Project Matrix for Glacier Rail Park/Kalispell Core Area Development and Trail Project							
Current Status/ Base line (No Build) & Problem to be Addressed	**Change to Baseline/ Alternatives**	**Type of Impacts**	**Population Affected by Impacts**	**Economic Benefit**	**Summary of Results (Mill $ 2015)**	**Reference in BCA write up**	**Tab in Spreadsheet**
Lack of Transportation options for freight and people in Kalispell, MT. This includes the lack of a centralized cost-effective/ efficient Rail loading/ unloading hub in Flathead Co. The use inefficient long haul trucking as the primarily modal option causes inefficient and costly routing of freight into and out of the region. The current rail facilities do not have the capacity to meet current and future cargo demands In addition, a current rail line passing through the Core Area of Kalispell, bifurcates downtown. This increases the safety risk of the residents and visitors as they attempt to cross this active line on a daily basis.	Build a Rail Park to consolidate rail loading and unloading into one location (rail hub). Thus will allow the conversion of currently long-haul truck trips to be converted to short truck trips supporting the local area and long distant rail hauls of the associated cargo.	Reduced VMT on highways and roadways	Vehicle drivers	Monetized value of reduced truck miles generating fuel savings	Estimated $7 million of fuel savings	Pages 14 Table 8	Detailed Savings Gallons & MT CO2
		Reduced pollutant emissi	Local, state, region and national populations	Monetized value of emission reductions	Estimated $1.4 million in reduced emissions	Page 14 Table 8	Detailed Savings Gallons & MT CO2
		Improved efficiency in freight modal choice by switching freight to rail vs. truck	Freight Shippers utilizing the Rail Park	Monetized value of reduced operational costs to shippers	Estimated $7 million operational costs savings to shippers	Page 15 Table 9	Operational Savings
		Reduced road maintenance cost due to the reduction of VMT on highways	Government	Monetized value of reduced road maintenance costs to due to reduced VMT	Estimated $6 million of Road maintenance savings to states and regions	Page 16 Table 10	Road Maintenance
		Reduced potential fatalities on highways	General public	Monetized value of the reduction of potential fatalities on roadways to due to reduced VMT	Estimated $11 million of reduced fatalities from reduction of Vehicle Miles Traveled	Page 17 Table 11	Collision Costs
	Build a trail to transform Kalispell into a walkable community by connecting the isolated populations to work and daily activity centers. This will be accomplished by removing and relocating the current core area rail users to the new rail park. Post opening of the new rail park, the rail line running through the Core Area will be abandoned and replaced with a trail that connects east and west Kalispell. It will also include the closure of six at-grade rail crossings that limit safe transportation options to daily activities in Kalispell's core area.	Reduction in potential fatalities at six Downtown at-grade crossings	General public	Monetized value of the reduction of potential fatalities at six at-grade rail crossings	Estimated $10 million of reduced fatalities from the closure of six at- grade crossings	Page 17 Table 12	Collision Costs
		Reduction in potential pedestrian fatalities in core area	General public	Monetized value of the reduction of potential pedestrian fatalities at in core area	Estimated $10 million of reduced pedestrian fatalities due to a safe separated trail to walk	Page 18 Table 13	Pedestrian Fatality costs

	Calendar Year	Total Direct Beneficiaries (Reduction in Truck VMT)	Total Benefits (2015$)	Total Initial Costs & Residual	Maintenance Costs (2015$)	Undiscounted Net Benfits (2015$)	Discounted Net Benefits (7%)
	2015		$0	($2,042,081)	$0	($2,042,081)	($2,042,081)
	2016		$0	($15,469,464)	$0	($15,469,464)	($14,457,443)
	2017	1,560,000	$1,970,715	($2,407,355)	$0	($436,640)	($349,561)
	2018	1,560,000	$1,970,715	($3,407,355)	$0	($1,436,640)	($1,141,164)
1	2019	1,606,800	$3,431,801		($54,400)	$3,377,401	$2,609,509
2	2020	1,655,004	$3,461,882		($54,400)	$3,407,482	$2,463,736
3	2021	1,704,654	$3,492,865		($54,400)	$3,438,465	$2,326,114
4	2022	1,755,794	$3,524,778		($54,400)	$3,470,378	$2,196,097
5	2023	1,808,468	$3,557,648		($54,400)	$3,503,248	$2,075,185
6	2024	1,862,722	$3,591,504		($54,400)	$3,537,104	$1,960,885
7	2025	1,918,603	$3,626,376		($54,400)	$3,571,976	$1,853,417
8	2026	1,976,161	$3,662,293		($54,400)	$3,607,893	$1,752,362
9	2027	2,035,446	$3,699,289		($54,400)	$3,644,889	$1,657,323
10	2028	2,096,510	$3,737,394		($54,400)	$3,682,994	$1,568,604
11	2029	2,159,405	$3,776,643		($54,400)	$3,722,243	$1,484,514
12	2030	2,224,187	$3,817,069		($54,400)	$3,762,669	$1,405,400
13	2031	2,290,913	$3,858,707		($54,400)	$3,804,307	$1,330,957
14	2032	2,359,640	$3,901,595		($54,400)	$3,847,195	$1,260,230
15	2033	2,430,429	$3,945,770		($54,400)	$3,891,370	$1,194,966
16	2034	2,503,342	$3,991,270		($54,400)	$3,936,870	$1,132,899
17	2035	2,578,442	$4,038,134		($54,400)	$3,983,734	$1,075,137
18	2036	2,655,796	$4,086,405		($54,400)	$4,032,005	$1,020,118
19	2037	2,735,469	$4,136,124		($54,400)	$4,081,724	$968,978
20	2038	2,817,534	$4,187,334		($54,400)	$4,132,934	$920,180
21	2039	2,902,060	$4,240,081	$17,406,535	($54,400)	$21,592,216	$4,305,855
	Total	49,197,377	$83,706,390	($5,919,720)	($1,088,000)	$55,052,054	$18,572,215

Benefit to Cost Ratio Analysis

Selection Criteria	Description	Inputs	Value	Monetized Value Discount Rate 7%	Monetized Value Discount Rate 3%				
Quality of Life	Converting current rail line going through Downtown to trail	Property Values/ Noise Mitigation	not calculated						
Quality of Life	Fuel savings due to reduced miles traveled by cargo using Rail Park vs. Truck	Gallons of fuel saved	2.6 million gallons of fuel saved by reducing miles traveled with modal shift to Rail	$ 2,977,469	$ 4,730,461			8%	13%
Economic Competiveness	Operational cost savings	Savings of rail transport vs. truck transport	249 million ton miles @$0.071 savings per mile (truck/ barge vs. rail)	$ 7,453,055	$ 11,841,059			20%	32%
State of Good Repair	Reduction of maintenance on US Roads & Hwys, Consistent with State and Regional Plans	Maintenance, preservation and upgrade savings of Highways	49 million VTM reduced off the highways	$ 2,483,315	$ 3,945,373			7%	11%
Environmental Sustainabilit	Environmental Benefits from Reduced Emissions	CO_2 cost savings	22,408 metric tons of CO_2 saved	$ 920,932	$ 920,932			2%	2%
Safety	Closing of 6 rail crossings in Downtown Kalispell	Fatality cost savings of 1.1 fatalities	$10.7 million saved	$ 5,365,761	$ 8,131,428		check digits	63%	63%
Safety	Reduced fatalities from reduction of VMT	Fatality cost savings of 1.1 fatalities	$10.2 million saved	$ 5,139,806	$ 7,789,008	$ 37,005,362	$ 57,557,725		
Safety	Reduction of of pedestrian fatalities in Core Area upon completion of Trail	Fatality cost savings of 3.4 fatalities	$31.5 million saved	$ 12,665,024	$ 20,199,463				
Total Cost				($18,433,147)	($14,652,909)				
Total Benefits				$37,005,362	$ 57,557,725				
Net Present Value				**$ 18,572,215**	**$ 42,904,816**	$ -	$ -		
Benefit to Cost Ratio				**2:1**	**4:1**				
				2.0	3.9				

