FEDERAL RAILROAD ADMINISTRATION
GRADEDEC.NET
CORRIDOR AND CROSSING DATA
(with phased improvements)

User: A. M. Tahsin Emtenan
Dataset: Rock Island
Corridor ID 5

					Avg. No. Trains Per Day	Train Time-of-Day Distribution
Corridor Name	Rock Island					
				Passenger	0.0	Uniform
Technology Factors	1.00	0.50	0.50	*Freight*	4.0	Night Flat
Signal Synchronization?	True			*Switch*	4.0	Uniform

CORRIDOR SUMMARY OF PREDICTED ANNUAL ACCIDENTS

Calculated: 24-Aug-2022 3:28 pm

(Alternate reflects improved devices in year 31)

	Fatal	Injury	PDO	Total
Base	0.000420	0.001084	0.003443	0.004948
Alternate	0.000228	0.000595	0.001956	0.002779

CROSSING DATA FOR THE ROCK ISLAND CORRIDOR

Milepost 180.24 Crossing ID 604322J
Description IAIS - 1ST ST

GCX Base Type	Gates
Safety Sup. Type	None
GCX Phase I	Gates
Safety Sup. type	None
GCX Phase II	Closure
Safety Sup. type	None
No. RR Tracks	1

Train Speeds (mph)

Max Timetable	25.0
Passenger	25.0
Freight	20.0
Switch	7.5

Paved? True Urban? True

Accidents in 5 Years 0

Highway Traffic Characteristics

	Base	*Alternate*
H'way Lanes	2	2.0
Dist. from H'way	0.1	0.1
AADT	1,150	1,150
Auto TOD Dist	Uniform	Uniform
Auto % direction	Balanced	0.10
Percent Trucks	0.0	0.0
Of this, % trailers	0.0	0.0
Truck TOD Dist	Uniform	Uniform
Truck % direction	Balanced	Balanced
Percent Bus	0.0	0.0
Bus TOD Dist	Uniform	Uniform
Bus % direction	Balanced	Balanced

H'way Improvment Cost ($000) 0.0

Predicted Annual Accidents

	Base	*Alternate*
Fatal	0.00041	0.00000
Injury	0.00294	0.00000
PDO	0.00752	0.00000
Total	0.01088	0.00000

Costs in '000 $

	Base	*Phase I*	*Phase II*
Grade Crossing Devices			
O&M	0.0	0.0	0.0
Oth. Lcycle	0.0	0.0	0.0
Capital		0.0	8,888.3
Supplementary Safety			
O&M	0.0	0.0	0.0
Oth. Lcycle	0.0	0.0	0.0
Capital		0.0	0.0

Milepost 180.36 Crossing ID 604324X
Description IAIS - 44TH STREET

GCX Base Type	Gates
Safety Sup. Type	None
GCX Phase I	Gates
Safety Sup. type	None
GCX Phase II	Gates
Safety Sup. type	None
No. RR Tracks	1

Train Speeds (mph)

Max Timetable	20.0
Passenger	20.0
Freight	16.0
Switch	6.0

Paved? True Urban? True

Accidents in 5 Years 0

Highway Traffic Characteristics

	Base	*Alternate*
H'way Lanes	2	2.0
Dist. from H'way	0.1	0.1
AADT	4,650	4,650
Auto TOD Dist	Uniform	Uniform
Auto % direction	Balanced	0.10
Percent Trucks	11.0	11.0
Of this, % trailers	0.0	0.0
Truck TOD Dist	Uniform	Uniform
Truck % direction	Balanced	Balanced
Percent Bus	0.0	0.0
Bus TOD Dist	Uniform	Uniform
Bus % direction	Balanced	Balanced

H'way Improvment Cost ($000) 0.0

Predicted Annual Accidents

	Base	*Alternate*
Fatal	0.00048	0.00048
Injury	0.00410	0.00410
PDO	0.01109	0.01109
Total	0.01567	0.01567

Costs in '000 $

	Base	*Phase I*	*Phase II*
Grade Crossing Devices			
O&M	0.0	0.0	0.0
Oth. Lcycle	0.0	0.0	0.0
Capital		0.0	0.0
Supplementary Safety			
O&M	0.0	0.0	0.0
Oth. Lcycle	0.0	0.0	0.0
Capital		0.0	0.0

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Corridor ID 5

					Avg. No. Trains Per Day	Train Time-of-Day Distribution
Corridor Name	Rock Island					
				Passenger	0.0	Uniform
Technology Factors	1.00	0.50	0.50	*Freight*	4.0	Night Flat
Signal Synchronization?	True			*Switch*	4.0	Uniform

CORRIDOR SUMMARY OF PREDICTED ANNUAL ACCIDENTS

Calculated: 24-Aug-2022 3:28 pm

(Alternate reflects improved devices in year 31)

	Fatal	Injury	PDO	Total
Base	0.000420	0.001084	0.003443	0.004948
Alternate	0.000228	0.000595	0.001956	0.002779

CROSSING DATA FOR THE ROCK ISLAND CORRIDOR

Milepost 180.24 Crossing ID 604322J
Description IAIS - 1ST ST

Paved? True Urban? True

Accidents in 5 Years 0

GCX Base Type	Gates
Safety Sup. Type	None
GCX Phase I	Gates
Safety Sup. type	None
GCX Phase II	Gates
Safety Sup. type	None
No. RR Tracks	1

Train Speeds (mph)

Max Timetable	25.0
Passenger	25.0
Freight	20.0
Switch	7.5

Highway Traffic Characteristics

	Base	*Alternate*
H'way Lanes	2	2.0
Dist. from H'way	0.1	0.1
AADT	1,150	1,150
Auto TOD Dist	Uniform	Uniform
Auto % direction	Balanced	0.10
Percent Trucks	0.0	0.0
Of this, % trailers	0.0	0.0
Truck TOD Dist	Uniform	Uniform
Truck % direction	Balanced	Balanced
Percent Bus	0.0	0.0
Bus TOD Dist	Uniform	Uniform
Bus % direction	Balanced	Balanced

H'way Improvment Cost ($000) 0.0

Predicted Annual Accidents

	Base	*Alternate*
Fatal	0.00041	0.00000
Injury	0.00294	0.00000
PDO	0.00752	0.00000
Total	0.01088	0.00000

Costs in '000 $

	Base	*Phase I*	*Phase II*
Grade Crossing Devices			
O&M	0.0	0.0	0.0
Oth. Lcycle	0.0	0.0	0.0
Capital		0.0	0.0
Supplementary Safety			
O&M	0.0	0.0	0.0
Oth. Lcycle	0.0	0.0	0.0
Capital		0.0	0.0

Milepost 180.36 Crossing ID 604324X

Description IAIS - 44TH STREET

GCX Base Type	Gates
Safety Sup. Type	None
GCX Phase I	Gates
Safety Sup. type	None
GCX Phase II	Closure
Safety Sup. type	None
No. RR Tracks	1

Train Speeds (mph)

Max Timetable	20.0
Passenger	20.0
Freight	16.0
Switch	6.0

Paved? True Urban? True

Accidents in 5 Years 0

Highway Traffic Characteristics

	Base	*Alternate*
H'way Lanes	2	2.0
Dist. from H'way	0.1	0.1
AADT	4,650	4,650
Auto TOD Dist	Uniform	Uniform
Auto % direction	Balanced	0.10
Percent Trucks	11.0	11.0
Of this, % trailers	0.0	0.0
Truck TOD Dist	Uniform	Uniform
Truck % direction	Balanced	Balanced
Percent Bus	0.0	0.0
Bus TOD Dist	Uniform	Uniform
Bus % direction	Balanced	Balanced

H'way Improvment Cost ($000) 0.0

Predicted Annual Accidents

	Base	*Alternate*
Fatal	0.00048	0.00048
Injury	0.00410	0.00410
PDO	0.01109	0.01109
Total	0.01567	0.01567

Costs in '000 $

	Base	*Phase I*	*Phase II*
Grade Crossing Devices			
O&M	0.0	0.0	0.0
Oth. Lcycle	0.0	0.0	0.0
Capital		0.0	8,888.3
Supplementary Safety			
O&M	0.0	0.0	0.0
Oth. Lcycle	0.0	0.0	0.0
Capital		0.0	0.0

FEDERAL RAILROAD ADMINISTRATION

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User: A. M. Tahsin Emtenan
Dataset: Rock Island
Corridor ID 5

					Avg. No. Trains Per Day	Train Time-of-Day Distribution
Corridor Name	Rock Island					
				Passenger	0.0	Uniform
Technology Factors	1.00	0.50	0.50	*Freight*	4.0	Night Flat
Signal Synchronization?	True			*Switch*	4.0	Uniform

CORRIDOR SUMMARY OF PREDICTED ANNUAL ACCIDENTS

Calculated: 24-Aug-2022 3:28 pm

(Alternate reflects improved devices in year 31)

	Fatal	Injury	PDO	Total
Base	0.000420	0.001084	0.003443	0.004948
Alternate	0.000005	0.000015	0.000055	0.000075

CROSSING DATA FOR THE ROCK ISLAND CORRIDOR

Milepost 180.24 Crossing ID 604322J
Description IAIS - 1ST ST

Paved? True Urban? True

Accidents in 5 Years 0

GCX Base Type	Gates
Safety Sup. Type	None
GCX Phase I	Closure
Safety Sup. type	None
GCX Phase II	Closure
Safety Sup. type	None
No. RR Tracks	1

Train Speeds (mph)

Max Timetable	25.0
Passenger	25.0
Freight	20.0
Switch	7.5

Highway Traffic Characteristics

	Base	*Alternate*
H'way Lanes	2	2.0
Dist. from H'way	0.1	0.1
AADT	1,150	1,150
Auto TOD Dist	Uniform	Uniform
Auto % direction	Balanced	0.10
Percent Trucks	0.0	0.0
Of this, % trailers	0.0	0.0
Truck TOD Dist	Uniform	Uniform
Truck % direction	Balanced	Balanced
Percent Bus	0.0	0.0
Bus TOD Dist	Uniform	Uniform
Bus % direction	Balanced	Balanced

H'way Improvment Cost ($000) 0.0

Predicted Annual Accidents

	Base	*Alternate*
Fatal	0.00041	0.00000
Injury	0.00294	0.00000
PDO	0.00752	0.00000
Total	0.01088	0.00000

Costs in '000 $

	Base	*Phase I*	*Phase II*
Grade Crossing Devices			
O&M	0.0	0.0	0.0
Oth. Lcycle	0.0	0.0	0.0
Capital		0.0	0.0
Supplementary Safety			
O&M	0.0	0.0	0.0
Oth. Lcycle	0.0	0.0	0.0
Capital		0.0	0.0

Milepost 180.36 Crossing ID 604324X
Description IAIS - 44TH STREET

Paved? True Urban? True

Accidents in 5 Years 0

GCX Base Type	Gates
Safety Sup. Type	None
GCX Phase I	Gates
Safety Sup. type	None
GCX Phase II	Closure
Safety Sup. type	None
No. RR Tracks	1

Train Speeds (mph)

Max Timetable	20.0
Passenger	20.0
Freight	16.0
Switch	6.0

Highway Traffic Characteristics

	Base	Alternate
H'way Lanes	2	2.0
Dist. from H'way	0.1	0.1
AADT	4,650	4,650
Auto TOD Dist	Uniform	Uniform
Auto % direction	Balanced	0.10
Percent Trucks	11.0	11.0
Of this, % trailers	0.0	0.0
Truck TOD Dist	Uniform	Uniform
Truck % direction	Balanced	Balanced
Percent Bus	0.0	0.0
Bus TOD Dist	Uniform	Uniform
Bus % direction	Balanced	Balanced

H'way Improvment Cost ($000) 0.0

Predicted Annual Accidents

	Base	Alternate
Fatal	0.00048	0.00000
Injury	0.00410	0.00000
PDO	0.01109	0.00000
Total	0.01567	0.00000

Costs in '000 $

	Base	Phase I	Phase II
Grade Crossing Devices			
O&M	0.0	0.0	0.0
Oth. Lcycle	0.0	0.0	0.0
Capital		0.0	8,888.3
Supplementary Safety			
O&M	0.0	0.0	0.0
Oth. Lcycle	0.0	0.0	0.0
Capital		0.0	0.0

Milepost 180.30 Crossing ID 000000A
Description New Crossing

Paved? True Urban? True

Accidents in 5 Years 0

GCX Base Type	New Technology 1
Safety Sup. Type	None
GCX Phase I	Gates
Safety Sup. type	None
GCX Phase II	Gates
Safety Sup. type	4 quad - detection
No. RR Tracks	1

Train Speeds (mph)

Max Timetable	25.0
Passenger	25.0
Freight	20.0
Switch	7.5

Highway Traffic Characteristics

	Base	Alternate
H'way Lanes	2	2.0
Dist. from H'way	0.3	0.3
AADT	1	1
Auto TOD Dist	Uniform	Uniform
Auto % direction	Balanced	0.25
Percent Trucks	5.0	5.0
Of this, % trailers	0.0	0.0
Truck TOD Dist	Uniform	Uniform
Truck % direction	Balanced	Balanced
Percent Bus	0.0	0.0
Bus TOD Dist	Uniform	Uniform
Bus % direction	Balanced	Balanced

H'way Improvment Cost ($000) 0.0

Predicted Annual Accidents

	Base	Alternate
Fatal	0.00000	0.00000
Injury	0.00000	0.00000
PDO	0.00000	0.00000
Total	0.00000	0.00000

Costs in '000 $

	Base	Phase I	Phase II
Grade Crossing Devices			
O&M	0.0	0.0	0.0
Oth. Lcycle	0.0	0.0	0.0
Capital		0.0	0.0
Supplementary Safety			
O&M	0.0	0.0	0.0
Oth. Lcycle	0.0	0.0	0.0
Capital		0.0	0.0

Vehicle Emissions Rates (grams of emissions per minute of idling)

Vehicle Type	VOC	CO	NOx	PM	SOx	CO2
Cars	0.3030	4.8599	0.0916	0.0000	0.0000	41.0652
	(0.3030)	(4.8599)	(0.0916)	(0.0000)	(0.0000)	(41.0652)
Buses	0.6655	11.8500	0.1830	0.0000	0.0000	87.5789
	(0.6655)	(11.8500)	(0.1830)	(0.0000)	(0.0000)	(87.5789)
Trucks	0.2559	3.1446	0.2754	0.0383	0.0001	107.4107
	(0.2559)	(3.1446)	(0.2754)	(0.0383)	(0.0001)	(107.4107)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Fuel Burn Rates (quantity consumed per minute of idling)

Vehicle Type	Fuel (gallons)	Oil (quarts)
Cars	0.009690	0.000626
	(0.009690)	(0.000626)
Buses	0.018411	0.001189
	(0.018411)	(0.001189)
Trucks	0.020670	0.001335
	(0.020670)	(0.001335)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Effectiveness Rates (rate of reduction in accidents with improvements)

Improvement	Single Track no more than 10 Trains	Multi-track no more than 10 Trains	Single Track more than 10 Trains	Multi-track more than 10 Trains
Passive to Flashing Lights	0.75 (0.75)	0.65 (0.65)	0.61 (0.61)	0.57 (0.57)
Passive to Flashing Lights with Gates	0.90 (0.90)	0.86 (0.86)	0.80 (0.80)	0.78 (0.78)
Flashing Lights to Gates	0.89 (0.89)	0.65 (0.65)	0.69 (0.69)	0.63 (0.63)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Supplementary Safety Measure Effectiveness Rates (rate of reduction in accidents with supplementary safety measure)

Supplementary Measure	Effectiveness
4 quadrant gate system - no presence detection	0.82 (0.82)
4 quadrant gate system - with presence detection	0.77 (0.77)
4 quadrant gate system - with Medians of at least 60 feet	0.92 (0.92)
Medians or channelization devices - mountable curbs	0.75 (0.75)
Medians or channelization devices - barrier curbs	0.80 (0.80)
One-way street	0.82 (0.82)
Photo enforcement	0.72 (0.72)
Other type 1	0.50 (0.50)
Other type 2	0.50 (0.50)
Other type 3	0.50 (0.50)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Diurnal Distributions (share of daily traffic in hour)

Name / Description		12	1	2	3	4	5	6	7	8	9	10	11
Uniform / Uniform													
	AM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167
	PM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.159
AM Peak / AM Peak													
	AM	1.667	1.667	1.667	1.667	1.667	1.667	8.333	8.333	8.333	8.333	8.333	8.333
	PM	5.833	5.833	5.833	5.833	5.834	5.834	0.833	0.833	0.833	0.833	0.834	0.834
PM Peak / PM Peak													
	AM	0.833	0.833	0.833	0.833	0.833	0.833	5.833	5.833	5.833	5.833	5.833	5.833
	PM	8.333	8.333	8.333	8.333	8.334	8.334	1.667	1.667	1.667	1.667	1.668	1.668
Day Flat / Day Flat													
	AM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
	PM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
Night Flat / Night Flat													
	AM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
	PM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
AM Peak FR WD LC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	2.490	6.470	9.450	6.970	4.980	4.980	4.480
	PM	4.980	5.470	5.970	6.470	6.970	6.970	5.470	3.980	3.480	2.990	2.490	1.440
AM Peak Non-FR WD LC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	0.990	0.490	0.490	0.490	0.990	2.460	4.430	8.370	6.900	4.930	4.930	5.420
	PM	6.400	6.400	6.400	6.900	6.900	6.400	4.930	4.430	3.450	2.960	2.460	1.480
PM Peak FR WD LC / PM, Peak Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	1.500	3.500	5.500	5.000	4.500	4.500	5.000
	PM	5.500	5.500	6.500	8.000	9.500	9.500	6.500	4.500	3.500	3.000	3.000	2.000
PM Peak Non-FR WD LC / PM Peak, Non-Freeway, Traffic Distribution Profile for Low Congestion													
	AM	0.980	0.490	0.490	0.490	0.490	0.980	2.450	4.410	4.410	4.410	4.900	5.880
	PM	6.860	6.370	6.860	8.330	9.310	9.310	6.370	4.900	3.920	2.940	2.450	2.000
AM Peak FR WD MC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	2.510	6.530	9.050	7.540	5.530	5.030	5.030
	PM	5.030	5.530	5.530	6.530	7.040	6.530	5.030	4.020	3.020	3.020	2.510	1.470
AM Peak Non-FR WD MC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	1.510	4.520	7.540	7.040	5.030	5.030	5.530
	PM	6.530	6.530	5.530	7.040	7.040	7.040	5.530	4.520	3.520	3.020	2.510	1.470
PM Peak FR WD MC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.000	0.500	0.500	0.500	0.500	1.500	4.000	6.000	5.500	4.500	4.500	5.000
	PM	5.500	5.500	6.500	7.500	9.000	9.000	6.500	4.500	3.500	3.500	3.000	2.000

PM Peak Non-FR WD MC / PM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestio												
AM	1.020	0.510	0.510	0.510	0.510	1.020	1.520	4.570	4.570	4.570	5.080	6.090
PM	6.600	6.600	6.600	7.610	9.140	9.140	6.600	5.080	4.570	3.550	2.540	1.490
AM Peak FR WD SC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.020	0.510	0.510	0.510	0.510	2.030	5.580	7.610	7.110	6.090	5.580	5.580
PM	5.580	5.580	6.090	6.600	6.600	6.600	5.580	4.570	3.050	3.050	2.540	1.520
AM Peak Non-FR WD SC / AM Peak Non-Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.030	0.520	0.520	0.520	0.520	2.060	3.090	7.220	6.190	5.150	5.670	5.670
PM	6.190	6.190	6.700	7.220	7.220	7.220	5.670	4.640	3.610	3.090	2.580	1.510
PM Peak FR WD SC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.000	0.500	0.500	0.500	0.500	1.500	4.500	6.500	6.000	5.000	5.000	5.500
PM	5.500	5.500	6.500	7.000	7.500	7.500	6.500	5.000	3.500	3.500	3.000	2.000
PM Peak Non-FR WD SC / PM Peak, Non-Freeway Weekday, Profile for Severe Congestion												
AM	0.990	0.500	0.500	0.500	0.500	1.490	3.470	5.450	5.450	4.950	4.950	5.450
PM	6.440	6.440	6.930	7.430	7.430	7.430	6.440	4.950	4.460	3.470	2.480	1.900
FR WE / Freeway Weekend Traffic Distribution Profile												
AM	2.000	1.500	1.000	0.500	0.500	1.000	2.000	3.000	3.500	5.000	5.500	6.500
PM	7.000	7.000	7.000	7.000	7.500	7.000	6.500	5.000	4.500	3.500	3.500	2.500
Non-FR WE / Non-Freeway Weekend Trafic Distribution Profile												
AM	1.980	1.490	0.990	0.500	0.500	0.990	1.490	2.480	3.470	4.950	5.940	6.930
PM	7.430	7.430	7.430	7.430	7.430	6.930	5.940	4.950	4.460	3.470	2.970	2.420
FR WD SC SS / Freeway Weekday traffic distribution profile for severe congestion and similar speeds												
AM	1.490	0.990	0.990	0.500	0.500	1.490	5.450	6.930	6.440	5.450	5.450	5.450
PM	5.450	5.940	5.940	6.440	6.930	6.440	5.450	4.460	3.470	3.470	2.970	1.910
Non-FR WD SCSS / Non-Freeway Weekday traffic distribution profile for severe congestion and similar spe												
AM	1.460	0.980	0.980	0.490	0.980	2.930	5.370	6.340	5.370	4.880	4.880	5.370
PM	5.370	5.370	5.370	5.850	6.340	6.340	5.850	4.880	4.390	4.390	3.410	2.410

Directionality of Traffic (percent of hourly traffic in principal direction*)

*Principal direction is the one with lower railroad milepost to the left of highway traffic.

Name / Description	12	1	2	3	4	5	6	7	8	9	10	11
Balanced / Equal traffic in each direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Commute 1 / Commuter traffic AM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00
Commute 2 / Commuter traffic PM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00	50.00	50.00

Default Costs for Grade Crossing Devices (thousands of constant dollars)

Device Type	O&M	Capital Expenditure	Other Lifecycle Cost
Passive	0.20	1.60	0.00
	(0.20)	(1.60)	(0.00)
Flashing Lights	1.80	74.80	0.00
	(1.80)	(74.80)	(0.00)
Flashing Lights with Gates	2.50	106.10	0.00
	(2.50)	(106.10)	(0.00)
Closure	0.00	20.00	0.00
	(0.00)	(20.00)	(0.00)
Separation	0.50	1,500.00	0.00
	(0.50)	(1,500.00)	(0.00)
New Technology 1	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 2	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 3	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Default Costs for Supplementary Safety Measures (thousands of constant dollars)

Supplementary Measure	O&M	Capital Expenditure	Other Lifecycle Cost
None	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
4 quadrant - no detection	3.50	244.00	0.00
	(3.50)	(3.50)	(3.50)
4 quadrant - with detection	5.00	260.00	0.00
	(5.00)	(5.00)	(5.00)
4 quadrant - with 60' medians	3.50	255.00	0.00
	(3.50)	(3.50)	(3.50)
Mountable curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
Barrier curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
One-way street	3.50	5.00	0.00
	(3.50)	(3.50)	(3.50)
Photo Enforcement	25.00	65.00	0.00
	(25.00)	(25.00)	(25.00)
Other type 1	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 2	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 3	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Percent Accidents by Type (for use in High Speed Rail model)

Train Strikes Highway Vehicle	Highway Vehicle Strikes Train
84.0	16.0
(84.0)	(16.0)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Train Strikes Highway Vehicle" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.0001270	0.0001110	0.00004000
	(0.0001270)	(0.0001110)	(0.00004000)
Train Fatalities	0.000005000	0.000010000	0.00004400
	(0.000005000)	(0.000010000)	(0.00004400)
% Accidents with Severe Derailment	0.00010000	0.0010000	0.007000
	(0.00010000)	(0.0010000)	(0.007000)
Added Severity with Severe Derailment	0.0002200	0.0002200	0.0002200
	(0.0002200)	(0.0002200)	(0.0002200)
Speeds of maximum severity (highway) mph	70	70	65
	(70)	(70)	(65)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Highway Vehicle Strikes Train" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.2170	0.1600	0.09100
	(0.2170)	(0.1600)	(0.09100)
Train Fatalities	0.010000	0.010000	0.010000
	(0.010000)	(0.010000)	(0.010000)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

User: A. M. Tahsin Emtenan Dataset: Rock Island

Vehicle Emissions Rates (grams of emissions per minute of idling)

Vehicle Type	VOC	CO	NOx	PM	SOx	CO2
Cars	0.3030	4.8599	0.0916	0.0000	0.0000	41.0652
	(0.3030)	(4.8599)	(0.0916)	(0.0000)	(0.0000)	(41.0652)
Buses	0.6655	11.8500	0.1830	0.0000	0.0000	87.5789
	(0.6655)	(11.8500)	(0.1830)	(0.0000)	(0.0000)	(87.5789)
Trucks	0.2559	3.1446	0.2754	0.0383	0.0001	107.4107
	(0.2559)	(3.1446)	(0.2754)	(0.0383)	(0.0001)	(107.4107)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Fuel Burn Rates (quantity consumed per minute of idling)

Vehicle Type	Fuel (gallons)	Oil (quarts)
Cars	0.009690	0.000626
	(0.009690)	(0.000626)
Buses	0.018411	0.001189
	(0.018411)	(0.001189)
Trucks	0.020670	0.001335
	(0.020670)	(0.001335)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Effectiveness Rates (rate of reduction in accidents with improvements)

Improvement	Single Track no more than 10 Trains	Multi-track no more than 10 Trains	Single Track more than 10 Trains	Multi-track more than 10 Trains
Passive to Flashing Lights	0.75 (0.75)	0.65 (0.65)	0.61 (0.61)	0.57 (0.57)
Passive to Flashing Lights with Gates	0.90 (0.90)	0.86 (0.86)	0.80 (0.80)	0.78 (0.78)
Flashing Lights to Gates	0.89 (0.89)	0.65 (0.65)	0.69 (0.69)	0.63 (0.63)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Supplementary Safety Measure Effectiveness Rates (rate of reduction in accidents with supplementary safety measure)

Supplementary Measure	Effectiveness
4 quadrant gate system - no presence detection	0.82 (0.82)
4 quadrant gate system - with presence detection	0.77 (0.77)
4 quadrant gate system - with Medians of at least 60 feet	0.92 (0.92)
Medians or channelization devices - mountable curbs	0.75 (0.75)
Medians or channelization devices - barrier curbs	0.80 (0.80)
One-way street	0.82 (0.82)
Photo enforcement	0.72 (0.72)
Other type 1	0.50 (0.50)
Other type 2	0.50 (0.50)
Other type 3	0.50 (0.50)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Diurnal Distributions (share of daily traffic in hour)

Name / Description		12	1	2	3	4	5	6	7	8	9	10	11
Uniform / Uniform													
	AM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167
	PM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.159
AM Peak / AM Peak													
	AM	1.667	1.667	1.667	1.667	1.667	1.667	8.333	8.333	8.333	8.333	8.333	8.333
	PM	5.833	5.833	5.833	5.833	5.834	5.834	0.833	0.833	0.833	0.833	0.834	0.834
PM Peak / PM Peak													
	AM	0.833	0.833	0.833	0.833	0.833	0.833	5.833	5.833	5.833	5.833	5.833	5.833
	PM	8.333	8.333	8.333	8.333	8.334	8.334	1.667	1.667	1.667	1.667	1.668	1.668
Day Flat / Day Flat													
	AM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
	PM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
Night Flat / Night Flat													
	AM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
	PM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
AM Peak FR WD LC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	2.490	6.470	9.450	6.970	4.980	4.980	4.480
	PM	4.980	5.470	5.970	6.470	6.970	6.970	5.470	3.980	3.480	2.990	2.490	1.440
AM Peak Non-FR WD LC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	0.990	0.490	0.490	0.490	0.990	2.460	4.430	8.370	6.900	4.930	4.930	5.420
	PM	6.400	6.400	6.400	6.900	6.900	6.400	4.930	4.430	3.450	2.960	2.460	1.480
PM Peak FR WD LC / PM, Peak Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	1.500	3.500	5.500	5.000	4.500	4.500	5.000
	PM	5.500	5.500	6.500	8.000	9.500	9.500	6.500	4.500	3.500	3.000	3.000	2.000
PM Peak Non-FR WD LC / PM Peak, Non-Freeway, Traffic Distribution Profile for Low Congestion													
	AM	0.980	0.490	0.490	0.490	0.490	0.980	2.450	4.410	4.410	4.410	4.900	5.880
	PM	6.860	6.370	6.860	8.330	9.310	9.310	6.370	4.900	3.920	2.940	2.450	2.000
AM Peak FR WD MC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	2.510	6.530	9.050	7.540	5.530	5.030	5.030
	PM	5.030	5.530	5.530	6.530	7.040	6.530	5.030	4.020	3.020	3.020	2.510	1.470
AM Peak Non-FR WD MC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	1.510	4.520	7.540	7.040	5.030	5.030	5.530
	PM	6.530	6.530	5.530	7.040	7.040	7.040	5.530	4.520	3.520	3.020	2.510	1.470
PM Peak FR WD MC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.000	0.500	0.500	0.500	0.500	1.500	4.000	6.000	5.500	4.500	4.500	5.000
	PM	5.500	5.500	6.500	7.500	9.000	9.000	6.500	4.500	3.500	3.500	3.000	2.000

PM Peak Non-FR WD MC / PM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestio												
AM	1.020	0.510	0.510	0.510	0.510	1.020	1.520	4.570	4.570	4.570	5.080	6.090
PM	6.600	6.600	6.600	7.610	9.140	9.140	6.600	5.080	4.570	3.550	2.540	1.490
AM Peak FR WD SC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.020	0.510	0.510	0.510	0.510	2.030	5.580	7.610	7.110	6.090	5.580	5.580
PM	5.580	5.580	6.090	6.600	6.600	6.600	5.580	4.570	3.050	3.050	2.540	1.520
AM Peak Non-FR WD SC / AM Peak Non-Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.030	0.520	0.520	0.520	0.520	2.060	3.090	7.220	6.190	5.150	5.670	5.670
PM	6.190	6.190	6.700	7.220	7.220	7.220	5.670	4.640	3.610	3.090	2.580	1.510
PM Peak FR WD SC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.000	0.500	0.500	0.500	0.500	1.500	4.500	6.500	6.000	5.000	5.000	5.500
PM	5.500	5.500	6.500	7.000	7.500	7.500	6.500	5.000	3.500	3.500	3.000	2.000
PM Peak Non-FR WD SC / PM Peak, Non-Freeway Weekday, Profile for Severe Congestion												
AM	0.990	0.500	0.500	0.500	0.500	1.490	3.470	5.450	5.450	4.950	4.950	5.450
PM	6.440	6.440	6.930	7.430	7.430	7.430	6.440	4.950	4.460	3.470	2.480	1.900
FR WE / Freeway Weekend Traffic Distribution Profile												
AM	2.000	1.500	1.000	0.500	0.500	1.000	2.000	3.000	3.500	5.000	5.500	6.500
PM	7.000	7.000	7.000	7.000	7.500	7.000	6.500	5.000	4.500	3.500	3.500	2.500
Non-FR WE / Non-Freeway Weekend Trafic Distribution Profile												
AM	1.980	1.490	0.990	0.500	0.500	0.990	1.490	2.480	3.470	4.950	5.940	6.930
PM	7.430	7.430	7.430	7.430	7.430	6.930	5.940	4.950	4.460	3.470	2.970	2.420
FR WD SC SS / Freeway Weekday traffic distribution profile for severe congestion and similar speeds												
AM	1.490	0.990	0.990	0.500	0.500	1.490	5.450	6.930	6.440	5.450	5.450	5.450
PM	5.450	5.940	5.940	6.440	6.930	6.440	5.450	4.460	3.470	3.470	2.970	1.910
Non-FR WD SCSS / Non-Freeway Weekday traffic distribution profile for severe congestion and similar spe												
AM	1.460	0.980	0.980	0.490	0.980	2.930	5.370	6.340	5.370	4.880	4.880	5.370
PM	5.370	5.370	5.370	5.850	6.340	6.340	5.850	4.880	4.390	4.390	3.410	2.410

Directionality of Traffic (percent of hourly traffic in principal direction*)

*Principal direction is the one with lower railroad milepost to the left of highway traffic.

Name / Description	12	1	2	3	4	5	6	7	8	9	10	11
Balanced / Equal traffic in each direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Commute 1 / Commuter traffic AM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00
Commute 2 / Commuter traffic PM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00	50.00	50.00

Default Costs for Grade Crossing Devices (thousands of constant dollars)

Device Type	O&M	Capital Expenditure	Other Lifecycle Cost
Passive	0.20	1.60	0.00
	(0.20)	(1.60)	(0.00)
Flashing Lights	1.80	74.80	0.00
	(1.80)	(74.80)	(0.00)
Flashing Lights with Gates	2.50	106.10	0.00
	(2.50)	(106.10)	(0.00)
Closure	0.00	20.00	0.00
	(0.00)	(20.00)	(0.00)
Separation	0.50	1,500.00	0.00
	(0.50)	(1,500.00)	(0.00)
New Technology 1	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 2	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 3	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Default Costs for Supplementary Safety Measures (thousands of constant dollars)

Supplementary Measure	O&M	Capital Expenditure	Other Lifecycle Cost
None	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
4 quadrant - no detection	3.50	244.00	0.00
	(3.50)	(3.50)	(3.50)
4 quadrant - with detection	5.00	260.00	0.00
	(5.00)	(5.00)	(5.00)
4 quadrant - with 60' medians	3.50	255.00	0.00
	(3.50)	(3.50)	(3.50)
Mountable curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
Barrier curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
One-way street	3.50	5.00	0.00
	(3.50)	(3.50)	(3.50)
Photo Enforcement	25.00	65.00	0.00
	(25.00)	(25.00)	(25.00)
Other type 1	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 2	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 3	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Percent Accidents by Type (for use in High Speed Rail model)

Train Strikes Highway Vehicle	Highway Vehicle Strikes Train
84.0	16.0
(84.0)	(16.0)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Train Strikes Highway Vehicle" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.0001270	0.0001110	0.00004000
	(0.0001270)	(0.0001110)	(0.00004000)
Train Fatalities	0.000005000	0.000010000	0.00004400
	(0.000005000)	(0.000010000)	(0.00004400)
% Accidents with Severe Derailment	0.00010000	0.0010000	0.007000
	(0.00010000)	(0.0010000)	(0.007000)
Added Severity with Severe Derailment	0.0002200	0.0002200	0.0002200
	(0.0002200)	(0.0002200)	(0.0002200)
Speeds of maximum severity (highway) mph	70	70	65
	(70)	(70)	(65)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Highway Vehicle Strikes Train" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.2170	0.1600	0.09100
	(0.2170)	(0.1600)	(0.09100)
Train Fatalities	0.010000	0.010000	0.010000
	(0.010000)	(0.010000)	(0.010000)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Vehicle Emissions Rates (grams of emissions per minute of idling)

Vehicle Type	VOC	CO	NOx	PM	SOx	CO2
Cars	0.3030	4.8599	0.0916	0.0000	0.0000	41.0652
	(0.3030)	(4.8599)	(0.0916)	(0.0000)	(0.0000)	(41.0652)
Buses	0.6655	11.8500	0.1830	0.0000	0.0000	87.5789
	(0.6655)	(11.8500)	(0.1830)	(0.0000)	(0.0000)	(87.5789)
Trucks	0.2559	3.1446	0.2754	0.0383	0.0001	107.4107
	(0.2559)	(3.1446)	(0.2754)	(0.0383)	(0.0001)	(107.4107)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Fuel Burn Rates (quantity consumed per minute of idling)

Vehicle Type	Fuel (gallons)	Oil (quarts)
Cars	0.009690	0.000626
	(0.009690)	(0.000626)
Buses	0.018411	0.001189
	(0.018411)	(0.001189)
Trucks	0.020670	0.001335
	(0.020670)	(0.001335)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Effectiveness Rates (rate of reduction in accidents with improvements)

Improvement	Single Track no more than 10 Trains	Multi-track no more than 10 Trains	Single Track more than 10 Trains	Multi-track more than 10 Trains
Passive to Flashing Lights	0.75 (0.75)	0.65 (0.65)	0.61 (0.61)	0.57 (0.57)
Passive to Flashing Lights with Gates	0.90 (0.90)	0.86 (0.86)	0.80 (0.80)	0.78 (0.78)
Flashing Lights to Gates	0.89 (0.89)	0.65 (0.65)	0.69 (0.69)	0.63 (0.63)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Supplementary Safety Measure Effectiveness Rates (rate of reduction in accidents with supplementary safety measure)

Supplementary Measure	Effectiveness
4 quadrant gate system - no presence detection	0.82 (0.82)
4 quadrant gate system - with presence detection	0.77 (0.77)
4 quadrant gate system - with Medians of at least 60 feet	0.92 (0.92)
Medians or channelization devices - mountable curbs	0.75 (0.75)
Medians or channelization devices - barrier curbs	0.80 (0.80)
One-way street	0.82 (0.82)
Photo enforcement	0.72 (0.72)
Other type 1	0.50 (0.50)
Other type 2	0.50 (0.50)
Other type 3	0.50 (0.50)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Diurnal Distributions (share of daily traffic in hour)

Name / Description		12	1	2	3	4	5	6	7	8	9	10	11
Uniform / Uniform													
	AM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167
	PM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.159
AM Peak / AM Peak													
	AM	1.667	1.667	1.667	1.667	1.667	1.667	8.333	8.333	8.333	8.333	8.333	8.333
	PM	5.833	5.833	5.833	5.833	5.834	5.834	0.833	0.833	0.833	0.833	0.834	0.834
PM Peak / PM Peak													
	AM	0.833	0.833	0.833	0.833	0.833	0.833	5.833	5.833	5.833	5.833	5.833	5.833
	PM	8.333	8.333	8.333	8.333	8.334	8.334	1.667	1.667	1.667	1.667	1.668	1.668
Day Flat / Day Flat													
	AM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
	PM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
Night Flat / Night Flat													
	AM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
	PM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
AM Peak FR WD LC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	2.490	6.470	9.450	6.970	4.980	4.980	4.480
	PM	4.980	5.470	5.970	6.470	6.970	6.970	5.470	3.980	3.480	2.990	2.490	1.440
AM Peak Non-FR WD LC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	0.990	0.490	0.490	0.490	0.990	2.460	4.430	8.370	6.900	4.930	4.930	5.420
	PM	6.400	6.400	6.400	6.900	6.900	6.400	4.930	4.430	3.450	2.960	2.460	1.480
PM Peak FR WD LC / PM, Peak Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	1.500	3.500	5.500	5.000	4.500	4.500	5.000
	PM	5.500	5.500	6.500	8.000	9.500	9.500	6.500	4.500	3.500	3.000	3.000	2.000
PM Peak Non-FR WD LC / PM Peak, Non-Freeway, Traffic Distribution Profile for Low Congestion													
	AM	0.980	0.490	0.490	0.490	0.490	0.980	2.450	4.410	4.410	4.410	4.900	5.880
	PM	6.860	6.370	6.860	8.330	9.310	9.310	6.370	4.900	3.920	2.940	2.450	2.000
AM Peak FR WD MC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	2.510	6.530	9.050	7.540	5.530	5.030	5.030
	PM	5.030	5.530	5.530	6.530	7.040	6.530	5.030	4.020	3.020	3.020	2.510	1.470
AM Peak Non-FR WD MC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	1.510	4.520	7.540	7.040	5.030	5.030	5.530
	PM	6.530	6.530	5.530	7.040	7.040	7.040	5.530	4.520	3.520	3.020	2.510	1.470
PM Peak FR WD MC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.000	0.500	0.500	0.500	0.500	1.500	4.000	6.000	5.500	4.500	4.500	5.000
	PM	5.500	5.500	6.500	7.500	9.000	9.000	6.500	4.500	3.500	3.500	3.000	2.000

PM Peak Non-FR WD MC / PM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestio												
AM	1.020	0.510	0.510	0.510	0.510	1.020	1.520	4.570	4.570	4.570	5.080	6.090
PM	6.600	6.600	6.600	7.610	9.140	9.140	6.600	5.080	4.570	3.550	2.540	1.490
AM Peak FR WD SC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.020	0.510	0.510	0.510	0.510	2.030	5.580	7.610	7.110	6.090	5.580	5.580
PM	5.580	5.580	6.090	6.600	6.600	6.600	5.580	4.570	3.050	3.050	2.540	1.520
AM Peak Non-FR WD SC / AM Peak Non-Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.030	0.520	0.520	0.520	0.520	2.060	3.090	7.220	6.190	5.150	5.670	5.670
PM	6.190	6.190	6.700	7.220	7.220	7.220	5.670	4.640	3.610	3.090	2.580	1.510
PM Peak FR WD SC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.000	0.500	0.500	0.500	0.500	1.500	4.500	6.500	6.000	5.000	5.000	5.500
PM	5.500	5.500	6.500	7.000	7.500	7.500	6.500	5.000	3.500	3.500	3.000	2.000
PM Peak Non-FR WD SC / PM Peak, Non-Freeway Weekday, Profile for Severe Congestion												
AM	0.990	0.500	0.500	0.500	0.500	1.490	3.470	5.450	5.450	4.950	4.950	5.450
PM	6.440	6.440	6.930	7.430	7.430	7.430	6.440	4.950	4.460	3.470	2.480	1.900
FR WE / Freeway Weekend Traffic Distribution Profile												
AM	2.000	1.500	1.000	0.500	0.500	1.000	2.000	3.000	3.500	5.000	5.500	6.500
PM	7.000	7.000	7.000	7.000	7.500	7.000	6.500	5.000	4.500	3.500	3.500	2.500
Non-FR WE / Non-Freeway Weekend Trafic Distribution Profile												
AM	1.980	1.490	0.990	0.500	0.500	0.990	1.490	2.480	3.470	4.950	5.940	6.930
PM	7.430	7.430	7.430	7.430	7.430	6.930	5.940	4.950	4.460	3.470	2.970	2.420
FR WD SC SS / Freeway Weekday traffic distribution profile for severe congestion and similar speeds												
AM	1.490	0.990	0.990	0.500	0.500	1.490	5.450	6.930	6.440	5.450	5.450	5.450
PM	5.450	5.940	5.940	6.440	6.930	6.440	5.450	4.460	3.470	3.470	2.970	1.910
Non-FR WD SCSS / Non-Freeway Weekday traffic distribution profile for severe congestion and similar spe												
AM	1.460	0.980	0.980	0.490	0.980	2.930	5.370	6.340	5.370	4.880	4.880	5.370
PM	5.370	5.370	5.370	5.850	6.340	6.340	5.850	4.880	4.390	4.390	3.410	2.410

Directionality of Traffic (percent of hourly traffic in principal direction*)

*Principal direction is the one with lower railroad milepost to the left of highway traffic.

