COMBINED EFFECT OF PUBLIC TRANSPORTATION AND OPERATIONAL IMPROVEMENTS

Analytical improvements will continue to be developed and incorporated into the Urban Mobility Report. The values and approach may change, but the goal is to include all the types of transportation improvements in a comprehensive areawide mobility assessment. The use of the information may also encourage local and state transportation officials to develop their own databases and procedures to maximize the flexibility and inclusiveness of corridor and sub-regional evaluations, as some agencies are doing now.

The expanded version of the methodology used in this report (*6*) is available on the website (http://mobility.tamu.edu/ums). The summary statistics at the population group level for 2007 are illustrated in Exhibit B-40. Most of the delay in the 439 urban areas is in the 14 areas with populations above three million, so it should not be surprising that the majority of the operational treatment benefits are in those areas as well. Large areas not only have had large problems for longer, and thus more incentive to pursue a range of solutions, but the expertise needed to plan and implement innovative or complex programs are also more likely to be readily accessible.

Several of the areas with populations between one million and three million also have significant contributions from four or five of the six treatments identified in the report. Some of the delay reduction estimates are as large, or larger than the above three million population areas. The medium group areas have relatively small overall contributions due to the low congestion level, but they are also implementing and refining techniques that will be more valuable as congestion grows.

The Travel Time Index change from the base value to the "inclusive" value follows the same pattern as the delay reduction—much more change in the Very Large group than in the others. The TTI values are presented with three decimal places to better illustrate the amount of change. The amount of change should be gauged against the base TTI value—small areas with less congestion that have implemented more operational treatments or a more extensive transit system may have larger changes as a percentage of the base value than larger areas that have not used these options.

Several other observations about this initial attempt to include a broader set of mobility treatments in the regular mobility data reporting are listed below.

- The significant investment in operations treatments in states that are widely judged to be among the leaders in these technologies is evident. California, Minnesota, Illinois, Arizona, Oregon and Washington have relatively large delay reductions, in several case for cities outside the "most congested" list.

- The delay reduction estimate for public transportation service should be considered as "delay avoided" because the calculation involves comparing current operations to conditions that might exist if the service were not in operation.

- Almost three-fourths of delay reduction from incident management and ramp meters is in the Very Large group.

- Although the percentage of "treated" streets and freeways is relatively low, the combined effects are equal to several years of growth in the Very Large group, and one or two years in the Large and some of the Medium group cities.

Exhibit B-40. Summary of Public Transportation and Operational Improvement Delay Reduction Effects - 2007

Delay Reduction Element	Population Group – Annual Hours Saved (million)					
	Very Large	**Large**	**Medium**	**Small**	**Intensively Studied**	**All 439**
Number of Cities	14	29	31	16	90	439
Delay Reduction from:						
Ramp Metering	30.7	9.0	0.1	0.0	40	40
Incident Management	102.7	29.5	4.3	0.6	137	143
Signal Coordination	10.3	4.1	1.6	0.3	16	20
Access Management	38.1	16.6	5.1	0.8	61	69
High-Occupancy Vehicles	33.8	3.2	0.0	0.0	37	37
Delay Savings from Public Transportation	557	59	13	2	630	646