

# Appendix I – Greenhouse Gas Emissions

















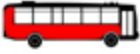

















## **Environmental Statement**

### **East-West Arterial Extension:**

Section 2 (Woodland Drive – Lookout Road)

Section 3 (Lookout Road – Frank Sound Road)

# Appendix I.1 – Traffic Data for Greenhouse Gas Analysis

<b>Class 1</b> Motorcycles		<b>Class 7</b> Four or more axle, single unit	
<b>Class 2</b> Passenger cars		<b>Class 8</b> Four or less axle, single trailer	
			
			
			
<b>Class 3</b> Four tire, single unit		<b>Class 9</b> 5-Axle tractor semitrailer	
			
			
<b>Class 4</b> Buses		<b>Class 10</b> Six or more axle, single trailer	
			
		<b>Class 11</b> Five or less axle, multi trailer	
<b>Class 5</b> Two axle, six tire, single unit		<b>Class 12</b> Six axle, multi-trailer	
			
		<b>Class 13</b> Seven or more axle, multi-trailer	
<b>Class 6</b> Three axle, single unit			
			
			

**Figure A-1 Federal Highway Administration Vehicle Classification**

All EPA MOVES runs applied the identical Federal Highway Administration vehicle classification distribution. Table A-1 provides the classifications by vehicle type discussed throughout the Greenhouse Gas Report

**Table A-1 Segment Data – Morning AM Baseline 2021**

<b>MOVES Category</b>	<b>FHWA Classification</b>
Motorcycles	1
Passenger cars	2-3
Buses	4
Single Unit Short-Haul Trucks	6-10
Combination Unit Short-Haul Trucks	11-13

**Table A-2 Segment Data – Morning AM Baseline 2021**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	1595	0.68	29.5	Shamrock Rd: Hirst Rd to Woodland Dr
2	Urban	1388	2.09	34.7	Coastal Rd: Woodland to Condor Rd
3	Urban	656	1.17	27.8	Coastal Rd: Condor Rd to Bodden Town Bypass
4	Urban	624	4.54	35.9	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
5	Urban	360	0.71	29.6	Hirst Rd
6	Urban	262	3.60	40.7	Frank Sound Rd

**Table A-3 Segment Data – Evening PM Baseline 2021**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	1601	0.68	29.7	Shamrock Rd: Hirst Rd to Woodland Dr
2	Urban	1580	2.09	32.8	Coastal Rd: Woodland to Condor Rd
3	Urban	929	1.17	26.7	Coastal Rd: Condor Rd to Bodden Town Bypass
4	Urban	917	4.54	34.7	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
5	Urban	795	0.71	28.3	Hirst Rd
6	Urban	417	3.60	45.7	Frank Sound Rd

**Table A-4 Segment Data – Morning AM No Build 2026**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	1115	0.68	33.2	Shamrock Rd: Hirst Rd to Woodland Dr
2	Urban	1726	2.09	32.9	Coastal Rd: Woodland to Condor Rd
3	Urban	653	1.17	27.8	Coastal Rd: Condor Rd to Bodden Town Bypass
4	Urban	863	4.54	34.9	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
5	Urban	189	0.71	29.9	Hirst Rd
6	Urban	491	3.60	40.4	Frank Sound Rd

**Table A-5 Segment Data – Evening PM No Build 2026**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	1157	0.68	33.2	Shamrock Rd: Hirst Rd to Woodland Dr
2	Urban	1905	2.09	31.7	Coastal Rd: Woodland to Condor Rd
3	Urban	955	1.17	26.5	Coastal Rd: Condor Rd to Bodden Town Bypass
4	Urban	1124	4.54	33.6	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
5	Urban	656	0.71	28.6	Hirst Rd
6	Urban	608	3.60	45.3	Frank Sound Rd

**Table A-6 Segment Data – Morning AM Proposed Project 2026**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	221	2.90	24.5	Will T
2	Urban	1230	2.52	43.5	Agricola Dr. Connector to Lookout Rd
3	Urban	886	1.38	46.5	Lookout Rd to Meagre Bay Pond
4	Rural	818	4.00	45.0	Meagre Bay Pond to Frank Sound Rd
5	Urban	843	0.68	34.5	Shamrock Rd: Hirst Rd to Woodland Dr
6	Urban	732	2.09	37.5	Coastal Rd: Woodland to Condor Rd
7	Urban	194	1.17	29.0	Coastal Rd: Condor Rd to Bodden Town Bypass
8	Urban	169	4.54	37.0	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
9	Urban	200	0.71	30.0	Hirst Rd from Shamrock Rd to EWA
10	Urban	597	3.60	40.0	Frank Sound Rd: Bodden Town Rd to Old Robin Rd

**Table A-7 Segment Data – Evening PM Proposed Project 2026**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	101	2.90	24.5	Will T
2	Urban	1327	2.52	43.0	Agricola Dr. Connector to Lookout Rd
3	Urban	1094	1.38	46.0	Lookout Rd to Meagre Bay Pond
4	Rural	953	4.00	43.5	Meagre Bay Pond to Frank Sound Rd
5	Urban	636	0.68	36.0	Shamrock Rd: Hirst Rd to Woodland Dr
6	Urban	829	2.09	38.5	Coastal Rd: Woodland to Condor Rd
7	Urban	326	1.17	29.0	Coastal Rd: Condor Rd to Bodden Town Bypass
8	Urban	292	4.54	37.0	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
9	Urban	405	0.71	30.0	Hirst Rd from Shamrock Rd to EWA
10	Urban	780	3.60	46.0	Frank Sound Rd: Bodden Town Rd to Old Robin Rd

**Table A-8 Segment Data – Morning AM No Build 2036**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	1464	0.68	30.8	Shamrock Rd: Hirst Rd to Woodland Dr
2	Urban	2541	2.09	26.3	Coastal Rd: Woodland to Condor Rd
3	Urban	1243	1.17	24.7	Coastal Rd: Condor Rd to Bodden Town Bypass
4	Urban	1665	4.54	29.7	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
5	Urban	401	0.71	29.7	Hirst Rd
6	Urban	1036	3.60	39.9	Frank Sound Rd

**Table A-9 Segment Data – Evening PM No Build 2036**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	1708	0.68	28.8	Shamrock Rd: Hirst Rd to Woodland Dr
2	Urban	2614	2.09	24.7	Coastal Rd: Woodland to Condor Rd
3	Urban	1687	1.17	22.3	Coastal Rd: Condor Rd to Bodden Town Bypass
4	Urban	1862	4.54	28.2	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
5	Urban	935	0.71	27.6	Hirst Rd
6	Urban	1079	3.60	44.8	Frank Sound Rd

**Table A-10 Segment Data – Morning AM Proposed Project 2036**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	200	2.90	24.5	Will T
2	Urban	1622	2.52	38.5	Agricola Dr. Connector to Lookout Rd
3	Urban	1308	1.38	43.5	Lookout Rd to Meagre Bay Pond
4	Rural	1242	4.00	42.5	Meagre Bay Pond to Frank Sound Rd
5	Urban	1087	0.68	33.5	Shamrock Rd: Hirst Rd to Woodland Dr
6	Urban	1241	2.09	34.5	Coastal Rd: Woodland to Condor Rd
7	Urban	441	1.17	28.5	Coastal Rd: Condor Rd to Bodden Town Bypass
8	Urban	540	4.54	35.5	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
9	Urban	218	0.71	30.0	Hirst Rd from Shamrock Rd to EWA
10	Urban	1089	3.60	39.0	Frank Sound Rd: Bodden Town Rd to Old Robin Rd

**Table A-11 Segment Data – Evening PM Proposed Project 2036**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	96	2.90	24.5	Will T
2	Urban	1694	2.52	39.0	Agricola Dr. Connector to Lookout Rd
3	Urban	1489	1.38	43.0	Lookout Rd to Meagre Bay Pond
4	Rural	1375	4.00	41.5	Meagre Bay Pond to Frank Sound Rd
5	Urban	840	0.68	35.0	Shamrock Rd: Hirst Rd to Woodland Dr
6	Urban	1238	2.09	36.0	Coastal Rd: Woodland to Condor Rd
7	Urban	524	1.17	28.0	Coastal Rd: Condor Rd to Bodden Town Bypass
8	Urban	596	4.54	35.5	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
9	Urban	430	0.71	30.0	Hirst Rd from Shamrock Rd to EWA
10	Urban	1249	3.60	44.5	Frank Sound Rd: Bodden Town Rd to Old Robin Rd

