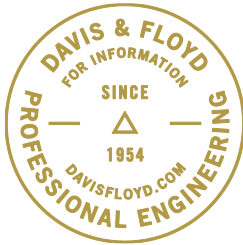


## Appendix 6-G: Safety Evaluation

*Draft Report – February 2016*

---



DRAFT

DRAFT

Page intentionally left blank

Safety: Injuries		Alt B-1: US 78/Mtg BRT			Alt B-3: US 78/EB BRT			Alt C-1: US 176/Mtg BRT			Alt C-3: US 176/EB BRT			Alt D-1: Dorch/Mtg BRT			Alt D-3: Dorch/EB BRT		
Mode/Technology	Conversion Factor: Emissions (kg)/VMT	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement
Automobile	0.00000195	6847855	1.335331725	\$654,312.55	6,626,481	1.292163795	\$633,160.26	3,665,676	0.71480682	\$350,255.34	3,477,537	0.678119715	\$332,278.66	5,629,431	1.097739045	\$537,892.13	5,518,744	1.07615508	\$527,315.99
Diesel Bus	0.000001824	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Hybrid Bus	0.000001824	-1096830.86	-2.000619489	(\$980,303.55)	-1,137,759	-2.075272671	(\$1,016,883.61)	-1,017,562	-1.856032577	(\$909,455.96)	-1,058,490	-1.93068576	(\$946,036.02)	-1,201,504	-2.191542858	(\$1,073,856.00)	-1,242,432	-2.266196041	(\$1,110,436.06)
CNG Bus	0.000001824	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Electric Bus	0.000001458	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Heavy Rail	0.00000155	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Light Rail/Street Car (CART Miles)	0.000001696	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Commuter Rail (Diesel Locomotive or DMU)	0.000001746	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Commuter Rail (Used Diesel Locomotive)	0.000001746	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Commuter Rail (Electric or EMU)	0.000001746	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
<b>Total Change</b>	---	<b>5751024.14</b>	<b>-0.665287764</b>	<b>(\$325,991.00)</b>	<b>5488721.86</b>	<b>-0.783108876</b>	<b>(\$383,723.35)</b>	<b>2,648,114</b>	<b>-1.141225757</b>	<b>(\$559,200.62)</b>	<b>2,419,047</b>	<b>-1.252566045</b>	<b>(\$613,757.36)</b>	<b>4,427,927</b>	<b>-1.093803813</b>	<b>(\$535,963.87)</b>	<b>4,276,312</b>	<b>-1.190040961</b>	<b>(\$583,120.07)</b>

Safety: Injuries		Alt B-2: US 78/Mtg LRT			Alt B-4: US 78/EB LRT			Alt C-2: US 176/Mtg LRT			Alt C-4: US 176/EB LRT			Alt D-2: Dorch/Mtg LRT			Alt D-4: Dorch/EB LRT		
Mode/Technology	Conversion Factor: Emissions (kg)/VMT	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement
Automobile	0.00000195	11,689,472	2.27944704	\$1,116,929.05	11,196,727	2.183361765	\$1,069,847.26	6,873,865	1.340403675	\$656,797.80	6,641,509	1.295094255	\$634,596.18	9,223,435	1.798569825	\$881,299.21	8,898,021	1.735114095	\$850,205.91
Diesel Bus	0.000001824	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Hybrid Bus	0.000001824	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
CNG Bus	0.000001824	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Electric Bus	0.000001458	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Heavy Rail	0.00000155	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Light Rail/Street Car (CART Miles)	0.000001696	-2,193,662	-3.720450277	(\$1,823,020.64)	-2,275,518	-3.859279003	(\$1,891,046.71)	-2,035,123	-3.451569354	(\$1,691,268.98)	-2,116,980	-3.59039808	(\$1,759,295.06)	-2,403,006	-4.075498176	(\$1,996,994.11)	-2,485,008	-4.214572754	(\$2,065,140.65)
Commuter Rail (Diesel Locomotive or DMU)	0.000001746	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Commuter Rail (Used Diesel Locomotive)	0.000001746	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Commuter Rail (Electric or EMU)	0.000001746	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
<b>Total Change</b>	---	<b>9495810.28</b>	<b>-1.441003237</b>	<b>(\$706,091.59)</b>	<b>8,921,209</b>	<b>-1.675917238</b>	<b>(\$821,199.45)</b>	<b>4,838,742</b>	<b>-2.111165679</b>	<b>(\$1,034,471.18)</b>	<b>4,524,529</b>	<b>-2.295303825</b>	<b>(\$1,124,698.87)</b>	<b>6,820,429</b>	<b>-2.276928351</b>	<b>(\$1,115,694.89)</b>	<b>6,413,013</b>	<b>-2.479458659</b>	<b>(\$1,214,934.74)</b>