Cost Benefit Summary

(A)	(B)	C	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(O)	(P)	(Q)	(S)	(T)	(U)
Year	Calendar Year	non-CO2 Benefits	Non-CO2 Costs	Net non-CO2 Benefits (C+D)	7% NPV net non CO2 Benefits (E/1.07^A))	3% NPV net non CO2 Benefits (E/1.03^A))	CO2 Reduced (Metric Tons)	3% SCC (2013$)	Undiscounted CO2 Costs @3% Avg SCC (H*I)	NPV CO2 Costs @ 3% Avg SCC (J/1.03^A))	7% NPV Total Benefits (F+K)	3% NPV Total Benefits (G+K)	7% NPV non CO2 Benefits (C/1.07^A))	7% NPV non CO2 Cost (D/1.07^A))	NPV7% Benefit + NPV Co2 @3% O+K	3% NPV non CO2 Benefits (C/1.03^A))	3% NPV non CO2 Cost (D/1.03^A))	NPV3% Benefit + NPV Co2 @3% S+K
0	2015	$0	$ (2,042,081)	($2,042,081)	($2,042,081)	($2,042,081)	0	$ 44.00	$0	$0	($2,042,081)	($2,042,081)	$0	($2,042,081)	$0	$0	($2,042,081)	$0
1	2016	$0	$ (15,469,464)	($15,469,464)	($14,457,443)	($14,036,352)	0	$ 45.00	$0	$0	($14,457,443)	($14,036,352)	$0	($14,457,443)	$0	$0	($15,018,897)	$0
2	2017	$1,970,715	(2,407,355)	($436,640)	($381,379)	($359,486)	734	$ 46.00	$33,755	$31,817	($349,561)	($327,669)	$1,721,298	($2,102,677)	$1,753,116	$1,857,587	($2,269,163)	$1,889,405
3	2018	$1,970,715	(3,407,355)	($1,436,640)	($1,172,727)	($1,073,211)	734	$ 47.00	$34,489	$31,562	($1,141,164)	($1,041,649)	$1,608,690	($2,781,417)	$1,640,252	$1,803,483	($3,118,213)	$1,835,045
4	2019	$3,431,801	(54,400)	$3,377,401	$2,576,603	$2,289,279	756	$ 49.00	$37,035	$32,905	$2,609,509	$2,322,184	$2,618,105	($41,501)	$2,651,010	$3,049,111	($48,334)	$3,082,016
5	2020	$3,461,882	(54,400)	$3,407,482	$2,429,488	$2,095,697	778	$ 51.00	$39,703	$34,248	$2,463,736	$2,129,946	$2,468,274	($38,786)	$2,502,522	$2,986,250	($46,926)	$3,020,498
6	2021	$3,492,865	(54,400)	$3,438,465	$2,291,194	$1,918,839	802	$ 52.00	$41,696	$34,920	$2,326,114	$1,953,759	$2,327,444	($36,249)	$2,362,363	$2,925,220	($45,559)	$2,960,139
7	2022	$3,524,778	(54,400)	$3,470,378	$2,161,177	$1,757,235	826	$ 52.00	$42,947	$34,920	$2,196,097	$1,792,154	$2,195,054	($33,878)	$2,229,974	$2,865,967	($44,232)	$2,900,887
8	2023	$3,557,648	(54,400)	$3,503,248	$2,038,922	$1,609,544	851	$ 54.00	$45,937	$36,263	$2,075,185	$1,645,807	$2,070,583	($31,661)	$2,106,846	$2,808,440	($42,944)	$2,844,703
9	2024	$3,591,504	(54,400)	$3,537,104	$1,923,950	$1,474,548	876	$ 55.00	$48,191	$36,935	$1,960,885	$1,511,482	$1,953,540	($29,590)	$1,990,475	$2,752,589	($41,693)	$2,789,523
10	2025	$3,626,376	(54,400)	$3,571,976	$1,815,811	$1,351,134	902	$ 56.00	$50,539	$37,606	$1,853,417	$1,388,740	$1,843,465	($27,654)	$1,881,072	$2,698,364	($40,479)	$2,735,970
11	2026	$3,662,293	(54,400)	$3,607,893	$1,714,084	$1,238,291	930	$ 57.00	$52,985	$38,278	$1,752,362	$1,276,568	$1,739,929	($25,845)	$1,778,207	$2,645,719	($39,300)	$2,683,996
12	2027	$3,699,289	(54,400)	$3,644,889	$1,618,374	$1,135,095	957	$ 58.00	$55,532	$38,949	$1,657,323	$1,174,044	$1,642,529	($24,154)	$1,681,478	$2,594,607	($38,155)	$2,633,556
13	2028	$3,737,394	(54,400)	$3,682,994	$1,528,312	$1,040,706	986	$ 60.00	$59,170	$40,292	$1,568,604	$1,080,998	$1,550,886	($22,574)	$1,591,178	$2,544,984	($37,044)	$2,585,276
14	2029	$3,776,643	(54,400)	$3,722,243	$1,443,550	$954,357	1016	$ 61.00	$61,961	$40,964	$1,484,514	$995,320	$1,464,647	($21,097)	$1,505,611	$2,496,806	($35,965)	$2,537,769
15	2030	$3,817,069	(54,400)	$3,762,669	$1,363,764	$875,348	1046	$ 62.00	$64,866	$41,635	$1,405,400	$916,984	$1,383,481	($19,717)	$1,425,117	$2,450,031	($34,917)	$2,491,666
16	2031	$3,858,707	(54,400)	$3,804,307	$1,288,651	$803,044	1078	$ 63.00	$67,890	$42,307	$1,330,957	$845,351	$1,307,078	($18,427)	$1,349,385	$2,404,619	($33,900)	$2,446,926
17	2032	$3,901,595	(54,400)	$3,847,195	$1,217,923	$736,864	1110	$ 63.00	$69,927	$42,307	$1,260,230	$779,171	$1,235,145	($17,222)	$1,277,452	$2,360,529	($32,913)	$2,402,836
18	2033	$3,945,770	(54,400)	$3,891,370	$1,151,316	$676,277	1143	$ 65.00	$74,311	$43,650	$1,194,966	$719,927	$1,167,411	($16,095)	$1,211,061	$2,317,724	($31,954)	$2,361,374
19	2034	$3,991,270	(54,400)	$3,936,870	$1,088,577	$620,800	1178	$ 66.00	$77,718	$44,321	$1,132,899	$665,122	$1,103,619	($15,042)	$1,147,941	$2,276,165	($31,024)	$2,320,487
20	2035	$4,038,134	(54,400)	$3,983,734	$1,029,473	$569,994	1213	$ 68.00	$82,475	$45,665	$1,075,137	$615,659	$1,043,531	($14,058)	$1,089,195	$2,235,817	($30,120)	$2,281,482
21	2036	$4,086,405	(54,400)	$4,032,005	$973,782	$523,456	1249	$ 69.00	$86,199	$46,336	$1,020,118	$569,792	$986,920	($13,138)	$1,033,256	$2,196,644	($29,243)	$2,242,980
22	2037	$4,136,124	(54,400)	$4,081,724	$921,299	$480,819	1287	$ 71.00	$91,358	$47,679	$968,978	$528,498	$933,578	($12,279)	$981,257	$2,158,612	($28,391)	$2,206,291
23	2038	$4,187,334	(54,400)	$4,132,934	$871,830	$441,749	1325	$ 72.00	$95,424	$48,351	$920,180	$490,099	$883,305	($11,476)	$931,656	$2,121,688	($27,564)	$2,170,038
24	2039	$4,240,081	17,352,135	$21,592,216	$4,256,832	$2,094,079	1365	$ 73.00	$99,652	$49,022	$4,305,855	$2,143,102	$835,918	$3,420,915	$884,940	$2,085,839	$8,536,101	$2,134,861
Total		$83,706,390	(7,062,120)	$76,644,270	$17,651,283	$7,176,024	23,142		$1,413,762	$920,932	$18,572,215	$8,096,956	$36,084,430	($18,433,147)	$37,005,362	$56,636,793	($14,652,909)	$57,557,725
													B/C Ratio	7%	2.01		3%	3.93
													NPV	7%	$18,572,215		3%	$42,904,816

