

Joint Stewardship & Oversight Agreement



Federal Highway Administration (FHWA) &
Connecticut Department of Transportation
November 23, 2010



AGREEMENT BETWEEN THE FEDERAL HIGHWAY ADMINISTRATION AND THE CONNECTICUT DEPARTMENT OF TRANSPORTATION

Section 106 of Title 23, United States Code, requires that the Federal Highway Administration (FHWA) and the State (CTDOT) enter into an agreement documenting the extent to which the CTDOT assumes the responsibilities of the FHWA under Title 23. Title 23 is simply a codified compilation of laws pertaining to highways passed over several bills and contains most laws that the FHWA and the CTDOT must comply with in the federal-aid highway program.

The Stewardship and Oversight Agreement formalizes these delegated responsibilities and agreements to address how the Federal-aid highway program will be administered in the State.

Approvals that are delegated means that the CTDOT makes the approval on behalf of the FHWA following all normal requirements. Approvals that are not delegated means that the FHWA actually takes the approval action. Delegation has no impact on the actual requirements that must be met, simply who makes them.

This plan explicitly identifies what approvals are needed and who performs them. There are program approvals (such as approval of a manual or procedure), and project specific approvals (such as approval of a specific contract).

The Connecticut General Statutes, Volume 4, Titles 13, 13a and 13b, will be the controlling Laws under which this Stewardship Agreement will be exercised, including all the CTDOT directives and Commissioner's Administrative Memoranda.

This agreement does not preclude the FHWA access to and review of Federal-aid projects at any time, and it does not replace the fundamental provisions of law in Title 23 with respect to the basic structure of the Federal-aid program. The FHWA will exercise its stewardship and oversight through product evaluations, program assessments, process reviews, continuous process improvement initiatives, program management activities, and other project involvement activities.

The FHWA may at any time have access to and review project phases and records under this agreement. In accordance with 23 CFR 17.5, records will be retained for a minimum of 3 years or until litigation, claims, or audit findings initiated before the expiration of the 3-year period have been resolved.

A standing committee was originally established on January 8, 2008 and the members were changed on February 8, 2010 to the following:

John F. Carey, Bureau of Engineering and Construction, Chairperson
JoAnn D. Devine, Bureau of Engineering and Construction
Colleen A. Kissane, Bureau of Policy and Planning
David W. Nardone, FHWA, Engineering
Eloise Powell, FHWA, Planning, Environment, and Research
Debra P. Ramirez, FHWA, Finance

The primary responsibility of this Committee is to modify this agreement when needed and recommend its approval to the CTDOT Commissioner and the FHWA Division Administrator.

The Division Administrator of the FHWA or the Commissioner of the CTDOT can initiate changes to this Stewardship Plan. Both parties must mutually agree upon all future changes.

This agreement replaces the October 25, 2007 agreement between the FHWA and the CTDOT.



Amy Jackson-Grove
Division Administrator
Federal Highway Administration
Connecticut Division Office



Jeffrey A. Parker
Commissioner
Connecticut Department of Transportation

TABLE OF CONTENTS

<i>Chapter</i>	<i>Page</i>
INTRODUCTION.....	1
<i>Performance Indicators.....</i>	<i>2</i>
<i>Approved Manuals, Standards, or Processes.....</i>	<i>5</i>
PROJECT OVERSIGHT.....	9
<i>Project Oversight Determination.....</i>	<i>9</i>
<i>Table 1: Project Oversight Determination Summary</i>	
<i>Project Development (Including Design and Contract Approval).....</i>	<i>11</i>
<i>Table 2: Project Development/Approval Summary</i>	
<i>Project Construction.....</i>	<i>14</i>
<i>Table 3: Construction Summary</i>	
<i>Local Public Agency (Municipalities).....</i>	<i>16</i>
<i>Table 4: Project Development Oversight for Municipalities Summary</i>	
<i>Table 5: Project Construction for Municipalities Summary</i>	
PROGRAM STEWARDSHIP.....	20
<i>Process Review/Product Evaluation.....</i>	<i>20</i>
<i>Table 5: Review/Evaluation Program Summary</i>	
<i>Bridge Program.....</i>	<i>21</i>
<i>Table 6: Bridge Program Summary</i>	
<i>Civil Rights Program.....</i>	<i>23</i>
<i>Table 7: Civil Rights Program Summary</i>	
<i>Environment Program.....</i>	<i>25</i>
<i>Table 8: Environment Reviews Summary</i>	
<i>Table 9: Environmental Assessment Summary</i>	
<i>Table 10: Environmental Impact Statement Summary</i>	
<i>Table 11: Section 4(f) Summary</i>	
<i>Table 12: Section 106 Summary</i>	
<i>Table 13: Traffic Noise and Air Quality Summary</i>	
<i>Table 14: Threatened and Endangered Species Summary</i>	
<i>Table 15: U.S. Army Corps of Engineers Section 404 Summary</i>	
<i>Table 16: State Wetland and Water-related Permits and Authorizations Summary</i>	

TABLE OF CONTENTS

Continued

<i>Chapter</i>	<i>Page</i>
<i>Financial Management Program</i>	29
Figure 1: Project Flowchart	
Figure 2: FHWA Projects Contracts through Billing Flowchart	
Table 17: <i>Financial Management Program Summary</i>	
<i>Intelligent Transportation Systems (ITS)/Operations Process</i>	36
Figure 3: Intelligent Transportation Systems Process	
Table 18: <i>ITS Process Summary</i>	
<i>Maintenance and Monitoring Program</i>	42
<i>Major Projects</i>	43
Table 19: <i>Major Projects Summary</i>	
<i>Pavement Design and Management Program</i>	44
Table 20: <i>Pavement Design and Management Summary</i>	
<i>Planning Program</i>	45
Table 21: <i>Planning Summary</i>	
<i>Quality Assurance Program for Materials</i>	49
Table 22: <i>Quality Assurance Program for Materials Summary</i>	
<i>Research, Development & Technology Program</i>	50
Table 23: <i>RD&T Program Summary</i>	
<i>Rights-of-Way Process</i>	53
Table 24: <i>R-O-W Process Summary</i>	
<i>Safety Program</i>	55
Table 25: <i>Safety Program Summary</i>	
APPENDICES	59
APPENDIX A: LIST OF ACRONYMS.....	59
APPENDIX B: FHWA RISK ASSESSMENT PROCESS	60
APPENDIX C: PROCUREMENTS.....	61

INTRODUCTION

In order to distinguish the term “stewardship” from “oversight” the following definitions will apply throughout this document:

Stewardship:

The efficient and effective management of the public funds that have been entrusted to the Federal Highway Administration.

Oversight:

The act of ensuring that the Federal highway program is delivered consistent with applicable laws, regulations and policies.

Stewardship reflects our collective [Federal Highway Administration (FHWA) and Connecticut Department of Transportation (CTDOT)] responsibility for the development and implementation of the Federal-aid highway program. It involves all activities involved in delivering the Federal-aid highway program, such as leadership, technology deployment, technical assistance, problem solving, program administration and oversight.

Oversight is the compliance or verification component of the FHWA's stewardship activities. Narrowly-focused, oversight activities ensure that the implementation of the Federal-aid highway program areas is done in accordance with the applicable laws, regulations, and policies.

When the CTDOT assumes project approval responsibilities, it must have mechanisms in-place to assure that all project actions will be carried out according to laws, regulations, and policies. This applies to projects administered by the CTDOT or by local public agencies (LPA). These mechanisms would typically include processes, procedures, and program manuals. The FHWA must conduct verification activities to assure that the CTDOT or the LPA implementation of the Federal-aid highway program conforms with laws, regulations and policies as noted in this agreement. The FHWA's oversight and independent verification activities are similar to the quality assurance portion of quality control/quality assurance programs prevalent in many construction and materials programs.

This agreement does not modify FHWA's non-Title 23 program oversight and project approval responsibilities for activities such as required under the *Clean Air Act*; the *National Environmental Policy Act of 1969 (NEPA)* and other related environmental laws and statutes; the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*; and the *Civil Rights Act of 1964* and related statutes, unless expressly permitted by SAFETEA-LU Section 6004 and 6005.

PERFORMANCE INDICATORS

Currently, both the CTDOT and the FHWA collect and evaluate many performance measures. These performance measures change frequently, and the lists below only represent the performance measures at the time of approval of this Stewardship Plan. The performance indicators are an integral part of this stewardship and oversight agreement.

The Connecticut Department of Transportation (CTDOT) Performance Measures Program is managed by the Division of Transportation Infrastructure Performance Management in the Bureau of Policy and Planning (www.ct.gov/dot/cwp/view.asp?a=3529&q=431980). The performance measures report can be found on the CTDOT's Web site at www.ct.gov/dot. The measures are reported quarterly and posted on the same website.

Both agencies agree to use the performance measures to track and monitor the health of the Federal Aid Program. An evaluation of those performance measures will provide the tools to determine where changes should be made in the oversight of projects, or where to focus our collective stewardship. The indicators will also be used to gauge the effectiveness of the Federal-aid program in the State. Quarterly discussions between the FHWA and the CTDOT shall occur to review the trends of these measures and determine if attention or action needs to be refocused.

Currently, the CTDOT performance measures include:

Safety and Security

- Number of fatalities
- Number of fatalities related to impaired driving
- Percentage of fatalities related to impaired driving
- Number of fatalities per 100 million vehicle miles travelled
- Number of Injuries
- Number of Fatal Crashes
- Percentage of Seat Belt Use
- Number of motorcycle operator fatalities
- Number of motorcycle operator fatalities per 10,000 registered vehicles
- Number of Serious Crashes in Work Zones
- Number of CHAMP assistances
- Number of Oversize and Overweight Permits
- Customer Perception of Rail Safety (based on Metro North survey)

Preservation

- International Roughness Index for state owned roads
- Pavement Serviceability Rating
- Number of Bridge Maintenance Memorandums
- Percent of Bridges rated Functionally Obsolete
- Percent of Bridges rated Structurally Deficient
- Bridge Condition Rating Categories for Highways (0-9)
- Bridge Condition Rating Categories for Railroads (0-9)
- Average Age of Transit Fleet
- Mean Distance between Failures (Rail)
- Mean Distance between Failures (Bus)

Efficiency and Effectiveness

- Rail Ridership in millions of passengers
- On-Time Performance for Commuter Rail
- Bus Ridership in millions of passengers
- On-Time Performance for Bus
- Rail Freight Tonnage
- Air Freight Tonnage
- Enplaned Passengers
- Debt per Enplaned Passengers
- Total Expenditures
- Number of Positions, filled and vacant

Quality of Life

- Tons recycled (demolition debris, steel, wood)
- Congestion Capacity of Connecticut Roads (over capacity, approaching capacity, under capacity)
- Average incident duration
- Average incident response time

Accountability and Transparency

- Percent of agreements executed in under 60 days
- Percent of Construction Contracts Awarded within 60 days of Bid Opening
- Number of Project Closeouts
- Construction Projects On-Time
- Construction Projects On-Budget

In addition, the FHWA has the following Dashboard items which are kept current in our Shared Unit Performance Plan System:

Safety and Security

Work Zone Self Assessment Score
Fatalities /100 Million Vehicle-Miles-Travelled
Number of Fatalities
Number of Pedestrian Fatalities
Number of Intersection Fatalities
Percent of Seat Belt Use
Percent of Fatalities Related to Alcohol
Improve HSIP quality assessment score by 10 percent

Preservation

Percent of Bridges with Current Load Rating
Percent of Bridge Deck Area Rated Deficient on Non-NHS
Percent of Scour Critical Bridges with Plans of Action Developed and/or Implemented
Percent of Bridges vulnerable, or potentially vulnerable, to scour on the NHS and non-NHS not yet evaluated.
Number of Road Departure Fatalities
Percent of Total Available SAFETEA-LU HSIP Funds Obligated (LS 30 Funds)
Percent of Bridge Deck Area Rated Deficient on NHS
Completion of an in-depth review of bridge load rating and posting practices
Percent Decrease in the Number of Bridges with Unknown Foundations
Percent of bridge inspections completed within the established bridge inspection cycle

Quality of Life

Number of Air Quality Containment Lapses in Previous 12 Months
Compliance with the National Bridge Inspection Standards
Percent Travel on the NHS with very good ride quality
Amount of Emergency Relief Funds Obligated
Disadvantaged Business Enterprises (DBE) Goal
Actual DBE participation rate

Accountability and Transparency

Percent of Total Number of Federal-aid Projects Authorized for Construction This Year That are Carried Out Thru Local Aid (Or Sub-Grantee)
Federal Highway Expenditures (\$)
Major Projects- Number of Projects Over \$100 Million and Less Than \$500 Million in Design
Major Projects- Number of Projects Over \$500 Million in Design
Major Projects- Number of Projects Over \$100 Million and Less Than \$500 Million in Construction
Major Projects- Number of Projects Over \$500 Million in Construction
Percent of Federal-aid construction projects subject to full Oversight
State's Total Inactive Obligation Balance as a Percent of the State's Annual Apportioned Amount
Project Close-Out Rate - Average Time from Last Expenditure to Close of the Project (days)
State Highway Expenditures
Percent of Federal-Aid Program of Total State Program
Proportion of Dollars Spent in Local Areas
Recovery Act- Total Number of Recovery Act Projects Authorized
Recovery Act - Number of Recovery Act Reviews conducted by National Review Teams
Recovery Act - Number of Project Reviews conducted on Recovery Act Projects per DAC Guidance
Percent of Recovery Act Funds Expended
Federal Highway Expenditures (\$)
Inactive Obligations
Total Number of Projects with Inactive Obligations as a Percentage of Total Federal-Aid Projects
Number of Construction Inspections
Number of Federal Projects Authorized for Construction this Year
Percent of Federal aid project dollars subject to full oversight
State's Annual Apportionment level (\$000)
Use of risk assessments, performance measures, and compliance indicators to carry out Stewardship
Percentage of Improper Payments

Number of Staff in Environmental Resource Agencies Funded with State or Federal Transportation Funds to Streamline Environmental Process
Number of EAs Completed this year
Number of EISs Active in Division and in National Data Base
Number of Final EISs Signed
Number of EAs Active in Division and in National Data Base
Percent of Current Year Projects in STIP Advanced
Amount of Advanced Construction Authorized this FY
Median number of months to complete an Environmental Impact Statement

APPROVED MANUALS, STANDARDS, OR PROCESSES

While each sub-section of this plan contains basic procedures for the oversight of the program or project phase, more detailed procedures are found in a number of manuals and operating agreements. The following chart lists State manuals and operating agreements that are either formally approved by the FHWA or endorsed by the FHWA for use on Federal-aid projects. Some of these manuals are followed but do not need any action by the FHWA, and are denoted below. The chart contains the latest versions.

Manuals Submitted to the FHWA for approval - The FHWA's approval is by letter or by stamping; some type of communication from the FHWA back to the CTDOT is expected. It is assumed that new editions and major revisions will be submitted. Minor revisions do not need to be explicitly approved by the FHWA, but can fall into the second category on the chart below.

Description	Bureau	Last Update	Owner	Approver	Availability	Basis
MANUALS/STANDARDS/PROCESSES						
Highway Design Manual, 2003 Edition	Engr. & Const.	Revised Jan 2009	Design Dev. Unit	Engr. Admin.	Website	23 CFR 625
ROW Division of Appraisals	Engr. & Const.	2006	Division of Appraisals	ROW Admin.	Hard Copy	23 CFR 710.201c
ROW Division of Administration	Engr. & Const.	2006	Division of Admin.	ROW Admin.	Hard Copy	23 CFR 710.201c
ROW Division of Acquisition-Relocation	Engr. & Const.	2006	Division of Acquisition-Relocation	ROW Admin.	Hard Copy	23 CFR 710.201c
ROW Division of Titles	Engr. & Const.	2006	Division of Titles	ROW Admin.	Hard Copy	23 CFR 710.201c
ROW Property Management Division	Engr. & Const.	2006	Property Management Division	ROW Admin.	Hard Copy	23 CFR 710.201c
Utility Accommodation Manual	Engr. & Const.	2009	Utilities	Chief Engineer	Website	23 CFR 645.211
QA Program for Materials, Acceptance and Assurance Testing Policies and Procedures	Engr. & Const.	July 2009	Research & Materials	Const. Admin.	Website	23 CFR 637
MUTCD Supplement Compliance	Commissioner	2002	State Traffic Commission	Executive Director	Website	MUTCD
Construction Contract Bidding and Award Manual	Fin. & Admin.	September 17, 2010	Contracts Admin.	Manager of Contracts	Website	23 CFR 635.110
Standard Specifications	Engr. & Const.	July 2010	Standing Comm.	Chief Engineer	Website	23 CFR 630 Subpart B
Standard Drawings	Engr. & Const.	Various	Design Dev. Unit	Engr. Admin.	Website	23 CFR 630B

Description	Bureau	Last Update	Owner	Approver	Availability	Basis
Bridge Design Manual, 2003 Edition	Engr. & Const.	March 2009	Bridge Design Unit	Manager of Hwy. Design	Website	23 CFR 625
Local Bridge Program Manual	Engr. & Const.	2010	CE Structures Design	Manager of CE Design	Website	23 CFR 635.110 & 23 CFR 630 Subpart B
Bridge Inspection Manual	Engr. & Const.	March 14, 2008	Bridge Insp. Unit	Chief Engineer or Manager of BSE	Website	23 CFR 650
Construction Manual	Engr. & Const.	April 2009	Const. Div. Chief	Const. Admin.	Website	23 CFR 635.123
Consultant Administration & Project Development Manual	Engr. & Const.	Sept. 2008	CE Design	Manager of CE Design	Website	23 CFR 625 & 630B
Environmental Process Manual	Policy & Plan.				Website	23 CFR 771
Municipality Manual	Engr. & Const.	2008	Const. Div. Chief	Const. Admin	Website	23 CFR 635.123
Value Engineering Program	Engr. & Const.	Nov. 2009	Office of Quality Assurance	Manager of Quality Assurance	Website	23 CFR 627
Public Involvement Guidance Manual	Policy & Plan.	2009	By Steering Committee		Website	23 CFR 771.111-(h)
Consultant Procurement Procedures for Municipalities	Engr. & Const.	Pending	Local Roads Unit	Manager of CE Design	Website	23 CFR 172
Contract Compliance Plan	Fin. & Admin.	2008	Contract Compliance	Manager Contract Comp.	Hard Copy	23 CFR 230
DBE Plan	Fin. & Admin.	2009	Contract Compliance	Manager Contract Comp.	Hard Copy	49 CFR Part 26
Title VI Plan	Fin. & Admin.	2008	Contract Compliance	Manager, Contract Comp.	Hard Copy	23 CFR 200
Affirmative Action Plan	Commissioner	2010	Equal Op./ Diversity	EEO Director	Website	23 CFR 230

Description	Bureau	Last Update	Owner	Approver	Availability	Basis
Policy & Procedures for New or Revised Interstate Access Approval	Policy & Plan.	May 2009		Transportation Assistant Planning Director	Hard Copy	23 USC 111
Professional Services Consultant Selection Procedures Manual	Commissioner	January 2010	Consultant Selection	Commissioner	Website	23 CFR 172

Manuals (including changes) listed below are submitted to the FHWA for endorsement and information - The FHWA's responsibility is to notify the CTDOT only if a provision specifically violates an FHWA policy; communication back to the CTDOT is not needed otherwise.

