

I. - INTRODUCTION

This chapter includes:

- Estimates of capital cost to bring restore rail service to Perry and to upgrade various connecting tracks in eastern Washington County up to three different levels of improvement.
- A description of how costs were derived, overall methodology and assumptions.
- Also included are order of magnitude cost estimates for the transload facility in Perry. Both the minimum, Phase 1 layout and maximum Phase 3 layout illustrated in the previous chapter are included.

II. - TRACK COSTS

The three levels of upgrading include bringing track up to Class 1 and Class 2 conditions as defined by the Federal Railroad Administration (FRA) within the Code of Federal Regulations dealing with track safety standards. That is Title 49, Part 213, Subpart A to F, Class of Track 1-5.¹ Also included is the cost to bring the track up to standards that would allow for operation at FRA Class 2 with 286,000 lb cars, versus 263,000 lb cars.

The classes of track represent varying overall track condition defined by geometric deviation horizontally and vertically (how straight and how smooth are the rails), deviation from gauge (the distance between the two rails), the number of “good” ties per unit (typically a 39 foot rail length), and a “good” tie within a minimum prescribed distance from a rail joint. The higher the FRA classification number, the better the overall condition of the track and the higher the operating speed allowed.

There is an additional classification known as “excepted” track. This is track in poor condition, below that of Class 1, but can be operated for freight service only at no more than 10 MPH, not more than 5 cars of hazardous material can be carried in a single train, no passenger trains with passengers on board and a number of other restrictions.

TABLE 7-1
MAXIMUM ALLOWABLE SPEEDS
EXCEPTED TRACK TO FRA CLASS 5

FRA CLASS	FREIGHT	PASSENGER
Excepted	10 MPH	Not Allowed
Class 1	10 MPH	15 MPH
Class 2	25 MPH	30 MPH
Class 3	40 MPH	60 MPH
Class 4	60 MPH	80 MPH
Class 5	80 MPH	90 MPH

¹ Actually, under Title 49, there are nine classes of track plus the category known as “Excepted” track. Classes 6-9 are high speed corridors (up to 150 MPH for Class 8 and up to 200 MPH for Class 9)

III - METHODOLOGY & ASSUMPTIONS

To develop mile by mile capital cost estimates to upgrade the various rail lines to two FRA track classifications and for 286K rail car loadings the following steps were undertaken and various assumptions made:

A. Field Inspections

1. A hi-rail² trip was conducted over the Pan Am Railway owned segment from Woodland to Calais (10 miles).
2. Hi-rail inspection of Maine DOT owned tracks from St. Croix Jct. to Ayers Jct.
3. A walking inspection of former Eastport Branch ROW from Ayers Jct. to Perry.

All inspections were conducted in June 16 to 19, 2009.

Track charts of the lines (except Eastport Branch) showing the limits of types of ballast, curves, size of tie plates and other data were consulted to assist in a mile by mile tabulation that included the grade crossings, bridges and culverts.

Typical unit costs for the various elements of the track work were then applied to the estimated quantities on a mile by mile basis.

B. Comments on Condition Related to Costs and Cost Summaries

In developing a program to upgrade track to a certain level there is a margin of subjective opinion as to what the minimum actions should be, the methods; and from that, costs to achieve a certain condition.

The fact that the Maine DOT segment from St. Croix Jct. to Ayers Jct has been out of service for over 20 years, had no maintenance at all during that period except important holding actions by MEDOT over the last several years, and was not up to high standards at the time service was suspended; point to the need for a substantial program to put the line in a good condition that can then be maintained.

We have taken a conservative approach to provide a level of repair at each FRA track classification to assure a track condition that could be maintained at that class for at least 5 years without ongoing heavy maintenance and repairs. Towards that end, we have estimated more tie replacements than the minimum to meet class, considerable ditching for drainage, excavation of fouled gravel ballast areas, sufficient new rock ballast, complete reconstruction of all grade crossings. This approach results in a higher cost per mile than other recent up-grade examples that could be cited, however, over time, this approach will be less expensive and assure that the track does not suddenly deteriorate to the next lower classification.

Based on visual inspection, the existing 85 lb rail and joint bar assemblies appear to be sufficient for FRA track classifications 1 and 2; provided a good tie condition is achieved to adequately support this light rail

² Hi-rail is a term used to describe what is otherwise an over- the road vehicle (such as pick-up truck) equipped with flip-down railroad wheels at both ends. This allows the truck to operate along tracks using its regular tires for propulsion but steered and kept on the tracks by the small rail wheels at each end.

section and 286,000 lb cars are not operated. If the track is required to support 286,000 lb cars at 25 MPH operation as Class 2, new rail, most likely 115 RE, would be recommended.

The net result of this approach and circumstances for 24 miles of railroad with existing track in place is an average cost per mile and per foot as noted below

TABLE 7-2
REHABILITATION COSTS
BY CLASS

FRA CLASS	AVERAGE COST/MILE	AVERAGE COST/FOOT
1	\$398,000	\$75
2	\$459,000	\$87
2 w/286K	\$1,116,000	\$211

The small difference between Class 1 and 2 is because of the base cost of rebuilding all the crossings, repairing all the bridges common to all levels of upgrading with the only major additional cost from Class 1 to 2 generally related to replacing some additional ties and providing some additional ballast.

The large increase in cost to FRA Class 2 with 286K loading is mostly related to the complete replacement of the rail and OTM (other track material). The Class 2 - 286K upgrade is essentially a complete removal of existing track, salvaging some of the ties and putting down an all new track structure.

For the FRA Class 1 and 2 conditions, applying a less conservative approach to providing a sustainable track condition could result in a cost reduction. This is not recommended since the cost will be greater over time, and without significant yearly maintenance, could result in the track slipping into a lower classification.

Due to the relatively small difference in cost between FRA Class 1 and 2, it would be prudent to not consider upgrading to just a Class 1 condition.

For the 8.12 miles between Ayers Junction and Route 1 in Perry, an all new track structure is required along with replacement of three bridges, one of which is 200 feet long. We have estimated the cost using both relay 100 lb rail and new 115 RE rail. Due to the relatively high cost of No. 1 relay rail in the current market, the cost differential between relay and new rail is not significant. It would be prudent therefore to consider using all new rail between Ayers Junction and the proposed transload facility in Perry.

TABLE 7-3
NEW RAILROAD CONSTRUCTION COSTS
AYERS JUNCTION TO PERRY
RELAY 100 LB RAIL VERSUS NEW 115 LB RAIL

RAIL SECTION	AVERAGE COST/MILE	AVERAGE COST/FOOT
100 lb	\$1,620,000	\$307
115 lb	\$1,744,000	\$330

Above numbers include replacement costs for two bridges totaling \$3,400,000 and grade crossing upgrades with warning systems totaling \$1.1 million. Not included in above costs is a third bridge at MP 262.90, the turntable bridge over the Little River. That bridge is not required for any of the Perry Sites except Site 1.