Assumptions

Year #	Year	Expected Yearly Cost (Construction and Maint.)
-2/-3	2012/2013	-$1,191,531
-1	2014	-$109,550
0	2015	-$741,000
1	2016	-$15,469,464
2	2017	-$2,407,355
3	2018	-$3,407,355
4	2019	-$54,400
5	2020	-$54,400
6	2021	-$54,400
7	2022	-$54,400
8	2023	-$54,400
9	2024	-$54,400
10	2025	-$54,400
11	2026	-$54,400
12	2027	-$54,400
13	2028	-$54,400
14	2029	-$54,400
15	2030	-$54,400
16	2031	-$54,400
17	2032	-$54,400
18	2033	-$54,400
19	2034	-$54,400
20	2035	-$54,400
21	2036	-$54,400
22	2037	-$54,400
23	2038	-$54,400
24	2039	-$54,400
Construction + Maint Costs		-$24,468,655

Residual value	$ 17,406,535
Net cost after Residual value	$ (7,062,120.10)

Annual Maintenance est by KLJ eng $ 54,400

$54,400

$ (1,301,081)

$23,326,255

Estimated Cash Outflow for Glacier Rail Park/Kalispell Core Area Development and Trail Project

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total
Phase 1a- Planning	$ 175,000	$ 60,000	$ 60,000	$ 36,000							$ 331,000
Phase 1b- Property Purchase/ PE/	$ 926,731	$ 29,800	$ 49,550	$ 36,000							$ 1,042,081
Phase 1c- Final Design and Eng.				$ 705,000							$ 705,000
Phase 2 (TIGER FY2015 request)			$ -	$ -	$ 15,469,464	$ 2,352,955	$ 3,352,955	$ -	$ -	$ -	$ 21,175,374
					73%	11%	16%	0%	0%	0%	
Cash Outflow of Project	**$ 1,101,731**	**$ 89,800**	**$ 109,550**	**$ 741,000**	**$ 15,469,464**	**$ 2,352,955**	**$ 3,352,955**	**$ -**	**$ -**	**$ -**	**$ 23,253,455**

Total Phase I $ 2,042,081

Allocation of costs		# months	Timeline	Montly expediture
Rail	$ 15,469,464	9 mo	Mar 16 to Dec 16	
Trail	$ 4,705,910	12 mo	July 17 to Jun 18	$ 392,159
Contingency	$ 1,000,000		2018	
	$ 21,175,374			

Prior Year expenditure detail

	2012	2013	2014	2015		Grant Funds	
Planning	$ 175,000.00	$ 60,000.00	$ 60,000.00	$ 36,000.00	Willdan	$ 175,000.00	EPA
Property Purchase/PE	$ 856,151.00	$ 29,800.00	$ 49,550.00	x	EDA and KLJ	$ 60,000.00	State of Montana BSTF (1:1 Match)
Environmental	$ 70,580.00				EPA Brownfield ESAs	$ 856,151.00	EDA
Engineering	x	x	x	$ 705,000.00	KLJ	$ 70,580.00	EPA
						$ 1,161,731.00	**Total Grant Funds State and Federa**
Totals	**$ 1,101,731.00**	**$ 89,800.00**	**$ 109,550.00**	**$ 741,000.00**	**$ 2,044,093.00**		

Road Maintenance Costs Saved by using Rail

Avoided Maintenance Costs - By diverting trucks off the roadways and onto the railroads, the public can benefit form reductions in highway maintenance costs. The value of every truck mile diverted to rail saves $0.12/ mile

$0.12 cost/ per mile diverted off roads

Calculation - Total truck mileage per year x $0.12

Referecne: WSDOT Cost Benefit

Reduced operating costs to cargo owner to use Rail vs. Truck

Rail vs truck transportation rate per ton mile ($0.071* ton miles) $ 0.071 per ton mile

Calculation - Truck Rate ($0.10) - Rail Rate ($0.029) x Average Tons per Truck (20) x Distance x (The estimated annual number of truck trips shifting to rail as a result of the project).

Reference: WSDOT Cost Benefit Study

Miles per gallon by mode Calculations

Truck	6	mpg	fuel usage
Tons miles moved per gallon			
Rail	640	ton miles per gallon	http://www.iwla.org/index.php?ht=a/GetDocumentAction/i/7799
Truck	160	ton miles per gallon	assumes truck is 4 times less efficient than rail
Barge	576	ton miles per gallon	
Fuel cost	$2.73	per gallon	source: Desiel price: average Rocky Moutains week of 4/27/2015 (all grades) http://www.eia.gov/dnav/pet/pet_pri_gnd_dcus_r40_w.htm

