

Prepared by HDR for McMahon Associates  
**Extension Of Service to Wachusett**

<b>Cost Estimate Breakdown: Extension of Service to Wachusett</b>					
	8/11/2009				
<b>Item</b>	<b>Description</b>	<b>UNIT</b>	<b>UNIT COST</b>	<b>QUANTITY</b>	<b>AMOUNT</b>
<b>A</b>	<b>Grading and Track Work (On Pan Am Property)</b>				
1	Clearing and Grubbing: Cut Brush (30' x 2 = 60'/TF) (5.5 miles X 5280 X 60)/43,560	Acre	\$0.00	40.00	\$0
2	Excavation and Removal of Unsuitable Material (Assume 1' Deep)	C.Y.	\$7.00	0	\$0
3	Furnish and Install (F&I) Embankment Material (Assume 2' Deep)	C.Y.	\$9.00	0	\$0
4	Excavate Ditches and Disposal of Materials (Railroad Standard Ditch)	L.F.	\$25.00	0	\$0
5	Drainage Items for Railroad Area				
	Headwalls	Each	\$4,000.00	0	\$0
	Catch Basins	Each	\$2,000.00	0	\$0
	Manholes	Each	\$2,500.00	0	\$0
	Flared End Section	Each	\$350.00	0	\$0
	12" Pipe	L.F.	\$50.00	0	\$0
	24" Pipe	L.F.	\$90.00	0	\$0
	48" Pipe	L.F.	\$110.00	0	\$0
	4" PVC Underdrain	L.F.	\$30.00	0	\$0
	Geotextile Fabric	S.Y.	\$2.00	0	\$0
6	F&I Subballast - 6" Compacted Layer				
	a. F&I Subballast: Yard Track No. 2 R&D Track (25' Wide)	C.Y	\$30.00	0	\$0
7	F&I Bottom Ballast - Varies				
	a. F&I Bottom Ballast: Yard Track No. 2 R&D Track (6" Ballast Depth)	C.Y	\$30.00	0	\$0
8	F&I Erosion Control Silt Fence/Hay Bales	L.F.	\$4.00	0	\$0
9	New Track Construction -				
	a. F&I New Wood Tie Track w/136# CWR Rail:	T.F.	\$175.00	0	\$0
10A	Realign/Surface and Align Existing Track: In Preparation for Other Track Activities				
	a. No. 1 Track at West Fitchburg MP 49 - MP 49.65	T.F.	\$15.00	3,432	\$51,480
10B	Track Construction (Relay Rail and OTM Not Included: Available from Project)				
	a. F&I New Wood Tie Track w/Relay CWR Rail: MP 64.44 - MP 62	T.F.	\$90.00	12,884	\$1,159,560
11	F&I New Turnouts				
	a. New No. 10 turnouts (136# With Wood Ties):	Each	\$85,000.00	0	\$0
	b. New No. 15 turnouts (136# With Wood Ties): West End Fitchburg Station Track MP 49.50	Each	\$125,000.00	1	\$125,000
	c. New No. 15 turnouts (136# With Wood Ties): No.2 Trk At East End of Wachusett Station Trk at MP 53.2	Each	\$125,000.00	1	\$125,000
	d. New No. 15 turnouts (136# With Wood Ties): No.2 Trk At West End of Wachusett Station Trk at MP 54.1	Each	\$125,000.00	1	\$125,000
	e. New No. 20 turnouts (136# With Wood Ties): LH No. 2 to Single Gardner MP 55	Each	\$160,000.00	1	\$160,000
12	F&I New Crossovers				
	a. New No. 15 crossover (136# With Wood Ties) MP 49.5 LHXO #1 to #2 West End Fitchburg Station	Each	\$300,000.00	1	\$300,000
	b. New No. 15 crossover (136# With Wood Ties): MP 53.1 LHXO #1 to #2 Wachusett Station	Each	\$300,000.00	1	\$300,000
	c. New No. 20 crossover (136# With Wood Ties)	Each	\$350,000.00	0	\$0
13	F&I New Ties				
	a. Track NO. 1 Fitchburg to Wachusett (MP 49.5 - MP 55): 12 ties/39'	Each	\$100.00	8,910	\$891,000
	b. Track NO. 2 Fitchburg to Wachusett (MP 49.5 - MP 55): 12 ties/39'	Each	\$100.00	0	\$0
14	F&I New 136 RE CWR and OTM (Relay Rail Picked Up Used At Other Locations Where Possible)				
	a. Track NO. 1 Fitchburg to Wachusett (MP 49.5 - MP 54)	Mile	\$600,000.00	4.5	\$2,700,000
	b. Track NO. 2 Fitchburg to Wachusett (MP 39.5 - MP 54)	Mile	\$600,000.00	0.0	\$0
15	Clean Shoulder Ballast/Add Replacement Ballast (50%)				
	a. Track NO. 1 Fitchburg to Wachusett (MP 49.5 - MP 54)	T.F.	\$25.00	11,880.0	\$297,000
	b. Track NO. 2 Fitchburg to Wachusett (MP 39.5 - MP 54)	T.F.	\$25.00	0.0	\$0
16	Selectively Undercut Track W/Vac Truck/Replace Ballast Surface and Align (5%)				
	a. Track NO. 1 Fitchburg to Wachusett (MP 49.5 - MP 54)	T.F.	\$75.00	1,188.0	\$89,100
	b. Track NO. 2 Fitchburg to Wachusett (MP 39.5 - MP 54)	T.F.	\$75.00	0.0	\$0
17	Strengthen/Replace Double Track Bridge (ALLOWANCE)				
	a. Over Nashua River	T.F.	\$15,000.00	170.0	\$2,550,000



Item	Description	UNIT	UNIT COST	QUANTITY	AMOUNT
<b>H</b>	<b>Contractor Mobilization</b>	L.S.			<b>\$1,428,232</b>
	(5% of Items A through G)				
<b>I</b>	<b>Environmental Assessment</b>				
1	Site Assessment	L.S.	\$0.00	0	\$0
2	Allowance for Site Remediation	L.S.	\$0.00	0	\$0
				<b>Sub Total</b>	<b>\$0</b>
<b>J</b>	<b>Design Engineering</b>	L.S.			<b>\$1,713,878</b>
	(6% of Items A through G)				
<b>K</b>	<b>Construction Management</b>	L.S.			<b>\$2,285,171</b>
	(8% of Items A through G)				
<b>L</b>	<b>CONTINGENCIES</b>	L.S.			<b>\$7,141,160</b>
	(25% of Items A-G)				
	<b>TOTAL CAPITAL COSTS</b>			<b>Total</b>	<b>\$41,133,082</b>