Improving the Performance of the Transportation Industry Through Training
**CATEGORY ICONS**

These NHI category icons can assist users in identifying the course category or multiple course categories. The category icons are listed below for your reference.

<table>
<thead>
<tr>
<th>Structures</th>
<th>Pavement and Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Structure Icon]</td>
<td>![Pavement Icon]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Geotechnical</th>
<th>Design and Traffic Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Geotechnical Icon]</td>
<td>![Traffic Icon]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Construction and Maintenance</th>
<th>Hydraulics</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Construction Icon]</td>
<td>![Hydraulics Icon]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intelligent Transportation Systems (ITS)</th>
<th>Freight and Transportation Logistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>![ITS Icon]</td>
<td>![Logistics Icon]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Real Estate</th>
<th>Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Real Estate Icon]</td>
<td>![Environment Icon]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transportation Planning</th>
<th>Business, Public Administration &amp; Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Transportation Planning Icon]</td>
<td>![Business Icon]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Highway Safety</th>
<th>Communications</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Highway Safety Icon]</td>
<td>![Communications Icon]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Asset Management</th>
<th>Financial Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Asset Management Icon]</td>
<td>![Financial Icon]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transportation Performance Management</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>![Performance Icon]</td>
<td></td>
</tr>
</tbody>
</table>
# TABLE OF CONTENTS

## INFORMATION

- About NHI ........................................ iii
- NHI Makes Hosting Easy .............................. 1
- Receiving Course Credit ............................. 3
- Free Web-Conference Training ....................... 5

## STRUCTURES

- FHWA-NHI-130053A Bridge Inspection Refresher Training ........................................ 6
- FHWA-NHI-130054 Engineering Concepts for Bridge Inspectors .................................... 8
- FHWA-NHI-130081 LRFD for Highway Bridge Superstructures - (NEW 4-Day ILT) .................. 10
- FHWA-NHI-130081J LRFD for Highway Bridge Superstructures - Concrete (2.5-Day) ............ 12
- FHWA-NHI-130101 Introduction to Safety Inspection of In-Service Bridges - WEB-BASED ........ 14

## PAVEMENTS AND MATERIALS

- FHWA-NHI-131050A Asphalt Pavement In-Place Recycling Techniques--WEB-BASED ............ 16

## DESIGN AND TRAFFIC OPERATIONS

- FHWA-NHI-133114A Construction Zone Safety Inspection (1.5 Day) ................................. 17
- FHWA-NHI-133126 National Traffic Incident Management Responder Training - Web-Based ..... 18
- FHWA-NHI-133126Z National Traffic Incident Management Responder Training - Web-Based .... 20
- FHWA-NHI-133132 Highway Design ................................................................. 22
- FHWA-NHI-380100 Using IHSDM ........................ ............................................. 23

## CONSTRUCTION AND MAINTENANCE

- FHWA-NHI-134064 Transportation Construction Quality Assurance (1.5-Day) ..................... 24
- FHWA-NHI-134073A Leap Not Creep: Accelerating Innovation Implementation (WCT) ........... 25

## HYDRAULICS

- FHWA-NHI-135095 Two-Dimensional Hydraulic Modeling of Rivers at Highway Encroachments .................................................. 28

## ASSET MANAGEMENT

- FHWA-NHI-134064 Transportation Construction Quality Assurance (1.5-Day) ..................... 29
- FHWA-NHI-136005 Testing adding a new course..................................................... 32
- FHWA-NHI-136115 Testing .......................................................... 33

## INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

- FHWA-NHI-137048 Turbo Architecture-Web-Based ................................................. 34

## INFORMATION TECHNOLOGY

- FHWA-NHI-230098 POAM Test Course ................................................................. 35
FINANCIAL MANAGEMENT
FHWA-NHI-231031 Financial Integrity Review and Evaluation (FIRE): Part 1, Overview .............................................. 36

BUSINESS, PUBLIC ADMIN, AND QUALITY
FHWA-NHI-134064 Transportation Construction Quality Assurance (1.5-Day) ................................................................. 37
FHWA-NHI-134073A Leap Not Creep: Accelerating Innovation Implementation (WCT) ......................................................... 38

HIGHWAY SAFETY
FHWA-NHI-380100 Using IHSDM ...................................................................................................................... 39
FHWA-NHI-380122A Safety Data and Analysis Fundamentals Training for Data Analysts ................................................. 40
FHWA-NHI-380122B Safety Data and Analysis Fundamentals Training for Data Collectors ......................................... 41
FHWA-NHI-380122C Safety Data and Analysis Fundamentals Training for Project/Program Managers .................. 42
FHWA-NHI-380122D Safety Data and Analysis Fundamentals Training for Safety Advocates ........................................... 43
FHWA-NHI-380123 Developing Quality Crash Modification Factors ........................................................................ 44
FHWA-NHI-381001 TCCC Safety Orientation - WEB-BASED TEST ................................................................. 45

SITE AND PERSONAL SAFETY
FHWA-NHI-381001 TCCC Safety Orientation - WEB-BASED TEST ................................................................. 46

COMMUNICATIONS
FHWA-NHI-134073A Leap Not Creep: Accelerating Innovation Implementation (WCT) ............................................. 47

NHI Store ......................................................................................................................................................... 48

Contacts ......................................................................................................................................................... 57
ABOUT NHI

WHO WE ARE
The National Highway Institute (NHI) provides technical training to the highway transportation workforce to build skills and enhance job performance to improve the conditions and safety of our nations’ roads, highways, and bridges.

As part of Federal Highway Administration’s (FHWA) Office of Technical Services (OTS), NHI courses complement the targeted training and technical assistance of FHWA program offices, Resource Center, and Local and Tribal Technical Assistance Programs (LTAP/TTAP).

OUR TRAINING
NHI courses are instrumental in developing core competencies and new skills, as well as learning about leading technologies and current policies. Our instructors strive to ensure that participants leave training not only with additional knowledge, but also the ability to apply that knowledge directly to their work. NHI is an accredited training provider by the International Association of Continuing Education and Training (IACET), allowing participants to earn Continuing Education Units (CEUs) for completed coursework. NHI also is an approved provider of the American Institute of Certified Planners (AICP) certification maintenance (CM) credits.

NHI offers three types of training.
Instructor-led Training (ILT): These courses are held in-person and led by an instructor when an organization is available to host the session. Any organization may host a session by submitting a Host Request form on the NHI Web site.
Web-conference Training (WCT): These are live, online training sessions that take place at a set time. Web-conference Training sessions also require a host.
Web-based Training (WBT): These online courses are available 24/7 for six months after purchase by the registrant. Participants can control the pace at which they complete the course and may return to it as many times as they wish within the six-month access period.

LEARN MORE
For more information or to subscribe to our mailing list, please visit the NHI Web site at www.nhi.fhwa.dot.gov.
Customers with additional questions may also contact NHI Customer Service at NHICustomerService@dot.gov, or by phone during regular business hours, 7:30AM – 4:30PM Eastern Time, at (877) 558-6873.
NHI MAKES HOSTING EASY

HOSTING A COURSE
NHI partners with host organizations across the country to deliver training where it is needed most. NHI provides top-notch instructors and course materials, while hosting organizations provide the facilities and equipment.

WHO CAN HOST
Any United States-based organization can host Instructor-led Trainings (ILT), which are taught in classrooms, and/or Web-conference Trainings (WCT), which are taught online.

Our instructors may tailor individual sessions to meet the unique needs and array of experiences of the hosting organization, including covering local issues and topics of special interest. Instructors also may modify case studies and exercises based on their subject matter expertise to make them pertinent to the participant's experiences.

REQUESTING TO HOST
To host a course, domestic customers can go to the NHI Web site and complete the appropriate Host Request form (ILT or WCT). The process takes just a few minutes. First-time users will need to create a user profile and check the INSTRUCTOR/HOST BOX.

If you run into any difficulty when you are logging in, filling out a Host Request form, or navigating the NHI Web site, please contact NHI Customer Service for help at (877) 558-6873 during normal business hours, 7:30am – 4:30pm Eastern time. Customers may also email NHI Customer Service at nhicustomerservice@dot.gov.

To assist the host in preparation for and coordination of the session, a hosting checklist is provided on the NHI Web site. This checklist includes important information about hosting your NHI training session, as well as valuable “best-practice” information based on NHI’s 40 years of experience with our hosting partners.

CONFIRMING SESSION DATES/LOCATIONS/TIMES
After the Host Request form is received, an Instructor or a member of the NHI team will contact the host to discuss scheduling options. While preferred dates may be specified on the Host Request form, sessions are not official until the hosting organization receives formal confirmation from NHI. Once official, NHI will list the session publicly on its Web site.

Enrollment Options
The host’s contact information is listed with the scheduled session. Interested participants from outside the host’s organization may contact the host to enroll. Alternatively, the host may ask NHI to open public seats, which allow outside participants to enroll through NHI.

The NHI Scheduler will email all participant information to the host and instructor prior to the session start date.

HOSTING EXPENSES
To host a session, hosts are charged the per-participant price multiplied by the class-size minimum, or the host is charged per participant if the session class size exceeds the minimum. Pricing cannot be reduced if the minimum class size is not met. Therefore, if registration for a course is lower than anticipated, it is important for the host to contact NHI prior to the cancellation period (15 business days) to discuss a remedy. Please note that with sufficient notice, NHI may be able to offer marketing support for the session.

Three seats in every session are reserved for Federal Highway Administration (FHWA) employees until 15 days before the course begins. FHWA participants do not count toward the participant minimum, but should be considered in the course maximum. Hosts are not charged for FHWA personnel or participants who have paid via the NHI Web site. Hosts are not charged for any instructor expenses.

Course hosts may charge participants an additional fee to recover all or part of costs associated with hosting the course. However, we ask hosts to contact the NHI Scheduler at (703) 235-0534 with this information prior to the confirmation of the session.

Course fees, which include the cost of materials for each participant, are listed with every course description.
RECEIVING COURSE MATERIALS
NHI will ship course material to the host approximately three weeks prior to the session start date.

PROVIDING PAYMENT
Payment may be made to NHI by check, money order, or credit card. Checks and money orders must be made payable to the National Highway Institute. To make credit card payments, contact NHI Customer Service at NHICustomerService@dot.gov or 1-877-558-6873. You are not charged for any FHWA participants or for participants who paid via the NHI Web site.

CANCELLATION POLICY/REFUNDS
To avoid incurring the $1,500 cancellation fee, cancellation must be requested no later than 15 business days prior to the course start date. If a course must be cancelled, the host is required to contact NHI Customer Service at 1-877-558-6873 during normal business hours, 7:30AM – 4:30PM Eastern Time, or email NHICustomerService@dot.gov. If the course materials have been sent, the host must contact NHI Customer Service.

In the event of cancellation, it is the host’s responsibility to contact all participants (including those registered for public seats). There must be verification that the registrants received the cancellation notice. Notice to out-of-state participants is especially important so that they may alter or cancel any travel arrangements.

In the case of an emergency or weather-related closing, the cancellation fee will not apply. NHI follows the host office’s policy regarding weather and emergency closings.
RECEIVING COURSE CREDIT

Many of the courses offered at NHI can be used toward obtaining Continuing Education Units (CEUs), Certification Maintenance (CM) credits, and Professional Development Hours (PDHs). Please select the headers below for more information about receiving credits.

CONTINUING EDUCATION UNITS

NHI has been recognized as an Accredited Provider by the International Association for Continuing Education and Training (IACET). In obtaining this accreditation, NHI has demonstrated that it complies with the ANSI/IACET Standard which is recognized internationally as a standard of good practice. As a result of this Accredited Provider status, NHI is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET Standard. IACET is an independent, non-profit association whose goal is to ensure quality continuing education for professionals. For an organization to become an IACET approved CEU Accredited Provider, it must demonstrate that it designs, develops, and delivers training in accordance with proven adult learning theory and recognizes instructional systems design practices. Each course description in the NHI catalog includes the number of CEUs offered upon successful completion of the course.

One CEU is offered for every ten contact hours of training led by a qualified instructor and qualified instruction. In order to be offered CEUs, a course participant must attend 100% of the course and must pass the course examination with a score of 70% or greater.

CEUs are offered to each course participant who fulfills the above stated requirement. NHI will maintain individual training records for seven years for the CEUs offered. Individuals and their employers are also encouraged to maintain their own training records including course name, class dates, instructor name, class roster, and CEUs offered.

For proof of your CEU record, please contact NHI at NHICustomerService@dot.gov or 1-877-558-6873 and request your official transcript. Your official transcript displays a record of your NHI course history as well as the CEUs offered for each CEU-accredited course. Please allow at least one month after the completion of your course before requesting your official transcript.

CERTIFICATION MAINTENANCE CREDITS

NHI providers Certification Maintenance (CM) credits to assist professional planners become and maintain their membership as certified planners through the American Planning Association (APA).

American Institute of Certified Planners (AICP) is APA’s professional institute. Certified Planners have demonstrated a commitment to high standards of professional practice and a mastery of theories and tools of planning.

NHI recognizes that the certification carries a high mark of distinction and requires planners to meet rigorous standards and maintain their expertise through continuing education. Planners must earn 32 CM continuing education credits every two years in order to stay up to date on the latest trends, technologies, and best practices. NHI courses will now help them achieve that requirement.

CM credits are measured in contact hours, so that 30 minutes of instructional time equals 30 minutes of CM credit (30 minutes contact = 0.5 CM credits; 1.0 contact hours = 1.0 CM credits). An event must be at least 30 minutes in duration to be eligible for CM credit.

Contact NHI Customer Service at NHICustomerService@dot.gov or 877-558-6873 to ask for an official transcript to be used by AICP to calculate CM credits. Please allow at least one month after the completion of your course before requesting your official transcript.

PROFESSIONAL DEVELOPMENT HOURS (PDHs)

NHI does not officially offer PDHs; however, it is possible to receive PDHs for your completed NHI training courses. To receive PDHs, please submit your course certificate (which indicates the contact hours assigned to the course) and/or your official transcript (which indicates the CEUs granted for a course) to the respective licensing agency. Upon consent, the licensing agency may convert your hours and/or CEUs into PDHs and proceed with the PDH awarding process.

PDHs are offered on a ratio of one contact hour to one PDH. When converting from CEU to PDH, please note that one CEU is equal to ten PDHs (or one PDH is equal to one-tenth of a CEU).

