

Benefit Cost (Environmental)

Springfield Highway Expansion - 2 regions

Summary Economic Impact **Benefit - Cost** Financial Impact Tracing / Validation Freight VIA

Graphics Benefit-Cost Overview Value of Benefits Cost and Net Benefits **Environmental** Grant Report Performance Metrics

Amount of Emissions By Year (Metric Tons) Value of Emissions By Year (\$) Value of Emissions By Mode (\$)

Amount of Emissions By Year (Metric Tons)

Calendar Year	Metric Tons of Emissions				
	VOC	NO _x	SO ₂	PM 2.5	CO ₂
2022	-1.73	-16.22	-0.05	-0.49	-9,330.51
2023	-1.49	-13.61	-0.04	-0.41	-7,932.58
Mode - Purpose	Emissions				
	VOC	NO _x	SO ₂	PM 2.5	CO ₂
Passenger Car - Personal	-0.41	-0.64	-0.01	-0.03	-1,702.33
Passenger Car - Federal Grants - Business	-0.01	-0.02	0.00	0.00	-55.52
Truck - Federal Grants - Freight	-1.07	-12.95	-0.04	-0.38	-6,174.73
2024	-1.23	-10.89	-0.03	-0.33	-6,475.24
2025	-0.96	-8.06	-0.03	-0.25	-4,956.63
2026	-0.69	-5.13	-0.02	-0.16	-3,374.84
2027	-0.40	-2.07	-0.01	-0.07	-1,727.88
2028	-0.10	1.10	0.00	0.03	-13.72
2029	0.21	4.39	0.01	0.13	1,769.72
2030	0.53	7.81	0.02	0.23	3,624.59
2031	0.87	11.36	0.03	0.33	5,553.11

Amount of Emissions By Year (Metric Tons) Value of Emissions By Year (\$) Value of Emissions By Mode (\$)

7% Discount Rate

Value of Emissions By Year - 7% Discount Rate (2020 \$)

Calendar Year	Emissions					Total
	VOC	NO _x	SO ₂	PM 2.5	CO ₂	
2022	-3,566.44	-228,119.05	-1,799.43	-325,052.36	-431,930.43	-990,467.70
2023	-2,858.42	-182,193.03	-1,453.89	-260,003.54	-349,668.68	-796,177.56
Mode - Purpose	Emissions					Total
	VOC	NO _x	SO ₂	PM 2.5	CO ₂	
Passenger Car - Personal	-784.29	-8,546.44	-202.89	-18,343.94	-75,038.97	-102,916.54
Passenger Car - Federal Grants - Business	-27.51	-299.76	-7.12	-643.40	-2,447.16	-3,424.94
Truck - Federal Grants - Freight	-2,046.62	-173,346.83	-1,243.88	-241,016.20	-272,182.55	-689,836.08
2024	-2,210.03	-137,927.72	-1,125.42	-198,620.82	-271,696.07	-611,580.06
2025	-1,617.17	-96,597.53	-815.54	-140,748.81	-197,904.55	-437,683.59
2026	-1,076.02	-58,064.47	-516.21	-85,897.85	-128,181.33	-273,735.89
2027	-582.98	-22,324.16	-237.30	-34,674.65	-62,409.97	-120,229.06
2028	-134.68	11,203.48	23.74	13,113.30	-471.13	23,734.71

Amount of Emissions By Year (Metric Tons) Value of Emissions By Year (\$) Value of Emissions By Mode (\$)

7% Discount Rate

Value of Emissions By Mode - 7% Discount Rate (2020 \$)

Mode - Purpose	Emissions					Total
	VOC	NO _x	SO ₂	PM 2.5	CO ₂	
Auto - Personal	-2,961.25	-31,730.93	-756.96	-68,403.08	-158,740.81	-262,593.02
Auto - Business	219.27	2,730.99	66.67	5,938.44	30,295.91	39,251.28
Truck - Freight	17,234.66	1,664,890.26	12,280.28	2,344,762.42	3,390,966.41	7,430,134.04
Total	14,492.68	1,635,890.32	11,589.99	2,282,297.78	3,262,521.51	7,206,792.29