**Table A-12 Segment Data – Morning AM No Build 2046**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	1619	0.68	29.5	Shamrock Rd: Hirst Rd to Woodland Dr
2	Urban	3078	2.09	22.2	Coastal Rd: Woodland to Condor Rd
3	Urban	1838	1.17	20.4	Coastal Rd: Condor Rd to Bodden Town Bypass
4	Urban	2384	4.54	24	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
5	Urban	451	0.71	29.6	Hirst Rd
6	Urban	879	3.60	39.7	Frank Sound Rd

**Table A-13 Segment Data – Evening PM No Build 2046**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	2358	0.68	23.4	Shamrock Rd: Hirst Rd to Woodland Dr
2	Urban	3238	2.09	20.3	Coastal Rd: Woodland to Condor Rd
3	Urban	2374	1.17	18.1	Coastal Rd: Condor Rd to Bodden Town Bypass
4	Urban	2503	4.54	23.1	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
5	Urban	1044	0.71	26.9	Hirst Rd
6	Urban	861	3.60	44.6	Frank Sound Rd

**Table A-14 Segment Data – Morning AM Proposed Project 2046**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	165	2.90	24.0	Will T
2	Urban	2354	2.52	45.0	Agricola Dr. Connector to Lookout Rd
3	Urban	1827	1.38	38.5	Lookout Rd to Meagre Bay Pond
4	Rural	1751	4.00	38.5	Meagre Bay Pond to Frank Sound Rd
5	Urban	1189	0.68	33.0	Shamrock Rd: Hirst Rd to Woodland Dr
6	Urban	1289	2.09	34.5	Coastal Rd: Woodland to Condor Rd
7	Urban	526	1.17	28.5	Coastal Rd: Condor Rd to Bodden Town Bypass
8	Urban	754	4.54	35.0	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
9	Urban	229	0.71	30.0	Hirst Rd from Shamrock Rd to EWA
10	Urban	1619	3.60	37.0	Frank Sound Rd: Bodden Town Rd to Old Robin Rd



**Table A-15 Segment Data – Evening PM Proposed Project 2046**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	99	2.90	25.0	Will T
2	Urban	2343	2.52	44.0	Agricola Dr. Connector to Lookout Rd
3	Urban	1878	1.38	38.5	Lookout Rd to Meagre Bay Pond
4	Rural	1686	4.00	38.5	Meagre Bay Pond to Frank Sound Rd
5	Urban	1111	0.68	34.0	Shamrock Rd: Hirst Rd to Woodland Dr
6	Urban	1308	2.09	35.0	Coastal Rd: Woodland to Condor Rd
7	Urban	660	1.17	28.0	Coastal Rd: Condor Rd to Bodden Town Bypass
8	Urban	947	4.54	35.0	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
9	Urban	456	0.71	30.0	Hirst Rd from Shamrock Rd to EWA
10	Urban	1590	3.60	42.5	Frank Sound Rd: Bodden Town Rd to Old Robin Rd

**Table A-16 Segment Data – Morning AM No Build Low Volume 2074**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	1472	0.68	30.6	Shamrock Rd: Hirst Rd to Woodland Dr
2	Urban	3489	2.09	22.5	Coastal Rd: Woodland to Condor Rd
3	Urban	1989	1.17	16.9	Coastal Rd: Condor Rd to Bodden Town Bypass
4	Urban	3394	4.54	18.1	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
5	Urban	1273	0.71	25.6	Hirst Rd
6	Urban	1480	3.60	36.5	Frank Sound Rd

**Table A-17 Segment Data – Evening PM No Build Low Volume 2074**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	1326	0.68	31.0	Shamrock Rd: Hirst Rd to Woodland Dr
2	Urban	3507	2.09	22.4	Coastal Rd: Woodland to Condor Rd
3	Urban	2069	1.17	17.0	Coastal Rd: Condor Rd to Bodden Town Bypass
4	Urban	3356	4.54	18.2	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
5	Urban	1361	0.71	24.9	Hirst Rd
6	Urban	1065	3.60	41.8	Frank Sound Rd

**Table A-18 Segment Data – Morning AM Proposed Project Low Volume 2074**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	235	2.90	24.5	Will T
2	Urban	3612	2.52	42.0	Agricola Dr. Connector to Lookout Rd
3	Urban	3105	1.38	44.5	Lookout Rd to Meagre Bay Pond
4	Rural	2926	4.00	43.5	Meagre Bay Pond to Frank Sound Rd
5	Urban	1837	0.68	28.0	Shamrock Rd: Hirst Rd to Woodland Dr
6	Urban	1994	2.09	33.5	Coastal Rd: Woodland to Condor Rd
7	Urban	538	1.17	28.0	Coastal Rd: Condor Rd to Bodden Town Bypass
8	Urban	732	4.54	35.5	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
9	Urban	451	0.71	30.0	Hirst Rd from Shamrock Rd to EWA
10	Urban	2520	3.60	33.0	Frank Sound Rd: Bodden Town Rd to Old Robin Rd

**Table A-19 Segment Data – Evening PM Proposed Project Low Volume 2074**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	233	2.90	24.0	Will T
2	Urban	3573	2.52	43.5	Agricola Dr. Connector to Lookout Rd
3	Urban	2985	1.38	45.0	Lookout Rd to Meagre Bay Pond
4	Rural	2795	4.00	43.0	Meagre Bay Pond to Frank Sound Rd
5	Urban	1839	0.68	28.5	Shamrock Rd: Hirst Rd to Woodland Dr
6	Urban	2138	2.09	32.5	Coastal Rd: Woodland to Condor Rd
7	Urban	764	1.17	27.5	Coastal Rd: Condor Rd to Bodden Town Bypass
8	Urban	913	4.54	34.5	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
9	Urban	601	0.71	29.0	Hirst Rd from Shamrock Rd to EWA
10	Urban	2520	3.60	37.5	Frank Sound Rd: Bodden Town Rd to Old Robin Rd

**Table A-20 Segment Data – Morning AM No Build Medium Volume 2074**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	2830	0.68	21.8	Shamrock Rd: Hirst Rd to Woodland Dr
2	Urban	4627	2.09	14.8	Coastal Rd: Woodland to Condor Rd
3	Urban	2998	1.17	15.1	Coastal Rd: Condor Rd to Bodden Town Bypass
4	Urban	3582	4.54	15.9	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
5	Urban	782	0.71	28.1	Hirst Rd
6	Urban	1379	3.60	37.4	Frank Sound Rd

**Table A-21 Segment Data – Evening PM No Build Medium Volume 2074**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	4048	0.68	13.6	Shamrock Rd: Hirst Rd to Woodland Dr
2	Urban	4699	2.09	14.0	Coastal Rd: Woodland to Condor Rd
3	Urban	3157	1.17	14.2	Coastal Rd: Condor Rd to Bodden Town Bypass
4	Urban	3592	4.54	15.8	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
5	Urban	1199	0.71	25.7	Hirst Rd
6	Urban	1366	3.60	36.2	Frank Sound Rd

**Table A-22 Segment Data – Morning AM Proposed Project Medium Volume 2074**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	210	2.90	24.0	Will T
2	Urban	3757	2.52	43.0	Agricola Dr. Connector to Lookout Rd
3	Urban	2987	1.38	45.5	Lookout Rd to Meagre Bay Pond
4	Rural	2848	4.00	43.5	Meagre Bay Pond to Frank Sound Rd
5	Urban	1841	0.68	28.0	Shamrock Rd: Hirst Rd to Woodland Dr
6	Urban	1947	2.09	31.5	Coastal Rd: Woodland to Condor Rd
7	Urban	657	1.17	28.0	Coastal Rd: Condor Rd to Bodden Town Bypass
8	Urban	1174	4.54	34.5	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
9	Urban	1071	0.71	32.5	Hirst Rd from Shamrock Rd to EWA
10	Urban	2459	3.60	34.5	Frank Sound Rd: Bodden Town Rd to Old Robin Rd

**Table A-23 Segment Data – Evening PM Proposed Project Medium Volume 2074**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	134	2.90	24.5	Will T
2	Urban	3510	2.52	45.0	Agricola Dr. Connector to Lookout Rd
3	Urban	3197	1.38	46.0	Lookout Rd to Meagre Bay Pond
4	Rural	2990	4.00	44.0	Meagre Bay Pond to Frank Sound Rd
5	Urban	1776	0.68	29.0	Shamrock Rd: Hirst Rd to Woodland Dr
6	Urban	2080	2.09	31.5	Coastal Rd: Woodland to Condor Rd
7	Urban	751	1.17	27.5	Coastal Rd: Condor Rd to Bodden Town Bypass
8	Urban	971	4.54	34.0	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
9	Urban	1218	0.71	27.0	Hirst Rd from Shamrock Rd to EWA
10	Urban	2676	3.60	38.5	Frank Sound Rd: Bodden Town Rd to Old Robin Rd