Description	Bureau	Last Update	Owner	Approver	Availability	Basis
ADA Transition Plan	Fin. & Admin.	Pending	Equal Op./ Diversity	EEO Director	-----	Various
Constructability Review Program	Engr. & Const.	June 2009	Office of Quality Assurance		Website	23 USC 106
DOT Federal Billing Manual	Fin. & Admin.	May 14, 2010	Division of Capital Services, Federal Billing Unit	Manager of Federal Billing	Hard Copy	Title 2, Part 225
State Accounting Manual	Office of the State Comptroller	January 2006	Office of the State Comptroller	State Comptroller	Website	Title 2, Part 225
Traffic Control Signal Design Manual	Engr. & Const	2009	Traffic Engineering	Manager of Traffic Engr.	Website	MUTCD, STC Regulations
Drainage Manual	Engr. & Const.	Dec. 2003	Hydraulics & Drainage	Engr. Admin.	Website	23 CFR 650
Information Guide for ROW Acquisition Activities	Engr. & Const.	2006	ROW Division of Administration	ROW Admin.	Hard Copy	23 CFR 710
Geotechnical Engineering Manual, 2005 Edition	Engr. & Const.	Revised, Feb 2009	Soils & Foundations	Principal Engr.	Website	Various

Description	Bureau	Last Update	Owner	Approver	Availability	Basis
Public Service Facility Policy and Procedures for Highways in CT	Engr. & Const.	Nov. 2008	Utilities	Chief Engineer	Website	Various
Force Account Construction Recordkeeping, Volume 1 and 2	Engr. & Const.	2003	Bureau of Highway Operations	Bureau Chief	Hard Copy	23 CFR 635.123 (if used for Federal-aid)

Manuals that do not need to be submitted to the FHWA - The FHWA need not be notified of changes. These manuals are for the FHWA's information and can be provided upon request if needed.

Description	Bureau	Last Update	Owner	Approver	Availability	Basis
Digital Design Environment Guide	Engr. & Const.	October 2007	Engineering Applications	Manager of Quality Assurance	Website	Various
Maintenance Manual	Hwy. Ops.	2001	Maint. Planning	Bureau Chief	Hard Copy	23 CFR 1.27

PROJECT OVERSIGHT

Per the FHWA's April 14, 2006, guidance, project oversight is defined as: "*The act of ensuring that the Federal highway program is delivered consistent with applicable laws, regulations and policies.*"

For each and every Federal-aid project, the 'project oversight' is determined to be either:

- Full Federal Oversight, or
- State Oversight

The basic difference between Full Federal Oversight and State Oversight is which agency (in this case, the FHWA or the CTDOT) is authorized to approve the necessary supporting project documents and project level decisions. For *Preliminary Engineering* projects and *Construction* projects, each specific supporting document and the authority to approve them are specified in the *Project Development* and the *Project Construction* chapters that follow in this document. For these projects, the type of project oversight is determined as detailed in the **Project Oversight Determination** process described below.

For all Planning, Rights-of-Way, Operations, and Research projects, the FHWA retains the Full Federal Oversight. The *Program Stewardship* chapters of this document provide additional details on the project oversight roles and responsibilities for these project types, as well as any specific delegations of authority for other program areas including Environmental, ITS/Operations, Safety, etc.

PROJECT OVERSIGHT DETERMINATION

The following projects are formally submitted by the CTDOT to the FHWA, usually early in the project initiation phase, for a 'determination of oversight' of the Preliminary Engineering (design) and Construction phases:

1. All projects on the National Highway System (NHS), which includes the Interstate system;
2. All Intelligent Transportation System (ITS) projects with a construction cost greater than \$1 million;
3. Any project involving unusual structural features, unusual hydraulic structures, movable structures and tunnels. An unusual structure is one that is determined to have:
 - a) Difficult or unique foundation problems;
 - b) New or complex designs with unique operational or design features;
 - c) Bridges with exceptionally long spans; or
 - d) Bridges being designed with procedures that depart from currently recognized, acceptable practices. Examples of unusual bridges include cable-stayed, suspension, arch, segmental concrete, movable or truss bridges.
4. All projects funded with the Congestion Mitigation Air Quality (CMAQ) Program (Please note: CMAQ Projects must have a CMAQ Program Project Funds Eligibility Determination at some point during project development and before authorization of CMAQ funds, *See Planning Program Table* in the Planning chapter of this Agreement);
5. All construction activities utilizing Department of Administrative Services (DAS)--where DAS formally enters into the contract with the contractor, not the CTDOT--or construction activities performed by State or municipal forces utilizing Force Account.

Design and Construction projects not meeting these criteria are typically State oversight and need not be submitted to the FHWA for formal determination of significance.

Table 1: Project Oversight Determination Summary

Work Activity	Projects Meeting Criteria 1-5 Above		Projects not meeting the Criteria Above
	CTDOT Action	FHWA Action	
Project Oversight Determination	Prepare and Submit	Determine Oversight	
		PE and Construction Phases become FHWA Oversight	PE and Construction Phases become State Oversight
			PE and Construction Phases become State Oversight

** However, the FHWA or the CTDOT may elect to have any project which is normally delegated as State Oversight to become FHWA Oversight.*

When a project oversight determination is made for a specific preliminary engineering project, that same oversight determination is applicable to the subsequent construction project(s), as well as, any other 'break-out' projects that result from the original preliminary engineering effort.

The final determination of oversight occurs when the specific Federal-aid project is authorized and a formal Federal-aid agreement is entered by the FHWA and the CTDOT, usually in the FHWA's Financial Management Information System. A formal Federal-aid agreement is normally signed for each individual phase: PE, ROW, and Construction.

PROJECT DEVELOPMENT (INCLUDING DESIGN AND CONTRACT APPROVAL)

Background

Project Development is the process that takes a transportation improvement from concept through design. For the purposes of this stewardship plan, this chapter includes all project development up to and including the award of the contract.

Overview

The Project Development process typically begins with the authorization of a preliminary engineering project, through FMIS, based on an approved scope, cost estimate and schedule. The scope of this authorization is most often an approved PS&E package; however, the scope may be limited to a specific interim product, such as Preliminary Design or an Engineering Report. Ultimately, the FHWA and the CTDOT must ensure that the agreed upon scope (product) is acceptably produced and approved. When the scope is to produce a PS&E package, the approval of the PS&E package by the CTDOT and/or the FHWA represents final acceptance of the Project Development effort and will be followed by the authorization of a Project Construction phase.

Operating Procedures

The FHWA and the CTDOT shall conduct their respective project oversight activities on Federal-aid projects to ensure consistent application of the approved policies and procedures, including this Agreement, throughout the Project Development process. The specific project oversight roles and responsibilities within the Project Development process are detailed in the Project Development Oversight Table below.

- FHWA Checklists (Design Approval, PS&E, Contract Administration)
- CTDOT's Assignment of Responsibilities and Checklist Pursuant to the Stewardship Agreement for State Oversight Pre-Construction Project Activities, Office of Engineering dated July 2010.
- Preliminary Cost Estimating Guidelines, January 2010

References

- ✓ 23 USC 109
- ✓ 23 CFR 625
- ✓ *A Policy on Geometric Design of Highways and Streets (the Green Book)*
- ✓ *A Policy on Design Standards – Interstate System*
- ✓ CTDOT's Highway Design Manual
- ✓ FHWA Technical Advisory 5080.4 (TA 5080.4), Preparing Engineer's Estimates and Reviewing Bids

Table 2: Project Development Approval Summary

Work Activity	FHWA Oversight Projects		State Oversight Projects		Documents/ Products
	CTDOT Action ¹	FHWA Action	CTDOT Action ¹	FHWA Action	
Project Authorization for Preliminary Engineering (CTDOT informally calls this the obligation date)	Prepare & Submit	Review & Approve	Prepare & Submit	Review & Approve	Authorization to Proceed with Preliminary Engineering
Project Scope/ Concept	Prepare & Submit	Review & Approve	Prepare & Approve	None	Recommend Project Memorandum (RPM)
Major Scope Revision	Prepare & Submit	Review & Approve	Prepare & Approve	Comment	Scoping Committee Report
Use of Consultants on Major Projects ² or as Management Role	Prepare & Submit	Review & Approve	Prepare & Submit	Review & Approve	Letter of Approval
Consultant Scope of Services / Agreements	Prepare, Approve, & Submit	File	Prepare & Approve	None	Consultant Agreement
Interstate Access Modification	Prepare & Submit	Review & Approve	Prepare & Submit	Review & Approve	Design Summary and Operational Analysis (per May 2009 FHWA/CTDOT Policy)
Design Exceptions ³	Prepare & Approve	Review & Approve	Prepare & Approve	Comment at Design Exceptions meeting	Design Exceptions Memorandum
Design Approval	Prepare & Submit	Review & Approve	Prepare & Approve	None	Design Approval Request Letter/Package
Project Authorization for Right-of-Way (CTDOT informally calls this the obligation date)	Prepare & Submit	Review & Approve	Prepare & Submit	Review & Approve	Authorization to Acquire Right-of-Way
Value Engineering ⁴	Prepare & Approve	Review & Comment	Prepare & Approve	Review & Comment	Value Engineering Summary Letter
Design Plan/Package Submittals (PE, PD, SLD, SF, FPR)	Prepare & Comment	Review & Comment	Prepare & Comment	None	Design Plans, Reports, Specifications & Cost Estimates
Public Interest Findings: Force Account by State forces ; Non-Competitive Bidding; Buy America Waivers	Prepare & Submit	Review & Approve	Prepare & Submit	Review & Approve	Public Interest Finding Justification/Approval Request Letter

Table 2: Project Development Approval Summary (Continued)

Work Activity	FHWA Oversight Projects		State Oversight Projects		Documents/ Products
	CTDOT ACTION ¹	FHWA ACTION	CTDOT ACTION ¹	FHWA ACTION	
Public Interest Findings: Use of patented or proprietary materials; Use of State-furnished materials; Mandatory use of borrow/disposal sites; Salvaging items	Prepare & Submit	Review & Approve	Prepare & Approve	None	Public Interest Finding Justification/Approval Request Letter
PS&E Approval	Prepare & Submit	Review & Approve	Prepare & Approve	None	Plans, Specifications & Engineers Estimate
Project Authorization for Construction (CTDOT informally calls this the obligation date)	Prepare & Submit	Review & Approve	Prepare & Submit	Review & Approve	Authorization to Advertise
Addenda	Prepare & Submit	Review & Approve	Prepare & Approve	None	Addenda Package
Concurrence in Contract Award	Prepare & Submit	Review & Concur	Prepare & Approve	None	Concurrence of Award Package
Rejection of Low Bidder and/or All Bidders	Prepare & Submit	Review & Concur	Prepare & Submit	Review & Concur	Bid Rejection Letter
Transportation Management Plans for significant projects	Prepare & Submit	Review & Approve	Prepare and Approve	None	Approved TMP
Utility and Railroad Agreements	Prepare, Approve, and Submit	Review and File	Prepare and Approve	None	Approved Agreement
State Police MOAs	Prepare and Approve	None	Prepare and Approve	None	Approved MOA

¹ All of the CTDOT 'Action' items which indicate that the CTDOT shall 'Submit' to the FHWA, shall be 'Approved' or otherwise endorsed by the CTDOT prior to submission to the FHWA, as applicable.

² See *Major Projects Chapter*; this requirement is in accordance with 23 CFR 172.9

³ The FHWA's approval must be obtained for all Design Exceptions concerning projects on the Interstate System, regardless of Oversight determination or funding source.

⁴ Value Engineering only applies to structures over \$20M and projects on the National Highway System over \$25M (the cost estimate is for all phases.)

PROJECT CONSTRUCTION

Background

The overall purpose of the Construction Monitoring Program is to establish procedures for assuring that projects are constructed in accordance with the plans, specifications, and approved changes.

Operating Procedures

- Construction Manual
- Municipal Manual
- Site Manager

References

- ✓ 23 CFR 635
- ✓ CTDOT Construction Manual, Version 2.1, April 2009
- ✓ CTDOT Standard Specifications for Roads, Bridges and Incidental Construction – Form 816.
- ✓ CTDOT Construction Engineering and Inspection, Information Pamphlet for Consulting Engineers, August 2008
- ✓ CTDOT Pamphlet for Monitoring Performance and Payment Requests for Consultants, June 1994
- ✓ FHWA Contract Administration Core Curriculum Manual and Reference Guide

Table 3: Project Construction Summary

Work Activity	FEDERAL OVERSIGHT PROJECTS		STATE-ADMINISTERED, STATE OVERSIGHT PROJECTS	
	CTDOT ACTION	FHWA ACTION	CTDOT ACTION	FHWA ACTION
Notification of Pre-construction Meeting	Prepare	Information	Prepare	None
Record of Prior Approval for Major Contract Change Order	Prepare & Approve	Approve for eligibility ¹	Approve	Some ³
Change Orders	Prepare & Approve	Approve for eligibility ²	Approve	Some ³
Claims	Prepare & Approve	Approve for eligibility	Prepare & Approve	Approve for eligibility
Time Extensions	Prepare & Approve	Approve (agree with increase in incidentals, or application of liquidated damages)	Approve	None
Suspension of Work	Prepare & Approve	Approve	Prepare & Approve	None
Termination	Prepare & Approve	Concurrence	Approve	Information
FHWA Construction Inspection Reports	Information & Action (if required)	Conduct & Prepare Report	Conduct & Prepare Report	None
FHWA Final Construction Inspection	Information	Conduct & Prepare Report	Conduct & Prepare Report	None
Final Acceptance (CON-501)	Prepare & Approve	Information (FHWA reviews, approves and files without notification back to the CTDOT)	Prepare & Approve	Information
Materials Certification	Prepare & Approve	Information (normally submitted with final acceptance package above)	Prepare & Approve	Information
Buy America Waiver ⁴	Prepare	Approve	Prepare	Approve
Value Engineering Change Proposals	Review & Approve	Information (<i>See Change Orders above</i>)	Review & Approve	Information
Design Errors & Omissions (Deficiency Report)	Prepare	Information	Prepare Report	None

¹ Major Contract Change Orders involve changes to: 1) the project scope 2) time extensions totaling 30 days or more and/or effect a contract milestone date 3) cost increases greater than or equal to \$100,000 and require a prior approval to proceed from the FHWA. The subsequent change order shall also be submitted to the FHWA for final approval. *See the Construction Manual for more details.*

² Routine change orders < \$100,000 can be approved retroactively by the FHWA.

³ *See Construction Manual for more details*

⁴ Value of Permanent and material in excess of 0.1% of the contract value

LOCAL PUBLIC AGENCY (MUNICIPALITIES)

Background

The CTDOT has been given the authority by legislation to provide Federal-aid Highway Program funds to local public agencies (LPAs or municipalities) to perform the work. Municipalities are not recognized as direct recipients of Federal funds, the Federal funds for local aid projects are provided through the CTDOT. As a direct recipient of Federal funds, the CTDOT is ultimately responsible for ensuring that project sponsors comply with applicable Federal laws and regulations.

Additionally, SAFETEA-LU Section 1904 has amended 23 USC 106 to hold the states accountable for assuring that municipalities utilizing Federal funds have adequate project delivery systems for projects and sufficient accounting controls to properly manage Federal funds.

Connecticut General Statute Section 13a-165 authorizes the Commissioner of the CTDOT to accept Federal funds on behalf of municipalities for transportation projects.

The following two tables highlight key project work activities and the actions required by municipalities, the CTDOT and the FHWA. In conjunction with the CTDOT, the FHWA performs periodic process reviews to ensure the efficiency and accountability of the program. In the event a locally administered project is determined to have the FHWA's oversight, then the previous tables--the *Project Development Oversight Table* and the *Project Construction Summary Table*--apply.

The following activities will not be delegated to the municipalities and are reflected in the table below and other chapters of this Stewardship Plan:

- NEPA Approval
- Design Approval
- Design Exceptions
- Right-of-Way Certificates
- Plan (PS&E) Approval
- DBE determinations and goals
- Labor Compliance enforcement
- Final Inspection and Acceptance
- Project Audits

Applicability

This chapter specifically applies to situations where the municipality holds and administers the construction contract or the consultant agreements.

In the event that a Municipality holds the consultant design agreement or does its own design and the CTDOT administers the construction contract, then this chapter is only valid through final design. From the PS&E forward, the State-Administered Project Development and Project Construction delegations apply as outlined in those chapters (Tables 1 and 2). Also, if a Municipal Project is determined federal oversight, Tables 1 and 2 apply, not Tables 4 and 5.

Table 4: Project Development Oversight for Municipalities Summary

Work Activity	LPA (Municipal) ACTION	CTDOT ACTION¹	FHWA ACTION	Documents/ Products
Project Scope/Concept	Prepare & Submit	Review & Approve	None, opportunity to comment	Recommended Project Memorandum (RPM)
Project Authorization for Preliminary Engineering (CTDOT informally calls this the obligation date)	Prepare & Submit	Review & Submit	Approve	Authorization to proceed with Preliminary Engineering
Major Scope Revision	Prepare & Submit	Review & Approve	None	Scoping Committee Report
Consultant Selection	Prepare & Submit	Review & Approve	None	Approved Firm
Consultant Scope of Services/Agreements	Prepare & Submit	Review & Approve	None	Consultant Agreement
Interstate Access Modification ²	Prepare & Submit	Review & Endorse	Approve	Design Summary and Operational Analysis (per May 2009 Policy)
Design Exceptions ³	Prepare & Submit	Review & Approve	None, Opportunity to comment (Approve if exception is on Interstate)	Design Exceptions Memorandum
Design Approval	None	Prepare & Approve	None	Design Approval Request Letter/Package
Project Authorization for Right-of-Way (CTDOT informally calls this the obligation date)	Prepare & Submit	Review & Submit	Approve	Authorization to Proceed with Right-of-Way Acquisition
Value Engineering ⁴	Prepare & Submit	Review & Approve	None	Value Engineering Summary Letter
Design Plan/Package Submittals (PE, PD, SLD, SF, FPR)	Prepare & Submit	Review & Approve	None	Design Plans, Reports, Specifications & Cost Estimates
Public Interest Findings: Sole Source, Proprietary products, Local-Furnished/ Designated Materials, Force Account work done by municipal forces	Prepare & Submit	Review & Approve	None	Public Interest Finding Justification/Approval Request Letter
Public Interest Findings: Buy America Waiver, Non- competitive Bidding	Prepare & Submit	Review and Endorse	Review & Approve	Public Interest Finding Justification/Approval Request Letter
PS&E Approval	Prepare & Submit	Review & Approve	None	CTDOT generated memorandum of PS&E approval and authorization to advertise
Project Authorization for Construction (CTDOT informally calls this the obligation date)	Prepare & Submit	Review & Submit	Approve	Authorization to Advertise

Table 4: Project Development Oversight for Municipalities Summary (Continued)

Work Activity	LPA (Municipal) ACTION	CTDOT ACTION¹	FHWA ACTION	Documents/ Products
Addenda	Prepare & Submit	Review & Approve	None	Addenda Package
Concurrence in Contract Award	Prepare & Submit	Review & Concur	None	Concurrence of Award Package
Rejection of Low Bidder and/or All Bidders	Prepare & Submit	Review & Endorse	Review & Concur	Bid Rejection Letter
Transportation Management Plans for significant projects ⁵	Prepare & Submit	Review & Approve	None	TMP
NEPA Approvals	<i>See Environmental Chapter of this Plan</i>			

¹ All of the CTDOT Action items which indicate that the CTDOT shall submit to the FHWA, must be endorsed by the CTDOT prior to submission to the FHWA, as applicable.