C. Tie Condition Issues

The most obvious need is the poor tie condition. In many sections the tie condition is so bad that in the case of bringing the tie condition up to just an FRA Class 1 condition, there would remain large spans of rail with insufficient vertical support. We have calculated more new ties than necessary to just bring the track to that class.

D. Rail and Joint Bars

The existing 85 lb rail appears to be in fair condition. The joint bars are a mixture of more modern design (headfree, toeless) and older style Weber joints. The majority are the head free design. With a good tie condition, this rail should be sufficient for service up to FRA Class 2 but not for FRA Class 2 with 286K loading. Complete rail replacement to a minimum of 100 lb rail to achieve operation of the heavier cars is required.

On the Pan Am segment there are several miles of 75 lb rail. Most of this is in very poor condition and must be replaced for all three conditions.

E. Grade Crossings

There are a number of grade crossings along the route, both public, paved crossings and several gravel crossings both public and private. Most of the crossings (except the crossings on the active Pan Am segment) have been paved over and have not been rebuilt prior to cessation of rail service on the Maine DOT segment.

For main road crossings we assumed a complete renewal, taking out the old track, constructing new track through the crossings with new ties, crushed rock ballast, underdrains for drainage, hot mix asphalt underlayment under the ballast or geotextile fabric, new 115 RE welded rail and rubber rail seal and bituminous road surface. Proper transitions from the 115 lb rail to 85 lb rail have also been included.

F. Automatic Highway Crossing Warning Systems

We have assumed that all public road crossings would have automatic highway crossing warning systems installed. At a minimum, flashers with audible warning, and at some major crossings such as Route 1, with the addition of crossing gates.

Passive warning system (cross bucks) would be installed at all private, farm type crossings.

G. Rail Anchors

There are few to no rail anchors on most of the 85 lb rail. Minimal use of rail anchors was apparently standard Maine Central practice. This would explain the large amount of slued and bunched ties noted at various locations. For Class 1 and 2 conditions, we have estimated cost for purchasing and installing sufficient rail anchors as is generally recommended and practiced today. The unit cost is the cost for the anchor plus installation.

H. Tie Plates

Many of the existing tie plates are small, flat or single shoulder plates. For FRA Class 1 and 2 upgrades we have included cost to replace plates where rail is to be replaced with a heavier rail section. Existing tie plates would be reused under the 85 lb rail to minimize mixing flat and canted tie plates in track.

I. Rail

Class 1 and 2 would generally reuse the existing 85 lb. rail with a few replacements in kind where visual and ultrasonic testing revealed flaws. For FRA Class 2 with 286K cars we have assumed all new 115 RE rail. The cost noted for the rail includes removal of the present track structure, rail purchase, OTM and installation cost for the new rail.

IV. – TRACK ESTIMATE TABLES

The tables on the following pages summarize the above items on a mile by mile basis, showing the estimated cost for each mile and a cumulative cost. Note that the mileposts on the Pan Am active segment start at milepost “0” in Calais and increase in the direction towards Woodland. Mileages on other segments are based on the Maine Central mileposts with Portland being “0”.

V. TRANSLOAD FACILITY ESTIMATES

We have assumed that the location for the transload will be Site 4 as identified in Chapter 3. We have estimated both the small, Phase 1 layout as well as the much larger Phase 3 layout. These estimates are at the very rear of this chapter.

Earthwork quantities are very approximate, based on limited vertical data available at the site and an assumed profile for the incoming track and grading of the facility. We also assumed 25% of the excavation would be in rock. If that assumption is incorrect, the earthwork costs could change significantly. We have also made assumptions as to the level of fire protection that would be required, the extent of supporting facilities that would be required at the two phases, and amount of environmental remediation that maybe necessary.

EASTPORT RAIL STUDY
COST ESTIMATE FOR FRA CLASS 1 TRACK CONDITION
TODD STREET CALAIS TO ST. CROIX JCT.

MILE	DITCHING		CLEARING		TIES		SWITCH TIMBER		TURNOUT REPAIR/REPLACE		SHOULDER PLOWING		TIE PLATES		RAIL ANCHORS		TRACK BOLT ASSEMBLIES		BOLT TIGHTENING		RAIL		BALLAST		SURFACING		BRIDGE REPAIRS		SMALL CULVERTS		GRADE CROSSINGS PRIVATE		GRADE CROSSINGS PUBLIC		WARNING SYSTEM		TOTAL COST PER MILE	CUMULATIVE COST
	UNIT COST	LF	UNIT COST	MILE	UNIT COST	EA	UNIT COST	FT	UNIT COST	EA	UNIT COST	TF	UNIT COST	EA	UNIT COST	EA	UNIT COST	EA	UNIT COST	Joint	UNIT COST	TF	UNIT COST	TON	UNIT COST	TF	UNIT COST	EA	UNIT COST	EA	UNIT COST	EA	UNIT COST	LF	ACTIVE	PASSIVE		
	\$5.00		\$5,000.00		\$70.00		\$12.00		Varies		\$3.50		\$9.00		\$4.00		\$4.00		\$9.00		\$30.00		\$18.00		\$3.00		Varies		\$3,000		\$4,000		\$375					
	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost				
0.62 End of Track to 1	600	\$3,000	0.10	\$500	600	\$42,000	456	\$5,472			2,000	\$7,000		\$0	1,300	\$5,200	60	\$240	150	\$1,350	100	\$3,000	410	\$7,380	3200	\$9,600			1	\$3,000				\$0		\$87,742	\$87,742	
1 to 2	1600	\$8,000	0.25	\$1,250	1,400	\$98,000		\$0			5,280	\$18,480		\$0	3,600	\$14,400	120	\$480	320	\$2,880	1450	\$43,500	1,200	\$21,600	5280	\$15,840			2	\$6,000		64	\$24,000	\$250,000	\$504,430	\$592,172		
2 to 3	1600	\$8,000	0.25	\$1,250	1,950	\$136,500	1,200	\$14,400	Baring	\$30,000	5,280	\$18,480		\$0	5,700	\$22,800	200	\$800	525	\$4,725	400	\$12,000	1,200	\$21,600	8700	\$26,100			2	\$6,000			\$0		\$302,655	\$894,827		
3 to 3.13 (266.87)	400	\$2,000	0.05	\$250	200	\$14,000		\$0			690	\$2,415		\$0	1,080	\$4,320	16	\$64	42	\$378	39	\$1,170	160	\$2,880	685	\$2,055			1	\$3,000			\$0		\$32,532	\$927,359		
St. Croix Bridge (269.02)	100	\$500		\$0	50	\$3,500		\$0	1	\$25,000	0	\$0		\$0	40	\$160		\$0		\$0	100	\$3,000	50	\$900	120	\$360			1	\$1,000,000		\$0		\$0		\$1,033,420	\$1,960,779	
ITEM TOTAL	4,300	\$21,500	\$1	\$3,250	\$4,200	\$294,000	\$1,656	\$19,872	\$1	\$55,000	\$13,250	\$46,375	\$0	\$0	\$11,720	\$46,880	\$396	\$1,584	\$1,037	\$9,333	\$2,089	\$62,670	\$3,020	\$54,360	\$17,985	\$53,955	\$1	\$1,000,000	6	\$18,000	0	\$0	64	\$24,000	\$250,000	\$0	\$1,960,779	

