

**System Requirements and Performance (Dollars are in millions except as noted.)**

<b>Southeast Corridor Results</b> ("N/Av" means "Not Available." "N/Ap" means "Not Applicable.")	<b>Accelerail 110: Extension</b>	<b>New HSR: Southeast/ Northeast System</b>	<b>New HSR: NEC Alone</b>	<b>New HSR: Southeast Corridor Proper</b>	<b>Maglev: Southeast/ Northeast System</b>	<b>Maglev: NEC Alone</b>	<b>Maglev: Southeast Corridor Proper</b>
<b>Physical, production, and traffic factors</b> <i>(traffic data is for the year 2020)</i>							
Route-miles	477	862	441	421	861	441	420
Trip-time, hours, Charlotte-Washington	5.7	3.0	N/Ap	3.0	2.1	N/Ap	2.1
Average train speed (mph)	79	117	110	137	171	163	183
Average fare per passenger-mile (dollars)	0.176	0.303	0.332	0.248	0.327	0.379	0.261
Trains per day in each direction, Charlotte-Washington	27	53	N/Ap	53	65	N/Ap	65
Passengers, Millions of Trips (2020)	5.7	32.5	24.8	7.7	36.5	25.8	10.8
Passenger-Miles, Millions (2020)	1,689	7,322	4,773	2,549	9,152	5,094	4,058
Average trip length (miles)	295	225	193	331	251	198	377
Average trip length as % of route length	N/Av	26%	44%	N/Av	29%	45%	N/Av
HSGT traffic density per route-mile (millions of passenger-miles per route-mile)	3.5	8.5	10.8	6.1	10.6	11.5	9.7
Percent of air traffic diverted	N/Av	25.1%	27.0%	N/Av	38.8%	35.2%	N/Av
Percent of intercity auto traffic diverted	N/Av	2.5%	0.7%	N/Av	3.2%	0.7%	N/Av
Percent of HSGT traffic by source:							
Diverted from air	N/Av	29%	22%	N/Av	36%	27%	N/Av
Diverted from auto	N/Av	9%	2%	N/Av	9%	2%	N/Av
Diverted from conventional rail	N/Av	56%	70%	N/Av	48%	66%	N/Av
Diverted from bus	N/Av	0%	0%	N/Av	0%	0%	N/Av
Induced	N/Av	6%	5%	N/Av	6%	5%	N/Av
<b>Operating efficiency factors, 2020</b>							
Train-miles, millions	13.3	57.5	39.4	18.1	63.5	36.7	26.8
Passenger-miles per train mile	127	127	121	141	144	139	151
Seat-miles, millions	4,565	16,333	11,203	5,130	20,644	11,932	8,712
Load factor	37%	45%	43%	50%	44%	43%	47%
Gross ton-miles, millions	5,238	22,544	15,463	7,081	11,434	6,609	4,825
Passenger-miles per gross ton-mile	0.32	0.32	0.31	0.36	0.80	0.77	0.84
Train-hours, millions	0.17	0.49	0.36	0.13	0.37	0.23	0.15
Passenger-miles per train hour	10,056	14,922	13,306	19,314	24,632	22,612	27,743
Operating ratio	53%	34%	34%	33%	26%	26%	27%
<b>Operating results for 2020</b>							
Revenues:							
Passenger transportation revenue	\$297	\$2,219	\$1,587	\$633	\$2,989	\$1,931	\$1,058
Income from ancillary activities	\$13	\$59	\$43	\$15	\$65	\$45	\$20
System revenues	\$311	\$2,278	\$1,630	\$648	\$3,054	\$1,976	\$1,078
<i>Percent of system revenues from ancillary activities</i>	<i>4.3%</i>	<i>2.6%</i>	<i>2.7%</i>	<i>2.4%</i>	<i>2.1%</i>	<i>2.3%</i>	<i>1.8%</i>
Operating and maintenance expenses:							
Maintenance of way	\$10	\$67	\$43	\$24	\$51	\$33	\$18
Maintenance of equipment	\$25	\$119	\$88	\$31	\$82	\$53	\$29
Transportation	\$45	\$193	\$138	\$54	\$256	\$154	\$102
