BID PACKAGE PREPARATION AND POLICIES TRAINING COURSE Instructor Version

Sponsored by Design Community Training Program





GLOBAL QUALITY & ENGINEERING CONSULTING

Introduction

- Welcome
- Introductions
 - o Instructor: Sumathi Ravindraraj, P.E.
- Schedule
- Materials



Introduction

- Class Rules
 - o Silence phones
 - o Be on time
 - o Be respectful
 - o Participate



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Course Overview

 Goal of course – Improve quality of Department's Construction Bid Packages

Learning Outcomes

- Prepare and review Bid Packages to improve biddability
- Use available standard information to prepare Bid Packages
- Check completeness and consistency of Bid Packages to reduce errors/addendum

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Topics Addressed – Day 1

- 1. Bid Package Assembly
- 2. Plans
- 3. Design Items
- 4. Other Topics
- 5. Attachments
- 6. Addenda

Topics Addressed – Day 2

- 7. Special Provisions
- 8. Project Development Checklist
- 9. Obstacles to Letting
- 10. Emergency & Local Projects

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LESSON 1 – BID PACKAGE ASSEMBLY

g

Topics Addressed

- 1.1 Bid Package General Information
- 1.2 Bid Package Standards
 - o Reference Documents
 - Special Provisions
 - Standard Drawings
 - Strike-off Letters
- 1.3 Business Rules
- 1.4 Roles & Responsibilities

1.1 – BID PACKAGE

1

Bid Package-class activity

- Project requirements
 - Develop a bid
 - Construct project

Lesson 1.1 Bid Package

Purpose of Bid Package

- Establishes rights, duties and responsibilities
- Defines contractor's activities
- Results in legal, binding contract
- Enables submission of bid

Lesson 1.1 Bid Package

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Contractor and Construction Management

- Expects Bid Package is:
 - Accurate
 - o Complete
 - Consistent
 - Biddable



Lesson 1.1 Bid Package

Quality Assurance

- Quality -- meeting criteria and expectations
- Quality Control -- processes ensuring compliance with requirements
- Quality Assurance -- ensuring compliance by non-QC

Lesson 1.1 Bid Package

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Federal Oversight

 Bid Packages routed to Central Office and FHWA for review and approval prior to publication.



Lesson 1.1 Bid Package

PennDOT Oversight

 Bid Packages routed to Central Office but not FHWA for review and approval prior to publication.

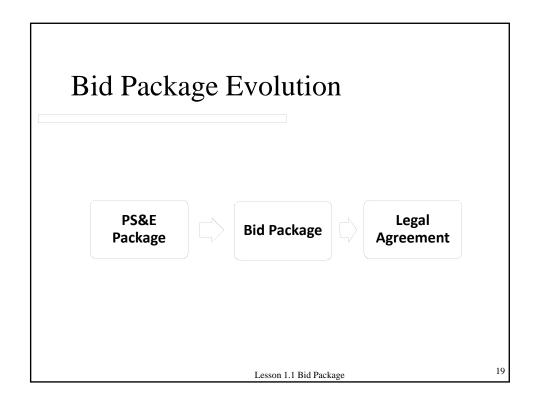
Lesson 1.1 Bid Package

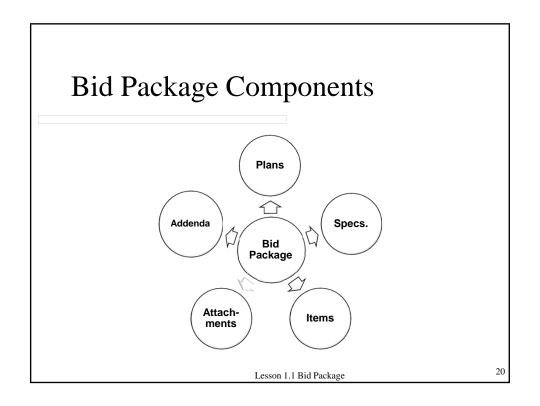
1′

QA for Bid Package

- Federal Oversight -- CDAS & FHWA QC
- PennDOT Oversight -- CDAS QC
- District Published -- CDAS QA

