
**Sample
Instructor Guide**

Truncated Version



U.S. Department of Transportation
Federal Highway Administration



**Publication No. FHWA-NHI-
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About the Instructor Guide

The instructor guide is designed to be a comprehensive tool for facilitating the course. Thoroughly reviewing this document, as well as all related course materials and resources, will prepare you to teach the course.

The format for each page of the main instructional content is listed and described below. This information is provided so you can utilize these elements appropriately and effectively as you prepare to teach.

Slides – The facilitation of the course is supported by a PPT presentation. Each slide in the presentation is displayed in the instructor guide, with relevant facilitation information below it.

Key Message – The key message provides helpful guidance to make transitions between slides, activities, or lessons. It also serves as a summary of the information to be discussed for each slide. The key message is not intended to be a script and should not be read to the class.

Facilitation Guidance – It is expected that, as a subject matter expert, you do not need guidance on what to say for each slide beyond that which is provided in the key message and background. However, often a slide contains animation, requires questions be asked, or includes an activity or video. In these instances, instructions are provided so you are able to facilitate the content as the course designer intended. These detailed instructions include information on timing, activity length, materials needed, directions to participants, and answers to questions.

Background – Whenever relevant, the background section is included to provide supplemental information to the slide content. Although you, as a subject matter expert, already possess this knowledge, it may serve as a reminder of any content that should be communicated to participants before advancing to the next topic or serve as a handy resource for detailed content, such as legal references, report titles, or dates.

Notes – This section lists specific references that support the content and may be of use to participants. It also includes considerations pertaining to facilitation.

CACC Manual Page – This course draws heavily on the information contained in the *Contract Administration Core Curriculum Manual*. Participants each have a copy of this manual and are encouraged to use it as a reference as the course is taught. The corresponding manual page is noted for your reference and is also found in the participant workbook.

Activity Time - This section indicates the overall length of the lesson or an activity. It may also be used to indicate recommended timing for breaks.

Preparation – This section appears at the beginning of every lesson under the lesson title slide. It indicates all steps you need to take to prepare for facilitation of the lesson.

Lesson Resources - This section appears at the beginning of every lesson under the lesson title slide. It indicates all materials that you should have on hand to teach the lesson and any ancillary resources used to develop the content.

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National Highway Institute (NHI) has been accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET).

NHI is authorized by IACET to offer **1.3 CEUs** for this program (NHI 134077 Contract Administration Core Curriculum).

Course Description

This is a 2-day course designed to explore contract provisions, administrative procedures, and applicable policies related to administering Federal-aid construction contracts. The class focuses on each stage of project development and the relevant contract procedures, policies, and requirements. Participants are provided with the *Contract Administration Core Curriculum Manual* and taught to utilize its contents to navigate the many requirements associated with Federal-aid contract administration.

Participants engage in a series of activities that help them explore their roles and responsibilities and allow them to apply the guidance provided during the course. In addition, the content is supplemented with examples and resources to support participants' successful application of the course content during future contract administration assignments.

It is recommended that participants new to administering Federal-aid contracts take one of the National Highway Institute's (NHI) introductory courses to the Federal-aid Highway Program (NHI 310110, 310115, or 310109) prior to attending this course. A basic understanding of the background and structure of the Federal-aid Highway Program is expected for participants attending this course.

Target Audience Description

The target audience for this class is as follows.

- Federal Highway Administration (FHWA) Division Office personnel who must read, interpret, and apply Federal regulations and guidance that affects administration of Federal-aid contracts
- State and local government agency personnel who must interpret and apply Federal regulations and guidance that affects administration of Federal-aid contracts

Course Goal

The goal of this course is to make participants aware of their roles and responsibilities when administering Federal-aid contracts in order to promote the effective and efficient use of Federal funds.

Course Learning Outcomes

- Use the *Contract Administration Core Curriculum Manual* and other FHWA resources in order to answer questions regarding program-level and project-level requirements on Federal-aid projects
- Describe the impact program-level contract requirements have on a Federal-aid project
- Identify the contract requirements associated with administering Federal-aid projects for Federal and State oversight entities at the pre-award, advertising and award, and post-award and construction stages

Class Size

This class is designed to accommodate a minimum of 20 participants and a maximum of 30 participants.

Classroom Setup

For the purposes of this course, the most desirable setup for the classroom would be group seating that can accommodate 5-6 participants at each group. Ideally there would be no more than 6 groups and no fewer than 4.

Course Organization

This course is organized by module. Within each module there may be multiple lessons. The modules in this course are as follows.

- Module 1 Course Overview
 - Lesson 1.1 Introductions and Course Administration
 - Lesson 1.2 Federal-aid Highway Program (FAHP) Basics Review
- Module 2 Contract Administration: Pre-award Phase
 - Lesson 2.1 Preparing the PS&E for Approval
 - Lesson 2.2 Preparing a Bid Package
- Module 3 Contract Administration: Advertising and Award Phase
 - Lesson 3.1 Project Advertisement, Bid Review, and Award
- Module 4 Contract Administration: Post-award and Construction Phase
 - Lesson 4.1 Supervising Agency Requirements
 - Lesson 4.2 Labor and Employment-related Post-award Requirements
 - Lesson 4.3 Other Post-award Requirements
 - Lesson 4.4 Contract Changes and Other Post-award Issues
 - Lesson 4.5 Project Closeout
- Conclusion
 - Review
 - Exam

Course Agenda

Scheduled Time	Lesson	Duration
Day 1		
8:00 – 8:35	Lesson 1.1	35
8:35 – 9:15	Lesson 1.2 (up to Stewardship & Oversight presentation)	40 (out of 105)
9:15 – 9:35	S & O Presentation	20 (out of 105)
9:35 – 9:50	<i>Break</i>	15
9:50 – 10:35	Lesson 1.2 continued	45 (out of 105)
10:35 – 11:30	Lesson 2.1	55 (out of 160)
11:30 – 12:30	<i>Lunch</i>	60
12:30 – 2:15	Lesson 2.1 continued	105 (out of 160)
2:15 – 2:30	<i>Break</i>	15
2:30 – 3:30	Lesson 2.2	60
3:30 – 4:25	Lesson 3.1	55 (out of 90)
4:25 – 4:30	Wrap-up and Homework	5
Day 2		
8:00 – 8:15	Review	15
8:15 – 8:50	Lesson 3.1 continued	35 (out of 90)
8:50 – 9:15	Lesson 4.1	25
9:15 – 11:10	Lesson 4.2 (<i>break as necessary during activity</i>)	115
11:10 – 11:30	Lesson 4.3	20
11:30 – 12:30	<i>Lunch</i>	60
12:30 – 1:45	Lesson 4.4	75
1:45 – 2:20	Lesson 4.5	35
2:20 – 2:35	<i>Break</i>	15
2:35 – 3:15	Conclusion: Review; Parking Lot; Administrative Matters	40
3:15 – 4:00	Exam	45

Instructor Presentation Checklists

The following is a general list of instructor presentation requirements.

Before the First Day of Classroom Training

1. Confirm the training dates, location, and number of participants.
2. Send “Host Pre-Training” email and confirm date and time for pre-training conference call.
3. Confirm that special accommodations have been arranged for any participant with a disability.
4. Facilitate pre-training conference call with the host.
5. Submit the “State Stewardship and Oversight Agreement” PPT to the FHWA Division office and confirm the time allotted for that presentation with the presenter.
6. Ask the FHWA Division office to provide their current organizational chart to the lead instructor.
7. Read and study the instructor guide, PowerPoint presentation, *Contract Administration Core Curriculum Manual*, and *State Stewardship and Oversight Agreement*.
8. Review all *Federal-aid Essentials* videos (<http://www.fhwa.dot.gov/federal-aidessentials/>) and Office of Inspector General *Fraud Awareness on False Statements and Claims* video.
 - Stewardship and Oversight*
 - Funding Basics and Eligibility*
 - Project Advertisement, Bid Review, and Request for Concurrence in Award*
 - Supervising Agency Requirements (Responsible Charge)*
 - Fraud Awareness on False Statements and Claims*
9. Review all activities and familiarize yourself with the participant workbook.
10. Arrange for equipment and supplies with the host or local coordinator. Ensure you have the following.
 - Computer loaded with MS PowerPoint 2010 or later
 - Internet access and guest login information, if available
 - Confirmation that the State allows access to www.YouTube.com (not firewalled)
 - LCD projector compatible with a notebook computer, e.g., InFocus or similar make
 - Cables to connect projector to computer, if necessary
 - Spare projector bulb, if possible
 - Electronic remote device to advance slides in PowerPoint Presentation, if available
 - Speakers to project audio for video clips played via the laptop or PC

- Projection screen
- Microphone, wireless if available
- Power strip
- Twenty-foot or longer extension cord
- Whiteboard with Dri Mark pens and eraser
- Flip charts (at least two)
- Large markers, assorted colors (at least two sets)
- Large black markers for student name tents (at least one marker for every two participants)
- Masking tape (at least one roll)

11. Ensure you have the following materials.

- Instructor guide (one copy for each instructor)
- PowerPoint Presentation
- Contract Administration Core Curriculum Manual*
- Federal-aid Essential videos
- Office of Inspector General *Fraud Awareness on False Statements and Claims* video
- End-of-course exam (one copy for each participant)
- Exam answer key
- List of participants, if available
- Special handouts, visual aids, activity materials, etc.
- State National Highway System (NHS) route map for Lesson 1.2, with URL if available

12. Confirm the training facility's hours of operation with the host and obtain directions on how to gain access and where to park.

13. Request (and emphasize) that the room should be set up to maximize interaction among the whole class and the small groups (tables accommodating 6 people, with no need to turn chairs around to see instructor).

14. Coordinate with host to prepare certificates.

During the Classroom Sessions

1. Arrive early. Give yourself plenty of time to get organized.
2. Ensure the room is set up properly, e.g., tables and chairs are arranged to maximize whole-class and small-group interaction without participants needing to turn chairs around, projectors do not block participants' lines of sight, flip charts are convenient to you and

visible to participants, and so forth.

3. Test the equipment.
4. Arrange materials so they are convenient for you and the participants. On the first day, ensure each participant's place has the following.
 - One NHI participant registration form
 - One copy of the participant workbook
 - One copy of the *Contract Administration Core Curriculum Manual*
 - One tent card
 - One pencil
 - One black marker for every two participants (so they can write their names on the tent card)
5. Start on time and stay on track. Keep exercises within their time limits. End discussions when they cease to be productive.
6. Closely monitor group activities. Walk among groups as they work; answer questions and offer guidance as appropriate. Give constructive feedback during the share-out sessions and discussions.
7. Post necessary information for completing NHI forms, e.g., instructor numbers, session identification numbers, and course number at the front of the room.
8. Provide clear directions on completing registration forms and session rosters.
9. Circulate the session roster in the morning and after lunch each day.

At the End of the Final Day

1. Ensure that each participant completes a course evaluation.
2. Distribute course certificates.
3. Post instructor contact information, if desired.
4. Collect all of the following:
 - NHI participant registration forms
 - Course evaluations
 - End-of-course exams
 - Session roster

After the Session

1. Remove all items from the room, including flip chart notes and extra training materials, and dispose as the host directs.
2. Complete the instructor section on all participant registration forms. Record:

- Attendance (100% attendance is required in order to award Continuing Education Credit)
 - Exam score (70% or better is required to pass)
 - Pass or fail status (To pass the course overall, a participant must have an exam score of 70% or higher and have 100% attendance.)
3. Review registration and course evaluation forms. Ensure all information is completed by the participants.
 4. Return completed registration forms, course evaluations, session rosters, and coversheets to the NHI Training Program Manager.

Host Pre-Training Requirements Sample Email

TO: {Host or Local coordinator}, {FHWA Division Contact}
FROM: {Instructor}
DATE: {Date}
SUBJECT: NHI 134077 CACC {date} Session Coordination Meeting

We look forward to leading this 2-day course from **{insert session dates}**. Typically, this class **begins at 8:00 a.m. It is scheduled to end at 4:30 p.m. on Day 1 and at 4:00 p.m. on Day 2.** Please let us know if adjustments need to be made to that schedule.

This course is intended to provide a comprehensive overview of Federal-aid contract administration and introduce a key resource, the *Contract Administration Core Curriculum Manual*. It is expected that participants attending this class **already possess** a basic understanding of the Federal-aid Highway Program (FAHP). Anyone needing a refresher on the FAHP can take a free online training NHI 310115 (*Federal-aid 101*) before attending this class. Registration for the training is available on the National Highway Institute's Web site <http://www.nhi.fhwa.dot.gov/default.aspx>.

In addition, prior to attending class, participants need to watch the Federal-aid Essentials video *Stewardship and Oversight*. This video is roughly 8.5-minutes long and can be accessed using the following link <http://www.fhwa.dot.gov/federal-aidessentials/catmod.cfm?id=31>. Participants will be asked a series of questions on the video content during the first day of class.

We hope to customize some aspects of the course content to maximize its relevance for participants. To that end, we request that a representative from the local FHWA Division office make a presentation on the State *Stewardship and Oversight Agreement*. This presentation has the benefit of localizing the training and provides information on how the Division Office delegates responsibility. The presentation is allotted 20 minutes during the first day of class. Please see the agenda attached to this email for further details.

In addition, attached to this email is a list of questions pertaining to the administration of Federal-aid projects in your State. These questions serve as the basis for discussion during a pre-training conference call, tentatively scheduled for **{insert date}**. During the call we will address the technical needs of your agency, class expectations, and any special requests for areas of emphasis.

We need certain equipment in the classroom to facilitate the course as designed. Please confirm that you are able to furnish the following equipment and material for the class.

- Computer loaded with MS PowerPoint 2010 or later version
- Internet access with guest login information
- Instructor access to www.YouTube.com so Federal-aid Essential videos can be shown
- LCD projector compatible with a notebook computer, e.g., InFocus or similar make
- Cables to connect projector to computer, if necessary
- Spare projector bulb, if possible
- Electronic remote device to advance slides in PowerPoint Presentation, if available
- External speakers to project audio for video clips played via the laptop or PC
- Projection screen
- Microphone (wireless, if possible)
- Power strip
- Twenty-foot or longer extension cord
- Whiteboard with Dri Mark pens and eraser
- Flip charts (at least two)
- Large markers, assorted colors (at least two sets)
- Large black markers for student name tents (at least one marker for every two participants)
- Masking tape (at least one roll)

Please confirm that the room will be set up to maximize whole-class and small-group interactions (round or rectangle tables with six chairs, set up so that all participants can see and hear without turning chairs around).

If you have any concerns about accommodating this request, please contact me as soon as possible.

Please communicate your availability for **{date}** to participate in the pre-training conference call.

Thank you,

{Instructor}

{Email}

{Phone}

Questions for the State to Address Prior to the CACC Course

Location and Travel-related Questions

1. What is the physical street address for the classroom? (for GPS location)
2. What instructions or recommendations do you have for parking, including cost?
3. Are there security protocols the instructors must meet to enter/exit the training building?
4. What time can we access the building on the day before training or early on day of training?
5. Who is the contact person for making those arrangements?

What is his/her phone number? _____ Email? _____

State-specific FAHP Questions

6. What does your office intend that participants will learn from this training?
7. What does the State do that is exceptional?
8. Briefly describe typical projects in your State and size of your program.
9. What are some contract administration issues for the Division or State? Select any specific areas where issues occur.

- Local Program Administration (LPA)
- Form FHWA-1273
- Project Authorization
- Consultant Procurement
- Project Development
- Construction Oversight
- Safety Accident Prevention (worker or work zone)
- Value Engineering
- Force Account
- Proprietary Products
- Public Interest Findings (PIFs)
- Buy America
- FHWA Participation in Contract Changes
- Contract Time Determination
- Bid Rigging and Post Award Reviews
- Liquidated Damages
- Non Traditional Contracting Practices
- Emergency Relief (ER) Projects

10. Are claims increasing in the State? If so, what areas of contract administration may be causing this?
11. Does the State use “Partnering” with its construction projects?
12. Are there any specific concerns or issues that are hot right now in the State?
13. Have there been any controversial areas of an administrative nature between the State and the Division Office in the past year where this course might better explain the Federal position?
14. Please include a link to an electronic copy of your specification book.

FHWA Division Staff Questions

1. What is this FHWA Division doing that is exceptional?
2. Do you think the Division is comfortable contacting the Resource Center or Headquarters for technical assistance?
3. Do you have any recommendations for the Headquarters Staff or Resource Center Staff pertaining to how the Division can better serve your needs? After the workshop is completed, please feel free to revisit this question again.

Instructor-led Training Session Content

It is important for the instructor to **present this course as directed in the instructor guide**. “Hitting the mark” on the course goals and outcomes requires that all questions are answered completely and correctly, all participant activities are explored fully, and all videos are viewed and reviewed properly. **All of the questions and activities must be fully realized so that the learning comes from those activities** and the learning outcomes are mastered by the participants.

The intent of this course is to teach participants how to use a comprehensive resource (*CACC Manual*) to help them make lawful decisions about Federal-aid projects. Using knowledge they already have, sharing practices within small and large groups, and building knowledge through critical thinking are all ways that learners acquire knowledge about the requirements and apply the guidance provided in the *CACC Manual*. The instructor facilitates the activities and guides the conversation so that learners take away the ability to apply that knowledge in the field, internalize the best practices, and understand how use the *CACC Manual*. It is the instructor’s job to synthesize content and ideas so that participants can have that “Aha!” moment.

In other words, it is up to the instructor—with support and guidance from the instructor guide—to make this course relevant, exciting, and important.

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Module 1 Course Overview

Lesson 1.1 Introductions and Course Administration

Slides 1 and 2



Key Message: This module serves as an introduction to the course and the course content. This module includes introductions of the participants and instructors, a description of the course's organization and facilitation, and a high-level review of the Federal-aid program. The module includes content on Stewardship and Oversight (S&O) and provides an opportunity for the Division Office in the host State to present its own S&O Agreement to the participants.

Facilitation Guidance:

1. Post instructor contact information and NHI instructor ID numbers.
2. Welcome the participants to the course as they enter the room.
3. When everyone is seated, begin the course by giving a formal welcome and introducing yourself and co-instructors.

Note: NHI 310110, 310115, or 310109 *Federal-aid 101*, or equivalent knowledge, is a prerequisite for this course.

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Slide 3



Lesson 1.1
Introductions and Course
Administration

Key Message: This lesson introduces the *Contract Administration Core Curriculum (CACC)* course. At this point, you should establish your credibility as an expert facilitator in the content, the purpose of the course, and the importance of appropriately applying FAHP requirements.

Lesson Preparation:

- Verify that the following items are in the meeting room upon your arrival.
 - A copy of the NHI registration form for each participant to complete
 - A name tent card for each participant
 - The NHI Session roster
 - A copy of the participant workbook for each participant
 - A copy of the 2014 CACC Manual for each participant
 - Flip charts and pens
- Place name cards on the table.
- Arrange room so participants are seated in groups of 4-6.
- Prepare a flip chart with the title “Parking Lot. “

Lesson Resources

- CACC Manual
- CACC Participant Workbook
- NHI forms (session roster, participant registration)

Lesson Time: 35 minutes is allotted for this lesson.

Slide 4



Introductions



- Name
- Agency
- Job title
- Experience administering Federal-aid (FA) contracts

Key Message: Participant introductions offer you an opportunity to determine the level of experience participants have with Federal-aid contract administration activities and the areas with which participants struggle to fulfill their contract obligations.

Facilitation Guidance:

1. Facilitate introductions by asking each participant to introduce him or herself using the talking points listed on the slide. Allow 15 minutes for introductions.
2. Break participants into groups. Tell participants these group assignments are to be used for the remainder of the class.
3. Then direct participants to talk within each of their groups to identify one outcome they would like to achieve by the end of the course. Allow 2-3 minutes for this discussion.
4. Ask each group to select a representative to record the outcome on a flip chart at the front of the room.
5. Discuss the outcomes after all are posted, and indicate where in the course each outcome is addressed.

Activity Time: 25 minutes is allotted for participant introductions and the discussion (group work).

Slide 5

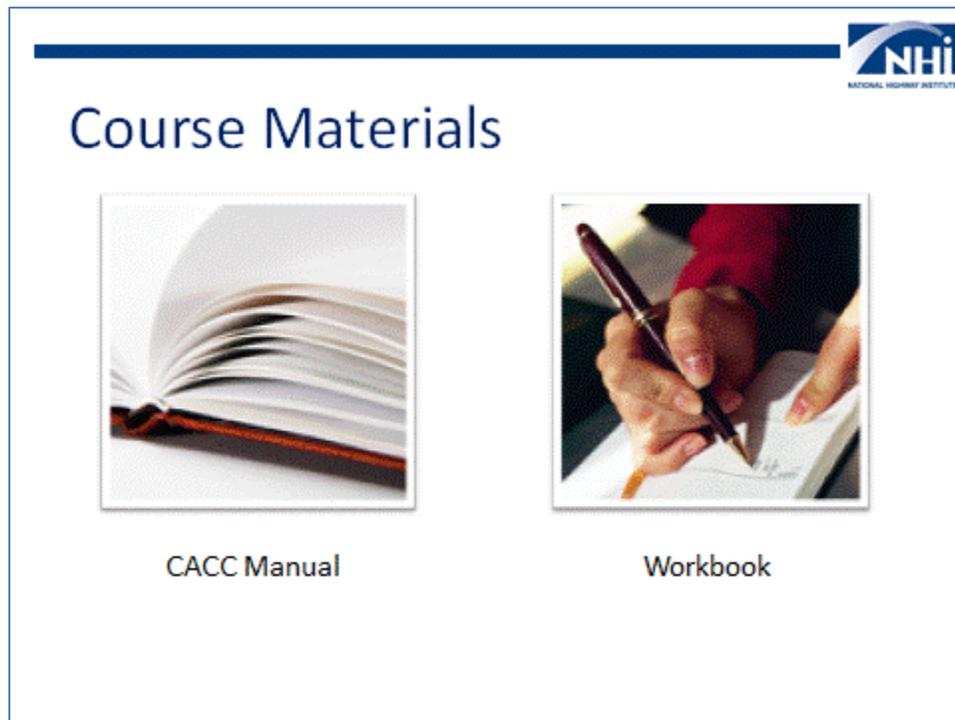


Why Are You Here?

- So you are
 - Fully aware of your roles and responsibilities when administrating FA contracts
 - Aware of the rules that support effective and efficient decisions regarding the use of Federal funds

Key Message: The goal of this course is to make participants aware of their roles and responsibilities when administering Federal-aid contracts in order to promote the effective and efficient use of Federal funds.

Slide 6



The slide features a blue header bar with the NHI logo (National Highway Institute) on the right. Below the header, the title "Course Materials" is centered in a large, dark blue font. Underneath the title are two square images. The left image shows an open book with many pages, labeled "CACC Manual". The right image shows a person's hands holding a pen and writing on a document, labeled "Workbook".

Key Message: One of the best resources for determining your responsibilities when administering Federal-aid contracts is the 2014 *Contract Administration Core Curriculum Manual*, which is provided as part of the materials for this course. Throughout, we will refer to this manual as “CACC” or “CACC Manual.” The CACC Manual is a valuable resource on Federal-aid requirements. It was developed to explain all of the policy, guidance, and memorandums as it relates to 23 CFR.

The course participant workbook is a companion document, indicating on each page the corresponding page in the manual, and containing slides, lists of resources, and information on the case studies.

Facilitation Guidance:

1. Complete a review of the CACC Manual at this time. Use the table of contents to explain the manual’s organization. Then direct participants to a page or pages, e.g., 19-21, with a specific requirement and explain the purpose of the reference, applicability, background, and guidance sections.
2. Then complete a review of the participant workbook, making sure the layout of the document is explained, including the placement of case study materials and resources in the appendices.
3. Point out the questions and supplemental information contained under many of the slides. Encourage participants to record answers to the questions in the workbook to use for reference later.

4. Direct participants' attention to the CACC Manual page number found under each slide capture in the workbook. This page number indicates where in the CACC Manual that content can be found. Participants can use these references to follow along in the manual as they choose.
5. There is an exam at the end of the course. Participants must pass with a score of 70% or better in order to be eligible for CEUs. **Participants may use the CACC Manual during the exam; however, they may not use the NHI 134077 Participant Workbook.** Questions may not be discussed among the participants during the exam.

Slide 7

The slide features a blue header bar with the NHI logo (National Highway Institute) on the right. Below the header, the title "You Will Be Able to..." is displayed in a large, dark blue font. To the left of the text are three downward-pointing chevrons in red, green, and purple. Each chevron is followed by a rounded rectangular box containing a bullet point. The red chevron points to a box with a red border, the green chevron to a box with a green border, and the purple chevron to a box with a purple border. The NHI logo is located in the top right corner of the slide frame.

You Will Be Able to...

