Work Zone Traffic Control Training Program

March 26th, 2018
What’s the Purpose of Today’s Webinar?

- Provide an overview of how the proposed work zone traffic control training program will impact day-to-day business
- Identify who all will be impacted
- Explain work zone traffic control training requirements
- Evoke questions and comments from participants to refine policy
• Why Work Zone Training?
• Authority
• Purpose
• Proposed Training Program
  – 3 Categories of Training
  – Training Requirements and Content
  – External Training Courses & Instructor Qualifications
  – Consequences for Non-compliance
  – Program Management
Why Work Zone Training?

- Reduce work zone crashes and fatalities
  - Workers
  - Motorists
Why Work Zone Training?

CRASH SEVERITY WITHIN THE WORK ZONE 2016 - 2017

OTHER AREA
18%, 13%, 11%

LEGEND
XX% Fatal
XX% Injury
XX% PDO

BEFORE FIRST SIGN
6%, 3%, 2%

ADVANCE WARNING AREA
29%, 18%, 15%

TRANSITION AREA
3%, 9%, 9%

ACTIVITY AREA
41%, 53%, 60%

TERMINATION AREA
3%, 4%, 3%
Why Work Zone Training?

- Improve work zone consistency amongst all organizations within State & Turnpike right-of-way
- Improve work zone compliance with Publication 213 and MUTCD
Goal: Provide the appropriate degree of training for all work zone personnel involved with traffic control activities to properly and effectively conduct their job responsibilities.

Objectives:

- Train all individuals who oversee traffic control, flagging, planning, design, installation, inspection, operation, management, maintenance, and removal of work zones.
- Reduce the number of fatal work zone crashes to zero.
- Reduce the number of overall work zone crashes each year.
- Reduce the number of unsatisfactory work zone QA/QC evaluations to zero.
- Improve work zone consistency amongst all organizations.
• Federal Regulations, 23 CFR Part 630J requires states to train all personnel involved with work zone activities to improve decision making for each individual’s job responsibilities.
• Provide training for all work zone personnel who are involved in the following traffic control activities:
  – Planning/Design of work zone traffic control
  – Installation/Removal of work zone traffic control devices
  – Maintenance/Inspection of work zone traffic control
  – Operations/Management of work zone traffic control
• Impacted public agencies and organizations include:
  – PennDOT
  – PA Turnpike
  – FHWA
  – PA Municipal Organizations
  – PA Public Utility Commission (PUC)
  – PA State Police (PSP)
• Impacted private agencies and organizations include:
  – Association of PA Constructors (APC)
  – American Council of Engineering Companies (ACEC)
  – Pennsylvania Asphalt Pavement Association (PAPA)
  – American Traffic Safety Services Association (ATSSA)
  – Highway Occupancy Permittees
  – Any organization that conducts business within PennDOT or PA Turnpike right-of-way
Proposed Training Program

- Provide 3 categories of work zone training
  - Field Personnel Work Zone Safety Training
  - Deployment & Oversight Work Zone Safety Training
  - Design & Review Work Zone Safety Training

- Training required is dependent upon work zone job duties
  - No pre-requisites for any category of training
Proposed Training Program

• All individuals involved with work zone traffic control must maintain the appropriate work zone training certification in order to perform work within State or PA Turnpike right-of-way

• Law Enforcement and Emergency/1st responders are encouraged to receive work zone training but not required
Proposed Training Program

- Training techniques to be offered:
  - Web-based training *(free to trainees)*
    - Field Personnel Work Zone Safety Training
  - Instructor facilitated mixed methods training *(cost to trainees)*
    - Field Personnel Work Zone Safety Training
    - Deployment & Oversight Work Zone Safety Training
    - Design & Review Work Zone Safety Training

**IMPORTANT:** All training courses utilize pre-recorded slides to ensure content consistency

Section 5.4
Proposed Training Program

• Field Personnel Training Requirements
  – Who is required:
    • All personnel controlling traffic in a work zone and personnel responsible for installing, maintaining, and removing temporary traffic control devices
    • Examples: Laborers involved with setting up and tearing down temporary traffic control devices and Flaggers
  – Course objectives include:
    • Understanding of required safety attire
    • Understanding of work zone components
    • Understanding of high level work zone concepts and overall safety awareness
    • Understanding of proper way to install/remove traffic control devices
# Module Content: Field Personnel Training

