

Appendix L – Capital Cost Spreadsheets

Route 1 Amtrak Route	Segment		Segments B & C				Segment E		Segment K		Segments M & O		Segment R		Segments S & V		Segment AA		Segment AA		Segment FF		Segment GG		Segment HH		Segment II				
	Sub-Segment 1	Sub-Segment 2	Sub-Segment 2A		Sub-Segment 2B		Sub-Segment 2C	Sub-Segment 11		Sub-Segment 16		Sub-Segment 21		Sub-Segment 28		Sub-Segment 29		Sub-Segment 34		Sub-Segment 35		Sub-Segment 41		Sub-Segment 37		Sub-Segment 38		Sub-Segment 39			
	From - To	Milwaukee to Grand Avenue Jct (note 1)	Grand Avenue Junction through Wauwatosa to Watertown (note 1)				Watertown to Portage		Portage to Camp Douglas		Camp Douglas to La Crosse		La Crosse to Winona		Winona through Redwing to Hastings (St Croix Jct - start shared tracks w/ BNSF) to Hoffman Avenue		Hoffman Avenue to Division Street		Division Street to St. Paul Junction		St. Paul Junction to St. Paul Union Depot		St. Paul Union Depot to Robert St		Robert St to Chestnut St		Chestnut St to Merriam Park (note 2)		Merriam Park to Minneapolis Jct (note 2)		Minneapolis Jct to Minneapolis Transportation Interchange (MTI) (note 2)

Host Carrier	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP
Mileposts	MP 85.0 - MP 88.3	MP 88.3 - MP 131.2	MP 131.2 - 178.2	MP 178.2 - 226.0	MP 226.0 - 281.0	MP 281.0 - 308.2	MP 308.2 - 392.1	MP 392.1 - 409.5 (CP)	MP 409.5 - 429.7	MP 429.7 - 451.3	MP 451.3 - 481.9	MP 481.9 - 512.5	MP 512.5 - 543.1	MP 543.1 - 573.7	MP 573.7 - 604.3	MP 604.3 - 634.9	MP 634.9 - 665.5	MP 665.5 - 696.1	MP 696.1 - 726.7	MP 726.7 - 757.3	MP 757.3 - 787.9	MP 787.9 - 818.5	MP 818.5 - 849.1	MP 849.1 - 879.7	MP 879.7 - 910.3	MP 910.3 - 940.9	MP 940.9 - 971.5	MP 971.5 - 1002.1	MP 1002.1 - 1032.7
Track Miles	2.5 miles	42.0 miles	47.0 miles	47.0 miles	55.0 miles	27.2 miles	83.9 miles	16.9 miles	0.6 miles	0.3 miles	0.5 miles	0.3 miles	0.5 miles	0.5 miles	0.5 miles	0.5 miles	0.5 miles	0.5 miles	0.5 miles	0.5 miles	0.5 miles	0.5 miles	0.5 miles	0.5 miles	0.5 miles	0.5 miles	0.5 miles	0.5 miles	0.5 miles

Proposed Max. Passenger Speed	110 mph	110 mph	110 mph	110 mph	90 mph	90 mph	90 mph	90 mph	90 mph	79 mph	79 mph	79 mph	79 mph	79 mph	79 mph	79 mph	79 mph	79 mph	79 mph	79 mph	79 mph	79 mph	79 mph	79 mph	79 mph	79 mph	79 mph	79 mph	79 mph
Proposed # of New Tracks	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Unit	2010 Unit Cost (1000's)	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount		
Trackwork																																			
HSR on Existing Roadbed	MI	\$	1,123	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Sub-total Trackwork (A)			0.0		25,983	0.0	56,623	0.0	102,273	0.0	93,236	0.0	50,583	0.0	188,038	0.0	73,606	0.0	1,233	0.0	617	0.0	1,293	0.0	906	0.0	2,093	0.0	14,873	0.0	6,679	0.0	0.0	0.0	
Total Sub-Segment 1			\$ 12,908,463		\$ 252,706,119		\$ 365,822,343		\$ 260,334,551		\$ 277,312,322		\$ 144,231,281		\$ 632,971,163		\$ 223,817,590		\$ 3,817,460		\$ 3,491,814		\$ 6,423,626		\$ 13,283,170		\$ 41,056,876		\$ 31,573,619		\$ 24,675,658		\$ 4,349,841		\$ 8,221,200

Total Sub-Segment 2			\$ 5,163,385		\$ 8,890,632		\$ 7,783,467		\$ 5,446,330		\$ 5,042,024		\$ 5,302,621		\$ 7,539,585		\$ 13,243,644		\$ 6,362,433		\$ 11,636,713		\$ 12,847,252		\$ 10,943,899		\$ 44,366,966		\$ 17,870,878		\$ 7,711,143		\$ 4,349,841		\$ 8,221,200
Total Sub-Segment 3			\$ 24,466		\$ 213,908		\$ 71,200		\$ 10,000		\$ 20,400		\$ 10,000		\$ 80,000		\$ 40,700		\$ 0		\$ 2,500		\$ 10,000		\$ 16,000		\$ 0		\$ 0		\$ 0		\$ 0		\$ 0