**Table A-24 Segment Data – Morning AM No Build High Volume 2074**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	4183	0.68	13.5	Shamrock Rd: Hirst Rd to Woodland Dr
2	Urban	8519	2.09	6.0	Coastal Rd: Woodland to Condor Rd
3	Urban	6686	1.17	5.0	Coastal Rd: Condor Rd to Bodden Town Bypass
4	Urban	7830	4.54	6.0	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
5	Urban	2680	0.71	18.0	Hirst Rd
6	Urban	4425	3.60	15.5	Frank Sound Rd

**Table A-25 Segment Data – Evening PM No Build High Volume 2074**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	4650	0.68	10.7	Shamrock Rd: Hirst Rd to Woodland Dr
2	Urban	8670	2.09	5.2	Coastal Rd: Woodland to Condor Rd
3	Urban	7543	1.17	5	Coastal Rd: Condor Rd to Bodden Town Bypass
4	Urban	8597	4.54	5	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
5	Urban	2685	0.71	18.3	Hirst Rd
6	Urban	3368	3.60	26.1	Frank Sound Rd

**Table A-26 Segment Data – Morning AM Proposed Project High Volume 2074**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	231	2.90	22.5	Will T
2	Urban	11260	2.52	27.0	Agricola Dr. Connector to Lookout Rd
3	Urban	10610	1.38	36.5	Lookout Rd to Meagre Bay Pond
4	Rural	10442	4.00	34.5	Meagre Bay Pond to Frank Sound Rd
5	Urban	12118	0.68	21.0	Shamrock Rd: Hirst Rd to Woodland Dr
6	Urban	10156	2.09	18.5	Coastal Rd: Woodland to Condor Rd
7	Urban	6442	1.17	16.0	Coastal Rd: Condor Rd to Bodden Town Bypass
8	Urban	7121	4.54	26.5	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
9	Urban	2359	0.71	17.5	Hirst Rd from Shamrock Rd to EWA
10	Urban	6348	3.60	16.5	Frank Sound Rd: Bodden Town Rd to Old Robin Rd

**Table A-27 Segment Data – Evening PM Proposed Project High Volume 2074**

<b>Segment ID</b>	<b>Road Type</b>	<b>Segment Volume (veh/hr)</b>	<b>Segment Length (miles)</b>	<b>Segment Average Speed (mph)</b>	<b>Segment Description</b>
1	Urban	779	2.90	23.5	Will T
2	Urban	9776	2.52	33.0	Agricola Dr. Connector to Lookout Rd
3	Urban	8582	1.38	46.0	Lookout Rd to Meagre Bay Pond
4	Rural	7664	4.00	43.0	Meagre Bay Pond to Frank Sound Rd
5	Urban	9434	0.68	14.0	Shamrock Rd: Hirst Rd to Woodland Dr
6	Urban	8968	2.09	13.5	Coastal Rd: Woodland to Condor Rd
7	Urban	6568	1.17	18.5	Coastal Rd: Condor Rd to Bodden Town Bypass
8	Urban	7199	4.54	27.0	Coastal Rd: Bodden Town Bypass to Frank Sound Rd
9	Urban	1908	0.71	19.0	Hirst Rd from Shamrock Rd to EWA
10	Urban	4640	3.60	18.0	Frank Sound Rd: Bodden Town Rd to Old Robin Rd

# Appendix I.2 – Bulk Materials Greenhouse Gas Analysis



### No-Build Alternative Quantity Summary

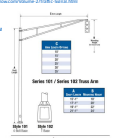
Build Year		COMPACTED ASPHALT, 2" DEPTH COMPACTED ASPHALT, 3.5" DEPTH CRUSHER RUN, 6" DEPTH CAYMAN ROCK, 6" DEPTH MILLING, 2" DEPTH ASPHALT TACK COAT PAVEMENT MARKINGS, WHITE GENERAL EXCAVATION							
		SQ YD	SQ YD	SQ YD	SQ YD	SQ YD	SQ YD	LF	CU YD
2026	New Construction								
	Rehabilitation/Resurfacing	180,017	18,002	18,002	18,002	180,017	378,036	48,500	8,001
2036	New Construction								
	Rehabilitation/Resurfacing	180,017	18,002	18,002	18,002	180,017	378,036	48,500	8,001
2046	New Construction								
	Rehabilitation/Resurfacing		180,017	180,017	180,017		180,017	48,500	80,008
2060	New Construction								
	Rehabilitation/Resurfacing	180,017	18,002	18,002	18,002	180,017	378,036	48,500	8,001
Total/Life	New Construction								
	Rehabilitation/Resurfacing	540,051	234,022	234,022	234,022	540,051	1,314,124	194,000	104,010
	Item Grand Total	540,051	234,022	234,022	234,022	540,051	1,314,124	194,000	104,010





Build Year		COMPACTED ASPHALT, 2" DEPTH	COMPACTED ASPHALT, 3.5" DEPTH	CRUSHER RUN, 6" DEPTH	CAYMAN ROCK, 6" DEPTH	MILLING, 2" DEPTH	ASPHALT TACK COAT	PAVEMENT MARKINGS, WHITE	GENERAL EXCAVATION
	Type	Asphalt	Asphalt	Rock	Rock	Asphalt	Asphalt	Marking	Soil
	EF (tCO2e/t)	0.055	0.055	0.007	0.007	0.055	0.055	5.7	0.007
	Density (t/m3)	2.3	2.3	2	2	2.3	2.3	1.4	1.7
	Depth/Height (in)	2	3.5	6	6	2	0.00984252		
	Diameter (in)								
	Material Units	SQ YD	SQ YD	SQ YD	SQ YD	SQ YD	SQ YD	LF	CU YD
<b>2026</b>	New Construction	0	0	0	0	0	0	0	0
	Rehabilitation/Resurfacing	180,017	18,002	18,002	18,002	180,017	378,036	48,500	8,001
<b>2036</b>	New Construction	0	0	0	0	0	0	0	0
	Rehabilitation/Resurfacing	180,017	18,002	18,002	18,002	180,017	378,036	48,500	8,001
<b>2046</b>	New Construction	0	0	0	0	0	0	0	0
	Rehabilitation/Resurfacing	0	180,017	180,017	180,017	0	180,017	48,500	80,008
<b>2060</b>	New Construction	0	0	0	0	0	0	0	0
	Rehabilitation/Resurfacing	180,017	18,002	18,002	18,002	180,017	378,036	48,500	8,001
<b>Total/Life</b>	New Construction	0	0	0	0	0	0	0	0
	Rehabilitation/Resurfacing	0	0	0	0	0	0	0	0
	Item Grand Total	540,051	234,022	234,022	234,022	540,051	1,314,124	194,000	104,010
<b>2026</b>	MT/year CO2e	967.25	169.27	32.11	32.11	967.25	10.00	53.93	72.79
<b>2036</b>	MT/year CO2e	967.25	169.27	32.11	32.11	967.25	10.00	53.93	72.79
<b>2046</b>	MT/year CO2e	0.00	1,692.69	321.14	321.14	0.00	4.76	53.93	727.93
<b>2060</b>	MT/year CO2e	967.25	169.27	32.11	32.11	967.25	10.00	53.93	72.79
<b>Total/Life</b>	MT/year CO2e	2,901.76	2,200.50	417.49	417.49	2,901.76	34.75	215.74	946.30

Raw Material	Use	Colours	No. Demand/Use	Source
Galvanized steel	High	White/Black	1000000	<a href="https://www.subseaconnect.com/...">https://www.subseaconnect.com/...</a>
Aluminum extrusion	High	White/Black	1000000	<a href="https://www.subseaconnect.com/...">https://www.subseaconnect.com/...</a>
Mudflap Polymer (PVC)	Medium	White	1000000	<a href="https://www.subseaconnect.com/...">https://www.subseaconnect.com/...</a>
Resistor (Industrial)	Low	White	1000000	<a href="https://www.subseaconnect.com/...">https://www.subseaconnect.com/...</a>
Resistor (Automotive)	Low	White	1000000	<a href="https://www.subseaconnect.com/...">https://www.subseaconnect.com/...</a>
Aluminum extrusion (PVC)	Medium	White	1000000	<a href="https://www.subseaconnect.com/...">https://www.subseaconnect.com/...</a>
Aluminum extrusion (PVC)	Medium	White	1000000	<a href="https://www.subseaconnect.com/...">https://www.subseaconnect.com/...</a>
Aluminum extrusion (PVC)	Medium	White	1000000	<a href="https://www.subseaconnect.com/...">https://www.subseaconnect.com/...</a>
Aluminum extrusion (PVC)	Medium	White	1000000	<a href="https://www.subseaconnect.com/...">https://www.subseaconnect.com/...</a>
Aluminum extrusion (PVC)	Medium	White	1000000	<a href="https://www.subseaconnect.com/...">https://www.subseaconnect.com/...</a>
Aluminum extrusion (PVC)	Medium	White	1000000	<a href="https://www.subseaconnect.com/...">https://www.subseaconnect.com/...</a>
Aluminum extrusion (PVC)	Medium	White	1000000	<a href="https://www.subseaconnect.com/...">https://www.subseaconnect.com/...</a>
Aluminum extrusion (PVC)	Medium	White	1000000	<a href="https://www.subseaconnect.com/...">https://www.subseaconnect.com/...</a>
Aluminum extrusion (PVC)	Medium	White	1000000	<a href="https://www.subseaconnect.com/...">https://www.subseaconnect.com/...</a>