<table>
<thead>
<tr>
<th>Day 1 (2.5 hours)</th>
<th>Time (mins)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Introduction</td>
<td>10</td>
</tr>
<tr>
<td>2 Required Safety Attire</td>
<td>5</td>
</tr>
<tr>
<td>3 Traffic Control Devices</td>
<td>15</td>
</tr>
<tr>
<td>4 Work Zone Components</td>
<td>10</td>
</tr>
<tr>
<td>5 Worker Safety Awareness</td>
<td>20</td>
</tr>
<tr>
<td>6 Building Work Zone Skills</td>
<td>30</td>
</tr>
<tr>
<td>Course Exam</td>
<td>60</td>
</tr>
</tbody>
</table>
Proposed Training Program

- Field Personnel Training Course Requirements

<table>
<thead>
<tr>
<th>Work Zone Safety Training</th>
<th>Instruction</th>
<th>Testing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Training Technique</td>
<td>Minimum Hours</td>
</tr>
<tr>
<td></td>
<td>Instructor Required</td>
<td>Classroom</td>
</tr>
<tr>
<td>Field Personnel Training</td>
<td>Web-based individual</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>Mixed Methods</td>
<td>Y</td>
</tr>
</tbody>
</table>

**IMPORTANT:** Personnel must complete training every 3 years in order to maintain field personnel work zone training certification

Section 5.4
• Field Personnel Training Implementation
  – Online and assembly trainings available early Fall 2018
  – Supplements current flagger training
  – Flagger training to be updated to incorporate field personnel content
  – All new PennDOT employees involved with temporary traffic control must complete
  – PennDOT maintenance divisions to conduct assembly trainings in Fall 2018/Winter 2019

• **Field Personnel Training must be completed by March 1\textsuperscript{st}, 2020**
Proposed Training Program

• Deployment & Oversight Training Requirements
  - Who is required:
    • All supervisory, decision-making, inspection, work zone QA/QC personnel, and individuals in charge of determining and laying out work zone traffic control set-ups in the field
    • Examples: Project managers, Foreman, Superintendents, Engineer-in-charge, Inspectors, Work zone QA/QC personnel
  - Course objectives include:
    • Understanding of human factors that contribute to crashes
    • Understanding of relevant manuals, guidebooks, and publications
    • Appropriate understanding and selection of Pub 213 PATAs
    • Understanding project specific traffic control plans
    • Modifying PATAs and traffic control plans for field conditions
    • Installing/removing traffic control devices
    • Understanding of inspection and documentation requirements
## Proposed Training Program

<table>
<thead>
<tr>
<th>Module Content: Deployment &amp; Oversight Training</th>
<th>Time (mins)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Day 1 (6 hours)</strong></td>
<td></td>
</tr>
<tr>
<td>1 Introduction</td>
<td>30</td>
</tr>
<tr>
<td>2 Liability and Risk</td>
<td>30</td>
</tr>
<tr>
<td>3 Human Factors</td>
<td>30</td>
</tr>
<tr>
<td>4A* PennDOT: Manuals and References</td>
<td>30</td>
</tr>
<tr>
<td>4B* Turnpike: Manuals and References</td>
<td>30</td>
</tr>
<tr>
<td>5 Traffic Control Devices</td>
<td>60</td>
</tr>
<tr>
<td>6 Work Zones</td>
<td>60</td>
</tr>
<tr>
<td>7 Worker Safety and Flagging Operations</td>
<td>90</td>
</tr>
<tr>
<td><strong>Day 2 (6 hours)</strong></td>
<td></td>
</tr>
<tr>
<td>8A* PennDOT: Building Work Zone Skills <em>(Tabletop/Field Demo)</em></td>
<td>75</td>
</tr>
<tr>
<td>8B* Turnpike: Building Work Zone Skills <em>(Tabletop/Field Demo)</em></td>
<td>45</td>
</tr>
<tr>
<td>9 Adjusting TTC <em>(Tabletop/Field Demo)</em></td>
<td>60</td>
</tr>
<tr>
<td>10 Types of TTC Activities</td>
<td>30</td>
</tr>
<tr>
<td>11 Work Zone Inspection</td>
<td>30</td>
</tr>
<tr>
<td>12 Review of TTC Typical Applications</td>
<td>60</td>
</tr>
<tr>
<td>Course Exam</td>
<td>60</td>
</tr>
</tbody>
</table>

*Agency specific modules may be removed based on course attendee applicability*
Proposed Training Program

- Deployment & Oversight Training Course Requirements

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<th>Work Zone Safety Training</th>
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<tr>
<td></td>
<td>Training Technique</td>
<td>Instructor Required</td>
</tr>
<tr>
<td></td>
<td>Virtual/Classroom</td>
<td>Practical</td>
</tr>
</tbody>
</table>

*Training to occur over consecutive days

**IMPORTANT:** Personnel must complete training every 3 years in order to maintain deployment & oversight work zone training certification

