

# TSP-2 Pavement Preservation Certification Program

# John Senger

Engineer of Pavement Technology  
Illinois Department of Transportation

Certification Task Force Chair  
Midwest Pavement Preservation Partnership

# Outline

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- Introduction to the AASHTO TSP•2 Pavement Preservation Certification Program
- Overview of the AASHTO TSP•2 Pavement Preservation Certification Program
- Implementing Agency's perspective (INDOT)
- Industry perspective
- Next steps

# What Is Certification?

- Certification involves the training and examination of all of the parties involved in the project selection and construction of preservation treatments.

# How Can Certification Help Your Agency?

Require that knowledgeable individuals and contractors are involved in all phases of a preservation project including:

- Project selection
- Pre-construction site preparation
- Construction
- Inspection

# What Certification Is Trying To Address...



Improper Gradation



Distributor outrunning the chip spreader

# What Certification Is Trying To Address...



Poor Construction and Quality Control



Poor Design Choices

**Neal Galehouse**  
Engineering Specialist  
National Center for Pavement Preservation



# Certification Exams Currently Offered

1. Slurry Systems (Micro Surfacing, Slurry Seal & Polymer Modified Slurry)
2. Chip Seals
3. Crack Treatments



# Suggested Certified Personnel – Agency

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1. Preservation Specialist from Headquarters or Central Office
2. One Senior Level Inspector from each Region/Division/District
3. One Preservation Treatment Designer from each Region/Division/District
4. Outside Consultants if providing inspection services

# Suggested Certified Personnel – Contractor

1. Company Superintendent(s)
2. Company Trainer (if position is designated)
3. Crew Foremen
4. Placement Machine Operators

# Training For The Certification Examination

## Free ISSA Web-Based Training

- For Registration Instructions Visit:

<http://www.slurry.org/page/indtrainingcourses>

## NCPP Treatment Certification Guides

- [www.tsp2.org/certification-information](http://www.tsp2.org/certification-information)



# Examination Overview

- Agency Exams are 50 questions.
- Contractor Exams for Chip Seal and Slurry Systems are 80 questions, the Crack Treatment exam is 50 questions.
- All exams are true/false and multiple choice format. A 70% score is needed to pass the exam.



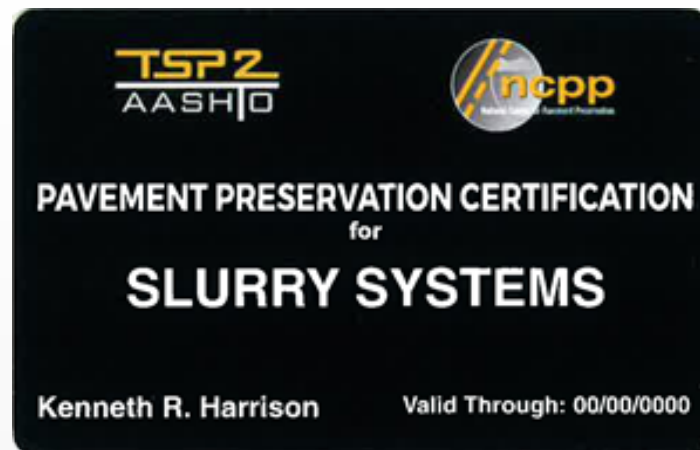
# Examination Topic Areas

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- Project Selection
- Materials
- Design
- Equipment
- Construction
- Quality Assurance

# Examination Information

- To date, the overall agency pass rate is 62% and the contractor pass rate is 72%.
- Examinees who pass are entered into a searchable, national database at [www.tsp2.org/certification](http://www.tsp2.org/certification)
- A durable, non-transferable card is provided to each individual certified. Each certification is valid for three years.



