



Appendix A. Air Quality Emission Table

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Vista Roman Creek - San Diego County, Summer

**Vista Roman Creek
San Diego County, Summer**

1.0 Project Characteristics

1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|----------------------------|-------|--------|-------------|--------------------|------------|
| Other Non-Asphalt Surfaces | 16.00 | Acre | 16.00 | 696,960.00 | 0 |

1.2 Other Project Characteristics

| | | | | | |
|---------------------------------|--------------------------|---------------------------------|-------|----------------------------------|-------|
| Urbanization | Urban | Wind Speed (m/s) | 2.6 | Precipitation Freq (Days) | 40 |
| Climate Zone | 13 | | | Operational Year | 2021 |
| Utility Company | San Diego Gas & Electric | | | | |
| CO2 Intensity (lb/MW hr) | 720.49 | CH4 Intensity (lb/MW hr) | 0.029 | N2O Intensity (lb/MW hr) | 0.006 |

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - non-asphalt parking is used to represent the mitigation site.

Construction Phase - Schedule adjusted to reflect the six month construction schedule.

Off-road Equipment - no cranes or welders would be required on-site

Grading - up to 16 acres will require grading

Construction Off-road Equipment Mitigation -

Vista Roman Creek - San Diego County, Summer

| Table Name | Column Name | Default Value | New Value |
|----------------------|----------------------------|---------------|-----------|
| tblConstructionPhase | NumDays | 300.00 | 40.00 |
| tblConstructionPhase | NumDays | 30.00 | 40.00 |
| tblConstructionPhase | NumDays | 10.00 | 40.00 |
| tblConstructionPhase | PhaseEndDate | 5/21/2021 | 7/17/2020 |
| tblConstructionPhase | PhaseEndDate | 3/27/2020 | 5/22/2020 |
| tblConstructionPhase | PhaseEndDate | 2/14/2020 | 3/27/2020 |
| tblConstructionPhase | PhaseStartDate | 3/28/2020 | 5/25/2020 |
| tblConstructionPhase | PhaseStartDate | 2/15/2020 | 3/30/2020 |
| tblConstructionPhase | PhaseStartDate | 2/1/2020 | 2/3/2020 |
| tblGrading | AcresOfGrading | 100.00 | 16.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |

2.0 Emissions Summary

Vista Roman Creek - San Diego County, 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 | 0.3798 | 2.0000e-005 | 1.6400e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | | 3.7300e-003 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Total | 0.3798 | 2.0000e-005 | 1.6400e-003 | 0.0000 | 0.0000 | 1.0000e-005 | 1.0000e-005 | 0.0000 | 1.0000e-005 | 1.0000e-005 | | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | 0.0000 | 3.7300e-003 |

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 | 0.3798 | 2.0000e-005 | 1.6400e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | | 3.7300e-003 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Total | 0.3798 | 2.0000e-005 | 1.6400e-003 | 0.0000 | 0.0000 | 1.0000e-005 | 1.0000e-005 | 0.0000 | 1.0000e-005 | 1.0000e-005 | | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | 0.0000 | 3.7300e-003 |

Vista Roman Creek - San Diego County, 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 | Site Preparation | Site Preparation | 2/3/2020 | 3/27/2020 | 5 | 40 | |
| 2 | Grading | Grading | 3/30/2020 | 5/22/2020 | 5 | 40 | |
| 3 | Building Construction | Building Construction | 5/25/2020 | 7/17/2020 | 5 | 40 | |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 16

Acres of Paving: 16

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

OffRoad Equipment

Vista Roman Creek - San Diego County, Summer

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Grading | Excavators | 2 | 8.00 | 158 | 0.38 |
| Building Construction | Cranes | 0 | 7.00 | 231 | 0.29 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97 | 0.37 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |
| Site Preparation | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Site Preparation | Rubber Tired Dozers | 3 | 8.00 | 247 | 0.40 |
| Grading | Scrapers | 2 | 8.00 | 367 | 0.48 |
| Building Construction | Welders | 0 | 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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation | 7 | 18.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 8 | 20.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 7 | 293.00 | 114.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |

3.1 Mitigation Measures Construction

Vista Roman Creek - San Diego County, Summer

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|----------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 18.0663 | 0.0000 | 18.0663 | 9.9307 | 0.0000 | 9.9307 | | | 0.0000 | | | 0.0000 |
| Off-Road | 4.0765 | 42.4173 | 21.5136 | 0.0380 | | 2.1974 | 2.1974 | | 2.0216 | 2.0216 | | 3,685.1016 | 3,685.1016 | 1.1918 | | 3,714.8975 |
| Total | 4.0765 | 42.4173 | 21.5136 | 0.0380 | 18.0663 | 2.1974 | 20.2637 | 9.9307 | 2.0216 | 11.9523 | | 3,685.1016 | 3,685.1016 | 1.1918 | | 3,714.8975 |

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 | 0.0661 | 0.0445 | 0.5102 | 1.5200e-003 | 0.1479 | 1.0400e-003 | 0.1489 | 0.0392 | 9.6000e-004 | 0.0402 | | 151.6945 | 151.6945 | 4.5300e-003 | | 151.8077 |
| Total | 0.0661 | 0.0445 | 0.5102 | 1.5200e-003 | 0.1479 | 1.0400e-003 | 0.1489 | 0.0392 | 9.6000e-004 | 0.0402 | | 151.6945 | 151.6945 | 4.5300e-003 | | 151.8077 |

