

# ENVIRONMENT | PLANNING | DEVELOPMENT SOLUTIONS, INC.

## CalEEMod Emission Summary

DATE: March 4, 2021

SUBJECT: Summary of CalEEMod Model Runs and Output for the Lancaster Promenade Apartment Homes, Lancaster, CA

### SECTION 1: PROJECT INFORMATION

#### 1.1 - Project Name

Lancaster Promenade Apartment Homes (Project)

#### 1.2 - Project Location

The Project is located on the west side of 20th Street West, south of Avenue I, and north of Lancaster Blvd on an approximately 26.3-acre site in the City of Lancaster, California.

#### 1.3 - Project Description

The Project proposes three residential area parcels and one commercial building parcel. Project buildout consists of multi-family housing with 392 dwelling units and approximately 12,750 square feet (sf) dedicated to commercial use. The project site is currently vacant.

#### 1.4 - Purpose of the Report

This report has been prepared to summarize the estimated project construction and operational criteria pollutant and greenhouse gas (GHG) emissions, and energy and fuel usage. The guidance and methods used in this assessment were as follows:

- CalEEMod Land Use Emission Model (Version 2016.3.2)<sup>1</sup>: for use in estimating air quality and greenhouse gas emissions and energy usage.
- California Air Resources Board (CARB) OFFROAD emissions model (Version 2017)<sup>2</sup> for estimating construction equipment fuel usage.

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<sup>1</sup> California Emissions Estimator Model Version 2016.3.2. November 2017. Available at: <http://caleemod.com>

<sup>2</sup> California Air Resources Board 2017. 2017 Off-Road Emission Model. Available at: <https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/msei-road-documentation-0>

- CARB EMFAC2017<sup>3</sup> mobile source emission model for estimating construction and operational vehicle fuel usage.
- Antelope Valley Air Quality Management District (AVAQMD) California Environmental Quality Act (CEQA) and Federal Conformity Guidelines<sup>4</sup>

The project emissions were estimated for the project design and the estimated emissions were compared to the recommended air quality and GHG significance thresholds recommended by the AVAQMD.

## 1.5 - Conclusions

- The Project's construction and operation would not exceed any project-level criteria pollutant emission significance thresholds recommended by the AVAQMD.
- The Project's construction and operation would not result in a cumulatively significant impact on the region's air quality.
- The Project's construction and operation would not exceed the greenhouse gas significance thresholds recommended by the AVAQMD.
- The Project's construction and operation are consistent with the requirements of the City of Lancaster's Climate Action Plan.
- The Project's construction and operation would not result in the wasteful, inefficient, and unnecessary consumption of energy, especially fossil fuels such as coal, natural gas, and petroleum, associated with project design, project location, the use of electricity and/or natural gas, and/or the use of fuel by vehicles anticipated to travel to and from the Project.

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<sup>3</sup> California Air Resources Board 2017. EMFAC2017. <https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/msei-road-documentation>

<sup>4</sup> AVAQMD 2016. California Environmental Quality Act (CEQA) and Federal Conformity Guidelines. Available at: <https://avaqmd.ca.gov/files/e5b34d385/AV%20CEQA%20Guides%202016.pdf>

## SECTION 2: CALEEMOD EMISSION ESTIMATES – CRITERIA POLLUTANTS

This section quantifies the Project construction and operational criteria pollutant emissions<sup>5</sup> for the Project design and compares the estimated emissions to the significance thresholds recommended by the AVAQMD.

### 2.1 - CalEEMod Model

The Project's construction and operational emissions were estimated using the CalEEMod land-use emission model. The CalEEMod model is a statewide land-use emissions model designed to provide a uniform platform for government agencies, land-use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects. The model quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Further, the model identifies mitigation measures to reduce criteria pollutant and GHG emissions and calculates the benefits achieved from measures chosen by the user.

The CalEEMod model develops emission estimates based on the land use type and development intensity. Table 1 provides a summary of the Project land uses and their equivalent within the CalEEMod model.

**Table 1: Project and CalEEMod Land Uses**

| Project Land Use                                | Project Intensity | CalEEMod Land Use                   | Comment                                                                    |
|-------------------------------------------------|-------------------|-------------------------------------|----------------------------------------------------------------------------|
| Residential Units                               | 392               | Apartments (Low Rise)               |                                                                            |
| Internal Roadways                               | 193,842 sf        | Other Asphalt Surfaces              |                                                                            |
| Landscaping                                     | 232,175 sf        | City Park                           | Trip rate = 0<br>The CalEEMod land use is to account for outside water use |
| Parking                                         | 166,399 sf        | Parking Lot                         |                                                                            |
| Commercial                                      | 12,750 sf         | High Turnover (sit down restaurant) |                                                                            |
| sf = square feet<br>Source: see Data Attachment |                   |                                     |                                                                            |

### 2.2 - Significance Thresholds-Criteria Pollutants

The AVAQMD recommends several criteria pollutant significance thresholds that apply to the construction and operation of projects located within the jurisdiction of the AVAQMD for use in CEQA assessments.

<sup>5</sup>Criteria pollutants are the only air pollutants with national air quality standards that define allowable concentrations of these substances in the ambient air. Criteria pollutants include carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>). Note that ozone is another criteria pollutant; however in terms of defining significance thresholds, ozone is represented by its precursor components, oxides of nitrogen (NO<sub>x</sub>) and reactive organic gases.

Projects with construction or operational emissions that do not exceed any threshold would be considered to have a less than significant air quality impact.

### 2.2.1 Emission Significance Thresholds

The incremental air quality impacts of an individual project are generally very small and difficult to measure. However, the AVAQMD's significance thresholds define levels of maximum daily and annual emissions whose exceedance by a project's construction or operation may add to the overall emission burden within the AVAQMD and impact the attainment and maintenance of ambient air quality standards.

The thresholds apply to criteria pollutant emissions of carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), oxides of sulfur (SO<sub>x</sub>), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), volatile organic compounds (VOC), hydrogen sulfide (H<sub>2</sub>S), and Lead (Pb). The quantification of emissions includes those project emissions generated from both onsite emission sources (i.e., offroad construction equipment, fugitive dust) and offsite emission sources (vehicle travel to and away from the Project). Table 2 presents the AVAQMD's significance thresholds. Note that the Project is not expected to emit any appreciable quantities of H<sub>2</sub>S or Pb. Therefore, these pollutants are not considered further in this assessment.

**Table 2: SCAQMD Regional Emission Significance Thresholds**

| Air Pollutant                         | Maximum Emissions |                |
|---------------------------------------|-------------------|----------------|
|                                       | Annual (tons)     | Daily (pounds) |
| Carbon Monoxide (CO)                  | 100               | 548            |
| Oxides of Nitrogen (NO <sub>x</sub> ) | 25                | 137            |
| Sulfur Oxides (SO <sub>x</sub> )      | 25                | 137            |
| PM <sub>10</sub>                      | 15                | 82             |
| PM <sub>2.5</sub>                     | 12                | 65             |
| Volatile Organic Compounds (VOC)      | 25                | 137            |
| Hydrogen Sulfide (H <sub>2</sub> S)   | 10                | 54             |
| Lead (Pb)                             | 0.6               | 3              |
| Source: AVAQMD <sup>6</sup>           |                   |                |

### 2.2.2 Cumulative Significance Thresholds

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable.

<sup>6</sup> AVAQMD 2016. California Environmental Quality Act (CEQA) and Federal Conformity Guidelines. Available at: <https://avaqmd.ca.gov/files/e5b34d385/AV%20CEQA%20Guides%202016.pdf>

Conversely, projects that do not exceed significance thresholds would not be considered cumulatively considerable.

## 2.3 - Criteria Pollutant Emission and Impact Estimates

### 2.3.1 Project Emissions

This section estimates the Project's construction and operational criteria pollutant emissions and compares the Project emissions to the AVAQMMD significance thresholds.

#### Construction

##### *Assumptions*

- Construction Schedule: Construction is anticipated to commence in August 2021 and last for approximately 15 months. Occupancy is expected in October/November 2022
- The current project site is vacant with little vegetation
- Soil import (49,877 cubic yards) with associated haul truck trips
- Fugitive dust mitigation applied as per AVAQMMD Rule 403 – Fugitive Dust
  - Watering 2x per day
  - Unpaved road mitigation (12% moisture content) and limit vehicle speed while on unpaved roads to 15 miles per hour)
- As per AVAQMMD Rule 1113, use of low VOC interior (50 grams/liter) and exterior (100 grams/liter) architectural coatings
- Construction equipment inventory derived from the CalEEMod model equipment

##### **Construction Emissions**

Table 3 and Table 4 provide the Project's conceptual construction schedule and equipment inventory, respectively, based on the applicant's schedule, and equipment in the CalEEMod model for the project size and land use. Table 5 provides the Project's construction vehicle trips.

**Table 3: Construction Schedule**

| Activity                    | Start Date | End Date   | Total Days |
|-----------------------------|------------|------------|------------|
| Grading                     | 08/02/2021 | 09/10/2021 | 30         |
| Building Construction       | 09/11/2021 | 09/02/2022 | 255        |
| Paving                      | 09/03/2022 | 10/14/2022 | 30         |
| Architectural Coating       | 10/15/2022 | 11/25/2022 | 30         |
| Source: see Data Attachment |            |            |            |

**Table 4: Construction Equipment Inventory**

| Activity                    | Equipment                 | Project Number | Project Hours per day | Default Horse-power | Default Load Factor |
|-----------------------------|---------------------------|----------------|-----------------------|---------------------|---------------------|
| Grading                     | Excavators                | 2              | 8                     | 158                 | 0.38                |
|                             | Graders                   | 1              | 8                     | 187                 | 0.41                |
|                             | Rubber Tired Dozers       | 1              | 8                     | 247                 | 0.40                |
|                             | Tractors/Loaders/Backhoes | 2              | 7                     | 97                  | 0.37                |
|                             | Scraper                   | 2              | 8                     | 367                 | 0.48                |
| Building Construction       | Crane                     | 1              | 7                     | 231                 | 0.29                |
|                             | Forklifts                 | 3              | 8                     | 89                  | 0.20                |
|                             | Tractors/Loaders/Backhoes | 3              | 7                     | 97                  | 0.37                |
|                             | Welders                   | 1              | 8                     | 46                  | 0.45                |
|                             | Generator Set             | 1              | 8                     | 84                  | 0.74                |
| Paving                      | Pavers                    | 2              | 8                     | 130                 | 0.42                |
|                             | Paving Equipment          | 2              | 8                     | 132                 | 0.36                |
|                             | Rollers                   | 2              | 8                     | 80                  | 0.38                |
| Architectural Coating       | Air Compressor            | 1              | 6                     | 78                  | 0.48                |
| Source: see Data Attachment |                           |                |                       |                     |                     |

**Table 5: Construction Vehicle Trips**

| Activity                      | Construction Trips per Day |        | Total Trips |
|-------------------------------|----------------------------|--------|-------------|
|                               | Worker                     | Vendor | Haul        |
| Grading                       | 20                         | 0      | 6,235       |
| Building Construction         | 628                        | 177    | 0           |
| Paving                        | 15                         | 0      | 0           |
| Architectural Coating         | 126                        | 0      | 0           |
| Source: see Data Attachment t |                            |        |             |

Table 6 shows the Project's estimated maximum daily construction emissions while Table 7 summarizes the Project's maximum annual construction emissions. As noted in Table 6, the Project's construction emissions would not exceed the AVAQMD's daily maximum emission significance thresholds. Table 7 indicates that the Project's construction would also not exceed the AVAQMD's annual construction emission significance thresholds.

**Table 6: Estimated Project Maximum Daily Construction Emissions**

| Construction Activity                                                                                                                                                                                                                                                                                                                                                         | Maximum Daily Construction Emissions <sup>(1)</sup><br>(pounds/day) |                 |             |                 |                  |                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------|-------------|-----------------|------------------|-------------------|
|                                                                                                                                                                                                                                                                                                                                                                               | VOC                                                                 | NO <sub>x</sub> | CO          | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| <b>2021</b>                                                                                                                                                                                                                                                                                                                                                                   |                                                                     |                 |             |                 |                  |                   |
| Grading                                                                                                                                                                                                                                                                                                                                                                       | 5.8                                                                 | 96.9            | 43.3        | 0.3             | 10.5             | 4.6               |
| Building Construction                                                                                                                                                                                                                                                                                                                                                         | 5.1                                                                 | 37.8            | 45.5        | 0.1             | 7.5              | 2.7               |
| Maximum Daily Emission                                                                                                                                                                                                                                                                                                                                                        | 5.8                                                                 | 96.9            | 45.5        | 0.3             | 10.5             | 4.6               |
| <b>2022</b>                                                                                                                                                                                                                                                                                                                                                                   |                                                                     |                 |             |                 |                  |                   |
| Building Construction                                                                                                                                                                                                                                                                                                                                                         | 4.7                                                                 | 34.8            | 39.1        | 0.1             | 7.3              | 2.6               |
| Paving                                                                                                                                                                                                                                                                                                                                                                        | 1.9                                                                 | 11.1            | 15.0        | 0.0             | 0.7              | 0.5               |
| Architectural Coating                                                                                                                                                                                                                                                                                                                                                         | 115.4                                                               | 1.7             | 5.5         | 0.0             | 1.1              | 0.4               |
| Maximum Daily Emission                                                                                                                                                                                                                                                                                                                                                        | 115.4                                                               | 34.8            | 39.1        | 0.1             | 7.3              | 2.6               |
| <b>2021 to 2022<br/>Maximum Daily<br/>Emissions</b>                                                                                                                                                                                                                                                                                                                           | <b>115.4</b>                                                        | <b>96.9</b>     | <b>45.5</b> | <b>0.3</b>      | <b>10.5</b>      | <b>4.6</b>        |
| <b>AVAQMD Significance<br/>Thresholds</b>                                                                                                                                                                                                                                                                                                                                     | <b>137</b>                                                          | <b>137</b>      | <b>548</b>  | <b>137</b>      | <b>82</b>        | <b>65</b>         |
| <b>Emissions Exceed<br/>Thresholds?</b>                                                                                                                                                                                                                                                                                                                                       | <b>No</b>                                                           | <b>No</b>       | <b>No</b>   | <b>No</b>       | <b>No</b>        | <b>No</b>         |
| Notes:<br>ROG = reactive organic gases    NO <sub>x</sub> = oxides of nitrogen    PM <sub>10</sub> = particulate matter 10 microns or less in diameter<br>PM <sub>2.5</sub> = particulate matter 2.5 microns or less in diameter    CO = carbon monoxide    SO <sub>x</sub> = sulfur oxides<br>PM emissions reflect SCAQMD Rule 403 reductions<br>Source: see Data Attachment |                                                                     |                 |             |                 |                  |                   |

**Table 7: Estimated Project Maximum Annual Construction Emissions**

| Construction Year                                    | Maximum Annual Construction Emissions <sup>(1)</sup><br>(tons/year) |                 |             |                 |                  |                   |
|------------------------------------------------------|---------------------------------------------------------------------|-----------------|-------------|-----------------|------------------|-------------------|
|                                                      | ROG                                                                 | NO <sub>x</sub> | CO          | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| 2021                                                 | 0.28                                                                | 3.00            | 2.33        | 0.01            | 0.44             | 0.18              |
| 2022                                                 | 2.14                                                                | 3.28            | 3.82        | 0.01            | 0.65             | 0.23              |
| <b>2021 to 2022<br/>Maximum Annual<br/>Emissions</b> | <b>2.14</b>                                                         | <b>3.28</b>     | <b>3.82</b> | <b>0.01</b>     | <b>0.65</b>      | <b>0.23</b>       |
| <b>AVAQMD Significance<br/>Thresholds</b>            | <b>25</b>                                                           | <b>25</b>       | <b>100</b>  | <b>25</b>       | <b>15</b>        | <b>12</b>         |
| <b>Emissions Exceed<br/>Thresholds?</b>              | <b>No</b>                                                           | <b>No</b>       | <b>No</b>   | <b>No</b>       | <b>No</b>        | <b>No</b>         |

| Construction Year                                                                                                                                                                                                                                                                                                                                                                 | Maximum Annual Construction Emissions <sup>(1)</sup><br>(tons/year) |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Notes:<br>VOC = volatile organic compounds    NO <sub>x</sub> = oxides of nitrogen    PM <sub>10</sub> = particulate matter 10 microns or less in diameter<br>PM <sub>2.5</sub> = particulate matter 2.5 microns or less in diameter    CO = carbon monoxide    SO <sub>x</sub> = sulfur oxides<br>PM emissions reflect AVAQMD Rule 403 reductions<br>Source: see Data Attachment |                                                                     |

## Project Operational Emissions

Long-term operational emissions result from the day-to-day operations. Operational emissions for land use development projects are typically distinguished as mobile, area, and energy-source emissions. Mobile-source emissions are associated with motor vehicles that would travel to and from the Project site while area-source emissions include landscape maintenance activities and periodic architectural coatings. Energy-source emissions are associated mainly with natural gas consumption.

Mobile sources constitute the largest source of operational emissions. Based on the intended project land uses, the Project is expected to generate 6,487 weekday daily trips<sup>7</sup>. The Project's operational vehicles were assumed to consist of the default vehicle fleet and fleet trip lengths and purposes contained in the CalEEMod model for the Project's land uses. The area source and energy source emissions were calculated internally by the CalEEMod model.

Table 8 summarizes the Project's maximum daily operational emissions along with a comparison to the AVAQMD's significance thresholds. As noted in Table 8, the Project's operational emissions are less than the daily maximum emission significance thresholds. Table 9 summarizes the Project's annual operational emissions. As shown in Table 9, the operation of the Project would not exceed the AVAQMD's annual emission significance thresholds.

**Table 8: Estimated Project Maximum Daily Operational Emissions**

| Operational Activity                 | Maximum Daily Emissions<br>(pounds/day) |                 |            |                 |                  |                   |
|--------------------------------------|-----------------------------------------|-----------------|------------|-----------------|------------------|-------------------|
|                                      | ROG                                     | NO <sub>x</sub> | CO         | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| Area                                 | 10.8                                    | 0.4             | 32.4       | 0.0             | 0.2              | 0.2               |
| Energy                               | 0.3                                     | 2.4             | 1.4        | 0.0             | 0.2              | 0.2               |
| Mobile                               | 13.0                                    | 52.0            | 114.6      | 0.4             | 25.5             | 7.0               |
| Total Project Operational Emissions  | 24.1                                    | 54.8            | 145.4      | 0.4             | 25.9             | 7.4               |
| <b>AVAQMD Significance Threshold</b> | <b>137</b>                              | <b>137</b>      | <b>548</b> | <b>137</b>      | <b>82</b>        | <b>65</b>         |
| <b>Exceed Threshold?</b>             | <b>No</b>                               | <b>No</b>       | <b>No</b>  | <b>No</b>       | <b>No</b>        | <b>No</b>         |

<sup>7</sup> David Evans and Associates Inc. 2020. Local Transportation Assessment Lancaster Promenade, Lancaster, CA

| Operational Activity | Maximum Daily Emissions<br>(pounds/day) |                 |    |                 |                  |                   |
|----------------------|-----------------------------------------|-----------------|----|-----------------|------------------|-------------------|
|                      | ROG                                     | NO <sub>x</sub> | CO | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |

Notes:  
 NO<sub>x</sub> = oxides of nitrogen    PM<sub>10</sub> = particulate matter 10 microns or less in diameter    ROG = reactive organic gases    SO<sub>x</sub> = sulfur oxides  
 PM<sub>2.5</sub> = particulate matter 2.5 microns or less in diameter    CO = carbon monoxide  
 Source: see Data Attachment

**Table 9: Estimated Project Maximum Annual Operational Emissions**

| Operational Activity                 | Maximum Daily Emissions<br>(tons/year) |                 |            |                 |                  |                   |
|--------------------------------------|----------------------------------------|-----------------|------------|-----------------|------------------|-------------------|
|                                      | ROG                                    | NO <sub>x</sub> | CO         | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| Area                                 | 1.9                                    | 0.0             | 2.9        | <0.1            | <0.1             | <0.1              |
| Energy                               | 0.1                                    | 0.4             | 0.2        | <0.1            | <0.1             | <0.1              |
| Mobile                               | 1.9                                    | 9.7             | 19.3       | 0.1             | 4.6              | 1.23              |
| Total Project Operational Emissions  | 3.9                                    | 10.1            | 22.4       | 0.1             | 4.66             | 1.3               |
| <b>AVAQMD Significance Threshold</b> | <b>25</b>                              | <b>25</b>       | <b>100</b> | <b>25</b>       | <b>15</b>        | <b>12</b>         |
| <b>Exceed Threshold?</b>             | <b>No</b>                              | <b>No</b>       | <b>No</b>  |                 | <b>No</b>        | <b>No</b>         |

Notes:  
 NO<sub>x</sub> = oxides of nitrogen    PM<sub>10</sub> = particulate matter 10 microns or less in diameter    ROG = reactive organic gases    SO<sub>x</sub> = sulfur oxides  
 PM<sub>2.5</sub> = particulate matter 2.5 microns or less in diameter    CO = carbon monoxide  
 Source: see Data Attachment

### 2.3.2 Cumulative Impacts

#### Construction

As shown above in Table 6 and Table 7, the Project's maximum daily and annual construction emissions, respectively would not exceed AVAQMD's thresholds of significance. Therefore, the Project's construction emissions would not result in a cumulatively considerable incremental contribution to the existing cumulative air quality impacts. Furthermore, all construction activities would comply with applicable AVAQMD rules and regulations, including Rule 403 to minimize fugitive PM dust emissions. Therefore, the cumulative impact from the construction of the Project would be less than significant.

#### Operations

As shown above in Table 8 and Table 9, the Project's maximum daily and annual operational emissions, respectively would not exceed AVAQMD's thresholds of significance. Therefore, the Project's operational emissions would not result in a cumulatively considerable incremental contribution to the existing

cumulative air quality impacts. The cumulative impact from long-term operation of the Project would be less than significant.

## 2.4 - Conclusions

The Project's construction and operational emissions would not exceed the AVAQMD's established project level or cumulative pollutant significant thresholds during either construction or operation. Therefore, the Project construction and operation will have less than significant impacts on air quality.

## SECTION 3: CALEEMOD EMISSION ESTIMATES - GREENHOUSE GAS EMISSIONS

This section analyzes the potential impacts on GHG emissions from the Project construction and operation.

### 3.1 - CalEEMod Model

Implementation of the Project is expected to increase GHG emissions, largely due to increased vehicle miles traveled (VMT) and construction activities, area sources, energy consumption, water supply, and solid waste generation. Increased GHG emissions could contribute to global climate change patterns and the adverse global environmental effects thereof. GHG emissions associated with future developments include principally carbon dioxide (CO<sub>2</sub>), nitrous oxide (N<sub>2</sub>O), and methane (CH<sub>4</sub>). Direct Project-related GHG emissions typically include emissions from construction and operational activities. Construction of the Project would result in direct emissions of CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub> from construction equipment. Transportation of materials and construction workers to and from the Project site would also result in GHG emissions. Construction activities would be short-term in duration and would cease upon Project completion. Direct operational-related GHG emissions from the Project would also include emissions from area (including natural gas consumption) and mobile sources. The direct GHG emissions were estimated using the CalEEMod model.

Indirect generation of GHG emissions would result from energy consumption to generate electricity to provide electrical power to the Project, generation, and transfer of solid waste to offsite collection locations, and energy requirements to provide the supply water to the Project. The indirect GHG emissions were estimated using the CalEEMod model.

### 3.2 - Significance Threshold

The AVAQMD's California Environmental Quality Act (CEQA) And Federal Conformity Guidelines identify both annual and daily significance thresholds for GHG emissions. The annual AVAQMD threshold is 100,000 metric tons of CO<sub>2</sub>e, and the daily threshold is 548,000 pounds of CO<sub>2</sub>e.

The significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. For the Project, the AVAQMD's numeric thresholds are used as the significance thresholds set forth above and a consistency evaluation with the requirements of the City of Lancaster's Climate Action Plan (CAP).

### 3.3 - Impact Analysis

#### 3.3.1 Construction

Table 10 summarizes the Project's daily and annual construction GHG emissions.

**Table 10: Project Construction GHG Emissions**

| Activity                        | Maximum Daily GHG Emissions (pounds/day of CO <sub>2</sub> e) |
|---------------------------------|---------------------------------------------------------------|
| 2021                            | 24,591                                                        |
| 2022                            | 13,554                                                        |
| Maximum Daily Emissions         | 24,591                                                        |
| AVAQMD Daily Threshold          | 548,000                                                       |
| <b>Exceeds Daily Threshold?</b> | <b>No</b>                                                     |
| Activity                        | Annual GHG Emissions (MTCO <sub>2</sub> e)                    |
| 2021                            | 810                                                           |
| 2022                            | 1,079                                                         |
| Maximum Annual Emissions        | 1,079                                                         |
| AVAQMD Annual Threshold         | 100,000                                                       |
| <b>Exceeds Daily Threshold?</b> | <b>No</b>                                                     |
| Source: see Data Attachment     |                                                               |

### 3.3.2 Operations

On February 14, 2017, the City adopted the Zero Net Energy Home Ordinance (No. 1020)<sup>8</sup>, which took into effect on January 1, 2018. The Ordinance mandates installing a solar system equivalent to two watts per square foot for each new home built. The City provides three options by which homebuilders can comply with this regulation: (1) providing a solar component on each new home; (2) offer mitigation fees in lieu of a solar component; or (3) arranging for a combination of both option one and two. Further, it should be noted that the 2019 California Building Energy Efficiency Standards mandates the installation of residential solar generation to offset combustion emissions associated with electricity generation. The new standards require that all new homes under three stories high install solar panels starting January 1, 2020 and that solar systems must be sized to net out the annual kilowatt-hour energy usage of the dwelling. For this study's purposes, however, it was assumed as a worst-case that no residential solar was installed, thereby maximizing the emissions from electricity generation.

Table 11 summarizes the Project's operational GHG emissions. As noted from Table 11, the project operation would not exceed the AVAQMD's GHG significance thresholds.

<sup>8</sup> City of Lancaster, CA 2017. Zero Net Energy Home Ordinance. Available at: <https://www.cityoflanasterca.org/Home/Components/News/News/7733/>

**Table 11: Project Operational GHG Emissions**

| Activity                      | Maximum Daily GHG Emissions (pounds/day CO <sub>2</sub> e) |
|-------------------------------|------------------------------------------------------------|
| Area                          | 60                                                         |
| Energy                        | 3,031                                                      |
| Mobile                        | 36,095                                                     |
| Total                         | 39,186                                                     |
| <b>Significance Threshold</b> | <b>548,000</b>                                             |
| <b>Exceeds Threshold?</b>     | <b>No</b>                                                  |
| Activity                      | Annual GHG Emissions (MTCO <sub>2</sub> e)                 |
| Area                          | 5                                                          |
| Energy                        | 1,056                                                      |
| Mobile                        | 5,555                                                      |
| Waste                         | 167                                                        |
| Water                         | 195                                                        |
| Total                         | 6,978                                                      |
| <b>Significance Threshold</b> | <b>10,000</b>                                              |
| <b>Exceeds Threshold?</b>     | <b>No</b>                                                  |
| Source: see Data Attachment   |                                                            |

The City of Lancaster adopted a CAP in March 2017. The CAP documents the City's GHG emissions inventory and the progress the City has made through its alternative energy and sustainability programs. The CAP outlines how the City would meet the State GHG reduction targets for 2020 and make substantial progress towards achieving the post-2020 targets. Project consistency with the applicable CAP measures is analyzed in Table 12. As shown in Table 12, the Project would be consistent with the City's CAP.

**Table 12: City of Lancaster CAP GHG Consistency Analysis**

| Measure                      | Description                                                                                                  | Consistency                                                                                                                                                                                                                                                                                                                                    |
|------------------------------|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>4.1: Transportation</b>   |                                                                                                              |                                                                                                                                                                                                                                                                                                                                                |
| 4.1.2b: Bike Lanes           | Installation of Class I, Class II, and Class III bike lanes to provide safe cycling facilities for residents | <u>Consistent</u> <ul style="list-style-type: none"> <li>The City of Lancaster Bike Trail System adjoins the Project's western property line and will be accessed by Avenue I or Lancaster Boulevard.</li> <li>Bicycle storage will be provided throughout.</li> <li>Thus, the Project would be consistent with CAP Measure 4.1.2b.</li> </ul> |
| 4.1.2c: Pedestrian Amenities | Provide pedestrian amenities throughout the Project to encourage walking instead of driving.                 | <u>Consistent</u> <ul style="list-style-type: none"> <li>The Project has been designed to be a walkable community from one end of the property to the other with continuous sidewalks.</li> <li>Although a gated community, pedestrian gates will</li> </ul>                                                                                   |

|                                 |                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 |                                                                                                                                                      | <p>allow residents to walk along 20<sup>th</sup> St. West to Avenue I to do shopping.</p> <ul style="list-style-type: none"> <li>• Being a mixed-use development, 12,750 SF of commercial space is part of the Project so that residents can walk instead of drive for services.</li> <li>• Thus, the Project would be consistent with CAP Measure 4.1.2c.</li> </ul>                                                                                                                                                                                                                                                                                                                                         |
| <b>4.4: Water Introduction</b>  |                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 4.4.2a: Sensor Technology       | Implement installation of water sensor technologies in order to increase efficient irrigation practices.                                             | <p><u>Consistent</u></p> <ul style="list-style-type: none"> <li>• The Project has been designed for desert landscaping with highly efficient landscape watering and Weather Based Irrigation Controllers.</li> <li>• Thus, the Project would be consistent with CAP Measure Code 4.4.2a.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>4.6: Built Environment</b>   |                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 4.6.1a: Zero Net Energy Housing | Establish innovative business models encouraging the development of zero net energy housing and develop a zero net energy affordable housing project | <p><u>Consistent</u></p> <ul style="list-style-type: none"> <li>• Solar Energy will be provided with 196kw of power to help offset common area electricity.</li> <li>• The Project will provide on an as needed basis approximately (93) locations for Electric Vehicle Charging.</li> <li>• Thus, the Project would be consistent with CAP Measure Code 4.6.1a.</li> </ul>                                                                                                                                                                                                                                                                                                                                   |
| 4.6.1.b: Building Code Revision | Establish goals that new commercial and residential construction exceed the California Building Standards Code energy requirements by 10%            | <p><u>Consistent</u></p> <ul style="list-style-type: none"> <li>• The Project will exceed Title 24 requirements with all LED Efficient Lighting, both on the buildings' interior and exteriors, and Appliances, approved by CEC Appliance Database. Higher efficiency Insulation, HVAC units with a higher SEER value and Smart Thermostats, Roofing, Water Heaters, Windows, and Pool Equipment. Water-efficient Faucets, Showerheads, Toilets and Waterless Urinals in the Community Buildings</li> <li>• . Electric fireplaces will be provided in all the units and Community Buildings instead of gas or wood.</li> <li>• Thus, the Project would be consistent with CAP Measure Code 4.6.1b.</li> </ul> |

### 3.4 - Conclusion

As noted from the results shown in Table 10, Table 11 and Table 12, the Project construction and operation would not exceed the AVAQMD's GHG significance thresholds and the Project would be consistent with the City of Lancaster's Climate Action Plan

## SECTION 4: PROJECT FUEL AND ENERGY CONSUMPTION

This section quantifies the project construction and operational fuel and energy requirements and compares the resulting quantities to the CEQA significance threshold.

### 4.1 - Assumptions

- The construction equipment inventory was derived from the CalEEMod model
- Construction equipment fuel consumption derived from ARB Offroad2017 emission model and the CalEEMod construction equipment
- Fuel Consumption from vehicle travel derived from ARB EMFAC2017 emission model
- Electrical and natural gas usage derived from the CalEEMod model

### 4.2 - Significance Thresholds

Neither Appendix F of the State CEQA Guidelines nor PRC Section 21100(b)(3)) provides a numerical threshold of significance that might be used to evaluate the potential significance of energy consumption of a proposed project. Rather, the emphasis is on reducing "the wasteful, inefficient, and unnecessary consumption of energy." Based on this focus of the guidelines, for purposes of this report, the Project would have a significant impact related to energy consumption if it would:

- Involve the wasteful, inefficient, and unnecessary consumption of energy, especially fossil fuels such as coal, natural gas, and petroleum, associated with project design, project location, the use of electricity and/or natural gas, and/or the use of fuel by vehicles anticipated to travel to and from the Project.

### 4.3 - Construction

#### 4.3.1 Electricity and Natural Gas Usage

Southern California Edison Company would provide temporary electric power for as-necessary lighting, construction equipment, and electronic equipment such as computers located inside temporary construction trailers. The electricity used for such activities would be temporary and would be substantially less than that required for project operation, and would have a negligible contribution to the Project's overall energy consumption.

Natural gas is not anticipated to be required during Project construction. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed below under the "petroleum" subsection. Any minor amounts of natural gas that may be consumed due to Project construction would be substantially less than that required for Project operation and would have a negligible contribution to the Project's overall energy consumption.

### 4.3.2 Petroleum Fuel Usage

Off-road heavy-duty construction equipment associated with construction activities would rely on diesel fuel, as vendors and haul trucks would be involved in delivering building materials and importing soil to the Project site. Construction workers would travel to and from the Project site throughout construction. It is assumed in this analysis that construction workers would travel in gasoline-powered passenger vehicles. Travel by vendor vehicles and haul trucks would be using diesel-fueled trucks. The fuel usage for the off-road construction equipment is provided in [Table 12](#). These estimates are based on the total fuel consumption and horsepower-hour data within the ARB OFFROAD2017 emission model for specific types of diesel construction equipment employed in the Project construction. It should be noted that the total fuel consumption during construction computed below likely substantially overstates the amount of fuel usage. Although construction equipment is listed under a particular construction activity, there is a likelihood that a particular equipment will not operate over the entire duration of the construction activity. For example, during building construction, a crane is listed as one of the operational pieces of equipment. However, the crane would not operate over the entire duration of 255 days assumed during the building construction activity.

[Table 13](#) summarizes the Project's construction vehicle fuel usage. The fuel usage is based on the vehicle type (worker vehicle, vendor vehicle, and haul truck), vehicle miles traveled, and fuel usage factors contained in the ARB EMFAC2017 mobile source emission model and as estimated in the CalEEMod model. The total fuel construction during construction is summarized in [Table 14](#).

## 4.4 - Operational Energy Requirements

Table 15 summarizes the Project's operational energy requirements. The Project is expected to require a total of 96,096 gallons of diesel fuel and 439,065 gallons of gasoline fuel each year, 9,350,000 thousand BTU of natural gas per year, and 2,281,025 kilowatts of electricity per year that would be netted-out through the use of solar power generation.

## 4.5 - Conclusion

Construction of the Project would result in fuel consumption from construction tools and equipment, vendor and haul truck trips, and vehicle trips generated from construction workers traveling to and from the site. Construction activities and corresponding fuel energy consumption would be temporary and localized. The use of diesel fuel and heavy-duty equipment would not be a typical operational condition of the Project. Also, there are no unusual Project characteristics that would cause the use of construction equipment that would be less energy efficient compared to other similar construction sites in other parts of the State. Whether it be for a household task or construction project such as the proposed Project, any construction job's rational goal is to minimize construction costs while meeting all legal requirements for doing so. Therefore, the Project's construction-related fuel consumption would not result in inefficient, wasteful, or unnecessary energy use compared to other construction sites in the region.

The Project's operation would involve the development of 392 multi-residential dwelling units with 12,750 sf dedicated to commercial use. According to CEQA Guidelines Appendix F, the goal of conserving energy implies the wise and efficient use of energy, including decreasing overall per capita energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. The Project would comply with all of the energy efficiency requirements under all applicable State, county, and

local business and energy code ordinances, including installing solar generating capacity. As a result, the Project's operation would not result in inefficient, wasteful, or unnecessary energy use compared with other similar residential projects in the region and would comply with all local and State building requirements.

**Table 13: Construction Equipment Fuel Usage**

| Activity                                                                     | Equipment                 | Project Number | Project Hours per day | Default Horse-power | Default Load Factor | Days of Construction | Total Horsepower-hours | Fuel Rate (gal/hp-hr) | Fuel Use (gallons) |
|------------------------------------------------------------------------------|---------------------------|----------------|-----------------------|---------------------|---------------------|----------------------|------------------------|-----------------------|--------------------|
| Grading                                                                      | Excavators                | 2              | 8                     | 158                 | 0.38                | 30                   | 28,819                 | 0.019763              | 570                |
|                                                                              | Graders                   | 1              | 8                     | 187                 | 0.41                | 30                   | 18,401                 | 0.021143              | 389                |
|                                                                              | Rubber Tired Dozers       | 1              | 8                     | 247                 | 0.4                 | 30                   | 23,712                 | 0.020461              | 485                |
|                                                                              | Scrapers                  | 2              | 8                     | 367                 | 0.48                | 30                   | 84,557                 | 0.024738              | 2,092              |
|                                                                              | Tractors/Loaders/Backhoes | 2              | 7                     | 97                  | 0.37                | 30                   | 15,074                 | 0.023965              | 361                |
| Building Construction                                                        | Crane                     | 1              | 7                     | 231                 | 0.29                | 255                  | 119,577                | 0.014896              | 1,781              |
|                                                                              | Forklifts                 | 3              | 8                     | 89                  | 0.2                 | 255                  | 108,936                | 0.019105              | 2,081              |
|                                                                              | Tractors/Loaders/Backhoes | 3              | 7                     | 97                  | 0.37                | 255                  | 192,191                | 0.023965              | 4,606              |
|                                                                              | Welders                   | 1              | 8                     | 46                  | 0.45                | 255                  | 42,228                 | 0.023965              | 1,012              |
|                                                                              | Generator Set             | 1              | 8                     | 84                  | 0.74                | 255                  | 126,806                | 0.023965              | 3,039              |
| Paving                                                                       | Pavers                    | 2              | 8                     | 130                 | 0.42                | 30                   | 26,208                 | 0.021525              | 564                |
|                                                                              | Paving Equipment          | 2              | 8                     | 132                 | 0.36                | 30                   | 22,810                 | 0.018334              | 418                |
|                                                                              | Rollers                   | 2              | 8                     | 80                  | 0.38                | 30                   | 14,592                 | 0.019412              | 283                |
| Architectural Coating                                                        | Air Compressor            | 1              | 6                     | 78                  | 0.48                | 30                   | 6,739                  | 0.023965              | 162                |
| Fuel Consumption rates derived from the ARB OFFROAD2017 - Orion Web Database |                           |                |                       |                     |                     |                      |                        |                       |                    |
|                                                                              |                           |                |                       |                     |                     |                      |                        | Total                 | 17,843             |

**Table 14: Estimated Project Vehicle Fuel Usage**

| Construction Source         | Gallons of Diesel Fuel | Gallons of Gasoline Fuel |
|-----------------------------|------------------------|--------------------------|
| Haul Trucks                 | 18,235                 | 0                        |
| Vendor Trucks               | 37,066                 | 0                        |
| Worker Vehicles             | 0                      | 66,803                   |
| Construction Vehicles Total | 55,301                 | 66,803                   |
| Source: see Data Attachment |                        |                          |

**Table 15: Total Construction Fuel Usage**

| Construction Source             | Gallons of Diesel Fuel | Gallons of Gasoline Fuel |
|---------------------------------|------------------------|--------------------------|
| Construction Vehicles           | 55,301                 | 66,803                   |
| Off-road Construction Equipment | 17,843                 | 0                        |
| Construction Total              | 73,144                 | 66,803                   |
| Source: see Data Attachment     |                        |                          |

**Table 16: Project Annual Operational Energy Requirements**

| Operational Source<br>(value per year) |                                                            |                                                     |
|----------------------------------------|------------------------------------------------------------|-----------------------------------------------------|
|                                        | Annual VMT                                                 | Gallons Fuel                                        |
| Transportation – Project               | 879,977 (Diesel)<br>10,986,579 (Gas)<br>11,866,556 (Total) | 96,096 (Diesel)<br>439,065 (Gas)<br>535,161 (Total) |
|                                        |                                                            |                                                     |
|                                        | Kilowatt-Hours                                             |                                                     |
| Electricity – Project                  | 2,281,025                                                  |                                                     |
|                                        |                                                            |                                                     |
|                                        | Thousands British Thermal Units                            |                                                     |
| Natural Gas – Project                  | 9,350,000                                                  |                                                     |
| Source: see Data Attachment            |                                                            |                                                     |

## Data Attachment

|                                                         |             |
|---------------------------------------------------------|-------------|
| CalEEMod Model Output: Project – Summer                 | Page<br>A-1 |
| CalEEMod Model Output: Project – Winter                 | A-26        |
| CalEEMod Model Output: Project – Annual                 | A-51        |
| CalEEMod Daily and Annual Construction Emission Summary | A-83        |
| CalEEMod Daily and Annual Operational Emission Summary  | A-85        |
| Construction Equipment Fuel Usage                       | A-86        |
| Construction Vehicle Fuel Usage                         | A-87        |
| Operational Vehicle Miles Travels and Fuel Usage        | A-88        |
| EMFAC2017 Emission and Fuel Consumption                 | A-89        |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

## Lancaster Promenade Project

### Antelope Valley APCD Air District, Summer

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses                           | Size   | Metric        | Lot Acreage | Floor Surface Area | Population |
|-------------------------------------|--------|---------------|-------------|--------------------|------------|
| Other Asphalt Surfaces              | 4.45   | Acre          | 4.45        | 193,842.00         | 0          |
| Parking Lot                         | 3.82   | Acre          | 3.82        | 166,399.20         | 0          |
| City Park                           | 5.33   | Acre          | 5.33        | 232,174.80         | 0          |
| High Turnover (Sit Down Restaurant) | 12.75  | 1000sqft      | 0.29        | 12,750.00          | 0          |
| Apartments Low Rise                 | 392.00 | Dwelling Unit | 10.67       | 392,000.00         | 1121       |

### 1.2 Other Project Characteristics

|                         |                            |                         |       |                           |       |
|-------------------------|----------------------------|-------------------------|-------|---------------------------|-------|
| Urbanization            | Urban                      | Wind Speed (m/s)        | 2.2   | Precipitation Freq (Days) | 33    |
| Climate Zone            | 9                          |                         |       | Operational Year          | 2022  |
| Utility Company         | Southern California Edison |                         |       |                           |       |
| CO2 Intensity (lb/MWhr) | 533                        | CH4 Intensity (lb/MWhr) | 0.029 | N2O Intensity (lb/MWhr)   | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

Project Characteristics - .....

Land Use - Project Description and site plan

Construction Phase - .Schedule modified to be completed within 18 months

Trips and VMT - Grading soil import of 49,877 cu yards

Grading - 49877 CY of soil import from client information

Architectural Coating - VOC content for coating changed to reflect the use of very low VOC coatings for residential (10 g/l) and non-residential uses at 50 g/l. VOC for parking lot paint set at 50 g/l

Vehicle Trips - Trip generation rates extracted from project Traffic Impact Analysis  
David Evans and Associates December 2020

Woodstoves - Assumed no fireplaces or wood stoves

Area Coating - All coating assumed to have a VOC content of 50 g/l for interior and 100 g/l for exterior as per Rule 1113

Construction Off-road Equipment Mitigation -

| Table Name              | Column Name                     | Default Value | New Value |
|-------------------------|---------------------------------|---------------|-----------|
| tblArchitecturalCoating | EF_Parking                      | 250.00        | 50.00     |
| tblArchitecturalCoating | EF_Residential_Exterior         | 250.00        | 100.00    |
| tblArchitecturalCoating | EF_Residential_Interior         | 250.00        | 50.00     |
| tblAreaCoating          | Area_EF_Residential_Exterior    | 250           | 100       |
| tblAreaCoating          | Area_EF_Residential_Interior    | 250           | 50        |
| tblConstDustMitigation  | WaterUnpavedRoadMoistureContent | 0             | 12        |
| tblConstDustMitigation  | WaterUnpavedRoadVehicleSpeed    | 0             | 15        |
| tblConstructionPhase    | NumDays                         | 35.00         | 30.00     |
| tblConstructionPhase    | NumDays                         | 440.00        | 255.00    |
| tblConstructionPhase    | NumDays                         | 45.00         | 30.00     |
| tblConstructionPhase    | NumDays                         | 35.00         | 30.00     |
| tblFireplaces           | FireplaceDayYear                | 82.00         | 0.00      |
| tblFireplaces           | FireplaceHourDay                | 3.00          | 0.00      |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

|                           |                    |          |           |
|---------------------------|--------------------|----------|-----------|
| tblFireplaces             | FireplaceWoodMass  | 3,078.40 | 0.00      |
| tblFireplaces             | NumberGas          | 215.60   | 0.00      |
| tblFireplaces             | NumberNoFireplace  | 39.20    | 0.00      |
| tblFireplaces             | NumberWood         | 137.20   | 0.00      |
| tblGrading                | AcresOfGrading     | 75.00    | 112.50    |
| tblGrading                | MaterialImported   | 0.00     | 49,877.00 |
| tblLandUse                | LotAcreage         | 24.50    | 10.67     |
| tblProjectCharacteristics | CO2IntensityFactor | 702.44   | 533       |
| tblVehicleTrips           | ST_TR              | 7.16     | 6.59      |
| tblVehicleTrips           | ST_TR              | 22.75    | 0.00      |
| tblVehicleTrips           | ST_TR              | 158.37   | 306.20    |
| tblVehicleTrips           | SU_TR              | 6.07     | 6.59      |
| tblVehicleTrips           | SU_TR              | 16.74    | 0.00      |
| tblVehicleTrips           | SU_TR              | 131.84   | 306.20    |
| tblVehicleTrips           | WD_TR              | 1.89     | 0.00      |
| tblVehicleTrips           | WD_TR              | 127.15   | 306.20    |
| tblWoodstoves             | NumberCatalytic    | 19.60    | 0.00      |
| tblWoodstoves             | NumberNoncatalytic | 19.60    | 0.00      |
| tblWoodstoves             | WoodstoveDayYear   | 82.00    | 0.00      |
| tblWoodstoves             | WoodstoveWoodMass  | 3,019.20 | 0.00      |

## 2.0 Emissions Summary

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## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

**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   |                 |                 |        |        |                 |
| 2021    | 5.8262   | 96.7094 | 45.4938 | 0.2383 | 13.9836       | 2.1108       | 16.0944    | 4.8072         | 1.9465        | 6.7537      | 0.0000   | 24,527.30<br>93 | 24,527.30<br>93 | 2.5626 | 0.0000 | 24,591.37<br>35 |
| 2022    | 115.4243 | 34.9240 | 43.1221 | 0.1344 | 6.3572        | 0.8750       | 7.2322     | 1.7134         | 0.8228        | 2.5362      | 0.0000   | 13,528.71<br>16 | 13,528.71<br>16 | 1.0057 | 0.0000 | 13,553.85<br>33 |
| Maximum | 115.4243 | 96.7094 | 45.4938 | 0.2383 | 13.9836       | 2.1108       | 16.0944    | 4.8072         | 1.9465        | 6.7537      | 0.0000   | 24,527.30<br>93 | 24,527.30<br>93 | 2.5626 | 0.0000 | 24,591.37<br>35 |

