Background

- December 7, 2001 – Minnesota Guidestar approved the development of a multi-state project to coordinate ITS deployments along I-90 and I-94

- February 25, 2002 – Representatives from Washington, Idaho, Montana, North Dakota, South Dakota, Wyoming, Minnesota, and Wisconsin held a workshop to discuss the development of a coalition along I-90 and I-94

- June 2002 – Pooled Fund Study Solicitation

- January 2003 – Pooled Fund Study Re-Solicitation

- North Dakota, Minnesota, and Wisconsin secured approval and funding to initiate the development of a North/West Passage Transportation Pooled Fund (TPF) study

- Other I-90 and I-94 states have continued to express interest in the project and are researching funding opportunities
Corridor Map

I-90 & I-94 from Washington to Wisconsin
Goal and Vision of TPF Study

Goal of North/West Passage TPF Study
Implement and evaluate integrated traveler information systems and coordinate maintenance operations across state borders.

Long-Term Vision of North/West Passage TPF Study
Influence ongoing standards development; operate database systems that can transmit and receive multiple data streams; and, utilize effective methods for sharing, coordinating, and integrating traveler information across state borders.
Phase I Status

- Minnesota DOT is the lead organization for the TPF Study
- Minnesota, North Dakota, and Wisconsin pooled $100,000 for Phase I projects
- Minnesota DOT hired URS to provide project management support
- Minnesota, North Dakota, and Wisconsin approved a Work Plan in December 2003 that identified projects to pursue as Phase I of the TPF Study
- Phase I projects started in March 2004
# Phase I Projects Summary

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Project Champion(s)</th>
<th>Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Integrate ND, WI, and MN Reporting Systems</td>
<td>Mark Nelson, Mn/DOT</td>
<td>$29,500</td>
</tr>
<tr>
<td>1.2 Deploy Limited CARS Application for WI</td>
<td>Phil DeCabooter, WisDOT</td>
<td>$7,500</td>
</tr>
<tr>
<td>1.3 Develop Automated Road Condition Reporting System (Possible Future Project)</td>
<td>Mark Nelson, Mn/DOT</td>
<td>$00</td>
</tr>
<tr>
<td>1.4 Provide Integrated Communications Capabilities for ND DMS (Possible Future Project)</td>
<td>Ed Ryen, NDDOT</td>
<td>$00</td>
</tr>
<tr>
<td>1.5 Preliminary Design for DMS Deployment on I-94 Eastbound in ND</td>
<td>Ed Ryen, NDDOT</td>
<td>$12,000</td>
</tr>
<tr>
<td></td>
<td>Dennis Redig, Mn/DOT</td>
<td></td>
</tr>
<tr>
<td>1.6 Preliminary Design for DMS Deployment at the I-94 and I-90 split in Tomah, WI</td>
<td>Phil DeCabooter, WisDOT</td>
<td>$12,000</td>
</tr>
<tr>
<td>1.7 Develop a North/West Passage Web Site</td>
<td>Ayman Smadi, NDSU</td>
<td>$4,000</td>
</tr>
<tr>
<td>1.8 Develop a Communications Plan for the De-Icing System to be installed on the I-94 Bridges at Red River</td>
<td>Dennis Redig, Mn/DOT</td>
<td>$20,000</td>
</tr>
<tr>
<td>1.9 Develop a Lessons Learned Document Comparing Requirements for CARS Deployment in WI to Meridian’s Planned Reporting System in ND</td>
<td>Ayman Smadi, NDSU</td>
<td>$15,000</td>
</tr>
<tr>
<td><strong>Total Cost of Phase I Projects</strong></td>
<td><strong>$100,000</strong>*</td>
<td></td>
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*Total does not include costs for admin, travel, meeting or consultant support services.
Phase I Projects

Project 1.1 - **Completed**
Integrate North Dakota, Wisconsin, and Minnesota Reporting Systems

**Project Results**

- Travelers in ND can now receive MN’s 511 Traveler Information
- At no additional cost SD can also receive MN’s 511 Traveler Information
- Development of an Interface Control Document

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**Project Champion**
Mark Nelson, Mn/DOT