# Upcoming Examinations

- Offered in conjunction with TSP•2 Partnership Meetings
- ISSA Slurry Systems Workshop, January 26, 2018
- Other exam dates: [www.tsp2.org/certification](http://www.tsp2.org/certification)
- For large groups exams can be scheduled at your facility
- Individual exams can be scheduled through the Consortium of College Testing Centers (CCTC) located across the country.  
[www.ncta-testing.org/find-a-cctc-participant](http://www.ncta-testing.org/find-a-cctc-participant)



# Certification and Your Agency

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To fully implement certification for your agency:

- Include in Treatment Specification; or
- Add to Prequalification Requirement

Indiana DOT

# Chip Seal Certification Program

Todd Shields

Maintenance Field Support Manager  
Indiana Department of Transportation

Chair of the Midwest Pavement Preservation Partnership

# Background

- INDOT constructs ~1,500 lane miles of chip seal each year.
- This work is done with our in-house crews.
  - 6 Districts, each District has equipment and crew



# Training

- Various efforts over the years....
- Centrally
  - NCPP Chip Seal training
  - Various NHI courses
  - In-house training (chip seal “kickoffs”)

# We Still Have Opportunities For Improvement...



# Indiana Women's Prison

## Textbook example

- INDOT Inspector not familiar with process or specs
- Contractor not familiar with process or specs



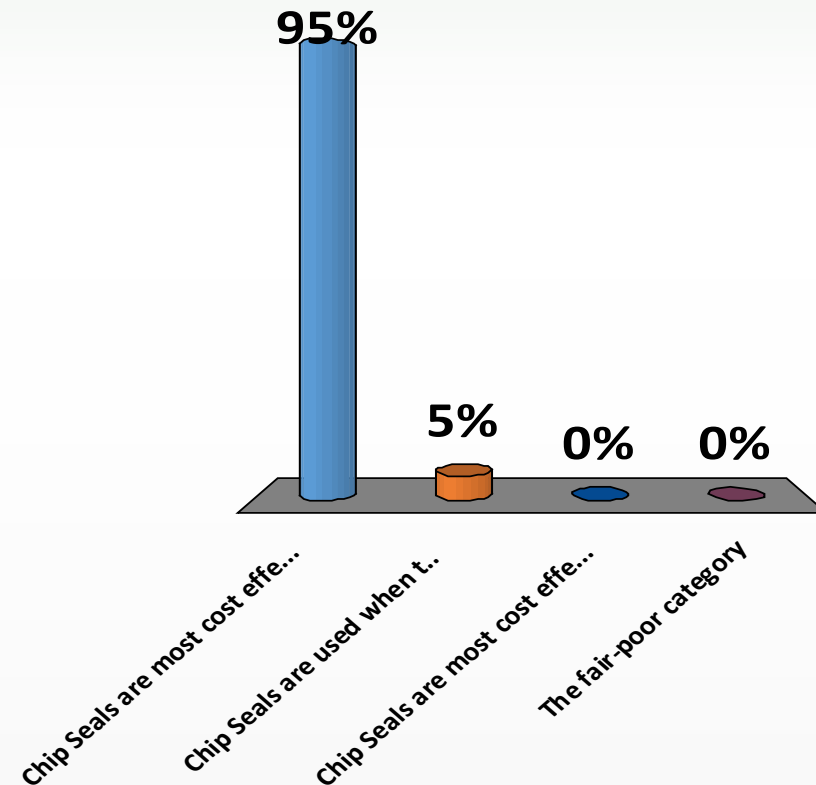
# Path to TSP-2 Certification...

- 2017 was a pilot for us
- Conducted 3 “kickoff” training sections
  - 2 Districts per session
  - Trained everyone involved in chip seal program
    - Operators
    - Managers
    - Foremen
- Identified which people would also go on to be “certified”
  - ~5 per District
  - 36 total
- Used the ISSA Web Based training as our template
  - Utilized Turning Point “Clickers” so everyone got to answer the knowledge checks
  - Did a final test with the clickers
  - Looked at “grades” on final test to see how well everyone “got it”

# Knowledge Check

Where in the pavement preservation model do chip seals fit in order to be most cost effective? Select the BEST answer

- A. Chip Seals are most cost effective when a pavement is in the good to fair category
- B. Chip Seals are used when the pavement life is at approx. 12%
- C. Chip Seals are most cost effective as a reactive maintenance measure
- D. The fair-poor category





# Path to TSP-2 Certification...

- For the folks that were going to take the certification test
  - Impressed upon them the challenges
  - Made sure they studied their manuals (once we got the right ones!)
- Certification
  - We had 36 take the exam
    - Operators
    - Managers
    - Few CO engineers
- We decided to certify our folks as “contractors” (80 question exam)
- ~3 hours “refresher” training provided by Larry Galehouse
- Actual exam in the afternoon
- 33 passed
  - Re-tested the 3 that did not pass and 1 passed on the second attempt

ISSA

# Contractor / Agency Certification

Rex W. Eberly

General Manager

Bergkamp Bituminous Solutions Inc.