Style 121 - 4-Bolt Base

Case	Series	Run	Trk	Run	Trk	Run	Trk
0800-0800	10	0	0	0	0	0	0
0800-0800	10	0	0	0	0	0	0
0800-0800	10	0	0	0	0	0	0
0800-0800	10	0	0	0	0	0	0

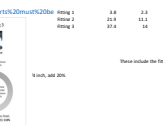


Table 4: C&G 03/10/2018

Table 5: C&G 03/10/2018

Table 6: C&G 03/10/2018

Product	Length (ft)	Width (ft)	Height (ft)	Weight (lbs)
Steel	10.0	1.0	0.5	100
Aluminum	10.0	1.0	0.5	50
PVC	10.0	1.0	0.5	20

Product	Length (ft)	Width (ft)	Height (ft)	Weight (lbs)
Steel	10.0	1.0	0.5	100
Aluminum	10.0	1.0	0.5	50
PVC	10.0	1.0	0.5	20

Raw Material	Use	Source/Reviewed
Structural Steel	Structural Beams	<a href="https://beta.metrotransit.org/shelter-design/">https://beta.metrotransit.org/shelter-design/</a>
Aluminum Sheet	Roof Panel	<a href="https://www.skagtransit.org/about-us/bus-stop-standards/#:~:text=Compliance%20with%20ADA%20standards%20is,access%20for%20individuals%20with%20disabilities,https://brcdoe.com/wp-content/uploads/2021/11/5_Bus-Stop-Amenities.pdf">https://www.skagtransit.org/about-us/bus-stop-standards/#:~:text=Compliance%20with%20ADA%20standards%20is,access%20for%20individuals%20with%20disabilities,https://brcdoe.com/wp-content/uploads/2021/11/5_Bus-Stop-Amenities.pdf</a>
Tempered glass	Walls	<a href="https://www.theparkcatalog.com/park-benches-101#:~:text=Aluminum%20is%20appropriate%20for%20Bench material">https://www.theparkcatalog.com/park-benches-101#:~:text=Aluminum%20is%20appropriate%20for%20Bench material</a>
Aluminum Cast	Benches	<a href="https://www.furnituresource.com/what-are-park-benches-made-of#:~:text=From%20steel%20and%20wood%20to%20plastic%20and%20metal%20to%20stainless%20steel">https://www.furnituresource.com/what-are-park-benches-made-of#:~:text=From%20steel%20and%20wood%20to%20plastic%20and%20metal%20to%20stainless%20steel</a>
Structural Steel	Roof Beam	<a href="https://www.enclave-foundry.com/blog/park-benches-guide#:~:text=Aesthetic%20Metal%20may%20provide%20structure,large%20casting%20and%20low%20maintenance,https://www.enclave-foundry.com/blog/park-benches-guide#:~:text=Aesthetic%20Metal%20may%20provide%20structure,large%20casting%20and%20low%20maintenance">https://www.enclave-foundry.com/blog/park-benches-guide#:~:text=Aesthetic%20Metal%20may%20provide%20structure,large%20casting%20and%20low%20maintenance,https://www.enclave-foundry.com/blog/park-benches-guide#:~:text=Aesthetic%20Metal%20may%20provide%20structure,large%20casting%20and%20low%20maintenance</a>

**Assumptions**

3-sided walls, open in front		
Lighting is accounted for in the "lightpoles" material category		
Depth (mm)	4 ft.	<a href="https://nacto.org/publication/transit-street-design-guide/stations-stop-elements/top-elements/small-transit-shelter/#:~:text=Shelters%20should%20include%20space%20to,rain%20but%20inter%20wind%20blockage,https://www.nycstreetsdesign.info/furniture/bus-stop-shelter#:~:text=Shelters%20are%20configured%20to%20five,4%20x%202%20D11%20x%20H">https://nacto.org/publication/transit-street-design-guide/stations-stop-elements/top-elements/small-transit-shelter/#:~:text=Shelters%20should%20include%20space%20to,rain%20but%20inter%20wind%20blockage,https://www.nycstreetsdesign.info/furniture/bus-stop-shelter#:~:text=Shelters%20are%20configured%20to%20five,4%20x%202%20D11%20x%20H</a>
Depth (regular)	5 ft.	<a href="https://www.nycstreetsdesign.info/furniture/bus-stop-shelter#:~:text=Shelters%20are%20configured%20to%20five,4%20x%202%20D11%20x%20H">https://www.nycstreetsdesign.info/furniture/bus-stop-shelter#:~:text=Shelters%20are%20configured%20to%20five,4%20x%202%20D11%20x%20H</a>
Width	14 ft.	<a href="https://www.nycstreetsdesign.info/furniture/bus-stop-shelter#:~:text=Shelters%20are%20configured%20to%20five,4%20x%202%20D11%20x%20H">https://www.nycstreetsdesign.info/furniture/bus-stop-shelter#:~:text=Shelters%20are%20configured%20to%20five,4%20x%202%20D11%20x%20H</a>
Height	8.92 ft.	<a href="https://www.nycstreetsdesign.info/furniture/bus-stop-shelter#:~:text=Shelters%20are%20configured%20to%20five,4%20x%202%20D11%20x%20H">https://www.nycstreetsdesign.info/furniture/bus-stop-shelter#:~:text=Shelters%20are%20configured%20to%20five,4%20x%202%20D11%20x%20H</a>
Side panels 3 inch off ground		<a href="https://www.pps.org/article/busshelters#:~:text=Bus%20shelters%20near%20intersections%20should,ink%20which%20they%20are%20located,https://www.pps.org/article/busshelters#:~:text=Bus%20shelters%20near%20intersections%20should,ink%20which%20they%20are%20located">https://www.pps.org/article/busshelters#:~:text=Bus%20shelters%20near%20intersections%20should,ink%20which%20they%20are%20located,https://www.pps.org/article/busshelters#:~:text=Bus%20shelters%20near%20intersections%20should,ink%20which%20they%20are%20located</a>

**Bench - Backless**

Length	7.5 ft.	<a href="https://www.nycstreetsdesign.info/furniture/citybench">https://www.nycstreetsdesign.info/furniture/citybench</a>
Width	1.71 ft.	<a href="https://www.nycstreetsdesign.info/furniture/citybench">https://www.nycstreetsdesign.info/furniture/citybench</a>
Height	1.5 ft.	<a href="https://www.nycstreetsdesign.info/furniture/citybench">https://www.nycstreetsdesign.info/furniture/citybench</a>
Thickness	0.17 ft.	<a href="https://www.nycstreetsdesign.info/furniture/citybench">https://www.nycstreetsdesign.info/furniture/citybench</a>
Seat Volume	2.14 R3	Calculated
Leg Volume	0.04 R3	Calculated, 4 per shelter
Bench Volume	2.30 R3	Calculated

**Walls - Safety Glass**

Length Back	14 ft.	See above
Height Back	8.67 ft.	See above
Area Back	121.3 R2	Calculated
Length Side	5 ft.	See above
Height Side	8.67 ft.	See above
Area Sides	43.33 R2	Calculated
Thickness	0.5 ft.	<a href="https://www.vitroglazings.com/media/172463/vitro-td-140.pdf">https://www.vitroglazings.com/media/172463/vitro-td-140.pdf</a>
Weight	6.5 lb/ft <sup>2</sup>	<a href="https://www.vitroglazings.com/media/172463/vitro-td-140.pdf">https://www.vitroglazings.com/media/172463/vitro-td-140.pdf</a>
Volume Side (1)	21.67 R3	Calculated
Volume Back	60.7 R3	Calculated