**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   |                 |                 |        |        |                 |
| 2021    | 5.8262   | 96.7094 | 45.4938 | 0.2383 | 8.3808        | 2.1108       | 10.4916    | 2.7348         | 1.9465        | 4.6813      | 0.0000   | 24,527.30<br>93 | 24,527.30<br>93 | 2.5626 | 0.0000 | 24,591.37<br>35 |
| 2022    | 115.4243 | 34.9240 | 43.1221 | 0.1344 | 6.3572        | 0.8750       | 7.2322     | 1.7134         | 0.8228        | 2.5362      | 0.0000   | 13,528.71<br>16 | 13,528.71<br>16 | 1.0057 | 0.0000 | 13,553.85<br>33 |
| Maximum | 115.4243 | 96.7094 | 45.4938 | 0.2383 | 8.3808        | 2.1108       | 10.4916    | 2.7348         | 1.9465        | 4.6813      | 0.0000   | 24,527.30<br>93 | 24,527.30<br>93 | 2.5626 | 0.0000 | 24,591.37<br>35 |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 27.54         | 0.00         | 24.02      | 31.78          | 0.00          | 22.31       | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

**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         | 10.8089        | 0.3734         | 32.3780         | 1.7100e-003   |                | 0.1789        | 0.1789         |                | 0.1789        | 0.1789        | 0.0000        | 58.2383            | 58.2383            | 0.0562        | 0.0000        | 59.6432            |
| Energy       | 0.2762         | 2.4075         | 1.3520          | 0.0151        |                | 0.1908        | 0.1908         |                | 0.1908        | 0.1908        |               | 3,012.8541         | 3,012.8541         | 0.0578        | 0.0552        | 3,030.7580         |
| Mobile       | 13.0243        | 52.0144        | 114.6116        | 0.3559        | 25.2592        | 0.2557        | 25.5149        | 6.7617         | 0.2385        | 7.0002        |               | 36,055.2413        | 36,055.2413        | 1.5957        |               | 36,095.1345        |
| <b>Total</b> | <b>24.1094</b> | <b>54.7953</b> | <b>148.3416</b> | <b>0.3726</b> | <b>25.2592</b> | <b>0.6254</b> | <b>25.8846</b> | <b>6.7617</b>  | <b>0.6082</b> | <b>7.3699</b> | <b>0.0000</b> | <b>39,126.3337</b> | <b>39,126.3337</b> | <b>1.7097</b> | <b>0.0552</b> | <b>39,185.5357</b> |

**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         | 10.8089        | 0.3734         | 32.3780         | 1.7100e-003   |                | 0.1789        | 0.1789         |                | 0.1789        | 0.1789        | 0.0000        | 58.2383            | 58.2383            | 0.0562        | 0.0000        | 59.6432            |
| Energy       | 0.2762         | 2.4075         | 1.3520          | 0.0151        |                | 0.1908        | 0.1908         |                | 0.1908        | 0.1908        |               | 3,012.8541         | 3,012.8541         | 0.0578        | 0.0552        | 3,030.7580         |
| Mobile       | 13.0243        | 52.0144        | 114.6116        | 0.3559        | 25.2592        | 0.2557        | 25.5149        | 6.7617         | 0.2385        | 7.0002        |               | 36,055.2413        | 36,055.2413        | 1.5957        |               | 36,095.1345        |
| <b>Total</b> | <b>24.1094</b> | <b>54.7953</b> | <b>148.3416</b> | <b>0.3726</b> | <b>25.2592</b> | <b>0.6254</b> | <b>25.8846</b> | <b>6.7617</b>  | <b>0.6082</b> | <b>7.3699</b> | <b>0.0000</b> | <b>39,126.3337</b> | <b>39,126.3337</b> | <b>1.7097</b> | <b>0.0552</b> | <b>39,185.5357</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | 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            | Grading               | Grading               | 8/2/2021   | 9/10/2021  | 5             | 30       |                   |
| 2            | Building Construction | Building Construction | 9/11/2021  | 9/2/2022   | 5             | 255      |                   |
| 3            | Paving                | Paving                | 9/3/2022   | 10/14/2022 | 5             | 30       |                   |
| 4            | Architectural Coating | Architectural Coating | 10/15/2022 | 11/25/2022 | 5             | 30       |                   |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 8.27

Residential Indoor: 793,800; Residential Outdoor: 264,600; Non-Residential Indoor: 19,110; Non-Residential Outdoor: 6,370; Striped Parking Area: 34,240 (Architectural Coating – sqft)

#### OffRoad Equipment

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Grading               | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Grading               | Graders                   | 1      | 8.00        | 187         | 0.41        |
| Grading               | Rubber Tired Dozers       | 1      | 8.00        | 247         | 0.40        |
| Grading               | Scrapers                  | 2      | 8.00        | 367         | 0.48        |
| Grading               | Tractors/Loaders/Backhoes | 2      | 8.00        | 97          | 0.37        |
| Building Construction | Cranes                    | 1      | 7.00        | 231         | 0.29        |
| Building Construction | Forklifts                 | 3      | 8.00        | 89          | 0.20        |
| Building Construction | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Building Construction | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Building Construction | Welders                   | 1      | 8.00        | 46          | 0.45        |
| Paving                | Pavers                    | 2      | 8.00        | 130         | 0.42        |
| Paving                | Paving Equipment          | 2      | 8.00        | 132         | 0.36        |
| Paving                | Rollers                   | 2      | 8.00        | 80          | 0.38        |
| Architectural Coating | Air Compressors           | 1      | 6.00        | 78          | 0.48        |

Trips and VMT

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Grading               | 8                       | 20.00              | 0.00               | 6,235.00            | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 9                       | 628.00             | 177.00             | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 1                       | 126.00             | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

**3.2 Grading - 2021****Unmitigated Construction On-Site**

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|---------------|---------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category      | lb/day        |                |                |               |                |               |                |                |               |               | lb/day   |                        |                        |               |     |                        |
| Fugitive Dust |               |                |                |               | 10.1870        | 0.0000        | 10.1870        | 3.7681         | 0.0000        | 3.7681        |          |                        | 0.0000                 |               |     | 0.0000                 |
| Off-Road      | 4.1912        | 46.3998        | 30.8785        | 0.0620        |                | 1.9853        | 1.9853         |                | 1.8265        | 1.8265        |          | 6,007.043<br>4         | 6,007.043<br>4         | 1.9428        |     | 6,055.613<br>4         |
| <b>Total</b>  | <b>4.1912</b> | <b>46.3998</b> | <b>30.8785</b> | <b>0.0620</b> | <b>10.1870</b> | <b>1.9853</b> | <b>12.1723</b> | <b>3.7681</b>  | <b>1.8265</b> | <b>5.5946</b> |          | <b>6,007.043<br/>4</b> | <b>6,007.043<br/>4</b> | <b>1.9428</b> |     | <b>6,055.613<br/>4</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

**3.2 Grading - 2021****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      | 1.5451        | 50.2540        | 10.5910        | 0.1745        | 3.6323        | 0.1241        | 3.7565        | 0.9955         | 0.1188        | 1.1143        |          | 18,343.3175        | 18,343.3175        | 0.6136        |     | 18,358.6573        |
| 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       | 0.0900        | 0.0556         | 0.7998         | 1.7800e-003   | 0.1643        | 1.3600e-003   | 0.1657        | 0.0436         | 1.2500e-003   | 0.0448        |          | 176.9483           | 176.9483           | 6.1800e-003   |     | 177.1028           |
| <b>Total</b> | <b>1.6351</b> | <b>50.3095</b> | <b>11.3908</b> | <b>0.1763</b> | <b>3.7966</b> | <b>0.1255</b> | <b>3.9221</b> | <b>1.0391</b>  | <b>0.1200</b> | <b>1.1591</b> |          | <b>18,520.2658</b> | <b>18,520.2658</b> | <b>0.6198</b> |     | <b>18,535.7601</b> |

**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 |               |                |                |               | 4.5841        | 0.0000        | 4.5841        | 1.6957         | 0.0000        | 1.6957        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 4.1912        | 46.3998        | 30.8785        | 0.0620        |               | 1.9853        | 1.9853        |                | 1.8265        | 1.8265        | 0.0000        | 6,007.0434        | 6,007.0434        | 1.9428        |     | 6,055.6134        |
| <b>Total</b>  | <b>4.1912</b> | <b>46.3998</b> | <b>30.8785</b> | <b>0.0620</b> | <b>4.5841</b> | <b>1.9853</b> | <b>6.5695</b> | <b>1.6957</b>  | <b>1.8265</b> | <b>3.5222</b> | <b>0.0000</b> | <b>6,007.0434</b> | <b>6,007.0434</b> | <b>1.9428</b> |     | <b>6,055.6134</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

**3.2 Grading - 2021****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      | 1.5451        | 50.2540        | 10.5910        | 0.1745        | 3.6323        | 0.1241        | 3.7565        | 0.9955         | 0.1188        | 1.1143        |          | 18,343.3175        | 18,343.3175        | 0.6136        |     | 18,358.6573        |
| 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       | 0.0900        | 0.0556         | 0.7998         | 1.7800e-003   | 0.1643        | 1.3600e-003   | 0.1657        | 0.0436         | 1.2500e-003   | 0.0448        |          | 176.9483           | 176.9483           | 6.1800e-003   |     | 177.1028           |
| <b>Total</b> | <b>1.6351</b> | <b>50.3095</b> | <b>11.3908</b> | <b>0.1763</b> | <b>3.7966</b> | <b>0.1255</b> | <b>3.9221</b> | <b>1.0391</b>  | <b>0.1200</b> | <b>1.1591</b> |          | <b>18,520.2658</b> | <b>18,520.2658</b> | <b>0.6198</b> |     | <b>18,535.7601</b> |

**3.3 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     | 1.9009        | 17.4321        | 16.5752        | 0.0269        |               | 0.9586        | 0.9586        |                | 0.9013        | 0.9013        |          | 2,553.3639        | 2,553.3639        | 0.6160        |     | 2,568.7643        |
| <b>Total</b> | <b>1.9009</b> | <b>17.4321</b> | <b>16.5752</b> | <b>0.0269</b> |               | <b>0.9586</b> | <b>0.9586</b> |                | <b>0.9013</b> | <b>0.9013</b> |          | <b>2,553.3639</b> | <b>2,553.3639</b> | <b>0.6160</b> |     | <b>2,568.7643</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

**3.3 Building Construction - 2021****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       | 0.5191        | 18.6942        | 3.8053         | 0.0539        | 1.1983        | 0.0294        | 1.2278        | 0.3450         | 0.0281        | 0.3731        |          | 5,650.506<br>2          | 5,650.506<br>2          | 0.2265        |     | 5,656.168<br>3          |
| Worker       | 2.8254        | 1.7446         | 25.1134        | 0.0559        | 5.1589        | 0.0426        | 5.2015        | 1.3684         | 0.0392        | 1.4076        |          | 5,556.177<br>6          | 5,556.177<br>6          | 0.1939        |     | 5,561.026<br>2          |
| <b>Total</b> | <b>3.3445</b> | <b>20.4387</b> | <b>28.9186</b> | <b>0.1098</b> | <b>6.3572</b> | <b>0.0720</b> | <b>6.4292</b> | <b>1.7133</b>  | <b>0.0674</b> | <b>1.7807</b> |          | <b>11,206.68<br/>38</b> | <b>11,206.68<br/>38</b> | <b>0.4204</b> |     | <b>11,217.19<br/>45</b> |

**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     | 1.9009        | 17.4321        | 16.5752        | 0.0269        |               | 0.9586        | 0.9586        |                | 0.9013        | 0.9013        | 0.0000        | 2,553.363<br>9         | 2,553.363<br>9         | 0.6160        |     | 2,568.764<br>3         |
| <b>Total</b> | <b>1.9009</b> | <b>17.4321</b> | <b>16.5752</b> | <b>0.0269</b> |               | <b>0.9586</b> | <b>0.9586</b> |                | <b>0.9013</b> | <b>0.9013</b> | <b>0.0000</b> | <b>2,553.363<br/>9</b> | <b>2,553.363<br/>9</b> | <b>0.6160</b> |     | <b>2,568.764<br/>3</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

**3.3 Building Construction - 2021****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       | 0.5191        | 18.6942        | 3.8053         | 0.0539        | 1.1983        | 0.0294        | 1.2278        | 0.3450         | 0.0281        | 0.3731        |          | 5,650.506<br>2          | 5,650.506<br>2          | 0.2265        |     | 5,656.168<br>3          |
| Worker       | 2.8254        | 1.7446         | 25.1134        | 0.0559        | 5.1589        | 0.0426        | 5.2015        | 1.3684         | 0.0392        | 1.4076        |          | 5,556.177<br>6          | 5,556.177<br>6          | 0.1939        |     | 5,561.026<br>2          |
| <b>Total</b> | <b>3.3445</b> | <b>20.4387</b> | <b>28.9186</b> | <b>0.1098</b> | <b>6.3572</b> | <b>0.0720</b> | <b>6.4292</b> | <b>1.7133</b>  | <b>0.0674</b> | <b>1.7807</b> |          | <b>11,206.68<br/>38</b> | <b>11,206.68<br/>38</b> | <b>0.4204</b> |     | <b>11,217.19<br/>45</b> |

**3.3 Building Construction - 2022****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     | 1.7062        | 15.6156        | 16.3634        | 0.0269        |               | 0.8090        | 0.8090        |                | 0.7612        | 0.7612        |          | 2,554.333<br>6         | 2,554.333<br>6         | 0.6120        |     | 2,569.632<br>2         |
| <b>Total</b> | <b>1.7062</b> | <b>15.6156</b> | <b>16.3634</b> | <b>0.0269</b> |               | <b>0.8090</b> | <b>0.8090</b> |                | <b>0.7612</b> | <b>0.7612</b> |          | <b>2,554.333<br/>6</b> | <b>2,554.333<br/>6</b> | <b>0.6120</b> |     | <b>2,569.632<br/>2</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

**3.3 Building Construction - 2022****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       | 0.4860        | 17.7259        | 3.5539         | 0.0535        | 1.1984        | 0.0247        | 1.2231        | 0.3450         | 0.0236        | 0.3686        |          | 5,610.4687         | 5,610.4687         | 0.2176        |     | 5,615.9074         |
| Worker       | 2.6480        | 1.5825         | 23.2048        | 0.0539        | 5.1589        | 0.0413        | 5.2002        | 1.3684         | 0.0380        | 1.4064        |          | 5,363.9094         | 5,363.9094         | 0.1762        |     | 5,368.3137         |
| <b>Total</b> | <b>3.1340</b> | <b>19.3084</b> | <b>26.7587</b> | <b>0.1075</b> | <b>6.3572</b> | <b>0.0660</b> | <b>6.4232</b> | <b>1.7134</b>  | <b>0.0617</b> | <b>1.7750</b> |          | <b>10,974.3780</b> | <b>10,974.3780</b> | <b>0.3937</b> |     | <b>10,984.2211</b> |

**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     | 1.7062        | 15.6156        | 16.3634        | 0.0269        |               | 0.8090        | 0.8090        |                | 0.7612        | 0.7612        | 0.0000        | 2,554.3336        | 2,554.3336        | 0.6120        |     | 2,569.6322        |
| <b>Total</b> | <b>1.7062</b> | <b>15.6156</b> | <b>16.3634</b> | <b>0.0269</b> |               | <b>0.8090</b> | <b>0.8090</b> |                | <b>0.7612</b> | <b>0.7612</b> | <b>0.0000</b> | <b>2,554.3336</b> | <b>2,554.3336</b> | <b>0.6120</b> |     | <b>2,569.6322</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

**3.3 Building Construction - 2022****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       | 0.4860        | 17.7259        | 3.5539         | 0.0535        | 1.1984        | 0.0247        | 1.2231        | 0.3450         | 0.0236        | 0.3686        |          | 5,610.4687         | 5,610.4687         | 0.2176        |     | 5,615.9074         |
| Worker       | 2.6480        | 1.5825         | 23.2048        | 0.0539        | 5.1589        | 0.0413        | 5.2002        | 1.3684         | 0.0380        | 1.4064        |          | 5,363.9094         | 5,363.9094         | 0.1762        |     | 5,368.3137         |
| <b>Total</b> | <b>3.1340</b> | <b>19.3084</b> | <b>26.7587</b> | <b>0.1075</b> | <b>6.3572</b> | <b>0.0660</b> | <b>6.4232</b> | <b>1.7134</b>  | <b>0.0617</b> | <b>1.7750</b> |          | <b>10,974.3780</b> | <b>10,974.3780</b> | <b>0.3937</b> |     | <b>10,984.2211</b> |

**3.4 Paving - 2022****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     | 1.1028        | 11.1249        | 14.5805        | 0.0228        |               | 0.5679        | 0.5679        |                | 0.5225        | 0.5225        |          | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.7223        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.8251</b> | <b>11.1249</b> | <b>14.5805</b> | <b>0.0228</b> |               | <b>0.5679</b> | <b>0.5679</b> |                | <b>0.5225</b> | <b>0.5225</b> |          | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

**3.4 Paving - 2022****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       | 0.0633        | 0.0378        | 0.5543        | 1.2900e-003        | 0.1232        | 9.9000e-004        | 0.1242        | 0.0327         | 9.1000e-004        | 0.0336        |          | 128.1189        | 128.1189        | 4.2100e-003        |     | 128.2241        |
| <b>Total</b> | <b>0.0633</b> | <b>0.0378</b> | <b>0.5543</b> | <b>1.2900e-003</b> | <b>0.1232</b> | <b>9.9000e-004</b> | <b>0.1242</b> | <b>0.0327</b>  | <b>9.1000e-004</b> | <b>0.0336</b> |          | <b>128.1189</b> | <b>128.1189</b> | <b>4.2100e-003</b> |     | <b>128.2241</b> |

**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     | 1.1028        | 11.1249        | 14.5805        | 0.0228        |               | 0.5679        | 0.5679        |                | 0.5225        | 0.5225        | 0.0000        | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.7223        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.8251</b> | <b>11.1249</b> | <b>14.5805</b> | <b>0.0228</b> |               | <b>0.5679</b> | <b>0.5679</b> |                | <b>0.5225</b> | <b>0.5225</b> | <b>0.0000</b> | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

**3.4 Paving - 2022****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       | 0.0633        | 0.0378        | 0.5543        | 1.2900e-003        | 0.1232        | 9.9000e-004        | 0.1242        | 0.0327         | 9.1000e-004        | 0.0336        |          | 128.1189        | 128.1189        | 4.2100e-003        |     | 128.2241        |
| <b>Total</b> | <b>0.0633</b> | <b>0.0378</b> | <b>0.5543</b> | <b>1.2900e-003</b> | <b>0.1232</b> | <b>9.9000e-004</b> | <b>0.1242</b> | <b>0.0327</b>  | <b>9.1000e-004</b> | <b>0.0336</b> |          | <b>128.1189</b> | <b>128.1189</b> | <b>4.2100e-003</b> |     | <b>128.2241</b> |

**3.5 Architectural Coating - 2022****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 | 114.6884        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.2045          | 1.4085        | 1.8136        | 2.9700e-003        |               | 0.0817        | 0.0817        |                | 0.0817        | 0.0817        |          | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>114.8930</b> | <b>1.4085</b> | <b>1.8136</b> | <b>2.9700e-003</b> |               | <b>0.0817</b> | <b>0.0817</b> |                | <b>0.0817</b> | <b>0.0817</b> |          | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

**3.5 Architectural Coating - 2022****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       | 0.5313        | 0.3175        | 4.6557        | 0.0108        | 1.0351        | 8.2800e-003        | 1.0433        | 0.2746         | 7.6300e-003        | 0.2822        |          | 1,076.1984        | 1,076.1984        | 0.0354        |     | 1,077.0821        |
| <b>Total</b> | <b>0.5313</b> | <b>0.3175</b> | <b>4.6557</b> | <b>0.0108</b> | <b>1.0351</b> | <b>8.2800e-003</b> | <b>1.0433</b> | <b>0.2746</b>  | <b>7.6300e-003</b> | <b>0.2822</b> |          | <b>1,076.1984</b> | <b>1,076.1984</b> | <b>0.0354</b> |     | <b>1,077.0821</b> |

**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 | 114.6884        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.2045          | 1.4085        | 1.8136        | 2.9700e-003        |               | 0.0817        | 0.0817        |                | 0.0817        | 0.0817        | 0.0000        | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>114.8930</b> | <b>1.4085</b> | <b>1.8136</b> | <b>2.9700e-003</b> |               | <b>0.0817</b> | <b>0.0817</b> |                | <b>0.0817</b> | <b>0.0817</b> | <b>0.0000</b> | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

**3.5 Architectural Coating - 2022****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       | 0.5313        | 0.3175        | 4.6557        | 0.0108        | 1.0351        | 8.2800e-003        | 1.0433        | 0.2746         | 7.6300e-003        | 0.2822        |          | 1,076.1984        | 1,076.1984        | 0.0354        |     | 1,077.0821        |
| <b>Total</b> | <b>0.5313</b> | <b>0.3175</b> | <b>4.6557</b> | <b>0.0108</b> | <b>1.0351</b> | <b>8.2800e-003</b> | <b>1.0433</b> | <b>0.2746</b>  | <b>7.6300e-003</b> | <b>0.2822</b> |          | <b>1,076.1984</b> | <b>1,076.1984</b> | <b>0.0354</b> |     | <b>1,077.0821</b> |

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

|             | ROG     | NOx     | CO       | SO2    | Fugitive 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   | 13.0243 | 52.0144 | 114.6116 | 0.3559 | 25.2592       | 0.2557       | 25.5149    | 6.7617         | 0.2385        | 7.0002      |          | 36,055.24<br>13 | 36,055.24<br>13 | 1.5957 |     | 36,095.13<br>45 |
| Unmitigated | 13.0243 | 52.0144 | 114.6116 | 0.3559 | 25.2592       | 0.2557       | 25.5149    | 6.7617         | 0.2385        | 7.0002      |          | 36,055.24<br>13 | 36,055.24<br>13 | 1.5957 |     | 36,095.13<br>45 |

## 4.2 Trip Summary Information

| Land Use                            | Average Daily Trip Rate |          |          | Unmitigated | Mitigated  |
|-------------------------------------|-------------------------|----------|----------|-------------|------------|
|                                     | Weekday                 | Saturday | Sunday   | Annual VMT  | Annual VMT |
| Apartments Low Rise                 | 2,583.28                | 2,583.28 | 2583.28  | 7,336,825   | 7,336,825  |
| City Park                           | 0.00                    | 0.00     | 0.00     |             |            |
| High Turnover (Sit Down Restaurant) | 3,904.05                | 3,904.05 | 3904.05  | 4,529,731   | 4,529,731  |
| Other Asphalt Surfaces              | 0.00                    | 0.00     | 0.00     |             |            |
| Parking Lot                         | 0.00                    | 0.00     | 0.00     |             |            |
| Total                               | 6,487.33                | 6,487.33 | 6,487.33 | 11,866,556  | 11,866,556 |

## 4.3 Trip Type Information

| Land Use                 | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|--------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                          | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Low Rise      | 10.80      | 7.30       | 7.50        | 40.20      | 19.20      | 40.60       | 86             | 11       | 3       |
| City Park                | 9.50       | 7.30       | 7.30        | 33.00      | 48.00      | 19.00       | 66             | 28       | 6       |
| High Turnover (Sit Down) | 9.50       | 7.30       | 7.30        | 8.50       | 72.50      | 19.00       | 37             | 20       | 43      |
| Other Asphalt Surfaces   | 9.50       | 7.30       | 7.30        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |
| Parking Lot              | 9.50       | 7.30       | 7.30        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

