Appendix B:

Air Quality Technical Memo

DouglasKim+Associates,LLC

To: **Stacie Henderson, CAJA**
From: **Douglas Kim, AICP**
CC:
Date: **February 24, 2019**
Re: **Responses to SWAPE Comments on Southern California Flower Market Air Quality Analysis**

This memo provides responses to comments provided by SWAPE Technical Consultants on the air quality analysis for the Southern California Flower Market Draft Environmental Impact Report.

Comment No. B11-24

The following comments were provided by SWAPE Technical Consultants, and are attached to Comment Letter B11.

We have reviewed the September 2018 Draft Environmental Impact Report (DEIR) for the Southern California Flower Market Project ("Project") located in Downtown Los Angeles. The Project site is currently developed with two buildings, a north building (206,517 square feet) and a south building (185,111 square feet). The Project proposes to maintain and renovate the north building and demolish the south building in order to construct a 15-story mixed use development with 323 residential units, 64,363 square feet of office space, 4,385 square feet of retail space, 63,785 square feet of wholesale space and storage, and 13,420 square feet of food and beverage space, and 10,226 square feet of event space.

Paul Rosenfeld is a Co-Founder and Principal Environmental Chemist at SWAPE. Dr. Rosenfeld has over 25 years of experience with monitoring and modeling pollutant sources as they relate to human and ecological health. He has provided technical consulting support and expert witness testimony for a variety of cases concerning the transport of environmental contaminants, risk assessment, and ecological restoration.

Hadley Nolan has a Bachelor of Science degree from the University of California, Los Angeles in Environmental Science. Hadley specializes in evaluating the adequacy of compliance determinations of compliance determinations made with regulations set forth by the California Environmental Quality Act (CEQA) and has conducted evaluations on more than 100 CEQA projects.

Our review concludes that the DEIR fails to adequately evaluate the Project's Air Quality and Greenhouse Gas (GHG) impacts. As a result, emissions and health impacts associated with the construction and operation of the proposed Project are

underestimated and inadequately addressed. An updated Environmental Impact Report (EIR) should be prepared to adequately assess and mitigate the potential air quality, health risk, and GHG impacts the Project may have on the surrounding environment.

Response to Comment No. B11-24

The comment provides the background of the commenters, which is acknowledged for the record and will be forwarded to the decision-making bodies for their review and consideration.

The comment also provides a summary of the comments provided in the letter. Responses to the specific comments raised in this letter are provided in Responses to Comment Nos. B11-25 through B11-44, below, and also in the air quality technical memo, which is attached as Appendix B to this Final EIR. Therefore, the commenter is referred to Responses to Comment Nos. B11-25 through B11-44.

Comment No. B11-25

Air Quality

Flawed Emissions Model Prepared for Proposed Project and Should Not Be Relied Upon to Determine Significance

The criteria air pollutant and GHG emissions generated by the existing land uses on the Project site were estimated by the Project Applicant using the California Emissions Estimator Model Version

CalEEMod.2016.3.1 and the criteria air pollutant and GHG emissions that will be emitted during construction and operation of the Project's proposed land uses were estimated using Version CalEEMod.2016.3.2 ("CalEEMod").[1] CalEEMod provides recommended default values based on site specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but CEQA requires that such changes be justified by substantial evidence.[2] Once all of the values are inputted into the model, the Project's construction and operational emissions are calculated, and "output files" are generated. These output files disclose to the reader what parameters were utilized in calculating the Project's criteria air pollutant and GHG emissions and make known

---

1 CalEEMod website, available at http://www.caleemod.com/

2 CalEEMod User Guide, p. 1, 11, available at http://www.caleemod.com/

which default values were changed as well as provide a justification for the values selected.[3]

Review of the Project's CalEEMod output files, located in Appendix E-1 of the DEIR, demonstrates that the model is considerably flawed and significantly underestimates the construction and operational criteria air pollutant and GHG emissions that will result from Project activities. The CalEEMod model prepared for the Project contradicts and does not reflect Project-specific information provided within the DEIR and associated attachments, and relies upon incorrect assumptions made by the Project Applicant. More specifically, our review demonstrates that the CalEEMod models prepared for the Project: (1) estimate existing operational emissions on the Project site based on incorrect land uses; and (2) rely upon incorrect assumptions and utilize unsubstantiated input parameters to estimate emissions from the Project's proposed land uses. As a result, the emissions estimates provided within these CalEEMod models, which the Project Applicant relies upon to determine the significance of the Project's air quality, health risk, and GHG impacts, are an inaccurate portrayal of the actual emissions and impacts that the Project will have on the surrounding environment. Thus, because the emissions estimates associated with the proposed Project cannot be relied upon, the significance determinations made within the DEIR, consequently, cannot and should not be relied upon to determine the magnitude of the impact that implementation of the Project will have on the surrounding community. A revised air pollution model must be prepared in a revised EIR for the proposed Project prior to Project approval.

Response to Comment No. B11-25

This comment serves as an introduction to the commenter's concerns, and does not require a detailed response. (CEQA Guidelines § 15088(c); Flanders Found. v. City of Carmel-by-the-Sea (2012) 202 Cal.App.4th 603, 615; Rural Landowners Ass'n v. City Council (1983) 143 Cal.App.3d 1013, 1020.) The concerns are expanded in the comments below. Each concern is also responded to below.

Comment No. B11-26

Existing Land Uses Modeled Do Not Reflect Existing Land Uses Discussed Within DEIR or Associated Studies Prepared for Project

According to the DEIR, there are two existing buildings on the Project site, one which will be completely demolished, and the other which will be maintained and renovated (pp. 1). Specifically, the DEIR states,

> "The Project Applicant proposes to expand and redevelop the existing Flower Market facility between Maple Avenue and Wall Street, south of 7th Street, while maintaining the existing wholesale market. The existing property consists of two

[3] CalEEMod User Guide, p. 8, 12, available at: http://www.caleemod.com/ (A key feature of the CalEEMod program is the "remarks" feature, where the user explains why a default setting was replaced by a "user defined" value. These remarks are included in the report.)

> buildings, the north building (206,517 square feet) and the south building (185,111 square feet) ... The Applicant proposes to maintain and renovate the north building and its roof-top parking and demolish the south building in preparation of a new building with one level of subterranean parking" (pp. 1).

The DEIR does not give any further information or explanation anywhere in the report as to what specific type of land use or uses are contained within the south building, other than stating that the Project site is currently developed "as the Southern California Flower Market" and that the existing south building includes 185,111 square feet of "wholesale, retail, and office uses" (pp. 60, pp. 117). In order to evaluate the existing emissions generated by the land uses in the south building on the Project site that will be eliminated once demolition occurs, the Project Applicant prepares an air pollution model that includes "the area source and energy source emissions associated with the current operation of the 185,111 square-foot south building" (pp. 116-117). Based on the information provided within the DEIR, it is reasonable to assume that since the DEIR states that there are "wholesale, retail, and office uses" within the south building, the Project Applicant would have modeled the Project site's existing emissions to reflect these land uses. However, review of the air pollution model for the existing south building demonstrates that this is not the case (see excerpt below) (Appendix E-1, pp. 2, pp. 9, pp. 19).

Southern California Flower Market Existing
Los Angeles-South Coast County, Winter

1.0 Project Characteristics
1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	185.11	1000sqft	3.80	185,111.00	0

As shown above, the Project Applicant modeled the existing south building's emissions assuming operation of a refrigerated warehouse. This, however, is incorrect because although the DEIR fails to give a clear description of the "retail and office space" land uses in the south building, review of information provided within two studies conducted by Fehr & Peers for the proposed Project indicates that there are other land uses in the south building and as such, these landed uses should have been modeled in order to give an accurate estimation of the existing operational emissions generated on the Project site.

According to the Project's Traffic Impact Analysis (TIA), contained in Appendix K-1, the existing south building is an 185,111 square foot warehouse building that also contains restaurant space (Appendix K-I, pp. 7). The TIA states (emphasis added),

> "The Project site currently has two buildings. The north building is 206,517 square feet and the south building is 185,111 square feet. These buildings house the Southern California Flower Market and 2,000 square feet of high-turnover sit-down restaurant space. The Project will maintain and renovate the north building and will remove and replace the south building" (Appendix K-1, pp. 7).

Furthermore, Fehr & Peers also conducted a Parking Demand Study for the proposed Project which expressly states that the analysis was conducted assuming that an existing restaurant is located on the Project site, and even provides the name of this restaurant. The Study states, "the project site currently houses the Southern California Flower Market (Flower Market) and 2,000 square feet of high turnover sit-down restaurant space (Poppy + Rose)" (Appendix K-4, p. 1). Therefore, although the DEIR did not explicitly state that a restaurant is currently operating on the Project site, it is evident, based on the analyses prepared by Fehr & Peers for the proposed Project, that there is in fact a 2,000-square foot restaurant that is operational on the site.

The inconsistency found between the land uses within the existing south building discussed in the DEIR, analyses conducted by Fehr & Peers, and the Project's CalEEMod models present a significant issue. The land use types features are used throughout CalEEMod in determining default variables and emission factors that go into the model's calculations.[4] For example, the square footage of a land use is used for certain calculations such as determining the wall space to be painted (i.e., VOC emissions from architectural coatings) and volume that is heated or cooled (i.e., energy impacts). By incorrectly assigning the Project's total square footage to a single land use, the emissions that are currently being generated on the Project site are underestimated. Because the Project Applicant uses the existing operational emissions generated by the south building in its evaluation of the Project's overall air quality impacts, it is critical that the existing emissions be adequately modeled and evaluated (Table 4.C-9, pp. 126). As such, an updated air pollution model must be prepared that adequately estimates the Project's existing operational emissions.

Response to Comment No. B11-26

Contrary to the comment, the Project Applicant did not prepare the air quality modeling. The air quality modeling contained in the Draft EIR was prepared by DKA Planning, as a subconsultant to CAJA Environmental Services, who prepared the EIR on behalf of the City. Staff in the Department of City Planning reviewed and approved all analysis contained in the EIR, including the air quality modeling.

Because of the mixed-use nature of the wholesale facility on the Project Site, the 185,111 square feet of uses was coded as a generic land use category of "Refrigerated Warehouse." However, the inputs in the model that drive the estimate of existing emissions (e.g., floor area, average daily trips, etc.) were customized to fit the specifics of the Project. As such, the trip generation estimates in the Fehr & Peers traffic analysis (included as Appendix K-1 of the Draft EIR) were used to baseline the amount of vehicle travel and results mobile source emissions emanate from the existing Project Site.

Because of the highly mixed-use nature of the Project and the corresponding lack of specific floor area for individual land uses, the total building floor area is an appropriate

---

[4] CalEEMod User's Guide, p. 14, available at: http://www.caleemod.com/

proxy for determining energy and area source emissions.[5] The wall space and energy from heating and cooling are not substantively different for the myriad of uses that would occupy this multi-use building. The use of a refrigerated warehouse as a land use input is consistent with the energy demands of a facility with substantial floor area devoted to wholesale retail/storage/cooler uses.

Comment No. B11-27

Air Pollution Model Prepared for Proposed Land Uses Utilizes Unsubstantiated Input Parameters That Underestimates Emissions

In addition to incorrectly modeling emissions from the existing land uses on the Project site, our review of the CalEEMod model prepared for the Project's proposed land uses demonstrates that the Project Applicant also incorrectly estimates emissions, and as a result, fails to provide an accurate and comprehensive analysis of the emissions that will be generated by the proposed Project. Specifically, our review of the CalEEMod models prepared for the Project's proposed land uses demonstrates that: (1) the Project's construction-related hauling truck trips were inaccurately estimated, resulting in an underestimation of the Project's construction-related mobile source emissions; (2) the Project Applicant incorrectly applies a construction-related mitigation measure that artificially reduces emissions; and (3) incorrectly estimates the operational daily mobile-source emissions that will be generated as a result of the Project's proposed land uses. The Project should not be approved until an updated CalEEMod model is prepared in an updated EIR that accurately estimates the Project's emissions.

Response to Comment No. B11-27

The comment provides a summary of comments related to the CalEEMod modeling prepared for the Project. The specific comments are provided in Comment Nos. B11-28 through B11-37. Therefore, the commenter is referred to the Responses to Comment Nos. B11-28 through B11-37, below.

Comment No. B11-28

Failure to Accurately Estimate Emissions from Construction Hauling Truck Trips

Review of the Project's CalEEMod output files demonstrates that the Project Applicant incorrectly modeled the hauling truck trips expected to occur during construction, resulting in an underestimation of the Project's construction-related criteria air pollutant emissions. Our review of the air pollution model prepared for the Project demonstrates that: (1) the truck trip length associated with all hauling truck trips expected to occur throughout construction is underestimated; and (2) the total number of hauling truck trips inputted into the model during all phases of construction is inconsistent with information provided within the DEIR. As a result, emissions associated with construction

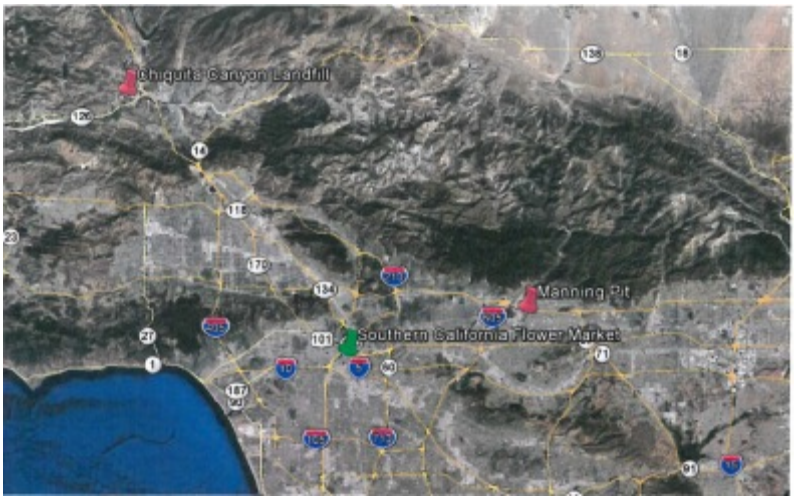
[5] South Coast Air Quality Management District, CalEEMod Appendix D – Default Data Tables, October 2017.

of the proposed Project are underestimated. An updated EIR should be prepared that contains a revised air pollution model to adequately assesses the potential impacts that construction of the Project may have on regional and local air quality.

Incorrect Hauling Truck Trip Length

Review of the Project's CalEEMod output files demonstrates that a underestimated hauling truck trip length was used to estimate the Project's construction-related emissions. As a result, the construction emissions are underestimated and should not be used to determine Project significance.

The DEIR states that there are two haul route options for the Project. Hauling trucks are anticipated to either haul export material to the Chiquita Canyon Landfill (Option 1) or to the Manning Pit Site (Option 2) (p. 2-6). According to Google Maps, the Chiquita Canyon Landfill is approximately 40 miles from the Project site and the Manning Pit is approximately 23 miles from the Project site (see excerpt below).



The DEIR fails to disclose what percentage of waste will be hauled to either site. However, since the DEIR lists both landfills as haul routes, it is reasonable to assume that Project waste will be sent to both landfills. Review of the "User Entered Comments &Non-Default Data" table in the Project's CalEEMod output files, however, demonstrates that the Project Applicant estimated the Project's construction emissions assuming that all hauling waste would be sent to the Manning Pit in Irwindale (see excerpt below) (Appendix E-1, pp. 27, pp. 59, pp. 96).

Trips and VMT | Haul of materials to Manning Pit in Irwindale. | Fehr & Peers consruction traffic analysis.

As a result, the Project Applicant modeled hauling truck emissions from the demolition and grading phase of construction assuming a 23-mile hauling truck route (see excerpt below) (Appendix E-1, pp. 38, pp. 71, pp. 107).

Trips and VMT

DKA Planning
Phone: (310) 316-2800
Fax: (310) 693-2579

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length
Demolition	34	20.00	3.00	842.00	14.70	6.90	23.00
Site Preparation	23	20.00	3.00	0.00	14.70	6.90	20.00
Grading	19	20.00	3.00	6,250.00	14.70	6.90	23.00
Building Construction	57	120.00	12.00	0.00	14.70	6.90	20.00
Paving	28	120.00	12.00	0.00	14.70	6.90	20.00
Architectural Coating	5	74.00	0.00	0.00	14.70	6.90	20.00

Estimating emissions assuming that all hauling trucks will deliver waste to the Manning Pit is completely incorrect and unsubstantiated, as the DEIR clearly states that either the Chiquita Canyon Landfill or the Manning Pit will be used to dispose of Project-generated waste. Therefore, at a minimum, the Project Applicant should have estimated mobile-source emissions by using the average distance between the two locations and the Project site. As a result, construction emissions associated with the Project are significantly underestimated and should not be used to determine Project significance. An updated CalEEMod model should be prepared in a revised project-specific EIR.

Response to Comment No. B11-28

As the commenter noted, there is no detailed haul plan for exporting soils to nearby landfills. As a result, hauling is assumed to be directed to the Manning Pit for the purposes of this analysis, as assuming that all hauling would be sent to a more distant landfill than the closest available facility was speculative and there was no basis for assuming this. Should soils be exported to a more distant landfill, running emissions from haul trucks would increase incrementally. However, any impacts during the demolition or grading phases (both in 2019) would not alter significance findings for construction impacts. NOx emissions would remain significant but mitigable, while VOC, CO, and particulates emissions would be substantially less than the SCAQMD's thresholds for regional emissions.

To confirm this, further analysis was performed assuming that 50 percent of the haul trips would be destined for the Manning Pit (23 miles one-way) and 50 percent would travel to the Chiquita Canyon Landfill (40 miles one-way). As shown below, this does not change the significance of construction-related emissions, and the additional technical modeling is included in Appendix B of this Final EIR.

Draft EIR Table 4.C-10 (original assumptions)
Estimated Daily Construction Emissions - Mitigated

Construction Phase Year	Pounds Per Day					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2019	3	40	109	<1	7	4
2020	3	26	109	<1	1	1
2021	38	33	171	<1	3	1
Maximum Regional Total	38	40	171	<1	7	4

DKA Planning
Phone: (310) 316-2800
Fax: (310) 693-2579

Regional Significance Threshold	75	100	550	150	150	55
Exceed Threshold?	No	No	No	No	No	No
Maximum Localized Total	34	30	148	<1	7	4
Localized Significance Threshold	--	106	1,368	--	25	7
Exceed Threshold?	N/A	No	No	N/A	No	No
Source: DKA Planning, 2017 based on CalEEMod 2016.3.1 model runs. LST analyses based on 2-acre site with 50-meter distances to receptors in Central LA County source receptor area.						

Table 4.C-10 (SWAPE assumptions)
Estimated Daily Construction Emissions - Mitigated

Construction Phase Year	Pounds Per Day					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2019	4	50	113	<1	7	4
2020	4	32	113	<1	1	1
2021	40	45	179	<1	3	2
Maximum Regional Total	40	50	179	<1	7	4
Regional Significance Threshold	75	100	550	150	150	55
Exceed Threshold?	No	No	No	No	No	No
Maximum Localized Total	34	30	148	<1	7	4
Localized Significance Threshold	--	106	1,368	--	25	7
Exceed Threshold?	N/A	No	No	N/A	No	No
Source: DKA Planning, 2018 based on CalEEMod 2016.3.1 model runs. LST analyses based on 2-acre site with 50-meter distances to receptors in Central LA County source receptor area. Modeling included in Appendix B of this Final EIR.						

Comment No. B11-29

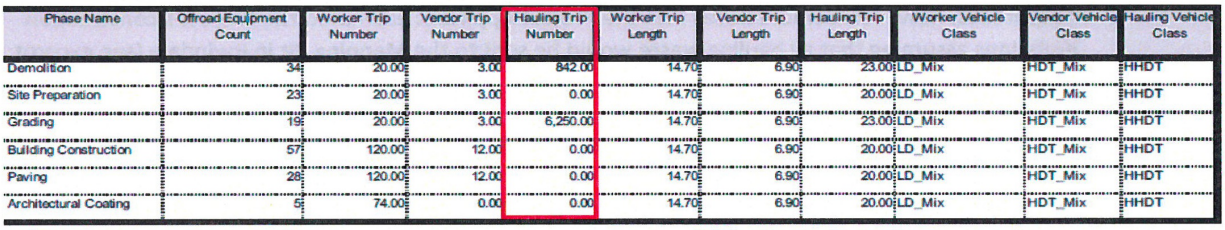
Failure to Account for All Hauling Truck Trips During Construction

According to the DEIR, hauling truck trips are anticipated to occur throughout the entirety of Project construction. The DEIR states,

> "A Haul Route program will be required as part of the City's permitting process. Hauling activity is expected to occur during all phases of the Project. Up to 140 haul trucks per day are anticipated on peak haul days" (p. 2-6).

However, review of the DEIR and the CalEEMod output files demonstrates that the only phases that included hauling truck trips were the demolition and grading phases of construction (see excerpt below) (Appendix E-1, pp. 38, pp. 71, pp. 107).

Trips and VMT



Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	34	20.00	3.00	842.00	14.70	6.90	23.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	23	20.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	19	20.00	3.00	6,250.00	14.70	6.90	23.00	LD_Mix	HDT_Mix	HHDT
Building Construction	57	120.00	12.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	28	120.00	12.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	5	74.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Since the DEIR expressly states that hauling activity "is expected to occur during all phases of the Project", the Project's emissions should have been estimated assuming that hauling trips would occur during all six phases of construction in order to adequately evaluate the air quality impacts resulting from construction activities. By failing to model any hauling trips during the Site Preparation, Building Construction, Paving, and Architectural Coating phases, the Project Applicant greatly underestimates the Project's emissions. As a result, the Project's CalEEMod modeling is completely incorrect and should not be used to determine Project significance. An updated air pollution model must be prepared prior to Project approval in order to adequately evaluate the emissions that will be generated from the additional hauling trips during construction.[6] Without the findings of such an assessment, the Project should not be approved.

Response to Comment No. B11-29

Haul activities would occur during any removal of on-site debris and material and that would exported off-site or imported on-site. As such, haul activities would occur during the demolition and removal of existing improvements from the Project Site, as well as the export of 50,000 cubic yards of soil during the grading phase. Besides the demolition and grading phases, no substantive hauling of material is expected. Because air quality impacts during construction are evaluated in large part on daily estimates of emissions, the assessment of grading and demolition activities would represent the worst-case scenario for off-site haul-related emissions (e.g., 6,250 haul trips during Project grading).

Nevertheless, up to five daily haul trips for each of the other phases (i.e., site preparation, construction, grading) were included in the assessment of construction emissions to supplement the core analysis of haul emissions during the demolition and grading phases. As seen in the Response to Comment No. B11-28, this and other refinements to the modeling do not change the significance of construction-related emissions.

[6] We were unable to estimate the criteria air pollutant emissions that would result from the additional hauling truck trips during each phase of construction because the DEIR fails to disclose what these hauling truck trips will be used for or how many trips per day or how many hauling trips over the entire construction period are expected to occur.

Comment No. B11-30

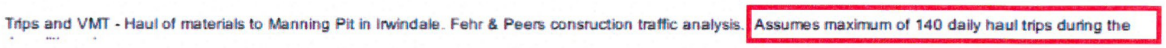
Inconsistent Grading Hauling Truck Trip Estimates Provided Throughout DEIR

As noted in the previous section, the DEIR definitively states that "up to 140 haul trucks per day are anticipated on peak haul days" (p. 2-6). However, the DEIR also states the following:

> "Grading activities would necessitate up to approximately 175 haul trips per workday to export excavated soils from the Project site to a regional landfill" (p. 4.1-14).

Thus, the DEIR provides two different estimations of how many hauling truck trips are expected to occur during the grading phase of construction. According to the DEIR the grading phase will occur over a 66-day duration (Appendix E-1, pp. 104). Thus, the total number of hauling truck trips expected to occur over the 66-day grading phase of construction, assuming a total of either 140 or 175 hauling truck trips would be 9,240[7] or 11,550[8] hauling trips. Thus, the DEIR's estimation of 175 hauling truck trips per day results in approximately 1.25 times more hauling truck trips than the 140 truck trips per day estimation.

According to the "User Entered Comments & Non-Default Data" table, the Project Applicant assumed a maximum of 140 daily hauling trips (see excerpt below) (Appendix E-1, pp. 27, 59, 96).



Relying on the 140 daily hauling trips estimation potentially underestimates the construction emissions generated during the grading phase by 35 daily truck trips, or approximately 2,310 hauling trips in total. Since the DEIR provides two different daily hauling truck trip estimates, the higher estimation should have been used to estimate Project emissions in order to provide the most conservative analysis.

Response to Comment No. B11-30

The Draft EIR has one reference to 175 haul trips per workday in Section 4.I, Noise, which was a citation that did not affect the analysis of haul-related noise impacts. This reference should be 140 haul trips, as noted elsewhere in the analysis. Regardless, the typo does not affect the noise analysis of off-site impacts or the significance determination for construction impacts.

---

7 140 hauling trips per day x 66 days = 9,240 total grading hauling trips.

8 175 hauling trips per day x 66 days = 11,550 total grading hauling trips.

The Draft EIR notes a maximum of up to 140 haul truck trips per day, but this activity would not be the maximum daily activity during Phases 1-3 (i.e., demolition, site preparation, and grading phases). However, this would not be haul tripmaking for each of the 66 days of grading, for example. Rather, as noted in the Response to Comment No. B11-31, below, the 6,250 total haul trips are distributed over the 66-day grading phase (an average of 95 haul trips daily), peaking with up to 140 haul trips during the grading phase. Meanwhile, per the Response to Comment No. B11-29, up to five daily haul trips for each of the other phases (i.e., site preparation, construction, grading) were included in the assessment of construction emissions.

Comment No. B11-31

Construction Emissions from Grading Hauling Truck Trips Actually Estimated Using CalEEMod Default Trip Estimates

Not only does the Project Applicant provide two separate estimations of the number of hauling truck trips that are expected to occur during the grading phase of construction, but the Project Applicant inexplicably models the emissions resulting from grading activity using neither the 140 or the 175 hauling truck trips per day estimation. Instead, the Project Applicant relies on CalEEMod default estimations to calculate the mobile-source emissions that will be generated during grading activities. While providing two different hauling truck trip estimations is incorrect, the Project Applicant's reliance on CalEEMod default values, when more Project-specific information is available, is erroneous and calls into question the validity of any of the hauling truck trips estimations provided within the Cal EE Mod modeling. It is critical that an updated analysis is prepared in order to adequately evaluate the Project's air quality impacts.

According to the CalEEMod output files, the Project Applicant assumes that 50,000 cubic yards of grading soil and material will be exported during the grading phase of construction (Appendix E-1, pp. 29, pp. 61, pp. 98). As previously mentioned, CalEEMod provides recommended default values based on site specific information.[9] Therefore, based on this input, the CalEEMod model generated an estimated number of grading hauling trips required to haul the 50,000 cubic yards of grading material and soil off the site. According to the CalEEMod output files, the CalEEMod assumed that the Project would require a total of 6,250 grading hauling trips over the grading phase of construction (see excerpt below)

(Appendix E-1, pp. 38, pp. 71, pp. 107).
Trips and VMT

[9] CalEEMod User Guide, p. 1, 11, available at: http://www.caleemod.com/

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number
Demolition	34	20.00	3.00	842.00
Site Preparation	23	20.00	3.00	0.00
Grading	19	20.00	3.00	6,250.00
Building Construction	57	120.00	12.00	0.00
Paving	26	120.00	12.00	0.00
Architectural Coating	5	74.00	0.00	0.00

However, the CalEEMod User's Guide also states that if more project specific information is known, the user can change these default values and input project-specific values.[10] Therefore, the use of the default value to estimate Project emissions is completely incorrect, as the DEIR provides project-specific values. As a result, the emissions resulting from approximately 5,300[11] grading hauling truck trips are unaccounted for, resulting in an underestimation of the Project's construction-related emissions.

Response to Comment No. B11-31

The Draft EIR does not estimate 11,550 haul truck trips during the grading phase. Instead, the Draft EIR assumes that the 50,000 cubic yards of soil will be hauled off-site with 6,250 haul trips. This is based on a conservative assumption that each haul truck will have the capacity of 8 cubic yards. Because most contractors use haul trucks with more capacity, the Draft EIR conservatively overestimates potential haul-related emissions. For example, if 10 cubic-yard haul trucks are used, grading activities would require 20 percent fewer trucks, with concomitant reductions in emissions from hauling.

The Draft EIR notes a maximum of up to 140 haul truck trips per day, but this level of hauling activity would not occur during the entirety of Phases 1-3 (i.e., demolition, site preparation, and grading phases). Rather, as noted in the Response to Comment No. B11-30, the 6,250 total haul trips are distributed over the 66-day grading phase (an average of 95 haul trips daily), peaking with up to 140 haul trips during the grading phase. Meanwhile, per the Response to Comment No. B11-29, up to five daily haul trips for each of the other phases (i.e., site preparation, construction, grading) were included in the assessment of construction emissions. As seen in the Response to

[10] CalEEMod User Guide, p. 1, 11, available at: http://www.caleemod.com/

[11] 11,550 grading hauling truck trips (DEIR's estimate) – 6,250 grading hauling truck trips (CalEEMod default) = 5,300 grading hauling trips unaccounted for.