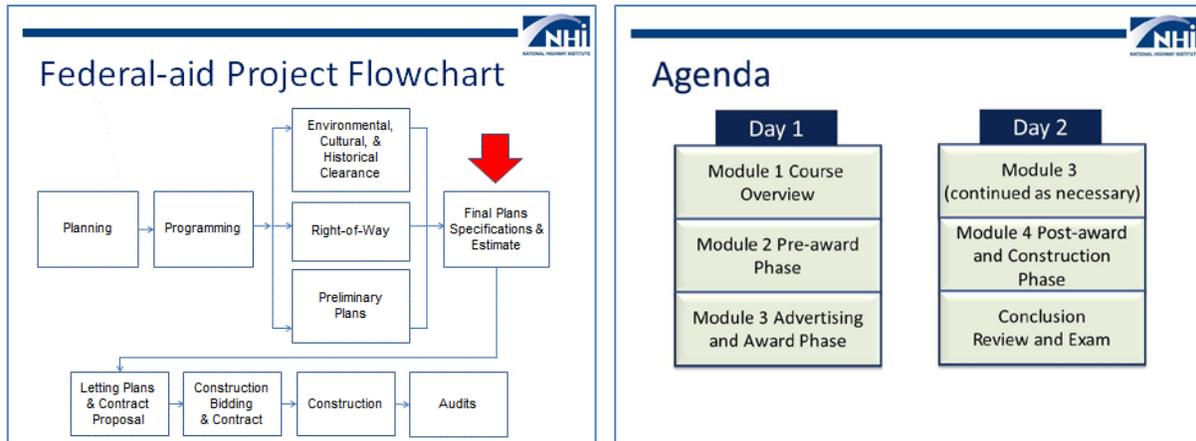
- Use the CACC Manual and other FHWA resources in order to answer questions regarding program-level and project-level requirements on FA projects
- Describe the impact program-level contract requirements have on individual FA projects
- Identify the contract requirements associated with administering FA projects for Federal and State entities at the pre-award, advertising and award, and post-award and construction stages

Key Message: The specific actions that people should be able to perform at the end of training are noted on the slide. It is important to make it clear how these outcomes support the purpose of FAHP.

Facilitation Guidance:

1. Share the learning outcomes with the participants and relate them back to the outcomes identified by the participants during the introductions whenever possible in order to reinforce the relevance of the course.

Slides 8 and 9



Key Message: This course is designed to discuss Federal-aid project contract requirements in relation to the project phase where they have the greatest impact.

The modules are organized to follow the cradle-to-grave approach, as shown by the flow chart and module organization diagram.

Facilitation Guidance:

1. Present the flowchart.
2. Advance the slide once to make the arrow appear on the flowchart. Explain to participants that the class begins at this step of a Federal-aid project and concludes with the audits process. Note that NHI offers additional courses covering a variety of subjects—from planning through PS&E development. In addition, we recommend that all participants take the free, online Federal-aid 101 Web-based training course (NHI 310109).
3. Direct participants' attention to the agenda provided in the front of their workbooks on page 7. State that Module 2 aligns with the "Final Plans, Specifications, and Estimate Process" step shown on the flowchart.
4. Advance to the next slide. Discuss the Day 1 agenda.
5. Then advance the slide once to display the Day 2 agenda.

Slides 10 and 11

As a Participant You Need to...




- Follow ground rules
- Utilize the participant workbook and CACC Manual
- Complete NHI forms
- Participate in all activities

Ground Rules

- Participate
- Be on time
- Stay on task
- Share responsibility for training
- Respect the opinions and attitudes of others
- Use flip chart "Parking Lot"
- Turn off cell phones
- Listen when others talk

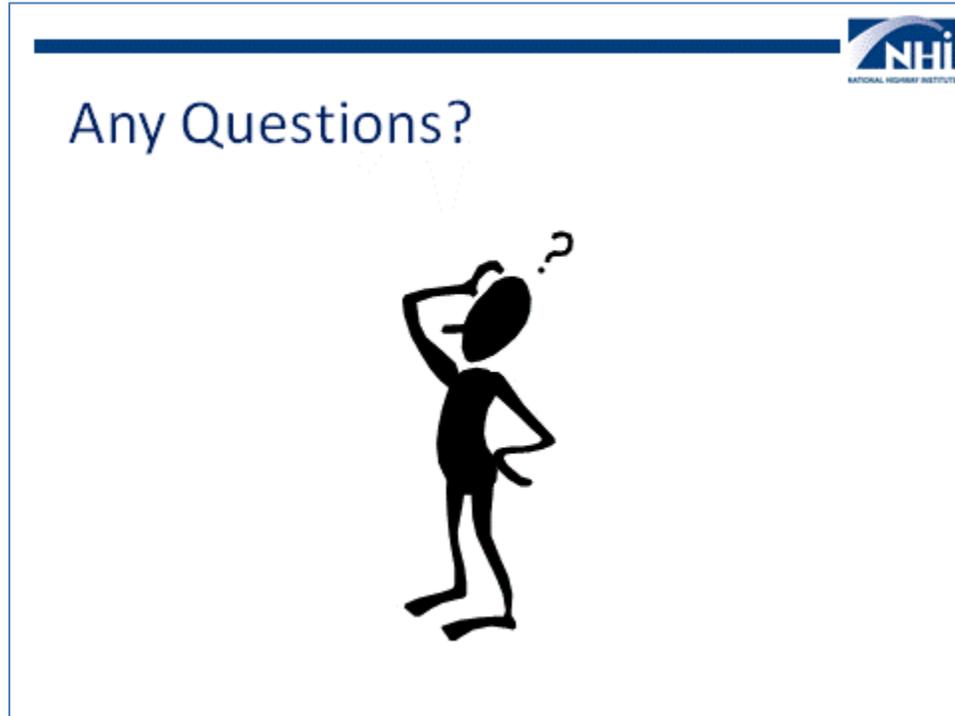
Key Message: It is essential that participants comply with some basic protocols in order for the class to be successful.

Facilitation Guidance:

1. Pass around the session roster. Instruct participants to complete the session roster in the morning and afternoon each day.
2. Remind participants to turn in the registration forms to the instructor by lunchtime on Day 1.
3. Advance to the "Ground Rules" slide and discuss expectations for class participation.
4. Indicate the "Parking Lot" flip chart's location in the room and explain its purpose.
5. Identify the nearest emergency exits and provide emergency procedures. Provide location of nearest rest rooms, break areas, and so forth.
6. Remind participants to turn off cell phone ringers and put away laptops.

Background: The NHI registration forms are placed at each seat prior to participants' arrival in class.

Slide 12



Key Message: This concludes the overview of the course.

Facilitation Guidance:

1. Ask participants if they have any questions about the course content, materials, or procedures.
2. Answer any questions that can be addressed at this time. Write more specific content questions on the "Parking Lot" for later lessons if necessary.

Lesson 1.2 Federal-aid Highway Program Basics Review

Slide 13



Lesson 1.2
Federal-aid Highway Program (FAHP)
Basics Review

Key Message: This lesson reviews essential information about the FAHP, particularly the Stewardship and Oversight (S&O) Agreement.

Lesson Preparation:

- Review the host State's S&O Agreement, if available.
- Distribute copies of the State's S&O Agreement, if provided.
- Verify that you have the Federal-aid Essentials video *Funding Basics and Eligibility* to show to the class.
- Obtain a copy of the host State's NHS map to display during the discussion. Insert it as a picture onto slide 36.

Lesson Resources

- Federal-aid Essentials *Stewardship and Oversight* video (not shown during class)
- Federal-aid Essentials *Funding Basics and Eligibility* video
- Federal-aid Essentials *Cost-Effectiveness Determinations and Public-Interest Findings* video (not shown during class)
- CACC Participant Workbook

- Federal-aid Applicability Requirements diagram
- Host State's NHS map
- FHWA *Stewardship and Oversight* Web site
<https://www.fhwa.dot.gov/federalaid/stewardship/>
- FHWA *Risk Based Stewardship and Oversight* memorandum (03/28/2014),
<http://www.fhwa.dot.gov/federalaid/stewardship/140328.cfm>, includes "Project Action Responsibility Matrix"

Note: This lesson was developed with the understanding that participants already possess basic FAHP information through completion of NHI 310110, 310115, or 310109 *Federal-aid 101* or other means, as is explained in the course description. Therefore, it is expected that the videos serve as a *refresher* on S&O Agreements and FAHP funding, not an introduction.

Lesson Time: 105 minutes is allotted for this lesson (including the Stewardship & Oversight presentation).

Timing Note: Instructor should allow a 15-minute break after the Stewardship & Oversight presentation. Break times are not included in the lesson's stated duration of 105 minutes. Breaks and suggested break times are included on the agenda.

Slide 14



Lesson Topics

- FAHP's purpose and key characteristics
- Roles and responsibilities associated with implementation of the FAHP
- Assigning and documenting roles and responsibilities for FA projects in the S&O Agreements
- Classifying and determining application of FA requirements on a project

Key Message: This lesson discusses the FAHP at a high level, reviewing essential characteristics of the program upon which many of the project requirements are built and explaining how program requirements are applied at the project level.

The lesson emphasizes the importance of the S&O Agreement and provides an opportunity for each FHWA Division office to present its S&O Agreement to participants.

In addition, the lesson introduces how to determine the applicability of FA requirements and the types of deviations to requirements that are available.

Slide 15



You Will Be Able to...

- Explain the purpose of a Stewardship and Oversight Agreement and the type of content it contains
- Identify the ways in which roles and responsibilities can be assigned under a Stewardship and Oversight Agreement
- Classify a project in order to determine which Federal-aid administration requirements are applicable to the project
- Distinguish between a public interest finding, cost effectiveness finding, and certification

Key Message: Participants should be able to complete these actions at the end of the lesson.

Slide 16



Purpose of the FAHP

- Support Federal-aid system by providing financial assistance for



Planning and Design



Construction



Asset Management

Key Message: The purpose of the FAHP is to support the State highway program's Federal-aid system by providing financial assistance for planning, design, construction, maintenance, and operations on Federal-aid routes.

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Slide 17



Administering the FAHP

- FHWA is charged with
 - Implementing the FAHP in cooperation with the State and local agencies
- States and local agencies must meet general FAHP requirements and those outlined in the S&O Agreement

Key Message: Title 23, Section 106, delegates the FHWA as the administrator of the FAHP. FHWA works cooperatively with States and local agencies to implement the Federal-aid program.

Facilitation Guidance:

1. Remind participants of the pre-course requirement to view the FAE Stewardship and Oversight video.
2. Ask participants to read the “Background” information under the slide in the workbook.
3. Ask participants to refer to the first question on the *Stewardship and Oversight* video on page 17 of their workbook. Ask for answers to the first question:
 - i. Who administers the FAHP? *Answer: FHWA is charged with implementing the Federal-aid Highway Program in cooperation with the States and local government.*
4. After answers have been provided, animate the slide once. **This slide appears only with the title in the workbook, so participants do not have the answer in advance. Remind participants to write answers on slides or elsewhere in their workbooks throughout the course.**

Activity Time: 3-5 minutes is allotted for the question and review of background information.

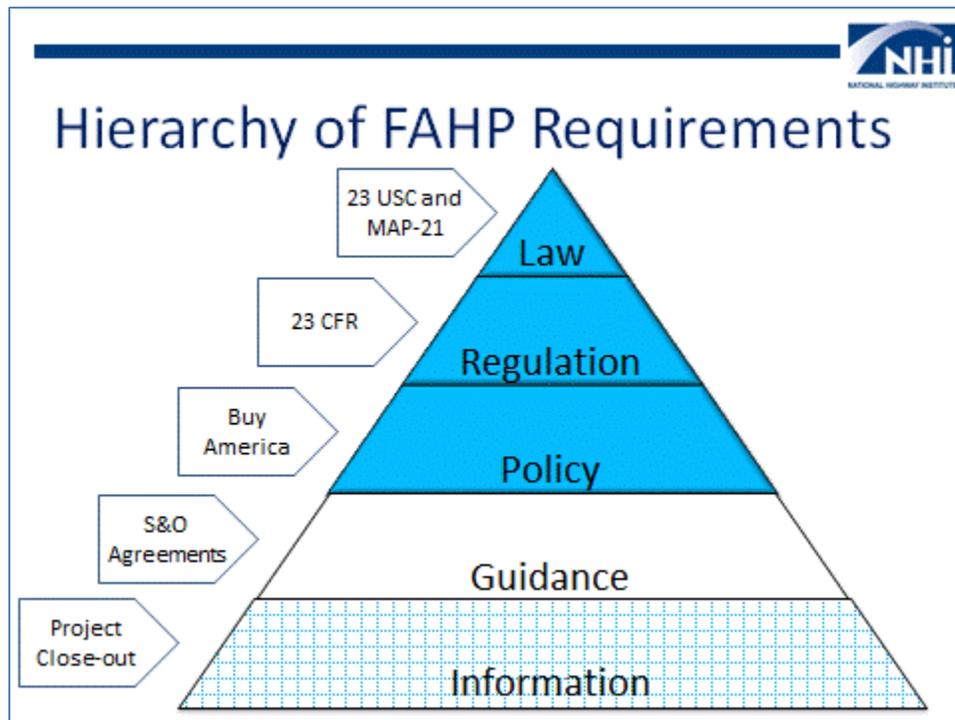
Background: “Section 106 of Title 23, United States Code (Section 106), provides the statutory requirements for project approval and oversight of the FAHP. Section 106(c) (3) requires FHWA and State departments of transportation (State DOTs) to enter into an agreement relating to the extent to which the State DOT assumes project responsibilities. These agreements, called Stewardship and Oversight Agreements (S&O Agreements), include information on specific project responsibilities and provide the requirements for oversight of the FAHP (Oversight Program), as required by 23 U.S.C. 106(g). This guidance summarizes the requirements of both the S&O Agreement and Oversight Program.” (FHWA *Federal-Aid Highway Program Stewardship and Oversight Agreement Guidance*, 3/28/2014, pg. 2)

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Resources

- Federal Aid Essentials Stewardship and Oversight Video
<http://www.fhwa.dot.gov/federalaid/stewardship/140328.cfm>

Slide 18



Key Message: There are a lot of rules and regulations governing administration of the Federal-aid program. This slide illustrates their precedence.

The hierarchy shown can be described succinctly in this way:

- Congress passes code. The law is the boundaries with exceptions.
- Federal agencies interpret the code and make regulations.
- Federal agencies then set policy in order to further clarify the requirements.
- The agencies then issue guidance to further explain policy.
- Information documents provide yet more clarification of the requirements.

For the purposes of this course, we make reference to the appropriate laws, regulations, policy, guidance, and memorandums applicable to contract administration requirements as those requirements are presented. Each section of the manual also contains a citation pertaining to the relevant governance. It was developed to explain all of the policy, guidance, and memorandums as it relates to 23 CFR

Facilitation Guidance:

1. This slide is animated. As you discuss the hierarchy, advance the slide five times to animate the examples provided for each type of requirement.

2. Note that the **shaded areas** indicate the requirement is binding, the **white area** indicates the requirement is binding for Division offices only, and the **checkerboard pattern** indicates the requirement is non-binding.
3. Remind participants that comprehensive coverage of this topic is provided in NHI 310110, 310115, or 310109 *Federal-aid 101*, which is a requirement for this course (or equivalent knowledge.) As specific FAHP requirements are presented during the course, citations for relevant laws, policies, and guidance can be found in the manual.
4. If an Internet connection is available in the training room, select the pyramid which is hyperlinked to FHWA's Program Policy and Guidance Center Web site. Explain that this site provides a central location of laws, policies, and guidance about the FAHP, including legal documents, links to relevant legislation, memos, directives, and guidance to support the FHWA's mission and goals.
5. If no Internet access is provided, refer participants to the URL in their workbook for the Web site.

Activity Time: 3-5 minutes is allotted for review of background information and a preview of the Web site.

Background: The role of highways in the United States is outlined by Title 23 of the U.S. Code. Section 106 of the Code provides the statutory requirements for FAHP project approval and oversight. Other legislation, such as MAP-21, outlines FAHP requirements as well.

The following list contains the definitions for each term on the slide.

Law (Legislation): A law that has been enacted by a legislature or other governing body. The term may refer to a single law, or the collective body of enacted law, while "statute" is also used to refer to a single law. Example document types include 23 U.S.C, SAFETEA-LU, National Environmental Policy Act (NEPA), and Title VI.

Regulation (Rules): An agency statement of general applicability and future effect, having the force and effect of law. It is designed to implement, interpret, or prescribe law or policy or to describe the procedure or practice requirements of an agency.

Policy: An internal agency statement of general applicability and future effect that sets forth a course of action, plan, or procedure on a statutory, regulatory, or technical issue or an interpretation of a statutory or regulatory issue. It is not a regulatory action. Policy assists the agency with implementing a program, and is often cited with regulation to verify program compliance. **The agency expectation is that policies will be implemented and adhered to without exception.**

Guidance: An agency statement of general applicability and future effect, other than a regulatory or policy action, that provides advice and assistance on a statutory, regulatory, policy, or technical issue. Guidance is used to influence decisions and actions to achieve an

expected program outcome. **The term implies agency expectations that the content will be considered in making specific decisions or actions that are within the user's discretion.**

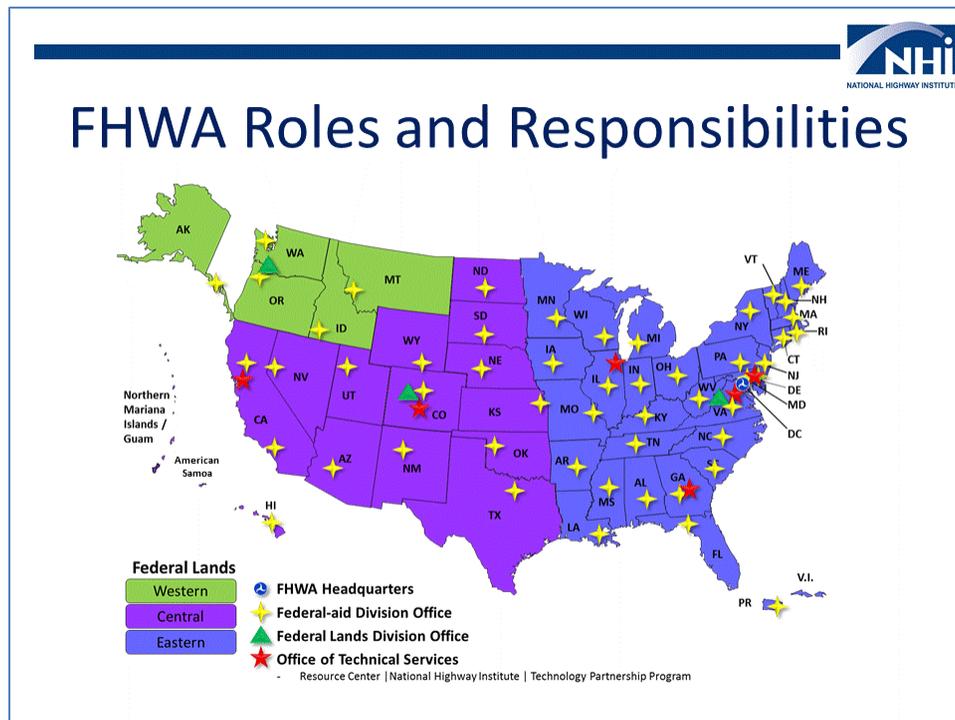
Information documents: An interim document used to issue policy interpretations to the field offices. Valid until superseded by new policy. While most information is sent out on memoranda, most policy is also sent out as memoranda. Policy documents are interpretations or expansions of law and regulatory requirements that require, or otherwise impact, the flexibility, eligibility, etc., whereas information is just that—something that the STAs may choose to adopt.

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Resources

- FHWA's Program Policy and Guidance Center <http://www.fhwa.dot.gov/pgc/>
- NHI 310110, 310115, or 310109 *Federal-aid 101* <http://www.nhi.fhwa.dot.gov/default.aspx>

Slide 19



Key Message: Very broadly, the FHWA's role is to provide funding, guidance, and technical assistance for the FAHP. FHWA has different offices and programs that are assigned various responsibilities associated with support of the program.

Facilitation Guidance:

1. Use this opportunity to **point out the list of Web sites** on page 148 of the workbook, which includes the Resource Center and CAG Web sites.
2. If Internet is available in the training room, select the map which is hyperlinked to the Resource Center Web site. Draw attention to the extensive FAHP resources that are located there.
3. If no Internet access is provided, refer participants to the URL in their workbook for the Web sites.

Activity Time: 3 minutes is allotted for review of background information and a preview of the Web site.

Background: FHWA sites include the following.

- Headquarters in Washington, D.C.

- Office of Technical Services: Resource Center (5 offices), National Highway Institute, Technology Partnerships Program, and the Knowledge Application Team.
- Division Offices (1 in each State, Puerto Rico, and Washington, D.C.)
- Federal Lands Highway Divisions (3 offices)

“These (52) Division Offices provide front line Federal-aid program delivery assistance to partners and customers in highway transportation and safety services, including but not limited to, planning and research, preliminary engineering, technology transfer, right-of-way, bridge, highway safety, traffic operations, environment, civil rights, design construction and maintenance, engineering coordination, highway beautification, and administration,” (FHWA Field Offices Web site, <http://www.fhwa.dot.gov/about/field.cfm>, 3/6/2014.)

In order to support stewardship and oversight of the FAHP, Division offices also provide risk management, process or program reviews, program assessments, and performance management. In addition, the Divisions provide assistance, guidance, and information regarding Federal transportation programs to local, State, and other Federal agencies in metropolitan areas.

Located within the Office of Program Administration (HIPA) at the Headquarters Building, the Contract Administration Group (CAG) is responsible, on a national level, for construction contract administration matters as contained in the following sections of the United States Code of Federal Regulations (CFR).

- 23 CFR 633 A
- 23 CFR 635 A, B, C, and D
- 23 CFR 636

As part of its nationwide oversight role, the Group maintains certain orders, technical advisories, and guides. They are also responsible for development and maintenance of the *Contract Administration Core Curriculum Manual*.

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Resources

- FHWA Resource Center <http://www.fhwa.dot.gov/resourcecenter/>
- Contract Administration Group <http://www.fhwa.dot.gov/programadmin/contracts/>

Slide 20



Sharing FAHP Responsibilities with the States

- Extent to which the State DOT assumes project and program responsibilities is documented in the S&O Agreement
- MAP-21 impacts to S&O Agreements include
 - Removes provision prohibiting State oversight of projects exceeding \$1M
 - Emphasizes a risk-based approach to oversight

Key Message: The S&O Agreement must specify the responsibilities assigned to FHWA and those assigned to the State DOT or local agency. It must also, per MAP-21, reflect a risk-based oversight approach.

Section 1503 of MAP-21 allows STAs to assume FHWA's responsibilities for projects on Interstate routes, including new construction or reconstruction projects with a value greater than \$1 million, unless that project is deemed "high risk."

The STA is also making Federal-aid participation decisions for FHWA. If the Division has historically considered something non-participatory, the STA should make the same decision. This impacts initial project development, construction (change orders), and decisions on claims.

Facilitation Guidance:

1. Direct participants' attention to page 22 of the workbook where an excerpt from FHWA's *Risk Based Stewardship and Oversight* is found. Call attention to the items that may be assigned to the State based on the dictates of the S&O Agreement.
2. Then direct participants to review the *Project Action Responsibility Matrix*. Call attention to some of the items that are reserved for FHWA based on the dictates of the S&O Agreement.
3. Discuss the impact of MAP-21 on FHWA's oversight and approval role in **general terms**. The Division Office presentation on the State's S&O Agreement will go into detail on this topic.

Activity Time: 5 minutes is allotted for review of the matrix.

Background: “The S&O Agreement should be written clearly to document responsibilities of the FHWA and State DOT, ensuring adequate oversight for validating the obligation and expenditure of Federal funds. On the broader program level, the S&O Agreement should acknowledge that FHWA and the State DOT are responsible for the effective and efficient use of Federal funds.” (FHWA *Stewardship and Oversight Agreement Implementation Guidance*, 03/14, pg. 2)

Changes to the oversight and approval of Federal-aid projects occurred with the passage of MAP-21. (See Section 1503 of the Act.)

Section 106 eliminated the provision prohibiting States from assuming responsibilities for new construction and reconstruction projects on the Interstate System exceeding \$1 million in cost. In addition, MAP-21 prohibits State DOTs from assuming responsibility for projects determined by FHWA to be high risk.

A significant change in FHWA's project-level S&O of the FAHP is the transition from full oversight of projects to oversight activities primarily focused on areas of higher risk and opportunity. The FHWA's use of a risk-based approach for project S&O is intended to optimize the successful delivery of projects and to assure compliance with Federal requirements.