Name / Description	12	1	2	3	4	5	6	7	8	9	10	11
Balanced / Equal traffic in each direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Commute 1 / Commuter traffic AM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00
Commute 2 / Commuter traffic PM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00	50.00	50.00

Default Costs for Grade Crossing Devices (thousands of constant dollars)

Device Type	O&M	Capital Expenditure	Other Lifecycle Cost
Passive	0.20	1.60	0.00
	(0.20)	(1.60)	(0.00)
Flashing Lights	1.80	74.80	0.00
	(1.80)	(74.80)	(0.00)
Flashing Lights with Gates	2.50	106.10	0.00
	(2.50)	(106.10)	(0.00)
Closure	0.00	20.00	0.00
	(0.00)	(20.00)	(0.00)
Separation	0.50	1,500.00	0.00
	(0.50)	(1,500.00)	(0.00)
New Technology 1	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 2	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 3	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Default Costs for Supplementary Safety Measures (thousands of constant dollars)

Supplementary Measure	O&M	Capital Expenditure	Other Lifecycle Cost
None	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
4 quadrant - no detection	3.50	244.00	0.00
	(3.50)	(3.50)	(3.50)
4 quadrant - with detection	5.00	260.00	0.00
	(5.00)	(5.00)	(5.00)
4 quadrant - with 60' medians	3.50	255.00	0.00
	(3.50)	(3.50)	(3.50)
Mountable curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
Barrier curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
One-way street	3.50	5.00	0.00
	(3.50)	(3.50)	(3.50)
Photo Enforcement	25.00	65.00	0.00
	(25.00)	(25.00)	(25.00)
Other type 1	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 2	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 3	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Percent Accidents by Type (for use in High Speed Rail model)

Train Strikes Highway Vehicle	Highway Vehicle Strikes Train
84.0	16.0
(84.0)	(16.0)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Train Strikes Highway Vehicle" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.0001270	0.0001110	0.00004000
	(0.0001270)	(0.0001110)	(0.00004000)
Train Fatalities	0.000005000	0.000010000	0.00004400
	(0.000005000)	(0.000010000)	(0.00004400)
% Accidents with Severe Derailment	0.00010000	0.0010000	0.007000
	(0.00010000)	(0.0010000)	(0.007000)
Added Severity with Severe Derailment	0.0002200	0.0002200	0.0002200
	(0.0002200)	(0.0002200)	(0.0002200)
Speeds of maximum severity (highway) mph	70	70	65
	(70)	(70)	(65)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Highway Vehicle Strikes Train" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.2170	0.1600	0.09100
	(0.2170)	(0.1600)	(0.09100)
Train Fatalities	0.010000	0.010000	0.010000
	(0.010000)	(0.010000)	(0.010000)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Vehicle Emissions Rates (grams of emissions per minute of idling)

Vehicle Type	VOC	CO	NOx	PM	SOx	CO2
Cars	0.3030	4.8599	0.0916	0.0000	0.0000	41.0652
	(0.3030)	(4.8599)	(0.0916)	(0.0000)	(0.0000)	(41.0652)
Buses	0.6655	11.8500	0.1830	0.0000	0.0000	87.5789
	(0.6655)	(11.8500)	(0.1830)	(0.0000)	(0.0000)	(87.5789)
Trucks	0.2559	3.1446	0.2754	0.0383	0.0001	107.4107
	(0.2559)	(3.1446)	(0.2754)	(0.0383)	(0.0001)	(107.4107)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Fuel Burn Rates (quantity consumed per minute of idling)

Vehicle Type	Fuel (gallons)	Oil (quarts)
Cars	0.009690	0.000626
	(0.009690)	(0.000626)
Buses	0.018411	0.001189
	(0.018411)	(0.001189)
Trucks	0.020670	0.001335
	(0.020670)	(0.001335)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Effectiveness Rates (rate of reduction in accidents with improvements)

Improvement	Single Track no more than 10 Trains	Multi-track no more than 10 Trains	Single Track more than 10 Trains	Multi-track more than 10 Trains
Passive to Flashing Lights	0.75 (0.75)	0.65 (0.65)	0.61 (0.61)	0.57 (0.57)
Passive to Flashing Lights with Gates	0.90 (0.90)	0.86 (0.86)	0.80 (0.80)	0.78 (0.78)
Flashing Lights to Gates	0.89 (0.89)	0.65 (0.65)	0.69 (0.69)	0.63 (0.63)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Supplementary Safety Measure Effectiveness Rates (rate of reduction in accidents with supplementary safety measure)

Supplementary Measure	Effectiveness
4 quadrant gate system - no presence detection	0.82 (0.82)
4 quadrant gate system - with presence detection	0.77 (0.77)
4 quadrant gate system - with Medians of at least 60 feet	0.92 (0.92)
Medians or channelization devices - mountable curbs	0.75 (0.75)
Medians or channelization devices - barrier curbs	0.80 (0.80)
One-way street	0.82 (0.82)
Photo enforcement	0.72 (0.72)
Other type 1	0.50 (0.50)
Other type 2	0.50 (0.50)
Other type 3	0.50 (0.50)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Diurnal Distributions (share of daily traffic in hour)

Name / Description		12	1	2	3	4	5	6	7	8	9	10	11
Uniform / Uniform													
	AM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167
	PM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.159
AM Peak / AM Peak													
	AM	1.667	1.667	1.667	1.667	1.667	1.667	8.333	8.333	8.333	8.333	8.333	8.333
	PM	5.833	5.833	5.833	5.833	5.834	5.834	0.833	0.833	0.833	0.833	0.834	0.834
PM Peak / PM Peak													
	AM	0.833	0.833	0.833	0.833	0.833	0.833	5.833	5.833	5.833	5.833	5.833	5.833
	PM	8.333	8.333	8.333	8.333	8.334	8.334	1.667	1.667	1.667	1.667	1.668	1.668
Day Flat / Day Flat													
	AM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
	PM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
Night Flat / Night Flat													
	AM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
	PM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
AM Peak FR WD LC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	2.490	6.470	9.450	6.970	4.980	4.980	4.480
	PM	4.980	5.470	5.970	6.470	6.970	6.970	5.470	3.980	3.480	2.990	2.490	1.440
AM Peak Non-FR WD LC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	0.990	0.490	0.490	0.490	0.990	2.460	4.430	8.370	6.900	4.930	4.930	5.420
	PM	6.400	6.400	6.400	6.900	6.900	6.400	4.930	4.430	3.450	2.960	2.460	1.480
PM Peak FR WD LC / PM, Peak Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	1.500	3.500	5.500	5.000	4.500	4.500	5.000
	PM	5.500	5.500	6.500	8.000	9.500	9.500	6.500	4.500	3.500	3.000	3.000	2.000
PM Peak Non-FR WD LC / PM Peak, Non-Freeway, Traffic Distribution Profile for Low Congestion													
	AM	0.980	0.490	0.490	0.490	0.490	0.980	2.450	4.410	4.410	4.410	4.900	5.880
	PM	6.860	6.370	6.860	8.330	9.310	9.310	6.370	4.900	3.920	2.940	2.450	2.000
AM Peak FR WD MC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	2.510	6.530	9.050	7.540	5.530	5.030	5.030
	PM	5.030	5.530	5.530	6.530	7.040	6.530	5.030	4.020	3.020	3.020	2.510	1.470
AM Peak Non-FR WD MC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	1.510	4.520	7.540	7.040	5.030	5.030	5.530
	PM	6.530	6.530	5.530	7.040	7.040	7.040	5.530	4.520	3.520	3.020	2.510	1.470
PM Peak FR WD MC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.000	0.500	0.500	0.500	0.500	1.500	4.000	6.000	5.500	4.500	4.500	5.000
	PM	5.500	5.500	6.500	7.500	9.000	9.000	6.500	4.500	3.500	3.500	3.000	2.000

PM Peak Non-FR WD MC / PM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestio												
AM	1.020	0.510	0.510	0.510	0.510	1.020	1.520	4.570	4.570	4.570	5.080	6.090
PM	6.600	6.600	6.600	7.610	9.140	9.140	6.600	5.080	4.570	3.550	2.540	1.490
AM Peak FR WD SC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.020	0.510	0.510	0.510	0.510	2.030	5.580	7.610	7.110	6.090	5.580	5.580
PM	5.580	5.580	6.090	6.600	6.600	6.600	5.580	4.570	3.050	3.050	2.540	1.520
AM Peak Non-FR WD SC / AM Peak Non-Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.030	0.520	0.520	0.520	0.520	2.060	3.090	7.220	6.190	5.150	5.670	5.670
PM	6.190	6.190	6.700	7.220	7.220	7.220	5.670	4.640	3.610	3.090	2.580	1.510
PM Peak FR WD SC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.000	0.500	0.500	0.500	0.500	1.500	4.500	6.500	6.000	5.000	5.000	5.500
PM	5.500	5.500	6.500	7.000	7.500	7.500	6.500	5.000	3.500	3.500	3.000	2.000
PM Peak Non-FR WD SC / PM Peak, Non-Freeway Weekday, Profile for Severe Congestion												
AM	0.990	0.500	0.500	0.500	0.500	1.490	3.470	5.450	5.450	4.950	4.950	5.450
PM	6.440	6.440	6.930	7.430	7.430	7.430	6.440	4.950	4.460	3.470	2.480	1.900
FR WE / Freeway Weekend Traffic Distribution Profile												
AM	2.000	1.500	1.000	0.500	0.500	1.000	2.000	3.000	3.500	5.000	5.500	6.500
PM	7.000	7.000	7.000	7.000	7.500	7.000	6.500	5.000	4.500	3.500	3.500	2.500
Non-FR WE / Non-Freeway Weekend Trafic Distribution Profile												
AM	1.980	1.490	0.990	0.500	0.500	0.990	1.490	2.480	3.470	4.950	5.940	6.930
PM	7.430	7.430	7.430	7.430	7.430	6.930	5.940	4.950	4.460	3.470	2.970	2.420
FR WD SC SS / Freeway Weekday traffic distribution profile for severe congestion and similar speeds												
AM	1.490	0.990	0.990	0.500	0.500	1.490	5.450	6.930	6.440	5.450	5.450	5.450
PM	5.450	5.940	5.940	6.440	6.930	6.440	5.450	4.460	3.470	3.470	2.970	1.910
Non-FR WD SCSS / Non-Freeway Weekday traffic distribution profile for severe congestion and similar spe												
AM	1.460	0.980	0.980	0.490	0.980	2.930	5.370	6.340	5.370	4.880	4.880	5.370
PM	5.370	5.370	5.370	5.850	6.340	6.340	5.850	4.880	4.390	4.390	3.410	2.410

Directionality of Traffic (percent of hourly traffic in principal direction*)

*Principal direction is the one with lower railroad milepost to the left of highway traffic.

Name / Description	12	1	2	3	4	5	6	7	8	9	10	11
Balanced / Equal traffic in each direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Commute 1 / Commuter traffic AM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00
Commute 2 / Commuter traffic PM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00	50.00	50.00

Default Costs for Grade Crossing Devices (thousands of constant dollars)

Device Type	O&M	Capital Expenditure	Other Lifecycle Cost
Passive	0.20	1.60	0.00
	(0.20)	(1.60)	(0.00)
Flashing Lights	1.80	74.80	0.00
	(1.80)	(74.80)	(0.00)
Flashing Lights with Gates	2.50	106.10	0.00
	(2.50)	(106.10)	(0.00)
Closure	0.00	20.00	0.00
	(0.00)	(20.00)	(0.00)
Separation	0.50	1,500.00	0.00
	(0.50)	(1,500.00)	(0.00)
New Technology 1	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 2	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 3	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Default Costs for Supplementary Safety Measures (thousands of constant dollars)

Supplementary Measure	O&M	Capital Expenditure	Other Lifecycle Cost
None	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
4 quadrant - no detection	3.50	244.00	0.00
	(3.50)	(3.50)	(3.50)
4 quadrant - with detection	5.00	260.00	0.00
	(5.00)	(5.00)	(5.00)
4 quadrant - with 60' medians	3.50	255.00	0.00
	(3.50)	(3.50)	(3.50)
Mountable curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
Barrier curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
One-way street	3.50	5.00	0.00
	(3.50)	(3.50)	(3.50)
Photo Enforcement	25.00	65.00	0.00
	(25.00)	(25.00)	(25.00)
Other type 1	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 2	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 3	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Percent Accidents by Type (for use in High Speed Rail model)

Train Strikes Highway Vehicle	Highway Vehicle Strikes Train
84.0	16.0
(84.0)	(16.0)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Train Strikes Highway Vehicle" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.0001270	0.0001110	0.00004000
	(0.0001270)	(0.0001110)	(0.00004000)
Train Fatalities	0.000005000	0.000010000	0.00004400
	(0.000005000)	(0.000010000)	(0.00004400)
% Accidents with Severe Derailment	0.00010000	0.0010000	0.007000
	(0.00010000)	(0.0010000)	(0.007000)
Added Severity with Severe Derailment	0.0002200	0.0002200	0.0002200
	(0.0002200)	(0.0002200)	(0.0002200)
Speeds of maximum severity (highway) mph	70	70	65
	(70)	(70)	(65)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Highway Vehicle Strikes Train" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.2170	0.1600	0.09100
	(0.2170)	(0.1600)	(0.09100)
Train Fatalities	0.010000	0.010000	0.010000
	(0.010000)	(0.010000)	(0.010000)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

User: A. M. Tahsin Emtenan Dataset: Rock Island

Vehicle Emissions Rates (grams of emissions per minute of idling)

Vehicle Type	VOC	CO	NOx	PM	SOx	CO2
Cars	0.3030	4.8599	0.0916	0.0000	0.0000	41.0652
	(0.3030)	(4.8599)	(0.0916)	(0.0000)	(0.0000)	(41.0652)
Buses	0.6655	11.8500	0.1830	0.0000	0.0000	87.5789
	(0.6655)	(11.8500)	(0.1830)	(0.0000)	(0.0000)	(87.5789)
Trucks	0.2559	3.1446	0.2754	0.0383	0.0001	107.4107
	(0.2559)	(3.1446)	(0.2754)	(0.0383)	(0.0001)	(107.4107)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Fuel Burn Rates (quantity consumed per minute of idling)

Vehicle Type	Fuel (gallons)	Oil (quarts)
Cars	0.009690	0.000626
	(0.009690)	(0.000626)
Buses	0.018411	0.001189
	(0.018411)	(0.001189)
Trucks	0.020670	0.001335
	(0.020670)	(0.001335)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Effectiveness Rates (rate of reduction in accidents with improvements)

Improvement	Single Track no more than 10 Trains	Multi-track no more than 10 Trains	Single Track more than 10 Trains	Multi-track more than 10 Trains
Passive to Flashing Lights	0.75 (0.75)	0.65 (0.65)	0.61 (0.61)	0.57 (0.57)
Passive to Flashing Lights with Gates	0.90 (0.90)	0.86 (0.86)	0.80 (0.80)	0.78 (0.78)
Flashing Lights to Gates	0.89 (0.89)	0.65 (0.65)	0.69 (0.69)	0.63 (0.63)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Supplementary Safety Measure Effectiveness Rates (rate of reduction in accidents with supplementary safety measure)

Supplementary Measure	Effectiveness
4 quadrant gate system - no presence detection	0.82 (0.82)
4 quadrant gate system - with presence detection	0.77 (0.77)
4 quadrant gate system - with Medians of at least 60 feet	0.92 (0.92)
Medians or channelization devices - mountable curbs	0.75 (0.75)
Medians or channelization devices - barrier curbs	0.80 (0.80)
One-way street	0.82 (0.82)
Photo enforcement	0.72 (0.72)
Other type 1	0.50 (0.50)
Other type 2	0.50 (0.50)
Other type 3	0.50 (0.50)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Diurnal Distributions (share of daily traffic in hour)

Name / Description		12	1	2	3	4	5	6	7	8	9	10	11
Uniform / Uniform													
	AM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167
	PM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.159
AM Peak / AM Peak													
	AM	1.667	1.667	1.667	1.667	1.667	1.667	8.333	8.333	8.333	8.333	8.333	8.333
	PM	5.833	5.833	5.833	5.833	5.834	5.834	0.833	0.833	0.833	0.833	0.834	0.834
PM Peak / PM Peak													
	AM	0.833	0.833	0.833	0.833	0.833	0.833	5.833	5.833	5.833	5.833	5.833	5.833
	PM	8.333	8.333	8.333	8.333	8.334	8.334	1.667	1.667	1.667	1.667	1.668	1.668
Day Flat / Day Flat													
	AM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
	PM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
Night Flat / Night Flat													
	AM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
	PM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
AM Peak FR WD LC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	2.490	6.470	9.450	6.970	4.980	4.980	4.480
	PM	4.980	5.470	5.970	6.470	6.970	6.970	5.470	3.980	3.480	2.990	2.490	1.440
AM Peak Non-FR WD LC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	0.990	0.490	0.490	0.490	0.990	2.460	4.430	8.370	6.900	4.930	4.930	5.420
	PM	6.400	6.400	6.400	6.900	6.900	6.400	4.930	4.430	3.450	2.960	2.460	1.480
PM Peak FR WD LC / PM, Peak Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	1.500	3.500	5.500	5.000	4.500	4.500	5.000
	PM	5.500	5.500	6.500	8.000	9.500	9.500	6.500	4.500	3.500	3.000	3.000	2.000
PM Peak Non-FR WD LC / PM Peak, Non-Freeway, Traffic Distribution Profile for Low Congestion													
	AM	0.980	0.490	0.490	0.490	0.490	0.980	2.450	4.410	4.410	4.410	4.900	5.880
	PM	6.860	6.370	6.860	8.330	9.310	9.310	6.370	4.900	3.920	2.940	2.450	2.000
AM Peak FR WD MC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	2.510	6.530	9.050	7.540	5.530	5.030	5.030
	PM	5.030	5.530	5.530	6.530	7.040	6.530	5.030	4.020	3.020	3.020	2.510	1.470
AM Peak Non-FR WD MC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	1.510	4.520	7.540	7.040	5.030	5.030	5.530
	PM	6.530	6.530	5.530	7.040	7.040	7.040	5.530	4.520	3.520	3.020	2.510	1.470
PM Peak FR WD MC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.000	0.500	0.500	0.500	0.500	1.500	4.000	6.000	5.500	4.500	4.500	5.000
	PM	5.500	5.500	6.500	7.500	9.000	9.000	6.500	4.500	3.500	3.500	3.000	2.000

PM Peak Non-FR WD MC / PM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestio												
AM	1.020	0.510	0.510	0.510	0.510	1.020	1.520	4.570	4.570	4.570	5.080	6.090
PM	6.600	6.600	6.600	7.610	9.140	9.140	6.600	5.080	4.570	3.550	2.540	1.490
AM Peak FR WD SC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.020	0.510	0.510	0.510	0.510	2.030	5.580	7.610	7.110	6.090	5.580	5.580
PM	5.580	5.580	6.090	6.600	6.600	6.600	5.580	4.570	3.050	3.050	2.540	1.520
AM Peak Non-FR WD SC / AM Peak Non-Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.030	0.520	0.520	0.520	0.520	2.060	3.090	7.220	6.190	5.150	5.670	5.670
PM	6.190	6.190	6.700	7.220	7.220	7.220	5.670	4.640	3.610	3.090	2.580	1.510
PM Peak FR WD SC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.000	0.500	0.500	0.500	0.500	1.500	4.500	6.500	6.000	5.000	5.000	5.500
PM	5.500	5.500	6.500	7.000	7.500	7.500	6.500	5.000	3.500	3.500	3.000	2.000
PM Peak Non-FR WD SC / PM Peak, Non-Freeway Weekday, Profile for Severe Congestion												
AM	0.990	0.500	0.500	0.500	0.500	1.490	3.470	5.450	5.450	4.950	4.950	5.450
PM	6.440	6.440	6.930	7.430	7.430	7.430	6.440	4.950	4.460	3.470	2.480	1.900
FR WE / Freeway Weekend Traffic Distribution Profile												
AM	2.000	1.500	1.000	0.500	0.500	1.000	2.000	3.000	3.500	5.000	5.500	6.500
PM	7.000	7.000	7.000	7.000	7.500	7.000	6.500	5.000	4.500	3.500	3.500	2.500
Non-FR WE / Non-Freeway Weekend Trafic Distribution Profile												
AM	1.980	1.490	0.990	0.500	0.500	0.990	1.490	2.480	3.470	4.950	5.940	6.930
PM	7.430	7.430	7.430	7.430	7.430	6.930	5.940	4.950	4.460	3.470	2.970	2.420
FR WD SC SS / Freeway Weekday traffic distribution profile for severe congestion and similar speeds												
AM	1.490	0.990	0.990	0.500	0.500	1.490	5.450	6.930	6.440	5.450	5.450	5.450
PM	5.450	5.940	5.940	6.440	6.930	6.440	5.450	4.460	3.470	3.470	2.970	1.910
Non-FR WD SCSS / Non-Freeway Weekday traffic distribution profile for severe congestion and similar spe												
AM	1.460	0.980	0.980	0.490	0.980	2.930	5.370	6.340	5.370	4.880	4.880	5.370
PM	5.370	5.370	5.370	5.850	6.340	6.340	5.850	4.880	4.390	4.390	3.410	2.410

Directionality of Traffic (percent of hourly traffic in principal direction*)

*Principal direction is the one with lower railroad milepost to the left of highway traffic.

Name / Description	12	1	2	3	4	5	6	7	8	9	10	11
Balanced / Equal traffic in each direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Commute 1 / Commuter traffic AM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00
Commute 2 / Commuter traffic PM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00	50.00	50.00

Default Costs for Grade Crossing Devices (thousands of constant dollars)

Device Type	O&M	Capital Expenditure	Other Lifecycle Cost
Passive	0.20	1.60	0.00
	(0.20)	(1.60)	(0.00)
Flashing Lights	1.80	74.80	0.00
	(1.80)	(74.80)	(0.00)
Flashing Lights with Gates	2.50	106.10	0.00
	(2.50)	(106.10)	(0.00)
Closure	0.00	20.00	0.00
	(0.00)	(20.00)	(0.00)
Separation	0.50	1,500.00	0.00
	(0.50)	(1,500.00)	(0.00)
New Technology 1	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 2	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 3	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Default Costs for Supplementary Safety Measures (thousands of constant dollars)

Supplementary Measure	O&M	Capital Expenditure	Other Lifecycle Cost
None	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
4 quadrant - no detection	3.50	244.00	0.00
	(3.50)	(3.50)	(3.50)
4 quadrant - with detection	5.00	260.00	0.00
	(5.00)	(5.00)	(5.00)
4 quadrant - with 60' medians	3.50	255.00	0.00
	(3.50)	(3.50)	(3.50)
Mountable curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
Barrier curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
One-way street	3.50	5.00	0.00
	(3.50)	(3.50)	(3.50)
Photo Enforcement	25.00	65.00	0.00
	(25.00)	(25.00)	(25.00)
Other type 1	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 2	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 3	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Percent Accidents by Type (for use in High Speed Rail model)

Train Strikes Highway Vehicle	Highway Vehicle Strikes Train
84.0	16.0
(84.0)	(16.0)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Train Strikes Highway Vehicle" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.0001270	0.0001110	0.00004000
	(0.0001270)	(0.0001110)	(0.00004000)
Train Fatalities	0.000005000	0.000010000	0.00004400
	(0.000005000)	(0.000010000)	(0.00004400)
% Accidents with Severe Derailment	0.00010000	0.0010000	0.007000
	(0.00010000)	(0.0010000)	(0.007000)
Added Severity with Severe Derailment	0.0002200	0.0002200	0.0002200
	(0.0002200)	(0.0002200)	(0.0002200)
Speeds of maximum severity (highway) mph	70	70	65
	(70)	(70)	(65)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Highway Vehicle Strikes Train" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.2170	0.1600	0.09100
	(0.2170)	(0.1600)	(0.09100)
Train Fatalities	0.010000	0.010000	0.010000
	(0.010000)	(0.010000)	(0.010000)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

User: A. M. Tahsin Emtenan Dataset: Rock Island

Vehicle Emissions Rates (grams of emissions per minute of idling)

Vehicle Type	VOC	CO	NOx	PM	SOx	CO2
Cars	0.3030	4.8599	0.0916	0.0000	0.0000	41.0652
	(0.3030)	(4.8599)	(0.0916)	(0.0000)	(0.0000)	(41.0652)
Buses	0.6655	11.8500	0.1830	0.0000	0.0000	87.5789
	(0.6655)	(11.8500)	(0.1830)	(0.0000)	(0.0000)	(87.5789)
Trucks	0.2559	3.1446	0.2754	0.0383	0.0001	107.4107
	(0.2559)	(3.1446)	(0.2754)	(0.0383)	(0.0001)	(107.4107)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Fuel Burn Rates (quantity consumed per minute of idling)

Vehicle Type	Fuel (gallons)	Oil (quarts)
Cars	0.009690	0.000626
	(0.009690)	(0.000626)
Buses	0.018411	0.001189
	(0.018411)	(0.001189)
Trucks	0.020670	0.001335
	(0.020670)	(0.001335)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Effectiveness Rates (rate of reduction in accidents with improvements)

Improvement	Single Track no more than 10 Trains	Multi-track no more than 10 Trains	Single Track more than 10 Trains	Multi-track more than 10 Trains
Passive to Flashing Lights	0.75 (0.75)	0.65 (0.65)	0.61 (0.61)	0.57 (0.57)
Passive to Flashing Lights with Gates	0.90 (0.90)	0.86 (0.86)	0.80 (0.80)	0.78 (0.78)
Flashing Lights to Gates	0.89 (0.89)	0.65 (0.65)	0.69 (0.69)	0.63 (0.63)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Supplementary Safety Measure Effectiveness Rates (rate of reduction in accidents with supplementary safety measure)

Supplementary Measure	Effectiveness
4 quadrant gate system - no presence detection	0.82 (0.82)
4 quadrant gate system - with presence detection	0.77 (0.77)
4 quadrant gate system - with Medians of at least 60 feet	0.92 (0.92)
Medians or channelization devices - mountable curbs	0.75 (0.75)
Medians or channelization devices - barrier curbs	0.80 (0.80)
One-way street	0.82 (0.82)
Photo enforcement	0.72 (0.72)
Other type 1	0.50 (0.50)
Other type 2	0.50 (0.50)
Other type 3	0.50 (0.50)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Diurnal Distributions (share of daily traffic in hour)

Name / Description		12	1	2	3	4	5	6	7	8	9	10	11
Uniform / Uniform													
	AM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167
	PM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.159
AM Peak / AM Peak													
	AM	1.667	1.667	1.667	1.667	1.667	1.667	8.333	8.333	8.333	8.333	8.333	8.333
	PM	5.833	5.833	5.833	5.833	5.834	5.834	0.833	0.833	0.833	0.833	0.834	0.834
PM Peak / PM Peak													
	AM	0.833	0.833	0.833	0.833	0.833	0.833	5.833	5.833	5.833	5.833	5.833	5.833
	PM	8.333	8.333	8.333	8.333	8.334	8.334	1.667	1.667	1.667	1.667	1.668	1.668
Day Flat / Day Flat													
	AM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
	PM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
Night Flat / Night Flat													
	AM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
	PM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
AM Peak FR WD LC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	2.490	6.470	9.450	6.970	4.980	4.980	4.480
	PM	4.980	5.470	5.970	6.470	6.970	6.970	5.470	3.980	3.480	2.990	2.490	1.440
AM Peak Non-FR WD LC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	0.990	0.490	0.490	0.490	0.990	2.460	4.430	8.370	6.900	4.930	4.930	5.420
	PM	6.400	6.400	6.400	6.900	6.900	6.400	4.930	4.430	3.450	2.960	2.460	1.480
PM Peak FR WD LC / PM, Peak Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	1.500	3.500	5.500	5.000	4.500	4.500	5.000
	PM	5.500	5.500	6.500	8.000	9.500	9.500	6.500	4.500	3.500	3.000	3.000	2.000
PM Peak Non-FR WD LC / PM Peak, Non-Freeway, Traffic Distribution Profile for Low Congestion													
	AM	0.980	0.490	0.490	0.490	0.490	0.980	2.450	4.410	4.410	4.410	4.900	5.880
	PM	6.860	6.370	6.860	8.330	9.310	9.310	6.370	4.900	3.920	2.940	2.450	2.000
AM Peak FR WD MC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	2.510	6.530	9.050	7.540	5.530	5.030	5.030
	PM	5.030	5.530	5.530	6.530	7.040	6.530	5.030	4.020	3.020	3.020	2.510	1.470
AM Peak Non-FR WD MC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	1.510	4.520	7.540	7.040	5.030	5.030	5.530
	PM	6.530	6.530	5.530	7.040	7.040	7.040	5.530	4.520	3.520	3.020	2.510	1.470
PM Peak FR WD MC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.000	0.500	0.500	0.500	0.500	1.500	4.000	6.000	5.500	4.500	4.500	5.000
	PM	5.500	5.500	6.500	7.500	9.000	9.000	6.500	4.500	3.500	3.500	3.000	2.000

PM Peak Non-FR WD MC / PM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestio												
AM	1.020	0.510	0.510	0.510	0.510	1.020	1.520	4.570	4.570	4.570	5.080	6.090
PM	6.600	6.600	6.600	7.610	9.140	9.140	6.600	5.080	4.570	3.550	2.540	1.490
AM Peak FR WD SC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.020	0.510	0.510	0.510	0.510	2.030	5.580	7.610	7.110	6.090	5.580	5.580
PM	5.580	5.580	6.090	6.600	6.600	6.600	5.580	4.570	3.050	3.050	2.540	1.520
AM Peak Non-FR WD SC / AM Peak Non-Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.030	0.520	0.520	0.520	0.520	2.060	3.090	7.220	6.190	5.150	5.670	5.670
PM	6.190	6.190	6.700	7.220	7.220	7.220	5.670	4.640	3.610	3.090	2.580	1.510
PM Peak FR WD SC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.000	0.500	0.500	0.500	0.500	1.500	4.500	6.500	6.000	5.000	5.000	5.500
PM	5.500	5.500	6.500	7.000	7.500	7.500	6.500	5.000	3.500	3.500	3.000	2.000
PM Peak Non-FR WD SC / PM Peak, Non-Freeway Weekday, Profile for Severe Congestion												
AM	0.990	0.500	0.500	0.500	0.500	1.490	3.470	5.450	5.450	4.950	4.950	5.450
PM	6.440	6.440	6.930	7.430	7.430	7.430	6.440	4.950	4.460	3.470	2.480	1.900
FR WE / Freeway Weekend Traffic Distribution Profile												
AM	2.000	1.500	1.000	0.500	0.500	1.000	2.000	3.000	3.500	5.000	5.500	6.500
PM	7.000	7.000	7.000	7.000	7.500	7.000	6.500	5.000	4.500	3.500	3.500	2.500
Non-FR WE / Non-Freeway Weekend Trafic Distribution Profile												
AM	1.980	1.490	0.990	0.500	0.500	0.990	1.490	2.480	3.470	4.950	5.940	6.930
PM	7.430	7.430	7.430	7.430	7.430	6.930	5.940	4.950	4.460	3.470	2.970	2.420
FR WD SC SS / Freeway Weekday traffic distribution profile for severe congestion and similar speeds												
AM	1.490	0.990	0.990	0.500	0.500	1.490	5.450	6.930	6.440	5.450	5.450	5.450
PM	5.450	5.940	5.940	6.440	6.930	6.440	5.450	4.460	3.470	3.470	2.970	1.910
Non-FR WD SCSS / Non-Freeway Weekday traffic distribution profile for severe congestion and similar spe												
AM	1.460	0.980	0.980	0.490	0.980	2.930	5.370	6.340	5.370	4.880	4.880	5.370
PM	5.370	5.370	5.370	5.850	6.340	6.340	5.850	4.880	4.390	4.390	3.410	2.410

Directionality of Traffic (percent of hourly traffic in principal direction*)

*Principal direction is the one with lower railroad milepost to the left of highway traffic.