² A municipal project requiring Interstate Access Modification would be rare but could also include developer's projects.

³ The FHWA's approval must be obtained for all Design Exceptions concerning projects on the Interstate System, regardless of Oversight determination or funding source.

⁴ Value Engineering for a municipal project is rare and only applies to Structures over \$20M and projects on the National Highway System over \$25M (for all phases.)

⁵ Transportation Management Plans are only required for projects on the Interstate (*See definition in August 6, 2007, CTDOT Policy Statement*)

Table 5: Project Construction for Municipalities Summary

Work Activity	LPA (Municipality) ACTION	CTDOT ACTION	FHWA ACTION
Notification of Pre-construction Meeting	Prepare & Submit	Review & Attend	Information
Change Orders	Prepare & Submit	Review & Approve	None
Claims ¹	Prepare & Submit	Review & Approve	None
Time Extensions	Prepare & Submit	Review & Approve	None
Suspension of Work	Prepare & Submit	Review & Approve	None
Termination	Prepare & Submit	Review & Approve	Information
Certificate of Compliance	Prepare & Submit	Review & Approve	None
Certificate of Final Acceptance	Prepare & Submit	Review & Approve	None
Materials Certification	Submit	Prepare & Approve	None
Buy America Waiver ²	Prepare & Submit	Review & Concur	Approve
Value Engineering Change Proposals	Prepare & Submit	Review & Approve	None
Errors & Omissions (Deficiency Report)	Prepare & Submit	Review & Approve	None
Public Interest Finding	Prepare & Submit	Review & Approve	None

¹ Claims that may set legal precedence should be coordinated with the FHWA.

² Not needed when minimal use of foreign steel and iron materials does not exceed 0.1 percent or \$2,500, whichever is greater.

Operating Procedures

- Consultant Selection, Negotiation and Contract Monitoring Procedures for Municipally Administered Projects
- CTDOT's Assignment of Responsibilities and Checklist Pursuant to the Stewardship Agreement for State Oversight Pre-Construction Project Activities, Office of Engineering dated July, 2010.
- Advertising Procedures for Construction Contracts Administered by Municipalities
- Master Municipal Agreement
- CTDOT Municipality Manual, Version 1, July 2008

References

- ✓ 23 U.S.C. 106(c)(2)
- ✓ 23 U.S.C. 109(o)
- ✓ 23 CFR 1.11
- ✓ 23 CFR 635

PROGRAM STEWARDSHIP

Stewardship: The efficient and effective management of the public funds that have been entrusted to the Federal Highway Administration.

Stewardship reflects our collective (FHWA and CTDOT) responsibility for the development and implementation of the Federal highway programs. It involves all activities in delivering the Federal highway program, such as leadership, technology deployment, technical assistance, problem solving, program administration, and oversight.

PROCESS REVIEW/PRODUCT EVALUATION

These evaluations are a key component of our Stewardship. A process review is a review such as the process of approving a public interest finding. A product evaluation is an evaluation of a product such as a completed bridge deck, asphalt mat, or even a set of contract documents.

The FHWA's Process Review/Product Evaluation (PR/PE) approach will be accomplished by teams or by an individual with team assignments being made following the selection of the review area. Teams could include the CTDOT representatives. In some cases representatives from local agencies may also be invited to participate. Other partners such as the Federal Transit Administration (FTA), National Highway Traffic Safety Administration (NHTSA), Resource agencies, or others may also be requested to participate dependent upon subject matter.

Each year, the FHWA in consultation with the CTDOT will develop an annual process review program. (Review areas selected will be identified in the FHWA Annual Performance Plan.) The PR/PE review topics will be selected with emphasis on:

- Key programs, processes, and practices resulting from emphasis areas identified in the FHWA's Annual Performance Plan or through periodic risk assessments.
- Evaluation of strengths and areas of improvement identified during the previous year's product evaluation reviews, project level activities, or during routine program monitoring. Other areas where possible review topics may be generated could include audit reports, needed cyclical reviews or to assess the effectiveness of new and innovative technologies, processes, and practices that have been implemented.
- Each PR/PE undertaken will include findings and recommendations which will be reported to the CTDOT. When appropriate, findings and recommendations will be presented at a joint session of the FHWA and the CTDOT's top management. Follow-up activities will occur as necessary to assure implementation and effectiveness of agreed upon recommendations.

For Federal-aid projects where the CTDOT has been delegated the authority to act for the FHWA, independent reviews can be conducted by the CTDOT.

BRIDGE PROGRAM

Background

Part 650, Subpart C of 23 CFR established the National Bridge Inspection Standards (NBIS) that apply to all bridges carrying vehicular traffic that are greater than 20 feet in length and are located on a public road. Subpart D establishes the procedures for administering the Highway Bridge Replacement and Rehabilitation Program (HBP). The program was established to replace and rehabilitate deficient highway bridges.

Operating Procedures

- Bridge Design Manual
- Bridge Inspection Manual
- Local Bridge Program Manual

Please note that capital projects constructing, reconstructing, or rehabilitating bridges (whether or not they are using the HBP) follow the project development and project construction chapters of this plan.

Eligibility for this program is based on bridge inspection and inventory data submitted annually to the FHWA Office of Bridge Technology by the CTDOT. A selection list of eligible structures is furnished by the FHWA to the CTDOT. The distribution of HBP funds to each State is based on unit cost data for bridges, which is prepared annually by the CTDOT. The CTDOT may select any bridge on the selection list for replacement or rehabilitation under this program. Also, these funds may be used for systematic preventative maintenance without regard to whether the bridge is eligible for rehabilitation or replacement.

A NBIS compliance review will be conducted by the FHWA yearly with the CTDOT. The reviews include the following major NBIS elements: inspection procedures, frequency of inspection, qualifications of personnel, quality of the reports and the inventory. The FHWA will also review the CTDOT's QA/QC and Scour Evaluation programs, and their procedures to review, prioritize and make recommendations for repairs. An annual program review report is prepared by the FHWA Division Bridge Engineer and discussed with the CTDOT.

The CTDOT's Bridge Safety and Evaluation Section (BSE) is responsible to manage its bridge inspector certification program in compliance with the NBIS.

References

- ✓ 23 CFR 650 Bridges, Structures and Hydraulics

Table 6: Bridge Program Summary

Work Activity	CTDOT ACTION	FHWA ACTION	Documents/ Products
Bridge Inspection Program	Conduct inspections.	Provide guidance and coordination with Federal Procedures.	Inspection Reports, load ratings and load posting. Annual Program Review Report.
	Submit NBIS inventory data to the FHWA annually by April 1.	Process data and furnish error listing to CTDOT for resolution.	Annual NBI Submittal, Selection List
	Prioritize and make repairs. Generate Annual Bridge List.	Review and comment on BMM's and Annual Bridge List	BMM, Annual Bridge List
	Prepare Scour Report.	Review and submit to the FHWA HQ.	Scour Report
	Participate in Annual Program Review.	Prepare Annual Program Review Report.	Annual Program Review Report
Bridge Replacement & Rehabilitation Program (HBP)	Initiate, design and construct projects.	Provide list of eligible projects, review and approve full Federal oversight projects. Resolve questions concerning eligibility and authorize funding.	Annual Summary of Bridges Replaced or Rehabilitated.
	Furnish unit cost data annually to the FHWA by April 1.	Review unit cost data and submit to the FHWA HQ.	CTDOT receives their share of HBP funds based on unit cost data.

CIVIL RIGHTS PROGRAM

Background

The FHWA Division Office is committed to effectively implement and enforce civil rights programs within the CTDOT in its planning, environment, design, rights of way, construction, and management of the multimodal Connecticut transportation system. The CTDOT is obligated to insure nondiscrimination in all programs and activities, and in the provisions of all services and benefits, as a basis for continued receipt of FHWA funds. The Division of Contract Compliance manages external civil rights programs; and its Internal Division of Affirmative Action manages internal civil rights programs. The CTDOT submits annual updates, assurance updates and reports of their programs as detailed in the table below.

Operating Procedures

The FHWA provides technical expertise and assistance to CTDOT's Division of Contract Compliance and the Internal Division of Affirmative Action. Civil rights program elements are required through a collection of regulations, laws, and executive orders including, but not limited to, those listed in the References. Approval actions are outlined in those elements.

The FHWA Division Office Civil Rights Specialist reviews all external civil rights program work plans and program documents and provides comments and recommendations to the CTDOT. The FHWA Division Office Civil Rights Specialist may participate in committees and teams set up by the CTDOT that address civil rights concerns about equal access and affirmative action in employment and contracting opportunities. Successful implementation of the civil rights activities will require support from the Division Administrator and Assistant Division Administrator. Technical assistance may be required from the Resource Center and the Washington Office of Civil Rights.

Oversight Activities

The purpose of the FHWA's oversight is to monitor the implementation and effectiveness of the CTDOT's civil rights, affirmative action and equal employment opportunity programs. The FHWA will be an advocate of the civil rights program and provide training, technical assistance, and active participation in the CTDOT-initiated civil rights meetings and review activities. The FHWA will review and approve the CTDOT's programs on an ongoing basis through process and program reviews, and through active participation in continuous program evaluation and improvement. Appropriate FHWA representatives will actively participate in the CTDOT initiated reviews, task forces, and other civil rights initiatives upon request and to the extent feasible. Finally, the FHWA will analyze civil rights reports submitted by the CTDOT to help identify trends and provide feedback and recommendations to the CTDOT.

Table 7: Civil Rights Program Summary

Work Activity	CTDOT ACTION	FHWA ACTION	Documents/ Products
DBE Semi-Annual Uniform Report	Prepare & Submit by June 1 and Dec. 1.	Preview and Endorse, submit to the FHWA HQ. (14 days)	1. Timeliness of submission 2. Implementation of recommendations based on analysis
Annual Contractor Employment Report – PR1392	Prepare & submit. (no later than September 30).	Review & File. Submit to the FHWA HQ.	1. Timeliness of submission 2. Implementation of recommendations based on analysis
State Internal Title VII AAP & Annual Updates	Prepare and submit AA Plan (every 3 years) and Annual Updates by June 15.	Joint Review with FTA and approve.	Implementation of recommendations
Contractor Compliance Program document & Annual Update Reports including review schedule	Prepare and submit Program document (every 3 years) and Annual Updates by Dec. 31.	Review reports and provide comments as appropriate.	Implementation of recommendations
Historically Black College/Minority/HSI Institution of Higher Education Plan/Report	Report on Dollars spent.	Review, Prepare and Submit to the FHWA HQ. (14 days)	Timeliness of submission
State Internal Employment Practice EEO-4 Report	Prepare and Submit. (no later than September 30)	Review and File Submit to the FHWA HQ. (14 days)	Timeliness of submission
Title VI Program & Annual Updates	Prepare and submit Program document (every 3 years) and Annual Updates by Dec. 31.	Review, provide comments, and Approve	Timeliness of submission
Title VI Program Reviews	Prepare schedule and include in Annual Update.	Provide Training & Technical Assistance.	Implementation of recommendations
DBE Program Plan/Update	Prepare and submit (no later than August 1) any changes as needed and update every 3 years.	Joint Review w/the FTA and approve. Submit to the FHWA HQ by August 31 (if there are changes)	Timeliness of changes
DBE Program Goals and Methodology	Prepare and submit (no later than August 1)	Review and Approve. Submit to the FHWA HQ and Resource Center Legal (for legal sufficiency) by Aug.31.	Discuss possible factors impacting goal setting process.
Contractor Compliance Reviews	Conduct CC reviews & participate in Site record reviews & create CAPs as needed.	None, file and participate as determined necessary.	Reviews performed & CAPs created as needed.
DBE & OJT Supportive Services Programs and Reports	Prepare and submit achievement reports as requested by the FHWA and as applicable	Review and Submit to the FHWA Office of Civil Rights (14 days).	FHWA Office of Civil Rights approves the request for continued funding

ENVIRONMENT PROGRAM

Background

The FHWA is the lead Federal agency responsible for compliance with a wide range of environmental requirements under a single, unified process for transportation decision-making. Pertinent laws and regulations include the National Environmental Policy Act (**NEPA**); implementing regulations of the Council on Environmental Quality (**CEQ**), 40 CFR 1500, *et seq* and FHWA 23 CFR 771; Section 4(f) [49 U.S.C. 303] and implementing regulations 23 CFR 774; Section 106 of the National Historic Preservation Act (**NHPA**) and implementing regulations 36 CFR 800; Section 404 of the Clean Water Act; and Section 7 of the Endangered Species Act (**ESA**). Furthermore, the FHWA has a commitment to the “protection and enhancement of communities and the natural environment” as outlined in the U.S.DOT Strategic Goals.

Operating Procedures

For all projects that require an action or approval by the FHWA, the State DOT and the FHWA will work together in the project planning phase to (1) ensure compliance with NEPA and all other applicable laws and regulations, and (2) determine what type of environmental document is appropriate before an alternative is selected (location/design approval). The level of involvement will be commensurate with the degree of environmental impact or project complexity depending upon the class of action. The CTDOT will prepare and document a recommendation on the type of environmental document required for each project using its *Environmental Review Checklist*. The CTDOT will be responsible for the preparation of all necessary environmental studies and documentation with guidance provided by the FHWA.

Project Oversight

The majority of projects will be covered by the *Programmatic Agreement for Approval of Certain Categorical Exclusions between the Federal Highway Administration and the Connecticut Department of Transportation*. These projects will be documented by the CTDOT in accordance with the terms of that agreement.

Environmental Impact Statements (EIS), Records of Decision (ROD), Environmental Assessments (EA), Findings of No Significant Impact (FONSI), Section 4(f) Evaluations, Programmatic Section 4(f) Evaluations, and Section 4(f) de Minimis Impacts Findings will be prepared by CTDOT in accordance with the FHWA and/or CEQ regulations and guidance and submitted to the FHWA for review and approval.

All documents requiring legal sufficiency review will be forwarded to the FHWA legal counsel by the FHWA Division Office prior to approval of these documents. Legal sufficiency review comments are typically received by the FHWA Division Office within 30 days after receipt of the request. Re-evaluations of environmental documents will be assessed either through informal consultation between the FHWA and the CTDOT or by formal written documentation in accordance with the FHWA regulations.

References

- ✓ FHWA Environment Web Site: <http://www.fhwa.dot.gov/environment/index.htm>
- ✓ FHWA *Environmental Guidebook*: <http://environment.fhwa.dot.gov/guidebook/index.asp>
- ✓ FHWA *Section 4(f) Policy Paper*, dated March 1, 2005:
<http://environment.fhwa.dot.gov/projdev/4fpolicy.asp>
- ✓ *Programmatic Agreement for Approval of Certain Categorical Exclusions between the Federal Highway Administration and the Connecticut Department of Transportation*, dated August 1997
- ✓ FHWA Technical Advisory T 6640.8A, *Guidance for Preparing and Processing Environmental and Section 4(f) Documents*, dated October 30, 1987:
<http://environment.fhwa.dot.gov/projdev/impTA6640.asp>
- ✓ FHWA Regulations: 23 CFR 771 (latest edition):
http://www.access.gpo.gov/nara/cfr/waisidx_07/23cfr771_07.html
- ✓ CTDOT *Environmental Review Checklist*

Table 8: Environmental Review Process Summary

Work Activity	CTDOT ACTION	FHWA ACTION	Documents/ Products
Environmental Review	Prepare and Evaluate	Periodic Audit	Recommend CE or Environ. Document
Categorical Exclusion (Programmatic)	Prepare and Approve	Periodic Audit	Approved CE
Categorical Exclusion (Individual)	Prepare and submit to the FHWA for approval	Review and Approve	Approved CE

Table 9: Environmental Assessment Summary

Work Activity	CTDOT ACTION	FHWA ACTION	Documents/ Products
Administrative Draft Environmental Assessment	Prepare and Submit to the FHWA for review and comment	Review and Comment	Comments
Draft Environmental Assessment	Submit to the FHWA for approval	Approve for Circulation for Public Comment	Approved Draft EA
Administrative Draft Final Environmental Assessment	Prepare and Submit to the FHWA for review and comment	Review and Comment	Comments
Final Environmental Assessment	Submit to the FHWA for approval	Approve EA	Approved Final EA
Finding of No Significant Impact (FONSI)	Prepare FONSI request Submit to the FHWA	Prepare and Issue FONSI	FONSI

Table 10: Environmental Impact Statement Summary

Work Activity	CTDOT ACTION	FHWA ACTION	Documents/ Products
Coordination Plan	Prepare Coordination Plan for the FHWA approval	Review, Comment, and Approve Coordination Plan	Approved Coordination Plan documenting the EIS process
Notice of Intent (NOI)	Prepare Notice of Intent Submit to the FHWA for approval	Review and Approve Notice of Intent. Submit to <i>Federal Register</i> for Publication	A Notice of Intent published in the <i>Federal Register</i>
Participating and Cooperating Agency Invitation Letters	State agency letters	Federal agency letters	Finalize Participating and Cooperating agencies
Scoping Meetings	Schedule and conduct scoping meetings with agencies and public	Participate in scoping meetings with agencies and public	Finalize EIS scope
Administrative Draft Environmental Impact Statement	Prepare and submit to the FHWA for review	Review and Comment	Comments
Draft Environmental Impact Statement (DEIS)	Prepare and approve Submit to the FHWA for approval	Approve Draft EIS for Circulation for Public Comment	Draft EIS
Administrative Final Environmental Impact Statement	Prepare and submit to the FHWA for review	Review and Comment	Comments
Final Environmental Impact Statement (FEIS)	Prepare and Approve Submit to the FHWA for approval	Approve Final EIS	Final EIS
Record of Decision (ROD)	Prepare draft Record of Decision	Review, Revise, and Issue Record of Decision	ROD

