Department of Transporation -- Central Oregon Rail Project
Alternate 'B' Redmond Only - Track and Crossing Cost

11/4/2009

RAILROAD CROSSING DATA											RAILROAD TRACK SEGMENT DATA							COMMENTS
Crossing No.	Name of Crossing	Over RR or Under RR	Extg Rdwy Width, ft	New Rdwy Width, ft	Skew Degrees	Span Length	Bridge/ Crossing Cost	Approach Cost	Utility plus 60% E&C	Track Segment ID	Cut(cy)	Fill(cy)	Track(tf)	Total Track Cost	No. 24 Mainline Turnout	60% E&C Trackwork	Total Cost (in millions)	
BNSF Mainline Tie (North)	North Tie														$1.0	$0.6	$1.6	
										North Tie to 118/119	6,778	3,014	2,740	$0.7		$0.4	$1.1	
118/119	Kings Way/Pilot Butte Canal	Under	NA	15	na	na	$1.5	$0.0	$0.8								$2.3	Canal crossing - Buried 8 to 11 ft. diameter irrigation pipe with 15 ft. x 18 ft. box culvert for maintenance road.
										118/119 to 111	408,913	387,546	17,819	$17.1		$10.3	$27.4	
117	COID Lateral						$0.70		$0.4								$1.1	Canal crossing - Buried 8 to 11 ft. diameter irrigation pipe with 15 ft. x 18 ft. box culvert for maintenance road.
114	COID Lateral						$0.80		$0.4								$1.2	Canal crossing - Buried 8 to 11 ft. diameter irrigation pipe with 15 ft. x 18 ft. box culvert for maintenance road.
113	COID Lateral						$0.80		$0.4								$1.2	Canal crossing - Buried 8 to 11 ft. diameter irrigation pipe with 15 ft. x 18 ft. box culvert for maintenance road.
111	Maple Ave./ Negus Ave.	Over	24'	86'	45	145'	$2.1	$10.3	$7.5								$19.9	Road is curved so overcrossing must be curved or roadway realigned. Standard Overcrossing is feasible.
101	Antler Ave.	Over	NA	86'	30	115'	$1.6	$10.3	$7.2								$19.1	There is no existing road, but city plans to extend Antler to the east. Standard Overcrossing is feasible.
99	Hwy 126	Over	36'	86'	30	115'	$1.6	$10.3	$7.2								$19.1	Road is tangent. Standard overcrossing is feasible.
										111 to 91	0	68,552	2,432	$1.5		$0.9	$2.3	
91	N. Unit Main Canal	Under	NA	15	na	na	$1.5	$0.0	$0.8								$2.3	Span canal and maintenance road. Standard undercrossing is feasible.
										91 to 88/89/127	38,147	39,420	4,588	$2.2		$1.3	$3.5	
88,89, 127	SW McCaffery Rd.	Over	18' gravel	24'	0	100'	$0.4	$2.2	$1.7								$4.3	Realign roads so that one structure carries all. Standard overcrossing is feasible.
										88/89/127 to 124/125	40,427	10,142	5,811	$2.0		$1.2	$3.2	
124/125	N. Unit Main Canal /Sherman Rd.	Under	12	45'	20	200'	$5.7	$0.0	$3.5								$9.2	Assume approach cost is in track embankment. Assume 125 ft span over Sherman Rd and 75 ft span over canal and maintenance road. Use vertical abutments.
121A	Proposed 19th St. Ext	Over	na	86'	35	125'	$1.8	$10.2	$7.3								$19.3	Road is tangent. Standard overcrossing is feasible.
										124/125 to Mid Tie	505,714	171,075	14,975	$15.3		$9.2	$24.5	
BNSF Mainline (Mid)	Mid Tie														$1.0	$0.6	$1.6	
Subtotal											999,978	679,748	48,365	$38.7	$2.0	$24.4	$163.9	
								LUMP SUM ITEMS										
									Right of Way Fence							96,730	$1.9	
									10000 LF siding connected to mainline with 2 No 15 Turnouts							1	$3.3	
									Clear and Grub							104.0	$0.3	
Grand Total																Grand Total	$169.4	

Note: Cost estimates for the crossing structures were predicated on the assumption that cast-in-place abutments and pre-cast (typical bulb-tee section) girders would be used.

Cost Assumptions:	Design Assumptions
Cut - $20 cu. yd.	Cut and Fill numbers represent a double track subgrade and a 13' access road.
Fill - $15 cu. yd.	Track numbers represent a single track installation.
Clear and Grub - $2,500 cu yd	All vertical data compiled from GIS information provided by Deschutes County.
Structures - $635 sq. ft.	Overhead power line clearances meet UPRR and Bonneville Power Company standards in their present location
Track (including subballast, ballast, ties, rail & OTM) - $175 TF	Utility relocations are not part of track estimate
Right of Way Fence - $20 lf	All cuts are assumed to be rock cuts.
10000 LF siding connected to mainline with 2 No 15 Turnouts - $3,250,000	10,000 LF siding to be installed at 10 mile intervals.
No 24 Mainline Turnout - $1,000,000	