Comment No. B11-28, this and other refinements to the modeling do not change the significance of construction-related emissions.

Comment No. B11-32

Incorrectly Applied Mitigation Measure to Construction Emissions

The DEIR's air quality analysis concludes that Project construction activities would generate 167 pounds per day (lbs/day) of NOx emissions, which exceeds the South Coast Air Quality Management District's (SCAQMD) significance threshold of 100 lbs/day (Table 4.C-8, pp. 125). In order to reduce construction emissions to less than significant levels, the Project Applicant proposes mitigation (p. 4.C-23). According to Mitigation Measure C-1 ("MM C-1"),

> "All off-road construction equipment greater than 50 hp shall meet USEPA Tier 4 emission standards to reduce NOx and PM2.5 emissions at the Project Site" (p. 4.C-23).

Review of the construction CalEEMod output files demonstrates that these emissions were modeled assuming that all 198 pieces of off-road construction equipment used throughout Project construction would be equipped with Tier 4 Final engines (Appendix E-1, pp. 27-28, pp. 60-61, pp. 97-98). This is incorrect for several reasons: (1) it is unclear if the Project Applicant intends to use Tier 4 Final or Tier 4 Interim equipment as a result of MM C-1; and (2) the Project Applicant incorrectly estimates the Project's construction-related emissions assuming that all pieces of off-road construction equipment will be equipped with Tier 4 Final engines. The Project Applicant's use of Tier 4 Final equipment, when the use of this equipment is not clearly defined within MM C-1, and application of this mitigation to all pieces of construction equipment, when the mitigation measure specifically states that MM C-1 only applies to "equipment greater than 5O hp is entirely incorrect. This inappropriate and incorrect application of MM C-1 results in an artificial reduction of the Project's construction-related criteria air pollutant emissions and as such, the emissions estimates provided by the DEIR's CalEEMod model should not be relied upon to determine significance.

Response to Comment No. B11-32

The application of Tier IV engine assumptions for equipment with less than 50 hp of horsepower makes no substantive difference in the analysis of emissions impacts and no difference to the determination of significance. The analysis assumes nominal numbers of dumpers/tenders (rated at 16 hp), signal boards (rated at 6 hp), sweepers/scrubbers (6 hp), cement and mortar mixers (9 hp), plate compactors (8 hp), and pressure washers (13 hp). Their horsepower rating and load factor produces emissions that are minimal; as such, the application of mitigation measures for this equipment have a negligible reduction in air quality emissions.[12]

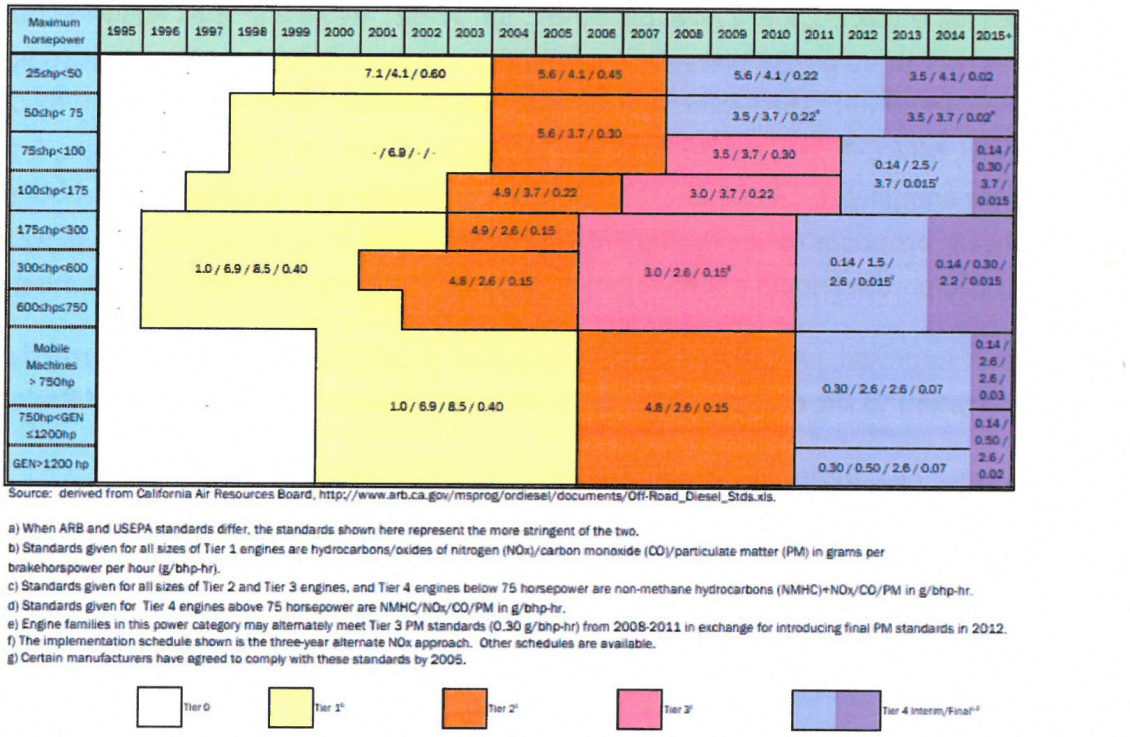
[12] U.S. EPA standards for Tier IV engines included an interim phase to allow manufacturers of many engine classes to transition to the ultimate Tier IV final standards. As such, the allowed transitional

To confirm this, the use of Tier IV engines was not assumed for those equipment types that are rated at less than 50 horsepower. As seen in the Response to Comment No. B11-28, this and other refinements to the modeling do not change the significance of construction-related emissions.

Comment No. B11-33

Unsubstantiated Application of Tier 4 Final Mitigation When Estimating Construction Emissions

The United States Environmental Protection Agency (U.S. EPA) has slowly adopted more stringent standards to lower the emissions from off-road construction equipment since 1994. Since that time, Tier 1, Tier 2, Tier 3, Tier 4 Interim, and Tier 4 Final construction equipment has been phased in over time. Tier 4 Final represents the cleanest burning equipment and therefore has the lowest emissions compared to other tiers, including Tier 4 Interim equipment (see excerpt below):[13]



Source: derived from California Air Resources Board, http://www.arb.ca.gov/msprog/ordiesel/documents/Off-Road_Diesel_Stds.xls.

a) When ARB and USEPA standards differ, the standards shown here represent the more stringent of the two.
b) Standards given for all sizes of Tier 1 engines are hydrocarbons/oxides of nitrogen (NOx)/carbon monoxide (CO)/particulate matter (PM) in grams per brakehorspower per hour (g/bhp-hr).
c) Standards given for all sizes of Tier 2 and Tier 3 engines, and Tier 4 engines below 75 horsepower are non-methane hydrocarbons (NMHC)+NOx/CO/PM in g/bhp-hr.
d) Standards given for Tier 4 engines above 75 horsepower are NMHC/NOx/CO/PM in g/bhp-hr.
e) Engine families in this power category may alternately meet Tier 3 PM standards (0.30 g/bhp-hr) from 2008-2011 in exchange for introducing final PM standards in 2012.
f) The implementation schedule shown is the three-year alternate NOx approach. Other schedules are available.
g) Certain manufacturers have agreed to comply with these standards by 2005.

---

certification rates for hydrocarbons, NOx, and PM for anywhere from three to five years before the final standards were required.

[13] San Francisco Clean Construction Ordinance Implementation Guide for San Francisco Public Projects." August 2015, available at: *https://www.sfdph.org/dph/files/EHSdocs/AirQuality/San_Francisoc_Clean_Construction_Ordinance_2015.pdf, p. 6.*

As demonstrated in the figure above, Tier 4 Final equipment has lower emissions than Tier 4 Interim equipment. Therefore, since MM C-1 fails to specify if the Project will use Tier 4 Interim or Tier 4 Final equipment, it is incorrect to model emissions assuming that the entire construction fleet will be Tier 4 Final equipment. The Project Applicant cannot simply apply Tier 4 Final mitigation to all pieces of construction equipment and garner the emissions reductions associated with use of this equipment to determine significance. Until it is expressly stated within an EIR that the Project will specifically obtain Tier 4 Final equipment for off-road construction equipment, the Project's potential impacts should not be evaluated assuming use of this cleaner burning equipment.

Response to Comment No. B11-33

Tier 4 engines are the culmination of 18 years of phasing in of increasingly stringent emissions standards by US EPA. Tier 4 engines have been phased in nationwide since 2008 for all engine types. While some manufacturers were given limited flexibility to phase in compliant engines under the Transition Program for Equipment Manufacturers (TPEM), this provided up to seven years of additional time to offer such equipment. For engines less than 56 horsepower (hp), this TPEM period ended at the end of 2014. Engines between 56-130 hp had until the end of 2018, while larger engines of 130 hp or more ended at the end of 2017. As a result, Tier 4 equipment is commercially available from all manufacturers, especially for common types of equipment to be used during the construction phases for this Project. In the unlikely event contractors are not able to secure acceptable equipment, they are able to work with the City's Building and Safety Department on equivalent alternatives that minimize tailpipe emissions from off-road equipment. Mitigation Measure C-1 confirms that any emissions control devices shall achieve appropriate performance standards. As such, this mitigation measure is a technically-feasible measure.

Comment No. B11-34

Incorrectly Applies Mitigation Measure MM C-1 to All Off-Road Construction Equipment

Regardless of the fact that the Project Applicant incorrectly assumes use of Tier 4 Final engines during construction, review of the CalEEMod output files demonstrates that the Project Applicant estimated emissions assuming that all pieces of off-road construction equipment would be equipped with Tier 4 Final engines, including pieces of equipment that are less than 50 horsepower (hp). As a result, construction emissions are significantly underestimated.

MM C-1 clearly states that the mitigation measure only applies to construction equipment above 50 hp. Therefore, construction equipment with engines less than 50 hp are not required to meet Tier 4 emission standards per MM C-1. As previously mentioned, the Project Applicant models emissions assuming that all of the 198 pieces of proposed construction equipment will be equipped with Tier 4 Final engines (Appendix E-1, pp. 27-28, pp. 60-61, pp. 97-98). Review of the CalEEMod output files demonstrates that there are 59 pieces of construction equipment that are less than 50 hp within the list of construction equipment the Project proposes to use (Appendix E-1, pp. 35-38, pp. 68-70, pp. 104-107). Therefore, MM C-1 does not apply to the 12 signal

boards, 16 dumpers/tenders, 1 pressure washer, 1 plate compacter, 14 cement mortar/mixers, 9 welders, or 6 sweepers/scrubbers that the Project Applicant proposes to use during Project construction. As a result, these 59 pieces of construction equipment should not have been modeled assuming any sort of Tier 4 mitigation.

Prior to Project Approval, an updated CalEEMod model should be prepared that correctly applies the proposed mitigation to the correct pieces of construction equipment in an updated Project-specific EIR.

Response to Comment No. B11-34

As noted in the Response to Comment No. B11-32, the application of Tier 4 engine assumptions for equipment with less than 50 hp of horsepower makes no substantive difference in the analysis of emissions impacts and no difference to the determination of significance. The horsepower rating for these limited pieces of equipment and load factor produces emissions that are minimal; as such, the application of mitigation measures for this equipment have a negligible reduction in air quality emissions.

To confirm this, the use of Tier 4 engines was not assumed for those equipment types that are rated at less than 50 horsepower. As seen in the Response to Comment No. B11-28, this and other refinements to the modeling do not change the significance of construction-related emissions.

Comment No. B11-35

Failure to Assess Feasibility of Obtaining Tier 4 Final Equipment

Finally, regardless of the fact that the Project Applicant incorrectly applies MM C-1 to the Project's emissions, the DEIR first fails to assess the feasibility of obtaining a large quantity of Tier 4 equipment for Project construction. Due to the limited number of Tier 4 construction equipment available, the DEIR should have assessed the feasibility in obtaining construction equipment equipped with Tier 4 engines. By failing to demonstrate how the Project will actually comply with this mitigation measure, this measure is unenforceable and thus, the Project Applicant cannot claim the emissions reductions from this measure. The U.S. EPA's 1998 nonroad engine emission standards were structured as a three-tiered progression. Tier 1 standards were phased-in from 1996 to 2000 and Tier 2 emission standards were phased in from 2001 to 2006. Tier 3 standards, which applied to engines from 37-560 kilowatts (kW) only, were phased in from 2006 to 2008. The Tier 4 emission standards were introduced in 2004 and were phased in from 2008 to 2015.[14] These tiered emission standards, however, are only applicable to newly manufactured non-road equipment. According to the U.S. EPA, "if products were built before EPA emission standards started to apply, they are generally

[14] Emissions Standards, Nonroad Diesel Engines, available at: https://www.dieselnet.com/standards/us/nonroad.php#tier3

not affected by the standards or other regulatory requirements."[15] Therefore, pieces of equipment manufactured prior to 2000 are not required to adhere to Tier 2 emission standards, and pieces of equipment manufactured prior to 2006 are not required to adhere to Tier 3 emission standards. Construction equipment often lasts more than 30 years; as a result, Tier 1 equipment and non-certified equipment are currently still in use.[16] It is estimated that of the two million diesel engines currently used in construction, 31 percent were manufactured before the introduction of emissions regulations.[17]

Although Tier 4 engines are currently being produced and installed in new off-road construction equipment, the vast majority of existing diesel off-road construction equipment in California is not equipped with Tier 4 engines.[18] In a 2010 white paper, the California Industry Air Quality Coalition estimated that approximately 7% and less than 1% of all off-road heavy duty diesel equipment in California was equipped with Tier 2 and Tier 3 engines, respectively.[19] Similarly, based on information and data provided in the San Francisco Clean Construction Ordinance Implementation Guide for San Francisco Public Projects, the availability of Tier 3 equipment is extremely limited. In 2014, 25% of all off-road equipment in the state of California were equipped with Tier 2 engines, approximately 12% were equipped with Tier 3 engines, approximately 18% were equipped with Tier 4 Interim engines, and only 4% were equipped with Tier 4 Final engines (see excerpt below).[20]

---

[15] "Frequently Asked Questions from Owners and Operators of Nonroad Engines, Vehicles, and Equipment Certified to EPA Standards." United States Environmental Protection Agency, August 2012. Available at: *http://www.epa.gov/oms/highway-diesel/regs/420f12053.pdf*

[16] "Best Practices for Clean Diesel Construction." Northeast Diesel Collaborative, August 2012. Available at: *http://northeastdiesel.org/pdf/BestPractices4CleanDieselConstructionAug2012.pef*

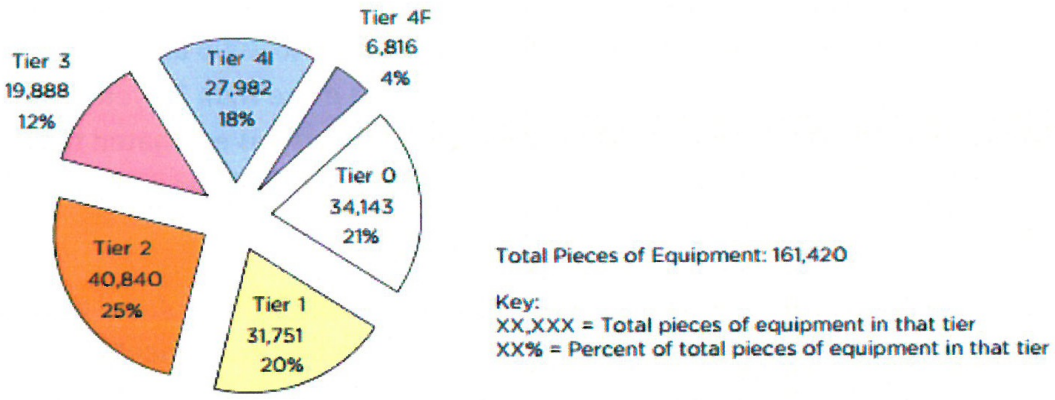
[17] Northeast Diesel Collaborative Clean Construction Workgroup, available at: *http://northeastdiesel/org/construction.html*

[18] California Industry Air Quality Coalition White Paper, p. 3, available at: *http://www.agc-ca.org/uploadedFiles/Member_Services/Regulatory-Advocacy-Page-PDFs/White_Paper_CARB_OffRoad.pef*

[19] "White Paper: An Industry Perspective on the California Air Resources Board Proposed Off-Road Diesel Regulations." Construction Industry Air Quality Coalition, available at: *http://www.agc-ca.org/uploadedFiles/Member_Services/Regulatory-Advocacy-Page-PDFs/White_Paper_CARB_OffRoad.pdf*

[20] "San Francisco Clean Construction Ordinance Implementation Guide for San Francisco Public Projects." August 2015, available at: *https://www.sfdph.org/dph/files/EHSdocs/AirQuality/San_Francisco_Clean_Construction_Ordinance_2015.pdf, p. 6.*

Figure 4: 2014 Statewide All Fleet Sizes (Pieces of Equipment)



As demonstrated in the figure above, Tier 4 Interim and Tier 4 Final equipment only accounts for 18% and 4%, respectively, of all off-road equipment currently available in the state of California. Thus, by stating that the Project proposes to use Tier 4 equipment during construction, the DEIR's analysis is relying on a fleet of construction equipment that only accounts for 22% of all off-road equipment currently available in the state of California. Therefore, by failing to evaluate the feasibility of implementing Tier 4 mitigation into the Project's construction phases, the Project's construction emissions are unverified. Thus, the significance determination made within the Air Quality analysis should not be relied upon to determine Project significance.

Response to Comment No. B11-35

As noted in the Response to Comment No. B11-33, Tier 4 engines have been phased in nationwide since 2008 for all engine types. While some manufacturers were given limited flexibility to phase in compliant engines under the Transition Program for Equipment Manufacturers (TPEM), this provided up to seven years of additional time to offer such equipment. For engines less than 56 horsepower (hp), this TPEM period ended at the end of 2014. Engines between 56 and 130 hp had until the end of 2018, while larger engines of 130 hp or more ended at the end of 2017. As a result, Tier 4 equipment is commercially available from all manufacturers, especially for common types of equipment to be sued during the construction phases for this Project. In the unlikely event contractors are not able to secure acceptable equipment, they are able to work with the City's Building and Safety Department on equivalent alternatives that minimize tailpipe emissions from off-road equipment. Mitigation Measure C-1 confirms that any emissions control devices shall achieve appropriate performance standards. While product availability from contractors may be As such, this mitigation measure is a technically-feasible measure.

Comment No. B11-36

Updated Analysis Indicates Significant Criteria Air Pollutant Emissions

In an effort to more accurately determine the Project's emissions, we prepared two updated CalEEMod models, using the most recent CalEEMod version, CalEEMod.2016.3.2. Our first model estimated the existing emissions generated by the south building that will be demolished in order to construct the proposed Project. We included the 2,000 square foot high-turnover restaurant and assumed that the restaurant would generate approximately 150 vehicle trips per day based on the TIA (Table 4, TIA, pp. 25).

Our second model estimates the emissions from the proposed Project. In this model, we inputted a total of 11,550 grading hauling trips in order to reflect the DEIR's assertion that there will be 175 grading trips per day (p. 4.1-14). In addition, we corrected the hauling trip length for demolition and construction. As previously stated, the DEIR states that the hauling trucks will either be directed to Chiquita Canyon Landfill or Manning Pit, located 40 miles and 23 miles away from the Project site, respectively. We assumed that half the hauling trucks will go to Chiquita Canyon Landfill and half will go to Manning Pit. In order to account for this, we used the average trip length of 31.5 miles[21] to estimate emissions. Furthermore, in an updated model, we did not include the Tier 4 Final mitigation, as the Project Applicant fails to assess the feasibility in obtaining this equipment. However, we did prepare the model assuming that construction equipment above 50 hp would be equipped with Tier 4 Interim engines in order to demonstrate that MM C-1 would not be sufficient in reducing emissions to a less than significant level. Finally, we modeled the operational vehicle trips with the adjusted trip rates to match the subtotals for each land use and used the default trip rate for the 63,785 square foot flower market.[22]

When correct input parameters are used to model emissions, we find that the Project's mitigated construction-related NOx emissions exceed the 100 lbs/day threshold set forth by the SCAQMD (see table below).[23]

---

[21] (40 miles + 23 miles) / 2 = 31.5 miles

[22] Our updated CalEEMod modeling for the Project's proposed land uses estimated a daily trip rate of 3,277 for the office, residences, retail/restaurant, and event space, which is consistent with the estimation provided within the TIA (Table 4). We also modeled and estimated that the proposed new flower market would generate 107 daily operational vehicle trips, based on CalEEMod defaults. In total, we modeled emissions assuming a total of 3,384 operational vehicle trips per day. Our updated CalEEMod modeling for the existing land uses includes the 311 vehicle trips from the existing flower market and the 150 vehicle trips from the existing restaurant (Appendix E-1, pp. 21; TIA, pp. 25). Therefore, when we calculate the net operational emissions, the emissions resulting from the existing flower market (311 trips) and existing restaurant (150 trips) are subtracted from the proposed Project's operational emissions. Thus, our modeling is consistent with the TIA.

[23] It should be noted that the SWAPE model's construction emissions are most likely underestimated for several reasons. First, the DEIR's CalEEMod model included 33 pieces of construction equipment without an assigned phase of construction (Appendix E-1, pp. 35). It is unclear if these pieces of equipment will be used throughout every phase of construction or if this was a glitch in the model. Since CalEEMod does not allow a user to enter a piece of construction equipment without an

Mitigated Maximum Daily Construction Emissions (lbs/day)	
Model	**NOx**
DEIR	40
SWAPE	120
Percent Difference	***200%***
SCAQMD Regional Threshold	**100**
Exceed?	***Yes***

As demonstrated in the table above, when correct, site-specific input parameters are used to model emissions, we find that the Project's mitigated construction-related NOx emissions exceed the threshold set forth by the SCAQMD. Therefore, the mitigation recommended by the Project Applicant is not sufficient in reducing emissions below significant thresholds.

Additionally, we find that during Project operation, ROG emissions exceed the 55 lbs/day threshold set forth by the SCAQMD (see table below).

Maximum Daily Operational Emissions (lbs/day)	
Model	**ROG**
DEIR	
Proposed Project	22
Existing Operations	4
Net Total	**19**
SWAPE	
Proposed Project	96
Existing Operations	5
Net Total	**91**
Percent Difference	**379%**
SCAQMD Regional Threshold	**55**
Exceed?	***Yes***

As demonstrated in the table above, when correct, site-specific input parameters are used to model emissions, operational-related ROG would exceed SCAQMD thresholds, resulting in a significant impact that was previously unidentified in the DEIR and associated attachments.

These updated emission estimates demonstrate that when the Project's construction and operational emissions are estimated correctly, the Project would result in a significant construction-related impact, even with implementation of proposed mitigation, and would result in a significant operational air quality impact that was not

---

associated phase of construction, we were unable to account for the emissions resulting from these 33 pieces of equipment. Second, as stated in this letter, the DEIR states that hauling trips will occur during each phase of construction. The DEIR fails to state how many hauling trips each phase of construction will have. Therefore, due to the lack of clarity provided in the DEIR, we were unable to model the hauling trips the Project will require during the Site Preparation, Building Construction, Paving, and Architectural Coating phases of construction. Therefore, our construction emissions are most likely underestimated.

previously identified in the DEIR. As a result, a project-specific EIR should be prepared that includes an updated air pollution model to adequately estimate the Project's emissions, and additional mitigation measures should be identified and incorporated to reduce these emissions to a less-than-significant level.

Response to Comment No. B11-36

As noted in the Responses to Comment Nos. B11-27 through B11-35, the Draft EIR and additional technical modeling contained as part of this appendix bases its emissions estimates for construction and operations phases on Project-specific and conservative activity data and provides a substantive justification for its findings of significance. As discussed in Response to Comment No. B11-28, assuming that all hauling would be sent to a more distant landfill than the closest available facility was speculative and there was no basis for assuming this. The alternative estimate of construction emissions is based on a misinterpretation of the Draft EIR's analysis and underlying activity data.

Comment No. B11-37

Diesel Particulate Health Risk Emissions Inadequately Evaluated

The DEIR concludes that the proposed Project "would not result in any substantial emissions of toxic air contaminants (TACs) during the construction or operations phase" without conducting a construction or operational health risk assessment (HRA) (p. 4.C-20). The DEIR attempts to justify this determination by stating,

> "The Project would not result in any substantial emissions of toxic air contaminants (TACs) during the construction or operations phase. During the construction phase, the primary air quality impacts would be associated with the combustion of diesel fuels, which produce exhaust-related particulate matter that is considered a toxic air contaminant by CARB based on chronic exposure to these emissions. However, construction activities would not produce chronic, long-term exposure to diesel particulate matter" (p. 4.C-20).

The DEIR goes on to state,

> "During long-term project operations, the Project does not include typical sources of acutely and chronically hazardous TACs such as industrial manufacturing processes and automotive repair facilities ... Based on the limited activity of TAC sources, the Project would not warrant the need for a health risk assessment associated with on-site activities. Therefore, Project impacts related to TACs would be less than significant" (p. 4.C-20).

This justification for failing to conduct a quantified construction and operational HRA, however, is incorrect for several reasons.

First, simply stating that "construction activities would not produce chronic, long-term exposure to diesel particulate matter" does not justify the omission of a construction HRA. According to the SCAQMD, it is recommended that health risk impacts from short-term projects also be assessed. The Guidance document states,

"Since these short-term calculations are only meant for projects with limits on the operating duration, these short-term cancer risk assessments can be thought of as being the equivalent to a 30-year cancer risk estimate and the appropriate thresholds would still apply (i.e. for a 5-year project, the maximum emissions during the 5-year period would be assessed on the more sensitive population, from the third trimester to age 5, after which the project's emissions would drop to 0 for the remaining 25 years to get the 30-year equivalent cancer risk estimate)".[24]

Thus, a health risk assessment is required to determine whether or not a Project would expose sensitive receptors to substantial air pollutants, regardless if construction would not create a "long-term exposure" to sensitive receptors. The DEIR should have conducted some sort of quantitative analysis and should have compared the results of this analysis to applicable thresholds. The SCAQMD provides a specific numerical threshold of 10 in one million for determining a project's health risk impact.[25] Therefore, the DEIR should have conducted an assessment that compares the Project's construction and operational health risks to this threshold in order to determine the Project's health risk impact. By failing to prepare a health risk assessment, the DEIR fails to provide a comprehensive analysis of the sensitive receptor impacts that may occur as a result of exposure to substantial air pollutants.

Second, stating that "the Project does not include typical sources of acutely and chronically hazardous TACs such as industrial manufacturing processes and automotive repair facilities" does not mean that an HRA for the proposed Project is not needed. Although the SCAQMD recommends performing a mobile source health risk assessment from mobile sources at truck stop or warehouse distribution facilities, the SCAQMD does not restrict the preparation of an HRA to just industrial projects.[26] The SCAQMD does not state that the preparation of an HRA should be restricted to industrial or automotive repair land uses, nor does it state that residential and commercial projects are exempt from this recommendation.[27] Seeing as Project construction is expected to occur over a 36-month period (p. 2-6), it is reasonable to assume that a significant amount of diesel particulate matter (DPM), a known human carcinogen, will be emitted from the exhaust stacks of construction equipment the Project proposes to use (Appendix E-1, pp. 35-38 pp. 68-71, pp. 104-107). Additionally, according to the Project's TIA, the Project will generate approximately 3,277 net vehicle trips a day during operation, all of which would emit substantial amounts of DPM during operation, potentially exposing nearby

---

[24] http://www.aqmd.gov/docs/default-source/planning/risk assessment/riskassprocjune15.pdf?sfvrsn=2, p. IX-2

[25] http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2

[26] "Mobile Source Toxics Analysis." SCAQMD, available at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis

[27] Ibid.

sensitive receptors to substantial air pollutants (Table 4, Appendix K-1, pp. 25). As such, the DEIR should have conducted a construction and operational HRA, as long term exposure to DPM and other toxic air contaminants (TACs) may result in a significant health risk impact.

