

Advancing Pavement Preservation Through Certification

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Presentation Outline

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- Background
- Certification Framework
- Agency Certification Process

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- Contractor Certification Process
- Contractor Company Decertification
- Cost of Certification

Background

1899

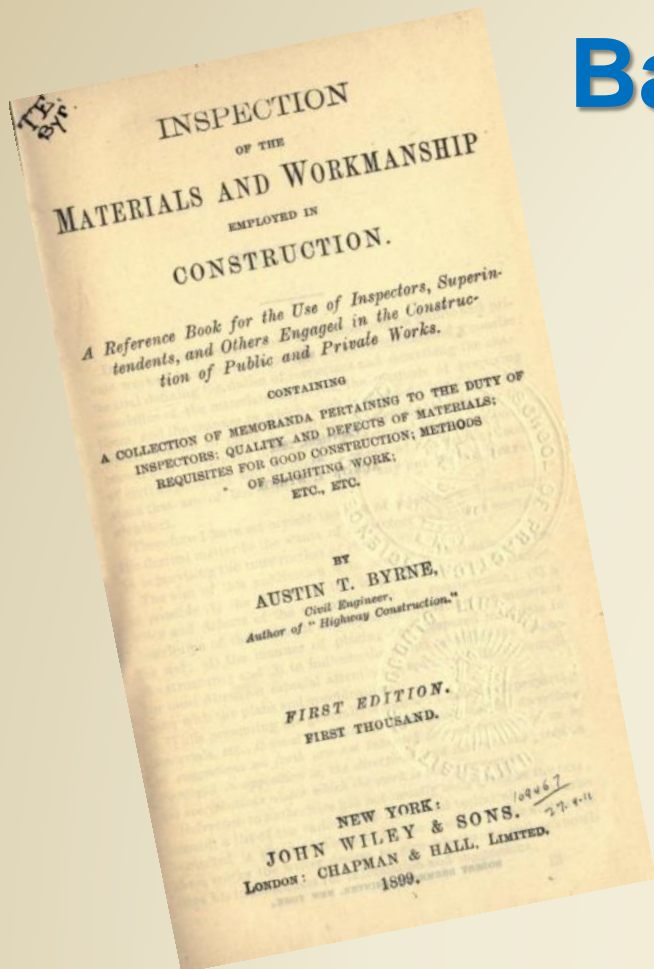


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Background

1974

- Certification concept for highway construction was envisioned.
- American Association of State Highway and Transportation Officials (AASHTO) and the Federal Highway Administration partnered to develop "*a nationally-applicable, individualized, job-competency-based, nondiscriminatory certification system that could be interfaced with education/training resources and a variety of personnel systems.*"

Background

1976

- AASHTO endorsed the program for use on a voluntary basis by State Departments of Highways and Transportation.



Background

Today

- To receive federal funding for highway and bridge projects, a quality assurance/quality control program must be in place that ensures that qualified and certified personnel are testing and inspecting materials used on those projects.



Background

Certification Goal

- To certify that personnel have demonstrated the abilities to engage in quality control (contractor), quality acceptance (agency), or independent assurance activities.



Background

Value of Certification

1. Reflects achievement
2. Establishes credentials
3. Improves skills and knowledge
4. Offers greater recognition from peers
5. Demonstrates commitment to pavement preservation



Background

The Conundrum

The best designs and materials are of no value without good workmanship.