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Resources

- FHWA *Legal Review of S&O Agreements (Revised)* memorandum, 4/2/2014
- FHWA *Scope of USC 23 106(c)* memorandum, 4/2/2014
- FHWA *Risk Based Stewardship and Oversight* memorandum, 03/28/14, <http://www.fhwa.dot.gov/federalaid/stewardship/140328.cfm>

Excerpt from FHWA's *Stewardship and Oversight Agreement Implementation Guidance*, March 2014, Project Action Responsibility Matrix

The following matrix identifies Federal-aid highway program (FAHP) project approvals and related responsibilities. The matrix specifies which ones are subject to State assumption under the provisions of 23 U.S.C. 106(c) or other statutory or regulatory authority, as well as those which are reserved to FHWA.

In the column entitled "Projects on the NHS" if an item is marked "FHWA or State," it means the State may assume the specified approval and related responsibilities if the Division determines the assumption is appropriate. For projects on the NHS, the FHWA may retain any approval or related action in any box marked "FHWA or State" as deemed appropriate by the Division. If the FHWA retains any approval or related action in any box marked "FHWA or State," the project is a PoDI, and will require a PoDI plan.

For the column marked "Projects off the NHS," the State must assume all items marked "State" unless the State determines the assumption of a particular item by the State is not appropriate.

Except as expressly stated in notes to the matrix below, the State cannot assume any item marked only as "FHWA" in either column. Any item marked only "FHWA" is reserved to FHWA because it is outside the scope of 23 U.S.C. 106(c), or otherwise is reserved to FHWA by law. The State DOT is responsible for ensuring all individual elements of the project are eligible for FAHP funding, but all final eligibility and participation determinations are retained by FHWA. While FHWA may not delegate decision-making authority to a State unless authorized by law, FHWA may authorize a State DOT to perform work needed to reach the decision point, or to implement the decision.

This matrix is available at

http://www.fhwa.dot.gov/federalaid/stewardship/140328_so_atta.xlsx

PROJECT ACTION RESPONSIBILITY MATRIX (as of March 28, 2014)		
ACTION	AGENCY RESPONSIBLE	
	PROJECTS ON THE NHS	PROJECTS OFF THE NHS
	Assumption of FHWA Responsibilities under 23 U.S.C. 106(c) or other statutory or regulatory authority	Assumption of FHWA Responsibilities under 23 U.S.C. 106(c) or other statutory or regulatory authority
PROGRAMMING (All phases)		
Ensure project in Statewide Transportation Improvement Program (STIP)/Transportation Improvement Program (TIP)	STATE	STATE
Identify proposed funding category	STATE(1)	STATE(1)
FINANCIAL MANAGMENT (All phases)		
Obligate funds/approve Federal-aid project agreement (project authorizations) (Note: this action cannot be assumed by State)	FHWA	FHWA
Authorize current bill (Note: this action cannot be assumed by State)	FHWA	FHWA
Review and Accept Financial Plan and Annual Updates for Federal Major Projects over \$500 million [23 U.S.C. 106(h)] (Note: this action cannot be assumed by State)	FHWA	FHWA
Review Cost Estimates for Federal Major Projects over \$500 million [23 U.S.C. 106(h)] (Note: this action cannot be assumed by State)	FHWA	FHWA
Develop Financial Plan for Federal Projects between \$100 million and \$500 million. [23 U.S.C. 106(i)]	STATE	STATE
ENVIRONMENT (All phases)		
All EA/FONSI, EIS/ROD, 4(f), 106, 6(f) and other approval actions required by Federal environmental laws and regulations. (Note: this action cannot be assumed by STATE except under 23 U.S.C. 327)	FHWA(2)	FHWA(2)
Categorical Exclusion approval actions (Note this action cannot be assumed by the State except through an assignment under 23 U.S.C. 326 or 327, or through a programmatic agreement pursuant to Section 1318(d) of MAP-21)	FHWA(2)	FHWA(2)

PROJECT ACTION RESPONSIBILITY MATRIX (as of March 28, 2014)		
ACTION	AGENCY RESPONSIBLE	
	PROJECTS ON THE NHS	PROJECTS OFF THE NHS
	Assumption of FHWA Responsibilities under 23 U.S.C. 106(c) or other statutory or regulatory authority	Assumption of FHWA Responsibilities under 23 U.S.C. 106(c) or other statutory or regulatory authority
PRELIMINARY DESIGN (Design Phase)		
Consultant Contract Selection	FHWA or STATE (3)	STATE (3)
Sole source Consultant Contract Selection	FHWA or STATE (3)	STATE (3)
Approve hiring of consultant to serve in a “management” role (Note: this action cannot be assumed by State) [23 CFR 172.9]	FHWA	FHWA
Approve consultant agreements and agreement revisions (Federal non-Major Projects) [23 CFR 172.9]	FHWA or STATE	STATE
Approve consultant agreements and agreement revisions on Federal Major Projects [23 CFR 172.9] (Note: this action cannot be assumed by State)	FHWA	FHWA
Approve exceptions to design standards [23 CFR 625.3(f)]	FHWA or STATE	STATE
Interstate System Access Change [23 USC 111] (Note: this action cannot be assumed by State)	FHWA	N/A
Interstate System Access Justification Report [23 USC 111] (Note: action may be assumed by State pursuant to 23 USC 111(e))	FHWA or STATE	N/A
Airport highway clearance coordination and respective public interest finding (if required) [23 CFR 620.104]	FHWA or STATE	STATE
Approve Project Management Plan for Federal Major Projects over \$500 million [23 USC 106(h)] (Note: this action cannot be assumed by State)	FHWA	FHWA
Approve innovative and Public-Private Partnership projects in accordance with SEP-14 and SEP-15 (Note: this action cannot be assumed by State)	FHWA	FHWA
Provide pre-approval for preventive maintenance project (until FHWA concurs with STATE procedures) (Note: this action cannot be	FHWA	FHWA

PROJECT ACTION RESPONSIBILITY MATRIX (as of March 28, 2014)		
ACTION	AGENCY RESPONSIBLE	
	PROJECTS ON THE NHS	PROJECTS OFF THE NHS
	Assumption of FHWA Responsibilities under 23 U.S.C. 106(c) or other statutory or regulatory authority	Assumption of FHWA Responsibilities under 23 U.S.C. 106(c) or other statutory or regulatory authority
assumed by State)		
DETAILED / FINAL DESIGN (Design Phase)		
Provide approval for complex and other unusual bridges and other structures on the Interstate. [23 USC 109(a) and FHWA Policy]	FHWA	N/A
Provide approval of preliminary plans for major bridges or other structures (non-Interstate). [23 USC 109(a) and FHWA Policy]	FHWA	STATE
Approve retaining right-of-way encroachments [23 CFR 1.23 (b) & (c)]	FHWA or STATE(4)	STATE
Approve use of local force account agreements [23 CFR 635.104 & 204]	FHWA or STATE	STATE
Approve use of publicly owned equipment [23 CFR 635.106]	FHWA or STATE	STATE
Approve the use of proprietary products, processes [23 CFR 635.411]	FHWA or STATE	STATE
Concur in use of publicly furnished materials [23 CFR 635.407]	FHWA or STATE	STATE
RIGHT-OF-WAY (Design and Operational Phases)		
Make feasibility/practicability determination for allowing authorization of construction prior to completion of ROW clearance, utility and railroad work [23 CFR 635.309(b)] (Note: 23 CFR 710.201 authorizes FHWA and STATE to agree to scope of property-related oversight and approvals for all actions except those on the Interstate System)	FHWA for Interstate FHWA or STATE for Non-Interstate	STATE

PROJECT ACTION RESPONSIBILITY MATRIX (as of March 28, 2014)		
ACTION	AGENCY RESPONSIBLE	
	PROJECTS ON THE NHS	PROJECTS OFF THE NHS
	Assumption of FHWA Responsibilities under 23 U.S.C. 106(c) or other statutory or regulatory authority	Assumption of FHWA Responsibilities under 23 U.S.C. 106(c) or other statutory or regulatory authority
Make public interest finding on whether State may proceed with bid advertisement even though ROW acquisition/relocation activities are not complete for some parcels [23 CFR 635.309(c)]	FHWA for Interstate FHWA or STATE for Non-Interstate	STATE
Ensure ROW certificate is in place [23 CFR 635.309(c)]	FHWA or STATE	STATE
Approve Hardship and Protective Buying [23 CFR 710.503] (If a Federal-aid project) (Note: this action cannot be assumed by State)	FHWA	FHWA
Approve Interstate Real Property Interest Use Agreements [23 CFR 710.405] (Note: this action cannot be assumed by State)	FHWA	N/A
Approve non-highway use and occupancy [23 CFR 1.23(c)]	FHWA for Interstate FHWA or STATE for Non-Interstate (3)	STATE (3)
Approve disposal at less than fair market value of federally funded right-of-way, including disposals of access control [23 U.S.C. 156] (Note: this action cannot be assumed by State)	FHWA	FHWA
Approve disposal at fair market value of federally funded right-of-way, including disposals of access control [23 CFR 710.409] (Note: 23 CFR 710.201 authorizes FHWA and STATE to agree to scope of property-related oversight and approvals for all actions except those on the Interstate System)	FHWA for Interstate FHWA or STATE for Non-Interstate (3)	STATE (3)
RIGHT-OF-WAY (Design and Operational Phases)		
Requests for credits toward the non-Federal share of construction costs for early acquisitions, donations or other contributions applied to a project (note: this action cannot be assumed by State)	FHWA	FHWA
Federal land transfers [23 CFR 710, Subpart F] (Note: this action cannot be assumed by State)	FHWA	FHWA

PROJECT ACTION RESPONSIBILITY MATRIX (as of March 28, 2014)		
ACTION	AGENCY RESPONSIBLE	
	PROJECTS ON THE NHS	PROJECTS OFF THE NHS
	Assumption of FHWA Responsibilities under 23 U.S.C. 106(c) or other statutory or regulatory authority	Assumption of FHWA Responsibilities under 23 U.S.C. 106(c) or other statutory or regulatory authority
Functional replacement of property [23 CFR 710.509] (Note: this action cannot be assumed by State)	FHWA	FHWA
SAFETY (Design Phase)		
Eligibility determinations for safety hardware (Note: this action cannot be assumed by State)	FHWA	FHWA
SYSTEM OPERATIONS AND PRESERVATION (Design Phase)		
Accept Transportation Management Plans (23 CFR 630.1012(b))	FHWA or STATE	STATE
Approval of System Engineering Analysis (for ITS) [23 CFR 940.11]	FHWA or STATE	STATE
PS&E AND ADVERTISING (Design Phase)		
Approve PS&E [23 CFR 630.201]	FHWA or STATE	STATE
Authorize advance construction and conversions [23 CFR 630.703 & 709] (Note: this action cannot be assumed by State)	FHWA	FHWA
Approve utility or railroad force account work [23 CFR 645.113 & 646.216]	FHWA or STATE	STATE
Approve utility and railroad agreements [23 CFR 645.113 & 646.216]	FHWA or STATE	STATE
Approve use of consultants by utility companies [23 CFR 645.109(b)]	FHWA or STATE	STATE
Approve exceptions to maximum railroad protective insurance limits [23 CFR 646.111]	FHWA or STATE	STATE
Authorize advertising for bids (FHWA authorization done via construction authorization) [23 CFR 635.112, 309]	FHWA or STATE	STATE

PROJECT ACTION RESPONSIBILITY MATRIX (as of March 28, 2014)		
ACTION	AGENCY RESPONSIBLE	
	PROJECTS ON THE NHS	PROJECTS OFF THE NHS
	Assumption of FHWA Responsibilities under 23 U.S.C. 106(c) or other statutory or regulatory authority	Assumption of FHWA Responsibilities under 23 U.S.C. 106(c) or other statutory or regulatory authority
CONTRACT ADVERTISEMENT AND AWARD (Design Phase)		
All contracts to be done by competitive bidding unless otherwise authorized by law		
Approve cost-effectiveness determinations for construction work performed by force account or by contract awarded by other than competitive bidding [23 CFR 635.104 &.204]	FHWA(5) or STATE(5)	STATE(5)
Approve emergency determinations for contracts awarded by other than competitive bidding [23 CFR 635.104 &.204]	FHWA or STATE	STATE
Approve construction engineering by local agency [23 CFR 635.105]	FHWA or STATE	STATE
Approve advertising period less than 3 weeks [23 CFR 635.112]	FHWA or STATE	STATE
Approve addenda during advertising period [23 CFR 635.112]	FHWA or STATE, whichever approved PS&E	STATE
Concur in award of contract [23 CFR 635.114]	FHWA or STATE	STATE
Concur in rejection of all bids [23 CFR 635.114]	FHWA or STATE	STATE
Approval of Design-Build Requests-for-Proposals and Addenda [23 CFR 635.112]	FHWA or STATE	STATE
CONSTRUCTION (Construction Phase)		
Approve changes and extra work [23 CFR 635.120]	FHWA or STATE	STATE
Approve contract time extensions [23 CFR 635.120]	FHWA or STATE	STATE
Concur in use of mandatory borrow/disposal sites [23 CFR 635.407]	FHWA or STATE	STATE
Accept materials certification [23 CFR 637.207]	FHWA or STATE	STATE

PROJECT ACTION RESPONSIBILITY MATRIX (as of March 28, 2014)		
ACTION	AGENCY RESPONSIBLE	
	PROJECTS ON THE NHS	PROJECTS OFF THE NHS
	Assumption of FHWA Responsibilities under 23 U.S.C. 106(c) or other statutory or regulatory authority	Assumption of FHWA Responsibilities under 23 U.S.C. 106(c) or other statutory or regulatory authority
Concur in settlement of contract claims [23 CFR 635.124]	FHWA or STATE	STATE
Concur in termination of construction contracts [23 CFR 635.125]	FHWA or STATE	STATE
Waive Buy America provisions [23 CFR 635.410] (Note: this action cannot be assumed by State)	FHWA	FHWA
Final inspection/acceptance of completed work [23 USC 114(a)]	FHWA or STATE	STATE
CIVIL RIGHTS (All phases)		
Approval of Disadvantaged Business Enterprise (DBE) Project Contract Goal set by the State DOT under 49 CFR 26.51(d). [49 CFR 26.51(e)(3)]	FHWA or STATE	STATE
Acceptance of Bidder’s Good Faith Efforts to Meet Contract Goal [49 CFR 26.53] or of Prime Contractor’s Good Faith Efforts to Find Another DBE Subcontractor When a DBE Subcontractor is Terminated or Fails to Complete Its Work [49 CFR 26.53(g)] (Note: this action cannot be performed by the FHWA)	STATE	STATE
Equal Employment Opportunity (EEO) Contract Compliance Review Approval [23 CFR Part 230, Subpart D]).	FHWA or STATE	STATE
Training Special Provision – Approval of Project Goal for training slots or hours [23 CFR Part 230, Subpart A]	FHWA or STATE	STATE
Training Special Provision – Approval of New Project Training Programs (Note: this action cannot be assumed by State) [23 CFR 230.111(d), (e)]	FHWA	FHWA

(1) State is responsible for ensuring that all individual elements of the project are eligible. FHWA will check that the scope of the project as described in submitted project agreement is eligible for the category of funding sought. All final eligibility and participation determinations are retained by FHWA.

(2) If there is a 23 U.S.C. 326 or 325 assignment or PCE agreement, decisions are handled in accordance with those assignments or agreements.

(3) State’s process and modifications to, or variation in process, require FHWA approval.

(4) FHWA approval is required for revocable occupancy permits of non-conforming outdoor advertising signs.

(5) A programmatic approval for projects with total costs below \$25,000 has been approved by FHWA.

Slides 21 and 22



Stewardship and Oversight (S&O)

- ii. Who may be a direct recipient and who may be a sub-recipient of Federal-aid funds?
- iii. What does Congress require in order for the State to assume FHWA responsibilities on Federal-aid projects?



S&O Video Questions, cont.

- iv. What does the term “stewardship” mean and what types of activities does it include?
- v. What does the term “oversight” mean?
- vi. What are some examples of approval and oversight responsibilities the State carries out on behalf of FHWA?

Key Message: As was stated earlier, FHWA is charged with implementing the Federal-aid Highway Program in cooperation with the States and local government. Over the years, Congress has granted an increasing number of responsibilities to the States in administering FA projects. The extent to which the State DOT assumes project responsibilities is documented in the S&O Agreement.

Facilitation Guidance:

1. Assign each group one question to answer about the *Stewardship and Oversight* video. The questions are found in the participant workbook, on page 30. (This video was viewed by participants prior to class.)
2. Allow 5 minutes for groups to formulate responses and then ask for each group to provide the answer to their assigned question. Supplement responses whenever necessary in order to provide the complete information documented below.
 - ii. Who may be a direct recipient and who may be a sub-recipient of Federal-aid funds?
Answers: State DOT is a direct recipient and for some TIGER grants the LPA’s and others might be a direct recipient, LPA is a sub-recipient.
 - iii. What does Congress require in order for the State to assume FHWA responsibilities on Federal-aid projects? *Answer: S&O Agreement that documents the extent of State responsibilities*
 - iv. What does the term “stewardship” mean and what types of activities does it include?
Answer: Stewardship is the efficient and effective management of public funds that have been entrusted to FHWA. Stewardship involves the activities to deliver the Federal-aid program such as leadership, technology deployment, technical assistance, problem-solving, program administration, utilities relocation, and oversight.
 - v. What does the term “oversight” mean? *Answer: The act of ensuring that the Federal-aid program is delivered consistent with laws, regulations, and policies. Oversight is the compliance or verification component of stewardship activities. Oversight activities*

enable FHWA and State DOTs to ensure the Federal-aid program is delivered effectively. The S&O Agreement also provides details of how the State handles its oversight responsibilities.

- vi. What are some examples of approval and oversight responsibilities the State carries out on behalf of FHWA? *Answer: Transportation planning activities; assessing environmental impacts; project design requirements; civil rights protections; purchase of rights-of-way; administering construction projects; maintenance activities*

Activity Time: 10 minutes is allotted for review of the video questions.

Slides 23-25



**{State} DOT & FHWA
Stewardship and Oversight**

Presented by
{Name}
{Job title}



{State} Division Staff

|| {Insert FHWA Division office org chart or listing of primary contacts}



Questions for Participants

- i. True or False: FHWA's approach to Stewardship and Oversight activities focuses on high-risk areas
- ii. How often are PoDI selected?
- iii. What types of projects are often selected to be PoDI?
- iv. Why are certain projects designated as PoCI?
- v. What is the purpose of the CAP reviews?

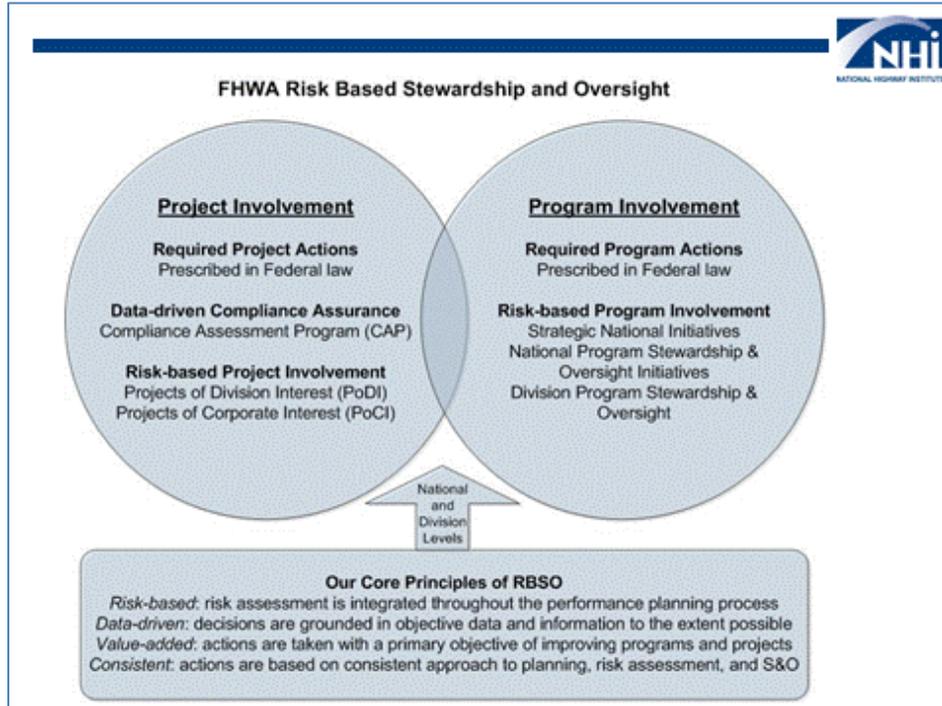
Key Message: It is important that participants are aware of the content of the State's S&O Agreement and know whom to contact when they have questions regarding its contents.

Facilitation Guidance:

1. Distribute copies of the State's S&O Agreement, if provided.
2. Introduce the State or Division Office representative who is presenting the State's S&O Agreement. **The representative will deliver Slides 23-31.** If this person is not on time for the presentation, present slides 23-31.
3. Direct participants' attention to the list of S&O Agreement questions found in the workbook on page 31 and ask them to record answers to those questions as the presentation proceeds. If time allows, answers will be reviewed at the end of the presentation.

Activity Time: 20 minutes is allotted for the S&O Agreement presentation.

Slide 26



Key Message: FHWA is integrating risk management into the performance planning process to identify agency-wide S&O initiatives.

- It includes S&O initiatives at both the national and unit (Division) level.
- It includes S&O initiatives for both programs and projects.

Background: Several factors have influenced, and will continue to influence, the need to advance our risk-based approach to S&O. MAP-21 provided FHWA with increased flexibility to carry out S&O responsibilities. Effectively delivering a large and increasingly complex FAHP requires FHWA to find better ways to use limited resources more efficiently and effectively. Primarily, this makes good business sense and is a better way to bolster the public's trust in the delivery of the FAHP.

Core principles guiding the most current S&O approach are:

- **Risk-based:** FHWA has an enterprise approach to risk management (considering, integrating, and informing the risk assessment process at all levels, e.g., corporate, program unit, and project.) Risk assessment is integrated throughout the performance planning process.
- **Data-driven:** Decisions are grounded in objective data to the greatest extent possible.
- **Value-added:** Actions are taken with a primary objective of improving programs and projects.

- **Consistent:** Actions are based on a consistent approach to planning, risk assessment, stewardship, and oversight.

Resources

- FHWA Risk-based Stewardship and Oversight Web site link
<http://our/office/fhwa.dfs/RBSO/SitePages/Home.aspx>

Slides 27-30

FHWA Risk-based S&O

State's Highway Program

The diagram illustrates the hierarchy of project classification. It starts with the 'State Highway Program' (outermost purple box), which contains the 'Federal-aid Program' (light blue box). Within the Federal-aid Program, there are three overlapping circles: a large red circle for 'Major Projects', a yellow circle for 'Projects of Division Interest (PoDI)', and a purple circle for 'Projects of Corporate Interest (PoCI)'. The PoCI circle overlaps with the Major Projects circle.

Projects of Division Interest

- FHWA selects projects annually
- FHWA involvement may be limited to key project phases (planning, design, construction)
- Projects selected can include
 - Complex Emergency Relief Projects
 - Complex Urban Reconstruction Projects
 - Major Structure Projects

Projects of Corporate Interest

- Identified by Program Offices or Division Offices
- Require additional resources at a corporate level
- Receive focused, strategic, agency-wide attention and an increased level of S&O

Compliance Assessment Program

- Uses a statistical approach to establish minimum compliance with requirements for FA construction projects at the
 - National level
 - Local level

Key Message: Projects within a State highway program can be classified in a variety of ways. Those classifications, and the dictates of the S&O Agreement, determine which program actions must be taken for each project.

Background: The FHWA's March 28, 2014, guidance regarding the development of S&O Agreements with the State DOTs includes a final listing of project actions. FHWA will continue to take certain project and program actions as outlined in the guidance. Each S&O agreement will identify all relevant program actions along with State DOT and Division contacts responsible for such actions, otherwise known as the Program Responsibility Matrix.

Projects of Division Interest (PoDI) are projects identified by Divisions that have an elevated level of risk (threat or opportunity) to the Division's successful delivery of the Federal-aid program. Identification of these projects allows the Division to concentrate resources on project phases or areas that add the most value.

- A State DOT can assume Section 106(c) responsibilities, but FHWA has retained responsibility for (1) one or more of the Section 106(c) items, or (2) FHWA has not retained

responsibility for any such items, but the projects are otherwise designated as PoDIs by the Division. PoDI projects could include projects on or off the NHS.

- PoDIs are selected by the FHWA on an annual basis. Involvement by FHWA in PoDI selection may be limited to key steps (environment, design, and construction phase.) The steps of FHWA involvement are determined at the time of selection. In addition to the annual selection of PoDI, the State DOT may request projects to be PoDI at any time.
- Examples of PoDIs: Projects that have Environmental Impact Statements as the environmental document; projects in specific geographical areas, i.e., within a National historic district; projects that have new or experimental types of work incorporated; or projects that are being administered by a Local Public Agency

Projects of Corporate Interest (PoCIs) are projects that are identified by Program Offices and Division Offices that require additional resources at a corporate level because of their impact on FHWA's performance.