**4.4 Fleet Mix**

| Land Use                            | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|-------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Apartments Low Rise                 | 0.621119 | 0.036839 | 0.149412 | 0.101634 | 0.016073 | 0.004933 | 0.018414 | 0.037394 | 0.002239 | 0.001889 | 0.007289 | 0.001543 | 0.001221 |
| City Park                           | 0.621119 | 0.036839 | 0.149412 | 0.101634 | 0.016073 | 0.004933 | 0.018414 | 0.037394 | 0.002239 | 0.001889 | 0.007289 | 0.001543 | 0.001221 |
| High Turnover (Sit Down Restaurant) | 0.621119 | 0.036839 | 0.149412 | 0.101634 | 0.016073 | 0.004933 | 0.018414 | 0.037394 | 0.002239 | 0.001889 | 0.007289 | 0.001543 | 0.001221 |
| Other Asphalt Surfaces              | 0.621119 | 0.036839 | 0.149412 | 0.101634 | 0.016073 | 0.004933 | 0.018414 | 0.037394 | 0.002239 | 0.001889 | 0.007289 | 0.001543 | 0.001221 |
| Parking Lot                         | 0.621119 | 0.036839 | 0.149412 | 0.101634 | 0.016073 | 0.004933 | 0.018414 | 0.037394 | 0.002239 | 0.001889 | 0.007289 | 0.001543 | 0.001221 |

**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   | 0.2762 | 2.4075 | 1.3520 | 0.0151 |               | 0.1908       | 0.1908     |                | 0.1908        | 0.1908      |          | 3,012.8541 | 3,012.8541 | 0.0578 | 0.0552 | 3,030.7580 |
| NaturalGas Unmitigated | 0.2762 | 2.4075 | 1.3520 | 0.0151 |               | 0.1908       | 0.1908     |                | 0.1908        | 0.1908      |          | 3,012.8541 | 3,012.8541 | 0.0578 | 0.0552 | 3,030.7580 |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

**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 Low Rise                 | 17548.5        | 0.1893        | 1.6172        | 0.6882        | 0.0103        |               | 0.1308        | 0.1308        |                | 0.1308        | 0.1308        |          | 2,064.5253        | 2,064.5253        | 0.0396        | 0.0379        | 2,076.7938        |
| City Park                           | 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            |
| High Turnover (Sit Down Restaurant) | 8060.79        | 0.0869        | 0.7903        | 0.6638        | 4.7400e-003   |               | 0.0601        | 0.0601        |                | 0.0601        | 0.0601        |          | 948.3288          | 948.3288          | 0.0182        | 0.0174        | 953.9642          |
| Other Asphalt Surfaces              | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Parking Lot                         | 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            |
| <b>Total</b>                        |                | <b>0.2762</b> | <b>2.4075</b> | <b>1.3520</b> | <b>0.0151</b> |               | <b>0.1908</b> | <b>0.1908</b> |                | <b>0.1908</b> | <b>0.1908</b> |          | <b>3,012.8541</b> | <b>3,012.8541</b> | <b>0.0578</b> | <b>0.0552</b> | <b>3,030.7580</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

**5.2 Energy by Land Use - NaturalGas****Mitigated**

|                                     | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|-------------------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Land Use                            | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |               |                   |
| Apartments Low Rise                 | 17.5485        | 0.1893        | 1.6172        | 0.6882        | 0.0103        |               | 0.1308        | 0.1308        |                | 0.1308        | 0.1308        |          | 2,064.5253        | 2,064.5253        | 0.0396        | 0.0379        | 2,076.7938        |
| City Park                           | 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            |
| High Turnover (Sit Down Restaurant) | 8.06079        | 0.0869        | 0.7903        | 0.6638        | 4.7400e-003   |               | 0.0601        | 0.0601        |                | 0.0601        | 0.0601        |          | 948.3288          | 948.3288          | 0.0182        | 0.0174        | 953.9642          |
| Other Asphalt Surfaces              | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Parking Lot                         | 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            |
| <b>Total</b>                        |                | <b>0.2762</b> | <b>2.4075</b> | <b>1.3520</b> | <b>0.0151</b> |               | <b>0.1908</b> | <b>0.1908</b> |                | <b>0.1908</b> | <b>0.1908</b> |          | <b>3,012.8541</b> | <b>3,012.8541</b> | <b>0.0578</b> | <b>0.0552</b> | <b>3,030.7580</b> |

**6.0 Area Detail****6.1 Mitigation Measures Area**

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

|             | ROG     | NOx    | CO      | SO2         | Fugitive 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   | 10.8089 | 0.3734 | 32.3780 | 1.7100e-003 |               | 0.1789       | 0.1789     |                | 0.1789        | 0.1789      | 0.0000   | 58.2383   | 58.2383   | 0.0562 | 0.0000 | 59.6432 |
| Unmitigated | 10.8089 | 0.3734 | 32.3780 | 1.7100e-003 |               | 0.1789       | 0.1789     |                | 0.1789        | 0.1789      | 0.0000   | 58.2383   | 58.2383   | 0.0562 | 0.0000 | 59.6432 |

## 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 | 1.0296         |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                | 0.0000         |               |               | 0.0000         |
| Consumer Products     | 8.8012         |               |                |                    |               | 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           | 0.9781         | 0.3734        | 32.3780        | 1.7100e-003        |               | 0.1789        | 0.1789        |                | 0.1789        | 0.1789        |               | 58.2383        | 58.2383        | 0.0562        |               | 59.6432        |
| <b>Total</b>          | <b>10.8089</b> | <b>0.3734</b> | <b>32.3780</b> | <b>1.7100e-003</b> |               | <b>0.1789</b> | <b>0.1789</b> |                | <b>0.1789</b> | <b>0.1789</b> | <b>0.0000</b> | <b>58.2383</b> | <b>58.2383</b> | <b>0.0562</b> | <b>0.0000</b> | <b>59.6432</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

**6.2 Area by SubCategory****Mitigated**

|                       | ROG            | NOx           | CO             | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|-----------------------|----------------|---------------|----------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| SubCategory           | lb/day         |               |                |                    |               |               |               |                |               |               | lb/day        |                |                |               |               |                |
| Architectural Coating | 1.0296         |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                | 0.0000         |               |               | 0.0000         |
| Consumer Products     | 8.8012         |               |                |                    |               | 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           | 0.9781         | 0.3734        | 32.3780        | 1.7100e-003        |               | 0.1789        | 0.1789        |                | 0.1789        | 0.1789        |               | 58.2383        | 58.2383        | 0.0562        |               | 59.6432        |
| <b>Total</b>          | <b>10.8089</b> | <b>0.3734</b> | <b>32.3780</b> | <b>1.7100e-003</b> |               | <b>0.1789</b> | <b>0.1789</b> |                | <b>0.1789</b> | <b>0.1789</b> | <b>0.0000</b> | <b>58.2383</b> | <b>58.2383</b> | <b>0.0562</b> | <b>0.0000</b> | <b>59.6432</b> |

**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**

## Lancaster Promenade Project - Antelope Valley APCD Air District, Summer

**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**

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## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

## Lancaster Promenade Project

### Antelope Valley APCD Air District, Winter

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses                           | Size   | Metric        | Lot Acreage | Floor Surface Area | Population |
|-------------------------------------|--------|---------------|-------------|--------------------|------------|
| Other Asphalt Surfaces              | 4.45   | Acre          | 4.45        | 193,842.00         | 0          |
| Parking Lot                         | 3.82   | Acre          | 3.82        | 166,399.20         | 0          |
| City Park                           | 5.33   | Acre          | 5.33        | 232,174.80         | 0          |
| High Turnover (Sit Down Restaurant) | 12.75  | 1000sqft      | 0.29        | 12,750.00          | 0          |
| Apartments Low Rise                 | 392.00 | Dwelling Unit | 10.67       | 392,000.00         | 1121       |

### 1.2 Other Project Characteristics

|                         |                            |                         |       |                           |       |
|-------------------------|----------------------------|-------------------------|-------|---------------------------|-------|
| Urbanization            | Urban                      | Wind Speed (m/s)        | 2.2   | Precipitation Freq (Days) | 33    |
| Climate Zone            | 9                          |                         |       | Operational Year          | 2022  |
| Utility Company         | Southern California Edison |                         |       |                           |       |
| CO2 Intensity (lb/MWhr) | 533                        | CH4 Intensity (lb/MWhr) | 0.029 | N2O Intensity (lb/MWhr)   | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

Project Characteristics - .....

Land Use - Project Description and site plan

Construction Phase - .Schedule modified to be completed within 18 months

Trips and VMT - Grading soil import of 49,877 cu yards

Grading - 49877 CY of soil import from client information

Architectural Coating - VOC content for coating changed to reflect the use of very low VOC coatings for residential (10 g/l) and non-residential uses at 50 g/l. VOC for parking lot paint set at 50 g/l

Vehicle Trips - Trip generation rates extracted from project Traffic Impact Analysis  
David Evans and Associates December 2020

Woodstoves - Assumed no fireplaces or wood stoves

Area Coating - All coating assumed to have a VOC content of 50 g/l for interior and 100 g/l for exterior as per Rule 1113

Construction Off-road Equipment Mitigation -

| Table Name              | Column Name                     | Default Value | New Value |
|-------------------------|---------------------------------|---------------|-----------|
| tblArchitecturalCoating | EF_Parking                      | 250.00        | 50.00     |
| tblArchitecturalCoating | EF_Residential_Exterior         | 250.00        | 100.00    |
| tblArchitecturalCoating | EF_Residential_Interior         | 250.00        | 50.00     |
| tblAreaCoating          | Area_EF_Residential_Exterior    | 250           | 100       |
| tblAreaCoating          | Area_EF_Residential_Interior    | 250           | 50        |
| tblConstDustMitigation  | WaterUnpavedRoadMoistureContent | 0             | 12        |
| tblConstDustMitigation  | WaterUnpavedRoadVehicleSpeed    | 0             | 15        |
| tblConstructionPhase    | NumDays                         | 35.00         | 30.00     |
| tblConstructionPhase    | NumDays                         | 440.00        | 255.00    |
| tblConstructionPhase    | NumDays                         | 45.00         | 30.00     |
| tblConstructionPhase    | NumDays                         | 35.00         | 30.00     |
| tblFireplaces           | FireplaceDayYear                | 82.00         | 0.00      |
| tblFireplaces           | FireplaceHourDay                | 3.00          | 0.00      |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

|                           |                    |          |           |
|---------------------------|--------------------|----------|-----------|
| tblFireplaces             | FireplaceWoodMass  | 3,078.40 | 0.00      |
| tblFireplaces             | NumberGas          | 215.60   | 0.00      |
| tblFireplaces             | NumberNoFireplace  | 39.20    | 0.00      |
| tblFireplaces             | NumberWood         | 137.20   | 0.00      |
| tblGrading                | AcresOfGrading     | 75.00    | 112.50    |
| tblGrading                | MaterialImported   | 0.00     | 49,877.00 |
| tblLandUse                | LotAcreage         | 24.50    | 10.67     |
| tblProjectCharacteristics | CO2IntensityFactor | 702.44   | 533       |
| tblVehicleTrips           | ST_TR              | 7.16     | 6.59      |
| tblVehicleTrips           | ST_TR              | 22.75    | 0.00      |
| tblVehicleTrips           | ST_TR              | 158.37   | 306.20    |
| tblVehicleTrips           | SU_TR              | 6.07     | 6.59      |
| tblVehicleTrips           | SU_TR              | 16.74    | 0.00      |
| tblVehicleTrips           | SU_TR              | 131.84   | 306.20    |
| tblVehicleTrips           | WD_TR              | 1.89     | 0.00      |
| tblVehicleTrips           | WD_TR              | 127.15   | 306.20    |
| tblWoodstoves             | NumberCatalytic    | 19.60    | 0.00      |
| tblWoodstoves             | NumberNoncatalytic | 19.60    | 0.00      |
| tblWoodstoves             | WoodstoveDayYear   | 82.00    | 0.00      |
| tblWoodstoves             | WoodstoveWoodMass  | 3,019.20 | 0.00      |

## 2.0 Emissions Summary

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## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

**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   |                 |                 |        |        |                 |
| 2021    | 5.8822   | 96.9402 | 43.2476 | 0.2331 | 13.9836       | 2.1125       | 16.0961    | 4.8072         | 1.9481        | 6.7553      | 0.0000   | 23,982.78<br>58 | 23,982.78<br>58 | 2.6162 | 0.0000 | 24,048.19<br>06 |
| 2022    | 115.3870 | 34.8229 | 39.0928 | 0.1258 | 6.3572        | 0.8757       | 7.2329     | 1.7134         | 0.8235        | 2.5368      | 0.0000   | 12,666.80<br>32 | 12,666.80<br>32 | 1.0057 | 0.0000 | 12,691.94<br>54 |
| Maximum | 115.3870 | 96.9402 | 43.2476 | 0.2331 | 13.9836       | 2.1125       | 16.0961    | 4.8072         | 1.9481        | 6.7553      | 0.0000   | 23,982.78<br>58 | 23,982.78<br>58 | 2.6162 | 0.0000 | 24,048.19<br>06 |

**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   |                 |                 |        |        |                 |
| 2021    | 5.8822   | 96.9402 | 43.2476 | 0.2331 | 8.3808        | 2.1125       | 10.4932    | 2.7348         | 1.9481        | 4.6829      | 0.0000   | 23,982.78<br>58 | 23,982.78<br>58 | 2.6162 | 0.0000 | 24,048.19<br>06 |
| 2022    | 115.3870 | 34.8229 | 39.0928 | 0.1258 | 6.3572        | 0.8757       | 7.2329     | 1.7134         | 0.8235        | 2.5368      | 0.0000   | 12,666.80<br>32 | 12,666.80<br>32 | 1.0057 | 0.0000 | 12,691.94<br>54 |
| Maximum | 115.3870 | 96.9402 | 43.2476 | 0.2331 | 8.3808        | 2.1125       | 10.4932    | 2.7348         | 1.9481        | 4.6829      | 0.0000   | 23,982.78<br>58 | 23,982.78<br>58 | 2.6162 | 0.0000 | 24,048.19<br>06 |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 27.54         | 0.00         | 24.02      | 31.78          | 0.00          | 22.30       | 0.00     | 0.00      | 0.00      | 0.00 | 0.00 | 0.00 |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

**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         | 10.8089        | 0.3734         | 32.3780         | 1.7100e-003   |                | 0.1789        | 0.1789         |                | 0.1789        | 0.1789        | 0.0000        | 58.2383            | 58.2383            | 0.0562        | 0.0000        | 59.6432            |
| Energy       | 0.2762         | 2.4075         | 1.3520          | 0.0151        |                | 0.1908        | 0.1908         |                | 0.1908        | 0.1908        |               | 3,012.8541         | 3,012.8541         | 0.0578        | 0.0552        | 3,030.7580         |
| Mobile       | 10.4600        | 51.8654        | 101.2629        | 0.3219        | 25.2592        | 0.2576        | 25.5168        | 6.7617         | 0.2403        | 7.0020        |               | 32,637.4765        | 32,637.4765        | 1.5922        |               | 32,677.2808        |
| <b>Total</b> | <b>21.5451</b> | <b>54.6463</b> | <b>134.9930</b> | <b>0.3386</b> | <b>25.2592</b> | <b>0.6273</b> | <b>25.8865</b> | <b>6.7617</b>  | <b>0.6100</b> | <b>7.3717</b> | <b>0.0000</b> | <b>35,708.5689</b> | <b>35,708.5689</b> | <b>1.7061</b> | <b>0.0552</b> | <b>35,767.6819</b> |

**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         | 10.8089        | 0.3734         | 32.3780         | 1.7100e-003   |                | 0.1789        | 0.1789         |                | 0.1789        | 0.1789        | 0.0000        | 58.2383            | 58.2383            | 0.0562        | 0.0000        | 59.6432            |
| Energy       | 0.2762         | 2.4075         | 1.3520          | 0.0151        |                | 0.1908        | 0.1908         |                | 0.1908        | 0.1908        |               | 3,012.8541         | 3,012.8541         | 0.0578        | 0.0552        | 3,030.7580         |
| Mobile       | 10.4600        | 51.8654        | 101.2629        | 0.3219        | 25.2592        | 0.2576        | 25.5168        | 6.7617         | 0.2403        | 7.0020        |               | 32,637.4765        | 32,637.4765        | 1.5922        |               | 32,677.2808        |
| <b>Total</b> | <b>21.5451</b> | <b>54.6463</b> | <b>134.9930</b> | <b>0.3386</b> | <b>25.2592</b> | <b>0.6273</b> | <b>25.8865</b> | <b>6.7617</b>  | <b>0.6100</b> | <b>7.3717</b> | <b>0.0000</b> | <b>35,708.5689</b> | <b>35,708.5689</b> | <b>1.7061</b> | <b>0.0552</b> | <b>35,767.6819</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | 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            | Grading               | Grading               | 8/2/2021   | 9/10/2021  | 5             | 30       |                   |
| 2            | Building Construction | Building Construction | 9/11/2021  | 9/2/2022   | 5             | 255      |                   |
| 3            | Paving                | Paving                | 9/3/2022   | 10/14/2022 | 5             | 30       |                   |
| 4            | Architectural Coating | Architectural Coating | 10/15/2022 | 11/25/2022 | 5             | 30       |                   |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 8.27

Residential Indoor: 793,800; Residential Outdoor: 264,600; Non-Residential Indoor: 19,110; Non-Residential Outdoor: 6,370; Striped Parking Area: 34,240 (Architectural Coating – sqft)

#### OffRoad Equipment

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Grading               | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Grading               | Graders                   | 1      | 8.00        | 187         | 0.41        |
| Grading               | Rubber Tired Dozers       | 1      | 8.00        | 247         | 0.40        |
| Grading               | Scrapers                  | 2      | 8.00        | 367         | 0.48        |
| Grading               | Tractors/Loaders/Backhoes | 2      | 8.00        | 97          | 0.37        |
| Building Construction | Cranes                    | 1      | 7.00        | 231         | 0.29        |
| Building Construction | Forklifts                 | 3      | 8.00        | 89          | 0.20        |
| Building Construction | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Building Construction | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Building Construction | Welders                   | 1      | 8.00        | 46          | 0.45        |
| Paving                | Pavers                    | 2      | 8.00        | 130         | 0.42        |
| Paving                | Paving Equipment          | 2      | 8.00        | 132         | 0.36        |
| Paving                | Rollers                   | 2      | 8.00        | 80          | 0.38        |
| Architectural Coating | Air Compressors           | 1      | 6.00        | 78          | 0.48        |

Trips and VMT

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Grading               | 8                       | 20.00              | 0.00               | 6,235.00            | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 9                       | 628.00             | 177.00             | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 1                       | 126.00             | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

**3.2 Grading - 2021****Unmitigated Construction On-Site**

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|---------------|---------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category      | lb/day        |                |                |               |                |               |                |                |               |               | lb/day   |                        |                        |               |     |                        |
| Fugitive Dust |               |                |                |               | 10.1870        | 0.0000        | 10.1870        | 3.7681         | 0.0000        | 3.7681        |          |                        | 0.0000                 |               |     | 0.0000                 |
| Off-Road      | 4.1912        | 46.3998        | 30.8785        | 0.0620        |                | 1.9853        | 1.9853         |                | 1.8265        | 1.8265        |          | 6,007.043<br>4         | 6,007.043<br>4         | 1.9428        |     | 6,055.613<br>4         |
| <b>Total</b>  | <b>4.1912</b> | <b>46.3998</b> | <b>30.8785</b> | <b>0.0620</b> | <b>10.1870</b> | <b>1.9853</b> | <b>12.1723</b> | <b>3.7681</b>  | <b>1.8265</b> | <b>5.5946</b> |          | <b>6,007.043<br/>4</b> | <b>6,007.043<br/>4</b> | <b>1.9428</b> |     | <b>6,055.613<br/>4</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

**3.2 Grading - 2021****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      | 1.6074        | 50.4816        | 11.7266        | 0.1695        | 3.6323        | 0.1258        | 3.7581        | 0.9955         | 0.1203        | 1.1159        |          | 17,819.67<br>33         | 17,819.67<br>33         | 0.6681        |     | 17,836.37<br>46         |
| 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       | 0.0836        | 0.0588         | 0.6425         | 1.5700e-003   | 0.1643        | 1.3600e-003   | 0.1657        | 0.0436         | 1.2500e-003   | 0.0448        |          | 156.0691                | 156.0691                | 5.3400e-003   |     | 156.2025                |
| <b>Total</b> | <b>1.6910</b> | <b>50.5404</b> | <b>12.3691</b> | <b>0.1711</b> | <b>3.7966</b> | <b>0.1271</b> | <b>3.9238</b> | <b>1.0391</b>  | <b>0.1216</b> | <b>1.1607</b> |          | <b>17,975.74<br/>24</b> | <b>17,975.74<br/>24</b> | <b>0.6734</b> |     | <b>17,992.57<br/>72</b> |

**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 |               |                |                |               | 4.5841        | 0.0000        | 4.5841        | 1.6957         | 0.0000        | 1.6957        |               |                        | 0.0000                 |               |     | 0.0000                 |
| Off-Road      | 4.1912        | 46.3998        | 30.8785        | 0.0620        |               | 1.9853        | 1.9853        |                | 1.8265        | 1.8265        | 0.0000        | 6,007.043<br>4         | 6,007.043<br>4         | 1.9428        |     | 6,055.613<br>4         |
| <b>Total</b>  | <b>4.1912</b> | <b>46.3998</b> | <b>30.8785</b> | <b>0.0620</b> | <b>4.5841</b> | <b>1.9853</b> | <b>6.5695</b> | <b>1.6957</b>  | <b>1.8265</b> | <b>3.5222</b> | <b>0.0000</b> | <b>6,007.043<br/>4</b> | <b>6,007.043<br/>4</b> | <b>1.9428</b> |     | <b>6,055.613<br/>4</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

**3.2 Grading - 2021****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      | 1.6074        | 50.4816        | 11.7266        | 0.1695        | 3.6323        | 0.1258        | 3.7581        | 0.9955         | 0.1203        | 1.1159        |          | 17,819.67<br>33         | 17,819.67<br>33         | 0.6681        |     | 17,836.37<br>46         |
| 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       | 0.0836        | 0.0588         | 0.6425         | 1.5700e-003   | 0.1643        | 1.3600e-003   | 0.1657        | 0.0436         | 1.2500e-003   | 0.0448        |          | 156.0691                | 156.0691                | 5.3400e-003   |     | 156.2025                |
| <b>Total</b> | <b>1.6910</b> | <b>50.5404</b> | <b>12.3691</b> | <b>0.1711</b> | <b>3.7966</b> | <b>0.1271</b> | <b>3.9238</b> | <b>1.0391</b>  | <b>0.1216</b> | <b>1.1607</b> |          | <b>17,975.74<br/>24</b> | <b>17,975.74<br/>24</b> | <b>0.6734</b> |     | <b>17,992.57<br/>72</b> |

**3.3 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     | 1.9009        | 17.4321        | 16.5752        | 0.0269        |               | 0.9586        | 0.9586        |                | 0.9013        | 0.9013        |          | 2,553.363<br>9         | 2,553.363<br>9         | 0.6160        |     | 2,568.764<br>3         |
| <b>Total</b> | <b>1.9009</b> | <b>17.4321</b> | <b>16.5752</b> | <b>0.0269</b> |               | <b>0.9586</b> | <b>0.9586</b> |                | <b>0.9013</b> | <b>0.9013</b> |          | <b>2,553.363<br/>9</b> | <b>2,553.363<br/>9</b> | <b>0.6160</b> |     | <b>2,568.764<br/>3</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

**3.3 Building Construction - 2021****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       | 0.5489        | 18.5168        | 4.3965         | 0.0518        | 1.1983        | 0.0302        | 1.2285        | 0.3450         | 0.0289        | 0.3738        |          | 5,422.5727         | 5,422.5727         | 0.2507        |     | 5,428.8395         |
| Worker       | 2.6239        | 1.8451         | 20.1756        | 0.0493        | 5.1589        | 0.0426        | 5.2015        | 1.3684         | 0.0392        | 1.4076        |          | 4,900.5686         | 4,900.5686         | 0.1676        |     | 4,904.7595         |
| <b>Total</b> | <b>3.1728</b> | <b>20.3619</b> | <b>24.5721</b> | <b>0.1010</b> | <b>6.3572</b> | <b>0.0728</b> | <b>6.4300</b> | <b>1.7133</b>  | <b>0.0681</b> | <b>1.7815</b> |          | <b>10,323.1413</b> | <b>10,323.1413</b> | <b>0.4183</b> |     | <b>10,333.5990</b> |

