

APPENDIX 4.2-5

Air Quality and GHG Calculations for Summer, Operational

Azusa TOD Operational
South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|--------------------------|--------|---------------|-------------|--------------------|------------|
| General Office Building | 93.00 | 1000sqft | 2.13 | 93,000.00 | 0 |
| Hotel | 150.00 | Room | 5.00 | 217,800.00 | 0 |
| Apartments Mid Rise | 840.00 | Dwelling Unit | 22.11 | 840,000.00 | 2915 |
| Regional Shopping Center | 226.00 | 1000sqft | 5.19 | 226,000.00 | 0 |
| Strip Mall | 84.00 | 1000sqft | 1.93 | 84,000.00 | 0 |

1.2 Other Project Characteristics

| | | | | | |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| Urbanization | Urban | Wind Speed (m/s) | 2.2 | Precipitation Freq (Days) | 31 |
| Climate Zone | 9 | | | Operational Year | 2035 |
| Utility Company | Southern California Edison | | | | |
| CO2 Intensity (lb/MWhr) | 630.89 | CH4 Intensity (lb/MWhr) | 0.029 | N2O Intensity (lb/MWhr) | 0.006 |

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 2035 operational year

Land Use - 226,000 retail, 93,000 office, 84,000 services (assumed as strip mall), 150 room lodging (assumed as hotel), 840 units (assumed as apartments mid rise), 2,915 persons

Construction Phase - Operational only, ignore construction

Woodstoves - no stoves/fireplaces

Energy Use -

Energy Mitigation - assume 25% improvement over 2008 Title 24 due to compliance with 2013 Title 24 standards

| Table Name | Column Name | Default Value | New Value |
|---------------------------|--------------------|---------------|-----------|
| tblFireplaces | FireplaceDayYear | 25.00 | 0.00 |
| tblFireplaces | FireplaceHourDay | 3.00 | 0.00 |
| tblFireplaces | FireplaceWoodMass | 1,019.20 | 0.00 |
| tblFireplaces | NumberGas | 714.00 | 0.00 |
| tblFireplaces | NumberNoFireplace | 84.00 | 0.00 |
| tblFireplaces | NumberWood | 42.00 | 0.00 |
| tblLandUse | Population | 2,402.00 | 2,915.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2035 |
| tblWoodstoves | NumberCatalytic | 42.00 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 42.00 | 0.00 |
| tblWoodstoves | WoodstoveDayYear | 25.00 | 0.00 |
| tblWoodstoves | WoodstoveWoodMass | 999.60 | 0.00 |

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|----------------|-----------------|-----------------|---------------|----------------|---------------|----------------|----------------|---------------|----------------|---------------|-------------------------|-------------------------|---------------|---------------|-------------------------|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2016 | 8.4515 | 49.3977 | 91.2546 | 0.1854 | 10.4215 | 2.3175 | 12.7390 | 2.7873 | 2.1704 | 4.9577 | 0.0000 | 16,668.47 31 | 16,668.47 31 | 1.1954 | 0.0000 | 16,693.57 62 |
| 2017 | 7.6642 | 45.3843 | 84.6178 | 0.1853 | 10.4219 | 2.0989 | 12.5208 | 2.7875 | 1.9653 | 4.7528 | 0.0000 | 16,195.60 78 | 16,195.60 78 | 1.1432 | 0.0000 | 16,219.61 40 |
| 2018 | 6.8340 | 40.6376 | 78.7259 | 0.1852 | 10.4219 | 1.7960 | 12.2179 | 2.7875 | 1.6827 | 4.4702 | 0.0000 | 15,745.47 78 | 15,745.47 78 | 1.0986 | 0.0000 | 15,768.54 75 |
| Total | 22.9497 | 135.4197 | 254.5984 | 0.5559 | 31.2654 | 6.2123 | 37.4777 | 8.3623 | 5.8184 | 14.1807 | 0.0000 | 48,609.55 87 | 48,609.55 87 | 3.4371 | 0.0000 | 48,681.73 77 |