- They receive focused, strategic, agency-wide attention, and an increased level of stewardship and oversight, because their success requires corporate investment and they have been deemed of special importance to FHWA's strategic success.
- Most PoCIs are those that have been sufficiently developed through NEPA to assure that there is a substantial and sustainable amount of support for the project.
- The list of PoCIs is updated annually as part of the Strategic Implementation Plan (SIP) development process.

The **Compliance Assessment Program** (CAP) uses a statistical approach to establish minimum compliance review requirements for Federal-aid highway projects. The purpose of the CAP is to provide reasonable assurance, at both the national and local level, that Federal-aid highway construction projects are in compliance with key Federal requirements.

- The CAP accomplishes this by providing a framework for making statistically valid inferences across national and local populations.
- The approach is objective and defensible and informs risk assessments with statistically valid information and data.
- The CAP is one element of project oversight, which supplements and strengthens the agency's movement toward being more data-driven and risk-based.

Slide 31



Review Questions

- i. True or False: FHWA's approach to Stewardship and Oversight activities focuses on high-risk areas
- ii. How often are PoDI selected?
- iii. What types of projects are often selected to be PoDI?
- iv. Why are certain projects designated as PoCI?
- v. What is the purpose of the CAP reviews?

Facilitation Guidance:

1. Although it is important to allow participants to use this opportunity to discuss the S&O Agreement with their Division Office representative, do not allow the presentation to exceed **20 minutes**.
2. If time allows, review answers to the questions posed at the beginning of the presentation.
 - i. True
 - ii. Annually (or as agreed upon in S&O)
 - iii. PoDIs are projects identified by Divisions that have an elevated level of risk (threat or opportunity) to the Division's successful delivery of the Federal-aid program. Identification of these projects allows the Division to concentrate resources on project phases or areas that add the most value.
 - iv. PoCIs are projects that are identified by Program Offices and Division Offices that require additional resources at a corporate level because of their impact on FHWA's performance.
 - v. The purpose of the CAP is to provide reasonable assurance, at both the national and local level, that Federal-aid highway construction projects are in compliance with key Federal requirements.
3. Encourage participants to write down any unanswered questions at the end of the presentation so they can be answered by the Division Office at a later time. Make sure the Division Office representative's contact information is posted and that all participants have had a chance to record the information.
4. Encourage the representative to attend the remainder of the class; use this person as a resource as the course proceeds.

Slides 32 and 33

 <p>Federal-aid Essentials Video <i>Funding Basics and Eligibility</i></p>	<h3>Video Questions</h3> <ol style="list-style-type: none"> i. What is the source of Federal-aid funding? ii. How are these funds provided to, and administered by, the States and LPAs? iii. What are two important characteristics of the Federal-aid program? iv. What is the criterion for using the funds?
---	---

Key Message: Now it's time to review how Federal-aid funds are made available to the States and the requirements for using those funds on a project.

The instructor now resumes his or her place as presenter and facilitator of the course. Thank the Division or State representative, and then follow the Facilitation Guidance below.

Facilitation Guidance:

1. Direct participants to page 35 in the workbook. Review the questions as a means of previewing the content of the video with the class. Tell participants to record answers to the questions as they watch the video.
2. Select the film reel icon or title to play the Federal-aid Essentials video *Funding Basics and Eligibility* (6:40).
3. At the conclusion of the video, solicit responses from the participants to the first **three** questions. (Note that discussion of the fourth question will occur in a few minutes.)
 - i. What is the source of Federal-aid funding? *Answer: The Highway Trust Fund, which receives revenue from user fees, such as the gas tax*
 - ii. How are these funds provided to, and administered by, the States and LPAs? *Answer: Federal-aid funds are generally distributed to States using formulas specified in Federal law, although the money is not provided up front. The funds distribution is provided to each State within funding categories or programs that focus on key areas, such as the Surface Transportation Program and the Highway Safety Improvement Program.*
 - iii. What are two important characteristics of the Federal-aid program? *Answer: It is a reimbursable and a matching program.*
 - iv. Note that we will address the answer to Question iv later (at Slide 35).
4. Advance to the next slide to provide a more complete response to the third question.

Note: If the video is unavailable or not viewable, refer participants to the “Resources” section at the end of their workbooks. Information on the video content is available there. This is a last resort measure to be used only if the hyperlinks and the movie files on instructor’s laptop should fail.

Activity Time: 20 minutes is allotted for presentation of the video and review of the questions.

CACC Manual Page: 28-34

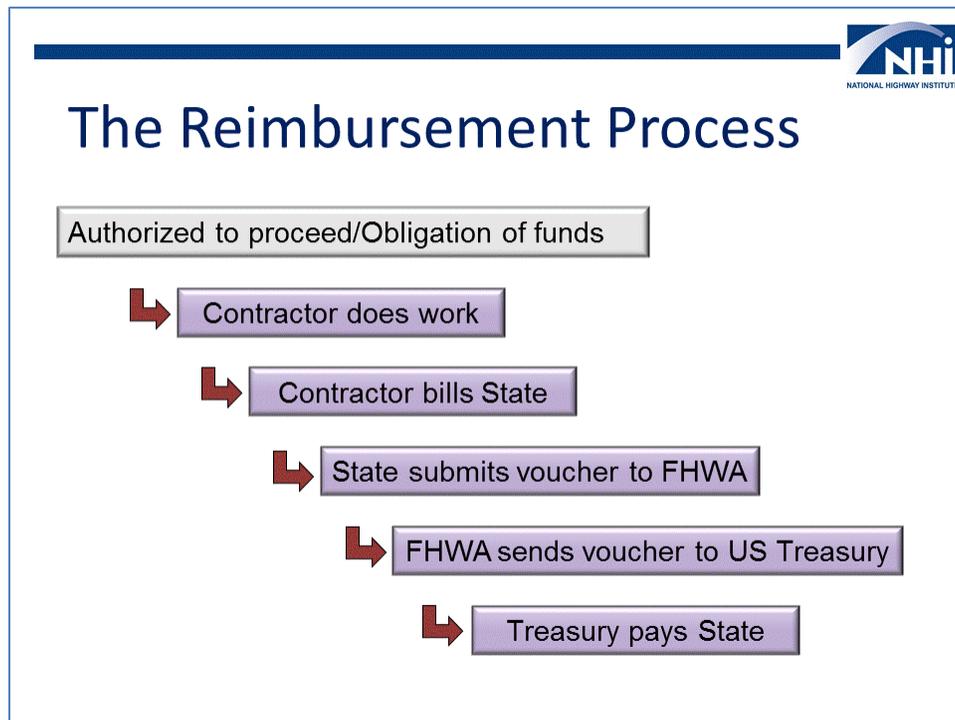
Background: State matching funds can come from toll credits, private donations, and fair market value of any donated right-of-way for the project. In some cases, the funds may include Federal funds from another agency when permitted by that agency.

Note: The video uses the term “grant.” Although the term “grant” is used in the legislation that describes transportation funding, the term “grant” may be misleading. There is a difference between a “grant” program and a “reimbursable” program.

Resources

- Federal-aid Essentials *Funding Basics and Eligibility* video <http://www.fhwa.dot.gov/federal-aidessentials/catmod.cfm?id=44>

Slide 34

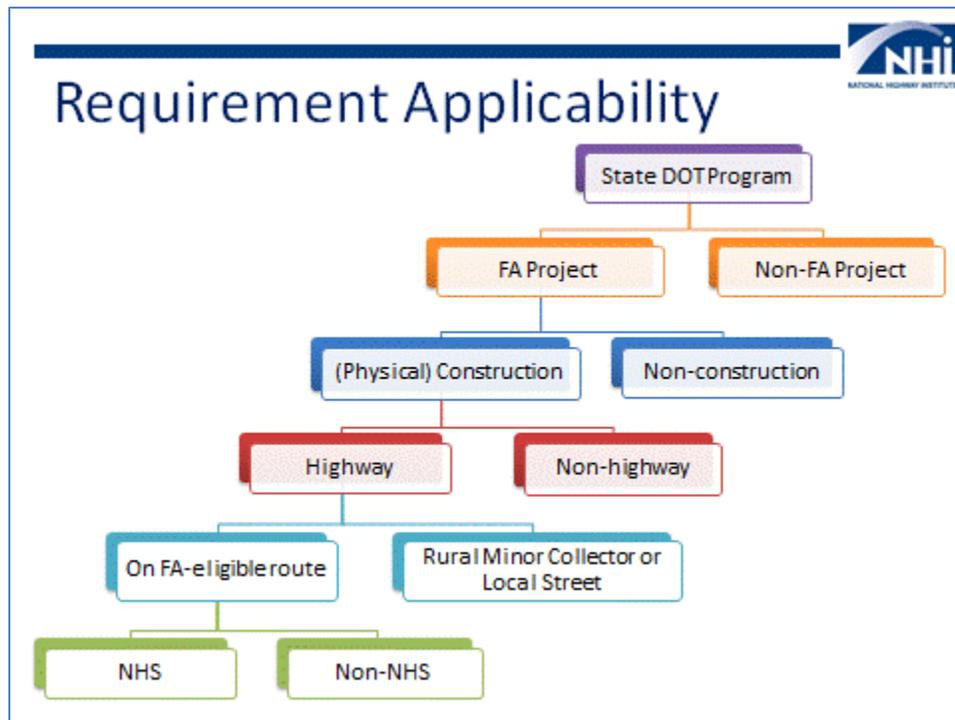


Key Message: As noted in the video, the FAHP is a **reimbursable** program. As a reimbursement program FHWA does not provide funding in advance of the completion of work. The State or local agency must have adequate funds to deliver the Federal-aid program, including paying the contractor progress estimates for work completed on the Federal-aid project.

These are the steps the State, or local, agency completes to be reimbursed for Federal-aid project expenditures. The Federal Treasury typically pays State invoices within 24 hours of the State submitting the voucher. (The processing time from the State to local agencies significantly varies nationwide.)

CACC Manual Page: 28

Slide 35



Key Message: Every project receiving Federal-aid funds is subject to Federal-aid requirements, but how and when to apply each requirement can vary from project-to-project. Therefore, you must have a process for determining which Federal-aid requirements apply to each project.

Facilitation Guidance:

1. Ask participants for the answer to the last video question.
 - iv. What is the criterion for using the funds? *Answer: Used on eligible highways; may be used only for certain activities; must comply with funding program requirements; must be applied to projects on the State Transportation Improvement Program (STIP)*
2. Direct participants' attention to the definitions listed in their workbook under the slide. Ask them to review the definitions silently.
3. Then turn to page 107 in the CACC Manual to read the applicability of the Project Estimate requirement. Use the applicability statement "All Federal-aid highway construction projects" and relate it back to the Applicability Diagram. Also see page 20 for information about foreign contractors and suppliers. Relate to class the process of identifying where a given **project** falls on the decision tree graphic, and where a given **requirement** falls on the decision tree, and discuss how those two elements relate.
4. Address any questions posed by the participants on the definitions or process before moving to the next slide.

Activity Time: 5 minutes is allotted for review of the definitions, diagram, and manual.

Background: Federal-aid routes include the National Highway System (NHS), including the Interstate Highway System, and other Federal-aid routes.

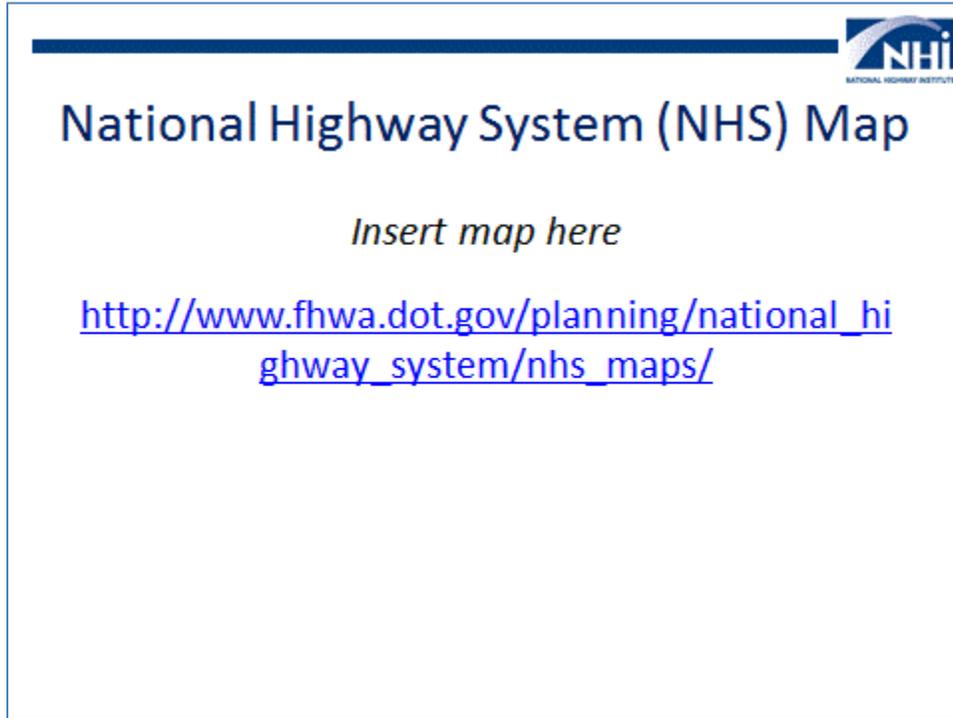
The following definitions are used to guide participants through the diagram and determine the applicability of requirements for each project.

- **Applicable to all Federal-aid projects** means the requirement applies to any work funded with Federal-aid funds, including consultant agreements, planning studies, etc. Examples include nondiscrimination, suspension, and debarment requirements. It is important to note that some Federal requirements, such as Buy America and provisions under the Civil Rights Act, also apply to non-Federal-aid projects.
- **Applicable to all Federal-aid construction projects** means the requirement applies to any construction project funded under Title 23 U.S.C. These projects involve the physical construction of a highway, bridge, building, rail, parking lot, bicycle path, or any other constructed component that is eligible for Federal-aid funding. Examples of requirements falling into this category are Buy America, Disadvantaged Business Enterprises, and certain non-Title 23 requirements. This includes maintenance. Non-construction items include consultant agreements, right-of-way purchase, preliminary design, planning, ITS development, etc.
- **Applicable to all Federal-aid highway construction projects** means the requirement applies to any Federal-aid highway construction project. Projects that fall under this definition involve the work meeting the construction definition in 23 U.S.C 101 for a highway or bridge component on any Federal-aid highway. In general, these requirements will not apply to work done outside of Federal-aid highway right-of-way. Examples of requirements falling under this category are the competitive bidding requirements of 23 U.S.C. 112 and the related implementing regulations of 23 CFR 635.
- **Applicable to all Federal-aid highway construction projects located on Federal-aid highways** means the requirement applies to any Federal-aid construction project located on a roadway functionally classified as a Federal-aid highway. This excludes routes functionally classified as rural minor collectors or local roads. Examples of requirements falling under this category include the Davis-Bacon and Copeland Acts (prevailing wage rate), convict labor, and material prohibitions.
- **Applicable to all Federal-aid construction projects on the NHS** means the requirement applies only to work done on NHS routes. Projects that fall under this definition involve require the work to meet the construction definition in 23 U.S.C 101 for a highway or bridge component on any NHS route. In general, these requirements are not applicable to Federal-aid highway construction projects on non-NHS routes, or Federal-aid non-highway construction, such as recreation trail projects or Transportation Enhancement work outside Federal-aid highway right-of-way. Examples of requirements falling under this category are the use of warranty and incentive/disincentive clauses.

Preventive maintenance contracts are generally subject to Federal-aid contract requirements. As defined in the October 8, 2004, memorandum on preventive maintenance, eligible preventive maintenance activities must extend the service life of a roadway asset or facility in a cost-effective manner.

CACC Manual Page: 107-108, 20.

Slide 36

The slide features a blue horizontal bar at the top left and the NHI logo at the top right. The main title is "National Highway System (NHS) Map". Below the title is the text "Insert map here" in italics. At the bottom is a blue underlined URL: http://www.fhwa.dot.gov/planning/national_highway_system/nhs_maps/

Key Message: The applicability diagram on the previous slide and a State NHS Route map are two tools that you can use to help identify the requirements for your project. The route map is used for determining whether a project is on a Federal-aid route and whether it is on the NHS, which also helps when determining eligibility for certain categories of FAHP funds.

One change with MAP-21 is that all principle arterials are now on the NHS. This means that any agency that had a route off of the NHS will now need to check that they are designing and constructing to the higher NHS standards.

Activity Time: 5 minutes is allotted for determining applicability for the State project.

Resources

- Office of Policy Web site
http://www.fhwa.dot.gov/planning/national_highway_system/nhs_maps/

Slide 37

Determine FA Project Requirements





- Group activity
 - Classify projects
 - Determine which requirements apply

Key Message: Apply the process for determining Federal-aid project requirements.

Facilitation Guidance:

1. Direct participants to Appendix A in the workbook to review two example route classification maps. One map is of an NHS project and the other a non-NHS project.
2. Ask participants to work in their groups to address the following questions, found underneath the slide in their workbook, using the manual. (See page 39 in participant workbook.)
 - i. Which project is an NHS Project? Which is a non-NHS project? *Answer: The Polk County project is on the NHS; the Wapello County project is non-NHS. Both are Federal-aid projects.*
 - ii. Are Project Estimates required on both projects? See page 107 in the CACC Manual for the answer. *Answer: Yes.*
 - iii. Are Davis-Bacon wages required to be paid on both projects? See page 77 in the CACC Manual for the answer. *Answer: Yes. When the Federal-aid prime contract value is over \$2,000, the Davis-Bacon requirement applies.*
 - iv. Are non-discrimination requirements needed in the specifications on either project? See page 18 (and page 122) in the CACC Manual for the answer. *Answer: "Yes" for both projects, if the prime contract is more than \$10K.*

Activity Time: 15 minutes is allotted for this classification and requirements activity.

Slide 38



Deviations from Requirements

- Public Interest Findings (PIF)
- Cost Effectiveness Findings
- Certifications

Key Message: Certain deviations from the approved standards may be allowed if a project presents unique challenges to the requirements.

Several types of deviations exist. For example:

- A waiver for Buy America requirements may be obtained in some instances when supported by an FHWA public interest finding (PIF).
- A cost effectiveness finding must be obtained to use a public agency force account.
- Certifications based on synchronization or a finding of no suitable equal product is necessary to use patented or proprietary products.

Examples of material requirements that have received deviation approval include ITS devices, ACROW or Mabey Bridges, and temporary signal trailers.

Facilitation Guidance:

1. Direct participants to review the descriptions in the workbook for a PIF, cost-effectiveness finding, and certification.
2. Ask participants:
 - i. Have your State and FHWA agreed to a standard format for any of these deviations?

Activity Time: Allow 2-3 minutes to review definitions and discuss examples.

Background: Descriptions for each type of deviation are as follows.

- **PIFs** require the STA to clearly demonstrate that the proposed deviation is more beneficial to the public than is meeting the requirement. Departments of Transportation cannot delegate PIFs to LPAs.
- **Cost Effectiveness Findings** require the STA to clearly demonstrate that the proposed deviation is more cost-effective than meeting the requirement.
- **Certifications** require that the STA certify the need to waive a requirement.

When using deviations, keep in mind that they:

- Apply to all Federal-aid highway construction projects.
- Generally require FHWA approval for Federal oversight projects (STA approval for all others).
- Should have a sunset date.
- Can establish a possible precedent.
- Require written documentation to support findings.

The form and format of a PIF, cost effectiveness finding, or certification varies according to the magnitude of the request and its potential impact. The document must contain the basis for the request and any supporting documentation about the impacts, costs, logistics, and precedence.

Examples of when deviations are applied are as follows.

- **PIF:** manufactured materials (mandatory with a PIF), local natural materials and disposal sites (optional or mandatory with PIF)
- **Cost effectiveness finding:** any proposal to use a noncompetitive method of contracting
- **Certification:** a patented or proprietary item is certified by an STA as a unique product for which no equally suitable alternative exists

CACC Manual Page: 13-15

Resources

- Federal-aid Essentials *Cost-Effectiveness Determinations and Public-Interest Findings* video <http://www.fhwa.dot.gov/federal-aidessentials/catmod.cfm?id=43>

Slide 39



Review Questions



- i. What type of information is typically contained in the S&O Agreement?
- ii. What are two important features of the Federal-aid program?
- iii. How is applicability of Federal-aid requirements determined for each project?

Key Message: Review the content of the lesson and determine participants' mastery of the content.

Facilitation Guidance:

1. Ask participants to review the following questions in the workbook and work within their groups to derive answers. (5 minutes)
 - i. What type of information is typically contained in the S&O Agreement? *Answer: The document lists the responsibilities of the FHWA and State DOT, ensuring adequate oversight for validating the obligation and expenditure of Federal funds*
 - ii. What are two important features of the Federal-aid program? *Answer: Matching and reimbursable*
 - iii. How is applicability of Federal-aid requirements determined for each project? *Answer: A project is delegated into specific categories. (An example delegation is a "Non-NHS Federal-aid highway construction project.") Based on how the project is delegated, requirements are identified.*
2. Ask each group to provide an answer. Take no more than 5 minutes to debrief the answers.

Module 2 Contract Administration: Pre-award Phase

Lesson 2.1 Preparing the PS&E for Approval

Slides 40 and 41



The image shows two presentation slides side-by-side. The left slide is the title slide for Module 2, featuring a collage of highway-related images (a truck, a road, and a bridge) and the NHI logo. The right slide is titled 'Module Topics' and lists three bullet points: 'What requirements need to be met in order to prepare a Federal-aid project for advertisement?', 'PS&E requirements and approvals, including material and equipment requirements', 'Bid package requirements and approvals, including procurement requirements', and 'Deviations from requirements'.

Module 2
Contract Administration:
Pre-award Phase

Module Topics

- What requirements need to be met in order to prepare a Federal-aid project for advertisement?
 - PS&E requirements and approvals, including material and equipment requirements
 - Bid package requirements and approvals, including procurement requirements
 - Deviations from requirements

Key Message: This module covers the requirements and tasks typically associated with the pre-award phase of a Federal-aid project. In other words, what requirements need to be met in order to obtain FHWA project approval and prepare a Federal-aid project for advertisement?

The first lesson focuses on Plans, Specifications, and Estimate (PS&E) requirements and approval. The second lesson addresses the requirements pertinent to preparing a bid package for approval, particularly procurement and equipment requirements. Deviations from the requirements are discussed when applicable.

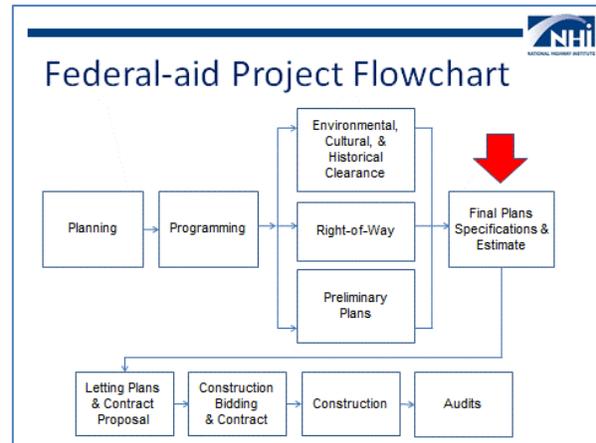
This module includes activities that allow participants to evaluate PS&E documentation and the likelihood of FHWA approval; identify the applicability of Buy America provisions; and determine if a Buy America waiver is required for a project.

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Slides 42 and 43



Lesson 2.1
Preparing the PS&E for Approval



Key Message: The main objective of PS&E preparation and approval is to verify that the design criteria is understood and has been met using sound engineering judgment.

23CFR 630.205(c) requires a PS&E to be submitted to FHWA for approval on all FA projects. The law also states that “no project or part thereof for actual construction shall be advertised for contract nor work commenced by force account until the PS&E has been approved by the FHWA and the State Highway Agency (SHA) has been so notified.” (23CFR 630.205(e))

Facilitation Guidance:

1. Introduce the lesson and then advance to the next slide to relate this content to the project flow chart diagram.

Lesson Preparation:

- Review the PS&E Requirements table and PS&E example checklist.
- Review the case study directions and materials.

Lesson Resources

- PS&E Requirements Table
- PS&E Example Checklist
- CACC Manual
- CACC Participant Workbook
- FHWA *Clarification of Manufactured Products under Buy America* Memorandum (12/21/12)

Lesson Time: 160 minutes is allotted for this lesson.

Timing Note: Instructor should allow a lunch break during this lesson. Lunch break time is not included in the lesson's stated duration of 160 minutes. Lunch and other breaks, and suggested break times, are included on the agenda.