Name / Description	12	1	2	3	4	5	6	7	8	9	10	11
Balanced / Equal traffic in each direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Commute 1 / Commuter traffic AM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00
Commute 2 / Commuter traffic PM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00	50.00	50.00

Default Costs for Grade Crossing Devices (thousands of constant dollars)

Device Type	O&M	Capital Expenditure	Other Lifecycle Cost
Passive	0.20	1.60	0.00
	(0.20)	(1.60)	(0.00)
Flashing Lights	1.80	74.80	0.00
	(1.80)	(74.80)	(0.00)
Flashing Lights with Gates	2.50	106.10	0.00
	(2.50)	(106.10)	(0.00)
Closure	0.00	20.00	0.00
	(0.00)	(20.00)	(0.00)
Separation	0.50	1,500.00	0.00
	(0.50)	(1,500.00)	(0.00)
New Technology 1	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 2	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 3	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Default Costs for Supplementary Safety Measures (thousands of constant dollars)

Supplementary Measure	O&M	Capital Expenditure	Other Lifecycle Cost
None	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
4 quadrant - no detection	3.50	244.00	0.00
	(3.50)	(3.50)	(3.50)
4 quadrant - with detection	5.00	260.00	0.00
	(5.00)	(5.00)	(5.00)
4 quadrant - with 60' medians	3.50	255.00	0.00
	(3.50)	(3.50)	(3.50)
Mountable curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
Barrier curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
One-way street	3.50	5.00	0.00
	(3.50)	(3.50)	(3.50)
Photo Enforcement	25.00	65.00	0.00
	(25.00)	(25.00)	(25.00)
Other type 1	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 2	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 3	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Percent Accidents by Type (for use in High Speed Rail model)

Train Strikes Highway Vehicle	Highway Vehicle Strikes Train
84.0	16.0
(84.0)	(16.0)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Train Strikes Highway Vehicle" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.0001270	0.0001110	0.00004000
	(0.0001270)	(0.0001110)	(0.00004000)
Train Fatalities	0.000005000	0.000010000	0.00004400
	(0.000005000)	(0.000010000)	(0.00004400)
% Accidents with Severe Derailment	0.00010000	0.0010000	0.007000
	(0.00010000)	(0.0010000)	(0.007000)
Added Severity with Severe Derailment	0.0002200	0.0002200	0.0002200
	(0.0002200)	(0.0002200)	(0.0002200)
Speeds of maximum severity (highway) mph	70	70	65
	(70)	(70)	(65)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Highway Vehicle Strikes Train" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.2170	0.1600	0.09100
	(0.2170)	(0.1600)	(0.09100)
Train Fatalities	0.010000	0.010000	0.010000
	(0.010000)	(0.010000)	(0.010000)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Vehicle Emissions Rates (grams of emissions per minute of idling)

Vehicle Type	VOC	CO	NOx	PM	SOx	CO2
Cars	0.3030	4.8599	0.0916	0.0000	0.0000	41.0652
	(0.3030)	(4.8599)	(0.0916)	(0.0000)	(0.0000)	(41.0652)
Buses	0.6655	11.8500	0.1830	0.0000	0.0000	87.5789
	(0.6655)	(11.8500)	(0.1830)	(0.0000)	(0.0000)	(87.5789)
Trucks	0.2559	3.1446	0.2754	0.0383	0.0001	107.4107
	(0.2559)	(3.1446)	(0.2754)	(0.0383)	(0.0001)	(107.4107)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Fuel Burn Rates (quantity consumed per minute of idling)

Vehicle Type	Fuel (gallons)	Oil (quarts)
Cars	0.009690	0.000626
	(0.009690)	(0.000626)
Buses	0.018411	0.001189
	(0.018411)	(0.001189)
Trucks	0.020670	0.001335
	(0.020670)	(0.001335)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Effectiveness Rates (rate of reduction in accidents with improvements)

Improvement	Single Track no more than 10 Trains	Multi-track no more than 10 Trains	Single Track more than 10 Trains	Multi-track more than 10 Trains
Passive to Flashing Lights	0.75 (0.75)	0.65 (0.65)	0.61 (0.61)	0.57 (0.57)
Passive to Flashing Lights with Gates	0.90 (0.90)	0.86 (0.86)	0.80 (0.80)	0.78 (0.78)
Flashing Lights to Gates	0.89 (0.89)	0.65 (0.65)	0.69 (0.69)	0.63 (0.63)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Supplementary Safety Measure Effectiveness Rates (rate of reduction in accidents with supplementary safety measure)

Supplementary Measure	Effectiveness
4 quadrant gate system - no presence detection	0.82 (0.82)
4 quadrant gate system - with presence detection	0.77 (0.77)
4 quadrant gate system - with Medians of at least 60 feet	0.92 (0.92)
Medians or channelization devices - mountable curbs	0.75 (0.75)
Medians or channelization devices - barrier curbs	0.80 (0.80)
One-way street	0.82 (0.82)
Photo enforcement	0.72 (0.72)
Other type 1	0.50 (0.50)
Other type 2	0.50 (0.50)
Other type 3	0.50 (0.50)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Diurnal Distributions (share of daily traffic in hour)

Name / Description		12	1	2	3	4	5	6	7	8	9	10	11
Uniform / Uniform													
	AM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167
	PM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.159
AM Peak / AM Peak													
	AM	1.667	1.667	1.667	1.667	1.667	1.667	8.333	8.333	8.333	8.333	8.333	8.333
	PM	5.833	5.833	5.833	5.833	5.834	5.834	0.833	0.833	0.833	0.833	0.834	0.834
PM Peak / PM Peak													
	AM	0.833	0.833	0.833	0.833	0.833	0.833	5.833	5.833	5.833	5.833	5.833	5.833
	PM	8.333	8.333	8.333	8.333	8.334	8.334	1.667	1.667	1.667	1.667	1.668	1.668
Day Flat / Day Flat													
	AM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
	PM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
Night Flat / Night Flat													
	AM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
	PM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
AM Peak FR WD LC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	2.490	6.470	9.450	6.970	4.980	4.980	4.480
	PM	4.980	5.470	5.970	6.470	6.970	6.970	5.470	3.980	3.480	2.990	2.490	1.440
AM Peak Non-FR WD LC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	0.990	0.490	0.490	0.490	0.990	2.460	4.430	8.370	6.900	4.930	4.930	5.420
	PM	6.400	6.400	6.400	6.900	6.900	6.400	4.930	4.430	3.450	2.960	2.460	1.480
PM Peak FR WD LC / PM, Peak Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	1.500	3.500	5.500	5.000	4.500	4.500	5.000
	PM	5.500	5.500	6.500	8.000	9.500	9.500	6.500	4.500	3.500	3.000	3.000	2.000
PM Peak Non-FR WD LC / PM Peak, Non-Freeway, Traffic Distribution Profile for Low Congestion													
	AM	0.980	0.490	0.490	0.490	0.490	0.980	2.450	4.410	4.410	4.410	4.900	5.880
	PM	6.860	6.370	6.860	8.330	9.310	9.310	6.370	4.900	3.920	2.940	2.450	2.000
AM Peak FR WD MC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	2.510	6.530	9.050	7.540	5.530	5.030	5.030
	PM	5.030	5.530	5.530	6.530	7.040	6.530	5.030	4.020	3.020	3.020	2.510	1.470
AM Peak Non-FR WD MC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	1.510	4.520	7.540	7.040	5.030	5.030	5.530
	PM	6.530	6.530	5.530	7.040	7.040	7.040	5.530	4.520	3.520	3.020	2.510	1.470
PM Peak FR WD MC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.000	0.500	0.500	0.500	0.500	1.500	4.000	6.000	5.500	4.500	4.500	5.000
	PM	5.500	5.500	6.500	7.500	9.000	9.000	6.500	4.500	3.500	3.500	3.000	2.000

PM Peak Non-FR WD MC / PM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestio												
AM	1.020	0.510	0.510	0.510	0.510	1.020	1.520	4.570	4.570	4.570	5.080	6.090
PM	6.600	6.600	6.600	7.610	9.140	9.140	6.600	5.080	4.570	3.550	2.540	1.490
AM Peak FR WD SC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.020	0.510	0.510	0.510	0.510	2.030	5.580	7.610	7.110	6.090	5.580	5.580
PM	5.580	5.580	6.090	6.600	6.600	6.600	5.580	4.570	3.050	3.050	2.540	1.520
AM Peak Non-FR WD SC / AM Peak Non-Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.030	0.520	0.520	0.520	0.520	2.060	3.090	7.220	6.190	5.150	5.670	5.670
PM	6.190	6.190	6.700	7.220	7.220	7.220	5.670	4.640	3.610	3.090	2.580	1.510
PM Peak FR WD SC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.000	0.500	0.500	0.500	0.500	1.500	4.500	6.500	6.000	5.000	5.000	5.500
PM	5.500	5.500	6.500	7.000	7.500	7.500	6.500	5.000	3.500	3.500	3.000	2.000
PM Peak Non-FR WD SC / PM Peak, Non-Freeway Weekday, Profile for Severe Congestion												
AM	0.990	0.500	0.500	0.500	0.500	1.490	3.470	5.450	5.450	4.950	4.950	5.450
PM	6.440	6.440	6.930	7.430	7.430	7.430	6.440	4.950	4.460	3.470	2.480	1.900
FR WE / Freeway Weekend Traffic Distribution Profile												
AM	2.000	1.500	1.000	0.500	0.500	1.000	2.000	3.000	3.500	5.000	5.500	6.500
PM	7.000	7.000	7.000	7.000	7.500	7.000	6.500	5.000	4.500	3.500	3.500	2.500
Non-FR WE / Non-Freeway Weekend Trafic Distribution Profile												
AM	1.980	1.490	0.990	0.500	0.500	0.990	1.490	2.480	3.470	4.950	5.940	6.930
PM	7.430	7.430	7.430	7.430	7.430	6.930	5.940	4.950	4.460	3.470	2.970	2.420
FR WD SC SS / Freeway Weekday traffic distribution profile for severe congestion and similar speeds												
AM	1.490	0.990	0.990	0.500	0.500	1.490	5.450	6.930	6.440	5.450	5.450	5.450
PM	5.450	5.940	5.940	6.440	6.930	6.440	5.450	4.460	3.470	3.470	2.970	1.910
Non-FR WD SCSS / Non-Freeway Weekday traffic distribution profile for severe congestion and similar spe												
AM	1.460	0.980	0.980	0.490	0.980	2.930	5.370	6.340	5.370	4.880	4.880	5.370
PM	5.370	5.370	5.370	5.850	6.340	6.340	5.850	4.880	4.390	4.390	3.410	2.410

Directionality of Traffic (percent of hourly traffic in principal direction*)

*Principal direction is the one with lower railroad milepost to the left of highway traffic.

Name / Description	12	1	2	3	4	5	6	7	8	9	10	11
Balanced / Equal traffic in each direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Commute 1 / Commuter traffic AM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00
Commute 2 / Commuter traffic PM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00	50.00	50.00

Default Costs for Grade Crossing Devices (thousands of constant dollars)

Device Type	O&M	Capital Expenditure	Other Lifecycle Cost
Passive	0.20	1.60	0.00
	(0.20)	(1.60)	(0.00)
Flashing Lights	1.80	74.80	0.00
	(1.80)	(74.80)	(0.00)
Flashing Lights with Gates	2.50	106.10	0.00
	(2.50)	(106.10)	(0.00)
Closure	0.00	20.00	0.00
	(0.00)	(20.00)	(0.00)
Separation	0.50	1,500.00	0.00
	(0.50)	(1,500.00)	(0.00)
New Technology 1	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 2	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 3	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Default Costs for Supplementary Safety Measures (thousands of constant dollars)

Supplementary Measure	O&M	Capital Expenditure	Other Lifecycle Cost
None	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
4 quadrant - no detection	3.50	244.00	0.00
	(3.50)	(3.50)	(3.50)
4 quadrant - with detection	5.00	260.00	0.00
	(5.00)	(5.00)	(5.00)
4 quadrant - with 60' medians	3.50	255.00	0.00
	(3.50)	(3.50)	(3.50)
Mountable curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
Barrier curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
One-way street	3.50	5.00	0.00
	(3.50)	(3.50)	(3.50)
Photo Enforcement	25.00	65.00	0.00
	(25.00)	(25.00)	(25.00)
Other type 1	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 2	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 3	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Percent Accidents by Type (for use in High Speed Rail model)

Train Strikes Highway Vehicle	Highway Vehicle Strikes Train
84.0	16.0
(84.0)	(16.0)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Train Strikes Highway Vehicle" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.0001270	0.0001110	0.00004000
	(0.0001270)	(0.0001110)	(0.00004000)
Train Fatalities	0.000005000	0.000010000	0.00004400
	(0.000005000)	(0.000010000)	(0.00004400)
% Accidents with Severe Derailment	0.00010000	0.0010000	0.007000
	(0.00010000)	(0.0010000)	(0.007000)
Added Severity with Severe Derailment	0.0002200	0.0002200	0.0002200
	(0.0002200)	(0.0002200)	(0.0002200)
Speeds of maximum severity (highway) mph	70	70	65
	(70)	(70)	(65)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Highway Vehicle Strikes Train" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.2170	0.1600	0.09100
	(0.2170)	(0.1600)	(0.09100)
Train Fatalities	0.010000	0.010000	0.010000
	(0.010000)	(0.010000)	(0.010000)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

User: A. M. Tahsin Emtenan Dataset: Rock Island

Vehicle Emissions Rates (grams of emissions per minute of idling)

Vehicle Type	VOC	CO	NOx	PM	SOx	CO2
Cars	0.3030	4.8599	0.0916	0.0000	0.0000	41.0652
	(0.3030)	(4.8599)	(0.0916)	(0.0000)	(0.0000)	(41.0652)
Buses	0.6655	11.8500	0.1830	0.0000	0.0000	87.5789
	(0.6655)	(11.8500)	(0.1830)	(0.0000)	(0.0000)	(87.5789)
Trucks	0.2559	3.1446	0.2754	0.0383	0.0001	107.4107
	(0.2559)	(3.1446)	(0.2754)	(0.0383)	(0.0001)	(107.4107)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Fuel Burn Rates (quantity consumed per minute of idling)

Vehicle Type	Fuel (gallons)	Oil (quarts)
Cars	0.009690	0.000626
	(0.009690)	(0.000626)
Buses	0.018411	0.001189
	(0.018411)	(0.001189)
Trucks	0.020670	0.001335
	(0.020670)	(0.001335)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Effectiveness Rates (rate of reduction in accidents with improvements)

Improvement	Single Track no more than 10 Trains	Multi-track no more than 10 Trains	Single Track more than 10 Trains	Multi-track more than 10 Trains
Passive to Flashing Lights	0.75 (0.75)	0.65 (0.65)	0.61 (0.61)	0.57 (0.57)
Passive to Flashing Lights with Gates	0.90 (0.90)	0.86 (0.86)	0.80 (0.80)	0.78 (0.78)
Flashing Lights to Gates	0.89 (0.89)	0.65 (0.65)	0.69 (0.69)	0.63 (0.63)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Supplementary Safety Measure Effectiveness Rates (rate of reduction in accidents with supplementary safety measure)

Supplementary Measure	Effectiveness
4 quadrant gate system - no presence detection	0.82 (0.82)
4 quadrant gate system - with presence detection	0.77 (0.77)
4 quadrant gate system - with Medians of at least 60 feet	0.92 (0.92)
Medians or channelization devices - mountable curbs	0.75 (0.75)
Medians or channelization devices - barrier curbs	0.80 (0.80)
One-way street	0.82 (0.82)
Photo enforcement	0.72 (0.72)
Other type 1	0.50 (0.50)
Other type 2	0.50 (0.50)
Other type 3	0.50 (0.50)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Diurnal Distributions (share of daily traffic in hour)

Name / Description		12	1	2	3	4	5	6	7	8	9	10	11
Uniform / Uniform													
	AM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167
	PM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.159
AM Peak / AM Peak													
	AM	1.667	1.667	1.667	1.667	1.667	1.667	8.333	8.333	8.333	8.333	8.333	8.333
	PM	5.833	5.833	5.833	5.833	5.834	5.834	0.833	0.833	0.833	0.833	0.834	0.834
PM Peak / PM Peak													
	AM	0.833	0.833	0.833	0.833	0.833	0.833	5.833	5.833	5.833	5.833	5.833	5.833
	PM	8.333	8.333	8.333	8.333	8.334	8.334	1.667	1.667	1.667	1.667	1.668	1.668
Day Flat / Day Flat													
	AM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
	PM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
Night Flat / Night Flat													
	AM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
	PM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
AM Peak FR WD LC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	2.490	6.470	9.450	6.970	4.980	4.980	4.480
	PM	4.980	5.470	5.970	6.470	6.970	6.970	5.470	3.980	3.480	2.990	2.490	1.440
AM Peak Non-FR WD LC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	0.990	0.490	0.490	0.490	0.990	2.460	4.430	8.370	6.900	4.930	4.930	5.420
	PM	6.400	6.400	6.400	6.900	6.900	6.400	4.930	4.430	3.450	2.960	2.460	1.480
PM Peak FR WD LC / PM, Peak Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	1.500	3.500	5.500	5.000	4.500	4.500	5.000
	PM	5.500	5.500	6.500	8.000	9.500	9.500	6.500	4.500	3.500	3.000	3.000	2.000
PM Peak Non-FR WD LC / PM Peak, Non-Freeway, Traffic Distribution Profile for Low Congestion													
	AM	0.980	0.490	0.490	0.490	0.490	0.980	2.450	4.410	4.410	4.410	4.900	5.880
	PM	6.860	6.370	6.860	8.330	9.310	9.310	6.370	4.900	3.920	2.940	2.450	2.000
AM Peak FR WD MC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	2.510	6.530	9.050	7.540	5.530	5.030	5.030
	PM	5.030	5.530	5.530	6.530	7.040	6.530	5.030	4.020	3.020	3.020	2.510	1.470
AM Peak Non-FR WD MC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	1.510	4.520	7.540	7.040	5.030	5.030	5.530
	PM	6.530	6.530	5.530	7.040	7.040	7.040	5.530	4.520	3.520	3.020	2.510	1.470
PM Peak FR WD MC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.000	0.500	0.500	0.500	0.500	1.500	4.000	6.000	5.500	4.500	4.500	5.000
	PM	5.500	5.500	6.500	7.500	9.000	9.000	6.500	4.500	3.500	3.500	3.000	2.000

PM Peak Non-FR WD MC / PM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestio												
AM	1.020	0.510	0.510	0.510	0.510	1.020	1.520	4.570	4.570	4.570	5.080	6.090
PM	6.600	6.600	6.600	7.610	9.140	9.140	6.600	5.080	4.570	3.550	2.540	1.490
AM Peak FR WD SC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.020	0.510	0.510	0.510	0.510	2.030	5.580	7.610	7.110	6.090	5.580	5.580
PM	5.580	5.580	6.090	6.600	6.600	6.600	5.580	4.570	3.050	3.050	2.540	1.520
AM Peak Non-FR WD SC / AM Peak Non-Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.030	0.520	0.520	0.520	0.520	2.060	3.090	7.220	6.190	5.150	5.670	5.670
PM	6.190	6.190	6.700	7.220	7.220	7.220	5.670	4.640	3.610	3.090	2.580	1.510
PM Peak FR WD SC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.000	0.500	0.500	0.500	0.500	1.500	4.500	6.500	6.000	5.000	5.000	5.500
PM	5.500	5.500	6.500	7.000	7.500	7.500	6.500	5.000	3.500	3.500	3.000	2.000
PM Peak Non-FR WD SC / PM Peak, Non-Freeway Weekday, Profile for Severe Congestion												
AM	0.990	0.500	0.500	0.500	0.500	1.490	3.470	5.450	5.450	4.950	4.950	5.450
PM	6.440	6.440	6.930	7.430	7.430	7.430	6.440	4.950	4.460	3.470	2.480	1.900
FR WE / Freeway Weekend Traffic Distribution Profile												
AM	2.000	1.500	1.000	0.500	0.500	1.000	2.000	3.000	3.500	5.000	5.500	6.500
PM	7.000	7.000	7.000	7.000	7.500	7.000	6.500	5.000	4.500	3.500	3.500	2.500
Non-FR WE / Non-Freeway Weekend Trafic Distribution Profile												
AM	1.980	1.490	0.990	0.500	0.500	0.990	1.490	2.480	3.470	4.950	5.940	6.930
PM	7.430	7.430	7.430	7.430	7.430	6.930	5.940	4.950	4.460	3.470	2.970	2.420
FR WD SC SS / Freeway Weekday traffic distribution profile for severe congestion and similar speeds												
AM	1.490	0.990	0.990	0.500	0.500	1.490	5.450	6.930	6.440	5.450	5.450	5.450
PM	5.450	5.940	5.940	6.440	6.930	6.440	5.450	4.460	3.470	3.470	2.970	1.910
Non-FR WD SCSS / Non-Freeway Weekday traffic distribution profile for severe congestion and similar spe												
AM	1.460	0.980	0.980	0.490	0.980	2.930	5.370	6.340	5.370	4.880	4.880	5.370
PM	5.370	5.370	5.370	5.850	6.340	6.340	5.850	4.880	4.390	4.390	3.410	2.410

Directionality of Traffic (percent of hourly traffic in principal direction*)

*Principal direction is the one with lower railroad milepost to the left of highway traffic.

Name / Description	12	1	2	3	4	5	6	7	8	9	10	11
Balanced / Equal traffic in each direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Commute 1 / Commuter traffic AM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00
Commute 2 / Commuter traffic PM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00	50.00	50.00

Default Costs for Grade Crossing Devices (thousands of constant dollars)

Device Type	O&M	Capital Expenditure	Other Lifecycle Cost
Passive	0.20	1.60	0.00
	(0.20)	(1.60)	(0.00)
Flashing Lights	1.80	74.80	0.00
	(1.80)	(74.80)	(0.00)
Flashing Lights with Gates	2.50	106.10	0.00
	(2.50)	(106.10)	(0.00)
Closure	0.00	20.00	0.00
	(0.00)	(20.00)	(0.00)
Separation	0.50	1,500.00	0.00
	(0.50)	(1,500.00)	(0.00)
New Technology 1	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 2	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 3	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Default Costs for Supplementary Safety Measures (thousands of constant dollars)

Supplementary Measure	O&M	Capital Expenditure	Other Lifecycle Cost
None	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
4 quadrant - no detection	3.50	244.00	0.00
	(3.50)	(3.50)	(3.50)
4 quadrant - with detection	5.00	260.00	0.00
	(5.00)	(5.00)	(5.00)
4 quadrant - with 60' medians	3.50	255.00	0.00
	(3.50)	(3.50)	(3.50)
Mountable curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
Barrier curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
One-way street	3.50	5.00	0.00
	(3.50)	(3.50)	(3.50)
Photo Enforcement	25.00	65.00	0.00
	(25.00)	(25.00)	(25.00)
Other type 1	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 2	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 3	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Percent Accidents by Type (for use in High Speed Rail model)

Train Strikes Highway Vehicle	Highway Vehicle Strikes Train
84.0	16.0
(84.0)	(16.0)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Train Strikes Highway Vehicle" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.0001270	0.0001110	0.00004000
	(0.0001270)	(0.0001110)	(0.00004000)
Train Fatalities	0.000005000	0.000010000	0.00004400
	(0.000005000)	(0.000010000)	(0.00004400)
% Accidents with Severe Derailment	0.00010000	0.0010000	0.007000
	(0.00010000)	(0.0010000)	(0.007000)
Added Severity with Severe Derailment	0.0002200	0.0002200	0.0002200
	(0.0002200)	(0.0002200)	(0.0002200)
Speeds of maximum severity (highway) mph	70	70	65
	(70)	(70)	(65)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Highway Vehicle Strikes Train" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.2170	0.1600	0.09100
	(0.2170)	(0.1600)	(0.09100)
Train Fatalities	0.010000	0.010000	0.010000
	(0.010000)	(0.010000)	(0.010000)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

User: A. M. Tahsin Emtenan Dataset: Rock Island

Vehicle Emissions Rates (grams of emissions per minute of idling)

Vehicle Type	VOC	CO	NOx	PM	SOx	CO2
Cars	0.3030	4.8599	0.0916	0.0000	0.0000	41.0652
	(0.3030)	(4.8599)	(0.0916)	(0.0000)	(0.0000)	(41.0652)
Buses	0.6655	11.8500	0.1830	0.0000	0.0000	87.5789
	(0.6655)	(11.8500)	(0.1830)	(0.0000)	(0.0000)	(87.5789)
Trucks	0.2559	3.1446	0.2754	0.0383	0.0001	107.4107
	(0.2559)	(3.1446)	(0.2754)	(0.0383)	(0.0001)	(107.4107)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Fuel Burn Rates (quantity consumed per minute of idling)

Vehicle Type	Fuel (gallons)	Oil (quarts)
Cars	0.009690	0.000626
	(0.009690)	(0.000626)
Buses	0.018411	0.001189
	(0.018411)	(0.001189)
Trucks	0.020670	0.001335
	(0.020670)	(0.001335)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Effectiveness Rates (rate of reduction in accidents with improvements)

Improvement	Single Track no more than 10 Trains	Multi-track no more than 10 Trains	Single Track more than 10 Trains	Multi-track more than 10 Trains
Passive to Flashing Lights	0.75 (0.75)	0.65 (0.65)	0.61 (0.61)	0.57 (0.57)
Passive to Flashing Lights with Gates	0.90 (0.90)	0.86 (0.86)	0.80 (0.80)	0.78 (0.78)
Flashing Lights to Gates	0.89 (0.89)	0.65 (0.65)	0.69 (0.69)	0.63 (0.63)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Supplementary Safety Measure Effectiveness Rates (rate of reduction in accidents with supplementary safety measure)

Supplementary Measure	Effectiveness
4 quadrant gate system - no presence detection	0.82 (0.82)
4 quadrant gate system - with presence detection	0.77 (0.77)
4 quadrant gate system - with Medians of at least 60 feet	0.92 (0.92)
Medians or channelization devices - mountable curbs	0.75 (0.75)
Medians or channelization devices - barrier curbs	0.80 (0.80)
One-way street	0.82 (0.82)
Photo enforcement	0.72 (0.72)
Other type 1	0.50 (0.50)
Other type 2	0.50 (0.50)
Other type 3	0.50 (0.50)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Diurnal Distributions (share of daily traffic in hour)

Name / Description		12	1	2	3	4	5	6	7	8	9	10	11
Uniform / Uniform													
	AM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167
	PM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.159
AM Peak / AM Peak													
	AM	1.667	1.667	1.667	1.667	1.667	1.667	8.333	8.333	8.333	8.333	8.333	8.333
	PM	5.833	5.833	5.833	5.833	5.834	5.834	0.833	0.833	0.833	0.833	0.834	0.834
PM Peak / PM Peak													
	AM	0.833	0.833	0.833	0.833	0.833	0.833	5.833	5.833	5.833	5.833	5.833	5.833
	PM	8.333	8.333	8.333	8.333	8.334	8.334	1.667	1.667	1.667	1.667	1.668	1.668
Day Flat / Day Flat													
	AM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
	PM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
Night Flat / Night Flat													
	AM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
	PM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
AM Peak FR WD LC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	2.490	6.470	9.450	6.970	4.980	4.980	4.480
	PM	4.980	5.470	5.970	6.470	6.970	6.970	5.470	3.980	3.480	2.990	2.490	1.440
AM Peak Non-FR WD LC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	0.990	0.490	0.490	0.490	0.990	2.460	4.430	8.370	6.900	4.930	4.930	5.420
	PM	6.400	6.400	6.400	6.900	6.900	6.400	4.930	4.430	3.450	2.960	2.460	1.480
PM Peak FR WD LC / PM, Peak Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	1.500	3.500	5.500	5.000	4.500	4.500	5.000
	PM	5.500	5.500	6.500	8.000	9.500	9.500	6.500	4.500	3.500	3.000	3.000	2.000
PM Peak Non-FR WD LC / PM Peak, Non-Freeway, Traffic Distribution Profile for Low Congestion													
	AM	0.980	0.490	0.490	0.490	0.490	0.980	2.450	4.410	4.410	4.410	4.900	5.880
	PM	6.860	6.370	6.860	8.330	9.310	9.310	6.370	4.900	3.920	2.940	2.450	2.000
AM Peak FR WD MC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	2.510	6.530	9.050	7.540	5.530	5.030	5.030
	PM	5.030	5.530	5.530	6.530	7.040	6.530	5.030	4.020	3.020	3.020	2.510	1.470
AM Peak Non-FR WD MC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	1.510	4.520	7.540	7.040	5.030	5.030	5.530
	PM	6.530	6.530	5.530	7.040	7.040	7.040	5.530	4.520	3.520	3.020	2.510	1.470
PM Peak FR WD MC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.000	0.500	0.500	0.500	0.500	1.500	4.000	6.000	5.500	4.500	4.500	5.000
	PM	5.500	5.500	6.500	7.500	9.000	9.000	6.500	4.500	3.500	3.500	3.000	2.000

PM Peak Non-FR WD MC / PM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestio												
AM	1.020	0.510	0.510	0.510	0.510	1.020	1.520	4.570	4.570	4.570	5.080	6.090
PM	6.600	6.600	6.600	7.610	9.140	9.140	6.600	5.080	4.570	3.550	2.540	1.490
AM Peak FR WD SC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.020	0.510	0.510	0.510	0.510	2.030	5.580	7.610	7.110	6.090	5.580	5.580
PM	5.580	5.580	6.090	6.600	6.600	6.600	5.580	4.570	3.050	3.050	2.540	1.520
AM Peak Non-FR WD SC / AM Peak Non-Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.030	0.520	0.520	0.520	0.520	2.060	3.090	7.220	6.190	5.150	5.670	5.670
PM	6.190	6.190	6.700	7.220	7.220	7.220	5.670	4.640	3.610	3.090	2.580	1.510
PM Peak FR WD SC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.000	0.500	0.500	0.500	0.500	1.500	4.500	6.500	6.000	5.000	5.000	5.500
PM	5.500	5.500	6.500	7.000	7.500	7.500	6.500	5.000	3.500	3.500	3.000	2.000
PM Peak Non-FR WD SC / PM Peak, Non-Freeway Weekday, Profile for Severe Congestion												
AM	0.990	0.500	0.500	0.500	0.500	1.490	3.470	5.450	5.450	4.950	4.950	5.450
PM	6.440	6.440	6.930	7.430	7.430	7.430	6.440	4.950	4.460	3.470	2.480	1.900
FR WE / Freeway Weekend Traffic Distribution Profile												
AM	2.000	1.500	1.000	0.500	0.500	1.000	2.000	3.000	3.500	5.000	5.500	6.500
PM	7.000	7.000	7.000	7.000	7.500	7.000	6.500	5.000	4.500	3.500	3.500	2.500
Non-FR WE / Non-Freeway Weekend Trafic Distribution Profile												
AM	1.980	1.490	0.990	0.500	0.500	0.990	1.490	2.480	3.470	4.950	5.940	6.930
PM	7.430	7.430	7.430	7.430	7.430	6.930	5.940	4.950	4.460	3.470	2.970	2.420
FR WD SC SS / Freeway Weekday traffic distribution profile for severe congestion and similar speeds												
AM	1.490	0.990	0.990	0.500	0.500	1.490	5.450	6.930	6.440	5.450	5.450	5.450
PM	5.450	5.940	5.940	6.440	6.930	6.440	5.450	4.460	3.470	3.470	2.970	1.910
Non-FR WD SCSS / Non-Freeway Weekday traffic distribution profile for severe congestion and similar spe												
AM	1.460	0.980	0.980	0.490	0.980	2.930	5.370	6.340	5.370	4.880	4.880	5.370
PM	5.370	5.370	5.370	5.850	6.340	6.340	5.850	4.880	4.390	4.390	3.410	2.410

Directionality of Traffic (percent of hourly traffic in principal direction*)

*Principal direction is the one with lower railroad milepost to the left of highway traffic.

Name / Description	12	1	2	3	4	5	6	7	8	9	10	11
Balanced / Equal traffic in each direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Commute 1 / Commuter traffic AM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00
Commute 2 / Commuter traffic PM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00	50.00	50.00

Default Costs for Grade Crossing Devices (thousands of constant dollars)

Device Type	O&M	Capital Expenditure	Other Lifecycle Cost
Passive	0.20	1.60	0.00
	(0.20)	(1.60)	(0.00)
Flashing Lights	1.80	74.80	0.00
	(1.80)	(74.80)	(0.00)
Flashing Lights with Gates	2.50	106.10	0.00
	(2.50)	(106.10)	(0.00)
Closure	0.00	20.00	0.00
	(0.00)	(20.00)	(0.00)
Separation	0.50	1,500.00	0.00
	(0.50)	(1,500.00)	(0.00)
New Technology 1	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 2	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 3	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Default Costs for Supplementary Safety Measures (thousands of constant dollars)

Supplementary Measure	O&M	Capital Expenditure	Other Lifecycle Cost
None	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
4 quadrant - no detection	3.50	244.00	0.00
	(3.50)	(3.50)	(3.50)
4 quadrant - with detection	5.00	260.00	0.00
	(5.00)	(5.00)	(5.00)
4 quadrant - with 60' medians	3.50	255.00	0.00
	(3.50)	(3.50)	(3.50)
Mountable curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
Barrier curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
One-way street	3.50	5.00	0.00
	(3.50)	(3.50)	(3.50)
Photo Enforcement	25.00	65.00	0.00
	(25.00)	(25.00)	(25.00)
Other type 1	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 2	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 3	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Percent Accidents by Type (for use in High Speed Rail model)

Train Strikes Highway Vehicle	Highway Vehicle Strikes Train
84.0	16.0
(84.0)	(16.0)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Train Strikes Highway Vehicle" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.0001270	0.0001110	0.00004000
	(0.0001270)	(0.0001110)	(0.00004000)
Train Fatalities	0.000005000	0.000010000	0.00004400
	(0.000005000)	(0.000010000)	(0.00004400)
% Accidents with Severe Derailment	0.00010000	0.0010000	0.007000
	(0.00010000)	(0.0010000)	(0.007000)
Added Severity with Severe Derailment	0.0002200	0.0002200	0.0002200
	(0.0002200)	(0.0002200)	(0.0002200)
Speeds of maximum severity (highway) mph	70	70	65
	(70)	(70)	(65)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Highway Vehicle Strikes Train" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.2170	0.1600	0.09100
	(0.2170)	(0.1600)	(0.09100)
Train Fatalities	0.010000	0.010000	0.010000
	(0.010000)	(0.010000)	(0.010000)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Vehicle Emissions Rates (grams of emissions per minute of idling)

Vehicle Type	VOC	CO	NOx	PM	SOx	CO2
Cars	0.3030	4.8599	0.0916	0.0000	0.0000	41.0652
	(0.3030)	(4.8599)	(0.0916)	(0.0000)	(0.0000)	(41.0652)
Buses	0.6655	11.8500	0.1830	0.0000	0.0000	87.5789
	(0.6655)	(11.8500)	(0.1830)	(0.0000)	(0.0000)	(87.5789)
Trucks	0.2559	3.1446	0.2754	0.0383	0.0001	107.4107
	(0.2559)	(3.1446)	(0.2754)	(0.0383)	(0.0001)	(107.4107)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Fuel Burn Rates (quantity consumed per minute of idling)

Vehicle Type	Fuel (gallons)	Oil (quarts)
Cars	0.009690	0.000626
	(0.009690)	(0.000626)
Buses	0.018411	0.001189
	(0.018411)	(0.001189)
Trucks	0.020670	0.001335
	(0.020670)	(0.001335)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Effectiveness Rates (rate of reduction in accidents with improvements)

Improvement	Single Track no more than 10 Trains	Multi-track no more than 10 Trains	Single Track more than 10 Trains	Multi-track more than 10 Trains
Passive to Flashing Lights	0.75 (0.75)	0.65 (0.65)	0.61 (0.61)	0.57 (0.57)
Passive to Flashing Lights with Gates	0.90 (0.90)	0.86 (0.86)	0.80 (0.80)	0.78 (0.78)
Flashing Lights to Gates	0.89 (0.89)	0.65 (0.65)	0.69 (0.69)	0.63 (0.63)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Supplementary Safety Measure Effectiveness Rates (rate of reduction in accidents with supplementary safety measure)

Supplementary Measure	Effectiveness
4 quadrant gate system - no presence detection	0.82 (0.82)
4 quadrant gate system - with presence detection	0.77 (0.77)
4 quadrant gate system - with Medians of at least 60 feet	0.92 (0.92)
Medians or channelization devices - mountable curbs	0.75 (0.75)
Medians or channelization devices - barrier curbs	0.80 (0.80)
One-way street	0.82 (0.82)
Photo enforcement	0.72 (0.72)
Other type 1	0.50 (0.50)
Other type 2	0.50 (0.50)
Other type 3	0.50 (0.50)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Diurnal Distributions (share of daily traffic in hour)

Name / Description		12	1	2	3	4	5	6	7	8	9	10	11
Uniform / Uniform													
	AM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167
	PM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.159
AM Peak / AM Peak													
	AM	1.667	1.667	1.667	1.667	1.667	1.667	8.333	8.333	8.333	8.333	8.333	8.333
	PM	5.833	5.833	5.833	5.833	5.834	5.834	0.833	0.833	0.833	0.833	0.834	0.834
PM Peak / PM Peak													
	AM	0.833	0.833	0.833	0.833	0.833	0.833	5.833	5.833	5.833	5.833	5.833	5.833
	PM	8.333	8.333	8.333	8.333	8.334	8.334	1.667	1.667	1.667	1.667	1.668	1.668
Day Flat / Day Flat													
	AM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
	PM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
Night Flat / Night Flat													
	AM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
	PM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
AM Peak FR WD LC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	2.490	6.470	9.450	6.970	4.980	4.980	4.480
	PM	4.980	5.470	5.970	6.470	6.970	6.970	5.470	3.980	3.480	2.990	2.490	1.440
AM Peak Non-FR WD LC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	0.990	0.490	0.490	0.490	0.990	2.460	4.430	8.370	6.900	4.930	4.930	5.420
	PM	6.400	6.400	6.400	6.900	6.900	6.400	4.930	4.430	3.450	2.960	2.460	1.480
PM Peak FR WD LC / PM, Peak Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	1.500	3.500	5.500	5.000	4.500	4.500	5.000
	PM	5.500	5.500	6.500	8.000	9.500	9.500	6.500	4.500	3.500	3.000	3.000	2.000
PM Peak Non-FR WD LC / PM Peak, Non-Freeway, Traffic Distribution Profile for Low Congestion													
	AM	0.980	0.490	0.490	0.490	0.490	0.980	2.450	4.410	4.410	4.410	4.900	5.880
	PM	6.860	6.370	6.860	8.330	9.310	9.310	6.370	4.900	3.920	2.940	2.450	2.000
AM Peak FR WD MC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	2.510	6.530	9.050	7.540	5.530	5.030	5.030
	PM	5.030	5.530	5.530	6.530	7.040	6.530	5.030	4.020	3.020	3.020	2.510	1.470
AM Peak Non-FR WD MC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	1.510	4.520	7.540	7.040	5.030	5.030	5.530
	PM	6.530	6.530	5.530	7.040	7.040	7.040	5.530	4.520	3.520	3.020	2.510	1.470
PM Peak FR WD MC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.000	0.500	0.500	0.500	0.500	1.500	4.000	6.000	5.500	4.500	4.500	5.000
	PM	5.500	5.500	6.500	7.500	9.000	9.000	6.500	4.500	3.500	3.500	3.000	2.000

PM Peak Non-FR WD MC / PM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestio												
AM	1.020	0.510	0.510	0.510	0.510	1.020	1.520	4.570	4.570	4.570	5.080	6.090
PM	6.600	6.600	6.600	7.610	9.140	9.140	6.600	5.080	4.570	3.550	2.540	1.490
AM Peak FR WD SC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.020	0.510	0.510	0.510	0.510	2.030	5.580	7.610	7.110	6.090	5.580	5.580
PM	5.580	5.580	6.090	6.600	6.600	6.600	5.580	4.570	3.050	3.050	2.540	1.520
AM Peak Non-FR WD SC / AM Peak Non-Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.030	0.520	0.520	0.520	0.520	2.060	3.090	7.220	6.190	5.150	5.670	5.670
PM	6.190	6.190	6.700	7.220	7.220	7.220	5.670	4.640	3.610	3.090	2.580	1.510
PM Peak FR WD SC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.000	0.500	0.500	0.500	0.500	1.500	4.500	6.500	6.000	5.000	5.000	5.500
PM	5.500	5.500	6.500	7.000	7.500	7.500	6.500	5.000	3.500	3.500	3.000	2.000
PM Peak Non-FR WD SC / PM Peak, Non-Freeway Weekday, Profile for Severe Congestion												
AM	0.990	0.500	0.500	0.500	0.500	1.490	3.470	5.450	5.450	4.950	4.950	5.450
PM	6.440	6.440	6.930	7.430	7.430	7.430	6.440	4.950	4.460	3.470	2.480	1.900
FR WE / Freeway Weekend Traffic Distribution Profile												
AM	2.000	1.500	1.000	0.500	0.500	1.000	2.000	3.000	3.500	5.000	5.500	6.500
PM	7.000	7.000	7.000	7.000	7.500	7.000	6.500	5.000	4.500	3.500	3.500	2.500
Non-FR WE / Non-Freeway Weekend Trafic Distribution Profile												
AM	1.980	1.490	0.990	0.500	0.500	0.990	1.490	2.480	3.470	4.950	5.940	6.930
PM	7.430	7.430	7.430	7.430	7.430	6.930	5.940	4.950	4.460	3.470	2.970	2.420
FR WD SC SS / Freeway Weekday traffic distribution profile for severe congestion and similar speeds												
AM	1.490	0.990	0.990	0.500	0.500	1.490	5.450	6.930	6.440	5.450	5.450	5.450
PM	5.450	5.940	5.940	6.440	6.930	6.440	5.450	4.460	3.470	3.470	2.970	1.910
Non-FR WD SCSS / Non-Freeway Weekday traffic distribution profile for severe congestion and similar spe												
AM	1.460	0.980	0.980	0.490	0.980	2.930	5.370	6.340	5.370	4.880	4.880	5.370
PM	5.370	5.370	5.370	5.850	6.340	6.340	5.850	4.880	4.390	4.390	3.410	2.410

Directionality of Traffic (percent of hourly traffic in principal direction*)

*Principal direction is the one with lower railroad milepost to the left of highway traffic.