Total	24%	\$ 12,908,463	\$ 252,706,119	\$ 365,822,343	\$ 260,334,551	\$ 277,312,322	\$ 144,231,281	\$ 632,971,163	\$ 223,817,590	\$ 3,817,460	\$ 3,491,814	\$ 6,423,626	\$ 13,283,170	\$ 41,056,876	\$ 31,573,619	\$ 24,675,658	\$ 4,349,841	\$ 8,221,200
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Average Cost/Mile	337.1 miles	\$ 7,105,073
Total Cost	\$ 2,395,049,054	

Milwaukee-Twin Cities

Route 5
Madison - Rochester

Table with columns for Segment, Sub-Segment, From-To, Host Carrier, Milepost, Proposed Max. Passenger Speed, and various cost columns (Quantity, Amount) for each segment.

Summary table showing Total Cost, Average Cost/Mile, and Miles for the project.

Milwaukee to Twin Cities Route 10 Antrak - Eau Claire	Segment Sub-Segment Number	From - To Mileposts	Segment A Sub-Segment 1		Segments B & C Sub-Segment 2		Segment E Sub-Segment 36		Segment K Sub-Segment 11		Segment L Sub-Segment 15		Segment M Sub-Segment 18		Segment DD Sub-Segment 32		Segment EE Sub-Segment 33		Segment FF Sub-Segment 35		Segment GG Sub-Segment 41		Segment HH Sub-Segment 37		Segment II Sub-Segment 38		Segment JJ Sub-Segment 39		Segment KK Sub-Segment 40				
			Milwaukee to Grand Avenue Jct (note 1)		Grand Avenue Junction through Watertown to Watertown (note 1)		Watertown to Portage		Portage to Camp Douglas		Camp Douglas to Wyeville		Wyeville to Eau Claire		Eau Claire to Westminster Street, MN		Westminster Street to 7th Street		7th Street to St. Paul Junction		St Paul Junction to St. Paul Union Depot		St. Paul Union Depot to Robert St		Robert St to Chestnut St		Chestnut St to Merrimack Park (note 2)		Merrimack Park to Minneapolis Jct (note 2)		Minneapolis Jct to Minneapolis Transportation Interchange (MTI) (note 2)		
			CP		CP		CP		CP		UP (Out of Service)		UP		UP		BNSF (Midway Sub)		BNSF/PA Union Depot Co.		St Paul Union Depot Co/UP		St Paul Union Depot Co/UP		CP		CP		BNSF/MNRR		BNSF		
			MP 85.8 - MP 88.3		MP 88.3 - MP 131.2		MP 131.2 - 178.2		MP 178.2 - 226.0		MP 173.9 - 183.7		MP 173.5 - 87.5		MP 87.5 - 0.6		MP 0.0 - 0.4		MP 0.0 - 0.3		MP 0.3 - 0.8		MP 0.8 - 1.1		MP 410.5 - 411.2		MP 411.2 - 417.6		3.2 miles		1.9 miles		
Proposed Max. Passenger Speed		110 mph		110 mph		110 mph		110 mph		79 mph		79 mph		110 mph		79 mph		79 mph		79 mph		79 mph		79 mph		79 mph		79 mph		79 mph			
Proposed # of New Tracks (1000's)		0		0		0		1		1		1		1		1		1		1		1		1		1		1		0			
Unit		Quantity		Amount		Quantity		Amount		Quantity		Amount		Quantity		Amount		Quantity		Amount		Quantity		Amount		Quantity		Amount		Quantity		Amount	
Trackwork																																	
HSR on Existing Roadbed																																	
HSR on New Roadbed																																	
HSR on New Roadbed & New Embankment																																	
HSR Double Track on 15' Retained Earth Fill (Cross Country)																																	
Timber & Surface w/ 53% Tie Replacement																																	
Timber & Surface w/ 66% Tie Replacement																																	
Replace Existing Rail w/ 1368 CWR																																	
Freight Siding																																	
Passenger Siding																																	
Highway Barrier Type 6																																	
Highway Barrier Type 5																																	
Fencing, 4 ft Woven Wire (both sides)																																	
Fencing, 6 ft Chain Link (both sides)																																	
Fencing, 10 ft Chain Link (both sides)																																	
Decorative Fencing (both sides)																																	
Drainage Improvements (cross country)																																	
Land Acquisition Urban																																	
Land Acquisition Rural																																	
#13 High Speed Turnout																																	
#24 High Speed Turnout																																	
#20 Turnout Timber																																	
#15 Turnout - Timber																																	
#10 Turnout Timber																																	
#15' Double Switch Point Detail																																	
#20 Turnout Concrete																																	
#15 Turnout - Concrete																																	
#10 Turnout Concrete																																	
#13 Crossover																																	
#20 Crossover																																	
Elevate & Surface Curves																																	
Curvature Reduction																																	
Elastomeric Rail Fasteners																																	
Sub-total Trackwork (A)																																	
Structures																																	
Bridges-under																																	
Four Lane Urban Expressway																																	
Four Lane Rural Expressway																																	
Two Lane Highway																																	
Rail																																	
Minor river																																	
Major River																																	
Double Track High (50') Level Bridge																																	
Inhab for 110'																																	
Convert open deck bridge to ballast deck (single track)																																	
Convert open deck bridge to ballast deck (double track)																																	
Single Track on Flyover/Elevated Structure																																	
Single Track on Approach Embankment w/ Retaining Wall																																	
Ballasted Deck Replacement Bridge																																	
Land Bridges																																	
Double Track on Flyover/Elevated Structure																																	