Background: Title 23, USC, Section 101 defines the term "construction" as *"...the supervising, inspecting, actual building, and all expenses incidental to the **construction or reconstruction** of a highway, including bond costs and other costs relating to the issuance in accordance with section 122 of bonds or other debt financing instruments, locating, surveying, and mapping (including the establishment of temporary and permanent geodetic markers in accordance with specifications of the National Oceanic and Atmospheric Administration in the Department of Commerce) resurfacing, restoration, and rehabilitation, acquisition of rights of way, relocation assistance, elimination of hazards of railway grade crossings, elimination of roadside obstacles, acquisition of replacement housing sites, acquisition and rehabilitation, relocation, and construction of replacement housing, and **improvements which directly facilitate and control traffic flow, such as grade separation of intersections, widening of lanes, channelization of traffic, traffic control systems, and passenger loading and unloading areas.** The term also includes capital improvements which directly facilitate an effective vehicle weight enforcement program, such as scales (fixed and portable), scale pits, scale installation, and scale houses and also includes costs incurred by the State in performing Federal-aid project related audits which directly benefit the Federal-aid highway program."*

Slide 44



You Will Be Able to...

- Identify the contract administration requirements that need to be met in order to obtain PS&E approval and obligate Federal funds
- List acceptable contract methods that can be used for Federal-aid projects
- Describe the impact of Buy America requirements on a Federal-aid project
- For each requirement, determine which type of deviation may be used and the documentation required

Key Message: Participants should be able to complete these actions at the end of the lesson.

Note: In relation to learning outcome 1: This course only covers CACC Manual topics. It does not present an all-inclusive discussion of PS&E requirements for obtaining construction authorization and obligating FA funds.

Slide 45



Plans, Specifications, Estimates

- What does the law require?

Plans and Specifications	Estimate
Location	Anticipated cost of the project
Design features	
Construction requirements	
With sufficient detail to: <ul style="list-style-type: none"> ▪ Facilitate the construction, the contract control and the estimation of construction costs of the project 	With sufficient detail to: <ul style="list-style-type: none"> ▪ Provide an initial prediction of the financial obligation to be incurred by the State and FHWA ▪ Permit an effective review and comparison of the bids received.

Key Message: The PS&E is a convenient collection of the documents and actions used to review and approve the project for advertisement and construction.

Plans, specifications, and estimates are the main component of the PS&E. Information on right-of-way, utilities, experimental features, contracting methods, etc., also may be included (depending on the State's requirements and the project).

Facilitation Guidance:

1. Direct participants to read 23CFR 630.205(b), found in the "Background" section under the slide in the workbook, which lists the items that must be included in the PS&E.
2. Then ask them to identify what the law requires in terms of plans and specifications. Advance the slide once to animate the answers.
3. Ask them to identify what the law requires in terms of the estimate. Advance the slide again to animate the answers.
4. Ask participants the following questions as you review the requirements in the table.
 - i. Why is the Project Estimate important? *Answer: It is an estimate of financial obligation, an evaluation of bids for unbalancing, and a basis of comparison for award.*
 - ii. What type of data is the Project Estimate based on? *Answer: It is based on historic data, actual cost, and a combination of both.*
 - iii. What is your State's policy on estimate confidentiality? Accuracy? *Answers will vary.*

Background: “Plans and specifications shall describe the location and design features and the construction requirements in sufficient detail to facilitate the construction, the contract control and the estimation of construction costs of the project. The estimate shall reflect the anticipated cost of the project in sufficient detail to provide an initial prediction of the financial obligations to be incurred by the State and FHWA and to permit an effective review and comparison of the bids received.” 23CFR 630.205(b)

Although FHWA does not require standard specifications or plans, FHWA must approve the PS&E on Federal oversight projects prior to authorizing the project for letting; FHWA must go through every contract page-by-page if no standard specifications have been preapproved; if the STA is working from a set of standard specifications and plans that FHWA has approved, it makes the approval process simpler for all involved.

Projects on the NHS must be designed to meet FHWA approved standards. Projects off the NHS may be designed to meet State or local standards.

FHWA’s formal adoption of a standard makes the minimum value for each design element the minimum design standard for FHWA projects. Therefore, a formal design exception is required if a project’s design uses less than the minimum criteria in an adopted standard. The STA may evaluate, document, and approve design exceptions on State-delegated or State-funded projects, provided it follows FHWA design exception guidelines for projects on the NHS.

Recent rulemaking requires State DOTs to monitor all projects and de-obligate funds if the amount obligated exceeds the current estimate by \$250,000.

Activity Time: 5-7 minutes is allotted for review of the content and discussion.

CACC Manual Page: 60-62, 107

Resources

- FHWA *Guidelines on Preparing Engineer's Estimate, Bid Reviews and Evaluation*
<http://www.fhwa.dot.gov/programadmin/contracts/ta508046.cfm>
- FHWA *Guide for Construction Contract Time Determination Procedure*
<http://www.fhwa.dot.gov/construction/contracts/t508015.cfm>
- NHI 134061 *Construction Program Management and Inspection*
<http://www.nhi.fhwa.dot.gov/default.aspx>
- AASHTO *Controlling Design Criteria Report*, Appendix A (October, 2001)
<http://www.fhwa.dot.gov/environment/publications/flexibility/ch02.cfm>
- AASHTO *Greenbook* (2001 or 2004 [see memos]) and AASHTO *A Policy on Design Standards Interstate System* (January 2005)
- “Coordination of Vertical Clearance Design Exceptions on the Interstate System” and “Information on Application of Design Standards, Uniform Federal Accessibility Standards, and Bridges” (23 CFR 625 Non-regulatory supplement)
<http://www.fhwa.dot.gov/pgc/index.cfm?ddisc=62&dsub=903>

Slide 46



What Does the PS&E Include?



- **Group Activity**
 - Complete the PS&E Requirements table
 - Determine which items are required and which are State- or project-dependent

Key Message: The table on the following pages lists the items that are essential **only for the purposes of contract administration.**

Remember that the purpose of the activities in this class is to help participants use the CACC Manual and to become familiar with the content therein. Encourage use of the Manual throughout all the group and individual learning activities in this course.

Facilitation Guidance: Specifically address the PS&E items found in the following table.

1. Direct participants' attention to the PS&E Requirements table on the page following this slide in their workbooks. (A completed version of the PS&E Requirements table is found on the following pages of this instructor guide.)
2. Identify and differentiate those components that **must** be included in the PS&E to comply with Federal-aid requirements, e.g., plans and specifications, from those that **may** be included, e.g., a Value Engineering study or Road User Costs, which are based on the STA's requirements or the project.

It is essential to explain that a **blacked-out cell on the PS&E Requirements table indicates "not applicable,"** i.e., **an optional item for which CFR must be followed if the optional item is used.** Therefore, there is no "deviation," *per se*, because the item was optional in the first place.

3. Assign each group 2-3 requirements from the table and ask them to use the manual to locate the applicability of each requirement. The following rows have already been completed with notes: Environmental Commitments and Road User Costs.

Note: Display Slide 35 while participants work on the task. The graphic is helpful.

4. Allow **10 minutes** for groups to complete this task.
5. Provide a brief overview of the answers. Do not cover topics in detail; inform class that we will go into detail on some items in the next few minutes.

Note: Remind participants that answers are provided in the appendix. Participants should attempt to capture answers in their workbooks to reinforce learning; however, if they do miss an answer, it will be available to them in the appendix.

Activity Time: 30 minutes is allotted for this requirements activity and questions.

Federal-aid PS&E Requirements

Requirement	CACC Manual Page	Applicable to	Deviation Allowed? Y/N (Type)
1. Specifications and Plans	60	All FA highway construction projects	N
2. Engineer’s Estimate	107	All FA highway construction projects	N
3. Environmental Commitments	120	All FA highway construction projects	N (Any required environmental mitigation measures that result from the environmental clearance process must be included as appropriate in the relevant construction projects. This is the NEPA process and all Federal actions need an approved NEPA document, which may contain environmental commitments that need to be carried into the design and construction phases.)
4. Basis of Contract Award – Competitive Low Bid	47	All FA highway construction projects	Y (Cost effectiveness finding (Public Agency Force Account), a time sensitive emergency exists, or under the SEP-14 program and TE projects via small purchase procedures)
5. Public Agency Force Account	48	All FA highway construction projects	N
6. Time-related Incentive/ Disincentive Clauses	109	All FA highway construction projects on the NHS	
7. Quality Price Adjustment Clauses	115	All FA highway construction projects on the NHS	
8. Commodity Price Escalation Clauses	116	All FA highway construction projects	

Requirement	CACC Manual Page	Applicable to	Deviation Allowed? Y/N (Type)
9. Standardized Changed Condition Clauses	118	All FA highway construction projects other than design-build projects where the applicability will be determined on a project-by-project basis	N
10. Value Engineering (VE)	64	1) All projects on the NHS with an estimated total cost of \$50,000,000 or more; 2) any bridge project on the NHS with an estimated total cost of \$40,000,000 or more; or 3) any other project the Secretary deems appropriate	N
11. Road User Costs	67	Any Federal-aid highway construction contract with an incentive/disincentive clause, lane rental fees, or a liquidated damages charge that includes road user costs	
12. Life-Cycle Cost Analysis	65	State optional	
13. Patented or proprietary products	93	All FA highway construction projects	Y (Certification, PIF, or open bid)
14. Domestic steel and iron products (Buy America)	86	All FA highway contracts	Y (Waiver)
15. State-owned, furnished, or designated materials	99	All FA highway construction projects	Y (Cost-effectiveness finding)
16. Convict-produced materials	90	Federal-aid highways only, not to projects on roadways functionally classified as local roads or rural minor collectors	Y (No new ones; see established list)
17. Salvaged materials	100	All FA construction projects	

Slide 47



Allowable Contracting Methods

- Traditional design-bid-build, low bid contracts
- Alternative contracting (operational methods)
 - Cost-plus-time bidding (A+B)
 - Lane rental
 - Design-build contracting
 - Additive alternate bidding
 - Warranty clauses
 - Construction Manager/General Contractor (CM/GC)
 - Alternate pavement type bidding using life-cycle cost adjustment factors

Key Message: The contracting method is documented in the PS&E. The FHWA allows State DOTs to evaluate non-traditional contracting techniques on Federal-aid projects.

Background: The methods listed as “operational” on the slide were previously experimental methods. Based on the collective experience of the STAs using these methods, FHWA changed their status to operational. These methods may be used without additional SEP-14 approval.

Note: This section (instructor guide pages 84-86) is **meant to be an overview**; do not go into detail on each contracting method. Take **no more than 10 minutes** to review this section.

CACC Manual Page: 47-59

Resources

- FHWA Alternative Contracting Web site
http://www.fhwa.dot.gov/programadmin/contracts/sep_a.cfm
- FHWA Alternative Contracting Methods (ACMs) Library
<http://www.fhwa.dot.gov/construction/contracts/acm/>
- FHWA SEP-15 Web site http://www.fhwa.dot.gov/ipd/p3/tools_programs/sep15.htm
- NHI 134058 *Alternative Contracting* <http://www.nhi.fhwa.dot.gov/default.aspx>

Slide 48



Allowable Contracting Methods, cont.

- Alternative contracting (experimental methods)
 - Best value
 - ID/IQ
 - No excuse incentive/bonus
 - Lump sum bidding

Key Message: This slide features a set of allowable contract methods that are classified as experimental. Their use on a Federal-aid project requires prior approval of the SEP-14 work plan by HIPA-30. The work plan is included for approval in the PS&E.

Facilitation Guidance:

1. Ask participants:
 - i. What are two examples of alternative contracting that are **not** allowed? *Answer: Bid averaging and reverse auction*

Background: The definitions for each type of alternative contracting method, as stated in the manual, are provided below.

- **Best value:** May be defined based on either the value of the product to be received (a 10-year warranty compared with a 3- or 5-year warranty) or the bidder's past performance based on some objective criteria. In general, the project award is based on a composite of price data and non-price factors.
- **Indefinite delivery/indefinite quantity (ID/IQ):** The bidders bid on a unit of defined work, e.g., lane-mile of pavement striping; lane mile of asphalt overlay of a defined depth; traffic signal installation for a "typical" intersection; or installation of a defined "typical" off-system bridge, with a guaranteed minimum number of work units over the life of the contract.

Actual work locations are determined during the contract, and there may be some room for price adjustments based on location specifics.

- **No excuse incentive/bonus:** The STA gives the contractor a “drop-dead date” or incentive date for completion of a phase or project. If the work is completed in advance of that date, the contractor receives a bonus. However, the STA accepts no excuses for delay in meeting that date. Other than the no-excuse bonus date, normal contract administration procedures are followed.
- **Lump sum bidding:** Lump sum bidding may be carried out in two ways. Under the non-experimental method, the STA provides the bidders with complete plans including quantity take-offs as the basis for the bids to be submitted. The experimental method requires each bidder to develop the quantity take-offs based on the provided plans in order to develop a lump sum bid for the work.

Examples of disallowed methods include bid averaging and reverse auction.

- **Bid averaging:** Under bid averaging, the high and low bids are thrown out. The remaining bids are averaged and the contract is awarded to the contractor that comes closest to that average. To work well, a minimum of 5 bidders is required for each contract. However, since this method clearly violates the requirements in 23 U.S.C. 112, FHWA rejected the approach.
- **Reverse auction:** Under reverse auction bidding, the STA posts a scope of work on a Web site and allows bidders to bid until the closing time. This method is similar to a silent auction, except that bids for construction are expected to drop as each bidder reacts to subsequent bids. Award is based on the low bidder at the advertised bid closing time. FHWA rejected this proposal for several reasons: primarily it violates the confidentiality of bids, and it pushes bidders to look for contract ambiguities that may allow them to recover the cost of bidding low in an effort to get the work. The latter creates an adversarial relationship between the contractor and STA even before the contract has been awarded.

Note: ATC are not contracting methods. They are part of other methods, but not methods unto themselves (per the CACC manual).

CACC Manual Page: 58-59

Timing Note: In a typical course delivery, lunch break will fall in this section (somewhere between instructor guide pages 86-93). If it is nearing lunchtime in a particular session, stop in this section where convenient.

Slide 49

Waiving Competitive Bidding Requirements





- Public agency force account can be used
 - When STA proves cost-effectiveness
 - When an emergency exists
- Negotiated contracts for emergency work to restore essential travel

Key Message: The law states that no public agency can bid in competition or enter into subcontracts with private contractors. Every Federal-aid construction contract has implicit approval for low-bid contracting that can only be changed with approval from the Division Administrator. A waiver of competitive bidding requirements is technically an “approval” to use another method of contracting, not just a removal of a requirement, and occurs in rare instances.

Background: A cost effectiveness finding must be provided to support a request to waive competitive bidding requirements.

Emergency repair (ER) requirements apply to projects on Federal-aid highways to repair serious damage by widespread natural disasters, or by catastrophic failure from an external cause. In the case of emergency, work time is of the essence and immediate action is needed to:

- Minimize damage.
- Protect adjacent facilities.
- Restore essential traffic.

Since the objective of ER projects is to quickly restore essential traffic flow on a facility, they may be excellent candidates for innovative contracting techniques, such as design-build, I/D, or A+B bidding.

An LPA could use force account work as a match. However, any match expected to be used towards Federal funds pro-rata needs to meet Federal requirements. Documentation may be asked to support how it met FA requirements.

CACC Manual Page: 47-49

Slide 50

Using Time-related Incentive/Disincentive Clauses



- Intended for projects with high traffic disruption potential
- Not intended to be used routinely
- Differs from liquidated damages



- Recommended caps are 5% for incentives; none for disincentives

Key Message: FHWA encourages the use of incentives on certain projects, as they are a demonstrated method of completing a project within schedule and budget. Incentive/disincentive (I/D) provisions are included in the PS&E.

Facilitation Guidance:

1. Ask participants:

- i. What is the difference between disincentives and liquidated damages? *Answer: Disincentives are designed to charge the contractor for the increased road user costs resulting from continued traffic obstruction. Liquidated damages are designed to compensate the STA for the additional construction engineering (CE) costs when the contractor does not complete the project on time. Liquidated damages are discussed in greater depth in Lesson 4.4.*
- ii. What types of costs can be included in disincentives? *Answer: Traffic control and maintenance, detour costs, and road user costs can be included.*
- iii. If road user costs are used to calculate liquidated damages, can they be used again in figuring disincentive charges? *Answer: No.*

Background: FHWA has traditionally endorsed the use of incentive provisions for improved quality that range up to 5% of the unit bid price, provided the incentive is based on readily

measured physical properties that reflect improved performance. Incentives greater than 5% may be considered on a case-by-case basis following an analysis of performance data.

An I/D provision is not to be used routinely; therefore, each STA should develop specific criteria to facilitate early identification of projects that would benefit from the inclusion of an I/D provision. Common characteristics of appropriate projects for I/D clauses include the following.

- Projects on high traffic volume facilities, generally in urban areas
- Projects that complete a gap in a significant highway system
- Major reconstruction or rehabilitation on an existing facility that severely disrupts traffic
- Reconstruction or rehabilitation of major bridges
- Projects with lengthy detours

It is important that an I/D clause be well thought out and reflect the following characteristics.

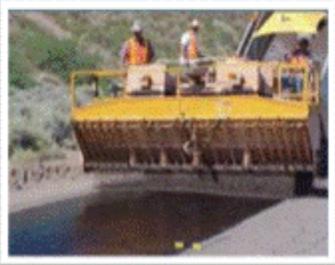
- Compatibility with plans, specifications, and any other scheduling information
 - A contract change order during the specified I/D time could be very expensive; prompt decision-making and approvals by the STA are critical to minimize time or cost impacts.
- Specificity about any unusual conditions or events that might impact the contractor's operations
- Clarity about start and end of the I/D time; there should be no time extensions during the I/D time period
- Coordination with any outside parties that might be affected, such as the police, local government agencies, emergency response centers, and traffic management centers
 - If the contractor needs to adapt the schedule, there should be a feedback loop so that the right people receive the needed information in good time.
- Requires a CPM and updates so that the STA can make informed decisions about the effects of extra work or change orders during the I/D time. This requirement makes it possible to determine the effect any changes would have on non-critical work items.

CACC Manual Page: 109-111

Slide 51



Price Adjustment Clauses

- Quality Price Adjustment Clauses
- Commodity Price Escalation Clauses

Key Message: Price adjustment clauses are frequently used in Federal-aid contracts and are documented in the PS&E. FHWA can only participate in a price adjustment if the original contract offering included the clause.

Use of these clauses is optional. If they are included in the contract, they must follow the requirements of 23 CFR 637.

Facilitation Guidance:

1. Ask participants:
 - i. For what is a **quality** price adjustment clause typically used in your State? *Possible answers: Smoothness, concrete strength, pavement thickness, aggregate product consistency*
2. Direct participants to page 115 in the manual to review a list of physical properties for which STAs include quality price adjustments.
3. Ask participants:
 - ii. What **commodity** price escalation clauses are used in your State? *Possible answers: Asphalt, cement, steel*

Activity Time: 5 minutes is allotted for answering the question and reviewing the manual.

Background:

Quality-related Price Adjustment Clauses may be based on a single individual physical property or the combination of several physical properties. This clause should be related to critical physical properties on a project and their contribution to the overall performance of the pay item.

- Remember the four Ds for this type of price adjustment.
 - Determine the critical physical properties
 - Describe how each property influences product performance
 - Describe the evaluation methods for each property
 - Develop a price escalation clause for each property

These items are then incorporated into the acceptance plan for the each property.

A quality price adjustment provision includes a pay schedule that uses either a continuous, or a stepped, method to adjust the unit price.

Commodity Price Escalation Clauses are used to compensate the contractor for an unanticipated, nationwide price increase of specific construction materials. Under specific conditions, it also may be invoked for regional shortages. The clause is designed to reduce the contractor's risk and therefore, decrease inflated or speculative bid prices.

Some STAs identify the items of work the clause will affect; others require the contractor to provide fuel receipts on a monthly basis. Unless the contracting agency has provided in the original contract for adjustments due to changes in sales taxes, FHWA is unable to participate in such adjustments. FHWA is unable to participate in retroactive price adjustments.

CACC Manual Page: 115-117

Resources

- Transportation Research Board *National Cooperative Highway Research Program (NCHRP) 371: Quality-Related Pay Adjustment Factors for Pavements*
<http://www.trb.org/Publications/Blurbs/168404.aspx>

Slide 52



Standardized Changed Conditions Clauses

- Three different clauses
 - Differing site conditions
 - Suspensions of work ordered by the Engineer
 - Material changes in the scope of the work

Key Message: The PS&E includes Standardized Changed Condition clauses that are intended to protect both the contractor and the STA. Since project plans do not always accurately represent field conditions, these clauses protect the contractor from construction cost increases if the scope of work or actual field conditions requires different construction methods. Conversely, if the construction costs decrease for an item of work, the STA can receive the benefit.

The standardized changed condition clauses in 23 CFR 635.109 must be included **verbatim** in all contracts unless State statute prohibits their inclusion. With the Division Administrator's approval, an alternative clause may be developed by the STA that either a) includes all the required sections of 23 CFR 109 but is structured to fit the STA's standard specifications; or b) fulfills the requirements of State statute.

While there are three clauses covering different aspects, they may overlap.

CACC Manual Page: 118-120

Slides 53-55



Differing Site Conditions

- Type I Condition
 - Subsurface or latent physical conditions that differ materially from the contract
- Type II Condition
 - Unknown physical conditions of an unusual nature that differ from those ordinarily encountered



Suspensions of Work Ordered by Engineer

- Allows adjustment of contract terms if the performance of all, or a portion, of the work is suspended or delayed by the Engineer for an unreasonable period of time
- Must be in writing



Material Changes in Scope of Work

- Permits adjustment of the contract terms if the Engineer orders an alteration of the work or in the quantities that **significantly changes** the character of the work
- Must be in writing

Key Message: The three different types of standardized changed condition clauses are discussed in greater detail here.

Facilitation Guidance:

1. Direct participant to read the “Standardized Changed Condition Clauses” section of the CACC Manual that begins on page 118.
2. Ask participants to answer the following questions, based on their reading:
 - i. Can adverse weather be a differing site condition? *Answer: Owners do not allow claims based on bad weather as a differing site condition. This includes adverse or unusually severe weather. Some States may allow a time extension if critical work was affected by bad weather.*
 - ii. What are some example causes of compensable owner delay? *Possible answers: Failure to make timely progress payments; delay in issuing the notice to proceed; delayed approvals; improper inspections; failure to act on contractor requests; non-cooperation*

- iii. Are deleted items covered under the significant changes in the character of the work clause? *Answer: This topic was not specifically addressed in FHWA's regulation. It is covered by most contracting agencies' standard specifications.*
- iv. What constitutes a significant change? *Answer: The term "significant change" is defined in the regulation to mean that a) the altered character of the work differs materially from the original contract; or b) a major item of work, as defined in the contract, is increased or decreased by more than 25%. Either party may initiate this adjustment but both must agree before the work is actually performed.*

Activity Time: 5 minutes is allotted for answering the question and reviewing the manual.

Background:

- Differing site conditions include the following.
 - Type I - Subsurface or latent physical conditions that differ materially from the contract; the actual subsurface conditions must have been reasonably unforeseeable and there must be an express statement as to the conditions to be expected, or there must be some statement from which the conditions can be fairly implied
 - Type II - Unknown physical conditions of an unusual nature that differ from those ordinarily encountered; the contractor must demonstrate that the condition was unknown, unforeseeable, and unusual, i.e., it could not have been reasonably anticipated from the contractor's study of the contract documents, inspection of the site, and general experience

With both types of site conditions, one party must notify the other in a timely manner, and an Engineer needs to promptly investigate and determine if an adjustment is warranted. This is one of the most frequently cited clauses in contractor-requested changes.

- Suspensions of work ordered by the Engineer allows adjustment of contract terms if the performance of all, or a portion, of the work is suspended or delayed by the Engineer, in writing, for an unreasonable period of time, i.e., not originally anticipated, customary or inherent to the construction industry; suspension must not be due to contractor's actions; contractor can request compensation or time.
- Material changes in the scope of the work permits adjustment of the contract terms if the Engineer orders, in writing, an alteration of the work or in the quantities that **significantly changes** the character of the work.

CACC Manual Page: 118-120

Slide 56

Does the Contractor Have a Valid Claim Under the Clause?





- Group Activity
 - Review the scenario
 - Determine if there are grounds for action

Key Message: Using two different case study examples and the information discussed on the previous slides, determine if the contractor has grounds for a claim. If so, identify appropriate actions that could be taken to address the claim.

Facilitation Guidance:

1. Refer participants to page 56 in the workbook.
2. Assign half of the class to review Changed Condition Example #1 and the other half to review Changed Condition Example #2. Tell them to decide if there are grounds for action in either example. (The descriptions are found in this document on the following page, along with the answers and lesson learned.)
3. Allow the groups 5 minutes to review the examples and develop an answer.
4. Ask each group to provide their thoughts on the appropriate actions. Provide the actual outcomes and lesson learned after each group's response.

