

TCCC
Training Course Development Report
Updated for July 2003

AVAILABLE TRAINING

Hot-Mix Asphalt Construction 131032

The course was originally developed by the AASHTO Joint Asphalt Industry/Agency Committee in 1991/92. The course was revised for NHI. The course is targeted for contractor project superintendents, foremen, SHA project engineers, and lead inspectors. The participant manual has been revised by HIPT, HIAM, and NHI, completed in July 2002. The course is available for scheduling, with instructors provided by ERES Consultants. The *Hot Mix Asphalt Handbook 2000*, the revised reference for the course, has been published by TRB and is also now available.

- FHWA Contact: Jim Sorenson 202-366-1333
Matt Corrigan 202-366-1549
NHI Contact: Ewa Rodzik 703-235-0524

Construction of Portland Cement Concrete Pavements 131033

This joint industry/agency training is divided into 6 modules: 1) Introduction/ Quality PCC Pavements; 2) PCC Production (ready-mix and central); 3) Slipform paving operations; 4) Fixed Form paving operations; 5) Pavement curing, sawing, and sealing operations; and 6) Concrete Pavement Rehabilitation (CPR) techniques. The course is available for delivery, with instructors provided by the American Concrete Paving Association.

- FHWA Contact: Mike Rafalowski 202-366-1371
NHI Contact: Ewa Rodzik 703-235-0524

3. Hot Mix Asphalt Production Facilities 131044

This 3-day course is designed to give participants the background information on HMA plant production to adequately inspect the HMA plant production process to ensure minimum standards of product quality are met. It is designed for project engineers, lead inspectors, plant supervisors, foremen, and all others involved with the HMA plant production. This is a joint industry/agency effort developed by the Asphalt Joint Training Committee. The FHWA HIPT, HIAM, and NHI have collaborated with State DOT's and industry for an update of the course materials, completed in July of 2002. This course has been awarded to APT for delivery.

- FHWA Contact: Chris Newman 202-366-2023
Matt Corrigan 202-366-1549
NHI Contact: Ewa Rodzik 703-235-0524

Hot-Mix Asphalt Materials, Characteristics & Control 131045

This training course is the result of a partnership between AASHTO, FHWA, and the Hot-Mix Asphalt (HMA) Industry. It combines lectures and problem solving workshop sessions to

provide participants with a working knowledge of HMA materials, their characteristics and controls. The course focuses on two areas. The first provides technical information on the material properties of HMA, the processes used to measure these properties, and the effect that these properties have on the final, compacted pavement. The second involves achieving these properties in the field, with discussions on quality management, and analyzing the impact of segregation and density on HMA pavement performance. The course concludes with an examination which reviews the key elements of HMA materials, characteristics and control. The FHWA HIPT, HIAM, and NHI have collaborated with State DOT's and industry for an update of the course materials, completed in July of 2002. Proposals for a delivery contract are currently being evaluated.

- FHWA Contact: Jim Sorenson 202-366-1333
Matt Corrigan 202-366-1549
NHI Contact: Ewa Rodzik 703-235-0524

Pavement Preservation: The Preventive Maintenance Concept 131054

The Preventive Maintenance Expert Task Group (PM ETG) supports the development of the joint FHWA/Industry NHI short course on pavement preservation. This course makes the case for preventive maintenance and pavement preservation programming for upper and mid-level managers. In addition, it provides an overview on effective preventive maintenance techniques and their cost effectiveness. The course discusses the importance of preventive maintenance (PM) and show how PM techniques can be used to effectively preserve the pavement performance and prolong its life. The demonstration of preventive maintenance techniques enables the State to plan, design, and apply the right technique, at the appropriate time, to preserve their highway system. Available for scheduling, with instructors provided by Applied Pavement Technologies.

- FHWA Contact: Steve Mueller 202-366-1557
NHI Contact: Ewa Rodzik 703-235-0524

Pavement Preservation: Selecting Pavements for Preventive Maintenance 131058

This short course focuses on selecting the right pavement for the various preservation treatments by evaluating the merits of each treatment under various field conditions. This course illustrates in detail pavement evaluation, project selection, materials considerations for the various preventive maintenance applications. It is intended for field manager and practitioners for both the owner and the industry. The course is complete and available for scheduling, with instructors provided by Applied Pavement Technologies.