**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     | 1.9009        | 17.4321        | 16.5752        | 0.0269        |               | 0.9586        | 0.9586        |                | 0.9013        | 0.9013        | 0.0000        | 2,553.3639        | 2,553.3639        | 0.6160        |     | 2,568.7643        |
| <b>Total</b> | <b>1.9009</b> | <b>17.4321</b> | <b>16.5752</b> | <b>0.0269</b> |               | <b>0.9586</b> | <b>0.9586</b> |                | <b>0.9013</b> | <b>0.9013</b> | <b>0.0000</b> | <b>2,553.3639</b> | <b>2,553.3639</b> | <b>0.6160</b> |     | <b>2,568.7643</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

**3.3 Building Construction - 2021****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       | 0.5489        | 18.5168        | 4.3965         | 0.0518        | 1.1983        | 0.0302        | 1.2285        | 0.3450         | 0.0289        | 0.3738        |          | 5,422.5727         | 5,422.5727         | 0.2507        |     | 5,428.8395         |
| Worker       | 2.6239        | 1.8451         | 20.1756        | 0.0493        | 5.1589        | 0.0426        | 5.2015        | 1.3684         | 0.0392        | 1.4076        |          | 4,900.5686         | 4,900.5686         | 0.1676        |     | 4,904.7595         |
| <b>Total</b> | <b>3.1728</b> | <b>20.3619</b> | <b>24.5721</b> | <b>0.1010</b> | <b>6.3572</b> | <b>0.0728</b> | <b>6.4300</b> | <b>1.7133</b>  | <b>0.0681</b> | <b>1.7815</b> |          | <b>10,323.1413</b> | <b>10,323.1413</b> | <b>0.4183</b> |     | <b>10,333.5990</b> |

**3.3 Building Construction - 2022****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     | 1.7062        | 15.6156        | 16.3634        | 0.0269        |               | 0.8090        | 0.8090        |                | 0.7612        | 0.7612        |          | 2,554.3336        | 2,554.3336        | 0.6120        |     | 2,569.6322        |
| <b>Total</b> | <b>1.7062</b> | <b>15.6156</b> | <b>16.3634</b> | <b>0.0269</b> |               | <b>0.8090</b> | <b>0.8090</b> |                | <b>0.7612</b> | <b>0.7612</b> |          | <b>2,554.3336</b> | <b>2,554.3336</b> | <b>0.6120</b> |     | <b>2,569.6322</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

**3.3 Building Construction - 2022****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       | 0.5147        | 17.5340        | 4.1200         | 0.0514        | 1.1984        | 0.0254        | 1.2237        | 0.3450         | 0.0243        | 0.3693        |          | 5,381.3404         | 5,381.3404         | 0.2415        |     | 5,387.3767         |
| Worker       | 2.4621        | 1.6732         | 18.6094        | 0.0475        | 5.1589        | 0.0413        | 5.2002        | 1.3684         | 0.0380        | 1.4064        |          | 4,731.1293         | 4,731.1293         | 0.1523        |     | 4,734.9365         |
| <b>Total</b> | <b>2.9768</b> | <b>19.2072</b> | <b>22.7294</b> | <b>0.0989</b> | <b>6.3572</b> | <b>0.0667</b> | <b>6.4239</b> | <b>1.7134</b>  | <b>0.0623</b> | <b>1.7757</b> |          | <b>10,112.4696</b> | <b>10,112.4696</b> | <b>0.3937</b> |     | <b>10,122.3132</b> |

**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     | 1.7062        | 15.6156        | 16.3634        | 0.0269        |               | 0.8090        | 0.8090        |                | 0.7612        | 0.7612        | 0.0000        | 2,554.3336        | 2,554.3336        | 0.6120        |     | 2,569.6322        |
| <b>Total</b> | <b>1.7062</b> | <b>15.6156</b> | <b>16.3634</b> | <b>0.0269</b> |               | <b>0.8090</b> | <b>0.8090</b> |                | <b>0.7612</b> | <b>0.7612</b> | <b>0.0000</b> | <b>2,554.3336</b> | <b>2,554.3336</b> | <b>0.6120</b> |     | <b>2,569.6322</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

**3.3 Building Construction - 2022****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       | 0.5147        | 17.5340        | 4.1200         | 0.0514        | 1.1984        | 0.0254        | 1.2237        | 0.3450         | 0.0243        | 0.3693        |          | 5,381.3404         | 5,381.3404         | 0.2415        |     | 5,387.3767         |
| Worker       | 2.4621        | 1.6732         | 18.6094        | 0.0475        | 5.1589        | 0.0413        | 5.2002        | 1.3684         | 0.0380        | 1.4064        |          | 4,731.1293         | 4,731.1293         | 0.1523        |     | 4,734.9365         |
| <b>Total</b> | <b>2.9768</b> | <b>19.2072</b> | <b>22.7294</b> | <b>0.0989</b> | <b>6.3572</b> | <b>0.0667</b> | <b>6.4239</b> | <b>1.7134</b>  | <b>0.0623</b> | <b>1.7757</b> |          | <b>10,112.4696</b> | <b>10,112.4696</b> | <b>0.3937</b> |     | <b>10,122.3132</b> |

**3.4 Paving - 2022****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     | 1.1028        | 11.1249        | 14.5805        | 0.0228        |               | 0.5679        | 0.5679        |                | 0.5225        | 0.5225        |          | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.7223        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.8251</b> | <b>11.1249</b> | <b>14.5805</b> | <b>0.0228</b> |               | <b>0.5679</b> | <b>0.5679</b> |                | <b>0.5225</b> | <b>0.5225</b> |          | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

**3.4 Paving - 2022****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       | 0.0588        | 0.0400        | 0.4445        | 1.1400e-003        | 0.1232        | 9.9000e-004        | 0.1242        | 0.0327         | 9.1000e-004        | 0.0336        |          | 113.0047        | 113.0047        | 3.6400e-003        |     | 113.0956        |
| <b>Total</b> | <b>0.0588</b> | <b>0.0400</b> | <b>0.4445</b> | <b>1.1400e-003</b> | <b>0.1232</b> | <b>9.9000e-004</b> | <b>0.1242</b> | <b>0.0327</b>  | <b>9.1000e-004</b> | <b>0.0336</b> |          | <b>113.0047</b> | <b>113.0047</b> | <b>3.6400e-003</b> |     | <b>113.0956</b> |

**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     | 1.1028        | 11.1249        | 14.5805        | 0.0228        |               | 0.5679        | 0.5679        |                | 0.5225        | 0.5225        | 0.0000        | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.7223        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.8251</b> | <b>11.1249</b> | <b>14.5805</b> | <b>0.0228</b> |               | <b>0.5679</b> | <b>0.5679</b> |                | <b>0.5225</b> | <b>0.5225</b> | <b>0.0000</b> | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

**3.4 Paving - 2022****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       | 0.0588        | 0.0400        | 0.4445        | 1.1400e-003        | 0.1232        | 9.9000e-004        | 0.1242        | 0.0327         | 9.1000e-004        | 0.0336        |          | 113.0047        | 113.0047        | 3.6400e-003        |     | 113.0956        |
| <b>Total</b> | <b>0.0588</b> | <b>0.0400</b> | <b>0.4445</b> | <b>1.1400e-003</b> | <b>0.1232</b> | <b>9.9000e-004</b> | <b>0.1242</b> | <b>0.0327</b>  | <b>9.1000e-004</b> | <b>0.0336</b> |          | <b>113.0047</b> | <b>113.0047</b> | <b>3.6400e-003</b> |     | <b>113.0956</b> |

**3.5 Architectural Coating - 2022****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 | 114.6884        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.2045          | 1.4085        | 1.8136        | 2.9700e-003        |               | 0.0817        | 0.0817        |                | 0.0817        | 0.0817        |          | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>114.8930</b> | <b>1.4085</b> | <b>1.8136</b> | <b>2.9700e-003</b> |               | <b>0.0817</b> | <b>0.0817</b> |                | <b>0.0817</b> | <b>0.0817</b> |          | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

**3.5 Architectural Coating - 2022****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       | 0.4940        | 0.3357        | 3.7337        | 9.5400e-003        | 1.0351        | 8.2800e-003        | 1.0433        | 0.2746         | 7.6300e-003        | 0.2822        |          | 949.2393        | 949.2393        | 0.0306        |     | 950.0032        |
| <b>Total</b> | <b>0.4940</b> | <b>0.3357</b> | <b>3.7337</b> | <b>9.5400e-003</b> | <b>1.0351</b> | <b>8.2800e-003</b> | <b>1.0433</b> | <b>0.2746</b>  | <b>7.6300e-003</b> | <b>0.2822</b> |          | <b>949.2393</b> | <b>949.2393</b> | <b>0.0306</b> |     | <b>950.0032</b> |

**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 | 114.6884        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.2045          | 1.4085        | 1.8136        | 2.9700e-003        |               | 0.0817        | 0.0817        |                | 0.0817        | 0.0817        | 0.0000        | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>114.8930</b> | <b>1.4085</b> | <b>1.8136</b> | <b>2.9700e-003</b> |               | <b>0.0817</b> | <b>0.0817</b> |                | <b>0.0817</b> | <b>0.0817</b> | <b>0.0000</b> | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

**3.5 Architectural Coating - 2022****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       | 0.4940        | 0.3357        | 3.7337        | 9.5400e-003        | 1.0351        | 8.2800e-003        | 1.0433        | 0.2746         | 7.6300e-003        | 0.2822        |          | 949.2393        | 949.2393        | 0.0306        |     | 950.0032        |
| <b>Total</b> | <b>0.4940</b> | <b>0.3357</b> | <b>3.7337</b> | <b>9.5400e-003</b> | <b>1.0351</b> | <b>8.2800e-003</b> | <b>1.0433</b> | <b>0.2746</b>  | <b>7.6300e-003</b> | <b>0.2822</b> |          | <b>949.2393</b> | <b>949.2393</b> | <b>0.0306</b> |     | <b>950.0032</b> |

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

|             | ROG     | NOx     | CO       | SO2    | Fugitive 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   | 10.4600 | 51.8654 | 101.2629 | 0.3219 | 25.2592       | 0.2576       | 25.5168    | 6.7617         | 0.2403        | 7.0020      |          | 32,637.47<br>65 | 32,637.47<br>65 | 1.5922 |     | 32,677.28<br>08 |
| Unmitigated | 10.4600 | 51.8654 | 101.2629 | 0.3219 | 25.2592       | 0.2576       | 25.5168    | 6.7617         | 0.2403        | 7.0020      |          | 32,637.47<br>65 | 32,637.47<br>65 | 1.5922 |     | 32,677.28<br>08 |

## 4.2 Trip Summary Information

| Land Use                            | Average Daily Trip Rate |          |          | Unmitigated | Mitigated  |
|-------------------------------------|-------------------------|----------|----------|-------------|------------|
|                                     | Weekday                 | Saturday | Sunday   | Annual VMT  | Annual VMT |
| Apartments Low Rise                 | 2,583.28                | 2,583.28 | 2583.28  | 7,336,825   | 7,336,825  |
| City Park                           | 0.00                    | 0.00     | 0.00     |             |            |
| High Turnover (Sit Down Restaurant) | 3,904.05                | 3,904.05 | 3904.05  | 4,529,731   | 4,529,731  |
| Other Asphalt Surfaces              | 0.00                    | 0.00     | 0.00     |             |            |
| Parking Lot                         | 0.00                    | 0.00     | 0.00     |             |            |
| Total                               | 6,487.33                | 6,487.33 | 6,487.33 | 11,866,556  | 11,866,556 |

## 4.3 Trip Type Information

| Land Use                 | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|--------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                          | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Low Rise      | 10.80      | 7.30       | 7.50        | 40.20      | 19.20      | 40.60       | 86             | 11       | 3       |
| City Park                | 9.50       | 7.30       | 7.30        | 33.00      | 48.00      | 19.00       | 66             | 28       | 6       |
| High Turnover (Sit Down) | 9.50       | 7.30       | 7.30        | 8.50       | 72.50      | 19.00       | 37             | 20       | 43      |
| Other Asphalt Surfaces   | 9.50       | 7.30       | 7.30        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |
| Parking Lot              | 9.50       | 7.30       | 7.30        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

**4.4 Fleet Mix**

| Land Use                            | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|-------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Apartments Low Rise                 | 0.621119 | 0.036839 | 0.149412 | 0.101634 | 0.016073 | 0.004933 | 0.018414 | 0.037394 | 0.002239 | 0.001889 | 0.007289 | 0.001543 | 0.001221 |
| City Park                           | 0.621119 | 0.036839 | 0.149412 | 0.101634 | 0.016073 | 0.004933 | 0.018414 | 0.037394 | 0.002239 | 0.001889 | 0.007289 | 0.001543 | 0.001221 |
| High Turnover (Sit Down Restaurant) | 0.621119 | 0.036839 | 0.149412 | 0.101634 | 0.016073 | 0.004933 | 0.018414 | 0.037394 | 0.002239 | 0.001889 | 0.007289 | 0.001543 | 0.001221 |
| Other Asphalt Surfaces              | 0.621119 | 0.036839 | 0.149412 | 0.101634 | 0.016073 | 0.004933 | 0.018414 | 0.037394 | 0.002239 | 0.001889 | 0.007289 | 0.001543 | 0.001221 |
| Parking Lot                         | 0.621119 | 0.036839 | 0.149412 | 0.101634 | 0.016073 | 0.004933 | 0.018414 | 0.037394 | 0.002239 | 0.001889 | 0.007289 | 0.001543 | 0.001221 |

**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   | 0.2762 | 2.4075 | 1.3520 | 0.0151 |               | 0.1908       | 0.1908     |                | 0.1908        | 0.1908      |          | 3,012.8541 | 3,012.8541 | 0.0578 | 0.0552 | 3,030.7580 |
| NaturalGas Unmitigated | 0.2762 | 2.4075 | 1.3520 | 0.0151 |               | 0.1908       | 0.1908     |                | 0.1908        | 0.1908      |          | 3,012.8541 | 3,012.8541 | 0.0578 | 0.0552 | 3,030.7580 |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

**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 Low Rise                 | 17548.5        | 0.1893        | 1.6172        | 0.6882        | 0.0103        |               | 0.1308        | 0.1308        |                | 0.1308        | 0.1308        |          | 2,064.5253        | 2,064.5253        | 0.0396        | 0.0379        | 2,076.7938        |
| City Park                           | 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            |
| High Turnover (Sit Down Restaurant) | 8060.79        | 0.0869        | 0.7903        | 0.6638        | 4.7400e-003   |               | 0.0601        | 0.0601        |                | 0.0601        | 0.0601        |          | 948.3288          | 948.3288          | 0.0182        | 0.0174        | 953.9642          |
| Other Asphalt Surfaces              | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Parking Lot                         | 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            |
| <b>Total</b>                        |                | <b>0.2762</b> | <b>2.4075</b> | <b>1.3520</b> | <b>0.0151</b> |               | <b>0.1908</b> | <b>0.1908</b> |                | <b>0.1908</b> | <b>0.1908</b> |          | <b>3,012.8541</b> | <b>3,012.8541</b> | <b>0.0578</b> | <b>0.0552</b> | <b>3,030.7580</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

**5.2 Energy by Land Use - NaturalGas****Mitigated**

|                                     | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|-------------------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Land Use                            | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |               |                   |
| Apartments Low Rise                 | 17.5485        | 0.1893        | 1.6172        | 0.6882        | 0.0103        |               | 0.1308        | 0.1308        |                | 0.1308        | 0.1308        |          | 2,064.5253        | 2,064.5253        | 0.0396        | 0.0379        | 2,076.7938        |
| City Park                           | 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            |
| High Turnover (Sit Down Restaurant) | 8.06079        | 0.0869        | 0.7903        | 0.6638        | 4.7400e-003   |               | 0.0601        | 0.0601        |                | 0.0601        | 0.0601        |          | 948.3288          | 948.3288          | 0.0182        | 0.0174        | 953.9642          |
| Other Asphalt Surfaces              | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Parking Lot                         | 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            |
| <b>Total</b>                        |                | <b>0.2762</b> | <b>2.4075</b> | <b>1.3520</b> | <b>0.0151</b> |               | <b>0.1908</b> | <b>0.1908</b> |                | <b>0.1908</b> | <b>0.1908</b> |          | <b>3,012.8541</b> | <b>3,012.8541</b> | <b>0.0578</b> | <b>0.0552</b> | <b>3,030.7580</b> |

**6.0 Area Detail****6.1 Mitigation Measures Area**

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

|             | ROG     | NOx    | CO      | SO2         | Fugitive 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   | 10.8089 | 0.3734 | 32.3780 | 1.7100e-003 |               | 0.1789       | 0.1789     |                | 0.1789        | 0.1789      | 0.0000   | 58.2383   | 58.2383   | 0.0562 | 0.0000 | 59.6432 |
| Unmitigated | 10.8089 | 0.3734 | 32.3780 | 1.7100e-003 |               | 0.1789       | 0.1789     |                | 0.1789        | 0.1789      | 0.0000   | 58.2383   | 58.2383   | 0.0562 | 0.0000 | 59.6432 |

## 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 | 1.0296         |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                | 0.0000         |               |               | 0.0000         |
| Consumer Products     | 8.8012         |               |                |                    |               | 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           | 0.9781         | 0.3734        | 32.3780        | 1.7100e-003        |               | 0.1789        | 0.1789        |                | 0.1789        | 0.1789        |               | 58.2383        | 58.2383        | 0.0562        |               | 59.6432        |
| <b>Total</b>          | <b>10.8089</b> | <b>0.3734</b> | <b>32.3780</b> | <b>1.7100e-003</b> |               | <b>0.1789</b> | <b>0.1789</b> |                | <b>0.1789</b> | <b>0.1789</b> | <b>0.0000</b> | <b>58.2383</b> | <b>58.2383</b> | <b>0.0562</b> | <b>0.0000</b> | <b>59.6432</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

**6.2 Area by SubCategory****Mitigated**

|                       | ROG            | NOx           | CO             | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|-----------------------|----------------|---------------|----------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| SubCategory           | lb/day         |               |                |                    |               |               |               |                |               |               | lb/day        |                |                |               |               |                |
| Architectural Coating | 1.0296         |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                | 0.0000         |               |               | 0.0000         |
| Consumer Products     | 8.8012         |               |                |                    |               | 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           | 0.9781         | 0.3734        | 32.3780        | 1.7100e-003        |               | 0.1789        | 0.1789        |                | 0.1789        | 0.1789        |               | 58.2383        | 58.2383        | 0.0562        |               | 59.6432        |
| <b>Total</b>          | <b>10.8089</b> | <b>0.3734</b> | <b>32.3780</b> | <b>1.7100e-003</b> |               | <b>0.1789</b> | <b>0.1789</b> |                | <b>0.1789</b> | <b>0.1789</b> | <b>0.0000</b> | <b>58.2383</b> | <b>58.2383</b> | <b>0.0562</b> | <b>0.0000</b> | <b>59.6432</b> |

**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**

## Lancaster Promenade Project - Antelope Valley APCD Air District, Winter

**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**

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## Lancaster Promenade Project - Antelope Valley APCD Air District, Annual

## Lancaster Promenade Project

### Antelope Valley APCD Air District, Annual

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses                           | Size   | Metric        | Lot Acreage | Floor Surface Area | Population |
|-------------------------------------|--------|---------------|-------------|--------------------|------------|
| Other Asphalt Surfaces              | 4.45   | Acre          | 4.45        | 193,842.00         | 0          |
| Parking Lot                         | 3.82   | Acre          | 3.82        | 166,399.20         | 0          |
| City Park                           | 5.33   | Acre          | 5.33        | 232,174.80         | 0          |
| High Turnover (Sit Down Restaurant) | 12.75  | 1000sqft      | 0.29        | 12,750.00          | 0          |
| Apartments Low Rise                 | 392.00 | Dwelling Unit | 10.67       | 392,000.00         | 1121       |

### 1.2 Other Project Characteristics

|                         |                            |                         |       |                           |       |
|-------------------------|----------------------------|-------------------------|-------|---------------------------|-------|
| Urbanization            | Urban                      | Wind Speed (m/s)        | 2.2   | Precipitation Freq (Days) | 33    |
| Climate Zone            | 9                          |                         |       | Operational Year          | 2022  |
| Utility Company         | Southern California Edison |                         |       |                           |       |
| CO2 Intensity (lb/MWhr) | 533                        | CH4 Intensity (lb/MWhr) | 0.029 | N2O Intensity (lb/MWhr)   | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

## Lancaster Promenade Project - Antelope Valley APCD Air District, Annual

Project Characteristics - .....