Activity Time: 15 minutes is allotted for the change condition activity.

Changed Conditions: Delays #1

D.A. Elia Construction Corporation was contracted by the New York State Thruway Authority (NYSTA) to repair 4 concrete piers supporting the Castleton-on-Hudson Bridge. NYSTA required that Elia repair more—but smaller—areas of the piers than were identified in the bid documents. The contract had advised bidders to conduct their own inspections as the bid documents indicated only major repairs and were approximations subject to field conditions.

Elia did not conduct its own inspection, but rather based its bid on the assumption that an accurate field inspection by hammer soundings of the piers had recently been completed.

Elia sued NYSTA seeking compensation for additional work and costs.

Is Elia's claim justified? *The Court of Claims dismissed Elia's claim, finding that the increased number of repairs did not reflect a qualitative change in the work. Even though significantly more areas required repair, the total area repaired was comparable to original estimates. The contract had advised the bidders to conduct their own inspections as the bid documents indicated only major repairs and were approximations subject to field conditions. Elia could not reasonably rely on bid documents for anything more than an approximation of the necessary repairs.*

Lesson learned: The Significant Change Clause is intended to compensate the contractor only for additional costs that result from the significantly increased quantity when the scope of the work does not change.

Changed Conditions: Delays #2

Huff Enterprises was contracted by the Triborough Bridge and Tunnel Authority to construct office facilities. The contract contained a standard requirement that a 10-day written notice of delay be given to the owner. Full completion of the project was delayed for more than 2 years largely due to the Authority's revision of construction plans, which required Huff to perform extra work. Huff failed to provide written notice at the start of the delay.

After completion, Huff sued the authority, seeking to recover delay damages, as well as compensation for the extra work.

Huff claimed that the Authority repeatedly and deliberately ignored, and therefore waived, the contractual notice requirement. But, the Authority had verbally told Huff that any claim for delay damages should be submitted along with other claims at the end of the project.

Huff said it was established practice between the parties to bypass the strict mandates of the contract by not making notice of each item causing delay.

Does Huff have a legitimate case against the Authority? *The court found there was no extensive record of timely written correspondence between the parties addressing the disputed subject matter. The Authority only sought to dismiss the claims relating to delay damages and*

not those for the extra work. Any claim's award or rejection is subjective depending on the deciding official (and jury.) In this case a 10-day time frame of written notice of delay was in the contract and not followed, therefore the court ruled in favor of the authority. Also, the FHWA approved the specifications so FA participation could also be affected.

Lesson learned: Strict compliance with notice requirements is essential. Any claim award or rejection is subjective depending on the deciding official (and/or jury). In this case, a 10-day time frame for written notice of delay was in the contract and not followed, therefore court ruled in favor of the Authority.

Slide 57



Conducting a Value Engineering (VE) Study

- VE studies are required on certain FA projects
- Design-build projects are exempt from the VE requirements
- FHWA can require more than one VE analysis for major projects

Key Message: If a VE study was completed, the VE study report is included in the PS&E. Any changes made as a result of VE studies are incorporated into the project plans and specifications.

FHWA Divisions have general program oversight responsibility for VE through monitoring the STA's overall implementation of the program

Background: In order to determine whether a project exceeds the VE threshold, the project estimate must include the costs associated with environmental studies, preliminary engineering, final design, right-of-way acquisition, and construction.

VE thresholds are: 1) All projects on the NHS with an estimated total cost of \$50,000,000 (YOE) or more; 2) any bridge project on the NHS with an estimated total cost of \$40,000,000 or more; or 3) any other project the Secretary deems appropriate. Dollar amount is based on the total project cost, not just the construction contract amount.

CACC Manual Page: 64

Resources

- FHWA Value Engineering Web site <https://www.fhwa.dot.gov/ve/>
- NHI 134005 *Value Engineering* <http://www.nhi.fhwa.dot.gov/default.aspx>

Slide 58



Materials Requirements



- Patented or proprietary products
- Domestic steel and iron products
- State-owned, furnished, or designated materials
- Convict-produced materials
- Salvaged materials

Key Message: The contractor must have maximum flexibility to furnish and select materials, and their sources, when doing work on Federal-aid projects. These materials requirements largely support that goal, with certain exceptions.

Background: The preferred method of obtaining materials for a project is through normal contracting procedures, which require the contractor to furnish all materials to be incorporated in the work. The contractor selects the source—public or private—from which the materials are to be obtained (23 CFR 635.407.)

CACC Manual Page: 86-102

Slide 59



Using Patented or Proprietary Items



- Discourages use of brand or trade names
- Requires use of “equal to” phrasing when trade or brand names cannot be avoided
- Requires inclusion of equivalent materials and products in specifications

- FHWA does not pay a premium or royalty for patented or proprietary materials, specifications, or products

Key Message: The primary purpose of the requirement on patented or proprietary items is to support competition in the selection of materials, while encouraging the development of new materials and products.

CACC Manual Page: 93-97

Slide 60



Patented or Proprietary Items May Be Used When...

- Obtained through competitive bidding
- Certified by the STA as being essential or unique
- Used for research or for a distinctive type of construction
- Approved by FHWA using a PIF

Key Message: In some instances, the use of patented or proprietary products on Federal-aid projects is allowed, if specific requirements are met.

Facilitation Guidance:

1. Direct participants to read “Patented or Proprietary Materials” on page 93 of the CACC manual. (See 23CFR 635.411(a)(1).)
2. Ask participants:
 - i. What constitutes a “reasonable” number of acceptable products in your State? *Note: FHWA recommends 2-3 products be used to meet the “reasonable” requirement and most states adhere to this number.*

Background: The requirements to be met in order to use patented or proprietary items on a Federal-aid project are as follows.

- Competitive bidding
 - The proprietary product is obtained through competitive bidding with equally suitable proprietary or nonproprietary products from multiple manufacturers.
 - A competitively bid, performance-based warranty specification is permitted if it does not limit product selection to a single source.

- The STA certifies that the proprietary or patented item is either:
 - Essential for synchronization with the existing highway facilities, or
 - A unique product for which no equally suitable alternative exists.
- The proprietary product is to be used for research or for a distinctive type of construction on relatively short sections of road for experimental purposes.
- If there are other equally acceptable materials or products available, the contracting agency may require a specific material or product when the Division Administrator approves its use based on a public interest finding. PIFs cannot be delegated to LPAs in this instance.

Resources

- FHWA *Approvals of Patented and Proprietary Products from November 30, 2011 to Present*
<http://www.fhwa.dot.gov/construction/contracts/pnpapprovals/approvals.cfm>
- FHWA *Questions and Answers Regarding Title 23 CFR 635.411 (Patented and Proprietary)*
<http://www.fhwa.dot.gov/programadmin/contracts/011106qa.cfm>
- AASHTO Product Evaluation List (APEL)
http://apel.transportation.org/all_certified_products.aspx

Slide 61



Buy America Requirements



- Domestic manufacturing of all steel and iron materials permanently incorporated in a Federal-aid project funded under Title 23 U.S.C.

- Includes the application of a coating

Key Message: Buy America is a significant requirement pertaining to materials selection on Federal-aid projects. This requirement **limits** the selection of steel and iron materials and products to domestically-manufactured options. It is the responsibility of the STA to enforce compliance with Buy America.

Background: The requirement applies to all Federal-aid projects funded under Title 23 U.S.C. Under MAP-21, the requirement expanded to include all contracts eligible for assistance under Title 23 within the scope of a finding, determination, or decision under NEPA, regardless of funding source, if at least one contract within the scope of the NEPA decision is funded with Federal funding provided under Title 23 (23 U.S.C. 313).

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Buy America Does Not Apply to...

- Manufactured products that are not steel or iron (total iron and steel content <90% by weight)
- Miscellaneous steel or iron components, subcomponents, and hardware necessary to encase, assemble, and construct steel components

Key Message: The FHWA memo *Clarification of Manufactured Products under Buy America* clarifies the application of Buy America requirements to manufactured products, including structural steel or iron components of pavements, bridges, tunnels, etc.

Background: The memo includes a list of manufactured products for which Buy America **does not apply**. They include the following.

- Not predominantly steel or iron (90% by weight)
- Miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble, and construct steel components, e.g., cabinets, covers, shelves, clamps, fittings, sleeves, washers, bolts, nuts, screws, tie wire, spacers, chairs, lifting hooks, faucets, door hinges

Resources

- FHWA *Clarification of Manufactured Products under Buy America* Memorandum (12/21/12)
<http://www.fhwa.dot.gov/construction/contracts/121221.cfm>
- FHWA's *Buy America Q&A for Federal-aid Program*
http://www.fhwa.dot.gov/construction/contracts/buyam_qa.cfm

Slide 63



Buy America v. Buy American

Requirement	Statute/Regulation	Applicability	Coverage	Threshold
Buy America	23 USC 313 23 CFR 635.410	All projects funded under Title 23	Manufacturing process for steel and iron materials, application of a coating	None NAFTA and other international trade agreements have no effect
Buy American	41 USC 10a-10d 48 CFR 25	Direct Federal Procurement	All construction materials with exceptions	Thresholds identified in NAFTA and other trade agreements

Key Message: Buy America and Buy American are two requirements that are often confused. Buy American applies only to direct Federal procurements, while Buy America applies to all Federal-aid projects funded under Title 23. Buy American requirements address all materials, while Buy America covers only iron and steel materials.

Background: The North American Free Trade Agreement (NAFTA) between US, Canada, and Mexico does not affect the Buy America requirements for the FAHP.

Slide 64

Circumstances that May Warrant Use of Non-domestic Steel or Iron





- Minimal use
- Temporary use
- Alternate bid procedures
- Buy America waivers

Key Message: FHWA policy provides for non-domestic steel to be used under the following circumstances: minimal use, temporary use, alternate bidding procedures, and an approved waiver of the requirements.

Background: The following circumstances may warrant the use of non-domestic steel on a Federal-aid project.

- Minimal use: The total amount of non-domestic steel or iron products used on the project may not exceed the minimal threshold amount (the greater of \$2,500 or 0.1% of the contract value).
- Temporary use: Steel or iron products used on a temporary basis, but not permanently installed, e.g., temporary sheet piling, may be non-domestic.
- Alternate bidding procedures: A contracting agency may use alternate bidding procedures; if the lowest total contract bid using domestic steel exceeds the lowest total contract bid using non-domestic steel by more than 25%, then non-domestic steel may be used (Reference: 23 CFR 635.410(b)(3)).
- Buy America Waivers: A contracting agency may request a waiver of the Buy America requirements if it can be shown that:
 - The application of the requirements would be inconsistent with the public interest (generally an emergency situation and not based on schedule or cost).

Steel and iron materials and products are not produced in the United States in sufficient and reasonably available quantities that are of a satisfactory quality.

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Slide 65



Buy America Project Waiver Process

- STA requests waiver through the Division with supporting documents
- Division provides initial review with recommendations to FHWA headquarters (HIPA-30)
- FHWA hosts public comments period and in-depth reviews
- STA must resolve all comments before the waiver request is published in the Federal Register

Key Message: It is important that an STA consider Buy America requirements in the design phase of the project, as obtaining a waiver of the requirement is a lengthy process. Before a waiver can be considered, FHWA requires the STA to evaluate a re-design with domestic products.

Background: Nationwide waivers exist for specific ferry boat equipment and machinery and pig iron, scrap, raw alloy materials, pelletized, or reduced iron ore.

On a project, an STA may submit a waiver through the Division to be approved by the Federal Highway Administrator. The waiver request must include the project number, description, cost, waiver item(s), item cost(s), country of origin for each item, and reason for the waiver. An essential element of any waiver request is a thorough discussion of why project requirements cannot be met with domestic products.

By law, FHWA must provide a minimum 15-day public comment period before granting a waiver. Any comments received during the comment period must be resolved prior to issuing a waiver.

Federal Register publication of the waiver constitutes approval.

Resources

- FHWA Notice of Buy America Waiver Request Web site
www.fhwa.dot.gov/construction/contracts/waivers.cfm

Slide 66



Materials Requirements (cont.)



- State-owned, furnished, or designated materials
- Convict-produced materials
- Salvaged materials




Key Message: These are the remaining materials requirements that need to be addressed as part of PS&E preparation.

Background:

- **State-owned, furnished, or designated materials:** An STA cannot give preference to in-State materials sources, including labor.
- **Convict-produced materials:** It cannot be used unless such materials have been produced by convicts who are on parole, supervised release, or probation from a prison, or have been produced in a qualified prison facility; those materials manufactured or produced in such a facility cannot be given preferential treatment.
- **Salvaged materials:** Items to be salvaged may be unused construction materials, salvaged highway materials or appurtenances, or other material for which the useful life is greater than one year; it does not include equipment purchased for the Federal-aid project; cost to salvage shall not exceed salvage value. State policy typically guides how salvaged material is treated in the contract. In the absence of State policy, 2 CFR 200.313 and 49 CFR 18.36 should be followed.
 - *Salvageable material* means material purchased with Title 23 funds with remaining monetary value when removed from the project and ownership is retained by the contracting agency. It does not include equipment or supplies purchased to complete or

administer the current project, or material that was purchased solely with non-Title 23 funds.

- *Salvage credit* means a monetary credit to a Federal-aid project for the estimated current market value of salvageable material.

CACC Manual Page: 90, 99-100

Slide 67



Deviations Case Study



- Determine if you need a PIF, cost effectiveness finding, or a certification for the project and materials listed

- Or identify if more information is needed

Key Message: It is now time to apply the information you just learned to determine the appropriate circumstances for using Buy America waivers.

Facilitation Guidance for Items 1-7:

1. Break participants into their previous groups.
2. Direct participants to the directions on page 63 in the workbook.
3. Assign each group to work on 1-2 items from the workbook's list of items #1-7. First they will determine if Buy America applies, and then they will determine if the item is a patented or proprietary product. They should identify which deviation would allow the use of the item on a Federal-aid project. Allow 10 minutes for the groups to work.
4. Ask each group to report on the materials assigned. Allow 10 minutes to debrief.

Facilitation Guidance for Item 8:

5. As a whole group, read #8 and answer the questions that follow it. During discussion of the last question, refer participants to the Buy America waiver request letter and compare the actual response to the participants' responses.

Activity Time: 30 minutes is allotted for the case study.

Note: A copy of the case study information, as it appears in the participant workbook, can be found on the following pages.

Case Study 1 Determining When to Deviate from Requirements**Goal:**

Determine if you need a PIF, cost effectiveness finding, or a certification for the project and material listed.

Directions for Completing Project-Materials Items 1-7

1. Review the descriptions for PIF, CEF, and certification on page 40 of the workbook.
2. Read the description of the project(s) and material(s) assigned to your group.
 - a. Determine if Buy America (BA) requirements apply.
 - b. Determine if the material is a patented or proprietary product (PPP).
 - c. If the answer to **a** or **b** (BA or PPP) is yes, determine which type of deviation(s) is (or are) required to utilize the item on the project.
 - d. If the answer to **a** or **b** (BA or PPP) is unable to be determined from the information provided, list what information you would need in order to make a determination.

Directions for Completing Project-Materials Item 8

3. As a whole group, read #8 and answer the questions that follow it. During discussion of the last question, refer to the Buy America waiver request letter and compare the actual response to your responses.

Project Materials

1. A Streetscape project's plans and specifications require the use of decorative light poles, Victorian-style, Model 10-X. These light poles are similar in appearance to those in place adjacent to the project.
 - a. *BA: unknown: What is the pole made of?*
If the pole is made of steel or iron, you would need to follow BA requirements or seek a waiver.
If the pole is aluminum (which Model-10X is), BA does not apply.
 - b. *PPP: yes, Model 10-X*
Deviation: Certification, because poles are essential for synchronization with existing highway facilities.

2. An overlay project's plans and specifications require the use of the NovaChip® process.
 - a. BA: no
 - b. PPP: yes, NovaChip® process

PIF. As the relevant patents for NovaChip® expired in 2010, others can now replicate this process without infringing on the patent. However, as the NovaChip® trademark is still in effect (held by Colas), the contracting agency is requiring its use by specifying it while other equivalent processes are available. The contracting agency could eliminate the need for a Deviation by writing a generic specification, thus allowing full competition.

3. An Interstate reconstruction project's plans and specifications require the installation of new underdrain and specifies the use of ConTech® plastic pipe.
 - a. BA: no
 - b. PPP: yes, ConTech® plastic pipe

PIF, as plastic underdrain pipe is available from multiple sources.

4. A bridge project plan requires a pier to be constructed in the middle of a stream using a sheet pile cofferdam.
 - a. BA: unknown

Is the cofferdam a temporary (No) or permanent (Yes) installation?
 - b. PPP: no

5. A superstructure replacement project's plans and specifications require the use of steel stay-in-place forms.
 - a. BA: yes
 - b. PPP: no

6. A bridge replacement project's plans and specifications require the use of a temporary bridge to be utilized as part of a detour for Maintenance of Traffic. The contractor may utilize a state furnished ACROW Bridge or provide their own, at no additional cost to the Government.
 - a. BA: no, this is a temporary use.
 - b. PPP: no, there are several manufacturers of temporary bridges.
 - c. Note: the project will need a PIF for the optional use of the State owned/furnished ACROW Bridge. ACROW is a name brand but the State-ownership is the issue in this example.

7. A project's plans and specifications require W-beam guardrail post, rails, and Slotted Rail Terminal (SRT) end treatments.

a. BA: yes

b. PPP: yes, SRTs are patented (by Trinity Highway Products) and proprietary.

A PIF would be required as there are multiple end treatments on the market.

8. A consultant develops plans for the complete replacement of a 75-year-old vertical lift bridge. The estimated cost of the proposed project is \$160M. The plans were submitted to the State with the following statement: "No domestic manufacturer of these components has been found:

4 Mondel Mill Shoe Brake 13" BT/E ED50/6S

4 Mondel Machinery brakes 23" BT/E ED201/6S

8 Timkin Counterweight sheave bearings 241/710KYMD

16 Timkin Deflector sheave bearings 23040YM

8 Timkin span lock bearings SDAFS23064K."

a. Should the State apply for a waiver, redesign, or proceed?

i. *BA applies, so yes, they need a waiver based on the information provided. Note: 0.1% of \$160M = \$160K; therefore, the minimal use provision would not be able to cover all the products listed.*

ii. *Note: Waivers must be supported by justification of why a redesign is not possible.*

b. If applying for a waiver, what would the State use as justification?

"No domestic manufacturer of these components has been found..."

c. What would happen if the consultant did not bring the materials to the attention of the State and the contract went out for bid?

There are several scenarios that could occur. Bidders might pose a lot of questions as to where they can get these special components, causing the State to recognize the problem during bid advertisement. At that point, the State would need to decide whether to pull the advertisement.

A second scenario might be that the bids come in very high, causing the State to recognize the problem during bid analysis. At that point, the State could evaluate the costs under minimal use (0.1% of total bid), or rebid the project using Alternate Bidding (lowest total contract bid using domestic steel exceeds the lowest total contract bid using non-domestic steel by more than 25%), or seek a waiver request.

The final scenario might be that the bid is accepted and the contract executed and the prime contractor submits a source of supply with a foreign manufacturer, causing the State to recognize the problem following the award of the contract. The State would have to consider a redesign and the possible issue of a change order. If a redesign is not possible, the State would

need to apply for a waiver. (Note: The supplier does not have to be Buy America compliant, but the manufacturer does.)

Use this scenario to emphasize that the waiver request/approval can be very time-consuming and is best initiated early in the project development process.

d. If you were the Secretary of the U.S. Department of Transportation, would you approve this waiver?

1. *Audience answers will vary*
2. *Refer participants to the actual letter on following page.*

The waiver was approved for the Mondel products

The waiver was denied for the Timkin products. Timkin replied to the 15-day public comment period Federal Register notice, stating they could and would make their products and they would be manufactured in compliance with the BA requirements for the project.



Paul R. LaPage
GOVERNOR

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0016

David Bernhardt
COMMISSIONER

February 25, 2014

Maria Drozd, Division Bridge Engineer
FHWA Maine Division
Edmund S. Muskie Federal Building
40 Western Avenue Room 614
Augusta, Maine 04330

Re: Sarah Mildred Long Bridge Buy America Waiver Request
MaineDOT WIN 16710.00, Federal Project Number BH-1671(000)

Dear Maria,

This letter is to request a waiver of the Buy America requirements of 23 CFR 635.410 for selected movable bridge machinery components.

The Sarah Mildred Long Bridge Replacement project involves the complete replacement of a 75 year old vertical lift bridge and associated approach work. The estimated total project cost is \$160,000,000. The Buy America waiver request is for the machinery components listed below:

1. Motor Brakes
2. Machinery Brakes
3. Counterweight Sheave Bearings
4. Deflector Sheave Bearings
5. Operating Drum Bearings
6. Span Lock Bearings

Motor Brakes:

The motor brakes for this project are specified as Mondel Mill Duty Shoe Brake 13" BT/E – ED50/6S. Four motor brakes are required for this project at an estimated cost of \$19,500 each for a total cost of \$75,000. We have been unable to locate a domestic supplier for this component. Since no domestic manufacturer of this component has been found, the Department requests a waiver of the Buy America provisions for this component.

Machinery Brakes:

The machinery brakes for this project are specified as Mondel Mill Duty Shoe Brake 23" BT/E – ED201/6S. Four machinery brakes are required for this project at an estimated cost of \$34,500 each for a total cost of \$138,000. We have been unable to locate a domestic supplier for this component. Since no domestic manufacturer of this component has been found, the Department requests a waiver of the Buy America provisions for this component.

THE MAINE DEPARTMENT OF TRANSPORTATION IS AN AFFIRMATIVE ACTION - EQUAL OPPORTUNITY EMPLOYER
PHONE: (207) 624-3000 TTY: 888-516-9364 FAX: (207) 624-3001

RECEIVED

FEB 27 2014

Counterweight Sheave Bearings:

The counterweight sheave bearings are very large spherical roller bearings. The design plans specify Timken 241/710KYMD or equivalent spherical roller bearings. Eight bearings will be required for this project. We have contacted two bearing manufacturers capable of producing such a bearing, Timken and SKF. Only one of those manufacturers would expect to produce that bearing domestically. The domestically produced bearing has been quoted at \$225,000 each for a total of \$1,800,000 for 8 bearings. The lift span fabricator quoting the mechanical package has informed us through the CM/GC process that a cost savings of \$800,000 (44%) can be realized by opening up competition to non-domestic sources. The Department's opinion is that since only one domestic source is available for this component that it is not available in sufficient and reasonable quantity and therefore a waiver of the Buy America provision is warranted.

Deflector Sheave Bearings:

The deflector sheave bearings are spherical roller bearings specified as Timken 23040YM or equivalent. Sixteen bearings will be required for this project at an estimated cost of \$3000 each for a total cost of \$48,000. We have contacted two bearing manufacturers capable of producing this bearing, Timken and SKF. Neither manufacturer produces this particular bearing domestically. Since no domestic manufacturer of this component has been found, the Department requests a waiver of the Buy America provisions for this component.

Operating Drum Bearings:

The operating drum bearings are pillow block spherical bearings specified as Timken SDAFS 23064K or equivalent. Eight bearings will be required for this project at an estimated cost of \$25,500 each for a total cost of \$204,000. We have contacted two bearing manufacturers capable of producing this bearing, Timken and SKF. Neither manufacturer produces this particular bearing domestically. Since no domestic manufacturer of this component has been found, the Department requests a waiver of the Buy America provisions for this component.

Span Lock Bearings:

The span lock bearings are pillow block spherical bearings specified as Timken SDAFS22522 or equivalent. Eight bearings will be required for this project at an estimated cost of \$3,300 each for a total cost of \$26,400. We have contacted two bearing manufacturers capable of producing this bearing, Timken and SKF. Neither manufacturer produces this particular bearing domestically. Since no domestic manufacturer of this component has been found, the Department requests a waiver of the Buy America provisions for this component.

Sincerely,



Jeffrey S. Folsom, P.E.
Project Manager
MaineDOT Bridge Program

Slide 68



Review Questions



- i. What are some examples of documentation that must be included in the PS&E to receive approval?
- ii. What are some examples of approved contract methods that can be used on Federal-aid projects?
- iii. What type of deviation is used for Buy America requirements?

Key Message: Review the content of the lesson and determine participants' mastery of the content.

Facilitation Guidance:

1. Ask participants to review the following questions in the workbook and work within their groups to derive answers. (2 minutes)
 - i. What are some examples of documentation that must be included in the PS&E to receive approval? *Possible answers include: Plans, specifications, estimates, contract method.*
 - ii. What are some examples of approved contract methods that can be used on Federal-aid projects? *Answers include: Design-bid-build, low-bid, cost-plus-time bidding, lane rental, design-build, additive alternate bidding, warranty clauses, Construction Manager/General Contractor, alternate pavement type bidding using life-cycle cost adjustment factors.*
 - iii. What type of deviation is used for Buy America requirements? *Answer: A waiver for Buy America requirements may be obtained in some instances when supported by a public interest finding.*
2. Ask each group to provide an answer. Take no more than 2-3 minutes to debrief the answers.