Third, the omission of a quantified health risk is inconsistent with the most recent guidance published by Office of Environmental Health Hazard Assessment (OEHHA), the organization responsible for providing recommendations and guidance on how to conduct health risk assessments in California. In February of 2015, OEHHA released its most recent Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments, which was formally adopted in March of 2015.[28] This guidance document describes the types of projects that warrant the preparation of an HRA. Construction of the Project's proposed land uses will require the use of off-road equipment and heavy-duty on-road hauling trucks, which both emit diesel particulate matter (DPM) emissions, a known human carcinogen (p. 4.C-17, p. 2-6). The OEHHA document recommends that all short-term projects lasting at least two months be evaluated for cancer risks to nearby sensitive receptors.[29] Once construction is complete, Project operation will generate truck trips, which will generate additional exhaust emissions, thus continuing to expose nearby sensitive receptors to DPM emissions. The OEHHA document recommends that exposure from projects lasting more than 6 months should be evaluated for the duration of the project, and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident (MEIR).[30] Even though we were not provided with the expected lifetime of the Project, we can reasonably assume that the Project will operate for at least 30 years, if not more. Therefore, per OEHHA guidelines, health risk impacts from Project construction and operation should have been evaluated by the DEIR. These recommendations reflect the most recent HRA policy, and as such, an assessment of health risks to nearby sensitive receptors from construction and operation should be included in a revised CEQA evaluation for the Project.

By failing to prepare an HRA, the DEIR fails to provide a comprehensive analysis of the sensitive receptor impacts that may occur as a result of exposure to the Project's potentially substantial air pollutant emissions. It is critical that an HRA for the proposed Project be prepared, since there is a residential sensitive receptor located only 240 feet from the Project site (Table 4.1-6, p. 4.1-14).

---

[28] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

[29] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-18

[30] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-6, 8-15

In order to conduct our screening-level risk assessment we relied upon AERSCREEN, which is a screening-level air quality dispersion model.[31] The model replaced SCREEN3, and AERSCREEN is included in the OEHHA[32] and the California Air Pollution Control Officers Associated (CAPCOA)[33] guidance as the appropriate air dispersion model for Level 2 health risk screening assessments ("HRSAs"). A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project.

We prepared a preliminary health risk screening assessment of the Project's construction and operational impacts to sensitive receptors using the annual estimates from SWAPE's updated air model. As previously stated, the DEIR states that the closest sensitive receptor to the Project is located within 240 feet, or approximately 73 meters of the Project site at (Table 4.1-6, p. 4.1-14). Consistent with recommendations set forth by OEHHA, we used a residential exposure duration of 30 years, starting from the third trimester of pregnancy. We also assumed that construction and operation of the Project would occur sequentially, with no gaps between each Project phase. SWAPE's CalEEMod model's mitigated annual emissions indicate that construction activities will generate approximately 441 pounds of DPM over a 1,070-day (36 month) construction period. The AERSCREEN model relies on a continuous average emissions rate to simulate maximum downwind concentrations from point, area, and volume emissions sources. To account for the variability in construction equipment usage over the many phases of Project construction, we calculated an average DPM emission rate for construction by the following equation.

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{441\ lbs}{1{,}070\ days} \times \frac{453.6\ grams}{lb} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} \approx \mathbf{0.002163}\ {}^{g}/_{s}$$

Subtracting the 1,070-day construction duration from the total residential exposure duration of 30 years, we assumed that after Project construction, the MEIR would be exposed to the Project's operational DPM emissions for an additional 27.1 years (9,880 days). The net emissions from SWAPE's existing and proposed CalEEMod models' annual emissions indicate that operational activities will generate approximately 437 pounds of

---

[31] "AERSCREEN Released as the EPA Recommended Screening Model," USEPA, April 11, 2011, available at: http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf

[32] *"Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf*

[33] "Health Risk Assessments for Proposed Land Use Projects," CAPCOA, July 2009, available at: http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf

DPM per year, or approximately 159,432 pounds of DPM over a 27.1-year operational period. Applying the same equation used to estimate the construction DPM emission rate, we estimated the following emission rate for Project operation.

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{437\ lbs}{365\ days} \times \frac{453.6\ grams}{lb} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} \approx \mathbf{0.006283}\ {}^{g}/_{s}$$

Construction and operational activity was simulated as a 3.87-acre rectangular area source in AERSCREEN, with dimensions of 178 meters by 88 meters. A release height of three meters was selected to represent the height of exhaust stacks on construction equipment and other heavy-duty vehicles, and an initial vertical dimension of one and a half meters was used to simulate instantaneous plume dispersion upon release. An urban meteorological setting was selected with model-default inputs for wind speed and direction distribution.

The AERSCREEN model generates maximum reasonable estimates of single-hour DPM concentrations from the Project site. EPA guidance suggests that in screening procedures, the annualized average concentration of an air pollutant be estimated by multiplying the single-hour concentration by 10%.[34] There are residences located approximately 75 meters away from the Project boundary. The single-hour concentration estimated by AERSCREEN for Project construction is approximately 3.715 µg/m3 DPM at approximately 75 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.3715 µg/m3 for construction. For Project operation, the single-hour concentration in AERSCREEN is approximately 10.79 µg/m3 DPM at approximately 75 meters downwind. Again, multiplying this single-hour concentration by 10%, we get an annualized average concentration of 1.079 µg/m3 for operation.

We calculated the excess cancer risk to the residential receptors located closest to the Project site using applicable HRA methodologies prescribed by OEHHA. Consistent with the construction schedule proposed by the DEIR, the annualized average concentration for construction was used for the entire 3rd trimester of pregnancy (0.25 years), the infantile stage of life (0 to 2 years), and the beginning of the child stage of life (2 to 16 years). The annualized average concentration for operation was used for the remainder of the 30-year exposure period, which makes up the remainder the child stages of life (2 to 16 years) and adult stages of life (16 to 30 years). Consistent with OEHHA guidance, we used Age Sensitivity Factors (ASFs) to account for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution.[35] According to the updated guidance, quantified cancer risk should be multiplied by a factor of ten during the 3rd trimester and first two years of life (infant) and should be multiplied by a

---

34 http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019_OCR.pdf

35 "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

factor of three during the child stage of life (2 to 16 years). Furthermore, in accordance with guidance set forth by OEHHA, we used 95th percentile breathing rates for infants.[36] Finally, according to SCAQMD guidance, we used a Fraction of Time At Home (FAH) Value of 1 the 3rd trimester, infant, and child receptors and we used a FAH Value of 0.73 for the adult receptors.[37] We used a cancer potency factor of 1.1 (mg/kg-dayf1 and an averaging time of 25,550 days. The results of our calculations are shown below.

The Maximum Exposed Individual at an Existing Residential Receptor (MEIR)					
Activity	**Duration (years)**	**Concentration (µg/m³)**	**Breathing Rate (L/kg-day)**	**ASF**	**Cancer Risk**
Construction	0.25	0.3715	361	10	5.1E-06
3rd Trimester Duration	***0.25***			***3rd Trimester Exposure***	***5.1E-06***
Construction	2.00	0.3715	1090	10	1.2E-04
Infant Exposure Duration	***2.00***			***Infant Exposure***	***1.2E-04***
Construction	0.68	0.3715	572	3	6.5E-06
Operation	13.32	1.079	572	3	3.7E-04
Child Exposure Duration	***14.00***			***Child Exposure***	***3.8E-04***
Operation	14.00	1.079	261	1	4.3E-05
Adult Exposure Duration	***14.00***			***Adult Exposure***	***4.3E-05***
Lifetime Exposure Duration	**30.00**			**Lifetime Exposure**	**5.5E-04**

As demonstrated above, the excess cancer risk to adults, children, infants, and 3rd trimester gestations at a sensitive receptor located approximately 75 meters away, over the course of Project construction and operation, are approximately 43, 380, 120, and 5.1 in one million, respectively. Furthermore, the excess cancer risk over the course of a residential lifetime (30 years) is approximately 550 in one million. Consistent with OEHHA guidance, exposure was assumed to begin in the 3rd trimester stage of pregnancy to provide the most conservative estimates of air quality hazards. The infantile, child, adult, and lifetime cancer risks all greatly exceed the SCAQMD's threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the DEIR.

It is worth noting that the construction-related DPM emissions used to calculate the cancer risk represent the Project's mitigated emissions using Tier 4 Interim engines. Therefore, our analysis demonstrates that even with implementation of MM C-1, which states that all off-road construction equipment over SO hp will be equipped with Tier 4 Interim mitigation, the Project would still result in a significant health-related impact.

---

[36] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

[37] "Risk Assessment Procedures for Rules 1401, 1401.1, and 212." SCAQMD, August 2017, available at: http://www.aqmd.gov/docs/default-source/rule-book/ProposedRules/1401/riskassessmentprocedures_2017_080717.pdf, p.7

It should also be noted that our analysis represents a screening-level HRA, which is known to be more conservative, and tends to err on the side of health protection.[38] The purpose of a screening-level HRA, however, is to determine if a more refined HRA needs to be conducted. If the results of a screening-level health risk are above applicable thresholds, then the Project needs to conduct a more refined HRA that is more representative of site-specific concentrations. Our screening-level HRA demonstrates that construction and operation of the Project could result in a potentially significant health risk impact, when correct exposure assumptions and up-to-date, applicable guidance are used. As a result, refined construction and operational HRAs must be prepared to examine air quality impacts generated by Project construction and operation using site-specific meteorology. A DEIR should be prepared to adequately evaluate the Project's health risk impact and should include additional mitigation measures to reduce these impacts to a less-than-significant level.

Response to Comment No. B11-37

This comment asserts that the Project's short-term construction period is insufficient justification for failing to prepare and include in the EIR a construction health risk assessment (HRA). This comment also states that SCAQMD guidance recommends HRAs for short-term projects; therefore, an HRA should have been prepared and included in the EIR and compared against a 10 in one million threshold. This comment goes on to state that it is reasonable to assume that construction equipment and trip generation will increase emissions of diesel particulate matter (DPM) and that, the Project's proposed uses that do not represent "typical sources" of toxic air contaminants (TACs) is insufficient justification for excluding HRA preparation and that this is inconsistent with Office of Environmental Health Hazard's Assessment (OEHHA) guidance. The comment states that a screening-level HRA shows high cancer rates for the area of the Project, exceeding the 10 in one million threshold.

The EIR's analysis of potential health risks from TAC emissions during the construction and operations phase is consistent with SCAQMD's guidance on this topic and their comment letter in response to the Notice of Preparation (included in Appendix C of the Draft EIR). OEHHA's guidance is intended to implement the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) and establishes protocols for analysis but does not establish when projects must prepare an HRA. AB 2588 delegates to SCAQMD (as the local air district) the task of determining when a project must prepare an HRA. As explained in the Draft EIR (see p. 4.C-20), SCAQMD recommends, as pertinent to the Project, that health risk assessments be considered for substantial sources of diesel particulate emissions (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions. Yet, since the Project is not the type that would emit substantial DPM, no HRA is required under the applicable SCAQMD guidance. Further, the Project does not qualify as a "facility" subject to AB

[38] http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf p. 1-5

2588. But even if it did, as set forth in SCAQMD's most recent guidance interpreting the OEHHA guidance, a Project would only require further preliminary analysis—not a complete HRA. The guidance explains that SCAQMD then ranks projects surpassing preliminary thresholds, and only requires HRAs for the highest priority projects (http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab2588-supplemental-guidelines.pdf). For the reasons explained in the Draft EIR, the Project would not qualify as a high priority project. In addition, SCAQMD's only comments submitted for the Project, during the initial study, did not indicate that the air district considered the Project high priority or otherwise a candidate for HRA review. No further comments were received from SCAQMD on the Draft EIR. Further, based on an assessment of the potential for human health impacts from temporary emissions of diesel particulate matter from construction activities associated with the Project on sensitive receptors that gauged the approximate quantity, volume, and toxicity of TACs associated with the Project's construction activities, a health risk assessment was not deemed necessary for the Project based on the lack of substantial evidence that the Project would result in any potentially significant impacts related to TACs (see Draft EIR page 4.C-20).

As the air pollution control agency for the Project Site region, SCAQMD has not developed any recommendations on the use of OEHHA's Risk Assessment Guidelines for CEQA analyses for potential construction impacts, nor has the City adopted the Risk Assessment Guidelines or incorporated it into the City's adopted CEQA thresholds or methodologies. Thus, the Draft EIR properly relied on the L.A. CEQA Thresholds Guide for determining the Project's potential impacts related to TAC emissions during construction.

It should be noted that in the Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments (Guidance Manual) in March of 2015, OEHHA noted it is not appropriate to use the Guidance Manual to assess the Project's short-term construction projects. In fact, the guidelines do not recommend preparation of an HRA for temporary activities lasting less than two months, due to the uncertainty in assessing cancer risk from very short-term exposures. Instead, OEHHA guidelines defer to the Lead Agency for a determination of whether to conduct a HRA for activities lasting longer than two months, if the Lead Agency determines an HRA is appropriate. Based on an assessment of the potential for human health impacts from the temporary emissions of diesel particulate matter from construction activities on sensitive receptors, an HRA was not deemed necessary for the Project's construction activities, because the Project's construction activities would not generate high concentrations of pollutants. The determination of significance for TACs impacts for the Project (or any project) is made on a case-by-case basis (as stated previously), considering a number of factors including the following:

The Guidance Manual was developed by OEHHA, in conjunction with CARB, for use in implementing the Air Toxics "Hot Spots" Program (Health and Safety Code Section 44360 et. seq.) and is intended to apply to certain stationary sources, such as power plants or industrial uses that emit toxic air contaminants. The new Guidance Manual does not provide specific recommendations for evaluation of short-term use of mobile sources (e.g., heavy-duty diesel construction equipment).

Quantity, volume and toxicity of TACs to be emitted. With proposed mitigation, on-site construction activities would produce negligible amounts of combustion-related $PM_{2.5}$, the subset of particulates (e.g., soot emitted with ultrafine particles) most associated with toxic exposure. Specifically, maximum daily emissions of $PM_{2.5}$ would be far below SCAQMD significance thresholds for criteria pollutant emissions and would represent a negligible emissions rate, especially over an 8-10 hour period, where hourly emissions would equate to an average emissions rate of a few grams of $PM_{2.5}$ per hour during the most robust construction activities.

Based on the information provided in this response, the Project's construction and operational activities would not cause a significant health risk to any of the sensitive receptors near the Project Site, and a detailed HRA is not required for the Project.

Comment No. B11-38

Greenhouse Gas

Failure to Adequately Evaluate the Project's Greenhouse Gas Emissions

The DEIR concludes that the Project's GHG impact would be less than significant, yet fails to provide proper justification to support this claim (p. 4.F-45). As a result, the Project's GHG impacts are inadequately addressed. Until an updated analysis is conducted that correctly and thoroughly assesses the Project's GHG impacts, the conclusions made within the DEIR should not be relied upon to determine Project significance.

The DEIR relies upon Section 15064(h)(3) of the CEQA Guidelines Amendments to determine the significance of the Project's GHG impact. The DEIR states,

> "A project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project will comply with an approved plan or mitigation program that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area of the project" (p. 4.F-25).

Additionally, the DEIR states,

> "Put another way, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of non-significance for GHG emissions if a project complies with

the California Cap-and-Trade Program and/or other regulatory schemes to reduce GHG emissions" (p. 4.F-24- 4.F-25).

Using this guidance, the DEIR reasons that because the Project would comply with the reduction measures set forth within Executive Orders S-3-05 and B-30-15, Assembly Bill 32 Scoping Plan ("Scoping Plan"), SCAG's 2016-2014 RTP/SCS, the City of LA Mobility 2035 Plan, the City of LA Climate LA plan, and the City of LA Green Building Ordinance, in conjunction with a No Action Taken (NAT) analysis, the Project would not conflict with applicable plan, policy or regulation, thus resulting in a less than significant impact (p. 4.F-44 - 4.F-45). This conclusion, as well as the explanation as to why this threshold was used, however, are incorrect and inadequate for several reasons.

First, the DEIR states that the Project's GHG emissions were not compared to any numerical threshold since "CARB, SCAQMD and the City of Los Angeles have yet to adopt project-level significance thresholds for GHG emissions that would be applicable to the Project" (p. 4.F-23). As a result, the DEIR instead relies upon consistency with the aforementioned state, regional, and City of Los Angeles' GHG emission reduction objectives to conclude that the Project would result in a less than significant GHG impact (p. 4.F-43). This method of determining significance, however, is entirely incorrect, as the SCAQMD does provide interim guidance that identifies specific thresholds to which residential, commercial, and mixed-use projects can compare their emissions to. In December 2008, the SCAQMD released its Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans report.[39] According to this Interim Guidance, the SCAQMD proposes the use of a 3,000 metric tons of carbon dioxide equivalents per year {MT CO2e/yr) threshold for mixed use developments, a 3,500 MT CO2e/yr threshold for residential developments, and a 1,400 MT CO2e/yr threshold for commercial developments. As an alternative to the aforementioned proposed thresholds for residential, commercial, and mixed-use developments, the SCAQMD has also recommended the use of a single numerical threshold of 3,000 MT CO2e/yr for all non-industrial projects.[40] Although these thresholds have not been formally adopted by the City of Los Angeles, these thresholds are designed for application at the project level and thus provide a relevant method for determining the significance of the Project's GHG emissions.[41]

---

[39] http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2

[40] http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-%28ghg%29-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15-minutes.pdf?sfvrsn=2

[41] *Even this threshold likely is outdated. It was circulated by a South Coast AQMD Working Group that has not met since 2010 and that was never adopted by any agency "by ordinance, resolution, rule, or regulation" as required by CEQA Guidelines 15064.7(b) or (c). It was not crafted to comply with the more aggressive goals of SB32, which did not exist in 2010. A GHG significance finding must be "based on the extent possible on scientific and factual data," in step with evolving scientific knowledge and state regulatory schemes" and presented "in a manner calculated to adequately inform the public and decision*

As you can see, the SCAQMD does provide recommended significance thresholds that are applicable to the proposed Project, contrary to what is stated in the DEIR. Air districts, such as the SCAQMD, act in an advisory capacity to local governments in establishing the framework for environmental review of air pollution impacts under CEQA, which include recommendations regarding significance thresholds, analytical tools to estimate emissions and assess impacts, and mitigations for potentially significant impacts. Because the proposed Project is a mixed-use project, the most appropriate threshold to apply to the Project would be the 3,000 MT CO2e/yr criteria recommended by SCAQMD for mixed-use developments. Since the Project is located in Los Angeles, it falls under SCAQMD jurisdiction, which means that the threshold provided in the SCAQMD's Interim Guidance for mixed-use projects is fully applicable to the proposed Project, and should be relied upon to determine Project significance.

Second, while a lead agency enjoys substantial discretion in its choice of methodology to determine Project significance, when the agency chooses to rely completely on a single method to justify a no-significance finding, CEQA demands the agency research and document the parameters essential to that method. According to Section 15064.4(b) of the CEQA Guidelines, a lead agency may consider the use of a qualitative analysis that relies upon consistency with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions when assessing the significance of impacts from greenhouse gas emissions on the environment; however, such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions.[42]

The DEIR fails to provide substantial evidence to support the use of compliance with the Executive Orders S-3-05 and B-30-15, AB 32 Scoping Plan, SCAG's 2016-2014 RTP/SCS, the City of LA Mobility 2035 Plan, the City of LA Climate LA plan, and the City of LA Green Building Ordinance. The DEIR briefly discusses how the "Project's post-2020 emissions trajectory is expected to follow a declining trend" and how this will result in the Project being "consistent with the 2030 and 2050 targets and Executive Order S-305 and B-30-15", however, this does not adequately demonstrate compliance with the 2030 and 2050 targets or Executive Order S-305 and B-30-15 (p. 4.F-32 - 4.F-33). Furthermore, the DEIR also lists and discusses which applicable GHG reduction strategies set forth in the Scoping Plan (Table 4.7-7, p. 4.F-34- 4.7-35}, 2016-2040 SCAG RTP/SCS Actions and Strategies (Table 4.F-8, p. 4.F-36 -4.F-38), the City of Los Angeles ClimateLA Plan (p. 4.F-38 - 4.F-39), and the City of Los Angeles Green Building Ordinance (p. 4.F-40 - 4.F-43} that the Project would be consistent with, the DEIR fails to include any of the measures as design features, conditions of Project approval, or as mitigation measures. As a result, the validity of this method is called into question. The SCAQMD's recommended GHG significance thresholds discussed above, on the other hand, have undergone a public

---

makers." Cleveland National Forest Found. v San Diego Assn. of Gov'ts. (2017) 3 Cal.5th 497, 504-507, 518-519.

42 http://resources.ca.gov/ceqa/docs/FINAL_Text_of_Proposed_Amendments.pdf

review process as part of stakeholder working group meetings that are open to the public, and the SCAQMD's Interim Guidance document provides substantial evidence relative to the methodology for developing the interim GHG significance thresholds, consistent with requirements set forth by CEQA.[43] Therefore, reliance on the SCAQMD's thresholds, rather than the methods used in the DEIR, should be considered, as the DEIR's current method of evaluating the Project's GHG impact is flawed.

Response to Comment No. B11-38

This comment states that the Draft EIR's analysis of the Project's potential GHG emissions is inadequate, alleging first that the Project's potential GHG emissions should have been compared to a numeric threshold, citing to the SCAQMD's 2008 draft guidance regarding interim CEQA GHG significance thresholds. This comment next states that the Draft EIR does not provide substantial evidence to support the Draft EIR's evaluation of the Project's potential GHG emissions by evaluating the Project's consistency with GHG reduction policies in the applicable statewide goals and land use plans, as described in the Draft EIR.

Under CEQA, a lead agency has broad discretion to establish thresholds of significance, so long as the thresholds are supported by substantial evidence. (See CEQA Guidelines Section 15064.7(c).) Specifically, with respect to a project's potential greenhouse gas emissions under CEQA, a lead agency has discretion to evaluate a project's potential greenhouse gas emissions either by using a model or methodology to quantify greenhouse gas emissions or by relying on a qualitative analysis or performance-based standards. (CEQA Guidelines Section 15064.4(a).) In 2015, the California Supreme Court reviewed the acceptable methodology to analyze GHG emissions in an EIR in Center for Biological Diversity v. California Department of Fish and Wildlife (2015) 62 Cal.4th 204 (CBD v. CDFW or Newhall Ranch case). In that case, the Supreme Court held there are "potential pathways" to reviewing a project's GHG impacts under CEQA. First, a lead agency may compare a project's potential GHG emissions with a "business-as-usual" scenario, provided a lead agency can show what level of reduction from a "business-as-usual" scenario would be required for a particular project at a proposed location to comply with statewide GHG reduction goals. Second, a lead agency may assess a project's consistency with AB 32's goals in whole or in part and with the California Air Resources Board 2008 Climate Change Scoping Plan that implements AB 32 by evaluating a project's compliance with regulatory programs designed to reduce GHG emissions from particular activities. Third, a lead agency may rely on existing numerical thresholds of significance for GHG emissions reductions.

Nether the City nor the SCAQMD has adopted numeric thresholds for greenhouse gas emissions for land use development projects (e.g., residential/commercial projects) such as the Project. As further explained in the Draft EIR, in 2008, the SCAQMD convened a GHG CEQA Significance Threshold Working Group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA

---

[43] http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf?sfvrsn=2

documents. In December 2008, the SCAQMD Governing Board adopted interim GHG significance thresholds for projects where the SCAQMD is the lead agency. That threshold uses a tiered approach to determine a project's significance, with 10,000 metric tons of CO2 equivalent ($MTCO_2e$) per year as a screening numerical threshold for stationary sources. In September 2010, the Working Group released additional revisions that recommended a screening threshold of 3,500 $MTCO_2e$ for residential projects, 1,400 $MTCO_2e$ for commercial projects, and 3,000 $MTCO_2e$ for mixed use projects. The SCAQMD has not since adopted those thresholds, nor has the SCAQMD provided a timeline for formal consideration of those thresholds. In the meantime, the thresholds in the SCAQMD's guidance document are used as a non-binding guide. A lead agency is not required under CEQA to rely on draft regulatory standards that have not been adopted as significance thresholds.

In the absence of any quantitative threshold adopted by the City or the SCAQMD, the Draft EIR chose the second pathway to compliance that the Supreme Court identified in the Newhall Ranch case and evaluated Project's potential GHG impacts by reviewing the Project's consistency with applicable regulatory plans and polices to reduce GHG emissions. Specifically, the Draft EIR provided a detailed analysis of the Project's consistency with the applicable AB 32 Scoping Plan GHG Emissions Reduction Strategies, SCAG's 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy, the City's Mobility 2035 Plan, the City's ClimateLA Plan, and the City's Green Building Ordinance. (See Draft EIR, pages 4.F-32 to 4.F-43.) The Draft EIR's approach is consistent with the Supreme Court's ruling in the Newhall Ranch case and the guidance set forth in the CEQA Guidelines. (See CEQA Guidelines Section 15064.4.) Given the Project's consistency with those applicable policies and regulatory requirements, the Draft EIR concluded the Project's impacts related to GHG emissions would be less than significant, and no mitigation measures would be required.

For informational purposes, the Draft EIR also quantified the Project's potential GHG emissions and compared those emissions to the emissions that would be generated by the Project in the absence of any GHG reduction measures (i.e., the No Action Taken or "NAT" Scenario). That methodology was used to support the Draft EIR's evaluation of the Project's consistency with applicable GHG reduction plans and policies and to demonstrate the efficacy of the measures contained therein. However, the NAT Scenario was not used as a threshold of significance. The Draft EIR's analysis included potential emissions under the NAT Scenario and from the Project at build-out based on actions and mandates expected to be in force in 2020. Early-action measures identified in CARB's Climate Change Scoping Plan that have not been approved were not credited in that analysis. By not speculating on potential regulatory conditions, the analysis took a conservative approach that likely overestimated the Project's GHG emissions at build-out.

Given the Draft EIR's thorough analysis evaluating the Project's potential impacts related to GHG emissions as required under CEQA, no further analysis related to GHG emissions is required.

Comment No. B11-39

Failure to Utilize CHG Reduction Targets Specified in Senate Bill 32

AB 32 requires California to reduce GHG emissions to 1990 levels by 2020.[44] However, in September 2016, prior to the release of the IS/MND, Governor Brown signed Senate Bill 32, enacting HEALTH & SAFETY CODE § 38566. AR 305. This statue ("SB 32") requires California to achieve a new, more aggressive 40% reduction in GHG emissions over the 1990 levels by 2030.[45] "This 40 percent reduction is widely acknowledged as a necessary interim target to ensure that California meets its longer-range goal of reducing greenhouse gas emissions to 80 percent below 1990 levels by the year 2050."[46] Therefore, by failing to demonstrate consistency with the reduction targets set forth by SB 32, the Project may conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. As a result, the Project may have a potentially significant impact that was not previously addressed in the DEIR, and as such, a revised EIR should be prepared.

SB 32[47] requires emissions reductions above those mandated by AB 32 to reduce GHG emissions 40 percent below their 1990 levels by 2030. 1990 statewide GHG emissions are estimated to be approximately 431 million MTCO2e (MMTCO2e).[48] Therefore, by 2030 California will be required to reduce statewide emissions by 172 MMTCO2e (431 x 40%), which results in a statewide limit on GHG emissions of 259 MMTCO2e. 2020 "business-as-usual" levels are estimated to be approximately 509 MMTCO2e.[49] Therefore, in order to successfully reach the 2030 statewide goal of 259 MMTCO2e, California would have to reduce its emissions by 49 percent below the "business-as-usual" levels. This reduction target indicates that compliance with these more aggressive reduction goals, beyond what is mandated by AB 32, will be necessary.

This 49 percent reduction target should be considered as a threshold of significance against which to measure Project impacts. Because the proposed Project is unlikely to be redeveloped again prior to 2030, the 2030 goals are applicable to any evaluation of the Project's impacts. A revised EIR should be prepared to demonstrate the Project's compliance with these more aggressive measures specified in SB 32. Specifically, the Project should demonstrate, at a minimum, a reduction of 49 percent below "business-as-usual" levels. It should be noted that this reduction percentage is applicable to statewide emissions, which is not directly applicable to a project-level analysis. As a result, an additional analysis would need to be conducted to translate the new statewide targets into a project-specific threshold against which Project GHG emissions can be compared. A Project-specific EIR should be prepared to quantify any

---

44 HEALTH & SAFETY CODE 38500 et seq.; AR 235, 470.

45 Ibid.

46 Cleveland, 3 Cal.5th at 519.

47 *https://leginfo.legistlature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32*

48 *http://www.arb.ca.gov/cc/inventory/data/bau.htm*

49 http://energyinnovation.org/wp-content/uploads/2015/04/CA_CapReport_Mar2015.pdf

reductions expected to be achieved by mitigation measures, shown by substantial evidence that such measures will be effective, and should demonstrate how these measures will reduce the emissions below the new 2030 significance threshold.

Response to Comment No. B11-39

This comment states that the Project's EIR should have evaluated the Project's compliance with a GHG reduction target against the business-as-usual levels as targeted in SB 32 for the year 2030.

As explained in the Draft EIR, in 2016, the Legislature passed SB 32, which calls on statewide reductions in GHG emissions to 40 percent below 1990 levels by 2030. In November 2017, CARB adopted a Climate Change Scoping Plan that reflected those 2030 targets. That 2017 Scoping Plan was adopted after the analysis for the Draft EIR was completed. Specifically, the Notice of Preparation for the EIR was released on May 22, 2017, prior to the November 2017 adoption of the Scoping Plan.