Background

Poor Workmanship



Background

Poor Workmanship



Background

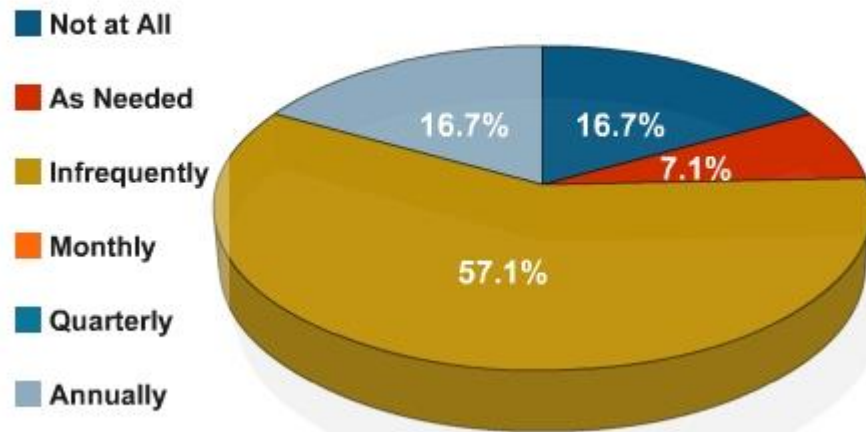
Poor Workmanship



Background

Agency Pavement Preservation Training

How Often is Pavement Preservation Training Offered?:



Data Assembled: July 2005 – Sep 2013



Pavement Preservation Certification Framework

The AASHTO TSP•2 Regional Pavement Preservation Partnerships identified 3 areas to increase the quality of pavement preservation treatments:

- Laboratory Accreditation – **AASHTO re:source**
- Updated Specifications – **AASHTO TSP•2 ETF & SOM**
- Certification

Pavement Preservation Certification Framework

- AASHTO **TSP2** Oversight Panel approved implementation of a pavement preservation certification program on April 13, 2016.
- The National Center for Pavement Preservation (NCPP) will administer the certification program.

Pavement Preservation Certification Framework

- For certification to be considered valid, it must involve an independent assessment by a third party.
- The National Center for Pavement Preservation (NCPPE) at Michigan State University is the independent third party.



Pavement Preservation Certification Framework

Recipe for Success

- Certification of both agency and contractor employees is key to achieve consistently high-quality preservation treatments.



Pavement Preservation Certification Framework

- Certification is granted through an exam, and for contractors, additional performance assessments are required.
- The program is not related to, nor will it infringe on, any prequalification program required by an agency.

Pavement Preservation Certification Framework

- Topics areas currently available for Certification
 - Slurry Systems (Micro Surfacing, Slurry Seal & Polymer Modified Slurry)
 - Chip Seals & Fog Seals
 - Crack Treatments

Pavement Preservation Certification Framework

- Recommended preparation for Examination

- **Web-Based Training**

- **ISSA** (*Free*)

- <http://slurry.org/education/industry-training-courses/web-based-courses/>

- **TC3** (*Membership Required*)

- <http://tc3.transportation.org/training-resources/courses/>

Pavement Preservation Certification Framework

- Topic Areas Covered by Examinations
 - Project Selection
 - Materials
 - Design
 - Equipment
 - Construction
 - Quality Assurance

Pavement Preservation Certification Framework

- Optional Review Session offered prior to each Examination by ISSA Approved Trainer



Agency Certification Process

- Benefits to Agency
 - Will ensure that future investments in the preservation treatment will be properly designed, constructed, and that the treatment will perform as intended.
 - Certified personnel will serve as the agency technical experts for the treatment.

Agency Certification Process

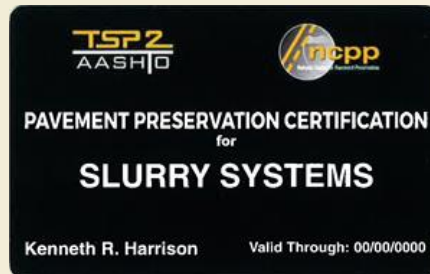
- Recommended Personnel for Certification
 - One senior level inspector & designer from each district, region, or division.
 - One engineering preservation specialist from headquarters / central office.
 - Outside consultants if providing inspection services to agency.

Agency Certification Process

- Voluntary Program
- Certification Valid for 3 Years
- Examination consists of 50 Questions
- Focus on Fundamental Treatment Components and Inspection Points
- Passing Score is 70% or better

Agency Certification Process

- Personnel Passing the Examination
 - Name entered in the certification database accessible at <https://www.tsp2.org/certification/>
 - Issued a durable, non-transferable card stating their qualification.





Contractor Certification Process

- The International Slurry Surfacing Association (ISSA) is a nonprofit association dedicated to the interests, education and success of *slurry seal, micro surfacing, chip sealing and crack treatment* professionals and corporations around the world.
- The Certification Process has been reviewed and approved by the ISSA Board of Directors.