Vista Roman Creek - San Diego County, Summer

3.2 Site Preparation - 2020

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 | | | | | 18.0663 | 0.0000 | 18.0663 | 9.9307 | 0.0000 | 9.9307 | | | 0.0000 | | | 0.0000 |
| Off-Road | 4.0765 | 42.4173 | 21.5136 | 0.0380 | | 2.1974 | 2.1974 | | 2.0216 | 2.0216 | 0.0000 | 3,685.1016 | 3,685.1016 | 1.1918 | | 3,714.8975 |
| Total | 4.0765 | 42.4173 | 21.5136 | 0.0380 | 18.0663 | 2.1974 | 20.2637 | 9.9307 | 2.0216 | 11.9523 | 0.0000 | 3,685.1016 | 3,685.1016 | 1.1918 | | 3,714.8975 |

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 | 0.0661 | 0.0445 | 0.5102 | 1.5200e-003 | 0.1479 | 1.0400e-003 | 0.1489 | 0.0392 | 9.6000e-004 | 0.0402 | | 151.6945 | 151.6945 | 4.5300e-003 | | 151.8077 |
| Total | 0.0661 | 0.0445 | 0.5102 | 1.5200e-003 | 0.1479 | 1.0400e-003 | 0.1489 | 0.0392 | 9.6000e-004 | 0.0402 | | 151.6945 | 151.6945 | 4.5300e-003 | | 151.8077 |

Vista Roman Creek - San Diego County, Summer

3.3 Grading - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 6.4463 | 0.0000 | 6.4463 | 3.3560 | 0.0000 | 3.3560 | | | 0.0000 | | | 0.0000 |
| Off-Road | 4.4501 | 50.1975 | 31.9583 | 0.0620 | | 2.1739 | 2.1739 | | 2.0000 | 2.0000 | | 6,005.8653 | 6,005.8653 | 1.9424 | | 6,054.4257 |
| Total | 4.4501 | 50.1975 | 31.9583 | 0.0620 | 6.4463 | 2.1739 | 8.6202 | 3.3560 | 2.0000 | 5.3560 | | 6,005.8653 | 6,005.8653 | 1.9424 | | 6,054.4257 |

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 | 0.0734 | 0.0495 | 0.5669 | 1.6900e-003 | 0.1643 | 1.1500e-003 | 0.1655 | 0.0436 | 1.0600e-003 | 0.0446 | | 168.5494 | 168.5494 | 5.0300e-003 | | 168.6752 |
| Total | 0.0734 | 0.0495 | 0.5669 | 1.6900e-003 | 0.1643 | 1.1500e-003 | 0.1655 | 0.0436 | 1.0600e-003 | 0.0446 | | 168.5494 | 168.5494 | 5.0300e-003 | | 168.6752 |

Vista Roman Creek - San Diego County, Summer

3.3 Grading - 2020

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 6.4463 | 0.0000 | 6.4463 | 3.3560 | 0.0000 | 3.3560 | | | 0.0000 | | | 0.0000 |
| Off-Road | 4.4501 | 50.1975 | 31.9583 | 0.0620 | | 2.1739 | 2.1739 | | 2.0000 | 2.0000 | 0.0000 | 6,005.8653 | 6,005.8653 | 1.9424 | | 6,054.4257 |
| Total | 4.4501 | 50.1975 | 31.9583 | 0.0620 | 6.4463 | 2.1739 | 8.6202 | 3.3560 | 2.0000 | 5.3560 | 0.0000 | 6,005.8653 | 6,005.8653 | 1.9424 | | 6,054.4257 |

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 | 0.0734 | 0.0495 | 0.5669 | 1.6900e-003 | 0.1643 | 1.1500e-003 | 0.1655 | 0.0436 | 1.0600e-003 | 0.0446 | | 168.5494 | 168.5494 | 5.0300e-003 | | 168.6752 |
| Total | 0.0734 | 0.0495 | 0.5669 | 1.6900e-003 | 0.1643 | 1.1500e-003 | 0.1655 | 0.0436 | 1.0600e-003 | 0.0446 | | 168.5494 | 168.5494 | 5.0300e-003 | | 168.6752 |

Vista Roman Creek - San Diego County, Summer

3.4 Building Construction - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.3810 | 12.8971 | 13.2305 | 0.0193 | | 0.8357 | 0.8357 | | 0.7845 | 0.7845 | | 1,856.644 4 | 1,856.644 4 | 0.4341 | | 1,867.495 8 |
| Total | 1.3810 | 12.8971 | 13.2305 | 0.0193 | | 0.8357 | 0.8357 | | 0.7845 | 0.7845 | | 1,856.644 4 | 1,856.644 4 | 0.4341 | | 1,867.495 8 |

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 | 0.4260 | 12.8544 | 3.2748 | 0.0312 | 0.7717 | 0.0629 | 0.8346 | 0.2222 | 0.0602 | 0.2823 | | 3,352.056 9 | 3,352.056 9 | 0.2473 | | 3,358.239 0 |
| Worker | 1.0752 | 0.7244 | 8.3053 | 0.0248 | 2.4069 | 0.0169 | 2.4238 | 0.6384 | 0.0156 | 0.6540 | | 2,469.248 9 | 2,469.248 9 | 0.0737 | | 2,471.092 1 |
| Total | 1.5012 | 13.5789 | 11.5802 | 0.0560 | 3.1787 | 0.0798 | 3.2585 | 0.8606 | 0.0757 | 0.9363 | | 5,821.305 8 | 5,821.305 8 | 0.3210 | | 5,829.331 1 |

Vista Roman Creek - San Diego County, Summer

3.4 Building Construction - 2020

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 | 1.3810 | 12.8971 | 13.2305 | 0.0193 | | 0.8357 | 0.8357 | | 0.7845 | 0.7845 | 0.0000 | 1,856.644 4 | 1,856.644 4 | 0.4341 | | 1,867.495 8 |
| Total | 1.3810 | 12.8971 | 13.2305 | 0.0193 | | 0.8357 | 0.8357 | | 0.7845 | 0.7845 | 0.0000 | 1,856.644 4 | 1,856.644 4 | 0.4341 | | 1,867.495 8 |