As explained further in Response to Comment No. B11-38, the Draft EIR does not use a business-as-usual or the NAT Scenario as a threshold of significance against which to measure whether the Project will have significant impacts related to GHG emissions. The Draft EIR included a qualitative analysis of applicable post-2020 GHG reduction goals, as the Draft EIR evaluated the Project's consistency with applicable statewide, regional, and local regulatory plans and polices to reduce GHG emissions. For example, SCAG's RTP/SCS provides strategies to reduce emissions from transportation sources pursuant to California's long-term climate policies, including SB 375. Through its reduction strategies, the 2016-2040 RTP/SCS would result in an estimated 8-percent decrease in GHG emissions per capita by 2020 over 2005 levels, 18-percent decrease in GHG emissions per capita by 2035 over 2005 levels, and 21-percent decrease in GHG emissions per capita by 2040 over 2005 levels. SCAG's RTP/SCS will meet or exceed the SB 375 targets for 2020 and 2035, the 2016-2040 RTP/SCS is expected to help achieve the State's GHG emission reduction goals past the year 2020.

Given the Project's consistency with the applicable statewide, regional, and local regulatory plans and policies to reduce GHG emissions, and without any adopted numeric significance thresholds, the Draft EIR concluded the Project would have less than significant impacts related to GHG impacts.

Comment No. B11-40

Newhall Ranch Requires Additionality

Just because "a project is designed to meet high building efficiency and conservation standards ... does not establish that its [GHG] emissions from transportation activities lack significant impacts." Newhall Ranch, 62 Cal.4th at 229 (citing Natural Resources Agency).[50] This concept is known as "additionality" whereby GHG emission reductions

[50] *See Final Statement of Reasons for Regulatory Action: Amendments to State CEQA Guidelines Addressing Analysis and Mitigation of GHG Emissions Pursuant to SB-97 ("Final Statement of Reasons")*

otherwise required by law or regulation are appropriately considered part of the baseline and, pursuant to CEQA Guideline § 15064.4(b)(l), a new project's emission should be compared against that existing baseline.[51] Hence, a "project should not subsidize or take credit for emissions reductions which would have occurred regardless of the project."[52] In short, as observed by the Court, newer developments must be more GHG-efficient. See Newhall Ranch, 62 Cal.4th at 226.

Here, the Project fails to provide more aggressive mitigation measures required for newer developments to reach AB 32's long-term goals-such as the net-zero approach utilized in the wake of the Supreme Court's Newhall Ranch decision. See Center for Biological Diversity v. Cal. Dept. of Fish and Wildlife (2015) 62 Cal.4th 204, 226 ("a greater degree of reduction may be needed from new land use projects .... "); see also Californians for Alternatives to Toxics v. Department of Food and Agriculture (2005) 136 Cal.App.4th 1, 17 ("[c]ompliance with the law is not enough to support a finding of no significant impact under the CEQA."). More should be required for the Project, including those new, feasible mitigation measures found in CAPCOA's Quantifying Greenhouse Gas Mitigation Measures, which attempt to reduce GHG levels.

Response to Comment No. B11-40

This comment states that the Draft EIR should have evaluated the Project's GHG emissions beyond looking only at efficiency and conservation standards that are required by law and that the Draft EIR should have evaluated more efficient mitigation measures.

The lead agency has substantial discretion to select the appropriate significance threshold to evaluate the severity of a particular impact. (See Jensen v. City of Santa Rosa (2018) 23 Cal.App.5th 877.) The CEQA Guidelines also specifically state that the lead agency has discretion to select the method to determine the significance of a project's impacts from greenhouse gas emissions. (CEQA Guidelines Section 15064.4(a).) The City's significance thresholds are grounded in compliance with State and local plans aimed at reducing GHG emissions. As explained further in Section 4.F of

---

(Dec. 2009), p. 23 available at http://resources.ca.gov/ceqa/docs/Final_Statement_of_Reasons.pdf (while a Platinum LLED rating may be relevant to emissions from a building's energy use, "that performance standard may not reveal sufficient information to evaluate transportation-related emissions associated with that proposed project").

[51] *See Final Statement of Reasons, p. 89; see also California Air Pollution Control Officers Association ("CAPCOA") (Aug. 2010) Quantifying Greenhouse Gas Mitigation Measures, pp. 32, A3 available at http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf (("in practice is that if there is a rule that requires, for example, increased energy efficiency in a new building, the project proponent cannot count that increased efficiency as a mitigation or credit unless the project goes beyond what the rule requires; and in that case, only the efficiency in excess of what is required can be counted.").*

[52] *Supra fn 30.*

the Draft EIR, the Draft EIR did not only evaluate the Project's compliance with required conservation standards, such as compliance with the City's Green Building Ordinance, the Draft EIR evaluated the Project's consistency with the applicable statewide and regional GHG reduction goals and policies as set forth in the AB 32 Scoping Plan and SCAG 2016-2040 RTP/SCS. Based on that analysis, the City properly concluded that the Project's impacts related to GHG emissions will be less than significant. That approach is consistent with the CEQA Guidelines and guidance from the Supreme Court to evaluate a project's potential GHG emissions impacts. (See CEQA Guidelines Section 15064.4 and Center for Biological Diversity v. California Department of Fish and Wildlife (2015) 62 Cal.4th 204. Because the Draft EIR concluded the Project's impacts related to GHG emissions will be less than significant, no mitigation measures related to potential GHG impacts are required under CEQA.

Contrary to the assertion that the Project is obligated to meet a net-zero standard, the Newhall case does not prescribe any such bright-line requirements for analysis. Similarly, the Project and the EIR are not required to identify more aggressive mitigation measures per se, but rather to demonstrate its consistency with broad climate action plans that include numerous strategies to collectively reduce carbon emissions throughout the State and region. To that end, the EIR meets this CEQA requirement by cataloguing the Project's consistency with the RTP/SCS for the region.

Comment No. B11-41

Incorrect Use of Green Building Ordinance and City of Los Angeles ClimateLA Plan to Determine Significance

As stated above, the DEIR states that the Project would result in a less than significant GHG impact if the Project was found to be consistent with several applicable regulatory plans and policies (p. 4.F-26). Specifically, the DEIR notes that compliance with the Green Building Ordinance and the ClimateLA Plan would result in a less than significant impact (p. 4.F-36 - 4.F-41). While the DEIR mentions Green Building Ordinance standards, and points to various Project characteristics required by City ordinances or state statutes to conserve energy, the Green Building Ordinance and ClimateLA Implementation Plan do not meet the criteria for an officially adopted GHG reduction target for use as a threshold of significance for GHG emissions as required by GUIDELINES§ 15064.4(b)(3). No actual, quantified, or evidence-supported GHG emissions reductions to meet current GHG reduction targets in a plan "adopted by the relevant public agency through a public review process" [GUIDELINES§ 15064.4(b)(3)] are claimed, much less proven, for these measures, precluding their use to establish a lack of significant impact. Therefore, the DEIR's reliance on compliance with these regulatory plans and policies is incorrect and should not be used as a threshold with which to determine the significance of the Project's GHG impact. By using these plans to determine Project significance, the DEIR fails to adequately evaluate and mitigate the Project's impacts.

Response to Comment No. B11-41

This comment states that the Draft EIR should not have relied on the Project's consistency with the City's Green Building Ordinance or City of Los Angeles Climate LA Plan to evaluate the significance of the Project's GHG emissions because that ordinance and the plan do not meet the requirements of an adopted plan pursuant to CEQA Guidelines section 15064.3(b)(3).

The Draft EIR's GHG analysis does not rely solely on the Project's compliance with the City's Green Building Ordinance or ClimateLA Plan to determine the Project's significance. Instead, the Draft EIR also considers the Project's consistency with AB 32 Scoping Plan GHG Emissions Reduction Strategies and the 2016-2040 RTP/SCS. The Green Building Ordinance and ClimateLA Plan are relevant to the Project in considering the Project's potential GHG impacts. The ClimateLA Plan includes goals to reduce or recycle waste. The City's Green Building Ordinance includes requirements to reduce the use of natural resources in new development. Mandatory measures under the Green Building Ordinance that would help reduce GHG emissions include short- and long- term bicycle parking measures, designated parking measures, electric vehicle supply wiring, and measures to increase energy efficiency on the Project Site. As explained in the Draft EIR, the Project will be consistent with those GHG reduction strategies as set forth in the ClimateLA Plan and the City's Green Building Ordinance. As also discussed in the Draft EIR, the Project will be consistent with the applicable statewide and regional GHG reduction goals and policies, and based on that analysis, the Draft EIR concluded the Project's impacts related to GHG emissions would be less than significant. That approach is consistent with the CEQA Guidelines and guidance from the Supreme Court to evaluate a project's potential GHG emissions impacts, and no further analysis is required under CEQA. (See CEQA Guidelines Section 15064.4 and Center for Biological Diversity v. California Department of Fish and Wildlife (2015) 62 Cal.4th 204.

Comment No. B11-42

Updated Analysis Demonstrates Significant Greenhouse Gas Impact

In an effort to determine the significance of the Project's GHG impact, we conducted a simple analysis using the emission estimates provided in the SWAPE CalEEMod output files and the SCAQMD's Interim Guidance. When we apply the Project's emissions to the 3,000 MT CO2e/yr screening threshold recommended by the SCAQMD mixed-use projects, we find that the Project's emissions would exceed the screening threshold (see table below).

Estimated Annual Greenhouse Gas Emissions	
Emission Source	**Proposed Project (MT CO_2E/Yr)**
Construction (Amortized)	82
Area	85
Energy	3,477
Mobile	4,472
Waste	222
Water	597
Total	**8,935**
SCAQMD Significance Threshold	**3,000**
Threshold Exceeded?	***Yes***

As you can see in the table above, when we compare the proposed Project's GHG emissions estimated by the SWAPE CalEEMod model, we find that the Project would emit approximately 8,935 MT C02e/year of GHG emissions. This greatly exceeds the SCAQMD's recommended threshold of 3,000 MT C02e/yr. Until an updated GHG analysis is prepared in a Project-specific DEIR that adequately evaluates the Project's total GHG emissions from all sources, the DEIR should not be relied upon to determine Project significance.

According to the SCAQMD, if the Project's emissions exceed the 3,000 MT C02e/year screening-level threshold, a more detailed review of the Project's GHG emissions is warranted.[53] SCAQMD proposed per capita efficiency targets to conduct the detailed review. SCAQMD proposed a 2020 efficiency target of 4.8 MTC02e per year per service population (MT C02e/sp/year) for project-level analyses and 6.6 MT C02e/sp/year for plan level projects (e.g., program-level projects such as general plans). Those per capita efficiency targets are based on the AB 32 GHG reduction target and the 2020 GHG emissions inventory prepared for ARB's 2008 Scoping Plan. SCAQMD also created a 2035 efficiency thresholds by reducing the 2020 thresholds by 40 percent, resulting in an efficiency threshold for plans of 4.1 MT C02e/sp/year and an efficiency threshold at the project level of 3.0 MT C02e/sp/year.[54] Therefore, per SCAQMD guidance, because the Project's GHG emissions exceed the SCAQMD's 3,000 MT C02e/year screening-level threshold, the Project's emissions should be compared to the proposed 2020 efficiency target of 4.8 MT C02e/sp/year and the 2035 efficiency target of 3.0 MT C02e/sp/year, as the Project is not anticipated to be redeveloped prior to 2035.

According to the California Air Pollution Control Officers Association's (CAPCOA) CEQA & Climate Change report, service population is defined as "the sum of the number of

---

[53] SCAQMD, CEQA Significance Thresholds, available at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2

[54] Working Group Meeting 15 Minutes, available at http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf?sfvrsn=2

residents and the number of jobs supported by the project".[55] According to the DEIR, the proposed Project is anticipated to have 885 residents and 700 employees (Table 4.J-3, p. 4.J-12 and Table 4.J-4, p. 4.J-12). Therefore, the proposed Project has an estimated service population of approximately 1,585 people. Dividing the Project's GHG emissions by a service population value of 1,585 people, we find that the Project would emit approximately 5.64 MTC02e/sp/year. When we compare the Project's per service population GHG emissions to the SCAQMD 2020 efficiency threshold of 4.8 MT C02e/sp/year and the 2035 efficiency target of 3.0 MT C02e/sp/year, we find that the Project would result in a significant GHG impact (see table below).

Estimated Annual Greenhouse Gas Emissions Per Service Population		
Source	**Emissions**	**Unit**
Total Annual Emissions	8,935	MT CO_2e/yr
Maximum Service Population	1,585	Residents
Per Service Population Annual Emissions	**5.64**	**MT CO_2e/sp/yr**
2020 SCAQMD Project Level Efficiency Threshold	4.8	MT CO_2e/sp/yr
Exceed?	***Yes***	-
Per Service Population Annual Emissions	**5.64**	**MT CO_2e/sp/yr**
2035 SCAQMD Project Level Efficiency Threshold	3.0	MT CO_2e/sp/yr
Exceed?	***Yes***	-

As you can see in the table above, when we compare the per capita emissions estimated by SWAPE to the SCAQMD recommended efficiency thresholds of 4.8 MT C02e/sp/yr for 2020 and 3.0 MT C02e/sp/yr for 2035, we find that the Project's emissions would greatly exceed both of these thresholds, thus resulting in a potentially significant impact. Based on the results of this analysis, an updated DEIR must be prepared for the Project, and additional mitigation should be implemented where necessary, per CEQA Guidelines.

Response to Comment No. B11-42

The comment is based on an inappropriate comparison to a draft threshold of significance that was never approved or endorsed by the SCAQMD, based on the lack of consensus from its technical working group. Since that proposal was evaluated in 2008, over ten years ago, the SCAQMD has never recommended or enforced the consideration of this proposal. This was due to the lack of consensus from a Technical Working Group, as there were disputes about whether a single quantitative threshold could be justified based on concerns regarding how these were calculated based on a limited review of 711 CEQA projects from the Office of Planning and Research's

[55] "CEQA & Climate Change." & Climate Change." CAPCOA, January 2008, available at: http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf, p. 71-72.

database, the accuracy of threshold values for a variety of different land use types, and technical concerns about the derivation of discrete thresholds instead of per capita thresholds. As such, their guidance on the evaluation of GHG impacts never refers to such an alleged standard or significance threshold. See also, Response to Comment No. B11-38.

DKA Planning
Phone: (310) 316-2800
Fax: (310) 693-2579

Southern California Flower Market Future - Los Angeles-South Coast County, Summer

Southern California Flower Market Future

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	64.36	1000sqft	0.20	64,363.00	0
General Office Building	10.23	1000sqft	0.10	10,226.00	0
Refrigerated Warehouse-No Rail	63.78	1000sqft	0.30	63,785.00	0
Enclosed Parking with Elevator	681.00	Space	1.00	272,400.00	0
High Turnover (Sit Down Restaurant)	13.42	1000sqft	0.10	13,420.00	0
Apartments Mid Rise	323.00	Dwelling Unit	2.00	476,279.00	924
Strip Mall	4.38	1000sqft	0.10	4,385.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project description

Construction Phase - Developer information

Off-road Equipment - Developer information

Off-road Equipment - Developer information

Off-road Equipment - Developer information

Off-road Equipment - Developer information

Off-road Equipment - Developer information

Off-road Equipment - Developer information

Off-road Equipment - Developer information

Trips and VMT - Haul of materials to Manning Pit in Irwindale and Chiquita Canyon (50/50 split), with an average of 31.5 miles one-way. Fehr & Peers consruction

Demolition - Developer information

Grading - Assumes 507'x262' at 10' feet of depth of excavation of one-level garage

Vehicle Trips - Assumes continuation of mobile source emissions associated with preservation of existing wholesale operations

Woodstoves - Developer information

Construction Off-road Equipment Mitigation - Assumes SCAQMD Rule 403 control efficiencies

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	46
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	19.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	16.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	16.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	15.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	86.00
tblConstructionPhase	NumDays	5.00	23.00
tblConstructionPhase	NumDays	8.00	66.00
tblConstructionPhase	NumDays	230.00	523.00
tblConstructionPhase	NumDays	18.00	135.00
tblConstructionPhase	NumDays	18.00	24.00
tblFireplaces	NumberGas	274.55	0.00
tblFireplaces	NumberNoFireplace	32.30	323.00
tblFireplaces	NumberWood	16.15	0.00
tblGrading	AcresOfGrading	363.00	3.70
tblGrading	AcresOfGrading	23.00	0.00
tblGrading	MaterialExported	0.00	50,000.00
tblLandUse	LandUseSquareFeet	64,360.00	64,363.00
tblLandUse	LandUseSquareFeet	10,230.00	10,226.00
tblLandUse	LandUseSquareFeet	63,780.00	63,785.00
tblLandUse	LandUseSquareFeet	323,000.00	476,279.00
tblLandUse	LandUseSquareFeet	4,380.00	4,385.00
tblLandUse	LotAcreage	1.48	0.20
tblLandUse	LotAcreage	0.23	0.10
tblLandUse	LotAcreage	1.46	0.30
tblLandUse	LotAcreage	6.13	1.00

tblLandUse	LotAcreage	0.31	0.10
tblLandUse	LotAcreage	8.50	2.00
tblOffRoadEquipment	HorsePower	63.00	78.00
tblOffRoadEquipment	HorsePower	9.00	247.00
tblOffRoadEquipment	HorsePower	64.00	6.00
tblOffRoadEquipment	LoadFactor	0.31	0.48
tblOffRoadEquipment	LoadFactor	0.56	0.40
tblOffRoadEquipment	LoadFactor	0.46	0.82
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	9.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripLength	20.00	31.50
tblTripsAndVMT	HaulingTripLength	20.00	31.50
tblTripsAndVMT	HaulingTripLength	20.00	31.50
tblTripsAndVMT	HaulingTripLength	20.00	31.50
tblTripsAndVMT	HaulingTripLength	20.00	31.50

tblTripsAndVMT	HaulingTripNumber	0.00	5.00
tblTripsAndVMT	HaulingTripNumber	0.00	5.00
tblTripsAndVMT	HaulingTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	105.00	12.00
tblTripsAndVMT	VendorTripNumber	0.00	12.00
tblTripsAndVMT	WorkerTripNumber	85.00	20.00
tblTripsAndVMT	WorkerTripNumber	58.00	20.00
tblTripsAndVMT	WorkerTripNumber	48.00	20.00
tblTripsAndVMT	WorkerTripNumber	405.00	120.00
tblTripsAndVMT	WorkerTripNumber	70.00	120.00
tblTripsAndVMT	WorkerTripNumber	81.00	74.00
tblVehicleTrips	HO_TTP	40.60	41.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	6.39	3.37
tblVehicleTrips	ST_TR	158.37	63.49
tblVehicleTrips	ST_TR	1.68	1.18
tblVehicleTrips	SU_TR	5.86	3.37
tblVehicleTrips	SU_TR	131.84	63.49
tblVehicleTrips	SU_TR	1.68	1.18
tblVehicleTrips	WD_TR	6.65	3.37
tblVehicleTrips	WD_TR	11.03	11.22
tblVehicleTrips	WD_TR	127.15	63.49
tblVehicleTrips	WD_TR	1.68	1.18
tblVehicleTrips	WD_TR	44.32	74.63
tblWoodstoves	NumberCatalytic	16.15	0.00
tblWoodstoves	NumberNoncatalytic	16.15	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	14.3042	175.2316	103.9291	0.2634	18.3278	6.0962	22.9802	10.0008	5.8662	14.2849	0.0000	27,132.5467	27,132.5467	5.3907	0.0000	27,267.3150
2020	13.1337	105.2662	102.4033	0.1961	1.4186	5.4127	6.8313	0.3780	5.2051	5.5831	0.0000	18,350.2578	18,350.2578	3.5616	0.0000	18,439.2965
2021	52.0670	153.4364	160.2325	0.3164	3.6698	7.3677	11.0375	0.9768	7.0529	8.0297	0.0000	29,811.3481	29,811.3481	5.5993	0.0000	29,951.3315
Maximum	**52.0670**	**175.2316**	**160.2325**	**0.3164**	**18.3278**	**7.3677**	**22.9802**	**10.0008**	**7.0529**	**14.2849**	**0.0000**	**29,811.3481**	**29,811.3481**	**5.5993**	**0.0000**	**29,951.3315**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	3.9115	49.5603	113.1219	0.2634	6.8531	0.6560	7.2584	3.7244	0.6386	4.1133	0.0000	27,132.5467	27,132.5467	5.3907	0.0000	27,267.3149
2020	3.8416	31.8423	112.5468	0.1961	0.8568	0.6378	1.4946	0.2401	0.6217	0.8617	0.0000	18,350.2578	18,350.2578	3.5616	0.0000	18,439.2964
2021	40.0158	44.7717	179.0309	0.3164	2.2136	1.1040	3.3176	0.6194	1.0773	1.6966	0.0000	29,811.3481	29,811.3481	5.5993	0.0000	29,951.3315
Maximum	**40.0158**	**49.5603**	**179.0309**	**0.3164**	**6.8531**	**1.1040**	**7.2584**	**3.7244**	**1.0773**	**4.1133**	**0.0000**	**29,811.3481**	**29,811.3481**	**5.5993**	**0.0000**	**29,951.3315**

	ROG	NOx	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	**39.92**	**70.92**	**-10.40**	**0.00**	**57.62**	**87.30**	**70.45**	**59.63**	**87.10**	**76.09**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	14.6668	0.3084	26.7622	1.4100e-003		0.1477	0.1477		0.1477	0.1477	0.0000	48.1656	48.1656	0.0468	0.0000	49.3350
Energy	0.2046	1.8116	1.2102	0.0112		0.1413	0.1413		0.1413	0.1413		2,231.5011	2,231.5011	0.0428	0.0409	2,244.7618
Mobile	6.6388	30.9571	83.1114	0.2967	18.9520	0.2406	19.1926	5.1804	0.2244	5.4048		30,203.6671	30,203.6671	1.5393		30,242.1501
Total	**21.5101**	**33.0772**	**111.0838**	**0.3093**	**18.9520**	**0.5296**	**19.4816**	**5.1804**	**0.5134**	**5.6938**	**0.0000**	**32,483.3339**	**32,483.3339**	**1.6289**	**0.0409**	**32,536.2469**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	14.6668	0.3084	26.7622	1.4100e-003		0.1477	0.1477		0.1477	0.1477	0.0000	48.1656	48.1656	0.0468	0.0000	49.3350
Energy	0.2046	1.8116	1.2102	0.0112		0.1413	0.1413		0.1413	0.1413		2,231.5011	2,231.5011	0.0428	0.0409	2,244.7618
Mobile	6.6388	30.9571	83.1114	0.2967	18.9520	0.2406	19.1926	5.1804	0.2244	5.4048		30,203.6671	30,203.6671	1.5393		30,242.1501
Total	**21.5101**	**33.0772**	**111.0838**	**0.3093**	**18.9520**	**0.5296**	**19.4816**	**5.1804**	**0.5134**	**5.6938**	**0.0000**	**32,483.3339**	**32,483.3339**	**1.6289**	**0.0409**	**32,536.2469**

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

Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	4/30/2019	5	86	
2	Site Preparation	Site Preparation	5/1/2019	5/31/2019	5	23	
3	Grading	Grading	6/3/2019	9/2/2019	5	66	
4	Building Construction	Building Construction	9/3/2019	9/2/2021	5	523	
5	Architectural Coating	Architectural Coating	6/1/2021	12/6/2021	5	135	
6	Paving	Paving	8/2/2021	9/2/2021	5	24	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 3.7

Acres of Paving: 1

Residential Indoor: 964,465; Residential Outdoor: 321,488; Non-Residential Indoor: 234,269; Non-Residential Outdoor: 78,090; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
	Aerial Lifts	5	8.00	63	0.31
	Air Compressors	2	8.00	78	0.48
	Concrete/Industrial Saws	2	8.00	81	0.73
	Cranes	1	8.00	231	0.29
	Crawler Tractors	2	8.00	212	0.43
	Crushing/Proc. Equipment	1	8.00	85	0.78
	Dumpers/Tenders	5	8.00	16	0.38
	Excavators	2	8.00	158	0.38
	Forklifts	1	8.00	89	0.20
	Off-Highway Tractors	2	8.00	124	0.44

	Rough Terrain Forklifts	1	8.00	100	0.40
	Rubber Tired Loaders	1	8.00	203	0.36
	Signal Boards	2	8.00	6	0.82
	Skid Steer Loaders	2	8.00	65	0.37
	Sweepers/Scrubbers	1	8.00	64	0.46
	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Aerial Lifts	5	8.00	63	0.31
Demolition	Air Compressors	2	8.00	78	0.48
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Cranes	1	8.00	231	0.29
Demolition	Crawler Tractors	2	8.00	212	0.43
Demolition	Crushing/Proc. Equipment	1	8.00	85	0.78
Demolition	Dumpers/Tenders	5	8.00	16	0.38
Demolition	Excavators	2	8.00	158	0.38
Demolition	Forklifts	1	8.00	89	0.20
Demolition	Off-Highway Tractors	2	8.00	124	0.44
Demolition	Rough Terrain Forklifts	1	8.00	100	0.40
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Rubber Tired Loaders	1	8.00	203	0.36
Demolition	Signal Boards	2	8.00	6	0.82
Demolition	Skid Steer Loaders	2	8.00	65	0.37
Demolition	Sweepers/Scrubbers	1	8.00	64	0.46
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Cement and Mortar Mixers	2	8.00	247	0.40
Site Preparation	Crawler Tractors	2	8.00	212	0.43
Site Preparation	Dumpers/Tenders	1	8.00	16	0.38
Site Preparation	Excavators	2	8.00	158	0.38
Site Preparation	Off-Highway Tractors	2	8.00	124	0.44
Site Preparation	Rough Terrain Forklifts	1	8.00	100	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40

Site Preparation	Rubber Tired Loaders	2	8.00	203	0.36
Site Preparation	Signal Boards	2	8.00	6	0.82
Site Preparation	Sweepers/Scrubbers	1	8.00	64	0.46
Site Preparation	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Trenchers	2	8.00	78	0.50
Grading	Cranes	3	8.00	231	0.29
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Off-Highway Tractors	1	8.00	124	0.44
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Loaders	2	8.00	203	0.36
Grading	Scrapers	5	8.00	367	0.48
Grading	Sweepers/Scrubbers	2	8.00	6	0.82
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	8	8.00	63	0.31
Building Construction	Air Compressors	3	8.00	78	0.48
Building Construction	Bore/Drill Rigs	3	8.00	221	0.50
Building Construction	Cement and Mortar Mixers	8	8.00	9	0.56
Building Construction	Concrete/Industrial Saws	3	8.00	81	0.73
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Dumpers/Tenders	1	8.00	16	0.38
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Generator Sets	2	8.00	84	0.74
Building Construction	Pumps	2	8.00	84	0.74
Building Construction	Rough Terrain Forklifts	2	8.00	100	0.40
Building Construction	Rubber Tired Loaders	1	8.00	203	0.36
Building Construction	Signal Boards	4	8.00	6	0.82
Building Construction	Sweepers/Scrubbers	1	8.00	64	0.46
Building Construction	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Trenchers	2	8.00	78	0.50

Building Construction	Welders	9	8.00	46	0.45
Paving	Cement and Mortar Mixers	6	8.00	9	0.56
Paving	Concrete/Industrial Saws	3	8.00	81	0.73
Paving	Dumpers/Tenders	4	8.00	16	0.38
Paving	Graders	1	8.00	187	0.41
Paving	Off-Highway Tractors	2	8.00	124	0.44
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Plate Compactors	1	8.00	8	0.43
Paving	Rollers	2	8.00	80	0.38
Paving	Rubber Tired Loaders	2	8.00	203	0.36
Paving	Signal Boards	2	8.00	6	0.82
Paving	Sweepers/Scrubbers	1	8.00	64	0.46
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Aerial Lifts	1	8.00	78	0.48
Architectural Coating	Air Compressors	1	6.00	78	0.48
Architectural Coating	Generator Sets	1	8.00	84	0.74
Architectural Coating	Pressure Washers	1	8.00	13	0.30
Architectural Coating	Rollers	1	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	34	20.00	5.00	842.00	14.70	6.90	31.50	LD_Mix	HDT_Mix	HHDT
Site Preparation	23	20.00	5.00	5.00	14.70	6.90	31.50	LD_Mix	HDT_Mix	HHDT
Grading	19	20.00	5.00	6,250.00	14.70	6.90	31.50	LD_Mix	HDT_Mix	HHDT
Building Construction	57	120.00	12.00	5.00	14.70	6.90	31.50	LD_Mix	HDT_Mix	HHDT
Paving	28	120.00	12.00	5.00	14.70	6.90	31.50	LD_Mix	HDT_Mix	HHDT
Architectural Coating	5	74.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Replace Ground Cover