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 | | | | | |
| 2016 | 8.4515 | 49.3977 | 91.2546 | 0.1854 | 10.4215 | 2.3175 | 12.7390 | 2.7873 | 2.1704 | 4.9577 | 0.0000 | 16,668.47 31 | 16,668.47 31 | 1.1954 | 0.0000 | 16,693.57 62 |
| 2017 | 7.6642 | 45.3843 | 84.6178 | 0.1853 | 10.4219 | 2.0989 | 12.5208 | 2.7875 | 1.9653 | 4.7528 | 0.0000 | 16,195.60 78 | 16,195.60 78 | 1.1432 | 0.0000 | 16,219.61 40 |
| 2018 | 6.8340 | 40.6376 | 78.7259 | 0.1852 | 10.4219 | 1.7960 | 12.2179 | 2.7875 | 1.6827 | 4.4702 | 0.0000 | 15,745.47 78 | 15,745.47 78 | 1.0986 | 0.0000 | 15,768.54 75 |
| Total | 22.9497 | 135.4197 | 254.5984 | 0.5559 | 31.2654 | 6.2123 | 37.4777 | 8.3623 | 5.8184 | 14.1807 | 0.0000 | 48,609.55 87 | 48,609.55 87 | 3.4371 | 0.0000 | 48,681.73 77 |

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 | 36.7355 | 0.7972 | 69.1136 | 3.6600e-003 | | 0.3845 | 0.3845 | | 0.3845 | 0.3845 | 0.0000 | 124.9050 | 124.9050 | 0.1191 | 0.0000 | 127.4060 |
| Energy | 0.4528 | 3.9823 | 2.4731 | 0.0247 | | 0.3129 | 0.3129 | | 0.3129 | 0.3129 | | 4,939.9112 | 4,939.9112 | 0.0947 | 0.0906 | 4,969.9746 |
| Mobile | 42.6652 | 93.1924 | 440.0658 | 1.9452 | 123.9147 | 2.6558 | 126.5705 | 33.1346 | 2.4507 | 35.5854 | | 138,875.7472 | 138,875.7472 | 3.5117 | | 138,949.4933 |
| Total | 79.8535 | 97.9720 | 511.6525 | 1.9735 | 123.9147 | 3.3532 | 127.2679 | 33.1346 | 3.1481 | 36.2827 | 0.0000 | 143,940.5634 | 143,940.5634 | 3.7255 | 0.0906 | 144,046.8739 |

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 | 36.7355 | 0.7972 | 69.1136 | 3.6600e-003 | | 0.3845 | 0.3845 | | 0.3845 | 0.3845 | 0.0000 | 124.9050 | 124.9050 | 0.1191 | 0.0000 | 127.4060 |
| Energy | 0.3582 | 3.1499 | 1.9541 | 0.0195 | | 0.2475 | 0.2475 | | 0.2475 | 0.2475 | | 3,907.6998 | 3,907.6998 | 0.0749 | 0.0716 | 3,931.4814 |
| Mobile | 42.6652 | 93.1924 | 440.0658 | 1.9452 | 123.9147 | 2.6558 | 126.5705 | 33.1346 | 2.4507 | 35.5854 | | 138,875.7472 | 138,875.7472 | 3.5117 | | 138,949.4933 |
| Total | 79.7589 | 97.1395 | 511.1335 | 1.9684 | 123.9147 | 3.2878 | 127.2025 | 33.1346 | 3.0827 | 36.2174 | 0.0000 | 142,908.3519 | 142,908.3519 | 3.7057 | 0.0716 | 143,008.3807 |

| | ROG | NOx | CO | SO2 | 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 | 0.12 | 0.85 | 0.10 | 0.26 | 0.00 | 1.95 | 0.05 | 0.00 | 2.08 | 0.18 | 0.00 | 0.72 | 0.72 | 0.53 | 20.90 | 0.72 |

3.0 Construction Detail

Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1 | Building Construction | Building Construction | 1/1/2016 | 11/1/2018 | 5 | 740 | |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Building Construction | Cranes | 1 | 7.00 | 226 | 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 |

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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Building Construction | 9 | 825.00 | 192.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

