

Biographical Summary

Bernard J. Arseneau, P.E., PTOE
Mn/DOT Office of Traffic, Safety and Operations

Work Experience:

Bernie joined Mn/Dot 23 years ago after receiving his Bachelor of Civil Engineering Degree from the University of Minnesota. During that time he has held several positions within the department, including serving as the, director of Traffic Operations in charge of the Mn/DOT Regional Transportation Management Center (RTMC), Area Maintenance Engineer for District 6 in Rochester, the Tort Claims and Traffic Standards Engineer, and legislative liaison for one session. In May of 2003 Bernie was appointed Director of the Office of Traffic, Safety and Operations/State Traffic Engineer for Mn/DOT.

Bernie is an active participant in the leadership of the Toward Zero Death program, and is currently the public sector Co-chair for the Minnesota Guidestar Board of Directors.

Education

- St. Cloud State University, St. Cloud, MN, A.A., General
- University of Minnesota, Minneapolis, B.S., Civil Engineering, August 1982

License and Certification

- Registered Professional Engineer (#18430)
- Professional Traffic Operations Engineer

Current Memberships

- Institute of Transportation Engineers (ITE)
- Minnesota Surveyors and Engineers Society (MSES)
- National Committee on Uniform Traffic Control – Regulatory and Warning Technical Team
- AASHTO Subcommittee on Traffic Engineering
- ASTM International Subcommittee D-4.38, Highway Traffic Control Materials

**NATIONAL SURFACE TRANSPORTATION POLICY AND
REVENUE COMMISSION FIELD HEARINGS**

WRITTEN TESTIMONY

**MINNEAPOLIS, MINNESOTA
APRIL 18 – 19, 2007**

**TOPIC 2 - MULTIMODAL TRANSPORTATION
CONGESTION SOLUTIONS**

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Congestion Management Planning Study

What is the Congestion Management Planning Study?

The objective of this project is to both set the groundwork for the development of a comprehensive Congestion Management Plan and, based on preliminary findings, recommend a list of specific congestion mitigation projects that can be implemented within the next two years. The Congestion Management Plan will provide guidance and identify strategies for relieving congestion in the Twin Cities Metropolitan Area for the short term (1 to 2 years) and the long term (3 to 10 years).

Building from Recent Proven Successes

The recent successes of the Hwy 100 3rd lane addition at Hwy 7 and the I-94 3rd lane addition in the area of McKnight Rd. have shown that relatively minor investments in construction can have major improvement in mitigating congestion. The study will identify other small to mid level projects that can have major impacts on reducing congestion.

Congestion Relief Strategies

The study will develop a list of projects that are small to mid level construction projects, operational improvements or ITS projects that can reduce congestion and improve safety on Metro Freeways.

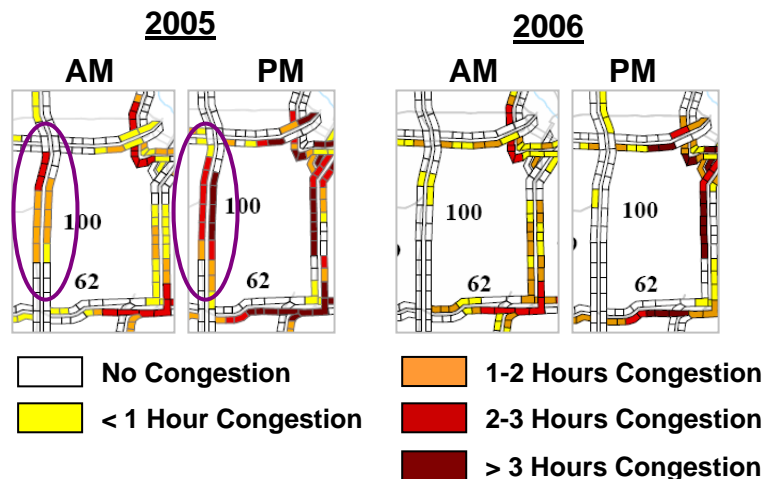
- **Construction Projects:** Auxiliary lanes, shoulder conversions
- **Improved Operations:** Enhanced Incident Management, add and/or enhanced ramp metering, arterial signal time enhancements
- **ITS Projects:** HOT shoulders and lanes, contra flow lanes, variable speed limits

Project Timeline

- Draft List of Candidate Projects – Mid-March 2007
- Revised List of Candidate Projects – Early-April 2007
- Final Report – May 5, 2007

Highway 100

The recent success of the temporary 3rd lane addition on Hwy 100 at Hwy 7 has reduced congestion from >6 hours of congestion per day to less than 1 hour of congestion.