Section 5.4
Proposed Training Program

- A Deployment & Oversight Certified Individual **must be on-site** during installation, removal, or modifications of traffic control devices
- Program intends to provide at least one individual with Deployment & Oversight Training in a work zone at all times
- Where foreman/supervisors are responsible for multiple work zones, Deployment & Oversight Training is encouraged for field personnel
• Deployment & Oversight Training Implementation
  – Assembly trainings available early 2019
  – Training to be incorporated into PennDOT’s Foreman Academy Training

• Deployment & Oversight Training must be completed by March 1st, 2020
• Design & Review Training Requirements
  – Who is required:
    • All personnel with responsibility for design (includes PATA modifications) and/or review of work zone traffic control
    • Examples: Design engineers (i.e. Consultants, Contractors, Utilities, & Permittees) and District/PTC Work Zone Review Staff
  – Course objectives include:
    • Understanding of relevant design manuals, guidebooks, and publications
    • Review of work zone components and devices
    • Work zone mobility analysis and Transportation Management Plans
    • Design considerations and detours
    • Preferred Traffic Control Plan presentation and specifications
    • Understanding of night-time, urban, and pedestrian/bicycle considerations
## Proposed Training Program

<table>
<thead>
<tr>
<th>Module Content: Design &amp; Review Training</th>
<th>Time (mins)</th>
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<tr>
<td><strong>Day 1 (6 hours)</strong></td>
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<tr>
<td>1 Introduction</td>
<td>30</td>
</tr>
<tr>
<td>2A* PennDOT: Manuals and References</td>
<td>30</td>
</tr>
<tr>
<td>2B* Turnpike: Manuals and References</td>
<td>30</td>
</tr>
<tr>
<td>3 Fundamental Principles of Work Zones</td>
<td>30</td>
</tr>
<tr>
<td>4 Human Factors</td>
<td>30</td>
</tr>
<tr>
<td>5 Component Parts of TTC</td>
<td>30</td>
</tr>
<tr>
<td>6 TTC Devices</td>
<td>60</td>
</tr>
<tr>
<td>7 Types of TTC Activities</td>
<td>30</td>
</tr>
<tr>
<td><em><em>8A</em> PennDOT: Transportation Management Plan (Group Exercises)</em>*</td>
<td>30</td>
</tr>
<tr>
<td><em><em>8B</em> Turnpike: Transportation Management Plan (Group Exercises)</em>*</td>
<td>30</td>
</tr>
<tr>
<td>9 Design Considerations</td>
<td>30</td>
</tr>
<tr>
<td><strong>Day 2 (6 hours)</strong></td>
<td></td>
</tr>
<tr>
<td><em><em>10A</em> PennDOT: TTC Plans and Specifications (Group Exercises)</em>*</td>
<td>75</td>
</tr>
<tr>
<td><em><em>10B</em> Turnpike: TTC Plans and Specifications (Group Exercises)</em>*</td>
<td>45</td>
</tr>
<tr>
<td>11 Nighttime Work Zones</td>
<td>45</td>
</tr>
<tr>
<td>12 Urban and Other Considerations</td>
<td>45</td>
</tr>
<tr>
<td>13 Course Review: TTC Designs, Plans, and Specifications</td>
<td>90</td>
</tr>
<tr>
<td>Course Exam</td>
<td>60</td>
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*Agency specific modules may be removed based on course attendee applicability*
Proposed Training Program

- Design & Review Training Course Requirements

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<tr>
<td></td>
<td>Training Technique</td>
<td>Instructor Required</td>
</tr>
<tr>
<td>Designer &amp; Reviewer Training</td>
<td>Mixed Methods</td>
<td>Y</td>
</tr>
</tbody>
</table>

*Training to occur over consecutive days

**IMPORTANT:** Personnel must complete training every 3 years in order to maintain design & review work zone training certification

Section 5.4
Proposed Training Program

- **Design & Review Training Implementation**
  - Use Planning for Operations course as a baseline for new training course
  - Assembly trainings available early 2019

- **Design & Review Training must be completed by March 1\textsuperscript{st}, 2020**
Proposed Training Program

• External work zone training courses may be accepted if PennDOT training course content is included at a minimum
  – PennDOT’s Work Zone Unit or Program Administrator will approve all trainings

• PennDOT and PTC to meet periodically with impacted agencies/organizations to assess work zone training program and course content
  – Potential to use Work Zone Safety Technical Advisory Group

• PennDOT has the authority to update training course requirements at any time in concurrence with PTC