**Structural Poles**

Count/Shelter	5	
Length	0.26 ft.	<a href="https://www.procity.eu/square-post-bus-shelters.html#:~:text=Technical%20specifications,both%20durable%20and%20aesthetically%20pleasing,https://www.procity.eu/square-post-bus-shelters.html#:~:text=Technical%20specifications,both%20durable%20and%20aesthetically%20pleasing">https://www.procity.eu/square-post-bus-shelters.html#:~:text=Technical%20specifications,both%20durable%20and%20aesthetically%20pleasing,https://www.procity.eu/square-post-bus-shelters.html#:~:text=Technical%20specifications,both%20durable%20and%20aesthetically%20pleasing</a>
Width	0.26 ft.	See above
Height	8.92 ft.	See above
Volume per pole	0.61 R3	Calculated
Volume per Shelter	3.07 R3	Calculated

**Roof**

Structural Beam Len	14 ft.	See above
Structural Beam Wid	0.26 ft.	See above
Structural Beam Hei	0.26 ft.	See above
Roof Beam Volume	0.96 R3	Calculated
Panel Length	14 ft.	See above
Panel Width	3 ft.	Increased depth by 20% to account for slope
Panel Thickness	0.003 ft.	<a href="https://sheffieldmetals.com/learning-center/what-is-aluminum-roofing/#:~:text=Uses%20for%20Aluminum%20Metal%20Roofing%20Systems,06%201%208%20%20x%20most%20common,https://sheffieldmetals.com/learning-center/what-is-aluminum-roofing/#:~:text=Uses%20for%20Aluminum%20Metal%20Roofing%20Systems,06%201%208%20%20x%20most%20common">https://sheffieldmetals.com/learning-center/what-is-aluminum-roofing/#:~:text=Uses%20for%20Aluminum%20Metal%20Roofing%20Systems,06%201%208%20%20x%20most%20common,https://sheffieldmetals.com/learning-center/what-is-aluminum-roofing/#:~:text=Uses%20for%20Aluminum%20Metal%20Roofing%20Systems,06%201%208%20%20x%20most%20common</a>
Panel Volume (ea.)	0.14 R3	Calculated

Bus Stop Shelter							
Unit	Count	Structural Beams	Roof Beam	Roof Panel	Wall - Sides	Wall - Back	Bench
Material		Structural Steel	Structural Steel	Aluminum Sheet	Safety Glass	Safety Glass	Aluminum Cast
Quantity per count		5.00	1.00	2.00	2.00	1	1
2026	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2036	20.00	100.00	20.00	40.00	40.00	20.00	20.00
2044	4.00	20.00	4.00	8.00	8.00	4.00	4.00
2060	24.00	120.00	24.00	48.00	48.00	24.00	24.00
2074	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	48.00	240.00	48.00	96.00	96.00	48.00	48.00
MT CO2e/MT material	--	2.10	2.10	13.00	2.08	2.08	13.20
MT CO2e/item	--						
Density Wt/m <sup>3</sup>	--	7.8	7.8	2.7	2.5	2.5	2.7
Area Material (ft <sup>2</sup> /item)	--				43.33	121.3	
Volume Material (ft <sup>3</sup> /item)	--	0.61	0.96	0.14	21.67	60.7	2.30
Weight Item (lb/item)	--				6.5	6.5	
2026 (MT CO2e)	--	0	0	0	0	0	0
2036 (MT CO2e)	--	28.51832855	8.955288218	5.565950208	127.6143797	178.6601301	46.46574504
2046 (MT CO2e)	--	5.70366571	1.791057644	1.113190042	25.52287573	35.73202603	9.29149008
2060 (MT CO2e)	--	34.22199426	10.74634586	6.67914025	153.1372544	214.3921562	55.75889405
2074 (MT CO2e)	--	0	0	0	0	0	0
Total (MT CO2e)	--	68.44398852	21.49269172	13.3582805	306.2745088	428.7843123	111.5177881

**Attenuator - Test Level 3 HASH-KCHP 356 (concrete anchors)**  
 Length 21.5 ft.  
 Width 2 ft.  
 Height 2.83 ft.  
 Weight 3450.00 lb/ftem  
 Side Panel Thickness 0.29 ft.  
 Side Panel Volume 17.77 ft.<sup>3</sup>

**Attenuator - Test Level 2 HASH-KCHP 356 (concrete anchors)**  
 Length 33.5 ft.  
 Width 2 ft.  
 Height 2.83 ft.  
 Weight 2470 lb/ftem  
 Side Panel Thickness 0.29 ft.

**Hazard Marker**  
 Length 2 ft.  
 Width 2 ft.  
 Thickness 0.007 ft.

**Support Posts**  
 Height 2.83 ft.  
 Length 0.33 ft.  
 Width 0.33 ft.  
 Distance Apart 2.83 ft.  
 No. Per Item 15.00

**Rubber Circles**  
 Diameter (outer) 2.83 ft.  
 Thickness 0.33 ft.  
 Length 2.52 ft.  
 No. Per Item 7.00  
 Volume Circles 3.52 ft.<sup>3</sup>

[https://files.bentley.com/ep-content/uploads/2022/03/ata\\_0145\\_2019\\_attenuatorbroch.pdf](https://files.bentley.com/ep-content/uploads/2022/03/ata_0145_2019_attenuatorbroch.pdf)

Side panels will be off the ground, but height off ground is unknown so assuming full length from ground to total height

[https://files.bentley.com/ep-content/uploads/2022/03/ata\\_0146\\_2019\\_attenuatorbroch.pdf](https://files.bentley.com/ep-content/uploads/2022/03/ata_0146_2019_attenuatorbroch.pdf)

Side panels will be off the ground, but height off ground is unknown so assuming full length from ground to total height

Other Sources:  
[https://www.vdot.virginia.gov/media/4/dm/initialing/doing-business/technical-guidance-and-support/technical-guidance-document/location-and-design/2016-road-and-bridge-standards/autopublish/december2016revision/505\\_01.pdf](https://www.vdot.virginia.gov/media/4/dm/initialing/doing-business/technical-guidance-and-support/technical-guidance-document/location-and-design/2016-road-and-bridge-standards/autopublish/december2016revision/505_01.pdf)  
<https://ftp.dot.state.tx.us/pub/txdot-info/cmd/csrw/standard/roadway/cccr.pdf>

DOT drawing shows 1x1 ft. E.

Black and yellow striped marker on the front of the attenuator, photo for example  
[https://files.bentley.com/ep-content/uploads/2022/03/ata\\_0146\\_2019\\_attenuatorbroch.pdf](https://files.bentley.com/ep-content/uploads/2022/03/ata_0146_2019_attenuatorbroch.pdf)  
[https://files.bentley.com/ep-content/uploads/2022/03/ata\\_0146\\_2019\\_attenuatorbroch.pdf](https://files.bentley.com/ep-content/uploads/2022/03/ata_0146_2019_attenuatorbroch.pdf)  
[https://files.bentley.com/ep-content/uploads/2022/03/ata\\_0146\\_2019\\_attenuatorbroch.pdf](https://files.bentley.com/ep-content/uploads/2022/03/ata_0146_2019_attenuatorbroch.pdf)



Approximation based on Alabama DOT drawing  
 Approximation based on Alabama DOT drawing  
 Total length divided by distance between times 2 (1 for each side)

Horizontal, outer radius is height of attenuator (this may mean that the attenuator width ends up larger than 2 ft. but the 2 ft. width of attenuator is not incorporated into the calculations)  
 Conservative approximation based on Alabama DOT drawing  
 Distance between the mid section of each post less the post width assuming rubber circle touches posts on both side  
 One between each set of posts

**Material**  
 Galvanized steel  
 Aluminum  
 High Density polyethylene

**Part**  
 Side Panel  
 Hazard Marker  
 Energy Absorbing Material

[https://files.bentley.com/ep-content/uploads/2022/03/ata\\_0145\\_2019\\_attenuatorbroch.pdf](https://files.bentley.com/ep-content/uploads/2022/03/ata_0145_2019_attenuatorbroch.pdf)

<https://www.federalregister.gov/documents/2020/03/23/2020-06333/habit-usa-highway-impact-attenuator-used-for-rte-104-highway-2020-attenuator-2020-06-23-2020-06-23-2020-06-23-2020-06-23>