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 | 0.4260 | 12.8544 | 3.2748 | 0.0312 | 0.7717 | 0.0629 | 0.8346 | 0.2222 | 0.0602 | 0.2823 | | 3,352.056 9 | 3,352.056 9 | 0.2473 | | 3,358.239 0 |
| Worker | 1.0752 | 0.7244 | 8.3053 | 0.0248 | 2.4069 | 0.0169 | 2.4238 | 0.6384 | 0.0156 | 0.6540 | | 2,469.248 9 | 2,469.248 9 | 0.0737 | | 2,471.092 1 |
| Total | 1.5012 | 13.5789 | 11.5802 | 0.0560 | 3.1787 | 0.0798 | 3.2585 | 0.8606 | 0.0757 | 0.9363 | | 5,821.305 8 | 5,821.305 8 | 0.3210 | | 5,829.331 1 |

4.0 Operational Detail - Mobile

Vista Roman Creek - San Diego County, Summer

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 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |

4.2 Trip Summary Information

| Land Use | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|----------------------------|-------------------------|----------|--------|-------------|------------|
| | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Other Non-Asphalt Surfaces | 0.00 | 0.00 | 0.00 | | |
| Total | 0.00 | 0.00 | 0.00 | | |

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 |
| Other Non-Asphalt Surfaces | 9.50 | 7.30 | 7.30 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |

4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Other Non-Asphalt Surfaces | 0.593936 | 0.041843 | 0.182569 | 0.108325 | 0.016436 | 0.005513 | 0.015940 | 0.023523 | 0.001912 | 0.001972 | 0.006090 | 0.000748 | 0.001193 |

Vista Roman Creek - San Diego County, Summer

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 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

Vista Roman Creek - San Diego County, 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 | | | | | |
| Other Non-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 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

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 | | | | | |
| Other Non-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 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

6.0 Area Detail

6.1 Mitigation Measures Area

Vista Roman Creek - San Diego County, 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 | 0.3798 | 2.0000e-005 | 1.6400e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | | 3.7300e-003 |
| Unmitigated | 0.3798 | 2.0000e-005 | 1.6400e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | | 3.7300e-003 |

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 | 0.1328 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.2469 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 1.5000e-004 | 2.0000e-005 | 1.6400e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | | 3.7300e-003 |
| Total | 0.3798 | 2.0000e-005 | 1.6400e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | | 3.7300e-003 |

Vista Roman Creek - San Diego County, 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 | 0.1328 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.2469 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 1.5000e-004 | 2.0000e-005 | 1.6400e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | | 3.7300e-003 |
| Total | 0.3798 | 2.0000e-005 | 1.6400e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | | 3.7300e-003 |

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Vista Roman Creek - San Diego County, Summer

| 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

Vista Roman Creek - San Diego County, Winter

**Vista Roman Creek
San Diego County, Winter**

1.0 Project Characteristics

1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|----------------------------|-------|--------|-------------|--------------------|------------|
| Other Non-Asphalt Surfaces | 16.00 | Acre | 16.00 | 696,960.00 | 0 |

1.2 Other Project Characteristics

| | | | | | |
|---------------------------------|--------------------------|---------------------------------|-------|----------------------------------|-------|
| Urbanization | Urban | Wind Speed (m/s) | 2.6 | Precipitation Freq (Days) | 40 |
| Climate Zone | 13 | | | Operational Year | 2021 |
| Utility Company | San Diego Gas & Electric | | | | |
| CO2 Intensity (lb/MW hr) | 720.49 | CH4 Intensity (lb/MW hr) | 0.029 | N2O Intensity (lb/MW hr) | 0.006 |

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - non-asphalt parking is used to represent the mitigation site.

Construction Phase - Schedule adjusted to reflect the six month construction schedule.

Off-road Equipment - no cranes or welders would be required on-site

Grading - up to 16 acres will require grading

Construction Off-road Equipment Mitigation -

Vista Roman Creek - San Diego County, Winter

| Table Name | Column Name | Default Value | New Value |
|----------------------|----------------------------|---------------|-----------|
| tblConstructionPhase | NumDays | 300.00 | 40.00 |
| tblConstructionPhase | NumDays | 30.00 | 40.00 |
| tblConstructionPhase | NumDays | 10.00 | 40.00 |
| tblConstructionPhase | PhaseEndDate | 5/21/2021 | 7/17/2020 |
| tblConstructionPhase | PhaseEndDate | 3/27/2020 | 5/22/2020 |
| tblConstructionPhase | PhaseEndDate | 2/14/2020 | 3/27/2020 |
| tblConstructionPhase | PhaseStartDate | 3/28/2020 | 5/25/2020 |
| tblConstructionPhase | PhaseStartDate | 2/15/2020 | 3/30/2020 |
| tblConstructionPhase | PhaseStartDate | 2/1/2020 | 2/3/2020 |
| tblGrading | AcresOfGrading | 100.00 | 16.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |

2.0 Emissions Summary

Vista Roman Creek - San Diego County, 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 | 0.3798 | 2.0000e-005 | 1.6400e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | | 3.7300e-003 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Total | 0.3798 | 2.0000e-005 | 1.6400e-003 | 0.0000 | 0.0000 | 1.0000e-005 | 1.0000e-005 | 0.0000 | 1.0000e-005 | 1.0000e-005 | | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | 0.0000 | 3.7300e-003 |

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 | 0.3798 | 2.0000e-005 | 1.6400e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | | 3.7300e-003 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Total | 0.3798 | 2.0000e-005 | 1.6400e-003 | 0.0000 | 0.0000 | 1.0000e-005 | 1.0000e-005 | 0.0000 | 1.0000e-005 | 1.0000e-005 | | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | 0.0000 | 3.7300e-003 |