Safety: Fatalities		Alt B-1: US 78/Mtg BRT			Alt B-3: US 78/EB BRT			Alt C-1: US 176/Mtg BRT			Alt C-3: US 176/EB BRT			Alt D-1: Dorch/Mtg BRT			Alt D-3: Dorch/EB BRT		
Mode/Technology	Conversion Factor: Emissions (kg)/VMT	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement
Automobile	0.000000013	6,847,855	0.089022115	\$810,101.25	6,626,481	0.086144253	\$783,912.70	3,665,676	0.047653788	\$433,649.47	3,477,537	0.045207981	\$411,392.63	5,629,431	0.073182603	\$665,961.69	5,518,744	0.071743672	\$652,867.42
Diesel Bus	0.000000004	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Hybrid Bus	0.000000004	-1096830.86	-0.004387323	(\$39,924.64)	-1,137,759	-0.004551037	(\$41,414.43)	-1,017,562	-0.004070247	(\$37,039.25)	-1,058,490	-0.00423396	(\$38,529.04)	-1,201,504	-0.004806015	(\$43,734.74)	-1,242,432	-0.004969728	(\$45,224.53)
CNG Bus	0.000000004	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Electric Bus	0.000000004	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Heavy Rail	0.000000007	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Light Rail/Street Car (CART Miles)	0.000000009	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Commuter Rail (Diesel Locomotive or DMU)	0.000000012	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Commuter Rail (Used Diesel Locomotive)	0.000000012	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Commuter Rail (Electric or EMU)	0.000000001	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
<b>Total Change</b>	---	<b>5751024.14</b>	<b>0.084634792</b>	<b>\$770,176.60</b>	<b>5488721.86</b>	<b>0.081593216</b>	<b>\$742,498.27</b>	<b>2,648,114</b>	<b>0.043583541</b>	<b>\$396,610.22</b>	<b>2,419,047</b>	<b>0.040974021</b>	<b>\$372,863.59</b>	<b>4,427,927</b>	<b>0.068376588</b>	<b>\$622,226.95</b>	<b>4,276,312</b>	<b>0.066773944</b>	<b>\$607,642.89</b>

Safety: Fatalities		Alt B-2: US 78/Mtg LRT			Alt B-4: US 78/EB LRT			Alt C-2: US 176/Mtg LRT			Alt C-4: US 176/EB LRT			Alt D-2: Dorch/Mtg LRT			Alt D-4: Dorch/EB LRT		
Mode/Technology	Conversion Factor: Emissions (kg)/VMT	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement	VMT Decrease (Increase)	Emissions Decrease (Increase) (kg)	Value of Improvement
Automobile	0.000000013	11,689,472	0.151963136	\$1,382,864.54	11,196,727	0.145557451	\$1,324,572.80	6,873,865	0.089360245	\$813,178.23	6,641,509	0.086339617	\$785,690.51	9,223,435	0.119904655	\$1,091,132.36	8,898,021	0.115674273	\$1,052,635.88
Diesel Bus	0.000000004	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Hybrid Bus	0.000000004	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
CNG Bus	0.000000004	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Electric Bus	0.000000004	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Heavy Rail	0.000000007	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Light Rail/Street Car (CART Miles)	0.000000009	-2,193,662	-0.019742955	(\$179,660.89)	-2,275,518	-0.020479665	(\$186,364.95)	-2,035,123	-0.018316111	(\$166,676.61)	-2,116,980	-0.01905282	(\$173,380.66)	-2,403,006	-0.021627054	(\$196,806.19)	-2,485,008	-0.022365068	(\$203,522.12)
Commuter Rail (Diesel Locomotive or DMU)	0.000000012	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Commuter Rail (Used Diesel Locomotive)	0.000000012	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
Commuter Rail (Electric or EMU)	0.000000001	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00	0	0	\$0.00
<b>Total Change</b>	---	<b>9495810.28</b>	<b>0.132220181</b>	<b>\$1,203,203.64</b>	<b>8,921,209</b>	<b>0.125077786</b>	<b>\$1,138,207.86</b>	<b>4,838,742</b>	<b>0.071044134</b>	<b>\$646,501.62</b>	<b>4,524,529</b>	<b>0.067286797</b>	<b>\$612,309.85</b>	<b>6,820,429</b>	<b>0.098277601</b>	<b>\$894,326.17</b>	<b>6,413,013</b>	<b>0.093309205</b>	<b>\$849,113.77</b>