Training & Certification of Highway Maintenance Workers

NCHRP Synthesis Topic 46-17

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Panel Members

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• Jim Feda, South Carolina DOT
• Monty Mills, WSDOT
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• Jim Robida, MassDOT
• Morgan Kessler, FHWA Liaison
• James Bryant, TRB Liaison
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Objectives

• Document & summarize current training & certification practices for front-line highway maintenance workers
• Focus on training directly related to the performance of job duties
• Document the rationale behind decisions regarding training where possible
Focus of Survey

- Subject areas covered in training
- Delivery mode
- Source
- Methods of determining effectiveness
- Value of training to organization & employees
- Inducements to participate in training
- Regularity of training
- Areas of training that lead to certification
Information Sources

• Literature review
• Survey of practice
  – 41 state DOTs
  – 6 Canadian Ministries of Transportation
• Phone interviews
  – 8 state DOTs
  – Clear Roads Research, TC3, Upper Great Plains Transportation Institute
Status

- Draft Synthesis submitted to NCHRP
- Panel review meeting held July 16, 2015
- Revised draft due August 31, 2015
- Expected publication: Early 2016
Preliminary Findings - Content

- Bridge
- Highway Safety & Reliability
- Pavement
- Roadway/Roadside
- General Maintenance Skills
Preliminary Findings - Delivery

• Instructor-led training & on-the-job training are the most widely used methods for delivering training & are considered most effective

• The use of alternate delivery methods is growing
Training Development Approaches

- Develop training in-house: 4
- Do not develop training in-house: 43
Preliminary Findings - Impacts

- Training is aligned with employee performance requirements in half the organizations.
- Training is considered by supervisors in 2/3 of the organizations when making promotions.
- Very few agencies measure the effectiveness of training.
Measuring the Effectiveness of Training on Workers’ Performance?

- Yes: 7
- No: 9
- Don't know: 31
Measuring the Impact of Training on the Organization?

- Yes: 12
- No: 27
- Don't know: 8
Training Gaps

- Other: 8
- General Maintenance Skills: 28
- Roadway/Roadside: 19
- Pavement: 22
- Highway Safety and Reliability: 16
- Bridge: 16
Additional Training Needs (> 10 agencies mentioned)

- Bridge preservation
- Guardrail, end treatments & median barriers
- Asphalt pavement patching
- Preservation treatment application
- Roadway draining systems
- Base and subbase repair
- Vegetation management
- Stormwater management activities
- Scheduling & planning
- Customer service
- MQA program inspections
Future Research Needs

• Develop guidance for measuring the effectiveness of training
• Explore strategies for using new technology in training
Questions?

• The synthesis is available for download as NCHRP Synthesis 483