Vista Roman Creek - San Diego County, 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 | Site Preparation | Site Preparation | 2/3/2020 | 3/27/2020 | 5 | 40 | |
| 2 | Grading | Grading | 3/30/2020 | 5/22/2020 | 5 | 40 | |
| 3 | Building Construction | Building Construction | 5/25/2020 | 7/17/2020 | 5 | 40 | |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 16

Acres of Paving: 16

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

OffRoad Equipment

Vista Roman Creek - San Diego County, Winter

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Grading | Excavators | 2 | 8.00 | 158 | 0.38 |
| Building Construction | Cranes | 0 | 7.00 | 231 | 0.29 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97 | 0.37 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |
| Site Preparation | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Site Preparation | Rubber Tired Dozers | 3 | 8.00 | 247 | 0.40 |
| Grading | Scrapers | 2 | 8.00 | 367 | 0.48 |
| Building Construction | Welders | 0 | 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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation | 7 | 18.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 8 | 20.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 7 | 293.00 | 114.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |

3.1 Mitigation Measures Construction

Vista Roman Creek - San Diego County, Winter

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|----------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 18.0663 | 0.0000 | 18.0663 | 9.9307 | 0.0000 | 9.9307 | | | 0.0000 | | | 0.0000 |
| Off-Road | 4.0765 | 42.4173 | 21.5136 | 0.0380 | | 2.1974 | 2.1974 | | 2.0216 | 2.0216 | | 3,685.1016 | 3,685.1016 | 1.1918 | | 3,714.8975 |
| Total | 4.0765 | 42.4173 | 21.5136 | 0.0380 | 18.0663 | 2.1974 | 20.2637 | 9.9307 | 2.0216 | 11.9523 | | 3,685.1016 | 3,685.1016 | 1.1918 | | 3,714.8975 |

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 | 0.0748 | 0.0500 | 0.4810 | 1.4300e-003 | 0.1479 | 1.0400e-003 | 0.1489 | 0.0392 | 9.6000e-004 | 0.0402 | | 142.4038 | 142.4038 | 4.2900e-003 | | 142.5109 |
| Total | 0.0748 | 0.0500 | 0.4810 | 1.4300e-003 | 0.1479 | 1.0400e-003 | 0.1489 | 0.0392 | 9.6000e-004 | 0.0402 | | 142.4038 | 142.4038 | 4.2900e-003 | | 142.5109 |

Vista Roman Creek - San Diego County, Winter

3.2 Site Preparation - 2020

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 | | | | | 18.0663 | 0.0000 | 18.0663 | 9.9307 | 0.0000 | 9.9307 | | | 0.0000 | | | 0.0000 |
| Off-Road | 4.0765 | 42.4173 | 21.5136 | 0.0380 | | 2.1974 | 2.1974 | | 2.0216 | 2.0216 | 0.0000 | 3,685.1016 | 3,685.1016 | 1.1918 | | 3,714.8975 |
| Total | 4.0765 | 42.4173 | 21.5136 | 0.0380 | 18.0663 | 2.1974 | 20.2637 | 9.9307 | 2.0216 | 11.9523 | 0.0000 | 3,685.1016 | 3,685.1016 | 1.1918 | | 3,714.8975 |

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 | 0.0748 | 0.0500 | 0.4810 | 1.4300e-003 | 0.1479 | 1.0400e-003 | 0.1489 | 0.0392 | 9.6000e-004 | 0.0402 | | 142.4038 | 142.4038 | 4.2900e-003 | | 142.5109 |
| Total | 0.0748 | 0.0500 | 0.4810 | 1.4300e-003 | 0.1479 | 1.0400e-003 | 0.1489 | 0.0392 | 9.6000e-004 | 0.0402 | | 142.4038 | 142.4038 | 4.2900e-003 | | 142.5109 |

Vista Roman Creek - San Diego County, Winter

3.3 Grading - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 6.4463 | 0.0000 | 6.4463 | 3.3560 | 0.0000 | 3.3560 | | | 0.0000 | | | 0.0000 |
| Off-Road | 4.4501 | 50.1975 | 31.9583 | 0.0620 | | 2.1739 | 2.1739 | | 2.0000 | 2.0000 | | 6,005.865 3 | 6,005.865 3 | 1.9424 | | 6,054.425 7 |
| Total | 4.4501 | 50.1975 | 31.9583 | 0.0620 | 6.4463 | 2.1739 | 8.6202 | 3.3560 | 2.0000 | 5.3560 | | 6,005.865 3 | 6,005.865 3 | 1.9424 | | 6,054.425 7 |

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 | 0.0831 | 0.0555 | 0.5345 | 1.5900e-003 | 0.1643 | 1.1500e-003 | 0.1655 | 0.0436 | 1.0600e-003 | 0.0446 | | 158.2264 | 158.2264 | 4.7600e-003 | | 158.3455 |
| Total | 0.0831 | 0.0555 | 0.5345 | 1.5900e-003 | 0.1643 | 1.1500e-003 | 0.1655 | 0.0436 | 1.0600e-003 | 0.0446 | | 158.2264 | 158.2264 | 4.7600e-003 | | 158.3455 |

Vista Roman Creek - San Diego County, Winter

3.3 Grading - 2020

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|------------------------|------------------------|---------------|-----|------------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 6.4463 | 0.0000 | 6.4463 | 3.3560 | 0.0000 | 3.3560 | | | 0.0000 | | | 0.0000 |
| Off-Road | 4.4501 | 50.1975 | 31.9583 | 0.0620 | | 2.1739 | 2.1739 | | 2.0000 | 2.0000 | 0.0000 | 6,005.865 3 | 6,005.865 3 | 1.9424 | | 6,054.425 7 |
| Total | 4.4501 | 50.1975 | 31.9583 | 0.0620 | 6.4463 | 2.1739 | 8.6202 | 3.3560 | 2.0000 | 5.3560 | 0.0000 | 6,005.865 3 | 6,005.865 3 | 1.9424 | | 6,054.425 7 |