Work Activity	CTDOT ACTION	FHWA ACTION	Documents/ Products
Supplemental EIS (SEIS)	Prepare and Approve Submit to the FHWA for approval	Approve Supplemental EIS	Supplemental EIS
Draft Re-evaluation (required for Environmental Documents which have had no FHWA approval within 3 years)	Prepare and Submit to the FHWA for review	Review and Comment	Comments
Final Re-evaluation	Prepare and submit to the FHWA for approval	Approve Re-evaluation	Re-evaluation Determination

Table 11: Section 4(f) Summary

Work Activity	CTDOT ACTION	FHWA ACTION	Documents/ Products
Section 4(f) De Minimis Impacts Finding	Prepare and Submit to the FHWA for review and approval	Review and Approve Section 4(f) De Minimis Impacts Finding	Section 4(f) De Minimis Impacts Finding
Programmatic Section 4(f) Evaluation	Prepare and Submit to the FHWA for review and approval	Review and Approve Programmatic Section 4(f) Evaluation	Programmatic Section 4(f) Evaluation
Draft Section 4(f) Evaluation	Prepare and Submit to the FHWA for review and circulation for comment	Review and circulation of Draft Section 4(f) Evaluation	Comments
Final Section 4(f) Evaluation	Prepare and Submit to the FHWA for approval	Review and Approve Final Section 4(f) Evaluation	Final Section 4(f) Evaluation

Table 12: Section 106 Summary

Work Activity	CTDOT ACTION	FHWA ACTION	Documents/ Products
Section 106 Consultation	Consultation with SHPO and the FHWA	Consultation with SHPO and CTDOT Notification of ACHP if Adverse Effect	Determination of Effect
Section 106 Memorandum of Agreement (MOA)	Prepare, sign concurrence and Submit to SHPO and the FHWA to execute	Execute MOA	Section 106 MOA

Table 13: Traffic Noise and Air Quality Program Summary

Work Activity	CTDOT ACTION	FHWA ACTION	Documents/ Products
Traffic Noise Study	Prepare and submit to the FHWA with recommended determination	Approval of Traffic Noise study	Preliminary Traffic Noise Impacts & Abatement Identified
CO, PM2.5 and PM10 project level air quality analysis.	Prepare and submit to the FHWA for review.	Review and comment.	Project Level Conformity determination / NEPA / CEPA document.
Indirect Source of Air Pollution Permit Application for Construction	Prepare and Submit to DEP and the FHWA for review	Review and comment.	Permit

Table 14: Threatened and Endangered Species Summary

Work Activity	CTDOT ACTION	FHWA ACTION	Documents/ Products
Preliminary Assessment	Determine potential for occurrence of threatened and endangered species within project limits	Coordination with CTDOT, USFWS and DEP	Identify potential for adverse effect on listed species
Biological Assessment	Conduct species surveys (if needed)	Coordination with CTDOT, USFWS and DEP	Evaluate effect of project on listed species
DEP ESA Consultation	Consult with DEP and the FHWA (if required)	Coordination with CTDOT and DEP	DEP Opinion
USFWS ESA Section 7 Consultation	Consult with USFWS, DEP and the FHWA (if required)	Coordination with CTDOT and USFWS	USFWS Opinion

ENVIRONMENTAL PERMITS SUMMARY TABLES

Table 15: U.S. Army Corps of Engineers Section 404 permits Summary

Work Activity	CTDOT ACTION	FHWA ACTION	Documents/ Products
Application Preparation	Prepare and Evaluate	Consultation with ACOE and Federal Resource Agencies	Signed application
Agency Coordination	Coordinate	Consultation with ACOE and Federal Resource Agencies	Issued Permit

Table 16: State Wetland and Water-related Permits and Authorizations Summary

Work Activity	CTDOT ACTION	FHWA ACTION	Documents/ Products
Inland Wetlands and Watercourses permit	Prepare and review Submit to DEP for review	None	Permit
Section 401 Water Quality Certificate	Prepare and review Submit to DEP for approval	None	Certification
Stream Channel Encroachment Line	Prepare and review Submit to DEP	None	Permit
Flood Management Certification	Prepare and review Submit to DEP	None	Certification
Structures and Dredging Permit	Prepare and review Submit to DEP (OLISP)	None	Permit
Certificate of Permission	Prepare and review Submit to DEP (OLISP)	None	Permit
Tidal Wetland Permit	Prepare and review Submit to DEP (OLISP)	None	Permit
Coastal Management Consistency Review Form	Prepare and review Submit to DEP (OLISP)	None	Certification
Diversion Permit	Prepare and review Submit to DEP	None	Permit
Coast Guard Bridge Permit	Prepare and review Submit to U.S. Coast Guard	Coordination with USCG	Permit
Dept. of Health Water Company Land Permit	Prepare and review Submit to Dept. of Health	None	Permit
Conditional Letter of Map Revision (CLOMR)	Coordinate with DEP and Municipality Prepare and review Map Revision Request Submit to FEMA	None	FEMA Floodway Map Revision

FINANCIAL MANAGEMENT PROGRAM

Background

On August 10, 2005, the President signed into law the Safe, Accountable, Flexible, Efficient Transportation Equity Act; A Legacy for Users (SAFETEA-LU), which represents the largest surface transportation investment in our Nation's history. SAFETEA-LU builds on ISTEA and TEA-21 supplying the funds and refining the programmatic framework for investments needed to maintain and grow our nation's vital transportation infrastructure. The entire Stewardship Agreement provides greater emphasis on financial integrity, project delivery, and major project oversight. Pertinent operating procedures and policies are noted in the Operating Section below.

Operating Procedures

The CTDOT recognizes that sound Federal financial management stewardship and oversight encompasses the entire Federal-aid program from the authorization to proceed with preliminary engineering through construction and project closeout and final vouchering. Further, that the correctness and propriety of all Federal-aid reimbursement are its primary responsibility whether the primary cost document resides with the CTDOT or some third party. This responsibility is fulfilled by the CTDOT maintaining adequate and tested financial and operating policies and procedures and a sound accounting system with proper internal controls together with suitable audit activities.

The FHWA recognizes a need for complete understanding of all pertinent financial and operating policies and procedures of the CTDOT. This includes but not limited to: Policy Statements, Finance Directives, Purchasing and Stores Directives, State Accounting Manual, RASPS Manual, FMIS Manual, Federal Billing Manual, Procedure Manuals, etc. It is the FHWA's responsibility to provide technical assistance and advice in funding and financial areas in a timely manner to meet the processing needs of the CTDOT.

The culmination of the CTDOT and the FHWA Financial Management Stewardship and Oversight is the annual certifications of the Financial Integrity Review and Evaluation (FIRE) Program and Federal Managers' Financial Integrity Act (FMFIA), completed by the FHWA Connecticut Division Office, of internal and financial controls to substantiate the financial statements.

Oversight Responsibilities

➤ **Project Agreements**

The CTDOT enters pertinent statistical, descriptive, and financial information into the FMIS and the project is signed electronically by both the CTDOT and the FHWA. All supporting documentation of the action is provided for full oversight projects as outlined in the project development and project construction chapters. Supporting documentation can be requested for delegated projects at the discretion of the FHWA.

Amended agreements (modifications) are supported by the Core-CT system expenditures and other approved costs including change orders or new project estimates which support increases or decreases in project obligations are referenced. The CTDOT enters the necessary financial information and justification into the FMIS and the agreement modification is signed electronically by both the CTDOT and the FHWA.

Advance construction (23 U.S.C. 115; 23 CFR 630 Subpart G) is an effective tool in innovative financing to advance a project's construction time line. An advance construction project must meet the same Agreement requirements and proceed in the same manner as a regular Federal-aid project, except for the following: The FHWA authorization does not constitute any commitment of Federal funds and the CTDOT will not be reimbursed until the project has been

converted. Conversion of advance construction projects requires an amended agreement which is electronically signed by both the CTDOT and the FHWA.

Both the CTDOT and the FHWA are committed to meeting customer requirements within appropriate time frames, to the maximum extent possible. The CTDOT will assure to the maximum extent possible that project authorizations submitted for the FHWA approval have satisfied all Federal regulations and requirements and are carried out in accordance with the approved Stewardship Agreement. The target time frame for the FHWA processing of project authorizations and agreements, and amended project authorizations and agreements is 10 working days.

➤ **Reimbursement**

Federal-aid reimbursement to the CTDOT for eligible expenditures incurred is found in 23 U.S.C. 121. In accordance with 23 CFR 1.9(a), Federal-aid funds shall not participate in any cost which is not in conformity with applicable Federal and State law, the regulations in 23 CFR, and policies and procedures prescribed by the FHWA. The FHWA Connecticut Division Office provides oversight of Cost Reimbursable Contracts, pursuant to 23 CFR Part 140, 49 CFR Part 18, and 2 CFR 225 (OMB Circular A-87, "Cost Principles for State, Local, and Indian Tribal Governments"). Likewise, the FHWA must comply with the requirements of the Federal Managers' Financial Integrity Act of 1982 (FMFIA).

In order to facilitate the Federal Billing Process, the CTDOT utilizes the CORE-CT People soft Projects Costing module. The projects are created based on the Federal agreements with the various funding agencies. The CTDOT projects and activities allow for the integration, accounting, pricing and billing of transactional data from the other financial modules within Core-CT. The CTDOT utilizes the Core-CT People soft commitment control module. This process ensures that the Federal Funds budgeted for projects are loaded and available for various module transaction processing. The primary element that supports the billing process is the accounting distribution related to the project, project activities and source types. The following chart shows the high-level life cycle of a Federal project in the projects module.

Figure 1: Project Flowchart

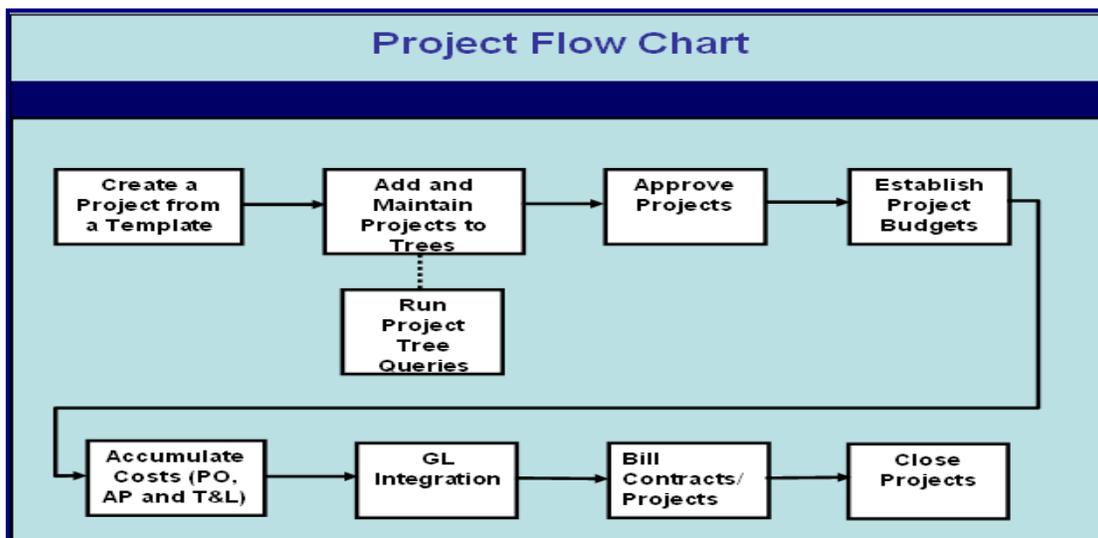
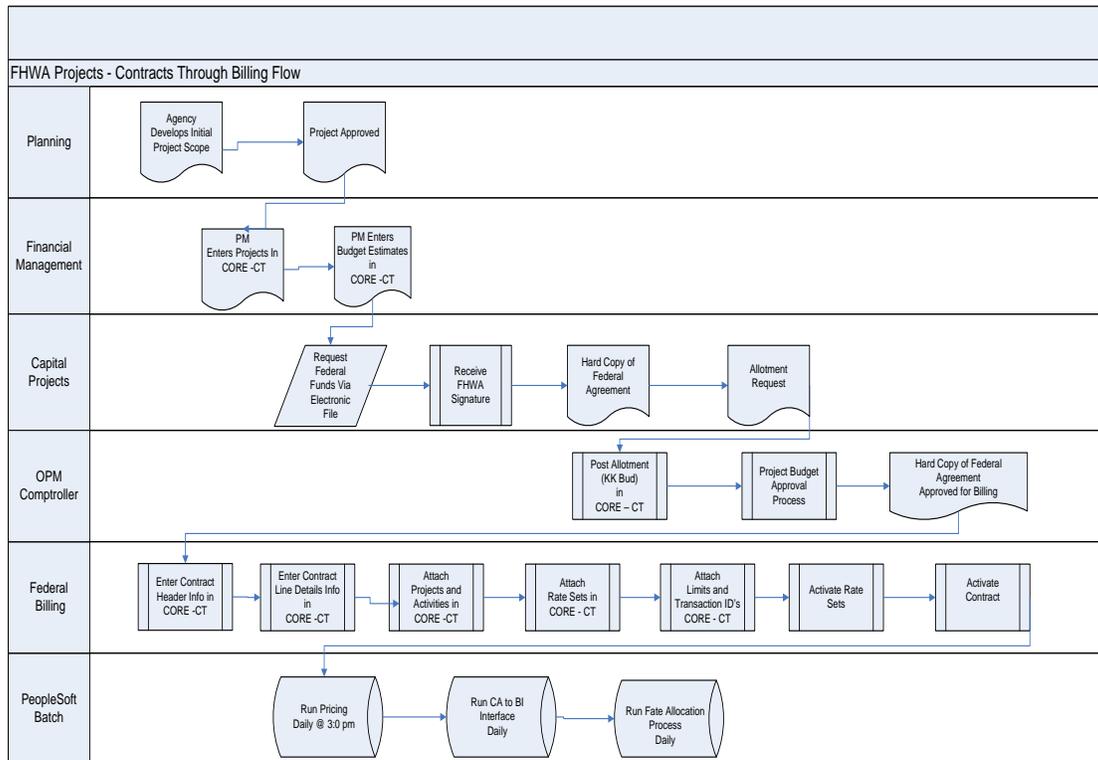


Figure 2: FHWA Projects Contracts through Billing Flowchart

A high-level view of the FHWA process flow at the CTDOT--from Contract through Billing stages.



Reimbursement to the CTDOT is made through an electronic Federal-aid Rapid Approval and State Payment System (RASPS). The Single Audit Act does not preclude the FHWA from performing program reviews. These activities are undertaken to facilitate oversight of the Current Billing process. Routine financial management reviews, in accordance with FHWA Order 4560.1B (FIRE), may be conducted on the CTDOT's accounting systems and records to assure conformance with applicable laws, regulations, and government-wide accounting principles and standards.

➤ **Cash Management**

The Cash Management Act of 1990 (31 CFR Part 205), prescribes rules and procedures for the transfer of funds between the Federal Government and the states for Federal grants and other programs. The U.S. Treasury and the State of Connecticut have entered into an agreement to describe its fund transfer procedures. The FHWA's involvement is to provide assistance and guidance to the CTDOT to facilitate compliance and to assist in the implementation of cash management improvements. The FHWA and the CTDOT have implemented electronic signature processes for reimbursement of the State's Current Billings and Project Authorizations and Agreements. The RASPS provides the CTDOT with the ability to enter a date that will allow for the State of Connecticut's clearance pattern of checks, in order to satisfy the Cash Management agreement with the Federal Government.

➤ ***Fiscal Management Information System (FMIS)***

The Fiscal Management Information System (FMIS) is the FHWA's major financial information system. It contains data related to all highway projects financed with Federal-aid highway funds. The FHWA uses this information for planning and executing program activities, evaluating program performance, and depicting financial trends and requirements related to current and future funding. Electronic data sharing allows the CTDOT to electronically sign and transmit FMIS data to the FMIS Warehouse database and then the FHWA can review and electronically approve the data. This process provides faster approvals and better control of funds. Both the CTDOT and the FHWA have the ability to access FMIS information to obtain current funding and project related reports. The data contained in FMIS allows both the CTDOT and the FHWA to monitor the level of obligations and ensure responsible management of the federal funds. The CTDOT produces a monthly Status of Obligations Report which provides information by program on obligations and releases that have occurred in the month.

➤ ***Federal-aid Funding***

The Federal-aid Highway Program is made up of a series of separately funded program categories, each having its own specific and separate funding as described in 23 U.S.C. Each of the programs has certain activities for which that funding may be used and are described in law. When an Authorization Act establishes a program, it sets certain ground rules under which the program operates. These rules include the amounts of funds available to the program for each fiscal year, period of availability, Federal participation ratio, Federal source, type of authority, and a listing of eligible activities. In order to be more responsive to Federal budget policy, a limit is placed on the total of funds that can be obligated during the fiscal year (obligation limitation).

It is the CTDOT's responsibility to program their available funds each fiscal year in accordance with the eligibility criteria for the various programs and to ensure that projects are eligible for the programs under which funds are being requested. The FHWA Connecticut Division, in their role of administering and delivering the Federal-aid program, has a responsibility to provide information, guidance, and assistance to the CTDOT. Although this oversight is ongoing, when a new Authorization Act modifies existing programs, or adds or eliminates programs, the FHWA has a responsibility to advise the CTDOT that significant changes in the program have been made and to assure that appropriate financing procedures are implemented by the CTDOT.

➤ ***Financial Integrity Review and Evaluation Program (FIRE)***

The Financial Integrity Review and Evaluation Program (FIRE) (FHWA Order 4560.1B) requires each Federal-aid Division Office to establish an effective oversight program to ensure that Federal funds are properly managed and effectively used in accordance with Federal policies. Under this program, each Federal-aid Division office is required to submit annual certifications of internal and financial controls to support the financial statements. To support the certifications, activities outlined in FIRE must be accomplished annually. The performance of an annual risk assessment is required. A grant financial management process review is to be performed in conjunction with the risk assessment.

FIRE requires a review of transactions selected by the CFO for the Improper Payment Review. FIRE also requires the FHWA Division Office and the State to perform reviews of inactive Federal-aid projects and release of any unneeded obligations. Additional FIRE requirements relative to the Single Audit Review and Federal Audit Findings Review for both the CTDOT and the FHWA are to track and assure corrective actions to all findings are resolved.

➤ **Inactive Federal-aid Project Reviews**

The CTDOT is responsible for establishing a funds management program that will ensure that funds are being used effectively and lapsed funds are limited. This includes a quarterly review of inactive and older projects that have had no activity for possible release of funds for use on other eligible federal projects.

