Wisconsin DOT Incident Management and Safety-related Strategies

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State Traffic Engineer of Design
Wisconsin DOT
Bureau of Traffic Operations
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OUTLINE

- Wisconsin DOT TMP Process
- Guidance on Work Zone Incident Management Plans
- Additional Safety-related Strategies
- Project Examples
TRANSPORTATION MANAGEMENT PLANS (TMPs)

DEFINITION

1. A set of coordinated transportation management strategies

2. A description of how the strategies will be used to manage work zone impacts

Components include:

- Traffic Control Plans
- Public Information and Outreach
- Transportation Operations
- Incident Management
WISDOT TMP PROCESS

- Includes all phases of project development
  - Planning
  - Design
  - Construction

- Adjust at various construction stages

- Identify issues and impacts
  - Work Zone Impacts Assessment
WISDOT TMP PROCESS

- Determine TMP Type
- Identify and Evaluate Strategies
- Develop TMP Report
- Include with Design Study Report (DSR)
- Approval Process
TMP DOCUMENTATION & REQUEST FOR APPROVAL

We are requesting approval of the Transportation Management Plan (TMP) for the project detailed below. This project is categorized as TMP type _______. Impacts resulting from project activities meet the current work zone policies of the Wisconsin Department of Transportation.

<table>
<thead>
<tr>
<th>TMP/Project Type</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Project that requires a DSR and is TMP Type 1, 2 or 3.</td>
<td>Complete and submit this document and any attachments to BPD project services liaison.</td>
</tr>
<tr>
<td>B. Project that requires a DSR and is TMP Type 4.</td>
<td>Complete this document as the TMP Executive Summary and submit along with separate TMP report to BPD project services liaison. Complete and submit this document and any attachments to BPD project services liaison.</td>
</tr>
<tr>
<td>C. Project does not require DSR and is TMP Type 1, 2 or 3.</td>
<td></td>
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For Federal Oversight projects, coordinate early in TMP development with BPD & FHWA project liaisons.

1. Project Information
   - Design ID:
   - Project Title:
   - Project Limits:
   - Highway:
   - County:
   - Project type (recst., recondition, SHRM, etc.):
   - PS&E Date:
   - Let Date:
   - Project Name:
   - Length:
   - Project Miles:
   - Duration:
   - AADT:
   - Days:
Transportation Management Plan

INCIDENT MANAGEMENT PLAN CONTENT

- Project Summary
- Checklists
  - Statewide Traffic Operations Center (STOC)
  - Law Enforcement
  - Project Leader
  - Regional Incident Management Coordinator and Duty Officer
Transportation Management Plan

INCIDENT MANAGEMENT PLAN CHECKLISTS

- Law Enforcement
  - Contact dispatch to report incident or backups
  - Identify incident classification based on duration
  - Initiate traffic control as appropriate
  - Inform media of highway incident
  - Dispatch contacts Statewide Traffic Operations Center (STOC)
  - Need for specialized equipment
  - Notifications at conclusion of incident
Transportation Management Plan

INCIDENT MANAGEMENT PLAN CHECKLISTS

- Project Leader
  - Function as liaison for contractors
  - Contact project manager and/or supervisor if backups reach 5 miles
Transportation Management Plan

INCIDENT MANAGEMENT PLAN CONTENT

- Emergency contact list
- Alternate routes
- Queue backup levels
- Available barricade locations for ramp closures
- Activation of traveler information systems
### Incident Management Plan

#### TRAFFIC VOLUMES, DELAY & QUEUE BACKUP LEVELS

**SUMMARY OF TRAFFIC MODEL OUTPUT**

<table>
<thead>
<tr>
<th>TIME OF DAY</th>
<th>MAIN ROUTE</th>
<th>ALTERNATE ROUTE</th>
<th>SITE CAPACITY</th>
<th>FLOW MAIN ROUTE</th>
<th>FLOW DIVERSION</th>
<th>TOTAL DIVN FLOW</th>
<th>AV.DEL PER VEH (MINS)</th>
<th>AVERAGE QUEUE (VEH)</th>
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*WISCONSIN DEPARTMENT OF TRANSPORTATION*
Incident Management Plan

ACTIVATION OF TRAVELER INFORMATION SYSTEMS

- Scenarios
  - Normal conditions
  - Operational backups due to work zone congestion
  - Backups due to incident
  - Blocked highway
## CONSIDERATIONS FOR LAW ENFORCEMENT OR FREEWAY SERVICE TEAM SUPPORT SERVICES

<table>
<thead>
<tr>
<th>For projects with:</th>
<th>Law Enforcement</th>
<th>Freeway Service Team</th>
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<tbody>
<tr>
<td>Recurring delay</td>
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<td>x</td>
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<td>Type 3-4 TMP</td>
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<tr>
<td>Challenging geometrics</td>
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<tr>
<td>Reduced lane capacity or shoulder width</td>
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<td>x</td>
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<tr>
<td>Escorts for oversize loads</td>
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<td>x</td>
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<tr>
<td>Interstate/freeway</td>
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<td>x</td>
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<tr>
<td>Reduced speed limit</td>
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<tr>
<td>Speed management needed</td>
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IMPLEMENTING TMPS IN WISCONSIN

- Marquette Interchange
- I-94 North-South Freeway
- USH 41/STH 29 Interchange
MARQUETTE INTERCHANGE
TMP SAFETY STRATEGIES

- Local Road Traffic Operations
  + Intersection Improvements
  + New Signals and Signal Upgrades
  + Temporary No Parking Zones

- Freeway Traffic Operations and Safety
  + Statewide Traffic Operations Center (STOC)
  + Emergency Responders
  + Incident Crisis Communication Plan (ICCP)
Traffic Control and Operations
- Construction Vehicle Ingress and Egress
- Traffic Responsive Signal System
- Free Bus Routes
I-94 NORTH-SOUTH FREEWAY
TMP SAFETY STRATEGIES

+ Incident Management and Crisis Communication
  - Freeway Service Team
  - Incident Crisis Communication Plan
  - Tunnel Emergency Response Plan
USH 41/STH 29 INTERCHANGE
TMP SAFETY STRATEGIES

+ Traffic Control
  ❌ Temporary and Permanent Signals

+ Traffic Operations
  ❌ Radar Speed Display Boards
  ❌ Improvements to Intersection Geometry
USH 41/STH 29 INTERCHANGE
TMP SAFETY STRATEGIES

+ Public Information
  - Outreach and Task Force Meetings
  - Construction Staging Diagrams
    - Road Users
    - Traffic Shifts
    - Mitigation Concepts

+ Incident Management
  - Rapid Intervention Vehicle (RIV)
CONTACTS

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