Detailed Benefits before SCC

						Reductions due to modal change to rail				PV @7%						PV @3%					
Year	Calendar Year	Highway maintenance cost savings using rail vs truck	Reduced severity of accidents due to crossing closures	Reduced severity of accidents due to VMT reduction	Reduction of Pedestrian fatalities due to the completion of the Trail	Savings in operational cost of switching to rail	Fuel saved	GHG reduced*	Total Benefits before SCC	Highway maintenance cost savings using rail vs truck	Reduced severity of accidents due to crossing closures	Reduced severity of accidents due to VMT reduction	Reduction of Pedestrian fatalities due to the completion of the Trail	Savings in operational cost of switching to rail	Fuel saved	Highway maintence cost savings using rail vs truck	Reduced severity of accidents due to crossing crossures	Reduced severity of accidents due to VMT reduction	Reduction of Pedestrian fatalities due to the completion of the Trail	Savings in operational cost of switching to rail	Fuel saved
										(C/1.07^A))		(D/1.07^A))		(E/1.07^A))	(F/1.07^A))	(C/1.03^A))		(D/1.03^A))		(E/1.03^A))	(F/1.03^A))
0	2015	$0				$0	$0		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
1	2016	$0		$0		$0	$0	*this will be added on the summary page	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	2017	$187,200	$509,339	$487,890		$561,834	$224,451		$1,970,715	$163,508	$444,876	$426,142	$0	$490,728	$196,044	$176,454	$480,101	$459,883	$0	$529,583	$211,566
3	2018	$187,200	$509,339	$487,890		$561,834	$224,451		$1,970,715	$152,811	$415,772	$398,264	$0	$458,624	$183,219	$171,315	$466,117	$446,489	$0	$514,158	$205,404
4	2019	$192,816	$509,339	$487,890	$1,431,882	$578,689	$231,184		$3,431,801	$147,098	$388,572	$372,209	$1,092,376	$441,479	$176,369	$171,315	$452,541	$433,484	$1,272,209	$514,158	$205,404
5	2020	$198,600	$509,339	$487,890	$1,431,882	$596,050	$238,120		$3,461,882	$141,599	$363,152	$347,859	$1,020,912	$424,975	$169,776	$171,315	$439,360	$420,859	$1,235,154	$514,158	$205,404
6	2021	$204,558	$509,339	$487,890	$1,431,882	$613,932	$245,263		$3,492,865	$136,306	$339,394	$325,102	$954,124	$409,089	$163,429	$171,315	$426,563	$408,601	$1,199,179	$514,158	$205,404
7	2022	$210,695	$509,339	$487,890	$1,431,882	$632,350	$252,621		$3,524,778	$131,210	$317,191	$303,834	$891,704	$393,796	$157,320	$171,315	$414,139	$396,700	$1,164,251	$514,158	$205,404
8	2023	$217,016	$509,339	$487,890	$1,431,882	$651,320	$260,200		$3,557,648	$126,305	$296,440	$283,957	$833,368	$379,074	$151,439	$171,315	$402,077	$385,145	$1,130,341	$514,158	$205,404
9	2024	$223,527	$509,339	$487,890	$1,431,882	$670,860	$268,006		$3,591,504	$121,584	$277,047	$265,380	$778,849	$364,903	$145,778	$171,315	$390,366	$373,927	$1,097,418	$514,158	$205,404
10	2025	$230,232	$509,339	$487,890	$1,431,882	$690,985	$276,046		$3,626,376	$117,038	$258,922	$248,019	$727,896	$351,262	$140,328	$171,315	$378,996	$363,036	$1,065,455	$514,158	$205,404
11	2026	$237,139	$509,339	$487,890	$1,431,882	$711,715	$284,328		$3,662,293	$112,663	$241,983	$231,793	$680,277	$338,131	$135,082	$171,315	$367,957	$352,462	$1,034,422	$514,158	$205,404
12	2027	$244,254	$509,339	$487,890	$1,431,882	$733,066	$292,857		$3,699,289	$108,451	$226,153	$216,629	$635,773	$325,490	$130,032	$171,315	$357,240	$342,197	$1,004,293	$514,158	$205,404
13	2028	$251,581	$509,339	$487,890	$1,431,882	$755,058	$301,643		$3,737,394	$104,397	$211,358	$202,457	$594,180	$313,322	$125,171	$171,315	$346,835	$332,230	$975,042	$514,158	$205,404
14	2029	$259,129	$509,339	$487,890	$1,431,882	$777,710	$310,692		$3,776,643	$100,495	$197,530	$189,212	$555,309	$301,609	$120,492	$171,315	$336,733	$322,553	$946,643	$514,158	$205,404
15	2030	$266,902	$509,339	$487,890	$1,431,882	$801,041	$320,013		$3,817,069	$96,738	$184,608	$176,834	$518,980	$290,334	$115,988	$171,315	$326,925	$313,158	$919,071	$514,158	$205,404
16	2031	$274,910	$509,339	$487,890	$1,431,882	$825,073	$329,614		$3,858,707	$93,121	$172,531	$165,265	$485,028	$279,481	$111,652	$171,315	$317,403	$304,037	$892,302	$514,158	$205,404
17	2032	$283,157	$509,339	$487,890	$1,431,882	$849,825	$339,502		$3,901,595	$89,640	$161,244	$154,454	$453,297	$269,033	$107,478	$171,315	$308,158	$295,182	$866,312	$514,158	$205,404
18	2033	$291,652	$509,339	$487,890	$1,431,882	$875,320	$349,687		$3,945,770	$86,289	$150,695	$144,349	$423,642	$258,975	$103,460	$171,315	$299,183	$286,584	$841,080	$514,158	$205,404
19	2034	$300,401	$509,339	$487,890	$1,431,882	$901,579	$360,178		$3,991,270	$83,063	$140,836	$134,906	$395,927	$249,294	$99,592	$171,315	$290,469	$278,237	$816,582	$514,158	$205,404
20	2035	$309,413	$509,339	$487,890	$1,431,882	$928,627	$370,983		$4,038,134	$79,958	$131,623	$126,080	$370,026	$239,975	$95,869	$171,315	$282,009	$270,133	$792,798	$514,158	$205,404
21	2036	$318,695	$509,339	$487,890	$1,431,882	$956,485	$382,112		$4,086,405	$76,969	$123,012	$117,832	$345,818	$231,004	$92,285	$171,315	$273,795	$262,265	$769,707	$514,158	$205,404
22	2037	$328,256	$509,339	$487,890	$1,431,882	$985,180	$393,576		$4,136,124	$74,092	$114,965	$110,123	$323,195	$222,368	$88,835	$171,315	$265,820	$254,626	$747,289	$514,158	$205,404
23	2038	$338,104	$509,339	$487,890	$1,431,882	$1,014,735	$405,383		$4,187,334	$71,322	$107,443	$102,919	$302,051	$214,055	$85,514	$171,315	$258,078	$247,210	$725,523	$514,158	$205,404
24	2039	$348,247	$509,339	$487,890	$1,431,882	$1,045,177	$417,545		$4,240,081	$68,656	$100,414	$96,186	$282,291	$206,053	$82,318	$171,315	$250,561	$240,010	$704,391	$514,158	$205,404
		$5,716,485	$11,205,458	$10,733,589	$30,069,526	$17,156,612	$6,854,005	$0	$81,735,675	$2,483,315	$5,365,761	$5,139,806	$12,665,024	$7,453,055	$2,977,469	$3,945,373	$8,131,428	$7,789,008	$20,199,463	$11,841,059	$4,730,461

Assumptions

													Sum of PV @7%		$36,084,430				Sum of PV @3%		$56,636,793
												cost ben summary co2 savings			$920,932						$ 920,932
												check summary			$37,005,362						$57,557,725

GHG Reduction to traffic improvements due to avialability of Rail service = Metric Tons — See Fuel savings above

Annual Social benefit of reduced accidents (from Collision costs worksheet) $ 997,229