To request your official transcript with proof of CEU record and/or contact hours, please contact NHI at NHICustomerService@dot.gov or 1-877-558-6873. Your official transcript displays a record of your NHI course history as well as
the CEUs offered for each CEU-accredited course. Please allow at least one month after the completion of your course before requesting your official transcript.

**NHI CERTIFICATES OF ACCOMPLISHMENT**

NHI’s Certificates of Accomplishment program was designed to recognize individuals who have successfully enhanced their depth and breadth of knowledge and expertise in specific disciplines or topic areas. Students would be eligible for the Certificate of Accomplishment when they have completed and passed a suite of related NHI course offerings. Currently, this program has been put on hold, although it is expected to be re-initiated in the near future.

More Information will be released as soon as it is available.
FREE WEB-CONFERENCE TRAINING

NHI is excited to offer FREE Web-conference training. These trainings save both time and money, while covering the latest topics and techniques within the transportation industry. All transportation professionals in the public and private sectors are invited to participate in these trainings.

REAL SOLUTIONS SEMINAR SERIES
This series of free monthly Webinars features a guest speaker who presents problems or issues faced in the field and what steps were taken to solve them. In some sessions, additional panelists join the guest speaker to further discuss that seminar’s topic.

Some past topics include:
• Best Practices for Integrating Climate Change Considerations in the Transportation Planning Process
• eLearning and Distance Learning within the Transportation Industry
• Smart Corridors and Complete Streets: A Look at Some Situations and Strategies
• Solving Old Traffic Noise Ills: Tennessee Type II Noise Abatement Program

Visit the Real Solutions Seminar Series section of the Web site to register for the next Real Solutions Web conference or to listen to past Web conferences.

LEARN MORE
For more information, please visit the NHI Web site at www.nhi.fhwa.dot.gov.
Want to be notified when a free Web conference is scheduled? Email nhimarketing@dot.gov.
COURSE NUMBER
FHWA-NHI-130053A

COURSE TITLE
Bridge Inspection Refresher Training

The major goals of this course are to refresh the skills of practicing bridge inspectors in fundamental visual inspection techniques; review the background knowledge necessary to understand how bridges function; communicate issues of national significance relative to the nations’ bridge infrastructures; re-establish proper condition and appraisal rating practices; and review the professional obligations of bridge inspectors.

This course is based on the “Bridge Inspector’s Reference Manual,” 2002 (updated in 2006) with reference to the AASHTO Manual as defined by the National Bridge Inspection Standards regulation.

Core course topics include inspector qualifications and duties, bridge mechanics, record keeping and documentation, fatigue and fracture in steel bridges, traffic safety features, safety, National Bridge Inventory (NBI) component ratings, superstructure type identification, inspection techniques and case studies for decks, superstructures, bearings, substructures, channels and culverts, and two (2) mock bridge inspection classroom exercises.

Optional topics include fiber reinforced polymer, inspection of truss gusset plates, inspection of adjacent box beams, bridge site signing, structure inventory and appraisal overview, common NBI miscodings, element level ratings and timber superstructures.

For this version of the course (3.5-day), the host agency will need to select six to seven (6-7) desired optional topics. Course instructors will contact the host prior to the course to complete a pre-course questionnaire, determine optional topics to be taught, and discuss the course schedule.

OUTCOMES

Upon completion of the course, participants will be able to:

• Describe the current overall condition and condition trends for the nation’s bridges
• Identify the recent National Bridge Inspection Standards (NBIS) revisions
• Accurately code National Bridge Inventory (NBI) items
• Identify and document inspection observations using standard methods
• Evaluate defects based on the 2008 AASHTO Manual for Bridge Evaluation
• Code NBI components using the Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation’s Bridges
• Determine if overall structure/structural member is fracture critical prone
• Accurately inspect and evaluate a bridge’s four traffic safety features
• List the keys to ensuring a safe work environment
• Explain bridge responses and bridge mechanic principles

TARGET AUDIENCE

The target audience for this course includes Federal, State, and local agencies and private sector personnel employed in inspecting bridges or managing bridge inspection programs. The course is built to accommodate those that have completed comprehensive bridge inspection training (130055 or similar) or met the criteria for a bridge inspector under the State’s procedures or requirements.
TRAINING LEVEL: Intermediate

FEE: 2018: $2 Per Person; 2019: N/A

LENGTH: 2 DAYS (CEU: 2 UNITS)

CLASS SIZE: MINIMUM: 20; MAXIMUM: 30

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
COURSE NUMBER
FHWA-NHI-130054

COURSE TITLE
Engineering Concepts for Bridge Inspectors

This course was updated in 2010 and provides knowledge of the elementary concepts in bridge engineering for individuals involved with the inspection of in-service highway bridges. The course covers the purpose of highway bridge inspections and the roles of inspectors through the discussion of common bridge types and materials, material properties, and bridge components as well as details, loadings, stresses, strains, and deterioration of bridge materials and members. Participants will be asked to complete an exam at the end of the course, which they must earn a 70% or better on to successfully complete the course and receive a certificate of completion.

This course prepares participants for the 2-week, intensive Instructor-led course in bridge inspection, 130055 Safety Inspection of In-Service Bridges. Upon successful completion of 130054, participants will have met the prerequisite requirement for participation in the 130055 course.* If participants would like to enroll in the 130055 course, they will be required to demonstrate their certificate of completion for 130054 as proof that the prerequisite requirement has been fulfilled.

Participation in 130054 is not the only option to fulfill the prerequisite requirement for 130055.* Individuals have the option to 1) successfully complete the Web-based training and assessment (130101 Introduction to Safety of In-Service Bridges) or 2) for those with engineering backgrounds or prior knowledge and experience in the field of bridge inspection may “test-out” through a Web-based assessment (130101A Introduction to Safety Inspection of In-Service Bridges).

*Please note: Upon successful completion of this prerequisite course, you will be eligible to take the 130055 training course for up to 2 years.

OUTCOMES

Upon completion of the course, participants will be able to:

• Describe the basis for bridge inspection
• Describe the various roles of the bridge inspection team
• Identify common bridge types and major components, primary members, secondary members and features of highway bridges
• Name the common materials used in bridges
• Describe the basic properties, strengths, and weaknesses of each material
• Describe basic engineering concepts
• Describe standard highway bridge loadings
• Describe the types, signs, and causes of structural distress
• Identify other features associated with bridges
• Name protective measures required to mitigate hazards

TARGET AUDIENCE

This course is designed for Federal, State, and local technicians and inspectors who have limited experience with the inspection of in-service highway bridges. Engineers without bridge experience or those who need a refresher in basic bridge design concepts will also benefit from the course. Individuals completing this course could serve on a bridge inspection team, but would require additional experience and training to qualify as team leaders.
**TRAINING LEVEL:** Basic

**FEE:** 2018: $2 Per Person; 2019: N/A

**LENGTH:** 2 DAYS (CEU: 2 UNITS)

**CLASS SIZE:** MINIMUM: 20; MAXIMUM: 30

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
COURSE NUMBER
FHWA-NHI-130081

COURSE TITLE
LRFD for Highway Bridge Superstructures - (NEW 4-Day ILT)

This course expands the suite of FHWA services to assist State and local governments in a successful implementation of load and resistance factor design (LRFD). The course promotes the philosophy of the LRFD design platform and establishes the motivation for LRFD as the reassurance that safe design practices are being applied where needed. For structural applications, the curriculum follows the AASHTO “LRFD Bridge Design Specifications,” 3rd Edition, 2004 (AASHTO LRFD), including the approved 2005 and 2006 Interims.

This course is a combination of instructor-led discussions and workshop exercises. It includes LRFD theory applied to design examples and illustrates step-by-step LRFD design procedures. The training includes the extensive use of student exercises and example problems to demonstrate overall design, detailing, and construction principles addressed in the reference materials, and provides hands-on experience in the AASHTO LRFD design and detailing of concrete superstructures. Exercise and example problems are based on components of overall comprehensive bridge design examples using AASHTO LRFD and provide comparisons between ASD, LFD, and LRFD design methods where meaningful.

The curriculum materials are comprised of a comprehensive design manual, FHWA Publication No. FHWA NHI 06-001, lecture and workshop exercises intended to promote or enhance a working knowledge of the AASHTO LRFD specification, and a participant workbook for lecture notes and exercises.

The curriculum material contains the following major topics:
1. Preliminary design concepts for prestressed concrete superstructures
2. Pretensioned concrete I-girder design
3. Continuous pretensioned concrete I-girder design
4. Staged construction of prestressed concrete girder bridges
5. Bearing design

OUTCOMES
Upon completion of the course, participants will be able to:
• Describe the concrete bridge superstructure design and construction process in accordance with the AASHTO LRFD specifications
• Identify the application of appropriate AASHTO LRFD specification articles dealing with selection of bridge type, size, and location; bridge economics; concrete bridge superstructure design; and bearings selection and design
• Demonstrate the use of the AASHTO LRFD specification requirements for concrete superstructure design through the completion of step-by-step procedures, student exercises, and design examples
• Successfully complete applicable learning outcome assessments with a combined score of 70 percent or higher

TARGET AUDIENCE
This course has been developed for the needs of practicing public and private sector structural and bridge engineers with 1-10 years of experience. The primary audience is agency and consultant structural designers. Pre-training Competencies: Individuals attending this course should have a minimum BSCE degree and have a working knowledge of the AASHTO LRFD or the “AASHTO Standard Specifications for Highway Bridges,” and have relevant design experience using either of these specifications on at least one bridge superstructure.
TRAINING LEVEL: Intermediate

FEE: 2018: $425 Per Person; 2019: N/A

LENGTH: 2 DAYS (CEU: 0 UNITS)

CLASS SIZE: MINIMUM: 20; MAXIMUM: 1

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
Course Number
FHWA-NHI-130081J

Course Title
LRFD for Highway Bridge Superstructures - Concrete (2.5-Day)

This new course expands the suite of FHWA services to assist State and local governments in a successful implementation of load and resistance factor design (LRFD). The course promotes the philosophy of the LRFD design platform and establishes the motivation for LRFD as the reassurance that safe design practices are being applied where needed. For structural applications, the curriculum follows the AASHTO “LRFD Bridge Design Specifications,” 3rd Edition, 2004 (AASHTO LRFD), including the approved 2005 and 2006 Interims.

This course is a combination of instructor-led discussions and workshop exercises. It includes LRFD theory applied to design examples and illustrates step-by-step LRFD design procedures. The training includes the extensive use of student exercises and example problems to demonstrate overall design, detailing, and construction principles addressed in the reference materials, and provides hands-on experience in the AASHTO LRFD design and detailing of concrete superstructures. Exercise and example problems are based on components of overall comprehensive bridge design examples using AASHTO LRFD and provide comparisons between ASD, LFD, and LRFD design methods where meaningful.

The curriculum materials are comprised of a comprehensive design manual, FHWA Publication No. FHWA NHI 06-001, lecture and workshop exercises intended to promote or enhance a working knowledge of the AASHTO LRFD specification, and a participant workbook for lecture notes and exercises.

The curriculum material contains the following major topics:

1. General superstructure design considerations
2. Preliminary design concepts for prestressed concrete superstructures
3. Pretensioned concrete I-girder design
4. Continuous pretensioned concrete I-girder design
5. Staged construction of prestressed concrete girder bridges
6. Bearing design

Outcomes

Upon completion of the course, participants will be able to:

• Describe the concrete bridge superstructure design and construction process in accordance with the AASHTO LRFD specifications
• Identify the application of appropriate AASHTO LRFD specification articles dealing with selection of bridge type, size, and location; bridge economics; evolution of bridge design codes; bridge loads and load combinations; structural analysis; deck design; concrete bridge superstructure design; and bearings selection and design
• Demonstrate the use of the AASHTO LRFD specification requirements for concrete superstructure design through the completion of step-by-step procedures, student exercises, and design examples
• Successfully complete applicable learning outcome assessments with a combined score of 70 percent or higher

Target Audience

This course has been developed for the needs of practicing public and private sector structural and bridge engineers with 1-10 years of experience. The primary audience is agency and consultant structural designers. Pre-training Competencies: Individuals attending this course should have a minimum BSCE degree, and have a working knowledge of the AASHTO LRFD or the “AASHTO Standard Specifications for Highway Bridges,” and have relevant design experience using either of these specifications on at least one bridge superstructure.
TRAINING LEVEL: Intermediate

FEE: 2018: $775 Per Person; 2019: N/A

LENGTH: 2.5 DAYS (CEU: 1.5 UNITS)

CLASS SIZE: MINIMUM: 20; MAXIMUM: 40

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
Course Number
FHWA-NHI-130101

Course Title
Introduction to Safety Inspection of In-Service Bridges - WEB-BASED

This training is a prerequisite of another NHI training and is offered at no cost.

Introduction to Safety Inspection of In-Service Bridges is designed to prepare participants with the necessary fundamentals required for a more intensive course in bridge inspection. This WBT introduces the elementary concepts of bridge inspection, bridge functions, and bridge inspection terminology. Participants who complete this WBT will be prepared for more intensive courses in bridge inspection, which focus on documentation, rating, assessment, and field inspection.

Introduction to Safety Inspection of In-Service Bridges covers bridge components and elements, bridge mechanics, design features, bridge materials, decks, superstructures, bearings, substructures, channels, inspection preparations, inspection reporting activities, and work area safety.

This course prepares participants for the 2-week, intensive Instructor-led course in bridge inspection, 130055 Safety Inspection of In-Service Bridges.

Upon successful completion of 130101, participants will have met the prerequisite requirement for participation in the 130055 course (for sessions beginning March 5, 2012 or later).* If participants would like to enroll in the 130055 course, they will be required to demonstrate their certificate of completion for 130101 as proof that the prerequisite requirement has been fulfilled.

Participation in 130101 is not the only option to fulfill the prerequisite requirement for 130055.* Individuals have the option to 1) successfully complete NHI-130054 Engineering Concepts for Bridge Inspectors (Instructor-led course) or 2) for those with engineering backgrounds or prior knowledge and experience in the field of bridge inspection may “test-out” through a Web-based assessment (130101A Introduction to Safety Inspection of In-Service Bridges).

*Please note: Upon successful completion of this prerequisite course, you will be eligible to take the 130055 training course for up to 2 years.