Land Use - Project Description and site plan

Construction Phase - .Schedule modified to be completed within 18 months

Trips and VMT - Grading soil import of 49,877 cu yards

Grading - 49877 CY of soil import from client information

Architectural Coating - VOC content for coating changed to reflect the use of very low VOC coatings for residential (10 g/l) and non-residential uses at 50 g/l. VOC for parking lot paint set at 50 g/l

Vehicle Trips - Trip generation rates extracted from project Traffic Impact Analysis  
David Evans and Associates December 2020

Woodstoves - Assumed no fireplaces or wood stoves

Area Coating - All coating assumed to have a VOC content of 50 g/l for interior and 100 g/l for exterior as per Rule 1113

Construction Off-road Equipment Mitigation -

| Table Name              | Column Name                     | Default Value | New Value |
|-------------------------|---------------------------------|---------------|-----------|
| tblArchitecturalCoating | EF_Parking                      | 250.00        | 50.00     |
| tblArchitecturalCoating | EF_Residential_Exterior         | 250.00        | 100.00    |
| tblArchitecturalCoating | EF_Residential_Interior         | 250.00        | 50.00     |
| tblAreaCoating          | Area_EF_Residential_Exterior    | 250           | 100       |
| tblAreaCoating          | Area_EF_Residential_Interior    | 250           | 50        |
| tblConstDustMitigation  | WaterUnpavedRoadMoistureContent | 0             | 12        |
| tblConstDustMitigation  | WaterUnpavedRoadVehicleSpeed    | 0             | 15        |
| tblConstructionPhase    | NumDays                         | 35.00         | 30.00     |
| tblConstructionPhase    | NumDays                         | 440.00        | 255.00    |
| tblConstructionPhase    | NumDays                         | 45.00         | 30.00     |
| tblConstructionPhase    | NumDays                         | 35.00         | 30.00     |
| tblFireplaces           | FireplaceDayYear                | 82.00         | 0.00      |
| tblFireplaces           | FireplaceHourDay                | 3.00          | 0.00      |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Annual

|                           |                    |          |           |
|---------------------------|--------------------|----------|-----------|
| tblFireplaces             | FireplaceWoodMass  | 3,078.40 | 0.00      |
| tblFireplaces             | NumberGas          | 215.60   | 0.00      |
| tblFireplaces             | NumberNoFireplace  | 39.20    | 0.00      |
| tblFireplaces             | NumberWood         | 137.20   | 0.00      |
| tblGrading                | AcresOfGrading     | 75.00    | 112.50    |
| tblGrading                | MaterialImported   | 0.00     | 49,877.00 |
| tblLandUse                | LotAcreage         | 24.50    | 10.67     |
| tblProjectCharacteristics | CO2IntensityFactor | 702.44   | 533       |
| tblVehicleTrips           | ST_TR              | 7.16     | 6.59      |
| tblVehicleTrips           | ST_TR              | 22.75    | 0.00      |
| tblVehicleTrips           | ST_TR              | 158.37   | 306.20    |
| tblVehicleTrips           | SU_TR              | 6.07     | 6.59      |
| tblVehicleTrips           | SU_TR              | 16.74    | 0.00      |
| tblVehicleTrips           | SU_TR              | 131.84   | 306.20    |
| tblVehicleTrips           | WD_TR              | 1.89     | 0.00      |
| tblVehicleTrips           | WD_TR              | 127.15   | 306.20    |
| tblWoodstoves             | NumberCatalytic    | 19.60    | 0.00      |
| tblWoodstoves             | NumberNoncatalytic | 19.60    | 0.00      |
| tblWoodstoves             | WoodstoveDayYear   | 82.00    | 0.00      |
| tblWoodstoves             | WoodstoveWoodMass  | 3,019.20 | 0.00      |

## 2.0 Emissions Summary

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## Lancaster Promenade Project - Antelope Valley APCD Air District, Annual

**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    |            |            |        |        |            |
| 2021    | 0.2810  | 3.0000 | 2.3300 | 8.7700e-003 | 0.4582        | 0.0729       | 0.5312     | 0.1392         | 0.0680        | 0.2072      | 0.0000   | 808.0843   | 808.0843   | 0.0725 | 0.0000 | 809.8960   |
| 2022    | 2.1482  | 3.2797 | 3.8221 | 0.0118      | 0.5627        | 0.0865       | 0.6492     | 0.1519         | 0.0812        | 0.2331      | 0.0000   | 1,076.3681 | 1,076.3681 | 0.0897 | 0.0000 | 1,078.6099 |
| Maximum | 2.1482  | 3.2797 | 3.8221 | 0.0118      | 0.5627        | 0.0865       | 0.6492     | 0.1519         | 0.0812        | 0.2331      | 0.0000   | 1,076.3681 | 1,076.3681 | 0.0897 | 0.0000 | 1,078.6099 |

**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    |            |            |        |        |            |
| 2021    | 0.2810  | 3.0000 | 2.3300 | 8.7700e-003 | 0.3742        | 0.0729       | 0.4471     | 0.1081         | 0.0680        | 0.1761      | 0.0000   | 808.0841   | 808.0841   | 0.0725 | 0.0000 | 809.8958   |
| 2022    | 2.1482  | 3.2797 | 3.8221 | 0.0118      | 0.5627        | 0.0865       | 0.6492     | 0.1519         | 0.0812        | 0.2331      | 0.0000   | 1,076.3678 | 1,076.3678 | 0.0897 | 0.0000 | 1,078.6097 |
| Maximum | 2.1482  | 3.2797 | 3.8221 | 0.0118      | 0.5627        | 0.0865       | 0.6492     | 0.1519         | 0.0812        | 0.2331      | 0.0000   | 1,076.3678 | 1,076.3678 | 0.0897 | 0.0000 | 1,078.6097 |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 8.23          | 0.00         | 7.12       | 10.68          | 0.00          | 7.06        | 0.00     | 0.00      | 0.00      | 0.00 | 0.00 | 0.00 |

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| Quarter | Start Date | End Date  | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|-----------|----------------------------------------------|--------------------------------------------|
| 1       | 8-2-2021   | 11-1-2021 | 2.2627                                       | 2.2627                                     |
| 2       | 11-2-2021  | 2-1-2022  | 1.3701                                       | 1.3701                                     |
| 3       | 2-2-2022   | 5-1-2022  | 1.2586                                       | 1.2586                                     |
| 4       | 5-2-2022   | 8-1-2022  | 1.3065                                       | 1.3065                                     |
| 5       | 8-2-2022   | 9-30-2022 | 0.5850                                       | 0.5850                                     |
|         |            | Highest   | 2.2627                                       | 2.2627                                     |

## 2.2 Overall Operational

Unmitigated Operational

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2       | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | tons/yr       |                |                |               |               |               |               |                |               |               | MT/yr          |                   |                   |               |               |                   |
| Area         | 1.8822        | 0.0336         | 2.9140         | 1.5000e-004   |               | 0.0161        | 0.0161        |                | 0.0161        | 0.0161        | 0.0000         | 4.7550            | 4.7550            | 4.5900e-003   | 0.0000        | 4.8697            |
| Energy       | 0.0504        | 0.4394         | 0.2467         | 2.7500e-003   |               | 0.0348        | 0.0348        |                | 0.0348        | 0.0348        | 0.0000         | 1,050.8230        | 1,050.8230        | 0.0396        | 0.0154        | 1,056.3898        |
| Mobile       | 1.8694        | 9.6706         | 19.2987        | 0.0603        | 4.5085        | 0.0466        | 4.5551        | 1.2089         | 0.0435        | 1.2524        | 0.0000         | 5,548.2292        | 5,548.2292        | 0.2609        | 0.0000        | 5,554.7515        |
| Waste        |               |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 67.4762        | 0.0000            | 67.4762           | 3.9877        | 0.0000        | 167.1695          |
| Water        |               |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 9.3296         | 154.1847          | 163.5143          | 0.9666        | 0.0244        | 194.9398          |
| <b>Total</b> | <b>3.8020</b> | <b>10.1436</b> | <b>22.4594</b> | <b>0.0632</b> | <b>4.5085</b> | <b>0.0976</b> | <b>4.6061</b> | <b>1.2089</b>  | <b>0.0944</b> | <b>1.3033</b> | <b>76.8058</b> | <b>6,757.9918</b> | <b>6,834.7976</b> | <b>5.2594</b> | <b>0.0397</b> | <b>6,978.1203</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Annual

**2.2 Overall Operational****Mitigated Operational**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2       | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | tons/yr       |                |                |               |               |               |               |                |               |               | MT/yr          |                   |                   |               |               |                   |
| Area         | 1.8822        | 0.0336         | 2.9140         | 1.5000e-004   |               | 0.0161        | 0.0161        |                | 0.0161        | 0.0161        | 0.0000         | 4.7550            | 4.7550            | 4.5900e-003   | 0.0000        | 4.8697            |
| Energy       | 0.0504        | 0.4394         | 0.2467         | 2.7500e-003   |               | 0.0348        | 0.0348        |                | 0.0348        | 0.0348        | 0.0000         | 1,050.8230        | 1,050.8230        | 0.0396        | 0.0154        | 1,056.3898        |
| Mobile       | 1.8694        | 9.6706         | 19.2987        | 0.0603        | 4.5085        | 0.0466        | 4.5551        | 1.2089         | 0.0435        | 1.2524        | 0.0000         | 5,548.2292        | 5,548.2292        | 0.2609        | 0.0000        | 5,554.7515        |
| Waste        |               |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 67.4762        | 0.0000            | 67.4762           | 3.9877        | 0.0000        | 167.1695          |
| Water        |               |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 9.3296         | 154.1847          | 163.5143          | 0.9666        | 0.0244        | 194.9398          |
| <b>Total</b> | <b>3.8020</b> | <b>10.1436</b> | <b>22.4594</b> | <b>0.0632</b> | <b>4.5085</b> | <b>0.0976</b> | <b>4.6061</b> | <b>1.2089</b>  | <b>0.0944</b> | <b>1.3033</b> | <b>76.8058</b> | <b>6,757.9918</b> | <b>6,834.7976</b> | <b>5.2594</b> | <b>0.0397</b> | <b>6,978.1203</b> |

|                          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2    | NBio-CO2    | Total CO2   | CH4         | N2O         | CO2e        |
|--------------------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b>   | <b>0.00</b>  | <b>0.00</b> | <b>0.00</b>    | <b>0.00</b>   | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |

**3.0 Construction Detail****Construction Phase**

## Lancaster Promenade Project - Antelope Valley APCD Air District, Annual

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|------------|---------------|----------|-------------------|
| 1            | Grading               | Grading               | 8/2/2021   | 9/10/2021  | 5             | 30       |                   |
| 2            | Building Construction | Building Construction | 9/11/2021  | 9/2/2022   | 5             | 255      |                   |
| 3            | Paving                | Paving                | 9/3/2022   | 10/14/2022 | 5             | 30       |                   |
| 4            | Architectural Coating | Architectural Coating | 10/15/2022 | 11/25/2022 | 5             | 30       |                   |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 112.5**

**Acres of Paving: 8.27**

**Residential Indoor: 793,800; Residential Outdoor: 264,600; Non-Residential Indoor: 19,110; Non-Residential Outdoor: 6,370; Striped Parking Area: 34,240 (Architectural Coating – sqft)**

**OffRoad Equipment**

## Lancaster Promenade Project - Antelope Valley APCD Air District, Annual

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Grading               | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Grading               | Graders                   | 1      | 8.00        | 187         | 0.41        |
| Grading               | Rubber Tired Dozers       | 1      | 8.00        | 247         | 0.40        |
| Grading               | Scrapers                  | 2      | 8.00        | 367         | 0.48        |
| Grading               | Tractors/Loaders/Backhoes | 2      | 8.00        | 97          | 0.37        |
| Building Construction | Cranes                    | 1      | 7.00        | 231         | 0.29        |
| Building Construction | Forklifts                 | 3      | 8.00        | 89          | 0.20        |
| Building Construction | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Building Construction | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Building Construction | Welders                   | 1      | 8.00        | 46          | 0.45        |
| Paving                | Pavers                    | 2      | 8.00        | 130         | 0.42        |
| Paving                | Paving Equipment          | 2      | 8.00        | 132         | 0.36        |
| Paving                | Rollers                   | 2      | 8.00        | 80          | 0.38        |
| Architectural Coating | Air Compressors           | 1      | 6.00        | 78          | 0.48        |

Trips and VMT

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Grading               | 8                       | 20.00              | 0.00               | 6,235.00            | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 9                       | 628.00             | 177.00             | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 1                       | 126.00             | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

## Lancaster Promenade Project - Antelope Valley APCD Air District, Annual

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

**3.2 Grading - 2021****Unmitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category      | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                |                |               |               |                |
| Fugitive Dust |               |               |               |                    | 0.1528        | 0.0000        | 0.1528        | 0.0565         | 0.0000        | 0.0565        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Off-Road      | 0.0629        | 0.6960        | 0.4632        | 9.3000e-004        |               | 0.0298        | 0.0298        |                | 0.0274        | 0.0274        | 0.0000        | 81.7425        | 81.7425        | 0.0264        | 0.0000        | 82.4034        |
| <b>Total</b>  | <b>0.0629</b> | <b>0.6960</b> | <b>0.4632</b> | <b>9.3000e-004</b> | <b>0.1528</b> | <b>0.0298</b> | <b>0.1826</b> | <b>0.0565</b>  | <b>0.0274</b> | <b>0.0839</b> | <b>0.0000</b> | <b>81.7425</b> | <b>81.7425</b> | <b>0.0264</b> | <b>0.0000</b> | <b>82.4034</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Annual

**3.2 Grading - 2021****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      | 0.0236        | 0.7724        | 0.1662        | 2.5900e-003        | 0.0536        | 1.8700e-003        | 0.0554        | 0.0147         | 1.7900e-003        | 0.0165        | 0.0000        | 246.6189        | 246.6189        | 8.6800e-003        | 0.0000        | 246.8359        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Worker       | 1.1500e-003   | 9.3000e-004   | 0.0103        | 2.0000e-005        | 2.4200e-003   | 2.0000e-005        | 2.4400e-003   | 6.4000e-004    | 2.0000e-005        | 6.6000e-004   | 0.0000        | 2.1892          | 2.1892          | 8.0000e-005        | 0.0000        | 2.1911          |
| <b>Total</b> | <b>0.0247</b> | <b>0.7733</b> | <b>0.1765</b> | <b>2.6100e-003</b> | <b>0.0560</b> | <b>1.8900e-003</b> | <b>0.0579</b> | <b>0.0153</b>  | <b>1.8100e-003</b> | <b>0.0172</b> | <b>0.0000</b> | <b>248.8081</b> | <b>248.8081</b> | <b>8.7600e-003</b> | <b>0.0000</b> | <b>249.0270</b> |

**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 |               |               |               |                    | 0.0688        | 0.0000        | 0.0688        | 0.0254         | 0.0000        | 0.0254        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Off-Road      | 0.0629        | 0.6960        | 0.4632        | 9.3000e-004        |               | 0.0298        | 0.0298        |                | 0.0274        | 0.0274        | 0.0000        | 81.7424        | 81.7424        | 0.0264        | 0.0000        | 82.4033        |
| <b>Total</b>  | <b>0.0629</b> | <b>0.6960</b> | <b>0.4632</b> | <b>9.3000e-004</b> | <b>0.0688</b> | <b>0.0298</b> | <b>0.0985</b> | <b>0.0254</b>  | <b>0.0274</b> | <b>0.0528</b> | <b>0.0000</b> | <b>81.7424</b> | <b>81.7424</b> | <b>0.0264</b> | <b>0.0000</b> | <b>82.4033</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Annual

**3.2 Grading - 2021****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      | 0.0236        | 0.7724        | 0.1662        | 2.5900e-003        | 0.0536        | 1.8700e-003        | 0.0554        | 0.0147         | 1.7900e-003        | 0.0165        | 0.0000        | 246.6189        | 246.6189        | 8.6800e-003        | 0.0000        | 246.8359        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Worker       | 1.1500e-003   | 9.3000e-004   | 0.0103        | 2.0000e-005        | 2.4200e-003   | 2.0000e-005        | 2.4400e-003   | 6.4000e-004    | 2.0000e-005        | 6.6000e-004   | 0.0000        | 2.1892          | 2.1892          | 8.0000e-005        | 0.0000        | 2.1911          |
| <b>Total</b> | <b>0.0247</b> | <b>0.7733</b> | <b>0.1765</b> | <b>2.6100e-003</b> | <b>0.0560</b> | <b>1.8900e-003</b> | <b>0.0579</b> | <b>0.0153</b>  | <b>1.8100e-003</b> | <b>0.0172</b> | <b>0.0000</b> | <b>248.8081</b> | <b>248.8081</b> | <b>8.7600e-003</b> | <b>0.0000</b> | <b>249.0270</b> |

**3.3 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     | 0.0760        | 0.6973        | 0.6630        | 1.0800e-003        |               | 0.0383        | 0.0383        |                | 0.0361        | 0.0361        | 0.0000        | 92.6549        | 92.6549        | 0.0224        | 0.0000        | 93.2138        |
| <b>Total</b> | <b>0.0760</b> | <b>0.6973</b> | <b>0.6630</b> | <b>1.0800e-003</b> |               | <b>0.0383</b> | <b>0.0383</b> |                | <b>0.0361</b> | <b>0.0361</b> | <b>0.0000</b> | <b>92.6549</b> | <b>92.6549</b> | <b>0.0224</b> | <b>0.0000</b> | <b>93.2138</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Annual

**3.3 Building Construction - 2021****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       | 0.0213        | 0.7552        | 0.1650        | 2.1200e-003        | 0.0472        | 1.1900e-003        | 0.0484        | 0.0136         | 1.1400e-003        | 0.0148        | 0.0000        | 201.5683        | 201.5683        | 8.6200e-003   | 0.0000        | 201.7839        |
| Worker       | 0.0961        | 0.0782        | 0.8623        | 2.0300e-003        | 0.2023        | 1.7000e-003        | 0.2040        | 0.0537         | 1.5700e-003        | 0.0553        | 0.0000        | 183.3105        | 183.3105        | 6.3000e-003   | 0.0000        | 183.4680        |
| <b>Total</b> | <b>0.1174</b> | <b>0.8334</b> | <b>1.0273</b> | <b>4.1500e-003</b> | <b>0.2495</b> | <b>2.8900e-003</b> | <b>0.2524</b> | <b>0.0674</b>  | <b>2.7100e-003</b> | <b>0.0701</b> | <b>0.0000</b> | <b>384.8788</b> | <b>384.8788</b> | <b>0.0149</b> | <b>0.0000</b> | <b>385.2519</b> |

**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     | 0.0760        | 0.6973        | 0.6630        | 1.0800e-003        |               | 0.0383        | 0.0383        |                | 0.0361        | 0.0361        | 0.0000        | 92.6548        | 92.6548        | 0.0224        | 0.0000        | 93.2136        |
| <b>Total</b> | <b>0.0760</b> | <b>0.6973</b> | <b>0.6630</b> | <b>1.0800e-003</b> |               | <b>0.0383</b> | <b>0.0383</b> |                | <b>0.0361</b> | <b>0.0361</b> | <b>0.0000</b> | <b>92.6548</b> | <b>92.6548</b> | <b>0.0224</b> | <b>0.0000</b> | <b>93.2136</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Annual

**3.3 Building Construction - 2021****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       | 0.0213        | 0.7552        | 0.1650        | 2.1200e-003        | 0.0472        | 1.1900e-003        | 0.0484        | 0.0136         | 1.1400e-003        | 0.0148        | 0.0000        | 201.5683        | 201.5683        | 8.6200e-003   | 0.0000        | 201.7839        |
| Worker       | 0.0961        | 0.0782        | 0.8623        | 2.0300e-003        | 0.2023        | 1.7000e-003        | 0.2040        | 0.0537         | 1.5700e-003        | 0.0553        | 0.0000        | 183.3105        | 183.3105        | 6.3000e-003   | 0.0000        | 183.4680        |
| <b>Total</b> | <b>0.1174</b> | <b>0.8334</b> | <b>1.0273</b> | <b>4.1500e-003</b> | <b>0.2495</b> | <b>2.8900e-003</b> | <b>0.2524</b> | <b>0.0674</b>  | <b>2.7100e-003</b> | <b>0.0701</b> | <b>0.0000</b> | <b>384.8788</b> | <b>384.8788</b> | <b>0.0149</b> | <b>0.0000</b> | <b>385.2519</b> |

**3.3 Building Construction - 2022****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     | 0.1493        | 1.3664        | 1.4318        | 2.3600e-003        |               | 0.0708        | 0.0708        |                | 0.0666        | 0.0666        | 0.0000        | 202.7596        | 202.7596        | 0.0486        | 0.0000        | 203.9740        |
| <b>Total</b> | <b>0.1493</b> | <b>1.3664</b> | <b>1.4318</b> | <b>2.3600e-003</b> |               | <b>0.0708</b> | <b>0.0708</b> |                | <b>0.0666</b> | <b>0.0666</b> | <b>0.0000</b> | <b>202.7596</b> | <b>202.7596</b> | <b>0.0486</b> | <b>0.0000</b> | <b>203.9740</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Annual

**3.3 Building Construction - 2022****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       | 0.0436        | 1.5642        | 0.3376        | 4.6100e-003        | 0.1032        | 2.1900e-003        | 0.1054        | 0.0298         | 2.0900e-003        | 0.0319        | 0.0000        | 437.7127        | 437.7127        | 0.0181        | 0.0000        | 438.1661        |
| Worker       | 0.1970        | 0.1552        | 1.7399        | 4.2900e-003        | 0.4425        | 3.6100e-003        | 0.4462        | 0.1176         | 3.3300e-003        | 0.1209        | 0.0000        | 387.1243        | 387.1243        | 0.0125        | 0.0000        | 387.4372        |
| <b>Total</b> | <b>0.2406</b> | <b>1.7194</b> | <b>2.0775</b> | <b>8.9000e-003</b> | <b>0.5457</b> | <b>5.8000e-003</b> | <b>0.5515</b> | <b>0.1473</b>  | <b>5.4200e-003</b> | <b>0.1527</b> | <b>0.0000</b> | <b>824.8370</b> | <b>824.8370</b> | <b>0.0307</b> | <b>0.0000</b> | <b>825.6033</b> |

**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     | 0.1493        | 1.3664        | 1.4318        | 2.3600e-003        |               | 0.0708        | 0.0708        |                | 0.0666        | 0.0666        | 0.0000        | 202.7594        | 202.7594        | 0.0486        | 0.0000        | 203.9737        |
| <b>Total</b> | <b>0.1493</b> | <b>1.3664</b> | <b>1.4318</b> | <b>2.3600e-003</b> |               | <b>0.0708</b> | <b>0.0708</b> |                | <b>0.0666</b> | <b>0.0666</b> | <b>0.0000</b> | <b>202.7594</b> | <b>202.7594</b> | <b>0.0486</b> | <b>0.0000</b> | <b>203.9737</b> |

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**3.3 Building Construction - 2022****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       | 0.0436        | 1.5642        | 0.3376        | 4.6100e-003        | 0.1032        | 2.1900e-003        | 0.1054        | 0.0298         | 2.0900e-003        | 0.0319        | 0.0000        | 437.7127        | 437.7127        | 0.0181        | 0.0000        | 438.1661        |
| Worker       | 0.1970        | 0.1552        | 1.7399        | 4.2900e-003        | 0.4425        | 3.6100e-003        | 0.4462        | 0.1176         | 3.3300e-003        | 0.1209        | 0.0000        | 387.1243        | 387.1243        | 0.0125        | 0.0000        | 387.4372        |
| <b>Total</b> | <b>0.2406</b> | <b>1.7194</b> | <b>2.0775</b> | <b>8.9000e-003</b> | <b>0.5457</b> | <b>5.8000e-003</b> | <b>0.5515</b> | <b>0.1473</b>  | <b>5.4200e-003</b> | <b>0.1527</b> | <b>0.0000</b> | <b>824.8370</b> | <b>824.8370</b> | <b>0.0307</b> | <b>0.0000</b> | <b>825.6033</b> |

**3.4 Paving - 2022****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     | 0.0165        | 0.1669        | 0.2187        | 3.4000e-004        |               | 8.5200e-003        | 8.5200e-003        |                | 7.8400e-003        | 7.8400e-003        | 0.0000        | 30.0413        | 30.0413        | 9.7200e-003        | 0.0000        | 30.2842        |
| Paving       | 0.0108        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| <b>Total</b> | <b>0.0274</b> | <b>0.1669</b> | <b>0.2187</b> | <b>3.4000e-004</b> |               | <b>8.5200e-003</b> | <b>8.5200e-003</b> |                | <b>7.8400e-003</b> | <b>7.8400e-003</b> | <b>0.0000</b> | <b>30.0413</b> | <b>30.0413</b> | <b>9.7200e-003</b> | <b>0.0000</b> | <b>30.2842</b> |

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**3.4 Paving - 2022****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       | 8.1000e-004        | 6.4000e-004        | 7.1200e-003        | 2.0000e-005        | 1.8100e-003        | 1.0000e-005        | 1.8300e-003        | 4.8000e-004        | 1.0000e-005        | 4.9000e-004        | 0.0000        | 1.5851        | 1.5851        | 5.0000e-005        | 0.0000        | 1.5864        |
| <b>Total</b> | <b>8.1000e-004</b> | <b>6.4000e-004</b> | <b>7.1200e-003</b> | <b>2.0000e-005</b> | <b>1.8100e-003</b> | <b>1.0000e-005</b> | <b>1.8300e-003</b> | <b>4.8000e-004</b> | <b>1.0000e-005</b> | <b>4.9000e-004</b> | <b>0.0000</b> | <b>1.5851</b> | <b>1.5851</b> | <b>5.0000e-005</b> | <b>0.0000</b> | <b>1.5864</b> |

**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     | 0.0165        | 0.1669        | 0.2187        | 3.4000e-004        |               | 8.5200e-003        | 8.5200e-003        |                | 7.8400e-003        | 7.8400e-003        | 0.0000        | 30.0413        | 30.0413        | 9.7200e-003        | 0.0000        | 30.2842        |
| Paving       | 0.0108        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| <b>Total</b> | <b>0.0274</b> | <b>0.1669</b> | <b>0.2187</b> | <b>3.4000e-004</b> |               | <b>8.5200e-003</b> | <b>8.5200e-003</b> |                | <b>7.8400e-003</b> | <b>7.8400e-003</b> | <b>0.0000</b> | <b>30.0413</b> | <b>30.0413</b> | <b>9.7200e-003</b> | <b>0.0000</b> | <b>30.2842</b> |

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**3.4 Paving - 2022****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       | 8.1000e-004        | 6.4000e-004        | 7.1200e-003        | 2.0000e-005        | 1.8100e-003        | 1.0000e-005        | 1.8300e-003        | 4.8000e-004        | 1.0000e-005        | 4.9000e-004        | 0.0000        | 1.5851        | 1.5851        | 5.0000e-005        | 0.0000        | 1.5864        |
| <b>Total</b> | <b>8.1000e-004</b> | <b>6.4000e-004</b> | <b>7.1200e-003</b> | <b>2.0000e-005</b> | <b>1.8100e-003</b> | <b>1.0000e-005</b> | <b>1.8300e-003</b> | <b>4.8000e-004</b> | <b>1.0000e-005</b> | <b>4.9000e-004</b> | <b>0.0000</b> | <b>1.5851</b> | <b>1.5851</b> | <b>5.0000e-005</b> | <b>0.0000</b> | <b>1.5864</b> |