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Module 3 Contract Administration: Advertising and Award Phase

Lesson 3.1 Project Advertisement, Bid Review, and Award

Slides 79 and 80



The image shows two presentation slides side-by-side. The left slide is the title slide for Module 3, featuring a collage of highway-related images (a truck, a road, and a bridge) and the NHI logo. The right slide is titled 'Module Topics' and lists five bullet points: Advertising for bids, Bid opening, Bid analysis and award, Bid rigging, and Concurrence in award. Both slides include the NHI logo in the top right corner.

Module 3
Contract Administration:
Advertising and Award Phase

Module Topics

- Advertising for bids
- Bid opening
- Bid analysis and award
- Bid rigging
- Concurrence in award

Key Message: This module has only one lesson; it focuses on the requirements for advertising a project, conducting bid reviews, and making an award.

The lesson also discusses issues such as bid rigging, suspension, and debarment.

Slides 81 and 82



Key Message: The purpose of this lesson is to explain the process for advertising a project, bid opening, bid review, concurrence, and award. Requirements pertaining to each step are reviewed in detail. Particular emphasis is placed on the bid review process, including how to meet the Disadvantaged Business Enterprise (DBE) goal, defining a good faith effort (GFE), and explaining the requirements for re-advertising a project.

In addition, information is provided on bid rigging and other fraudulent contracting practices, and reporting requirements.

Facilitation Guidance:

1. Introduce the lesson and then advance to the next slide to relate this content to the project flow chart diagram.

Lesson Preparation:

- Verify that you have the Federal-aid Essentials video *Project Advertisement, Bid Review, and Request for Concurrence in Award* to show to the class.
- Determine the bid analysis requirements for the State, as documented in the S&O Agreement.
- Review the case study material.

Lesson Time: 90 minutes is allotted for this lesson.

End of Day 1 Timing Note: The instructor shall cover as much of this lesson as possible in Day 1. The case study on page 160 can typically be completed on the first day. However, no matter what content has been covered at the end of Day 1, **assign homework of the Day 1 Review**

questions (instructor guide page 169; participant workbook pages 92-94). Answers are to be reviewed at the beginning of Day 2.

If all the expected content has not been covered at the end of Day 1, **encourage participants to use the CACC manual to answer the Review questions.**

Start Day 2 with a brief review of the Review questions; no further instructions for this review are provided in the instructor guide.

Resources

- Federal-aid Essentials *Project Advertisement, Bid Review, and Request for Concurrence in Award* video
- CACC Manual
- CACC Participant Workbook (Case study documents, including project narrative, and video questions)
- FHWA *Guidelines on Preparing Engineer's Estimate, Bid Reviews and Evaluation*
<http://www.fhwa.dot.gov/programadmin/contracts/ta508046.cfm>

Slide 83



You Will Be Able to...

- Identify the critical requirements that need to be met in order to advertise a Federal-aid project
- Describe the process for reviewing and analyzing bids
- Explain what is meant by the terms “responsible bidder” and “responsive bidder”
- Determine what constitutes an adequate, good faith effort for meeting Disadvantaged Business Enterprise goals
- Describe the process for obtaining concurrence and awarding the contract

Key Message: Participants should be able to complete these actions at the end of the lesson.

Slide 84

Obtaining FHWA Approval to Advertise



- PS&E approved
- ROW clearances complete or proper coordination in contract
- Public hearing and environmental processes complete (NEPA)
- Other agency reviews complete
- Funding deemed adequate

Key Message: On all Federal-aid construction projects, FHWA authorizes the project for advertisement and approves any addenda. (On State-delegated Federal-aid projects, the STA performs these tasks on behalf of FHWA.) In order to obtain authorization, these are several of the tasks that need to be completed, as stated in 23 CFR 639.305.

Facilitation Guidance:

1. Ask participants:
 - i. When can a project be advertised? What tasks need to be confirmed as “complete”?
2. Record answers on a flip chart as participants provide their answers. Supplement the responses as needed, making sure all of the requirements are listed and explained as necessary. Remind participants to write answers on their blank slides in their workbooks.
3. Animate the slide to show the bullets after participants have answered.

Background: A right-of-way certificate includes utility and railroad coordination, and indicates whether ROW relocations are complete or if additional coordination is needed in the contract.

Other agency reviews can be completed by either Federal or State agencies, or both.

A funding obligation is only adequate if it is supported by an up-to-date cost estimate. As the project progresses and cost estimates change, the obligation in FMIS should be adjusted accordingly. Per 23 CFR 630.106(a)(4), “The State shall maintain a process to adjust project cost estimates. For example, the process would require a review of the project cost estimate when the bid is approved, a project phase is completed, a design change is approved, etc. Specifically,

the State shall revise the Federal funds obligated within 90 days after it has determined that the estimated Federal share of project costs has decreased by \$250,000 or more.”

Note: This slide is blank in the participants’ workbook.

CACC Manual Page: 129-130

Slides 85-87



Video Questions

- i. What is the minimum advertisement period on a Federal-aid project?
- ii. What step is immediately taken by the STA following the close of the bid submittal period?
- iii. What four factors need to be considered during bid analysis?
- iv. What indicates a responsible bidder?
- v. Inclusion on what list prevents a contractor from being awarded a Federal-aid contract?



Video Questions, cont.

- vi. When comparing the apparent low bid to the project estimate, what two types of unbalanced bids are possible?
- vii. What are some examples by which a bid could be deemed “non-responsive”?
- viii. Why might re-advertisement of a project be necessary?
- ix. Before notifying the contractor that its bid was selected or rejected, what must an STA or LPA do?





Federal-aid Essentials Video
[Project Advertisement, Bid Review, and Request for
 Concurrence in Award](#)

Key Message: The project can be advertised after project authorization has been obtained. The video provides an overview of requirements pertaining to advertisement, bid review, and concurrence.

Facilitation Guidance:

1. Direct participants to record answers to the video questions in their workbook as they watch the video.
 - i. What is the minimum advertisement period on a Federal-aid project?
 - ii. What step is immediately taken by the STA following the close of the bid submittal period?
 - iii. What four factors need to be considered during bid analysis?
 - iv. What indicates a responsible bidder?
 - v. Inclusion on what list prevents a contractor from being awarded a Federal-aid contract?
 - vi. When comparing the apparent low bid to the Project Estimate, what two types of unbalanced bids are possible?

- vii. What are some examples by which a bid could be deemed “non-responsive”?
 - viii. Why might re-advertisement of a project be necessary?
 - ix. Before notifying the contractor that its bid was selected or rejected, what must an STA or LPA do?
2. Select the film reel icon to play the Federal-aid Essentials video *Project Advertisement, Bid Review, and Request for Concurrence in Award* (8:57).
 3. Answers to the questions are revealed as the slide presentation proceeds.

Note: If the video is unavailable or not viewable, refer participants to the “Resources” section at the end of their workbooks. Information on the video content is available there. This is a last resort measure to be used only if the hyperlinks and the movie files on instructor’s laptop should fail.

Activity Time: 10 minutes is allotted for the video and question introduction.

Resources

- Federal-aid Essentials *Project Advertisement, Bid Review, and Request for Concurrence in Award* video <http://www.fhwa.dot.gov/federal-aidessentials/catmod.cfm?id=5>

Slide 88



Advertising Requirements

- Method of Advertising
- Bid Advertisement Period
- Pre-bid meeting
- Addenda

Key Message: FHWA requires that the advertising policies and practices of the STA must ensure free and open competition. These primary requirements, such as the advertisement period and addenda, must be adequately conveyed to potential bidders in order to comply with FHWA policy.

Facilitation Guidance:

1. Ask participants to provide responses to the video question.
 - i. What is the minimum advertisement period on a Federal-aid project? *Answer: 3 weeks*

Background: Advertising requirements are applicable to all Federal-aid highway construction projects. FHWA's free and open competition policy addresses issues such as prequalification, licensing, bonding and bidding, as well as Title VI Nondiscrimination. (Title VI prohibits discrimination based on age, race, religion, color, sex, national origin, disability, or sexual orientation.)

Legally acceptable advertisement of a contract proposal can take the form of a classified ad in a newspaper or any other format that is permitted by State law or practices and that is acceptable to the FHWA. Other acceptable formats for announcing upcoming projects may include advertisements in trade journals, bulletins, and mailed notices to potential bidders. Electronic advertising is acceptable on Federal-aid projects, as long as the STA can confirm that

the Web site used for advertising the project—or the process by which potential bidders obtain the information—is widely known.

Pre-bid meetings, which are predominantly used on large and complex projects, must be stated in the project advertisement and all bidding documents. In addition, the STA must ensure that prospective bidders have adequate notice of the requirement in order to attend.

All bidders must bid the project on the same basis so that no particular advantage or disadvantage accrues to any potential bidder or to the contracting agency. An addendum issued during advertisement could have a profound impact on bid prices, and the basis for bid comparisons, so the contracting agency must ensure as expeditiously as possible that all prospective bidders are aware of any addendum. Any addendum must be approved by the FHWA Division Administrator prior to its release to the prospective bidders. The STA must ensure that all potential bidders receive the approved addendum. (Note that any addendum to a project constitutes a deviation from the approved PS&E and may impact the obligation of Federal-aid funds.)

CACC Manual Page: 129

Slide 89



Bid Opening



- Bid opening and reading
 - Indicates apparent low bidder
 - Establishes the cost to build the project

Key Message: The bid opening is a public forum for the announcement of all bids, and is usually the point in time when the bids are opened and read aloud. For the bidder, the reading of bids provides an initial indication of the apparent low bidder. For the STA and the general public, this forum establishes the cost to build the project.

Facilitation Guidance:

1. Review the answer to the next video question.
 - ii. What step is immediately taken by the STA following the close of the bid submittal period? *Answer: Bids are opened publicly and read aloud either item-by-item, or by total amount. For any bid that is not read, the STA must identify the bidder and provide the reason for not reading the bid. The apparent low bid is identified. With electronic bidding, the spirit of the law must still be applied. Three ways this can be done are live video webcast of the bid opening, live audio webcast of the bid opening, and “real time” posting of bid opening results via Bid Express®.*

Background: Applicable to all Federal-aid highway construction projects. 23 CFR 635.113 requires that all bids be opened publicly and read aloud either item-by-item, or by total amount.

While FHWA does not have specific policies on how a bid opening should be conducted, the STA’s process must meet the intent of the regulatory requirement that “...[a]ll bids... shall be

publicly opened and announced...” In common terms, “publicly opened” means being opened in front of the “public,” particularly those people who are stakeholders in the letting. The specific details of how an STA advertises, accepts, and opens bids for projects are governed by State statute.

An open and public Web-based format is used for sharing bid information for electronic contracting.

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Slide 90



Bid Analysis and Award

- When analyzing bids, what four criteria should you use?
 - Is the bid responsive?
 - Is the bidder responsible?
 - How do bids compare to the Engineer's Estimate?
 - Was there adequate competition?

Key Message: Federal-aid contracts must be awarded to the lowest responsive and responsible bidder unless an alternative contracting method is being used. A bid analysis is the basis for justifying a contract award or rejection of the bids. A proper bid analysis helps to ensure that funds are being used in the most effective manner.

Facilitation Guidance:

1. Review the following question from the video.
 - iii. What four factors need to be considered during bid analysis? *Answer: Is the bid responsive? Is the bidder responsible? How do bids compare to the Engineer's Estimate? Was there adequate competition?*
2. After participants have responded, advance the slide one time to animate the answers. **The right column of the slide is blank in the participants' workbook.**
3. Review the remaining video questions.
 - iv. What indicates a responsible bidder? *Possible answers: Physically organized and equipped with the financial means to undertake and complete the contract; not suspended, debarred, or deemed to have inadequate business ethics*
 - v. Inclusion on what list prevents a contractor from being awarded a Federal-aid contract? *Answer: Excluded Parties List System, currently found on the Federal System for Award Management Web site, www.sam.gov.*

- vi. When comparing the apparent low bid to Engineer's Estimate, what two types of unbalanced bids are possible? *Answer: Mathematically unbalanced (a bid that contains lump sum or unit bid items that do not reasonably reflect the actual costs plus reasonable profit, overhead costs, and other indirect costs to construct the item); and Materially unbalanced (a bid that generates reasonable doubt that an award to that bidder would result in the lowest ultimate cost to the Government.)*
- Can you provide an example from your State?
- vii. What are some examples by which a bid could be deemed "non-responsive"? *Answer: Absence of signatures or certifications; failure to meet prequalification, insurance requirements, or DBE goals; failure to demonstrate adequate GFE; failure to include non-collusion statement*
- viii. Why might re-advertisement of a project be necessary? *Answer: Adequate competition was not present; a bid was materially unbalanced; bidders were not responsive; there was an error or major change in the PS&E package necessitating re-advertisement; or bids were considerably higher or lower than Engineer's Estimate (plus or minus 10% is cause for a detailed evaluation of bids.)*
- ix. Before notifying the contractor that their bid was selected or rejected, what must an STA or LPA do? *Answer: Obtain written concurrence from the oversight agency*

Activity Time: 20 minutes is allotted for review of the questions.

Background: Applicable to all Federal-aid highway construction projects.

A non-responsible determination by the STA should be in writing, and the contractor should be allowed an opportunity to respond under due process.

Each STA's standard general specifications have a section that defines what the STA considers a bidding irregularity, which can lead to a bid being deemed "non-responsive." Instances of non-responsive bids have been reduced with the growth of electronic bidding. The software used to submit the bids ensures that items are completed correctly before bids are submitted.

FHWA's review of the bids should parallel the STA review so that both agencies can confirm that adequate competition and the lowest possible price were received. This also allows FHWA to issue concurrence in award. There must be formal documentation of the analysis and rationale for contract award or rejection. The STA may act for FHWA in the bid analysis and award processes in a State-delegated project, but the STA must document its decisions in the project files as required by 23 CFR 635.114 (b) through (j).

A thorough analysis of all bids should be undertaken when the low bid differs from the Engineer's Estimate by an unreasonable amount. This helps to justify the award of a contract. The following should be considered.

- Was competition adequate?

- Was there an error in the Engineer's Estimate?
- Is re-advertisement likely to result in higher or lower bids?
- Is the timing of the project award critical?
- Would deferral be contrary to the public interest?

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Resources

- AASHTO Practical Guide to Cost Estimating (2013)
- FHWA *Bid Analysis and Unbalanced Bids* Memorandum (05/16/88)
<http://www.fhwa.dot.gov/programadmin/contracts/051688.cfm>
- FHWA *Guidelines on Preparing Engineer's Estimate, Bid Reviews and Evaluation* (2004)
<http://www.fhwa.dot.gov/programadmin/contracts/ta508046.cfm>
- Federal System for Award Management (incorporates the EPLS), <http://www.sam.gov>

Slide 91



Determining Adequate GFEs

- Solicitations
- Break-out items
- Amount of work made available
- DBE commitment
- Number and dollar amount of DBE bids
- Bonding, insurance, materials, and supplies assistance
- Plans, specifications, and requirements available

Key Message: An adequate good faith effort (GFE) means that the bidder actively and aggressively tried to meet the contract goal. In order to determine if an adequate GFE was made, you need to measure the quality, quantity, and intensity of the aspects shown on the slide, and then evaluate them relative to the efforts of other bidders.

Facilitation Guidance:

1. Ask participants:
 - i. How would you define a good faith effort in your State?

Background: To determine if an adequate GFE has been made:

- Check to see if the bidder made enough work available to DBEs to, at least, meet the contract goal. If not, it does not matter what other efforts were made; it is not possible to meet the goal and, therefore, adequate good faith efforts were not made.
- If the bidder made enough work available to DBEs, then count items only if the bidder solicited all available DBEs for that item. Written solicitations should be sent to all certified DBEs listed to do the work made available by the bidder. Query the Unified Certification Program (UCP) database to determine the DBEs available in the relevant market area to do each of the types of work made available by the bidder. If, for example, there are 12 DBEs available to do guiderail work and the bidder solicits 6 DBEs, do not count that work as

being made available by the bidder. It is not an adequate GFE. The bidder's effort was inadequate.

- Consider each and every bid. Bidders cannot reject DBE reasonable bids. In order to define "reasonable," review the efforts of other bidders. These efforts are a powerful tool to evaluate the GFEs of the apparent low bidder. If another bidder is utilizing the DBE at similar prices, the bid must be reasonable by default.
- A recipient can compare the amount of assistance offered by other bidders, the amount of DBE bids received for a variety of work items, etc.
- Finally, consider the efforts of other bidders. This gives the recipient a yardstick to measure the adequacy of the GFEs of a bidder as illustrated in the examples that follow. The recipient should consider the efforts of all other "competitive" bidders when evaluating the GFEs of the apparent low bidder. This procedure gives the recipient a solid foundation to support the GFE decision because it cites a lot of objective data and information regarding other bidders. Further, it creates competition among bidders for DBE participation. They are not solely concerned about being the low bidder. They have to factor in DBE participation in their bid.

Slides 92 and 93



Example #1: Is GFE Adequate?

- DBE Contract Goal = 14%

Bidder	Amount	DBE Commitment	Good Faith Effort Submitted
A	\$ 8.5 M	10.3%	Yes
B	\$ 9.0 M	8.3%	Yes
C	\$9.5 M	8.5%	Yes
D	\$16.0 M	14%	No



Example #2: Is GFE Adequate?

- DBE Contract Goal = 14%

Bidder	Amount	DBE Commitment	Good Faith Effort Submitted
A	\$ 8.5 M	8.6%	Yes
B	\$ 9.0 M	14.1%	No
C	\$9.5 M	14%	No
D	\$9.6 M	14%	No

Key Message: Here are some examples of GFE efforts. These examples are provided to illustrate the process for determining if a GFE is adequate.

Facilitation Guidance:

1. Complete a demonstration of determining whether Bidder A's GFE is adequate.
 - On example #1, add the numbers in the "DBE Commitment" column and divide by the number of bidders. Show the work on a flip chart.

$$(10.3 + 8.3 + 8.5 + 14)/4 = 10.275\%$$

- Explain that Bidders B and C did not meet or exceed the average DBE participation and are, therefore, nonresponsive bidders. Bidders A and D have met the average DBE participation and are responsive bidders. Bidder A is the apparent lowest responsive bidder, based on the guidance provided in 49 CFR 26, Appendix A, Section V.
2. Direct participants to complete the same steps for example #2. Show the work on a flip chart.

$$(8.5 + 14.1 + 14 + 14)/4 = 12.675\%$$

- Explain that Bidder A did not meet or exceed the average DBE participation and is, therefore, a nonresponsive bidder. Bidders B, C, and D met the average DBE participation and are responsive bidders. Bidder B is the apparent lowest responsive bidder.

Activity Time: 5-7 minutes is allotted for the demonstration and completion of example #2.

Background: "In determining whether a bidder has made good faith efforts, **you may take into account the performance of other bidders in meeting the contract.** For example, when the apparent successful bidder fails to meet the contract goal, but others meet it, you may

reasonably raise the question of whether, with additional reasonable efforts, the apparent successful bidder could have met the goal. **If the apparent successful bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders**, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts.” (49 CFR 26, Appendix A, Section V)

Slide 94



DBE Goal Case Study



- Evaluate contractor DBE practices for compliance with Federal-aid requirements

Key Message: It is now time to evaluate contractor DBE practices by applying the information you just learned.

Facilitation Guidance:

1. Break participants into their previous groups. Assign each group either Case Study 3A or 3B.
2. Direct participants to the case study directions on page 87 in the workbook.
3. Instruct participants to use the source documents directly following the directions, e.g., project narratives, to complete the case study. Allow 10 minutes for the groups to work.
4. Debrief by asking each group to report one or more answers. Allow 10 minutes to debrief.

Activity Time: 15 minutes is allotted for the case study.

Note: A copy of the case study information, as it appears in the participant workbook, can be found on the following pages.

Case Study 3 Disadvantaged Business Enterprise

Goal(s)

- Evaluate contractor DBE practices for compliance with Federal-aid requirements.

Directions

- Read each project narrative reflecting common DBE practices.
- Answer the questions that follow to determine if the practices of the contractor or agency are acceptable, or potentially fraudulent, and why.

Case Study 3A

Prior to the bid opening, Jane Wilson, the president and owner of a DBE landscaping company, submitted a bid to the prime contractor for the landscaping work on a Federal-aid project. The prime contractor told Ms. Wilson he had already met the DBE goal for the project and, therefore, he did not consider her bid.

After the bid opening, Ms. Wilson heard that the non-DBE subcontractor selected to perform the work submitted a bid for the same amount as Ms. Wilson's bid. Ms. Wilson believes that the correct procedure was not followed.

A review of the project records revealed that the prime contractor had met the DBE goal for the project.

- i. Do you think there is a problem with the subcontractor selection?

Answer: Yes. The prime contractor violated the current nondiscrimination provisions and the equal opportunity provisions as outlined by law and regulations. The prime contractor must at least accept and consider her bid. He states that he did not consider her bid because she is a DBE and, "I already met my goal."

Case Study 3B

Always Redi Mix, Inc., and Ace are two companies that bid regularly on Federal-aid projects. Always is listed as the prime contractor and Ace is a subcontractor, identified as a DBE.

Ace leases concrete ready-mix plants from Always Redi Mix, Inc. Each truck load is identified either as an Always load or an Ace load. Concrete batch plant employees are shared between Ace and Always. The lease agreement between Always and Ace is based on a tonnage arrangement (not a monthly lease). Ace's President has skills to manage the plant, but not to design batches to State specifications. Ace only performs on Federal-aid contracts and never on 100% State or local projects.

- i. Are the prime contractor and subcontractor in compliance with DBE regulations? Is Ace, the DBE “. . . responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved” (49 CFR 26.55(c)(1))?

Answer: No. A DBE must perform its own work and be in control of daily operations (Commercially Useful Function). It cannot lease the prime’s equipment or use other contractor’s employee(s), and must purchase its own materials and supplies. It must have its own workforce. Fraud and abuse often occur when a DBE is certified but does not meet one or more of these requirements.

- ii. Does the manufacturer “. . . [operate] or [maintain] a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications” (49 CFR 26.55(e)(1)(ii))?

Answer: No, Ace leases it from Always.

- iii. Does this arrangement represent normal industry practice?

Answer: No.

- iv. Would Ace, the DBE, exist without the DBE program?

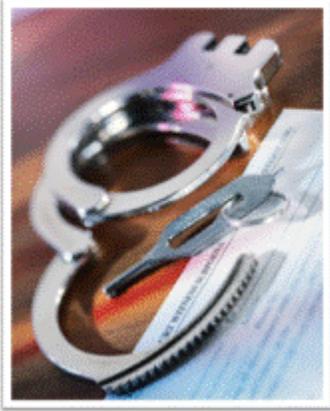
Answer: No. “But for” the Federal-aid DBE program, Ace would not exist.

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Slide 95

Bid Rigging





- The most common types of collusion are
 - Complementary bids
 - Territorial allocation
 - Joint ventures
 - Bid rotation

Key Message: Bid rigging, or bid collusion, is a conspiracy to disrupt or circumvent the competitive bidding environment by establishing a competitive advantage for certain bidders.

Facilitation Guidance:

1. Ask participants:
 - i. If you suspect bid rigging has occurred, what should you do? *Answer: Contact the Office of the Inspector General*
2. Refer participants to the OIG contact information found in the workbook after this slide on page 90.
3. Refer participants to the “Recognize and Report Fraud” OIG handout cards. Take a moment to review the various cards. (Each participant should receive one card.)

Background: Applicable to all Federal-aid highway construction projects. The most common types of bid collusion are the following.

- Complementary bid: A pattern of consistently high bids, or non-responsive bids
- Territorial allocation: Consistent wins by a vendor within a specific area (county or region of the State)
- Joint venture: A contractor submits a high bid for a project for which he has already agreed to be a subcontractor to the successful bidder

- Bid rotation: A coordinated pattern of win/lose bid responses, i.e., the bidder consistently wins every n^{th} bid

Bid collusion is monitored by the STA's bid analysis process, using data accumulated over at least a 5-year period. The process must include an adequate number of projects in order to detect abnormal bid patterns.

Several of these contract issues should be reported to the Office of the Inspector General (OIG.) To make a complaint, use the following contact information.

- **Call:** 1-800-424-9071 (toll free)
- **Email:** hotline@oig.dot.gov
- **Mail:** DOT Inspector General, 1200 New Jersey Ave SE, West Bldg. 7th Floor, Washington, DC 20590

A contractor may also use the online Federal Acquisition Regulation Disclosure Form to report criminal or civil violations in connection with a Federal contract.