Passenger traffic and services	\$43	\$213	\$156	\$57	\$242	\$160	\$82
General and administrative	\$34	\$160	\$114	\$46	\$150	\$95	\$55
Total O&M expense	\$157	\$751	\$540	\$212	\$780	\$494	\$286
<i>Per passenger-mile (dollars):</i>							
Maintenance of way	<i>\$0.006</i>	<i>\$0.009</i>	<i>\$0.009</i>	<i>\$0.009</i>	<i>\$0.006</i>	<i>\$0.006</i>	<i>\$0.004</i>
Maintenance of equipment	<i>\$0.015</i>	<i>\$0.016</i>	<i>\$0.018</i>	<i>\$0.012</i>	<i>\$0.009</i>	<i>\$0.010</i>	<i>\$0.007</i>
Transportation	<i>\$0.027</i>	<i>\$0.026</i>	<i>\$0.029</i>	<i>\$0.021</i>	<i>\$0.028</i>	<i>\$0.030</i>	<i>\$0.025</i>
Passenger traffic and services	<i>\$0.026</i>	<i>\$0.029</i>	<i>\$0.033</i>	<i>\$0.022</i>	<i>\$0.026</i>	<i>\$0.031</i>	<i>\$0.020</i>
General and administrative	<i>\$0.020</i>	<i>\$0.022</i>	<i>\$0.024</i>	<i>\$0.018</i>	<i>\$0.016</i>	<i>\$0.019</i>	<i>\$0.013</i>
Total O&M expense	<i>\$0.093</i>	<i>\$0.103</i>	<i>\$0.113</i>	<i>\$0.083</i>	<i>\$0.085</i>	<i>\$0.097</i>	<i>\$0.071</i>
Operating surplus	\$154	\$1,527	\$1,090	\$436	\$2,273	\$1,482	\$791
<i>Operating surplus per passenger-mile (dollars)</i>	<i>\$0.091</i>	<i>\$0.209</i>	<i>\$0.228</i>	<i>\$0.171</i>	<i>\$0.248</i>	<i>\$0.291</i>	<i>\$0.195</i>

<b>Southeast Corridor Results</b> ("N/Av" means "Not Available." "N/Ap" means "Not Applicable.")	Accelerail 110: Extension	New HSR: Southeast/ Northeast System	New HSR: NEC Alone	New HSR: Southeast Corridor Proper	Maglev: Southeast/ Northeast System	Maglev: NEC Alone	Maglev: Southeast Corridor Proper
<i>Life-Cycle Measures</i> (All amounts are present values, as of the year 2000, of cash inflows/outflows between 2000 and 2040. )							
Revenues:							
Passenger Transportation Revenues	\$2,451	\$18,306	\$13,089	\$5,217	\$24,678	\$15,917	\$8,760
Income from Ancillary Activities	\$110	\$476	\$353	\$123	\$528	\$367	\$161
System Revenues	\$2,561	\$18,782	\$13,442	\$5,340	\$25,205	\$16,285	\$8,921
Less: Total O&M expenses	\$1,389	\$6,531	\$4,687	\$1,844	\$6,856	\$4,328	\$2,528
Operating surplus	\$1,172	\$12,251	\$8,755	\$3,496	\$18,349	\$11,956	\$6,393
Less: Continuing investments	\$131	\$675	\$478	\$196	\$531	\$349	\$182
Surplus after continuing investments	\$1,041	\$11,576	\$8,277	\$3,299	\$17,818	\$11,607	\$6,211
Initial investment:							
Initial vehicle investment	\$232	\$2,373	\$1,826	\$548	\$2,311	\$1,541	\$770
Initial infrastructure investment	\$803	\$23,529	\$17,232	\$6,297	\$30,037	\$20,524	\$9,513
Initial investment for ancillary activities	\$13	\$88	\$70	\$19	\$100	\$73	\$27
Initial investment, Total	\$1,047	\$25,991	\$19,127	\$6,864	\$32,448	\$22,137	\$10,311
Percent of total initial investment pertaining to--							
Vehicles	22%	9%	10%	8%	7%	7%	7%
Infrastructure	77%	91%	90%	92%	93%	93%	92%
Ancillary activities	1%	0%	0%	0%	0%	0%	0%
Total initial investment per route-mile	\$2.2	\$30.1	\$43.4	\$16.3	\$37.7	\$50.2	\$24.6