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1188	0.0000	2.1188	0.3208	0.0000	0.3208			0.0000			0.0000
Off-Road	9.6302	97.8573	67.3033	0.1234		4.8552	4.8552		4.5630	4.5630		11,991.2036	11,991.2036	3.0871		12,068.3811
Total	**9.6302**	**97.8573**	**67.3033**	**0.1234**	**2.1188**	**4.8552**	**6.9740**	**0.3208**	**4.5630**	**4.8838**		**11,991.2036**	**11,991.2036**	**3.0871**		**12,068.3811**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1343	4.1623	0.9346	0.0117	0.2695	0.0170	0.2865	0.0739	0.0162	0.0901		1,268.2980	1,268.2980	0.0818		1,270.3427
Vendor	0.0208	0.5787	0.1535	1.3100e-003	0.0320	3.6900e-003	0.0357	9.2200e-003	3.5300e-003	0.0128		139.4073	139.4073	8.9300e-003		139.6307
Worker	0.0999	0.0734	0.9643	2.4400e-003	0.2236	1.9300e-003	0.2255	0.0593	1.7800e-003	0.0611		242.5906	242.5906	8.3300e-003		242.7989
Total	**0.2550**	**4.8144**	**2.0525**	**0.0155**	**0.5251**	**0.0226**	**0.5476**	**0.1424**	**0.0216**	**0.1639**		**1,650.2959**	**1,650.2959**	**0.0991**		**1,652.7722**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7850	0.0000	0.7850	0.1189	0.0000	0.1189			0.0000			0.0000
Off-Road	2.2808	17.7872	73.8839	0.1234		0.4997	0.4997		0.4836	0.4836	0.0000	11,991.2036	11,991.2036	3.0871		12,068.3811
Total	**2.2808**	**17.7872**	**73.8839**	**0.1234**	**0.7850**	**0.4997**	**1.2847**	**0.1189**	**0.4836**	**0.6025**	**0.0000**	**11,991.2036**	**11,991.2036**	**3.0871**		**12,068.3811**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1343	4.1623	0.9346	0.0117	0.1757	0.0170	0.1927	0.0508	0.0162	0.0671		1,268.2980	1,268.2980	0.0818		1,270.3427
Vendor	0.0208	0.5787	0.1535	1.3100e-003	0.0215	3.6900e-003	0.0252	6.6400e-003	3.5300e-003	0.0102		139.4073	139.4073	8.9300e-003		139.6307
Worker	0.0999	0.0734	0.9643	2.4400e-003	0.1342	1.9300e-003	0.1361	0.0373	1.7800e-003	0.0391		242.5906	242.5906	8.3300e-003		242.7989
Total	**0.2550**	**4.8144**	**2.0525**	**0.0155**	**0.3314**	**0.0226**	**0.3540**	**0.0948**	**0.0216**	**0.1164**		**1,650.2959**	**1,650.2959**	**0.0991**		**1,652.7722**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	8.6926	93.7600	51.4255	0.0977		4.6464	4.6464		4.2784	4.2784		9,623.6113	9,623.6113	3.0111		9,698.8889
Total	**8.6926**	**93.7600**	**51.4255**	**0.0977**	**18.0663**	**4.6464**	**22.7127**	**9.9307**	**4.2784**	**14.2090**		**9,623.6113**	**9,623.6113**	**3.0111**		**9,698.8889**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.9800e-003	0.0924	0.0208	2.6000e-004	5.9800e-003	3.8000e-004	6.3600e-003	1.6400e-003	3.6000e-004	2.0000e-003		28.1611	28.1611	1.8200e-003		28.2065
Vendor	0.0208	0.5787	0.1535	1.3100e-003	0.0320	3.6900e-003	0.0357	9.2200e-003	3.5300e-003	0.0128		139.4073	139.4073	8.9300e-003		139.6307
Worker	0.0999	0.0734	0.9643	2.4400e-003	0.2236	1.9300e-003	0.2255	0.0593	1.7800e-003	0.0611		242.5906	242.5906	8.3300e-003		242.7989
Total	**0.1237**	**0.7445**	**1.1386**	**4.0100e-003**	**0.2615**	**6.0000e-003**	**0.2675**	**0.0702**	**5.6700e-003**	**0.0758**		**410.1590**	**410.1590**	**0.0191**		**410.6361**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6936	0.0000	6.6936	3.6793	0.0000	3.6793			0.0000			0.0000
Off-Road	1.6163	8.6137	56.7796	0.0977		0.3993	0.3993		0.3832	0.3832	0.0000	9,623.6113	9,623.6113	3.0111		9,698.8889

Total	**1.6163**	**8.6137**	**56.7796**	**0.0977**	**6.6936**	**0.3993**	**7.0928**	**3.6793**	**0.3832**	**4.0625**	**0.0000**	**9,623.6113**	**9,623.6113**	**3.0111**		**9,698.8889**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.9800e-003	0.0924	0.0208	2.6000e-004	3.9000e-003	3.8000e-004	4.2800e-003	1.1300e-003	3.6000e-004	1.4900e-003		28.1611	28.1611	1.8200e-003		28.2065
Vendor	0.0208	0.5787	0.1535	1.3100e-003	0.0215	3.6900e-003	0.0252	6.6400e-003	3.5300e-003	0.0102		139.4073	139.4073	8.9300e-003		139.6307
Worker	0.0999	0.0734	0.9643	2.4400e-003	0.1342	1.9300e-003	0.1361	0.0373	1.7800e-003	0.0391		242.5906	242.5906	8.3300e-003		242.7989
Total	**0.1237**	**0.7445**	**1.1386**	**4.0100e-003**	**0.1596**	**6.0000e-003**	**0.1656**	**0.0451**	**5.6700e-003**	**0.0508**		**410.1590**	**410.1590**	**0.0191**		**410.6361**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.1893	0.0000	12.1893	6.6399	0.0000	6.6399			0.0000			0.0000
Off-Road	11.6496	134.3213	73.0039	0.1462		5.6854	5.6854		5.2306	5.2306		14,483.3969	14,483.3969	4.5824		14,597.9567
Total	**11.6496**	**134.3213**	**73.0039**	**0.1462**	**12.1893**	**5.6854**	**17.8747**	**6.6399**	**5.2306**	**11.8704**		**14,483.3969**	**14,483.3969**	**4.5824**		**14,597.9567**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2986	40.2583	9.0400	0.1134	2.6065	0.1642	2.7707	0.7144	0.1571	0.8714		12,267.1519	12,267.1519	0.7911		12,286.9287
Vendor	0.0208	0.5787	0.1535	1.3100e-003	0.0320	3.6900e-003	0.0357	9.2200e-003	3.5300e-003	0.0128		139.4073	139.4073	8.9300e-003		139.6307
Worker	0.0999	0.0734	0.9643	2.4400e-003	0.2236	1.9300e-003	0.2255	0.0593	1.7800e-003	0.0611		242.5906	242.5906	8.3300e-003		242.7989
Total	**1.4193**	**40.9104**	**10.1579**	**0.1171**	**2.8621**	**0.1698**	**3.0319**	**0.7829**	**0.1624**	**0.9452**		**12,649.1498**	**12,649.1498**	**0.8083**		**12,669.3582**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.5161	0.0000	4.5161	2.4601	0.0000	2.4601			0.0000			0.0000
Off-Road	2.0352	8.6499	71.5377	0.1462		0.3235	0.3235		0.3167	0.3167	0.0000	14,483.3969	14,483.3969	4.5824		14,597.9567
Total	**2.0352**	**8.6499**	**71.5377**	**0.1462**	**4.5161**	**0.3235**	**4.8396**	**2.4601**	**0.3167**	**2.7767**	**0.0000**	**14,483.3969**	**14,483.3969**	**4.5824**		**14,597.9567**

Mitigated Construction Off-Site

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

Hauling	1.2986	40.2583	9.0400	0.1134	1.6994	0.1642	1.8636	0.4917	0.1571	0.6488		12,267.1519	12,267.1519	0.7911		12,286.9287
Vendor	0.0208	0.5787	0.1535	1.3100e-003	0.0215	3.6900e-003	0.0252	6.6400e-003	3.5300e-003	0.0102		139.4073	139.4073	8.9300e-003		139.6307
Worker	0.0999	0.0734	0.9643	2.4400e-003	0.1342	1.9300e-003	0.1361	0.0373	1.7800e-003	0.0391		242.5906	242.5906	8.3300e-003		242.7989
Total	**1.4193**	**40.9104**	**10.1579**	**0.1171**	**1.8551**	**0.1698**	**2.0249**	**0.5357**	**0.1624**	**0.6981**		**12,649.1498**	**12,649.1498**	**0.8083**		**12,669.3582**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	13.6548	110.8768	97.7737	0.1787		6.0758	6.0758		5.8471	5.8471		16,789.7184	16,789.7184	3.5681		16,878.9218
Total	**13.6548**	**110.8768**	**97.7737**	**0.1787**		**6.0758**	**6.0758**		**5.8471**	**5.8471**		**16,789.7184**	**16,789.7184**	**3.5681**		**16,878.9218**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.3000e-004	4.0600e-003	9.1000e-004	1.0000e-005	1.2700e-003	2.0000e-005	1.2900e-003	3.2000e-004	2.0000e-005	3.4000e-004		1.2384	1.2384	8.0000e-005		1.2404
Vendor	0.0499	1.3888	0.3685	3.1400e-003	0.0768	8.8500e-003	0.0857	0.0221	8.4700e-003	0.0306		334.5775	334.5775	0.0214		335.1136
Worker	0.5995	0.4406	5.7860	0.0146	1.3413	0.0116	1.3529	0.3557	0.0107	0.3664		1,455.5435	1,455.5435	0.0500		1,456.7934
Total	**0.6495**	**1.8334**	**6.1554**	**0.0178**	**1.4194**	**0.0204**	**1.4399**	**0.3782**	**0.0192**	**0.3973**		**1,791.3594**	**1,791.3594**	**0.0715**		**1,793.1474**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2621	30.3205	106.9665	0.1787		0.6356	0.6356		0.6195	0.6195	0.0000	16,789.7183	16,789.7183	3.5681		16,878.9218
Total	**3.2621**	**30.3205**	**106.9665**	**0.1787**		**0.6356**	**0.6356**		**0.6195**	**0.6195**	**0.0000**	**16,789.7183**	**16,789.7183**	**3.5681**		**16,878.9218**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.3000e-004	4.0600e-003	9.1000e-004	1.0000e-005	7.2000e-004	2.0000e-005	7.3000e-004	1.8000e-004	2.0000e-005	2.0000e-004		1.2384	1.2384	8.0000e-005		1.2404
Vendor	0.0499	1.3888	0.3685	3.1400e-003	0.0516	8.8500e-003	0.0605	0.0159	8.4700e-003	0.0244		334.5775	334.5775	0.0214		335.1136
Worker	0.5995	0.4406	5.7860	0.0146	0.8049	0.0116	0.8165	0.2241	0.0107	0.2347		1,455.5435	1,455.5435	0.0500		1,456.7934
Total	**0.6495**	**1.8334**	**6.1554**	**0.0178**	**0.8573**	**0.0204**	**0.8777**	**0.2402**	**0.0192**	**0.2593**		**1,791.3594**	**1,791.3594**	**0.0715**		**1,793.1474**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	12.5387	103.5930	96.8138	0.1788		5.3955	5.3955		5.1891	5.1891		16,605.2675	16,605.2675	3.4967		16,692.6846
Total	**12.5387**	**103.5930**	**96.8138**	**0.1788**		**5.3955**	**5.3955**		**5.1891**	**5.1891**		**16,605.2675**	**16,605.2675**	**3.4967**		**16,692.6846**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2000e-004	3.8000e-003	8.9000e-004	1.0000e-005	4.6000e-004	1.0000e-005	4.8000e-004	1.2000e-004	1.0000e-005	1.3000e-004		1.2253	1.2253	8.0000e-005		1.2272
Vendor	0.0427	1.2765	0.3345	3.1100e-003	0.0768	6.0100e-003	0.0828	0.0221	5.7500e-003	0.0279		332.4296	332.4296	0.0203		332.9368
Worker	0.5522	0.3929	5.2541	0.0142	1.3413	0.0112	1.3525	0.3557	0.0103	0.3661		1,411.3355	1,411.3355	0.0445		1,412.4479
Total	**0.5950**	**1.6731**	**5.5895**	**0.0173**	**1.4186**	**0.0172**	**1.4358**	**0.3780**	**0.0161**	**0.3941**		**1,744.9904**	**1,744.9904**	**0.0649**		**1,746.6119**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2465	30.1692	106.9573	0.1788		0.6205	0.6205		0.6056	0.6056	0.0000	16,605.2675	16,605.2675	3.4967		16,692.6846

Total	**3.2465**	**30.1692**	**106.9573**	**0.1788**		**0.6205**	**0.6205**		**0.6056**	**0.6056**	**0.0000**	**16,605.2675**	**16,605.2675**	**3.4967**		**16,692.6846**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2000e-004	3.8000e-003	8.9000e-004	1.0000e-005	2.8000e-004	1.0000e-005	2.9000e-004	8.0000e-005	1.0000e-005	9.0000e-005		1.2253	1.2253	8.0000e-005		1.2272
Vendor	0.0427	1.2765	0.3345	3.1100e-003	0.0517	6.0100e-003	0.0577	0.0159	5.7500e-003	0.0217		332.4296	332.4296	0.0203		332.9368
Worker	0.5522	0.3929	5.2541	0.0142	0.8049	0.0112	0.8161	0.2241	0.0103	0.2344		1,411.3355	1,411.3355	0.0445		1,412.4479
Total	**0.5950**	**1.6731**	**5.5895**	**0.0173**	**0.8568**	**0.0172**	**0.8741**	**0.2401**	**0.0161**	**0.2562**		**1,744.9904**	**1,744.9904**	**0.0649**		**1,746.6119**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	11.3902	94.8719	95.7058	0.1789		4.6820	4.6820		4.5027	4.5027		16,612.9382	16,612.9382	3.4339		16,698.7847
Total	**11.3902**	**94.8719**	**95.7058**	**0.1789**		**4.6820**	**4.6820**		**4.5027**	**4.5027**		**16,612.9382**	**16,612.9382**	**3.4339**		**16,698.7847**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2000e-004	3.5300e-003	8.8000e-004	1.0000e-005	6.6000e-004	1.0000e-005	6.7000e-004	1.7000e-004	1.0000e-005	1.8000e-004		1.2117	1.2117	8.0000e-005		1.2136
Vendor	0.0365	1.1651	0.3046	3.0900e-003	0.0768	2.3800e-003	0.0792	0.0221	2.2800e-003	0.0244		329.8568	329.8568	0.0194		330.3426
Worker	0.5144	0.3536	4.8333	0.0137	1.3413	0.0108	1.3522	0.3557	9.9800e-003	0.3657		1,366.5238	1,366.5238	0.0403		1,367.5304
Total	**0.5510**	**1.5222**	**5.1388**	**0.0168**	**1.4188**	**0.0132**	**1.4320**	**0.3780**	**0.0123**	**0.3903**		**1,697.5923**	**1,697.5923**	**0.0598**		**1,699.0867**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2051	29.8988	106.9202	0.1789		0.5846	0.5846		0.5725	0.5725	0.0000	16,612.9382	16,612.9382	3.4339		16,698.7847
Total	**3.2051**	**29.8988**	**106.9202**	**0.1789**		**0.5846**	**0.5846**		**0.5725**	**0.5725**	**0.0000**	**16,612.9382**	**16,612.9382**	**3.4339**		**16,698.7847**

Mitigated Construction Off-Site

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

Hauling	1.2000e-004	3.5300e-003	8.8000e-004	1.0000e-005	3.9000e-004	1.0000e-005	4.0000e-004	1.0000e-004	1.0000e-005	1.1000e-004		1.2117	1.2117	8.0000e-005		1.2136
Vendor	0.0365	1.1651	0.3046	3.0900e-003	0.0517	2.3800e-003	0.0540	0.0159	2.2800e-003	0.0182		329.8568	329.8568	0.0194		330.3426
Worker	0.5144	0.3536	4.8333	0.0137	0.8049	0.0108	0.8158	0.2241	9.9800e-003	0.2340		1,366.5238	1,366.5238	0.0403		1,367.5304
Total	**0.5510**	**1.5222**	**5.1388**	**0.0168**	**0.8570**	**0.0132**	**0.8702**	**0.2401**	**0.0123**	**0.2524**		**1,697.5923**	**1,697.5923**	**0.0598**		**1,699.0867**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	33.3610					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.8813	8.0741	9.7229	0.0159		0.4153	0.4153		0.4041	0.4041		1,509.4120	1,509.4120	0.2380		1,515.3628
Total	**34.2423**	**8.0741**	**9.7229**	**0.0159**		**0.4153**	**0.4153**		**0.4041**	**0.4041**		**1,509.4120**	**1,509.4120**	**0.2380**		**1,515.3628**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3172	0.2180	2.9805	8.4600e-003	0.8272	6.6800e-003	0.8338	0.2194	6.1600e-003	0.2255		842.6897	842.6897	0.0248		843.3104
Total	**0.3172**	**0.2180**	**2.9805**	**8.4600e-003**	**0.8272**	**6.6800e-003**	**0.8338**	**0.2194**	**6.1600e-003**	**0.2255**		**842.6897**	**842.6897**	**0.0248**		**843.3104**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	33.3610					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2109	1.0304	10.5587	0.0159		0.0361	0.0361		0.0361	0.0361	0.0000	1,509.4120	1,509.4120	0.2380		1,515.3628
Total	**33.5719**	**1.0304**	**10.5587**	**0.0159**		**0.0361**	**0.0361**		**0.0361**	**0.0361**	**0.0000**	**1,509.4120**	**1,509.4120**	**0.2380**		**1,515.3628**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3172	0.2180	2.9805	8.4600e-003	0.4964	6.6800e-003	0.5030	0.1382	6.1600e-003	0.1443		842.6897	842.6897	0.0248		843.3104
Total	**0.3172**	**0.2180**	**2.9805**	**8.4600e-003**	**0.4964**	**6.6800e-003**	**0.5030**	**0.1382**	**6.1600e-003**	**0.1443**		**842.6897**	**842.6897**	**0.0248**		**843.3104**

3.7 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.0129	47.1547	41.5273	0.0792		2.2371	2.2371		2.1151	2.1151		7,425.9308	7,425.9308	1.7814		7,470.4668
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**5.0129**	**47.1547**	**41.5273**	**0.0792**		**2.2371**	**2.2371**		**2.1151**	**2.1151**		**7,425.9308**	**7,425.9308**	**1.7814**		**7,470.4668**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.5500e-003	0.0769	0.0193	2.4000e-004	5.7300e-003	2.7000e-004	6.0000e-003	1.5700e-003	2.5000e-004	1.8300e-003		26.4046	26.4046	1.7000e-003		26.4471
Vendor	0.0365	1.1651	0.3046	3.0900e-003	0.0768	2.3800e-003	0.0792	0.0221	2.2800e-003	0.0244		329.8568	329.8568	0.0194		330.3426
Worker	0.5144	0.3536	4.8333	0.0137	1.3413	0.0108	1.3522	0.3557	9.9800e-003	0.3657		1,366.5238	1,366.5238	0.0403		1,367.5304
Total	**0.5534**	**1.5955**	**5.1571**	**0.0171**	**1.4239**	**0.0135**	**1.4374**	**0.3794**	**0.0125**	**0.3919**		**1,722.7852**	**1,722.7852**	**0.0614**		**1,724.3201**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8171	10.5069	48.2756	0.0792		0.4498	0.4498		0.4377	0.4377	0.0000	7,425.9308	7,425.9308	1.7814		7,470.4668
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Total	**1.8171**	**10.5069**	**48.2756**	**0.0792**		**0.4498**	**0.4498**		**0.4377**	**0.4377**	**0.0000**	**7,425.9308**	**7,425.9308**	**1.7814**		**7,470.4668**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.5500e-003	0.0769	0.0193	2.4000e-004	3.7400e-003	2.7000e-004	4.0100e-003	1.0800e-003	2.5000e-004	1.3400e-003		26.4046	26.4046	1.7000e-003		26.4471
Vendor	0.0365	1.1651	0.3046	3.0900e-003	0.0517	2.3800e-003	0.0540	0.0159	2.2800e-003	0.0182		329.8568	329.8568	0.0194		330.3426
Worker	0.5144	0.3536	4.8333	0.0137	0.8049	0.0108	0.8158	0.2241	9.9800e-003	0.2340		1,366.5238	1,366.5238	0.0403		1,367.5304
Total	**0.5534**	**1.5955**	**5.1571**	**0.0171**	**0.8603**	**0.0135**	**0.8738**	**0.2411**	**0.0125**	**0.2536**		**1,722.7852**	**1,722.7852**	**0.0614**		**1,724.3201**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.6388	30.9571	83.1114	0.2967	18.9520	0.2406	19.1926	5.1804	0.2244	5.4048		30,203.6671	30,203.6671	1.5393		30,242.1501
Unmitigated	6.6388	30.9571	83.1114	0.2967	18.9520	0.2406	19.1926	5.1804	0.2244	5.4048		30,203.6671	30,203.6671	1.5393		30,242.1501

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,088.51	1,088.51	1088.51	3,717,354	3,717,354
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	722.12	158.33	67.58	1,765,591	1,765,591
General Office Building	114.78	25.17	10.74	280,640	280,640
High Turnover (Sit Down Restaurant)	852.04	852.04	852.04	1,161,180	1,161,180
Refrigerated Warehouse-No Rail	75.26	75.26	75.26	322,545	322,545
Strip Mall	326.88	184.14	89.48	518,597	518,597
Total	3,179.59	2,383.43	2,183.61	7,765,907	7,765,907

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.00	19.00	41.00	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down Restaurant)	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Refrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Enclosed Parking with Elevator	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
General Office Building	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
General Office Building	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
High Turnover (Sit Down Restaurant)	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Refrigerated Warehouse-No Rail	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Strip Mall	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2046	1.8116	1.2102	0.0112		0.1413	0.1413		0.1413	0.1413		2,231.5011	2,231.5011	0.0428	0.0409	2,244.7618
NaturalGas Unmitigated	0.2046	1.8116	1.2102	0.0112		0.1413	0.1413		0.1413	0.1413		2,231.5011	2,231.5011	0.0428	0.0409	2,244.7618

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	8156.36	0.0880	0.7517	0.3199	4.8000e-003		0.0608	0.0608		0.0608	0.0608		959.5718	959.5718	0.0184	0.0176	965.2741
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	1835.67	0.0198	0.1800	0.1512	1.0800e-003		0.0137	0.0137		0.0137	0.0137		215.9609	215.9609	4.1400e-003	3.9600e-003	217.2443
General Office Building	291.651	3.1500e-003	0.0286	0.0240	1.7000e-004		2.1700e-003	2.1700e-003		2.1700e-003	2.1700e-003		34.3119	34.3119	6.6000e-004	6.3000e-004	34.5158
High Turnover (Sit Down Restaurant)	8484.38	0.0915	0.8318	0.6987	4.9900e-003		0.0632	0.0632		0.0632	0.0632		998.1625	998.1625	0.0191	0.0183	1,004.0941
Refrigerated Warehouse-No Rail	179.996	1.9400e-003	0.0177	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003		21.1760	21.1760	4.1000e-004	3.9000e-004	21.3018

Strip Mall	19.7025	2.1000e-004	1.9300e-003	1.6200e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		2.3179	2.3179	4.0000e-005	4.0000e-005	2.3317
Total		**0.2046**	**1.8116**	**1.2102**	**0.0112**		**0.1413**	**0.1413**		**0.1413**	**0.1413**		**2,231.5011**	**2,231.5011**	**0.0428**	**0.0409**	**2,244.7618**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	8.15636	0.0880	0.7517	0.3199	4.8000e-003		0.0608	0.0608		0.0608	0.0608		959.5718	959.5718	0.0184	0.0176	965.2741
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0.291651	3.1500e-003	0.0286	0.0240	1.7000e-004		2.1700e-003	2.1700e-003		2.1700e-003	2.1700e-003		34.3119	34.3119	6.6000e-004	6.3000e-004	34.5158
General Office Building	1.83567	0.0198	0.1800	0.1512	1.0800e-003		0.0137	0.0137		0.0137	0.0137		215.9609	215.9609	4.1400e-003	3.9600e-003	217.2443
High Turnover (Sit Down Restaurant)	8.48438	0.0915	0.8318	0.6987	4.9900e-003		0.0632	0.0632		0.0632	0.0632		998.1625	998.1625	0.0191	0.0183	1,004.0941
Refrigerated Warehouse-No Rail	0.179996	1.9400e-003	0.0177	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003		21.1760	21.1760	4.1000e-004	3.9000e-004	21.3018
Strip Mall	0.0197025	2.1000e-004	1.9300e-003	1.6200e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		2.3179	2.3179	4.0000e-005	4.0000e-005	2.3317
Total		**0.2046**	**1.8116**	**1.2102**	**0.0112**		**0.1413**	**0.1413**		**0.1413**	**0.1413**		**2,231.5011**	**2,231.5011**	**0.0428**	**0.0409**	**2,244.7618**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Mitigated	14.6668	0.3084	26.7622	1.4100e-003		0.1477	0.1477		0.1477	0.1477	0.0000	48.1656	48.1656	0.0468	0.0000	49.3350
Unmitigated	14.6668	0.3084	26.7622	1.4100e-003		0.1477	0.1477		0.1477	0.1477	0.0000	48.1656	48.1656	0.0468	0.0000	49.3350

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.2339					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.6192					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.8137	0.3084	26.7622	1.4100e-003		0.1477	0.1477		0.1477	0.1477		48.1656	48.1656	0.0468		49.3350
Total	**14.6668**	**0.3084**	**26.7622**	**1.4100e-003**		**0.1477**	**0.1477**		**0.1477**	**0.1477**	**0.0000**	**48.1656**	**48.1656**	**0.0468**	**0.0000**	**49.3350**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.2339					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.6192					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.8137	0.3084	26.7622	1.4100e-003		0.1477	0.1477		0.1477	0.1477		48.1656	48.1656	0.0468		49.3350
Total	**14.6668**	**0.3084**	**26.7622**	**1.4100e-003**		**0.1477**	**0.1477**		**0.1477**	**0.1477**	**0.0000**	**48.1656**	**48.1656**	**0.0468**	**0.0000**	**49.3350**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Southern California Flower Market Future

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	64.36	1000sqft	0.20	64,363.00	0
General Office Building	10.23	1000sqft	0.10	10,226.00	0
Refrigerated Warehouse-No Rail	63.78	1000sqft	0.30	63,785.00	0
Enclosed Parking with Elevator	681.00	Space	1.00	272,400.00	0
High Turnover (Sit Down Restaurant)	13.42	1000sqft	0.10	13,420.00	0
Apartments Mid Rise	323.00	Dwelling Unit	2.00	476,279.00	924
Strip Mall	4.38	1000sqft	0.10	4,385.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project description

Construction Phase - Developer information

Off-road Equipment - Developer information

Off-road Equipment - Developer information

Off-road Equipment - Developer information

Off-road Equipment - Developer information

Off-road Equipment - Developer information

Off-road Equipment - Developer information

Off-road Equipment - Developer information

Trips and VMT - Haul of materials to Manning Pit in Irwindale and Chiquita Canyon (50/50 split), with an average of 31.5 miles one-way. Fehr & Peers consruction

Demolition - Developer information

Grading - Assumes 507'x262' at 10' feet of depth of excavation of one-level garage

Vehicle Trips - Assumes continuation of mobile source emissions associated with preservation of existing wholesale operations

Woodstoves - Developer information

Construction Off-road Equipment Mitigation - Assumes SCAQMD Rule 403 control efficiencies

