

1 Build
2 No Build

2000 opening year

Discount Rate 4%

Year	Discount Rate	Costs			Benefits							Undiscounted		Discounted			
		Capital Costs	TOTAL CAPITAL COSTS	TOTAL Discounted CAPITAL COSTS	Maintenance and Rehab costs	TOTAL recurring COSTS	TOTAL recurring COSTS discounted	Residual	Travel Time	VOC	Accid	TOTAL BENEFITS	TOTAL BENEFITS discounted	NET BENEFITS (benefits-recurring costs)	NET BENEFITS	Net Benefits - Capital Costs	Net Benefits - Capital Costs
0	1998																
1	1999	2.28	2.28	2.11	-	-	-	3.93	2.12	-	-	6.86	6.34	6.86	6.34	-	4.23
2	2000	46.60	47	41.42	-	-	-	4.26	2.24	0.91	0.81	7.40	6.58	7.40	6.58	4.58	34.84
3	2001	46.60	47	39.83	0.08	0.08	-	4.56	2.34	1.00	0.91	7.90	6.75	7.98	6.82	38.61	33.01
4	2002				0.11	0.11	-	4.88	2.44	1.10	1.10	8.42	6.92	8.53	7.01	8.53	7.01
5	2003				0.14	0.14	-	5.21	2.55	1.21	1.21	8.96	7.08	9.10	7.19	9.10	7.19
6	2004				0.18	0.18	-	5.56	2.65	1.32	1.32	9.52	7.24	9.70	7.37	9.70	7.37
7	2005				1.33	1.33	-	5.92	2.76	1.43	1.43	10.11	7.39	10.44	7.70	10.44	7.70
8	2006				0.02	0.02	-	6.37	2.90	1.56	1.56	10.83	7.61	10.81	8.36	8.36	7.59
9	2007				0.01	0.01	-	6.64	2.98	1.67	1.67	11.28	7.62	11.28	7.62	11.28	7.62
10	2008				0.00	0.00	-	6.99	3.08	1.74	1.74	11.81	7.67	11.81	7.67	11.81	7.67
11	2009				0.01	0.01	-	7.28	3.16	1.82	1.82	12.26	7.66	12.27	7.66	12.27	7.66
12	2010				0.25	0.25	-	7.58	3.25	1.89	1.89	12.71	7.63	12.47	7.49	12.47	7.49
13	2011				0.21	0.21	-	7.97	3.35	1.97	1.97	13.30	7.68	13.51	7.80	13.51	7.80
14	2012				1.36	1.36	-	8.30	3.44	2.05	2.05	13.79	7.66	14.43	7.70	14.43	7.70
15	2013				0.01	0.01	-	8.73	3.54	2.14	2.14	14.41	7.69	14.96	7.72	14.96	7.72
16	2014	2.90	2.90	1.55	0.03	0.03	-	9.09	3.63	2.22	2.22	14.93	7.67	15.63	7.68	15.63	7.68
17	2015				0.04	0.04	-	9.55	3.74	2.31	2.31	15.59	7.70	16.21	7.72	16.21	7.72
18	2016				0.06	0.06	-	9.93	3.83	2.39	2.39	16.15	7.66	16.82	7.69	16.82	7.69
19	2017				0.10	0.10	-	10.33	3.92	2.47	2.47	16.72	7.63	17.51	7.69	17.51	7.69
20	2018				0.12	0.12	-	10.84	4.03	2.52	2.52	17.39	7.63	18.28	7.72	18.28	7.72
21	2019				1.26	1.26	-	11.27	4.12	2.56	2.56	17.95	7.57	19.24	7.80	19.24	7.80
22	2020				0.37	0.37	-	11.82	4.24	2.61	2.61	18.66	7.57	20.06	7.80	20.06	7.80
23	2021				0.06	0.06	-	12.27	4.32	2.64	2.64	19.24	7.51	20.70	7.80	20.70	7.80
24	2022				0.07	0.07	-	12.87	4.43	2.69	2.69	19.99	7.50	21.53	7.80	21.53	7.80
25	2023				0.10	0.10	-	13.36	4.52	2.73	2.73	20.61	7.43	22.23	7.80	22.23	7.80
26	2024				0.13	0.13	-	14.00	4.63	2.77	2.77	21.40	7.42	23.44	7.80	23.44	7.80
27	2025				0.17	0.17	-	14.53	4.72	2.81	2.81	22.06	7.36	24.05	7.80	24.05	7.80
28	2026				1.32	1.32	-	15.07	4.81	2.85	2.85	22.73	7.29	23.44	7.80	23.44	7.80
29	2027				0.03	0.03	-	15.64	4.93	2.90	2.90	23.47	7.24	23.93	7.80	23.93	7.80
30	2028				0.03	0.03	-	15.97	5.04	2.94	2.94	23.95	7.10	24.05	7.80	24.05	7.80
31	2029	3	3	0.86	0.03	0.03	-	15.97	5.04	2.94	2.94	23.95	7.10	24.05	7.80	24.05	7.80
TOTAL		89.67	89.67	80.95	6.19	6.19	-	280.70	107.69	62.01	62.01	450.40	221.79	456.59	225.03	366.92	144.08