Vice President of International Slurry Surfacing Association

# Timeline



- Winter of 2014 – ISSA Slurry / Micro Committee began internal discussions about the need for contractor certification.
- Winter of 2015 – ISSA Board of Directors presents the Certification plan to its members for approval.
- Summer of 2015 – ISSA / NCPP / TSP•2 collaborate on the certification and testing plan.
- January of 2016 - NCPP holds first round of certification testing at the ISSA Slurry Systems Workshop in Clark County Nevada
- April of 2016 – Nevada DOT is the first to add certification to its Slurry / Micro surfacing specification.

# Why Certification?

- Raises the Quality Bar for both members and non-members of ISSA.
- Insures that Contractor and Agency personnel understand what it takes to get a quality project.
- Quality Management Plan provides a roadmap for Agency and Contractor to follow.
- Testing Component requires all parties to pay attention to the education and training.

# Why Partner with NCPP

- ISSA decided early on that the program would not have credibility if it was managed by a contractor association. We believe that NCPP is the best organization to manage the program because:
  - Nationwide reputation as a Pavement Preservation resource.
  - Access to AASHTO and TSP•2.
  - Affiliation with an accredited university that provides testing software and guidance.
  - Ability and availability to manage the certification program and database.
- ISSA will provide education and training assistance to members, non-members and agencies.

# ISSA Certification Plan

The ISSA Board of Directors and a majority of the membership support Contractor / Agency Certification for pavement preservation projects. We believe that any certification program must include the following components:

- Applies to both Contractor and Agency
- Contractor Requirements
- Agency Requirements
- Quality Management Plan
- Employee Testing
- De-Certification

# Certification Applies to Both Contractor and Agency

- ISSA believes that both parties must be certified in order to be effective.
- The goal is that both the contractor personnel and agency personnel will have the same training and information and will understand what it takes to build a quality project.
- Inspector certification reminds the agency that Preservation Projects are an important tool to maintain the health of the road network.

# Contractor Requirements

To be effective the program should require the contractor to:

- Develop and follow a Quality Management Plan that is specific to the agency specifications.
- Certify at least one Supervisor / Trainer for every three crews working on agency projects.
  - This should be a management level employee.
  - Certification includes taking and passing the AASHTO TSP•2 Certification Course.
- Certify at least one Foreman / Operator that must be on the project at all times.
  - Certification includes taking and passing the AASHTO TSP•2 Certification Course.
- Certify that at least 30% of each crew will have taken and passed the ISSA Web Based Training Course.



# Agency Requirements

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To be effective the program should require the agency to:

- Review the Quality Management Plan prior to each project.
- Require at least one Design level employee to have taken and passed the certification exam.
- Require at least one Field level employee to have taken and passed the certification exam.
- Require the on-site inspector to have taken and passed the ISSA Web Based Training program.
- Provide a method for the agency to de-certify the contractor for falsification of training documentation or quality management reports.

# Quality Management Plan

The Quality Management Plan should:

- Be required by every agency.
- Be reviewed by agency and contractor before every project.
- Be followed by contractor on every project.
- Include:
  - 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 the steps that will be taken to get the project back on track.

# Quality Management Plan

The Quality Management Plan Should Include:

- 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.
- 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

# Quality Management Plan

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The Quality Management Plan Should Include:

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

# Questions

John Senger  
Certification Task Force Chair  
Illinois DOT  
[John.Senger@illinois.gov](mailto:John.Senger@illinois.gov)

Todd Shields  
Maintenance Field Support Manager  
Indiana DOT  
[Tshields@indot.in.gov](mailto:Tshields@indot.in.gov)

Neal Galehouse  
Engineering Specialist  
National Center for Pavement  
Preservation  
[galehou1@egr.msu.edu](mailto:galehou1@egr.msu.edu)  
(517) 432-8220

Rex Eberly  
General Manager  
Bergkamp Bituminous Solutions  
[rexe@berkampinc.com](mailto:rexe@berkampinc.com)