Savings from modal change from Truck to Rail Transportation

					Grain/ Other On truck from Lake Co (Polson), MT to Lewiston to barge to PDX — Current mode Grain / other truck to lewiston						Grain/ Other Barge from Lewiston to PDX — Current Barge Miles						Current Routing a combo truck and Barge (with truck to Lewiston)		
	Year #	Year	Rate of growth	Total Tons	Tons/ truck	# Trucks	Travel distance in Miles RT/ truck	Total Truck Miles	Total Ton miles	Total Gallons of Truck Fuel used	Tons/ barge	# barges	Travel distance RT in Miles/ barge	Total Barge Miles	Total Ton miles	Total Gallons of Rail Fuel used	Total Miles	Total tons miles	Total Fuel used in Gallons on Current Routing
				+E*D10	25.86	+C/+D	624	"+E*+F	Total tons * miles	"+H/ 6 mpg)	1500		930	+L * +M	Total tons * miles	See Q24		+I +P	"+J +R
									only OW, empty back	6					only OW, empty back				
		2005																	
		2006																	
		2007																	
		2008																	
		2009																	
		2010																	
		2011																	
		2012																	
		2013																	ok
		2014		77,580		3,000	624	1,872,000	48,409,920	312,000		51.7	930	48,100	72,149,400	125,259	1,920,100	120,559,320	437,259
	Base Year	2015	0	77,580		3,000	624	1,872,000	48,409,920	312,000		51.7	930	48,100	72,149,400	125,259	1,920,100	120,559,320	437,259
	1	2016	0	77,580		3,000	624	1,872,000	48,409,920	312,000		51.7	930	48,100	72,149,400	112,733	1,920,100	120,559,320	424,733
1	year facility opens2	2017		77,580		3,000	624	1,872,000	48,409,920	312,000		51.7	930	48,100	72,149,400	112,733	1,920,100	120,559,320	424,733
2	3	2018		77,580		3,000	624	1,872,000	48,409,920	312,000		51.7	930	48,100	72,149,400	112,733	1,920,100	120,559,320	424,733
3	4	2019	3%	79,907		3,090	624	1,928,160	49,862,218	321,360		53.3	930	49,543	74,313,882	116,115	1,977,703	124,176,100	437,475
4	5	2020	3%	82,305		3,183	624	1,986,005	51,358,084	331,001		54.9	930	51,029	76,543,298	119,599	2,037,034	127,901,383	450,600
5	6	2021	3%	84,774		3,278	624	2,045,585	52,898,827	340,931		56.5	930	52,560	78,839,597	123,187	2,098,145	131,738,424	464,118
6	7	2022	3%	87,317		3,377	624	2,106,952	54,485,791	351,159		58.2	930	54,137	81,204,785	126,882	2,161,089	135,690,577	478,041
7	8	2023	3%	89,936		3,478	624	2,170,161	56,120,365	361,694		60.0	930	55,761	83,640,929	130,689	2,225,922	139,761,294	492,382
8	9	2024	3%	92,635		3,582	624	2,235,266	57,803,976	372,544		61.8	930	57,433	86,150,157	134,610	2,292,699	143,954,133	507,154
9	10	2025	3%	95,414		3,690	624	2,302,324	59,538,095	383,721		63.6	930	59,156	88,734,661	138,648	2,361,480	148,272,757	522,369
10	11	2026	3%	98,276		3,800	624	2,371,394	61,324,238	395,232		65.5	930	60,931	91,396,701	142,807	2,432,325	152,720,940	538,040
11	12	2027	3%	101,224		3,914	624	2,442,535	63,163,965	407,089		67.5	930	62,759	94,138,602	147,092	2,505,294	157,302,568	554,181
12	13	2028	3%	104,261		4,032	624	2,515,811	65,058,884	419,302		69.5	930	64,642	96,962,760	151,504	2,580,453	162,021,645	570,806
13	14	2029	3%	107,389		4,153	624	2,591,286	67,010,651	431,881		71.6	930	66,581	99,871,643	156,049	2,657,867	166,882,294	587,930
14	15	2030	3%	110,611		4,277	624	2,669,024	69,020,970	444,837		73.7	930	68,579	102,867,793	160,731	2,737,603	171,888,763	605,568
15	16	2031	3%	113,929		4,406	624	2,749,095	71,091,600	458,183		76.0	930	70,636	105,953,826	165,553	2,819,731	177,045,426	623,735
16	17	2032	3%	117,347		4,538	624	2,831,568	73,224,348	471,928		78.2	930	72,755	109,132,441	170,519	2,904,323	182,356,789	642,447
17	18	2033	3%	120,867		4,674	624	2,916,515	75,421,078	486,086		80.6	930	74,938	112,406,414	175,635	2,991,453	187,827,492	661,721
18	19	2034	3%	124,493		4,814	624	3,004,010	77,683,710	500,668		83.0	930	77,186	115,778,607	180,904	3,081,196	193,462,317	681,572
19	20	2035	3%	128,228		4,959	624	3,094,131	80,014,222	515,688		85.5	930	79,501	119,251,965	186,331	3,173,632	199,266,187	702,020
20	21	2036	3%	132,075		5,107	624	3,186,955	82,414,648	531,159		88.0	930	81,886	122,829,524	191,921	3,268,841	205,244,172	723,080
21	22	2037	3%	136,037		5,261	624	3,282,563	84,887,088	547,094		90.7	930	84,343	126,514,410	197,679	3,366,906	211,401,497	744,773
22	23	2038	3%	140,118		5,418	624	3,381,040	87,433,700	563,507		93.4	930	86,873	130,309,842	203,609	3,467,913	217,743,542	767,116
23	24	2039	3%	144,322		5,581	624	3,482,471	90,056,711	580,412		96.2	930	89,479	134,219,137	209,717	3,571,951	224,275,849	790,129
																	-		
								62,780,853	1,623,512,851							Total for 24 years forward 2016-2039 + base 2015 year			

Year	Reduction in Truck miles with converting to rail from Kalispell			Reduction in Barge miles with converting to rail from Kalispell			Increase in Rail Miles Kalispell to Portland with conversion of current trucks delivering to Kalispell not Lewiston,ID					
	Reduction of 520 truck miles per truck of trucks	Reduction in total gallons of fuel used by Truck	Reduction in total Truck ton miles	Reduction of 930 miles per barge of barge	Reduction in total gallons of fuel used by Barge	Reduction in total barge ton miles	Tons/ railcar	# railcars	Total Additional rail ton miles	Increased Travel distance in Miles/ railcar	Total additional Rail Miles	Total Additional Gallons of Rail Fuel used
	520	mpg * miles		930			100	C/ W9	=+Y10*Z10*AB10	1292		
2005			ok									
2006												
2007												
2008												
2009												
2010												
2011												
2012												
2013												
2014	-											
2015	-											
2016	-											
2017	1,560,000	126,068	20,170,800	48,100	112,733	72,149,400		776	(100,233,360)	-1292	(1,002,334)	(156,615)
2018	1,560,000	126,068	20,170,800	48,100	112,733	72,149,400		776	(100,233,360)	-1292	(1,002,334)	(156,615)
2019	1,606,800	129,850	20,775,924	49,543	116,115	74,313,882		799	(103,240,361)	-1292	(1,032,404)	(161,313)
2020	1,655,004	133,745	21,399,202	51,029	119,599	76,543,298		823	(106,337,572)	-1292	(1,063,376)	(166,152)
2021	1,704,654	137,757	22,041,178	52,560	123,187	78,839,597		848	(109,527,699)	-1292	(1,095,277)	(171,137)
2022	1,755,794	141,890	22,702,413	54,137	126,882	81,204,785		873	(112,813,530)	-1292	(1,128,135)	(176,271)
2023	1,808,468	146,147	23,383,485	55,761	130,689	83,640,929		899	(116,197,936)	-1292	(1,161,979)	(181,559)
2024	1,862,722	150,531	24,084,990	57,433	134,610	86,150,157		926	(119,683,874)	-1292	(1,196,839)	(187,006)
2025	1,918,603	155,047	24,807,540	59,156	138,648	88,734,661		954	(123,274,390)	-1292	(1,232,744)	(192,616)
2026	1,976,161	159,699	25,551,766	60,931	142,807	91,396,701		983	(126,972,622)	-1292	(1,269,726)	(198,395)
2027	2,035,446	164,489	26,318,319	62,759	147,092	94,138,602		1012	(130,781,800)	-1292	(1,307,818)	(204,347)
2028	2,096,510	169,424	27,107,869	64,642	151,504	96,962,760		1043	(134,705,254)	-1292	(1,347,053)	(210,477)
2029	2,159,405	174,507	27,921,105	66,581	156,049	99,871,643		1074	(138,746,412)	-1292	(1,387,464)	(216,791)
2030	2,224,187	179,742	28,758,738	68,579	160,731	102,867,793		1106	(142,908,804)	-1292	(1,429,088)	(223,295)
2031	2,290,913	185,134	29,621,500	70,636	165,553	105,953,826		1139	(147,196,068)	-1292	(1,471,961)	(229,994)
2032	2,359,640	190,688	30,510,145	72,755	170,519	109,132,441		1173	(151,611,950)	-1292	(1,516,120)	(236,894)
2033	2,430,429	196,409	31,425,449	74,938	175,635	112,406,414		1209	(156,160,309)	-1292	(1,561,603)	(244,000)
2034	2,503,342	202,301	32,368,213	77,186	180,904	115,778,607		1245	(160,845,118)	-1292	(1,608,451)	(251,320)
2035	2,578,442	208,370	33,339,259	79,501	186,331	119,251,965		1282	(165,670,472)	-1292	(1,656,705)	(258,860)
2036	2,655,796	214,621	34,339,437	81,886	191,921	122,829,524		1321	(170,640,586)	-1292	(1,706,406)	(266,626)
2037	2,735,469	221,060	35,369,620	84,343	197,679	126,514,410		1360	(175,759,803)	-1292	(1,757,598)	(274,625)
2038	2,817,534	227,692	36,430,708	86,873	203,609	130,309,842		1401	(181,032,598)	-1292	(1,810,326)	(282,863)
2039	2,902,060	234,523	37,523,630	89,479	209,717	134,219,137		1443	(186,463,576)	-1292	(1,864,636)	(291,349)
											Total from 2015 for 24 years	
	49,197,377	3,975,763	636,122,088	1,516,907	3,555,250	2,275,359,776		23,690	(3,060,804,093)			
	saved on highway											