Outcomes
Upon completion of the course, participants will be able to:

• Describe the basis for bridge inspection
• Identify the three major bridge components and various culvert types
• Identify the various elements that comprise bridge components
• Describe standard highway bridge loadings
• Describe the basic concepts of elasticity of materials, response of materials to an applied force, response of structural members to a variety of loadings, the relationship between stresses and strains, and load rating
• Describe span arrangements, deck-superstructure interaction, and redundancy
• Describe the basic properties, strengths and weaknesses of steel, concrete, and timber
• Describe the types, signs and causes of structural distress in steel, concrete, and timber
• Describe the general purpose of decks, superstructures, and bearings
• Describe the general purpose and function of substructure units
• Describe waterway features and the effect of scour
• Describe the requirements for preparing for an inspection
• Describe the basic bridge inspection reporting requirements
• Name protective measurements to mitigate the hazards involved when working in the field performing bridge inspection

Target Audience
This training has been developed for Federal, State, and local highway agency employees and consultants involved in inspecting bridges or in charge of a bridge inspection unit. A background in bridge engineering is strongly recommended.
**Training Level:** Basic  
**Fee:** 2018: $0 Per Person; 2019: N/A  
**Length:** 1 Days (CEU: 1 Units)  
**Class Size:** Minimum: 0; Maximum: 0  

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
COURSE NUMBER
FHWA-NHI-131050A

COURSE TITLE
Asphalt Pavement In-Place Recycling Techniques--WEB-BASED

This training is a prerequisite of another NHI training and is offered at no cost.

Transportation agencies focusing on the use of sustainable, cost-effective, and environmentally conscious construction practices often consider in-place recycling techniques as a viable alternative to the more traditional rehabilitation techniques used on asphalt-surfed pavements. NHI training 131050 Asphalt Pavement In-place Recycling Techniques is designed to help participants acquire necessary skills for selecting the appropriate in-place recycling technique for a given set of conditions, choosing the appropriate materials for the project, developing suitable specifications, and constructing those projects effectively.

The Asphalt Pavement In-place Recycling Techniques course includes two brief Web-based training (WBT) modules, and two days of instructor-led, classroom-based training (ILT). Through independent study, classroom interaction, and workshop activities, participants explore the current technologies available in the area of asphalt pavement in-place recycling. Two WBT lessons introduce pavement evaluation techniques and the three potential recycling techniques, along with the types of equipment commonly used for each. The classroom session focuses on project and technique selection and justification, materials considerations and mix design, construction specifications, and project control considerations during construction.

OUTCOMES
Upon completion of the course, participants will be able to:

• Describe the economic, environmental, and engineered performance benefits associated with using in-place asphalt recycling
• Identify the key factors that contribute to the selection of appropriate in-place asphalt recycling techniques under different traffic levels, pavement conditions, and environments
• Identify the key requirements in developing effective in-place asphalt recycling construction specifications, including method specification and end-result or performance specifications
• Demonstrate the ability to select the appropriate new materials and additives needed for each of three HMA pavement in-place recycling techniques
• List steps that can be taken to address a variety of issues that may impact the constructability of a project

TARGET AUDIENCE
This course is intended for State and local transportation agency engineers, such as pavement managers and maintenance engineers, and other agency personnel who are responsible for selecting, designing, or constructing the agency’s asphalt pavement maintenance, resurfacing, rehabilitation, and reconstruction alternatives. The course particularly benefits those individuals responsible for selecting and designing asphalt in-place recycling projects, for writing effective specifications, or for inspecting asphalt in-place recycling projects during their construction. Contractors, consulting engineers, and industry representatives involved in asphalt pavement in-place recycling also will benefit from this course.

TRAINING LEVEL: Basic

FEE: 2018: $2 Per Person; 2019: N/A

LENGTH: 2 DAYS (CEU: 2 UNITS)

CLASS SIZE: MINIMUM: 20; MAXIMUM: 35

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov

NHI Training Information: (877) 558-6873 • Fax (703) 235-0577
COURSE NUMBER
FHWA-NHI-133114A

COURSE TITLE
Construction Zone Safety Inspection (1.5 Day)
**Formerly Course No. 380063A**

This course provides training in the management of traffic control plans and the inspection of construction zone safety devices. Participants receive instruction in traffic control plan review, inspection of traffic control procedures and safety devices, and the resolution of discrepancies from the traffic control plan, as well as on deficiencies in safety hardware maintenance. The following major topics are covered: Inspection of traffic control plan operation, maintenance of work zone signs and markings, inspection of construction safety hardware, and resolution of discrepancies from contract requirements.

This course is part of the Certificate of Accomplishment in Work Zone Safety. To learn more about how you can achieve a certificate in Work Zone Safety visit the NHI Web site at http://www.nhi.fhwa.dot.gov/training/cert_programs.aspx.

NHI is providing 30 MUTCD Manuals per class and charging the host for these at our cost - $10 per copy. If there are excess manuals those are to be retained by the host. Each host will be charged a flat fee of $300 for the manuals (30 x $10) to allow NHI to recoup only our purchase costs.

OUTCOMES
Upon completion of the course, participants will be able to:
• Recognize the importance of construction zone safety devices
• Identify the contract requirements for selected devices
• Inspect the installation and operation of safety devices, including discrepancies and deficiencies in safety devices
• Resolve discrepancies from the contract requirements and ensure corrections in the deficient safety devices

TARGET AUDIENCE
FHWA safety engineers, FHWA highway engineers, and State and local personnel involved in the management of traffic control plans and the inspection of construction zone safety devices.

TRAINING LEVEL: Basic

FEE: 2018: $0 Per Person; 2019: N/A

LENGTH: 1.5 DAYS (CEU: .9 UNITS)

CLASS SIZE: MINIMUM: 20; MAXIMUM: 30

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
Course Number
FHWA-NHI-133126

Course Title
National Traffic Incident Management Responder Training - Web-Based

This training was developed under the second Strategic Highway Research Program (SHRP2), and is being provided to you by the FHWA Office of Operations.

Three injury crashes occur every minute in the United States, putting nearly 39,000 incident responders potentially in harm’s way every day. Congestion from these incidents often generates secondary crashes, further increasing traveler delay and frustration. The longer incident responders remain at the scene, the greater the risk they, and the traveling public, face. A cadre of well-trained responders helps improve traffic incident response. Better incident response improve the safety of responders and drivers, reduces crashes that occur because of incident-related congestion, decreases traffic delays caused by incidents, and can cut incident response time.

The National Traffic Incident Management Responder Training was created by responders for responders. This course provides first responders a shared understanding of the requirements for safe, quick clearance of traffic incident scenes; prompt, reliable and open communication; and motorist and responder safeguards. First responders learn how to operate more efficiently and collectively.

This training covers many TIM recommended procedures and techniques, including:
- TIM Fundamentals and Terminology
- Notification and Scene Size-Up
- Safe Vehicle Positioning
- Scene Safety
- Command Responsibilities
- Traffic Management
- Special Circumstances
- Clearance and Termination
- Telecommunicators

Prerequisite Note:
It is recommended that you take the following courses offered by FEMA:
IS 700 - National Management System (NIMS), An Introduction
ICS 100 - Introduction to Incident Command System (ICS)
ICS 200 - ICS for Single Resources and Initial Action Incidents

This training was developed through the second Strategic Highway Research Program (SHRP2).

Outcomes
Upon completion of the course, participants will be able to:
• Use a common set of practices and advance standards across all responder disciplines.
• The National Traffic Incident Management Training Program equips responders with a common set of core competencies and assists them in achieving the TIM National Unified Goal of strengthening TIM programs in the areas of: Responder safety; Safe, quick clearance; and Prompt, reliable, and interoperable communications.

Target Audience
The target audience for the training is individuals from all TIM responder disciplines, including: Law Enforcement, Fire/Rescue, Emergency Medical Service, Towing and Recovery, Emergency Management, Communications, Highway/Transportation and Dispatch within States, regions and localities.
TRAINING LEVEL: Basic

FEE: 2018: $2 Per Person; 2019: N/A

LENGTH: 4 HOURS (CEU: .4 UNITS)

CLASS SIZE: MINIMUM: 1; MAXIMUM: 1

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
Course Number
FHWA-NHI-133126Z

Course Title
National Traffic Incident Management Responder Training - Web-Based

This training was developed under the second Strategic Highway Research Program (SHRP2), and is being provided to you by the FHWA Office of Operations.

Three injury crashes occur every minute in the United States, putting nearly 39,000 incident responders potentially in harm’s way every day. Congestion from these incidents often generates secondary crashes, further increasing traveler delay and frustration. The longer incident responders remain at the scene, the greater the risk they, and the traveling public, face. A cadre of well-trained responders helps improve traffic incident response. Better incident response improve the safety of responders and drivers, reduces crashes that occur because of incident-related congestion, decreases traffic delays caused by incidents, and can cut incident response time.

The National Traffic Incident Management Responder Training was created by responders for responders. This course provides first responders a shared understanding of the requirements for safe, quick clearance of traffic incident scenes; prompt, reliable and open communication; and motorist and responder safeguards. First responders learn how to operate more efficiently and collectively.

This training covers many TIM recommended procedures and techniques, including:
- TIM Fundamentals and Terminology
- Notification and Scene Size-Up
- Safe Vehicle Positioning
- Scene Safety
- Command Responsibilities
- Traffic Management
- Special Circumstances
- Clearance and Termination
- Telecommunicators

Prerequisite Note:
It is recommended that you take the following courses offered by FEMA:
IS 700 - National Management System (NIMS), An Introduction
ICS 100 - Introduction to Incident Command System (ICS)
ICS 200 - ICS for Single Resources and Initial Action Incidents

This training was developed through the second Strategic Highway Research Program (SHRP2).

Outcomes
Upon completion of the course, participants will be able to:
• Use a common set of practices and advance standards across all responder disciplines.
• The National Traffic Incident Management Training Program equips responders with a common set of core competencies and assists them in achieving the TIM National Unified Goal of strengthening TIM programs in the areas of: Responder safety; Safe, quick clearance; and Prompt, reliable, and interoperable communications.

Target Audience
The target audience for the training is individuals from all TIM responder disciplines, including: Law Enforcement, Fire/Rescue, Emergency Medical Service, Towing and Recovery, Emergency Management, Communications, Highway/Transportation and Dispatch within States, regions and localities.
TRAINING LEVEL: Basic

FEE: 2018: $1 Per Person; 2019: N/A

LENGTH: 1 DAYS (CEU: 1 UNITS)

CLASS SIZE: MINIMUM: 1; MAXIMUM: 1

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
COURSE NUMBER
FHWA-NHI-133132

COURSE TITLE
Highway Design

Test course description

OUTCOMES
Upon completion of the course, participants will be able to:

• Outcome 1
• Outcome 2
• Outcome 3

TARGET AUDIENCE
Test Target Audience

TRAINING LEVEL: Basic

FEE: 2018: $500 Per Person; 2019: N/A

LENGTH: 2 DAYS (CEU: 1 UNITS)

CLASS SIZE: MINIMUM: 20; MAXIMUM: 30

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
Course Number
FHWA-NHI-380100

Course Title
Using IHSDM

IHSDM is a suite of software analysis tools for evaluating safety and operational effects of geometric design decisions. The new IHSDM 2014 Release (v. 10.0.0; September 2014) includes a Crash Prediction Module (CPM) that implements draft Highway Safety Manual (HSM) Part C Predictive Methods for freeway segments and interchanges (freeway ramps, collector-distributor roads, and ramp terminals); as well as 1st Ed. HSM methods for two-lane rural highways, multilane rural highways, and urban and suburban arterials. IHSDM also includes five other safety evaluation modules applicable to rural two-lane highways: Policy Review, Design Consistency, Intersection Review, Traffic Analysis, and Driver/Vehicle.


NHI delivers Web-conference Training to you!

The IHSDM course is a training that gives participants the opportunity to use the IHSDM software tools to evaluate and analyze highway designs.

The delivery format consists of 4 live Web Conference Trainings (WCT), which participants are required to attend. In between Web-conferences, participants must complete self-paced assignments.

Outcomes
Upon completion of the course, participants will be able to:

• Explain the scope and uses for the IHSDM tool.
• Input rural highway data to IHSDM.
• Explain the purpose of each of the six IHSDM modules.
• Demonstrate the workflow for each IHSDM module.
• Interpret and apply data from IHSDM reports and graphs to make rural highways safer.

Target Audience
The Using IHSDM Course is designed for personnel working on highway design projects who will be directly interacting with the IHSDM software tools or applying the data generated by them. The IHSDM course benefits highway design project managers, planners, designers, safety engineers, and other personnel responsible for reviewing operations and safety on rural highways. Participants should have general familiarity with highway design elements and terminology.

Training Level: Intermediate

Fee: 2018: $24 Per Person; 2019: N/A

Length: 3 DAYS (CEU: 1 UNITS)

Class Size: Minimum: 10; Maximum: 45

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
Course Number
FHWA-NHI-134064

Course Title
Transportation Construction Quality Assurance (1.5-Day)

The Federal Highway Administration (FHWA) identified the need for transportation construction and materials personnel to increase their knowledge of the fundamentals of effective transportation construction Quality Assurance (QA). This course was developed to ensure that agency, contractor, producer, and consultant personnel responsible for interpreting and applying quality assurance specifications in transportation construction are properly qualified. The course will utilize a Quality Assurance Reference Manual, adapted from the current NETTCP manual.

This one and a half-day version of the course covers Chapters 1 through 6 of the course materials and will be available to, and appropriate for, all audiences including management level personnel. The content covered in this first day includes how quality assurance is featured in a transportation construction quality assurance program, quality assurance program elements, the evolution of quality assurance specifications, measuring quality, and the roles and responsibilities of both contractor and agency personnel.

Outcomes
Upon completion of the course, participants will be able to:

- Consistently apply fundamental Quality Assurance concepts, terminology, and definitions
- Differentiate QA specifications from other specifications
- Explain each of the six core elements of a QA program and how each is essential to successful implementation of Quality Assurance
- Describe the respective roles and responsibilities of the project decision makers (Contractor QC and Agency Acceptance personnel) and how their interaction contributes to construction quality

Target Audience
This is an intermediate-level course for personnel who are implementing QA specifications on construction projects. Necessary background knowledge for participants is 3-5 years minimum in transportation construction specifications inspections. The suggested list of personnel that may consider attending, if they have the requisite background knowledge are Contractor/Consultant Personnel (QC managers/QC Plan Administrators, Senior Production Facility QC Technician/Inspectors, Senior QC Laboratory Personnel, and Senior Field QC Technicians/Inspectors) and Agency Personnel (Project Managers/Resident Engineers, Senior Production Facility Acceptance Technicians/Inspectors, Senior Acceptance Laboratory Personnel, and Senior Field Acceptance Technicians/Inspectors).