The FHWA Division Office will work with the CTDOT to conduct and document the results of quarterly reviews of inactive projects in accordance with 23 CFR 630, Subpart A, Project Authorizations and Agreements. Once excess obligations are identified, the CTDOT is required to take action to promptly de-obligate the funds through modification of the project agreement. The FHWA Strategic Plan (FY 2011) has established a goal of inactive projects as 4% of the State's annual apportionment. The CTDOT will work with the FHWA Division office to meet the established goal.

The CTDOT Finance holds biweekly meetings to discuss project closeout and inactive projects. Discussions about changes and /or improvements to financial processes that will reduce processing time to reduce the percentage of Inactive projects and release funds are discussed.

➤ **Project Closeout**

The CTDOT is responsible for monitoring Federal projects for closure. Databases are maintained that include criteria needed to move projects to closure. The CTDOT has implemented a project status path in the Core-CT Project Costing module that will be used to track a project throughout the project closeout process. In addition, lists of projects sorted by authorization date and federal appropriation are maintained to close out old projects and preclude the lapsing of federal funds.

The CTDOT holds biweekly meetings to discuss project closeout with representatives from the FHWA, the CTDOT Senior Management, and various operational areas. Issues impacting project closeout and final vouchering are brought forward and necessary decisions, policy changes or guidance is provided to remedy the problems and allow the projects to continue along the closeout process.

➤ **Audits**

Office of Management and Budget (OMB) Circular No. A-133 was issued pursuant to the Single Audit Act of 1984 [P.L. 98-502] and Amendments of 1996 [P.L. 104-156] for the purpose of setting forth standards for obtaining consistency and uniformity among Federal agencies for the audit of States, local governments, and non-profit organizations expending Federal awards. The United State Department of Health and Human Services, Office of Inspector General is the cognizant agency for audit responsibilities for the Connecticut Department of Transportation. Since the FHWA is the Federal awarding agency to the CTDOT, the FHWA Connecticut Division is administratively cognizant and has certain responsibilities in this area.

The State of Connecticut, Auditor's of Public Accounts is responsible in Connecticut for the Single Audit. The Connecticut Department of Transportation, Office of Management Services has been charged with the responsibility to perform the audit of the CTDOT and they are responsible for ensuring that its operations are audited. The FHWA is responsible for ensuring that audits are completed and reports are received in a timely manner, assure that findings are resolved, and corrective actions are taken in a timely manner as required by the FIRE Order. Further, the FHWA has a responsibility to provide technical advice and assistance to the CTDOT and auditors as appropriate, and advise the CTDOT of requirements imposed by Federal laws, regulations or provisions of contracts.

➤ **Record Requirements/Retention**

The CTDOT maintains the official records for Federal projects. Supporting documentation will be retained by the CTDOT for three years after the final voucher has been accepted and will include (but not be limited to) the final contractor pay estimate, material certification, project agreement/modification, statement of overruns and under runs, final record of costs, final voucher, and final Right of Way certificate in accordance with current requirements. Supporting documentation retained by the CTDOT will be available to the FHWA upon request.

Program Evaluation

The CTDOT implemented a new financial management system, Core-CT, in State fiscal year 2008. The FHWA has performed reviews of the system to ensure that appropriate controls are in place and functioning as designed. The CTDOT is committed to continuing to work with the FHWA to provide assurance that the CORE system meets requirements for Current Billing. Additionally, the CTDOT and the FHWA are working together to significantly reduce the number of inactive projects and projects eligible to be closed.

References

- ✓ 23 USC
- ✓ 23 CFR
- ✓ 49 CFR 18
- ✓ SAFETEA-LU
- ✓ TEA-21
- ✓ FHWA Order 4560.1B
- ✓ FMIS Manual
- ✓ RASPS Manual
- ✓ Chief Financial Officer Act of 1990
- ✓ FMFIA of 1992
- ✓ CMIA Act of 1990
- ✓ 2 CFR 225 (Formerly OMB Circular A-87)
- ✓ OMB Circular A-133
- ✓ Improper Payments Information Act of 2002
- ✓ Improper Payments Elimination and Recovery Act of 2010

Table 17: Financial Management Program Summary

Work Activity	CTDOT ACTION	FHWA ACTION	Documents/ Products
Project Authorizations and Agreements	Submits approved request using electronic signature.	Project reviewed and approved by the FHWA Program Managers using electronic signature. Funds obligated. Target completion: 10 working days or less.	Electronic signed Project Authorization/Agreement executed between the CTDOT and the FHWA. Project has been authorized and Federal funds obligated.
Amended Project Authorizations and Agreements	Submits approved request using electronic signature.	Amended authorizations reviewed by the FHWA Program Managers. Amended Agreements approved by Financial Manager. Target completion: 10 working days or less.	Electronic signed Amended Authorization/ Agreement executed between CTDOT and the FHWA. Project has been authorized and Federal funds obligated.
Federal-aid Billing Reimbursement	Submits electronically to the FHWA, as often as desired.	The FHWA Finance Team approves electronically within 1- week of receipt.	FHWA payment received by CTDOT via electronic fund transfer.
Monitoring of Inactive Obligations	Quarterly pulls the FHWA FMIS Q40 reports and one month after submits status report of each project on Q40 report. Bi-Weekly meeting held on inactive projects.	The FHWA pulls the FMIS Q40 reports quarterly. Reviews reports with CTDOT staff to address areas of concern. Attend bi-weekly inactive meetings.	Excess obligations as confirmed by CTDOT are deobligated.
Project Closeout	Monitors internal systems to move projects to closure; submits and electronically signs close out requests.	FMIS close out request reviewed and approved by electronic signature of Finance Team.	Project closed out.
Advanced Construction	Identifies the potential federal share of project costs as "Advanced Construction" if not Full Obligation when submitting requests for authorization of new projects.	Approves the conversion of Advanced Construction amounts to Obligated amounts when requested by agreement modification.	Projects are authorized without obligation of apportionment, or impact to limitation, until funds are needed.
Innovative Financing	When the CTDOT determines a non-traditional funding arrangement would be required or preferred, the CTDOT initiates discussion with and submits documentation to the FHWA regarding the proposed financing plan for a project. Examples might be the use of soft match, tapered match or Grant Anticipation Revenue Bonds (GARVE).	FHWA reviews the CTDOT's proposed plan, seeks clarification or additional information where required.	FHWA concurrence or rejection of plan. Documentation of the plan is maintained by the CTDOT and referenced in State Remarks in the federal aid agreement.
Finance Plans	<i>See Major Projects Chapter</i>		

INTELLIGENT TRANSPORTATION SYSTEMS (ITS)/ OPERATIONS PROCESS

Background

➤ **Intelligent Transportation Systems (ITS)**

Federal regulations (23 CFR 940) define ITS as "...electronics, communications, or information processing used singly or in combination, to improve the efficiency or safety of a surface transportation system." This is a broad definition, covering the range from small, simple devices up to large and complex systems. In addition to this definition, ITS systems should include comprehensive management strategies and apply technologies in an integrated manner. The purpose of ITS integration is to share information and reduce redundant spending between jurisdictions. ITS integration includes both technical and inter-agency aspects of system development. An ITS Project is defined as "any project that in whole or in part funds the acquisition of technologies or systems of technologies that provide or significantly contribute to the provision of one or more ITS user services as defined in the National ITS Architecture."

The Transportation Equity Act for the 21st Century (TEA-21) initially directed changes in the stewardship responsibilities for the ITS program. TEA-21 also clarified the use of Federal-aid funding categories for ITS. SAFETEA-LU continues to provide eligibility for transportation systems management and operations through various Federal-aid programs.

Section 1201 of SAFETEA-LU establishes a new program geared to provide States the ability to monitor, in real time, the traffic and travel conditions on major highways and to share information to improve the operation of the highway system. These operational improvements may include those that address congestion, improve response to weather events and surface transportation incidents, improve surface transportation system security, and facilitate national and regional highway traveler information.

Funding Programs

➤ **CMAQ**

Section 1808 of SAFETEA-LU expands eligibility of projects or programs that improve transportation systems management and operations that mitigate congestion and improve air quality.

➤ **NHS**

The National Highway System program (23 USC 103) supports funding for capital and operating costs in the ITS program area. Capital and operating costs for traffic monitoring, management, and control facilities and programs are eligible using National Highway System funds.

➤ **STP**

The Surface Transportation Program (23 USC 133) provides Federal-aid eligibility for projects that establish or operate a traffic monitoring, management, and control facility or program. This regulation also provides eligibility for programs or projects that improve traffic flow, including projects to improve signalization, construct high occupancy vehicle lanes, improve intersections, and implement ITS strategies.

Types of ITS Projects

➤ **Major Intelligent Transportation Systems Projects (both NHS and non-NHS)**

A major ITS project is one that implements in whole or a part of a statewide ITS initiative that is new technology, multi-jurisdictional, multi-modal, or otherwise affects statewide integration of ITS systems. They have **one (or more)** of the following characteristics:

- 1.) Multi-jurisdictional or multi-modal
- 2.) Custom software is required
- 3.) Hardware and communications are “cutting-edge” or not in common use
- 4.) New interfaces to other systems are required
- 5.) System requirements are not detailed or not fully documented
- 6.) Operating procedures are not detailed or not fully documented
- 7.) Technology service life shortens project life-cycle

The project manager must submit a Systems Engineering (SE) Analysis Form (SEAFORM) for further determination by the FHWA. Upon approval of the SEAFORM, the project manager must submit a Systems Engineering Management Plan (SEMP) for all major ITS projects under the FHWA full oversight to the FHWA for approval to advance to final design.

➤ **Minor ITS Projects**

These projects do not require a Systems Engineering Management Plan approval by the FHWA. However, a SEAFORM must be filled out and approved for Preliminary Engineering.

Minor ITS projects are often referred to as ITS infrastructure expansion. Standard Plans, Standard Specifications, and Standard Special Provisions are well documented. They will have all of the following characteristics:

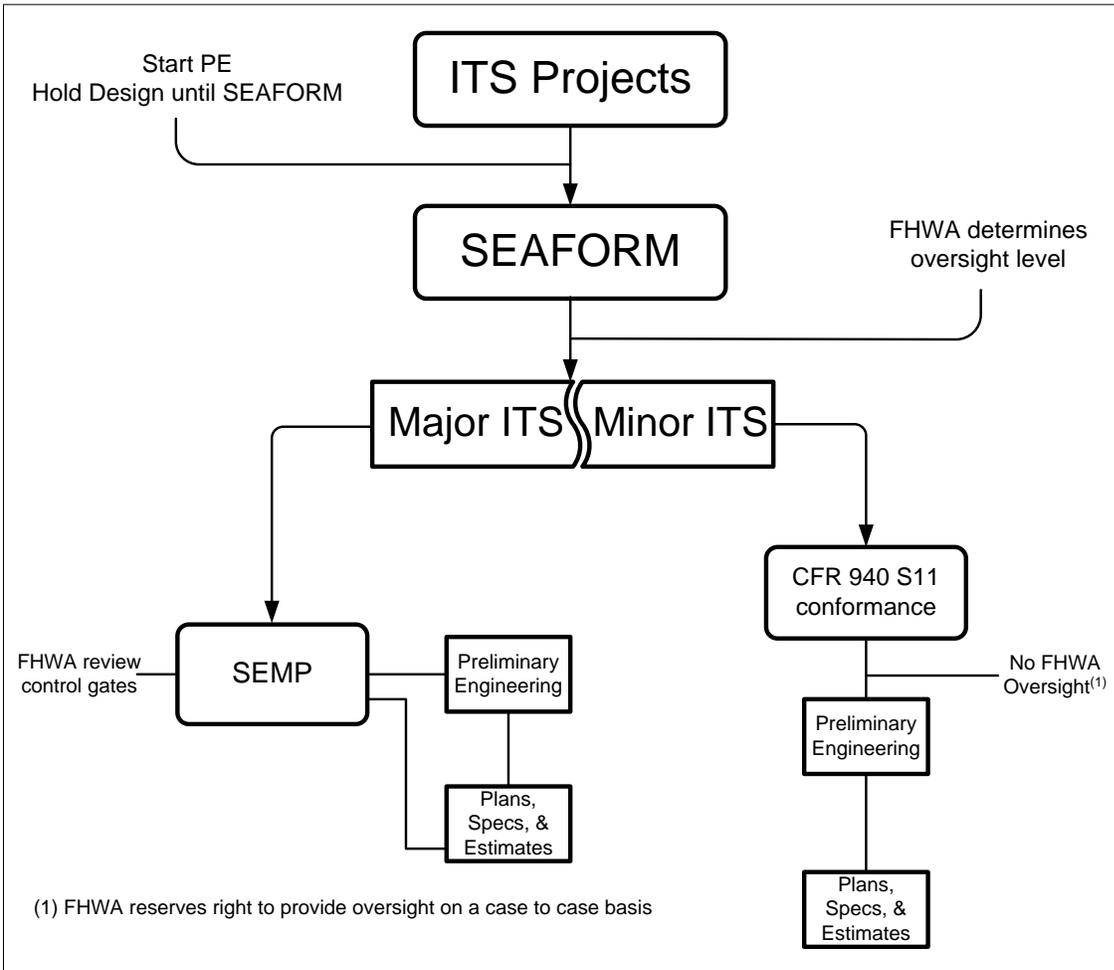
- 1.) Single jurisdiction; single transportation mode (highway, transit or rail)
- 2.) No software creation; commercial-off-the-shelf (COTS) or proven software
- 3.) Proven COTS hardware & communications technology
- 4.) No new interfaces
- 5.) System requirements fully detailed in writing
- 6.) Operating procedures fully detailed in writing
- 7.) Project life-cycle not shortened by technology service life

Projects that fit the above definition and characteristics are “minor” projects regardless of project costs. It should be recognized that, although there may be no “formal” Systems Engineering requirements or oversight, good procurement practices should ensure detailed systems requirements and specifications plus a thorough acceptance plan. These items are elements of the SE process; hence, this is one example of scaling down the SE process to fit the needs of a minor project.

Operating Procedures

All ITS projects shall follow the Preliminary Engineering (PE) process flow shown below in Figure 3. Application and control of the Systems Engineering process is a key reason for the PE process as shown below. Federal-aid ITS projects shall follow the regular federal-aid procedures as detailed in the Project Oversight Chapters. The completion of the SEAFORM and the PE obligation and authorization procedure assure conformity with the national architecture regulation.

Figure 3: Intelligent Transportation Systems Process



➤ **Major ITS Projects - Procedures**

1. The Project Manager (PM) forwards the SEAFORM to the FHWA for concurrence and oversight determination.
2. The FHWA reviews the SEAFORM for the FHWA oversight determination, comments on the SEAFORM, and sends the information back to the PM.
3. The PM revises the SEAFORM upon receipt from the FHWA. If the project is determined to be a Major ITS project requiring the FHWA full oversight, the PM will submit a SEMP and the Systems Engineering process to the FHWA for review and approval.
4. The FHWA notifies the PM that they approved the SEMP and Systems Engineering process.
5. Upon receiving final SEMP and process product(s) approval, the PM may proceed with PE.

➤ **Construction**

1. If the ITS project includes activities defined as construction; the PM must submit a PS&E package requesting construction authorization. The request includes the necessary federal-aid paperwork and requirements in accordance with 23 CFR 635.
2. Beyond this point, normal federal-aid procedures apply for completing the project.

➤ **Minor ITS Projects - Procedures**

The procedures for minor ITS projects will follow the traditional federal aid PE procedures. ITS documentation remains a requirement in accordance with the CTDOT oversight requirements. However, no SEMP review and the FHWA review are required.

1. The Project Manager (PM) forwards the SEAFORM to the FHWA for concurrence and oversight level.
2. The FHWA reviews the SEAFORM for the FHWA oversight determination, comments on the SEAFORM, and sends the information back to the PM.
3. The PM revises the SEAFORM upon receipt from the FHWA. If the project is determined to be a Minor ITS project, the PM will proceed with PE.

➤ **ITS in Traditional Roadway and Other Federal-aid Projects**

The procedure for any ITS in traditional roadway or other Federal aid projects shall follow the Operating Procedures described above.

Project Oversight

➤ **ITS Regional (Statewide) Architecture – 23 CFR 940.9**

The applicable regulation for ITS projects is contained in 23 CFR 940, entitled Intelligent Transportation System Architecture and Standards. This regulation requires States and metropolitan areas to develop regional architectures and to follow a systems engineering process for ITS project development whenever Federal-aid funds are utilized for ITS deployment. ITS projects are defined in 23 CFR 940.3.

Connecticut has developed a Statewide architecture in accordance with the requirements in 23 CFR 940.9. This Statewide architecture shall be a guide to the development of ITS projects and programs, consistent with ITS strategies and projects contained in applicable transportation plans.

The State shall develop and implement procedures and responsibilities for maintaining the regional ITS architecture as needs evolve within the State.

➤ **Project Implementation – 23 CFR 940.11**

All ITS projects funded with highway trust funds shall be based on systems engineering analysis, and the analysis should be on a scale commensurate with the project scope.

The systems engineering analysis shall meet the minimum requirements in 23 CFR 940.11, (c), 1-7.

All ITS projects entering final design shall accommodate the interface requirements and information exchanges as specified in the Statewide ITS architecture. If the final design is inconsistent with the Statewide architecture, then the Statewide architecture shall be updated as provided in 23 CFR 940.9.

All ITS projects funded with highway trust funds shall use applicable ITS standards and interoperability that have been adopted through rulemaking by the DOT.

➤ **Project Administration – 23 CFR 940.13**

Prior to authorization of highway trust funds for construction or implementation of ITS projects, compliance with 23 CFR 940.11 shall be demonstrated.

Compliance with this part will be monitored under Federal-aid oversight procedures as provided in 23 U.S.C. 106 and 133.

Determinations of the FHWA full oversight for ITS projects, and the FHWA oversight and administration of projects will be accomplished in accordance with the framework in the Project Oversight, Project Development, and Project Construction Chapters. These determinations will also consider the process flow for ITS projects described in the “Operating Procedures” section for determining the FHWA oversight on a project case by case basis.

Program Evaluation

Periodic review of Operating Procedures between the FHWA and the Department may be conducted, when necessary, to identify areas for greater efficiency and improvements to the ITS program.

SEAFORM and SEMP approvals shall be tracked and compared to provide exemplary practices.

Operations Program Activities

Operations program activities are eligible for funding with the use of NHS and STP federal-aid funds and also with the use of CMAQ funds for a period not to exceed three years from the date of deployment of an ITS system or project. Operations projects are approved and authorized for Federal-aid funding using regular federal-aid procedures. The below the CTDOT and other State agency operations activities have been previously approved for Federal-aid funding by the Connecticut Division.