- FHWA Contact: Steve Mueller 202-366-1557
NHI Contact: Ewa Rodzik 703-235-0524

Principles of Writing Highway Construction Specifications 134001

This course addresses the engineering, legal aspects, and linguistics of writing specifications. This is not a course in technical writing. The course however, addresses the issues of how to draft new specifications or rewrite existing ones into clear, readable, and definitive statements of contract requirements. Classroom activities include lectures, case studies, workshops and writing assignments. Revised in 2003.

- FHWA Contact: Roger Surdahl 303-716-2158
NHI Contact: Ewa Rodzik 703-235-0524

Materials Control and Acceptance-Quality Assurance (General Course) 134042

The course was updated and revised by the University of Nevada, Reno, as part of the revisions to course 13123, the 6-week Materials Engineering Course. Final draft materials have been delivered to NHI. The revision incorporated the elements of specification development and analysis, process control, acceptance sampling testing and inspection, quality assurance, independent assurance sampling, developing acceptable risk limits, project quality analysis and bidding with respect to specifications, interpreting and reporting data, evaluating risk in acceptance specifications, and dispute resolution. The course integrates each of the elements and demonstrates how they work to deliver a quality asphalt pavement that will serve well for the design life. In addition the course has been designed to provide insight in developing solid, practical specifications that yield good performance along with equipping contractors to analyze their production capability to meet required criteria and assure a reasonable return for their work.

- FHWA Contact: Mike Rafalowski 202-366-1571
Ken Jacoby 202-366-6503
NHI Contact: Ewa Rodzik 703-235-0524

Use of CPM for Estimating, Scheduling and Timely Completion 134049

This training course is designed to educate State Highway, FHWA, and Industry project staff about the availability of effective construction and maintenance planning and scheduling tools that can help in providing visual representation of current project status, completed tasks, and expected completion of all activities. These tools can be focused to accelerate construction and minimize impact on the traveling public. An RFP is out for course continuation.

- FHWA Contact: Celso Gatchalian 202-366-1342
NHI Contact: Ewa Rodzik 703-235-0524

Design and Implementation of Erosion and Sediment Control 134054

This course addresses management techniques for controlling erosion and sedimentation on highway construction and maintenance operations. Methods to identify the source of erosion and sedimentation will be presented, including best management practices to insure the current legislative and regulatory requirement of FHWA, EPA, and local governments are met. Joint development between HIAM/Environment. The course is available for delivery with instructors provided by Nichols Consulting Engineers.

- FHWA Contact: Chris Newman 202-366-2023
Patricia Cazenias 202-366-4085
NHI Contact: Mila Plosky 703-235-0527

Claims and Claims Management 134037

The NHI Contract claims course will be revised to update its technical content, case studies, and delivery methods. An FHWA and State DOT technical panel has reviewed the existing training course and provided substantial new material to include in the course

- FHWA Contact: Chris Newman 202-366-2023
NHI Contact: Ewa Rodzik 703-235-0524

Courses under Development

Field Structural Coatings Inspection Certification Course - During the winter of 2001/2002, an Expert Task Group (ETG) was established to guide the development of this course. The ETG is comprised of representatives from 8 State DOTs, SSPC, and FHWA. The first meeting of the ETG was held April 15, 2002 in Chicago. It is envisioned that the "course" will likely be a basic level course providing a baseline certification. Other course modules dealing with various specialty topics in coatings (lead paint removal, abrasive blasting, high pressure water blasting, metalizing, 100% solids coatings, shop coatings, etc.) will be subsequently developed. The development of the basic curricula and certification requirements is the initial goal of the ETG and the training course is scheduled to be on-line during late 2002 or early 2003.

- FHWA Contact: Bob Kogler 202-493-3080
Mike Praul 207-622-8350 ext 109
NHI Contact: Larry Jones 703-235-0523

Principles and Practices for Cost-effective Maintenance Management System 131107

Building on the successful, "Maintenance Management Forum for the 21st Century," the three day NHI short course will detail the state of the practice and will define the necessary components and measures necessary for a state of the art maintenance management system. The Phase 1 work for the for creation of a comprehensive AASHTO Maintenance Management Guide is underway; the Guide will then serve as the basis for the NHI course to be developed in the spring of 2003.

- FHWA Contact: Celso Gatchalian 202-366-1342
NHI Contact: Ewa Rodzik 703-235-0524

Geotechnical Inspector Certification Program

- Drilled Shaft Foundation Inspector 132070a
- Driven Piles Inspector 132069a

Certification materials and training documents for these NHI courses been completed and course will be ready for scheduling Jan 03. The Drilled Shaft Foundation Inspector Course was piloted in Portland, OR and Kansas City, MO and the Driven Piles Inspector Course was piloted in Milford, MA.