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	46
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	19.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	16.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	16.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	15.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	86.00
tblConstructionPhase	NumDays	5.00	23.00
tblConstructionPhase	NumDays	8.00	66.00
tblConstructionPhase	NumDays	230.00	523.00
tblConstructionPhase	NumDays	18.00	135.00
tblConstructionPhase	NumDays	18.00	24.00
tblFireplaces	NumberGas	274.55	0.00
tblFireplaces	NumberNoFireplace	32.30	323.00
tblFireplaces	NumberWood	16.15	0.00
tblGrading	AcresOfGrading	363.00	3.70
tblGrading	AcresOfGrading	23.00	0.00
tblGrading	MaterialExported	0.00	50,000.00
tblLandUse	LandUseSquareFeet	64,360.00	64,363.00
tblLandUse	LandUseSquareFeet	10,230.00	10,226.00
tblLandUse	LandUseSquareFeet	63,780.00	63,785.00
tblLandUse	LandUseSquareFeet	323,000.00	476,279.00
tblLandUse	LandUseSquareFeet	4,380.00	4,385.00
tblLandUse	LotAcreage	1.48	0.20
tblLandUse	LotAcreage	0.23	0.10
tblLandUse	LotAcreage	1.46	0.30
tblLandUse	LotAcreage	6.13	1.00

tblLandUse	LotAcreage	0.31	0.10
tblLandUse	LotAcreage	8.50	2.00
tblOffRoadEquipment	HorsePower	63.00	78.00
tblOffRoadEquipment	HorsePower	9.00	247.00
tblOffRoadEquipment	HorsePower	64.00	6.00
tblOffRoadEquipment	LoadFactor	0.31	0.48
tblOffRoadEquipment	LoadFactor	0.56	0.40
tblOffRoadEquipment	LoadFactor	0.46	0.82
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	9.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripLength	20.00	31.50
tblTripsAndVMT	HaulingTripLength	20.00	31.50
tblTripsAndVMT	HaulingTripLength	20.00	31.50
tblTripsAndVMT	HaulingTripLength	20.00	31.50
tblTripsAndVMT	HaulingTripLength	20.00	31.50

tblTripsAndVMT	HaulingTripNumber	0.00	5.00
tblTripsAndVMT	HaulingTripNumber	0.00	5.00
tblTripsAndVMT	HaulingTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	105.00	12.00
tblTripsAndVMT	VendorTripNumber	0.00	12.00
tblTripsAndVMT	WorkerTripNumber	85.00	20.00
tblTripsAndVMT	WorkerTripNumber	58.00	20.00
tblTripsAndVMT	WorkerTripNumber	48.00	20.00
tblTripsAndVMT	WorkerTripNumber	405.00	120.00
tblTripsAndVMT	WorkerTripNumber	70.00	120.00
tblTripsAndVMT	WorkerTripNumber	81.00	74.00
tblVehicleTrips	HO_TTP	40.60	41.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	6.39	3.37
tblVehicleTrips	ST_TR	158.37	63.49
tblVehicleTrips	ST_TR	1.68	1.18
tblVehicleTrips	SU_TR	5.86	3.37
tblVehicleTrips	SU_TR	131.84	63.49
tblVehicleTrips	SU_TR	1.68	1.18
tblVehicleTrips	WD_TR	6.65	3.37
tblVehicleTrips	WD_TR	11.03	11.22
tblVehicleTrips	WD_TR	127.15	63.49
tblVehicleTrips	WD_TR	1.68	1.18
tblVehicleTrips	WD_TR	44.32	74.63
tblWoodstoves	NumberCatalytic	16.15	0.00
tblWoodstoves	NumberNoncatalytic	16.15	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	1.5733	16.1970	10.7884	0.0242	0.8789	0.7187	1.5975	0.3953	0.6767	1.0720	0.0000	2,168.4118	2,168.4118	0.4595	0.0000	2,179.8997
2020	1.7209	13.8001	13.3759	0.0256	0.1822	0.7091	0.8913	0.0486	0.6819	0.7305	0.0000	2,173.1437	2,173.1437	0.4231	0.0000	2,183.7213
2021	3.4448	9.5880	10.2016	0.0198	0.1932	0.4663	0.6595	0.0515	0.4483	0.4998	0.0000	1,689.2685	1,689.2685	0.3133	0.0000	1,697.1011
Maximum	**3.4448**	**16.1970**	**13.3759**	**0.0256**	**0.8789**	**0.7187**	**1.5975**	**0.3953**	**0.6819**	**1.0720**	**0.0000**	**2,173.1437**	**2,173.1437**	**0.4595**	**0.0000**	**2,183.7213**

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					
2019	0.4118	4.1637	11.4798	0.0242	0.3722	0.0716	0.4438	0.1608	0.0695	0.2303	0.0000	2,168.4098	2,168.4098	0.4595	0.0000	2,179.8977
2020	0.5036	4.1815	14.7047	0.0256	0.1103	0.0836	0.1938	0.0310	0.0814	0.1124	0.0000	2,173.1414	2,173.1414	0.4231	0.0000	2,183.7189
2021	2.6450	2.9876	11.3202	0.0198	0.1167	0.0608	0.1775	0.0327	0.0594	0.0922	0.0000	1,689.2667	1,689.2667	0.3133	0.0000	1,697.0993
Maximum	**2.6450**	**4.1815**	**14.7047**	**0.0256**	**0.3722**	**0.0836**	**0.4438**	**0.1608**	**0.0814**	**0.2303**	**0.0000**	**2,173.1414**	**2,173.1414**	**0.4595**	**0.0000**	**2,183.7189**

	ROG	NOx	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
	ROG	**NOx**	**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	**47.17**	**71.37**	**-9.13**	**0.00**	**52.23**	**88.60**	**74.11**	**54.70**	**88.36**	**81.11**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2019	3-31-2019	3.6214	0.8115
2	4-1-2019	6-30-2019	4.2329	0.9223
3	7-1-2019	9-30-2019	5.5742	1.5724
4	10-1-2019	12-31-2019	4.1772	1.1888
5	1-1-2020	3-31-2020	3.8514	1.1631
6	4-1-2020	6-30-2020	3.8480	1.1597
7	7-1-2020	9-30-2020	3.8903	1.1725
8	10-1-2020	12-31-2020	3.8937	1.1759
9	1-1-2021	3-31-2021	3.4853	1.1337
10	4-1-2021	6-30-2021	3.9800	1.5197
11	7-1-2021	9-30-2021	4.5050	2.1240
		Highest	5.5742	2.1240

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.6299	0.0386	3.3453	1.8000e-004		0.0185	0.0185		0.0185	0.0185	0.0000	5.4619	5.4619	5.3000e-003	0.0000	5.5945
Energy	0.0373	0.3306	0.2209	2.0400e-003		0.0258	0.0258		0.0258	0.0258	0.0000	3,468.8707	3,468.8707	0.0803	0.0219	3,477.4095
Mobile	1.0070	5.1516	12.8322	0.0456	3.0631	0.0384	3.1015	0.8360	0.0358	0.8718	0.0000	4,214.4639	4,214.4639	0.2218	0.0000	4,220.0082
Waste						0.0000	0.0000		0.0000	0.0000	89.7626	0.0000	89.7626	5.3048	0.0000	222.3831
Water						0.0000	0.0000		0.0000	0.0000	16.9569	522.8359	539.7927	1.7540	0.0437	596.6585
Total	**3.6742**	**5.5208**	**16.3984**	**0.0478**	**3.0631**	**0.0827**	**3.1457**	**0.8360**	**0.0801**	**0.9161**	**106.7195**	**8,211.6324**	**8,318.3519**	**7.3662**	**0.0656**	**8,522.0536**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.6299	0.0386	3.3453	1.8000e-004		0.0185	0.0185		0.0185	0.0185	0.0000	5.4619	5.4619	5.3000e-003	0.0000	5.5945
Energy	0.0373	0.3306	0.2209	2.0400e-003		0.0258	0.0258		0.0258	0.0258	0.0000	3,468.8707	3,468.8707	0.0803	0.0219	3,477.4095
Mobile	1.0070	5.1516	12.8322	0.0456	3.0631	0.0384	3.1015	0.8360	0.0358	0.8718	0.0000	4,214.4639	4,214.4639	0.2218	0.0000	4,220.0082
Waste						0.0000	0.0000		0.0000	0.0000	89.7626	0.0000	89.7626	5.3048	0.0000	222.3831
Water						0.0000	0.0000		0.0000	0.0000	16.9569	522.8359	539.7927	1.7540	0.0437	596.6585
Total	**3.6742**	**5.5208**	**16.3984**	**0.0478**	**3.0631**	**0.0827**	**3.1457**	**0.8360**	**0.0801**	**0.9161**	**106.7195**	**8,211.6324**	**8,318.3519**	**7.3662**	**0.0656**	**8,522.0536**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	4/30/2019	5	86	
2	Site Preparation	Site Preparation	5/1/2019	5/31/2019	5	23	
3	Grading	Grading	6/3/2019	9/2/2019	5	66	
4	Building Construction	Building Construction	9/3/2019	9/2/2021	5	523	
5	Architectural Coating	Architectural Coating	6/1/2021	12/6/2021	5	135	
6	Paving	Paving	8/2/2021	9/2/2021	5	24	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 3.7

Acres of Paving: 1

Residential Indoor: 964,465; Residential Outdoor: 321,488; Non-Residential Indoor: 234,269; Non-Residential Outdoor: 78,090; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
	Aerial Lifts	5	8.00	63	0.31
	Air Compressors	2	8.00	78	0.48
	Concrete/Industrial Saws	2	8.00	81	0.73
	Cranes	1	8.00	231	0.29
	Crawler Tractors	2	8.00	212	0.43
	Crushing/Proc. Equipment	1	8.00	85	0.78
	Dumpers/Tenders	5	8.00	16	0.38
	Excavators	2	8.00	158	0.38
	Forklifts	1	8.00	89	0.20
	Off-Highway Tractors	2	8.00	124	0.44
	Rough Terrain Forklifts	1	8.00	100	0.40
	Rubber Tired Loaders	1	8.00	203	0.36
	Signal Boards	2	8.00	6	0.82
	Skid Steer Loaders	2	8.00	65	0.37
	Sweepers/Scrubbers	1	8.00	64	0.46
	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Aerial Lifts	5	8.00	63	0.31
Demolition	Air Compressors	2	8.00	78	0.48
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Cranes	1	8.00	231	0.29
Demolition	Crawler Tractors	2	8.00	212	0.43
Demolition	Crushing/Proc. Equipment	1	8.00	85	0.78
Demolition	Dumpers/Tenders	5	8.00	16	0.38

Demolition	Excavators	2	8.00	158	0.38
Demolition	Forklifts	1	8.00	89	0.20
Demolition	Off-Highway Tractors	2	8.00	124	0.44
Demolition	Rough Terrain Forklifts	1	8.00	100	0.40
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Rubber Tired Loaders	1	8.00	203	0.36
Demolition	Signal Boards	2	8.00	6	0.82
Demolition	Skid Steer Loaders	2	8.00	65	0.37
Demolition	Sweepers/Scrubbers	1	8.00	64	0.46
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Cement and Mortar Mixers	2	8.00	247	0.40
Site Preparation	Crawler Tractors	2	8.00	212	0.43
Site Preparation	Dumpers/Tenders	1	8.00	16	0.38
Site Preparation	Excavators	2	8.00	158	0.38
Site Preparation	Off-Highway Tractors	2	8.00	124	0.44
Site Preparation	Rough Terrain Forklifts	1	8.00	100	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Rubber Tired Loaders	2	8.00	203	0.36
Site Preparation	Signal Boards	2	8.00	6	0.82
Site Preparation	Sweepers/Scrubbers	1	8.00	64	0.46
Site Preparation	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Trenchers	2	8.00	78	0.50
Grading	Cranes	3	8.00	231	0.29
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Off-Highway Tractors	1	8.00	124	0.44
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Loaders	2	8.00	203	0.36
Grading	Scrapers	5	8.00	367	0.48
Grading	Sweepers/Scrubbers	2	8.00	6	0.82

Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	8	8.00	63	0.31
Building Construction	Air Compressors	3	8.00	78	0.48
Building Construction	Bore/Drill Rigs	3	8.00	221	0.50
Building Construction	Cement and Mortar Mixers	8	8.00	9	0.56
Building Construction	Concrete/Industrial Saws	3	8.00	81	0.73
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Dumpers/Tenders	1	8.00	16	0.38
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Generator Sets	2	8.00	84	0.74
Building Construction	Pumps	2	8.00	84	0.74
Building Construction	Rough Terrain Forklifts	2	8.00	100	0.40
Building Construction	Rubber Tired Loaders	1	8.00	203	0.36
Building Construction	Signal Boards	4	8.00	6	0.82
Building Construction	Sweepers/Scrubbers	1	8.00	64	0.46
Building Construction	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Trenchers	2	8.00	78	0.50
Building Construction	Welders	9	8.00	46	0.45
Paving	Cement and Mortar Mixers	6	8.00	9	0.56
Paving	Concrete/Industrial Saws	3	8.00	81	0.73
Paving	Dumpers/Tenders	4	8.00	16	0.38
Paving	Graders	1	8.00	187	0.41
Paving	Off-Highway Tractors	2	8.00	124	0.44
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Plate Compactors	1	8.00	8	0.43
Paving	Rollers	2	8.00	80	0.38
Paving	Rubber Tired Loaders	2	8.00	203	0.36
Paving	Signal Boards	2	8.00	6	0.82
Paving	Sweepers/Scrubbers	1	8.00	64	0.46

Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Aerial Lifts	1	8.00	78	0.48
Architectural Coating	Air Compressors	1	6.00	78	0.48
Architectural Coating	Generator Sets	1	8.00	84	0.74
Architectural Coating	Pressure Washers	1	8.00	13	0.30
Architectural Coating	Rollers	1	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	34	20.00	5.00	842.00	14.70	6.90	31.50	LD_Mix	HDT_Mix	HHDT
Site Preparation	23	20.00	5.00	5.00	14.70	6.90	31.50	LD_Mix	HDT_Mix	HHDT
Grading	19	20.00	5.00	6,250.00	14.70	6.90	31.50	LD_Mix	HDT_Mix	HHDT
Building Construction	57	120.00	12.00	5.00	14.70	6.90	31.50	LD_Mix	HDT_Mix	HHDT
Paving	28	120.00	12.00	5.00	14.70	6.90	31.50	LD_Mix	HDT_Mix	HHDT
Architectural Coating	5	74.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Replace Ground Cover

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2019

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					0.0911	0.0000	0.0911	0.0138	0.0000	0.0138	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4141	4.2079	2.8940	5.3000e-003		0.2088	0.2088		0.1962	0.1962	0.0000	467.7642	467.7642	0.1204	0.0000	470.7748
Total	**0.4141**	**4.2079**	**2.8940**	**5.3000e-003**	**0.0911**	**0.2088**	**0.2999**	**0.0138**	**0.1962**	**0.2100**	**0.0000**	**467.7642**	**467.7642**	**0.1204**	**0.0000**	**470.7748**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.8100e-003	0.1861	0.0409	5.0000e-004	0.0114	7.3000e-004	0.0121	3.1300e-003	7.0000e-004	3.8300e-003	0.0000	49.2398	49.2398	3.2300e-003	0.0000	49.3205
Vendor	9.1000e-004	0.0254	6.9500e-003	6.0000e-005	1.3500e-003	1.6000e-004	1.5100e-003	3.9000e-004	1.5000e-004	5.4000e-004	0.0000	5.3764	5.3764	3.6000e-004	0.0000	5.3854
Worker	4.3100e-003	3.5900e-003	0.0390	1.0000e-004	9.4200e-003	8.0000e-005	9.5100e-003	2.5000e-003	8.0000e-005	2.5800e-003	0.0000	9.0589	9.0589	3.1000e-004	0.0000	9.0667
Total	**0.0110**	**0.2151**	**0.0869**	**6.6000e-004**	**0.0222**	**9.7000e-004**	**0.0231**	**6.0200e-003**	**9.3000e-004**	**6.9500e-003**	**0.0000**	**63.6750**	**63.6750**	**3.9000e-003**	**0.0000**	**63.7725**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0338	0.0000	0.0338	5.1100e-003	0.0000	5.1100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0981	0.7649	3.1770	5.3000e-003		0.0215	0.0215		0.0208	0.0208	0.0000	467.7636	467.7636	0.1204	0.0000	470.7742
Total	**0.0981**	**0.7649**	**3.1770**	**5.3000e-003**	**0.0338**	**0.0215**	**0.0553**	**5.1100e-003**	**0.0208**	**0.0259**	**0.0000**	**467.7636**	**467.7636**	**0.1204**	**0.0000**	**470.7742**

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	5.8100e-003	0.1861	0.0409	5.0000e-004	7.4500e-003	7.3000e-004	8.1800e-003	2.1600e-003	7.0000e-004	2.8600e-003	0.0000	49.2398	49.2398	3.2300e-003	0.0000	49.3205
Vendor	9.1000e-004	0.0254	6.9500e-003	6.0000e-005	9.1000e-004	1.6000e-004	1.0700e-003	2.8000e-004	1.5000e-004	4.4000e-004	0.0000	5.3764	5.3764	3.6000e-004	0.0000	5.3854
Worker	4.3100e-003	3.5900e-003	0.0390	1.0000e-004	5.6700e-003	8.0000e-005	5.7500e-003	1.5800e-003	8.0000e-005	1.6600e-003	0.0000	9.0589	9.0589	3.1000e-004	0.0000	9.0667
Total	**0.0110**	**0.2151**	**0.0869**	**6.6000e-004**	**0.0140**	**9.7000e-004**	**0.0150**	**4.0200e-003**	**9.3000e-004**	**4.9600e-003**	**0.0000**	**63.6750**	**63.6750**	**3.9000e-003**	**0.0000**	**63.7725**

3.3 Site Preparation - 2019

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					0.2078	0.0000	0.2078	0.1142	0.0000	0.1142	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1000	1.0782	0.5914	1.1200e-003		0.0534	0.0534		0.0492	0.0492	0.0000	100.3995	100.3995	0.0314	0.0000	101.1849
Total	**0.1000**	**1.0782**	**0.5914**	**1.1200e-003**	**0.2078**	**0.0534**	**0.2612**	**0.1142**	**0.0492**	**0.1634**	**0.0000**	**100.3995**	**100.3995**	**0.0314**	**0.0000**	**101.1849**

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	3.0000e-005	1.1100e-003	2.4000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.2924	0.2924	2.0000e-005	0.0000	0.2929
Vendor	2.4000e-004	6.7900e-003	1.8600e-003	1.0000e-005	3.6000e-004	4.0000e-005	4.0000e-004	1.0000e-004	4.0000e-005	1.5000e-004	0.0000	1.4379	1.4379	1.0000e-004	0.0000	1.4403
Worker	1.1500e-003	9.6000e-004	0.0104	3.0000e-005	2.5200e-003	2.0000e-005	2.5400e-003	6.7000e-004	2.0000e-005	6.9000e-004	0.0000	2.4227	2.4227	8.0000e-005	0.0000	2.4248
Total	**1.4200e-003**	**8.8600e-003**	**0.0125**	**4.0000e-005**	**2.9500e-003**	**6.0000e-005**	**3.0100e-003**	**7.9000e-004**	**6.0000e-005**	**8.6000e-004**	**0.0000**	**4.1530**	**4.1530**	**2.0000e-004**	**0.0000**	**4.1580**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0770	0.0000	0.0770	0.0423	0.0000	0.0423	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0186	0.0991	0.6530	1.1200e-003		4.5900e-003	4.5900e-003		4.4100e-003	4.4100e-003	0.0000	100.3994	100.3994	0.0314	0.0000	101.1848
Total	**0.0186**	**0.0991**	**0.6530**	**1.1200e-003**	**0.0770**	**4.5900e-003**	**0.0816**	**0.0423**	**4.4100e-003**	**0.0467**	**0.0000**	**100.3994**	**100.3994**	**0.0314**	**0.0000**	**101.1848**

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	3.0000e-005	1.1100e-003	2.4000e-004	0.0000	4.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.2924	0.2924	2.0000e-005	0.0000	0.2929
Vendor	2.4000e-004	6.7900e-003	1.8600e-003	1.0000e-005	2.4000e-004	4.0000e-005	2.9000e-004	8.0000e-005	4.0000e-005	1.2000e-004	0.0000	1.4379	1.4379	1.0000e-004	0.0000	1.4403
Worker	1.1500e-003	9.6000e-004	0.0104	3.0000e-005	1.5200e-003	2.0000e-005	1.5400e-003	4.2000e-004	2.0000e-005	4.4000e-004	0.0000	2.4227	2.4227	8.0000e-005	0.0000	2.4248

Total	**1.4200e-003**	**8.8600e-003**	**0.0125**	**4.0000e-005**	**1.8000e-003**	**6.0000e-005**	**1.8800e-003**	**5.1000e-004**	**6.0000e-005**	**5.8000e-004**	**0.0000**	**4.1530**	**4.1530**	**2.0000e-004**	**0.0000**	**4.1580**

3.4 Grading - 2019

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					0.4023	0.0000	0.4023	0.2191	0.0000	0.2191	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3844	4.4326	2.4091	4.8300e-003		0.1876	0.1876		0.1726	0.1726	0.0000	433.5909	433.5909	0.1372	0.0000	437.0204
Total	**0.3844**	**4.4326**	**2.4091**	**4.8300e-003**	**0.4023**	**0.1876**	**0.5899**	**0.2191**	**0.1726**	**0.3917**	**0.0000**	**433.5909**	**433.5909**	**0.1372**	**0.0000**	**437.0204**

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	0.0432	1.3817	0.3038	3.7200e-003	0.0845	5.4500e-003	0.0900	0.0232	5.2100e-003	0.0284	0.0000	365.4971	365.4971	0.0240	0.0000	366.0962
Vendor	7.0000e-004	0.0195	5.3300e-003	4.0000e-005	1.0400e-003	1.2000e-004	1.1600e-003	3.0000e-004	1.2000e-004	4.2000e-004	0.0000	4.1261	4.1261	2.8000e-004	0.0000	4.1330
Worker	3.3100e-003	2.7600e-003	0.0300	8.0000e-005	7.2300e-003	6.0000e-005	7.3000e-003	1.9200e-003	6.0000e-005	1.9800e-003	0.0000	6.9522	6.9522	2.4000e-004	0.0000	6.9581
Total	**0.0472**	**1.4039**	**0.3391**	**3.8400e-003**	**0.0928**	**5.6300e-003**	**0.0985**	**0.0254**	**5.3900e-003**	**0.0308**	**0.0000**	**376.5754**	**376.5754**	**0.0245**	**0.0000**	**377.1872**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1490	0.0000	0.1490	0.0812	0.0000	0.0812	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0672	0.2855	2.3607	4.8300e-003		0.0107	0.0107		0.0105	0.0105	0.0000	433.5903	433.5903	0.1372	0.0000	437.0199
Total	**0.0672**	**0.2855**	**2.3607**	**4.8300e-003**	**0.1490**	**0.0107**	**0.1597**	**0.0812**	**0.0105**	**0.0916**	**0.0000**	**433.5903**	**433.5903**	**0.1372**	**0.0000**	**437.0199**

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	0.0432	1.3817	0.3038	3.7200e-003	0.0553	5.4500e-003	0.0607	0.0160	5.2100e-003	0.0212	0.0000	365.4971	365.4971	0.0240	0.0000	366.0962
Vendor	7.0000e-004	0.0195	5.3300e-003	4.0000e-005	7.0000e-004	1.2000e-004	8.2000e-004	2.2000e-004	1.2000e-004	3.3000e-004	0.0000	4.1261	4.1261	2.8000e-004	0.0000	4.1330
Worker	3.3100e-003	2.7600e-003	0.0300	8.0000e-005	4.3500e-003	6.0000e-005	4.4100e-003	1.2100e-003	6.0000e-005	1.2700e-003	0.0000	6.9522	6.9522	2.4000e-004	0.0000	6.9581
Total	**0.0472**	**1.4039**	**0.3391**	**3.8400e-003**	**0.0603**	**5.6300e-003**	**0.0660**	**0.0175**	**5.3900e-003**	**0.0228**	**0.0000**	**376.5754**	**376.5754**	**0.0245**	**0.0000**	**377.1872**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

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

Off-Road	0.5872	4.7677	4.2043	7.6900e-003		0.2613	0.2613		0.2514	0.2514	0.0000	654.9492	654.9492	0.1392	0.0000	658.4289
Total	**0.5872**	**4.7677**	**4.2043**	**7.6900e-003**		**0.2613**	**0.2613**		**0.2514**	**0.2514**	**0.0000**	**654.9492**	**654.9492**	**0.1392**	**0.0000**	**658.4289**

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	1.0000e-005	1.8000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0481	0.0481	0.0000	0.0000	0.0482
Vendor	2.1800e-003	0.0610	0.0167	1.3000e-004	3.2500e-003	3.8000e-004	3.6300e-003	9.4000e-004	3.7000e-004	1.3000e-003	0.0000	12.9033	12.9033	8.6000e-004	0.0000	12.9249
Worker	0.0259	0.0215	0.2343	6.0000e-004	0.0565	5.0000e-004	0.0570	0.0150	4.6000e-004	0.0155	0.0000	54.3532	54.3532	1.8700e-003	0.0000	54.4000
Total	**0.0280**	**0.0827**	**0.2510**	**7.3000e-004**	**0.0598**	**8.8000e-004**	**0.0607**	**0.0160**	**8.3000e-004**	**0.0168**	**0.0000**	**67.3047**	**67.3047**	**2.7300e-003**	**0.0000**	**67.3730**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1403	1.3038	4.5996	7.6900e-003		0.0273	0.0273		0.0266	0.0266	0.0000	654.9484	654.9484	0.1392	0.0000	658.4281
Total	**0.1403**	**1.3038**	**4.5996**	**7.6900e-003**		**0.0273**	**0.0273**		**0.0266**	**0.0266**	**0.0000**	**654.9484**	**654.9484**	**0.1392**	**0.0000**	**658.4281**

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	1.0000e-005	1.8000e-004	4.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0481	0.0481	0.0000	0.0000	0.0482
Vendor	2.1800e-003	0.0610	0.0167	1.3000e-004	2.1900e-003	3.8000e-004	2.5800e-003	6.8000e-004	3.7000e-004	1.0500e-003	0.0000	12.9033	12.9033	8.6000e-004	0.0000	12.9249
Worker	0.0259	0.0215	0.2343	6.0000e-004	0.0340	5.0000e-004	0.0345	9.4800e-003	4.6000e-004	9.9400e-003	0.0000	54.3532	54.3532	1.8700e-003	0.0000	54.4000
Total	**0.0280**	**0.0827**	**0.2510**	**7.3000e-004**	**0.0362**	**8.8000e-004**	**0.0371**	**0.0102**	**8.3000e-004**	**0.0110**	**0.0000**	**67.3047**	**67.3047**	**2.7300e-003**	**0.0000**	**67.3730**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6426	13.5707	12.6826	0.0234		0.7068	0.7068		0.6798	0.6798	0.0000	1,973.3899	1,973.3899	0.4156	0.0000	1,983.7787
Total	**1.6426**	**13.5707**	**12.6826**	**0.0234**		**0.7068**	**0.7068**		**0.6798**	**0.6798**	**0.0000**	**1,973.3899**	**1,973.3899**	**0.4156**	**0.0000**	**1,983.7787**

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	2.0000e-005	5.2000e-004	1.2000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.1449	0.1449	1.0000e-005	0.0000	0.1452
Vendor	5.7000e-003	0.1704	0.0461	4.0000e-004	9.9000e-003	7.9000e-004	0.0107	2.8600e-003	7.6000e-004	3.6200e-003	0.0000	39.0526	39.0526	2.4800e-003	0.0000	39.1146
Worker	0.0726	0.0585	0.6471	1.7800e-003	0.1723	1.4700e-003	0.1737	0.0458	1.3500e-003	0.0471	0.0000	160.5563	160.5563	5.0600e-003	0.0000	160.6828
Total	**0.0783**	**0.2294**	**0.6933**	**2.1800e-003**	**0.1822**	**2.2600e-003**	**0.1845**	**0.0486**	**2.1100e-003**	**0.0508**	**0.0000**	**199.7538**	**199.7538**	**7.5500e-003**	**0.0000**	**199.9426**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4253	3.9522	14.0114	0.0234		0.0813	0.0813		0.0793	0.0793	0.0000	1,973.3876	1,973.3876	0.4156	0.0000	1,983.7763
Total	**0.4253**	**3.9522**	**14.0114**	**0.0234**		**0.0813**	**0.0813**		**0.0793**	**0.0793**	**0.0000**	**1,973.3876**	**1,973.3876**	**0.4156**	**0.0000**	**1,983.7763**

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	2.0000e-005	5.2000e-004	1.2000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1449	0.1449	1.0000e-005	0.0000	0.1452
Vendor	5.7000e-003	0.1704	0.0461	4.0000e-004	6.6800e-003	7.9000e-004	7.4700e-003	2.0700e-003	7.6000e-004	2.8200e-003	0.0000	39.0526	39.0526	2.4800e-003	0.0000	39.1146
Worker	0.0726	0.0585	0.6471	1.7800e-003	0.1036	1.4700e-003	0.1051	0.0289	1.3500e-003	0.0303	0.0000	160.5563	160.5563	5.0600e-003	0.0000	160.6828

Total	**0.0783**	**0.2294**	**0.6933**	**2.1800e-003**	**0.1103**	**2.2600e-003**	**0.1126**	**0.0310**	**2.1100e-003**	**0.0331**	**0.0000**	**199.7538**	**199.7538**	**7.5500e-003**	**0.0000**	**199.9426**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.9966	8.3013	8.3743	0.0157		0.4097	0.4097		0.3940	0.3940	0.0000	1,318.7129	1,318.7129	0.2726	0.0000	1,325.5272
Total	**0.9966**	**8.3013**	**8.3743**	**0.0157**		**0.4097**	**0.4097**		**0.3940**	**0.3940**	**0.0000**	**1,318.7129**	**1,318.7129**	**0.2726**	**0.0000**	**1,325.5272**