Training Level: Intermediate

Fee: 2018: $200 Per Person; 2019: N/A

Length: 3 DAYS (CEU: 1 UNITS)

Class Size: Minimum: 20; Maximum: 30

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
COURSE NUMBER
FHWA-NHI-134073A

COURSE TITLE
Leap Not Creep: Accelerating Innovation Implementation (WCT)

This is a blended training solution designed to provide transportation employees with the necessary tools to implement innovations quickly and successfully and mainstream the innovations into an agency’s standard practice. The training discusses the features of successful deployments, provides information on the components of a deployment plan, lists resources for locating innovations and funding for implementation, and discusses strategies for neutralizing challenges to implementing innovations. The course is taught in two formats: first participants attend a two-hour Web conference to introduce the course and set expectations. One-to-two weeks following the Web conference, participants attend two days of training to complete the course.

OUTCOMES
Upon completion of the course, participants will be able to:
• Identify the benefits of implementing innovations.
• Describe the evolution of an innovation from the identification of a need to mainstreaming an innovation into standard practice.
• Describe the key factors of successful innovation implementation.
• Develop a deployment plan for implementing an innovation.
• List three strategies that could be employed by agency decision-makers to support innovation implementation.
• Determine resources required to mainstream the innovation into standard practice.
• Identify strategies for overcoming barriers to implementing an innovation.
• Locate resources to support the deployment of innovations, such as funding resources.

TARGET AUDIENCE
The target audience for this course will be people are responsible for: Leading a team, or are preparing to lead a team, that’s responsible for deploying an innovation. Selecting innovations that will be implemented within the organization. Promoting the use of innovations within an organization.

TRAINING LEVEL: Basic

FEE: 2018: $0 Per Person; 2019: N/A
LENGTH: 5 DAYS (CEU: 5 UNITS)
CLASS SIZE: MINIMUM: 1; MAXIMUM: 30

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
Course Number
FHWA-NHI-134112

Course Title

Is your agency in the process of enhancing its maintenance management capabilities?

Are you interested in learning more about developing effective performance measures for maintenance activities?

If so, join us for a blended training course that features both independent study material and facilitated Web conferences. Now you can learn all of the information provided in the 3.5-day instructor-led course (NHI-131107), without leaving your office!

This course is an introduction to the methods and practices used in an enhanced maintenance management system (MMS) to effectively maintain and operate a highway network. It provides participants with the principles and practices of using MMS effectively and illustrates efficient maintenance and operation of a highway network. Throughout the course, participants are provided with activities and assignments specific to using MMS.

The course materials rely heavily on the recently developed AASHTO Guidelines for Maintenance Management Systems, the Transportation Asset Management Guide, along with several other recent publications on the topic. The materials will be supplemented with examples from State and local highway agencies to illustrate the application of the principles in transportation agencies. This course has the same content and outcomes as FHWA-NHI-131107, Principles and Practices for Enhanced Maintenance Management Systems.

Responsibilities:

You will be expected to complete seven online lessons and three facilitated Web conferences. You must complete all 7 of the online lessons and participate in the Web conferences to obtain your certificate. By passing the online test at the end of the course, you can also receive Continuing Education Units (CEUs) for the course. All participants will need their own computer with internet connection and a telephone line to participate in the Web conference.

Outcomes

Upon completion of the course, participants will be able to:

• Compare and contrast a first generation MMS with an enhanced MMS
• Describe the terms “outcome-based” and “performance-based” and how they pertain to an enhanced MMS
• Describe the use of service levels to support the programming and budgeting activities incorporated into an MMS
• Identify the types of systems that should be integrated with an MMS and provide several examples of the types of data that should interface between each system
• List the potential benefits to be realized by fully integrating an enhanced MMS
• Identify several steps that will advance an agency’s current maintenance management practices now and in the future

Target Audience

The target audience for this course includes State and local maintenance engineers, maintenance supervisors, asset managers, and their industry counterparts. The course is specifically for individuals who are responsible for directing and managing maintenance operations and budgets, maintenance project and treatment selection, and/or the monitoring of system conditions.
TRAINING LEVEL: Basic

FEE: 2018: $0 Per Course; 2019: N/A

LENGTH: 1 DAYS (CEU: .5 UNITS)

CLASS SIZE: MINIMUM: 15; MAXIMUM: 30

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
Course Number
FHWA-NHI-135095

Course Title
Two-Dimensional Hydraulic Modeling of Rivers at Highway Encroachments

**THIS AN UPDATE OF COURSE NO. 135071.**

The course provides a well-balanced mix of lessons, demonstrations, and exercises for a comprehensive introduction to two-dimensional modeling concepts, including: background data necessary to support a model, hydraulic modeling parameters, mesh development, model simulation parameters, model calibration, hydraulic structures, and reviewing two-dimensional model results. Extracting hydraulic parameters for use in bridge scour evaluation is also discussed. Each concept is demonstrated and participants are given hands-on exercises to apply what they have learned. Once all modeling concepts are covered a comprehensive exercise is provided for participants to apply their skills on a project from start to finish.

Participants will receive a participant workbook that includes hard copies of presentation slides and step-by-step exercises. Electronic data needed for the exercises will also be provided.

Following completion of this course, participants should recognize situations where two-dimensional modeling is preferred and use SMS to successfully compile, execute, and review results for a SRH-2D model on a bridge or other hydraulic structure project.

PREREQUISITE NOTE: Course participants should have knowledge of the fundamentals of open channel flow hydraulics. The free web-based training course, NHI 135091 “Basic Hydraulic Principles Review” is available for those wishing to refresh their knowledge.

HOST NOTE: The host is responsible for providing a minimum of one computer for each pair of students. The computers shall have the following minimum specifications: Microsoft Windows XP with 512 MB of RAM (2 GB recommended) or Windows Vista, Windows 7, or Windows 8 with 1 GB of RAM (4 GB recommended), graphics card (OpenGL 1.5 or higher must be supported). The use of a dedicated graphics card is strongly recommended, display resolution of 1024 x 768 or greater.

Outcomes
Upon completion of the course, participants will be able to:

• Recognize the differences between 1D and 2D hydraulic models
• Use background data in SMS for 2D modeling projects
• Use SMS to setup and run 2D models
• Visualize and review 2D model results
• Add structures to 2D models
• Evaluate 2D hydraulic parameters for use in bridge scour analysis

Target Audience
The target audience for this course is FHWA and state Department of Transportation hydraulics personnel and other federal, state, local or consulting engineers who have responsibility for, or desire to work with, the hydraulic analysis and design of highway river crossings.

Training Level: Intermediate

Fee: 2018: $775 Per Person; 2019: N/A

Length: 3 DAYS (CEU: 1.8 UNITS)

Class Size: Minimum: 20; Maximum: 26

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
Course Number
FHWA-NHI-134064

Course Title
Transportation Construction Quality Assurance (1.5-Day)

The Federal Highway Administration (FHWA) identified the need for transportation construction and materials personnel to increase their knowledge of the fundamentals of effective transportation construction Quality Assurance (QA). This course was developed to ensure that agency, contractor, producer, and consultant personnel responsible for interpreting and applying quality assurance specifications in transportation construction are properly qualified. The course will utilize a Quality Assurance Reference Manual, adapted from the current NETTCP manual.

This one and a half-day version of the course covers Chapters 1 through 6 of the course materials and will be available to, and appropriate for, all audiences including management level personnel. The content covered in this first day includes how quality assurance is featured in a transportation construction quality assurance program, quality assurance program elements, the evolution of quality assurance specifications, measuring quality, and the roles and responsibilities of both contractor and agency personnel.

Outcomes
Upon completion of the course, participants will be able to:

• Consistently apply fundamental Quality Assurance concepts, terminology, and definitions
• Differentiate QA specifications from other specifications
• Explain each of the six core elements of a QA program and how each is essential to successful implementation of Quality Assurance
• Describe the respective roles and responsibilities of the project decision makers (Contractor QC and Agency Acceptance personnel) and how their interaction contributes to construction quality

Target Audience
This is an intermediate-level course for personnel who are implementing QA specifications on construction projects. Necessary background knowledge for participants is 3-5 years minimum in transportation construction specifications inspections. The suggested list of personnel that may consider attending, if they have the requisite background knowledge are Contractor/Consultant Personnel (QC managers/QC Plan Administrators, Senior Production Facility QC Technician/Inspectors, Senior QC Laboratory Personnel, and Senior Field QC Technicians/Inspectors) and Agency Personnel (Project Managers/Resident Engineers, Senior Production Facility Acceptance Technicians/Inspectors, Senior Acceptance Laboratory Personnel, and Senior Field Acceptance Technicians/Inspectors).

Training Level: Intermediate

Fee: 2018: $200 Per Person; 2019: N/A

Length: 3 Days (CEU: 1 Units)

Class Size: Minimum: 20; Maximum: 30

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
COURSE NUMBER
FHWA-NHI-134112

COURSE TITLE

Is your agency in the process of enhancing its maintenance management capabilities?
Are you interested in learning more about developing effective performance measures for maintenance activities?

If so, join us for a blended training course that features both independent study material and facilitated Web conferences. Now you can learn all of the information provided in the 3.5-day instructor-led course (NHI-131107), without leaving your office!

This course is an introduction to the methods and practices used in an enhanced maintenance management system (MMS) to effectively maintain and operate a highway network. It provides participants with the principles and practices of using MMS effectively and illustrates efficient maintenance and operation of a highway network. Throughout the course, participants are provided with activities and assignments specific to using MMS.

The course materials rely heavily on the recently developed AASHTO Guidelines for Maintenance Management Systems, the Transportation Asset Management Guide, along with several other recent publications on the topic. The materials will be supplemented with examples from State and local highway agencies to illustrate the application of the principles in transportation agencies. This course has the same content and outcomes as FHWA-NHI-131107, Principles and Practices for Enhanced Maintenance Management Systems.

Responsibilities:
You will be expected to complete seven online lessons and three facilitated Web conferences. You must complete all 7 of the online lessons and participate in the Web conferences to obtain your certificate. By passing the online test at the end of the course, you can also receive Continuing Education Units (CEUs) for the course. All participants will need their own computer with internet connection and a telephone line to participate in the Web conference.

OUTCOMES
Upon completion of the course, participants will be able to:
• Compare and contrast a first generation MMS with an enhanced MMS
• Describe the terms “outcome-based” and “performance-based” and how they pertain to an enhanced MMS
• Describe the use of service levels to support the programming and budgeting activities incorporated into an MMS
• Identify the types of systems that should be integrated with an MMS and provide several examples of the types of data that should interface between each system
• List the potential benefits to be realized by fully integrating an enhanced MMS
• Identify several steps that will advance an agency’s current maintenance management practices now and in the future

TARGET AUDIENCE
The target audience for this course includes State and local maintenance engineers, maintenance supervisors, asset managers, and their industry counterparts. The course is specifically for individuals who are responsible for directing and managing maintenance operations and budgets, maintenance project and treatment selection, and/or the monitoring of system conditions.
Training Level: Basic
Fee: 2018: $0 Per Course; 2019: N/A
Length: 1 Days (CEU: .5 Units)
Class Size: Minimum: 15; Maximum: 30

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
COURSE NUMBER
FHWA-NHI-136005

COURSE TITLE
Testing adding a new course
test

OUTCOMES
Upon completion of the course, participants will be able to:
• test

TARGET AUDIENCE
test

TRAINING LEVEL: Basic

FEE: 2018: $500 Per Person; 2019: N/A

LENGTH: 4 DAYS (CEU: 2 UNITS)

CLASS SIZE: MINIMUM: 0; MAXIMUM: 0

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
Course Number
FHWA-NHI-136115

Course Title
Testing

Outcomes
Upon completion of the course, participants will be able to:

Target Audience
Testing audience

Training Level: Basic

Fee: 2018: $500 Per Person; 2019: N/A

Length: 1 DAYS (CEU: 0 UNITS)

Class Size: Minimum: 0; Maximum: 0

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
COURSE NUMBER
FHWA-NHI-137048

COURSE TITLE
Turbo Architecture-Web-Based

This course is based upon Turbo Architecture Version 5.0. The current version is 7.0 (as Turbo Architecture jumped directly from Version 5.0 to Version 7.0 to align the Turbo Architecture version with the corresponding version of the National ITS Architecture.) There are some minor differences in the versions but the information presented in this course is still applicable to Version 7.0. For more information on the differences in version 7.0, see the Turbo Architecture page on The National ITS Architecture 7.0 website, http://www.iteris.com/itsarch/html/turbo/turbomain.htm.

Turbo Architecture is an interactive software program that assists transportation planners and system integrators in the development of regional and project architectures. This Web-based training (WBT) provides ITS professionals with a hands-on experience using the Turbo software. Participants will work with simulated examples and practice exercises to create, maintain, and use regional and project ITS architectures.

At the end of the training, participants will be able to use the Turbo software to create and modify a regional or project architecture including providing a link to planning, entering stakeholders, entering inventory data, selecting ITS services, creating operational concepts, tailoring functional requirements, building and customizing interfaces, customizing standards mappings, entering agreements, creating outputs, and applying features to new projects.

OUTCOMES
Upon completion of the course, participants will be able to:
• Recall training objective and delivery elements
• Verify the correct installation of Turbo
• Explain the use and importance of Turbo
• Explain Turbo’s support of the ITS project life cycle

TARGET AUDIENCE
The Turbo Architecture WBT is designed for ITS professionals employed by MPOs, transit agencies, municipalities, State DOTs, FHWA Division Offices, or consultants and system integrators who use and/or maintain an ITS architecture and are involved with ITS planning, deployment, and operations.

TRAINING LEVEL: Basic

FEE: 2018: $50 Per Person; 2019: N/A
LENGTH: 5 HOURS (CEU: 0 UNITS)
CLASS SIZE: MINIMUM: 1; MAXIMUM: 1

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
COURSE NUMBER
FHWA-NHI-230098

COURSE TITLE
POAM Test Course

OUTCOMES
Upon completion of the course, participants will be able to:

• Test outcomes

TARGET AUDIENCE
Test target audience

TRAINING LEVEL: Basic

FEE: 2018: $0 Per Person; 2019: N/A

LENGTH: 1 DAYS (CEU: 0 UNITS)

CLASS SIZE: MINIMUM: 0; MAXIMUM: 0

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
COURSE NUMBER
FHWA-NHI-231031

COURSE TITLE
Financial Integrity Review and Evaluation (FIRE): Part 1, Overview

NOTE: The session is available ONLY TO INVITED ATTENDEES. This is a pilot session and the course is not yet available to the general public. ONLY THOSE ALREADY ATTENDING BOOT CAMP MAY REGISTER FOR NHI 231032 AT THIS TIME. Thank you.