Name / Description	12	1	2	3	4	5	6	7	8	9	10	11
Balanced / Equal traffic in each direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Commute 1 / Commuter traffic AM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00
Commute 2 / Commuter traffic PM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00	50.00	50.00

Default Costs for Grade Crossing Devices (thousands of constant dollars)

Device Type	O&M	Capital Expenditure	Other Lifecycle Cost
Passive	0.20	1.60	0.00
	(0.20)	(1.60)	(0.00)
Flashing Lights	1.80	74.80	0.00
	(1.80)	(74.80)	(0.00)
Flashing Lights with Gates	2.50	106.10	0.00
	(2.50)	(106.10)	(0.00)
Closure	0.00	20.00	0.00
	(0.00)	(20.00)	(0.00)
Separation	0.50	1,500.00	0.00
	(0.50)	(1,500.00)	(0.00)
New Technology 1	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 2	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 3	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Default Costs for Supplementary Safety Measures (thousands of constant dollars)

Supplementary Measure	O&M	Capital Expenditure	Other Lifecycle Cost
None	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
4 quadrant - no detection	3.50	244.00	0.00
	(3.50)	(3.50)	(3.50)
4 quadrant - with detection	5.00	260.00	0.00
	(5.00)	(5.00)	(5.00)
4 quadrant - with 60' medians	3.50	255.00	0.00
	(3.50)	(3.50)	(3.50)
Mountable curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
Barrier curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
One-way street	3.50	5.00	0.00
	(3.50)	(3.50)	(3.50)
Photo Enforcement	25.00	65.00	0.00
	(25.00)	(25.00)	(25.00)
Other type 1	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 2	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 3	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Percent Accidents by Type (for use in High Speed Rail model)

Train Strikes Highway Vehicle	Highway Vehicle Strikes Train
84.0	16.0
(84.0)	(16.0)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Train Strikes Highway Vehicle" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.0001270	0.0001110	0.00004000
	(0.0001270)	(0.0001110)	(0.00004000)
Train Fatalities	0.000005000	0.000010000	0.00004400
	(0.000005000)	(0.000010000)	(0.00004400)
% Accidents with Severe Derailment	0.00010000	0.0010000	0.007000
	(0.00010000)	(0.0010000)	(0.007000)
Added Severity with Severe Derailment	0.0002200	0.0002200	0.0002200
	(0.0002200)	(0.0002200)	(0.0002200)
Speeds of maximum severity (highway) mph	70	70	65
	(70)	(70)	(65)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Highway Vehicle Strikes Train" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.2170	0.1600	0.09100
	(0.2170)	(0.1600)	(0.09100)
Train Fatalities	0.010000	0.010000	0.010000
	(0.010000)	(0.010000)	(0.010000)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Vehicle Emissions Rates (grams of emissions per minute of idling)

Vehicle Type	VOC	CO	NOx	PM	SOx	CO2
Cars	0.3030	4.8599	0.0916	0.0000	0.0000	41.0652
	(0.3030)	(4.8599)	(0.0916)	(0.0000)	(0.0000)	(41.0652)
Buses	0.6655	11.8500	0.1830	0.0000	0.0000	87.5789
	(0.6655)	(11.8500)	(0.1830)	(0.0000)	(0.0000)	(87.5789)
Trucks	0.2559	3.1446	0.2754	0.0383	0.0001	107.4107
	(0.2559)	(3.1446)	(0.2754)	(0.0383)	(0.0001)	(107.4107)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Fuel Burn Rates (quantity consumed per minute of idling)

Vehicle Type	Fuel (gallons)	Oil (quarts)
Cars	0.009690	0.000626
	(0.009690)	(0.000626)
Buses	0.018411	0.001189
	(0.018411)	(0.001189)
Trucks	0.020670	0.001335
	(0.020670)	(0.001335)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Effectiveness Rates (rate of reduction in accidents with improvements)

Improvement	Single Track no more than 10 Trains	Multi-track no more than 10 Trains	Single Track more than 10 Trains	Multi-track more than 10 Trains
Passive to Flashing Lights	0.75 (0.75)	0.65 (0.65)	0.61 (0.61)	0.57 (0.57)
Passive to Flashing Lights with Gates	0.90 (0.90)	0.86 (0.86)	0.80 (0.80)	0.78 (0.78)
Flashing Lights to Gates	0.89 (0.89)	0.65 (0.65)	0.69 (0.69)	0.63 (0.63)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Supplementary Safety Measure Effectiveness Rates (rate of reduction in accidents with supplementary safety measure)

Supplementary Measure	Effectiveness
4 quadrant gate system - no presence detection	0.82 (0.82)
4 quadrant gate system - with presence detection	0.77 (0.77)
4 quadrant gate system - with Medians of at least 60 feet	0.92 (0.92)
Medians or channelization devices - mountable curbs	0.75 (0.75)
Medians or channelization devices - barrier curbs	0.80 (0.80)
One-way street	0.82 (0.82)
Photo enforcement	0.72 (0.72)
Other type 1	0.50 (0.50)
Other type 2	0.50 (0.50)
Other type 3	0.50 (0.50)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Diurnal Distributions (share of daily traffic in hour)

Name / Description		12	1	2	3	4	5	6	7	8	9	10	11
Uniform / Uniform													
	AM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167
	PM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.159
AM Peak / AM Peak													
	AM	1.667	1.667	1.667	1.667	1.667	1.667	8.333	8.333	8.333	8.333	8.333	8.333
	PM	5.833	5.833	5.833	5.833	5.834	5.834	0.833	0.833	0.833	0.833	0.834	0.834
PM Peak / PM Peak													
	AM	0.833	0.833	0.833	0.833	0.833	0.833	5.833	5.833	5.833	5.833	5.833	5.833
	PM	8.333	8.333	8.333	8.333	8.334	8.334	1.667	1.667	1.667	1.667	1.668	1.668
Day Flat / Day Flat													
	AM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
	PM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
Night Flat / Night Flat													
	AM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
	PM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
AM Peak FR WD LC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	2.490	6.470	9.450	6.970	4.980	4.980	4.480
	PM	4.980	5.470	5.970	6.470	6.970	6.970	5.470	3.980	3.480	2.990	2.490	1.440
AM Peak Non-FR WD LC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	0.990	0.490	0.490	0.490	0.990	2.460	4.430	8.370	6.900	4.930	4.930	5.420
	PM	6.400	6.400	6.400	6.900	6.900	6.400	4.930	4.430	3.450	2.960	2.460	1.480
PM Peak FR WD LC / PM, Peak Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	1.500	3.500	5.500	5.000	4.500	4.500	5.000
	PM	5.500	5.500	6.500	8.000	9.500	9.500	6.500	4.500	3.500	3.000	3.000	2.000
PM Peak Non-FR WD LC / PM Peak, Non-Freeway, Traffic Distribution Profile for Low Congestion													
	AM	0.980	0.490	0.490	0.490	0.490	0.980	2.450	4.410	4.410	4.410	4.900	5.880
	PM	6.860	6.370	6.860	8.330	9.310	9.310	6.370	4.900	3.920	2.940	2.450	2.000
AM Peak FR WD MC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	2.510	6.530	9.050	7.540	5.530	5.030	5.030
	PM	5.030	5.530	5.530	6.530	7.040	6.530	5.030	4.020	3.020	3.020	2.510	1.470
AM Peak Non-FR WD MC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	1.510	4.520	7.540	7.040	5.030	5.030	5.530
	PM	6.530	6.530	5.530	7.040	7.040	7.040	5.530	4.520	3.520	3.020	2.510	1.470
PM Peak FR WD MC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.000	0.500	0.500	0.500	0.500	1.500	4.000	6.000	5.500	4.500	4.500	5.000
	PM	5.500	5.500	6.500	7.500	9.000	9.000	6.500	4.500	3.500	3.500	3.000	2.000

PM Peak Non-FR WD MC / PM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestio												
AM	1.020	0.510	0.510	0.510	0.510	1.020	1.520	4.570	4.570	4.570	5.080	6.090
PM	6.600	6.600	6.600	7.610	9.140	9.140	6.600	5.080	4.570	3.550	2.540	1.490
AM Peak FR WD SC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.020	0.510	0.510	0.510	0.510	2.030	5.580	7.610	7.110	6.090	5.580	5.580
PM	5.580	5.580	6.090	6.600	6.600	6.600	5.580	4.570	3.050	3.050	2.540	1.520
AM Peak Non-FR WD SC / AM Peak Non-Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.030	0.520	0.520	0.520	0.520	2.060	3.090	7.220	6.190	5.150	5.670	5.670
PM	6.190	6.190	6.700	7.220	7.220	7.220	5.670	4.640	3.610	3.090	2.580	1.510
PM Peak FR WD SC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.000	0.500	0.500	0.500	0.500	1.500	4.500	6.500	6.000	5.000	5.000	5.500
PM	5.500	5.500	6.500	7.000	7.500	7.500	6.500	5.000	3.500	3.500	3.000	2.000
PM Peak Non-FR WD SC / PM Peak, Non-Freeway Weekday, Profile for Severe Congestion												
AM	0.990	0.500	0.500	0.500	0.500	1.490	3.470	5.450	5.450	4.950	4.950	5.450
PM	6.440	6.440	6.930	7.430	7.430	7.430	6.440	4.950	4.460	3.470	2.480	1.900
FR WE / Freeway Weekend Traffic Distribution Profile												
AM	2.000	1.500	1.000	0.500	0.500	1.000	2.000	3.000	3.500	5.000	5.500	6.500
PM	7.000	7.000	7.000	7.000	7.500	7.000	6.500	5.000	4.500	3.500	3.500	2.500
Non-FR WE / Non-Freeway Weekend Trafic Distribution Profile												
AM	1.980	1.490	0.990	0.500	0.500	0.990	1.490	2.480	3.470	4.950	5.940	6.930
PM	7.430	7.430	7.430	7.430	7.430	6.930	5.940	4.950	4.460	3.470	2.970	2.420
FR WD SC SS / Freeway Weekday traffic distribution profile for severe congestion and similar speeds												
AM	1.490	0.990	0.990	0.500	0.500	1.490	5.450	6.930	6.440	5.450	5.450	5.450
PM	5.450	5.940	5.940	6.440	6.930	6.440	5.450	4.460	3.470	3.470	2.970	1.910
Non-FR WD SCSS / Non-Freeway Weekday traffic distribution profile for severe congestion and similar spe												
AM	1.460	0.980	0.980	0.490	0.980	2.930	5.370	6.340	5.370	4.880	4.880	5.370
PM	5.370	5.370	5.370	5.850	6.340	6.340	5.850	4.880	4.390	4.390	3.410	2.410

Directionality of Traffic (percent of hourly traffic in principal direction*)

*Principal direction is the one with lower railroad milepost to the left of highway traffic.

Name / Description	12	1	2	3	4	5	6	7	8	9	10	11
Balanced / Equal traffic in each direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Commute 1 / Commuter traffic AM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00
Commute 2 / Commuter traffic PM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00	50.00	50.00

Default Costs for Grade Crossing Devices (thousands of constant dollars)

Device Type	O&M	Capital Expenditure	Other Lifecycle Cost
Passive	0.20	1.60	0.00
	(0.20)	(1.60)	(0.00)
Flashing Lights	1.80	74.80	0.00
	(1.80)	(74.80)	(0.00)
Flashing Lights with Gates	2.50	106.10	0.00
	(2.50)	(106.10)	(0.00)
Closure	0.00	20.00	0.00
	(0.00)	(20.00)	(0.00)
Separation	0.50	1,500.00	0.00
	(0.50)	(1,500.00)	(0.00)
New Technology 1	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 2	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 3	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Default Costs for Supplementary Safety Measures (thousands of constant dollars)

Supplementary Measure	O&M	Capital Expenditure	Other Lifecycle Cost
None	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
4 quadrant - no detection	3.50	244.00	0.00
	(3.50)	(3.50)	(3.50)
4 quadrant - with detection	5.00	260.00	0.00
	(5.00)	(5.00)	(5.00)
4 quadrant - with 60' medians	3.50	255.00	0.00
	(3.50)	(3.50)	(3.50)
Mountable curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
Barrier curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
One-way street	3.50	5.00	0.00
	(3.50)	(3.50)	(3.50)
Photo Enforcement	25.00	65.00	0.00
	(25.00)	(25.00)	(25.00)
Other type 1	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 2	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 3	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Percent Accidents by Type (for use in High Speed Rail model)

Train Strikes Highway Vehicle	Highway Vehicle Strikes Train
84.0	16.0
(84.0)	(16.0)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Train Strikes Highway Vehicle" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.0001270	0.0001110	0.00004000
	(0.0001270)	(0.0001110)	(0.00004000)
Train Fatalities	0.000005000	0.000010000	0.00004400
	(0.000005000)	(0.000010000)	(0.00004400)
% Accidents with Severe Derailment	0.00010000	0.0010000	0.007000
	(0.00010000)	(0.0010000)	(0.007000)
Added Severity with Severe Derailment	0.0002200	0.0002200	0.0002200
	(0.0002200)	(0.0002200)	(0.0002200)
Speeds of maximum severity (highway) mph	70	70	65
	(70)	(70)	(65)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Highway Vehicle Strikes Train" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.2170	0.1600	0.09100
	(0.2170)	(0.1600)	(0.09100)
Train Fatalities	0.010000	0.010000	0.010000
	(0.010000)	(0.010000)	(0.010000)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

User: A. M. Tahsin Emtenan Dataset: Rock Island

Vehicle Emissions Rates (grams of emissions per minute of idling)

Vehicle Type	VOC	CO	NOx	PM	SOx	CO2
Cars	0.3030	4.8599	0.0916	0.0000	0.0000	41.0652
	(0.3030)	(4.8599)	(0.0916)	(0.0000)	(0.0000)	(41.0652)
Buses	0.6655	11.8500	0.1830	0.0000	0.0000	87.5789
	(0.6655)	(11.8500)	(0.1830)	(0.0000)	(0.0000)	(87.5789)
Trucks	0.2559	3.1446	0.2754	0.0383	0.0001	107.4107
	(0.2559)	(3.1446)	(0.2754)	(0.0383)	(0.0001)	(107.4107)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Fuel Burn Rates (quantity consumed per minute of idling)

Vehicle Type	Fuel (gallons)	Oil (quarts)
Cars	0.009690	0.000626
	(0.009690)	(0.000626)
Buses	0.018411	0.001189
	(0.018411)	(0.001189)
Trucks	0.020670	0.001335
	(0.020670)	(0.001335)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Effectiveness Rates (rate of reduction in accidents with improvements)

Improvement	Single Track no more than 10 Trains	Multi-track no more than 10 Trains	Single Track more than 10 Trains	Multi-track more than 10 Trains
Passive to Flashing Lights	0.75 (0.75)	0.65 (0.65)	0.61 (0.61)	0.57 (0.57)
Passive to Flashing Lights with Gates	0.90 (0.90)	0.86 (0.86)	0.80 (0.80)	0.78 (0.78)
Flashing Lights to Gates	0.89 (0.89)	0.65 (0.65)	0.69 (0.69)	0.63 (0.63)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Supplementary Safety Measure Effectiveness Rates (rate of reduction in accidents with supplementary safety measure)

Supplementary Measure	Effectiveness
4 quadrant gate system - no presence detection	0.82 (0.82)
4 quadrant gate system - with presence detection	0.77 (0.77)
4 quadrant gate system - with Medians of at least 60 feet	0.92 (0.92)
Medians or channelization devices - mountable curbs	0.75 (0.75)
Medians or channelization devices - barrier curbs	0.80 (0.80)
One-way street	0.82 (0.82)
Photo enforcement	0.72 (0.72)
Other type 1	0.50 (0.50)
Other type 2	0.50 (0.50)
Other type 3	0.50 (0.50)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Diurnal Distributions (share of daily traffic in hour)

Name / Description		12	1	2	3	4	5	6	7	8	9	10	11
Uniform / Uniform													
	AM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167
	PM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.159
AM Peak / AM Peak													
	AM	1.667	1.667	1.667	1.667	1.667	1.667	8.333	8.333	8.333	8.333	8.333	8.333
	PM	5.833	5.833	5.833	5.833	5.834	5.834	0.833	0.833	0.833	0.833	0.834	0.834
PM Peak / PM Peak													
	AM	0.833	0.833	0.833	0.833	0.833	0.833	5.833	5.833	5.833	5.833	5.833	5.833
	PM	8.333	8.333	8.333	8.333	8.334	8.334	1.667	1.667	1.667	1.667	1.668	1.668
Day Flat / Day Flat													
	AM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
	PM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
Night Flat / Night Flat													
	AM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
	PM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
AM Peak FR WD LC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	2.490	6.470	9.450	6.970	4.980	4.980	4.480
	PM	4.980	5.470	5.970	6.470	6.970	6.970	5.470	3.980	3.480	2.990	2.490	1.440
AM Peak Non-FR WD LC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	0.990	0.490	0.490	0.490	0.990	2.460	4.430	8.370	6.900	4.930	4.930	5.420
	PM	6.400	6.400	6.400	6.900	6.900	6.400	4.930	4.430	3.450	2.960	2.460	1.480
PM Peak FR WD LC / PM, Peak Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	1.500	3.500	5.500	5.000	4.500	4.500	5.000
	PM	5.500	5.500	6.500	8.000	9.500	9.500	6.500	4.500	3.500	3.000	3.000	2.000
PM Peak Non-FR WD LC / PM Peak, Non-Freeway, Traffic Distribution Profile for Low Congestion													
	AM	0.980	0.490	0.490	0.490	0.490	0.980	2.450	4.410	4.410	4.410	4.900	5.880
	PM	6.860	6.370	6.860	8.330	9.310	9.310	6.370	4.900	3.920	2.940	2.450	2.000
AM Peak FR WD MC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	2.510	6.530	9.050	7.540	5.530	5.030	5.030
	PM	5.030	5.530	5.530	6.530	7.040	6.530	5.030	4.020	3.020	3.020	2.510	1.470
AM Peak Non-FR WD MC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	1.510	4.520	7.540	7.040	5.030	5.030	5.530
	PM	6.530	6.530	5.530	7.040	7.040	7.040	5.530	4.520	3.520	3.020	2.510	1.470
PM Peak FR WD MC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.000	0.500	0.500	0.500	0.500	1.500	4.000	6.000	5.500	4.500	4.500	5.000
	PM	5.500	5.500	6.500	7.500	9.000	9.000	6.500	4.500	3.500	3.500	3.000	2.000

PM Peak Non-FR WD MC / PM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestio												
AM	1.020	0.510	0.510	0.510	0.510	1.020	1.520	4.570	4.570	4.570	5.080	6.090
PM	6.600	6.600	6.600	7.610	9.140	9.140	6.600	5.080	4.570	3.550	2.540	1.490
AM Peak FR WD SC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.020	0.510	0.510	0.510	0.510	2.030	5.580	7.610	7.110	6.090	5.580	5.580
PM	5.580	5.580	6.090	6.600	6.600	6.600	5.580	4.570	3.050	3.050	2.540	1.520
AM Peak Non-FR WD SC / AM Peak Non-Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.030	0.520	0.520	0.520	0.520	2.060	3.090	7.220	6.190	5.150	5.670	5.670
PM	6.190	6.190	6.700	7.220	7.220	7.220	5.670	4.640	3.610	3.090	2.580	1.510
PM Peak FR WD SC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.000	0.500	0.500	0.500	0.500	1.500	4.500	6.500	6.000	5.000	5.000	5.500
PM	5.500	5.500	6.500	7.000	7.500	7.500	6.500	5.000	3.500	3.500	3.000	2.000
PM Peak Non-FR WD SC / PM Peak, Non-Freeway Weekday, Profile for Severe Congestion												
AM	0.990	0.500	0.500	0.500	0.500	1.490	3.470	5.450	5.450	4.950	4.950	5.450
PM	6.440	6.440	6.930	7.430	7.430	7.430	6.440	4.950	4.460	3.470	2.480	1.900
FR WE / Freeway Weekend Traffic Distribution Profile												
AM	2.000	1.500	1.000	0.500	0.500	1.000	2.000	3.000	3.500	5.000	5.500	6.500
PM	7.000	7.000	7.000	7.000	7.500	7.000	6.500	5.000	4.500	3.500	3.500	2.500
Non-FR WE / Non-Freeway Weekend Trafic Distribution Profile												
AM	1.980	1.490	0.990	0.500	0.500	0.990	1.490	2.480	3.470	4.950	5.940	6.930
PM	7.430	7.430	7.430	7.430	7.430	6.930	5.940	4.950	4.460	3.470	2.970	2.420
FR WD SC SS / Freeway Weekday traffic distribution profile for severe congestion and similar speeds												
AM	1.490	0.990	0.990	0.500	0.500	1.490	5.450	6.930	6.440	5.450	5.450	5.450
PM	5.450	5.940	5.940	6.440	6.930	6.440	5.450	4.460	3.470	3.470	2.970	1.910
Non-FR WD SCSS / Non-Freeway Weekday traffic distribution profile for severe congestion and similar spe												
AM	1.460	0.980	0.980	0.490	0.980	2.930	5.370	6.340	5.370	4.880	4.880	5.370
PM	5.370	5.370	5.370	5.850	6.340	6.340	5.850	4.880	4.390	4.390	3.410	2.410

Directionality of Traffic (percent of hourly traffic in principal direction*)

*Principal direction is the one with lower railroad milepost to the left of highway traffic.

Name / Description	12	1	2	3	4	5	6	7	8	9	10	11
Balanced / Equal traffic in each direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Commute 1 / Commuter traffic AM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00
Commute 2 / Commuter traffic PM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00	50.00	50.00

Default Costs for Grade Crossing Devices (thousands of constant dollars)

Device Type	O&M	Capital Expenditure	Other Lifecycle Cost
Passive	0.20	1.60	0.00
	(0.20)	(1.60)	(0.00)
Flashing Lights	1.80	74.80	0.00
	(1.80)	(74.80)	(0.00)
Flashing Lights with Gates	2.50	106.10	0.00
	(2.50)	(106.10)	(0.00)
Closure	0.00	20.00	0.00
	(0.00)	(20.00)	(0.00)
Separation	0.50	1,500.00	0.00
	(0.50)	(1,500.00)	(0.00)
New Technology 1	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 2	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 3	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Default Costs for Supplementary Safety Measures (thousands of constant dollars)

Supplementary Measure	O&M	Capital Expenditure	Other Lifecycle Cost
None	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
4 quadrant - no detection	3.50	244.00	0.00
	(3.50)	(3.50)	(3.50)
4 quadrant - with detection	5.00	260.00	0.00
	(5.00)	(5.00)	(5.00)
4 quadrant - with 60' medians	3.50	255.00	0.00
	(3.50)	(3.50)	(3.50)
Mountable curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
Barrier curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
One-way street	3.50	5.00	0.00
	(3.50)	(3.50)	(3.50)
Photo Enforcement	25.00	65.00	0.00
	(25.00)	(25.00)	(25.00)
Other type 1	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 2	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 3	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Percent Accidents by Type (for use in High Speed Rail model)

Train Strikes Highway Vehicle	Highway Vehicle Strikes Train
84.0	16.0
(84.0)	(16.0)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Train Strikes Highway Vehicle" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.0001270	0.0001110	0.00004000
	(0.0001270)	(0.0001110)	(0.00004000)
Train Fatalities	0.000005000	0.000010000	0.00004400
	(0.000005000)	(0.000010000)	(0.00004400)
% Accidents with Severe Derailment	0.00010000	0.0010000	0.007000
	(0.00010000)	(0.0010000)	(0.007000)
Added Severity with Severe Derailment	0.0002200	0.0002200	0.0002200
	(0.0002200)	(0.0002200)	(0.0002200)
Speeds of maximum severity (highway) mph	70	70	65
	(70)	(70)	(65)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Highway Vehicle Strikes Train" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.2170	0.1600	0.09100
	(0.2170)	(0.1600)	(0.09100)
Train Fatalities	0.010000	0.010000	0.010000
	(0.010000)	(0.010000)	(0.010000)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Vehicle Emissions Rates (grams of emissions per minute of idling)

Vehicle Type	VOC	CO	NOx	PM	SOx	CO2
Cars	0.3030	4.8599	0.0916	0.0000	0.0000	41.0652
	(0.3030)	(4.8599)	(0.0916)	(0.0000)	(0.0000)	(41.0652)
Buses	0.6655	11.8500	0.1830	0.0000	0.0000	87.5789
	(0.6655)	(11.8500)	(0.1830)	(0.0000)	(0.0000)	(87.5789)
Trucks	0.2559	3.1446	0.2754	0.0383	0.0001	107.4107
	(0.2559)	(3.1446)	(0.2754)	(0.0383)	(0.0001)	(107.4107)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Fuel Burn Rates (quantity consumed per minute of idling)

Vehicle Type	Fuel (gallons)	Oil (quarts)
Cars	0.009690	0.000626
	(0.009690)	(0.000626)
Buses	0.018411	0.001189
	(0.018411)	(0.001189)
Trucks	0.020670	0.001335
	(0.020670)	(0.001335)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Effectiveness Rates (rate of reduction in accidents with improvements)

Improvement	Single Track no more than 10 Trains	Multi-track no more than 10 Trains	Single Track more than 10 Trains	Multi-track more than 10 Trains
Passive to Flashing Lights	0.75 (0.75)	0.65 (0.65)	0.61 (0.61)	0.57 (0.57)
Passive to Flashing Lights with Gates	0.90 (0.90)	0.86 (0.86)	0.80 (0.80)	0.78 (0.78)
Flashing Lights to Gates	0.89 (0.89)	0.65 (0.65)	0.69 (0.69)	0.63 (0.63)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Supplementary Safety Measure Effectiveness Rates (rate of reduction in accidents with supplementary safety measure)

Supplementary Measure	Effectiveness
4 quadrant gate system - no presence detection	0.82 (0.82)
4 quadrant gate system - with presence detection	0.77 (0.77)
4 quadrant gate system - with Medians of at least 60 feet	0.92 (0.92)
Medians or channelization devices - mountable curbs	0.75 (0.75)
Medians or channelization devices - barrier curbs	0.80 (0.80)
One-way street	0.82 (0.82)
Photo enforcement	0.72 (0.72)
Other type 1	0.50 (0.50)
Other type 2	0.50 (0.50)
Other type 3	0.50 (0.50)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Diurnal Distributions (share of daily traffic in hour)

Name / Description		12	1	2	3	4	5	6	7	8	9	10	11
Uniform / Uniform													
	AM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167
	PM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.159
AM Peak / AM Peak													
	AM	1.667	1.667	1.667	1.667	1.667	1.667	8.333	8.333	8.333	8.333	8.333	8.333
	PM	5.833	5.833	5.833	5.833	5.834	5.834	0.833	0.833	0.833	0.833	0.834	0.834
PM Peak / PM Peak													
	AM	0.833	0.833	0.833	0.833	0.833	0.833	5.833	5.833	5.833	5.833	5.833	5.833
	PM	8.333	8.333	8.333	8.333	8.334	8.334	1.667	1.667	1.667	1.667	1.668	1.668
Day Flat / Day Flat													
	AM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
	PM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
Night Flat / Night Flat													
	AM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
	PM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
AM Peak FR WD LC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	2.490	6.470	9.450	6.970	4.980	4.980	4.480
	PM	4.980	5.470	5.970	6.470	6.970	6.970	5.470	3.980	3.480	2.990	2.490	1.440
AM Peak Non-FR WD LC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	0.990	0.490	0.490	0.490	0.990	2.460	4.430	8.370	6.900	4.930	4.930	5.420
	PM	6.400	6.400	6.400	6.900	6.900	6.400	4.930	4.430	3.450	2.960	2.460	1.480
PM Peak FR WD LC / PM, Peak Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	1.500	3.500	5.500	5.000	4.500	4.500	5.000
	PM	5.500	5.500	6.500	8.000	9.500	9.500	6.500	4.500	3.500	3.000	3.000	2.000
PM Peak Non-FR WD LC / PM Peak, Non-Freeway, Traffic Distribution Profile for Low Congestion													
	AM	0.980	0.490	0.490	0.490	0.490	0.980	2.450	4.410	4.410	4.410	4.900	5.880
	PM	6.860	6.370	6.860	8.330	9.310	9.310	6.370	4.900	3.920	2.940	2.450	2.000
AM Peak FR WD MC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	2.510	6.530	9.050	7.540	5.530	5.030	5.030
	PM	5.030	5.530	5.530	6.530	7.040	6.530	5.030	4.020	3.020	3.020	2.510	1.470
AM Peak Non-FR WD MC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	1.510	4.520	7.540	7.040	5.030	5.030	5.530
	PM	6.530	6.530	5.530	7.040	7.040	7.040	5.530	4.520	3.520	3.020	2.510	1.470
PM Peak FR WD MC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.000	0.500	0.500	0.500	0.500	1.500	4.000	6.000	5.500	4.500	4.500	5.000
	PM	5.500	5.500	6.500	7.500	9.000	9.000	6.500	4.500	3.500	3.500	3.000	2.000

PM Peak Non-FR WD MC / PM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestio												
AM	1.020	0.510	0.510	0.510	0.510	1.020	1.520	4.570	4.570	4.570	5.080	6.090
PM	6.600	6.600	6.600	7.610	9.140	9.140	6.600	5.080	4.570	3.550	2.540	1.490
AM Peak FR WD SC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.020	0.510	0.510	0.510	0.510	2.030	5.580	7.610	7.110	6.090	5.580	5.580
PM	5.580	5.580	6.090	6.600	6.600	6.600	5.580	4.570	3.050	3.050	2.540	1.520
AM Peak Non-FR WD SC / AM Peak Non-Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.030	0.520	0.520	0.520	0.520	2.060	3.090	7.220	6.190	5.150	5.670	5.670
PM	6.190	6.190	6.700	7.220	7.220	7.220	5.670	4.640	3.610	3.090	2.580	1.510
PM Peak FR WD SC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.000	0.500	0.500	0.500	0.500	1.500	4.500	6.500	6.000	5.000	5.000	5.500
PM	5.500	5.500	6.500	7.000	7.500	7.500	6.500	5.000	3.500	3.500	3.000	2.000
PM Peak Non-FR WD SC / PM Peak, Non-Freeway Weekday, Profile for Severe Congestion												
AM	0.990	0.500	0.500	0.500	0.500	1.490	3.470	5.450	5.450	4.950	4.950	5.450
PM	6.440	6.440	6.930	7.430	7.430	7.430	6.440	4.950	4.460	3.470	2.480	1.900
FR WE / Freeway Weekend Traffic Distribution Profile												
AM	2.000	1.500	1.000	0.500	0.500	1.000	2.000	3.000	3.500	5.000	5.500	6.500
PM	7.000	7.000	7.000	7.000	7.500	7.000	6.500	5.000	4.500	3.500	3.500	2.500
Non-FR WE / Non-Freeway Weekend Trafic Distribution Profile												
AM	1.980	1.490	0.990	0.500	0.500	0.990	1.490	2.480	3.470	4.950	5.940	6.930
PM	7.430	7.430	7.430	7.430	7.430	6.930	5.940	4.950	4.460	3.470	2.970	2.420
FR WD SC SS / Freeway Weekday traffic distribution profile for severe congestion and similar speeds												
AM	1.490	0.990	0.990	0.500	0.500	1.490	5.450	6.930	6.440	5.450	5.450	5.450
PM	5.450	5.940	5.940	6.440	6.930	6.440	5.450	4.460	3.470	3.470	2.970	1.910
Non-FR WD SCSS / Non-Freeway Weekday traffic distribution profile for severe congestion and similar spe												
AM	1.460	0.980	0.980	0.490	0.980	2.930	5.370	6.340	5.370	4.880	4.880	5.370
PM	5.370	5.370	5.370	5.850	6.340	6.340	5.850	4.880	4.390	4.390	3.410	2.410

Directionality of Traffic (percent of hourly traffic in principal direction*)

*Principal direction is the one with lower railroad milepost to the left of highway traffic.