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	1.0000e-005	3.2000e-004	8.0000e-005	0.0000	6.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0957	0.0957	1.0000e-005	0.0000	0.0959
Vendor	3.2600e-003	0.1036	0.0281	2.7000e-004	6.6100e-003	2.1000e-004	6.8300e-003	1.9100e-003	2.0000e-004	2.1100e-003	0.0000	25.8821	25.8821	1.5900e-003	0.0000	25.9218
Worker	0.0452	0.0352	0.3971	1.1500e-003	0.1151	9.5000e-004	0.1160	0.0306	8.7000e-004	0.0314	0.0000	103.8363	103.8363	3.0600e-003	0.0000	103.9127
Total	**0.0485**	**0.1391**	**0.4252**	**1.4200e-003**	**0.1217**	**1.1600e-003**	**0.1229**	**0.0325**	**1.0700e-003**	**0.0336**	**0.0000**	**129.8141**	**129.8141**	**4.6600e-003**	**0.0000**	**129.9304**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2805	2.6161	9.3555	0.0157		0.0512	0.0512		0.0501	0.0501	0.0000	1,318.7113	1,318.7113	0.2726	0.0000	1,325.5257
Total	**0.2805**	**2.6161**	**9.3555**	**0.0157**		**0.0512**	**0.0512**		**0.0501**	**0.0501**	**0.0000**	**1,318.7113**	**1,318.7113**	**0.2726**	**0.0000**	**1,325.5257**

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	1.0000e-005	3.2000e-004	8.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0957	0.0957	1.0000e-005	0.0000	0.0959
Vendor	3.2600e-003	0.1036	0.0281	2.7000e-004	4.4600e-003	2.1000e-004	4.6700e-003	1.3800e-003	2.0000e-004	1.5800e-003	0.0000	25.8821	25.8821	1.5900e-003	0.0000	25.9218
Worker	0.0452	0.0352	0.3971	1.1500e-003	0.0692	9.5000e-004	0.0701	0.0193	8.7000e-004	0.0202	0.0000	103.8363	103.8363	3.0600e-003	0.0000	103.9127
Total	**0.0485**	**0.1391**	**0.4252**	**1.4200e-003**	**0.0737**	**1.1600e-003**	**0.0748**	**0.0207**	**1.0700e-003**	**0.0218**	**0.0000**	**129.8141**	**129.8141**	**4.6600e-003**	**0.0000**	**129.9304**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

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

Archit. Coating	2.2519					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0595	0.5450	0.6563	1.0800e-003		0.0280	0.0280		0.0273	0.0273	0.0000	92.4288	92.4288	0.0146	0.0000	92.7932
Total	**2.3114**	**0.5450**	**0.6563**	**1.0800e-003**		**0.0280**	**0.0280**		**0.0273**	**0.0273**	**0.0000**	**92.4288**	**92.4288**	**0.0146**	**0.0000**	**92.7932**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0215	0.0167	0.1889	5.5000e-004	0.0547	4.5000e-004	0.0552	0.0145	4.2000e-004	0.0150	0.0000	49.3964	49.3964	1.4500e-003	0.0000	49.4328
Total	**0.0215**	**0.0167**	**0.1889**	**5.5000e-004**	**0.0547**	**4.5000e-004**	**0.0552**	**0.0145**	**4.2000e-004**	**0.0150**	**0.0000**	**49.3964**	**49.3964**	**1.4500e-003**	**0.0000**	**49.4328**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.2519					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0142	0.0696	0.7127	1.0800e-003		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	92.4287	92.4287	0.0146	0.0000	92.7931
Total	**2.2661**	**0.0696**	**0.7127**	**1.0800e-003**		**2.4400e-003**	**2.4400e-003**		**2.4400e-003**	**2.4400e-003**	**0.0000**	**92.4287**	**92.4287**	**0.0146**	**0.0000**	**92.7931**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0215	0.0167	0.1889	5.5000e-004	0.0329	4.5000e-004	0.0334	9.1800e-003	4.2000e-004	9.6000e-003	0.0000	49.3964	49.3964	1.4500e-003	0.0000	49.4328
Total	**0.0215**	**0.0167**	**0.1889**	**5.5000e-004**	**0.0329**	**4.5000e-004**	**0.0334**	**9.1800e-003**	**4.2000e-004**	**9.6000e-003**	**0.0000**	**49.3964**	**49.3964**	**1.4500e-003**	**0.0000**	**49.4328**

3.7 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0602	0.5659	0.4983	9.5000e-004		0.0268	0.0268		0.0254	0.0254	0.0000	80.8403	80.8403	0.0194	0.0000	81.3251
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0602**	**0.5659**	**0.4983**	**9.5000e-004**		**0.0268**	**0.0268**		**0.0254**	**0.0254**	**0.0000**	**80.8403**	**80.8403**	**0.0194**	**0.0000**	**81.3251**

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	3.0000e-005	9.6000e-004	2.3000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.2861	0.2861	2.0000e-005	0.0000	0.2865
Vendor	4.5000e-004	0.0142	3.8500e-003	4.0000e-005	9.1000e-004	3.0000e-005	9.4000e-004	2.6000e-004	3.0000e-005	2.9000e-004	0.0000	3.5496	3.5496	2.2000e-004	0.0000	3.5550
Worker	6.2000e-003	4.8200e-003	0.0545	1.6000e-004	0.0158	1.3000e-004	0.0159	4.1900e-003	1.2000e-004	4.3100e-003	0.0000	14.2404	14.2404	4.2000e-004	0.0000	14.2509
Total	**6.6800e-003**	**0.0200**	**0.0585**	**2.0000e-004**	**0.0168**	**1.6000e-004**	**0.0169**	**4.4700e-003**	**1.5000e-004**	**4.6200e-003**	**0.0000**	**18.0760**	**18.0760**	**6.6000e-004**	**0.0000**	**18.0924**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0218	0.1261	0.5793	9.5000e-004		5.4000e-003	5.4000e-003		5.2500e-003	5.2500e-003	0.0000	80.8402	80.8402	0.0194	0.0000	81.3250
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0218**	**0.1261**	**0.5793**	**9.5000e-004**		**5.4000e-003**	**5.4000e-003**		**5.2500e-003**	**5.2500e-003**	**0.0000**	**80.8402**	**80.8402**	**0.0194**	**0.0000**	**81.3250**

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	3.0000e-005	9.6000e-004	2.3000e-004	0.0000	4.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.2861	0.2861	2.0000e-005	0.0000	0.2865
Vendor	4.5000e-004	0.0142	3.8500e-003	4.0000e-005	6.1000e-004	3.0000e-005	6.4000e-004	1.9000e-004	3.0000e-005	2.2000e-004	0.0000	3.5496	3.5496	2.2000e-004	0.0000	3.5550
Worker	6.2000e-003	4.8200e-003	0.0545	1.6000e-004	9.4900e-003	1.3000e-004	9.6200e-003	2.6500e-003	1.2000e-004	2.7700e-003	0.0000	14.2404	14.2404	4.2000e-004	0.0000	14.2509

Total	**6.6800e-003**	**0.0200**	**0.0585**	**2.0000e-004**	**0.0101**	**1.6000e-004**	**0.0103**	**2.8500e-003**	**1.5000e-004**	**3.0100e-003**	**0.0000**	**18.0760**	**18.0760**	**6.6000e-004**	**0.0000**	**18.0924**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.0070	5.1516	12.8322	0.0456	3.0631	0.0384	3.1015	0.8360	0.0358	0.8718	0.0000	4,214.4639	4,214.4639	0.2218	0.0000	4,220.0082
Unmitigated	1.0070	5.1516	12.8322	0.0456	3.0631	0.0384	3.1015	0.8360	0.0358	0.8718	0.0000	4,214.4639	4,214.4639	0.2218	0.0000	4,220.0082

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,088.51	1,088.51	1088.51	3,717,354	3,717,354
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	722.12	158.33	67.58	1,765,591	1,765,591
General Office Building	114.78	25.17	10.74	280,640	280,640
High Turnover (Sit Down Restaurant)	852.04	852.04	852.04	1,161,180	1,161,180
Refrigerated Warehouse-No Rail	75.26	75.26	75.26	322,545	322,545
Strip Mall	326.88	184.14	89.48	518,597	518,597
Total	3,179.59	2,383.43	2,183.61	7,765,907	7,765,907

4.3 Trip Type Information

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

Apartments Mid Rise	14.70	5.90	8.70	40.00	19.00	41.00	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down Restaurant)	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Refrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Enclosed Parking with Elevator	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
General Office Building	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
General Office Building	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
High Turnover (Sit Down Restaurant)	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Refrigerated Warehouse-No Rail	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Strip Mall	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,099.4207	3,099.4207	0.0732	0.0152	3,105.7640
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,099.4207	3,099.4207	0.0732	0.0152	3,105.7640

NaturalGas Mitigated	0.0373	0.3306	0.2209	2.0400e-003		0.0258	0.0258		0.0258	0.0258	0.0000	369.4500	369.4500	7.0800e-003	6.7700e-003	371.6455
NaturalGas Unmitigated	0.0373	0.3306	0.2209	2.0400e-003		0.0258	0.0258		0.0258	0.0258	0.0000	369.4500	369.4500	7.0800e-003	6.7700e-003	371.6455

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.97707e+006	0.0161	0.1372	0.0584	8.8000e-004		0.0111	0.0111		0.0111	0.0111	0.0000	158.8679	158.8679	3.0400e-003	2.9100e-003	159.8120
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	106453	5.7000e-004	5.2200e-003	4.3800e-003	3.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	5.6807	5.6807	1.1000e-004	1.0000e-004	5.7145
General Office Building	670019	3.6100e-003	0.0328	0.0276	2.0000e-004		2.5000e-003	2.5000e-003		2.5000e-003	2.5000e-003	0.0000	35.7548	35.7548	6.9000e-004	6.6000e-004	35.9672
High Turnover (Sit Down Restaurant)	3.0968e+006	0.0167	0.1518	0.1275	9.1000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	165.2570	165.2570	3.1700e-003	3.0300e-003	166.2390
Refrigerated Warehouse-No Rail	65698.6	3.5000e-004	3.2200e-003	2.7100e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.5059	3.5059	7.0000e-005	6.0000e-005	3.5268
Strip Mall	7191.4	4.0000e-005	3.5000e-004	3.0000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.3838	0.3838	1.0000e-005	1.0000e-005	0.3860
Total		**0.0373**	**0.3306**	**0.2209**	**2.0400e-003**		**0.0258**	**0.0258**		**0.0258**	**0.0258**	**0.0000**	**369.4500**	**369.4500**	**7.0900e-003**	**6.7700e-003**	**371.6455**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.97707e+006	0.0161	0.1372	0.0584	8.8000e-004		0.0111	0.0111		0.0111	0.0111	0.0000	158.8679	158.8679	3.0400e-003	2.9100e-003	159.8120

Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	106453	5.7000e-004	5.2200e-003	4.3800e-003	3.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	5.6807	5.6807	1.1000e-004	1.0000e-004	5.7145
General Office Building	670019	3.6100e-003	0.0328	0.0276	2.0000e-004		2.5000e-003	2.5000e-003		2.5000e-003	2.5000e-003	0.0000	35.7548	35.7548	6.9000e-004	6.6000e-004	35.9672
High Turnover (Sit Down Restaurant)	3.0968e+006	0.0167	0.1518	0.1275	9.1000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	165.2570	165.2570	3.1700e-003	3.0300e-003	166.2390
Refrigerated Warehouse-No Rail	65698.6	3.5000e-004	3.2200e-003	2.7100e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.5059	3.5059	7.0000e-005	6.0000e-005	3.5268
Strip Mall	7191.4	4.0000e-005	3.5000e-004	3.0000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.3838	0.3838	1.0000e-005	1.0000e-005	0.3860
Total		**0.0373**	**0.3306**	**0.2209**	**2.0400e-003**		**0.0258**	**0.0258**		**0.0258**	**0.0258**	**0.0000**	**369.4500**	**369.4500**	**7.0900e-003**	**6.7700e-003**	**371.6455**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.27911e+006	712.4128	0.0168	3.4800e-003	713.8708
Enclosed Parking with Elevator	1.59626e+006	889.0577	0.0210	4.3400e-003	890.8772
General Office Building	132836	73.9844	1.7500e-003	3.6000e-004	74.1358
General Office Building	836075	465.6618	0.0110	2.2800e-003	466.6149
High Turnover (Sit Down Restaurant)	592359	329.9211	7.7900e-003	1.6100e-003	330.5963
Refrigerated Warehouse-No Rail	1.06904e+006	595.4123	0.0141	2.9100e-003	596.6308
Strip Mall	59197.5	32.9707	7.8000e-004	1.6000e-004	33.0382
Total		**3,099.4207**	**0.0732**	**0.0151**	**3,105.7640**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.27911e+006	712.4128	0.0168	3.4800e-003	713.8708
Enclosed Parking with Elevator	1.59626e+006	889.0577	0.0210	4.3400e-003	890.8772
General Office Building	132836	73.9844	1.7500e-003	3.6000e-004	74.1358
General Office Building	836075	465.6618	0.0110	2.2800e-003	466.6149
High Turnover (Sit Down Restaurant)	592359	329.9211	7.7900e-003	1.6100e-003	330.5963
Refrigerated Warehouse-No Rail	1.06904e+006	595.4123	0.0141	2.9100e-003	596.6308
Strip Mall	59197.5	32.9707	7.8000e-004	1.6000e-004	33.0382
Total		**3,099.4207**	**0.0732**	**0.0151**	**3,105.7640**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.6299	0.0386	3.3453	1.8000e-004		0.0185	0.0185		0.0185	0.0185	0.0000	5.4619	5.4619	5.3000e-003	0.0000	5.5945
Unmitigated	2.6299	0.0386	3.3453	1.8000e-004		0.0185	0.0185		0.0185	0.0185	0.0000	5.4619	5.4619	5.3000e-003	0.0000	5.5945

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2252					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.3030					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1017	0.0386	3.3453	1.8000e-004		0.0185	0.0185		0.0185	0.0185	0.0000	5.4619	5.4619	5.3000e-003	0.0000	5.5945
Total	**2.6299**	**0.0386**	**3.3453**	**1.8000e-004**		**0.0185**	**0.0185**		**0.0185**	**0.0185**	**0.0000**	**5.4619**	**5.4619**	**5.3000e-003**	**0.0000**	**5.5945**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2252					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.3030					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1017	0.0386	3.3453	1.8000e-004		0.0185	0.0185		0.0185	0.0185	0.0000	5.4619	5.4619	5.3000e-003	0.0000	5.5945
Total	**2.6299**	**0.0386**	**3.3453**	**1.8000e-004**		**0.0185**	**0.0185**		**0.0185**	**0.0185**	**0.0000**	**5.4619**	**5.4619**	**5.3000e-003**	**0.0000**	**5.5945**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	539.7927	1.7540	0.0437	596.6585
Unmitigated	539.7927	1.7540	0.0437	596.6585

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	21.0448 / 13.2673	241.3934	0.6913	0.0173	263.8426
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	13.2572 / 8.12536	150.6278	0.4354	0.0109	164.7668
High Turnover (Sit Down Restaurant)	4.07342 / 0.260006	32.4424	0.1335	3.2900e-003	36.7585
Refrigerated Warehouse-No Rail	14.7491 / 0	111.6428	0.4831	0.0119	127.2584
Strip Mall	0.324438 / 0.198849	3.6863	0.0107	2.7000e-004	4.0323
Total		**539.7927**	**1.7540**	**0.0437**	**596.6585**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	21.0448 / 13.2673	241.3934	0.6913	0.0173	263.8426
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	13.2572 / 8.12536	150.6278	0.4354	0.0109	164.7668
High Turnover (Sit Down Restaurant)	4.07342 / 0.260006	32.4424	0.1335	3.2900e-003	36.7585
Refrigerated Warehouse-No Rail	14.7491 / 0	111.6428	0.4831	0.0119	127.2584
Strip Mall	0.324438 / 0.198849	3.6863	0.0107	2.7000e-004	4.0323
Total		**539.7927**	**1.7540**	**0.0437**	**596.6585**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	89.7626	5.3048	0.0000	222.3831
Unmitigated	89.7626	5.3048	0.0000	222.3831

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	148.58	30.1604	1.7824	0.0000	74.7211
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	69.37	14.0815	0.8322	0.0000	34.8863
High Turnover (Sit Down Restaurant)	159.7	32.4177	1.9158	0.0000	80.3134
Refrigerated Warehouse-No Rail	59.95	12.1693	0.7192	0.0000	30.1490
Strip Mall	4.6	0.9338	0.0552	0.0000	2.3134
Total		**89.7626**	**5.3048**	**0.0000**	**222.3831**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	148.58	30.1604	1.7824	0.0000	74.7211
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	69.37	14.0815	0.8322	0.0000	34.8863

High Turnover (Sit Down Restaurant)	159.7	32.4177	1.9158	0.0000	80.3134
Refrigerated Warehouse-No Rail	59.95	12.1693	0.7192	0.0000	30.1490
Strip Mall	4.6	0.9338	0.0552	0.0000	2.3134
Total		**89.7626**	**5.3048**	**0.0000**	**222.3831**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Southern California Flower Market Future - Los Angeles-South Coast County, Winter

Southern California Flower Market Future

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	64.36	1000sqft	0.20	64,363.00	0
General Office Building	10.23	1000sqft	0.10	10,226.00	0
Refrigerated Warehouse-No Rail	63.78	1000sqft	0.30	63,785.00	0
Enclosed Parking with Elevator	681.00	Space	1.00	272,400.00	0
High Turnover (Sit Down Restaurant)	13.42	1000sqft	0.10	13,420.00	0
Apartments Mid Rise	323.00	Dwelling Unit	2.00	476,279.00	924
Strip Mall	4.38	1000sqft	0.10	4,385.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project description

Construction Phase - Developer information

Off-road Equipment - Developer information

Off-road Equipment - Developer information

Off-road Equipment - Developer information

Off-road Equipment - Developer information

Off-road Equipment - Developer information

Off-road Equipment - Developer information

Off-road Equipment - Developer information

Trips and VMT - Haul of materials to Manning Pit in Irwindale and Chiquita Canyon (50/50 split), with an average of 31.5 miles one-way. Fehr & Peers consruction

Demolition - Developer information

Grading - Assumes 507'x262' at 10' feet of depth of excavation of one-level garage

Vehicle Trips - Assumes continuation of mobile source emissions associated with preservation of existing wholesale operations

Woodstoves - Developer information

Construction Off-road Equipment Mitigation - Assumes SCAQMD Rule 403 control efficiencies

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	46
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	19.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	16.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	16.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	15.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	86.00
tblConstructionPhase	NumDays	5.00	23.00
tblConstructionPhase	NumDays	8.00	66.00
tblConstructionPhase	NumDays	230.00	523.00
tblConstructionPhase	NumDays	18.00	135.00
tblConstructionPhase	NumDays	18.00	24.00
tblFireplaces	NumberGas	274.55	0.00
tblFireplaces	NumberNoFireplace	32.30	323.00
tblFireplaces	NumberWood	16.15	0.00
tblGrading	AcresOfGrading	363.00	3.70
tblGrading	AcresOfGrading	23.00	0.00
tblGrading	MaterialExported	0.00	50,000.00
tblLandUse	LandUseSquareFeet	64,360.00	64,363.00
tblLandUse	LandUseSquareFeet	10,230.00	10,226.00
tblLandUse	LandUseSquareFeet	63,780.00	63,785.00
tblLandUse	LandUseSquareFeet	323,000.00	476,279.00
tblLandUse	LandUseSquareFeet	4,380.00	4,385.00
tblLandUse	LotAcreage	1.48	0.20
tblLandUse	LotAcreage	0.23	0.10
tblLandUse	LotAcreage	1.46	0.30
tblLandUse	LotAcreage	6.13	1.00

tblLandUse	LotAcreage	0.31	0.10
tblLandUse	LotAcreage	8.50	2.00
tblOffRoadEquipment	HorsePower	63.00	78.00
tblOffRoadEquipment	HorsePower	9.00	247.00
tblOffRoadEquipment	HorsePower	64.00	6.00
tblOffRoadEquipment	LoadFactor	0.31	0.48
tblOffRoadEquipment	LoadFactor	0.56	0.40
tblOffRoadEquipment	LoadFactor	0.46	0.82
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	9.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripLength	20.00	31.50
tblTripsAndVMT	HaulingTripLength	20.00	31.50
tblTripsAndVMT	HaulingTripLength	20.00	31.50
tblTripsAndVMT	HaulingTripLength	20.00	31.50
tblTripsAndVMT	HaulingTripLength	20.00	31.50

tblTripsAndVMT	HaulingTripNumber	0.00	5.00
tblTripsAndVMT	HaulingTripNumber	0.00	5.00
tblTripsAndVMT	HaulingTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	105.00	12.00
tblTripsAndVMT	VendorTripNumber	0.00	12.00
tblTripsAndVMT	WorkerTripNumber	85.00	20.00
tblTripsAndVMT	WorkerTripNumber	58.00	20.00
tblTripsAndVMT	WorkerTripNumber	48.00	20.00
tblTripsAndVMT	WorkerTripNumber	405.00	120.00
tblTripsAndVMT	WorkerTripNumber	70.00	120.00
tblTripsAndVMT	WorkerTripNumber	81.00	74.00
tblVehicleTrips	HO_TTP	40.60	41.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	6.39	3.37
tblVehicleTrips	ST_TR	158.37	63.49
tblVehicleTrips	ST_TR	1.68	1.18
tblVehicleTrips	SU_TR	5.86	3.37
tblVehicleTrips	SU_TR	131.84	63.49
tblVehicleTrips	SU_TR	1.68	1.18
tblVehicleTrips	WD_TR	6.65	3.37
tblVehicleTrips	WD_TR	11.03	11.22
tblVehicleTrips	WD_TR	127.15	63.49
tblVehicleTrips	WD_TR	1.68	1.18
tblVehicleTrips	WD_TR	44.32	74.63
tblWoodstoves	NumberCatalytic	16.15	0.00
tblWoodstoves	NumberNoncatalytic	16.15	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	14.3715	176.0667	103.4905	0.2619	18.3278	6.0964	22.9803	10.0008	5.8664	14.2849	0.0000	26,975.7681	26,975.7681	5.4122	0.0000	27,111.0732
2020	13.1967	105.3081	101.9957	0.1952	1.4186	5.4128	6.8314	0.3780	5.2052	5.5832	0.0000	18,258.7220	18,258.7220	3.5603	0.0000	18,347.7288
2021	52.2219	153.5321	159.2141	0.3141	3.6698	7.3678	11.0376	0.9768	7.0530	8.0298	0.0000	29,584.0755	29,584.0755	5.5956	0.0000	29,723.9667
Maximum	**52.2219**	**176.0667**	**159.2141**	**0.3141**	**18.3278**	**7.3678**	**22.9803**	**10.0008**	**7.0530**	**14.2849**	**0.0000**	**29,584.0755**	**29,584.0755**	**5.5956**	**0.0000**	**29,723.9667**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	3.9787	50.3954	112.6834	0.2619	6.8531	0.6561	7.2585	3.7244	0.6388	4.1133	0.0000	26,975.7681	26,975.7681	5.4122	0.0000	27,111.0732
2020	3.9045	31.8842	112.1392	0.1952	0.8568	0.6378	1.4947	0.2401	0.6217	0.8618	0.0000	18,258.7220	18,258.7220	3.5603	0.0000	18,347.7288
2021	40.1706	44.8674	178.0124	0.3141	2.2136	1.1041	3.3177	0.6194	1.0774	1.6968	0.0000	29,584.0755	29,584.0755	5.5956	0.0000	29,723.9666
Maximum	**40.1706**	**50.3954**	**178.0124**	**0.3141**	**6.8531**	**1.1041**	**7.2585**	**3.7244**	**1.0774**	**4.1133**	**0.0000**	**29,584.0755**	**29,584.0755**	**5.5956**	**0.0000**	**29,723.9666**

	ROG	NOx	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	**39.77**	**70.76**	**-10.46**	**0.00**	**57.62**	**87.30**	**70.45**	**59.63**	**87.10**	**76.08**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	14.6668	0.3084	26.7622	1.4100e-003		0.1477	0.1477		0.1477	0.1477	0.0000	48.1656	48.1656	0.0468	0.0000	49.3350
Energy	0.2046	1.8116	1.2102	0.0112		0.1413	0.1413		0.1413	0.1413		2,231.5011	2,231.5011	0.0428	0.0409	2,244.7618
Mobile	6.4407	31.5916	79.3898	0.2821	18.9520	0.2420	19.1940	5.1804	0.2257	5.4061		28,734.3135	28,734.3135	1.5404		28,772.8225
Total	**21.3120**	**33.7116**	**107.3622**	**0.2947**	**18.9520**	**0.5310**	**19.4830**	**5.1804**	**0.5148**	**5.6952**	**0.0000**	**31,013.9803**	**31,013.9803**	**1.6299**	**0.0409**	**31,066.9193**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	14.6668	0.3084	26.7622	1.4100e-003		0.1477	0.1477		0.1477	0.1477	0.0000	48.1656	48.1656	0.0468	0.0000	49.3350
Energy	0.2046	1.8116	1.2102	0.0112		0.1413	0.1413		0.1413	0.1413		2,231.5011	2,231.5011	0.0428	0.0409	2,244.7618
Mobile	6.4407	31.5916	79.3898	0.2821	18.9520	0.2420	19.1940	5.1804	0.2257	5.4061		28,734.3135	28,734.3135	1.5404		28,772.8225
Total	**21.3120**	**33.7116**	**107.3622**	**0.2947**	**18.9520**	**0.5310**	**19.4830**	**5.1804**	**0.5148**	**5.6952**	**0.0000**	**31,013.9803**	**31,013.9803**	**1.6299**	**0.0409**	**31,066.9193**

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

Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	4/30/2019	5	86	
2	Site Preparation	Site Preparation	5/1/2019	5/31/2019	5	23	
3	Grading	Grading	6/3/2019	9/2/2019	5	66	
4	Building Construction	Building Construction	9/3/2019	9/2/2021	5	523	
5	Architectural Coating	Architectural Coating	6/1/2021	12/6/2021	5	135	
6	Paving	Paving	8/2/2021	9/2/2021	5	24	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 3.7

Acres of Paving: 1

Residential Indoor: 964,465; Residential Outdoor: 321,488; Non-Residential Indoor: 234,269; Non-Residential Outdoor: 78,090; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
	Aerial Lifts	5	8.00	63	0.31
	Air Compressors	2	8.00	78	0.48
	Concrete/Industrial Saws	2	8.00	81	0.73
	Cranes	1	8.00	231	0.29
	Crawler Tractors	2	8.00	212	0.43
	Crushing/Proc. Equipment	1	8.00	85	0.78
	Dumpers/Tenders	5	8.00	16	0.38
	Excavators	2	8.00	158	0.38
	Forklifts	1	8.00	89	0.20
	Off-Highway Tractors	2	8.00	124	0.44

	Rough Terrain Forklifts	1	8.00	100	0.40
	Rubber Tired Loaders	1	8.00	203	0.36
	Signal Boards	2	8.00	6	0.82
	Skid Steer Loaders	2	8.00	65	0.37
	Sweepers/Scrubbers	1	8.00	64	0.46
	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Aerial Lifts	5	8.00	63	0.31
Demolition	Air Compressors	2	8.00	78	0.48
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Cranes	1	8.00	231	0.29
Demolition	Crawler Tractors	2	8.00	212	0.43
Demolition	Crushing/Proc. Equipment	1	8.00	85	0.78
Demolition	Dumpers/Tenders	5	8.00	16	0.38
Demolition	Excavators	2	8.00	158	0.38
Demolition	Forklifts	1	8.00	89	0.20
Demolition	Off-Highway Tractors	2	8.00	124	0.44
Demolition	Rough Terrain Forklifts	1	8.00	100	0.40
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Rubber Tired Loaders	1	8.00	203	0.36
Demolition	Signal Boards	2	8.00	6	0.82
Demolition	Skid Steer Loaders	2	8.00	65	0.37
Demolition	Sweepers/Scrubbers	1	8.00	64	0.46
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Cement and Mortar Mixers	2	8.00	247	0.40
Site Preparation	Crawler Tractors	2	8.00	212	0.43
Site Preparation	Dumpers/Tenders	1	8.00	16	0.38
Site Preparation	Excavators	2	8.00	158	0.38
Site Preparation	Off-Highway Tractors	2	8.00	124	0.44
Site Preparation	Rough Terrain Forklifts	1	8.00	100	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40