3.1 Mitigation Measures Construction

3.2 Building Construction - 2016

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 3.4062 | 28.5063 | 18.5066 | 0.0268 | | 1.9674 | 1.9674 | | 1.8485 | 1.8485 | | 2,669.2864 | 2,669.2864 | 0.6620 | | 2,683.1890 |
| Total | 3.4062 | 28.5063 | 18.5066 | 0.0268 | | 1.9674 | 1.9674 | | 1.8485 | 1.8485 | | 2,669.2864 | 2,669.2864 | 0.6620 | | 2,683.1890 |

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 | 1.5986 | 16.5825 | 19.1215 | 0.0418 | 1.2000 | 0.2730 | 1.4730 | 0.3417 | 0.2511 | 0.5928 | | 4,186.1552 | 4,186.1552 | 0.0299 | | 4,186.7826 |
| Worker | 3.4466 | 4.3089 | 53.6266 | 0.1168 | 9.2216 | 0.0771 | 9.2986 | 2.4456 | 0.0709 | 2.5165 | | 9,813.0315 | 9,813.0315 | 0.5035 | | 9,823.6046 |
| Total | 5.0453 | 20.8914 | 72.7480 | 0.1586 | 10.4215 | 0.3501 | 10.7716 | 2.7873 | 0.3219 | 3.1093 | | 13,999.1867 | 13,999.1867 | 0.5334 | | 14,010.3872 |

3.2 Building Construction - 2016

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 3.4062 | 28.5063 | 18.5066 | 0.0268 | | 1.9674 | 1.9674 | | 1.8485 | 1.8485 | 0.0000 | 2,669.2864 | 2,669.2864 | 0.6620 | | 2,683.1890 |
| Total | 3.4062 | 28.5063 | 18.5066 | 0.0268 | | 1.9674 | 1.9674 | | 1.8485 | 1.8485 | 0.0000 | 2,669.2864 | 2,669.2864 | 0.6620 | | 2,683.1890 |

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 | 1.5986 | 16.5825 | 19.1215 | 0.0418 | 1.2000 | 0.2730 | 1.4730 | 0.3417 | 0.2511 | 0.5928 | | 4,186.1552 | 4,186.1552 | 0.0299 | | 4,186.7826 |
| Worker | 3.4466 | 4.3089 | 53.6266 | 0.1168 | 9.2216 | 0.0771 | 9.2986 | 2.4456 | 0.0709 | 2.5165 | | 9,813.0315 | 9,813.0315 | 0.5035 | | 9,823.6046 |
| Total | 5.0453 | 20.8914 | 72.7480 | 0.1586 | 10.4215 | 0.3501 | 10.7716 | 2.7873 | 0.3219 | 3.1093 | | 13,999.1867 | 13,999.1867 | 0.5334 | | 14,010.3872 |

3.2 Building Construction - 2017

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 | 3.1024 | 26.4057 | 18.1291 | 0.0268 | | 1.7812 | 1.7812 | | 1.6730 | 1.6730 | | 2,639.8053 | 2,639.8053 | 0.6497 | | 2,653.4490 |
| Total | 3.1024 | 26.4057 | 18.1291 | 0.0268 | | 1.7812 | 1.7812 | | 1.6730 | 1.6730 | | 2,639.8053 | 2,639.8053 | 0.6497 | | 2,653.4490 |

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 | 1.4649 | 15.0886 | 17.9822 | 0.0417 | 1.2004 | 0.2435 | 1.4439 | 0.3419 | 0.2240 | 0.5659 | | 4,118.3511 | 4,118.3511 | 0.0289 | | 4,118.9575 |
| Worker | 3.0970 | 3.8901 | 48.5066 | 0.1168 | 9.2216 | 0.0741 | 9.2957 | 2.4456 | 0.0684 | 2.5140 | | 9,437.4514 | 9,437.4514 | 0.4646 | | 9,447.2075 |
| Total | 4.5618 | 18.9787 | 66.4887 | 0.1585 | 10.4219 | 0.3177 | 10.7396 | 2.7875 | 0.2924 | 3.0798 | | 13,555.8025 | 13,555.8025 | 0.4935 | | 13,566.1650 |