Name / Description	12	1	2	3	4	5	6	7	8	9	10	11
Balanced / Equal traffic in each direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Commute 1 / Commuter traffic AM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00
Commute 2 / Commuter traffic PM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00	50.00	50.00

Default Costs for Grade Crossing Devices (thousands of constant dollars)

Device Type	O&M	Capital Expenditure	Other Lifecycle Cost
Passive	0.20	1.60	0.00
	(0.20)	(1.60)	(0.00)
Flashing Lights	1.80	74.80	0.00
	(1.80)	(74.80)	(0.00)
Flashing Lights with Gates	2.50	106.10	0.00
	(2.50)	(106.10)	(0.00)
Closure	0.00	20.00	0.00
	(0.00)	(20.00)	(0.00)
Separation	0.50	1,500.00	0.00
	(0.50)	(1,500.00)	(0.00)
New Technology 1	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 2	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 3	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Default Costs for Supplementary Safety Measures (thousands of constant dollars)

Supplementary Measure	O&M	Capital Expenditure	Other Lifecycle Cost
None	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
4 quadrant - no detection	3.50	244.00	0.00
	(3.50)	(3.50)	(3.50)
4 quadrant - with detection	5.00	260.00	0.00
	(5.00)	(5.00)	(5.00)
4 quadrant - with 60' medians	3.50	255.00	0.00
	(3.50)	(3.50)	(3.50)
Mountable curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
Barrier curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
One-way street	3.50	5.00	0.00
	(3.50)	(3.50)	(3.50)
Photo Enforcement	25.00	65.00	0.00
	(25.00)	(25.00)	(25.00)
Other type 1	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 2	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 3	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Percent Accidents by Type (for use in High Speed Rail model)

Train Strikes Highway Vehicle	Highway Vehicle Strikes Train
84.0	16.0
(84.0)	(16.0)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Train Strikes Highway Vehicle" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.0001270	0.0001110	0.00004000
	(0.0001270)	(0.0001110)	(0.00004000)
Train Fatalities	0.000005000	0.000010000	0.00004400
	(0.000005000)	(0.000010000)	(0.00004400)
% Accidents with Severe Derailment	0.00010000	0.0010000	0.007000
	(0.00010000)	(0.0010000)	(0.007000)
Added Severity with Severe Derailment	0.0002200	0.0002200	0.0002200
	(0.0002200)	(0.0002200)	(0.0002200)
Speeds of maximum severity (highway) mph	70	70	65
	(70)	(70)	(65)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Highway Vehicle Strikes Train" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.2170	0.1600	0.09100
	(0.2170)	(0.1600)	(0.09100)
Train Fatalities	0.010000	0.010000	0.010000
	(0.010000)	(0.010000)	(0.010000)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

User: A. M. Tahsin Emtenan Dataset: Rock Island

Vehicle Emissions Rates (grams of emissions per minute of idling)

Vehicle Type	VOC	CO	NOx	PM	SOx	CO2
Cars	0.3030	4.8599	0.0916	0.0000	0.0000	41.0652
	(0.3030)	(4.8599)	(0.0916)	(0.0000)	(0.0000)	(41.0652)
Buses	0.6655	11.8500	0.1830	0.0000	0.0000	87.5789
	(0.6655)	(11.8500)	(0.1830)	(0.0000)	(0.0000)	(87.5789)
Trucks	0.2559	3.1446	0.2754	0.0383	0.0001	107.4107
	(0.2559)	(3.1446)	(0.2754)	(0.0383)	(0.0001)	(107.4107)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Fuel Burn Rates (quantity consumed per minute of idling)

Vehicle Type	Fuel (gallons)	Oil (quarts)
Cars	0.009690	0.000626
	(0.009690)	(0.000626)
Buses	0.018411	0.001189
	(0.018411)	(0.001189)
Trucks	0.020670	0.001335
	(0.020670)	(0.001335)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Effectiveness Rates (rate of reduction in accidents with improvements)

Improvement	Single Track no more than 10 Trains	Multi-track no more than 10 Trains	Single Track more than 10 Trains	Multi-track more than 10 Trains
Passive to Flashing Lights	0.75 (0.75)	0.65 (0.65)	0.61 (0.61)	0.57 (0.57)
Passive to Flashing Lights with Gates	0.90 (0.90)	0.86 (0.86)	0.80 (0.80)	0.78 (0.78)
Flashing Lights to Gates	0.89 (0.89)	0.65 (0.65)	0.69 (0.69)	0.63 (0.63)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Supplementary Safety Measure Effectiveness Rates (rate of reduction in accidents with supplementary safety measure)

Supplementary Measure	Effectiveness
4 quadrant gate system - no presence detection	0.82 (0.82)
4 quadrant gate system - with presence detection	0.77 (0.77)
4 quadrant gate system - with Medians of at least 60 feet	0.92 (0.92)
Medians or channelization devices - mountable curbs	0.75 (0.75)
Medians or channelization devices - barrier curbs	0.80 (0.80)
One-way street	0.82 (0.82)
Photo enforcement	0.72 (0.72)
Other type 1	0.50 (0.50)
Other type 2	0.50 (0.50)
Other type 3	0.50 (0.50)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Diurnal Distributions (share of daily traffic in hour)

Name / Description		12	1	2	3	4	5	6	7	8	9	10	11
Uniform / Uniform													
	AM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167
	PM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.159
AM Peak / AM Peak													
	AM	1.667	1.667	1.667	1.667	1.667	1.667	8.333	8.333	8.333	8.333	8.333	8.333
	PM	5.833	5.833	5.833	5.833	5.834	5.834	0.833	0.833	0.833	0.833	0.834	0.834
PM Peak / PM Peak													
	AM	0.833	0.833	0.833	0.833	0.833	0.833	5.833	5.833	5.833	5.833	5.833	5.833
	PM	8.333	8.333	8.333	8.333	8.334	8.334	1.667	1.667	1.667	1.667	1.668	1.668
Day Flat / Day Flat													
	AM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
	PM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
Night Flat / Night Flat													
	AM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
	PM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
AM Peak FR WD LC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	2.490	6.470	9.450	6.970	4.980	4.980	4.480
	PM	4.980	5.470	5.970	6.470	6.970	6.970	5.470	3.980	3.480	2.990	2.490	1.440
AM Peak Non-FR WD LC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	0.990	0.490	0.490	0.490	0.990	2.460	4.430	8.370	6.900	4.930	4.930	5.420
	PM	6.400	6.400	6.400	6.900	6.900	6.400	4.930	4.430	3.450	2.960	2.460	1.480
PM Peak FR WD LC / PM, Peak Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	1.500	3.500	5.500	5.000	4.500	4.500	5.000
	PM	5.500	5.500	6.500	8.000	9.500	9.500	6.500	4.500	3.500	3.000	3.000	2.000
PM Peak Non-FR WD LC / PM Peak, Non-Freeway, Traffic Distribution Profile for Low Congestion													
	AM	0.980	0.490	0.490	0.490	0.490	0.980	2.450	4.410	4.410	4.410	4.900	5.880
	PM	6.860	6.370	6.860	8.330	9.310	9.310	6.370	4.900	3.920	2.940	2.450	2.000
AM Peak FR WD MC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	2.510	6.530	9.050	7.540	5.530	5.030	5.030
	PM	5.030	5.530	5.530	6.530	7.040	6.530	5.030	4.020	3.020	3.020	2.510	1.470
AM Peak Non-FR WD MC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	1.510	4.520	7.540	7.040	5.030	5.030	5.530
	PM	6.530	6.530	5.530	7.040	7.040	7.040	5.530	4.520	3.520	3.020	2.510	1.470
PM Peak FR WD MC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.000	0.500	0.500	0.500	0.500	1.500	4.000	6.000	5.500	4.500	4.500	5.000
	PM	5.500	5.500	6.500	7.500	9.000	9.000	6.500	4.500	3.500	3.500	3.000	2.000

PM Peak Non-FR WD MC / PM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestio												
AM	1.020	0.510	0.510	0.510	0.510	1.020	1.520	4.570	4.570	4.570	5.080	6.090
PM	6.600	6.600	6.600	7.610	9.140	9.140	6.600	5.080	4.570	3.550	2.540	1.490
AM Peak FR WD SC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.020	0.510	0.510	0.510	0.510	2.030	5.580	7.610	7.110	6.090	5.580	5.580
PM	5.580	5.580	6.090	6.600	6.600	6.600	5.580	4.570	3.050	3.050	2.540	1.520
AM Peak Non-FR WD SC / AM Peak Non-Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.030	0.520	0.520	0.520	0.520	2.060	3.090	7.220	6.190	5.150	5.670	5.670
PM	6.190	6.190	6.700	7.220	7.220	7.220	5.670	4.640	3.610	3.090	2.580	1.510
PM Peak FR WD SC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.000	0.500	0.500	0.500	0.500	1.500	4.500	6.500	6.000	5.000	5.000	5.500
PM	5.500	5.500	6.500	7.000	7.500	7.500	6.500	5.000	3.500	3.500	3.000	2.000
PM Peak Non-FR WD SC / PM Peak, Non-Freeway Weekday, Profile for Severe Congestion												
AM	0.990	0.500	0.500	0.500	0.500	1.490	3.470	5.450	5.450	4.950	4.950	5.450
PM	6.440	6.440	6.930	7.430	7.430	7.430	6.440	4.950	4.460	3.470	2.480	1.900
FR WE / Freeway Weekend Traffic Distribution Profile												
AM	2.000	1.500	1.000	0.500	0.500	1.000	2.000	3.000	3.500	5.000	5.500	6.500
PM	7.000	7.000	7.000	7.000	7.500	7.000	6.500	5.000	4.500	3.500	3.500	2.500
Non-FR WE / Non-Freeway Weekend Trafic Distribution Profile												
AM	1.980	1.490	0.990	0.500	0.500	0.990	1.490	2.480	3.470	4.950	5.940	6.930
PM	7.430	7.430	7.430	7.430	7.430	6.930	5.940	4.950	4.460	3.470	2.970	2.420
FR WD SC SS / Freeway Weekday traffic distribution profile for severe congestion and similar speeds												
AM	1.490	0.990	0.990	0.500	0.500	1.490	5.450	6.930	6.440	5.450	5.450	5.450
PM	5.450	5.940	5.940	6.440	6.930	6.440	5.450	4.460	3.470	3.470	2.970	1.910
Non-FR WD SCSS / Non-Freeway Weekday traffic distribution profile for severe congestion and similar spe												
AM	1.460	0.980	0.980	0.490	0.980	2.930	5.370	6.340	5.370	4.880	4.880	5.370
PM	5.370	5.370	5.370	5.850	6.340	6.340	5.850	4.880	4.390	4.390	3.410	2.410

Directionality of Traffic (percent of hourly traffic in principal direction*)

*Principal direction is the one with lower railroad milepost to the left of highway traffic.

Name / Description	12	1	2	3	4	5	6	7	8	9	10	11
Balanced / Equal traffic in each direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Commute 1 / Commuter traffic AM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00
Commute 2 / Commuter traffic PM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00	50.00	50.00

Default Costs for Grade Crossing Devices (thousands of constant dollars)

Device Type	O&M	Capital Expenditure	Other Lifecycle Cost
Passive	0.20	1.60	0.00
	(0.20)	(1.60)	(0.00)
Flashing Lights	1.80	74.80	0.00
	(1.80)	(74.80)	(0.00)
Flashing Lights with Gates	2.50	106.10	0.00
	(2.50)	(106.10)	(0.00)
Closure	0.00	20.00	0.00
	(0.00)	(20.00)	(0.00)
Separation	0.50	1,500.00	0.00
	(0.50)	(1,500.00)	(0.00)
New Technology 1	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 2	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 3	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Default Costs for Supplementary Safety Measures (thousands of constant dollars)

Supplementary Measure	O&M	Capital Expenditure	Other Lifecycle Cost
None	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
4 quadrant - no detection	3.50	244.00	0.00
	(3.50)	(3.50)	(3.50)
4 quadrant - with detection	5.00	260.00	0.00
	(5.00)	(5.00)	(5.00)
4 quadrant - with 60' medians	3.50	255.00	0.00
	(3.50)	(3.50)	(3.50)
Mountable curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
Barrier curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
One-way street	3.50	5.00	0.00
	(3.50)	(3.50)	(3.50)
Photo Enforcement	25.00	65.00	0.00
	(25.00)	(25.00)	(25.00)
Other type 1	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 2	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 3	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Percent Accidents by Type (for use in High Speed Rail model)

Train Strikes Highway Vehicle	Highway Vehicle Strikes Train
84.0	16.0
(84.0)	(16.0)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Train Strikes Highway Vehicle" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.0001270	0.0001110	0.00004000
	(0.0001270)	(0.0001110)	(0.00004000)
Train Fatalities	0.000005000	0.000010000	0.00004400
	(0.000005000)	(0.000010000)	(0.00004400)
% Accidents with Severe Derailment	0.00010000	0.0010000	0.007000
	(0.00010000)	(0.0010000)	(0.007000)
Added Severity with Severe Derailment	0.0002200	0.0002200	0.0002200
	(0.0002200)	(0.0002200)	(0.0002200)
Speeds of maximum severity (highway) mph	70	70	65
	(70)	(70)	(65)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Highway Vehicle Strikes Train" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.2170	0.1600	0.09100
	(0.2170)	(0.1600)	(0.09100)
Train Fatalities	0.010000	0.010000	0.010000
	(0.010000)	(0.010000)	(0.010000)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Vehicle Emissions Rates (grams of emissions per minute of idling)

Vehicle Type	VOC	CO	NOx	PM	SOx	CO2
Cars	0.3030	4.8599	0.0916	0.0000	0.0000	41.0652
	(0.3030)	(4.8599)	(0.0916)	(0.0000)	(0.0000)	(41.0652)
Buses	0.6655	11.8500	0.1830	0.0000	0.0000	87.5789
	(0.6655)	(11.8500)	(0.1830)	(0.0000)	(0.0000)	(87.5789)
Trucks	0.2559	3.1446	0.2754	0.0383	0.0001	107.4107
	(0.2559)	(3.1446)	(0.2754)	(0.0383)	(0.0001)	(107.4107)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Fuel Burn Rates (quantity consumed per minute of idling)

Vehicle Type	Fuel (gallons)	Oil (quarts)
Cars	0.009690	0.000626
	(0.009690)	(0.000626)
Buses	0.018411	0.001189
	(0.018411)	(0.001189)
Trucks	0.020670	0.001335
	(0.020670)	(0.001335)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Effectiveness Rates (rate of reduction in accidents with improvements)

Improvement	Single Track no more than 10 Trains	Multi-track no more than 10 Trains	Single Track more than 10 Trains	Multi-track more than 10 Trains
Passive to Flashing Lights	0.75 (0.75)	0.65 (0.65)	0.61 (0.61)	0.57 (0.57)
Passive to Flashing Lights with Gates	0.90 (0.90)	0.86 (0.86)	0.80 (0.80)	0.78 (0.78)
Flashing Lights to Gates	0.89 (0.89)	0.65 (0.65)	0.69 (0.69)	0.63 (0.63)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Supplementary Safety Measure Effectiveness Rates (rate of reduction in accidents with supplementary safety measure)

Supplementary Measure	Effectiveness
4 quadrant gate system - no presence detection	0.82 (0.82)
4 quadrant gate system - with presence detection	0.77 (0.77)
4 quadrant gate system - with Medians of at least 60 feet	0.92 (0.92)
Medians or channelization devices - mountable curbs	0.75 (0.75)
Medians or channelization devices - barrier curbs	0.80 (0.80)
One-way street	0.82 (0.82)
Photo enforcement	0.72 (0.72)
Other type 1	0.50 (0.50)
Other type 2	0.50 (0.50)
Other type 3	0.50 (0.50)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Diurnal Distributions (share of daily traffic in hour)

Name / Description		12	1	2	3	4	5	6	7	8	9	10	11
Uniform / Uniform													
	AM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167
	PM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.159
AM Peak / AM Peak													
	AM	1.667	1.667	1.667	1.667	1.667	1.667	8.333	8.333	8.333	8.333	8.333	8.333
	PM	5.833	5.833	5.833	5.833	5.834	5.834	0.833	0.833	0.833	0.833	0.834	0.834
PM Peak / PM Peak													
	AM	0.833	0.833	0.833	0.833	0.833	0.833	5.833	5.833	5.833	5.833	5.833	5.833
	PM	8.333	8.333	8.333	8.333	8.334	8.334	1.667	1.667	1.667	1.667	1.668	1.668
Day Flat / Day Flat													
	AM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
	PM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
Night Flat / Night Flat													
	AM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
	PM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
AM Peak FR WD LC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	2.490	6.470	9.450	6.970	4.980	4.980	4.480
	PM	4.980	5.470	5.970	6.470	6.970	6.970	5.470	3.980	3.480	2.990	2.490	1.440
AM Peak Non-FR WD LC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	0.990	0.490	0.490	0.490	0.990	2.460	4.430	8.370	6.900	4.930	4.930	5.420
	PM	6.400	6.400	6.400	6.900	6.900	6.400	4.930	4.430	3.450	2.960	2.460	1.480
PM Peak FR WD LC / PM, Peak Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	1.500	3.500	5.500	5.000	4.500	4.500	5.000
	PM	5.500	5.500	6.500	8.000	9.500	9.500	6.500	4.500	3.500	3.000	3.000	2.000
PM Peak Non-FR WD LC / PM Peak, Non-Freeway, Traffic Distribution Profile for Low Congestion													
	AM	0.980	0.490	0.490	0.490	0.490	0.980	2.450	4.410	4.410	4.410	4.900	5.880
	PM	6.860	6.370	6.860	8.330	9.310	9.310	6.370	4.900	3.920	2.940	2.450	2.000
AM Peak FR WD MC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	2.510	6.530	9.050	7.540	5.530	5.030	5.030
	PM	5.030	5.530	5.530	6.530	7.040	6.530	5.030	4.020	3.020	3.020	2.510	1.470
AM Peak Non-FR WD MC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	1.510	4.520	7.540	7.040	5.030	5.030	5.530
	PM	6.530	6.530	5.530	7.040	7.040	7.040	5.530	4.520	3.520	3.020	2.510	1.470
PM Peak FR WD MC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.000	0.500	0.500	0.500	0.500	1.500	4.000	6.000	5.500	4.500	4.500	5.000
	PM	5.500	5.500	6.500	7.500	9.000	9.000	6.500	4.500	3.500	3.500	3.000	2.000

PM Peak Non-FR WD MC / PM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestio												
AM	1.020	0.510	0.510	0.510	0.510	1.020	1.520	4.570	4.570	4.570	5.080	6.090
PM	6.600	6.600	6.600	7.610	9.140	9.140	6.600	5.080	4.570	3.550	2.540	1.490
AM Peak FR WD SC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.020	0.510	0.510	0.510	0.510	2.030	5.580	7.610	7.110	6.090	5.580	5.580
PM	5.580	5.580	6.090	6.600	6.600	6.600	5.580	4.570	3.050	3.050	2.540	1.520
AM Peak Non-FR WD SC / AM Peak Non-Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.030	0.520	0.520	0.520	0.520	2.060	3.090	7.220	6.190	5.150	5.670	5.670
PM	6.190	6.190	6.700	7.220	7.220	7.220	5.670	4.640	3.610	3.090	2.580	1.510
PM Peak FR WD SC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.000	0.500	0.500	0.500	0.500	1.500	4.500	6.500	6.000	5.000	5.000	5.500
PM	5.500	5.500	6.500	7.000	7.500	7.500	6.500	5.000	3.500	3.500	3.000	2.000
PM Peak Non-FR WD SC / PM Peak, Non-Freeway Weekday, Profile for Severe Congestion												
AM	0.990	0.500	0.500	0.500	0.500	1.490	3.470	5.450	5.450	4.950	4.950	5.450
PM	6.440	6.440	6.930	7.430	7.430	7.430	6.440	4.950	4.460	3.470	2.480	1.900
FR WE / Freeway Weekend Traffic Distribution Profile												
AM	2.000	1.500	1.000	0.500	0.500	1.000	2.000	3.000	3.500	5.000	5.500	6.500
PM	7.000	7.000	7.000	7.000	7.500	7.000	6.500	5.000	4.500	3.500	3.500	2.500
Non-FR WE / Non-Freeway Weekend Trafic Distribution Profile												
AM	1.980	1.490	0.990	0.500	0.500	0.990	1.490	2.480	3.470	4.950	5.940	6.930
PM	7.430	7.430	7.430	7.430	7.430	6.930	5.940	4.950	4.460	3.470	2.970	2.420
FR WD SC SS / Freeway Weekday traffic distribution profile for severe congestion and similar speeds												
AM	1.490	0.990	0.990	0.500	0.500	1.490	5.450	6.930	6.440	5.450	5.450	5.450
PM	5.450	5.940	5.940	6.440	6.930	6.440	5.450	4.460	3.470	3.470	2.970	1.910
Non-FR WD SCSS / Non-Freeway Weekday traffic distribution profile for severe congestion and similar spe												
AM	1.460	0.980	0.980	0.490	0.980	2.930	5.370	6.340	5.370	4.880	4.880	5.370
PM	5.370	5.370	5.370	5.850	6.340	6.340	5.850	4.880	4.390	4.390	3.410	2.410

Directionality of Traffic (percent of hourly traffic in principal direction*)

*Principal direction is the one with lower railroad milepost to the left of highway traffic.

Name / Description	12	1	2	3	4	5	6	7	8	9	10	11
Balanced / Equal traffic in each direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Commute 1 / Commuter traffic AM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00
Commute 2 / Commuter traffic PM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00	50.00	50.00

Default Costs for Grade Crossing Devices (thousands of constant dollars)

Device Type	O&M	Capital Expenditure	Other Lifecycle Cost
Passive	0.20	1.60	0.00
	(0.20)	(1.60)	(0.00)
Flashing Lights	1.80	74.80	0.00
	(1.80)	(74.80)	(0.00)
Flashing Lights with Gates	2.50	106.10	0.00
	(2.50)	(106.10)	(0.00)
Closure	0.00	20.00	0.00
	(0.00)	(20.00)	(0.00)
Separation	0.50	1,500.00	0.00
	(0.50)	(1,500.00)	(0.00)
New Technology 1	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 2	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 3	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Default Costs for Supplementary Safety Measures (thousands of constant dollars)

Supplementary Measure	O&M	Capital Expenditure	Other Lifecycle Cost
None	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
4 quadrant - no detection	3.50	244.00	0.00
	(3.50)	(3.50)	(3.50)
4 quadrant - with detection	5.00	260.00	0.00
	(5.00)	(5.00)	(5.00)
4 quadrant - with 60' medians	3.50	255.00	0.00
	(3.50)	(3.50)	(3.50)
Mountable curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
Barrier curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
One-way street	3.50	5.00	0.00
	(3.50)	(3.50)	(3.50)
Photo Enforcement	25.00	65.00	0.00
	(25.00)	(25.00)	(25.00)
Other type 1	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 2	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 3	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Percent Accidents by Type (for use in High Speed Rail model)

Train Strikes Highway Vehicle	Highway Vehicle Strikes Train
84.0	16.0
(84.0)	(16.0)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Train Strikes Highway Vehicle" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.0001270	0.0001110	0.00004000
	(0.0001270)	(0.0001110)	(0.00004000)
Train Fatalities	0.000005000	0.000010000	0.00004400
	(0.000005000)	(0.000010000)	(0.00004400)
% Accidents with Severe Derailment	0.00010000	0.0010000	0.007000
	(0.00010000)	(0.0010000)	(0.007000)
Added Severity with Severe Derailment	0.0002200	0.0002200	0.0002200
	(0.0002200)	(0.0002200)	(0.0002200)
Speeds of maximum severity (highway) mph	70	70	65
	(70)	(70)	(65)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Highway Vehicle Strikes Train" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.2170	0.1600	0.09100
	(0.2170)	(0.1600)	(0.09100)
Train Fatalities	0.010000	0.010000	0.010000
	(0.010000)	(0.010000)	(0.010000)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

User: A. M. Tahsin Emtenan Dataset: Rock Island

Vehicle Emissions Rates (grams of emissions per minute of idling)

Vehicle Type	VOC	CO	NOx	PM	SOx	CO2
Cars	0.3030	4.8599	0.0916	0.0000	0.0000	41.0652
	(0.3030)	(4.8599)	(0.0916)	(0.0000)	(0.0000)	(41.0652)
Buses	0.6655	11.8500	0.1830	0.0000	0.0000	87.5789
	(0.6655)	(11.8500)	(0.1830)	(0.0000)	(0.0000)	(87.5789)
Trucks	0.2559	3.1446	0.2754	0.0383	0.0001	107.4107
	(0.2559)	(3.1446)	(0.2754)	(0.0383)	(0.0001)	(107.4107)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Fuel Burn Rates (quantity consumed per minute of idling)

Vehicle Type	Fuel (gallons)	Oil (quarts)
Cars	0.009690	0.000626
	(0.009690)	(0.000626)
Buses	0.018411	0.001189
	(0.018411)	(0.001189)
Trucks	0.020670	0.001335
	(0.020670)	(0.001335)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Effectiveness Rates (rate of reduction in accidents with improvements)

Improvement	Single Track no more than 10 Trains	Multi-track no more than 10 Trains	Single Track more than 10 Trains	Multi-track more than 10 Trains
Passive to Flashing Lights	0.75 (0.75)	0.65 (0.65)	0.61 (0.61)	0.57 (0.57)
Passive to Flashing Lights with Gates	0.90 (0.90)	0.86 (0.86)	0.80 (0.80)	0.78 (0.78)
Flashing Lights to Gates	0.89 (0.89)	0.65 (0.65)	0.69 (0.69)	0.63 (0.63)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Supplementary Safety Measure Effectiveness Rates (rate of reduction in accidents with supplementary safety measure)

Supplementary Measure	Effectiveness
4 quadrant gate system - no presence detection	0.82 (0.82)
4 quadrant gate system - with presence detection	0.77 (0.77)
4 quadrant gate system - with Medians of at least 60 feet	0.92 (0.92)
Medians or channelization devices - mountable curbs	0.75 (0.75)
Medians or channelization devices - barrier curbs	0.80 (0.80)
One-way street	0.82 (0.82)
Photo enforcement	0.72 (0.72)
Other type 1	0.50 (0.50)
Other type 2	0.50 (0.50)
Other type 3	0.50 (0.50)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Diurnal Distributions (share of daily traffic in hour)

Name / Description		12	1	2	3	4	5	6	7	8	9	10	11
Uniform / Uniform													
	AM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167
	PM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.159
AM Peak / AM Peak													
	AM	1.667	1.667	1.667	1.667	1.667	1.667	8.333	8.333	8.333	8.333	8.333	8.333
	PM	5.833	5.833	5.833	5.833	5.834	5.834	0.833	0.833	0.833	0.833	0.834	0.834
PM Peak / PM Peak													
	AM	0.833	0.833	0.833	0.833	0.833	0.833	5.833	5.833	5.833	5.833	5.833	5.833
	PM	8.333	8.333	8.333	8.333	8.334	8.334	1.667	1.667	1.667	1.667	1.668	1.668
Day Flat / Day Flat													
	AM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
	PM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
Night Flat / Night Flat													
	AM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
	PM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
AM Peak FR WD LC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	2.490	6.470	9.450	6.970	4.980	4.980	4.480
	PM	4.980	5.470	5.970	6.470	6.970	6.970	5.470	3.980	3.480	2.990	2.490	1.440
AM Peak Non-FR WD LC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	0.990	0.490	0.490	0.490	0.990	2.460	4.430	8.370	6.900	4.930	4.930	5.420
	PM	6.400	6.400	6.400	6.900	6.900	6.400	4.930	4.430	3.450	2.960	2.460	1.480
PM Peak FR WD LC / PM, Peak Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	1.500	3.500	5.500	5.000	4.500	4.500	5.000
	PM	5.500	5.500	6.500	8.000	9.500	9.500	6.500	4.500	3.500	3.000	3.000	2.000
PM Peak Non-FR WD LC / PM Peak, Non-Freeway, Traffic Distribution Profile for Low Congestion													
	AM	0.980	0.490	0.490	0.490	0.490	0.980	2.450	4.410	4.410	4.410	4.900	5.880
	PM	6.860	6.370	6.860	8.330	9.310	9.310	6.370	4.900	3.920	2.940	2.450	2.000
AM Peak FR WD MC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	2.510	6.530	9.050	7.540	5.530	5.030	5.030
	PM	5.030	5.530	5.530	6.530	7.040	6.530	5.030	4.020	3.020	3.020	2.510	1.470
AM Peak Non-FR WD MC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	1.510	4.520	7.540	7.040	5.030	5.030	5.530
	PM	6.530	6.530	5.530	7.040	7.040	7.040	5.530	4.520	3.520	3.020	2.510	1.470
PM Peak FR WD MC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.000	0.500	0.500	0.500	0.500	1.500	4.000	6.000	5.500	4.500	4.500	5.000
	PM	5.500	5.500	6.500	7.500	9.000	9.000	6.500	4.500	3.500	3.500	3.000	2.000

PM Peak Non-FR WD MC / PM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestio												
AM	1.020	0.510	0.510	0.510	0.510	1.020	1.520	4.570	4.570	4.570	5.080	6.090
PM	6.600	6.600	6.600	7.610	9.140	9.140	6.600	5.080	4.570	3.550	2.540	1.490
AM Peak FR WD SC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.020	0.510	0.510	0.510	0.510	2.030	5.580	7.610	7.110	6.090	5.580	5.580
PM	5.580	5.580	6.090	6.600	6.600	6.600	5.580	4.570	3.050	3.050	2.540	1.520
AM Peak Non-FR WD SC / AM Peak Non-Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.030	0.520	0.520	0.520	0.520	2.060	3.090	7.220	6.190	5.150	5.670	5.670
PM	6.190	6.190	6.700	7.220	7.220	7.220	5.670	4.640	3.610	3.090	2.580	1.510
PM Peak FR WD SC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.000	0.500	0.500	0.500	0.500	1.500	4.500	6.500	6.000	5.000	5.000	5.500
PM	5.500	5.500	6.500	7.000	7.500	7.500	6.500	5.000	3.500	3.500	3.000	2.000
PM Peak Non-FR WD SC / PM Peak, Non-Freeway Weekday, Profile for Severe Congestion												
AM	0.990	0.500	0.500	0.500	0.500	1.490	3.470	5.450	5.450	4.950	4.950	5.450
PM	6.440	6.440	6.930	7.430	7.430	7.430	6.440	4.950	4.460	3.470	2.480	1.900
FR WE / Freeway Weekend Traffic Distribution Profile												
AM	2.000	1.500	1.000	0.500	0.500	1.000	2.000	3.000	3.500	5.000	5.500	6.500
PM	7.000	7.000	7.000	7.000	7.500	7.000	6.500	5.000	4.500	3.500	3.500	2.500
Non-FR WE / Non-Freeway Weekend Trafic Distribution Profile												
AM	1.980	1.490	0.990	0.500	0.500	0.990	1.490	2.480	3.470	4.950	5.940	6.930
PM	7.430	7.430	7.430	7.430	7.430	6.930	5.940	4.950	4.460	3.470	2.970	2.420
FR WD SC SS / Freeway Weekday traffic distribution profile for severe congestion and similar speeds												
AM	1.490	0.990	0.990	0.500	0.500	1.490	5.450	6.930	6.440	5.450	5.450	5.450
PM	5.450	5.940	5.940	6.440	6.930	6.440	5.450	4.460	3.470	3.470	2.970	1.910
Non-FR WD SCSS / Non-Freeway Weekday traffic distribution profile for severe congestion and similar spe												
AM	1.460	0.980	0.980	0.490	0.980	2.930	5.370	6.340	5.370	4.880	4.880	5.370
PM	5.370	5.370	5.370	5.850	6.340	6.340	5.850	4.880	4.390	4.390	3.410	2.410

Directionality of Traffic (percent of hourly traffic in principal direction*)

*Principal direction is the one with lower railroad milepost to the left of highway traffic.

Name / Description	12	1	2	3	4	5	6	7	8	9	10	11
Balanced / Equal traffic in each direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Commute 1 / Commuter traffic AM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00
Commute 2 / Commuter traffic PM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00	50.00	50.00

Default Costs for Grade Crossing Devices (thousands of constant dollars)

Device Type	O&M	Capital Expenditure	Other Lifecycle Cost
Passive	0.20	1.60	0.00
	(0.20)	(1.60)	(0.00)
Flashing Lights	1.80	74.80	0.00
	(1.80)	(74.80)	(0.00)
Flashing Lights with Gates	2.50	106.10	0.00
	(2.50)	(106.10)	(0.00)
Closure	0.00	20.00	0.00
	(0.00)	(20.00)	(0.00)
Separation	0.50	1,500.00	0.00
	(0.50)	(1,500.00)	(0.00)
New Technology 1	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 2	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 3	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Default Costs for Supplementary Safety Measures (thousands of constant dollars)

Supplementary Measure	O&M	Capital Expenditure	Other Lifecycle Cost
None	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
4 quadrant - no detection	3.50	244.00	0.00
	(3.50)	(3.50)	(3.50)
4 quadrant - with detection	5.00	260.00	0.00
	(5.00)	(5.00)	(5.00)
4 quadrant - with 60' medians	3.50	255.00	0.00
	(3.50)	(3.50)	(3.50)
Mountable curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
Barrier curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
One-way street	3.50	5.00	0.00
	(3.50)	(3.50)	(3.50)
Photo Enforcement	25.00	65.00	0.00
	(25.00)	(25.00)	(25.00)
Other type 1	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 2	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 3	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Percent Accidents by Type (for use in High Speed Rail model)

Train Strikes Highway Vehicle	Highway Vehicle Strikes Train
84.0	16.0
(84.0)	(16.0)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Train Strikes Highway Vehicle" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.0001270	0.0001110	0.00004000
	(0.0001270)	(0.0001110)	(0.00004000)
Train Fatalities	0.000005000	0.000010000	0.00004400
	(0.000005000)	(0.000010000)	(0.00004400)
% Accidents with Severe Derailment	0.00010000	0.0010000	0.007000
	(0.00010000)	(0.0010000)	(0.007000)
Added Severity with Severe Derailment	0.0002200	0.0002200	0.0002200
	(0.0002200)	(0.0002200)	(0.0002200)
Speeds of maximum severity (highway) mph	70	70	65
	(70)	(70)	(65)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Highway Vehicle Strikes Train" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.2170	0.1600	0.09100
	(0.2170)	(0.1600)	(0.09100)
Train Fatalities	0.010000	0.010000	0.010000
	(0.010000)	(0.010000)	(0.010000)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

User: A. M. Tahsin Emtenan Dataset: Rock Island

Vehicle Emissions Rates (grams of emissions per minute of idling)

Vehicle Type	VOC	CO	NOx	PM	SOx	CO2
Cars	0.3030	4.8599	0.0916	0.0000	0.0000	41.0652
	(0.3030)	(4.8599)	(0.0916)	(0.0000)	(0.0000)	(41.0652)
Buses	0.6655	11.8500	0.1830	0.0000	0.0000	87.5789
	(0.6655)	(11.8500)	(0.1830)	(0.0000)	(0.0000)	(87.5789)
Trucks	0.2559	3.1446	0.2754	0.0383	0.0001	107.4107
	(0.2559)	(3.1446)	(0.2754)	(0.0383)	(0.0001)	(107.4107)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Fuel Burn Rates (quantity consumed per minute of idling)

Vehicle Type	Fuel (gallons)	Oil (quarts)
Cars	0.009690	0.000626
	(0.009690)	(0.000626)
Buses	0.018411	0.001189
	(0.018411)	(0.001189)
Trucks	0.020670	0.001335
	(0.020670)	(0.001335)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Effectiveness Rates (rate of reduction in accidents with improvements)

Improvement	Single Track no more than 10 Trains	Multi-track no more than 10 Trains	Single Track more than 10 Trains	Multi-track more than 10 Trains
Passive to Flashing Lights	0.75 (0.75)	0.65 (0.65)	0.61 (0.61)	0.57 (0.57)
Passive to Flashing Lights with Gates	0.90 (0.90)	0.86 (0.86)	0.80 (0.80)	0.78 (0.78)
Flashing Lights to Gates	0.89 (0.89)	0.65 (0.65)	0.69 (0.69)	0.63 (0.63)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Supplementary Safety Measure Effectiveness Rates (rate of reduction in accidents with supplementary safety measure)

Supplementary Measure	Effectiveness
4 quadrant gate system - no presence detection	0.82 (0.82)
4 quadrant gate system - with presence detection	0.77 (0.77)
4 quadrant gate system - with Medians of at least 60 feet	0.92 (0.92)
Medians or channelization devices - mountable curbs	0.75 (0.75)
Medians or channelization devices - barrier curbs	0.80 (0.80)
One-way street	0.82 (0.82)
Photo enforcement	0.72 (0.72)
Other type 1	0.50 (0.50)
Other type 2	0.50 (0.50)
Other type 3	0.50 (0.50)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Diurnal Distributions (share of daily traffic in hour)

Name / Description		12	1	2	3	4	5	6	7	8	9	10	11
Uniform / Uniform													
	AM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167
	PM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.159
AM Peak / AM Peak													
	AM	1.667	1.667	1.667	1.667	1.667	1.667	8.333	8.333	8.333	8.333	8.333	8.333
	PM	5.833	5.833	5.833	5.833	5.834	5.834	0.833	0.833	0.833	0.833	0.834	0.834
PM Peak / PM Peak													
	AM	0.833	0.833	0.833	0.833	0.833	0.833	5.833	5.833	5.833	5.833	5.833	5.833
	PM	8.333	8.333	8.333	8.333	8.334	8.334	1.667	1.667	1.667	1.667	1.668	1.668
Day Flat / Day Flat													
	AM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
	PM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
Night Flat / Night Flat													
	AM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
	PM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
AM Peak FR WD LC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	2.490	6.470	9.450	6.970	4.980	4.980	4.480
	PM	4.980	5.470	5.970	6.470	6.970	6.970	5.470	3.980	3.480	2.990	2.490	1.440
AM Peak Non-FR WD LC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	0.990	0.490	0.490	0.490	0.990	2.460	4.430	8.370	6.900	4.930	4.930	5.420
	PM	6.400	6.400	6.400	6.900	6.900	6.400	4.930	4.430	3.450	2.960	2.460	1.480
PM Peak FR WD LC / PM, Peak Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	1.500	3.500	5.500	5.000	4.500	4.500	5.000
	PM	5.500	5.500	6.500	8.000	9.500	9.500	6.500	4.500	3.500	3.000	3.000	2.000
PM Peak Non-FR WD LC / PM Peak, Non-Freeway, Traffic Distribution Profile for Low Congestion													
	AM	0.980	0.490	0.490	0.490	0.490	0.980	2.450	4.410	4.410	4.410	4.900	5.880
	PM	6.860	6.370	6.860	8.330	9.310	9.310	6.370	4.900	3.920	2.940	2.450	2.000
AM Peak FR WD MC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	2.510	6.530	9.050	7.540	5.530	5.030	5.030
	PM	5.030	5.530	5.530	6.530	7.040	6.530	5.030	4.020	3.020	3.020	2.510	1.470
AM Peak Non-FR WD MC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	1.510	4.520	7.540	7.040	5.030	5.030	5.530
	PM	6.530	6.530	5.530	7.040	7.040	7.040	5.530	4.520	3.520	3.020	2.510	1.470
PM Peak FR WD MC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.000	0.500	0.500	0.500	0.500	1.500	4.000	6.000	5.500	4.500	4.500	5.000
	PM	5.500	5.500	6.500	7.500	9.000	9.000	6.500	4.500	3.500	3.500	3.000	2.000

PM Peak Non-FR WD MC / PM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestio												
AM	1.020	0.510	0.510	0.510	0.510	1.020	1.520	4.570	4.570	4.570	5.080	6.090
PM	6.600	6.600	6.600	7.610	9.140	9.140	6.600	5.080	4.570	3.550	2.540	1.490
AM Peak FR WD SC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.020	0.510	0.510	0.510	0.510	2.030	5.580	7.610	7.110	6.090	5.580	5.580
PM	5.580	5.580	6.090	6.600	6.600	6.600	5.580	4.570	3.050	3.050	2.540	1.520
AM Peak Non-FR WD SC / AM Peak Non-Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.030	0.520	0.520	0.520	0.520	2.060	3.090	7.220	6.190	5.150	5.670	5.670
PM	6.190	6.190	6.700	7.220	7.220	7.220	5.670	4.640	3.610	3.090	2.580	1.510
PM Peak FR WD SC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.000	0.500	0.500	0.500	0.500	1.500	4.500	6.500	6.000	5.000	5.000	5.500
PM	5.500	5.500	6.500	7.000	7.500	7.500	6.500	5.000	3.500	3.500	3.000	2.000
PM Peak Non-FR WD SC / PM Peak, Non-Freeway Weekday, Profile for Severe Congestion												
AM	0.990	0.500	0.500	0.500	0.500	1.490	3.470	5.450	5.450	4.950	4.950	5.450
PM	6.440	6.440	6.930	7.430	7.430	7.430	6.440	4.950	4.460	3.470	2.480	1.900
FR WE / Freeway Weekend Traffic Distribution Profile												
AM	2.000	1.500	1.000	0.500	0.500	1.000	2.000	3.000	3.500	5.000	5.500	6.500
PM	7.000	7.000	7.000	7.000	7.500	7.000	6.500	5.000	4.500	3.500	3.500	2.500
Non-FR WE / Non-Freeway Weekend Trafic Distribution Profile												
AM	1.980	1.490	0.990	0.500	0.500	0.990	1.490	2.480	3.470	4.950	5.940	6.930
PM	7.430	7.430	7.430	7.430	7.430	6.930	5.940	4.950	4.460	3.470	2.970	2.420
FR WD SC SS / Freeway Weekday traffic distribution profile for severe congestion and similar speeds												
AM	1.490	0.990	0.990	0.500	0.500	1.490	5.450	6.930	6.440	5.450	5.450	5.450
PM	5.450	5.940	5.940	6.440	6.930	6.440	5.450	4.460	3.470	3.470	2.970	1.910
Non-FR WD SCSS / Non-Freeway Weekday traffic distribution profile for severe congestion and similar spe												
AM	1.460	0.980	0.980	0.490	0.980	2.930	5.370	6.340	5.370	4.880	4.880	5.370
PM	5.370	5.370	5.370	5.850	6.340	6.340	5.850	4.880	4.390	4.390	3.410	2.410

Directionality of Traffic (percent of hourly traffic in principal direction*)

*Principal direction is the one with lower railroad milepost to the left of highway traffic.