Lesson 1.1 Bid Package





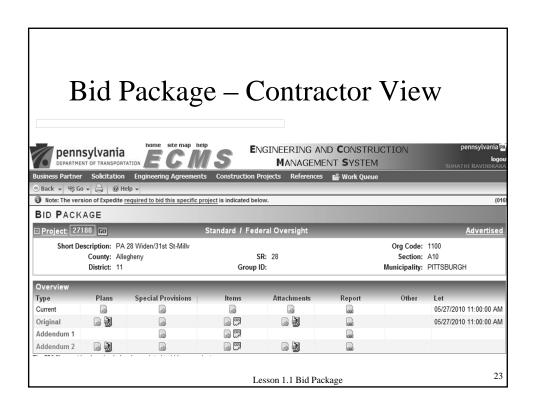
Bid Package – Contractor View

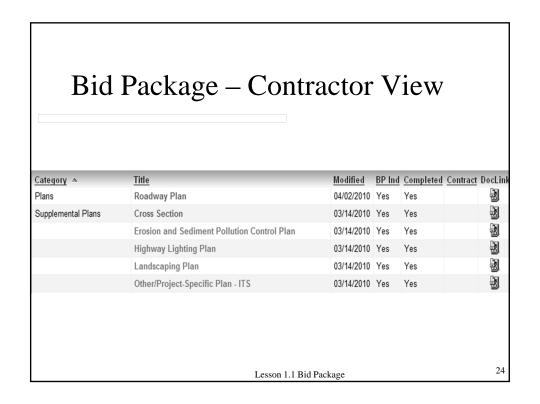
How do Contractors Obtain Bid Packages?

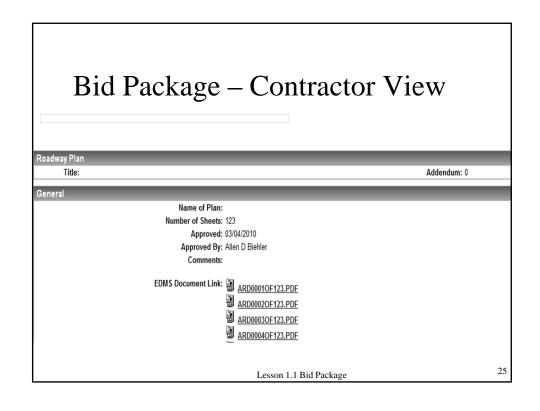
Lesson 1.1 Bid Package

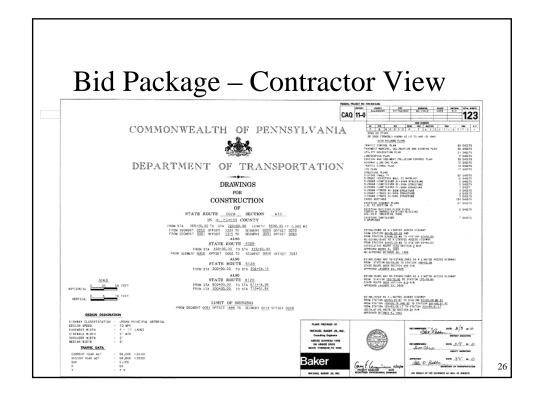
21

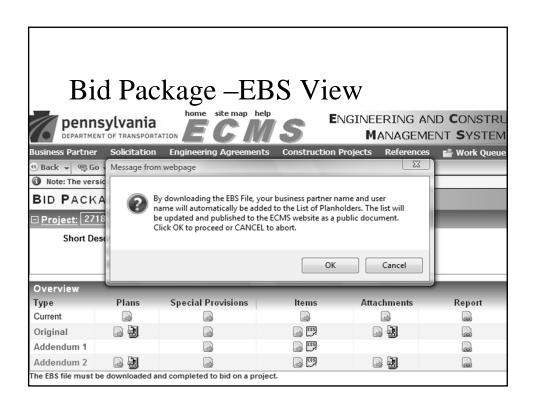
Bid Package — Contractor View | Pennsylvania | DEPARTMENT OF TRANSPORTATION | DEPARTMENT OF

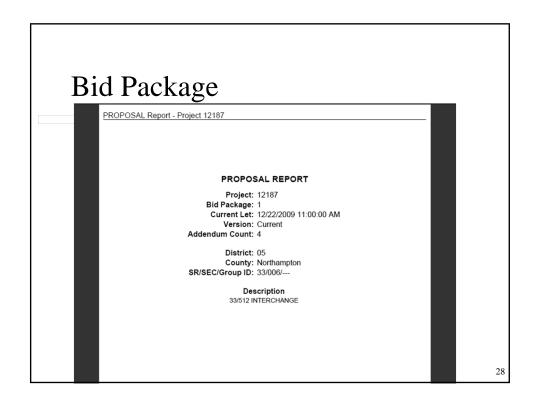












Bid Package – General Information

Genera

Expedite Version: 5.7a

Status: Published Bid Results

Version: 1

Project Cost Range: \$30,000,000.00 - \$34,999,999.99 Federal Project Status: Federal Oversight

DBE: 6%

Let: 05/27/2010 11:00:00 AM

Structure Work: 36.00% Pre-Bid Meeting: Optional

Let Type: Scheduled Anticipated NTP: 07/26/2010 Required Completion: 05/15/2012

Wage Rates: Yes Prequalification Requirement: Yes

. .