The CTDOT will utilize Federal-aid funds to operate the Newington and Bridgeport Highway Operations Centers (HOC). These centers are staffed by system operators on a 24 hour-a-day/7 day-a-week basis. Consultant staff responsible for operating the Bridgeport HOC are procured using the CTDOT’s qualifications based selection process. In addition, engineering staff in the CTDOT Office of Highway Operations will charge their payroll to these Federally-funded projects when working on Operations Center assignments or tasks.

Staff that operate and maintain the CTDOT CHAMP service patrol vehicles will charge their payroll to the Federally-funded Highway Operations Center projects, as appropriate. In addition, Office of Maintenance personnel that respond to after-hour calls involving traffic incidents or traffic signal malfunctions will continue to charge their time to the Highway Operations Center projects.

Federal funds will continue to be provided to the Connecticut State Police for the provision of enhanced incident management patrols along the I-95 Corridor in southern and southwestern Connecticut. These patrols ensure the timely response and clearance of traffic incidents along this corridor.

References

- ✓ SAFETEA-LU Sections: 1201, 1808, 5101(a), 5211, 5305, 5306, 5310(8)
- ✓ 23 U.S.C. 103, 149, 511
- ✓ 23 CFR 940

Table 18: ITS Process Summary

Work Activity	CTDOT ACTION	FHWA ACTION	Documents/Product
SEAFORM and/or SEMP for Systems Engineering Analysis Process	Prepare and Submit	Review and Approve (14 Days)	Begin Preliminary Engineering
Copies of all project reports, quarterly progress reports, correspondence, meeting announcements and minutes	Prepare and Submit for FHWA Oversight Projects Only	Information	Reports and Updates
Update Regional ITS Architecture	Prepare and Submit	Review and Approve (14 Days)	Updated Regional ITS Architecture
ITS Design Project Submittals	<i>See Project Development and Project Construction Chapters</i>		
ITS Construction Project Submittals			

MAINTENANCE AND MONITORING PROGRAM

Background

The CTDOT shall maintain all federal-aid projects. The State may provide for such maintenance by formal agreement with any adequately equipped county, municipality or other governmental instrumentality, but such an agreement shall not relieve the State highway department of its responsibility for such maintenance.

Operating Procedures

- By virtue of signing a Federal-aid project agreement, the CTDOT agrees with the above.

Oversight Activities

The FHWA (mostly Area Engineers) will notify the CTDOT of any glaring lack of maintenance of known Federal-aid projects. Notifications will start informally by e-mail to the appropriate maintenance district and be formalized if it is serious and no action is taken.

Program Evaluation

None

Performance Indicators

None

References

- ✓ 23 USC 116; 23 CFR 1.27

MAJOR PROJECTS

Background

Section 1904 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users” (SAFETEA-LU) amended 23 U.S.C. 106 and made several significant changes to the requirements for Major Projects. The monetary threshold for classification as a Major Project was lowered from an estimated cost of \$1 billion to \$500 million or greater as determined by the scope in the NEPA document and includes entire costs (including non Federal-aid) associated with preliminary engineering, ROW, and construction based on the project’s (and/or portions thereof) scheduled year of expenditure dollars.

Project Oversight Procedures

A Project Management Plan and a Finance Plan are required for all Major Projects, as well as a Cost Estimate Review. In addition, projects with a total cost between \$100 million and \$500 million, while not classified as Major Projects, require the preparation of Finance Plans that must be made available upon request. Financial Plans are also required to be updated annually. Major projects still follow the regular delegations as outlined in the Project Development and Project Construction chapters of this plan.

References

- ✓ FHWA Major Projects website
- ✓ FHWA Major Projects Guidance memo dated 1/19/2007

Table 19: Major Projects Summary

Work Activity	Major Projects (Projects \$500M and greater)		Projects over \$100M but less than \$500M	
	CTDOT ACTION	FHWA ACTION	CTDOT ACTION	FHWA ACTION
Project Management Plan	Prepare & Submit	Review & Approve	Not required	None
Financial Plan	Prepare & Submit	Review & Approve	Prepare & Approve	Review
Financial Plan Annual Update	Prepare & Submit	Review & Approve	Prepare & Approve	Review
Cost Estimate Review	Determine Price Range using Crystal Ball © software (or comparable)	Participate in developing price range of project & Endorse the results	Not required	None
Consultant Agreement	Prepare & Submit	Review & Approve	Prepare & Approve	None

PAVEMENT DESIGN AND MANAGEMENT PROGRAM

Background

As part of project development, consideration should be given to pavement design in accordance with applicable laws and regulations set forth in 23 CFR 626. Pavements shall be designed to accommodate current and predicted traffic needs in a safe, durable and cost effective manner. The regulations do not specify the procedures to be followed to meet this requirement. Each State transportation agency is expected to use a design procedure that is appropriate for their conditions. The CTDOT may use the design procedure that is outlined in the *AASHTO Guide for Design of Pavement Structures* or they may use other pavement design procedures that, based on past performance or research, are expected to produce satisfactory pavement designs.

Operating Procedures

The CTDOT elected to establish and implement an operational Pavement Management System (PMS) for the State highway network. Implementation and operation of the PMS and the Pavement Preservation Program is the responsibility of the Pavement Management Unit.

The CTDOT designs pavements in accordance with AASHTO Pavement Design Guidelines, 1993 version. Exceptions for special cases can apply.

Policy on Roadway Pavement Management, 12/7/2009, Policy No. EX.O.-28

References

- ✓ 23 U.S.C. 303 (a),(d) and 23 CFR 500.106 (Pavement Management)
- ✓ 23 CFR 626 (Pavement Design Policy)
- ✓ FHWA Preventative Maintenance Eligibility memo dated 10/8/2004
- ✓ FHWA Pavement Preservation Definitions memo dated 9/12/2005
- ✓ *Pavement Preservation FHWA Safety Guidance*, 2/15/09 (Connecticut Division)
- ✓ *AASHTO Guide for Design of Pavement Structures*

Table 20: Pavement Design and Management Summary

Work Activity	CTDOT ACTION	FHWA ACTION	Documents/ Products
Pavement Management Implementation	Pavement Condition evaluation and analysis of condition trends; development of multi-year prioritized program	Review	Annual Pavement Condition Report; Forecast of Pavement Conditions given budget scenarios; Annual Project Candidate List based on multi-year prioritization.
Pavement Preservation Program	Develop and Maintain Pavement Preservation Guidelines	Review, and Approve if Federal aid is involved	List of approved treatments classified as pavement preservation and program guidelines
Pavement Policy (including design)	Prepare and Submit	Review and approve	Catalog for special facilities (Bikeways, parking lots); Catalog for new construction and re-construction of state highways – minor projects

PLANNING PROGRAM

Background

Metropolitan and Statewide Transportation Planning, Statewide Planning and Research (SPR), and data collection and reporting activities are legislated under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFTEA-LU), which was enacted on August 10, 2005 [23 U.S.C. 134, 135 and 49 U.S.C. 5303, 5304, and 23 U.S.C. 505(b) respectively].

The *Metropolitan Transportation Planning* process establishes the national policy that the Metropolitan Planning Organization (MPO) designated for each urbanized area is to carry out a continuing, cooperative, and comprehensive multimodal transportation planning process, including the development of a metropolitan transportation plan [§ 450.322] and a transportation improvement program (TIP) [§ 450.324], that encourages and promotes the safe and efficient development, management, and operation of surface transportation systems to serve the mobility needs of people and freight (including accessible pedestrian walkways and bicycle transportation facilities) and foster economic growth and development, while minimizing fuel consumption and air pollution.

The *Statewide Transportation Planning* process requires that each State department of transportation (State DOT) carry out a continuing, cooperative, and comprehensive statewide multimodal transportation planning process, including the development of a long-range statewide transportation plan [§ 450.214] and statewide transportation improvement program (STIP) [§ 450.216], that facilitates the safe and efficient management, operation, and development of surface transportation systems that will serve the mobility needs of people and freight, and that fosters economic growth and development within and between States and urbanized areas, while minimizing fuel consumption and air pollution in all areas of the State. Program oversight is a joint Federal Highway Administration (FHWA)/Federal Transit Administration (FTA) responsibility.

The *SPR Program* establishes statewide Planning and Research Development & Technology Transfer (RD&T) activities undertaken by the State DOT and its sub-recipients, including MPOs, with the FHWA planning and research funds relating to highway, public transportation, and intermodal transportation systems [23 U.S.C. 505(b)].

The State DOT makes all PL funds available to the MPOs in accordance with a formula developed by the State DOT, in consultation with the MPOs, and approved by the FHWA Division Administrator [23 U.S.C. 104(f)]. The MPOs develop a Unified Planning Work Program (UPWP) to define the work activities done by the central staff.

There are also required data collection and reporting activities which require State DOTs to provide data that support the FHWA's responsibilities to the Congress and to the public. These data include (not all-inclusive list) information required for:

- preparing proposed legislation and reports to the Congress
- evaluating the extent, performance, condition, and use of the Nation's transportation system
- analyzing existing and proposed Federal-aid funding methods and levels and the assignment of user cost responsibility
- maintaining a critical information base on fuel availability, use, and revenues generated, and
- calculation of apportionment factors

Activities proposed to be funded with the FHWA planning and research funds are documented and submitted for the FHWA and FTA for approval and authorization [§§420.111 and 420.113].

Operating Procedures

The FHWA provides technical expertise and assistance through participation in committees, Quarterly Program and Research Meetings, and joint Program Process Reviews set up by the FHWA, the CTDOT and the MPOs that address metropolitan and statewide transportation planning, data collection and analysis, as well as coordination on individual topics of interest such as:

- (1) Congestion Management,
- (2) Air Quality Conformity,
- (3) Multimodal and Intermodal Coordination,
- (4) Freight Issues, etc.

In addition, the FHWA conducts reviews of planning processes and products, such as Highway Performance Monitoring System (HPMS) data, Heavy Vehicle Use Tax Enforcement, Financial Reporting etc.

Oversight Activities

The FHWA and the FTA are jointly responsible for required approval actions on the Statewide Transportation Improvement Program (STIP), the STIP Amendment process and the Public Involvement Policy.

The Statewide Transportation Plan and the Connecticut Process for Consultation and Cooperation with Local Officials in Non-Metropolitan Areas is submitted to the FHWA and the FTA for their information.

The FHWA participates in statewide and MPO planning activities as necessary to ensure a planning finding as part of the STIP approval process.

The MPOs develop the UPWPs in cooperation with the CTDOT and U.S.DOT, which work together to ensure compliance with federal planning regulations. All three agencies approve the final UPWPs that are endorsed by the MPOs. This same oversight applies to any revisions or amendments that an MPO may wish to undertake during a fiscal year after the initial approval of the plans.

References

- ✓ SAFTEA-LU Section 6001
- ✓ Title 23 USC 134 and 135
- ✓ Federal Transit Act
- ✓ Subparts A, B, and C of 23 CFR 450
- ✓ 23 CFR 420 and 450
- ✓ 23 CFR 500
- ✓ 23 CFR 460
- ✓ 23 CFR 470 - Highway System
- ✓ 23 U.S.C. 402 (c)
- ✓ Guide to Reporting Highway Statistics
- ✓ 23 CFR 635.105 – STD
- ✓ 23 CFR 1.5

Table 21: Planning Program Summary

Work Activity	CTDOT ACTION	FHWA ACTION	Documents/ Products
Public Road Mileage Certification	Prepare and submit certification as outlined in 23 CFR 460.3	Review and recommend acceptance then forward to HQ	Apportionment of funds under 23 U.S.C. 402(c)
TMA UPWPs	Cooperate with TMAs in plan preparation and forward to the FHWA and FTA.	Review and approve UPWPs. Coordinate with the FTA. Written response. Authorizes projects	FHWA responds to the CTDOT's request for CPG funds transfer.
Non-TMA UPWPs	Cooperate with non-TMAs in plan preparation and forward to the FHWA and FTA.	Review and approve UPWPs. Coordinate with the FTA. Written response. Authorizes projects.	FHWA responds to the CTDOT's request for CPG funds transfer.
Annual Self-Certification of non-Transportation Management Areas (TMAs) (50,000 to 200,000) (TIPs)	Review and Recommend approval when TIPs submitted to the FHWA	Concur with the CTDOT's recommendation for approval of self-certification	Fully certified MPO and positive planning finding
Certification of TMAs every 4 years (200,000+population)	Participate and provide information for joint FHWA/FTA triennial review	Jointly conduct with FTA a triennial review. Develop recommendations and report that details finding of certification status.	Fully certified MPO and positive planning finding
Transportation Air Quality (AQ) Conformity Determinations	Participate in interagency consultations. Review TIP and plan conformity analysis and provide comments as needed.	Coordinate review of AQ conformity analysis with FTA and EPA. Make joint conformity determination With FTA.	Maintain and improve AQ Non-Attainment areas in CT
Congestion Management System (CMS) in TMA	Participate with TMA in development of CMS	Accept CMS	Acceptable CMS
CMAQ Program Annual Report	Enter CMAQ project data on the FHWA website for FHWA review	Review CMAQ projects Approve and submit to FHWA HQ	FHWA HQ receives CMAQ annual report as required
CMAQ Program Project Funds Eligibility Determinations	Submit requests to the FHWA	Determine eligibility Approval letter to the CTDOT	Proposed CMAQ projects are determined to be eligible
Metropolitan Planning Area Boundary Changes	Prepare and Submit per 23 CFR 450.308	Review, and Coordinate with FTA	Established boundaries for capital project funding
Data to Support the FHWA program responsibilities (various, WIM< AVC, ATR, etc.)	Forward as requested	Review for adequacy	Data included in Congressional and/or FHWA reports
National Truck Network Modifications	Prepare and Submit per 658.11	Review compliance and Approve	National Network for Trucks

Table 21: Planning Program Summary (Continued)

Work Activity	CTDOT ACTION	FHWA ACTION	Documents/ Products
Highway Systems (Including NHS, Functional Classification, and Urban Area Boundary Changes) Size and Weight Enforcement Plan and Certification	Prepare and Submit per 23 CFR 470. Monitor enforcement activities of CT, including needed corrective actions.	Review and Approve Coordinate with FHWA HQ as necessary. Review and Approve including certification acceptance.	Designation of routes on Federal-aid highway system Vehicle Size and Weight enforcement on Federal-aid highways
Heavy Vehicle Use Tax Certification of Enforcement	Review Governor's official designate for compliance	Review and Accept annual certification	State registered vehicles have aid Federal Heavy-Use Tax
Traffic Monitoring System	Verify and Update System Components	Review and Recommend improvements	Continued Operations of this system
HPMS Data Submittal	Prepare and submit per HPMS Field Manual	Review apportionment data and make approval recommendation	Final data used in FHWA reports and apportionment of funds

QUALITY ASSURANCE PROGRAM FOR MATERIALS

Background

It is necessary for the CTDOT to prepare a written Quality Assurance Program document that addresses the following six (6) core elements: Quality Control, Acceptance, Independent Assurance, Dispute Resolution, Laboratory Accreditation and Qualification, and Personnel Qualification/Certification.

Operating Procedures

New England Transportation Technician Certification Program (NETTCP) QA Program for Materials Acceptance and Assurance Testing Policies and Procedures, July 2009 (CTDOT's Quality Assurance Program for Materials)

References

- ✓ 23 USC 637
- ✓ AASHTO Accreditation Program
- ✓ AASHTO/ASTM Standards

Table 22: Quality Assurance Program for Materials Summary

Work Activities	Federal-aid Projects on the NHS		Federal-aid Projects off the NHS	
	CTDOT ACTION	FHWA ACTION	CTDOT ACTION	FHWA ACTION
Schedule of Minimum Sampling	Prepare	Approve	Prepare and Approve	None
Qualified Technician Program	Develop and Implement	Approve	Prepare and Approve	None
AASHTO Accreditation Inspection	Maintain accreditation	None if by AASHTO, if a comparable program is used, then the FHWA approves	Prepare and Approve	None
Independent Assurance Program	Prepare annual report	Approve	Prepare and Approve	None
Quality Assurance Program	Prepare & Submit	Approve	Approve	None

RESEARCH, DEVELOPMENT & TECHNOLOGY PROGRAM

Background

The purpose of the program is to implement the provisions of 23 U.S.C. 307 for research, development, technology transfer, programs, and studies undertaken with the FHWA planning and research funds.

STATE PLANNING AND RESEARCH (SPR) PROGRAM

The main requirements under 23 CFR 420 are to create a SPR Work Program, monitor planning and research activities, submit performance and expenditure reports, conduct peer exchanges, develop and maintain an FHWA approved research and development manual, and maintain program certification.

LOCAL TECHNICAL ASSISTANCE PROGRAM (LTAP)

LTAP was created to provide training and technical assistance to rural, small urban, tribal governments, and contractors that do work for local agencies on roads, bridges, and public transportation. The LTAP program is regulated under 23 U.S.C. 504(b). The Technology Transfer (T2) Center at the University of Connecticut was established in 1984 under the Connecticut Transportation Institute (CTI). T2 Center is the local entity that works with the CTDOT and the FHWA to administer LTAP.

Operating Procedures

➤ ***SPR***

The SPR Work Program consists of two parts: (1) Part I, Planning, which is prepared by the CTDOT's Bureau of Policy and Planning and (2) Part II, Research, which is prepared by the CTDOT's Research Unit. The CTDOT is responsible for preparation and overall coordination of the Work Program in accordance with 23 CFR 420. The SPR program operates on a state fiscal-year basis. The CTDOT considers how to address research needs and may, at its option, 1) conduct research with in-house personnel, 2) conduct research through a transportation pooled fund project wherein the CTDOT is the lead agency, such as the New England Transportation Consortium, 3) conduct research through agreement with its land grant state research university, or 4) submit needs to outside a) universities, b) other transportation pooled fund projects, c) one of the national cooperative transportation research programs, or d) and other outside transportation research programs for consideration.

➤ ***LTAP***

The T2 Advisory Committee determines the direction for the Connecticut LTAP. The Committee, consisting of CTI personnel, federal, state, and local government representatives, typically meets quarterly. The Fall Committee meeting reviews, modifies, and approves the content of Connecticut's annual local training and assistance plan. The other three Committee meetings monitor progress, discuss opportunities and needs, develop plans for future programs and associated budget needs. Connecticut's LTAP annual training schedule consistently consists of more than ten courses.

T2 Center coordinates with the CTDOT and the FHWA to draft an LTAP Work Plan based on a calendar year. The CTDOT and the FHWA review a draft LTAP Work Plan. Comments from both parties are incorporated into the draft and the final version is approved by the FHWA.

➤ **Experimental Features**

Procedures for implementing experimental features are outlined in the Research Program Manual. Research acts as coordinator to the CTDOT units that incorporate experimental features into their projects. Research also acts a clearinghouse to disseminate the information learned from the use of experimental features. The FHWA will work with the CTDOT, as appropriate, to disseminate information and encourage the implementation of successfully used experimental features.

