

The background image shows a highway construction or maintenance scene. In the foreground, a large concrete mixer truck is parked on the left side of the road. In the background, a road grader or similar heavy machinery is working on the road surface. There are highway signs visible in the distance, including one for '150' and another for '150'. The scene is set during the day with some trees and a clear sky.

Training & Certification of Highway Maintenance Workers

NCHRP Synthesis Topic 46-17

Presented by:

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Panel Members

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- Anita Bush, Nevada DOT
 - Bill Beckman, (Formerly VaDOT)
 - Jim Feda, South Carolina DOT
 - Monty Mills, WSDOT
 - Wilf Nixon, (Formerly University of Iowa)
 - Roger Olson, (Formerly Minnesota DOT)
 - Jim Robida, MassDOT
 - Morgan Kessler, FHWA Liaison
 - James Bryant, TRB Liaison
 - Amir Hanna, TRB Liaison

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



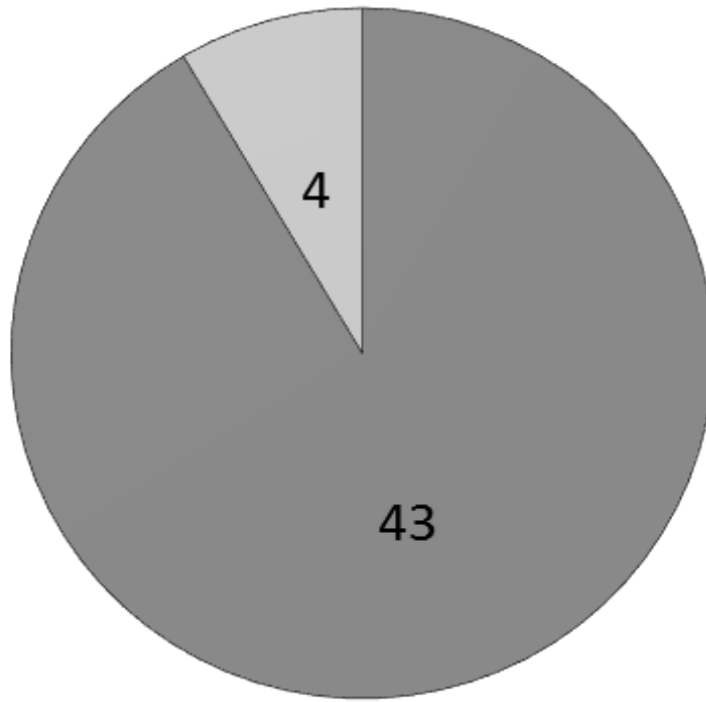
- Bridge
- Highway Safety & Reliability
- Pavement
- Roadway/Roadside
- General Maintenance Skills