Troquamouton noquirement 100

State Type of Work: RECONSTRUCTION

Diesel Fuel Price Index

Asphalt/Cement Price Index

Additional Information

This is an ECMS project. All Addenda will be electronically posted. Place for delivery of diskette bid before 11:00 a.m. prevailing local time on the scheduled let date: PENNDOT CONTRACT AWARDS ROOM, 7TH FLOOR: COMMONWEALTH KEYSTONE BUILDING: 400 NORTH STREET; HARRISBURG PA 17120

Lesson 1.1 Bid Package

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Bid Package – Description / Q&A

Description

The description and location of the project is as follows: For the bituminous widening and reconstruction, drainage, concrete barrier, concrete curb and sidewalk, highway lighting, signing and pavement marking, sign structures, signals and ITS, wall construction, landslide stabilization, water line and sewer relocation, asbestos, hazardous material removal and industrial park demolition, and other miscellaneous construction, all within a length of 5502.05 linear feet (1.042 Miles) as indicated on the approved drawings included in the bid package for STATE ROUTE 0028, SECTION A10, in ALLEGHENY COUNTY, MILLVALE BOROUGH, Commonwealth of Pennsylvania. This project being situated as follows: From a point approximately 1300 feet north of the 31st Street Bridge (SR 2122) at Segment 0050/0051 Offset 1334/1315 (Station 165+30) to a point approximately 2560 feet north of the 40th Street Bridge (SR 2124) at Segment 0090/0091 Offset 0070/0060 (Station 220+50).

Answers to questions on this page are for informational and clarification purposes. Official changes to the proposal will be made via an Addendum.

Questions and Responses

Post Tensioned Rock Anchors S-27749

NEW

Question

The estimated stressing lengths shown on your Rock Anchor Schedule Shts 35, 36, 37 seem to correspond with the soil boring information when used in conjunction with indicated anchor inclination. However, the typical Rock Anchor Detail on Sheet 12 shows an additional 5-0 of unbonded length past the top of rock. If someone were to base their bid on the quantities in the schedule they could be missing 5-0 of anchor length. Please clarify that the tables do not include the additional 5-0.

Posted on 04/30/2010 08:30 43 AM

Response

The anchor lengths on the schedule are correct. The detail on Sheet 12 will be revised by addendum; the "5' - 0" " from top of rock to bond zone will be replaced with

Lesson 1.1 Bid Package

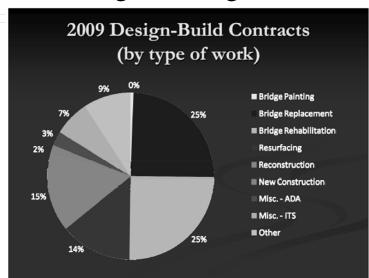
Bid Package – Uses

- Highway Restoration
- Bridge
- Safety and Mobility
- Interstate Restoration
- Economic Development Transportation

Lesson 1.1 Bid Package

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Bid Package – Design-Build



Bid Package – End Customers

- Bidders
- PennDOT Construction Management Team
- Contractor

Lesson 1.1 Bid Package

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1.2 – BID PACKAGE STANDARDS REFERENCE DOCUMENTS

Bid Package Standards

- Publications 7,51, & 408 and 7
- Standard Special Provisions
- Standard Drawings
- Strike-Off Letters



Lesson 1.2 B.P. Stds - Ref. Doc.

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Publication 7-Items Catalog

0409-0301	F	SY	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING	COURSE,	PG 64-22, < 0.3 PG 64-22, < 0.3	MILLION ESALS, 19.0 MM
0409- 0295	F	TON	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING	COURSE,	PG 58-28, 3 TO < 10 PG 64-22, < 0.3	MILLION ESALS, 9.5 M MILLION ESALS, 19.0 MM
0409-0294	F		SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING			
0409-0293	F	TON	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING	COURSE,	PG 58-28, 3 TO < 10	
0409-0293	-	TON	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING	COURSE.	PG 58-28, 3 TO < 10	
0409- 0292	F	TON	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING	COURSE.	PG 58-28, 3 TO < 10	
0409-0291	F	TON	SUPERPAVE ASPHALT MIXTURE DESIGN. HMA WEARING	COURSE.	PG 58-28, 3 TO < 10	MILLION ESALS, 9.51
0409- 0285	F	SY	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING	COURSE,	PG 58-28, 3 TO < 10	MILLION ESALS, 9.5 I
0409- 0284	F	SY	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING	COURSE,	PG 58-28, 3 TO < 10	MILLION ESALS, 9.5 f
0409- 0283	F	SY	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING	COURSE,	PG 58-28, 3 TO < 10	MILLION ESALS, 9.5 f
0409- 0282	F	SY	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING	COURSE,	PG 58-28, 3 TO < 10	MILLION ESALS, 9.5 N
0409- 0281	F	SY	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING	COURSE,	PG 58-28, 3 TO < 10	MILLION ESALS, 9.5 N
0409-0275	F	SY	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING	COURSE,	PG 58-28, 3 TO < 10	MILLION ESALS, 9.5 I

akbdata2k01\data\Bureau of Design\Contra

11/22/2010

9:45:08AM

Lesson 1.2 B.P. Stds – Ref. Doc.