COST PER MILE \$781,187
TRACK ONLY \$382,780

EASTPORT RAIL STUDY
COST ESTIMATE FOR FRA CLASS 2 TRACK CONDITION
TODD STREET CALAIS TO ST. CROIX JCT.

MILE	DITCHING		CLEARING		TIES		SWITCH TIMBER		TURNOUT REPAIR/REPLACE		SHOULDER PLOWING		TIE PLATES		RAIL ANCHORS		TRACK BOLT ASSEMBLIES		BOLT TIGHTENING		RAIL		BALLAST		SURFACING		BRIDGE REPAIRS		SMALL CULVERTS		GRADE CROSSINGS PRIVATE		GRADE CROSSINGS PUBLIC		WARNING SYSTEM		TOTAL COST PER MILE	CUMULATIVE COST
	UNIT COST	LF	UNIT COST	MILE	UNIT COST	EA	UNIT COST	FT	UNIT COST	EA	UNIT COST	TF	UNIT COST	EA	UNIT COST	EA	UNIT COST	EA	UNIT COST	Joint	UNIT COST	TF	UNIT COST	TON	UNIT COST	TF	UNIT COST	EA	UNIT COST	EA	UNIT COST	EA	UNIT COST	LF	ACTIVE	PASSIVE		
	\$5.00		\$5,000.00		\$70.00		\$12.00		Varies		\$3.50		\$9.00		\$4.00		\$4.00		\$9.00		\$30.00		\$18.00		\$3.00		Varies		\$3,000		\$4,000		\$375					
	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost				
0.62 End of Track to 1	600	\$3,000	0.10	\$500	850	\$59,500	456	\$5,472			2,000	\$7,000		\$0	1,300	\$5,200	60	\$240	150	\$1,350	100	\$3,000	820	\$14,760	6400	\$19,200			1	\$3,000				\$0		\$122,222	\$122,222	
1 to 2	1,600	\$8,000	0.25	\$1,250	2,000	\$140,000		\$0			5,280	\$18,480		\$0	3,600	\$14,400	120	\$480	320	\$2,880	1450	\$43,500	2,150	\$38,700	10560	\$31,680			2	\$6,000		64	\$24,000	\$250,000	\$579,370	\$701,592		
2 to 3	1,600	\$8,000	0.25	\$1,250	2,550	\$178,500	1,200	\$14,400	Baring	\$30,000	5,280	\$18,480		\$0	5,700	\$22,800	200	\$800	525	\$4,725	400	\$12,000	3,000	\$54,000	10560	\$31,680			2	\$6,000			\$0		\$382,635	\$1,084,227		
3 to 3.13 (266.87)	400	\$2,000	0.05	\$250	250	\$17,500		\$0			690	\$2,415		\$0	1,080	\$4,320	16	\$64	42	\$378	39	\$1,170	300	\$5,400	1370	\$4,110			1	\$3,000			\$0		\$40,607	\$1,124,834		
St. Croix Bridge (269.02)	100	\$500		\$0	50	\$3,500		\$0	1	\$25,000	0	\$0		\$0	40	\$160		\$0		\$0	100	\$3,000	75	\$1,350	240	\$720			1	\$1,000,000		\$0		\$0		\$1,034,230	\$2,159,064	
ITEM TOTAL	4,300	\$21,500	\$1	\$3,250	\$5,700	\$399,000	\$1,656	\$19,872	\$1	\$55,000	\$13,250	\$46,375	\$0	\$0	\$11,720	\$46,880	\$396	\$1,584	\$1,037	\$9,333	\$2,089	\$62,670	\$6,345	\$114,210	\$29,130	\$87,390	\$1	\$1,000,000	6	\$18,000	0	\$0	64	\$24,000	\$250,000	\$0	\$2,159,064	

COST PER MILE \$860,185
TRACK ONLY \$461,778

- NOTES:
- Milepost 0.62 is approximate milepost at end of track. This is between the connection to New Brunswick Southern Railway at Milltown Jct. and Todd Street in Calais.
 - St. Croix Jct. is up to but not including the turnout between the line to Woodland and the line to Ayers Jct.
 - The St. Croix Bridge connecting to the New Brunswick Southern Railway in St. Stephen, NB is included as the last line item above.
 - Quantities reflect upgrading Track 5 (near the old roundhouse at Milltown Jct.) between Milepost 0.62 and 1 and the 2 sidings at Campbells between Milepost 2 and 3.

**Eastport Freight Rail Restoration Study
Preliminary Report and Cost Estimates**

**Chapter 7
Cost Estimates**

**EASTPORT RAIL STUDY
COST ESTIMATE FOR FRA CLASS 1 TRACK CONDITION
ST. CROIX JCT. TO WOODLAND (BAILEYVILLE)**

Table with columns: MILE, DITCHING, CLEARING, TIES, SWITCH TIMBER, TURNOUT REPAIR/REPLACE, SHOULDER PLOWING, TIE PLATES, RAIL ANCHORS, TRACK BOLT ASSEMBLIES, BOLT TIGHTENING, RAIL, BALLAST, SURFACING, BRIDGE REPAIRS, SMALL CULVERTS, GRADE CROSSINGS PRIVATE, GRADE CROSSINGS PUBLIC, WARNING SYSTEM ACTIVE/PASSIVE, TOTAL COST PER MILE/SEGMENT, CUMULATIVE COST. Includes rows for miles 3.13 to 4, 4 to 4.65, 4.65 to 5, 5 to 6, 6 to 7, 7 to 8, 8 to 9, 9 to 9.77, 9.77 to 10, 10 to 11, 11 to end of trk., and SUB-TOTAL MAIN TRACK.