- FHWA Contact: Peter Osborn 401-528-4550
NHI Contact: Larry Jones 703-235-0523

Managing Construction Workmanship 134055

This training effort is a short course on construction workmanship for inspectors, project engineers, foreman and superintendents. The target audience would include both FHWA, SHA and industry personnel. The course would be aimed at improving workmanship decision making for quality highway construction projects. The intention of this course is not to replace the individual training SHA's are doing but rather establish a knowledge baseline for construction managers on a national level. The first phase of course development, preparing a course outline, target audience, and course objectives, is complete. The contract is being re-advertised with a refined scope of work after comments from the technical panel and members of the SCOC. This contract will take the results of Phase I and work closely with the technical panel to develop course materials.

- FHWA Contact: Christopher Newman, 202-366-2023
NHI Contact: Ewa Rodzik, 703-235-0524

Bridge Construction Inspection

The technical panel has been formed and a scope of work has been submitted to NHI to develop the RFP solicitation. We expect advertisement in August.

- FHWA Contact: Dan Sanayi, 202-493-0551
NHI Contact: Larry Jones, 703-235-0523

Pavement Preservation: Design and Construction of Quality Preventive Maintenance Treatments 131103

The training course is designed for the foreman on a road crew constructing preventive maintenance treatments, and for the agency or agency's representatives responsible for inspecting the project up to and including middle managers. The course will clearly distinguish between good and bad practices in the selection, design, and construction of quality preventive maintenance treatments. The following content areas are likely to be covered for each pavement preservation treatment in the presentations:

1. Material evaluation and selection.
2. Logical sequence of steps in the construction process.
3. Pre-construction inspection or evaluation to identify conditions that might have an adverse effect on treatment construction or performance.
4. Common problems and the troubleshooting procedures used to identify and correct them.
5. Post-construction inspection to verify that the project is constructed properly and ready to open to traffic.

This course is being developed in cooperation with the Foundation for Pavement Preservation, a longtime collaborator with FHWA on the development of other courses in the Pavement Preservation series. They have contracted to develop video segments for use during the course presentations, which will be incorporated into the course materials during the development contract. A contract has been awarded for the development of the course, and is expected to be offered in late 2003.

- FHWA Contact: Steve Mueller 202-366-1557
David Hawk, NJ Division, 609-637-4213
NHI Contact: Ewa Rodzik 703-235-0524

Pavement Preservation: Integrating Preventive Maintenance with Pavement Management Systems 131104

The course is intended to communicate the importance of integrating preventive maintenance activities with pavement management systems to highway agencies. This course will identify how preventive maintenance affects pavement performance, how preventive maintenance and pavement management can be integrated, and how enhanced or integrated pavement management systems can be used effectively to support asset management decisions. A contract has been awarded for the development of the course.

- FHWA Contact: Steve Mueller 202-366-1557
Keith Herbold, NRC-Olympia Fields 708-283-3548
NHI Contact: Ewa Rodzik 703-235-0524

Upcoming Courses

Conducting Reviews that Get Results

This will be a half-day to 1-day training course for FHWA and State DOT employees to assist in developing and carrying out process reviews. The training course is envisioned as one to be presented by key FHWA staff on short notice, when a review is about to be initiated, to teach FHWA and State DOT staff the PR/PE review methodology. The main topics of the training course will be Clarification of the Review, Planning the Review, Data Collection, Analysis of Data, and Selling and Implementing Improvements. The development team met in November 2002 to review previous training courses on related subjects, evaluate topics for inclusion, organize material for flow within the context of a training course, and develop a detailed outline of the training course presentation. The course is expected to be available for delivery during the spring of 2003.

- FHWA Contacts: Christopher Newman 202-366-2023
Fred Jones, HCM, 202-366-9379

Quality Assurance Technologist Certification Course 13050 - The NETTCP QA

Technologist Committee held an initial meeting on March 8, 2002 to kickoff the final course development effort. The NETTCP will be coordinating the development of the final course materials. The Committee will be holding progress meetings with the contractor developing the course material each month to review draft chapters. A Pilot Course was held November 2002 in Methuen, MA. Final course delivery is scheduled for January 2003. The course material content is being "generically structured" to permit use by any State or Region.

- FHWA Contacts: Ken Jacoby 202-366-6503 Greg Doyle, FHWA-MA, 617-494-3279
NHI Contact: Ewa Rodzik 703-235-0524

Leadership and Training for Construction Program Oversight – This will be training focused at FHWA's field staff, and will provide them with training and guidance on effective stewardship of the construction program.