This live, instructor-led Web-conference training (WCT) is a supplement to the FIRE Toolkit eBook, Part 1, Overview. The WCT is developed with interactive exercises that focus on the Committee of Sponsoring Organizations of the Treadway Commission (COSO) Model and introduces the Standards for Internal Control from the Federal Government, the GAO Green Book.

The WCT serves two important roles:
1. A study in how financial management objectives are achieved through internal controls; and
2. Supporting the FIRE Toolkit eBook principles of continuous improvement using Enterprise Risk Management (ERM) and FIRE activities as it relates to the Monitoring component.

OUTCOMES
Upon completion of the course, participants will be able to:
- Understand Internal Controls and the Control Environment
- Determine the value of the Risk Assessment component in the context of the FIRE Program
- Align Internal Control and Control activities
- Relate an example of a standard operating procedure (SOP) to the three objectives of Internal Control
- Define the component of Information and Communication as it relates to the FIRE Program
- Relate the Component of Monitoring to FIRE activities

TARGET AUDIENCE
The target audience for this course includes Federal-aid Division Office Financial Management Staff, FHWA Assessable Unit Managers, Federal Lands Highway Financial Management Staff, FHWA HQ Program Office Program Managers and the FHWA Program and Management Analysis Discipline, FHWA Administrative and Support Services Discipline and State DOT Financial Staff. All participants in the WCT are required to have read or be familiar with the content of: Financial Integrity Review and Evaluation (FIRE) Toolkit eBook--Part 1, Overview.

TRAINING LEVEL: Basic

FEE: 2018: $0 Per Course; 2019: N/A

LENGTH: 2.5 HOURS (CEU: 0 UNITS)

CLASS SIZE: MINIMUM: 20; MAXIMUM: 35

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
Course Number
FHWA-NHI-134064

Course Title
Transportation Construction Quality Assurance (1.5-Day)

The Federal Highway Administration (FHWA) identified the need for transportation construction and materials personnel to increase their knowledge of the fundamentals of effective transportation construction Quality Assurance (QA). This course was developed to ensure that agency, contractor, producer, and consultant personnel responsible for interpreting and applying quality assurance specifications in transportation construction are properly qualified. The course will utilize a Quality Assurance Reference Manual, adapted from the current NETTCP manual.

This one and a half-day version of the course covers Chapters 1 through 6 of the course materials and will be available to, and appropriate for, all audiences including management level personnel. The content covered in this first day includes how quality assurance is featured in a transportation construction quality assurance program, quality assurance program elements, the evolution of quality assurance specifications, measuring quality, and the roles and responsibilities of both contractor and agency personnel.

Outcomes
Upon completion of the course, participants will be able to:

• Consistently apply fundamental Quality Assurance concepts, terminology, and definitions
• Differentiate QA specifications from other specifications
• Explain each of the six core elements of a QA program and how each is essential to successful implementation of Quality Assurance
• Describe the respective roles and responsibilities of the project decision makers (Contractor QC and Agency Acceptance personnel) and how their interaction contributes to construction quality

Target Audience
This is an intermediate-level course for personnel who are implementing QA specifications on construction projects. Necessary background knowledge for participants is 3-5 years minimum in transportation construction specifications inspections. The suggested list of personnel that may consider attending, if they have the requisite background knowledge are Contractor/Consultant Personnel (QC managers/QC Plan Administrators, Senior Production Facility QC Technician/Inspectors, Senior QC Laboratory Personnel, and Senior Field QC Technicians/Inspectors) and Agency Personnel (Project Managers/Resident Engineers, Senior Production Facility Acceptance Technicians/Inspectors, Senior Acceptance Laboratory Personnel, and Senior Field Acceptance Technicians/Inspectors).

Training Level: Intermediate

Fee: 2018: $200 Per Person; 2019: N/A

Length: 3 DAYS (CEU: 1 UNITS)

Class Size: Minimum: 20; Maximum: 30

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
**Course Number**  
FHWA-NHI-134073A

**Course Title**  
Leap Not Creep: Accelerating Innovation Implementation (WCT)

This is a blended training solution designed to provide transportation employees with the necessary tools to implement innovations quickly and successfully and mainstream the innovations into an agency’s standard practice. The training discusses the features of successful deployments, provides information on the components of a deployment plan, lists resources for locating innovations and funding for implementation, and discusses strategies for neutralizing challenges to implementing innovations. The course is taught in two formats: first participants attend a two-hour Web conference to introduce the course and set expectations. One-to-two weeks following the Web conference, participants attend two days of training to complete the course.

**Outcomes**

Upon completion of the course, participants will be able to:

- Identify the benefits of implementing innovations.
- Describe the evolution of an innovation from the identification of a need to mainstreaming an innovation into standard practice.
- Describe the key factors of successful innovation implementation.
- Develop a deployment plan for implementing an innovation.
- List three strategies that could be employed by agency decision-makers to support innovation implementation.
- Determine resources required to mainstream the innovation into standard practice.
- Identify strategies for overcoming barriers to implementing an innovation.
- Locate resources to support the deployment of innovations, such as funding resources.

**Target Audience**

The target audience for this course will be people responsible for: Leading a team, or are preparing to lead a team, that’s responsible for deploying an innovation. Selecting innovations that will be implemented within the organization. Promoting the use of innovations within an organization.

**Training Level:** Basic

**Fee:** 2018: $0 Per Person; 2019: N/A

**Length:** 5 DAYS (CEU: 5 UNITS)

**Class Size:** MINIMUM: 1; MAXIMUM: 30

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
COURSE NUMBER
FHWA-NHI-380100

COURSE TITLE
Using IHSDM

IHSDM is a suite of software analysis tools for evaluating safety and operational effects of geometric design decisions. The new IHSDM 2014 Release (v. 10.0.0; September 2014) includes a Crash Prediction Module (CPM) that implements draft Highway Safety Manual (HSM) Part C Predictive Methods for freeway segments and interchanges (freeway ramps, collector-distributor roads, and ramp terminals); as well as 1st Ed. HSM methods for two-lane rural highways, multilane rural highways, and urban and suburban arterials. IHSDM also includes five other safety evaluation modules applicable to rural two-lane highways: Policy Review, Design Consistency, Intersection Review, Traffic Analysis, and Driver/Vehicle.


NHI delivers Web-conference Training to you!

The IHSDM course is a training that gives participants the opportunity to use the IHSDM software tools to evaluate and analyze highway designs.

The delivery format consists of 4 live Web Conference Trainings (WCT), which participants are required to attend. In between Web-conferences, participants must complete self-paced assignments.

OUTCOMES
Upon completion of the course, participants will be able to:

• Explain the scope and uses for the IHSDM tool.
• Input rural highway data to IHSDM.
• Explain the purpose of each of the six IHSDM modules.
• Demonstrate the workflow for each IHSDM module.
• Interpret and apply data from IHSDM reports and graphs to make rural highways safer.

TARGET AUDIENCE
The Using IHSDM Course is designed for personnel working on highway design projects who will be directly interacting with the IHSDM software tools or applying the data generated by them. The IHSDM course benefits highway design project managers, planners, designers, safety engineers, and other personnel responsible for reviewing operations and safety on rural highways. Participants should have general familiarity with highway design elements and terminology.

TRAINING LEVEL: Intermediate

FEE: 2018: $24 Per Person; 2019: N/A
LENGTH: 3 DAYS (CEU: 1 UNITS)
CLASS SIZE: MINIMUM: 10; MAXIMUM: 45

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
Course Number
FHWA-NHI-380122A

Course Title
Safety Data and Analysis Fundamentals Training for Data Analysts

This training course is tailored to the participant’s individual goal and/or role within an organization. Individual learning tracks are provided for Data Analysts, Data Collectors, Project/Program Managers and Safety Advocates. Participants enroll in one of these four tracks that most closely matches their personal goals and responsibilities. Refer to the “Target Audience” section for more information.

NHI’s Safety Data and Analysis Fundamentals training course helps transportation professionals understand safety data and collection methods. It teaches how to interpret safety data and use it to support key decision-making efforts. Data collection has not always kept up with the data needs of the latest safety analysis tools and methodologies. Forecasting trends is easier with good data. Accurate forecasts help identify optimal times for project deployment and improve program results. The course provides knowledge to identify weaknesses and strengthen the way safety data is used in transportation programs and projects, and communities.

Participants in this training learn key safety data types and terms with additional insights to sources and collection methods of safety data. Participants study the data analysis process, several methods of data analysis, and explore and interpret various examples throughout the training. They leave the training with the skills and knowledge to evaluate data, enhance data collection, and data storage to understand its potential, as well as its limitations.

Outcomes
Upon completion of the course, participants will be able to:

- Use data to support decision-making, with respect to identifying safety issues, selecting countermeasures to mitigate safety issues, and evaluating the success of those countermeasures.
- Identify basic terms and concepts related to safety data and analysis, enabling participants to communicate effectively on safety-related data projects.
- Identify types, sources, strengths, and weaknesses of transportation safety data.
- Explain various methods used to analyze safety data, including their application and limitations.

Target Audience
DATA ANALYSTS - For professionals in charge of integrating and analyzing datasets, including highway safety engineers, specialists, traffic engineers, highway designers, and technical analysts. Emphasizes the applicability, uses, strengths, limitations, and requirements of safety data and collection methods. Recommended for anyone whose responsibility is to analyze safety data to identify causes and potential patterns that contribute to crashes and other systemic safety issues.

Training Level: Basic

Fee: 2018: $2 Per Person; 2019: N/A

Length: 1 DAYS (CEU: 0 UNITS)

Class Size: Minimum: 1; Maximum: 0

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
COURSE NUMBER
FHWA-NHI-380122B

COURSE TITLE
Safety Data and Analysis Fundamentals Training for Data Collectors

This training course is tailored to the participant’s individual goal and/or role within an organization. Individual learning tracks are provided for Data Analysts, Data Collectors, Project/Program Managers and Safety Advocates. Participants enroll in one of these four tracks that most closely matches their personal goals and responsibilities. Refer to the “Target Audience” section for more information.

NHI’s Safety Data and Analysis Fundamentals training course helps transportation professionals understand safety data and collection methods. It teaches how to interpret safety data and use it to support key decision-making efforts. Data collection has not always kept up with the data needs of the latest safety analysis tools and methodologies. Forecasting trends is easier with good data. Accurate forecasts help identify optimal times for project deployment and improve program results. The course provides knowledge to identify weaknesses and strengthen the way safety data is used in transportation programs and projects, and communities.

Participants in this training learn key safety data types and terms with additional insights to sources and collection methods of safety data. Participants study the data analysis process, several methods of data analysis, and explore and interpret various examples throughout the training. They leave the training with the skills and knowledge to evaluate data, enhance data collection, and data storage to understand its potential, as well as its limitations.

OUTCOMES
Upon completion of the course, participants will be able to:

• Use data to support decision-making, with respect to identifying safety issues, selecting countermeasures to mitigate safety issues, and evaluating the success of those countermeasures.

• Identify basic terms and concepts related to safety data and analysis, enabling participants to communicate effectively on safety-related data projects.

• Identify types, sources, strengths, and weaknesses of transportation safety data.

• Explain various methods used to analyze safety data, including their application and limitations.

TARGET AUDIENCE
DATA COLLECTORS - For professionals who are responsible for collecting, coding, and managing data to support safety analysis and decision-making. Emphasizes ways data collectors meet the needs of data analysts and helps collectors understand how managers use data to make strategic, informed decisions about safety priorities. Recommended for law enforcement officers, emergency medical service providers, trauma registrars, driver and vehicle service clerks, roadway data collectors, and anyone responsible for collecting crash, traffic, roadway, behavioral, injury, or other safety data.

TRAINING LEVEL: Basic

FEE: 2018: $2 Per Person; 2019: N/A

LENGTH: 17 HOURS (CEU: 1.7 UNITS)

CLASS SIZE: MINIMUM: 1; MAXIMUM: 0

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
Course Number
FHWA-NHI-380122C

Course Title
Safety Data and Analysis Fundamentals Training for Project/Program Managers

This training course is tailored to the participant’s individual goal and/or role within an organization. Individual learning tracks are provided for Data Analysts, Data Collectors, Project/Program Managers and Safety Advocates. Participants enroll in one of these four tracks that most closely matches their personal goals and responsibilities. Refer to the “Target Audience” section for more information.

NHI’s Safety Data and Analysis Fundamentals training course helps transportation professionals understand safety data and collection methods. It teaches how to interpret safety data and use it to support key decision-making efforts. Data collection has not always kept up with the data needs of the latest safety analysis tools and methodologies. Forecasting trends is easier with good data. Accurate forecasts help identify optimal times for project deployment and improve program results. The course provides knowledge to identify weaknesses and strengthen the way safety data is used in transportation programs and projects, and communities.

Participants in this training learn key safety data types and terms with additional insights to sources and collection methods of safety data.

Participants study the data analysis process, several methods of data analysis, and explore and interpret various examples throughout the training. They leave the training with the skills and knowledge to evaluate data, enhance data collection, and data storage to understand its potential, as well as its limitations.

Outcomes
Upon completion of the course, participants will be able to:

• Use data to support decision-making, with respect to identifying safety issues, selecting countermeasures to mitigate safety issues, and evaluating the success of those countermeasures.
• Identify basic terms and concepts related to safety data and analysis, enabling participants to communicate effectively on safety-related data projects.
• Identify types, sources, strengths, and weaknesses of transportation safety data.
• Explain various methods used to analyze safety data, including their application and limitations.

Target Audience
PROJECT/PROGRAM MANAGERS - For transportation professionals responsible for using safety analytics to identify and prioritize safety issues, develop and implement safety countermeasures, and evaluate project/program effectiveness. Emphasis on the tradeoffs of project alternatives in terms of cost and benefits, including the safety impacts of the project/program as well as the individual components. Recommended for transportation planners, traffic records coordinating committee members, highway safety online directors, and State and local mid-level managers such as division and district program managers in highway safety, design, traffic engineering, enforcement, and public health.

Training Level: Basic

Fee: 2018: $0 Per Person; 2019: N/A

Length: 17 HOURS (CEU: 1.7 UNITS)

Class Size: Minimum: 1; Maximum: 0

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
Course Number
FHWA-NHI-380122D

Course Title
Safety Data and Analysis Fundamentals Training for Safety Advocates

This training course is tailored to the participant’s individual goal and/or role within an organization. Individual learning tracks are provided for Data Analysts, Data Collectors, Project/Program Managers and Safety Advocates. Participants enroll in one of these four tracks that most closely matches their personal goals and responsibilities. Refer to the “Target Audience” section for more information.