COST PER MILE (Excluding spur to LP Mill) \$606,058
COST SUMMARY TRACK ONLY \$409,314
Woodland from St. Croix River Bridge around Wye and Yard at Domtar Mill \$294,624
East and West Wye and Track to Louisiana Pacific OSB Mill \$202,752
St. Croix Jct. to Route 1 Grade Crossing (Owned by Pan Am Railway) \$159,818
Canada to St. Croix Jct. \$918,750
5.12 Miles in Canada \$3,517,693

**EASTPORT RAIL STUDY
COST ESTIMATE FOR FRA CLASS 2 TRACK CONDITION
ST. CROIX JCT. TO WOODLAND (BAILEYVILLE)**

Table with columns: MILE, DITCHING, CLEARING, TIES, SWITCH TIMBER, TURNOUT REPAIR/REPLACE, SHOULDER PLOWING, TIE PLATES, RAIL ANCHORS, TRACK BOLT ASSEMBLIES, BOLT TIGHTENING, RAIL, BALLAST, SURFACING, BRIDGE REPAIRS, SMALL CULVERTS, GRADE CROSSINGS PRIVATE, GRADE CROSSINGS PUBLIC, WARNING SYSTEM ACTIVE/PASSIVE, TOTAL COST PER MILE/SEGMENT, CUMULATIVE COST. Includes rows for miles 3.13 to 4, 4 to 4.65, 4.65 to 5, 5 to 6, 6 to 7, 7 to 8, 8 to 9, 9 to 9.77, 9.77 to 10, 10 to 11, 11 to end of trk., and SUB-TOTAL MAIN TRACK.

COST PER MILE (Excluding spur to LP Mill) \$ 669,170
COST SUMMARY TRACK ONLY \$470,165
Woodland from St. Croix River Bridge around Wye and Yard at Domtar Mill \$413,292
East and West Wye and Track to Louisiana Pacific OSB Mill \$202,752
St. Croix Jct. to Route 1 Grade Crossing (Owned by Pan Am Railway) \$181,148
Canada to St. Croix Jct. \$1,054,565
5.12 Miles in Canada \$3,731,119

NOTES:

- 1. Segment is from St. Croix Jct to Baileyville (Woodland) and around the sharpest leg of the wye to the Domtar pulp mill.
- 2. East wye is the leg of wye closest to St. Croix River (one end of which has been removed).
- 3. West wye is the segment from the Domtar pulp mill straight towards the LP OSB mill.
- 4. Odd mileages at 4.65 and 9.77 are centerlines of bridges over the St. Croix River and presumably the International Border. A separate accounting of work in New Brunswick is required.

EASTPORT RAIL STUDY
COST ESTIMATE FOR NEW TRACK CONSTRUCTION WITH 100 LB RELAY MATERIAL
AYERS JCT. TO PERRY

MILE	DITCHING		CLEARING		SUBGRADE GRADING		SUB-BALLAST 6" Deep		RELAY 100 LB TRACK		SURFACING		BRIDGE REPLACEMENTS		SMALL CULVERTS		GRADE CROSSINGS PRIVATE		GRADE CROSSINGS PUBLIC		WARNING SYSTEM		TOTAL COST PER MILE	CUMULATIVE COST
	UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		ACTIVE	PASSIVE		
	\$5.00	LF	\$10,000.00	MILE	\$2.50	SY	\$20.00	TON	\$160.00	TF	\$3.00	TF	Varies	EA	\$3,000	EA	\$3,000	EA	\$375	TF	\$200,000	\$5,000		
	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost		
254.47 to 255	1850	\$9,250	0.5	\$5,300	6,996	\$17,490	1,959	\$39,178	2,798	\$447,744	2,798	\$8,395	1	\$500,000	0	\$0							\$1,027,357	\$1,027,357
255 to 256	3450	\$17,250	1.0	\$10,000	13,200	\$33,000	3,696	\$73,920	5,280	\$844,800	5,280	\$15,840			1	\$3,000			34	\$12,750	1	\$200,000	\$1,210,561	\$2,237,918
256 to 257	3450	\$17,250	1.0	\$10,000	13,200	\$33,000	3,696	\$73,920	5,280	\$844,800	5,280	\$15,840			5	\$15,000							\$1,009,810	\$3,247,728
257 to 258	3450	\$17,250	1.0	\$10,000	13,200	\$33,000	3,696	\$73,920	5,280	\$844,800	5,280	\$15,840	1	\$3,000,000	4	\$12,000			80	\$30,000	2	\$400,000	\$4,436,812	\$7,684,540
258 to 259	3450	\$17,250	1.0	\$10,000	13,200	\$33,000	3,696	\$73,920	5,280	\$844,800	5,280	\$15,840			4	\$12,000							\$1,006,810	\$8,691,350
259 to 260	3450	\$17,250	1.0	\$10,000	13,200	\$33,000	3,696	\$73,920	5,280	\$844,800	5,280	\$15,840			3	\$9,000		\$0		\$0			\$1,003,810	\$9,695,160
260 to 261	3450	\$17,250	1.0	\$10,000	13,200	\$33,000	3,696	\$73,920	5,280	\$844,800	5,280	\$15,840			3	\$9,000		\$0		\$0			\$1,003,810	\$10,698,970
261 to 262	3450	\$17,250	1.0	\$10,000	13,200	\$33,000	3,696	\$73,920	5,280	\$844,800	5,280	\$15,840			5	\$15,000		\$0	98	\$36,750	2	\$400,000	\$1,446,562	\$12,145,532
262 to 263	3450	\$17,250	1.0	\$10,000	13,200	\$33,000	3,696	\$73,920	5,280	\$844,800	5,280	\$15,840	1	\$1,500,000	5	\$15,000		\$0					\$2,509,810	\$14,655,342
263 to 263.19	600	\$3,000	0.2	\$1,900	2,508	\$6,270	702	\$14,045	1,003	\$160,512	1,003	\$3,010			2	\$6,000	1	\$3,000		\$0	1	\$5,000	\$202,737	\$14,858,079
ITEM TOTAL	30,050	\$150,250	8.7	\$87,200	115,104	\$287,760	\$32,229	\$644,582	46,042	\$7,366,656	46,042	\$138,125	3	\$5,000,000	32	\$96,000	1	\$3,000	212	\$79,500		\$1,005,000	\$14,858,079	
																				COST PER MILE		\$1,703,908		