Sections 8.1-8.2
Proposed Training Program

- Trainees that receive a failing score (79% or less) can take a makeup test within 48 hours
- Trainee certifications to be documented/tracked within a Work Zone Training Program Database by Program Administrator
- Certificates will be presented to successful trainees by instructor
- Successful trainees will **NOT** be required to carry a work zone training card/certificate

Sections 5.5-5.7
Proposed Training Program

- Trainings to be delivered by certified instructors
- Instructors must meet the following requirements:

<table>
<thead>
<tr>
<th>Work Zone Safety Training</th>
<th>PennDOT Certification Requirements</th>
<th>Documentable Years’ of Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Flagger Training</td>
<td>Train the Trainer</td>
</tr>
<tr>
<td>Field Personnel Training</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Deployment &amp; Oversight Training</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Design &amp; Review Training</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

**IMPORTANT:** Training instructors need to be re-certified every 2 years

Section 6.1-6.4
Proposed Training Program

- Non-compliance with Work Zone Training Program Policy requirements will result in individual and/or organizational consequences/penalties
- Consequences and penalties to be enforced per existing regulations and policies for:
  - PennDOT Maintenance/Work Zone Staff
  - PA Turnpike Maintenance/Work Zone Staff
  - Non-PennDOT/PA Turnpike Organizations
• PennDOT and PA Turnpike Consequences:
  – Individuals who fail to meet work zone safety, performance, or training policy requirements will be subject the following:
    • PennDOT: Individuals may be subject to discipline and/or termination as determined by Human Resources
      – Policy and Process for a Needs Improvement and/or Unsatisfactory Quality Assurance and Work Zone Traffic Control Reviews dated June 3, 2014
    • PA Turnpike: Individuals may be subject to an investigation and disciplinary actions as determined by Human Resources

• Incident will be documented in the WZ Training Program Database as well

Section 7.4
• Non-PennDOT/PA Turnpike individuals and organizations will be subject to consequences as noted in Publication 408
  – *Section 105 Control of Work*
  – *Section 108.05(b) Competence of Worker*

**IMPORTANT:** If first violation is egregious enough to endanger the safety of oneself, workers, or motorists, immediate suspension of individuals or stoppage of work may be necessary
• Engineer-in-charge, inspector, or designated representatives from PennDOT/PTC will enforce Work Zone Training Policy.

• Designated PennDOT/PTC representative will be responsible for documenting the incident in their file and in the Work Zone Training Program Database.
Organizations/agencies that repeatedly violate the work zone training policy may be removed from the roadway, have work suspended, or have their pre-qualification status docked/suspended in accordance with:

- Title 67 Sections 441.10 & 459.11
- Title 67 Sections 457.10 & 457.13
- Publication 93 Section 5.5 and 5.8
- Commission Specifications 105.01b & 108.09

Sections 7.5.1.4 and 7.5.2.4
Proposed Training Program

- Program administrator will be contracted to handle day-to-day management of training program including:
  - Developing/Administering trainings
  - Approving external work zone training courses
  - Approving instructor applications
  - Evaluating instructors and work zone training courses
  - Recording/tracking all trainee/instructor certifications
  - Alerting individuals when certifications are to expire
    - 12, 9, 6, and 3 month alerts prior to expiration
  - Assisting PennDOT in evaluating/updating training content
  - Delivering annual report on state of the Work Zone Training Program

Sections 5.6, 5.9, 6.1-5, 7.4, 8.1, 9, 10
## Proposed Training Program

### Next steps

<table>
<thead>
<tr>
<th>TASK</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT Process</td>
<td>Mar, Apr, May, June, July</td>
<td>Aug, Sept, Oct, Nov, Dec</td>
<td>Jan-Dec, Jan, Feb, Mar</td>
</tr>
<tr>
<td>Develop RFP for WZ Training</td>
<td>Mar, Apr, May, June, July</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select Consultant/Program Admin</td>
<td>Mar, Apr, May, June</td>
<td>Aug, Sept, Oct, Nov</td>
<td>Jan-Dec, Jan, Feb, Mar</td>
</tr>
<tr>
<td>Develop Training Course Content</td>
<td>Apr, May, June, July, Aug</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop WZ Training Database</td>
<td>May, June, July, Aug, Sept</td>
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<td></td>
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<tr>
<td>Select Instructors</td>
<td>June, July, Aug, Sept, Oct</td>
<td></td>
<td></td>
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<tr>
<td>Implement/Administer Trainings</td>
<td>July, Aug, Sept, Oct, Nov</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enforce Training Policy</td>
<td>Aug, Sept, Oct, Nov, Dec</td>
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</tr>
</tbody>
</table>

- **Green**: PennDOT Responsibilities
- **Blue**: Consultant Responsibilities