3.2 Building Construction - 2017**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 3.1024 | 26.4057 | 18.1291 | 0.0268 | | 1.7812 | 1.7812 | | 1.6730 | 1.6730 | 0.0000 | 2,639.8053 | 2,639.8053 | 0.6497 | | 2,653.4490 |
| Total | 3.1024 | 26.4057 | 18.1291 | 0.0268 | | 1.7812 | 1.7812 | | 1.6730 | 1.6730 | 0.0000 | 2,639.8053 | 2,639.8053 | 0.6497 | | 2,653.4490 |

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 | 1.4649 | 15.0886 | 17.9822 | 0.0417 | 1.2004 | 0.2435 | 1.4439 | 0.3419 | 0.2240 | 0.5659 | | 4,118.3511 | 4,118.3511 | 0.0289 | | 4,118.9575 |
| Worker | 3.0970 | 3.8901 | 48.5066 | 0.1168 | 9.2216 | 0.0741 | 9.2957 | 2.4456 | 0.0684 | 2.5140 | | 9,437.4514 | 9,437.4514 | 0.4646 | | 9,447.2075 |
| Total | 4.5618 | 18.9787 | 66.4887 | 0.1585 | 10.4219 | 0.3177 | 10.7396 | 2.7875 | 0.2924 | 3.0798 | | 13,555.8025 | 13,555.8025 | 0.4935 | | 13,566.1650 |

3.2 Building Construction - 2018

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 | 2.6687 | 23.2608 | 17.5327 | 0.0268 | | 1.4943 | 1.4943 | | 1.4048 | 1.4048 | | 2,609.9390 | 2,609.9390 | 0.6387 | | 2,623.3517 |
| Total | 2.6687 | 23.2608 | 17.5327 | 0.0268 | | 1.4943 | 1.4943 | | 1.4048 | 1.4048 | | 2,609.9390 | 2,609.9390 | 0.6387 | | 2,623.3517 |

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 | 1.3737 | 13.8481 | 17.1313 | 0.0417 | 1.2004 | 0.2295 | 1.4299 | 0.3419 | 0.2111 | 0.5530 | | 4,049.2432 | 4,049.2432 | 0.0287 | | 4,049.8457 |
| Worker | 2.7917 | 3.5287 | 44.0620 | 0.1167 | 9.2216 | 0.0722 | 9.2937 | 2.4456 | 0.0668 | 2.5124 | | 9,086.2956 | 9,086.2956 | 0.4312 | | 9,095.3501 |
| Total | 4.1653 | 17.3768 | 61.1932 | 0.1584 | 10.4219 | 0.3017 | 10.7236 | 2.7875 | 0.2779 | 3.0654 | | 13,135.5389 | 13,135.5389 | 0.4599 | | 13,145.1958 |

3.2 Building Construction - 2018

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 | 2.6687 | 23.2608 | 17.5327 | 0.0268 | | 1.4943 | 1.4943 | | 1.4048 | 1.4048 | 0.0000 | 2,609.9389 | 2,609.9389 | 0.6387 | | 2,623.3517 |
| Total | 2.6687 | 23.2608 | 17.5327 | 0.0268 | | 1.4943 | 1.4943 | | 1.4048 | 1.4048 | 0.0000 | 2,609.9389 | 2,609.9389 | 0.6387 | | 2,623.3517 |

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 | 1.3737 | 13.8481 | 17.1313 | 0.0417 | 1.2004 | 0.2295 | 1.4299 | 0.3419 | 0.2111 | 0.5530 | | 4,049.2432 | 4,049.2432 | 0.0287 | | 4,049.8457 |
| Worker | 2.7917 | 3.5287 | 44.0620 | 0.1167 | 9.2216 | 0.0722 | 9.2937 | 2.4456 | 0.0668 | 2.5124 | | 9,086.2956 | 9,086.2956 | 0.4312 | | 9,095.3501 |
| Total | 4.1653 | 17.3768 | 61.1932 | 0.1584 | 10.4219 | 0.3017 | 10.7236 | 2.7875 | 0.2779 | 3.0654 | | 13,135.5389 | 13,135.5389 | 0.4599 | | 13,145.1958 |