IF ROUTE 1 IS CROSSED, ADD

66 \$24,750 1 \$250,000

\$274,750

EASTPORT RAIL STUDY
COST ESTIMATE FOR NEW TRACK CONSTRUCTION WITH NEW 115 RE RAIL
AYERS JCT. TO PERRY

MILE	DITCHING		CLEARING		SUBGRADE GRADING		SUB-BALLAST 8" Deep		NEW 115 RE TRACK		SURFACING		BRIDGE REPLACEMENTS		SMALL CULVERTS		GRADE CROSSINGS PRIVATE		GRADE CROSSINGS PUBLIC		WARNING SYSTEM		TOTAL COST PER MILE	CUMULATIVE COST
	UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		ACTIVE	PASSIVE		
	\$5.00	LF	\$10,000.00	MILE	\$2.50	SY	\$20.00	TON	\$180.00	TF	\$3.00	TF	Varies	EA	\$3,000	EA	\$3,000	EA	\$375	TF	\$200,000	\$5,000		
	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost		
254.47 to 255	1850	\$9,250	0.5	\$5,300	6,996	\$17,490	2,630	\$52,610	2,798	\$503,712	2,798	\$8,395	1	\$500,000	0	\$0							\$1,096,757	\$1,096,757
255 to 256	3450	\$17,250	1.0	\$10,000	13,200	\$33,000	4,963	\$99,264	5,280	\$950,400	5,280	\$15,840			1	\$3,000			34	\$12,750	1	\$200,000	\$1,341,505	\$2,438,262
256 to 257	3450	\$17,250	1.0	\$10,000	13,200	\$33,000	4,963	\$99,264	5,280	\$950,400	5,280	\$15,840			5	\$15,000							\$1,140,754	\$3,579,016
257 to 258	3450	\$17,250	1.0	\$10,000	13,200	\$33,000	4,963	\$99,264	5,280	\$950,400	5,280	\$15,840	1	\$3,000,000	4	\$12,000			80	\$30,000	2	\$400,000	\$4,567,756	\$8,146,772
258 to 259	3450	\$17,250	1.0	\$10,000	13,200	\$33,000	4,963	\$99,264	5,280	\$950,400	5,280	\$15,840			4	\$12,000							\$1,137,754	\$9,284,526
259 to 260	3450	\$17,250	1.0	\$10,000	13,200	\$33,000	4,963	\$99,264	5,280	\$950,400	5,280	\$15,840			3	\$9,000		\$0		\$0			\$1,134,754	\$10,419,280
260 to 261	3450	\$17,250	1.0	\$10,000	13,200	\$33,000	4,963	\$99,264	5,280	\$950,400	5,280	\$15,840			3	\$9,000		\$0		\$0			\$1,134,754	\$11,554,034
261 to 262	3450	\$17,250	1.0	\$10,000	13,200	\$33,000	4,963	\$99,264	5,280	\$950,400	5,280	\$15,840			5	\$15,000		\$0	98	\$36,750	2	\$400,000	\$1,577,506	\$13,131,540
262 to 263	3450	\$17,250	1.0	\$10,000	13,200	\$33,000	4,963	\$99,264	5,280	\$950,400	5,280	\$15,840	1	\$1,500,000	5	\$15,000		\$0		\$0			\$2,640,754	\$15,772,294
263 to 263.19	600	\$3,000	0.2	\$1,900	2,508	\$6,270	943	\$18,860	1,003	\$180,576	1,003	\$3,010			2	\$6,000	1	\$3,000		\$0	1	\$5,000	\$227,617	\$15,999,911
ITEM TOTAL	30,050	\$150,250	8.7	\$87,200	115,104	\$287,760	43,279	\$865,582	46,042	\$8,287,488	46,042	\$138,125	3	\$5,000,000	32	\$96,000	1	\$3,000	212	\$79,500		\$1,005,000	\$15,999,911	
																				COST PER MILE		\$1,834,852		

IF ROUTE 1 IS CROSSED, ADD

66 \$24,750 1 \$250,000

\$274,750

NOTES:

- Milepost 254.47 is the PS of the turnout to east wye at Ayers Jct. Wye accounted for in segment from Ayers Jct. to St Croix Jct.
- Milepost 263.19 is the Route 1 grade crossing in Perry. Alternative 1 would need to cross Route 1. Alternative 2 would end at Milepost 262.5. Alternative 3 would end at Milepost 262.85. Alternative 4 would end at Milepost 261.1

EASTPORT RAIL STUDY
COST ESTIMATE FOR FRA CLASS 2 WITH 286K
AYERS JCT. TO ST. CROIX JCT.

MILE	DITCHING		CLEARING		TIES		NEW 115 RE TURNOUTS		NEW 115 RE TRACK CONSTR.		BRIDGE REPAIRS		SMALL CULVERTS		GRADE CROSSINGS PRIVATE		GRADE CROSSINGS PUBLIC		WARNING SYSTEM		TOTAL COST PER MILE	CUMULATIVE COST
	UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		ACTIVE	PASSIVE		
	\$5.00	LF	\$10,000.00	MILE	\$70.00	EA	\$70,000	EA	\$150.00	TF			\$3,000.00	EA	\$4,000	EA	\$375	TF	\$200,000	LF		
	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost		
East Wye (1,165')	400	\$2,000	0.3	\$3,000	450	\$31,500	1	\$70,000	1,125	\$168,750			2	\$6,000				\$0			\$281,250	\$281,250
254.40 to 255	3400	\$17,000	0.6	\$6,000	1,250	\$87,500			5,280	\$792,000			3	\$9,000				\$0			\$911,500	\$1,192,750
255 to 256	5700	\$28,500	1.0	\$10,000	2,200	\$154,000			5,280	\$792,000			12	\$36,000		32	\$12,000	1	\$200,000		\$1,232,500	\$2,425,250
256 to 257	5800	\$29,000	1.0	\$10,000	2,200	\$154,000			5,280	\$792,000	1	\$150,000	10	\$50,000				\$0			\$1,185,000	\$3,610,250
257 to 258	5800	\$29,000	1.0	\$10,000	2,200	\$154,000	2	\$10,000	5,280	\$792,000			2	\$6,000		56	\$21,000	1	\$200,000		\$1,222,000	\$4,832,250
258 to 259	5700	\$28,500	1.0	\$10,000	2,200	\$154,000			5,280	\$792,000	1	\$250,000	3	\$9,000				\$0			\$1,243,500	\$6,075,750
259 to 260	5800	\$29,000	1.0	\$10,000	2,200	\$154,000			5,280	\$792,000			3	\$9,000				\$0			\$994,000	\$7,069,750
260 to 261	5800	\$29,000	1.0	\$10,000	2,200	\$154,000			5,280	\$792,000			4	\$12,000				\$0			\$997,000	\$8,066,750
261 to 262	5800	\$29,000	1.0	\$10,000	2,200	\$154,000			5,280	\$792,000			5	\$15,000		115	\$43,125	1	\$225,000		\$1,268,125	\$9,334,875
262 to 263	5800	\$29,000	1.0	\$10,000	2,200	\$154,000			5,280	\$792,000			4	\$12,000							\$997,000	\$10,331,875
263 to 264	5800	\$29,000	1.0	\$10,000	2,200	\$154,000			5,280	\$792,000			6	\$18,000				\$0			\$1,003,000	\$11,334,875
264 to 265	5800	\$29,000	1.0	\$10,000	2,200	\$154,000			5,280	\$792,000			5	\$15,000		64	\$24,000	2	\$400,000		\$1,424,000	\$12,758,875
265 to 266	5800	\$29,000	1.0	\$10,000	2,200	\$154,000			5,280	\$792,000			4	\$12,000				\$0			\$997,000	\$13,755,875
266 to 266.35	2000	\$10,000	0.4	\$3,500	750	\$52,500			1,850	\$277,500			3	\$9,000				\$0			\$352,500	\$14,108,375
ITEM TOTAL	69,400	\$347,000	12.3	\$122,500	26,650	\$1,865,500			66,335	\$9,950,250	2	\$400,000	66	\$218,000	0	\$0	267	\$100,125		\$1,025,005	\$14,108,375	