Site Preparation	Rubber Tired Loaders	2	8.00	203	0.36
Site Preparation	Signal Boards	2	8.00	6	0.82
Site Preparation	Sweepers/Scrubbers	1	8.00	64	0.46
Site Preparation	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Trenchers	2	8.00	78	0.50
Grading	Cranes	3	8.00	231	0.29
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Off-Highway Tractors	1	8.00	124	0.44
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Loaders	2	8.00	203	0.36
Grading	Scrapers	5	8.00	367	0.48
Grading	Sweepers/Scrubbers	2	8.00	6	0.82
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	8	8.00	63	0.31
Building Construction	Air Compressors	3	8.00	78	0.48
Building Construction	Bore/Drill Rigs	3	8.00	221	0.50
Building Construction	Cement and Mortar Mixers	8	8.00	9	0.56
Building Construction	Concrete/Industrial Saws	3	8.00	81	0.73
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Dumpers/Tenders	1	8.00	16	0.38
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Generator Sets	2	8.00	84	0.74
Building Construction	Pumps	2	8.00	84	0.74
Building Construction	Rough Terrain Forklifts	2	8.00	100	0.40
Building Construction	Rubber Tired Loaders	1	8.00	203	0.36
Building Construction	Signal Boards	4	8.00	6	0.82
Building Construction	Sweepers/Scrubbers	1	8.00	64	0.46
Building Construction	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Trenchers	2	8.00	78	0.50

Building Construction	Welders	9	8.00	46	0.45
Paving	Cement and Mortar Mixers	6	8.00	9	0.56
Paving	Concrete/Industrial Saws	3	8.00	81	0.73
Paving	Dumpers/Tenders	4	8.00	16	0.38
Paving	Graders	1	8.00	187	0.41
Paving	Off-Highway Tractors	2	8.00	124	0.44
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Plate Compactors	1	8.00	8	0.43
Paving	Rollers	2	8.00	80	0.38
Paving	Rubber Tired Loaders	2	8.00	203	0.36
Paving	Signal Boards	2	8.00	6	0.82
Paving	Sweepers/Scrubbers	1	8.00	64	0.46
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Aerial Lifts	1	8.00	78	0.48
Architectural Coating	Air Compressors	1	6.00	78	0.48
Architectural Coating	Generator Sets	1	8.00	84	0.74
Architectural Coating	Pressure Washers	1	8.00	13	0.30
Architectural Coating	Rollers	1	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	34	20.00	5.00	842.00	14.70	6.90	31.50	LD_Mix	HDT_Mix	HHDT
Site Preparation	23	20.00	5.00	5.00	14.70	6.90	31.50	LD_Mix	HDT_Mix	HHDT
Grading	19	20.00	5.00	6,250.00	14.70	6.90	31.50	LD_Mix	HDT_Mix	HHDT
Building Construction	57	120.00	12.00	5.00	14.70	6.90	31.50	LD_Mix	HDT_Mix	HHDT
Paving	28	120.00	12.00	5.00	14.70	6.90	31.50	LD_Mix	HDT_Mix	HHDT
Architectural Coating	5	74.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Replace Ground Cover

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1188	0.0000	2.1188	0.3208	0.0000	0.3208			0.0000			0.0000
Off-Road	9.6302	97.8573	67.3033	0.1234		4.8552	4.8552		4.5630	4.5630		11,991.2036	11,991.2036	3.0871		12,068.3811
Total	**9.6302**	**97.8573**	**67.3033**	**0.1234**	**2.1188**	**4.8552**	**6.9740**	**0.3208**	**4.5630**	**4.8838**		**11,991.2036**	**11,991.2036**	**3.0871**		**12,068.3811**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1366	4.2477	0.9758	0.0116	0.2695	0.0172	0.2867	0.0739	0.0164	0.0903		1,253.9428	1,253.9428	0.0840		1,256.0427
Vendor	0.0217	0.5794	0.1692	1.2700e-003	0.0320	3.7500e-003	0.0358	9.2200e-003	3.5900e-003	0.0128		135.6386	135.6386	9.5300e-003		135.8768
Worker	0.1108	0.0813	0.8850	2.2900e-003	0.2236	1.9300e-003	0.2255	0.0593	1.7800e-003	0.0611		228.4262	228.4262	7.8600e-003		228.6226
Total	**0.2690**	**4.9085**	**2.0300**	**0.0152**	**0.5251**	**0.0229**	**0.5479**	**0.1424**	**0.0218**	**0.1642**		**1,618.0075**	**1,618.0075**	**0.1014**		**1,620.5421**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7850	0.0000	0.7850	0.1189	0.0000	0.1189			0.0000			0.0000
Off-Road	2.2808	17.7872	73.8839	0.1234		0.4997	0.4997		0.4836	0.4836	0.0000	11,991.2036	11,991.2036	3.0871		12,068.3811
Total	**2.2808**	**17.7872**	**73.8839**	**0.1234**	**0.7850**	**0.4997**	**1.2847**	**0.1189**	**0.4836**	**0.6025**	**0.0000**	**11,991.2036**	**11,991.2036**	**3.0871**		**12,068.3811**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1366	4.2477	0.9758	0.0116	0.1757	0.0172	0.1929	0.0508	0.0164	0.0673		1,253.9428	1,253.9428	0.0840		1,256.0427
Vendor	0.0217	0.5794	0.1692	1.2700e-003	0.0215	3.7500e-003	0.0253	6.6400e-003	3.5900e-003	0.0102		135.6386	135.6386	9.5300e-003		135.8768
Worker	0.1108	0.0813	0.8850	2.2900e-003	0.1342	1.9300e-003	0.1361	0.0373	1.7800e-003	0.0391		228.4262	228.4262	7.8600e-003		228.6226
Total	**0.2690**	**4.9085**	**2.0300**	**0.0152**	**0.3314**	**0.0229**	**0.3542**	**0.0948**	**0.0218**	**0.1166**		**1,618.0075**	**1,618.0075**	**0.1014**		**1,620.5421**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	8.6926	93.7600	51.4255	0.0977		4.6464	4.6464		4.2784	4.2784		9,623.6113	9,623.6113	3.0111		9,698.8889
Total	**8.6926**	**93.7600**	**51.4255**	**0.0977**	**18.0663**	**4.6464**	**22.7127**	**9.9307**	**4.2784**	**14.2090**		**9,623.6113**	**9,623.6113**	**3.0111**		**9,698.8889**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.0300e-003	0.0943	0.0217	2.6000e-004	5.9800e-003	3.8000e-004	6.3700e-003	1.6400e-003	3.6000e-004	2.0000e-003		27.8424	27.8424	1.8700e-003		27.8890
Vendor	0.0217	0.5794	0.1692	1.2700e-003	0.0320	3.7500e-003	0.0358	9.2200e-003	3.5900e-003	0.0128		135.6386	135.6386	9.5300e-003		135.8768
Worker	0.1108	0.0813	0.8850	2.2900e-003	0.2236	1.9300e-003	0.2255	0.0593	1.7800e-003	0.0611		228.4262	228.4262	7.8600e-003		228.6226
Total	**0.1355**	**0.7551**	**1.0759**	**3.8200e-003**	**0.2615**	**6.0600e-003**	**0.2676**	**0.0702**	**5.7300e-003**	**0.0759**		**391.9071**	**391.9071**	**0.0193**		**392.3884**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6936	0.0000	6.6936	3.6793	0.0000	3.6793			0.0000			0.0000
Off-Road	1.6163	8.6137	56.7796	0.0977		0.3993	0.3993		0.3832	0.3832	0.0000	9,623.6113	9,623.6113	3.0111		9,698.8889

Total	**1.6163**	**8.6137**	**56.7796**	**0.0977**	**6.6936**	**0.3993**	**7.0928**	**3.6793**	**0.3832**	**4.0625**	**0.0000**	**9,623.6113**	**9,623.6113**	**3.0111**		**9,698.8889**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.0300e-003	0.0943	0.0217	2.6000e-004	3.9000e-003	3.8000e-004	4.2800e-003	1.1300e-003	3.6000e-004	1.4900e-003		27.8424	27.8424	1.8700e-003		27.8890
Vendor	0.0217	0.5794	0.1692	1.2700e-003	0.0215	3.7500e-003	0.0253	6.6400e-003	3.5900e-003	0.0102		135.6386	135.6386	9.5300e-003		135.8768
Worker	0.1108	0.0813	0.8850	2.2900e-003	0.1342	1.9300e-003	0.1361	0.0373	1.7800e-003	0.0391		228.4262	228.4262	7.8600e-003		228.6226
Total	**0.1355**	**0.7551**	**1.0759**	**3.8200e-003**	**0.1596**	**6.0600e-003**	**0.1656**	**0.0451**	**5.7300e-003**	**0.0508**		**391.9071**	**391.9071**	**0.0193**		**392.3884**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.1893	0.0000	12.1893	6.6399	0.0000	6.6399			0.0000			0.0000
Off-Road	11.6496	134.3213	73.0039	0.1462		5.6854	5.6854		5.2306	5.2306		14,483.3969	14,483.3969	4.5824		14,597.9567
Total	**11.6496**	**134.3213**	**73.0039**	**0.1462**	**12.1893**	**5.6854**	**17.8747**	**6.6399**	**5.2306**	**11.8704**		**14,483.3969**	**14,483.3969**	**4.5824**		**14,597.9567**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.3207	41.0847	9.4378	0.1121	2.6065	0.1662	2.7727	0.7144	0.1590	0.8733		12,128.3065	12,128.3065	0.8124		12,148.6171
Vendor	0.0217	0.5794	0.1692	1.2700e-003	0.0320	3.7500e-003	0.0358	9.2200e-003	3.5900e-003	0.0128		135.6386	135.6386	9.5300e-003		135.8768
Worker	0.1108	0.0813	0.8850	2.2900e-003	0.2236	1.9300e-003	0.2255	0.0593	1.7800e-003	0.0611		228.4262	228.4262	7.8600e-003		228.6226
Total	**1.4531**	**41.7454**	**10.4920**	**0.1156**	**2.8621**	**0.1718**	**3.0339**	**0.7829**	**0.1643**	**0.9472**		**12,492.3712**	**12,492.3712**	**0.8298**		**12,513.1165**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.5161	0.0000	4.5161	2.4601	0.0000	2.4601			0.0000			0.0000
Off-Road	2.0352	8.6499	71.5377	0.1462		0.3235	0.3235		0.3167	0.3167	0.0000	14,483.3969	14,483.3969	4.5824		14,597.9567
Total	**2.0352**	**8.6499**	**71.5377**	**0.1462**	**4.5161**	**0.3235**	**4.8396**	**2.4601**	**0.3167**	**2.7767**	**0.0000**	**14,483.3969**	**14,483.3969**	**4.5824**		**14,597.9567**

Mitigated Construction Off-Site

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

Hauling	1.3207	41.0847	9.4378	0.1121	1.6994	0.1662	1.8656	0.4917	0.1590	0.6507		12,128.3065	12,128.3065	0.8124		12,148.6171
Vendor	0.0217	0.5794	0.1692	1.2700e-003	0.0215	3.7500e-003	0.0253	6.6400e-003	3.5900e-003	0.0102		135.6386	135.6386	9.5300e-003		135.8768
Worker	0.1108	0.0813	0.8850	2.2900e-003	0.1342	1.9300e-003	0.1361	0.0373	1.7800e-003	0.0391		228.4262	228.4262	7.8600e-003		228.6226
Total	**1.4531**	**41.7454**	**10.4920**	**0.1156**	**1.8551**	**0.1718**	**2.0270**	**0.5357**	**0.1643**	**0.7001**		**12,492.3712**	**12,492.3712**	**0.8298**		**12,513.1165**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	13.6548	110.8768	97.7737	0.1787		6.0758	6.0758		5.8471	5.8471		16,789.7184	16,789.7184	3.5681		16,878.9218
Total	**13.6548**	**110.8768**	**97.7737**	**0.1787**		**6.0758**	**6.0758**		**5.8471**	**5.8471**		**16,789.7184**	**16,789.7184**	**3.5681**		**16,878.9218**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.3000e-004	4.1500e-003	9.5000e-004	1.0000e-005	1.2700e-003	2.0000e-005	1.2900e-003	3.2000e-004	2.0000e-005	3.4000e-004		1.2244	1.2244	8.0000e-005		1.2265
Vendor	0.0520	1.3906	0.4062	3.0500e-003	0.0768	9.0000e-003	0.0858	0.0221	8.6100e-003	0.0307		325.5325	325.5325	0.0229		326.1042
Worker	0.6645	0.4879	5.3097	0.0138	1.3413	0.0116	1.3529	0.3557	0.0107	0.3664		1,370.5570	1,370.5570	0.0472		1,371.7357
Total	**0.7167**	**1.8827**	**5.7168**	**0.0168**	**1.4194**	**0.0206**	**1.4400**	**0.3782**	**0.0193**	**0.3975**		**1,697.3139**	**1,697.3139**	**0.0701**		**1,699.0664**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2621	30.3205	106.9665	0.1787		0.6356	0.6356		0.6195	0.6195	0.0000	16,789.7183	16,789.7183	3.5681		16,878.9218
Total	**3.2621**	**30.3205**	**106.9665**	**0.1787**		**0.6356**	**0.6356**		**0.6195**	**0.6195**	**0.0000**	**16,789.7183**	**16,789.7183**	**3.5681**		**16,878.9218**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.3000e-004	4.1500e-003	9.5000e-004	1.0000e-005	7.2000e-004	2.0000e-005	7.3000e-004	1.8000e-004	2.0000e-005	2.0000e-004		1.2244	1.2244	8.0000e-005		1.2265
Vendor	0.0520	1.3906	0.4062	3.0500e-003	0.0516	9.0000e-003	0.0606	0.0159	8.6100e-003	0.0246		325.5325	325.5325	0.0229		326.1042
Worker	0.6645	0.4879	5.3097	0.0138	0.8049	0.0116	0.8165	0.2241	0.0107	0.2347		1,370.5570	1,370.5570	0.0472		1,371.7357
Total	**0.7167**	**1.8827**	**5.7168**	**0.0168**	**0.8573**	**0.0206**	**0.8779**	**0.2402**	**0.0193**	**0.2595**		**1,697.3139**	**1,697.3139**	**0.0701**		**1,699.0664**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	12.5387	103.5930	96.8138	0.1788		5.3955	5.3955		5.1891	5.1891		16,605.2675	16,605.2675	3.4967		16,692.6846
Total	**12.5387**	**103.5930**	**96.8138**	**0.1788**		**5.3955**	**5.3955**		**5.1891**	**5.1891**		**16,605.2675**	**16,605.2675**	**3.4967**		**16,692.6846**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2000e-004	3.8800e-003	9.3000e-004	1.0000e-005	4.6000e-004	1.0000e-005	4.8000e-004	1.2000e-004	1.0000e-005	1.3000e-004		1.2112	1.2112	8.0000e-005		1.2132
Vendor	0.0446	1.2762	0.3689	3.0300e-003	0.0768	6.1000e-003	0.0829	0.0221	5.8400e-003	0.0280		323.3389	323.3389	0.0216		323.8794
Worker	0.6132	0.4350	4.8121	0.0133	1.3413	0.0112	1.3525	0.3557	0.0103	0.3661		1,328.9045	1,328.9045	0.0419		1,329.9516
Total	**0.6580**	**1.7151**	**5.1819**	**0.0164**	**1.4186**	**0.0173**	**1.4359**	**0.3780**	**0.0162**	**0.3941**		**1,653.4545**	**1,653.4545**	**0.0636**		**1,655.0442**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2465	30.1692	106.9573	0.1788		0.6205	0.6205		0.6056	0.6056	0.0000	16,605.2675	16,605.2675	3.4967		16,692.6846

Total	**3.2465**	**30.1692**	**106.9573**	**0.1788**		**0.6205**	**0.6205**		**0.6056**	**0.6056**	**0.0000**	**16,605.2675**	**16,605.2675**	**3.4967**		**16,692.6846**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2000e-004	3.8800e-003	9.3000e-004	1.0000e-005	2.8000e-004	1.0000e-005	2.9000e-004	8.0000e-005	1.0000e-005	9.0000e-005		1.2112	1.2112	8.0000e-005		1.2132
Vendor	0.0446	1.2762	0.3689	3.0300e-003	0.0517	6.1000e-003	0.0578	0.0159	5.8400e-003	0.0218		323.3389	323.3389	0.0216		323.8794
Worker	0.6132	0.4350	4.8121	0.0133	0.8049	0.0112	0.8161	0.2241	0.0103	0.2344		1,328.9045	1,328.9045	0.0419		1,329.9516
Total	**0.6580**	**1.7151**	**5.1819**	**0.0164**	**0.8568**	**0.0173**	**0.8742**	**0.2401**	**0.0162**	**0.2563**		**1,653.4545**	**1,653.4545**	**0.0636**		**1,655.0442**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	11.3902	94.8719	95.7058	0.1789		4.6820	4.6820		4.5027	4.5027		16,612.9382	16,612.9382	3.4339		16,698.7847
Total	**11.3902**	**94.8719**	**95.7058**	**0.1789**		**4.6820**	**4.6820**		**4.5027**	**4.5027**		**16,612.9382**	**16,612.9382**	**3.4339**		**16,698.7847**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2000e-004	3.6000e-003	9.2000e-004	1.0000e-005	6.6000e-004	1.0000e-005	6.7000e-004	1.7000e-004	1.0000e-005	1.8000e-004		1.1977	1.1977	8.0000e-005		1.1997
Vendor	0.0383	1.1627	0.3369	3.0000e-003	0.0768	2.4600e-003	0.0793	0.0221	2.3500e-003	0.0245		320.8146	320.8146	0.0207		321.3324
Worker	0.5722	0.3914	4.4191	0.0129	1.3413	0.0108	1.3522	0.3557	9.9800e-003	0.3657		1,286.7013	1,286.7013	0.0379		1,287.6479
Total	**0.6106**	**1.5576**	**4.7569**	**0.0159**	**1.4188**	**0.0133**	**1.4321**	**0.3780**	**0.0123**	**0.3904**		**1,608.7136**	**1,608.7136**	**0.0587**		**1,610.1799**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2051	29.8988	106.9202	0.1789		0.5846	0.5846		0.5725	0.5725	0.0000	16,612.9382	16,612.9382	3.4339		16,698.7847
Total	**3.2051**	**29.8988**	**106.9202**	**0.1789**		**0.5846**	**0.5846**		**0.5725**	**0.5725**	**0.0000**	**16,612.9382**	**16,612.9382**	**3.4339**		**16,698.7847**

Mitigated Construction Off-Site

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

Hauling	1.2000e-004	3.6000e-003	9.2000e-004	1.0000e-005	3.9000e-004	1.0000e-005	4.0000e-004	1.0000e-004	1.0000e-005	1.1000e-004		1.1977	1.1977	8.0000e-005		1.1997
Vendor	0.0383	1.1627	0.3369	3.0000e-003	0.0517	2.4600e-003	0.0541	0.0159	2.3500e-003	0.0183		320.8146	320.8146	0.0207		321.3324
Worker	0.5722	0.3914	4.4191	0.0129	0.8049	0.0108	0.8158	0.2241	9.9800e-003	0.2340		1,286.7013	1,286.7013	0.0379		1,287.6479
Total	**0.6106**	**1.5576**	**4.7569**	**0.0159**	**0.8570**	**0.0133**	**0.8703**	**0.2401**	**0.0123**	**0.2524**		**1,608.7136**	**1,608.7136**	**0.0587**		**1,610.1799**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	33.3610					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.8813	8.0741	9.7229	0.0159		0.4153	0.4153		0.4041	0.4041		1,509.4120	1,509.4120	0.2380		1,515.3628
Total	**34.2423**	**8.0741**	**9.7229**	**0.0159**		**0.4153**	**0.4153**		**0.4041**	**0.4041**		**1,509.4120**	**1,509.4120**	**0.2380**		**1,515.3628**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3529	0.2414	2.7251	7.9600e-003	0.8272	6.6800e-003	0.8338	0.2194	6.1600e-003	0.2255		793.4658	793.4658	0.0234		794.0495
Total	**0.3529**	**0.2414**	**2.7251**	**7.9600e-003**	**0.8272**	**6.6800e-003**	**0.8338**	**0.2194**	**6.1600e-003**	**0.2255**		**793.4658**	**793.4658**	**0.0234**		**794.0495**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	33.3610					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2109	1.0304	10.5587	0.0159		0.0361	0.0361		0.0361	0.0361	0.0000	1,509.4120	1,509.4120	0.2380		1,515.3628
Total	**33.5719**	**1.0304**	**10.5587**	**0.0159**		**0.0361**	**0.0361**		**0.0361**	**0.0361**	**0.0000**	**1,509.4120**	**1,509.4120**	**0.2380**		**1,515.3628**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3529	0.2414	2.7251	7.9600e-003	0.4964	6.6800e-003	0.5030	0.1382	6.1600e-003	0.1443		793.4658	793.4658	0.0234		794.0495
Total	**0.3529**	**0.2414**	**2.7251**	**7.9600e-003**	**0.4964**	**6.6800e-003**	**0.5030**	**0.1382**	**6.1600e-003**	**0.1443**		**793.4658**	**793.4658**	**0.0234**		**794.0495**

3.7 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.0129	47.1547	41.5273	0.0792		2.2371	2.2371		2.1151	2.1151		7,425.9308	7,425.9308	1.7814		7,470.4668
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**5.0129**	**47.1547**	**41.5273**	**0.0792**		**2.2371**	**2.2371**		**2.1151**	**2.1151**		**7,425.9308**	**7,425.9308**	**1.7814**		**7,470.4668**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.5900e-003	0.0784	0.0200	2.4000e-004	5.7300e-003	2.7000e-004	6.0000e-003	1.5700e-003	2.6000e-004	1.8300e-003		26.0991	26.0991	1.7400e-003		26.1426
Vendor	0.0383	1.1627	0.3369	3.0000e-003	0.0768	2.4600e-003	0.0793	0.0221	2.3500e-003	0.0245		320.8146	320.8146	0.0207		321.3324
Worker	0.5722	0.3914	4.4191	0.0129	1.3413	0.0108	1.3522	0.3557	9.9800e-003	0.3657		1,286.7013	1,286.7013	0.0379		1,287.6479
Total	**0.6131**	**1.6324**	**4.7760**	**0.0162**	**1.4239**	**0.0136**	**1.4374**	**0.3794**	**0.0126**	**0.3920**		**1,633.6151**	**1,633.6151**	**0.0603**		**1,635.1229**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8171	10.5069	48.2756	0.0792		0.4498	0.4498		0.4377	0.4377	0.0000	7,425.9308	7,425.9308	1.7814		7,470.4668
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Total	**1.8171**	**10.5069**	**48.2756**	**0.0792**		**0.4498**	**0.4498**		**0.4377**	**0.4377**	**0.0000**	**7,425.9308**	**7,425.9308**	**1.7814**		**7,470.4668**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.5900e-003	0.0784	0.0200	2.4000e-004	3.7400e-003	2.7000e-004	4.0100e-003	1.0800e-003	2.6000e-004	1.3400e-003		26.0991	26.0991	1.7400e-003		26.1426
Vendor	0.0383	1.1627	0.3369	3.0000e-003	0.0517	2.4600e-003	0.0541	0.0159	2.3500e-003	0.0183		320.8146	320.8146	0.0207		321.3324
Worker	0.5722	0.3914	4.4191	0.0129	0.8049	0.0108	0.8158	0.2241	9.9800e-003	0.2340		1,286.7013	1,286.7013	0.0379		1,287.6479
Total	**0.6131**	**1.6324**	**4.7760**	**0.0162**	**0.8603**	**0.0136**	**0.8739**	**0.2411**	**0.0126**	**0.2537**		**1,633.6151**	**1,633.6151**	**0.0603**		**1,635.1229**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.4407	31.5916	79.3898	0.2821	18.9520	0.2420	19.1940	5.1804	0.2257	5.4061		28,734.3135	28,734.3135	1.5404		28,772.8225
Unmitigated	6.4407	31.5916	79.3898	0.2821	18.9520	0.2420	19.1940	5.1804	0.2257	5.4061		28,734.3135	28,734.3135	1.5404		28,772.8225

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,088.51	1,088.51	1088.51	3,717,354	3,717,354
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	722.12	158.33	67.58	1,765,591	1,765,591
General Office Building	114.78	25.17	10.74	280,640	280,640
High Turnover (Sit Down Restaurant)	852.04	852.04	852.04	1,161,180	1,161,180
Refrigerated Warehouse-No Rail	75.26	75.26	75.26	322,545	322,545
Strip Mall	326.88	184.14	89.48	518,597	518,597
Total	3,179.59	2,383.43	2,183.61	7,765,907	7,765,907

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.00	19.00	41.00	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down Restaurant)	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Refrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Enclosed Parking with Elevator	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
General Office Building	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
General Office Building	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
High Turnover (Sit Down Restaurant)	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Refrigerated Warehouse-No Rail	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Strip Mall	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2046	1.8116	1.2102	0.0112		0.1413	0.1413		0.1413	0.1413		2,231.5011	2,231.5011	0.0428	0.0409	2,244.7618
NaturalGas Unmitigated	0.2046	1.8116	1.2102	0.0112		0.1413	0.1413		0.1413	0.1413		2,231.5011	2,231.5011	0.0428	0.0409	2,244.7618

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	8156.36	0.0880	0.7517	0.3199	4.8000e-003		0.0608	0.0608		0.0608	0.0608		959.5718	959.5718	0.0184	0.0176	965.2741
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	1835.67	0.0198	0.1800	0.1512	1.0800e-003		0.0137	0.0137		0.0137	0.0137		215.9609	215.9609	4.1400e-003	3.9600e-003	217.2443
General Office Building	291.651	3.1500e-003	0.0286	0.0240	1.7000e-004		2.1700e-003	2.1700e-003		2.1700e-003	2.1700e-003		34.3119	34.3119	6.6000e-004	6.3000e-004	34.5158
High Turnover (Sit Down Restaurant)	8484.38	0.0915	0.8318	0.6987	4.9900e-003		0.0632	0.0632		0.0632	0.0632		998.1625	998.1625	0.0191	0.0183	1,004.0941
Refrigerated Warehouse-No Rail	179.996	1.9400e-003	0.0177	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003		21.1760	21.1760	4.1000e-004	3.9000e-004	21.3018

Strip Mall	19.7025	2.1000e-004	1.9300e-003	1.6200e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		2.3179	2.3179	4.0000e-005	4.0000e-005	2.3317
Total		**0.2046**	**1.8116**	**1.2102**	**0.0112**		**0.1413**	**0.1413**		**0.1413**	**0.1413**		**2,231.5011**	**2,231.5011**	**0.0428**	**0.0409**	**2,244.7618**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	8.15636	0.0880	0.7517	0.3199	4.8000e-003		0.0608	0.0608		0.0608	0.0608		959.5718	959.5718	0.0184	0.0176	965.2741
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0.291651	3.1500e-003	0.0286	0.0240	1.7000e-004		2.1700e-003	2.1700e-003		2.1700e-003	2.1700e-003		34.3119	34.3119	6.6000e-004	6.3000e-004	34.5158
General Office Building	1.83567	0.0198	0.1800	0.1512	1.0800e-003		0.0137	0.0137		0.0137	0.0137		215.9609	215.9609	4.1400e-003	3.9600e-003	217.2443
High Turnover (Sit Down Restaurant)	8.48438	0.0915	0.8318	0.6987	4.9900e-003		0.0632	0.0632		0.0632	0.0632		998.1625	998.1625	0.0191	0.0183	1,004.0941
Refrigerated Warehouse-No Rail	0.179996	1.9400e-003	0.0177	0.0148	1.1000e-004		1.3400e-003	1.3400e-003		1.3400e-003	1.3400e-003		21.1760	21.1760	4.1000e-004	3.9000e-004	21.3018
Strip Mall	0.0197025	2.1000e-004	1.9300e-003	1.6200e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		2.3179	2.3179	4.0000e-005	4.0000e-005	2.3317
Total		**0.2046**	**1.8116**	**1.2102**	**0.0112**		**0.1413**	**0.1413**		**0.1413**	**0.1413**		**2,231.5011**	**2,231.5011**	**0.0428**	**0.0409**	**2,244.7618**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Mitigated	14.6668	0.3084	26.7622	1.4100e-003		0.1477	0.1477		0.1477	0.1477	0.0000	48.1656	48.1656	0.0468	0.0000	49.3350
Unmitigated	14.6668	0.3084	26.7622	1.4100e-003		0.1477	0.1477		0.1477	0.1477	0.0000	48.1656	48.1656	0.0468	0.0000	49.3350

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.2339					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.6192					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.8137	0.3084	26.7622	1.4100e-003		0.1477	0.1477		0.1477	0.1477		48.1656	48.1656	0.0468		49.3350
Total	**14.6668**	**0.3084**	**26.7622**	**1.4100e-003**		**0.1477**	**0.1477**		**0.1477**	**0.1477**	**0.0000**	**48.1656**	**48.1656**	**0.0468**	**0.0000**	**49.3350**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.2339					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.6192					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.8137	0.3084	26.7622	1.4100e-003		0.1477	0.1477		0.1477	0.1477		48.1656	48.1656	0.0468		49.3350
Total	**14.6668**	**0.3084**	**26.7622**	**1.4100e-003**		**0.1477**	**0.1477**		**0.1477**	**0.1477**	**0.0000**	**48.1656**	**48.1656**	**0.0468**	**0.0000**	**49.3350**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation