



**APPENDIX F**  
**Air Quality/  
Greenhouse Gas Emissions Data**

Riverside Operations Dwelling Units - South Coast Air Basin, Summer

**Riverside Operations Dwelling Units**  
**South Coast Air Basin, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	540.00	Dwelling Unit	33.75	540,000.00	1544

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	10	<b>Operational Year</b>	2019		
<b>Utility Company</b>	Riverside Public Utilities				
<b>CO2 Intensity (lb/MW hr)</b>	1325.65	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

- Project Characteristics -
- Land Use - Number of Multi-Family Dwelling Units for operations below SCAQMD Thresholds.
- Construction Phase - Operational Only.
- Off-road Equipment -
- Woodstoves - Per no woodfireplaces scaqmd rule 445.
- Area Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	500.00	1.00
tblFireplaces	NumberWood	27.00	0.00
tblProjectCharacteristics	OperationalYear	2018	2019

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	5.7346	35.7792	42.2726	0.0911	4.7192	1.8890	6.6082	1.2600	1.7746	3.0346	0.0000	9,139.364 4	9,139.364 4	0.9540	0.0000	9,163.215 0
Maximum	5.7346	35.7792	42.2726	0.0911	4.7192	1.8890	6.6082	1.2600	1.7746	3.0346	0.0000	9,139.364 4	9,139.364 4	0.9540	0.0000	9,163.215 0

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	5.7346	35.7792	42.2726	0.0911	4.7192	1.8890	6.6082	1.2600	1.7746	3.0346	0.0000	9,139.364 4	9,139.364 4	0.9540	0.0000	9,163.215 0
Maximum	5.7346	35.7792	42.2726	0.0911	4.7192	1.8890	6.6082	1.2600	1.7746	3.0346	0.0000	9,139.364 4	9,139.364 4	0.9540	0.0000	9,163.215 0

	ROG	NOx	CO	SO2	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

### 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	28.4534	10.2917	180.3664	0.4828		22.4523	22.4523		22.4523	22.4523	3,186.884 7	9,800.218 3	12,987.10 30	15.1631	0.1782	13,419.28 35
Energy	0.3160	2.6999	1.1489	0.0172		0.2183	0.2183		0.2183	0.2183		3,446.726 5	3,446.726 5	0.0661	0.0632	3,467.208 6
Mobile	8.4449	40.8176	114.7320	0.3654	28.0815	0.4074	28.4889	7.5137	0.3833	7.8970		37,076.82 86	37,076.82 86	1.9259		37,124.97 72
<b>Total</b>	<b>37.2142</b>	<b>53.8093</b>	<b>296.2473</b>	<b>0.8654</b>	<b>28.0815</b>	<b>23.0779</b>	<b>51.1595</b>	<b>7.5137</b>	<b>23.0538</b>	<b>30.5676</b>	<b>3,186.884 7</b>	<b>50,323.77 33</b>	<b>53,510.65 81</b>	<b>17.1551</b>	<b>0.2414</b>	<b>54,011.46 94</b>

### Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	13.8792	8.1326	48.0113	0.0510		0.8609	0.8609		0.8609	0.8609	0.0000	9,800.218 3	9,800.218 3	0.2650	0.1782	9,859.947 9
Energy	0.3160	2.6999	1.1489	0.0172		0.2183	0.2183		0.2183	0.2183		3,446.726 5	3,446.726 5	0.0661	0.0632	3,467.208 6
Mobile	8.4449	40.8176	114.7320	0.3654	28.0815	0.4074	28.4889	7.5137	0.3833	7.8970		37,076.82 86	37,076.82 86	1.9259		37,124.97 72
<b>Total</b>	<b>22.6401</b>	<b>51.6501</b>	<b>163.8922</b>	<b>0.4336</b>	<b>28.0815</b>	<b>1.4866</b>	<b>29.5681</b>	<b>7.5137</b>	<b>1.4625</b>	<b>8.9762</b>	<b>0.0000</b>	<b>50,323.77 33</b>	<b>50,323.77 33</b>	<b>2.2570</b>	<b>0.2414</b>	<b>50,452.13 37</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	39.16	4.01	44.68	49.90	0.00	93.56	42.20	0.00	93.66	70.63	100.00	0.00	5.96	86.84	0.00	6.59

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	8/17/2017	8/17/2017	5	1	

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

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

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	389.00	58.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

**3.2 Building Construction - 2017**

**Unmitigated Construction On-Site**

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

Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078
<b>Total</b>	<b>3.1149</b>	<b>26.5546</b>	<b>18.1825</b>	<b>0.0269</b>		<b>1.7879</b>	<b>1.7879</b>		<b>1.6791</b>	<b>1.6791</b>		<b>2,650.9797</b>	<b>2,650.9797</b>	<b>0.6531</b>		<b>2,667.3078</b>

**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	0.2839	7.5050	1.9856	0.0151	0.3711	0.0650	0.4362	0.1068	0.0622	0.1690		1,611.5736	1,611.5736	0.1168		1,614.4926
Worker	2.3358	1.7196	22.1045	0.0490	4.3481	0.0361	4.3842	1.1531	0.0333	1.1864		4,876.8111	4,876.8111	0.1841		4,881.4145
<b>Total</b>	<b>2.6197</b>	<b>9.2246</b>	<b>24.0901</b>	<b>0.0642</b>	<b>4.7192</b>	<b>0.1011</b>	<b>4.8203</b>	<b>1.2600</b>	<b>0.0955</b>	<b>1.3555</b>		<b>6,488.3847</b>	<b>6,488.3847</b>	<b>0.3009</b>		<b>6,495.9071</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
<b>Total</b>	<b>3.1149</b>	<b>26.5546</b>	<b>18.1825</b>	<b>0.0269</b>		<b>1.7879</b>	<b>1.7879</b>		<b>1.6791</b>	<b>1.6791</b>	<b>0.0000</b>	<b>2,650.9797</b>	<b>2,650.9797</b>	<b>0.6531</b>		<b>2,667.3078</b>

## 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	0.2839	7.5050	1.9856	0.0151	0.3711	0.0650	0.4362	0.1068	0.0622	0.1690		1,611.573 6	1,611.573 6	0.1168		1,614.492 6
Worker	2.3358	1.7196	22.1045	0.0490	4.3481	0.0361	4.3842	1.1531	0.0333	1.1864		4,876.811 1	4,876.811 1	0.1841		4,881.414 5
<b>Total</b>	<b>2.6197</b>	<b>9.2246</b>	<b>24.0901</b>	<b>0.0642</b>	<b>4.7192</b>	<b>0.1011</b>	<b>4.8203</b>	<b>1.2600</b>	<b>0.0955</b>	<b>1.3555</b>		<b>6,488.384 7</b>	<b>6,488.384 7</b>	<b>0.3009</b>		<b>6,495.907 1</b>

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.4449	40.8176	114.7320	0.3654	28.0815	0.4074	28.4889	7.5137	0.3833	7.8970		37,076.82 86	37,076.82 86	1.9259		37,124.97 72
Unmitigated	8.4449	40.8176	114.7320	0.3654	28.0815	0.4074	28.4889	7.5137	0.3833	7.8970		37,076.82 86	37,076.82 86	1.9259		37,124.97 72

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	3,558.60	3,866.40	3277.80	12,173,457	12,173,457

Total	3,558.60	3,866.40	3,277.80	12,173,457	12,173,457
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### 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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.548893	0.044275	0.199565	0.124385	0.017503	0.005874	0.020174	0.028962	0.001990	0.002015	0.004673	0.000702	0.000989

### 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
NaturalGas Mitigated	0.3160	2.6999	1.1489	0.0172		0.2183	0.2183		0.2183	0.2183		3,446.7265	3,446.7265	0.0661	0.0632	3,467.2086
NaturalGas Unmitigated	0.3160	2.6999	1.1489	0.0172		0.2183	0.2183		0.2183	0.2183		3,446.7265	3,446.7265	0.0661	0.0632	3,467.2086

### 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
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Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	29297.2	0.3160	2.6999	1.1489	0.0172		0.2183	0.2183		0.2183	0.2183		3,446.7265	3,446.7265	0.0661	0.0632	3,467.2086
<b>Total</b>		<b>0.3160</b>	<b>2.6999</b>	<b>1.1489</b>	<b>0.0172</b>		<b>0.2183</b>	<b>0.2183</b>		<b>0.2183</b>	<b>0.2183</b>		<b>3,446.7265</b>	<b>3,446.7265</b>	<b>0.0661</b>	<b>0.0632</b>	<b>3,467.2086</b>

**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	lb/day										lb/day					
Apartments Low Rise	29.2972	0.3160	2.6999	1.1489	0.0172		0.2183	0.2183		0.2183	0.2183		3,446.7265	3,446.7265	0.0661	0.0632	3,467.2086
<b>Total</b>		<b>0.3160</b>	<b>2.6999</b>	<b>1.1489</b>	<b>0.0172</b>		<b>0.2183</b>	<b>0.2183</b>		<b>0.2183</b>	<b>0.2183</b>		<b>3,446.7265</b>	<b>3,446.7265</b>	<b>0.0661</b>	<b>0.0632</b>	<b>3,467.2086</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	13.8792	8.1326	48.0113	0.0510		0.8609	0.8609		0.8609	0.8609	0.0000	9,800.2183	9,800.2183	0.2650	0.1782	9,859.9479

Unmitigated	28.4534	10.2917	180.3664	0.4828		22.4523	22.4523		22.4523	22.4523	3,186.884	9,800.218	12,987.10	15.1631	0.1782	13,419.28
											7	3	30			35

## 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	0.9257					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.6920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	15.4652	9.7731	135.5950	0.4804		22.2070	22.2070		22.2070	22.2070	3,186.884	9,720.000	12,906.88	15.0843	0.1782	13,337.09
											7	0	47			68
Landscaping	1.3705	0.5186	44.7713	2.3500e-003		0.2453	0.2453		0.2453	0.2453		80.2183	80.2183	0.0787		82.1868
<b>Total</b>	<b>28.4534</b>	<b>10.2917</b>	<b>180.3664</b>	<b>0.4828</b>		<b>22.4523</b>	<b>22.4523</b>		<b>22.4523</b>	<b>22.4523</b>	<b>3,186.884</b>	<b>9,800.218</b>	<b>12,987.10</b>	<b>15.1631</b>	<b>0.1782</b>	<b>13,419.28</b>
											7	3	30			36

### 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	0.9257					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.6920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.8910	7.6140	3.2400	0.0486		0.6156	0.6156		0.6156	0.6156	0.0000	9,720.000	9,720.000	0.1863	0.1782	9,777.761
												0	0			1
Landscaping	1.3705	0.5186	44.7713	2.3500e-003		0.2453	0.2453		0.2453	0.2453		80.2183	80.2183	0.0787		82.1868
<b>Total</b>	<b>13.8792</b>	<b>8.1326</b>	<b>48.0113</b>	<b>0.0510</b>		<b>0.8609</b>	<b>0.8609</b>		<b>0.8609</b>	<b>0.8609</b>	<b>0.0000</b>	<b>9,800.218</b>	<b>9,800.218</b>	<b>0.2650</b>	<b>0.1782</b>	<b>9,859.947</b>
												3	3			9

## 7.0 Water Detail

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### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

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

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### Fire Pumps and Emergency Generators

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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### User Defined Equipment

Equipment Type	Number
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## 11.0 Vegetation

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Riverside Operations Dwelling Units - South Coast Air Basin, Winter

**Riverside Operations Dwelling Units  
South Coast Air Basin, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	540.00	Dwelling Unit	33.75	540,000.00	1544

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	10	<b>Operational Year</b>	2019		
<b>Utility Company</b>	Riverside Public Utilities				
<b>CO2 Intensity (lb/MW hr)</b>	1325.65	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

- Project Characteristics -
- Land Use - Number of Multi-Family Dwelling Units for operations below SCAQMD Thresholds.
- Construction Phase - Operational Only.
- Off-road Equipment -
- Woodstoves - Per no woodfireplaces scaqmd rule 445.
- Area Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	500.00	1.00
tblFireplaces	NumberWood	27.00	0.00
tblProjectCharacteristics	OperationalYear	2018	2019

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	5.9697	35.9754	40.6084	0.0877	4.7192	1.8899	6.6092	1.2600	1.7755	3.0355	0.0000	8,796.4196	8,796.4196	0.9515	0.0000	8,820.2078
Maximum	5.9697	35.9754	40.6084	0.0877	4.7192	1.8899	6.6092	1.2600	1.7755	3.0355	0.0000	8,796.4196	8,796.4196	0.9515	0.0000	8,820.2078

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	5.9697	35.9754	40.6084	0.0877	4.7192	1.8899	6.6092	1.2600	1.7755	3.0355	0.0000	8,796.4196	8,796.4196	0.9515	0.0000	8,820.2078
Maximum	5.9697	35.9754	40.6084	0.0877	4.7192	1.8899	6.6092	1.2600	1.7755	3.0355	0.0000	8,796.4196	8,796.4196	0.9515	0.0000	8,820.2078

	ROG	NOx	CO	SO2	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

### 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	28.4534	10.2917	180.3664	0.4828		22.4523	22.4523		22.4523	22.4523	3,186.884 7	9,800.218 3	12,987.10 30	15.1631	0.1782	13,419.28 35
Energy	0.3160	2.6999	1.1489	0.0172		0.2183	0.2183		0.2183	0.2183		3,446.726 5	3,446.726 5	0.0661	0.0632	3,467.208 6
Mobile	8.1475	41.9374	108.1224	0.3464	28.0815	0.4100	28.4915	7.5137	0.3858	7.8995		35,168.33 24	35,168.33 24	1.9151		35,216.20 99
<b>Total</b>	<b>36.9169</b>	<b>54.9290</b>	<b>289.6377</b>	<b>0.8464</b>	<b>28.0815</b>	<b>23.0806</b>	<b>51.1621</b>	<b>7.5137</b>	<b>23.0564</b>	<b>30.5701</b>	<b>3,186.884 7</b>	<b>48,415.27 71</b>	<b>51,602.16 18</b>	<b>17.1442</b>	<b>0.2414</b>	<b>52,102.70 21</b>

### Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	13.8792	8.1326	48.0113	0.0510		0.8609	0.8609		0.8609	0.8609	0.0000	9,800.218 3	9,800.218 3	0.2650	0.1782	9,859.947 9
Energy	0.3160	2.6999	1.1489	0.0172		0.2183	0.2183		0.2183	0.2183		3,446.726 5	3,446.726 5	0.0661	0.0632	3,467.208 6
Mobile	8.1475	41.9374	108.1224	0.3464	28.0815	0.4100	28.4915	7.5137	0.3858	7.8995		35,168.33 24	35,168.33 24	1.9151		35,216.20 99
<b>Total</b>	<b>22.3427</b>	<b>52.7699</b>	<b>157.2827</b>	<b>0.4146</b>	<b>28.0815</b>	<b>1.4892</b>	<b>29.5707</b>	<b>7.5137</b>	<b>1.4650</b>	<b>8.9787</b>	<b>0.0000</b>	<b>48,415.27 71</b>	<b>48,415.27 71</b>	<b>2.2462</b>	<b>0.2414</b>	<b>48,543.36 64</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	39.48	3.93	45.70	51.02	0.00	93.55	42.20	0.00	93.65	70.63	100.00	0.00	6.18	86.90	0.00	6.83