Year	Change due to conversion to delivery to Kalispell Rail Park vs. Lewiston, ID				Calculation of Fuel savings			SCC Calculations at 3%						
	Reduction in miles	Reduction in Ton miles	Net Reduction in gallons of fuel used	Reduction in operation cost based upon differential rate/ mile rail vs truck	Total reduction in mode ton miles	Total gallons save by moving cargo by rail vs truck	Fuel savings due to modal change to rail	Co2 savings@ 20 lbs/ gal	CO2 in MT	Social cost of Carbon (3%)	Total $ saved in Social cost of Carbon (3%)			
				$ 0.071	miles	+O-H	@$2.731 / gal	+AH*20 lbs	+AJ/2240	$/ MT				
2005														
2006														
2007														
2008														
2009														
2010										$ 39.00				
2011										$ 40.00				
2012										$ 41.00				
2013					-	-			0	$ 43.00				
2014									0	$ 44.00	$0			
2015	-			$ -	-	-		-	0	$ 45.00	$0	2015	0	
2016	-			$ -	-	-		-	0	$ 46.00	$0	2016	1	
2017	605,766	(7,913,160)	82,186	$ 561,834	(7,913,160)	82,186	$224,451	1,643,726	734	$ 47.00	$34,489	2017	2	Railroad opens 1/1/2017
2018	605,766	(7,913,160)	82,186	$ 561,834	(7,913,160)	82,186	$224,451	1,643,726	734	$ 49.00	$35,957	2018	3	
2019	623,939	(8,150,555)	84,652	$ 578,689	(8,150,555)	84,652	$231,184	1,693,038	756	$ 51.00	$38,547	2019	4	
2020	642,657	(8,395,071)	87,191	$ 596,050	(8,395,071)	87,191	$238,120	1,743,829	778	$ 52.00	$40,482	2020	5	
2021	661,937	(8,646,924)	89,807	$ 613,932	(8,646,924)	89,807	$245,263	1,796,144	802	$ 52.00	$41,696	2021	6	
2022	681,795	(8,906,331)	92,501	$ 632,350	(8,906,331)	92,501	$252,621	1,850,028	826	$ 54.00	$44,599	2022	7	
2023	702,249	(9,173,521)	95,276	$ 651,320	(9,173,521)	95,276	$260,200	1,905,529	851	$ 55.00	$46,788	2023	8	
2024	723,316	(9,448,727)	98,135	$ 670,860	(9,448,727)	98,135	$268,006	1,962,695	876	$ 56.00	$49,067	2024	9	
2025	745,016	(9,732,189)	101,079	$ 690,985	(9,732,189)	101,079	$276,046	2,021,576	902	$ 57.00	$51,442	2025	10	
2026	767,366	(10,024,154)	104,111	$ 711,715	(10,024,154)	104,111	$284,328	2,082,223	930	$ 58.00	$53,915	2026	11	
2027	790,387	(10,324,879)	107,234	$ 733,066	(10,324,879)	107,234	$292,857	2,144,690	957	$ 60.00	$57,447	2027	12	
2028	814,099	(10,634,625)	110,452	$ 755,058	(10,634,625)	110,452	$301,643	2,209,031	986	$ 61.00	$60,157	2028	13	
2029	838,522	(10,953,664)	113,765	$ 777,710	(10,953,664)	113,765	$310,692	2,275,302	1016	$ 62.00	$62,977	2029	14	
2030	863,677	(11,282,274)	117,178	$ 801,041	(11,282,274)	117,178	$320,013	2,343,561	1046	$ 63.00	$65,913	2030	15	
2031	889,588	(11,620,742)	120,693	$ 825,073	(11,620,742)	120,693	$329,614	2,413,867	1078	$ 63.00	$67,890	2031	16	
2032	916,275	(11,969,365)	124,314	$ 849,825	(11,969,365)	124,314	$339,502	2,486,283	1110	$ 65.00	$72,147	2032	17	
2033	943,764	(12,328,445)	128,044	$ 875,320	(12,328,445)	128,044	$349,687	2,560,872	1143	$ 66.00	$75,454	2033	18	
2034	972,077	(12,698,299)	131,885	$ 901,579	(12,698,299)	131,885	$360,178	2,637,698	1178	$ 67.00	$78,895	2034	19	
2035	1,001,239	(13,079,248)	135,841	$ 928,627	(13,079,248)	135,841	$370,983	2,716,829	1213	$ 68.00	$82,475	2035	20	
2036	1,031,276	(13,471,625)	139,917	$ 956,485	(13,471,625)	139,917	$382,112	2,798,334	1249	$ 69.00	$86,199	2036	21	
2037	1,062,214	(13,875,774)	144,114	$ 985,180	(13,875,774)	144,114	$393,576	2,882,284	1287	$ 71.00	$91,358	2037	22	
2038	1,094,081	(14,292,047)	148,438	$ 1,014,735	(14,292,047)	148,438	$405,383	2,968,752	1325	$ 72.00	$95,424	2038	23	
2039	1,126,903	(14,720,809)	152,891	$ 1,045,177	(14,720,809)	152,891	$417,545	3,057,815	1365	$ 73.00	$99,652	2039	24	
	19,103,909		2,591,892	$ 17,718,447	(249,555,588)	2,591,892	$7,078,456	51,837,834	23,142		$ 1,432,969			
	19,103,909			$ 17,718,447	(249,555,588)	$ 2,591,892	$ 7,078,456	$ 51,837,834	$ 23,142	$ 1,391	$ 1,432,969			

Notes:
Diesel price: average Rocky Moutains week of 4/27/15 $ 2.73
Value of the trucker's time has not been calculated in this BCA
Social cost of Carbon (3%) $/ MT
rail park assumed to open 1/2018,

Estimated loads were developed based on 300 annual rail cars from moving from Lewiston to Seattle with the associated trucks from Lake Co to Lewiston
In the future the move would by truck to Kalispell and rail from the Kalispell Rail Park to Seattle.

Conversion of Collision statistics based upon 100 Million miles travel by truck								
Collision Type					Average for	Current est. accident costs	Effect on Accidents with conversion to rail	
AIS Level	Severity	Fraction of VSL	Unit value ($2013)*	Conversation of Montana Traffic	Accident Count by KABCO	Current Annual social cost of Accidents	reduction in injuries by 70 % per Insurance Inst for Highway	Estimated Annual accident costs savings
AIS 0	no injury					$0	$0	
AIS 1	Minor	0.003	$28,200			$0	$0	$0
AIS 2	Moderate	0.047	$441,800			$0	$0	$0
AIS 3	Serious	0.105	$987,000			$0	$0	$0
AIS 4	Severe	0.266	$2,500,400			$0	$0	$0
AIS 5	Critical	0.593	$5,574,200			$0	$0	$0
AIS 6 reduction VMT	Unsurvivable	1.000	$9,400,000	0.051903	0	$487,890	$341,523	$487,890
AIS 6 due to crossing closure	Unsurvivable	1.000	$9,400,000	0.054185	0	$509,339	$356,537	$509,339
Property Damage Only			$3,285			$0	$0	$0
						$997,229	$698,061	$997,229
*TIGER BENEFIT-COST ANALYSIS (BCA) RESOURCE GUIDE updated 3/27/2015							annual savings	

Conversion of Collision statistics based upon 100 Million miles travel by truck			
Montana Traffic Fatalities Per 100 Million miles traveled on Roads	2.11		Annual
Total Truck miles reduced over the 22 years	49,197,377	/22	2,459,869
Total Truck miles divided by 100 million miles	0.491973773		0.024598689
Estimated Fatalities Per 100 miles travel based upon Montana's experience	1.04		0.051903233
2013 Unsurvivable value $9,400,000			
Annual life savings based upon reduced truck mileage			$487,890.39
		Total lives saved over 22 years	1.14
		Dollars saved	$10,733,589

22 years after opening in yr 3.