Program Oversight

➤ **SPR**

The FHWA exercises its oversight responsibilities through review of the annual program prior to approval actions, review of SPR Work Program amendments prior to approval, and ongoing participation of its technical specialists in pooled fund study technical panels. As appropriate, the FHWA personnel participate in peer exchanges.

The FHWA Division Research and Technology Engineer oversees the administrative aspects and coordinates with the Division Office specialists for technical aspects.

The FHWA reviews and approves an updated version of the manual when there are significant changes in the management process or new Federal regulation/policy are enacted.

➤ **LTAP**

The FHWA exercises its oversight responsibilities through review of the annual work plan prior to approval actions, review of work plan amendments prior to approval, participation in the T2 Steering Committee, and participation or planning of various LTAP-related activities.

The CTDOT, T2 Center and FHWA coordinate to process amendments to LTAP. The FHWA also coordinates with the CTDOT for program development, eligibility and fiscal issues.

➤ **Experimental Features**

The FHWA exercises oversight for experimental features through review of the project applications prior to approval actions.

The FHWA Division Research and Technology Engineer oversees the administrative aspects and coordinates with the Division Office specialists for technical aspects.

Program Evaluation

➤ **Program Assessments**

Periodic Transportation Research Peer Exchanges shall be conducted in compliance with 23 CFR 420 on a periodic basis to assess elements of the program. To assist peer exchange teams in conducting an effective exchange, the State DOT shall provide to them pertinent information and documentation. Travel and other costs associated with the CTDOT's peer exchange may be identified as a line item in the State DOT's work program and will be eligible for 100 percent Federal funding. The peer exchange team shall prepare a written report of the exchange. Peer Exchanges shall identify strengths, weaknesses and opportunities in focus areas selected for the exchange. A final report will be prepared for use by the Department, for submittal the FHWA, and at the state's option, may be shared through the AASHTO Research Advisory Committee national Web Site.

➤ **Performance Indicators**

The CTDOT will provide performance/compliance indicator data to the Division in its quarterly and annual reporting, for use in tracking performance trends and to implement countermeasures/actions when the data are not moving in the desired target direction.

References

- ✓ 23 USC Sections 501-508
- ✓ 23 CFR Part 420
- ✓ FHWA State Planning and Research (SP&R) Guide (<http://www.tfsrc.gov/sprguide/os.htm>)
- ✓ FHWA Transportation Pooled Fund Program Procedures
- ✓ http://www.pooledfund.org/reports/TPFPProgramManual_FINALDRAFT.pdf
- ✓ FHWA Policy Memo of 11/3/1994 – “State Planning and Research Administration; Guidelines”
- ✓ FHWA Policy Memo of 1/16/1997 – “Use of State Planning and Research (SPR) Funds for Tech Certification Program Course Development”
- ✓ FHWA Policy Memo of 1/26/2001 – “FHWA Development and Coordination of the Research and Technology Program”
- ✓ FHWA Order of 9/19/2001 – “Processing Research Projects Under TEA-21 Section 5001”
- ✓ CTDOT Research Manual
- ✓ FHWA Guidelines for Projects Using Experimental Features
- ✓ A Guide to Federal-Aid Programs and Projects, FHWA-IF-99-006
- ✓ LTAP Manual
- ✓ Administration of FHWA Planning and Research Funds, FHWA-PD-98-053
- ✓ LTAP Handbook
- ✓ 49 CFR 18

Table 23: Research, Development and Technology Program Summary

Work Activity	CTDOT ACTION	FHWA ACTION	Documents/ Products
Peer Exchange	Sponsor event or participates in other States’ peer exchanges	Participate and support	Shared knowledge, improved processes, report
Draft SPR Work Program	Prepares Part I and II. Submit draft to the FHWA	Participate in preparation. Review and Comment	Annual SPR Work Program, list of research projects for CY, planning activities
Final SPR Work Program	Submit (no later than December 1)	Review and Approve (30 days)	Annual SPR Work Program, list of research projects for CY, planning activities
SPR Work Program Amendments	Prepares Part I and II amendments. Submit to the FHWA as necessary.	Review, Comment (if appropriate), and approve	Addition/reduction of contributions to existing projects and participation in new projects
Maintain Certification of SPR Program LTAP Work Plan	Prepare certification statement	Review, Comment, and Approve	Certified compliance with 23 CFR 420.
	UConn submits to the FHWA annually	Review and comment	Final version of LTAP Work Plan

RIGHTS-OF-WAY PROCESS

Background

All Federal, State, and local public agencies (and others receiving Federal financial assistance for public programs and projects requiring the acquisition of real property) must comply with the policies and provisions set forth in the Uniform Act and its amendments. The current regulations implementing the Uniform Act were first published in the Federal Register of March 2, 1989, and are codified in the Code of Federal Regulations, Title 49, Part 24. These regulations contain the standards and procedures that acquiring agencies must follow in their appraisal, acquisition and relocation assistance programs.

Additionally, state and local public agencies using federal funds for transportation programs administered under Title 23 U.S.C. must adhere to the regulations contained in Title 23 U.S.C. 710 in the administration of their Right-of-Way (ROW) programs.

Operating Procedures

The following oversight functional area involving the Federal-aid ROW program are covered under 49 CFR (24), which has no provision for exemptions under Title 23 U.S.C.:

- Appraisal
- Acquisition
- Relocation

The work activities listed below are covered under 23CFR (part) and require specific approval and/or oversight by the FHWA:

- ROW certification (635.309)
- State ROW operations manual (710.201)
- ROW authorization (710.307)
- Air rights on the interstate (710.405) & NHS (710.201)
- Airspace leases/joint use agreements (710.407)
- Sale/transfer of excess ROW (710.409)
- Early acquisition, protective buying , and hardship (710.501 & 503)
- Functional replacement (710.509)
- Federal land transfers (710.601)
- Highway beautification (750)

The work activities listed below are covered in 23 CFR and do not require specific program or project approvals, but are not exempted from the FHWA oversight under Title 23 U.S.C.:

- Direct eligible costs including administrative, legal and court settlements (710.203 (b))
- Real property donations (710.505)

Project Oversight

Even though there are no exemptions under the law for any functions covered in 49 CFR 24, for practical purposes there are two levels of review of those elements. One level depends on whether the project involves ROW acquisition and has Federal-aid in the ROW project phases. Although the ROW regulations must be followed under both levels, there is less concern about the reasonableness of the actual dollar expenditures in those projects containing no Federal-aid in the ROW. The primary concerns with these projects are to protect the rights of property owners and displaced persons.

For the second level of projects, there is a dual concern for the rights of property owners and displaced persons and the stewardship of the federal dollars. Continuous review of all State activities has proven to be an effective means of assuring that the rights of owners and displaced persons are protected as well as monitoring the expenditure of federal funds. This will be continued under this stewardship plan.

Process reviews and program evaluations will be conducted when needs or trends are identified at either of the above project levels. The reviews will be conducted jointly with the CTDOT personnel whenever possible.

Municipalities are required to comply with the Uniform Act and its governing regulations found in 49 CFR 24 in the same manner as the CTDOT stipulated in 23 CFR 710.201(b), STAs are responsible for assuring that ROW acquisitions by local public agencies are made in compliance with Federal and State laws and regulations. The CTDOT exercise its oversight responsibilities in the following ways:

- A manual outlining the ROW program provides guidance to the municipalities on how to acquire ROW in accordance with Federal and State regulations.
- A ROW coordinator is assigned to each municipal project and is responsible for instructing the local representatives on the requirements for the use of State and Federal Funds in the ROW process. The coordinator provides oversight during the ROW process and prepares the ROW certificates for those projects.
- The ROW coordinator meets with local representatives on a regular basis to provide technical adherence to applicable Federal and State regulations.

For 23 CFR program areas, recent changes in the regulations have added some flexibility to the oversight responsibilities. With this flexibility the CTDOT will be taking more direct approval and oversight responsibility. If, during the normal approval action, any problems are identified, a process review or CPI review may be scheduled.

Table 24: R-O-W Process Summary

Work Activity	CTDOT ACTION	FHWA ACTION	Documents/ Products/Outcomes
Project Authorization for Right-of-Way (CTDOT informally calls this the obligation date)	Prepare and Submit (CTDOT Finance Section)	Review and Approve	Authorization to Acquire Right-of-Way
Right-of-Way Authorization Package	Prepare and Submit	Review	Note that FHWA approval of this is inherent in the Project Authorization for Right-of-Way approval above
Right-of-Way Waivers	Prepare and Submit	Review and Approve	Permission to advertise the federal-aid contract without all right-of-way available
Final Right-of-Way Certificates	Prepare and Submit	Review and File	Closure on status of outstanding right-of-way
Air-Space Lease	Prepare and Submit	Review and Approve	Airspace Agreement
Disposal of Real Property Interests at fair market value	Prepare and Submit (Interstate) Prepare and Approve (non-Interstate)	Review and Approve (Interstate) None (non-Interstate)	FHWA approval for any change of use of property along the Interstate
Disposal of Real Property Interests for less than fair market value	Prepare and Submit	Review and Approve	Public Interest Determination consistent with 23 CFR 710.409(d)

SAFETY PROGRAM

Background

SAFETEA-LU established the **Highway Safety Improvement Program (HSIP)** as a core Federal-aid program. The overall purpose of this program is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads through the implementation of infrastructure-related highway safety improvements.

As part of the HSIP, the **Railway-Highway Grade Crossings Program (RHGCP)** (23 U.S.C. 130) provides funds for the elimination of hazards and the installation of protective devices at public railway-highway crossings. Also as part of the HSIP, the **High Risk Rural Roads Program (HRRRP)** provides funding for construction and operational improvements on rural major or minor collectors and rural local roads.

Safe Routes to Schools (SRTS) is a Federal-aid safety program to substantially improve the ability of primary and middle school students to walk and bicycle to school safely. The SRTS program facilitates the planning, development, and implementation of projects that will improve safety and reduce traffic in the vicinity of schools.

SAFETEA-LU and TEA-21 provide additional funding sources for safety activities besides the HSIP, RHGCP, HRRRP or SRTS programs. Safety funding can be found in other programs such as the State Traffic Safety Information System Improvement Grants (Section 408) or the Highway Safety Program under 23 U.S.C, Section 402.

To encourage enactment of state laws, there are several programs which contain sanctions. If a State does not pass legislation, there are mandatory transfers of safety funds from the infrastructure program (HSIP) into the non-infrastructure program (Section 402). These programs are as follows: Repeat Offenders for DUI under 23 U.S.C. 164, Open Container under 23 U.S.C. 154, Drug Offender's Driver's License Suspension under section 23 U.S.C. 159, and Blood Alcohol Concentration (0.08 BAC) under 23 U.S.C. 163. In SAFETEA-LU, the 0.08 BAC law requirement has changed from providing an incentive for compliance to a penalty for non-compliance.

Operating Procedure

States are required to develop and implement a Strategic Highway Safety Plan (SHSP) to produce a program of projects or strategies to reduce identified safety problems under the requirements of Title 23 section 148(c)(1). The HSIP now requires a State DOT to develop a SHSP with a process that is data driven, comprehensive, and includes consultation with state, local, public, and private participation.

Stewardship Activities

The FHWA participates with the State in the following safety-related committees and/or teams: Connecticut Traffic Records Coordinating Committee, Work Zone Safety Awareness Committee, Strategic Highway Safety Plan Steering Committee, Work Zone Mobility and Safety Steering Committee, Design Exceptions Committee, Design Standards Committee, Standard Specifications Committee, Project Scoping Committee and related subcommittees.

In addition, the FHWA and the CTDOT work together on safety issues related to geometric design, roadside safety and appurtenances, the highway safety improvement program, work zone safety, traffic operations and control, traffic incident management, railroad-grade crossing program, and pedestrian and bicycle safety. In each instance, sharing of knowledge occurs through discussions, meetings, committee or team participation, and through project or program reviews.

Although the Federal Motor Carrier Safety Administration (FMCSA) is the State's primary Federal partner for motor carrier safety issues, the FHWA provides assistance, as necessary, whenever FMCSA is not directly involved. The FHWA also assists the CTDOT and the National Highway Traffic Safety Administration (NHTSA) with addressing driver behavior issues, such as impaired drivers, occupant protection, and traffic records programs.

Project Oversight Activities

The FHWA role in project oversight is described in the Project Development and Project Construction Chapters. Additional requirements apply to federal-aid projects funded under the HSIP, including planning, implementation, evaluation and annual reporting (See 23 CFR 924). HSIP projects must be consistent with a data-driven SHSP. The FHWA approves the CTDOT's annual Suggested List of Study Surveillance Sites (SLOSSS) developed to define those locations which have the greatest promise of accident reduction.

References

- ✓ 23 USC 130
- ✓ 23 USC 148
- ✓ 23 USC 152
- ✓ 23 USC 154
- ✓ 23 USC 159
- ✓ 23 USC 163
- ✓ 23 USC 164
- ✓ 23 CFR 924

Table 25: Safety Program Summary

Work Activity	CTDOT ACTION	FHWA ACTION	Documents/ Products/ Outcome
Strategic Highway Safety Plan (SHSP)	Prepare and approve SHSP. The SHSP should be evaluated and updated as deemed necessary by the FHWA and the CTDOT to ensure the accuracy of the data, priority of proposed improvements and effectiveness of the projects and plan.	Review and Approve SHSP and subsequent updates, and ensure that the SHSP is implemented and evaluated.	To provide a comprehensive framework for reducing highway fatalities and serious injuries on all public roads.
Highway Safety Improvement Program (HSIP)	Prepare HSIP annual program and 5 Percent reports (included in the CTDOT Annual Safety Report) and submit to the FHWA Division Office by August 31. Prepare the State's SLOSSS list and submit to the FHWA for approval by August 1 of each calendar year.	Review and comment on annual program report and submit the final CTDOT Annual Safety Report to the FHWA-HQ by Sept. 30. Review and comment on SLOSSS list within 14 business days of receipt of list.	To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
Rail-Highway Grade Crossing Program (RHGCP)	Prepare annual program report (included in the CTDOT Annual Safety Report), and submit to the FHWA Division Office by August 31.	Review and comment on annual program report and submit the final CTDOT Annual Safety Report to the FHWA-HQ by Sept. 30.	To reduce the occurrence of crashes at railway-highway crossings.
High Risk Rural Roads Program (HRRRP)	Included in HSIP annual program report contained in the CTDOT Annual Safety Report.	Review and comment on annual program report and submit the final CTDOT Annual Safety Report to the FHWA-HQ by Sept. 30.	To reduce the accident rate for fatalities and incapacitating injuries that exceeds the statewide average on rural major and minor collector and rural local roads.
Safe Routes to School (SRTS)	State administers the program with a full-time SRTS coordinator funded by the CTDOT with SRTS funds, and partners with enforcement, educators, and engineering to substantially improve the ability of primary and middle school students to walk and bicycle to school safely.	Monitor and document outcomes and trends for the FHWA-HQ report to Congress.	To enable and encourage children to walk and bicycle to school, and to encourage a healthy lifestyle for children.

Table 24: Safety Program Summary (Continued)

Work Activity	CTDOT ACTION	FHWA ACTION	Documents/ Products/ Outcome
Open Container 23 USC Section 154	If the State certifies to NHTSA that it meets the requirements of 23 U.S.C. 154 by September 30 then no action is needed by the FHWA. If the State does not meet these requirements, then the State must (1) submit a “shift letter” notifying the FHWA of its desired distribution of the transfer of funds from its NHS, STP, and IM program apportionments by October 30, otherwise the transfer of funds will be distributed proportionately from these programs; and (2) submit a “split letter” (typically within 60 days of the actual transfer of funds) indicating to NHTSA how it will use the transferred funds for Section 402 and/or HSIP eligible activities.	FHWA Division review and forward “shift letter” and/or split letter” to FHWA HQ to take appropriate action.	Encourage State to enact and enforce open container law
Repeat Intoxicated Driver 23 USC Section 164	If State certifies to NHTSA that it meets these requirements by September 30 then no action is needed by the FHWA.	FHWA to monitor continued compliance with these requirements.	Encourage the State to continue to enforce Repeat Intoxicated Driver laws
Revocation or Suspension of Drivers’ Licenses 23 USC Section 159	Governor shall certify by compliance letter to the Division Office whether the State opposes or comply with 159 requirements before January 1. The State initiates the process with the Governor.	If State does not send proper certification by Jan 1 then 10% withheld from NHS, STP, and IM on Oct 1. By July 1, Advance Notice for Next Fiscal year will reflect State’s penalty. Monitor for continued compliance.	Encourage State to enact and enforce drug offender’s driver’s license
Blood Alcohol Concentration (0.08BAC) 23 USC Section 163.	State must enact & enforce law by October 1 or be subject to 8% penalty (FY 2007 and thereafter) from NHS, STP, and IM program apportionments.	FHWA monitors to determine compliance	Encourage State to enact and enforce a BAC law
Work Zone Process Review	Conduct biennial review and Submit results to the FHWA	Work in partnership with State	Improvement of Work Zone procedures and policies

APPENDICES

APPENDIX A: LIST OF ACRONYMS

AASHTO American Association of State Highway and Transportation Officials	NACE National Association of Corrosion Engineers
ACHP American Council on Historic Preservation	NBIS National Bridge Inspection Standards
ACI American Cement Institute	NEPA National Environmental Policy Act
AMRL AASHTO Materials Reference Laboratory	NETTCP New England Transportation Technician Certification Program
ASTM American Society for Testing and Materials	NHPA National Historic Preservation Act
ATR Automatic Traffic Recording	NHS National Highway System
AWS American Welding Society	NHTSA National Highway Traffic Safety Administration
BAC Blood Alcohol Concentration	NOI Notice of Intent
BMS Bridge Management System	OJT On the Job Training
BSE Bridge Safety and Evaluation	OMB Office of Management and Budget
CAP Corrective Action Plan	PD Preliminary Design
CE Categorical Exclusion	PE Preliminary Engineering
CFR Code of Federal Regulations	PL Planning Funds made available to MPOs
CGS Connecticut General Statutes	PMS Pavement Management System
CMAQ Congestion Mitigation and Air Quality	PR Program Review
CMS Congestion Management System	PS&E Plans, Specifications, and Estimate
CPI Continuous Process Improvement	PTFE Public Transportation Facilities and Equipment
CTDOT Connecticut Department of Transportation	QA/QC Quality Control/Quality Assurance
FMFIA Federal Managers' Financial Integrity Act	RASPS Rapid Approval State Payment System
CTI Connecticut Transportation Institute	RHGCP Railway Highway Grade Crossing Program
CY Calendar Year	ROD Record of Decision
DAS Department of Administrative Services	ROW Rights-of-Way
DBE Disadvantaged Business Enterprise	RPA Regional Planning Agency
DEIS Draft Environmental Impact Statement	RPO Regional Planning Organization
EA Environmental Assessment	SAFETEA-LU Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
EEO Equal Employment Opportunity	SEAFORM Systems Engineering Analysis Form
EIS Environmental Impact Statement	SEMP Systems Engineering Management Plan
FHWA Federal Highway Administration	SF Semi-Final
FIRE Financial Integrity Report Evaluation	SHPO State Historic Preservation Officer
FMCSA Federal Motor Carrier Safety Administration	SHSP Strategic Highway Safety Plan
FMIS Federal Management Information System	SLD Structure Layout for Design
FONSI Finding of No Significant Impact	SLOSSS Suggested List of Study Surveillance Sites
FPR – Final Plan Review	SMS Safety Management System
FTA Federal Transit Administration	SPR State Planning and Research
HMA Hot Mix Asphalt	SRTS Safe Routes to School
HPMS Highway Performance Monitoring System	STA State Transportation Agency
HRRRP High Risk Rural Road Program	STIP State Transportation Improvement Program
HSIP Highway Safety Improvement Program	STP Surface Transportation Program
IM Interstate Maintenance	T2 Technology Transfer
IMS Intermodal Facilities & Systems Management Systems	TEA-21 Transportation Equity Act for the 21st Century
ISTEA Intermodal Surface Transportation Efficiency Act	TIP Transportation Improvement Program
ITS Intelligent Transportation Systems	TMA Transportation Management Area
LPA Local Public Agencies	TMG Traffic Monitoring Guide
LTAP Local Technical Assistance Program	TMS Traffic Monitoring System
MOA Memorandum of Agreement	UPWP Unified Planning Work Program
MOU Memorandum of Understanding	U.S.C. United States Code
MPO Metropolitan Planning Organization	USDOT United States Department of Transportation
MUTCD Manual of Uniform Traffic Control Devices	WIM Weigh in Motion

APPENDIX B: FHWA RISK ASSESSMENT PROCESS

Background:

The purpose of the Connecticut Division Risk Assessment procedure is to identify potential risk areas within the Federal-aid program and to maximize our effort of available resources in the implementation of Federal-aid programs. It essentially drives our stewardship activities including our upcoming process reviews and other activities.