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 | 0.0831 | 0.0555 | 0.5345 | 1.5900e-003 | 0.1643 | 1.1500e-003 | 0.1655 | 0.0436 | 1.0600e-003 | 0.0446 | | 158.2264 | 158.2264 | 4.7600e-003 | | 158.3455 |
| Total | 0.0831 | 0.0555 | 0.5345 | 1.5900e-003 | 0.1643 | 1.1500e-003 | 0.1655 | 0.0436 | 1.0600e-003 | 0.0446 | | 158.2264 | 158.2264 | 4.7600e-003 | | 158.3455 |

Vista Roman Creek - San Diego County, Winter

3.4 Building Construction - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.3810 | 12.8971 | 13.2305 | 0.0193 | | 0.8357 | 0.8357 | | 0.7845 | 0.7845 | | 1,856.644 4 | 1,856.644 4 | 0.4341 | | 1,867.495 8 |
| Total | 1.3810 | 12.8971 | 13.2305 | 0.0193 | | 0.8357 | 0.8357 | | 0.7845 | 0.7845 | | 1,856.644 4 | 1,856.644 4 | 0.4341 | | 1,867.495 8 |

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 | 0.4462 | 12.8441 | 3.6344 | 0.0304 | 0.7717 | 0.0641 | 0.8358 | 0.2222 | 0.0613 | 0.2835 | | 3,265.669 3 | 3,265.669 3 | 0.2628 | | 3,272.238 7 |
| Worker | 1.2177 | 0.8134 | 7.8303 | 0.0233 | 2.4069 | 0.0169 | 2.4238 | 0.6384 | 0.0156 | 0.6540 | | 2,318.016 6 | 2,318.016 6 | 0.0698 | | 2,319.761 4 |
| Total | 1.6639 | 13.6574 | 11.4647 | 0.0537 | 3.1787 | 0.0810 | 3.2596 | 0.8606 | 0.0769 | 0.9375 | | 5,583.685 9 | 5,583.685 9 | 0.3326 | | 5,592.000 1 |

Vista Roman Creek - San Diego County, Winter

3.4 Building Construction - 2020

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 | 1.3810 | 12.8971 | 13.2305 | 0.0193 | | 0.8357 | 0.8357 | | 0.7845 | 0.7845 | 0.0000 | 1,856.644 4 | 1,856.644 4 | 0.4341 | | 1,867.495 8 |
| Total | 1.3810 | 12.8971 | 13.2305 | 0.0193 | | 0.8357 | 0.8357 | | 0.7845 | 0.7845 | 0.0000 | 1,856.644 4 | 1,856.644 4 | 0.4341 | | 1,867.495 8 |

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 | 0.4462 | 12.8441 | 3.6344 | 0.0304 | 0.7717 | 0.0641 | 0.8358 | 0.2222 | 0.0613 | 0.2835 | | 3,265.669 3 | 3,265.669 3 | 0.2628 | | 3,272.238 7 |
| Worker | 1.2177 | 0.8134 | 7.8303 | 0.0233 | 2.4069 | 0.0169 | 2.4238 | 0.6384 | 0.0156 | 0.6540 | | 2,318.016 6 | 2,318.016 6 | 0.0698 | | 2,319.761 4 |
| Total | 1.6639 | 13.6574 | 11.4647 | 0.0537 | 3.1787 | 0.0810 | 3.2596 | 0.8606 | 0.0769 | 0.9375 | | 5,583.685 9 | 5,583.685 9 | 0.3326 | | 5,592.000 1 |

4.0 Operational Detail - Mobile

Vista Roman Creek - San Diego County, Winter

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 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |

4.2 Trip Summary Information

| Land Use | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|----------------------------|-------------------------|----------|--------|-------------|------------|
| | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Other Non-Asphalt Surfaces | 0.00 | 0.00 | 0.00 | | |
| Total | 0.00 | 0.00 | 0.00 | | |

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 |
| Other Non-Asphalt Surfaces | 9.50 | 7.30 | 7.30 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |

4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Other Non-Asphalt Surfaces | 0.593936 | 0.041843 | 0.182569 | 0.108325 | 0.016436 | 0.005513 | 0.015940 | 0.023523 | 0.001912 | 0.001972 | 0.006090 | 0.000748 | 0.001193 |

Vista Roman Creek - San Diego County, Winter

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 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

Vista Roman Creek - San Diego County, 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 | | | | | |
| Other Non-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 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

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 | | | | | |
| Other Non-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 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

6.0 Area Detail

6.1 Mitigation Measures Area

Vista Roman Creek - San Diego County, 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 | 0.3798 | 2.0000e-005 | 1.6400e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | | 3.7300e-003 |
| Unmitigated | 0.3798 | 2.0000e-005 | 1.6400e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | | 3.7300e-003 |

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 | 0.1328 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.2469 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 1.5000e-004 | 2.0000e-005 | 1.6400e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | | 3.7300e-003 |
| Total | 0.3798 | 2.0000e-005 | 1.6400e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | | 3.7300e-003 |

Vista Roman Creek - San Diego County, 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 | 0.1328 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.2469 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 1.5000e-004 | 2.0000e-005 | 1.6400e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | | 3.7300e-003 |
| Total | 0.3798 | 2.0000e-005 | 1.6400e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | | 3.7300e-003 |

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Vista Roman Creek - San Diego County, Winter

| 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

Vista Roman Creek - San Diego County, Annual

**Vista Roman Creek
San Diego County, Annual**

1.0 Project Characteristics

1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|----------------------------|-------|--------|-------------|--------------------|------------|
| Other Non-Asphalt Surfaces | 16.00 | Acre | 16.00 | 696,960.00 | 0 |

1.2 Other Project Characteristics

| | | | | | |
|---------------------------------|--------------------------|---------------------------------|-------|----------------------------------|-------|
| Urbanization | Urban | Wind Speed (m/s) | 2.6 | Precipitation Freq (Days) | 40 |
| Climate Zone | 13 | | | Operational Year | 2021 |
| Utility Company | San Diego Gas & Electric | | | | |
| CO2 Intensity (lb/MW hr) | 720.49 | CH4 Intensity (lb/MW hr) | 0.029 | N2O Intensity (lb/MW hr) | 0.006 |

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - non-asphalt parking is used to represent the mitigation site.