Unit	CONCRETE MASSIVE BARRIER ATTENUATOR					GUARD RAIL MASSIVE BARRIER ATTENUATOR					GUARD RAIL ATTENUATOR				
	Count	Side Panels Galvanized Steel	Support Beams Galvanized Steel	Hazard Marker Maximum Steel	Energy Absorption HDPE	Count	Side Panels Galvanized Steel	Support Beams Galvanized Steel	Hazard Marker Maximum Steel	Energy Absorption HDPE	Count	Side Panels Galvanized Steel	Support Beams Galvanized Steel	Hazard Marker Aluminum	Energy Absorption HDPE
Material															
Quantity per count		2.00	15.00	1.00	7.00		2.00	15.00	1.00	7.00		2.00	15.00	1.00	7.00
2036	12.00	24.00	180.00	12.00	84.00	0.00	0.00	0.00	0.00	0.00	30.00	60.00	450.00	30.00	210.00
2036	28.00	56.00	390.00	28.00	182.00	7.00	14.00	105.00	7.00	49.00	30.00	60.00	450.00	30.00	210.00
2044	30.00	60.00	450.00	30.00	210.00	0.00	0.00	0.00	0.00	0.00	30.00	60.00	450.00	30.00	210.00
2050	38.00	76.00	570.00	38.00	266.00	0.00	0.00	0.00	0.00	0.00	48.00	96.00	675.00	48.00	315.00
2074	38.00	76.00	570.00	38.00	266.00	0.00	0.00	0.00	0.00	0.00	48.00	96.00	675.00	48.00	315.00
Total	144.00	288.00	2,160.00	144.00	800.00	7.00	14.00	105.00	7.00	49.00	186.00	372.00	2,790.00	186.00	1,302.00
MT CO2/m		2.76	2.76	13.00	2.52		2.76	2.76	13.00	2.52		2.76	2.76	13.00	2.52
MT CO2/m															
Density MT/m <sup>3</sup>		8	8	2.7	0.97		8	8	2.7	0.97		8	8	2.7	0.97
Area Material (ft <sup>2</sup> /ftem)															
Volume Material (ft <sup>3</sup> /ftem)		17.77	0.31	0.027	3.52		17.77	0.31	0.027	3.52		17.77	0.31	0.027	3.52
Weight Item (lb/ftem)															
2036 (MT CO2/m)		266.41	35.43	0.32	20.46		0.00	0.00	0.00	0.00		666.53	88.57	0.80	51.31
2036 (MT CO2/m)		377.68	76.76	0.69	44.34		135.32	20.87	0.19	11.94		666.53	88.57	0.80	51.31
2044 (MT CO2/m)		666.33	88.57	0.80	51.31		0.00	0.00	0.00	0.00		709.83	109.29	0.90	57.30
2050 (MT CO2/m)		844.27	112.23	1.03	64.81		0.00	0.00	0.00	0.00		999.79	132.86	1.13	76.74
2074 (MT CO2/m)		844.27	112.23	1.03	64.81		0.00	0.00	0.00	0.00		999.79	132.86	1.13	76.74
Total (MT CO2/m)		3,195.33	426.18	3.82	245.38		135.32	20.87	0.19	11.94		4,133.48	549.16	4.93	317.20



# Appendix I.3 – Critical Pollutants Analysis Results

**Table C-1 Criteria Pollutant Emissions by Analysis Year (Metric Tonnes)**

Year	Scenario	AM MT/yr	PM MT/yr	Total MT/yr	AM MT/yr	PM MT/yr	Total MT/yr	AM MT/yr	PM MT/yr	Total MT/yr	AM MT/yr	PM MT/yr	Total MT/yr
		NOx Emissions			SO2 Emissions			VOC Emissions			PM2.5 Emissions		
2021	Baseline	85.96	146.08	232.03	3.44	5.65	9.10	32.27	53.79	86.07	2.32	3.87	6.19
2026	NoBuild	70.73	99.67	170.40	1.45	2.06	3.51	23.20	33.49	56.69	2.44	3.27	5.70
	Proposed	86.89	115.71	202.59	1.75	2.42	4.16	25.22	35.35	60.57	2.90	3.57	6.47
2036	NoBuild	21.99	28.76	50.74	0.14	0.20	0.35	4.86	6.95	11.81	0.90	1.09	1.99
	Proposed	21.07	25.01	46.08	0.15	0.19	0.34	4.63	5.94	10.58	0.83	0.92	1.75
2046	NoBuild	4.99	7.23	12.22	0.15	0.20	0.35	2.07	3.72	5.79	0.15	0.23	0.39
	Proposed	4.49	5.26	9.74	0.15	0.19	0.34	2.06	2.88	4.94	0.16	0.20	0.36
2074	NoBuild_L	6.01	6.76	12.76	6.62	8.02	14.64	4.78	5.71	10.49	0.37	0.42	0.80
	NoBuild_M	8.15	11.65	19.80	8.71	11.63	20.33	6.25	10.93	17.18	0.49	0.67	1.16
	NoBuild_H	35.96	38.54	74.49	33.49	37.77	71.26	25.88	35.40	61.28	1.69	1.79	3.48
	Proposed_L	7.53	8.35	15.88	7.60	9.22	16.81	6.44	7.33	13.76	0.46	0.49	0.95
	Proposed_M	7.33	8.72	16.06	7.88	9.63	17.51	6.09	7.82	13.90	0.46	0.52	0.98
	Proposed_H	37.40	38.49	75.89	38.28	41.10	79.38	35.41	34.87	70.28	2.20	2.20	4.39

**Table C-2 Criteria Pollutant Emissions by Analysis Year (Short Tons)**

Year	Scenario	AM T/yr	PM T/yr	Total T/yr	AM T/yr	PM T/yr	Total T/yr	AM T/yr	PM T/yr	Total T/yr	AM T/yr	PM T/yr	Total T/yr
		NOx Emissions			SO2 Emissions			VOC Emissions			PM2.5 Emissions		
2021	Baseline	94.75	161.02	255.77	3.80	6.23	10.03	35.58	59.30	94.88	2.56	4.27	6.83
2026	NoBuild	77.97	109.87	187.84	1.60	2.27	3.87	25.57	36.92	62.49	2.68	3.60	6.29
	Proposed	95.78	127.55	223.32	1.92	2.66	4.59	27.81	38.96	66.77	3.20	3.93	7.13
2036	NoBuild	24.24	31.70	55.93	0.16	0.22	0.38	5.36	7.66	13.02	0.99	1.20	2.19
	Proposed	23.22	27.57	50.79	0.16	0.21	0.38	5.11	6.55	11.66	0.92	1.01	1.93
2046	NoBuild	5.50	7.97	13.47	0.16	0.22	0.39	2.28	4.10	6.38	0.17	0.25	0.43
	Proposed	4.94	5.79	10.74	0.17	0.20	0.37	2.28	3.18	5.45	0.18	0.22	0.40
2074	NoBuild_L	6.62	7.45	14.07	7.30	8.84	16.14	5.26	6.29	11.56	0.41	0.47	0.88
	NoBuild_M	8.99	12.84	21.83	9.60	12.81	22.41	6.89	12.05	18.94	0.54	0.73	1.27
	NoBuild_H	39.64	42.48	82.11	36.91	41.64	78.55	28.53	39.02	67.55	1.86	1.97	3.83
	Proposed_L	8.30	9.20	17.50	8.37	10.16	18.53	7.09	8.08	15.17	0.50	0.55	1.05
	Proposed_M	8.08	9.62	17.70	8.69	10.61	19.30	6.71	8.62	15.33	0.51	0.57	1.08
	Proposed_H	41.22	42.43	83.65	42.19	45.30	87.50	39.04	38.44	77.47	2.42	2.42	4.84



# Appendix I.4 – Construction Emissions Analysis

	MOVES Output Name	2006			2026			2046			2060		
		CO2	CH4	N2O*	CO2	CH4	N2O*	CO2	CH4	N2O*	CO2	CH4	N2O*
		Grams per Hour			Grams per Hour			Grams per Hour			Grams per Hour		
	90	5	6	90	5	6	90	5	6	90	5	6	
Road Construction	Pavers	40,352	1.15	1.07	40,391	0.19	0.18	40,392	0.13	0.12	40,393	0.13	0.12
	Rollers	30,458	0.82	0.76	30,461	0.21	0.20	30,463	0.15	0.14	30,463	0.15	0.14
	Excavators	54,647	1.70	1.58	54,730	0.13	0.12	54,731	0.09	0.09	54,731	0.09	0.09
	Graders	64,767	1.97	1.83	64,848	0.11	0.10	64,849	0.05	0.05	64,849	0.05	0.05
	Tractors/Loaders/Backhoes	12,989	0.53	0.49	13,060	0.17	0.16	13,071	0.03	0.03	13,071	0.03	0.03
	Crawler Tractor/Dozers	82,948	1.99	1.85	82,752	0.29	0.27	82,757	0.12	0.11	82,757	0.12	0.11
	Dumpers/Tenders	4,719	0.17	0.10	4,745	0.15	0.14	4,753	0.11	0.10	4,753	0.10	0.10
	Surfacing Equipment	36,806	0.69	0.64	36,158	0.38	0.36	36,167	0.24	0.22	36,167	0.24	0.22
Electric Work	Tractors/Loaders/Backhoes	12,989	0.53	0.49	13,060	0.17	0.16	13,071	0.03	0.03	13,071	0.03	0.03
	Cranes	53,123	1.26	1.17	52,949	0.21	0.20	52,954	0.05	0.05	52,954	0.05	0.05
	Bore/Drill Rigs	40,875	0.74	0.69	40,761	0.48	0.44	40,788	0.14	0.13	40,789	0.11	0.11
	Rough Terrain Forklifts	32,493	0.82	0.76	32,534	0.19	0.18	32,538	0.08	0.08	32,537	0.08	0.08
	Dumpers/Tenders	4,719	0.17	0.10	4,745	0.15	0.14	4,753	0.11	0.10	4,753	0.10	0.10
	Excavators	54,647	1.70	1.58	54,730	0.13	0.12	54,731	0.09	0.09	54,731	0.09	0.09