<http://www.oig.dot.gov/contractor-disclosures-certain-violations-criminal-law-and-civil-false-claims-act-0>

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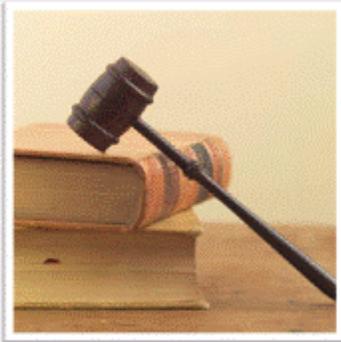
Resources

- U.S. Department of Transportation Office of the Inspector General www.oig.dot.gov/Hotline

Slide 96

Suspension and Debarment





- Debarment excludes persons and companies from participation in all Federally-assisted programs
- Debarment requires due process
- Suspension excludes anyone proposed for debarment

Key Message: Part of the bid review process is making sure the contractor is not on the Suspension or Debarment list. The contractor has to provide a signed statement that he or she is not currently on this list. If the contractor provides that statement but is on the list, the contractor has provided a false statement, which is a Federal offense.

Bid-rigging can result in a contractor's suspension and debarment.

Facilitation Guidance:

1. Direct participants' attention to page 165-167 of the CACC Manual.
2. Ask them to answer the following question based on what they read in the manual.
 - i. If a parent company is debarred, does it mean that subsidiary firms of the parent company are debarred as well? *Answer: According to the CACC Manual: "Only those persons (individuals, corporations, or subsidiaries) listed in the suspension/debarment notice are excluded...If a parent company is debarred, this does not mean that subsidiary firms of the parent company are automatically debarred. However, subsidiary or affiliate firms of a debarred company should be required to demonstrate that debarred individuals involved in any affiliated firm cannot influence the affiliate's business decisions or otherwise participate in a federal project."*

Activity Time: 2-3 minutes is allotted for review of the manual and response to the question.

Background: Applicable to all Federal-aid projects. A complete list of debarment causes can be found in 2 CFR 180.800. Suspension and debarment actions are prospective, meaning they do not apply to existing contracts. The actions only apply to “covered” contracts.

Suspension and debarment serve to exclude persons or companies from participating in Federal assistance programs, thus ensuring that the Federal Government does not conduct business with a person or company with an unsatisfactory record of integrity and business ethics. These are Government-wide actions, so any person or company excluded by one Federal agency is excluded from doing business with any Federal agency. A Federal agency may suspend, or exclude, persons or companies proposed for debarment, so that the Federal government is protected during the processing of a debarment.

System for Award Management (SAM) is the most recent Federal method for managing and tracking actions regarding excluded parties (persons and firms). SAM includes EPLS among 11 other systems. It consolidated the capabilities of CCR/FedReg, ORCA, and EPLS into a single new, streamlined system.

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Resources

- System for Award Management, including Excluded Parties List System
<https://www.sam.gov/portal/SAM/#1>

Slide 97



Concurrence in Award Decision



- Required to
 - Authorize construction and award the contract to the successful bidder
 - Select a bid that was not the lowest
 - Reject all bids

Key Message: FHWA's concurrence in the agency's contract award (or rejection) decision is not just a formality; it is **the** authorization for the owner-agency to proceed with construction or to reject one or more of the bids.

Background: Applicable to all Federal-aid highway construction projects. The Division Administrator's concurrence is formally documented in writing and included in any qualifying statements concerning the concurrence. The State's S&O Agreement should include the procedures for documenting concurrence in award for different oversight levels, including the procedure that local agencies need to follow for locally administered projects.

If the SHA determines that the lowest bidder is not responsive or the bidder is not responsible, it shall so notify and obtain the Division Administrator's concurrence before making an award to the next lowest responsible bidder.

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Slide 98



Review Questions



- i. What requirements need to be completed in order to advertise a Federal-aid project?
- ii. What is a “responsive bid”?
- iii. Which tasks must be completed in order to review and analyze bids appropriately?

Key Message: Review the content of the lesson and determine participants’ mastery of the content.

Facilitation Guidance:

1. Ask participants to work within their groups to answer the following questions in the workbook. (5 minutes)
 - i. What requirements need to be completed in order to advertise a Federal-aid project?
Answer: PS&E approved; clearances complete (Utility, ROW, R.R.) or proper coordination in contract; relocations complete; public hearing and environmental processes complete; other agency reviews complete; funding deemed adequate
 - ii. What is a “responsive bid?” *Answer: A bid that meets all the requirements of the advertisement and proposal*
 - iii. Which tasks must be completed in order to review and analyze bids appropriately?
Answer: Determine if a bid is responsive, a bidder is responsible, and if an adequate GFE was made
2. Ask each group to provide an answer. Take no more than 5 minutes to debrief the answers.

Day 1 Review Questions (Homework)

Facilitation Guidance:

1. Direct participants to page 92 of the workbook.
2. Assign each group one question from each category to answer; remind them to use the CACC Manual as needed.

Activity Time: 15 minutes is allotted for this review activity.

Pre-award Procedures

1. What is the benefit to the SHA of developing standard specifications and standard plans for use on Federal-aid projects? *Answer: Even though regulations do not require SHAs to have standard plans and specifications, they simplify the PS&E review process. After the standard plans and specifications have been approved by FHWA, they may be used on Federal-aid projects in the State without further review.*
2. List three reasons why the Engineer's Estimate is important. *Answer: Defines the initial level of Federal-aid participation; estimates the anticipated cost of the project in sufficient detail to permit an effective review and comparison of the bids received; serves as a guide to analyze bids*
3. List three categories of costs associated with Road User Costs. *Answer: Travel time, vehicle operation, accidents*
4. List five actions, or steps, that must be completed prior to FHWA's construction authorization. *Answer: PS&E approval; provision by the STA of an ROW certification; assurances for relocation of individuals and families when such circumstances exist; assurances that the public hearing process and the location and design approval requirements are met; assurances, where applicable, that area-wide agency reviews have been accomplished*

Buy America

Are the following statements True or False regarding Buy America as it pertains to the FHWA Federal-aid Program?

1. Steel manufactured in the United States may contain up to 50% (by value) foreign steel, without a deviation being required. *Answer: False*
2. Foreign alloys, e.g., carbon, chromium, can be used in the production of domestic steel or iron to achieve certain characteristics within the final product. *Answer: True*

3. An SHA creates a contract package which allows alternate bids for foreign versus domestic steel and iron materials. It includes a notation that if the lowest total bid containing foreign steel and iron materials is lower by more than 25%, then the SHA will award to the bidder with the foreign steel or iron. *Answer: True*
4. A Canadian reinforced concrete pipe manufacturer uses steel rebar cages wholly fabricated in the United States. The firm asserts that it is only assembling components, not fabricating steel, and therefore, it is complying with Buy America. *Answer: True*

Equipment and Materials

1. Are the following items permitted on a Federal-aid NHS project?
 - a. A requirement to use a guiderail block made from recycled plastic from sources within the State *Answer: No*
 - b. The optional use of recycled guiderail blocks manufactured by Prison Industries *Answer: No*
 - c. The mandatory use of State-furnished guiderail blocks made from plastic recycled by a proprietary source within the State *Answer: No*
 - d. A requirement to use a specific brand of fabric-based reinforcement prior to the placement of asphalt *Answer: No, unless there is a certification (where only one brand is available) or a PIF (where more than one brand is available)*
 - e. A requirement to use a State-owned Bailey Bridge (temporary bridge) *Answer: No, unless there is a PIF for use of State-owned/furnished materials*
 - f. A requirement to use a specific brand of Road Weather Information System device *Answer: No, unless there is a certification (where only one brand is available) or a PIF (where more than one brand is available)*

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Conclusion

Slide 160



Key Message: This is a transition slide into the conclusion.

Lesson Preparation: For the conclusion of the course, you need to do the following.

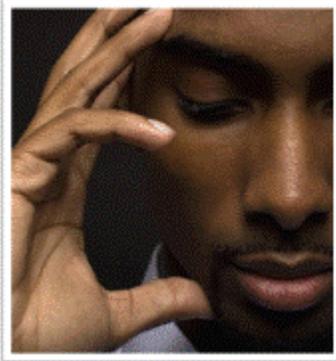
- Distribute:
 - Course evaluations (1 for each participant)
 - Signed course certificates (The host is responsible for printing the course certificates with the names of the participants and course information. The instructor needs to sign each.)
- Post the NHI Session ID number, course title and number, and instructor numbers at the front of the room.
- Review the NHI Session roster to make sure all participants have filled it in completely.
- Post your email address at the front of the room if you are willing to be contacted with further questions.
- List other relevant NHI courses; post at the front of the room.

Lesson Time: 85 minutes is allotted for this lesson.

Slide 161



Course Review



- Review categories
 - FAHP overview
 - Pre-award requirements
 - Bid advertisement, analysis, and award requirements
 - Post-award requirements

Key Message: In order to prepare for the exam, key elements of the course content are reviewed.

Facilitation Guidance:

1. Before you begin, make sure there are no unanswered questions in the Parking Lot.
2. Break the class into their groups.
3. Assign each group a number of questions so that all questions are assigned. (For example, if there are 5 groups, then assign each group 5 different questions.)
(The questions appear on the next page of this document.) Allow 10 minutes for the groups to answer questions. **Encourage participants to use the CACC Manual to find answers as needed.**
4. Debrief by reviewing the questions and answers; clarify or correct any incorrect answers.

Activity Time: 30 minutes is allotted for this review activity.

Slide 162

The slide features a blue header bar with the NHI logo (National Highway Institute) on the right. The title "Administrative Matters" is centered in a large blue font. Below the title are three overlapping images: a red pencil writing on a grid, a certificate titled "ACHIEVEMENT", and a document with a grid. To the right of these images is a bulleted list of administrative tasks.

Administrative Matters

- Session roster
- Participant registration forms
- Course evaluations
- Certificates
- Continuing Education Credits

Key Message: Provide instructions on the final administrative tasks that participants should complete.

Facilitation Guidance:

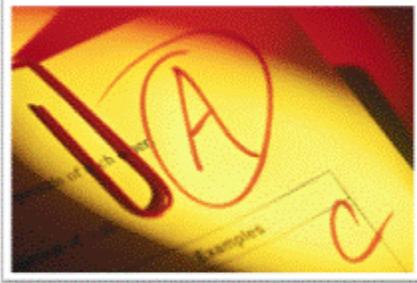
1. Collect the session roster and any remaining participant registration forms.
2. Hand out and explain how to complete course and instructor evaluation forms. Indicate that participants should place the evaluations in a separate, designated spot. Evaluation forms are not handed to the instructor.
3. Explain to participants that they will receive a certificate for attending the course. Also, Continuing Education Credits (CEUs) may be awarded if participants:
 - Take the exam and pass with a score of 70% or better.
 - Have 100% attendance.
4. Provide information regarding additional NHI and FHWA trainings and workshops.
5. Address any outstanding items in the parking lot, if any.

Activity Time: 10 minutes is allotted for completing administrative matters.

Slide 163

Exam



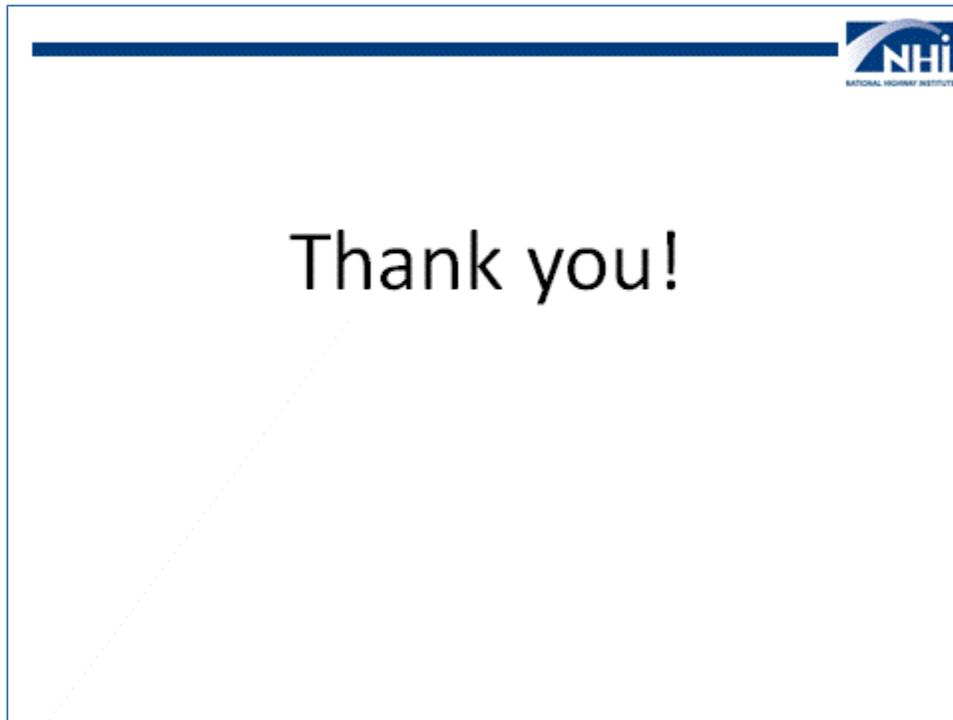


- Directions
- Passing score
- Completion time

Facilitation Guidance:

1. Distribute the exams, scan sheets, and course evaluations.
2. Remind participants to select the one best answer to each exam question. Participants must mark the corresponding answer on the scan sheet.
3. Participants must put their names on the exam and the scan sheet; both documents must be returned to the instructor in order to receive credit. (Participants may not remove the exam questions from the classroom.)
4. Remind participants that they have 45 minutes to complete the exam; they may use the manual but not the workbook. (Use of the manual to answer questions pertaining to the Federal-aid process is a course outcome, which is why the manual is an allowable exam resource.)
5. Collect completed exams and scan sheets. Correct exams and provide feedback to participants .
6. Participants may place course and instructor evaluation sheets in a separate location before leaving class. (These documents are not handed to the instructor.)
7. All participants who have completed the course receive a Certificate of Attendance. However, a score of 70% or better and 100% attendance are required for earning CEUs.

Slide 164

**Facilitation Guidance:**

1. Lead instructor responsibilities include returning the following documents to NHI within two weeks of the conclusion of the session.
 - Session roster
 - Sign-in sheets
 - Participant registration forms
 - Course evaluations
 - Exams
 - Scan sheets

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Acronyms

CEU	Continuing Education Unit
CFR	Code of Federal Regulations
DBE	Disadvantaged Business Enterprise
EEO	Equal Employment Opportunity
FA	Federal-aid
FAHP	Federal-aid Highway Program
FHWA	Federal Highway Administration
GFE	Good-faith Estimate
LPA	Local Public Agency
MAP-21	Moving Ahead for Progress in the 21 st Century Act (P.L. 112-141)
NHI	National Highway Institute
OIG	Office of Inspector General
OSHA	Occupational Safety and Health Administration
PIF	Public Interest Finding
PS&E	Plans, Specifications, and Estimate
QA	Quality Assurance
S&O	Stewardship and Oversight
STA	State Transportation Agency
USC	United States Code

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Web Resources

- Form FHWA-1273
<http://www.fhwa.dot.gov/programadmin/contracts/1273/>
- AASHTO *Controlling Design Criteria Report* Appendix A (October, 2001)
<http://www.fhwa.dot.gov/environment/publications/flexibility/ch02.cfm>
- Design Exception Guidance
<http://www.fhwa.dot.gov/design/standards/ga.cfm>
- Federal-aid Essentials Videos
<http://www.fhwa.dot.gov/federal-aidessentials/>
- Federal Highway Administration Contract Administration
<http://www.fhwa.dot.gov/programadmin/contracts/>
- Federal Highway Administration Program Policy and Guidance Center
<http://www.fhwa.dot.gov/pgc/>
- Federal Highway Administration Stewardship and Oversight
<http://www.fhwa.dot.gov/federalaid/stewardship/>
- Job Posters
<http://www.fhwa.dot.gov/programadmin/contracts/poster.cfm>
- *Responsible Charge Memorandum (08/04/11)*
<http://www.fhwa.dot.gov/federalaid/110804.cfm>
- U.S. Department of Labor, Davis-Bacon Resources
<http://www.dol.gov/whd/programs/dbra/>

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Appendix A: Case Study Route Maps

BRIDGE REPLACEMENT - PPCB LETTING DATE
BRFIM-080-5(272)142--05-77

CONVENTIONAL SIGNS

	DIVIDED HIGHWAY
	PAVED ROAD
	BITUMINOUS ROAD
	GRAVEL ROAD
	EARTH ROAD
	INTERSTATE HIGHWAY
	UNITED STATES HIGHWAY
	STATE HIGHWAY
	COUNTY HIGHWAY
	RAILROAD
	PIPELINE
	AIRPORT
	HYDROLOGY
	BRIDGE
	STATE BOUNDARY
	COUNTY BOUNDARY
	CORPORATE LIMIT LINE
	TOWNSHIP LINE
	SECTION LINE

Department of Transportation
Highway Division

PLANS OF PROPOSED IMPROVEMENTS ON THE
INTERSTATE ROAD SYSTEM
POLK COUNTY

BRIDGE NEW - PPCB
EASTBOUND I-80 OVER US 65

THE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, SERIES 2009, PLUS APPLICABLE GENERAL SUPPLEMENTAL SPECIFICATIONS, DEVELOPMENTAL SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS SHALL APPLY TO CONSTRUCTION WORK ON THIS PROJECT.

ENGLISH STANDARD BRIDGE PLANS

STANDARD	ISSUED	REVISED

TOTAL SHEETS	35
PROJECT NUMBER	BRFIM-080-5(272)142--05-77
R.O.W. PROJECT NUMBER	
PROJECT IDENTIFICATION NUMBER	94-77-080-180

INDEX OF SHEETS

NO.	DESCRIPTION
1	TITLE SHEET
1A	REVISION SHEET
2	ESTIMATE SHEET - DESIGN 1010
2-29	DESIGN 1010
SPS.1-SPS.4	SOIL PROFILE SHEET
C.1	ESTIMATE SHEET FOR ROADWAY
C.1-J.1	ROADWAY SHEET

REVISIONS
SEE REVISION SHEET 2-1-2011
SEE REVISION SHEET 12-7-2011
SEE REVISION SHEET 2-1-2012
SEE REVISION SHEET 4-4-2012

ONE CALL
1-800-292-8989

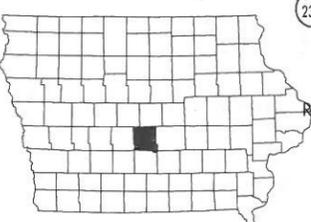
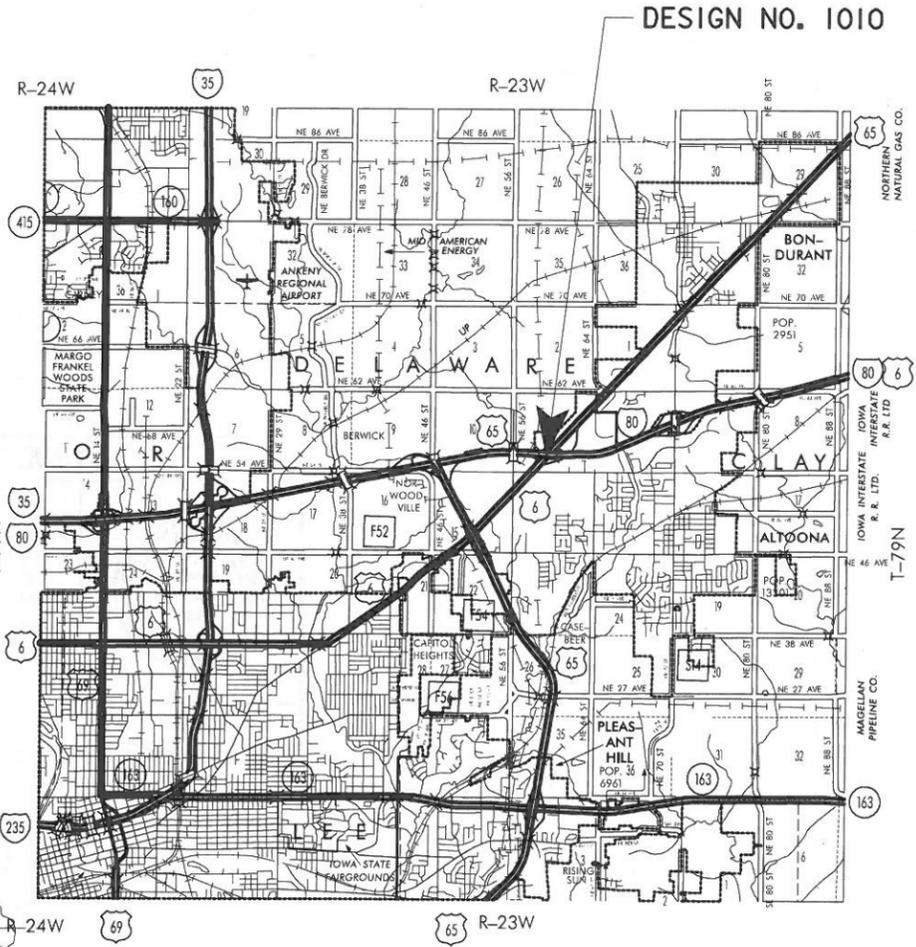
STANDARD ROAD PLANS
STANDARD ROAD PLANS ARE LISTED ON SHEET _____

DESIGN DATA RURAL

2010 AADT	10600	V.P.D.
2030 AADT	12500	V.P.D.
2030 DHV		V.P.H.
TRUCKS	18	%
Total Design ESALs		

INDEX OF SEALS

SHEET NO.	NAME	TYPE
1		STRUCTURAL DESIGN
SPS.1		GEOTECHNICAL DESIGN
C.1		ROADWAY DESIGN



LOCATION MAP

PROJECT DIRECTORY NAME: 77080180B94

STRUCTURAL DESIGN

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the

6-28-10
Signature _____ Date _____
Printed or Typed Name _____
My license renewal date is December 31, 2010 _____

Pages or sheets covered by this seal: SHEETS 1 THRU 29 OF 35

POLK COUNTY - DESIGN NO. 1010

Appendix B: Answers to “Federal-aid PS&E Requirements” Group Activity

Requirement	CACC Manual Page	Applicable to	Deviation Allowed? Y/N (Type)
1. Specifications and Plans	60	All FA highway construction projects	N
2. Engineer’s Estimate	107	All FA highway construction projects	N
3. Environmental Commitments	120	All FA highway construction projects	N (Any required environmental mitigation measures that result from the environmental clearance process must be included as appropriate in the relevant construction projects. This is the NEPA process and all Federal actions need an approved NEPA document, which may contain environmental commitments that need to be carried into the design and construction phases.)
4. Basis of Contract Award – Competitive Low Bid	47	All FA highway construction projects	Y (Cost effectiveness finding (Public Agency Force Account), a time sensitive emergency exists, or under the SEP-14 program and TE projects via small purchase procedures)
5. Public Agency Force Account	48	All FA highway construction projects	N
6. Time-related Incentive/ Disincentive Clauses	109	All FA highway construction projects on the NHS	
7. Quality Price Adjustment Clauses	115	All FA highway construction projects on the NHS	
8. Commodity Price Escalation Clauses	116	All FA highway construction projects	

Appendix D: Form FHWA-1273

FHWA-1273 -- Revised May 1, 2012

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Government-wide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

ATTACHMENTS

- A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services).

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

Appendix E: Davis-Bacon Case Study Materials

Employee #	Classification	Interview Wage Rate	Payroll		DOL Wage Determination			
			Hourly Rate of Pay	Fringe Benefits	Rates	Fringes	Covered by Davis-Bacon?	Employee's wage in compliance with Davis-Bacon?
1	Timekeeper*	21	21.32	13.39	n/a	n/a	No	n/a
2	Flagger	22	22.65	13.39	16.22	11.03	Yes	Yes
3	Carpenter	27.03	27.03	11.43	25.30	9.86	Yes	Yes
4	Laborer	22	22.65	13.39	19.83	11.03	Yes	Yes
5	Carpenter	27	27.03	11.43	25.30	9.86	Yes	Yes
6	Carpenter	27	27.03	11.43	25.30	9.86	Yes	Yes
7	Trainee-Operator-Crane **	?	21.32	13.39	27.45 or 29.70	16.30 or 16.98	Yes	unknown - TBD
8	Operator-Crane***	34	34.31	20.76	27.45 or 29.70	16.30 or 16.98	Yes	Yes

*Employee #1: Timekeeper is not a Davis-Bacon eligible wage classification

**Employee #7: Trainees earn a percentage of the DB Wage (60, 75, or 90 percent) dependent upon progress in their on-the-job training program as documented in the monthly OJT Report.

Project staff should use project records (diaries, daily reports, etc.) to verify the type of crane operated, and then apply the correct percentage.

***Employee #8: Project staff should use project records (diaries, daily reports, etc.) to verify the type of crane operated. This employee meets both group 1 and 1a minimum wages.

Appendix F: Project Close-out Documents