**NWP Cost**
$29,500
Phase I Projects

Project 1.2 - **Completed**
Deploy Limited CARS Study Application for Wisconsin

**Project Results**

- Test deployment of CARS along I-94 in WI - District 6 for staff to become familiar with manual input
- Alleviated fears of system time demands
- Demonstrated the value that will be achieved when a statewide reporting system is implemented
- Wisconsin DOT staff have continued to meet internally to discuss statewide deployment

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</table>
Phase I Projects

Project 1.3 - *Project Tabled*

Develop Automated Road Condition Reporting System

**Project Results**

- This project has been successfully developed in a separate Maintenance Decision Support System (MDSS) study, TPF-5(054)
- Therefore, planning for this project was set aside in Phase I and will be further reviewed and addressed as a Corridor Strategic Plan is developed during Phase II

**Project Champion**

Mark Nelson, Mn/DOT

**NWP Cost**

$0
Phase I Projects

Project 1.4 - **Completed**
Provide Integrated Communications Capabilities for North Dakota DMS

**Project Results**
- NDDOT used a new software to upgrade all 19 of their DMS to NTCIP compliance
- Utilized a single communication interface to communicate to all DMS
- Project was funded through an Amber Alert Grant
- The project was a success – North/West Passage stimulated the project

**Project Champion**
Ed Ryen, NDDOT  
**NWP Cost**  
$0
Project 1.5
Preliminary Design for DMS Deployment on I-94 Eastbound in North Dakota

- Install DMS on I-94 in ND for travelers approaching the MN border
- Complement MN DMS for westbound travelers
- Receive coordinated traveler information at state boundary
- Next step: Develop a DMS RFP

Project Champions: Ed Ryen, NDDOT & Dennis Redig, Mn/DOT
NWP Cost: $12,000
Phase I Projects

Project 1.6 - **Completed**

Preliminary Design for DMS Deployment at the I-94 & I-90 Split at Tomah, Wisconsin

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Project Results

- Project successfully shifted to better meet the users' needs by determining a Concept of Operations should be developed first that fits into the Wisconsin Statewide Transportation Operations Plan, being developed at the same time.

- Information gathered and documented will assist in moving forward with the statewide plan.

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Phase I Projects

Project 1.7 - **Completed**
Develop a North/West Passage Program Website

**Project Results**
- Provide easy access to North/West Passage information
- Communicate and educate public about North/West Passage Pooled Fund Study
- Information available on demand
- [www.nwpassage.info](http://www.nwpassage.info)

**Project Champion**
Ayman Smadi, NDSU

**NWP Cost**
$4,000
Phase I Projects

Project 1.8 - **Completed**
Develop a Communications Plan for the Anti-Icing System to be Installed on the I-94 Bridges at Red River

**Project Results**

- Developed the preliminary design and communication design for the Anti-Icing System on the I-94 bridge over the Red River
- RFP developed - Anti-Icing System to be completed Fall 2005

**Project Champion**
Ed Ryen, NDDOT & Dennis Redig, Mn/DOT

**NWP Cost**
$20,000
Phase I Projects

Project 1.9
Develop a Lessons Learned Document Comparing Requirements for CARS Deployment in Wisconsin to Meridian’s System Deployment in North Dakota

- Identify typical requirements for developing a road condition reporting system
- Survey available systems, use deployment as case study, identify agency issues/requirements
- Guide other states in deploying similar projects

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Phase II – North/West Passage ITS Integrated Corridor Strategic Plan

Goal

Develop a high-level architecture, coordinated traveler information system, and an inventory of communication issues for I-90 and I-94 to produce a solid, corridor-wide strategy for planning, programming and development of future integrated corridor projects
Next Steps

- Continue and Complete Phase I Projects
- Review/Approve Draft Phase I Report
- Phase II Proposals Due May 23, 2005
Next Steps

- Washington - Committed
- Idaho - Committed
- Wyoming - Likely
- Montana - Very Likely
- North Dakota - Committed
- South Dakota - Unknown
- Minnesota - Committed
- Wisconsin - Likely
Contact Information

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mark.nelson@dot.state.mn.us