Name / Description	12	1	2	3	4	5	6	7	8	9	10	11
Balanced / Equal traffic in each direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Commute 1 / Commuter traffic AM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00
Commute 2 / Commuter traffic PM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00	50.00	50.00

Default Costs for Grade Crossing Devices (thousands of constant dollars)

Device Type	O&M	Capital Expenditure	Other Lifecycle Cost
Passive	0.20	1.60	0.00
	(0.20)	(1.60)	(0.00)
Flashing Lights	1.80	74.80	0.00
	(1.80)	(74.80)	(0.00)
Flashing Lights with Gates	2.50	106.10	0.00
	(2.50)	(106.10)	(0.00)
Closure	0.00	20.00	0.00
	(0.00)	(20.00)	(0.00)
Separation	0.50	1,500.00	0.00
	(0.50)	(1,500.00)	(0.00)
New Technology 1	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 2	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 3	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Default Costs for Supplementary Safety Measures (thousands of constant dollars)

Supplementary Measure	O&M	Capital Expenditure	Other Lifecycle Cost
None	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
4 quadrant - no detection	3.50	244.00	0.00
	(3.50)	(3.50)	(3.50)
4 quadrant - with detection	5.00	260.00	0.00
	(5.00)	(5.00)	(5.00)
4 quadrant - with 60' medians	3.50	255.00	0.00
	(3.50)	(3.50)	(3.50)
Mountable curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
Barrier curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
One-way street	3.50	5.00	0.00
	(3.50)	(3.50)	(3.50)
Photo Enforcement	25.00	65.00	0.00
	(25.00)	(25.00)	(25.00)
Other type 1	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 2	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 3	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Percent Accidents by Type (for use in High Speed Rail model)

Train Strikes Highway Vehicle	Highway Vehicle Strikes Train
84.0	16.0
(84.0)	(16.0)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Train Strikes Highway Vehicle" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.0001270	0.0001110	0.00004000
	(0.0001270)	(0.0001110)	(0.00004000)
Train Fatalities	0.000005000	0.000010000	0.00004400
	(0.000005000)	(0.000010000)	(0.00004400)
% Accidents with Severe Derailment	0.00010000	0.0010000	0.007000
	(0.00010000)	(0.0010000)	(0.007000)
Added Severity with Severe Derailment	0.0002200	0.0002200	0.0002200
	(0.0002200)	(0.0002200)	(0.0002200)
Speeds of maximum severity (highway) mph	70	70	65
	(70)	(70)	(65)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Highway Vehicle Strikes Train" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.2170	0.1600	0.09100
	(0.2170)	(0.1600)	(0.09100)
Train Fatalities	0.010000	0.010000	0.010000
	(0.010000)	(0.010000)	(0.010000)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Vehicle Emissions Rates (grams of emissions per minute of idling)

Vehicle Type	VOC	CO	NOx	PM	SOx	CO2
Cars	0.3030	4.8599	0.0916	0.0000	0.0000	41.0652
	(0.3030)	(4.8599)	(0.0916)	(0.0000)	(0.0000)	(41.0652)
Buses	0.6655	11.8500	0.1830	0.0000	0.0000	87.5789
	(0.6655)	(11.8500)	(0.1830)	(0.0000)	(0.0000)	(87.5789)
Trucks	0.2559	3.1446	0.2754	0.0383	0.0001	107.4107
	(0.2559)	(3.1446)	(0.2754)	(0.0383)	(0.0001)	(107.4107)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Fuel Burn Rates (quantity consumed per minute of idling)

Vehicle Type	Fuel (gallons)	Oil (quarts)
Cars	0.009690	0.000626
	(0.009690)	(0.000626)
Buses	0.018411	0.001189
	(0.018411)	(0.001189)
Trucks	0.020670	0.001335
	(0.020670)	(0.001335)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Effectiveness Rates (rate of reduction in accidents with improvements)

Improvement	Single Track no more than 10 Trains	Multi-track no more than 10 Trains	Single Track more than 10 Trains	Multi-track more than 10 Trains
Passive to Flashing Lights	0.75 (0.75)	0.65 (0.65)	0.61 (0.61)	0.57 (0.57)
Passive to Flashing Lights with Gates	0.90 (0.90)	0.86 (0.86)	0.80 (0.80)	0.78 (0.78)
Flashing Lights to Gates	0.89 (0.89)	0.65 (0.65)	0.69 (0.69)	0.63 (0.63)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Supplementary Safety Measure Effectiveness Rates (rate of reduction in accidents with supplementary safety measure)

Supplementary Measure	Effectiveness
4 quadrant gate system - no presence detection	0.82 (0.82)
4 quadrant gate system - with presence detection	0.77 (0.77)
4 quadrant gate system - with Medians of at least 60 feet	0.92 (0.92)
Medians or channelization devices - mountable curbs	0.75 (0.75)
Medians or channelization devices - barrier curbs	0.80 (0.80)
One-way street	0.82 (0.82)
Photo enforcement	0.72 (0.72)
Other type 1	0.50 (0.50)
Other type 2	0.50 (0.50)
Other type 3	0.50 (0.50)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Diurnal Distributions (share of daily traffic in hour)

Name / Description		12	1	2	3	4	5	6	7	8	9	10	11
Uniform / Uniform													
	AM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167
	PM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.159
AM Peak / AM Peak													
	AM	1.667	1.667	1.667	1.667	1.667	1.667	8.333	8.333	8.333	8.333	8.333	8.333
	PM	5.833	5.833	5.833	5.833	5.834	5.834	0.833	0.833	0.833	0.833	0.834	0.834
PM Peak / PM Peak													
	AM	0.833	0.833	0.833	0.833	0.833	0.833	5.833	5.833	5.833	5.833	5.833	5.833
	PM	8.333	8.333	8.333	8.333	8.334	8.334	1.667	1.667	1.667	1.667	1.668	1.668
Day Flat / Day Flat													
	AM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
	PM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
Night Flat / Night Flat													
	AM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
	PM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
AM Peak FR WD LC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	2.490	6.470	9.450	6.970	4.980	4.980	4.480
	PM	4.980	5.470	5.970	6.470	6.970	6.970	5.470	3.980	3.480	2.990	2.490	1.440
AM Peak Non-FR WD LC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	0.990	0.490	0.490	0.490	0.990	2.460	4.430	8.370	6.900	4.930	4.930	5.420
	PM	6.400	6.400	6.400	6.900	6.900	6.400	4.930	4.430	3.450	2.960	2.460	1.480
PM Peak FR WD LC / PM, Peak Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	1.500	3.500	5.500	5.000	4.500	4.500	5.000
	PM	5.500	5.500	6.500	8.000	9.500	9.500	6.500	4.500	3.500	3.000	3.000	2.000
PM Peak Non-FR WD LC / PM Peak, Non-Freeway, Traffic Distribution Profile for Low Congestion													
	AM	0.980	0.490	0.490	0.490	0.490	0.980	2.450	4.410	4.410	4.410	4.900	5.880
	PM	6.860	6.370	6.860	8.330	9.310	9.310	6.370	4.900	3.920	2.940	2.450	2.000
AM Peak FR WD MC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	2.510	6.530	9.050	7.540	5.530	5.030	5.030
	PM	5.030	5.530	5.530	6.530	7.040	6.530	5.030	4.020	3.020	3.020	2.510	1.470
AM Peak Non-FR WD MC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestior													
	AM	1.010	0.500	0.500	0.500	1.010	1.510	4.520	7.540	7.040	5.030	5.030	5.530
	PM	6.530	6.530	5.530	7.040	7.040	7.040	5.530	4.520	3.520	3.020	2.510	1.470
PM Peak FR WD MC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.000	0.500	0.500	0.500	0.500	1.500	4.000	6.000	5.500	4.500	4.500	5.000
	PM	5.500	5.500	6.500	7.500	9.000	9.000	6.500	4.500	3.500	3.500	3.000	2.000

PM Peak Non-FR WD MC / PM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestio												
AM	1.020	0.510	0.510	0.510	0.510	1.020	1.520	4.570	4.570	4.570	5.080	6.090
PM	6.600	6.600	6.600	7.610	9.140	9.140	6.600	5.080	4.570	3.550	2.540	1.490
AM Peak FR WD SC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.020	0.510	0.510	0.510	0.510	2.030	5.580	7.610	7.110	6.090	5.580	5.580
PM	5.580	5.580	6.090	6.600	6.600	6.600	5.580	4.570	3.050	3.050	2.540	1.520
AM Peak Non-FR WD SC / AM Peak Non-Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.030	0.520	0.520	0.520	0.520	2.060	3.090	7.220	6.190	5.150	5.670	5.670
PM	6.190	6.190	6.700	7.220	7.220	7.220	5.670	4.640	3.610	3.090	2.580	1.510
PM Peak FR WD SC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.000	0.500	0.500	0.500	0.500	1.500	4.500	6.500	6.000	5.000	5.000	5.500
PM	5.500	5.500	6.500	7.000	7.500	7.500	6.500	5.000	3.500	3.500	3.000	2.000
PM Peak Non-FR WD SC / PM Peak, Non-Freeway Weekday, Profile for Severe Congestion												
AM	0.990	0.500	0.500	0.500	0.500	1.490	3.470	5.450	5.450	4.950	4.950	5.450
PM	6.440	6.440	6.930	7.430	7.430	7.430	6.440	4.950	4.460	3.470	2.480	1.900
FR WE / Freeway Weekend Traffic Distribution Profile												
AM	2.000	1.500	1.000	0.500	0.500	1.000	2.000	3.000	3.500	5.000	5.500	6.500
PM	7.000	7.000	7.000	7.000	7.500	7.000	6.500	5.000	4.500	3.500	3.500	2.500
Non-FR WE / Non-Freeway Weekend Trafic Distribution Profile												
AM	1.980	1.490	0.990	0.500	0.500	0.990	1.490	2.480	3.470	4.950	5.940	6.930
PM	7.430	7.430	7.430	7.430	7.430	6.930	5.940	4.950	4.460	3.470	2.970	2.420
FR WD SC SS / Freeway Weekday traffic distribution profile for severe congestion and similar speeds												
AM	1.490	0.990	0.990	0.500	0.500	1.490	5.450	6.930	6.440	5.450	5.450	5.450
PM	5.450	5.940	5.940	6.440	6.930	6.440	5.450	4.460	3.470	3.470	2.970	1.910
Non-FR WD SCSS / Non-Freeway Weekday traffic distribution profile for severe congestion and similar spe												
AM	1.460	0.980	0.980	0.490	0.980	2.930	5.370	6.340	5.370	4.880	4.880	5.370
PM	5.370	5.370	5.370	5.850	6.340	6.340	5.850	4.880	4.390	4.390	3.410	2.410

Directionality of Traffic (percent of hourly traffic in principal direction*)

*Principal direction is the one with lower railroad milepost to the left of highway traffic.

Name / Description	12	1	2	3	4	5	6	7	8	9	10	11
Balanced / Equal traffic in each direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Commute 1 / Commuter traffic AM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00
Commute 2 / Commuter traffic PM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00	50.00	50.00

Default Costs for Grade Crossing Devices (thousands of constant dollars)

Device Type	O&M	Capital Expenditure	Other Lifecycle Cost
Passive	0.20	1.60	0.00
	(0.20)	(1.60)	(0.00)
Flashing Lights	1.80	74.80	0.00
	(1.80)	(74.80)	(0.00)
Flashing Lights with Gates	2.50	106.10	0.00
	(2.50)	(106.10)	(0.00)
Closure	0.00	20.00	0.00
	(0.00)	(20.00)	(0.00)
Separation	0.50	1,500.00	0.00
	(0.50)	(1,500.00)	(0.00)
New Technology 1	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 2	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 3	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Default Costs for Supplementary Safety Measures (thousands of constant dollars)

Supplementary Measure	O&M	Capital Expenditure	Other Lifecycle Cost
None	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
4 quadrant - no detection	3.50	244.00	0.00
	(3.50)	(3.50)	(3.50)
4 quadrant - with detection	5.00	260.00	0.00
	(5.00)	(5.00)	(5.00)
4 quadrant - with 60' medians	3.50	255.00	0.00
	(3.50)	(3.50)	(3.50)
Mountable curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
Barrier curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
One-way street	3.50	5.00	0.00
	(3.50)	(3.50)	(3.50)
Photo Enforcement	25.00	65.00	0.00
	(25.00)	(25.00)	(25.00)
Other type 1	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 2	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 3	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Percent Accidents by Type (for use in High Speed Rail model)

Train Strikes Highway Vehicle	Highway Vehicle Strikes Train
84.0	16.0
(84.0)	(16.0)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Train Strikes Highway Vehicle" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.0001270	0.0001110	0.00004000
	(0.0001270)	(0.0001110)	(0.00004000)
Train Fatalities	0.000005000	0.000010000	0.00004400
	(0.000005000)	(0.000010000)	(0.00004400)
% Accidents with Severe Derailment	0.00010000	0.0010000	0.007000
	(0.00010000)	(0.0010000)	(0.007000)
Added Severity with Severe Derailment	0.0002200	0.0002200	0.0002200
	(0.0002200)	(0.0002200)	(0.0002200)
Speeds of maximum severity (highway) mph	70	70	65
	(70)	(70)	(65)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Highway Vehicle Strikes Train" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.2170	0.1600	0.09100
	(0.2170)	(0.1600)	(0.09100)
Train Fatalities	0.010000	0.010000	0.010000
	(0.010000)	(0.010000)	(0.010000)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

User: A. M. Tahsin Emtenan Dataset: Rock Island

Vehicle Emissions Rates (grams of emissions per minute of idling)

Vehicle Type	VOC	CO	NOx	PM	SOx	CO2
Cars	0.3030	4.8599	0.0916	0.0000	0.0000	41.0652
	(0.3030)	(4.8599)	(0.0916)	(0.0000)	(0.0000)	(41.0652)
Buses	0.6655	11.8500	0.1830	0.0000	0.0000	87.5789
	(0.6655)	(11.8500)	(0.1830)	(0.0000)	(0.0000)	(87.5789)
Trucks	0.2559	3.1446	0.2754	0.0383	0.0001	107.4107
	(0.2559)	(3.1446)	(0.2754)	(0.0383)	(0.0001)	(107.4107)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Fuel Burn Rates (quantity consumed per minute of idling)

Vehicle Type	Fuel (gallons)	Oil (quarts)
Cars	0.009690	0.000626
	(0.009690)	(0.000626)
Buses	0.018411	0.001189
	(0.018411)	(0.001189)
Trucks	0.020670	0.001335
	(0.020670)	(0.001335)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Effectiveness Rates (rate of reduction in accidents with improvements)

Improvement	Single Track no more than 10 Trains	Multi-track no more than 10 Trains	Single Track more than 10 Trains	Multi-track more than 10 Trains
Passive to Flashing Lights	0.75 (0.75)	0.65 (0.65)	0.61 (0.61)	0.57 (0.57)
Passive to Flashing Lights with Gates	0.90 (0.90)	0.86 (0.86)	0.80 (0.80)	0.78 (0.78)
Flashing Lights to Gates	0.89 (0.89)	0.65 (0.65)	0.69 (0.69)	0.63 (0.63)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Supplementary Safety Measure Effectiveness Rates (rate of reduction in accidents with supplementary safety measure)

Supplementary Measure	Effectiveness
4 quadrant gate system - no presence detection	0.82 (0.82)
4 quadrant gate system - with presence detection	0.77 (0.77)
4 quadrant gate system - with Medians of at least 60 feet	0.92 (0.92)
Medians or channelization devices - mountable curbs	0.75 (0.75)
Medians or channelization devices - barrier curbs	0.80 (0.80)
One-way street	0.82 (0.82)
Photo enforcement	0.72 (0.72)
Other type 1	0.50 (0.50)
Other type 2	0.50 (0.50)
Other type 3	0.50 (0.50)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Diurnal Distributions (share of daily traffic in hour)

Name / Description		12	1	2	3	4	5	6	7	8	9	10	11
Uniform / Uniform													
	AM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167
	PM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.159
AM Peak / AM Peak													
	AM	1.667	1.667	1.667	1.667	1.667	1.667	8.333	8.333	8.333	8.333	8.333	8.333
	PM	5.833	5.833	5.833	5.833	5.834	5.834	0.833	0.833	0.833	0.833	0.834	0.834
PM Peak / PM Peak													
	AM	0.833	0.833	0.833	0.833	0.833	0.833	5.833	5.833	5.833	5.833	5.833	5.833
	PM	8.333	8.333	8.333	8.333	8.334	8.334	1.667	1.667	1.667	1.667	1.668	1.668
Day Flat / Day Flat													
	AM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
	PM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
Night Flat / Night Flat													
	AM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
	PM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
AM Peak FR WD LC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	2.490	6.470	9.450	6.970	4.980	4.980	4.480
	PM	4.980	5.470	5.970	6.470	6.970	6.970	5.470	3.980	3.480	2.990	2.490	1.440
AM Peak Non-FR WD LC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	0.990	0.490	0.490	0.490	0.990	2.460	4.430	8.370	6.900	4.930	4.930	5.420
	PM	6.400	6.400	6.400	6.900	6.900	6.400	4.930	4.430	3.450	2.960	2.460	1.480
PM Peak FR WD LC / PM, Peak Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	1.500	3.500	5.500	5.000	4.500	4.500	5.000
	PM	5.500	5.500	6.500	8.000	9.500	9.500	6.500	4.500	3.500	3.000	3.000	2.000
PM Peak Non-FR WD LC / PM Peak, Non-Freeway, Traffic Distribution Profile for Low Congestion													
	AM	0.980	0.490	0.490	0.490	0.490	0.980	2.450	4.410	4.410	4.410	4.900	5.880
	PM	6.860	6.370	6.860	8.330	9.310	9.310	6.370	4.900	3.920	2.940	2.450	2.000
AM Peak FR WD MC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	2.510	6.530	9.050	7.540	5.530	5.030	5.030
	PM	5.030	5.530	5.530	6.530	7.040	6.530	5.030	4.020	3.020	3.020	2.510	1.470
AM Peak Non-FR WD MC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	1.510	4.520	7.540	7.040	5.030	5.030	5.530
	PM	6.530	6.530	5.530	7.040	7.040	7.040	5.530	4.520	3.520	3.020	2.510	1.470
PM Peak FR WD MC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.000	0.500	0.500	0.500	0.500	1.500	4.000	6.000	5.500	4.500	4.500	5.000
	PM	5.500	5.500	6.500	7.500	9.000	9.000	6.500	4.500	3.500	3.500	3.000	2.000

PM Peak Non-FR WD MC / PM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestio												
AM	1.020	0.510	0.510	0.510	0.510	1.020	1.520	4.570	4.570	4.570	5.080	6.090
PM	6.600	6.600	6.600	7.610	9.140	9.140	6.600	5.080	4.570	3.550	2.540	1.490
AM Peak FR WD SC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.020	0.510	0.510	0.510	0.510	2.030	5.580	7.610	7.110	6.090	5.580	5.580
PM	5.580	5.580	6.090	6.600	6.600	6.600	5.580	4.570	3.050	3.050	2.540	1.520
AM Peak Non-FR WD SC / AM Peak Non-Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.030	0.520	0.520	0.520	0.520	2.060	3.090	7.220	6.190	5.150	5.670	5.670
PM	6.190	6.190	6.700	7.220	7.220	7.220	5.670	4.640	3.610	3.090	2.580	1.510
PM Peak FR WD SC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.000	0.500	0.500	0.500	0.500	1.500	4.500	6.500	6.000	5.000	5.000	5.500
PM	5.500	5.500	6.500	7.000	7.500	7.500	6.500	5.000	3.500	3.500	3.000	2.000
PM Peak Non-FR WD SC / PM Peak, Non-Freeway Weekday, Profile for Severe Congestion												
AM	0.990	0.500	0.500	0.500	0.500	1.490	3.470	5.450	5.450	4.950	4.950	5.450
PM	6.440	6.440	6.930	7.430	7.430	7.430	6.440	4.950	4.460	3.470	2.480	1.900
FR WE / Freeway Weekend Traffic Distribution Profile												
AM	2.000	1.500	1.000	0.500	0.500	1.000	2.000	3.000	3.500	5.000	5.500	6.500
PM	7.000	7.000	7.000	7.000	7.500	7.000	6.500	5.000	4.500	3.500	3.500	2.500
Non-FR WE / Non-Freeway Weekend Trafic Distribution Profile												
AM	1.980	1.490	0.990	0.500	0.500	0.990	1.490	2.480	3.470	4.950	5.940	6.930
PM	7.430	7.430	7.430	7.430	7.430	6.930	5.940	4.950	4.460	3.470	2.970	2.420
FR WD SC SS / Freeway Weekday traffic distribution profile for severe congestion and similar speeds												
AM	1.490	0.990	0.990	0.500	0.500	1.490	5.450	6.930	6.440	5.450	5.450	5.450
PM	5.450	5.940	5.940	6.440	6.930	6.440	5.450	4.460	3.470	3.470	2.970	1.910
Non-FR WD SCSS / Non-Freeway Weekday traffic distribution profile for severe congestion and similar spe												
AM	1.460	0.980	0.980	0.490	0.980	2.930	5.370	6.340	5.370	4.880	4.880	5.370
PM	5.370	5.370	5.370	5.850	6.340	6.340	5.850	4.880	4.390	4.390	3.410	2.410

Directionality of Traffic (percent of hourly traffic in principal direction*)

*Principal direction is the one with lower railroad milepost to the left of highway traffic.

Name / Description	12	1	2	3	4	5	6	7	8	9	10	11
Balanced / Equal traffic in each direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Commute 1 / Commuter traffic AM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00
Commute 2 / Commuter traffic PM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00	50.00	50.00

Default Costs for Grade Crossing Devices (thousands of constant dollars)

Device Type	O&M	Capital Expenditure	Other Lifecycle Cost
Passive	0.20	1.60	0.00
	(0.20)	(1.60)	(0.00)
Flashing Lights	1.80	74.80	0.00
	(1.80)	(74.80)	(0.00)
Flashing Lights with Gates	2.50	106.10	0.00
	(2.50)	(106.10)	(0.00)
Closure	0.00	20.00	0.00
	(0.00)	(20.00)	(0.00)
Separation	0.50	1,500.00	0.00
	(0.50)	(1,500.00)	(0.00)
New Technology 1	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 2	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 3	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Default Costs for Supplementary Safety Measures (thousands of constant dollars)

Supplementary Measure	O&M	Capital Expenditure	Other Lifecycle Cost
None	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
4 quadrant - no detection	3.50	244.00	0.00
	(3.50)	(3.50)	(3.50)
4 quadrant - with detection	5.00	260.00	0.00
	(5.00)	(5.00)	(5.00)
4 quadrant - with 60' medians	3.50	255.00	0.00
	(3.50)	(3.50)	(3.50)
Mountable curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
Barrier curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
One-way street	3.50	5.00	0.00
	(3.50)	(3.50)	(3.50)
Photo Enforcement	25.00	65.00	0.00
	(25.00)	(25.00)	(25.00)
Other type 1	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 2	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 3	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Percent Accidents by Type (for use in High Speed Rail model)

Train Strikes Highway Vehicle	Highway Vehicle Strikes Train
84.0	16.0
(84.0)	(16.0)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Train Strikes Highway Vehicle" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.0001270	0.0001110	0.00004000
	(0.0001270)	(0.0001110)	(0.00004000)
Train Fatalities	0.000005000	0.000010000	0.00004400
	(0.000005000)	(0.000010000)	(0.00004400)
% Accidents with Severe Derailment	0.00010000	0.0010000	0.007000
	(0.00010000)	(0.0010000)	(0.007000)
Added Severity with Severe Derailment	0.0002200	0.0002200	0.0002200
	(0.0002200)	(0.0002200)	(0.0002200)
Speeds of maximum severity (highway) mph	70	70	65
	(70)	(70)	(65)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Highway Vehicle Strikes Train" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.2170	0.1600	0.09100
	(0.2170)	(0.1600)	(0.09100)
Train Fatalities	0.010000	0.010000	0.010000
	(0.010000)	(0.010000)	(0.010000)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

User: A. M. Tahsin Emtenan Dataset: Rock Island

Vehicle Emissions Rates (grams of emissions per minute of idling)

Vehicle Type	VOC	CO	NOx	PM	SOx	CO2
Cars	0.3030	4.8599	0.0916	0.0000	0.0000	41.0652
	(0.3030)	(4.8599)	(0.0916)	(0.0000)	(0.0000)	(41.0652)
Buses	0.6655	11.8500	0.1830	0.0000	0.0000	87.5789
	(0.6655)	(11.8500)	(0.1830)	(0.0000)	(0.0000)	(87.5789)
Trucks	0.2559	3.1446	0.2754	0.0383	0.0001	107.4107
	(0.2559)	(3.1446)	(0.2754)	(0.0383)	(0.0001)	(107.4107)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Fuel Burn Rates (quantity consumed per minute of idling)

Vehicle Type	Fuel (gallons)	Oil (quarts)
Cars	0.009690	0.000626
	(0.009690)	(0.000626)
Buses	0.018411	0.001189
	(0.018411)	(0.001189)
Trucks	0.020670	0.001335
	(0.020670)	(0.001335)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Effectiveness Rates (rate of reduction in accidents with improvements)

Improvement	Single Track no more than 10 Trains	Multi-track no more than 10 Trains	Single Track more than 10 Trains	Multi-track more than 10 Trains
Passive to Flashing Lights	0.75 (0.75)	0.65 (0.65)	0.61 (0.61)	0.57 (0.57)
Passive to Flashing Lights with Gates	0.90 (0.90)	0.86 (0.86)	0.80 (0.80)	0.78 (0.78)
Flashing Lights to Gates	0.89 (0.89)	0.65 (0.65)	0.69 (0.69)	0.63 (0.63)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Supplementary Safety Measure Effectiveness Rates (rate of reduction in accidents with supplementary safety measure)

Supplementary Measure	Effectiveness
4 quadrant gate system - no presence detection	0.82 (0.82)
4 quadrant gate system - with presence detection	0.77 (0.77)
4 quadrant gate system - with Medians of at least 60 feet	0.92 (0.92)
Medians or channelization devices - mountable curbs	0.75 (0.75)
Medians or channelization devices - barrier curbs	0.80 (0.80)
One-way street	0.82 (0.82)
Photo enforcement	0.72 (0.72)
Other type 1	0.50 (0.50)
Other type 2	0.50 (0.50)
Other type 3	0.50 (0.50)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Diurnal Distributions (share of daily traffic in hour)

Name / Description		12	1	2	3	4	5	6	7	8	9	10	11
Uniform / Uniform													
	AM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167
	PM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.159
AM Peak / AM Peak													
	AM	1.667	1.667	1.667	1.667	1.667	1.667	8.333	8.333	8.333	8.333	8.333	8.333
	PM	5.833	5.833	5.833	5.833	5.834	5.834	0.833	0.833	0.833	0.833	0.834	0.834
PM Peak / PM Peak													
	AM	0.833	0.833	0.833	0.833	0.833	0.833	5.833	5.833	5.833	5.833	5.833	5.833
	PM	8.333	8.333	8.333	8.333	8.334	8.334	1.667	1.667	1.667	1.667	1.668	1.668
Day Flat / Day Flat													
	AM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
	PM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
Night Flat / Night Flat													
	AM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
	PM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
AM Peak FR WD LC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	2.490	6.470	9.450	6.970	4.980	4.980	4.480
	PM	4.980	5.470	5.970	6.470	6.970	6.970	5.470	3.980	3.480	2.990	2.490	1.440
AM Peak Non-FR WD LC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	0.990	0.490	0.490	0.490	0.990	2.460	4.430	8.370	6.900	4.930	4.930	5.420
	PM	6.400	6.400	6.400	6.900	6.900	6.400	4.930	4.430	3.450	2.960	2.460	1.480
PM Peak FR WD LC / PM, Peak Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	1.500	3.500	5.500	5.000	4.500	4.500	5.000
	PM	5.500	5.500	6.500	8.000	9.500	9.500	6.500	4.500	3.500	3.000	3.000	2.000
PM Peak Non-FR WD LC / PM Peak, Non-Freeway, Traffic Distribution Profile for Low Congestion													
	AM	0.980	0.490	0.490	0.490	0.490	0.980	2.450	4.410	4.410	4.410	4.900	5.880
	PM	6.860	6.370	6.860	8.330	9.310	9.310	6.370	4.900	3.920	2.940	2.450	2.000
AM Peak FR WD MC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	2.510	6.530	9.050	7.540	5.530	5.030	5.030
	PM	5.030	5.530	5.530	6.530	7.040	6.530	5.030	4.020	3.020	3.020	2.510	1.470
AM Peak Non-FR WD MC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	1.510	4.520	7.540	7.040	5.030	5.030	5.530
	PM	6.530	6.530	5.530	7.040	7.040	7.040	5.530	4.520	3.520	3.020	2.510	1.470
PM Peak FR WD MC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.000	0.500	0.500	0.500	0.500	1.500	4.000	6.000	5.500	4.500	4.500	5.000
	PM	5.500	5.500	6.500	7.500	9.000	9.000	6.500	4.500	3.500	3.500	3.000	2.000

PM Peak Non-FR WD MC / PM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestio												
AM	1.020	0.510	0.510	0.510	0.510	1.020	1.520	4.570	4.570	4.570	5.080	6.090
PM	6.600	6.600	6.600	7.610	9.140	9.140	6.600	5.080	4.570	3.550	2.540	1.490
AM Peak FR WD SC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.020	0.510	0.510	0.510	0.510	2.030	5.580	7.610	7.110	6.090	5.580	5.580
PM	5.580	5.580	6.090	6.600	6.600	6.600	5.580	4.570	3.050	3.050	2.540	1.520
AM Peak Non-FR WD SC / AM Peak Non-Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.030	0.520	0.520	0.520	0.520	2.060	3.090	7.220	6.190	5.150	5.670	5.670
PM	6.190	6.190	6.700	7.220	7.220	7.220	5.670	4.640	3.610	3.090	2.580	1.510
PM Peak FR WD SC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.000	0.500	0.500	0.500	0.500	1.500	4.500	6.500	6.000	5.000	5.000	5.500
PM	5.500	5.500	6.500	7.000	7.500	7.500	6.500	5.000	3.500	3.500	3.000	2.000
PM Peak Non-FR WD SC / PM Peak, Non-Freeway Weekday, Profile for Severe Congestion												
AM	0.990	0.500	0.500	0.500	0.500	1.490	3.470	5.450	5.450	4.950	4.950	5.450
PM	6.440	6.440	6.930	7.430	7.430	7.430	6.440	4.950	4.460	3.470	2.480	1.900
FR WE / Freeway Weekend Traffic Distribution Profile												
AM	2.000	1.500	1.000	0.500	0.500	1.000	2.000	3.000	3.500	5.000	5.500	6.500
PM	7.000	7.000	7.000	7.000	7.500	7.000	6.500	5.000	4.500	3.500	3.500	2.500
Non-FR WE / Non-Freeway Weekend Trafic Distribution Profile												
AM	1.980	1.490	0.990	0.500	0.500	0.990	1.490	2.480	3.470	4.950	5.940	6.930
PM	7.430	7.430	7.430	7.430	7.430	6.930	5.940	4.950	4.460	3.470	2.970	2.420
FR WD SC SS / Freeway Weekday traffic distribution profile for severe congestion and similar speeds												
AM	1.490	0.990	0.990	0.500	0.500	1.490	5.450	6.930	6.440	5.450	5.450	5.450
PM	5.450	5.940	5.940	6.440	6.930	6.440	5.450	4.460	3.470	3.470	2.970	1.910
Non-FR WD SCSS / Non-Freeway Weekday traffic distribution profile for severe congestion and similar spe												
AM	1.460	0.980	0.980	0.490	0.980	2.930	5.370	6.340	5.370	4.880	4.880	5.370
PM	5.370	5.370	5.370	5.850	6.340	6.340	5.850	4.880	4.390	4.390	3.410	2.410

Directionality of Traffic (percent of hourly traffic in principal direction*)

*Principal direction is the one with lower railroad milepost to the left of highway traffic.