Publication 51

"Bid Package Preparation and Policies Manual"

 Guidelines/policy for assembling and submitting Bid Packages for construction projects

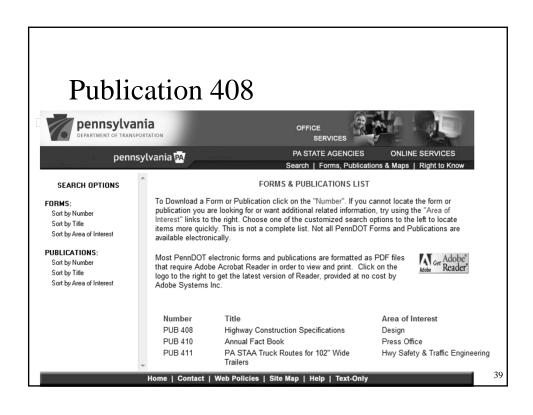
Lesson 1.2 B.P. Stds - Ref. Doc.

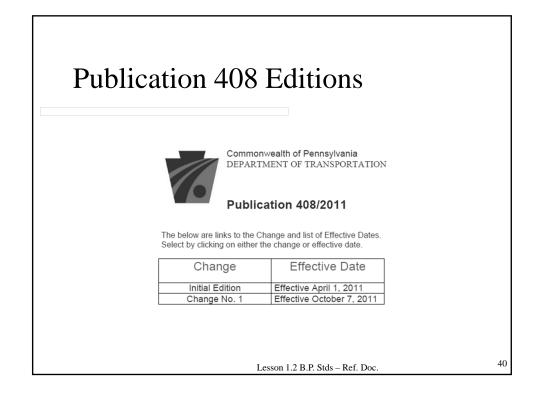
37

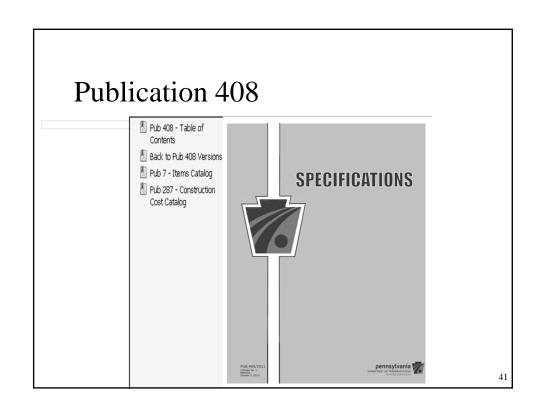
Publication 51

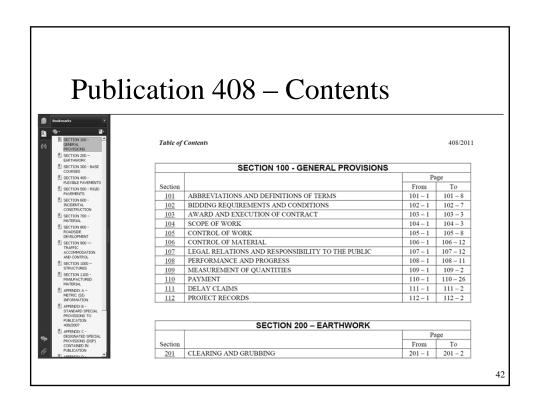
- ◆ Ch. 1 Bid Package Assembly
- Ch. 2 Addenda to Proposals
- Ch. 3 Approvals
- Ch. 4 Attachments to Bid Package
- ◆ Ch. 5 Other Bid Package Related Issues
- Ch. 6 Emergency Projects
- Exhibits
- Appendices