**3.5 Architectural Coating - 2022****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 | 1.7203        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        | 3.0700e-003   | 0.0211        | 0.0272        | 4.0000e-005        |               | 1.2300e-003        | 1.2300e-003        |                | 1.2300e-003        | 1.2300e-003        | 0.0000        | 3.8299        | 3.8299        | 2.5000e-004        | 0.0000        | 3.8361        |
| <b>Total</b>    | <b>1.7234</b> | <b>0.0211</b> | <b>0.0272</b> | <b>4.0000e-005</b> |               | <b>1.2300e-003</b> | <b>1.2300e-003</b> |                | <b>1.2300e-003</b> | <b>1.2300e-003</b> | <b>0.0000</b> | <b>3.8299</b> | <b>3.8299</b> | <b>2.5000e-004</b> | <b>0.0000</b> | <b>3.8361</b> |

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**3.5 Architectural Coating - 2022****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       | 6.7800e-003        | 5.3400e-003        | 0.0598        | 1.5000e-004        | 0.0152        | 1.2000e-004        | 0.0154        | 4.0400e-003        | 1.1000e-004        | 4.1600e-003        | 0.0000        | 13.3151        | 13.3151        | 4.3000e-004        | 0.0000        | 13.3259        |
| <b>Total</b> | <b>6.7800e-003</b> | <b>5.3400e-003</b> | <b>0.0598</b> | <b>1.5000e-004</b> | <b>0.0152</b> | <b>1.2000e-004</b> | <b>0.0154</b> | <b>4.0400e-003</b> | <b>1.1000e-004</b> | <b>4.1600e-003</b> | <b>0.0000</b> | <b>13.3151</b> | <b>13.3151</b> | <b>4.3000e-004</b> | <b>0.0000</b> | <b>13.3259</b> |

**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 | 1.7203        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        | 3.0700e-003   | 0.0211        | 0.0272        | 4.0000e-005        |               | 1.2300e-003        | 1.2300e-003        |                | 1.2300e-003        | 1.2300e-003        | 0.0000        | 3.8299        | 3.8299        | 2.5000e-004        | 0.0000        | 3.8361        |
| <b>Total</b>    | <b>1.7234</b> | <b>0.0211</b> | <b>0.0272</b> | <b>4.0000e-005</b> |               | <b>1.2300e-003</b> | <b>1.2300e-003</b> |                | <b>1.2300e-003</b> | <b>1.2300e-003</b> | <b>0.0000</b> | <b>3.8299</b> | <b>3.8299</b> | <b>2.5000e-004</b> | <b>0.0000</b> | <b>3.8361</b> |

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**3.5 Architectural Coating - 2022****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       | 6.7800e-003        | 5.3400e-003        | 0.0598        | 1.5000e-004        | 0.0152        | 1.2000e-004        | 0.0154        | 4.0400e-003        | 1.1000e-004        | 4.1600e-003        | 0.0000        | 13.3151        | 13.3151        | 4.3000e-004        | 0.0000        | 13.3259        |
| <b>Total</b> | <b>6.7800e-003</b> | <b>5.3400e-003</b> | <b>0.0598</b> | <b>1.5000e-004</b> | <b>0.0152</b> | <b>1.2000e-004</b> | <b>0.0154</b> | <b>4.0400e-003</b> | <b>1.1000e-004</b> | <b>4.1600e-003</b> | <b>0.0000</b> | <b>13.3151</b> | <b>13.3151</b> | <b>4.3000e-004</b> | <b>0.0000</b> | <b>13.3259</b> |

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

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|             | ROG     | NOx    | CO      | SO2    | Fugitive 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   | 1.8694  | 9.6706 | 19.2987 | 0.0603 | 4.5085        | 0.0466       | 4.5551     | 1.2089         | 0.0435        | 1.2524      | 0.0000   | 5,548.229<br>2 | 5,548.229<br>2 | 0.2609 | 0.0000 | 5,554.751<br>5 |
| Unmitigated | 1.8694  | 9.6706 | 19.2987 | 0.0603 | 4.5085        | 0.0466       | 4.5551     | 1.2089         | 0.0435        | 1.2524      | 0.0000   | 5,548.229<br>2 | 5,548.229<br>2 | 0.2609 | 0.0000 | 5,554.751<br>5 |

## 4.2 Trip Summary Information

| Land Use                            | Average Daily Trip Rate |          |          | Unmitigated | Mitigated  |
|-------------------------------------|-------------------------|----------|----------|-------------|------------|
|                                     | Weekday                 | Saturday | Sunday   | Annual VMT  | Annual VMT |
| Apartments Low Rise                 | 2,583.28                | 2,583.28 | 2583.28  | 7,336,825   | 7,336,825  |
| City Park                           | 0.00                    | 0.00     | 0.00     |             |            |
| High Turnover (Sit Down Restaurant) | 3,904.05                | 3,904.05 | 3904.05  | 4,529,731   | 4,529,731  |
| Other Asphalt Surfaces              | 0.00                    | 0.00     | 0.00     |             |            |
| Parking Lot                         | 0.00                    | 0.00     | 0.00     |             |            |
| Total                               | 6,487.33                | 6,487.33 | 6,487.33 | 11,866,556  | 11,866,556 |

## 4.3 Trip Type Information

| Land Use                 | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|--------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                          | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Low Rise      | 10.80      | 7.30       | 7.50        | 40.20      | 19.20      | 40.60       | 86             | 11       | 3       |
| City Park                | 9.50       | 7.30       | 7.30        | 33.00      | 48.00      | 19.00       | 66             | 28       | 6       |
| High Turnover (Sit Down) | 9.50       | 7.30       | 7.30        | 8.50       | 72.50      | 19.00       | 37             | 20       | 43      |
| Other Asphalt Surfaces   | 9.50       | 7.30       | 7.30        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |
| Parking Lot              | 9.50       | 7.30       | 7.30        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |

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**4.4 Fleet Mix**

| Land Use                            | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|-------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Apartments Low Rise                 | 0.621119 | 0.036839 | 0.149412 | 0.101634 | 0.016073 | 0.004933 | 0.018414 | 0.037394 | 0.002239 | 0.001889 | 0.007289 | 0.001543 | 0.001221 |
| City Park                           | 0.621119 | 0.036839 | 0.149412 | 0.101634 | 0.016073 | 0.004933 | 0.018414 | 0.037394 | 0.002239 | 0.001889 | 0.007289 | 0.001543 | 0.001221 |
| High Turnover (Sit Down Restaurant) | 0.621119 | 0.036839 | 0.149412 | 0.101634 | 0.016073 | 0.004933 | 0.018414 | 0.037394 | 0.002239 | 0.001889 | 0.007289 | 0.001543 | 0.001221 |
| Other Asphalt Surfaces              | 0.621119 | 0.036839 | 0.149412 | 0.101634 | 0.016073 | 0.004933 | 0.018414 | 0.037394 | 0.002239 | 0.001889 | 0.007289 | 0.001543 | 0.001221 |
| Parking Lot                         | 0.621119 | 0.036839 | 0.149412 | 0.101634 | 0.016073 | 0.004933 | 0.018414 | 0.037394 | 0.002239 | 0.001889 | 0.007289 | 0.001543 | 0.001221 |

**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   | 552.0112  | 552.0112  | 0.0300      | 6.2100e-003 | 554.6138 |
| Electricity Unmitigated |         |        |        |             |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 552.0112  | 552.0112  | 0.0300      | 6.2100e-003 | 554.6138 |
| NaturalGas Mitigated    | 0.0504  | 0.4394 | 0.2467 | 2.7500e-003 |               | 0.0348       | 0.0348     |                | 0.0348        | 0.0348      | 0.0000   | 498.8118  | 498.8118  | 9.5600e-003 | 9.1400e-003 | 501.7760 |
| NaturalGas Unmitigated  | 0.0504  | 0.4394 | 0.2467 | 2.7500e-003 |               | 0.0348       | 0.0348     |                | 0.0348        | 0.0348      | 0.0000   | 498.8118  | 498.8118  | 9.5600e-003 | 9.1400e-003 | 501.7760 |

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**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 Low Rise                 | 6.40519e+006   | 0.0345        | 0.2951        | 0.1256        | 1.8800e-003        |               | 0.0239        | 0.0239        |                | 0.0239        | 0.0239        | 0.0000        | 341.8053        | 341.8053        | 6.5500e-003        | 6.2700e-003        | 343.8365        |
| City Park                           | 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          |
| High Turnover (Sit Down Restaurant) | 2.94219e+006   | 0.0159        | 0.1442        | 0.1212        | 8.7000e-004        |               | 0.0110        | 0.0110        |                | 0.0110        | 0.0110        | 0.0000        | 157.0065        | 157.0065        | 3.0100e-003        | 2.8800e-003        | 157.9395        |
| Other Asphalt Surfaces              | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 0.0000          |
| Parking Lot                         | 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          |
| <b>Total</b>                        |                | <b>0.0504</b> | <b>0.4394</b> | <b>0.2467</b> | <b>2.7500e-003</b> |               | <b>0.0348</b> | <b>0.0348</b> |                | <b>0.0348</b> | <b>0.0348</b> | <b>0.0000</b> | <b>498.8118</b> | <b>498.8118</b> | <b>9.5600e-003</b> | <b>9.1500e-003</b> | <b>501.7760</b> |

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**5.2 Energy by Land Use - NaturalGas****Mitigated**

|                                     | NaturalGas Use | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|-------------------------------------|----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Land Use                            | kBTU/yr        | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |                    |                    |                 |
| Apartments Low Rise                 | 6.40519e+006   | 0.0345        | 0.2951        | 0.1256        | 1.8800e-003        |               | 0.0239        | 0.0239        |                | 0.0239        | 0.0239        | 0.0000        | 341.8053        | 341.8053        | 6.5500e-003        | 6.2700e-003        | 343.8365        |
| City Park                           | 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          |
| High Turnover (Sit Down Restaurant) | 2.94219e+006   | 0.0159        | 0.1442        | 0.1212        | 8.7000e-004        |               | 0.0110        | 0.0110        |                | 0.0110        | 0.0110        | 0.0000        | 157.0065        | 157.0065        | 3.0100e-003        | 2.8800e-003        | 157.9395        |
| Other Asphalt Surfaces              | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 0.0000          |
| Parking Lot                         | 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          |
| <b>Total</b>                        |                | <b>0.0504</b> | <b>0.4394</b> | <b>0.2467</b> | <b>2.7500e-003</b> |               | <b>0.0348</b> | <b>0.0348</b> |                | <b>0.0348</b> | <b>0.0348</b> | <b>0.0000</b> | <b>498.8118</b> | <b>498.8118</b> | <b>9.5600e-003</b> | <b>9.1500e-003</b> | <b>501.7760</b> |

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**5.3 Energy by Land Use - Electricity****Unmitigated**

|                                     | Electricity Use | Total CO2       | CH4           | N2O                | CO2e            |
|-------------------------------------|-----------------|-----------------|---------------|--------------------|-----------------|
| Land Use                            | kWh/yr          | MT/yr           |               |                    |                 |
| Apartments Low Rise                 | 1.66223e+006    | 401.8693        | 0.0219        | 4.5200e-003        | 403.7640        |
| City Park                           | 0               | 0.0000          | 0.0000        | 0.0000             | 0.0000          |
| High Turnover (Sit Down Restaurant) | 562785          | 136.0616        | 7.4000e-003   | 1.5300e-003        | 136.7031        |
| Other Asphalt Surfaces              | 0               | 0.0000          | 0.0000        | 0.0000             | 0.0000          |
| Parking Lot                         | 58239.7         | 14.0803         | 7.7000e-004   | 1.6000e-004        | 14.1467         |
| <b>Total</b>                        |                 | <b>552.0112</b> | <b>0.0300</b> | <b>6.2100e-003</b> | <b>554.6138</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Annual

**5.3 Energy by Land Use - Electricity****Mitigated**

|                                     | Electricity Use | Total CO2       | CH4           | N2O                | CO2e            |
|-------------------------------------|-----------------|-----------------|---------------|--------------------|-----------------|
| Land Use                            | kWh/yr          | MT/yr           |               |                    |                 |
| Apartments Low Rise                 | 1.66223e+006    | 401.8693        | 0.0219        | 4.5200e-003        | 403.7640        |
| City Park                           | 0               | 0.0000          | 0.0000        | 0.0000             | 0.0000          |
| High Turnover (Sit Down Restaurant) | 562785          | 136.0616        | 7.4000e-003   | 1.5300e-003        | 136.7031        |
| Other Asphalt Surfaces              | 0               | 0.0000          | 0.0000        | 0.0000             | 0.0000          |
| Parking Lot                         | 58239.7         | 14.0803         | 7.7000e-004   | 1.6000e-004        | 14.1467         |
| <b>Total</b>                        |                 | <b>552.0112</b> | <b>0.0300</b> | <b>6.2100e-003</b> | <b>554.6138</b> |

**6.0 Area Detail****6.1 Mitigation Measures Area**

## Lancaster Promenade Project - Antelope Valley APCD Air District, Annual

|             | ROG     | NOx    | CO     | SO2         | Fugitive 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   | 1.8822  | 0.0336 | 2.9140 | 1.5000e-004 |               | 0.0161       | 0.0161     |                | 0.0161        | 0.0161      | 0.0000   | 4.7550    | 4.7550    | 4.5900e-003 | 0.0000 | 4.8697 |
| Unmitigated | 1.8822  | 0.0336 | 2.9140 | 1.5000e-004 |               | 0.0161       | 0.0161     |                | 0.0161        | 0.0161      | 0.0000   | 4.7550    | 4.7550    | 4.5900e-003 | 0.0000 | 4.8697 |

## 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 | 0.1879        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Consumer Products     | 1.6062        |               |               |                    |               | 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           | 0.0880        | 0.0336        | 2.9140        | 1.5000e-004        |               | 0.0161        | 0.0161        |                | 0.0161        | 0.0161        | 0.0000        | 4.7550        | 4.7550        | 4.5900e-003        | 0.0000        | 4.8697        |
| <b>Total</b>          | <b>1.8822</b> | <b>0.0336</b> | <b>2.9140</b> | <b>1.5000e-004</b> |               | <b>0.0161</b> | <b>0.0161</b> |                | <b>0.0161</b> | <b>0.0161</b> | <b>0.0000</b> | <b>4.7550</b> | <b>4.7550</b> | <b>4.5900e-003</b> | <b>0.0000</b> | <b>4.8697</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Annual

**6.2 Area by SubCategory****Mitigated**

|                       | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|-----------------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| SubCategory           | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |               |               |                    |               |               |
| Architectural Coating | 0.1879        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Consumer Products     | 1.6062        |               |               |                    |               | 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           | 0.0880        | 0.0336        | 2.9140        | 1.5000e-004        |               | 0.0161        | 0.0161        |                | 0.0161        | 0.0161        | 0.0000        | 4.7550        | 4.7550        | 4.5900e-003        | 0.0000        | 4.8697        |
| <b>Total</b>          | <b>1.8822</b> | <b>0.0336</b> | <b>2.9140</b> | <b>1.5000e-004</b> |               | <b>0.0161</b> | <b>0.0161</b> |                | <b>0.0161</b> | <b>0.0161</b> | <b>0.0000</b> | <b>4.7550</b> | <b>4.7550</b> | <b>4.5900e-003</b> | <b>0.0000</b> | <b>4.8697</b> |

**7.0 Water Detail****7.1 Mitigation Measures Water**

## Lancaster Promenade Project - Antelope Valley APCD Air District, Annual

|             | Total CO2 | CH4    | N2O    | CO2e     |
|-------------|-----------|--------|--------|----------|
| Category    | MT/yr     |        |        |          |
| Mitigated   | 163.5143  | 0.9666 | 0.0244 | 194.9398 |
| Unmitigated | 163.5143  | 0.9666 | 0.0244 | 194.9398 |

## 7.2 Water by Land Use

Unmitigated

|                                     | Indoor/Outdoor Use | Total CO2       | CH4           | N2O           | CO2e            |
|-------------------------------------|--------------------|-----------------|---------------|---------------|-----------------|
| Land Use                            | Mgal               | MT/yr           |               |               |                 |
| Apartments Low Rise                 | 25.5404 / 16.1015  | 131.7532        | 0.8390        | 0.0210        | 158.9980        |
| City Park                           | 0 / 6.58889        | 17.6978         | 9.6000e-004   | 2.0000e-004   | 17.7813         |
| High Turnover (Sit Down Restaurant) | 3.86702 / 0.246831 | 14.0633         | 0.1267        | 3.1200e-003   | 18.1606         |
| Other Asphalt Surfaces              | 0 / 0              | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Parking Lot                         | 0 / 0              | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| <b>Total</b>                        |                    | <b>163.5143</b> | <b>0.9666</b> | <b>0.0244</b> | <b>194.9398</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Annual

**7.2 Water by Land Use****Mitigated**

|                                     | Indoor/Outdoor Use | Total CO2       | CH4           | N2O           | CO2e            |
|-------------------------------------|--------------------|-----------------|---------------|---------------|-----------------|
| Land Use                            | Mgal               | MT/yr           |               |               |                 |
| Apartments Low Rise                 | 25.5404 / 16.1015  | 131.7532        | 0.8390        | 0.0210        | 158.9980        |
| City Park                           | 0 / 6.58889        | 17.6978         | 9.6000e-004   | 2.0000e-004   | 17.7813         |
| High Turnover (Sit Down Restaurant) | 3.86702 / 0.246831 | 14.0633         | 0.1267        | 3.1200e-003   | 18.1606         |
| Other Asphalt Surfaces              | 0 / 0              | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Parking Lot                         | 0 / 0              | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| <b>Total</b>                        |                    | <b>163.5143</b> | <b>0.9666</b> | <b>0.0244</b> | <b>194.9398</b> |

**8.0 Waste Detail****8.1 Mitigation Measures Waste**

## Lancaster Promenade Project - Antelope Valley APCD Air District, Annual

**Category/Year**

|             | Total CO2 | CH4    | N2O    | CO2e     |
|-------------|-----------|--------|--------|----------|
|             | MT/yr     |        |        |          |
| Mitigated   | 67.4762   | 3.9877 | 0.0000 | 167.1695 |
| Unmitigated | 67.4762   | 3.9877 | 0.0000 | 167.1695 |

**8.2 Waste by Land Use****Unmitigated**

|                                     | Waste Disposed | Total CO2      | CH4           | N2O           | CO2e            |
|-------------------------------------|----------------|----------------|---------------|---------------|-----------------|
| Land Use                            | tons           | MT/yr          |               |               |                 |
| Apartments Low Rise                 | 180.32         | 36.6033        | 2.1632        | 0.0000        | 90.6832         |
| City Park                           | 0.48           | 0.0974         | 5.7600e-003   | 0.0000        | 0.2414          |
| High Turnover (Sit Down Restaurant) | 151.61         | 30.7755        | 1.8188        | 0.0000        | 76.2449         |
| Other Asphalt Surfaces              | 0              | 0.0000         | 0.0000        | 0.0000        | 0.0000          |
| Parking Lot                         | 0              | 0.0000         | 0.0000        | 0.0000        | 0.0000          |
| <b>Total</b>                        |                | <b>67.4762</b> | <b>3.9877</b> | <b>0.0000</b> | <b>167.1695</b> |

## Lancaster Promenade Project - Antelope Valley APCD Air District, Annual

**8.2 Waste by Land Use****Mitigated**

|                                     | Waste Disposed | Total CO2      | CH4           | N2O           | CO2e            |
|-------------------------------------|----------------|----------------|---------------|---------------|-----------------|
| Land Use                            | tons           | MT/yr          |               |               |                 |
| Apartments Low Rise                 | 180.32         | 36.6033        | 2.1632        | 0.0000        | 90.6832         |
| City Park                           | 0.48           | 0.0974         | 5.7600e-003   | 0.0000        | 0.2414          |
| High Turnover (Sit Down Restaurant) | 151.61         | 30.7755        | 1.8188        | 0.0000        | 76.2449         |
| Other Asphalt Surfaces              | 0              | 0.0000         | 0.0000        | 0.0000        | 0.0000          |
| Parking Lot                         | 0              | 0.0000         | 0.0000        | 0.0000        | 0.0000          |
| <b>Total</b>                        |                | <b>67.4762</b> | <b>3.9877</b> | <b>0.0000</b> | <b>167.1695</b> |

**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 |
|----------------|--------|----------------|-----------------|---------------|-----------|
|----------------|--------|----------------|-----------------|---------------|-----------|

## Lancaster Promenade Project - Antelope Valley APCD Air District, Annual

**User Defined Equipment**

| Equipment Type | Number |
|----------------|--------|
|----------------|--------|

**11.0 Vegetation**

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# Lancaster Promenade Project

