

2035 LRTP – Transportation Options Evaluation Measures

Purpose of Evaluation Measures

Evaluation Measures provide a general indicator of a transportation system from a variety of perspectives such as mobility, travel time, congestion, mode choice, air quality, and financial. The measures are not specific to a particular travel corridor but instead cover the entire transportation system, and therefore are useful for comparing the efficiency and effectiveness of the different transportation options. Most of the data used for calculating the Evaluation Measures comes from the Triangle Regional Model, which is a travel demand model that forecasts future travel statistics based on a set of assumptions concerning the highway network, transit service and other transportation facilities.

Evaluation Measures Table

The table in this section presents the Evaluation Measures for the Existing plus Committed network and the Draft 2035 LRTP network, and compares the two transportation networks.

The column in the table designated as E+C indicates Existing plus Committed. The E+C is composed of a transportation network of the existing and committed highway and transit facilities, and the 2035 socioeconomic data (i.e., population and employment in the year 2035). Thus, the E+C serves as a benchmark for comparing how much the performance measures improve with the transportation investments in the different options.

DCHC MPO Draft 2035 LRTP

Evaluation Measures -- Draft LRTP vs. E+C

	Measures	2035 E+C	Draft LRTP	% Change from E+C
1	Performance Measures			
1.1	Total VMT (daily)	17,397,077	17,441,504	0%
1.2	Total VHT (daily)	459,072	405,368	-12%
1.3	Average Speed by Facility (miles/hour)			
1.3.1	- Freeway	57	61	6%
1.3.2	- Arterial	36	38	8%
1.3.3	- All Facility	45	49	10%
1.4	Peak Average Speed by Facility (miles/hour)			
1.4.1	- Freeway	54	59	9%
1.4.2	- Arterial	34	37	10%
1.4.3	- All Facility	42	47	12%
1.5	Average Travel Time - All Trips	17	16	-5%
1.6	Average Travel Time - Work Trips	26	23	-11%
1.7	Peak Average Travel Time - All Trips	21	19	-9%
1.8	Hours of Delay (daily)	112,862	68,228	-40%
1.8.1	CV Hours of Delay (daily)	4,580	2,954	-36%
1.9	Percent of VMT experiencing congestion - All Day			
1.9.1	- Freeway	6%	2%	-69%
1.9.2	- Arterial	9%	4%	-59%
1.9.3	- All Facility	6%	2%	-63%
1.10.	Percent of VMT experiencing congestion - Peak			
1.10.1	- Freeway	11%	3%	-72%
1.10.2	- Arterial	14%	6%	-57%
1.10.3	- All Facility	10%	4%	-64%
1.10.4	Degree of congestion (V/C >1) on designated truck routes	8%	3%	-60%
1.10.5	Degree of congestion (V/C >1) on facilities w/bus routes	9%	2%	-72%
2	Mode Share Measures			
2.1	Number Mode Choice - <u>All Trips</u>			
2.1.1	- Drive alone (single occupant vehicle -SOV)	1,660,787	1,636,250	-1%
2.1.2	- Carpool (Share ride)	1,095,943	1,094,468	0%
2.1.3	- Bus	69,664	87,147	25%
2.1.4	- Rail	0	14,557	NA
2.1.5	- Non-Motorized (Bike and Walk)	206,552	210,169	2%
2.2	Number Mode Choice - <u>Peak Hours</u>			
2.2.1	- Drive alone (single occupant vehicle -SOV)	834,496	824,700	-1%
2.2.2	- Carpool (Share ride)	550,209	551,586	0%
2.2.3	- Bus	35,228	44,878	27%
2.2.4	- Rail	0	8,699	NA
2.2.5	- Non-Motorized (Bike and Walk)	N/A	N/A	NA
2.3	Number Mode Choice - <u>Non Work Trips</u>			
2.3.1	- Drive alone (single occupant vehicle -SOV)	1,098,746	1,079,781	-2%
2.3.2	- Carpool (Share ride)	998,378	999,255	0%
2.3.3	- Bus	53,261	61,354	15%
2.3.4	- Rail	-	11,067	NA
2.3.5	- Non-Motorized (Bike and Walk)	199,646	203,186	2%
2.4	Daily Bicycle and Pedestrian Trips	206,552	210,169	2%
3	Transit Measures			
3.1	Average Weekday Transit Ridership (Whole region)			
3.1.1	- TTA (Including Rail)	4,900	32,574	565%
3.1.2	- CAT	22,874	32,773	43%
3.1.3	- CHT	44,990	63,005	40%
3.1.4	- DATA	23,312	55,923	140%
3.1.5	- NCSU	20,080	16,232	-19%
3.1.6	- DUKE	14,642	10,790	-26%
3.1.7	- OPT	0	0	0%
3.1.8	- C-Tran	1,557	4,476	187%
3.1.9	Total Bus	132,358	215,773	63%
3.2	Total Rail		20,991	
4	Demographics Measures			
4.1	Population	551,362	551,362	0%
4.2	Employment	389,249	389,249	0%
4.3	Total Daily Trips	3,032,947	3,042,593	0%
4.4	Total Daily Work Trips	682,913	687,947	1%
4.5	Total Daily Non-Work Trips	2,350,033	2,354,646	0%