Urban Partnership Agreement

What is the Urban Partnership Agreement?

A major component of the National Strategy to Reduce Congestion is the Urban Partnership Agreement (UPA), through which the U.S. Department of Transportation plans to partner with certain metropolitan areas or "Urban Partners" in order to demonstrate strategies with proven effectiveness in reducing traffic congestion.

Up to \$130M in grant funds are available that will be distributed to a handful of selected cities. President Bush has also proposed an additional \$175 M in the 2008 budget.

There are four strategies that must be addressed in the UPA funding applications:

- Congestion Pricing/Tolling
- Transit
- Telecommuting
- Technology and Operations

Separate Applications are due on April 30th, 2007.

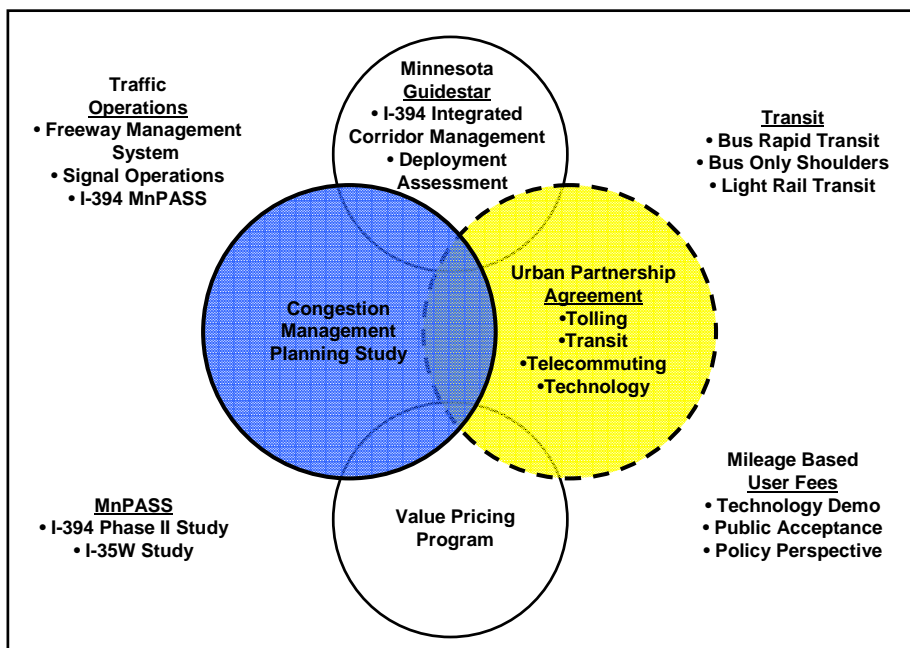
- Urban Partnership Agreements
- Value Pricing Pilot Program
- ITS Operations Testing to Mitigate Congestion

Fitting the Pieces Together

Current efforts support establishment of an Urban Congestion Reduction Initiative

- Congestion Management Planning Study and Urban Partnership Agreements are drivers
- ITS and Value Pricing programs are being leveraged
- Individual efforts offer additional support

Urban Congestion Reduction Initiative





Integrated Corridor Management

What is Integrated Corridor Management?

United States Department of Transportation (U.S. DOT) has launched a major initiative to reduce congestion across all modes of transportation. The Integrated Corridor Management (ICM) Initiative is one of these initiatives to be implemented in the coming months and years to help curb congestion.

The concept behind the ICM initiative is based on the fact that freeways, arterial streets, and transit systems often incorporate considerable technology solutions to optimize performance of each individual system. The ICM initiative seeks to integrate these systems together, resulting in integrated corridor management. Therefore, the approach is to attempt to integrate existing technologies and strategies (adding some technologies as needed) to ultimately develop a fully integrated and optimized corridor.