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	8/17/2017	8/17/2017	5	1	

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

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

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	389.00	58.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

**3.2 Building Construction - 2017**

**Unmitigated Construction On-Site**

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

Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078
<b>Total</b>	<b>3.1149</b>	<b>26.5546</b>	<b>18.1825</b>	<b>0.0269</b>		<b>1.7879</b>	<b>1.7879</b>		<b>1.6791</b>	<b>1.6791</b>		<b>2,650.9797</b>	<b>2,650.9797</b>	<b>0.6531</b>		<b>2,667.3078</b>

**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	0.2955	7.5307	2.1847	0.0147	0.3711	0.0660	0.4371	0.1068	0.0631	0.1700		1,569.8682	1,569.8682	0.1248		1,572.9876
Worker	2.5593	1.8901	20.2412	0.0460	4.3481	0.0361	4.3842	1.1531	0.0333	1.1864		4,575.5716	4,575.5716	0.1736		4,579.9124
<b>Total</b>	<b>2.8548</b>	<b>9.4209</b>	<b>22.4259</b>	<b>0.0608</b>	<b>4.7192</b>	<b>0.1021</b>	<b>4.8213</b>	<b>1.2600</b>	<b>0.0964</b>	<b>1.3564</b>		<b>6,145.4398</b>	<b>6,145.4398</b>	<b>0.2984</b>		<b>6,152.9000</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
<b>Total</b>	<b>3.1149</b>	<b>26.5546</b>	<b>18.1825</b>	<b>0.0269</b>		<b>1.7879</b>	<b>1.7879</b>		<b>1.6791</b>	<b>1.6791</b>	<b>0.0000</b>	<b>2,650.9797</b>	<b>2,650.9797</b>	<b>0.6531</b>		<b>2,667.3078</b>



## 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	0.2955	7.5307	2.1847	0.0147	0.3711	0.0660	0.4371	0.1068	0.0631	0.1700		1,569.868 2	1,569.868 2	0.1248			1,572.987 6
Worker	2.5593	1.8901	20.2412	0.0460	4.3481	0.0361	4.3842	1.1531	0.0333	1.1864		4,575.571 6	4,575.571 6	0.1736			4,579.912 4
<b>Total</b>	<b>2.8548</b>	<b>9.4209</b>	<b>22.4259</b>	<b>0.0608</b>	<b>4.7192</b>	<b>0.1021</b>	<b>4.8213</b>	<b>1.2600</b>	<b>0.0964</b>	<b>1.3564</b>		<b>6,145.439 8</b>	<b>6,145.439 8</b>	<b>0.2984</b>			<b>6,152.900 0</b>

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Mitigated	8.1475	41.9374	108.1224	0.3464	28.0815	0.4100	28.4915	7.5137	0.3858	7.8995		35,168.33 24	35,168.33 24	1.9151			35,216.20 99
Unmitigated	8.1475	41.9374	108.1224	0.3464	28.0815	0.4100	28.4915	7.5137	0.3858	7.8995		35,168.33 24	35,168.33 24	1.9151			35,216.20 99

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	3,558.60	3,866.40	3277.80	12,173,457	12,173,457

Total	3,558.60	3,866.40	3,277.80	12,173,457	12,173,457
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### 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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.548893	0.044275	0.199565	0.124385	0.017503	0.005874	0.020174	0.028962	0.001990	0.002015	0.004673	0.000702	0.000989