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

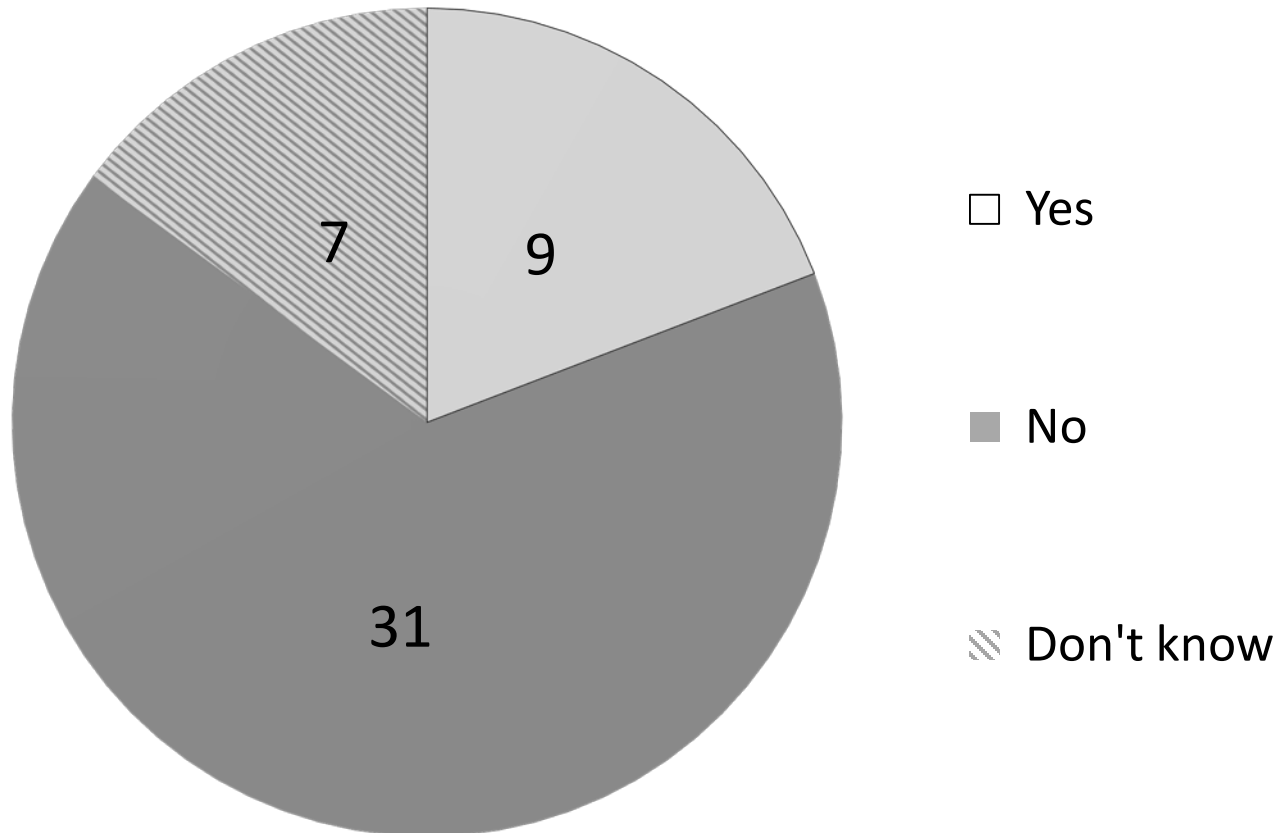
□ Do not develop training in-house

Preliminary Findings - Impacts

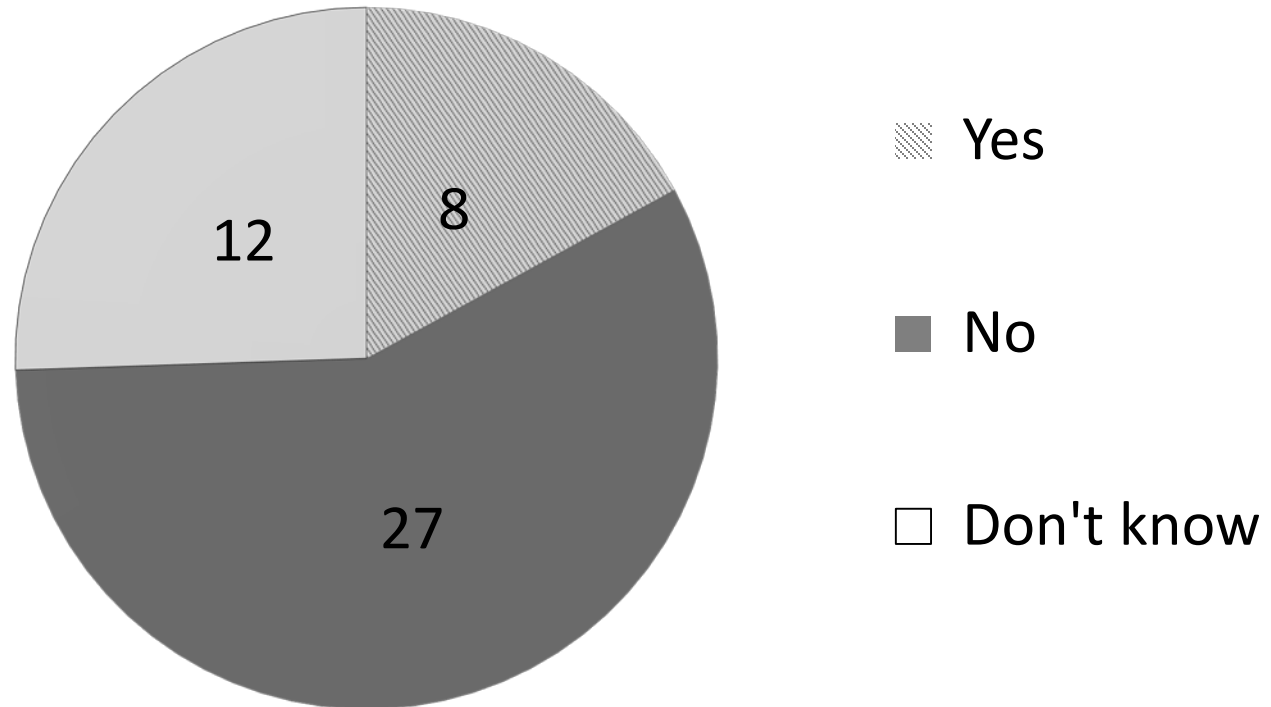


- Training is aligned with employee performance requirements in half the organizations
- Training is considered by a supervisors in 2/3 of the organizations when making promotions
- Very few agencies measure the effectiveness of training