NHI’s Safety Data and Analysis Fundamentals training course helps transportation professionals understand safety data and collection methods. It teaches how to interpret safety data and use it to support key decision-making efforts. Data collection has not always kept up with the data needs of the latest safety analysis tools and methodologies. Forecasting trends is easier with good data. Accurate forecasts help identify optimal times for project deployment and improve program results. The course provides knowledge to identify weaknesses and strengthen the way safety data is used in transportation programs and projects, and communities.

Participants in this training learn key safety data types and terms with additional insights to sources and collection methods of safety data.

Participants study the data analysis process, several methods of data analysis, and explore and interpret various examples throughout the training. They leave the training with the skills and knowledge to evaluate data, enhance data collection, and data storage to understand its potential, as well as its limitations.

Outcomes
Upon completion of the course, participants will be able to:

- Use data to support decision-making, with respect to identifying safety issues, selecting countermeasures to mitigate safety issues, and evaluating the success of those countermeasures.
- Identify basic terms and concepts related to safety data and analysis, enabling participants to communicate effectively on safety-related data projects.
- Identify types, sources, strengths, and weaknesses of transportation safety data.
- Explain various methods used to analyze safety data, including their application and limitations.

Target Audience
SENIOR MANAGERS & SAFETY ADVOCATES - For anyone looking to bridge the gap between the public and practitioners, and who are responsible for developing or influencing policies, practices, setting budgets, allocating resources, and making safety investments. Emphasis on understanding the needs of data collectors, data managers, and data analysts in terms of equipment, human resources, and organizational structure. Recommended for State and local senior managers, such as division heads/chief of transportation, planning, civil engineering, and public health.

Training Level: Basic

Fee: 2018: $0 Per Person; 2019: N/A
Length: 17 HOURS (CEU: 1.7 UNITS)
Class Size: Minimum: 1; Maximum: 0

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
Course Number
FHWA-NHI-380123

Course Title
Developing Quality Crash Modification Factors

This is an interactive virtual classroom training that alternates between self-paced Web-based training and live instructor-led virtual classroom sessions, spanned over four weeks. Live sessions are held on Tuesdays and Thursdays 1-2:30 pm EDT on May 1, 3, 8, 10, 15, 17, 22, 24. *The May 2018 session is provided to enrollees at no cost by the Office of Safety.* Future sessions will be $300 per person.

The science of safety has evolved over time, such that researchers have employed more rigorous study designs, resulting in more consistent and reliable results of countermeasure effectiveness. There are currently almost 1000 countermeasures, with over 6,100 different Crash Modification Factors (CMFs) in the CMF Clearinghouse. However, just over 250 of the CMFs are recognized as “high quality” based on the CMF Clearinghouse quality criteria.

The goal of this interactive virtual classroom is to enable you to develop and document quality CMFs. The course provides practical application of various CMF development methods and appropriate documentation of CMF study results. The course is divided into two parts. Part 1 will provide the fundamentals of CMF development, and Part 2 will cover the more advanced concepts and allow you to practice employing the various methods.

The course features self-paced Web-based training (WBT) modules and assignments to be completed independently, interspersed with eight instructor-led virtual classroom sessions, during which you will interact with peers and your instructor.

To enroll in this virtual training course, select the ‘View Sessions’ button and select ‘Add To Cart’ next to your session choice. If there are no upcoming sessions, select ‘Sign Up for Session Alerts.’

Outcomes
Upon completion of the course, participants will be able to:

- Identify the various study designs used to develop CMFs, their data needs, and associated strengths and limitations
- Select an appropriate study design based on the resources and quantity/quality of data available
- Apply the various methodologies to develop CMFs and assess the quality of the results
- Report the salient information for any new CMFs developed so that others may properly assess the applicability and quality of the CMFs

Target Audience
The target audience for this virtual training includes those involved with the development of CMFs, including those responsible for providing, merging, and analyzing the data as well as those responsible for providing specific background information on the countermeasures of interest. This could include state or local transportation agencies, as well as their consultants or university support. Participants of this course should have prior experience with CMFs and have a basic understanding of statistical concepts.

Training Level: Basic

Fee: 2018: $0 Per Person; 2019: N/A

Length: 1 Days (CEU: 1.8 Units)

Class Size: Minimum: 3; Maximum: 20

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
COURSE NUMBER
FHWA-NHI-381001

COURSE TITLE
TCCC Safety Orientation - WEB-BASED TEST

This training is provided to you at no cost by the Transportation Curriculum Coordination Council in partnership with NHI.

This training was prepared by the Transportation Curriculum Coordination Council (TCCC) in partnership with NHI to provide a general safety awareness orientation. This training will teach that safety is everyone’s responsibility. Remember the motto: “Do it safely, or don’t do it!” Thanks to SCDOT and IDOT for their contributions to this training. This training is recommended for the Transportation Curriculum Coordination Council levels I and II.

Prevention of injury and safeguarding health is the responsibility of everyone - both management and employee. The safety and health of employees is the overriding concern in all phases of operations.

Completion of the first module will provide you with a general awareness of policy, responsibilities, what to wear, tools, hazards, and personal protective equipment (PPE). The second module will cover proper housekeeping practices, critical elements of hazard communication, confined spaces, procedure for lockout or tagout, and components of health and safety policies.

OUTCOMES

Upon completion of the course, participants will be able to:

• Identify the reasons for having a safety policy
• Describe the employee and supervisor responsibilities at the workplace
• Identify what is appropriate and safe to wear to work
• Describe the different types of tools and the proper ways to use them
• Describe standard operating procedures to control for hazards
• Identify the components of personal protective equipment (PPE)
• Identify proper housekeeping practices
• Describe the critical elements of hazard communication
• Define confined spaces
• Describe the procedure for lockout or tagout
• Identify the important components of health and safety policies

TARGET AUDIENCE

This training would be beneficial to anyone that is involved with providing a safe work place, safe equipment, proper materials, and establishing and insisting upon safe methods and practices at all times.

TRAINING LEVEL: Basic

FEE: 2018: $1 Per Person; 2019: N/A

LENGTH: 1 DAYS (CEU: 1 UNITS)

CLASS SIZE: MINIMUM: 1; MAXIMUM: 1

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
Course Number
FHWA-NHI-381001

Course Title
TCCC Safety Orientation - WEB-BASED TEST

This training is provided to you at no cost by the Transportation Curriculum Coordination Council in partnership with NHI.

This training was prepared by the Transportation Curriculum Coordination Council (TCCC) in partnership with NHI to provide a general safety awareness orientation. This training will teach that safety is everyone’s responsibility. Remember the motto: “Do it safely, or don’t do it!” Thanks to SCDOT and IDOT for their contributions to this training. This training is recommended for the Transportation Curriculum Coordination Council levels I and II.

Prevention of injury and safeguarding health is the responsibility of everyone - both management and employee. The safety and health of employees is the overriding concern in all phases of operations.

Completion of the first module will provide you with a general awareness of policy, responsibilities, what to wear, tools, hazards, and personal protective equipment (PPE). The second module will cover proper housekeeping practices, critical elements of hazard communication, confined spaces, procedure for lockout or tagout, and components of health and safety policies.

Outcomes
Upon completion of the course, participants will be able to:

- Identify the reasons for having a safety policy
- Describe the employee and supervisor responsibilities at the workplace
- Identify what is appropriate and safe to wear to work
- Describe the different types of tools and the proper ways to use them
- Describe standard operating procedures to control for hazards
- Identify the components of personal protective equipment (PPE)
- Identify proper housekeeping practices
- Describe the critical elements of hazard communication
- Define confined spaces
- Describe the procedure for lockout or tagout
- Identify the important components of health and safety policies

Target Audience
This training would be beneficial to anyone that is involved with providing a safe work place, safe equipment, proper materials, and establishing and insisting upon safe methods and practices at all times.

Training Level: Basic

Fee: 2018: $1 Per Person; 2019: N/A

Length: 1 DAYS (CEU: 1 UNITS)

Class Size: Minimum: 1; Maximum: 1

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
Course Number
FHWA-NHI-134073A

Course Title
Leap Not Creep: Accelerating Innovation Implementation (WCT)

This is a blended training solution designed to provide transportation employees with the necessary tools to implement innovations quickly and successfully and mainstream the innovations into an agency’s standard practice. The training discusses the features of successful deployments, provides information on the components of a deployment plan, lists resources for locating innovations and funding for implementation, and discusses strategies for neutralizing challenges to implementing innovations. The course is taught in two formats: first participants attend a two-hour Web conference to introduce the course and set expectations. One-to-two weeks following the Web conference, participants attend two days of training to complete the course.

Outcomes
Upon completion of the course, participants will be able to:
• Identify the benefits of implementing innovations.
• Describe the evolution of an innovation from the identification of a need to mainstreaming an innovation into standard practice.
• Describe the key factors of successful innovation implementation.
• Develop a deployment plan for implementing an innovation.
• List three strategies that could be employed by agency decision-makers to support innovation implementation.
• Determine resources required to mainstream the innovation into standard practice.
• Identify strategies for overcoming barriers to implementing an innovation.
• Locate resources to support the deployment of innovations, such as funding resources.

Target Audience
The target audience for this course will be people are responsible for: Leading a team, or are preparing to lead a team, that’s responsible for deploying an innovation. Selecting innovations that will be implemented within the organization. Promoting the use of innovations within an organization.

Training Level: Basic
Fee: 2018: $0 Per Person; 2019: N/A
Length: 5 DAYS (CEU: 5 UNITS)
Class Size: Minimum: 1; Maximum: 30

NHI Customer Service: (877) 558-6873 • nhicustomerservice@dot.gov
NHI STORE PROVIDES RESOURCES AND REFERENCE MATERIALS

Created based on customer feedback, the NHI Store is an online resource that enables users to order course materials through the NHI Web site. These materials can be used to plan a workshop, support train-the-trainer programs, or gather highway-related reference materials. The NHI Store offers both electronic downloads and hard copy versions.

To search for and purchase NHI course training materials, please visit www.nhi.fhwa.dot.gov. Easy directions are provided for ordering and payment; special instructions are provided for FHWA employees.

If you are unable to find the training materials you need, please contact us at nhitraining@dot.gov.

The following pages list all materials available for purchase at the time this catalog was published. For the most up-to-date listing, visit the NHI Store at www.nhi.fhwa.dot.gov. Credit card payment is accepted.