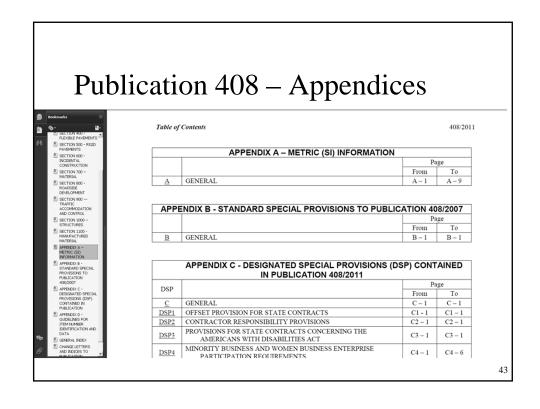
 $Lesson\ 1.2\ B.P.\ Stds-Ref.\ Doc.$







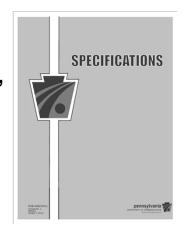




Publication 408 – Index GENERAL INDEX 408/2011 Section Item Section Item 1112.02(b) Structures, Glulam Abbreviations 101.02 Fabrication 1031.2(b) Adjustable Extensions, Existing Inlets, Manholes, or Utility Appendix A 703.2(c)2 Metric Abrasion, Coarse Aggregate Abrasives, Cleaning Steel 1070.3(c)6 606.3(b) Absolute Refusal, Pile-Driving to Abutment, Protective Coating 106.03(a)3.c 110.04 1005.3(b)4 Adjusted Payment 1019.2(b) Bituminous Materials Abutting Joints, Fabricated Diesel Fuel Cost Fluctuations Structural Steel 1105.03(r) Diamond Grinding of Concrete Acceptance Bar Mat Design 514.4 Pavement 709.2(c) HMA Courses, Plant-Mixed Cement Concrete 704.1(d) Superpave Mixture 409.4(a) Pavements (RPS) Certificate Inspector's Field Office and 506.3(v) 110.08(b) Inspection Facilities Low Strength Cement Concrete 110.10 713.2(c) 623.3(f) Block, Precast Microcomputer 688.4(a) Median Barrier Plain Cement Concrete Geomembrane 736.1(c) Pavements (RPS) 506.4(a) Geotextiles 735.1(c) Portland Cement Concrete

Publication 408 – Changes

- Changes to **Publication 408**
- Include in all projects, in effect at Let date



Lesson 1.2 B.P. Stds - Ref. Doc.

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Publication 408 – Change Letters

OS-299 (7-08) **PUBLICATION:** TRANSMITTAL LETTER



PENNDOT PUB 408/2011

DATE:

October 1, 2010

SUBJECT:

PENNDOT Publication 408/2011 Specifications (Metric & English) 2011 Edition

INFORMATION AND SPECIAL INSTRUCTIONS:

Applicability: This Transmittal Letter and its attachment constitute the Initial Edition to PENNDOT Specifications, Publication 408/2011. The Initial Edition to Pub 408/2007 is hereby referred to as Pub 408/2011-IE. It is new and complete in its entirety, and is effective on projects let after April 1, 2011.

Publication 408 – Sections

- 100 General Provisions
- 200 Earthwork
- 300 Base Courses
- 400 Flexible Pavements
- 500 Rigid Pavements
- 600 Incidental Construction

Lesson 1.2 B.P. Stds - Ref. Doc.

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Publication 408 – Sections

- 700 Material
- 800 Roadside Development
- 900 Traffic Accommodation and Control
- 1000 Structures
- 1100 Manufactured Material

Lesson 1.2 B.P. Stds – Ref. Doc.

Publication 408 – Section Format

- Each Section contains:
 - o **D** escription
 - o Material
 - o **C** onstruction
 - o M & P Measurement & Payment

Lesson 1.2 B.P. Stds - Ref. Doc.

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Non-Typical Format

Which Sections of Publication 408 are non-typical in format?

Sections <u>100, 7</u>00 & 1100

 $Lesson\ 1.2\ B.P.\ Stds-Ref.\ Doc.$

Publication 408

How does a contractor know that Publication 408 is the main requirements document and the version that applies?

Lesson 1.2 B.P. Stds - Ref. Doc.

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1.2 – BID PACKAGE STANDARDS

STANDARD SPECIAL PROVISIONS

Standard Special Provisions

- G General Provisions Related
- Item Related
- N Non-pay Item Related
- P Provisional Specification Related
- S Section related

Lesson 1.2 B.P. Stds – Std Sp. Prov.

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Standard Special Provisions ENGINEERING AND CONSTRUCTION pennsylvania MANAGEMENT SYSTEM DEPARTMENT OF TRANSPORTATIO ss Partner Solicitation Engi 🖰 Back 🗸 🔎 Search 🖉 Clear 🔒 🔞 Help 🕶 STANDARD SPECIAL PROVISION SEARCH Search Criteria Index or Category: General Provisions Related Measurement: Dual Provision Name: District: CO ▼ Approved Inactive Include Instructions: Yes ▼ Lesson 1.2 B.P. Stds - Std Sp. Prov.

1.2 – BID PACKAGE STANDARDS

STANDARD DRAWINGS

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Standard Drawings

- Drawings for construction of standard items
 - o Details
 - o Dimensions
 - Notes



Lesson 1.2 B.P. Stds – Std Draw.

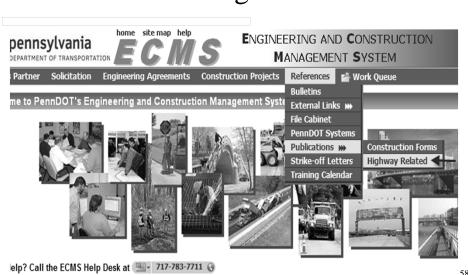
Standard Drawings

- Roadway Construction Standards
- Bridge Construction Standards
- Traffic Standards

Lesson 1.2 B.P. Stds - Std Draw.