Construction Phase - Schedule adjusted to reflect the six month construction schedule.

Off-road Equipment - no cranes or welders would be required on-site

Grading - up to 16 acres will require grading

Construction Off-road Equipment Mitigation -

Vista Roman Creek - San Diego County, Annual

| Table Name | Column Name | Default Value | New Value |
|----------------------|----------------------------|---------------|-----------|
| tblConstructionPhase | NumDays | 300.00 | 40.00 |
| tblConstructionPhase | NumDays | 30.00 | 40.00 |
| tblConstructionPhase | NumDays | 10.00 | 40.00 |
| tblConstructionPhase | PhaseEndDate | 5/21/2021 | 7/17/2020 |
| tblConstructionPhase | PhaseEndDate | 3/27/2020 | 5/22/2020 |
| tblConstructionPhase | PhaseEndDate | 2/14/2020 | 3/27/2020 |
| tblConstructionPhase | PhaseStartDate | 3/28/2020 | 5/25/2020 |
| tblConstructionPhase | PhaseStartDate | 2/15/2020 | 3/30/2020 |
| tblConstructionPhase | PhaseStartDate | 2/1/2020 | 2/3/2020 |
| tblGrading | AcresOfGrading | 100.00 | 16.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |

2.0 Emissions Summary

Vista Roman Creek - San Diego County, Annual

| Quarter | Start Date | End Date | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|-----------|--|--|
| 1 | 1-6-2020 | 4-5-2020 | 1.0360 | 1.0360 |
| 2 | 4-6-2020 | 7-5-2020 | 1.3597 | 1.3597 |
| 3 | 7-6-2020 | 9-30-2020 | 0.1258 | 0.1258 |
| | | Highest | 1.3597 | 1.3597 |

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 | 0.0693 | 0.0000 | 1.5000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 2.9000e-004 | 2.9000e-004 | 0.0000 | 0.0000 | 3.0000e-004 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 0.0693 | 0.0000 | 1.5000e-004 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 2.9000e-004 | 2.9000e-004 | 0.0000 | 0.0000 | 3.0000e-004 |

Vista Roman Creek - San Diego County, 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 | 0.0693 | 0.0000 | 1.5000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 2.9000e-004 | 2.9000e-004 | 0.0000 | 0.0000 | 3.0000e-004 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 0.0693 | 0.0000 | 1.5000e-004 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 2.9000e-004 | 2.9000e-004 | 0.0000 | 0.0000 | 3.0000e-004 |

| | ROG | NOx | CO | SO2 | 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 | Site Preparation | Site Preparation | 2/3/2020 | 3/27/2020 | 5 | 40 | |
| 2 | Grading | Grading | 3/30/2020 | 5/22/2020 | 5 | 40 | |
| 3 | Building Construction | Building Construction | 5/25/2020 | 7/17/2020 | 5 | 40 | |

Vista Roman Creek - San Diego County, Annual

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 16

Acres of Paving: 16

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

OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Grading | Excavators | 2 | 8.00 | 158 | 0.38 |
| Building Construction | Cranes | 0 | 7.00 | 231 | 0.29 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97 | 0.37 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |
| Site Preparation | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Site Preparation | Rubber Tired Dozers | 3 | 8.00 | 247 | 0.40 |
| Grading | Scrapers | 2 | 8.00 | 367 | 0.48 |
| Building Construction | Welders | 0 | 8.00 | 46 | 0.45 |

Trips and VMT

Vista Roman Creek - San Diego County, Annual

| 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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation | 7 | 18.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 8 | 20.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 7 | 293.00 | 114.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.3613 | 0.0000 | 0.3613 | 0.1986 | 0.0000 | 0.1986 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0815 | 0.8484 | 0.4303 | 7.6000e-004 | | 0.0440 | 0.0440 | | 0.0404 | 0.0404 | 0.0000 | 66.8614 | 66.8614 | 0.0216 | 0.0000 | 67.4020 |
| Total | 0.0815 | 0.8484 | 0.4303 | 7.6000e-004 | 0.3613 | 0.0440 | 0.4053 | 0.1986 | 0.0404 | 0.2390 | 0.0000 | 66.8614 | 66.8614 | 0.0216 | 0.0000 | 67.4020 |

Vista Roman Creek - San Diego County, Annual

3.2 Site Preparation - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.3300e-003 | 9.8000e-004 | 9.6300e-003 | 3.0000e-005 | 2.8900e-003 | 2.0000e-005 | 2.9100e-003 | 7.7000e-004 | 2.0000e-005 | 7.9000e-004 | 0.0000 | 2.6096 | 2.6096 | 8.0000e-005 | 0.0000 | 2.6115 |
| Total | 1.3300e-003 | 9.8000e-004 | 9.6300e-003 | 3.0000e-005 | 2.8900e-003 | 2.0000e-005 | 2.9100e-003 | 7.7000e-004 | 2.0000e-005 | 7.9000e-004 | 0.0000 | 2.6096 | 2.6096 | 8.0000e-005 | 0.0000 | 2.6115 |