COST PER MILE \$1,160,228

EASTPORT RAIL STUDY
COST ESTIMATE FOR FRA CLASS 2 WITH 286K
TODD STREET CALAIS TO ST. CROIX JCT.

MILE	DITCHING		CLEARING		TIES		NEW 115 RE TURNOUT		NEW 115 RE TRACK CONSTR.		BRIDGE REPAIRS		SMALL CULVERTS		GRADE CROSSINGS PRIVATE		GRADE CROSSINGS PUBLIC		WARNING SYSTEM		TOTAL COST PER MILE	CUMULATIVE COST
	UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		UNIT COST		ACTIVE	PASSIVE		
	\$5.00	LF	\$5,000.00	MILE	\$70.00	EA	\$70,000	EA	\$150.00	TF	Varies	EA	\$3,000	EA	\$4,000	EA	\$375	LF				
	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost		
0.62 End of Track to 1	600	\$3,000	0.10	\$1,000	850	\$59,500	2	\$140,000	2000	\$300,000			1	\$3,000				\$0			\$506,500	\$506,500
1 to 2	1600	\$8,000	0.25	\$2,500	2,200	\$154,000			5,280	\$792,000			2	\$6,000		64	\$24,000	\$250,000			\$986,500	\$1,493,000
2 to 3	1600	\$8,000	0.25	\$2,500	3,200	\$224,000	4	\$280,000	5,280	\$792,000			2	\$6,000				\$0			\$1,312,500	\$2,805,500
3 to 3.13 (266.87)	400	\$2,000	0.05	\$500	275	\$19,250			685	\$102,750			1	\$3,000				\$0			\$127,500	\$2,933,000
St. Croix Bridge (269.02)	100	\$500		\$0	60	\$4,200	1	\$70,000	200	\$30,000	1	\$1,000,000		\$0				\$0			\$1,104,700	\$4,037,700
ITEM TOTAL	4,300	\$21,500	\$1	\$6,500	\$6,585	\$460,950	\$7	\$490,000	\$13,445	\$2,016,750	\$1	\$1,000,000	6	\$18,000	0	\$0	64	\$24,000	\$250,000	\$0	\$4,037,700	

COST PER MILE \$1,589,646

EASTPORT RAIL STUDY
COST ESTIMATE FOR FRA CLASS 2 WITH 286K
ST. CROIX JCT. TO WOODLAND (BAILEYVILLE)

MILE	DITCHING		CLEARING		TIES		TURNOUTS		NEW 115 RE TRACK CONSTR.		BRIDGE REPAIRS		SMALL CULVERTS		GRADE CROSSINGS PRIVATE		GRADE CROSSINGS PUBLIC		WARNING SYSTEM		TOTAL COST PER MILE/SEGMENT	CUMULATIVE COST	
	UNIT COST	LF	UNIT COST	MILE	UNIT COST	EA	UNIT COST	EA	UNIT COST	TF	UNIT COST	EA	UNIT COST	EA	UNIT COST	EA	UNIT COST	LF	ACTIVE	PASSIVE			
	\$5.00		\$5,000.00		\$70.00		Varies		\$160.00		Varies		\$3,000		\$4,000		\$375		\$200,000	\$5,000			
	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost					
St. Croix to Rte. 1		\$0	0.5	\$2,500	700	\$49,000			1,800	\$288,000			2	\$6,000					\$0			\$345,500	
3.13 to 4	3200	\$16,000	0.5	\$2,500	1,800	\$126,000	1	\$70,000	4590	\$734,400			7	\$21,000					\$0			\$969,900	\$1,315,400
4 to 4.65 (Bridge)	2400	\$12,000	0.5	\$2,500	1,340	\$93,800			3430	\$548,800	1	\$1,000,000	2	\$6,000					\$0			\$1,663,100	\$2,978,500
4.65 to 5	800	\$4,000	0.2	\$750	720	\$50,400			2640	\$422,400			3	\$9,000					\$0			\$486,550	\$3,465,050
5 to 6	2200	\$11,000	0.4	\$2,000	2,200	\$154,000			5280	\$844,800			4	\$12,000					\$0			\$1,023,800	\$4,488,850
6 to 7	2200	\$11,000	0.4	\$2,000	2,200	\$154,000			5280	\$844,800			4	\$12,000					\$0			\$1,023,800	\$5,512,650
7 to 8	2200	\$11,000	0.4	\$2,000	2,200	\$154,000			5280	\$844,800			6	\$18,000	1	\$4,000			\$0			\$1,033,800	\$6,546,450
8 to 9	2200	\$11,000	0.4	\$2,000	2,200	\$154,000			5280	\$844,800	1	\$100,000	5	\$15,000	1	\$4,000			\$0			\$1,130,800	\$7,677,250
9 to 9.77 (Bridge)	1600	\$8,000	0.3	\$1,250	1,590	\$111,300			4065	\$650,400	1	\$1,000,000	3	\$9,000		\$0			\$0			\$1,779,950	\$9,457,200
9.77 to 10		\$0		\$0	400	\$28,000	2	\$140,000	690	\$110,400			1	\$3,000								\$281,400	\$9,738,600
10 to 11 (Yard)		\$0		\$0	1,700	\$119,000	7	\$28,000	1800	\$288,000			2	\$6,000		\$0						\$441,000	\$10,179,600
11 to end of trk.		\$0		\$0	80	\$5,600				\$0				\$0		\$0						\$5,600	\$10,185,200
SUB - TOTAL MAIN TRACK	16,800	\$84,000	3	\$15,000	16,430	\$1,150,100	10	\$238,000	38,335	\$6,133,600	3	2,100,000	37	\$111,000	2	\$8,000	0	\$0	0	\$0	0	\$10,185,200	
East Wye to OSB		\$0			460	\$32,200				\$0			1	\$3,000		\$0	240	\$90,000	2	\$10,000		\$284,172	
West Wye		\$0			165	\$11,550				\$0				\$0		\$0		\$0				\$21,580	
SUB-TOTAL	0	0	0	0	625	\$43,750	0	\$0	0	\$0	0	0	1	\$3,000	0	\$0	240	\$90,000	2	10,000		\$305,752	\$10,490,952
TOTAL																							