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Standard Drawings – Access



Standard Drawings – Roadway Construction

COMMONWEALTH OF PENNSYLVANIA



DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

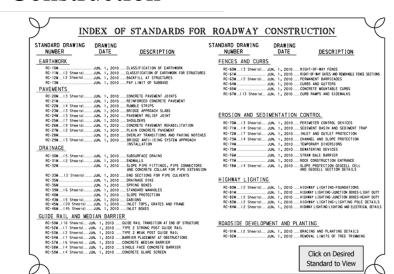
STANDARDS FOR ROADWAY CONSTRUCTION SERIES RC-1M TO 100M

JUNE 2010 EDITION

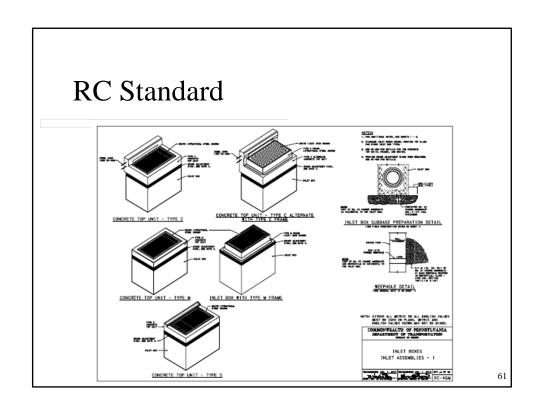
Click Here to go to Index Sheet

PDT Pub #72

Standard Drawings – Roadway Construction



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Con	a4 a4. a.a			
	struction			
C	TURRENT BRIDGE COM	NSTRUCTION STANDARDS (BCs)		
Std. Dwg. No.	Standard Title	Sheet Title(s)		
	Transmittal Letter	Choose a Sheet to View ▼		
BC-700M	Index of Standards	Choose a Sheet to View ▼		
BC-701M	Protective Fence	Choose a Sheet to View ▼		
BC-703M	Bridge Vertical Wall Barrier to Thrie Beam Rail	Choose a Sheet to View ▼		
BC-707M	PA HT Bridge Barrier Misc. Details	Choose a Sheet to View ▼		
BC-708M	Thrie Beam to PA Type 10M Bridge Barrier Transition Connection	Choose a Sheet to View ▼		
BC-709M	PA Type 10M Bridge Barrier Misc. Details	Choose a Sheet to View ▼		
BC-711M	Aluminum Protective Barrier	Choose a Sheet to View ▼		
BC-712M	PA Bridge Barrier to Thrie Beam Guiderail Transition	Choose a Sheet to View ▼		
BC-713M	PA Bridge Barrier - Misc. Details	Choose a Sheet to View ▼		
BC-716M	Aluminum Pedestrian Railing	Choose a Sheet to View ▼		
BC-718M	Alternate Railing Details	Choose a Sheet to View ▼		
BC-719M	Temporary Concrete Barrier, Structure Mounted	Choose a Sheet to View ▼		
BC-720M	Aluminum or Steel Bridge Hand Railing	Choose a Sheet to View ▼		
BC-721M	Electrical Details	Choose a Sheet to View ▼		