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 | | | | | 0.3613 | 0.0000 | 0.3613 | 0.1986 | 0.0000 | 0.1986 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0815 | 0.8484 | 0.4303 | 7.6000e-004 | | 0.0440 | 0.0440 | | 0.0404 | 0.0404 | 0.0000 | 66.8613 | 66.8613 | 0.0216 | 0.0000 | 67.4019 |
| Total | 0.0815 | 0.8484 | 0.4303 | 7.6000e-004 | 0.3613 | 0.0440 | 0.4053 | 0.1986 | 0.0404 | 0.2390 | 0.0000 | 66.8613 | 66.8613 | 0.0216 | 0.0000 | 67.4019 |

Vista Roman Creek - San Diego County, Annual

3.2 Site Preparation - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.3300e-003 | 9.8000e-004 | 9.6300e-003 | 3.0000e-005 | 2.8900e-003 | 2.0000e-005 | 2.9100e-003 | 7.7000e-004 | 2.0000e-005 | 7.9000e-004 | 0.0000 | 2.6096 | 2.6096 | 8.0000e-005 | 0.0000 | 2.6115 |
| Total | 1.3300e-003 | 9.8000e-004 | 9.6300e-003 | 3.0000e-005 | 2.8900e-003 | 2.0000e-005 | 2.9100e-003 | 7.7000e-004 | 2.0000e-005 | 7.9000e-004 | 0.0000 | 2.6096 | 2.6096 | 8.0000e-005 | 0.0000 | 2.6115 |

3.3 Grading - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.1289 | 0.0000 | 0.1289 | 0.0671 | 0.0000 | 0.0671 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0890 | 1.0040 | 0.6392 | 1.2400e-003 | | 0.0435 | 0.0435 | | 0.0400 | 0.0400 | 0.0000 | 108.9686 | 108.9686 | 0.0352 | 0.0000 | 109.8497 |
| Total | 0.0890 | 1.0040 | 0.6392 | 1.2400e-003 | 0.1289 | 0.0435 | 0.1724 | 0.0671 | 0.0400 | 0.1071 | 0.0000 | 108.9686 | 108.9686 | 0.0352 | 0.0000 | 109.8497 |

Vista Roman Creek - San Diego County, Annual

3.3 Grading - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.4700e-003 | 1.0900e-003 | 0.0107 | 3.0000e-005 | 3.2100e-003 | 2.0000e-005 | 3.2300e-003 | 8.5000e-004 | 2.0000e-005 | 8.7000e-004 | 0.0000 | 2.8995 | 2.8995 | 9.0000e-005 | 0.0000 | 2.9017 |
| Total | 1.4700e-003 | 1.0900e-003 | 0.0107 | 3.0000e-005 | 3.2100e-003 | 2.0000e-005 | 3.2300e-003 | 8.5000e-004 | 2.0000e-005 | 8.7000e-004 | 0.0000 | 2.8995 | 2.8995 | 9.0000e-005 | 0.0000 | 2.9017 |

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 | | | | | 0.1289 | 0.0000 | 0.1289 | 0.0671 | 0.0000 | 0.0671 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0890 | 1.0040 | 0.6392 | 1.2400e-003 | | 0.0435 | 0.0435 | | 0.0400 | 0.0400 | 0.0000 | 108.9685 | 108.9685 | 0.0352 | 0.0000 | 109.8495 |
| Total | 0.0890 | 1.0040 | 0.6392 | 1.2400e-003 | 0.1289 | 0.0435 | 0.1724 | 0.0671 | 0.0400 | 0.1071 | 0.0000 | 108.9685 | 108.9685 | 0.0352 | 0.0000 | 109.8495 |

Vista Roman Creek - San Diego County, Annual

3.3 Grading - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.4700e-003 | 1.0900e-003 | 0.0107 | 3.0000e-005 | 3.2100e-003 | 2.0000e-005 | 3.2300e-003 | 8.5000e-004 | 2.0000e-005 | 8.7000e-004 | 0.0000 | 2.8995 | 2.8995 | 9.0000e-005 | 0.0000 | 2.9017 |
| Total | 1.4700e-003 | 1.0900e-003 | 0.0107 | 3.0000e-005 | 3.2100e-003 | 2.0000e-005 | 3.2300e-003 | 8.5000e-004 | 2.0000e-005 | 8.7000e-004 | 0.0000 | 2.8995 | 2.8995 | 9.0000e-005 | 0.0000 | 2.9017 |

3.4 Building Construction - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0276 | 0.2579 | 0.2646 | 3.9000e-004 | | 0.0167 | 0.0167 | | 0.0157 | 0.0157 | 0.0000 | 33.6864 | 33.6864 | 7.8800e-003 | 0.0000 | 33.8833 |
| Total | 0.0276 | 0.2579 | 0.2646 | 3.9000e-004 | | 0.0167 | 0.0167 | | 0.0157 | 0.0157 | 0.0000 | 33.6864 | 33.6864 | 7.8800e-003 | 0.0000 | 33.8833 |

Vista Roman Creek - San Diego County, Annual

3.4 Building Construction - 2020

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 | 8.6900e-003 | 0.2599 | 0.0691 | 6.2000e-004 | 0.0151 | 1.2700e-003 | 0.0164 | 4.3700e-003 | 1.2100e-003 | 5.5800e-003 | 0.0000 | 60.1604 | 60.1604 | 4.6100e-003 | 0.0000 | 60.2757 |
| Worker | 0.0216 | 0.0160 | 0.1568 | 4.7000e-004 | 0.0470 | 3.4000e-004 | 0.0473 | 0.0125 | 3.1000e-004 | 0.0128 | 0.0000 | 42.4777 | 42.4777 | 1.2800e-003 | 0.0000 | 42.5096 |
| Total | 0.0303 | 0.2759 | 0.2259 | 1.0900e-003 | 0.0621 | 1.6100e-003 | 0.0637 | 0.0169 | 1.5200e-003 | 0.0184 | 0.0000 | 102.6381 | 102.6381 | 5.8900e-003 | 0.0000 | 102.7853 |

