Work Zone Safety

Steve Cooley, ODOT Chief Engineer
Justin Moderie, ODOT State Pavement Engineer
Justin King, ODOT Traffic Control Engineer
What we’re doing now

- Safety and Mobility Policy Committee
  - Work Zone Executive Strategy Session Committee
- Pilot Projects Lessons Learned
- Annual Staging Meetings
- Law Enforcement Pilot Tracking Hours Worked
- Automated Flagger Technical Bulletin
- Secretary of State Work Zone Safety Audit
- Blue Light Study Follow-up
Work Zone Safety Pilot Projects

- 11 Projects
  - Four located on I-5
  - Three located on I-84
  - Remaining four located on US 20, US 97, OR 569 and OR 224

- Pilot Alternatives
  - Crossovers
  - Directional Closers/Detours
  - Day Paving
  - Buffer Zones/Ext. Paving Hours
  - Mobile Barrier Truck
Pilot Project: I-5 Ashland to California State Line

• Preservation and Bridge Project
• General contractor: Carter & Company
• Contract amount: $23.4 million
• Work includes:
  – 50 lane-miles of Diamond Grinding
  – 3 lane-miles of Concrete Pavement
  – 20,000 tons ACP
  – Bridge Deck and Rail Replacements
  – Bridge Deck Sealing
  – Guardrails and Barriers
Pilot Project: I-5 Ashland to California

Design Considerations

- Weather considerations
- Length of one lane cross over
- Disabled vehicles
- Run away truck ramps
- Pinch Point at Bridge
Pilot Project: I-5 Ashland to California
Pilot Project: I-84 Swanson Canyon to Arlington

- Preservation Project
- General contractor: Kerr Contractors
- Contract amount: $14.2 million
- Work includes:
  - 160,000 tons ACP
  - Bridge Deck Sealing
  - Guardrails
Pilot Project: I-84 Swanson Canyon to Arlington

Design Considerations

- Length of crossover
- Law Enforcement
- Six foot median/tubular markers
Pilot Project: I-84 Swanson Canyon to Arlington
Continuing Our Efforts

- ODOT and industry staging meetings and constructability reviews 2023-2024
- Law Enforcement Presence
- Looking at automated flagger projects
- Construction season 2020 blue lights agreement
- Develop best practices and performance requirements
- Work Zone Safety Symposium Seminar
- Communications, Education and Outreach
- Maintain momentum to improve safety in highway work zones
Industry Staging Meetings – Overview

- Need for broader understanding
- Desire for input and feedback
Industry Staging Meeting – Participants

- Trucking
- Construction Industry
- Travelers
- OSP
- ODOT
Industry Staging Meetings – Process

- Annually – November
- +/- 10 Projects
- Not limited to paving
- ODOT Regions / Chief Engineer select projects
- Regions present project overview
- Open discussion and learning
Industry Staging Meetings – Positive Outcomes

Detours

Bike & Ped Access

80 / 20 Concept

Production Rates
Industry Staging Meetings – Future Needs

- Limited Time on Site
- Automated Flagger Implementation
- Worker Safety versus Access
Transportation Management Plan & Contract Administration

ODOT Temporary Traffic Control Plan and Transportation Management Plan

“Plans are nothing; planning is everything.”
Dwight D. Eisenhower
TMP & Contract Administration

- TCP must be stamped by a PE.
- TMP Purpose: Provides the details regarding the development and implementation of the TCP PS&E, living document.
- Now a bid reference document, available to the contractor, similar to a geotechnical report
- The ODOT RE will provide updated TMP and Work Zone Decision Tree in the project final documentation.
- Contractor-supplied TCP and ODOT TMP
**Example of a TMP in eBIDS**