LEGEND


<table>
<thead>
<tr>
<th>Course Number</th>
<th>Material Name</th>
<th>Format</th>
<th>Type</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>130053A</td>
<td>Bridge Inspection Refresher Training (August 2014)</td>
<td>Hard Copy PW</td>
<td>$70.00</td>
<td></td>
</tr>
<tr>
<td>130053A</td>
<td>Bridge Inspector's Reference Manual-December 2012 (Compact Disc)</td>
<td>Hard Copy RM</td>
<td>$20.00</td>
<td></td>
</tr>
<tr>
<td>130054</td>
<td>Bridge Inspector's Reference Manual-December 2012 (Compact Disc)</td>
<td>Hard Copy RM</td>
<td>$20.00</td>
<td></td>
</tr>
<tr>
<td>130054</td>
<td>Engineering Concepts For Bridge Inspectors (September 2011)</td>
<td>Hard Copy PW</td>
<td>$40.00</td>
<td></td>
</tr>
<tr>
<td>130078</td>
<td>Fracture Critical Inspection Techniques for Steel Bridges (September 2011)</td>
<td>Hard Copy PW</td>
<td>$50.00</td>
<td></td>
</tr>
<tr>
<td>130081</td>
<td>(130081) Load and Resistance Factor Design (LRFD) for Highway Bridge Superstructures (April 2007)</td>
<td>Hard Copy PW</td>
<td>$50.00</td>
<td></td>
</tr>
<tr>
<td>130081</td>
<td>Handbook of Retrofit Options for Bridges Vulnerable to Coastal Storms (May 2008)</td>
<td>Hard Copy OM</td>
<td>$40.00</td>
<td></td>
</tr>
<tr>
<td>130081</td>
<td>Load and Resistance Factor Design (LRFD) For Highway Bridge Superstructures-Examples (April 2007)</td>
<td>Hard Copy OM</td>
<td>$40.00</td>
<td></td>
</tr>
<tr>
<td>130081</td>
<td>Load and Resistance Factor Design (LRFD) For Highway Bridge Superstructures-SEC No. 1 (April 2007)</td>
<td>Hard Copy RM</td>
<td>$100.00</td>
<td></td>
</tr>
<tr>
<td>130081B</td>
<td>(130081) Load and Resistance Factor Design (LRFD) for Highway Bridge Superstructures (April 2007)</td>
<td>Hard Copy PW</td>
<td>$50.00</td>
<td></td>
</tr>
<tr>
<td>130081B</td>
<td>Handbook of Retrofit Options for Bridges Vulnerable to Coastal Storms (May 2008)</td>
<td>Hard Copy OM</td>
<td>$40.00</td>
<td></td>
</tr>
<tr>
<td>130081B</td>
<td>Load and Resistance Factor Design (LRFD) For Highway Bridge Superstructures-Examples (April 2007)</td>
<td>Hard Copy OM</td>
<td>$40.00</td>
<td></td>
</tr>
<tr>
<td>Course Number</td>
<td>Material Name</td>
<td>Format</td>
<td>Type</td>
<td>Price</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>--------------</td>
<td>------</td>
<td>---------</td>
</tr>
<tr>
<td>130081B</td>
<td>Load and Resistance Factor Design (LRFD) For Highway Bridge Superstructures-SEC No. 1 (April 2007)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$100.00</td>
</tr>
<tr>
<td>130081I</td>
<td>Load and Resistance Factor Design (LRFD) for Highway Bridge Superstructures-Examples (April 2007)</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$40.00</td>
</tr>
<tr>
<td>130081J</td>
<td>Load and Resistance Factor Design (LRFD) For Highway Bridge Superstructures-SEC No. 1 (April 2007)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$100.00</td>
</tr>
<tr>
<td>130081J</td>
<td>Load and Resistance Factor Design (LRFD) for Highway Bridge Superstructures-Examples (April 2007)</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$40.00</td>
</tr>
<tr>
<td>130087</td>
<td>Guidelines For The Installation, Inspection, Maintenance And Repair Of Structural Supports For Highw</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$50.00</td>
</tr>
<tr>
<td>130087</td>
<td>Inspection And Maintenance Of Ancillary Highway Structures-(March 2005)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>130088</td>
<td>Bridge Construction Inspection - Participant Workbook Volume 1 (March 2015)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>130088</td>
<td>Bridge Construction Inspection - Participant Workbook Volume 2 (March 2015)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$40.00</td>
</tr>
<tr>
<td>130091</td>
<td>Bridge Inspector’s Reference Manual-December 2012 (Compact Disc)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$20.00</td>
</tr>
<tr>
<td>130091</td>
<td>Underwater Bridge Inspection (January 2010)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$40.00</td>
</tr>
<tr>
<td>130091</td>
<td>Underwater Inspection of Bridges (June 2010)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$40.00</td>
</tr>
<tr>
<td>130091A</td>
<td>Underwater Bridge Inspection (January 2010)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$40.00</td>
</tr>
<tr>
<td>130091A</td>
<td>Underwater Inspection of Bridges (June 2010)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$40.00</td>
</tr>
<tr>
<td>130091B</td>
<td>Underwater Bridge Repair (December 2009)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$40.00</td>
</tr>
<tr>
<td>130091B</td>
<td>Underwater Bridge Repair, Rehabilitation, and Countermeasures (December 2009)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$30.00</td>
</tr>
<tr>
<td>130092</td>
<td>Fundamentals of LRFR and Applications of LRFR for Bridge Superstructures (September 2013)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$40.00</td>
</tr>
<tr>
<td>130092A</td>
<td>Load and Resistance Factor Rating for Highway Bridges (September 2013)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$40.00</td>
</tr>
<tr>
<td>130092B</td>
<td>Fundamentals of LRFR and Applications of LRFR for Bridge Superstructures (September 2013)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$40.00</td>
</tr>
<tr>
<td>130093</td>
<td>LRFD Seismic Analysis and Design of Bridges (February 2011)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$75.00</td>
</tr>
<tr>
<td>130093</td>
<td>LRFD Seismic Analysis and Design of Bridges (July 2013)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>130093</td>
<td>LRFD Seismic Analysis and Design of Bridges-Design Examples (July 2014)</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$50.00</td>
</tr>
<tr>
<td>130093A</td>
<td>LRFD Seismic Analysis and Design of Bridges (February 2011)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$75.00</td>
</tr>
<tr>
<td>Course Number</td>
<td>Material Name</td>
<td>Format</td>
<td>Type</td>
<td>Price</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>---------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>130093A</td>
<td>LRFD Seismic Analysis and Design of Bridges-Design Examples (July 2014)</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$50.00</td>
</tr>
<tr>
<td>130095</td>
<td>LRFD and Analysis of Curved Steel Highway Bridges (February 2011)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$70.00</td>
</tr>
<tr>
<td>130095</td>
<td>LRFD and Analysis of Curved Steel Highway Bridges (February 2011)-Compact Disc</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$20.00</td>
</tr>
<tr>
<td>130095A</td>
<td>LRFD and Analysis of Curved Steel Highway Bridges (February 2011)-Compact Disc</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$20.00</td>
</tr>
<tr>
<td>130095B</td>
<td>LRFD and Analysis of Curved Steel Highway Bridges (February 2011)-Compact Disc</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$20.00</td>
</tr>
<tr>
<td>130096</td>
<td>Design Criteria for Arch and Cable Stayed Signature Bridges (February 2012)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$70.00</td>
</tr>
<tr>
<td>130096</td>
<td>Design Criteria for Arch and Cable Stayed Signature Bridges (February 2012)</td>
<td>Electronic Copy</td>
<td>RM</td>
<td>$20.00</td>
</tr>
<tr>
<td>130096</td>
<td>Design Criteria for Arch and Cable Stayed Signature Bridges (March 2013)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$40.00</td>
</tr>
<tr>
<td>131050</td>
<td>Asphalt Pavement In-Place Recycling Techniques (March 2013)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>132013</td>
<td>Geosynthetics Engineering Workshop (RM)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$40.00</td>
</tr>
<tr>
<td>132013A</td>
<td>Geosynthetic Design And Construction Guidelines (March 2009)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>132013A</td>
<td>Geosynthetics Engineering Workshop</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$40.00</td>
</tr>
<tr>
<td>132013B</td>
<td>Geosynthetics Engineering Workshop</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$40.00</td>
</tr>
<tr>
<td>132013C</td>
<td>Geosynthetics Engineering Workshop</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$40.00</td>
</tr>
<tr>
<td>132013D</td>
<td>Geosynthetics Engineering Workshop</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$40.00</td>
</tr>
<tr>
<td>132014</td>
<td>Drilled Shafts: Construction Procedures and LRFD Design Methods (May 2010)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$50.00</td>
</tr>
<tr>
<td>132033</td>
<td>Soil Slope and Embankment Design (September 2005)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$40.00</td>
</tr>
<tr>
<td>132035</td>
<td>Rock Slopes - Module 5 - Reference Manual</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$50.00</td>
</tr>
<tr>
<td>132035</td>
<td>Rock Slopes - Module 5 - Student Exercises (August 1999)</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$50.00</td>
</tr>
<tr>
<td>132036</td>
<td>Earth Retaining Structures (RM)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$50.00</td>
</tr>
<tr>
<td>132036</td>
<td>Soil Nail Walls Reference Manual-GEC 7 (February 2015)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$40.00</td>
</tr>
<tr>
<td>132037</td>
<td>Shallow Foundations - Module 7 - Reference Manual</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$50.00</td>
</tr>
<tr>
<td>132037</td>
<td>Shallow Foundations (April 2012)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$40.00</td>
</tr>
<tr>
<td>132040</td>
<td>Geotechnical Aspects of Pavements (June 2010)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$40.00</td>
</tr>
<tr>
<td>132041</td>
<td>Geotechnical Instrumentation - Module 11 - Reference Manual</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$50.00</td>
</tr>
<tr>
<td>132042</td>
<td>Corrosion/Degradation of Soil Reinforcements for MSE/RSS (November 2009)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$40.00</td>
</tr>
<tr>
<td>132042</td>
<td>Design of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes-Vol 1 (March 2012)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$40.00</td>
</tr>
<tr>
<td>Course Number</td>
<td>Material Name</td>
<td>Format</td>
<td>Type</td>
<td>Price</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>--------------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>132042</td>
<td>Design of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes-Vol 2 (March 2012)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$40.00</td>
</tr>
<tr>
<td>132043</td>
<td>Design of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes-Vol 1 (March 2012)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$40.00</td>
</tr>
<tr>
<td>132043</td>
<td>Design of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes-Vol 2 (March 2012)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$40.00</td>
</tr>
<tr>
<td>132069</td>
<td>Driven Pile Foundation Inspection - Participant Workbook (July 2006)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>132069</td>
<td>Plan Set Handout Driven Pile Foundation Inspection Course (October 2002)</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$60.00</td>
</tr>
<tr>
<td>132070</td>
<td>Drilled Shaft Foundation Inspection - Participant Workbook (December 2002)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>132070</td>
<td>Drilled Shaft Inspector's Course - Plan Set Handout</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$50.00</td>
</tr>
<tr>
<td>132070B</td>
<td>Drilled Shaft Foundation Inspection - Participant Workbook (December 2002)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>132070B</td>
<td>Drilled Shaft Inspector's Course - Plan Set Handout</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$50.00</td>
</tr>
<tr>
<td>132081</td>
<td>Highway Slope Maintenance and Slide Restoration -- Participant Workbook</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>132081</td>
<td>Highway Slope Maintenance and Slide Restoration -- Reference Manual</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$50.00</td>
</tr>
<tr>
<td>132082</td>
<td>LFRD for Highway Bridge Substructures and Earth Retaining Structures (Feb 2012)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$50.00</td>
</tr>
<tr>
<td>132082</td>
<td>LFRD for Highway Bridge Substructures and Earth Retaining Structures (Feb 2014)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>132083</td>
<td>Implementation of LRFD Geotechnical Design for Bridge Foundations (February 2011)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$20.00</td>
</tr>
<tr>
<td>132094</td>
<td>LRFD Seismic Analysis and Design of Transportation Structures, Features and Foundations (Feb 2012)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>132094</td>
<td>LRFD Seismic Analysis and Design of Transportation Structures, Features and Foundations (Feb 2012)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$75.00</td>
</tr>
<tr>
<td>132094</td>
<td>LRFD Seismic Analysis and Design of Transportation Structures,...Design Examples (April 2012)</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$75.00</td>
</tr>
<tr>
<td>132094A</td>
<td>LRFD Seismic Analysis and Design of Transportation Structures, Features and Foundations (Feb 2012)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$75.00</td>
</tr>
<tr>
<td>132094A</td>
<td>LRFD Seismic Analysis and Design of Transportation Structures,...Design Examples (April 2012)</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$75.00</td>
</tr>
<tr>
<td>132094B</td>
<td>LRFD Seismic Analysis and Design of Transportation Structures, Features and Foundations(August 2011)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>132094B</td>
<td>LRFD Seismic Analysis and Design of Transportation Structures, Features and Foundations(August 2011)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$75.00</td>
</tr>
<tr>
<td>132094B</td>
<td>LRFD Seismic Analysis and Design of Transportation Structures,...Design Examples (April 2012)</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$75.00</td>
</tr>
<tr>
<td>133075</td>
<td>Freeway Management And Operations - Participant Workbook (August 2005)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>Course Number</td>
<td>Material Name</td>
<td>Format</td>
<td>Type</td>
<td>Price</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>-------------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>133075A</td>
<td>Freeway Management And Operations - Participant Workbook (August 2005)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>133078</td>
<td>Access Management Location and Design (February 2007)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>133099</td>
<td>Managing Travel For Planned Events - CD (September 2005)</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$20.00</td>
</tr>
<tr>
<td>133099</td>
<td>Managing Travel For Planned Events - Participant Workbook (September 2005)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>133099A</td>
<td>Managing Travel for Planned Special Events</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>133115</td>
<td>Advanced Work Zone Management and Design (August 2007)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$20.00</td>
</tr>
<tr>
<td>133115</td>
<td>Advanced Work Zone Management and Design (August 2007)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$40.00</td>
</tr>
<tr>
<td>133120</td>
<td>WZ Traffic Analysis Applications and Decision Framework-PW</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>133121</td>
<td>Traffic Signal Design and Operations (Dec 2011)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>133122</td>
<td>Traffic Signal Timing Concepts (May 2014)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>133123</td>
<td>Implementing Successful Advanced Traffic Signal System Projects Including Adaptive Control</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>133124</td>
<td>Performance Management of Traffic Signal Systems (March 2014)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>133125</td>
<td>Successful Traffic Signal Management: The Basic Service Approach (May 2014)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>134005</td>
<td>VALUE ENGINEERING (February 2013)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$30.00</td>
</tr>
<tr>
<td>134005A</td>
<td>VALUE ENGINEERING (AUGUST 2010)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$30.00</td>
</tr>
<tr>
<td>134005B</td>
<td>VALUE ENGINEERING (February 2013)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$30.00</td>
</tr>
<tr>
<td>134005C</td>
<td>VALUE ENGINEERING (February 2013)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$30.00</td>
</tr>
<tr>
<td>134037A</td>
<td>Managing Highway Contract Claims: Analysis And Avoidance - Participant Notes (September 2004)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>134042</td>