## CalEEMod Daily Construction Emission Summary

| 2021                         | Maximum Daily Emissions (pounds/day) |             |             |            |            |            |             |            |            |            |
|------------------------------|--------------------------------------|-------------|-------------|------------|------------|------------|-------------|------------|------------|------------|
|                              | ROG                                  | NOx         | CO          | SOx        | PM10F      | PM10Exh    | PM10Total   | PM2.5Fug   | PM2.5 Exh  | PM2.5Total |
| <b>Grading</b>               |                                      |             |             |            |            |            |             |            |            |            |
| Onsite                       | 4.2                                  | 46.4        | 30.9        | 0.1        | 4.6        | 2.0        | 6.6         | 1.7        | 1.8        | 3.5        |
| Offsite                      | 1.7                                  | 50.5        | 12.4        | 0.2        | 3.8        | 0.1        | 3.9         | 1.0        | 0.1        | 1.1        |
| Total                        | 5.9                                  | 96.9        | 43.3        | 0.3        | 8.4        | 2.1        | 10.5        | 2.7        | 1.9        | 4.6        |
| <b>BuildingConstruction</b>  |                                      |             |             |            |            |            |             |            |            |            |
| Onsite                       | 1.9                                  | 17.4        | 16.6        | 0.0        | 0.0        | 1.0        | 1.0         | 0.0        | 0.9        | 0.9        |
| Offsite                      | 3.2                                  | 20.4        | 28.9        | 0.1        | 6.4        | 0.1        | 6.5         | 1.7        | 0.1        | 1.8        |
| Total                        | 5.1                                  | 37.8        | 45.5        | 0.1        | 6.4        | 1.1        | 7.5         | 1.7        | 1.0        | 2.7        |
| <b>2021 Max Onsite</b>       | <b>4.2</b>                           | <b>46.4</b> | <b>30.9</b> | <b>0.1</b> | <b>4.6</b> | <b>2.0</b> | <b>6.6</b>  | <b>1.7</b> | <b>1.8</b> | <b>3.5</b> |
| <b>2021 Max Total</b>        | <b>5.9</b>                           | <b>96.9</b> | <b>45.5</b> | <b>0.3</b> | <b>8.4</b> | <b>2.1</b> | <b>10.5</b> | <b>2.7</b> | <b>1.9</b> | <b>4.6</b> |
| <b>2022</b>                  |                                      |             |             |            |            |            |             |            |            |            |
| <b>Building Construction</b> |                                      |             |             |            |            |            |             |            |            |            |
| Onsite                       | 1.7                                  | 15.6        | 16.4        | 0.0        | 0.0        | 0.8        | 0.8         | 0.0        | 0.8        | 0.8        |
| Offsite                      | 3.0                                  | 19.2        | 22.7        | 0.1        | 6.4        | 0.1        | 6.5         | 1.7        | 0.1        | 1.8        |
| Total                        | 4.7                                  | 34.8        | 39.1        | 0.1        | 6.4        | 0.9        | 7.3         | 1.7        | 0.9        | 2.6        |
| <b>Paving</b>                |                                      |             |             |            |            |            |             |            |            |            |
| Onsite                       | 1.8                                  | 11.1        | 14.6        | 0.0        | 0.0        | 0.6        | 0.6         | 0.0        | 0.5        | 0.5        |
| Offsite                      | 0.1                                  | 0.0         | 0.4         | 0.0        | 0.1        | 0.0        | 0.1         | 0.0        | 0.0        | 0.0        |
| Total                        | 1.9                                  | 11.1        | 15.0        | 0.0        | 0.1        | 0.6        | 0.7         | 0.0        | 0.5        | 0.5        |
| <b>Architectural Coating</b> |                                      |             |             |            |            |            |             |            |            |            |
| Onsite                       | 114.9                                | 1.4         | 1.8         | 0.0        | 0.0        | 0.1        | 0.1         | 0.0        | 0.1        | 0.1        |
| Offsite                      | 0.5                                  | 0.3         | 3.7         | 0.0        | 1.0        | 0.0        | 1.0         | 0.3        | 0.0        | 0.3        |
| Total                        | 115.4                                | 1.7         | 5.5         | 0.0        | 1.0        | 0.1        | 1.1         | 0.3        | 0.1        | 0.4        |
| <b>2022 Max Onsite</b>       | <b>114.9</b>                         | <b>15.6</b> | <b>16.4</b> | <b>0.0</b> | <b>0.0</b> | <b>0.8</b> | <b>0.8</b>  | <b>0.0</b> | <b>0.8</b> | <b>0.8</b> |
| <b>2022 Max Total</b>        | <b>115.4</b>                         | <b>34.8</b> | <b>39.1</b> | <b>0.1</b> | <b>6.4</b> | <b>0.9</b> | <b>7.3</b>  | <b>1.7</b> | <b>0.9</b> | <b>2.6</b> |
| <b>2021-2022 Max Onsite</b>  | <b>114.9</b>                         | <b>46.4</b> | <b>30.9</b> | <b>0.1</b> | <b>4.6</b> | <b>2.0</b> | <b>6.6</b>  | <b>1.7</b> | <b>1.8</b> | <b>3.5</b> |
| <b>2021-2022 Max Total</b>   | <b>115.4</b>                         | <b>96.9</b> | <b>45.5</b> | <b>0.3</b> | <b>8.4</b> | <b>2.1</b> | <b>10.5</b> | <b>2.7</b> | <b>1.9</b> | <b>4.6</b> |
| <b>AVAQMD Threshold</b>      | <b>137</b>                           | <b>137</b>  | <b>548</b>  | <b>137</b> |            |            | <b>82</b>   |            |            | <b>65</b>  |
| <b>Exceeds Threshold</b>     | <b>NO</b>                            | <b>NO</b>   | <b>NO</b>   | <b>NO</b>  |            |            | <b>NO</b>   |            |            | <b>NO</b>  |

## Lancaster Promenade Project

### CalEEMod Annual Construction Emission Summary

|                          | Maximum Annual Emissions (tons/year) |             |             |             |             |             |             |             |             |             |
|--------------------------|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                          | ROG                                  | NOx         | CO          | SOx         | PM10F       | PM10Exh     | PM10Total   | PM2.5Fug    | PM2.5 Exh   | PM2.5Total  |
| <b>2021</b>              | 0.28                                 | 3.00        | 2.33        | 0.01        | 0.37        | 0.07        | 0.44        | 0.11        | 0.07        | 0.18        |
| <b>2022</b>              | 2.14                                 | 3.28        | 3.82        | 0.01        | 0.56        | 0.09        | 0.65        | 0.15        | 0.08        | 0.23        |
| <b>Maximum Annual</b>    | <b>2.14</b>                          | <b>3.28</b> | <b>3.82</b> | <b>0.01</b> | <b>0.56</b> | <b>0.09</b> | <b>0.65</b> | <b>0.15</b> | <b>0.08</b> | <b>0.23</b> |
| <b>AVAQMD Threshold</b>  | <b>25</b>                            | <b>25</b>   | <b>100</b>  | <b>25</b>   |             |             | <b>15</b>   |             |             | <b>12</b>   |
| <b>Exceeds Threshold</b> | <b>NO</b>                            | <b>NO</b>   | <b>NO</b>   | <b>NO</b>   |             |             | <b>NO</b>   |             |             | <b>NO</b>   |

# Lancaster Promenade Project

## CalEEMod Daily Operational Emission Summary

|                          | Maximum Daily Emissions (pounds/day) |            |            |            |           |           |
|--------------------------|--------------------------------------|------------|------------|------------|-----------|-----------|
|                          | ROG                                  | NOx        | CO         | SOX        | PM10      | PM2.5     |
| Area                     | 10.8                                 | 0.4        | 32.4       | 0          | 0.2       | 0.2       |
| Energy                   | 0.3                                  | 2.4        | 1.4        | 0          | 0.2       | 0.2       |
| Mobile                   | 13                                   | 52         | 111.6      | 0.4        | 25.5      | 7         |
| Total                    | 24.1                                 | 54.8       | 145.4      | 0.4        | 25.9      | 7.4       |
| <b>AVAQMD Threshold</b>  | <b>137</b>                           | <b>137</b> | <b>548</b> | <b>137</b> | <b>82</b> | <b>65</b> |
| <b>Exceeds Threshold</b> | <b>NO</b>                            | <b>NO</b>  | <b>NO</b>  | <b>NO</b>  | <b>NO</b> | <b>NO</b> |

## CalEEMod Annual Operational Emission Summary

|                          | Annual Emissions (tons/year) |           |            |           |           |           |
|--------------------------|------------------------------|-----------|------------|-----------|-----------|-----------|
|                          | ROG                          | NOx       | CO         | SOX       | PM10      | PM2.5     |
| Area                     | 1.9                          | 0         | 2.9        | 0         | 0         | 0         |
| Energy                   | 0.1                          | 0.4       | 0.2        | 0         | 0         | 0         |
| Mobile                   | 1.9                          | 9.7       | 19.3       | 0.1       | 4.6       | 1.3       |
| Waste                    | 0                            | 0         | 0          | 0         | 0         | 0         |
| Water                    | 0                            | 0         | 0          | 0         | 0         | 0         |
| Total                    | 3.9                          | 10.1      | 22.4       | 0.1       | 4.6       | 1.3       |
| <b>AVAQMD Threshold</b>  | <b>25</b>                    | <b>25</b> | <b>100</b> | <b>25</b> | <b>15</b> | <b>12</b> |
| <b>Exceeds Threshold</b> | <b>NO</b>                    | <b>NO</b> | <b>NO</b>  | <b>NO</b> | <b>NO</b> | <b>NO</b> |

## Lancaster Promenade Project

### Construction Equipment Fuel Usage

| Activity              | Equipment                 | Project Number | Project Hours per day | Default Horse-power | Default Load Factor | Days of Construction | Total Horsepower-hours | Fuel Rate (gal/hp-hr) | Fuel Use (gallons) |
|-----------------------|---------------------------|----------------|-----------------------|---------------------|---------------------|----------------------|------------------------|-----------------------|--------------------|
| Grading               | Excavators                | 2              | 8                     | 158                 | 0.38                | 30                   | 28,819                 | 0.019763              | 570                |
|                       | Graders                   | 1              | 8                     | 187                 | 0.41                | 30                   | 18,401                 | 0.021143              | 389                |
|                       | Rubber Tired Dozers       | 1              | 8                     | 247                 | 0.4                 | 30                   | 23,712                 | 0.020461              | 485                |
|                       | Scrapers                  | 2              | 8                     | 367                 | 0.48                | 30                   | 84,557                 | 0.024738              | 2,092              |
|                       | Tractors/Loaders/Backhoes | 2              | 7                     | 97                  | 0.37                | 30                   | 15,074                 | 0.023965              | 361                |
| Building Construction | Crane                     | 1              | 7                     | 231                 | 0.29                | 255                  | 119,577                | 0.014896              | 1,781              |
|                       | Forklifts                 | 3              | 8                     | 89                  | 0.2                 | 255                  | 108,936                | 0.019105              | 2,081              |
|                       | Tractors/Loaders/Backhoes | 3              | 7                     | 97                  | 0.37                | 255                  | 192,191                | 0.023965              | 4,606              |
|                       | Welders                   | 1              | 8                     | 46                  | 0.45                | 255                  | 42,228                 | 0.023965              | 1,012              |
|                       | Generator Set             | 1              | 8                     | 84                  | 0.74                | 255                  | 126,806                | 0.023965              | 3,039              |
| Paving                | Pavers                    | 2              | 8                     | 130                 | 0.42                | 30                   | 26,208                 | 0.021525              | 564                |
|                       | Paving Equipment          | 2              | 8                     | 132                 | 0.36                | 30                   | 22,810                 | 0.018334              | 418                |
|                       | Rollers                   | 2              | 8                     | 80                  | 0.38                | 30                   | 14,592                 | 0.019412              | 283                |
| Architectural Coating | Air Compressor            | 1              | 6                     | 78                  | 0.48                | 30                   | 6,739                  | 0.023965              | 162                |

Fuel Consumption rates derived from the ARB OFFROAD2017 - Orion Web Database

Total 17,843

## Lancaster Promenade Project

### Fuel Consumption from Construction Vehicles (Derived from the ARB EMFAC2017 Mobile Source Emission Model)

#### Emission Factors

| Region (AQMD) | Calendar Year | Vehicle Category | Model Year | Speed      | Fuel | VTM<br>(miles/day) | Fuel Consumption<br>(1000 gallons/day) | Fuel Rate<br>(miles/gallon) |
|---------------|---------------|------------------|------------|------------|------|--------------------|----------------------------------------|-----------------------------|
| AVAQMD        | 2021          | MHDT-T6          | Aggregated | Aggregated | DSL  | 113890             | 10.4                                   | 10.9                        |
| AVAQMD        | 2021          | HHDT-T7          | Aggregated | Aggregated | DSL  | 218056             | 31.9                                   | 6.8                         |
|               |               |                  |            |            |      |                    | <b>Average (50%/50%)</b>               | <b>8.9</b>                  |
| AVAQMD        | 2021          | LDA              | Aggregated | Aggregated | GAS  | 4295847            | 146.6                                  | 29.3                        |
| AVAQMD        | 2021          | LDT1             | Aggregated | Aggregated | GAS  | 358471             | 14.3                                   | 25.0                        |
| AVAQMD        | 2021          | LDT2             | Aggregated | Aggregated | GAS  | 1058081            | 45.9                                   | 23.1                        |
| AVAQMD        | 2021          | MDV              | Aggregated | Aggregated | GAS  | 857735             | 46.1                                   | 18.6                        |
|               |               |                  |            |            |      |                    | <b>Average (50%/25%/25%)</b>           | <b>27</b>                   |
| AVAQMD        | 2021          | LHDT1            | Aggregated | Aggregated | DSL  | 85984              | 4.1                                    | 20.8                        |
| AVAQMD        | 2021          | LHDT2            | Aggregated | Aggregated | DSL  | 33120              | 1.8                                    | 18.7                        |

#### Vehicle Assumptions (CalEEMod)

**Haul trucks** represented by HHDT-T7 (heavy -heavy duty haul truck)

MHDT-T6 (medium heavy duty haul truck)

**Vendor trucks** assumed to be 50% HHDT-T7 and MHDT-T6)

LDA (light duty automobile for worker vehicles)

LDT1 (light duty truck 1 for worker vehicles)

LDT2 (light duty truck 2 for worker vehicles)

**Worker vehicles** represented as 50% LDT, 25% LHT1, and 25% LDT2

#### Construction Vehicle Use (Derived from the CalEEMod model output)

##### Fuel Consumption for Haul Trucks

| Construction Activity | No Haul Truck<br>Trips | Trip<br>Length | VTM<br>(miles) | DSL Fuel<br>(gallons) |
|-----------------------|------------------------|----------------|----------------|-----------------------|
| Grading               | 6235                   | 20             | 124700         | 18235                 |
| Building Construction | 0                      | 20             | 0              | 0                     |
| Paving -              | 0                      | 20             | 0              | 0                     |
| Architectural Coating | 0                      | 20             | 0              | 0                     |
| <b>Total</b>          | <b>6235</b>            |                | <b>124700</b>  | <b>18235</b>          |

##### Fuel Consumption for Vendor Trucks

| Construction Activity | No Vendor Truck<br>Trips/day | Duration<br>(days) | Trip Length<br>(miles) | VTM<br>(miles) | Fuel | Fuel Rate<br>(miles/gallon) | DSL Fuel<br>(gallons) |
|-----------------------|------------------------------|--------------------|------------------------|----------------|------|-----------------------------|-----------------------|
| Grading               | 0                            | 30                 | 7.3                    | 0              | DSL  | 8.9                         | 0                     |
| Building Construction | 177                          | 255                | 7.3                    | 329486         | DSL  | 8.9                         | 37066                 |
| Paving -              | 0                            | 30                 | 7.3                    | 0              | DSL  | 8.9                         | 0                     |
| Architectural Coating | 0                            | 30                 | 7.3                    | 0              | DSL  | 8.9                         | 0                     |
| <b>Total</b>          |                              |                    |                        | <b>329486</b>  |      |                             | <b>37066</b>          |

##### Fuel Consumption for Worker Vehicles

| Activity              | No Worker Vehicles<br>Trips/day | Duration<br>(days) | Trip Length<br>(miles) | VTM<br>(miles) | Fuel | Fuel Rate<br>(miles/gallon) | Gas Fuel<br>(gallons) |
|-----------------------|---------------------------------|--------------------|------------------------|----------------|------|-----------------------------|-----------------------|
| Grading               | 20                              | 30                 | 10.8                   | 6480           | GAS  | 27                          | 243                   |
| Building Construction | 628                             | 255                | 10.8                   | 1729512        | GAS  | 27                          | 64848                 |
| Paving -              | 15                              | 30                 | 10.8                   | 4860           | GAS  | 27                          | 182                   |
| Architectural Coating | 126                             | 30                 | 10.8                   | 40824          | GAS  | 27                          | 1531                  |
| <b>Total -DSL</b>     |                                 |                    |                        | <b>1781676</b> |      |                             | <b>66803</b>          |

| Summary     | Gallons |
|-------------|---------|
| Total -DSL  | 55300   |
| Total - GAS | 66803   |
|             | 122104  |

## Lancaster Promenade Project

### Estimation of Operational Vehicle Fuel Use

Total Annual VMT  
from CalEEMod

11,866,556

| Vehicle Class | CalEEMod                 | Fleet Mileage<br>(miles/year) | EMFAC2017<br>% DSL | Annual<br>DSL VMT | Fuel Rate -DSL<br>(mi/gallons) | DSL Fuel<br>Consumption<br>(gal/year) | EMFAC2017<br>%GAS | Annual<br>GAS VMT | GAS Fuel<br>Fuel Rate-GAS<br>(mi/gal) | Consumption<br>(gal/year) |
|---------------|--------------------------|-------------------------------|--------------------|-------------------|--------------------------------|---------------------------------------|-------------------|-------------------|---------------------------------------|---------------------------|
|               | Project Fleet Mix<br>(%) |                               |                    |                   |                                |                                       |                   |                   |                                       |                           |
| LDA           | 62.1%                    | 7,369,131                     | 0.9%               | 63,000            | 46.7                           | 1,349                                 | 99.1%             | 7,306,132         | 29.3                                  | 249,272                   |
| LDT1          | 3.7%                     | 439,063                       | 0.0%               | 189               | 23.8                           | 8                                     | 100.0%            | 438,874           | 25.0                                  | 17,549                    |
| LDT2          | 14.9%                    | 1,768,117                     | 0.7%               | 11,881            | 36.4                           | 326                                   | 99.3%             | 1,756,235         | 23.1                                  | 76,182                    |
| MDV           | 10.2%                    | 1,210,389                     | 2.2%               | 26,267            | 26.1                           | 1,007                                 | 97.8%             | 1,184,122         | 18.6                                  | 63,623                    |
| LHDT1         | 1.6%                     | 189,865                       | 40.3%              | 76,466            | 20.8                           | 3,680                                 | 59.7%             | 113,399           | 10.5                                  | 10,831                    |
| LHDT2         | 0.5%                     | 59,333                        | 62.0%              | 36,760            | 18.7                           | 1,965                                 | 38.0%             | 22,573            | 9.2                                   | 2,453                     |
| MHDT          | 1.8%                     | 213,598                       | 83.7%              | 178,767           | 10.4                           | 17,172                                | 16.3%             | 34,831            | 5.2                                   | 6,714                     |
| HHDT          | 3.8%                     | 450,929                       | 99.9%              | 450,552           | 6.8                            | 65,884                                | 0.1%              | 377               | 4.6                                   | 82                        |
| OBUS          | 0.2%                     | 23,733                        | 57.6%              | 13,663            | 8.0                            | 1,717                                 | 42.4%             | 10,070            | 5.1                                   | 1,984                     |
| UBUS          | 0.2%                     | 23,733                        | 13.3%              | 3,148             | 6.6                            | 480                                   | 86.7%             | 20,585            | 3.7                                   | 5,604                     |
| MCY           | 0.7%                     | 83,066                        | 0.0%               | -                 | -                              | -                                     | 100.0%            | 83,066            | 37.5                                  | 2,215                     |
| SBUS          | 0.2%                     | 23,733                        | 69.4%              | 16,473            | 7.4                            | 2,234                                 | 30.6%             | 7,260             | 9.7                                   | 747                       |
| MH            | 0.1%                     | 11,867                        | 23.7%              | 2,810             | 10.2                           | 277                                   | 76.3%             | 9,056             | 5.0                                   | 1,809                     |
| Totals        | 100.0%                   | 11,866,556                    |                    | 879,977           |                                | 96,096                                |                   | 10,986,579        |                                       | 439,065                   |

Total VMT-DSL 879,977 VMT

Total VMT-Gas 10,986,579 VMT

11,866,556 VMT

Total Fuel - DSL 96,096 gallons/year

Total Fuel - GAS 439,065 gallons/year

535,161

Fuel rates and fuel mixes defined in the EMFAC2017 mobile source emission model

EMFAC2017 (v1.0.2) Emissions Inventory

Region Type: Air District

Region: ANTELOPE VALLEY AQMD

Calendar Year: 2021

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption. Note 'day' in the unit is operation day.

| Region   | Calendar Y | Vehicle Ca | Model Yea  | Speed      | Fuel | VMT      | Fuel Consumption | Fuel Rate |         |     | VMT          | VMT      | %DSL  | %GAS   |
|----------|------------|------------|------------|------------|------|----------|------------------|-----------|---------|-----|--------------|----------|-------|--------|
| ANTELOPE | 2021       | LDA        | Aggregater | Aggregater | DSL  | 38028.02 | 0.814031         | 46.71571  |         |     |              |          |       |        |
| ANTELOPE | 2021       | LDT1       | Aggregater | Aggregater | DSL  | 140.4335 | 0.005891         | 23.83848  | LDA     | DSL | 1336170 GAS  | 1.55E+08 | 0.9%  | 99.1%  |
| ANTELOPE | 2021       | LDT2       | Aggregater | Aggregater | DSL  | 5171.765 | 0.142021         | 36.41554  | LDT1    | DSL | 7338.123 GAS | 17065391 | 0.0%  | 100.0% |
| ANTELOPE | 2021       | LHDT1      | Aggregater | Aggregater | DSL  | 85983.65 | 4.137615         | 20.78097  | LDT2    | DSL | 355535.4 GAS | 52553142 | 0.7%  | 99.3%  |
| ANTELOPE | 2021       | LHDT2      | Aggregater | Aggregater | DSL  | 33120.05 | 1.770129         | 18.71053  | LHDT1   | DSL | 2667215 GAS  | 3955472  | 40.3% | 59.7%  |
| ANTELOPE | 2021       | MDV        | Aggregater | Aggregater | DSL  | 18870.2  | 0.723124         | 26.09541  | LHDT2   | DSL | 1035823 GAS  | 636046.4 | 62.0% | 38.0%  |
| ANTELOPE | 2021       | MH         | Aggregater | Aggregater | DSL  | 2461.763 | 0.242378         | 10.15672  | MCY     | DSL | 0 GAS        | 1259346  | 0.0%  | 100.0% |
| ANTELOPE | 2021       | OBUS       | Aggregater | Aggregater | DSL  | 4032.026 | 0.506594         | 7.959084  | MDV     | DSL | 734378.7 GAS | 33105799 | 2.2%  | 97.8%  |
| ANTELOPE | 2021       | SBUS       | Aggregater | Aggregater | DSL  | 12965.21 | 1.757862         | 7.375556  | MH      | DSL | 61474.43 GAS | 198097   | 23.7% | 76.3%  |
| ANTELOPE | 2021       | T6-MHDT    | Aggregater | Aggregater | DSL  | 113890.2 | 10.93987         | 10.41056  | OBUS    | DSL | 233602.7 GAS | 172164.4 | 57.6% | 42.4%  |
| ANTELOPE | 2021       | T7-HHDT    | Aggregater | Aggregater | DSL  | 218055.9 | 31.88603         | 6.838603  | SBUS    | DSL | 121324.5 GAS | 53467.22 | 69.4% | 30.6%  |
| ANTELOPE | 2021       | UBUS       | Aggregater | Aggregater | DSL  | 3923.915 | 0.598585         | 6.555314  | T6-MHDT | DSL | 4146737 GAS  | 807949.9 | 83.7% | 16.3%  |
| ANTELOPE | 2021       | LDA        | Aggregater | Aggregater | GAS  | 4295847  | 146.5667         | 29.30984  | T7-HHDT | DSL | 6891921 GAS  | 5770.22  | 99.9% | 0.1%   |
| ANTELOPE | 2021       | LDT1       | Aggregater | Aggregater | GAS  | 358470.8 | 14.33372         | 25.00892  | UBUS    | DSL | 5105.145 GAS | 33383.22 | 13.3% | 86.7%  |
| ANTELOPE | 2021       | LDT2       | Aggregater | Aggregater | GAS  | 1058081  | 45.89764         | 23.05305  |         |     |              |          |       |        |
| ANTELOPE | 2021       | LHDT1      | Aggregater | Aggregater | GAS  | 78757.88 | 7.52252          | 10.46961  |         |     |              |          |       |        |
| ANTELOPE | 2021       | LHDT2      | Aggregater | Aggregater | GAS  | 11091.89 | 1.205135         | 9.203856  |         |     |              |          |       |        |
| ANTELOPE | 2021       | MCY        | Aggregater | Aggregater | GAS  | 54199.44 | 1.444968         | 37.5091   |         |     |              |          |       |        |
| ANTELOPE | 2021       | MDV        | Aggregater | Aggregater | GAS  | 857734.5 | 46.0863          | 18.61148  |         |     |              |          |       |        |
| ANTELOPE | 2021       | MH         | Aggregater | Aggregater | GAS  | 7868.715 | 1.571699         | 5.006501  |         |     |              |          |       |        |
| ANTELOPE | 2021       | OBUS       | Aggregater | Aggregater | GAS  | 4768.877 | 0.939656         | 5.075128  |         |     |              |          |       |        |
| ANTELOPE | 2021       | SBUS       | Aggregater | Aggregater | GAS  | 1213.174 | 0.12483          | 9.718646  |         |     |              |          |       |        |
| ANTELOPE | 2021       | T6-MHDT    | Aggregater | Aggregater | GAS  | 17545.61 | 3.382273         | 5.18752   |         |     |              |          |       |        |
| ANTELOPE | 2021       | T7-HHDT    | Aggregater | Aggregater | GAS  | 76.46375 | 0.016699         | 4.57905   |         |     |              |          |       |        |
| ANTELOPE | 2021       | UBUS       | Aggregater | Aggregater | GAS  | 588.5479 | 0.160214         | 3.673503  |         |     |              |          |       |        |