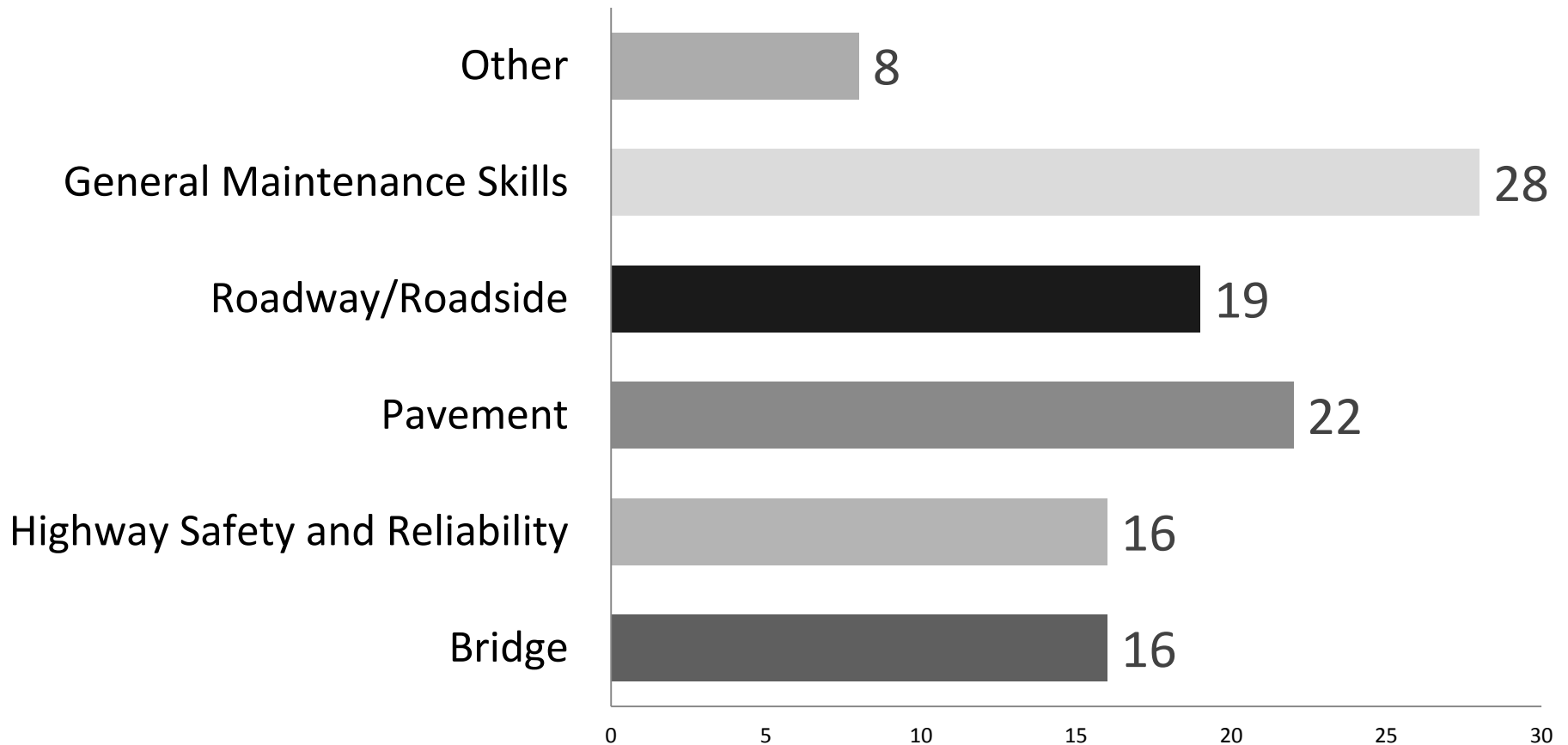
Measuring the Effectiveness of Training on Workers' Performance?



Measuring the Impact of Training on the Organization?



Training Gaps



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

