

# **C**OMBINED 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 area wide 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 2009 are illustrated in Exhibit B-32. Most of the delay in the 439 urban areas is in the 15 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.

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-32. Summary of Public Transportation and Operational Improvement Delay Reduction Effects - 2010**

Delay Reduction Element	Population Group – Annual Hours Saved (million)					
	Very Large	Large	Medium	Small	Intensively Studied	All 439
Number of Cities	15	32	33	21	101	439
Delay Reduction from:						
Ramp Metering	33.7	5.8	0.1	0.0	40	40
Incident Management	101.9	28.0	4.0	1.0	135	138
Signal Coordination	13.8	5.2	2.2	0.5	22	26
Access Management	49.7	20.2	5.8	1.4	77	86
High-Occupancy Vehicles	35.4	2.3	0.0	0.0	38	38
Delay Savings from Public Transportation	680.7	73.7	8.7	2.8	766	796