RAILROAD CROSSING SAFETY										
Crossing	MP	Road	City	County	Rank within County with 33 crossings	Predictive Collision	Train Speed	# Tracks	AADT	Lanes
059375E	1226.70	Meridian Rd	Kalispell	Flathead	22	0.009105	10 mph	1 Main	10482	2
059374X	1226.30	5th Ave NW	Kalispell	Flathead	21	0.008358	10 mph	1 Main	7611	2
059373R	1226.10	Main St ((US 93)	Kalispell	Flathead	4	0.021198	5 mph	1 Main	25833	5
099099N	1225.93	1st Ave E (US723)	Kalispell	Flathead	33	0.000145	10 mph	2 Main	6409	3
059372J	1225.79	3rd Ave NE	Kalispell	Flathead	23	0.007626	10 mph	1 Main + 1	5422	4
059371C	1225.70	4th Ave NE	Kalispell	Flathead	24	0.007753	10 mph	1 Main	5761	2
		Six crossings have an annual predictive collision rate of			0.054185					
		Total Predictive Collisions 0.054185			20 yrs			1.0837	20 yrs	post abandment and trail construction
							$	10,186,780		

Source: http://safetydata.fra.dot.gov U.S. DOT-Crossing inventory information as of 4/28/2015
http://safetydata.fra.dot.gov/webaps/default.aspx
https://safetydata.fra.dot.gov/OfficeofSafety/PublicSite/Crossing/Crossing.aspx

Decreased road maintenance due to construction of Phase II and conversion to rail						
Year	Truck Miles saved	Maintenance rate/ mile	Total savings	No Build Total Miles	No Build Total Maintenance Cost	Decrease in Maintenance Costs with full conversation to rail of the grain shipments
		$ 0.12				
2014	-	$ 0.12	-	1,872,000	$ 224,640	$ -
2015	-	$ 0.12	-	1,872,000	$ 224,640	
2016	-	$ 0.12	-	1,872,000	$ 224,640	
2017	1,560,000	$ 0.12	187,200	1,872,000	$ 224,640	$ 187,200
2018	1,560,000	$ 0.12	$ 187,200	1,872,000	$ 224,640	$ 187,200
2019	1,606,800	$ 0.12	$ 192,816	1,928,160	$ 231,379	$ 192,816
2020	1,655,004	$ 0.12	$ 198,600	1,986,005	$ 238,321	$ 198,600
2021	1,704,654	$ 0.12	$ 204,558	2,045,585	$ 245,470	$ 204,558
2022	1,755,794	$ 0.12	$ 210,695	2,106,952	$ 252,834	$ 210,695
2023	1,808,468	$ 0.12	$ 217,016	2,170,161	$ 260,419	$ 217,016
2024	1,862,722	$ 0.12	$ 223,527	2,235,266	$ 268,232	$ 223,527
2025	1,918,603	$ 0.12	$ 230,232	2,302,324	$ 276,279	$ 230,232
2026	1,976,161	$ 0.12	$ 237,139	2,371,394	$ 284,567	$ 237,139
2027	2,035,446	$ 0.12	$ 244,254	2,442,535	$ 293,104	$ 244,254
2028	2,096,510	$ 0.12	$ 251,581	2,515,811	$ 301,897	$ 251,581
2029	2,159,405	$ 0.12	$ 259,129	2,591,286	$ 310,954	$ 259,129
2030	2,224,187	$ 0.12	$ 266,902	2,669,024	$ 320,283	$ 266,902
2031	2,290,913	$ 0.12	$ 274,910	2,749,095	$ 329,891	$ 274,910
2032	2,359,640	$ 0.12	$ 283,157	2,831,568	$ 339,788	$ 283,157
2033	2,430,429	$ 0.12	$ 291,652	2,916,515	$ 349,982	$ 291,652
2034	2,503,342	$ 0.12	$ 300,401	3,004,010	$ 360,481	$ 300,401
2035	2,578,442	$ 0.12	$ 309,413	3,094,131	$ 371,296	$ 309,413
2036	2,655,796	$ 0.12	$ 318,695	3,186,955	$ 382,435	$ 318,695
2037	2,735,469	$ 0.12	$ 328,256	3,282,563	$ 393,908	$ 328,256
2038	2,817,534	$ 0.12	$ 338,104	3,381,040	$ 405,725	$ 338,104
2039	2,902,060	$ 0.12	$ 348,247	3,482,471	$ 417,897	$ 348,247
	49,197,377		$ 5,903,685			$ 5,903,685

Conversion of Collision statistics based upon 100 Million miles travel by truck						
Collision Type					Current est. accident costs	Effect on Accidents with addition of trail
AIS Level	Severity	Fraction of VSL	Unit value ($2013)*	Conversation of Montana Traffic Trips	Current Annual social cost of Accidents	Estimated Annual accident costs savings
AIS 6 reduction conflict of pedestrian and vehicles by building the trail	Unsurvivable	1.000	$9,400,000	0.152328	$1,431,882	$1,431,882
					$1,431,882	$1,431,882
*TIGER BENEFIT-COST ANALYSIS (BCA) RESOURCE GUIDE updated 3/27/2015						annual savings

Conversion of Collision statistics based upon Daily Average Trips in the Center St. in Downtown Core		
Kalispel Traffic Fatalities Per 1 Million trips traveled	0.0435	Annual
Total Potential vehicle Trip/ pedestrian interactions reduced over the 25 years	87,472,506 /25	3,498,900
Total Total trips divided by 1 million trips	87.472506423	3.498900257
Estimated Fatalities Per 1 million trips travel based upon Kalispell's experience	3.81	0.152327891
2013 Unsurvivable value $9,400,000		
Annual life savings based upon reduced trips		$1,431,882
Total lives saved over 20 years after completion of the trail		3.35
Dollars saved		$31,501,408

Gallons and CO2 MT Saved due to shift in mode			
Year	Total gallons save by reduction in modal shift	Fuel savings due to reduced VMT @$2.731 / gal	CO2 Reduced (Metric Tons)
2015	-	$0	
2016	-	$0	
2017	82,186	$328,745	
2018	82,186	$224,451	734
2019	84,652	$231,184	756
2020	87,191	$238,120	778
2021	89,807	$245,263	802
2022	92,501	$252,621	826
2023	95,276	$260,200	851
2024	98,135	$268,006	876
2025	101,079	$276,046	902
2026	104,111	$284,328	930
2027	107,234	$292,857	957
2028	110,452	$301,643	986
2029	113,765	$310,692	1,016
2030	117,178	$320,013	1,046
2031	120,693	$329,614	1,078
2032	124,314	$339,502	1,110
2033	128,044	$349,687	1,143
2034	131,885	$360,178	1,178
2035	135,841	$370,983	1,213
2036	139,917	$382,112	1,249
2037	144,114	$393,576	1,287
2038	148,438	$405,383	1,325
2039	152,891	$417,545	1,365
Total	2,591,892	$7,182,751	22,408

Notes:
Diesel price: average Rocky Mountains week of 4/27/2015 (all grades)
Source: http://www.eia.gov/dnav/pet/pet_pri_gnd_dcus_r40_w.htm
The Rail Park is assumed to open 1/2018