COST PER MILE (Excluding spur to LP Mill) \$1,262,107

COST SUMMARY

Woodland from St. Croix River Bridge around Wye and Yard at Domtar Mill	\$728,000
East and West Wye and Track to Louisiana Pacific OSB Mill	\$305,752
St. Croix Jct. to Route 1 Grade Crossing (Owned by Pan Am Railway)	\$345,500
Canada to St. Croix Jct.	\$2,633,000
5.12 Miles in Canada	\$6,478,700

NOTES:

1. Segment is from St. Croix Jct to Baileyville (Woodland) and around the sharpest leg of the wye to the Domtar pulp mill.
2. East wye is the leg of wye closest to St. Croix River (one end of which has been removed).
3. West wye is the segment from the Domtar pulp mill straight towards the LP OSB mill.
4. Odd mileages at 4.65 and 9.77 are centerlines of bridges over the St. Croix River and the International Border. A separate accounting of work in New Brunswick is required.
5. Costs in Woodland reflect upgrade to Class 1 speeds only, keeping 85 lb rail and replacing only the 75 lb rail. Some costs in Woodland are derived from other spread sheet.

**EASTPORT RAIL STUDY
TRACK CONSTRUCTION COST ESTIMATE SUMMARY**

MILEPOSTS	SEGMENT CURRENTLY ACTIVE PAN AM TRACK WEST (SOUTH) OF ST. CROIX JCT.	COST BY TRACK CLASS		
		CLASS I	CLASS II	286 K
9.77 to 11.15	Woodland from St. Croix River Bridge around Wye and Yard at Domtar Mill	\$294,624	\$413,292	\$728,000
In Woodland	East and West Wye and Track to Louisiana Pacific OSB Mill	\$202,752	\$202,752	\$305,752
	St. Croix Jct. to Route 1 Grade Crossing (Owned by Pan Am Railway)	\$159,818	\$181,148	\$345,500
3.13 to 5.35	Canada to St. Croix Jct.	\$918,750	\$1,054,565	\$2,633,000
	SUB -TOTAL IN USA	\$1,575,944	\$1,851,757	\$4,012,252
5.35 to 9.77	5.12 Miles in Canada	\$3,517,693	\$3,731,119	\$6,478,700
	TOTAL SEGMENT	\$5,093,637	\$5,582,876	\$10,490,952
	CURRENTLY ACTIVE PAM AM TRACK EAST (NORTH) OF ST. CROIX JCT.			
0.62 to 3.13	St. Croix Jct. to end of Track Beyond Milltown Jct.	\$1,960,779	\$2,159,064	\$4,037,700
	SUB - TOTAL PAN AM IN USA	\$3,536,723	\$4,010,821	\$8,049,952
	TOTAL ALL PAN AM OWNED	\$7,054,416	\$7,741,940	\$14,528,652
	AYERS JCT. TO ROUTE 1 IN BARING			
254.40 to 266.35	Former Calais Branch from Ayers Jct. to Route 1 Grade Crossing in Baring	\$4,147,088	\$4,918,948	\$14,108,375
	AYERS JCT. TO PERRY			
254.47 to 263.19	From Switch at Wye at Ayers Jct. up to the Route 1 Grade Crossing in Perry	\$14,858,079	\$15,999,911	\$15,999,911
	TOTAL CONSTRUCTION COST IN US	\$22,541,890	\$24,929,680	\$38,158,238
	TOTAL CONSTRUCTION COST	\$26,059,583	\$28,660,799	\$44,636,938

No Contingency, Engineering or Construction Management Costs Applied

Totals based on Constructing Track all the way to Route 1 in Perry. Less cost if only to Site 4, the preferred alternative location of the Transload Facility. The lesser cost to Site 4 is the cost used in project summary calculations for the four cost alternatives presented.

PERRY TRANSLOAD FACILITY
PRELIMINARY COST ESTIMATE
PHASE 1 - MINIMUM FOOTPRINT

TEM	UNIT	UNIT COST	EST. QTY.	EST. COST	COMMENTS
EARTHWORK					
Clearing and Grubbing	Acre	\$3,000.00	25	\$75,000	
Earth Excavation	CY	\$6.50	125,500	\$815,750	
Rock Excavation	CY	\$16.00	40,000	\$640,000	Assume 25% of Excavation
Ordinary Borrow	CY	\$9.00	85,000	\$765,000	
Loam Borrow	CY	\$15.00	2,100	\$31,500	
Seeding	SY	\$2.50	6,400	\$16,000	
Erosion Control	LS	\$40,000.00	1	\$40,000	
			SUBTOTAL	\$2,383,250	
HIGHWAY ACCESS TO ROUTE 1					
Right of Way Acquisition	Acre	\$2,500	13	\$32,500	
Access Road	LF	\$150	4,600	\$690,000	Earthwork included above
Intersection Modifications at Route 1	LS	\$75,000	1	\$75,000	
			SUBTOTAL	\$797,500	
PAVEMENT					
Heavy Duty Bit Conc Pavement	SY	\$38.50	43,000	\$1,655,500	8" Pavement Section - 16" subbase
Medium Duty Bit Conc Pavement	SY	\$32.50	28,600	\$929,500	6" Pavement Section - 12" subbase
Pavement Striping	LF	\$0.40	20,000	\$8,000	
Misc. Pavement Marking	LS	\$8,000.00	1	\$8,000	
			SUBTOTAL	\$2,601,000	
GENERAL SITE WORK					
Lighting	Acre	\$30,000.00	21	\$630,000	High Mast Lighting with Buried Conduits
Drainage	Acre	\$25,000.00	15	\$375,000	
Detention Pond Liner	SY	\$20.00	4,000	\$80,000	
Curbing	LF	\$22.00		\$0	
Security Fencing	LF	\$30.00	4,200	\$126,000	
Gates	LF	\$80.00	100	\$8,000	
Landscaping	LS	25000	1	\$25,000	