\* Nonroad MOVES does not calculate N2O directly. Therefore, EPA non-road vehicle N2O emissions were determined based on a ratio. Table 5 - Construction/Mining Equipment

<https://www.epa.gov/system/files/documents/2024-02/rhg-emission-factors-hub-2024.pdf>

All other emission factors are derived from Non-road portion of EPA MOVES 4.0.1

2026														
Project	Type	Equipment					Emissions (Metric Tonnes)				Emissions (Short Tons)			
		Number	Daily Schedule (hr/day)	Total Work Days	% of Equipment Utilization	Work Days of Equipment Utilization	CO2	CH4	N2O	CO2e	CO2	CH4	N2O	CO2e
Proposed Project	Pavers	4	8	697	33%	230	297.0	8.5E-03	7.9E-03	299.6	327.4	9.4E-03	8.7E-03	330.2
	Rollers	4	8	697	50%	349	340.2	9.1E-03	8.5E-03	342.9	375.0	1.0E-02	9.4E-03	378.0
	Excavators	4	8	697	75%	523	914.6	2.8E-02	2.6E-02	923.2	1008.1	3.1E-02	2.9E-02	1017.6
	Graders	4	8	697	50%	349	723.3	2.2E-02	2.0E-02	730.0	797.3	2.4E-02	2.3E-02	804.7
	Tractors/Loaders/Backhoes	3	8	697	75%	523	163.0	6.6E-03	6.2E-03	165.0	179.7	7.3E-03	6.8E-03	181.9
	Crawler Tractor/Dozers	4	8	697	75%	523	1388.2	3.3E-02	3.1E-02	1398.3	1530.2	3.7E-02	3.4E-02	1541.4
	Dumpers/Tenders	20	4	697	100%	697	263.1	9.3E-03	5.7E-03	265.1	290.0	1.0E-02	6.3E-03	292.2
	Surfacing Equipment	2	8	697	33%	230	135.4	2.5E-03	2.3E-03	136.2	149.3	2.8E-03	2.6E-03	150.1
	Tractors/Loaders/Backhoes	2	8	465	75%	349	72.5	2.9E-03	2.7E-03	73.4	80.0	3.2E-03	3.0E-03	80.9
	Cranes	1	8	465	25%	116	49.3	1.2E-03	1.1E-03	49.7	54.3	1.3E-03	1.2E-03	54.7
	Bore/Drill Rigs	1	8	465	33%	153	50.0	9.1E-04	8.5E-04	50.3	55.1	1.0E-03	9.3E-04	55.5
	Rough Terrain Forklifts	1	8	465	75%	349	90.7	2.3E-03	2.1E-03	91.4	100.0	2.5E-03	2.4E-03	100.8
	Dumpers/Tenders	1	4	465	100%	465	8.8	3.1E-04	1.9E-04	8.8	9.7	3.4E-04	2.1E-04	9.7
	Excavators	1	8	465	75%	349	152.6	4.7E-03	4.4E-03	154.0	168.2	5.2E-03	4.9E-03	169.8
						4687.88				5167.50				

1.10231

2036														
Project	Type	Equipment					Emissions (Metric Tonnes)				Emissions (Short Tons)			
		Number	Daily Schedule (hr/day)	Total Work Days	% of Equipment Utilization	Work Days of Equipment Utilization	CO2	CH4	N2O	CO2e	CO2	CH4	N2O	CO2e
Proposed Project	Pavers	4	8	697	33%	230	297.3	1.4E-03	1.4E-03	297.7	327.7	1.6E-03	1.6E-03	328.2
	Rollers	4	8	697	50%	349	340.2	2.4E-03	2.4E-03	341.0	375.0	2.6E-03	2.6E-03	375.8
	Excavators	4	8	697	75%	523	916.0	2.2E-03	2.2E-03	916.7	1009.7	2.4E-03	2.4E-03	1010.5
	Graders	4	8	697	50%	349	724.2	1.3E-03	1.3E-03	724.6	798.3	1.4E-03	1.4E-03	798.8
	Tractors/Loaders/Backhoes	3	8	697	75%	523	163.9	2.1E-03	2.1E-03	164.6	180.7	2.3E-03	2.3E-03	181.4
	Crawler Tractor/Dozers	4	8	697	75%	523	1384.9	4.8E-03	4.8E-03	1386.5	1526.6	5.3E-03	5.3E-03	1528.3
	Dumpers/Tenders	20	4	697	100%	697	264.6	8.6E-03	8.6E-03	267.3	291.6	9.4E-03	9.4E-03	294.7
	Surfacing Equipment	2	8	697	33%	230	133.1	1.4E-03	1.4E-03	133.5	146.7	1.5E-03	1.5E-03	147.2
	Tractors/Loaders/Backhoes	2	8	465	75%	349	72.9	9.3E-04	9.3E-04	73.2	80.4	1.0E-03	1.0E-03	80.7
	Cranes	1	8	465	25%	116	49.1	2.0E-04	2.0E-04	49.2	54.2	2.2E-04	2.2E-04	54.2
	Bore/Drill Rigs	1	8	465	33%	153	49.9	5.8E-04	5.8E-04	50.1	55.0	6.4E-04	6.4E-04	55.2
	Rough Terrain Forklifts	1	8	465	75%	349	90.8	5.3E-04	5.3E-04	91.0	100.1	5.9E-04	5.9E-04	100.3
	Dumpers/Tenders	1	4	465	100%	465	8.8	2.9E-04	2.9E-04	8.9	9.7	3.2E-04	3.2E-04	9.8
	Excavators	1	8	465	75%	349	152.8	3.7E-04	3.7E-04	152.9	168.4	4.0E-04	4.0E-04	168.6
						4657.30				5133.78				

2046														
Project	Type	Equipment					Emissions (Metric Tonnes)				Emissions (Short Tons)			
		Number	Daily Schedule (hr/day)	Total Work Days	% of Equipment Utilization	Work Days of Equipment Utilization	CO2	CH4	N2O	CO2e	CO2	CH4	N2O	CO2e
Proposed Project	Pavers	4	8	557	33%	184	237.8	7.8E-04	7.2E-04	238.1	262.2	8.6E-04	8.0E-04	262.4
	Rollers	4	8	557	50%	279	272.0	1.4E-03	1.3E-03	272.4	299.8	1.5E-03	1.4E-03	300.3
	Excavators	4	8	557	75%	418	732.1	1.3E-03	1.2E-03	732.5	807.0	1.4E-03	1.3E-03	807.4
	Graders	4	8	557	50%	279	579.0	4.6E-04	4.2E-04	579.1	638.2	5.0E-04	4.7E-04	638.4
	Tractors/Loaders/Backhoes	3	8	557	75%	418	131.1	3.3E-04	3.0E-04	131.2	144.5	3.6E-04	3.3E-04	144.7
	Crawler Tractor/Dozers	4	8	557	75%	418	1107.0	1.6E-03	1.5E-03	1107.4	1220.2	1.7E-03	1.6E-03	1220.7
	Dumpers/Tenders	20	4	557	100%	557	211.8	4.7E-03	4.4E-03	213.2	233.5	5.2E-03	4.9E-03	235.0
	Surfacing Equipment	2	8	557	33%	184	106.5	7.1E-04	6.6E-04	106.7	117.4	7.8E-04	7.3E-04	117.6
	Tractors/Loaders/Backhoes	2	8	371	75%	279	58.3	1.5E-04	1.4E-04	58.4	64.3	1.6E-04	1.5E-04	64.4
	Cranes	1	8	371	25%	93	39.4	3.7E-05	3.4E-05	39.4	43.4	4.1E-05	3.8E-05	43.4
	Bore/Drill Rigs	1	8	371	33%	123	40.1	1.3E-04	1.3E-04	40.2	44.2	1.5E-04	1.4E-04	44.3
	Rough Terrain Forklifts	1	8	371	75%	279	72.6	1.9E-04	1.7E-04	72.7	80.1	2.0E-04	1.9E-04	80.1
	Dumpers/Tenders	1	4	371	100%	371	7.1	1.6E-04	1.5E-04	7.1	7.8	1.7E-04	1.6E-04	7.8
	Excavators	1	8	371	75%	279	122.2	2.1E-04	2.0E-04	122.2	134.7	2.3E-04	2.2E-04	134.7
	<b>3720.59</b>										<b>4101.25</b>			

