0000	0.0789
Vendor	7.0000e-004	2.0100e-003	9.5300e-003	0.0000	2.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.2014	0.2014	0.0000	0.0000	0.2015
Worker	6.6000e-004	1.6000e-004	2.2700e-003	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0995	0.0995	1.0000e-005	0.0000	0.0997
Total	**1.6800e-003**	**2.9600e-003**	**0.0168**	**0.0000**	**9.0000e-005**	**1.0000e-005**	**1.2000e-004**	**3.0000e-005**	**1.0000e-005**	**5.0000e-005**	**0.0000**	**0.3797**	**0.3797**	**1.0000e-005**	**0.0000**	**0.3801**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.0300e-003	0.0626	0.0488	6.0000e-005		2.5300e-003	2.5300e-003		2.5300e-003	2.5300e-003	0.0000	6.0476	6.0476	1.8200e-003	0.0000	6.0859
Total	**3.0300e-003**	**0.0626**	**0.0488**	**6.0000e-005**		**2.5300e-003**	**2.5300e-003**		**2.5300e-003**	**2.5300e-003**	**0.0000**	**6.0476**	**6.0476**	**1.8200e-003**	**0.0000**	**6.0859**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2000e-004	7.9000e-004	5.0300e-003	0.0000	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0788	0.0788	0.0000	0.0000	0.0789

Vendor	7.0000e-004	2.0100e-003	9.5300e-003	0.0000	2.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.2014	0.2014	0.0000	0.0000	0.2015
Worker	6.6000e-004	1.6000e-004	2.2700e-003	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0995	0.0995	1.0000e-005	0.0000	0.0997
Total	**1.6800e-003**	**2.9600e-003**	**0.0168**	**0.0000**	**9.0000e-005**	**1.0000e-005**	**1.2000e-004**	**3.0000e-005**	**1.0000e-005**	**5.0000e-005**	**0.0000**	**0.3797**	**0.3797**	**1.0000e-005**	**0.0000**	**0.3801**

3.6 Paving - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.0300e-003	0.0127	6.6400e-003	1.0000e-005		6.2000e-004	6.2000e-004		5.7000e-004	5.7000e-004	0.0000	1.2521	1.2521	3.7000e-004	0.0000	1.2599
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.0300e-003**	**0.0127**	**6.6400e-003**	**1.0000e-005**		**6.2000e-004**	**6.2000e-004**		**5.7000e-004**	**5.7000e-004**	**0.0000**	**1.2521**	**1.2521**	**3.7000e-004**	**0.0000**	**1.2599**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.0000e-005	1.4000e-004	8.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0132	0.0132	0.0000	0.0000	0.0132
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.2700e-003	3.2700e-003	0.0000	0.0000	3.2800e-003
Total	**8.0000e-005**	**1.5000e-004**	**9.4000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0165**	**0.0165**	**0.0000**	**0.0000**	**0.0165**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.4000e-004	0.0116	8.5400e-003	1.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	1.2521	1.2521	3.7000e-004	0.0000	1.2599
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.4000e-004**	**0.0116**	**8.5400e-003**	**1.0000e-005**		**3.3000e-004**	**3.3000e-004**		**3.3000e-004**	**3.3000e-004**	**0.0000**	**1.2521**	**1.2521**	**3.7000e-004**	**0.0000**	**1.2599**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.0000e-005	1.4000e-004	8.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0132	0.0132	0.0000	0.0000	0.0132

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.2700e-003	3.2700e-003	0.0000	0.0000	3.2800e-003
Total	**8.0000e-005**	**1.5000e-004**	**9.4000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0165**	**0.0165**	**0.0000**	**0.0000**	**0.0165**

3.7 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3041					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6800e-003	0.0237	0.0188	3.0000e-005		1.9700e-003	1.9700e-003		1.9700e-003	1.9700e-003	0.0000	2.5533	2.5533	3.0000e-004	0.0000	2.5596
Total	**0.3078**	**0.0237**	**0.0188**	**3.0000e-005**		**1.9700e-003**	**1.9700e-003**		**1.9700e-003**	**1.9700e-003**	**0.0000**	**2.5533**	**2.5533**	**3.0000e-004**	**0.0000**	**2.5596**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.9500e-003	3.9500e-003	0.0000	0.0000	3.9600e-003
Total	**3.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.9500e-003**	**3.9500e-003**	**0.0000**	**0.0000**	**3.9600e-003**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3041					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1400e-003	0.0235	0.0183	3.0000e-005		9.5000e-004	9.5000e-004		9.5000e-004	9.5000e-004	0.0000	2.5533	2.5533	3.0000e-004	0.0000	2.5596
Total	**0.3052**	**0.0235**	**0.0183**	**3.0000e-005**		**9.5000e-004**	**9.5000e-004**		**9.5000e-004**	**9.5000e-004**	**0.0000**	**2.5533**	**2.5533**	**3.0000e-004**	**0.0000**	**2.5596**

Mitigated Construction Off-Site

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

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.9500e-003	3.9500e-003	0.0000	0.0000	3.9600e-003
Total	**3.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.9500e-003**	**3.9500e-003**	**0.0000**	**0.0000**	**3.9600e-003**