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------|---------|---------|----------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|--------------|--------------|--------|-----|--------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 42.6652 | 93.1924 | 440.0658 | 1.9452 | 123.9147 | 2.6558 | 126.5705 | 33.1346 | 2.4507 | 35.5854 | | 138,875.7472 | 138,875.7472 | 3.5117 | | 138,949.4933 |
| Unmitigated | 42.6652 | 93.1924 | 440.0658 | 1.9452 | 123.9147 | 2.6558 | 126.5705 | 33.1346 | 2.4507 | 35.5854 | | 138,875.7472 | 138,875.7472 | 3.5117 | | 138,949.4933 |

4.2 Trip Summary Information

| Land Use | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|--------------------------|-------------------------|------------------|------------------|-------------------|-------------------|
| | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments Mid Rise | 5,535.60 | 6,014.40 | 5098.80 | 18,936,489 | 18,936,489 |
| General Office Building | 1,023.93 | 220.41 | 91.14 | 2,499,486 | 2,499,486 |
| Hotel | 1,225.50 | 1,228.50 | 892.50 | 2,811,762 | 2,811,762 |
| Regional Shopping Center | 9,704.44 | 11,293.22 | 5704.24 | 20,244,114 | 20,244,114 |
| Strip Mall | 3,722.88 | 3,531.36 | 1716.12 | 6,485,643 | 6,485,643 |
| Total | 21,212.35 | 22,287.89 | 13,502.80 | 50,977,493 | 50,977,493 |

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 Mid Rise | 14.70 | 5.90 | 8.70 | 40.20 | 19.20 | 40.60 | 86 | 11 | 3 |
| General Office Building | 16.60 | 8.40 | 6.90 | 33.00 | 48.00 | 19.00 | 77 | 19 | 4 |
| Hotel | 16.60 | 8.40 | 6.90 | 19.40 | 61.60 | 19.00 | 58 | 38 | 4 |
| Regional Shopping Center | 16.60 | 8.40 | 6.90 | 16.30 | 64.70 | 19.00 | 54 | 35 | 11 |
| Strip Mall | 16.60 | 8.40 | 6.90 | 16.60 | 64.40 | 19.00 | 45 | 40 | 15 |

| LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0.474926 | 0.062601 | 0.188601 | 0.146937 | 0.045783 | 0.007301 | 0.017304 | 0.043806 | 0.002178 | 0.002600 | 0.003891 | 0.000533 | 0.003539 |

5.0 Energy Detail

2.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

| | ROG | NOx | CO | SO2 | 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 | 0.3582 | 3.1499 | 1.9541 | 0.0195 | | 0.2475 | 0.2475 | | 0.2475 | 0.2475 | | 3,907.6998 | 3,907.6998 | 0.0749 | 0.0716 | 3,931.4814 |
| NaturalGas Unmitigated | 0.4528 | 3.9823 | 2.4731 | 0.0247 | | 0.3129 | 0.3129 | | 0.3129 | 0.3129 | | 4,939.9112 | 4,939.9112 | 0.0947 | 0.0906 | 4,969.9746 |

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 | | | | | |
| General Office Building | 2784.9 | 0.0300 | 0.2730 | 0.2294 | 1.6400e-003 | | 0.0208 | 0.0208 | | 0.0208 | 0.0208 | | 327.6358 | 327.6358 | 6.2800e-003 | 6.0100e-003 | 329.6297 |
| Hotel | 14929.7 | 0.1610 | 1.4637 | 1.2295 | 8.7800e-003 | | 0.1112 | 0.1112 | | 0.1112 | 0.1112 | | 1,756.4403 | 1,756.4403 | 0.0337 | 0.0322 | 1,767.1297 |
| Regional Shopping Center | 1052.6 | 0.0114 | 0.1032 | 0.0867 | 6.2000e-004 | | 7.8400e-003 | 7.8400e-003 | | 7.8400e-003 | 7.8400e-003 | | 123.8356 | 123.8356 | 2.3700e-003 | 2.2700e-003 | 124.5893 |
| Strip Mall | 391.233 | 4.2200e-003 | 0.0384 | 0.0322 | 2.3000e-004 | | 2.9200e-003 | 2.9200e-003 | | 2.9200e-003 | 2.9200e-003 | | 46.0274 | 46.0274 | 8.8000e-004 | 8.4000e-004 | 46.3075 |
| Apartments Mid Rise | 22830.8 | 0.2462 | 2.1040 | 0.8953 | 0.0134 | | 0.1701 | 0.1701 | | 0.1701 | 0.1701 | | 2,685.9721 | 2,685.9721 | 0.0515 | 0.0492 | 2,702.3185 |
| Total | | 0.4528 | 3.9823 | 2.4731 | 0.0247 | | 0.3129 | 0.3129 | | 0.3129 | 0.3129 | | 4,939.9112 | 4,939.9112 | 0.0947 | 0.0906 | 4,969.9746 |