Double Track on Approach Embankment w/ Retaining Wall																																	
Bridges-over																																	
Four Lane Urban Expressway																																	
Four Lane Rural Expressway																																	
Two Lane Highway																																	
Rail																																	
Other Structural																																	
Culvert Extension																																	
Two Bore Long Tunnel																																	
Single Bore Short Tunnel																																	
Sub-total Structures (B)																																	
Systems																																	
Install CTC System (Single Track)																																	
Install CTC System (Double Track)																																	
Install PTC System																																	
Electric Lock for Industry Turnout																																	
New Control Point (CP)																																	
Signal work to add Crossover to CP																																	
Signal work to add Turnout to CP																																	
Sub-total Systems (C)																																	
Crossings																																	
Private Closure																																	
Four Quadrant Gates w/ Trapped Vehicle Detector																																	
Four Quadrant Gates																																	
Convert Dual Gates to Quad Gates																																	
Conventional Gates single mainline track																																	
Conventional Gates double mainline track																																	
Convert Flapways to Dual Gate																																	
Dual Gate with Median Barrier																																	
Convert Dual Gate to Extended Arm																																	
Precast Panels without Roway Improvements																																	
Precast Panels with Roway Improvements																																	
Traffic Signal Preemption																																	
Traffic Signal Preemption and Intersection Signalization																																	
Sub-total Crossings (D)																																	
Station/Maintenance Facilities																																	
Full Service - New - Low Volume - 500 Surface Park																																	
Full Service - Renovated - Low Volume - 500 Surface Park																																	
Terminal - New - Low Volume - 500 Surface Park																																	
Terminal - Renovated - Low Volume - 500 Surface Park																																	
Full Service - New - High Volume - Dual Platform - 1000 Surface Park																																	
Terminal - New - High Volume - Dual Platform - 1000 Surface Park																																	
Maintenance Facility (non-electrified track)																																	
Maintenance Facility (electrified track)																																	
Layover Facility																																	
Sub-total Station/Maintenance Facilities (E)																																	
Allocations for Special Elements																																	
Yard - Category A - Placeholder																																	
Yard - Category B - Placeholder																																	
Yard - Category C - Placeholder																																	
Access to Signal/Switch Location																																	
Maintenance of Way Spur																																	
Rail-Rail Flyovers																																	
ARRA application - Milwaukee to Grand Ave - Capital Cost Estimate																																	
ARRA application - Grand Ave to Watertown - Capital Cost Estimate																																	
ARRA application - Watertown to Madison - Capital Cost Estimate																																	
Upgrades near MTI - Minneapolis 2th Ave Track CP																																	
Structural Reconfiguration - West Approach to SPUD																																	
Rehab swing bridges @ Johnson & Gills Landing for HSR																																	
Lift bridge @ Hastings and approach																																	
Allocation to address flooding between Richmond & Reseville, WI																																	
Retaining Wall																																	
Restore UP w/ over route @ Canco																																	
Bike Path Renovation																																	
Sub-total Allocations for Special Elements (F)																																	
Sub-total Construction Elements (A+B+C+D+E+F)																																	
Contingency																																	
Contingency - 30% of Construction Costs (G)																																	
Sub-total Construction Elements and Contingency (A+B+C+D+E+F+G)																																	
Professional Services and Environmental																																	
Design Engineering																																	
Insurance and Bonding																																	
Program Management																																	
Construction Management & Inspection																																	
Engineering Services During Construction																																	
Integrated Testing and Commissioning																																	
Erosion Control and Water Quality Management																																	
Sub-total Professional Services and Environmental (H)																																	
Total Sub-Segment Cost (G+H)																																	
Sub-Segment Costs Per Mile																																	
Total Cost																																	
Average Cost/Mile																																	
Miles																																	