Contractor Certification Process

- Contractor Company is Certified as an Entity
- The Company is responsible for ensuring:
 - a properly trained workforce, including specific certified employees, and
 - a detailed Quality Control Plan (QCP).

Contractor Certification Process

- Contractor Company is Certified for 1-year
 - Annual renewal is required
- Company Employees are Certified for 3-years
 - Required employees include:
 - 1) Company superintendent(s)
 - 2) Company trainer (if designated)
 - 3) Crew foreman
 - 4) Placement machine operator

Contractor Certification Process

- Contractor Company Annual Renewal Process
 - Current listing of field employees
 - Confirmation of critical experience
 - 1) Company superintendent(s) – 3 years
 - 2) Company trainer (if designated) – 3 years
 - 3) Crew foreman - 2 years
 - 4) Placement machine operator – 2 years

CONTINUED

Contractor Certification Process

- Contractor Company Annual Renewal Process
 - Verification of crew / laborer training
 - 1) Completion of ISSA web-based training on specific treatment
 - 2) Internal training records, that include:
 - a. 4 hours Classroom training by company trainer or superintendent, and
 - b. 4 hours on-the-job (OJT) training.

CONTINUED

Contractor Certification Process

- Contractor Company Annual Renewal Process
 - Submission of the company's Quality Control Plan (QCP) for review and approval.
(annual fee \$150 for ISSA-Designated Evaluator)



Contractor Certification Process

- Contractor's Quality Control Plan
 - The quality control plan must define the expected results and describe how those results will be achieved. It must detail the following:
 - steps the contractor will go through to have a successful project, and
 - how the contractor will determine a problem that will cause the project to not be successful, and
 - steps that will be taken to get the project back on track.

Contractor Certification Process

- Contractor's Quality Control Plan
 - Quality Control Testing
 - list of materials to be tested, tests to be conducted, location of sampling, and testing frequency.
 - establish detailed testing schedule based on production and the means to insure its accomplishment.

Contractor Certification Process

- Contractor's Quality Control Plan
 - Design Protocol
 - material and mix design laboratory is accredited by AASHTO
re:source
 - tests to be completed
 - verification procedures to assure project job mix formula (JMF) meets the mix design requirements

Contractor Certification Process

- Contractor's Quality Control Plan
 - Inspection/Control Procedures for each phase of project.
 - Preparatory phase
 - Start up phase
 - Production phase
 - Description of records to be maintained



Contractor Certification Process

- Contractor Certified Employee Requirements
 - Certification Valid for 3 Years
 - Examination consists of 80 Questions
 - Focus on Pivotal Knowledge that leads to a Quality Product
 - Passing Score is 70% or better

Contractor Certification Process

- Certified Superintendent Responsibilities
 - Oversees no more than 3 projects at a time
 - Reviews project QCP with all crew members
 - Witnesses equipment calibration and test strip placement
 - Ensures certification documentation is available prior to beginning work



Contractor Certification Process

- Certified Foreman Responsibilities
 - Manages and remains on-site for 1 project at a time
 - Makes certain project QCP is followed
 - Witnesses equipment calibration and test strip placement
 - Ensures certification documentation is available prior to beginning work

Contractor Certification Process

- Certified Operator Responsibilities
 - Places treatment according to best practices and procedures

Contractor Certification Process

- Verification of Certification
 - Company name entered in the certification database
 - Company issued a plaque of recognition for year
 - Employee names entered in the certification database accessible at <https://www.tsp2.org/certification/>
 - Issued a durable, non-transferable card stating their qualification.





Contractor Company Decertification

- If the NCPP receives either of the following supporting documentation from a certified agency the company will be decertified.
 - Failure to produce or follow the project QCP, or
 - Fraudulent action or deliberate misrepresentation



Cost of Certification

Certification Exam Fee Schedule	
<i>NCPP Combined Session Review & Certification (One treatment category)</i>	
State & Local Agency	\$ 200
Consultant	\$ 325
Contractor Employees	\$ 325
Examination Retake	\$ 200
<i>Company Certification & Annual Renewal (One treatment category)</i>	
Preservation Contractor	\$ 1,250



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