Processes to Improve Work Zone Progression

99th Annual Purdue Road School

Pat McCarty

March 5, 2013
WORK ZONE PROGRESSION

Interstate Work Zones

- New Interstate Highway Congestion Policy
- Capacity Studies
- New Devices
INTERSTATE HIGHWAYS CONGESTION POLICY

I. Policy Section

- Prohibits operations on an Interstate Route which:
  - Restrict lanes
  - Cause congestion
  - Except as noted within
INTERSTATE HIGHWAYS CONGESTION POLICY

II. Purpose
Purpose is to comply with Federal Code

III. Administered by:
Administered and maintained by INDOT’s Traffic Management Division

IV. Terms/Acronyms/Definitions
List of the Terms, Definitions and Acronyms used in the policy
INTERSTATE HIGHWAYS CONGESTION POLICY

V. APPLICATION OF THE POLICY

- Contains ten parts which describe:
  - Who must follow the policy
  - When it applies and when it doesn’t
  - Where it applies
  - How to seek an exception
  - What data collection is required
VI. Pre-Reporting Requirements

- Any closures must be reported to the TMC
- The report is to include:
  - Closure information
  - Contact Information
VII. Policy Approval

- Replaces all prior policies
- Grandfathers Existing Waivers
- Effective dates:
  January 31, 2013 for INDOT Maintenance, permits...
  RFC date on or after April 1, 2013
Appendix A

- Emergency Repairs
  - Suggested use
  - Reporting requirements
- Urgent Repairs
  - Suggested use
  - Queue development
  - Reporting requirements
  - Prevention of future urgent repairs
# Interstate Highways Congestion Policy

<table>
<thead>
<tr>
<th>Section</th>
<th>Start Exit</th>
<th>End Exit</th>
<th>2009 Schedule</th>
<th>Length (mi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I 465 to 116th St</td>
<td>0</td>
<td>5</td>
<td>Nighttime Only</td>
<td>5</td>
</tr>
<tr>
<td>116th St to SR 38</td>
<td>5</td>
<td>19</td>
<td>Executive Approval</td>
<td>14</td>
</tr>
<tr>
<td>SR 38 to SR 12</td>
<td>13</td>
<td>64</td>
<td>Nighttime Only</td>
<td>45</td>
</tr>
<tr>
<td>SR 18 to</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US 224 to</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US 24 to</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 1 to</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 4 to</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Michigan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Anytime**
- **Weekend or Night-time Only**
- **Weekday or Night-time Only**
- **Night-time**
- **Executive Approval**
- **Minimum 3 lanes / Direction**
Appendix C

Policy Exceptions
- Approval requirements
- Who is responsible to seek an exception
- What requires an exception
- How to request one
# Appendix D

<table>
<thead>
<tr>
<th>Speed of Pilot Vehicle (MPH)</th>
<th>20 Minute Distance (Ft)</th>
<th>20 Minute Distance (M)</th>
<th>20 Minute Distance (Yd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>5,292</td>
<td>1,600</td>
<td>1,760</td>
</tr>
<tr>
<td>52</td>
<td>6,176</td>
<td>2,000</td>
<td>2,222</td>
</tr>
<tr>
<td>55</td>
<td>6,700</td>
<td>2,200</td>
<td>2,444</td>
</tr>
</tbody>
</table>
Appendix D

- Rolling Slowdowns
  - Diagram (Figure D-1)
INTERSTATE INTERSECTION WORK ZONE QUEUE & DELAY REPORT FORM

Contract No. ______________________
Route & Project Limit/Location: ______________________
County: ______________________
District: ______________________

Occasion: ______________________
(Note same?) ______________________
Date: __/__/____

Measurement 1:
Direction of Travel: ______________________
Time: _______ am/pm
Location of Queue (see note 1):
Queue Length: _______ miles
Delay: _______ minutes

Measurement 2:
Direction of Travel: ______________________
Time: _______ am/pm
Location of Queue (see note 2):
Queue Length: _______ miles
Delay: _______ minutes

Comments: ______________________

Signed: ______________________
Project Engineer/Supervisor____________________
Report Date ______________________

NOTES:
1. Occasion refers to the event (e.g., start of construction, phase change, location change) that is prompting the measurements.
2. Location of Queue refers to the location where the queue begins. For the purpose of this form, the left lane merging taper for the crossover at station 12+95’
3. Design Traffic Engineer
4. Work Zone Safety Section, Illinois DOT,仨 to 312-816-3887
5. Project 308

Form Date 02/2012
### Work Zone Capacity

**Table C-2: Suggested Working Hour Capacities**

<table>
<thead>
<tr>
<th>Work Zone Type</th>
<th>Lanes Maintained</th>
<th>Effective Lane Width</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>&gt; or = 11’</td>
</tr>
<tr>
<td>Short Term</td>
<td>1 or more</td>
<td>1600</td>
</tr>
<tr>
<td>Long Term, traffic not crossed over</td>
<td>1</td>
<td>1750</td>
</tr>
<tr>
<td>Long Term, traffic crossed over</td>
<td>1</td>
<td>1550</td>
</tr>
<tr>
<td>Long Term, either traffic crossed or not crossed over</td>
<td>2 or more</td>
<td>1750</td>
</tr>
</tbody>
</table>
CAPACITY STUDIES

Work Zone Capacity

- Data Collection Project
- Purpose
- Methodology
- Sites selected
Double lane count at about 1.25 miles S. of arrow board. N. of ramp from Marion Center Road. About MP 14.

- Single lane count just past end of taper and before exit to Tillman Road About MP 15.4
- 4 time lapse cameras. 2 facing N. and 2 facing S. (for redundancy) mounted on fence posts on each side of Wayne Trace at the top of the slope.
Map of approximate location of data collection points on I-70
NEW DEVICE STUDIES

Sequential Lights

- What are they
- Why use them
- Pilot projects
Are there any questions?