$2.73 average price

Glacier Rail Park/Kalispell Core Area Development and Trail Project Total Project Cost						
Description		Phase I-a Planning Total	Phase I-b Property Purchase/ PE/ENV Total	Phase I-c Final Engineering Total	Phase II Construction Total	Total Project to date
Planning		$ 331,000	$ -	$ -	$ -	$ 331,000
Property Purchase/ PE			$ 1,042,081		$ -	$ 1,042,081
Environmental- does not include City in-kind						$ -
Engineering				$ 705,000	$ -	$ 705,000
					$ -	$ -
Trail					$ 4,705,910	$ 4,705,910
Road and Rail					$ 15,469,464	$ 15,469,464
						$ -
Risk Management					$ 1,000,000	$ 1,000,000
						$ -
Subtotal Construction		$ 331,000	$ 1,042,081	$ 705,000	$ 21,175,374	$ 23,253,455
Total Cost		$ 331,000	$ 1,042,081	$ 705,000	$ 21,175,374	$ 23,253,455
					ok	
					$ 21,880,374	

Remaining Capital Value of Glacier Rail Park/Kalispell Core Area Development and Trail Project						
Asset	Expected Life	Total Project Cost		Remaining Life Proporation at 20 years after project completed	Remaining Capital Value	
Crossing Construction	80	$	-	75%	$	-
Rail and Road	100	$	19,191,455	78%	$	14,969,335
Trail	30	$	4,062,000	60%	$	2,437,200
					$	17,406,535
The remaining capital value when rounding is		$	23,253,455	**$**	**17,406,535**	

0.566666667 17

Decreased Operational Costs due to construction of Phase II and coversion to rail in Kalispell, MT			
Year	**Total ton miles on rail after opening of rail park**	**saving / mile**	**Reduction in operation cost based upon differential rate/ mile rail vs truck**
	Portland, OR	$ 0.071	
2014		$ 0.071	
2015		$ 0.071	
2016		$ 0.071	
2017	7,913,160	$ 0.071	$ 561,834
2018	7,913,160	$ 0.071	$ 561,834
2019	8,150,555	$ 0.071	$ 578,689
2020	8,395,071	$ 0.071	$ 596,050
2021	8,646,924	$ 0.071	$ 613,932
2022	8,906,331	$ 0.071	$ 632,350
2023	9,173,521	$ 0.071	$ 651,320
2024	9,448,727	$ 0.071	$ 670,860
2025	9,732,189	$ 0.071	$ 690,985
2026	10,024,154	$ 0.071	$ 711,715
2027	10,324,879	$ 0.071	$ 733,066
2028	10,634,625	$ 0.071	$ 755,058
2029	10,953,664	$ 0.071	$ 777,710
2030	11,282,274	$ 0.071	$ 801,041
2031	11,620,742	$ 0.071	$ 825,073
2032	11,969,365	$ 0.071	$ 849,825
2033	12,328,445	$ 0.071	$ 875,320
2034	12,698,299	$ 0.071	$ 901,579
2035	13,079,248	$ 0.071	$ 928,627
2036	13,471,625	$ 0.071	$ 956,485
2037	13,875,774	$ 0.071	$ 985,180
2038	14,292,047	$ 0.071	$ 1,014,735
2039	14,720,809	$ 0.071	$ 1,045,177
	249,555,588		$ 17,718,447

Glacier Rail Park/Kalispell Core Area Development and Trail Project Phase II			
Funding Sources	**Amount in Millions**	**Status**	**Purpose**
BNSF	**$ 0.5**	**Committed**	Construction
FCEDA	**$ 6.2**	**Committed**	Construction
City of Kalispell	**$ 4.5**	**Committed**	Construction
TIGER VII Request	**$ 10.0**	**Requested**	Construction
Total Project Funding for Phase II	**$ 21.2**		

$ 21.2

	Total Project Cost	
Total Federal	**$10.0**	**47%**
Total Local	**$11.2**	**53%**
Total Project Funding for Phase II	**$21.2**	**100%**

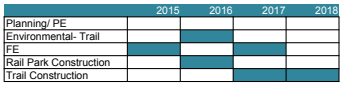
Glacier Rail Park/Kalispell Core Area Development and Trail Project		
Project Budget Phase II	**in Millions**	
CN	**$19.5**	**92%**
FE/ CN Engineering	**$1.1**	**5%**
Management and Inspection	**$0.6**	**3%**
Total Cost	**$21.2**	**100%**

Project Funding Phase II	**in Millions**	**%**
TIGER VII Request	**$10.0**	**47%**
Local Match	**$11.2**	**53%**
	$21.2	**100%**

Rail Park Project Schedule
Task

Rail Park- Trail Project Schedule and Task Details	Approved/Complete
REVIEW-Rail Park Categorical Exclusion Worksheet (FRA)	Apr-15
APPROVAL-Preliminary Rail Design & Operation Plan (BNSF)	Apr-15
APPROVAL-Traffic Design Concept and Location (Montana DOT)	Apr-15
COMPLETED-Construction Documents for Rail Park	Jun-15
SUBMITTED-Trail Categorical Exclusion Worksheet (USDOT)	Sep-15
Approval-Water Design (City of Kalispell and Montana DEQ)	Jun-15
Approval-Sewer and Storm Water Design (City of Kalispell and Montana DEQ)	Sep-15
APPROVAL-Traffic Design Construction Documents (Montana DOT)	Sep-15
BID-Construction of Rail Park	Sep-15
RECEIVE- Notice of Award from the US DOT	Sep-15
SIGN- Lease with CHS	Sep-15
BEGIN- Rail Abandonment and Rail Banking Process	Sep-15
RECEIVE- TIGER VII funds from US DOT	Jan-16
SIGNED-Rail Park Construction Contract	Feb-16
BEGIN-Rail Park Construction	Mar-16
BEGIN-CHS Facility Construction	Mar-16
COMPLETE- Environmental Site Assessments for Trail	Jul-16
COMPLETE-Construction of Rail Park	Dec-16
COMPLETE-CHS Facility Construction and Relocation	Dec-16
COMPLETE- Rail Abandonment and Rail Banking Process	Jan-17
COMPLETE-Trail Property Acquisition	Feb-17
COMPLETE-Final Design and Construction Documents for Trail	Feb-17
BID-Construction Costs of Trail	Mar-17
AWARD- Contract for Trail Construction	May-17
OBLIGATED- All TIGER Funds	Jun-17
REMOVE Track	Jun-17
TRAIL Construction (180 days)	July 2017 – June 2018
COMPLETE- Complete Street Extensions and Upgrade Pedestrian Crossings	Jun-18

Rail Park opens Jan 17



Year	Quarter	# Jobs	
2015	Q1	0	$ 1,241,081
	Q2	0	$ 741,000
	Q3	0	$ -
	Q4	0	$ -
2016	Q1	201	
	Q2	201	$ 15,469,464.00
	Q3	201	
	Q4	201	
2017	Q1	0	
	Q2	0	$ 2,352,955.00
	Q3	31	
	Q4	31	
2018	Q1	44	
	Q2	44	$ 3,352,955.00
	Q3	44	
	Q4	44	
2019	Q1	0	
	Q2	0	$ -
	Q3	0	
	Q4	0	
2020	Q1	0	
	Q2	0	$ -
	Q3	0	
	Q4	0	
2021	Q1	0	
	Q2	0	0
	Q3	0	
	Q4	0	0
generated during		275	275
			$ 21,175,374.00

Direct Jobs by Calendar Quarter				
	2016	2017	2018	Total
Q1	201	0	88	
Q2	201	0	88	
Q3	201	62	0	
Q4	201	62	0	
Capital Spending in Mill.	$ 15.5	$ 2.4	$ 3.4	$ 21.2
Total Annual Jobs at $76,900/yr	201	31	44	275