- FHWA Contact: Ken Jacoby 202-366-6503

Improved Construction Program Management for FHWA and SHA's. – This is a proposed NHI course on effective construction program management techniques. Course materials under development by CQIT team.

- FHWA Contact: Ken Jacoby 202-366-6503

Dust and Noise Abatement – This will be training concerning techniques for minimizing and controlling dust and noise pollution created as a result of construction operations Design techniques and technological solutions.

- FHWA Contact: Chris Newman 202-366-2023

Effective use of Construction Management Systems - No action had been taken yet on this proposed course.

- FHWA Contact: Celso Gatchalian, HIAM, 202-366-1342

<p>Contract Maintenance Concepts – Short Course to follow recently revised AASHTO Guide on Contract Maintenance. Scope of work under development.</p> <ul style="list-style-type: none"> • FHWA Contact: Lubin Quinones, 787-766-5600 Ext 223 SHA Contact: Joe Graff, TXDOT
<p>Understanding Benchmarking and Performance Measures – No action had been taken yet on this proposed course. Scope of work under development.</p> <ul style="list-style-type: none"> • FHWA Contacts: Jim Sorenson, HIAM 202-366-1333 SHA Contact: Mike Bousliman, MTDOT
<p>QA Specifications Development and PRS - No action had been taken yet on this proposed course.</p> <ul style="list-style-type: none"> • FHWA Contact: Ken Jacoby, HIAM, 202-366-6503
<p>Partnering for Improved Construction Quality This course will be based on the current training course being used by Washington State DOT and others being used for claims mitigation. The NHI training course will focus on the improvement of construction quality. The focus of this course will be built upon the success of the “Get In Get Out and Stay Out” philosophy. A request for proposal is expected to be ready by August 2003.</p> <ul style="list-style-type: none"> • FHWA Contact: Celso Gatchalian, HIAM 202-366-1342 Fred Jones HCM 202366-9379
<p>Maintenance Management Systems Development of this training course will follow the completion of an AASHTO Guide for Maintenance Management Systems. Completion of the draft guide is expected November and expected to be finalized early 2004. Statement of Work for the development and delivery of the training course is underway to be followed by preparation of an RFP.</p> <ul style="list-style-type: none"> • FHWA Contact: Celso Gatchalian 202-366-1342 NHI Contact: Ewa Rodzik 703-235-0524
<p>Reinforced Soil Structures The technical panel was recently asked for a progress update, but was not provided one yet. Course development – need a scope of work from the Geotechnical team which NHI will then prepare as an RFP.</p> <ul style="list-style-type: none"> • FHWA Contact: Peter Osborne 410-962-0702
<p>Work Zone Traffic Control Short Courses Need to check with Bill Williams at NHI to discuss status/ proposed curriculum for this area. Various courses under development at NHI. To be made available to TCCC.</p> <ul style="list-style-type: none"> • FHWA Contact: Ben Gribbon 202-366-1809

Highway Maintenance Quality Assurance for State and Local Agencies 1340XX

This short course will be developed using the outcome and results of the NCHRP Project 14-12 completed in 1998 by ERES Consultants. This course will educate governmental agencies on how to evaluate the Level of Service (LOS) being provided by maintenance forces in comparison to the LOS targeted by the agency or expected by its customers. In addition, the quality assessment process will allow an agency to benchmark maintenance levels at the time LOS monitoring begins, thereby providing a numerical point of reference for evaluating maintenance conditions over time. RFP is under development.

- FHWA Contact: Jim Sorenson 202-366-1333
NHI Contact: Ewa Rodzik 703-235-0524

Geotech - MSE Wall Inspection**Concrete Paving Construction Inspector**

The TCCC is currently exploring the formation of a new technical panel (including ACPA) to determine priorities in the development of core materials / curriculum for concrete paving inspector certification.

- Dan Sanayi, 202-493-0551

Embankment and Base Inspection

The TCCC currently has several efforts ongoing for the development of Embankment and Base Inspection courses. WAQTC is developing a course based on input from other existing courses and by modifying its format to meet the needs of WAQTC states. It is scheduled for development as a generic course so that everyone can utilize it. New England (NETTCP) has a soils and aggregate inspector course available. FHWA has an inspection course available for soils and base course construction. The Mid-Atlantic Regional Group offers a course for soils and aggregate compaction. IA State University and IA DOT also have certification courses in soils and aggregate compaction.

- Garth Newman ID-DOT, Lee Onstott NM-DOT.

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