Example Strategies for ICM

- Improved Data Sharing (incidents, traffic volumes, travel times)
- Integrated Signal Systems (standards, comm.)
- Advantages to Transit (P&R availability, bus arrival)
- Traveler Information (arterial, transit)

Partners

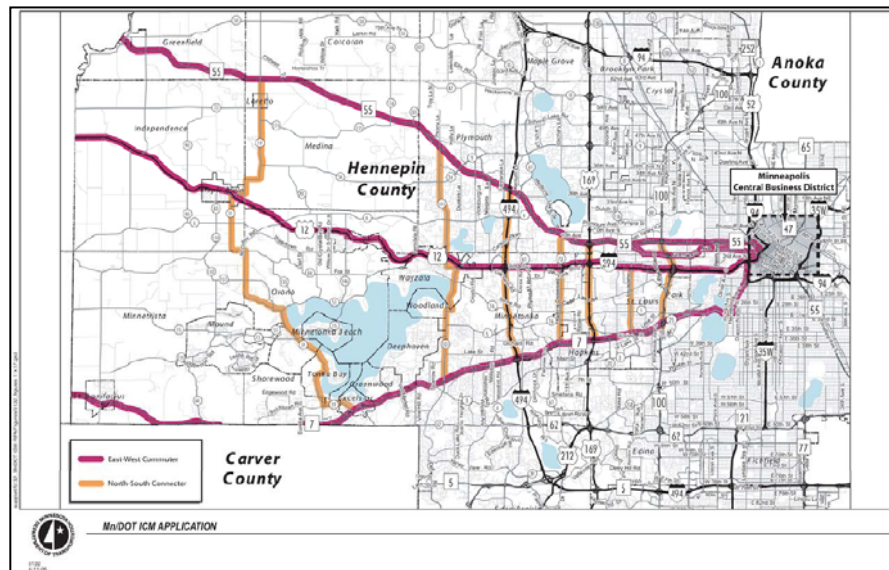
- Minnesota DOT – Lead Agency
- Hennepin County
- City of Minneapolis
- Metro Transit
- Athey Creek Consultants
- Other Stakeholders

Three Stages to the Project

- Stage 1: Develop Concept of Operations and Requirements Document
- Stage 2: Analysis and Modeling – Fall 2007
- State 3: ICM Deployment – Fall 2008

Minnesota's ICM Corridor

The ICM Corridor is located on the West side of Minneapolis, centered on I-394. The Corridor is a commuter path for travelers in to and out of Minneapolis and St. Paul. Geographically, the corridor extends North as far as Highway 55 and as far South as Highway 7, terminating Eastbound in downtown Minneapolis, and Westbound at the Hennepin County boundary (approximately 25 miles).



Bus-Only Shoulders –A Transit Advantage

What are Bus-Only Shoulders?

- Bus-Only Shoulders look and operate like any other shoulder but we permit certain buses to use the shoulders in designated areas in order to bypass congestion.
- Bus-Only Shoulders are not lanes for the following reasons:
 - The width of a traveled lane is 12 ft and the width of a bus-only shoulder is 10 ft.
 - The shoulder provides a refuge area for stranded vehicles and crashes.
 - The clear zone is a lateral distance kept free of hazards to allow approximately 80% of all run-off-road vehicles to recover or come to a stop. A shoulder is part of the clear zone. If cars use the shoulder as a lane, they will have a narrower clear zone (less room to recover).
- They are transit advantages designed to provide faster and more reliable transit commutes in congested corridors in order to promote and increase transit ridership.
- As per the Operational Guidelines an authorized transit bus:
 - must not use the shoulder when mainline speeds are greater than 35 mph.
 - may not exceed the speed of traffic by more than 15 mph. The maximum allowable speed is 35 mph.
 - must yield to any vehicle that enters the shoulder as well as any vehicle merging or exiting at an interchange ramp or intersection.
 - must re-enter the mainline at exception areas and in places where the shoulder is obstructed (parked vehicle, debris, etc.).

Where are Bus-Only Shoulders located?

- There are over 250 miles of Bus-Only Shoulders in the Metro Area.
- Usage of Bus-Only Shoulders varies by location from 6 to 250 buses per day.
- The only locations with more than 50 buses using the shoulder per day are:

I-94 between Minneapolis and St. Paul
I-35W in South Minneapolis (both directions)
I-94 3rd Street Ramp out of downtown Minneapolis
I-94 4th Street Ramp into downtown Minneapolis

Why do we limit the use of the Bus-Only Shoulders?

The issue of safety continues to be a concern for The Department of Public Safety, MnDOT, and the FHWA. Currently, transit buses are allowed to drive on the shoulder because the following factors diminish the safety concerns:

- Transit bus drivers are professional drivers who are held accountable to the operating rules and are able to handle complex driving decisions while driving on the shoulder.

- Large transit buses can be seen by other motorists and the drivers sit high enough to see potential hazards.
- Shoulder use is limited to a small number of vehicles and those vehicles are transit buses that directly help to reduce congestion.