2060														
Project	Type	Equipment					Emissions (Metric Tonnes)				Emissions (Short Tons)			
		Number	Daily Schedule (hr/day)	Total Work Days	% of Equipment Utilization	Work Days of Equipment Utilization	CO2	CH4	N2O	CO2e	CO2	CH4	N2O	CO2e
Proposed Project	Pavers	4	8	557	33%	184	237.8	7.8E-04	7.2E-04	238.1	262.2	8.6E-04	8.0E-04	262.4
	Rollers	4	8	557	50%	279	272.0	1.4E-03	1.3E-03	272.4	299.8	1.5E-03	1.4E-03	300.3
	Excavators	4	8	557	75%	418	732.1	1.3E-03	1.2E-03	732.5	807.0	1.4E-03	1.3E-03	807.4
	Graders	4	8	557	50%	279	579.0	4.6E-04	4.2E-04	579.1	638.2	5.0E-04	4.7E-04	638.4
	Tractors/Loaders/Backhoes	3	8	557	75%	418	131.1	2.9E-04	2.7E-04	131.2	144.5	3.2E-04	3.0E-04	144.6
	Crawler Tractor/Dozers	4	8	557	75%	418	1107.0	1.6E-03	1.5E-03	1107.4	1220.2	1.7E-03	1.6E-03	1220.7
	Dumpers/Tenders	20	4	557	100%	557	211.8	4.6E-03	4.3E-03	213.2	233.5	5.0E-03	4.7E-03	235.0
	Surfacing Equipment	2	8	557	33%	184	106.5	7.0E-04	6.5E-04	106.7	117.4	7.7E-04	7.2E-04	117.6
	Tractors/Loaders/Backhoes	2	8	371	75%	279	58.3	1.3E-04	1.2E-04	58.4	64.3	1.4E-04	1.3E-04	64.4
	Cranes	1	8	371	25%	93	39.4	3.7E-05	3.4E-05	39.4	43.4	4.0E-05	3.7E-05	43.4
	Bore/Drill Rigs	1	8	371	33%	123	40.1	1.1E-04	1.0E-04	40.2	44.2	1.2E-04	1.2E-04	44.3
	Rough Terrain Forklifts	1	8	371	75%	279	72.6	1.8E-04	1.7E-04	72.7	80.1	2.0E-04	1.9E-04	80.1
	Dumpers/Tenders	1	4	371	100%	371	7.1	1.5E-04	1.4E-04	7.1	7.8	1.7E-04	1.6E-04	7.8
	Excavators	1	8	371	75%	279	122.2	2.1E-04	2.0E-04	122.2	134.7	2.3E-04	2.2E-04	134.7
	<b>3720.53</b>										<b>4101.18</b>			

2074														
Project	Type	Equipment					Emissions (Metric Tonnes)				Emissions (Short Tons)			
		Number	Daily Schedule (hr/day)	Total Work Days	% of Equipment Utilization	Work Days of Equipment Utilization	CO2	CH4	N2O	CO2e	CO2	CH4	N2O	CO2e
Proposed Project	Pavers	4	8	279	33%	92	118.9	3.9E-04	3.6E-04	119.0	131.1	4.3E-04	4.0E-04	131.2
	Rollers	4	8	279	50%	140	136.5	6.8E-04	6.4E-04	136.7	150.4	7.5E-04	7.0E-04	150.7
	Excavators	4	8	279	75%	209	366.0	6.3E-04	5.9E-04	366.2	403.5	6.9E-04	6.5E-04	403.7
	Graders	4	8	279	50%	140	290.5	2.3E-04	2.1E-04	290.6	320.2	2.5E-04	2.3E-04	320.3
	Tractors/Loaders/Backhoes	3	8	279	75%	209	65.6	1.5E-04	1.4E-04	65.6	72.3	1.6E-04	1.5E-04	72.3
	Crawler Tractor/Dozers	4	8	279	75%	209	553.5	7.8E-04	7.3E-04	553.7	610.1	8.6E-04	8.0E-04	610.4
	Dumpers/Tenders	20	4	279	100%	279	106.1	2.3E-03	2.1E-03	106.8	116.9	2.5E-03	2.4E-03	117.7
	Surfacing Equipment	2	8	279	33%	92	53.2	3.5E-04	3.3E-04	53.3	58.7	3.9E-04	3.6E-04	58.8
	Tractors/Loaders/Backhoes	2	8	186	75%	140	29.3	6.6E-05	6.1E-05	29.3	32.3	7.2E-05	6.7E-05	32.3
	Cranes	1	8	186	25%	47	19.9	1.8E-05	1.7E-05	19.9	21.9	2.0E-05	1.9E-05	22.0
	Bore/Drill Rigs	1	8	186	33%	61	19.9	5.6E-05	5.2E-05	19.9	21.9	6.2E-05	5.7E-05	22.0
	Rough Terrain Forklifts	1	8	186	75%	140	36.4	9.3E-05	8.6E-05	36.5	40.2	1.0E-04	9.5E-05	40.2
	Dumpers/Tenders	1	4	186	100%	186	3.5	7.6E-05	7.1E-05	3.6	3.9	8.4E-05	7.8E-05	3.9
	Excavators	1	8	186	75%	140	61.3	1.1E-04	9.8E-05	61.3	67.6	1.2E-04	1.1E-04	67.6
	<b>1862.49</b>										<b>2053.05</b>			

**Worker Commuting**

Activity	Year	% of Total Project Manhours	Man hours/phase	Months/Phase	Crew Size	Hrs/crew member/month	Days/crew member/Month	Vehicles miles traveled	CO2e (gr/veh-mi)	Emissions (Metric Tons)	Emissions (Short tons)
Road Construction	2026	25%	1,393,299	24	200	290	29	1,671,959	471.82	788.86	869.57
	2036	25%	1,393,299	24		290	29	1,671,959	362.82	606.62	668.68
	2046	20%	1,114,639	24		232	23	1,337,567	311.74	416.97	459.63
	2060	20%	1,114,639	24		232	23	1,337,567	264.58	353.89	390.10
	2074	10%	557,320	12		232	23	668,783	224.55	150.18	165.54
<b>Total Hours</b>	<b>5,573,195</b>							<b>6,687,834</b>		<b>2,316.52</b>	<b>2,553.52</b>

**Assumptions:**

One daily trip is 12 miles round trip - assumes average of 6 miles one way

All onroad emission factors based on MOVES CY 2006, 2026,2046,2060 and a scaled 2074.

One person per personal vehicles with 80% gasoline passenger cars, 15% gasoline passenger trucks and 5% diesel trucks

**Material Delivery Trucks**

Activity	Year	Work Days	Trips per Phase	Trips/day	Truck Miles	CO2e (gr/veh-mi)	Emissions (Metric Tons)	Emissions (Short Tons)
Road Construction	2026	697	232,196	333	2,786,352	1967.53	5,482.24	6,043.13
	2036	697	152,148	218	1,825,776	1735.60	3,168.82	3,493.03
	2046	557	71,931	129	863,172	1510.07	1,303.45	1,436.81
	2060	557	69,092	124	829,104	1495.63	1,240.03	1,366.90
	2074	279	12,844	46	154,128	1481.33	228.31	251.67
							<b>11,422.86</b>	<b>12,591.54</b>

**Assumptions:**

One daily trip is 12 miles round trip - assumes average of 6 miles one way and 10 cubic yards per truck trip

All onroad emission factors based on MOVES CY 2006, 2026,2046,2060 and a scaled 2074.

Proposed	Construction tailpipe	On-Road	Total
	Metric Tonnes		
2026	4,687.88	6,271.10	<b>10,958.98</b>
2036	4,657.30	3,775.44	<b>8,432.74</b>
2046	3,720.59	1,720.42	<b>5,441.02</b>
2060	3,720.53	1,593.92	<b>5,314.45</b>
2074	1,862.49	378.49	<b>2,240.98</b>
<b>Total</b>	<b>18,648.79</b>	<b>13,739.38</b>	<b>32,388.17</b>
	Short Tons		
2026	5,167.50	6,912.69	<b>12,080.19</b>
2036	5,133.78	4,161.71	<b>9,295.49</b>
2046	4,101.25	1,896.44	<b>5,997.69</b>
2060	4,101.18	1,757.00	<b>5,858.17</b>
2074	2,053.05	417.21	<b>2,470.26</b>
<b>Total</b>	<b>20,556.75</b>	<b>15,145.06</b>	<b>35,701.80</b>