Standard Drawings – Bridge Construction

STD. DWG.	TITLE	NO. OF SHTS.	DATE	STD. DWG.	TITLE	NO. OF SHTS.	DATE
BC-700M	INDEX OF STANDARDS	1	OCT. 26, 2010	BC-751M	BRIDGE DRAINAGE	6	OCT. 26.
BC-701M	PROTECTIVE FENCE	2	OCT. 26, 2010	8C-752M	CONCRETE DECK SLAB DETAILS	2	OCT. 26.
BC-703M	THRIE-BEAM TO VERTICAL WALL BRIDGE BARRIER TRANSITION CONNECTION	3	OCT. 26, 2010	BC-753M BC-754M	STEEL GIRDER DETAILS STEEL DIAPHRAGMS FOR STEEL BEAM/ GIRDER STRUCTURES (STRAIGHT	2 2	OCT. 26, OCT. 26,
8C-707M 8C-708M	PA HT BRIDGE BARRIER MISC. DETAILS THRIE-BEAM TO PA TYPE IOM BRIDGE	5 2	OCT. 26, 2010 OCT. 26, 2010		GIRDERS ONLY)		
BC-709M	BARRIER TRANSITION CONNECTION PA TYPE 10M BRIDGE BARRIER MISC. DETAILS	12	OCT. 26, 2010	8C-755M 8C-757M	SIEEL PILE TIP REINFORCEMENTS &	3	OCT. 26.
BC-711M	ALUMINUM PROTECTIVE BARRIER	4	OCT. 26, 2010	00 1512	SPETCES	,	0011 201
BC-712M	THRIE BEAM TO PA BRIDGE BARRIER TRANSITION CONNECTION	2	OCT. 26, 2010	8C-762M	TOOTH EXPANSION DAM FOR PRESTRESSED CONCRETE & STEEL BEAM BRIDGES	7	OCT. 26,
BC-713M	PA BRIDGE BARRIER - MISCELLANEOUS DETAILS	13	OCT. 26, 2010	BC-766M	PREFORMED NEOPRENE COMPRESSION SEAL JOINT FOR APPROACH SLABS	2	OCT. 26,
BC-716M BC-718M	ALUMINUM PEDESTRIAN RAILING ALTERNATE RAILING DETAILS	2	OCT. 26, 2010 OCT. 26, 2010	BC-767M	NEOPRENE STRIP SEAL DAM FOR PRESTRESSED CONCRETE & STEEL I-DEAM BRIDGES	6	OCT. 26,
BC-719M	TEMPORARY CONCRETE BARRIER. STRUCTURE MOUNTED	8	OCT. 26, 2010	8C-772M	PRESTRESSED CONCRETE BEAM BRACING	5	OCT. 26,
BC-720M	ALUMINUM OR STEEL BRIDGE HAND RAILING	'	OCT. 26, 2010	BC-775M	MISCELLANEOUS PRESTRESS DETAILS	3	OCT. 26,
BC-721M BC-722M BC-723M	ELECTRICAL DETAILS LIGHTING POLE ANCHORAGE BRIDGE ANTI-(CING SYSTEM	2 2 10	OCT. 26, 2010 OCT. 26, 2010 OCT. 26, 2010	BC-776M	GROUND MOUNTED SOUND BARRIERS PRECAST CONCRETE PANELS	7	OCT. 26,
BC=731M	CEMENT CONCRETE SLOPE WALL	10	OCT. 26, 2010	8C-777M	GROUND MOUNTED SOUND BARRIERS PRECAST CONCRETE POSTS	12	OCT. 26,
BC-732M BC-734M	PERMANENT METAL DECK FORMS ANCHOR SYSTEMS	4	OCT. 26, 2010	8C-778M	GROUND MOUNTED SOUND BARRIERS STEEL POSTS	10	OCT. 26,
BC-735M BC-736M	WALL CONSTR. & EXP. JOINT DETAILS REINFORCEMENT BAR FABRICATION	1 1 3	OCT. 26, 2010 OCT. 26, 2010 OCT. 26, 2010	8C-779M 8C-780M	STRUCTURE MOUNTED SOUND BARRIER WALLS OFFSET SOUND BARRIER WALLS	9 8	OCT. 26,
BC-739M	DETAILS	2	OCT. 26, 2010	BC-781M BC-782M	RANDOM STONE SLOPE WALL	1	OCT. 26, OCT. 26,
BC-139M	TYPE F-BRIDGE BARRIER TO GUIDE RAIL TRANSITION	2	OCT. 26, 2010	BC-782M BC-783M	GABION SLOPE WALL DETAILS REINFORCED CONCRETE REPAIR	2	OCT. 26,
BC-741M	OVERHEAD SIGN STRUCTURES-CANTILEVER & CENTER-MOUNT STRUCTURES STRUT	6	OCT. 26, 2010	BC-788M	TYPICAL WATERPROOFING AND	11	OCT. 26,
BC-742M	LENGTHS UP TO 12 192 (40°) OVERHEAD SIGN STRUCTURES-TAPERED TUBE STRUCTURES SPANS FROM	6	OCT. 26, 2010	BC-794M	EXPANSION DETAILS UTILITY ATTACHMENT & SUPPORT	1	OCT. 26,
BC-743M	9 144 TO 24 384 (30'-80') OVERHEAD SIGN STRUCTURES-2 POST PLANAR TRUSS SPANS FROM	10	OCT. 26, 2010	BC-795M	DETAILS, PRESTRESSED BRIDGES GENERAL NOTES AND LEGENDS FOR SOIL/ROCK DESCRIPTION	3	OCT. 26.
BC-744M	9 144 TO 30 480 (30'-100') OVERHEAD SIGN STRUCTURES-2 POST & 4 POST TRI-CHORD TRUSS SPANS FROM	12	OCT. 26, 2010	8C-798M	MECHANICAL CONNECTION DETAILS	2	OCT. 26,
BC-745M	18 288 TO 73 152 (60' TO 240') OVERHEAD SIGN STRUCTURES-4 POST 4 CHORD TRUSS SPANS FROM	10	OCT. 26, 2010	8C-799M	MECHANICALLY STABILIZED EARTH RETAINING WALLS	13	OCT. 26,
BC-747M	30 480 TO 60 960 (100' TO 200') MONOPIPE SIGN STRUCTURES	5	OCT. 26, 2010	01.1	on desired		

Standard Drawings – Traffic

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION



TRAFFIC CONTROL - PAVEMENT MARKINGS AND SIGNING STANDARDS
PUBLICATION 111M
TC-8600 AND TC-8700 SERIES

BUREAU OF HIGHWAY SAFETY AND TRAFFIC ENGINEERING

PUB 111M (5-07) Including Changes 1, 2 & 3

MAY 2007

Standard Drawings – Traffic

- TC-8600
 - o Pavement markings
 - o Snowplowable raised pavement markers
 - Delineators
- TC-8700
 - o Highway signing
 - Sign lighting

Lesson 1.2 B.P. Stds - Std Draw.