<table>
<thead>
<tr>
<th>Type</th>
<th>Date Added</th>
<th>Content Size (MB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drawing</td>
<td>12-31-2019</td>
<td>0.50</td>
</tr>
<tr>
<td>Drawing</td>
<td>12-31-2019</td>
<td>0.14</td>
</tr>
<tr>
<td>Drawing</td>
<td>12-31-2019</td>
<td>0.78</td>
</tr>
<tr>
<td>Drawing</td>
<td>12-31-2019</td>
<td>2.76</td>
</tr>
<tr>
<td>Drawing</td>
<td>12-31-2019</td>
<td>1.54</td>
</tr>
<tr>
<td>Drawing</td>
<td>12-31-2019</td>
<td>0.39</td>
</tr>
<tr>
<td>Drawing</td>
<td>12-31-2019</td>
<td>5.65</td>
</tr>
<tr>
<td>Drawing</td>
<td>12-31-2019</td>
<td>0.42</td>
</tr>
<tr>
<td>Drawing</td>
<td>12-31-2019</td>
<td>5.94</td>
</tr>
<tr>
<td>Drawing</td>
<td>12-31-2019</td>
<td>0.35</td>
</tr>
<tr>
<td>Drawing</td>
<td>12-31-2019</td>
<td>0.55</td>
</tr>
<tr>
<td>Drawing</td>
<td>12-31-2019</td>
<td>10.57</td>
</tr>
<tr>
<td>Drawing</td>
<td>12-31-2019</td>
<td>2.98</td>
</tr>
<tr>
<td>Drawing</td>
<td>12-31-2019</td>
<td>4.83</td>
</tr>
<tr>
<td>Report</td>
<td>12-31-2019</td>
<td>0.95</td>
</tr>
<tr>
<td>Report</td>
<td>12-31-2019</td>
<td>2.46</td>
</tr>
<tr>
<td>Report</td>
<td>12-31-2019</td>
<td>0.03</td>
</tr>
<tr>
<td>Report</td>
<td>12-31-2019</td>
<td>0.08</td>
</tr>
<tr>
<td>Report</td>
<td>12-31-2019</td>
<td>0.13</td>
</tr>
<tr>
<td>Report</td>
<td>12-31-2019</td>
<td>0.02</td>
</tr>
</tbody>
</table>
Oregon Standard Specifications – 2018

Temporary Traffic Control

• 00220 – Accommodation for Public Traffic
• 00225 – Work Zone Traffic Control
Oregon Standard Specifications – 2021

- 00220 – Accommodation for Public Traffic
- 00221 – Work Zone Traffic Control
- 00222 – Temporary Signing & Temporary Electrical Signs
- 00223 – Work Zone Labor & Vehicles
- 00224 – Temporary Traffic Channelizing Devices
- 00225 – Temporary Pavement Markings
- 00226 – Temporary Roadside Barriers & Impact Attenuators
- 00227 – Temporary Traffic Signals & Illumination
- 00228 – Temporary Pedestrian & Bicycle Appurtenances
- 00229 – Smart Work Zones (Boilerplates)
Provide Feedback on Standard Specifications

Visit the Standard Specifications website, scroll to the “Change Requests” section:

Work Zone Safety Incidents Occur Across Oregon
Work Zone Safety Incidents Occur Across Oregon

Slow down! 3 flaggers hurt or killed in 4 days, ODOT says

The Oregon Department of Transportation says drivers must pay attention while driving in work zones.

Source: Portland Tribune
Work Zone Safety Incidents Across the Nation

132 Worker Fatalities in 2017

Source: National Work Zone Safety Information Clearinghouse
www.workzonesafety.org
Before selecting flaggers...

...consider using an automated flagger assistance device.

We have standard details for AFADs. See series 4700 for Temporary Traffic Control details.

www.oregon.gov/ODOT/Engineering/Pages/Details-Traffic.aspx#DET4700-Series
Lessons Learned

Try  Fail  Succeed
Traffic Control Plan Resources

Go Online
Visit the Work Zone website
www.oregon.gov/ODOT/Engineering/Pages/Work-Zone.aspx

Email Us
Contact the Work Zone team
WorkZoneStandards@odot.state.or.us
Connect with Us

/OregonDOT
@OregonDOT
@Oregon_DOT
/company/Oregon-Department-of-Transportation
/OregonDOT