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 | | | | | |
| General Office Building | 2.11352 | 0.0228 | 0.2072 | 0.1741 | 1.2400e-003 | | 0.0158 | 0.0158 | | 0.0158 | 0.0158 | | 248.6495 | 248.6495 | 4.7700e-003 | 4.5600e-003 | 250.1627 |
| Hotel | 11.803 | 0.1273 | 1.1572 | 0.9720 | 6.9400e-003 | | 0.0879 | 0.0879 | | 0.0879 | 0.0879 | | 1,388.5847 | 1,388.5847 | 0.0266 | 0.0255 | 1,397.0354 |
| Regional Shopping Center | 0.865301 | 9.3300e-003 | 0.0848 | 0.0713 | 5.1000e-004 | | 6.4500e-003 | 6.4500e-003 | | 6.4500e-003 | 6.4500e-003 | | 101.8002 | 101.8002 | 1.9500e-003 | 1.8700e-003 | 102.4197 |
| Strip Mall | 0.321616 | 3.4700e-003 | 0.0315 | 0.0265 | 1.9000e-004 | | 2.4000e-003 | 2.4000e-003 | | 2.4000e-003 | 2.4000e-003 | | 37.8372 | 37.8372 | 7.3000e-004 | 6.9000e-004 | 38.0675 |
| Apartments Mid Rise | 18.112 | 0.1953 | 1.6692 | 0.7103 | 0.0107 | | 0.1350 | 0.1350 | | 0.1350 | 0.1350 | | 2,130.8282 | 2,130.8282 | 0.0408 | 0.0391 | 2,143.7961 |
| Total | | 0.3582 | 3.1499 | 1.9541 | 0.0195 | | 0.2475 | 0.2475 | | 0.2475 | 0.2475 | | 3,907.6998 | 3,907.6998 | 0.0749 | 0.0717 | 3,931.4814 |

6.0 Area Detail

6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------|---------|--------|---------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 36.7355 | 0.7972 | 69.1136 | 3.6600e-003 | | 0.3845 | 0.3845 | | 0.3845 | 0.3845 | 0.0000 | 124.9050 | 124.9050 | 0.1191 | 0.0000 | 127.4060 |
| Unmitigated | 36.7355 | 0.7972 | 69.1136 | 3.6600e-003 | | 0.3845 | 0.3845 | | 0.3845 | 0.3845 | 0.0000 | 124.9050 | 124.9050 | 0.1191 | 0.0000 | 127.4060 |

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 | 5.7417 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 28.9238 | | | | | 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 | 2.0699 | 0.7972 | 69.1136 | 3.6600e-003 | | 0.3845 | 0.3845 | | 0.3845 | 0.3845 | | 124.9050 | 124.9050 | 0.1191 | | 127.4060 |
| Total | 36.7355 | 0.7972 | 69.1136 | 3.6600e-003 | | 0.3845 | 0.3845 | | 0.3845 | 0.3845 | 0.0000 | 124.9050 | 124.9050 | 0.1191 | 0.0000 | 127.4060 |

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 | 5.7417 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 28.9238 | | | | | 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 | 2.0699 | 0.7972 | 69.1136 | 3.6600e-003 | | 0.3845 | 0.3845 | | 0.3845 | 0.3845 | | 124.9050 | 124.9050 | 0.1191 | | 127.4060 |
| Total | 36.7355 | 0.7972 | 69.1136 | 3.6600e-003 | | 0.3845 | 0.3845 | | 0.3845 | 0.3845 | 0.0000 | 124.9050 | 124.9050 | 0.1191 | 0.0000 | 127.4060 |

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 Vegetation