Our risk assessment process is the first step in developing our Strategic Plan for the upcoming fiscal year.

Procedure:

Risk Assessments will be completed every year. Risk assessments are generally done in the same program areas as chapters in this plan.

First, a program assessment is done along with an analysis of Strengths, Weaknesses, Opportunities, and Threats. This assessment will include an analysis of relevant performance indicators.

Risk statements are generated, normally following an “if, then” format.

Risks (both threats and opportunities) are then quantitatively ranked for impact and severity.

The above three steps are done with input from the CTDOT.

The top ten risks are incorporated into the FHWA’s strategic plan. Other high risks are developed into other activities in individual program areas which may not be included in our strategic plan.

APPENDIX C: PROCUREMENTS

Federal-aid Procurement Overview

The procurement of goods and services utilizing Federal-aid funding is guided by the stipulations found in the Code of Federal Regulations (CFR) Title 23 Parts 172, 420, 635 and Title 49 Part 18. Specifically, these regulations define the following three procurement methods:

- A. Engineering and Design Related Service Contracts
- B. Construction Contracts
- C. Non-engineering/Non-architectural Contracts (Common Rule)

The specific procurement method to be implemented depends upon the type of goods/services to be procured. The following sections summarize these three procurement methods and the types of goods/services that are typically procured by each method as agreed to by the CTDOT and the FHWA. Additional discussions on the topic of procurements are provided in the FHWA Memorandum dated 6/26/2008 and titled 'Procurement of Federal-aid Construction Projects'

A. Engineering and Design Related Service Contracts:

Engineering and design related service contracts [per 23USC112(b)(2)(a)] are regulated under Title 23CFR Part 172.5, which generally specifies three methods for procuring engineering and design service contracts:

1. **Competitive Negotiation (also termed 'Quality Based Selection' or QBS)** – “These contracts shall use qualifications-based selection procedures in the same manner as a contract for architectural and engineering services is negotiated under Title IX of the Federal Property and Administrative Services Act of 1949.... Price shall not be used as a factor in the analysis and selection phase.”
2. **Small Purchases** – “Relatively simple and informal procurement method where an adequate number of qualified sources are reviewed and the total contact costs do not exceed the simplified acquisition threshold fixed in 41 U.S.C. 403(11).” *(Note: The 'simplified acquisition threshold fixed in 41 U.S.C. 403(11)' is currently set at \$100,000)*
3. **Noncompetitive Negotiation** – “Circumstances under which a contract may be awarded by noncompetitive negotiation are limited to the following:
 - i The service is available only from a single source;
 - ii There is an emergency which will not permit the time necessary to conduct competitive negotiations; or
 - iii After solicitation of a number of sources, competition is determined to be inadequate”.

Federal-aid engineering and design related service contracts, including consultant Engineering and Inspection Services, that are administered by the CTDOT are procured utilizing a Competitive Negotiations process as defined by the CTDOT's 'Professional Services Consultant Selection Procedures Manual'.

Federal-aid engineering and design related service contracts administered by a **local government sub-recipient** (municipality) under the oversight of the CTDOT are procured as defined by the CTDOT's 'Consultant Selection, Negotiation and Contract Monitoring Procedures for Municipal Administered Projects' document.

Federal-aid engineering and design related service contracts which qualify as **Small Purchases procurements** and for which the CTDOT elects to not utilize the Competitive Negotiations process, are

procured in a manner consistent with the State's small purchase procedures, which are detailed in the Connecticut Department of Administrative Services (DAS) General Letter No. 71.

Procurement of Federal-aid engineering and design related service contracts utilizing a **Noncompetitive Negotiation** approach must be individually approved by the FHWA CT Division Office. For each noncompetitive negotiations contract proposed, the CTDOT must provide a detailed justification and proposed methodology to the FHWA CT Division Office for review and approval before using this contract award method.

Per 23CFR 1.11, 'Cost of engineering services performed by the "CTDOT" may be eligible for Federal participation only to the extent that such costs are directly attributable and properly allocable to specific projects.'

Consultant staff responsible for operating the Bridgeport HOC are procured using this qualifications based selection process.

B. Construction Contracts:

Procurement of Construction [per 23USC101(a)(3)] Contracts is regulated by Title 23CFR Part 635.104, which states that "Actual construction work shall be performed by contract awarded by competitive bidding... the STD shall assure opportunity for free, open and competitive bidding..." Furthermore, 23USC112(b)(1) clarifies that 'Contracts for the construction of each project shall be awarded only on the basis of the lowest responsive bid submitted by a bidder meeting established criteria of responsibility. All Federal-aid construction contracts administered by the CTDOT are procured as defined by the approved CTDOT Bidding and Award Manual, the CTDOT Standard Specifications for Roads, Bridges and Incidental Construction – Form 816, and the CTDOT Construction Manual.

Per the regulations, an exception from the procurement through competitive bidding requirement can be made if "the STD demonstrates to the satisfaction of the Division Administrator that some other method is more cost effective" such as Force Account work by State Forces, "or that an emergency exists."

Federal-aid construction contracts administered by a **local government sub recipient** (municipality) under the oversight of CTDOT are procured in a manner consistent with the above regulations and as specified by the CTDOT.

The FHWA recognizes and accepts that the CTDOT utilizes the **Department of Administrative Services** (DAS) to provide public notice of construction contracts available for bid. However, through discussions between the FHWA and the CTDOT, it has been determined that the current DAS *contracting* procedures are *not* compliant with federal contracting regulations, and therefore the DAS cannot be utilized to contract Federally-funded, low bid construction contracts.

Per 23CFR 635.205(b) the adjustment of **railroad or utility** facilities and similar types of facilities owned or operated by a public agency, a railroad or a utility company by Force Account has been determined to be cost effective, and therefore prior FHWA approval for these efforts is not required. When the railroad/utility is not adequately staffed to pursue the work through its own forces the work may be done by a contract awarded by the utility/railroad to the lowest qualified bidder based on appropriate solicitation, a contract by a certified continuing contractor, as part of the Department's highway construction contract or a contract awarded by the Department. The CTDOT shall enter into and execute agreements with the appropriate railroad/utility company in accordance with their approved the CTDOT Standard Specifications for Roads, Bridges and Incidental Construction – Form 816 and the CTDOT Construction Manual, and in accordance with the 23CFR Parts 645 and 646.

C. Non-Engineering/Non-Architectural Contracts (Common Rule):

Procurement of goods and services that do not meet the legal definitions of “construction” [per 23UCS101(a)(3)] or “engineering and design service” [per 23USC112(b)(2)(a)] may be conducted in accordance with 49 CFR Part 18.36 (Common Rule). This includes service contracts, equipment purchases, limited software development and other goods and services.

Per Title 49 CFR Part 18.36(a), which states “when procuring property and services under a grant, a State will follow the same policies and procedures it uses for procurements from its non-Federal funds”, the CTDOT will utilize the same procedures for procuring goods and services with Federal funds that are utilized for State funds. The procurement, therefore, will be made in accordance with Title 4A, Chapter 58 (Purchases and Printing) of the Connecticut General Statutes and the CT Department of Administrative Services State Purchasing Procedures described in the Regulations of State Agencies, Title 4A –“Administrative Services”.

Connecticut Department of Administrative Services (DAS) General Letter No. 71 provides the State’s general process for the purchases of goods and/or services costing less than \$50,000.00. As required by DAS General Letter 71, goods and services that are already the subject of existing DAS or Department of Information Technology (DOIT) contracts will be purchased against those existing contracts, and goods and services which cost in excess of \$50,000.00 shall be procured through the DAS.

The following is a listing of specific ‘unique’ procurements for which the CTDOT and the FHWA have agreed may be procured under the ‘Common Rule’:

- The procurement of property, equipment and services with the FHWA planning and research funds;
- Services contracts for ITS projects which are not ‘construction’ (e.g. ... do not ‘directly facilitate and control traffic flow’) and which are not ‘engineering services’ such as:
 - video camera, variable message sign and traffic flow monitor operational support;
 - Highway Operations data transport communications system operational support;
 - Fiber-optic communications system support;
- Equipment purchases, including:
 - traffic control signals, equipment and parts;
 - Highway Operations Center goods and services;
 - CHAMP service patrol vehicle purchase;
 - CHAMP service patrol vehicle parts
- Materials procurement for eligible Force Account activities;
- Materials procurement for railroad and utility work which require long lead times;
- Highway Operations telecommunications costs;
- Call Before You Dig (CBYD) registration costs for traffic control systems and traffic management systems
- 511 Deployment and Operations
- Non-highway construction projects that are located outside the right-of-way, and which are not linked to, dependent upon, or would not exist except to fulfill a separate requirement of another highway project. (See *FHWA Memorandum dated 11/12/1996 titled ‘Procurement of Transportation Enhancement Projects’ for additional discussion*)

Federal laws and regulations also allow consultant services, which are not design related and which are not directly related to a construction project, to be procured utilizing ‘Common Rule’. However, the definition of the terms ‘consultant’ and ‘consultant services’ per Connecticut state statutes [Sec. 13b-20] requires a more restrictive application of the federal Common Rule. In general, the state statutes stipulate that the CTDOT’s procurement of professional consultant services be conducted in a manner that is effectively consistent with the ‘Competitive Negotiations’ (or QBS) process as described above. Therefore, per the state statutes, the Common Rule procurement approach may not be utilized by the CTDOT in procurement of professional consultant services.

Additional Procurement Information

The following sections provide additional discussions and information on some other unique procurement elements within the Federal-aid program and the CTDOT. These sections are provided to expand on the common understanding and agreements between the CTDOT and the FHWA as to how these specific procurements are addressed.

Innovative Contracting:

Currently the CTDOT does not utilize any Innovative Contracting Practices as defined by the FHWA's Special Experimental Project No. 14 (SEP-14), and therefore these procurement methods are not detailed herein.

Design-Build Contracting:

Design Build is allowed by federal regulations under 23CFR636; however the CTDOT currently does not utilize Design-Build contracting due to limitations within state statutes.

Procurement of Task-Based Consultant Services:

Municipalities and the Department may utilize Task-Based Consultants for multiple, complete project assignments, or for specific partial project assignments, provided the multiple projects/assignments are specifically identified, and the scope is sufficiently defined in advance of selection so said selection is based on the qualifications necessary for the specific project/assignments.

Some Task-Based Consultant Service contracts that the CTDOT has utilized include the following:

- Project Management & Liaison (i.e. Bridge, State Roads, Transportation Enhancement)
- Design Specific tasks (i.e. Traffic Engineering, Hydrology & Drainage)
- Highway Operations tasks
- Construction Claims & Scheduling
- Coatings Inspection
- Constructability Reviews
- Environmental Compliance
- Value Engineering
- Environmental Planning

The type of Task-Based services being procured will define the procurement method to be utilized. Typically these contracts are procured by the CTDOT utilizing their QBS process.

The FHWA and the CTDOT have agreed that the Task-Based services Request for Qualification and the resulting contract must include a finite number of tasks that can be assigned during the contract duration. The contract must be capped at a certain dollar value appropriate for the services intended. Furthermore, per the CTDOT Administrative Memorandum #15 dated May 24, 2007, the Task-Based contract must be limited in duration to 3 years for new assignments and one additional year to complete those assignments if necessary. The consultant's performance will be formally evaluated by the CTDOT every 6 months while the agreement is active. These limitations on Task-Based assignments will also be applied to any other municipal or regional agency to which Federal funding may be appropriately allocated.

All Task-Based costs shall be clearly defined and charged to the applicable Federal-aid project for which the work activity directly relates. General costs incurred and time expended for the oversight, management and administration of a Task-Based contract which are not directly related to a single Federal-aid project are not eligible for federal reimbursement. The CTDOT shall ensure that such costs are not billed to any Federal-aid project.

The CTDOT will document and submit to the FHWA Connecticut Division Office a report documenting the use of Task-Based consultant assignments on an annual basis. This report will be submitted by January 31st covering the previous calendar year. The reported information is subject to change but minimally should include the following information for each Task-Based Consultant Service contract in place:

- ✓ CTDOT Supervising Unit;
- ✓ Name of the CTDOT Project Manager responsible for the Task –Based consultant;
- ✓ Type of Task-Based services provided;
- ✓ Task –Based consultant firm name;
- ✓ Initial contract value and the current contract value;
- ✓ Contract value expended over the past year and the total contract value expended to date;
- ✓ Start date of contract, original contract length and any contract extensions enacted and/or allowed.

Procurement Practices For Relocation Of Public Service Facilities/Railroads on Federal-aid Projects – Preliminary Engineering Services

The preliminary engineering activities associated with utility/railroad relocation work are typically done by the Public Service Company's/Municipality's/Railroad's engineering forces. The CTDOT's Utilities Section retains the preliminary engineering services from the public service companies, municipalities and railroads for their relocation work as required by State Highway Projects. When the Public Service Company/Municipality/Railroad is not adequately staffed to pursue the necessary preliminary engineering work activities, the work is generally done by a qualified engineering consultant selected by the Public Service Company/Municipality/Railroad. Since this preliminary engineering work does not directly lead to 'highway construction', this work may be procured in accordance with the Department's approved procedures which are titled: *"Procedure for Retaining a Consultant Engineer to Render Services in Connection with Adjustments to Public Service Facilities Affected by State Highway Construction Projects."*

Office of Maintenance - Construction by State Forces (Force Account)

Per previous approval by the FHWA, state forces may perform force account work to address specific works items identified on the established list of eligible items requiring rapid response for critical/urgent deficiencies. This list was submitted to the FHWA in the Department's May 3, 2006 letter and approval was received by DOT from the FHWA on May 17, 2006.

Force account construction may therefore be used by the Office of Maintenance to accomplish work that is to be performed by some method other than a contract awarded by competitive bidding in accordance with 23 CFR635, Subpart B. The authorization for this force account construction program will not be longer than two years. The Department will provide the FHWA with a scope (consistent with Priority Codes A and B for Bridge Maintenance Memorandums) and a cost estimate (based on prior year's expenditures for these types of activities) for all construction work activities conducted under this authorization. In addition, the department will provide the FHWA with incident reporting forms as the work progresses. Lastly, in order to close the Federal-aid project, the Department will provide a report of actual work accomplished along with the actual costs. This report will be required prior to the next authorization.

Procurement for the Division Of Research

The Department, through the Division of Research, enters into Personal Service Agreements with the University of Connecticut to conduct transportation research on topics and issues of interest to the Department, one of which is for the operation of the Connecticut Local Transportation Assistance Program Center at the University of Connecticut. The University of Connecticut is a land-grant university and the only transportation research university in the state.

The Department will document the use of these Personal Service Agreements on an annual basis. This report will be submitted by January 1st on a calendar year basis.

Procurement for Property Management Contracting (by the Office of Rights-of-Way)

The Property Management Division is responsible for maintenance and safety of all land and structures acquired for transportation projects. The FHWA considers all property management contracting as 'Non-Engineering/Non-Architectural' in nature. Therefore, per the Common Rule, procurement of property management contracts follows the CTDOT's State approved procurement procedures as described in the above section 'Non-Engineering/Non-Architectural Contracts (Common Rule)'. The FHWA notes that this understanding does not mean all property management contracts are eligible for Federal-aid. All such determinations of eligibility shall be made on an individual basis in coordination with the FHWA.

Environmental Testing, Remediation, Asbestos Abatement, & Demolition Contracting (by the Office of Rights-of-Way)

The Office of Rights of Way obtain environmental testing, asbestos abatement, site remediation efforts, and demolition of structures services as part of the Right of Way authorization to determine, document, and eliminate environmental and structural liabilities on a project site. When these services are completed prior to the highway 'construction' activity, then the procurement of these services shall follow the CTDOT's State approved procurement procedures as described in the above section 'Non-Engineering/Non-Architectural Contracts (Common Rule)'. When these services are included as a necessary part of a highway 'construction' contract, then the CTDOT may utilize their Construction Contracting low bid procurement procedures.

Procurement of Fee Appraiser Services (by the Office of Rights-of-Way)

When the CTDOT is required to have a second opinion by the Attorney General's office, or by the FHWA, or when the workload of the Office of Rights of Way dictates, the Office of Rights of Way retains the services of Fee Appraisers. The FHWA considers all fee appraisers as 'Non-Engineering/Non-Architectural' in nature. Therefore, procurement of fee appraiser services shall follow the CTDOT's State approved procurement procedures as described in the above section 'Non-Engineering/Non-Architectural Contracts (Common Rule)'

Local Public Agency Performs Right Of Way Activities (Municipal Buy)

At times, a Local Public Agency (or municipality) is involved in the acquisition of property for a variety of Federal or State funded construction programs. When the Local Public Agency (LPA) is administering the project, they are required to follow state requirements as stated in the approved Local Public Agency Manual.



U.S. Department of Transportation



U.S. Department
of Transportation
**Federal Highway
Administration**

Federal Highway Administration



Connecticut Department of Transportation