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 | 0.0276 | 0.2579 | 0.2646 | 3.9000e-004 | | 0.0167 | 0.0167 | | 0.0157 | 0.0157 | 0.0000 | 33.6864 | 33.6864 | 7.8800e-003 | 0.0000 | 33.8832 |
| Total | 0.0276 | 0.2579 | 0.2646 | 3.9000e-004 | | 0.0167 | 0.0167 | | 0.0157 | 0.0157 | 0.0000 | 33.6864 | 33.6864 | 7.8800e-003 | 0.0000 | 33.8832 |

Vista Roman Creek - San Diego County, Annual

3.4 Building Construction - 2020

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 | 8.6900e-003 | 0.2599 | 0.0691 | 6.2000e-004 | 0.0151 | 1.2700e-003 | 0.0164 | 4.3700e-003 | 1.2100e-003 | 5.5800e-003 | 0.0000 | 60.1604 | 60.1604 | 4.6100e-003 | 0.0000 | 60.2757 |
| Worker | 0.0216 | 0.0160 | 0.1568 | 4.7000e-004 | 0.0470 | 3.4000e-004 | 0.0473 | 0.0125 | 3.1000e-004 | 0.0128 | 0.0000 | 42.4777 | 42.4777 | 1.2800e-003 | 0.0000 | 42.5096 |
| Total | 0.0303 | 0.2759 | 0.2259 | 1.0900e-003 | 0.0621 | 1.6100e-003 | 0.0637 | 0.0169 | 1.5200e-003 | 0.0184 | 0.0000 | 102.6381 | 102.6381 | 5.8900e-003 | 0.0000 | 102.7853 |

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Vista Roman Creek - San Diego County, 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 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

4.2 Trip Summary Information

| Land Use | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|----------------------------|-------------------------|----------|--------|-------------|------------|
| | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Other Non-Asphalt Surfaces | 0.00 | 0.00 | 0.00 | | |
| Total | 0.00 | 0.00 | 0.00 | | |

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 |
| Other Non-Asphalt Surfaces | 9.50 | 7.30 | 7.30 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |

4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Other Non-Asphalt Surfaces | 0.593936 | 0.041843 | 0.182569 | 0.108325 | 0.016436 | 0.005513 | 0.015940 | 0.023523 | 0.001912 | 0.001972 | 0.006090 | 0.000748 | 0.001193 |

5.0 Energy Detail

Historical Energy Use: N

Vista Roman Creek - San Diego County, Annual

5.2 Energy by Land Use - Natural Gas

Mitigated

| | Natural Gas 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 | | | | | |
| Other Non-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 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

5.3 Energy by Land Use - Electricity

Unmitigated

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|----------------------------|-----------------|---------------|---------------|---------------|---------------|
| Land Use | kWh/yr | MT/yr | | | |
| Other Non-Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

Vista Roman Creek - San Diego County, Annual

5.3 Energy by Land Use - Electricity

Mitigated

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|----------------------------|-----------------|---------------|---------------|---------------|---------------|
| Land Use | kWh/yr | MT/yr | | | |
| Other Non-Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

6.0 Area Detail

6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------|---------|--------|-------------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|--------|-------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 0.0693 | 0.0000 | 1.5000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 2.9000e-004 | 2.9000e-004 | 0.0000 | 0.0000 | 3.0000e-004 |
| Unmitigated | 0.0693 | 0.0000 | 1.5000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 2.9000e-004 | 2.9000e-004 | 0.0000 | 0.0000 | 3.0000e-004 |

Vista Roman Creek - San Diego County, Annual

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 | 0.0242 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.0451 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 1.0000e-005 | 0.0000 | 1.5000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 2.9000e-004 | 2.9000e-004 | 0.0000 | 0.0000 | 3.0000e-004 |
| Total | 0.0693 | 0.0000 | 1.5000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 2.9000e-004 | 2.9000e-004 | 0.0000 | 0.0000 | 3.0000e-004 |

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 | 0.0242 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.0451 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 1.0000e-005 | 0.0000 | 1.5000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 2.9000e-004 | 2.9000e-004 | 0.0000 | 0.0000 | 3.0000e-004 |
| Total | 0.0693 | 0.0000 | 1.5000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 2.9000e-004 | 2.9000e-004 | 0.0000 | 0.0000 | 3.0000e-004 |

7.0 Water Detail

Vista Roman Creek - San Diego County, Annual

7.1 Mitigation Measures Water

| | Total CO2 | CH4 | N2O | CO2e |
|-------------|-----------|--------|--------|--------|
| Category | MT/yr | | | |
| Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

7.2 Water by Land Use

Unmitigated

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|----------------------------|--------------------|---------------|---------------|---------------|---------------|
| Land Use | Mgal | MT/yr | | | |
| Other Non-Asphalt Surfaces | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

Vista Roman Creek - San Diego County, Annual

7.2 Water by Land Use

Mitigated

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|----------------------------|--------------------|---------------|---------------|---------------|---------------|
| Land Use | Mgal | MT/yr | | | |
| Other Non-Asphalt Surfaces | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

Vista Roman Creek - San Diego County, Annual

8.2 Waste by Land Use

Unmitigated

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|----------------------------|----------------|---------------|---------------|---------------|---------------|
| Land Use | tons | MT/yr | | | |
| Other Non-Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

Mitigated

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|----------------------------|----------------|---------------|---------------|---------------|---------------|
| Land Use | tons | MT/yr | | | |
| Other Non-Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

9.0 Operational Offroad

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

Vista Roman Creek - San Diego County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

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

11.0 Vegetation