Name / Description	12	1	2	3	4	5	6	7	8	9	10	11
Balanced / Equal traffic in each direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Commute 1 / Commuter traffic AM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00
Commute 2 / Commuter traffic PM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00	50.00	50.00

Default Costs for Grade Crossing Devices (thousands of constant dollars)

Device Type	O&M	Capital Expenditure	Other Lifecycle Cost
Passive	0.20	1.60	0.00
	(0.20)	(1.60)	(0.00)
Flashing Lights	1.80	74.80	0.00
	(1.80)	(74.80)	(0.00)
Flashing Lights with Gates	2.50	106.10	0.00
	(2.50)	(106.10)	(0.00)
Closure	0.00	20.00	0.00
	(0.00)	(20.00)	(0.00)
Separation	0.50	1,500.00	0.00
	(0.50)	(1,500.00)	(0.00)
New Technology 1	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 2	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 3	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Default Costs for Supplementary Safety Measures (thousands of constant dollars)

Supplementary Measure	O&M	Capital Expenditure	Other Lifecycle Cost
None	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
4 quadrant - no detection	3.50	244.00	0.00
	(3.50)	(3.50)	(3.50)
4 quadrant - with detection	5.00	260.00	0.00
	(5.00)	(5.00)	(5.00)
4 quadrant - with 60' medians	3.50	255.00	0.00
	(3.50)	(3.50)	(3.50)
Mountable curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
Barrier curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
One-way street	3.50	5.00	0.00
	(3.50)	(3.50)	(3.50)
Photo Enforcement	25.00	65.00	0.00
	(25.00)	(25.00)	(25.00)
Other type 1	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 2	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 3	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Percent Accidents by Type (for use in High Speed Rail model)

Train Strikes Highway Vehicle	Highway Vehicle Strikes Train
84.0	16.0
(84.0)	(16.0)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Train Strikes Highway Vehicle" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.0001270	0.0001110	0.00004000
	(0.0001270)	(0.0001110)	(0.00004000)
Train Fatalities	0.000005000	0.000010000	0.00004400
	(0.000005000)	(0.000010000)	(0.00004400)
% Accidents with Severe Derailment	0.00010000	0.0010000	0.007000
	(0.00010000)	(0.0010000)	(0.007000)
Added Severity with Severe Derailment	0.0002200	0.0002200	0.0002200
	(0.0002200)	(0.0002200)	(0.0002200)
Speeds of maximum severity (highway) mph	70	70	65
	(70)	(70)	(65)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Highway Vehicle Strikes Train" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.2170	0.1600	0.09100
	(0.2170)	(0.1600)	(0.09100)
Train Fatalities	0.010000	0.010000	0.010000
	(0.010000)	(0.010000)	(0.010000)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Vehicle Emissions Rates (grams of emissions per minute of idling)

Vehicle Type	VOC	CO	NOx	PM	SOx	CO2
Cars	0.3030	4.8599	0.0916	0.0000	0.0000	41.0652
	(0.3030)	(4.8599)	(0.0916)	(0.0000)	(0.0000)	(41.0652)
Buses	0.6655	11.8500	0.1830	0.0000	0.0000	87.5789
	(0.6655)	(11.8500)	(0.1830)	(0.0000)	(0.0000)	(87.5789)
Trucks	0.2559	3.1446	0.2754	0.0383	0.0001	107.4107
	(0.2559)	(3.1446)	(0.2754)	(0.0383)	(0.0001)	(107.4107)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Fuel Burn Rates (quantity consumed per minute of idling)

Vehicle Type	Fuel (gallons)	Oil (quarts)
Cars	0.009690	0.000626
	(0.009690)	(0.000626)
Buses	0.018411	0.001189
	(0.018411)	(0.001189)
Trucks	0.020670	0.001335
	(0.020670)	(0.001335)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Effectiveness Rates (rate of reduction in accidents with improvements)

Improvement	Single Track no more than 10 Trains	Multi-track no more than 10 Trains	Single Track more than 10 Trains	Multi-track more than 10 Trains
Passive to Flashing Lights	0.75 (0.75)	0.65 (0.65)	0.61 (0.61)	0.57 (0.57)
Passive to Flashing Lights with Gates	0.90 (0.90)	0.86 (0.86)	0.80 (0.80)	0.78 (0.78)
Flashing Lights to Gates	0.89 (0.89)	0.65 (0.65)	0.69 (0.69)	0.63 (0.63)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Supplementary Safety Measure Effectiveness Rates (rate of reduction in accidents with supplementary safety measure)

Supplementary Measure	Effectiveness
4 quadrant gate system - no presence detection	0.82 (0.82)
4 quadrant gate system - with presence detection	0.77 (0.77)
4 quadrant gate system - with Medians of at least 60 feet	0.92 (0.92)
Medians or channelization devices - mountable curbs	0.75 (0.75)
Medians or channelization devices - barrier curbs	0.80 (0.80)
One-way street	0.82 (0.82)
Photo enforcement	0.72 (0.72)
Other type 1	0.50 (0.50)
Other type 2	0.50 (0.50)
Other type 3	0.50 (0.50)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Diurnal Distributions (share of daily traffic in hour)

Name / Description		12	1	2	3	4	5	6	7	8	9	10	11
Uniform / Uniform													
	AM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167
	PM	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.167	4.159
AM Peak / AM Peak													
	AM	1.667	1.667	1.667	1.667	1.667	1.667	8.333	8.333	8.333	8.333	8.333	8.333
	PM	5.833	5.833	5.833	5.833	5.834	5.834	0.833	0.833	0.833	0.833	0.834	0.834
PM Peak / PM Peak													
	AM	0.833	0.833	0.833	0.833	0.833	0.833	5.833	5.833	5.833	5.833	5.833	5.833
	PM	8.333	8.333	8.333	8.333	8.334	8.334	1.667	1.667	1.667	1.667	1.668	1.668
Day Flat / Day Flat													
	AM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
	PM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
Night Flat / Night Flat													
	AM	6.667	6.667	6.667	6.667	6.666	6.666	1.667	1.667	1.667	1.667	1.666	1.666
	PM	1.667	1.667	1.667	1.667	1.666	1.666	6.667	6.667	6.667	6.667	6.666	6.666
AM Peak FR WD LC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	2.490	6.470	9.450	6.970	4.980	4.980	4.480
	PM	4.980	5.470	5.970	6.470	6.970	6.970	5.470	3.980	3.480	2.990	2.490	1.440
AM Peak Non-FR WD LC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Low Congestion													
	AM	0.990	0.490	0.490	0.490	0.990	2.460	4.430	8.370	6.900	4.930	4.930	5.420
	PM	6.400	6.400	6.400	6.900	6.900	6.400	4.930	4.430	3.450	2.960	2.460	1.480
PM Peak FR WD LC / PM, Peak Weekday, Traffic Distribution Profile for Low Congestion													
	AM	1.000	0.500	0.500	0.500	1.000	1.500	3.500	5.500	5.000	4.500	4.500	5.000
	PM	5.500	5.500	6.500	8.000	9.500	9.500	6.500	4.500	3.500	3.000	3.000	2.000
PM Peak Non-FR WD LC / PM Peak, Non-Freeway, Traffic Distribution Profile for Low Congestion													
	AM	0.980	0.490	0.490	0.490	0.490	0.980	2.450	4.410	4.410	4.410	4.900	5.880
	PM	6.860	6.370	6.860	8.330	9.310	9.310	6.370	4.900	3.920	2.940	2.450	2.000
AM Peak FR WD MC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	2.510	6.530	9.050	7.540	5.530	5.030	5.030
	PM	5.030	5.530	5.530	6.530	7.040	6.530	5.030	4.020	3.020	3.020	2.510	1.470
AM Peak Non-FR WD MC / AM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.010	0.500	0.500	0.500	1.010	1.510	4.520	7.540	7.040	5.030	5.030	5.530
	PM	6.530	6.530	5.530	7.040	7.040	7.040	5.530	4.520	3.520	3.020	2.510	1.470
PM Peak FR WD MC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Moderate Congestion													
	AM	1.000	0.500	0.500	0.500	0.500	1.500	4.000	6.000	5.500	4.500	4.500	5.000
	PM	5.500	5.500	6.500	7.500	9.000	9.000	6.500	4.500	3.500	3.500	3.000	2.000

PM Peak Non-FR WD MC / PM Peak, Non-Freeway Weekday, Traffic Distribution Profile for Moderate Congestio												
AM	1.020	0.510	0.510	0.510	0.510	1.020	1.520	4.570	4.570	4.570	5.080	6.090
PM	6.600	6.600	6.600	7.610	9.140	9.140	6.600	5.080	4.570	3.550	2.540	1.490
AM Peak FR WD SC / AM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.020	0.510	0.510	0.510	0.510	2.030	5.580	7.610	7.110	6.090	5.580	5.580
PM	5.580	5.580	6.090	6.600	6.600	6.600	5.580	4.570	3.050	3.050	2.540	1.520
AM Peak Non-FR WD SC / AM Peak Non-Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.030	0.520	0.520	0.520	0.520	2.060	3.090	7.220	6.190	5.150	5.670	5.670
PM	6.190	6.190	6.700	7.220	7.220	7.220	5.670	4.640	3.610	3.090	2.580	1.510
PM Peak FR WD SC / PM Peak, Freeway Weekday, Traffic Distribution Profile for Severe Congestion												
AM	1.000	0.500	0.500	0.500	0.500	1.500	4.500	6.500	6.000	5.000	5.000	5.500
PM	5.500	5.500	6.500	7.000	7.500	7.500	6.500	5.000	3.500	3.500	3.000	2.000
PM Peak Non-FR WD SC / PM Peak, Non-Freeway Weekday, Profile for Severe Congestion												
AM	0.990	0.500	0.500	0.500	0.500	1.490	3.470	5.450	5.450	4.950	4.950	5.450
PM	6.440	6.440	6.930	7.430	7.430	7.430	6.440	4.950	4.460	3.470	2.480	1.900
FR WE / Freeway Weekend Traffic Distribution Profile												
AM	2.000	1.500	1.000	0.500	0.500	1.000	2.000	3.000	3.500	5.000	5.500	6.500
PM	7.000	7.000	7.000	7.000	7.500	7.000	6.500	5.000	4.500	3.500	3.500	2.500
Non-FR WE / Non-Freeway Weekend Trafic Distribution Profile												
AM	1.980	1.490	0.990	0.500	0.500	0.990	1.490	2.480	3.470	4.950	5.940	6.930
PM	7.430	7.430	7.430	7.430	7.430	6.930	5.940	4.950	4.460	3.470	2.970	2.420
FR WD SC SS / Freeway Weekday traffic distribution profile for severe congestion and similar speeds												
AM	1.490	0.990	0.990	0.500	0.500	1.490	5.450	6.930	6.440	5.450	5.450	5.450
PM	5.450	5.940	5.940	6.440	6.930	6.440	5.450	4.460	3.470	3.470	2.970	1.910
Non-FR WD SCSS / Non-Freeway Weekday traffic distribution profile for severe congestion and similar spe												
AM	1.460	0.980	0.980	0.490	0.980	2.930	5.370	6.340	5.370	4.880	4.880	5.370
PM	5.370	5.370	5.370	5.850	6.340	6.340	5.850	4.880	4.390	4.390	3.410	2.410

Directionality of Traffic (percent of hourly traffic in principal direction*)

*Principal direction is the one with lower railroad milepost to the left of highway traffic.

Name / Description	12	1	2	3	4	5	6	7	8	9	10	11
Balanced / Equal traffic in each direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Commute 1 / Commuter traffic AM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00
Commute 2 / Commuter traffic PM greater in principal direction												
AM	50.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00	40.00	40.00	50.00	50.00
PM	50.00	50.00	50.00	50.00	60.00	60.00	60.00	60.00	50.00	50.00	50.00	50.00

Default Costs for Grade Crossing Devices (thousands of constant dollars)

Device Type	O&M	Capital Expenditure	Other Lifecycle Cost
Passive	0.20	1.60	0.00
	(0.20)	(1.60)	(0.00)
Flashing Lights	1.80	74.80	0.00
	(1.80)	(74.80)	(0.00)
Flashing Lights with Gates	2.50	106.10	0.00
	(2.50)	(106.10)	(0.00)
Closure	0.00	20.00	0.00
	(0.00)	(20.00)	(0.00)
Separation	0.50	1,500.00	0.00
	(0.50)	(1,500.00)	(0.00)
New Technology 1	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 2	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)
New Technology 3	5.00	280.00	0.00
	(5.00)	(280.00)	(0.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Default Costs for Supplementary Safety Measures (thousands of constant dollars)

Supplementary Measure	O&M	Capital Expenditure	Other Lifecycle Cost
None	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
4 quadrant - no detection	3.50	244.00	0.00
	(3.50)	(3.50)	(3.50)
4 quadrant - with detection	5.00	260.00	0.00
	(5.00)	(5.00)	(5.00)
4 quadrant - with 60' medians	3.50	255.00	0.00
	(3.50)	(3.50)	(3.50)
Mountable curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
Barrier curbs	3.50	15.00	0.00
	(3.50)	(3.50)	(3.50)
One-way street	3.50	5.00	0.00
	(3.50)	(3.50)	(3.50)
Photo Enforcement	25.00	65.00	0.00
	(25.00)	(25.00)	(25.00)
Other type 1	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 2	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)
Other type 3	5.00	50.00	0.00
	(5.00)	(5.00)	(5.00)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Percent Accidents by Type (for use in High Speed Rail model)

Train Strikes Highway Vehicle	Highway Vehicle Strikes Train
84.0	16.0
(84.0)	(16.0)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Train Strikes Highway Vehicle" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.0001270	0.0001110	0.00004000
	(0.0001270)	(0.0001110)	(0.00004000)
Train Fatalities	0.000005000	0.000010000	0.00004400
	(0.000005000)	(0.000010000)	(0.00004400)
% Accidents with Severe Derailment	0.00010000	0.0010000	0.007000
	(0.00010000)	(0.0010000)	(0.007000)
Added Severity with Severe Derailment	0.0002200	0.0002200	0.0002200
	(0.0002200)	(0.0002200)	(0.0002200)
Speeds of maximum severity (highway) mph	70	70	65
	(70)	(70)	(65)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

Coefficients for "Highway Vehicle Strikes Train" (for use in High Speed Rail Model)

Coefficient	Auto	Truck	Trailer
Highway Fatalities	0.2170	0.1600	0.09100
	(0.2170)	(0.1600)	(0.09100)
Train Fatalities	0.010000	0.010000	0.010000
	(0.010000)	(0.010000)	(0.010000)

Values in parentheses are Federal Railroad Administration default values that indicate national averages.

CAPITAL IMPROVEMENT PROGRAM FOR THE CORRIDOR

Total Corridor Capital Improvement Cost (thousands base year dollars)	Year	Base	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
			0.0	0.0	0.0	0.0	0.0	8888.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Milepost: 180.24 **ID:** 604322J **Description:** IAIS - 1ST ST

Active Devices at Crossing

	Year	Base	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Base Case: Gates		P	P	P	P	P	P	P	P													
Supp. Safety Device: None																						
Phase I: Gates																						
Supp. Safety Device: None																						
Phase II: Closure										P	P	P	P	P	P	P	P	P	P	P	P	P
Supp. Safety Device: None																						

Cost of Improvement (thous. base year dollars)

Device			0.0	0.0	0.0	0.0	0.0	8888.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Supp. Safety Device			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crossing Total			0.0	0.0	0.0	0.0	0.0	8888.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Milepost: 180.36 **ID:** 604324X **Description:** IAIS - 44TH STREET

Active Devices at Crossing

	Year	Base	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Base Case: Gates		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Supp. Safety Device: None																						
Phase I: Gates																						
Supp. Safety Device: None																						
Phase II: Gates																						
Supp. Safety Device: None																						

Cost of Improvement (thous. base year dollars)

Device			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Supp. Safety Device			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crossing Total			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CAPITAL IMPROVEMENT PROGRAM FOR THE CORRIDOR

Total Corridor Capital Improvement Cost (thousands base year dollars)	Year	Base	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
		0.0	0.0	0.0	0.0	0.0	0.0	8888.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Milepost: 180.24 **ID:** 604322J **Description:** IAIS - 1ST ST

Active Devices at Crossing

	Year	Base	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Base Case: Gates		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Supp. Safety Device: None																						
Phase I: Gates																						
Supp. Safety Device: None																						
Phase II: Gates																						
Supp. Safety Device: None																						

Cost of Improvement (thous. base year dollars)

	Base	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Device	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Supp. Safety Device	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crossing Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Milepost: 180.36 **ID:** 604324X **Description:** IAIS - 44TH STREET

Active Devices at Crossing

	Year	Base	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Base Case: Gates		P	P	P	P	P	P	P	P													
Supp. Safety Device: None																						
Phase I: Gates																						
Supp. Safety Device: None																						
Phase II: Closure										P	P	P	P	P	P	P	P	P	P	P	P	P
Supp. Safety Device: None																						

Cost of Improvement (thous. base year dollars)

	Base	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Device	0.0	0.0	0.0	0.0	0.0	0.0	8888.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Supp. Safety Device	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crossing Total	0.0	0.0	0.0	0.0	0.0	0.0	8888.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Total Corridor Capital Improvement Cost (thousands base year dollars)	Year	Base	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
			0.0	0.0	0.0	0.0	0.0	8888.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Milepost: 180.24 **ID:** 604322J **Description:** IAIS - 1ST ST

Active Devices at Crossing	Year	Base	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Base Case: Gates		P	P	P	P	P	P	P														
Supp. Safety Device: None																						
Phase I: Closure									P	P	P	P	P	P	P	P	P	P	P	P	P	P
Supp. Safety Device: None																						
Phase II: Closure																						
Supp. Safety Device: None																						

Cost of Improvement (thous. base year dollars)

Device			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Supp. Safety Device			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crossing Total			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Milepost: 180.36 **ID:** 604324X **Description:** IAIS - 44TH STREET

Active Devices at Crossing	Year	Base	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Base Case: Gates		P	P	P	P	P	P	P	P													
Supp. Safety Device: None																						
Phase I: Gates																						
Supp. Safety Device: None																						
Phase II: Closure										P	P	P	P	P	P	P	P	P	P	P	P	P
Supp. Safety Device: None																						

Cost of Improvement (thous. base year dollars)

Device			0.0	0.0	0.0	8888.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Supp. Safety Device			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crossing Total			0.0	0.0	0.0	8888.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Milepost: 180.30 **ID:** 000000A **Description:** New Crossing

Active Devices at Crossing

Year	Base	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Base Case: New Technology 1	P	P	P	P	P	P	P														
Supp. Safety Device: None																					
Phase I: Gates								P													
Supp. Safety Device: None																					
Phase II: Gates									P	P	P	P	P	P	P	P	P	P	P	P	P
Supp. Safety Device: 4 quad - detection																					

Cost of Improvement (thous. base year dollars)

Device	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Supp. Safety Device	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crossing Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Scenario ID	5	First Year	2020
Description	Rock Island Scenario	Last Year Near Term	2026
		Last Year	2050

ROCK ISLAND SCENARIO SCENARIO DATA

Variable Description	Prob. Distribution Type			
Rail Operations				
Rate of growth in passenger rail traffic, near term, %	Fixed Value	1.00		
Rate of growth in passenger rail traffic, long term, %	Fixed Value	1.00		
Passenger rail cars per train	Fixed Value	6.00		
Switch cars per train		**Min Value**		**Max Value**
	Uniform	6.00	8.00	
Average length of freight rail car, feet	Fixed Value	65.00		
Average length of passenger train rail car, feet	Fixed Value	40.00		
Average length of switch train car, feet	Fixed Value	65.00		
Freight rail cars per train		**Min Value**	**Most Likely**	**Max Value**
	Triangle	100.00	115.00	135.00
Rate of growth in freight rail traffic, near term, %		**Mean**	**Std. Deviation**	
	Normal	2.50	0.18	
Rate of growth in switch rail traffic, near term, %		**Mean**	**Std. Deviation**	
	Normal	2.50	0.18	
Rate of growth in freight rail traffic, long term, %		**Mean**	**Std. Deviation**	
	Normal	1.80	0.25	
Rate of growth in switch rail traffic, long term, %		**Mean**	**Std. Deviation**	
	Normal	1.80	0.25	

Variable Description	Prob. Distribution Type			
Highway				
Average % of auto trip costs that are GCX-related, %	Fixed Value	2.50		
Avg annual growth in hway auto traffic, near term, %		**Lower 10%**	**Median**	**Upper 10%**
	Skewed Bell	1.13	1.25	1.38
Avg annual growth in hway auto traffic, long term, %		**Lower 10%**	**Median**	**Upper 10%**
	Skewed Bell	1.13	1.25	1.38
Annualization factor	Fixed Value	280.00		
Avg bus vehicle occupancy		**Lower 10%**	**Median**	**Upper 10%**
	Skewed Bell	9.00	10.00	11.00
Average auto vehicle occupancy		**Lower 10%**	**Median**	**Upper 10%**
	Skewed Bell	1.48	1.64	1.80
Elasticity of auto AADT w.r.t. generalized cost of travel	Fixed Value	-0.10		
Avg annual growth in hway truck traffic, near term, %		**Lower 10%**	**Median**	**Upper 10%**
	Skewed Bell	1.13	1.25	1.38
Avg annual growth in hway bus traffic, near term, %		**Lower 10%**	**Median**	**Upper 10%**
	Skewed Bell	1.13	1.25	1.38
Avg annual growth in hway truck traffic, long term, %		**Lower 10%**	**Median**	**Upper 10%**
	Skewed Bell	1.13	1.25	1.38
Avg annual growth in hway bus traffic, long term, %		**Lower 10%**	**Median**	**Upper 10%**
	Skewed Bell	1.13	1.25	1.38

Variable Description	Prob. Distribution Type			
Social Costs				
Cost of PM emissions, thous $ / short ton	Fixed Value	332.41		
Cost of SOx emissions, thous $ / short ton	Fixed Value	42.95		
Cost of CO2 emissions, thous $ / short ton	Fixed Value	0.06		
Discount rate, %	Fixed Value	7.00		
% additional local benefits, %	Fixed Value	10.00		
Cost of a fatal accident, thous $	Fixed Value	12837.40		
Cost of an injury accident, thous $	Fixed Value	302.60		
Cost of a property damage only accident, thous $	Fixed Value	4.60		
Cost per fatality (for HSR Model), thous $	Fixed Value	9600.00		
Cost per injury (for HSR model), thous $	Fixed Value	1008.00		
Average out-of-pocket cost per accident (for HSR model), thous $	Fixed Value	33.30		
Value of time for auto travel, $ / hr	Fixed Value	17.80		
Cost of VOC emissions, thous $ / short ton	Fixed Value	1.84		
Base year gasoline fuel cost, $ / gal		**Lower 10%**	**Median**	**Upper 10%**
	Skewed Bell	2.30	2.50	2.70
Value of truck driver time, $ / hr	Fixed Value	32.00		
Cost of NOx emissions, thous $ / short ton	Fixed Value	17.18		
Cost of CO emissions, thous $ / short ton	Fixed Value	1.14		
Base year diesel fuel cost, $ / gal		**Lower 10%**	**Median**	**Upper 10%**
	Skewed Bell	2.60	2.80	3.00

Variable Description	Prob. Distribution Type	
Social Costs		
Base year oil cost, $ / qt	Fixed Value	4.50

Variable Description	Prob. Distribution Type	
Price Inflation		
Fuel price inflation, 2022, %,	Fixed Value	59.90
Fuel price inflation, 2023, %,	Fixed Value	2.40
Fuel price inflation, 2024, %,	Fixed Value	2.40
Fuel price inflation, 2025, %,	Fixed Value	2.40
Fuel price inflation, 2026, %,	Fixed Value	2.40
Fuel price inflation, 2027, %,	Fixed Value	2.40
Fuel price inflation, 2028, %,	Fixed Value	2.40
Fuel price inflation, 2029, %,	Fixed Value	2.40
Fuel price inflation, 2030, %,	Fixed Value	2.40
Fuel price inflation, 2031, %,	Fixed Value	2.40
Fuel price inflation, 2032, %,	Fixed Value	2.40
Fuel price inflation, 2033, %,	Fixed Value	2.40
Fuel price inflation, 2034, %,	Fixed Value	2.40
Fuel price inflation, 2035, %,	Fixed Value	2.40
Fuel price inflation, 2036, %,	Fixed Value	2.40
Fuel price inflation, 2037, %,	Fixed Value	2.40
Fuel price inflation, 2038, %,	Fixed Value	2.40
Fuel price inflation, 2039, %,	Fixed Value	2.40

Variable Description	Prob. Distribution Type	
Price Inflation		
Fuel price inflation, 2040, %,	Fixed Value	2.40
Fuel price inflation, 2041, %,	Fixed Value	2.40
Fuel price inflation, 2042, %,	Fixed Value	2.40
Fuel price inflation, 2043, %,	Fixed Value	2.40
Fuel price inflation, 2044, %,	Fixed Value	2.40
Fuel price inflation, 2045, %,	Fixed Value	2.40
Fuel price inflation, 2046, %,	Fixed Value	2.40
Fuel price inflation, 2047, %,	Fixed Value	2.40
Fuel price inflation, 2048, %,	Fixed Value	2.40
Fuel price inflation, 2049, %,	Fixed Value	2.40
Fuel price inflation, 2050, %,	Fixed Value	2.40
General price inflation, 2027, %,	Fixed Value	2.00
General price inflation, 2028, %,	Fixed Value	2.00
General price inflation, 2029, %,	Fixed Value	2.00
General price inflation, 2030, %,	Fixed Value	2.00
General price inflation, 2031, %,	Fixed Value	2.00
General price inflation, 2032, %,	Fixed Value	2.00
General price inflation, 2033, %,	Fixed Value	2.00

Variable Description	Prob. Distribution Type	
Price Inflation		
General price inflation, 2034, %,	Fixed Value	2.00
General price inflation, 2035, %,	Fixed Value	2.00
General price inflation, 2036, %,	Fixed Value	2.00
General price inflation, 2037, %,	Fixed Value	2.00
General price inflation, 2038, %,	Fixed Value	2.00
General price inflation, 2039, %,	Fixed Value	2.00
General price inflation, 2040, %,	Fixed Value	2.00
General price inflation, 2041, %,	Fixed Value	2.00
General price inflation, 2042, %,	Fixed Value	2.00
General price inflation, 2043, %,	Fixed Value	2.00
General price inflation, 2044, %,	Fixed Value	2.00
General price inflation, 2045, %,	Fixed Value	2.00
General price inflation, 2046, %,	Fixed Value	2.00
General price inflation, 2047, %,	Fixed Value	2.00
General price inflation, 2048, %,	Fixed Value	2.00
General price inflation, 2049, %,	Fixed Value	2.00
General price inflation, 2050, %,	Fixed Value	2.00
General price inflation, 2020, %,	Fixed Value	1.40

Variable Description	Prob. Distribution Type	
Price Inflation		
General price inflation, 2021, %,	Fixed Value	5.00
Fuel price inflation, 2020, %,	Fixed Value	0.00
Fuel price inflation, 2021, %,	Fixed Value	49.60
General price inflation, 2022, %,	Fixed Value	9.00
General price inflation, 2023, %,	Fixed Value	2.80
General price inflation, 2024, %,	Fixed Value	2.70
General price inflation, 2025, %,	Fixed Value	2.00
General price inflation, 2026, %,	Fixed Value	2.00

Results file:	Placeholder - Corridor Model	**Number of Trials:**	5000
Corridor:		**Random Seed:**	1
Scenario:	Rock Island Scenario	**Date/Time of Simulation:**	06-Oct-2022 11:12 am

Result No.: **Result Variable Description**

Percentile Summary | **Summary Statistics**

1 Safety benefits, thous $ PV

1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
24.7797	25.0189	25.1533	25.3095	25.41	25.5051	25.5889	0.34433	-0.150506	0.894017

50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**
25.5914	25.6778	25.7712	25.8781	26.0178	26.1491	26.3865	22.7389	26.7476

2 Travel time savings, thous $ PV

1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
39.985	44.318	47.0696	50.4535	53.2278	55.7049	58.739	9.51639	0.383098	0.109601

50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**
58.0218	60.5464	63.187	66.6848	71.4129	75.6632	83.5147	16.1339	101.074

3 Environmental benefits, thous $ PV

1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
1.23573	1.35423	1.41623	1.51165	1.57469	1.64417	1.72352	0.245149	0.315295	-0.125489

50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**
1.70656	1.77321	1.84129	1.93009	2.0516	2.15404	2.33747	0.660706	2.55242

4 Veh operating cost benefit, thous $ PV

1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
3.62689	4.00576	4.23542	4.50703	4.73208	4.94004	5.20585	0.801903	0.392368	0.061673

50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**
5.14794	5.34539	5.59957	5.87532	6.26377	6.6075	7.31984	1.80355	8.28601

5 Network benefits, thous $ PV

1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
0	0	0	0	0	0	0	0		

50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**
0	0	0	0	0	0	0	0	0

6 Total benefits, thous $ PV

1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
410.882	416.054	419.066	422.817	425.849	428.581	431.95	10.5165	0.367363	0.110128

50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**
431.244	434.005	436.923	440.714	446.036	450.569	459.427	382.133	476.877

7 benefits from induced trips, thous $ PV

1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
0.012432	0.013212	0.013643	0.014224	0.014668	0.015079	0.0156	0.001607	0.390305	0.147763

50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**
0.015483	0.015895	0.016344	0.016947	0.017767	0.018464	0.019816	0.008253	0.022547

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
8	disbenefits from induced trips, thous $ PV										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		-0.330397	-0.307748	-0.295781	-0.280893	-0.270333	-0.261735	-0.256038	0.029439	-0.338144	-0.116742
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		-0.253859	-0.246462	-0.238028	-0.230595	-0.2199	-0.211552	-0.196928	-0.357661		-0.145465
9	investment salvage value, thous $ PV										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		340.933	340.933	340.933	340.933	340.933	340.933	340.933	0		
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		340.933	340.933	340.933	340.933	340.933	340.933	340.933	340.933		340.933
10	Total costs, thous $ PV										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	0		
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	5535.16		5535.16
11	Net benefits, thous $ PV										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		-5124.28	-5119.11	-5116.09	-5112.34	-5109.31	-5106.58	-5103.21	10.5165	0.367362	0.110127
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		-5103.92	-5101.15	-5098.24	-5094.44	-5089.12	-5084.59	-5075.73	-5153.03		-5058.28
12	Benefit-cost ratio										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		0.074231	0.075166	0.07571	0.076387	0.076935	0.077429	0.078038	0.0019	0.367363	0.110128
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		0.07791	0.078409	0.078936	0.079621	0.080582	0.081401	0.083002	0.069037		0.086154
13	Rate of return (constant dollars), %										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		-4.97858	-4.95957	-4.94855	-4.93332	-4.92292	-4.91281	-4.8993	0.040395	0.423804	0.278379
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		-4.90233	-4.89179	-4.88087	-4.86617	-4.84498	-4.82744	-4.79161	-5.09059		-4.71686
14	Local benefits (not included in summary), thous $ PV										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		41.0882	41.6054	41.9066	42.2817	42.5849	42.8581	43.195	1.05165	0.367363	0.110128
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		43.1244	43.4005	43.6923	44.0714	44.6036	45.0569	45.9426	38.2133		47.6877
15	Safety Benefit, GCX 1, thous $ PV, MP 180.24										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		24.7476	24.9967	25.1331	25.2964	25.3993	25.497	25.5832	0.355285	-0.151993	0.893642
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		25.5876	25.6734	25.7711	25.8821	26.025	26.1596	26.4035	22.6458		26.7781

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
16	Safety Benefit, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		-0.020723	-0.013306	-0.008919	-0.00398	-0.00029	0.002705	0.005735	0.011717	0.18339	0.733614
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0.005451	0.008623	0.011568	0.015172	0.020472	0.02547	0.035087	-0.035488		0.093081
17	Travel Time Savings, GCX 1, thous $ PV, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		39.985	44.318	47.0696	50.4535	53.2278	55.7049	58.739	9.51639	0.383098	0.109601
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		58.0218	60.5464	63.187	66.6848	71.4129	75.6632	83.5147	16.1339		101.074
18	Travel Time Savings, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		0
19	Environmental Benefit, GCX 1, thous $ PV, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		1.23573	1.35423	1.41623	1.51165	1.57469	1.64417	1.72352	0.245149	0.315295	-0.125489
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		1.70656	1.77321	1.84129	1.93009	2.0516	2.15404	2.33747	0.660706		2.55242
20	Environmental Benefit, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		0
21	Benefit Veh Op Cost, GCX 1, thous $ PV, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		3.62689	4.00576	4.23542	4.50703	4.73208	4.94004	5.20585	0.801903	0.392368	0.061673
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		5.14794	5.34539	5.59957	5.87532	6.26377	6.6075	7.31984	1.80355		8.28601
22	Benefit Veh Op Cost, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		0
23	Network Benefits, GCX 1, thous $ PV, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		0

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
24	Network Benefits, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
25	Total Benefits, GCX 1, thous $ PV, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		70.1906	75.2768	78.3168	82.0901	85.1318	87.8719	91.2516	10.5446	0.366974	0.110208
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		90.5446	93.2995	96.2588	100.041	105.352	109.928	118.814	41.244	136.272	
26	Total Benefits, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		-0.020723	-0.013306	-0.008919	-0.00398	-0.00029	0.002705	0.005735	0.011717	0.18339	0.733614
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0.005451	0.008623	0.011568	0.015172	0.020472	0.02547	0.035087	-0.035488	0.093081	
27	Total Costs, GCX 1, thous $ PV, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	
28	Total Costs, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
29	Net Benefit thous $ PV, 600 1, 1, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		-5464.97	-5459.88	-5456.84	-5453.07	-5450.03	-5447.29	-5443.91	10.5446	0.366975	0.110211
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		-5444.61	-5441.86	-5438.9	-5435.12	-5429.81	-5425.23	-5416.35	-5493.92	-5398.89	
30	Net Benefit thous $ PV, 600 2, 1, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		-0.020723	-0.013306	-0.008919	-0.00398	-0.00029	0.002705	0.005735	0.011717	0.18339	0.733614
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0.005451	0.008623	0.011568	0.015172	0.020472	0.02547	0.035087	-0.035488	0.093081	
31	Decrease in pred. fatal acc., first year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
32	Decrease in pred. fatal acc., last year near term										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0.000212	0.000214	0.000214	0.000215	0.000216	0.000216	0.000216	2E-06	-0.757737	1.55421
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0.000217	0.000217	0.000217	0.000218	0.000218	0.000219	0.000219	0.000205		0.000221
33	Decrease in pred. fatal acc., last year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0.00027	0.000275	0.000278	0.000282	0.000285	0.000287	0.000289	9E-06	0.042222	0.28869
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0.000289	0.000291	0.000294	0.000297	0.0003	0.000304	0.000311	0.000232		0.000318
34	Decrease in pred. injury acc., first year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		0
35	Decrease in pred. injury acc., last year near term										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0.000539	0.000543	0.000545	0.000547	0.000549	0.00055	0.00055	4E-06	-0.787412	1.64172
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0.000551	0.000552	0.000552	0.000554	0.000555	0.000556	0.000558	0.000521		0.000561
36	Decrease in pred. injury acc., last year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0.000687	0.000702	0.000709	0.000718	0.000725	0.000731	0.000737	2.2E-05	0.02562	0.315776
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0.000736	0.000742	0.000748	0.000755	0.000764	0.000772	0.000789	0.000591		0.00081
37	Decrease in pred. PDO acc., first year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		1E-06
38	Decrease in pred. PDO acc., last year near term										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0.00054	0.000544	0.000546	0.000548	0.000549	0.00055	0.00055	4E-06	-0.750698	1.56819
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0.000551	0.000551	0.000552	0.000553	0.000554	0.000555	0.000557	0.000523		0.00056
39	Decrease in pred. PDO acc., last year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0.000694	0.000707	0.000714	0.000722	0.000728	0.000733	0.000738	1.9E-05	0.002161	0.349286
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0.000738	0.000743	0.000748	0.000755	0.000762	0.00077	0.000784	0.000607		0.000801

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
40	Decrease in pred.. fatalities highway, first year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
41	Decrease in pred. fatalities highway, last year near term										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
42	Decrease in pred. fatalities highway, last year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
43	Decrease in pred. fatalities train, first year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
44	Decrease in pred. fatalities train, last year near term										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
45	Decrease in pred. fatalities train, last year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
46	Decrease in pred. injuries highway, first year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
47	Decrease in pred. injuries highway, last year near term										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	

Result No.:	Result Variable Description	Percentile Summary							Summary Statistics			
48	Decrease in pred. injuries highway, last year											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
49	Decrease in pred. injuries train, first year											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
50	Decrease in pred. injuries train, last year near term											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
51	Decrease in pred. injuries train, last year											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
52	Decrease in pred. accidents, first year											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
53	Decrease in pred. accidents, last year near term											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
54	Decrease in pred. accidents, last year											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
55	Decrease in delay auto, first year, veh-hours											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	

Result No.:	Result Variable Description	Percentile Summary							Summary Statistics			
56	Decrease in delay auto, last year near term, veh-hours											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
57	Decrease in delay auto, last year, veh-hours											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		335.916	379.022	401.316	431.882	456.958	478.891		511.256	93.029	0.583709	0.498567
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		500.712	524.444	550.744	585.937	635.307	682.045	760.88	154.11		922.938	
58	Decrease in delay trucks, first year, veh-hours											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
59	Decrease in delay trucks, last year near term, veh-hours											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
60	Decrease in delay trucks, last year, veh-hours											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
61	Decrease in delay buses, first year, veh-hours											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
62	Decrease in delay buses, last year near term, veh-hours											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
63	Decrease in delay buses, last year, veh-hours											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
64	Decrease in gas consumption, first year, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
65	Decrease in gas consumption, last year near term, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
66	Decrease in gas consumption, last year, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		197.302	222.352	235.476	253.258	267.858	280.697	299.632	54.3853	0.586528	0.505998
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		293.58	307.427	322.626	343.281	372.334	399.526	445.691	90.6367	540.578	
67	Decrease in diesel consumption, first year, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
68	Decrease in diesel consumption, last year near term, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
69	Decrease in diesel consumption, last year, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
70	Decrease in oil consumption, first year, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
71	Decrease in oil consumption, last year near term, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
72	Decrease in oil consumption, last year, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		12.7463	14.3645	15.2124	16.3612	17.3043	18.1338	19.357	3.51344	0.586528	0.505998
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		18.966	19.8606	20.8425	22.1769	24.0538	25.8105	28.7928	5.85537	34.9228	
73	Decrease in CO emissions, first year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
74	Decrease in CO emissions, last year near term, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
75	Decrease in CO emissions, last year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		98.9537	111.517	118.099	127.017	134.339	140.779	150.275	27.2761	0.586528	0.505998
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		147.24	154.185	161.808	172.167	186.738	200.376	223.529	45.4573	271.118	
76	Decrease in VOC emissions, first year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
77	Decrease in VOC emissions, last year near term, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
78	Decrease in VOC emissions, last year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		6.16921	6.95246	7.36282	7.91883	8.37531	8.77677	9.36882	1.70051	0.586528	0.505998
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		9.17959	9.61256	10.0878	10.7336	11.6421	12.4923	13.9358	2.83401	16.9027	
79	Decrease in NOx emissions, first year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
80	Decrease in NOx emissions, last year near term, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
81	Decrease in NOx emissions, last year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		1.86419	2.10087	2.22487	2.39288	2.53082	2.65213	2.83104	0.513854	0.586528	0.505999
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		2.77386	2.90469	3.0483	3.24345	3.51796	3.77488	4.21106	0.856372	5.10759	
82	Decrease in PM emissions, first year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
83	Decrease in PM emissions, last year near term, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
84	Decrease in PM emissions, last year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
85	Decrease in SOX emissions, first year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
86	Decrease in SOX emissions, last year near term, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
87	Decrease in SOX emissions, last year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
88	Decrease in CO2 emissions, first year, kg										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		0	0	0	0	0	0	0	0		
		50%	60%	70%	80%	90%	95%	99%	Minimum	Maximum	
		0	0	0	0	0	0	0	0	0	
89	Decrease in CO2 emissions, last year near term, kg										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		0	0	0	0	0	0	0	0		
		50%	60%	70%	80%	90%	95%	99%	Minimum	Maximum	
		0	0	0	0	0	0	0	0	0	
90	Decrease in CO2 emissions, last year, kg										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		836.147	942.305	997.924	1073.28	1135.15	1189.56	1269.81	230.48	0.586528	0.505998
		50%	60%	70%	80%	90%	95%	99%	Minimum	Maximum	
		1244.16	1302.84	1367.26	1454.79	1577.91	1693.15	1888.79	384.109	2290.91	
91	Salvage value, GCX 1, thous $ PV, MP 180.24										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		340.933	340.933	340.933	340.933	340.933	340.933	340.933	0		
		50%	60%	70%	80%	90%	95%	99%	Minimum	Maximum	
		340.933	340.933	340.933	340.933	340.933	340.933	340.933	340.933	340.933	
92	Salvage value, GCX 2, thous $ PV, MP 180.36										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		0	0	0	0	0	0	0	0		
		50%	60%	70%	80%	90%	95%	99%	Minimum	Maximum	
		0	0	0	0	0	0	0	0	0	
93	Max queue length first year, GCX 1, PCE, MP 180.24										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		1.85234	1.89579	1.92693	1.97248	2.00814	2.03755	2.07115	0.109936	0.14179	-0.582709
		50%	60%	70%	80%	90%	95%	99%	Minimum	Maximum	
		2.065	2.09575	2.13034	2.17166	2.22431	2.26215	2.31423	1.78415	2.35902	
94	Max queue length first year, GCX 2, PCE, MP 180.36										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		10.4013	10.653	10.834	11.0954	11.2983	11.4707	11.664	0.634181	0.141609	-0.58363
		50%	60%	70%	80%	90%	95%	99%	Minimum	Maximum	
		11.6278	11.8082	12.0044	12.2428	12.5479	12.7644	13.0709	10.004	13.3199	
95	Max queue length, l.y.n.t, GCX 1, PCE, MP 180.24										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		2.10896	2.18278	2.22217	2.27637	2.32046	2.35942	2.39904	0.137971	0.104406	-0.343767
		50%	60%	70%	80%	90%	95%	99%	Minimum	Maximum	
		2.39404	2.43156	2.47324	2.521	2.58574	2.63	2.71216	1.82879	2.83384	