Portion of initial investment that is <u>not</u> covered by surplus after continuing investments	\$7	\$14,415	\$10,851	\$3,565	\$14,630	\$10,530	\$4,100
Percentage of initial investment covered by surplus after continuing investments	99%	45%	43%	48%	55%	52%	60%
<b>Comparison of Benefits and Costs; Assessment of Partnership Potential</b>							
<b>Surplus after continuing investments</b>	<b>\$1,041</b>	<b>\$11,576</b>	<b>\$8,277</b>	<b>\$3,299</b>	<b>\$17,818</b>	<b>\$11,607</b>	<b>\$6,211</b>
Total benefits:							
Benefits to HSGT users:							
System revenues	\$2,561	\$18,782	\$13,442	\$5,340	\$25,205	\$16,285	\$8,921
Users' consumer surplus	\$2,550	\$13,045	\$7,550	\$5,494	\$17,236	\$8,642	\$8,593
Total benefits to HSGT users	\$5,110	\$31,826	\$20,993	\$10,834	\$42,441	\$24,927	\$17,514
Benefits to the public at large:							
Airport congestion delay savings							
Operation delays	\$238	\$1,255	\$1,011	\$244	\$1,633	\$1,209	\$424
Passenger delays	\$428	\$2,166	\$1,717	\$448	\$2,816	\$2,055	\$761
Total airport congestion delay savings	\$666	\$3,421	\$2,728	\$693	\$4,449	\$3,264	\$1,185
Highway delay savings	\$721	\$2,079	\$521	\$1,559	\$2,734	\$719	\$2,015
Emission savings	\$22	\$339	\$143	\$196	\$297	\$101	\$196
Total benefits to the public at large	\$1,409	\$5,839	\$3,392	\$2,447	\$7,479	\$4,084	\$3,395
<b>Total benefits</b>	<b>\$6,519</b>	<b>\$37,665</b>	<b>\$24,384</b>	<b>\$13,281</b>	<b>\$49,920</b>	<b>\$29,011</b>	<b>\$20,909</b>
Total costs:							
Initial investment	\$1,047	\$25,991	\$19,127	\$6,864	\$32,448	\$22,137	\$10,311
O&M expense	\$1,389	\$6,531	\$4,687	\$1,844	\$6,856	\$4,328	\$2,528
Continuing investments	\$131	\$675	\$478	\$196	\$531	\$349	\$182
<b>Total costs</b>	<b>\$2,567</b>	<b>\$33,197</b>	<b>\$24,293</b>	<b>\$8,904</b>	<b>\$39,836</b>	<b>\$26,815</b>	<b>\$13,021</b>
Incidence of total costs:							
Costs borne by users	\$2,561	\$18,782	\$13,442	\$5,340	\$25,205	\$16,285	\$8,921
Publicly-borne costs	\$7	\$14,415	\$10,851	\$3,565	\$14,630	\$10,530	\$4,100
<b>Total benefits less total costs</b>	<b>\$3,952</b>	<b>\$4,468</b>	<b>\$91</b>	<b>\$4,377</b>	<b>\$10,085</b>	<b>\$2,196</b>	<b>\$7,889</b>
Benefits to HSGT users less costs borne by users	\$2,550	\$13,045	\$7,550	\$5,494	\$17,236	\$8,642	\$8,593
Benefits to the public at large less publicly-borne costs	\$1,403	(\$8,576)	(\$7,459)	(\$1,117)	(\$7,151)	(\$6,446)	(\$705)
<b>Ratio of total benefits to total costs</b>	<b>2.54</b>	<b>1.13</b>	<b>1.00</b>	<b>1.49</b>	<b>1.25</b>	<b>1.08</b>	<b>1.61</b>

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Ratio of benefits to HSGT users, to costs borne by users	2.00	1.69	1.56	2.03	1.68	1.53	1.96
Ratio of benefits to the public at large, to publicly-borne costs	207.44	0.41	0.31	0.69	0.51	0.39	0.83
<b>Does this case meet the threshold tests for "partnership potential"?</b>	YES	YES	YES	YES	YES	YES	YES