millions

RESULTS	Discount Rate -	4%
Net Present Value of total capital cost	\$	81.0
Net Present Value total Benefits	\$	221.8
Net Present Value of Recurrent Costs	\$	(3.2)
BCR		2.9
NPV	\$	144.1
IRR	\$	0.2
FYRR	\$	0.1

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2000 opening year

Discount Rate 10%

Year	Discount Rate	Costs			Benefits							Undiscounted NET BENEFITS (benefits- recurring costs)	Discounted NET BENEFITS Capital Costs	
		Capital Costs	TOTAL Discounted CAPITAL COSTS	Maintenance and Rehab costs	TOTAL recurring COSTS	TOTAL recurring COSTS discounted	Residual	Travel Time	VOC	Accid	TOTAL BENEFITS			TOTAL BENEFITS discounted
0	1998	1.00												
1	1999	0.91												
2	2000	0.83	2.28	1.88						3.93	2.12	0.81	6.86	5.67
3	2001	0.75	46.60	35.01						4.26	2.24	0.91	7.40	5.56
4	2002	0.68	46.60	31.83						4.56	2.34	1.00	7.90	5.45
5	2003	0.62			0.08	0.08				4.88	2.44	1.10	8.42	5.29
6	2004	0.56			0.11	0.11				5.21	2.55	1.21	8.96	5.14
7	2005	0.51			0.14	0.14				5.56	2.65	1.32	9.52	4.98
8	2006	0.47			0.18	0.18				5.92	2.76	1.43	10.11	4.81
9	2007	0.42			1.33	1.33				6.37	2.90	1.56	10.83	4.64
10	2008	0.39			0.02	0.02				6.64	2.98	1.67	11.28	4.48
11	2009	0.35			0.01	0.01				6.99	3.08	1.74	11.81	4.35
12	2010	0.32			0.00	0.00				7.28	3.16	1.82	12.27	4.21
13	2011	0.29			0.01	0.01				7.58	3.25	1.89	12.71	4.06
14	2012	0.26			0.25	0.25				7.97	3.35	1.97	13.30	3.91
15	2013	0.24			0.21	0.21				8.30	3.44	2.05	13.79	3.76
16	2014	0.22	2.90	0.63	1.36	1.36				8.73	3.54	2.14	14.41	3.61
17	2015	0.20			0.01	0.01				9.09	3.63	2.22	14.93	3.46
18	2016	0.18			0.03	0.03				9.55	3.74	2.31	15.59	3.31
19	2017	0.16			0.04	0.04				9.93	3.83	2.39	16.15	3.16
20	2018	0.15			0.06	0.06				10.33	3.92	2.47	16.72	3.01
21	2019	0.14			0.10	0.10				10.84	4.03	2.52	17.39	2.86
22	2020	0.12			0.12	0.12				11.27	4.12	2.56	17.95	2.71
23	2021	0.11			1.26	1.26				11.82	4.24	2.61	18.66	2.56
24	2022	0.10			0.37	0.37				12.27	4.32	2.64	19.24	2.41
25	2023	0.09			0.06	0.06				12.87	4.43	2.69	19.99	2.26
26	2024	0.08			0.07	0.07				13.36	4.52	2.73	20.61	2.11
27	2025	0.08			0.10	0.10				14.00	4.63	2.77	21.40	1.96
28	2026	0.07			0.13	0.13				14.53	4.72	2.81	22.06	1.81
29	2027	0.06			0.17	0.17				15.07	4.81	2.85	22.73	1.66
30	2028	0.06			1.32	1.32				15.64	4.93	2.90	23.47	1.51
31	2029	0.05	2.90	0.15	0.03	0.03				15.97	5.04	2.94	23.95	1.36
TOTAL			89.67	89.67	67.93	67.93	6.19	6.19	1.51	280.70	107.69	62.01	450.40	97.36

millions

RESULTS	Discount Rate -	10%
Net Present Value of total capital cost	\$	67.9
Net Present Value total Benefits	\$	97.4
Net Present Value of Recurrent Costs	\$	(1.5)
BCR		1.5
NPV	\$	30.9
IRR	\$	0.2
FYRR	\$	0.1