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
96	Max queue length, l.y.n.t, GCX 2, PCE, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		11.9635	12.3702	12.5967	12.9111	13.1679	13.3825	13.6172	0.793376	0.114445	-0.363678
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		13.5856	13.8038	14.0471	14.3172	14.6909	14.9536	15.4303	10.2682	16.0183	
97	Max queue length, last year, GCX 1, PCE, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		2.98909	3.24107	3.38598	3.54922	3.67158	3.78415	3.91344	0.429729	0.277344	0.130367
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		3.89106	4.00053	4.12541	4.26748	4.47349	4.65881	5.01025	2.11506	5.72798	
98	Max queue length, last year, GCX 2, PCE, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		17.7358	19.199	19.9842	20.9421	21.6369	22.3183	23.0682	2.51978	0.301701	0.178944
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		22.907	23.5953	24.3148	25.1189	26.3781	27.4437	29.5961	11.9694	33.6661	

Results file:	Placeholder - Corridor Model	**Number of Trials:**	5000
Corridor:		**Random Seed:**	1
Scenario:	Rock Island Scenario	**Date/Time of Simulation:**	06-Oct-2022 11:43 am

Result No.: **Result Variable Description**

Percentile Summary | **Summary Statistics**

1 Safety benefits, thous $ PV

1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
16.1367	16.2545	16.316	16.3965	16.4477	16.4985	16.5415	0.177402	-0.198225	1.71014

50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**
16.5413	16.5882	16.6343	16.6891	16.7697	16.8301	16.9504	14.8167	17.1895

2 Travel time savings, thous $ PV

1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
142.572	153.207	159.553	169.343	176.697	183.498	191.789	25.523	0.316784	-0.138164

50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**
189.943	197.204	204.48	213.738	226.061	236.59	255.348	76.752	281.989

3 Environmental benefits, thous $ PV

1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
8.00226	8.56583	8.93888	9.44291	9.81557	10.1604	10.6106	1.33685	0.302608	-0.17163

50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**
10.5271	10.8961	11.2822	11.7409	12.4248	12.9705	13.9759	4.79348	15.3737

4 Veh operating cost benefit, thous $ PV

1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
21.1284	22.8117	23.8747	25.2671	26.3836	27.3358	28.6504	3.85553	0.358317	-0.005727

50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**
28.4129	29.3789	30.5542	31.914	33.7848	35.3783	38.4752	12.2328	44.5165

5 Network benefits, thous $ PV

1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
-0.150101	-0.116233	-0.099373	-0.081068	-0.067017	-0.055428	-0.049218	0.037039	-0.652688	0.12142

50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**
-0.045106	-0.035161	-0.025005	-0.013256	0	0	0	-0.230816	0.012152

6 Total benefits, thous $ PV

1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
529.806	542.343	549.97	561.852	570.257	578.104	588.323	30.3773	0.314143	-0.134928

50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**
586.364	594.769	603.642	614.294	628.578	641.143	663.648	449.454	697.941

7 benefits from induced trips, thous $ PV

1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
0.012608	0.013816	0.014682	0.015843	0.016725	0.017512	0.018595	0.003162	0.430607	0.092026

50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**
0.018342	0.019179	0.020148	0.021242	0.022845	0.024046	0.026778	0.006636	0.032492

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
8	disbenefits from induced trips, thous $ PV										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		-0.228023	-0.211156	-0.20242	-0.18986	-0.18173	-0.175022	-0.170264	0.023326	-0.373749	-0.150997
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		-0.168278	-0.161952	-0.156477	-0.149703	-0.140821	-0.134786	-0.126564	-0.256955		-0.080965
9	investment salvage value, thous $ PV										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		340.933	340.933	340.933	340.933	340.933	340.933	340.933	0		
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		340.933	340.933	340.933	340.933	340.933	340.933	340.933	340.933		340.933
10	Total costs, thous $ PV										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	0		
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	5535.16		5535.16
11	Net benefits, thous $ PV										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		-5005.35	-4992.82	-4985.19	-4973.31	-4964.9	-4957.06	-4946.84	30.3773	0.314143	-0.134928
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		-4948.79	-4940.39	-4931.52	-4920.87	-4906.58	-4894.02	-4871.51	-5085.71		-4837.22
12	Benefit-cost ratio										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		0.095716	0.097981	0.099359	0.101506	0.103025	0.104442	0.106288	0.005488	0.314143	-0.134928
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		0.105935	0.107453	0.109056	0.11098	0.113561	0.115831	0.119897	0.0812		0.126092
13	Rate of return (constant dollars), %										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		-4.57835	-4.52551	-4.49692	-4.45529	-4.42456	-4.39735	-4.36081	0.108699	0.330828	0.027886
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		-4.36727	-4.33827	-4.30688	-4.26919	-4.21636	-4.17198	-4.07953	-4.8883		-3.9421
14	Local benefits (not included in summary), thous $ PV										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		52.9806	54.2343	54.997	56.1852	57.0257	57.8104	58.8323	3.03773	0.314143	-0.134929
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		58.6364	59.4769	60.3642	61.4294	62.8578	64.1143	66.3648	44.9454		69.7941
15	Safety Benefit, GCX 1, thous $ PV, MP 180.24										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		-14.3696	-14.2145	-14.1354	-14.0457	-13.978	-13.9186	-13.8645	0.215901	0.130694	0.806409
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		-13.8648	-13.8114	-13.7526	-13.6886	-13.5909	-13.5054	-13.3585	-14.5904		-12.1188

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
16	Safety Benefit, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		29.4997	29.7696	29.9136	30.0873	30.202	30.3089	30.406	0.389408	-0.161111	1.19841
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		30.4087	30.5074	30.6108	30.7266	30.8993	31.0421	31.3078	26.9355		31.7724
17	Travel Time Savings, GCX 1, thous $ PV, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		-531.596	-488.397	-464.411	-435.71	-416.558	-401.37	-390.492	55.372	-0.355785	0.143925
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		-386.865	-373.222	-358.45	-342.524	-322.309	-305.968	-278.371	-639.861		-134.774
18	Travel Time Savings, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		426.565	460.906	484.219	513.291	535.968	556.915	582.28	79.3878	0.341594	0.055547
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		577.267	598.664	620.328	649.126	688.097	722.092	786.571	211.526		917.972
19	Environmental Benefit, GCX 1, thous $ PV, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		-15.0625	-14.0099	-13.4296	-12.7485	-12.2352	-11.8562	-11.5635	1.39734	-0.304817	-0.097215
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		-11.4801	-11.1137	-10.7351	-10.3635	-9.82365	-9.43138	-8.72363	-16.2591		-5.51831
20	Environmental Benefit, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		16.7345	18.0247	18.7864	19.8139	20.5723	21.2793	22.1741	2.72053	0.301334	-0.139516
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		21.9963	22.7428	23.5198	24.4797	25.8032	26.928	29.0599	10.3118		31.6328
21	Benefit Veh Op Cost, GCX 1, thous $ PV, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		-47.313	-43.1966	-41.1158	-38.8951	-37.2768	-35.8972	-34.9903	4.69049	-0.372969	0.084445
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		-34.616	-33.4514	-32.2308	-30.9318	-29.2426	-27.8832	-25.5709	-53.5767		-15.1015
22	Benefit Veh Op Cost, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		47.3524	50.9189	53.5675	56.4473	58.7122	60.8942	63.6407	8.32443	0.361811	0.025214
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		63.1157	65.24	67.8435	70.5357	74.6805	78.1663	85.6365	27.3344		94.6241
23	Network Benefits, GCX 1, thous $ PV, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		-0.657785	-0.473257	-0.391789	-0.296931	-0.228126	-0.179483	-0.172165	0.156635	-1.15277	1.31457
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		-0.135666	-0.096254	-0.061588	-0.02829	-0.001302	0	0	-1.05258		0

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
24	Network Benefits, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0.010814	0.032214	0.05881	0.122947	0.124505	1.33309	1.84537
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0.08829	0.123003	0.16321	0.217191	0.297403	0.371167	0.523527	0		0.85939
25	Total Benefits, GCX 1, thous $ PV, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		-604.008	-557.854	-531.905	-500.942	-479.522	-462.912	-451.082	60.3468	-0.354392	0.127797
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		-446.957	-432.521	-415.946	-398.838	-376.534	-358.602	-329.542	-712.662		-167.513
26	Total Benefits, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		520.493	562.457	588.314	620.64	646.239	670.211	698.624	89.0939	0.337708	0.035903
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		693.62	717.194	741.535	772.673	817.34	855.622	926.549	276.108		1058.61
27	Total Costs, GCX 1, thous $ PV, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		0
28	Total Costs, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	5535.16		5535.16
29	Net Benefit thous $ PV, 600 1, 1, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		-604.008	-557.854	-531.905	-500.942	-479.522	-462.912	-451.082	60.3468	-0.354392	0.127797
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		-446.957	-432.521	-415.946	-398.838	-376.534	-358.602	-329.542	-712.662		-167.513
30	Net Benefit thous $ PV, 600 2, 1, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		-5014.67	-4972.7	-4946.85	-4914.52	-4888.92	-4864.95	-4836.54	89.0939	0.337708	0.035903
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		-4841.54	-4817.97	-4793.62	-4762.49	-4717.82	-4679.54	-4608.61	-5259.05		-4476.55
31	Decrease in pred. fatal acc., first year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		0

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
32	Decrease in pred. fatal acc., last year near term										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0.000252	0.000254	0.000255	0.000256	0.000256	0.000257	0.000257	2E-06	-0.699578	1.63799
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0.000257	0.000257	0.000258	0.000258	0.000259	0.000259	0.00026	0.000243		0.000262
33	Decrease in pred. fatal acc., last year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0.000164	0.000167	0.000169	0.00017	0.000172	0.000173	0.000174	4E-06	0.006829	0.610062
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0.000174	0.000175	0.000176	0.000178	0.00018	0.000181	0.000184	0.000141		0.000189
34	Decrease in pred. injury acc., first year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		0
35	Decrease in pred. injury acc., last year near term										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0.000658	0.000662	0.000664	0.000667	0.000668	0.000669	0.00067	4E-06	-0.730473	1.74274
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0.00067	0.000671	0.000673	0.000674	0.000675	0.000676	0.000679	0.000634		0.000682
36	Decrease in pred. injury acc., last year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0.000439	0.000447	0.000451	0.000456	0.000459	0.000462	0.000465	1.1E-05	-0.00807	0.669683
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0.000465	0.000468	0.000471	0.000475	0.00048	0.000484	0.000493	0.000376		0.000508
37	Decrease in pred. PDO acc., first year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		1E-06
38	Decrease in pred. PDO acc., last year near term										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0.002819	0.002839	0.002848	0.002859	0.002865	0.00287	0.002872	1.9E-05	-0.764768	1.84644
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0.002874	0.002879	0.002883	0.002888	0.002895	0.0029	0.002909	0.002715		0.002926
39	Decrease in pred. PDO acc., last year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0.003206	0.003267	0.0033	0.003338	0.003369	0.003392	0.003417	9.3E-05	0.000206	0.54122
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0.003415	0.003439	0.003464	0.003494	0.003535	0.00357	0.003638	0.00273		0.003784

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
40	Decrease in pred.. fatalities highway, first year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
41	Decrease in pred. fatalities highway, last year near term										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
42	Decrease in pred. fatalities highway, last year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
43	Decrease in pred. fatalities train, first year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
44	Decrease in pred. fatalities train, last year near term										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
45	Decrease in pred. fatalities train, last year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
46	Decrease in pred. injuries highway, first year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
47	Decrease in pred. injuries highway, last year near term										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	

Result No.:	Result Variable Description	Percentile Summary							Summary Statistics			
48	Decrease in pred. injuries highway, last year											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
49	Decrease in pred. injuries train, first year											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
50	Decrease in pred. injuries train, last year near term											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
51	Decrease in pred. injuries train, last year											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
52	Decrease in pred. accidents, first year											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
53	Decrease in pred. accidents, last year near term											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
54	Decrease in pred. accidents, last year											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
55	Decrease in delay auto, first year, veh-hours											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
56	Decrease in delay auto, last year near term, veh-hours										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
57	Decrease in delay auto, last year, veh-hours										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		430.967	476.853	507.488	549.554	582.537	610.422	647.869	113.39	0.458321	0.327502
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		639.516	669.181	702.364	740.972	796.829	847.739	942.972	207.206	1140.02	
58	Decrease in delay trucks, first year, veh-hours										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
59	Decrease in delay trucks, last year near term, veh-hours										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
60	Decrease in delay trucks, last year, veh-hours										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		607.785	676.29	714.876	762.431	801.584	837.489	883.834	141.894	0.483101	0.351905
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		870.944	907.349	947.461	999.592	1072.73	1141.93	1261.64	314.526	1496.73	
61	Decrease in delay buses, first year, veh-hours										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
62	Decrease in delay buses, last year near term, veh-hours										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
63	Decrease in delay buses, last year, veh-hours										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
64	Decrease in gas consumption, first year, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
65	Decrease in gas consumption, last year near term, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
66	Decrease in gas consumption, last year, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		247.053	273.479	290.964	315.616	334.468	350.734	372.301	65.8259	0.45577	0.324091
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		367.269	384.892	404.25	426.666	458.183	488.319	542.741	120.059	654.663	
67	Decrease in diesel consumption, first year, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
68	Decrease in diesel consumption, last year near term, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
69	Decrease in diesel consumption, last year, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		765.855	854.831	904.314	965.309	1014.25	1060.38	1119.54	180.92	0.487859	0.362229
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		1102.75	1148.96	1201.13	1266.51	1360.81	1447.94	1604.37	395.462	1901.47	
70	Decrease in oil consumption, first year, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
71	Decrease in oil consumption, last year near term, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
72	Decrease in oil consumption, last year, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		67.2007	74.0057	78.1302	83.1419	87.5004	91.3413	96.3771	15.2	0.48308	0.358939
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		95.0527	98.9412	103.427	108.826	116.542	123.413	136.644	33.304		162.15
73	Decrease in CO emissions, first year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		0
74	Decrease in CO emissions, last year near term, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		0
75	Decrease in CO emissions, last year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		249.066	272.662	287.64	307.762	323.752	337.691	357.041	56.95	0.472631	0.34672
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		352.963	367.575	383.862	404.073	431.425	458.015	508.017	120.377		610.588
76	Decrease in VOC emissions, first year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		0
77	Decrease in VOC emissions, last year near term, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		0
78	Decrease in VOC emissions, last year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		17.7637	19.5371	20.6171	22.0299	23.1387	24.1426	25.5013	4.04163	0.475266	0.349811
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		25.1799	26.2502	27.4068	28.8315	30.7832	32.6741	36.1722	8.6499		43.4389
79	Decrease in NOx emissions, first year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		0

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
80	Decrease in NOx emissions, last year near term, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
81	Decrease in NOx emissions, last year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		12.8114	14.1509	14.9287	15.9195	16.7407	17.4744	18.4341	2.91554	0.484879	0.360875
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		18.1989	18.9256	19.753	20.8253	22.3048	23.5962	26.1435	6.40336	30.9488	
82	Decrease in PM emissions, first year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
83	Decrease in PM emissions, last year near term, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
84	Decrease in PM emissions, last year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		1.41784	1.58256	1.67417	1.78709	1.87769	1.96308	2.07262	0.334939	0.487859	0.362229
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		2.04152	2.12709	2.22367	2.34471	2.51928	2.68058	2.97018	0.732123	3.52022	
85	Decrease in SOX emissions, first year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
86	Decrease in SOX emissions, last year near term, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
87	Decrease in SOX emissions, last year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0.002591	0.002892	0.00306	0.003266	0.003432	0.003588	0.003788	0.000612	0.487859	0.362229
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0.003731	0.003888	0.004064	0.004285	0.004604	0.004899	0.005428	0.001338	0.006434	

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
88	Decrease in CO2 emissions, first year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
89	Decrease in CO2 emissions, last year near term, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
90	Decrease in CO2 emissions, last year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		5147.66	5678.74	5992.39	6385.66	6716.48	7012.25	7395.43	1168.14	0.484225	0.360193
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		7297.96	7592.61	7929.33	8355.22	8950.88	9468.6	10494.7	2563.8	12415.3	
91	Salvage value, GCX 1, thous $ PV, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
92	Salvage value, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		340.933	340.933	340.933	340.933	340.933	340.933	340.933	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		340.933	340.933	340.933	340.933	340.933	340.933	340.933	340.933	340.933	
93	Max queue length first year, GCX 1, PCE, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		1.85234	1.89579	1.92693	1.97248	2.00814	2.03755	2.07115	0.109936	0.14179	-0.582709
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		2.065	2.09575	2.13034	2.17166	2.22431	2.26215	2.31423	1.78415	2.35902	
94	Max queue length first year, GCX 2, PCE, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		10.4013	10.653	10.834	11.0954	11.2983	11.4707	11.664	0.634181	0.141609	-0.58363
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		11.6278	11.8082	12.0044	12.2428	12.5479	12.7644	13.0709	10.004	13.3199	
95	Max queue length, l.y.n.t, GCX 1, PCE, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		2.10896	2.18278	2.22217	2.27637	2.32046	2.35942	2.39904	0.137971	0.104406	-0.343767
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		2.39404	2.43156	2.47324	2.521	2.58574	2.63	2.71216	1.82879	2.83384	

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
96	Max queue length, l.y.n.t, GCX 2, PCE, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		11.9635	12.3702	12.5967	12.9111	13.1679	13.3825	13.6172	0.793376	0.114445	-0.363678
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		13.5856	13.8038	14.0471	14.3172	14.6909	14.9536	15.4303	10.2682	16.0183	
97	Max queue length, last year, GCX 1, PCE, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		2.98909	3.24107	3.38598	3.54922	3.67158	3.78415	3.91344	0.429729	0.277344	0.130367
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		3.89106	4.00053	4.12541	4.26748	4.47349	4.65881	5.01025	2.11506	5.72798	
98	Max queue length, last year, GCX 2, PCE, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		17.7358	19.199	19.9842	20.9421	21.6369	22.3183	23.0682	2.51978	0.301701	0.178944
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		22.907	23.5953	24.3148	25.1189	26.3781	27.4437	29.5961	11.9694	33.6661	

Results file:	Placeholder - Corridor Model	**Number of Trials:**	5000
Corridor:		**Random Seed:**	1
Scenario:	Rock Island Scenario	**Date/Time of Simulation:**	06-Oct-2022 11:43 am

Result No.: **Result Variable Description**

Percentile Summary | **Summary Statistics**

1 Safety benefits, thous $ PV

1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
16.1367	16.2545	16.316	16.3965	16.4477	16.4985	16.5415	0.177402	-0.198225	1.71014

50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**
16.5413	16.5882	16.6343	16.6891	16.7697	16.8301	16.9504	14.8167	17.1895

2 Travel time savings, thous $ PV

1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
142.572	153.207	159.553	169.343	176.697	183.498	191.789	25.523	0.316784	-0.138164

50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**
189.943	197.204	204.48	213.738	226.061	236.59	255.348	76.752	281.989

3 Environmental benefits, thous $ PV

1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
8.00226	8.56583	8.93888	9.44291	9.81557	10.1604	10.6106	1.33685	0.302608	-0.17163

50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**
10.5271	10.8961	11.2822	11.7409	12.4248	12.9705	13.9759	4.79348	15.3737

4 Veh operating cost benefit, thous $ PV

1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
21.1284	22.8117	23.8747	25.2671	26.3836	27.3358	28.6504	3.85553	0.358317	-0.005727

50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**
28.4129	29.3789	30.5542	31.914	33.7848	35.3783	38.4752	12.2328	44.5165

5 Network benefits, thous $ PV

1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
-0.150101	-0.116233	-0.099373	-0.081068	-0.067017	-0.055428	-0.049218	0.037039	-0.652688	0.12142

50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**
-0.045106	-0.035161	-0.025005	-0.013256	0	0	0	-0.230816	0.012152

6 Total benefits, thous $ PV

1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
529.806	542.343	549.97	561.852	570.257	578.104	588.323	30.3773	0.314143	-0.134928

50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**
586.364	594.769	603.642	614.294	628.578	641.143	663.648	449.454	697.941

7 benefits from induced trips, thous $ PV

1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
0.012608	0.013816	0.014682	0.015843	0.016725	0.017512	0.018595	0.003162	0.430607	0.092026

50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**
0.018342	0.019179	0.020148	0.021242	0.022845	0.024046	0.026778	0.006636	0.032492

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
8	disbenefits from induced trips, thous $ PV										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		-0.228023	-0.211156	-0.20242	-0.18986	-0.18173	-0.175022	-0.170264	0.023326	-0.373749	-0.150997
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		-0.168278	-0.161952	-0.156477	-0.149703	-0.140821	-0.134786	-0.126564	-0.256955		-0.080965
9	investment salvage value, thous $ PV										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		340.933	340.933	340.933	340.933	340.933	340.933	340.933	0		
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		340.933	340.933	340.933	340.933	340.933	340.933	340.933	340.933		340.933
10	Total costs, thous $ PV										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	0		
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	5535.16		5535.16
11	Net benefits, thous $ PV										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		-5005.35	-4992.82	-4985.19	-4973.31	-4964.9	-4957.06	-4946.84	30.3773	0.314143	-0.134928
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		-4948.79	-4940.39	-4931.52	-4920.87	-4906.58	-4894.02	-4871.51	-5085.71		-4837.22
12	Benefit-cost ratio										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		0.095716	0.097981	0.099359	0.101506	0.103025	0.104442	0.106288	0.005488	0.314143	-0.134928
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		0.105935	0.107453	0.109056	0.11098	0.113561	0.115831	0.119897	0.0812		0.126092
13	Rate of return (constant dollars), %										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		-4.57835	-4.52551	-4.49692	-4.45529	-4.42456	-4.39735	-4.36081	0.108699	0.330828	0.027886
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		-4.36727	-4.33827	-4.30688	-4.26919	-4.21636	-4.17198	-4.07953	-4.8883		-3.9421
14	Local benefits (not included in summary), thous $ PV										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		52.9806	54.2343	54.997	56.1852	57.0257	57.8104	58.8323	3.03773	0.314143	-0.134929
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		58.6364	59.4769	60.3642	61.4294	62.8578	64.1143	66.3648	44.9454		69.7941
15	Safety Benefit, GCX 1, thous $ PV, MP 180.24										
		1%	5%	10%	20%	30%	40%	Mean	Std Dev	Skewness	Kurtosis
		-14.3696	-14.2145	-14.1354	-14.0457	-13.978	-13.9186	-13.8645	0.215901	0.130694	0.806409
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum
		-13.8648	-13.8114	-13.7526	-13.6886	-13.5909	-13.5054	-13.3585	-14.5904		-12.1188

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
16	Safety Benefit, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		29.4997	29.7696	29.9136	30.0873	30.202	30.3089	30.406	0.389408	-0.161111	1.19841
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		30.4087	30.5074	30.6108	30.7266	30.8993	31.0421	31.3078	26.9355		31.7724
17	Travel Time Savings, GCX 1, thous $ PV, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		-531.596	-488.397	-464.411	-435.71	-416.558	-401.37	-390.492	55.372	-0.355785	0.143925
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		-386.865	-373.222	-358.45	-342.524	-322.309	-305.968	-278.371	-639.861		-134.774
18	Travel Time Savings, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		426.565	460.906	484.219	513.291	535.968	556.915	582.28	79.3878	0.341594	0.055547
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		577.267	598.664	620.328	649.126	688.097	722.092	786.571	211.526		917.972
19	Environmental Benefit, GCX 1, thous $ PV, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		-15.0625	-14.0099	-13.4296	-12.7485	-12.2352	-11.8562	-11.5635	1.39734	-0.304817	-0.097215
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		-11.4801	-11.1137	-10.7351	-10.3635	-9.82365	-9.43138	-8.72363	-16.2591		-5.51831
20	Environmental Benefit, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		16.7345	18.0247	18.7864	19.8139	20.5723	21.2793	22.1741	2.72053	0.301334	-0.139516
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		21.9963	22.7428	23.5198	24.4797	25.8032	26.928	29.0599	10.3118		31.6328
21	Benefit Veh Op Cost, GCX 1, thous $ PV, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		-47.313	-43.1966	-41.1158	-38.8951	-37.2768	-35.8972	-34.9903	4.69049	-0.372969	0.084445
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		-34.616	-33.4514	-32.2308	-30.9318	-29.2426	-27.8832	-25.5709	-53.5767		-15.1015
22	Benefit Veh Op Cost, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		47.3524	50.9189	53.5675	56.4473	58.7122	60.8942	63.6407	8.32443	0.361811	0.025214
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		63.1157	65.24	67.8435	70.5357	74.6805	78.1663	85.6365	27.3344		94.6241
23	Network Benefits, GCX 1, thous $ PV, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		-0.657785	-0.473257	-0.391789	-0.296931	-0.228126	-0.179483	-0.172165	0.156635	-1.15277	1.31457
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		-0.135666	-0.096254	-0.061588	-0.02829	-0.001302	0	0	-1.05258		0

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
24	Network Benefits, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0.010814	0.032214	0.05881	0.122947	0.124505	1.33309	1.84537
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0.08829	0.123003	0.16321	0.217191	0.297403	0.371167	0.523527	0		0.85939
25	Total Benefits, GCX 1, thous $ PV, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		-604.008	-557.854	-531.905	-500.942	-479.522	-462.912	-451.082	60.3468	-0.354392	0.127797
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		-446.957	-432.521	-415.946	-398.838	-376.534	-358.602	-329.542	-712.662		-167.513
26	Total Benefits, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		520.493	562.457	588.314	620.64	646.239	670.211	698.624	89.0939	0.337708	0.035903
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		693.62	717.194	741.535	772.673	817.34	855.622	926.549	276.108		1058.61
27	Total Costs, GCX 1, thous $ PV, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		0
28	Total Costs, GCX 2, thous $ PV, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	5535.16	5535.16		5535.16
29	Net Benefit thous $ PV, 600 1, 1, MP 180.24										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		-604.008	-557.854	-531.905	-500.942	-479.522	-462.912	-451.082	60.3468	-0.354392	0.127797
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		-446.957	-432.521	-415.946	-398.838	-376.534	-358.602	-329.542	-712.662		-167.513
30	Net Benefit thous $ PV, 600 2, 1, MP 180.36										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		-5014.67	-4972.7	-4946.85	-4914.52	-4888.92	-4864.95	-4836.54	89.0939	0.337708	0.035903
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		-4841.54	-4817.97	-4793.62	-4762.49	-4717.82	-4679.54	-4608.61	-5259.05		-4476.55
31	Decrease in pred. fatal acc., first year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		0

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
32	Decrease in pred. fatal acc., last year near term										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0.000252	0.000254	0.000255	0.000256	0.000256	0.000257	0.000257	2E-06	-0.699578	1.63799
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0.000257	0.000257	0.000258	0.000258	0.000259	0.000259	0.00026	0.000243		0.000262
33	Decrease in pred. fatal acc., last year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0.000164	0.000167	0.000169	0.00017	0.000172	0.000173	0.000174	4E-06	0.006829	0.610062
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0.000174	0.000175	0.000176	0.000178	0.00018	0.000181	0.000184	0.000141		0.000189
34	Decrease in pred. injury acc., first year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		0
35	Decrease in pred. injury acc., last year near term										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0.000658	0.000662	0.000664	0.000667	0.000668	0.000669	0.00067	4E-06	-0.730473	1.74274
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0.00067	0.000671	0.000673	0.000674	0.000675	0.000676	0.000679	0.000634		0.000682
36	Decrease in pred. injury acc., last year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0.000439	0.000447	0.000451	0.000456	0.000459	0.000462	0.000465	1.1E-05	-0.00807	0.669683
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0.000465	0.000468	0.000471	0.000475	0.00048	0.000484	0.000493	0.000376		0.000508
37	Decrease in pred. PDO acc., first year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		1E-06
38	Decrease in pred. PDO acc., last year near term										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0.002819	0.002839	0.002848	0.002859	0.002865	0.00287	0.002872	1.9E-05	-0.764768	1.84644
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0.002874	0.002879	0.002883	0.002888	0.002895	0.0029	0.002909	0.002715		0.002926
39	Decrease in pred. PDO acc., last year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0.003206	0.003267	0.0033	0.003338	0.003369	0.003392	0.003417	9.3E-05	0.000206	0.54122
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0.003415	0.003439	0.003464	0.003494	0.003535	0.00357	0.003638	0.00273		0.003784

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
40	Decrease in pred.. fatalities highway, first year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
41	Decrease in pred. fatalities highway, last year near term										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
42	Decrease in pred. fatalities highway, last year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
43	Decrease in pred. fatalities train, first year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
44	Decrease in pred. fatalities train, last year near term										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
45	Decrease in pred. fatalities train, last year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
46	Decrease in pred. injuries highway, first year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
47	Decrease in pred. injuries highway, last year near term										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
48	Decrease in pred. injuries highway, last year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
49	Decrease in pred. injuries train, first year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
50	Decrease in pred. injuries train, last year near term										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
51	Decrease in pred. injuries train, last year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
52	Decrease in pred. accidents, first year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
53	Decrease in pred. accidents, last year near term										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
54	Decrease in pred. accidents, last year										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
55	Decrease in delay auto, first year, veh-hours										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	

Result No.:	Result Variable Description	Percentile Summary							Summary Statistics			
56	Decrease in delay auto, last year near term, veh-hours											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
57	Decrease in delay auto, last year, veh-hours											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		430.967	476.853	507.488	549.554	582.537	610.422		647.869	113.39	0.458321	0.327502
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		639.516	669.181	702.364	740.972	796.829	847.739	942.972	207.206		1140.02	
58	Decrease in delay trucks, first year, veh-hours											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
59	Decrease in delay trucks, last year near term, veh-hours											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
60	Decrease in delay trucks, last year, veh-hours											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		607.785	676.29	714.876	762.431	801.584	837.489		883.834	141.894	0.483101	0.351905
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		870.944	907.349	947.461	999.592	1072.73	1141.93	1261.64	314.526		1496.73	
61	Decrease in delay buses, first year, veh-hours											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
62	Decrease in delay buses, last year near term, veh-hours											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	
63	Decrease in delay buses, last year, veh-hours											
		1%	*5%*	*10%*	*20%*	*30%*	*40%*		**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0		0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**	
		0	0	0	0	0	0	0	0		0	

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
64	Decrease in gas consumption, first year, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
65	Decrease in gas consumption, last year near term, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
66	Decrease in gas consumption, last year, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		247.053	273.479	290.964	315.616	334.468	350.734	372.301	65.8259	0.45577	0.324091
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		367.269	384.892	404.25	426.666	458.183	488.319	542.741	120.059	654.663	
67	Decrease in diesel consumption, first year, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
68	Decrease in diesel consumption, last year near term, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
69	Decrease in diesel consumption, last year, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		765.855	854.831	904.314	965.309	1014.25	1060.38	1119.54	180.92	0.487859	0.362229
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		1102.75	1148.96	1201.13	1266.51	1360.81	1447.94	1604.37	395.462	1901.47	
70	Decrease in oil consumption, first year, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
71	Decrease in oil consumption, last year near term, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
72	Decrease in oil consumption, last year, gal										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		67.2007	74.0057	78.1302	83.1419	87.5004	91.3413	96.3771	15.2	0.48308	0.358939
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		95.0527	98.9412	103.427	108.826	116.542	123.413	136.644	33.304		162.15
73	Decrease in CO emissions, first year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		0
74	Decrease in CO emissions, last year near term, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		0
75	Decrease in CO emissions, last year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		249.066	272.662	287.64	307.762	323.752	337.691	357.041	56.95	0.472631	0.34672
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		352.963	367.575	383.862	404.073	431.425	458.015	508.017	120.377		610.588
76	Decrease in VOC emissions, first year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		0
77	Decrease in VOC emissions, last year near term, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		0
78	Decrease in VOC emissions, last year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		17.7637	19.5371	20.6171	22.0299	23.1387	24.1426	25.5013	4.04163	0.475266	0.349811
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		25.1799	26.2502	27.4068	28.8315	30.7832	32.6741	36.1722	8.6499		43.4389
79	Decrease in NOx emissions, first year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**		**Maximum**
		0	0	0	0	0	0	0	0		0

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
80	Decrease in NOx emissions, last year near term, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
81	Decrease in NOx emissions, last year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		12.8114	14.1509	14.9287	15.9195	16.7407	17.4744	18.4341	2.91554	0.484879	0.360875
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		18.1989	18.9256	19.753	20.8253	22.3048	23.5962	26.1435	6.40336	30.9488	
82	Decrease in PM emissions, first year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
83	Decrease in PM emissions, last year near term, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
84	Decrease in PM emissions, last year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		1.41784	1.58256	1.67417	1.78709	1.87769	1.96308	2.07262	0.334939	0.487859	0.362229
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		2.04152	2.12709	2.22367	2.34471	2.51928	2.68058	2.97018	0.732123	3.52022	
85	Decrease in SOX emissions, first year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
86	Decrease in SOX emissions, last year near term, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0	0	0	0	0	0	0	0		
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0	0	0	0	0	0	0	0	0	
87	Decrease in SOX emissions, last year, kg										
		1%	*5%*	*10%*	*20%*	*30%*	*40%*	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		0.002591	0.002892	0.00306	0.003266	0.003432	0.003588	0.003788	0.000612	0.487859	0.362229
		50%	*60%*	*70%*	*80%*	*90%*	*95%*	*99%*	**Minimum**	**Maximum**	
		0.003731	0.003888	0.004064	0.004285	0.004604	0.004899	0.005428	0.001338	0.006434	

Result No.:	Result Variable Description	Percentile Summary							Summary Statistics			
88	Decrease in CO2 emissions, first year, kg											
		1%	5%	10%	20%	30%	40%		Mean	Std Dev	Skewness	Kurtosis
		0	0	0	0	0	0		0	0		
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum	
		0	0	0	0	0	0	0	0		0	
89	Decrease in CO2 emissions, last year near term, kg											
		1%	5%	10%	20%	30%	40%		Mean	Std Dev	Skewness	Kurtosis
		0	0	0	0	0	0		0	0		
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum	
		0	0	0	0	0	0	0	0		0	
90	Decrease in CO2 emissions, last year, kg											
		1%	5%	10%	20%	30%	40%		Mean	Std Dev	Skewness	Kurtosis
		5147.66	5678.74	5992.39	6385.66	6716.48	7012.25		7395.43	1168.14	0.484225	0.360193
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum	
		7297.96	7592.61	7929.33	8355.22	8950.88	9468.6	10494.7	2563.8		12415.3	
91	Salvage value, GCX 1, thous $ PV, MP 180.24											
		1%	5%	10%	20%	30%	40%		Mean	Std Dev	Skewness	Kurtosis
		0	0	0	0	0	0		0	0		
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum	
		0	0	0	0	0	0	0	0		0	
92	Salvage value, GCX 2, thous $ PV, MP 180.36											
		1%	5%	10%	20%	30%	40%		Mean	Std Dev	Skewness	Kurtosis
		340.933	340.933	340.933	340.933	340.933	340.933		340.933	0		
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum	
		340.933	340.933	340.933	340.933	340.933	340.933	340.933	340.933		340.933	
93	Max queue length first year, GCX 1, PCE, MP 180.24											
		1%	5%	10%	20%	30%	40%		Mean	Std Dev	Skewness	Kurtosis
		1.85234	1.89579	1.92693	1.97248	2.00814	2.03755		2.07115	0.109936	0.14179	-0.582709
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum	
		2.065	2.09575	2.13034	2.17166	2.22431	2.26215	2.31423	1.78415		2.35902	
94	Max queue length first year, GCX 2, PCE, MP 180.36											
		1%	5%	10%	20%	30%	40%		Mean	Std Dev	Skewness	Kurtosis
		10.4013	10.653	10.834	11.0954	11.2983	11.4707		11.664	0.634181	0.141609	-0.58363
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum	
		11.6278	11.8082	12.0044	12.2428	12.5479	12.7644	13.0709	10.004		13.3199	
95	Max queue length, l.y.n.t, GCX 1, PCE, MP 180.24											
		1%	5%	10%	20%	30%	40%		Mean	Std Dev	Skewness	Kurtosis
		2.10896	2.18278	2.22217	2.27637	2.32046	2.35942		2.39904	0.137971	0.104406	-0.343767
		50%	60%	70%	80%	90%	95%	99%	Minimum		Maximum	
		2.39404	2.43156	2.47324	2.521	2.58574	2.63	2.71216	1.82879		2.83384	

Result No.:	Result Variable Description	Percentile Summary						Summary Statistics			
96	Max queue length, l.y.n.t, GCX 2, PCE, MP 180.36										
		1%	***5%***	***10%***	***20%***	***30%***	***40%***	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		11.9635	12.3702	12.5967	12.9111	13.1679	13.3825	13.6172	0.793376	0.114445	-0.363678
		50%	***60%***	***70%***	***80%***	***90%***	***95%***	***99%***	**Minimum**	**Maximum**	
		13.5856	13.8038	14.0471	14.3172	14.6909	14.9536	15.4303	10.2682	16.0183	
97	Max queue length, last year, GCX 1, PCE, MP 180.24										
		1%	***5%***	***10%***	***20%***	***30%***	***40%***	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		2.98909	3.24107	3.38598	3.54922	3.67158	3.78415	3.91344	0.429729	0.277344	0.130367
		50%	***60%***	***70%***	***80%***	***90%***	***95%***	***99%***	**Minimum**	**Maximum**	
		3.89106	4.00053	4.12541	4.26748	4.47349	4.65881	5.01025	2.11506	5.72798	
98	Max queue length, last year, GCX 2, PCE, MP 180.36										
		1%	***5%***	***10%***	***20%***	***30%***	***40%***	**Mean**	**Std Dev**	**Skewness**	**Kurtosis**
		17.7358	19.199	19.9842	20.9421	21.6369	22.3183	23.0682	2.51978	0.301701	0.178944
		50%	***60%***	***70%***	***80%***	***90%***	***95%***	***99%***	**Minimum**	**Maximum**	
		22.907	23.5953	24.3148	25.1189	26.3781	27.4437	29.5961	11.9694	33.6661	