### 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
NaturalGas Mitigated	0.3160	2.6999	1.1489	0.0172		0.2183	0.2183		0.2183	0.2183		3,446.7265	3,446.7265	0.0661	0.0632	3,467.2086
NaturalGas Unmitigated	0.3160	2.6999	1.1489	0.0172		0.2183	0.2183		0.2183	0.2183		3,446.7265	3,446.7265	0.0661	0.0632	3,467.2086

### 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
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Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	29297.2	0.3160	2.6999	1.1489	0.0172		0.2183	0.2183		0.2183	0.2183		3,446.7265	3,446.7265	0.0661	0.0632	3,467.2086
<b>Total</b>		<b>0.3160</b>	<b>2.6999</b>	<b>1.1489</b>	<b>0.0172</b>		<b>0.2183</b>	<b>0.2183</b>		<b>0.2183</b>	<b>0.2183</b>		<b>3,446.7265</b>	<b>3,446.7265</b>	<b>0.0661</b>	<b>0.0632</b>	<b>3,467.2086</b>

**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	lb/day										lb/day						
Apartments Low Rise	29.2972	0.3160	2.6999	1.1489	0.0172		0.2183	0.2183		0.2183	0.2183		3,446.7265	3,446.7265	0.0661	0.0632	3,467.2086	
<b>Total</b>		<b>0.3160</b>	<b>2.6999</b>	<b>1.1489</b>	<b>0.0172</b>		<b>0.2183</b>	<b>0.2183</b>		<b>0.2183</b>	<b>0.2183</b>		<b>3,446.7265</b>	<b>3,446.7265</b>	<b>0.0661</b>	<b>0.0632</b>	<b>3,467.2086</b>	

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Mitigated	13.8792	8.1326	48.0113	0.0510		0.8609	0.8609		0.8609	0.8609	0.0000	9,800.2183	9,800.2183	0.2650	0.1782	9,859.9479	

Unmitigated	28.4534	10.2917	180.3664	0.4828		22.4523	22.4523		22.4523	22.4523	3,186.884	9,800.218	12,987.10	15.1631	0.1782	13,419.28
											7	3	30			35

## 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	0.9257					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.6920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	15.4652	9.7731	135.5950	0.4804		22.2070	22.2070		22.2070	22.2070	3,186.884	9,720.000	12,906.88	15.0843	0.1782	13,337.09
											7	0	47			68
Landscaping	1.3705	0.5186	44.7713	2.3500e-003		0.2453	0.2453		0.2453	0.2453		80.2183	80.2183	0.0787		82.1868
<b>Total</b>	<b>28.4534</b>	<b>10.2917</b>	<b>180.3664</b>	<b>0.4828</b>		<b>22.4523</b>	<b>22.4523</b>		<b>22.4523</b>	<b>22.4523</b>	<b>3,186.884</b>	<b>9,800.218</b>	<b>12,987.10</b>	<b>15.1631</b>	<b>0.1782</b>	<b>13,419.28</b>
											7	3	30			36

### 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	0.9257					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.6920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.8910	7.6140	3.2400	0.0486		0.6156	0.6156		0.6156	0.6156	0.0000	9,720.000	9,720.000	0.1863	0.1782	9,777.761
												0	0			1
Landscaping	1.3705	0.5186	44.7713	2.3500e-003		0.2453	0.2453		0.2453	0.2453		80.2183	80.2183	0.0787		82.1868
<b>Total</b>	<b>13.8792</b>	<b>8.1326</b>	<b>48.0113</b>	<b>0.0510</b>		<b>0.8609</b>	<b>0.8609</b>		<b>0.8609</b>	<b>0.8609</b>	<b>0.0000</b>	<b>9,800.218</b>	<b>9,800.218</b>	<b>0.2650</b>	<b>0.1782</b>	<b>9,859.947</b>
												3	3			9

## 7.0 Water Detail

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### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

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

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### Fire Pumps and Emergency Generators

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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### User Defined Equipment

Equipment Type	Number
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## 11.0 Vegetation

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