

Operational Improvements and Intelligent Transportation System Priority Network-

Given the expense and difficulty of adding expressway capacity, and given the high demand for expressway usage that is forecast to continue to grow in the Capital District, it is clear that strategic investments in operational improvements will continue to be important to the future of the Capital District. ITS investments, including incident management and traveler information systems, will make the Capital District more accessible and will be important for maintaining the quality of travel. Emerging and future technologies hold promise, and ITS levels of investment have been described in this report. Analysis of future traffic growth and future conditions further underscores the importance of ITS and operational investments to provide important benefits to the traveling public.

The CDTC New Visions Plan identifies priority networks for bike, pedestrian, transit, ITS, goods movement and infrastructure improvements. One purpose of the priority networks is to help set priorities for TIP project selection. Another purpose is to give guidance for project development to make sure that individual projects address important needs on each priority network. For example, if a bridge replacement project takes place on the ITS priority network, the ITS needs at that location should be carefully reviewed and given special consideration to determine if an ITS component could be efficiently incorporated into the project.

The identification of priority networks makes the most efficient and effective use of available resources. The largest impact will be seen by directing funding to the functionally most significant part of the transportation system.

The identification of priority networks does not imply that improvements off the defined networks are not warranted or desirable. Flexibility is required in interpretation, so long as the basic message -- **these are important facilities** -- is not lost.

In developing the New Visions Plan, the Expressway Management Task Force identified a network of expressway and arterial facilities as the platform for the regional ITS. There should be centrally coordinated traffic control and/or guidance along these facilities. The logic is that advising travelers of preferable alternatives *before* they enter the most congested areas and facilitating smooth flows along the alternatives can keep overall traffic conditions from worsening. The regional ITS priority network contains:

- ◆ priority expressways;
- ◆ arterials representing their immediate alternatives (ordinarily either parallel to or connecting the expressways);
- ◆ their secondary alternatives (which entail more surface street travel); and
- ◆ other arterials that are strategically important because they are important travel corridors, although they are not viewed as alternative routes for expressway travelers.

Working Group B updated the ITS priority network. Although this network is primarily developed around the expressway system, the role of ITS on the arterial system could not be ignored. Some ITS improvements to arterials which parallel the expressways will have direct benefits to expressway travel, especially by providing alternate routes during expressway

incidents. Access management and physical improvements will be required for this to be effective. Nonetheless, ITS benefits from signal coordination, transit signal priority, or other improvements will also provide significant benefits to normal daily arterial function.

The ITS initiative includes a major effort to coordinate signal timing on major city and suburban arterials. Transit-friendly application of that technology will include designing the operation of the signal system to achieve multiple objectives. Rather than optimizing signal timing for maximum traffic flow, signal system design can be developed that allows for efficient traffic progression at travel speeds that are compatible with pedestrian, bike and transit movements. This may provide for a win/win outcome. Even modest improvements in basic signal timing will show important results. Implementation of signal coordination along arterial corridors will improve traffic flow for autos as well as for transit using Transit Signal Priority (TSP). Successful implementation of signal coordination along the Route 5 corridor in Albany, Colonie, Village of Colonie, Niskayuna and Schenectady has demonstrated the value of ITS for arterial performance. For routes that parallel expressways, ITS holds the promise of allowing the signal coordination and timing plan to be changed by the TMC to facilitate diverted traffic during an incident.

Updates to the ITS priority network include:

- ◆ Extending coverage on the Northway to Exit 15 for the near term, and to Lake George for the long term;
- ◆ Extending coverage of the Thruway to the CDTC boundaries for the near term, and to Amsterdam for the long term;
- ◆ Extending parallel routes for the Northway and Thruway: Route 9 to the Warren County line; Route 9W to the Greene County line; and Route 5S to the Montgomery County line.
- ◆ Extending coverage of I-88 to the Schenectady County line;
- ◆ Adding several priority arterial corridors not in expressway corridors, including Route 7 from Albany Shaker Road to I-890, and arterial corridors in the cities of Albany, Schenectady, Troy and Saratoga Springs.

The updated ITS priority network is described in Table 14 and is illustrated in Map 11.

TABLE 14**ITS Priority Network Facilities**

Priority Expressway Corridors	Centerline Miles
Northway (I-87): US 20 to Interchange 15 near term; extend to Lake George for longer term	31.3 near term 68.3 long term
Thruway (I-87/I-90): Albany/Greene County line to Schenectady/ Montgomery County line; Berkshire Spur (21A to B1)	44.9
I-88: Thruway Interchange 25A to Schenectady County Line	14.5
I-90: Thruway Exit 24 to Berkshire Spur	19.3
I-787: Thruway Interchange 23 to Alternate Route 7	8.7
I-890: End to End	7.8
Alternate Route 7: Northway to I-787	3.6
TOTAL MILEAGE	167.1
Priority Arterial Corridors – Immediate Alternate Routes for Expressways	
NY 2: I-787 to US 9	4.0
NY 5: Downtown Albany to Downtown Schenectady	16.0
US 9: Downtown Albany to Warren County Line	50.5
US 9/20: Downtown Albany to I-90 Interchange 11	7.0
NY 32: Downtown Albany to Waterford (US 4)	9.3
Erie Boulevard: NY 5 to Freeman’s Bridge Road	1.2
Fuller Road: US 20 to NY 5	1.9
Washington Avenue: Central Avenue to NY 155	7.6
Wolf Road: NY 5 to Albany Shaker Road	2.0
I-90 Exit 8 Connector (NY 43): I-90 to US 4	1.3
US 9W: I-787 to Greene County Line	11.4
NY 5S from I-890 to Montgomery County Line	5.86
TOTAL MILEAGE	118.1

TABLE 14 (continued)

Secondary Alternate Routes for Expressways	Centerline Miles
US 4: US 9/20 to NY 7	10.4
NY 7: I-890 to I-88	5.7
US 20: Downtown Albany to NY 155	7.6
US 20/NY 146: NY 155 to Thruway Interchange 25	5.7
NY 50: NY 5 to Glenridge Road	3.4
NY 146: US 9 to Glenridge Road	6.1
NY 155: US 20 to Watervliet Shaker Road	4.0
Albany Shaker Road: NY 7 to US 9	7.7
NY 7: I-87 to Albany Shaker Road	3.2
Balltown Road: NY 5 to Glenridge Road	6.7
Freeman's Bridge Road: Erie Boulevard to NY 50	1.7
Glenridge Road: NY 50 to NY 146	2.1
Watervliet Shaker Road: New Karner Road to Albany Shaker Road	1.3
NY 787 Cohoes Arterial: NY 7 to Route 32	2.6
TOTAL MILEAGE	68.2
Priority Arterials Not in Expressway Corridors	
NY 2 in Troy and Brunswick	10.3
NY 7 in Troy and Brunswick	9.1
NY 7: Albany Shaker Road to I-890	6.6
NY 32: US 9W to Elm Avenue	3.6
NY 85: I-90 to NY 140	4.6
NY 443: Downtown Albany to Elm Avenue	5.7
Broadway/Partition Street/East Street: US 20 to Amtrak Station	0.3
Arterial corridors with a density of more than two traffic signals per mile	50.0
TOTAL MILEAGE	90.2

MAP 11

ITS PRIORITY NETWORK