<td>MATERIALS CONTROL AND ACCEPTANCE QUALITY ASSURANCE (AUGUST 2009)</td>
<td>Electronic Copy</td>
<td>PW</td>
<td>$60.00</td>
</tr>
<tr>
<td>134042</td>
<td>MATERIALS CONTROL AND ACCEPTANCE QUALITY ASSURANCE (AUGUST 2009)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$60.00</td>
</tr>
<tr>
<td>134062A</td>
<td>Participant Workbook Volume I (November 2007)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$40.00</td>
</tr>
<tr>
<td>134062A</td>
<td>Participant Workbook Volume II (November 2007)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$40.00</td>
</tr>
<tr>
<td>134064</td>
<td>Transportation Construction Quality Assurance (June 2011)-1.5 Day Version</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>134064</td>
<td>Transportation Construction Quality Assurance Reference Manual</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$50.00</td>
</tr>
<tr>
<td>134064</td>
<td>Transportation Construction Quality Assurance Reference Manual</td>
<td>Electronic Copy</td>
<td>RM</td>
<td>Free</td>
</tr>
<tr>
<td>134064A</td>
<td>Transportation Construction Quality Assurance</td>
<td>Electronic Copy</td>
<td>RM</td>
<td>Free</td>
</tr>
<tr>
<td>135010</td>
<td>River Engineering For Highway Encroachments: Highways In The River Environment (December 2001)</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$50.00</td>
</tr>
<tr>
<td>135027</td>
<td>Errata for HEC-22 dtd September 2009 (Included in September 2013 Revision)</td>
<td>Electronic Copy</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>135027</td>
<td>Urban Drainage Design Manual, HEC-22 (Revised September 2013)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$50.00</td>
</tr>
<tr>
<td>Course Number</td>
<td>Material Name</td>
<td>Format</td>
<td>Type</td>
<td>Price</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>------------</td>
<td>------</td>
<td>--------</td>
</tr>
<tr>
<td>135027A</td>
<td>Highway Stormwater Pump Station Design (HEC-24)</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$40.00</td>
</tr>
<tr>
<td>135028</td>
<td>Highway Stormwater Pump Station Design HEC-24</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$50.00</td>
</tr>
<tr>
<td>135046</td>
<td>Evaluating Scour At Bridges, 5th Edition (HEC-18) (April 2013)</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$50.00</td>
</tr>
<tr>
<td>135046</td>
<td>Stream Instability, Bridge Scour, and Countermeasures: A Field Guide for Bridge Inspectors (Feb 2009)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$20.00</td>
</tr>
<tr>
<td>135046</td>
<td>Stream Stability at Highway Structures, 4th Edition (HEC-20)</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$50.00</td>
</tr>
<tr>
<td>135047</td>
<td>Stream Instability, Bridge Scour, and Countermeasures: A Field Guide for Bridge Inspectors (Feb 2009)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$20.00</td>
</tr>
<tr>
<td>135048</td>
<td>Countermeasure Design for Bridge Scour and Stream Instability</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$30.00</td>
</tr>
<tr>
<td>135048</td>
<td>HEC-23 Bridge Scour And Stream Instability Countermeasures-Vol I</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$20.00</td>
</tr>
<tr>
<td>135048</td>
<td>HEC-23 Bridge Scour And Stream Instability Countermeasures-Vol II</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$30.00</td>
</tr>
<tr>
<td>135048</td>
<td>Stream Instability, Bridge Scour, and Countermeasures: A Field Guide for Bridge Inspectors (Feb 2009)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$20.00</td>
</tr>
<tr>
<td>135056</td>
<td>Culvert Design for Aquatic Organism Passage: HEC-26, First Ed. (October 2010)</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$50.00</td>
</tr>
<tr>
<td>135056</td>
<td>Hydraulic Design of Highway Culverts-HDS 5 (April 2012)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$50.00</td>
</tr>
<tr>
<td>135065</td>
<td>Introduction to Highway Hydraulics-June 2008</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$50.00</td>
</tr>
<tr>
<td>135065</td>
<td>Introduction to Highway Hydraulics-HDS No. 4 (June 2008)</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$50.00</td>
</tr>
<tr>
<td>135080</td>
<td>student materials provided by instructor</td>
<td>Electronic Copy</td>
<td>OM</td>
<td>$20.00</td>
</tr>
<tr>
<td>135082</td>
<td>HEC-25 (Volume 2)-Highways in the Coastal Environment: Assessing Exposure to Extreme Events</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$30.00</td>
</tr>
<tr>
<td>135082</td>
<td>Highways in the Coastal Environment (HEC-25)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$40.00</td>
</tr>
<tr>
<td>135085</td>
<td>PLAN OF ACTION (POA) FOR SCOUR CRITICAL BRIDGES - CD (MAY 2007)</td>
<td>Hard Copy</td>
<td>PP</td>
<td>Free</td>
</tr>
<tr>
<td>135090</td>
<td>Hydraulic Design of Safe Bridges-HDS-7 (April 2012)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$50.00</td>
</tr>
<tr>
<td>136106</td>
<td>TRANSPORTATION ASSET MANAGEMENT (June 2013)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>136106A</td>
<td>Introduction to Transportation Asset Management (June 2013)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>137030</td>
<td>Principles and Tools for Road Weather Management</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$50.00</td>
</tr>
<tr>
<td>137030</td>
<td>Principles And Tools For Road Weather Management - Case Study Handout (November 2005)</td>
<td>Hard Copy</td>
<td>OM</td>
<td>$40.00</td>
</tr>
<tr>
<td>137030</td>
<td>Principles And Tools For Road Weather Management - Participant Workbook (November 2005)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>137046</td>
<td>NHI Using IDAS Data</td>
<td>Electronic Copy</td>
<td>EF</td>
<td>Free</td>
</tr>
<tr>
<td>139003</td>
<td>Advanced Freight Planning</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>139004</td>
<td>Principles of Effective Commercial Motor Vehicle (CMV) Size and Weight Enforcement (Dec 2013)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>139005</td>
<td>Linking Freight to Planning and the Environment (PW)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>Course Number</td>
<td>Material Name</td>
<td>Format</td>
<td>Type</td>
<td>Price</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>---------------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>141029</td>
<td>Basic Relocation under the Uniform Act, Participant Workbook (September 2011)</td>
<td>Hard Copy PW</td>
<td></td>
<td>$40.00</td>
</tr>
<tr>
<td>141030</td>
<td>Advanced Relocation (June 2006)</td>
<td>Hard Copy PW</td>
<td></td>
<td>$40.00</td>
</tr>
<tr>
<td>141031</td>
<td>Business Relocation, Participant Workbook (February 2013)</td>
<td>Hard Copy PW</td>
<td></td>
<td>$30.00</td>
</tr>
<tr>
<td>141043</td>
<td>Appraisal for Federal-Aid Highway Programs (May 2013)</td>
<td>Hard Copy PW</td>
<td></td>
<td>$30.00</td>
</tr>
<tr>
<td>141050</td>
<td>Introduction to Federal-Aid Right-of-Way Requirements for Local Public Agencies (August 2010)</td>
<td>Hard Copy PW</td>
<td></td>
<td>$50.00</td>
</tr>
<tr>
<td>142005</td>
<td>NEPA And The Transportation Decision Making Process (July 2011)</td>
<td>Hard Copy PW</td>
<td></td>
<td>$50.00</td>
</tr>
<tr>
<td>142042</td>
<td>Fundamentals Of Title VI / Environmental Justice PW (February 2007)</td>
<td>Hard Copy PW</td>
<td></td>
<td>$50.00</td>
</tr>
<tr>
<td>142046</td>
<td>Bicycle Facility Design (July 2013)</td>
<td>Hard Copy PW</td>
<td></td>
<td>$50.00</td>
</tr>
<tr>
<td>142047</td>
<td>Water Quality Management of Highway Runoff PW/RM</td>
<td>Hard Copy PW</td>
<td></td>
<td>$50.00</td>
</tr>
<tr>
<td>142049</td>
<td>Beyond Compliance: Historic Preservation In Transportation Project Development - Exercise 4 (July 07)</td>
<td>Hard Copy OM</td>
<td></td>
<td>$20.00</td>
</tr>
<tr>
<td>142049</td>
<td>Beyond Compliance: Historic Preservation In Transportation Project Development (July 2012)</td>
<td>Hard Copy PW</td>
<td></td>
<td>$50.00</td>
</tr>
<tr>
<td>142049</td>
<td>Beyond Compliance: Historic Preservation In Transportation Project Development - Exercise 3 (July 07)</td>
<td>Hard Copy OM</td>
<td></td>
<td>$20.00</td>
</tr>
<tr>
<td>142049</td>
<td>Beyond Compliance: Historic Preservation In Transportation Project Development - Exercise 2 (July 07)</td>
<td>Hard Copy OM</td>
<td></td>
<td>$20.00</td>
</tr>
<tr>
<td>142054</td>
<td>Design And Implementation Of Erosion And Sediment Control - Participant Workbook (December 2006)</td>
<td>Hard Copy PW</td>
<td></td>
<td>$30.00</td>
</tr>
<tr>
<td>142055</td>
<td>Advanced Seminar on Transportation Project Development: Navigating the NEPA Maze (December 2008)</td>
<td>Hard Copy PW</td>
<td></td>
<td>$40.00</td>
</tr>
<tr>
<td>152054</td>
<td>INTRODUCTION TO URBAN TRAVEL DEMAND FORECASTING (February 2012)</td>
<td>Hard Copy PW</td>
<td></td>
<td>$50.00</td>
</tr>
<tr>
<td>231028</td>
<td>Using the AASHTO Audit Guide for the Procurement and Administration of A/E Contracts (Feb 2012)</td>
<td>Hard Copy PW</td>
<td></td>
<td>$35.00</td>
</tr>
<tr>
<td>231029</td>
<td>Using AASHTO Audit Guide for Development of A/E Consultant Indirect Cost Rates (Feb 2012)</td>
<td>Hard Copy PW</td>
<td></td>
<td>$50.00</td>
</tr>
<tr>
<td>231030</td>
<td>Using AASHTO Audit Guide for Auditing and Oversight of A/E Consultant Indirect Cost Rate (Feb 2012)</td>
<td>Hard Copy PW</td>
<td></td>
<td>$50.00</td>
</tr>
<tr>
<td>310110</td>
<td>Federal-Aid Highways-101 (April 2014)</td>
<td>Hard Copy PW</td>
<td></td>
<td>$50.00</td>
</tr>
<tr>
<td>361032</td>
<td>Test Material Log</td>
<td>Hard Copy BK</td>
<td></td>
<td>$200.00</td>
</tr>
<tr>
<td>380005</td>
<td>Railroad-Highway Grade Crossing Improvement Program - Participant Workbook (July 2011)</td>
<td>Hard Copy PW</td>
<td></td>
<td>$50.00</td>
</tr>
<tr>
<td>380034</td>
<td>Design Construction And Maintenance Of Highway Safety Features And Appurtenances - Participant Workb</td>
<td>Hard Copy PW</td>
<td></td>
<td>$60.00</td>
</tr>
<tr>
<td>380034A</td>
<td>Design Construction And Maintenance Of Highway Safety Features And Appurtenances - Participant Workb</td>
<td>Hard Copy PW</td>
<td></td>
<td>$60.00</td>
</tr>
<tr>
<td>Course Number</td>
<td>Material Name</td>
<td>Format</td>
<td>Type</td>
<td>Price</td>
</tr>
<tr>
<td>---------------</td>
<td>---------------</td>
<td>--------------</td>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>380034B</td>
<td>Design Construction And Maintenance Of Highway Safety Features And Appurtenances - Participant Workb</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$60.00</td>
</tr>
<tr>
<td>380069</td>
<td>Desktop Reference for Crash Reduction Factors (September 2007)</td>
<td>Electronic Copy</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>380069</td>
<td>FHWA Road Safety Audit Guidelines (June 2006)</td>
<td>Electronic Copy</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>380069</td>
<td>Road Safety Audits/Assessments Participant Workbook (August 2008)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>380069</td>
<td>Road Safety Audits: Case Studies (December 2006)</td>
<td>Electronic Copy</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>380069</td>
<td>Toolbox of Countermeasures &amp; Their Potential Effectiveness for Intersection Crashes (September 2007)</td>
<td>Electronic Copy</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>380069</td>
<td>Toolbox of Countermeasures &amp; Their Potential Effectiveness for Pedestrian Crashes (September 2007)</td>
<td>Electronic Copy</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>380069</td>
<td>Toolbox of Countermeasures &amp; Their Potential Effectiveness for Roadway Departure Crashes (Sept 2007)</td>
<td>Electronic Copy</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>380069</td>
<td>Traffic Signals (September 2007)</td>
<td>Electronic Copy</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>380071</td>
<td>Interactive Highway Safety Design Model (December 2013)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>380073</td>
<td>Fundamentals of Planning, Design and Approval of Interchange Improvements...(February 2010)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>380075</td>
<td>Desktop Reference for Crash Reduction Factors (September 2007)</td>
<td>Electronic Copy</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>380075</td>
<td>New Approaches To Highway Safety Analysis - Reference Manual (February 2006)</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$50.00</td>
</tr>
<tr>
<td>380075</td>
<td>New Approaches to Highway Safety Analysis Participant Workbook (April 2011)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>380075</td>
<td>Toolbox of Countermeasures &amp; Their Potential Effectives for Intersection Crashes (September 2007)</td>
<td>Electronic Copy</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>380075</td>
<td>Toolbox of Countermeasures &amp; Their Potential Effectives for Pedestrian Crashes (September 2007)</td>
<td>Electronic Copy</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>380075</td>
<td>Toolbox of Countermeasures &amp; Their Potential Effectives for Roadway Departure Crashes (Sept 2007)</td>
<td>Electronic Copy</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>380075</td>
<td>Traffic Signals (September 2007)</td>
<td>Electronic Copy</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>380076</td>
<td>Desktop Reference for Crash Reduction Factors (September 2007)</td>
<td>Electronic Copy</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>380076</td>
<td>Low Cost Safety Improvements Workshop - Participant Workbook (February 2010)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>380076</td>
<td>Toolbox of Countermeasures &amp; Their Potential Effectiveness for Intersection Crashes (September 2007)</td>
<td>Electronic Copy</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>380076</td>
<td>Toolbox of Countermeasures &amp; Their Potential Effectiveness for Pedestrian Crashes (September 2007)</td>
<td>Electronic Copy</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>380076</td>
<td>Toolbox of Countermeasures &amp; Their Potential Effectiveness for Roadway Departure Crashes (Sept 2007)</td>
<td>Electronic Copy</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>Course Number</td>
<td>Material Name</td>
<td>Format</td>
<td>Type</td>
<td>Price</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-------</td>
</tr>
<tr>
<td>380076</td>
<td>Traffic Signals (September 2007)</td>
<td>Electronic</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>380077</td>
<td>Desktop Reference for Crash Reduction Factors (September 2007)</td>
<td>Electronic</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>380077</td>
<td>Toolbox of Countermeasures &amp; Their Potential Effectiveness for Intersection Crashes (September 2007)</td>
<td>Electronic</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>380077</td>
<td>Toolbox of Countermeasures &amp; Their Potential Effectiveness for Pedestrian Crashes (September 2007)</td>
<td>Electronic</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>380077</td>
<td>Toolbox of Countermeasures &amp; Their Potential Effectiveness for Roadway Departure Crashes (Sept 2007)</td>
<td>Electronic</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>380077</td>
<td>Traffic Signals (September 2007)</td>
<td>Electronic</td>
<td>OM</td>
<td>Free</td>
</tr>
<tr>
<td>380089</td>
<td>Designing for Pedestrian Safety - Participant Workbook (April 2012)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>380095</td>
<td>Highway Design: Applying Flexibility &amp; Risk Management (January 2013)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>380100</td>
<td>Interactive Highway Safety Design Model - Web-based course-Participant Workbook</td>
<td>Electronic</td>
<td>PW</td>
<td>$50.00</td>
</tr>
<tr>
<td>420050</td>
<td>How to Create and Deliver a Dynamic Presentation (April 2010)</td>
<td>Hard Copy</td>
<td>PW</td>
<td>$30.00</td>
</tr>
<tr>
<td>N/A</td>
<td>FHWA-NHI-132037 Shallow Foundations</td>
<td>Hard Copy</td>
<td>RM</td>
<td>$50.00</td>
</tr>
</tbody>
</table>
# NATIONAL HIGHWAY INSTITUTE (NHI)

Division of FHWA Office of Technical Services

1310 N Courthouse Road, Suite 300
Arlington, VA 22201
Phone: 703-235-0500 or Toll Free 877-558-6873
Fax: 703-235-0593

## Main Contacts

<table>
<thead>
<tr>
<th>Questions About?</th>
<th>E-mail</th>
<th>Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHI Training</td>
<td><a href="mailto:nhitraining@dot.gov">nhitraining@dot.gov</a></td>
<td>703-235-0534</td>
</tr>
<tr>
<td>General Inquiries</td>
<td><a href="mailto:nhicustomerservice@dot.gov">nhicustomerservice@dot.gov</a></td>
<td>703-235-0500</td>
</tr>
<tr>
<td>Instructors</td>
<td><a href="mailto:nhiinstructorliaison@dot.gov">nhiinstructorliaison@dot.gov</a></td>
<td>703-235-0952</td>
</tr>
<tr>
<td>Materials</td>
<td><a href="mailto:nhimaterials@dot.gov">nhimaterials@dot.gov</a></td>
<td>703-235-0552</td>
</tr>
</tbody>
</table>