

SYSTEMS INTERCHANGE MODIFICATION REPORT (SIMR)

I-95 (SR 9) from north of I-10 to south of
Martin Luther King Jr. Parkway (SR 115/US 1)
FPID: 442414-1

8.3.3 Comparison of No-Build Alternative and Build Alternative Analysis

Table 8-9 summarizes the comparison of all freeway and C-D road basic segments. Improvements were observed for the 2045 Build Alternative segments as compared to the No-Build. The I-95 southbound segment from the C-D Road to I-10 and the southbound C-D Road segment experience an increase in travel time under the Build. Travel time for these segments is expected to increase slightly, which is consistent with the assumption that the volume and demand for the I-95 C-D road will increase in the Build alternative after adding lanes. In addition, I-95 C-D road exit in the Build alternative is moved 2,500 feet north of its location in the No-Build resulting in more distance to travel. In addition, excessive congestion is observed on I-95 southbound in the No-Build upstream of C-D road exit which resulted in simulating lesser demand on the C-D Road showing decrease in the C-D road travel time. All of these resulted in slightly higher travel time in the Build compared to the No-Build.

Table 8-9: I-95 Peak Hour Travel Time/Speed – No-Build vs. Build Alternative

AM Peak			Travel Time (min)		Percent Difference
			Build	No Build	
I-95	NB	I-10 to C-D Road	1.8	6.9	-74%
		C-D Road to north of MLK Jr. Parkway	1.9	6.5	-70%
		Total Travel Time	3.8	13.5	-72%
	SB	North of MLK Jr. Parkway to C-D Road	1.8	5.2	-66%
		C-D Road to I-10	2.1	1.5	41%
		Total Travel Time	3.9	6.7	-42%
C-D Road	NB	Total Travel Time	1.3	5.2	-76%
	SB	Total Travel Time	1.5	0.8	88%
PM Peak			Travel Time (min)		Percent Difference
			Build	No Build	
I-95	NB	I-10 to C-D Road	1.8	5.9	-69%
		C-D Road to north of MLK Jr. Parkway	1.9	4.3	-55%
		Total Travel Time	3.8	10.2	-63%
	SB	North of MLK Jr. Parkway to C-D Road	1.8	6.4	-72%
		C-D Road to I-10	2.1	1.4	48%
		Total Travel Time	3.9	7.8	-50%
C-D Road	NB	Total Travel Time	1.3	1.7	-24%
	SB	Total Travel Time	1.5	0.8	85%

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Table 8-10 compares the network-wide performance for the 2045 No-Build and Build Alternatives during the AM and PM peak periods. The Build Alternative performs better than the No-Build Alternative during the AM and PM peak periods. The average speed has increased by 91 and 60 percent in the AM and PM peak periods, and total delay decreases by 83 percent and 67 percent, respectively. Improvements were also observed for travel time, latent delay, latent demand and vehicles arrived.

Table 8-10: Network-wide Performance – No-Build vs. Build Alternative

AM Peak	Build	No-Build	Percent Difference
Average Speed (mph)	44	23	91%
Total Travel Time (hr)	4,385	7,812	-44%
Total Delay (hr)	790	4,554	-83%
Latent Delay (hr)	108	5,088	-98%
Latent Demand (veh)	73	5,170	-99%
Vehicles Arrived	76,308	67,683	13%
PM Peak	Build	No-Build	Percent Difference
Average Speed (mph)	40	25	60%
Total Travel Time (hr)	5,154	7,791	-34%
Total Delay (hr)	1,385	4,257	-67%
Latent Delay (hr)	690	8,251	-92%
Latent Demand (veh)	363	4,982	-93%
Vehicles Arrived	80,660	73,197	10%