			SUBTOTAL	\$1,244,000	
RAILROAD WORK					
115# Track Construction	TF	\$180.00	9,350	\$1,683,000	
No. 10 115# RBM	EA	\$75,000.00	5	\$375,000	
Switch Point Derail	EA	\$20,000.00	1	\$20,000	
Grade Crossings	TF	\$275.00	850	\$233,750	
Yard Air System	LS		1	\$0	
			SUBTOTAL	\$2,311,750	
FIRE SUPPRESSION SYSTEM					
150,000 gallon storage tank	LS	\$300,000.00	1	\$300,000	
Pumping system	LS	\$50,000.00	1	\$50,000	
Fire Hydrants with Gates	EA	\$8,000.00	4	\$32,000	
8" CI Pipes, fittings	LF	\$65.00	2500	\$162,500	
			SUBTOTAL	\$544,500	
BUILDINGS & UTILITIES					
Administration Building	SF	\$150.00	1,200	\$180,000	
Gate Building and Swing Room	SF	\$125.00		\$0	
Warehouse	SF	\$35.00	76,000	\$2,660,000	
Maintenance Shop	SF	\$65.00	1,200	\$78,000	
Loading Machine Maintenance Pad	SF	\$35.00	5,000	\$175,000	
Gate Complex	LS	\$35,000.00	1	\$35,000	
Water Service using on site wells	LS	\$75,000.00	1	\$75,000	
Septic System	LS	\$40,000.00	1	\$40,000	
Electric Service exclusive of lighting	LS	\$250,000.00	1	\$250,000	
			SUBTOTAL	\$3,493,000	
TOTAL ESTIMATED CONSTRUCTION COST				\$9,882,000	
New Reach Stacker				\$560,000	
ENGINEERING & CONTINGENCIES					
Contingencies - 10%	LS	\$988,200	1	\$988,200	
Engineering - Design and Permitting	LS	\$1,304,424	1	\$1,304,424	
Engineering - Construction Management	LS	\$652,2120	1	\$652,212	
Site Acquisition Cost	Acre	\$2,000	210	\$420,000	
			SUBTOTAL	\$3,681,060	
TOTAL ESTIMATED COST				\$13,806,836	

Paved Area = 12 Acres	Construction Cost per Acre	Total Cost per Acre
Gross Area = 21 Acres	\$517,630	\$657,468
	Includes Access Road and Lead Tracks	

PERRY TRANSLOAD FACILITY
PRELIMINARY COST ESTIMATE
PHASE 3 -LARGE FOOTPRINT

ITEM	UNIT	UNIT COST	EST. QTY.	EST. COST	COMMENTS
EARTHWORK					
Clearing and Grubbing	Acre	\$3,000.00	74	\$222,000	
Gravel Excavation	CY	\$6.50	800,000	\$5,200,000	
Rock Excavation	CY	\$16.00	265,000	\$4,240,000	Assume 25% of Excavation
Ordinary Borrow	CY	\$9.00	0	\$0	Excess Excavation, no Borrow Required
Loam Borrow	CY	\$15.00	4,500	\$67,500	
Seeding	SY	\$2.50	45,000	\$112,500	
Erosion Control	LS	\$75,000.00	1	\$75,000	
			SUBTOTAL	\$9,917,000	
HIGHWAY ACCESS TO ROUTE 1					
Right of Way Acquistion	Acre	\$2,500	13	\$32,500	
Access Road	LS	\$150	2,800	\$420,000	Earthwork included above
Intersection Modifications at Route 1	LS	\$75,000	1	\$75,000	
			SUBTOTAL	\$527,500	
PAVEMENT					
Heavy Duty Bit Conc Pavement	SY	\$38.50	110,000	\$4,235,000	8" Pavement Section - 16" subbase
Medium Duty Bit Conc Pavement	SY	\$32.50	74,000	\$2,405,000	6" Pavement Section - 12" subbase
Pavement Striping	LF	\$0.40	45,000	\$18,000	
Misc. Pavement Marking	LS	\$15,000.00	1	\$15,000	
			SUBTOTAL	\$6,673,000	
GENERAL SITE WORK					
Lighting	Acre	\$30,000.00	70	\$2,100,000	High Mast Lighting with Buried Conduits
Drainage	Acre	\$25,000.00	38	\$950,000	
Detention Pond Liner	SY	\$20.00	12,000	\$240,000	
Curbing	LF	\$22.00	2,000	\$44,000	
Security Fencing	LF	\$30.00	9,000	\$270,000	
Gates	LF	\$80.00	240	\$19,200	
Landscaping	LS	\$40,000	1	\$40,000	
			SUBTOTAL	\$3,663,200	
RAILROAD WORK					
115# Track Construction	TF	\$180.00	24,000	\$4,320,000	
No. 10 115# RBM	EA	\$70,000.00	11	\$770,000	
Switch Point Derail	EA	\$20,000.00	2	\$40,000	

Grade Crossings	TF	\$275.00	630	\$173,250	Within facility plus private x-ing
Yard Air System	LS	\$400,000.00	1	\$400,000	
			SUBTOTAL	\$5,703,250	
FIRE SUPPRESSION SYSTEM					
250,000 gallon storage tank	LS	\$300,000.00	1	\$300,000	
Pumping system	LS	\$50,000.00	1	\$50,000	
Fire Hydrants with Gates	EA	\$8,000.00	9	\$72,000	
8" CI Pipes, fittings	LF	\$60.00	4000	\$240,000	
			SUBTOTAL	\$662,000	
BUILDINGS & UTILITIES					
Administration Building	SF	\$150.00	2,400	\$360,000	
Warehouse s	SF	\$35.00	140,000	\$4,900,000	
Maintenance Shop	SF	\$65.00	3,000	\$195,000	
Loading Machine Maintenance Pad	SF	\$35.00	9,600	\$336,000	
Communications System	LS	\$50,000.00	1	\$50,000	
Gate Complex	LS	\$250,000.00	1	\$250,000	
Water Service using on site wells	LS	\$75,000.00	1	\$75,000	
Septic System	LS	\$75,000.00	1	\$75,000	
Electric Service exclusive of lighting	LS	\$400,000.00	1	\$400,000	
			SUBTOTAL	\$6,641,000	
TOTAL ESTIMATED CONSTRUCTION COST				\$33,786,950	
2 - New Reach Stackers				1,120,000	
ENGINEERING & CONTINGENCIES					
Contingencies - 10%	LS	\$3,378,695	1	\$3,378,695	
Engineering - Design and Permitting	LS	\$4,459,877	1	\$4,459,877	
Engineering - Construction Management	LS	\$2,228,938	1	\$2,228,938	
Site Acquisition Cost	Acre	\$2,000	210	\$420,000	
			SUBTOTAL	\$10,893,955	
TOTAL ESTIMATED COST				\$48,773,155	

Paved Area = 38 Acres	Construction Cost per Acre	Total Cost per Acre
Gross Area = 72 Acres	\$516,189	\$677,405

Includes Access Road and Lead Tracks