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Standard Drawings – Traffic

```
INDEX OF TRAFFIC CONTROL - PAVEMENT MARKINGS AND SIGNING STANDARDS
STANDARD DRAWING NO.
                                    DATE
                                                                     DESCRIPTION
★ TC-8600 (11 SHEETS)
                                  JUN. 23, 2009
                                                         PAVEMENT WARKINGS (EXPESSWAY / FREEWAY, CONVENTIONAL, LEGENDS & SYMBOLS)
# TC-8602 (4 SHEETS)
                                  JUN. 23, 2009
                                                         SNOWPLOWABLE RAISED PAVEMENT WARKERS
* TC-8604 (4 SHEETS)
* TC-8700C (18 SHEETS)
                                  JUN. 23. 2009
                                                        SPACING CHARTS / DIRECT APPLIED LETTERS. NUMERALS & ARROWS
* TC-8701A (7 SHEETS)
                                                        ADVANCE SIGNING FOR INTERCHANGES
                                  JUN. 23, 2009
  TC-8701D (9 SHEETS)
TC-8701E (2 SHEETS)
                                  MAR. 18, 2008
WAY 25, 2007
                                                        SIGN DETAILS / FREEWAY & EXPRESSWAY GUIDE SIGNS
                                                        EXTRUDED ALUMINUM CHANNEL SIGNS
  TC-8701P (2 SHEETS)
TC-8701R (2 SHEETS)
                                  WAY 25, 2007
                                                        FREEWAY & EXPRESSWAY ADVANCE SIGNING FOR PARKING AREAS
                                                        FREEWAY & EXPRESSWAY ADVANCE SIGNING FOR REST AREAS
                                  WAY 25, 2007
  TC-8701S (4 SHEETS)
TC-8701W (2 SHEETS)
                                                        FLAT SHEET ALUMINUM SIGNS WITH EXTRUDED ALUMINUM STIFFENERS
FREEWAY & EXPRESSWAY ADVANCE SIGNING FOR WELCOME CENTERS
                                  JUL.18, 2008
                                  MAY 25, 2007
  TC-8702A (8 SHEETS)
                                  MAY 25, 2007
                                                         POST-MOUNTED SIGNS, TYPE A
  TC-8702B (9 SHEETS)
                                  MAY 25, 2007
                                                        POST-MOUNTED SIGNS, TYPE B
  TC-8702C (2 SHEETS)
                                                         POST-MOUNTED SIGNS, TYPE C
  TC-8702D (2 SHEETS)
                                  MAY 25, 2007
                                                        POST-MOUNTED SIGNS. TYPE D
  TC-8702E (5 SHEETS)
TC-8710 (1 SHEET)
                                  MAY 25, 2007
MAY 25, 2007
                                                        POST-MOUNTED SIGNS, TYPE E
DISTANCE MARKERS
TC-8715 (5 SHEETS)
* TC-8716 (1 SHEET)
* TC-8717 (1 SHEET)
                                 MAY 25, 2007
JUN. 23, 2009
JUN. 23, 2009
                                                        SIGN LIGHTING
TYPE 111 BARRICADE
TEMPORARY PORTABLE SIGN POST, "H" BASE AND "X" BASE
                                                                                               PLE. 111W. WAY 2007 SDITION

SEE CHANGE *1 FOR WAR. 18, 2008 STANDARD REVISIONS
SEE CHANGE *2 FOR JAN. 18, 2008 STANDARD REVISIONS
$ SEE CHANGE *1 FOR JAN. 21, 2008 STANDARD REVISIONS
```

Standard Drawings – Traffic Signal

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION



pennsylvania

DEPARTMENT OF TRANSPORTATION

TRAFFIC STANDARDS - SIGNALS
TC-8800 SERIES

BUREAU OF HIGHWAY SAFETY AND TRAFFIC ENGINEERING

PUB. 148 (10-10)

67

1.2 – BID PACKAGE STANDARDS

STRIKE-OFF LETTERS

Lesson 1.2 B.P. Stds – SOL

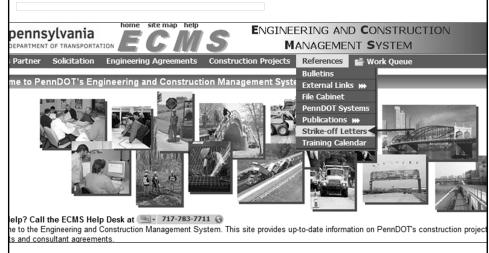
Strike-Off Letters

- Issued by Deputy Secretary & Directors in Highway Administration
- Written change to:
 - o Policy
 - o Specification
 - o Standard

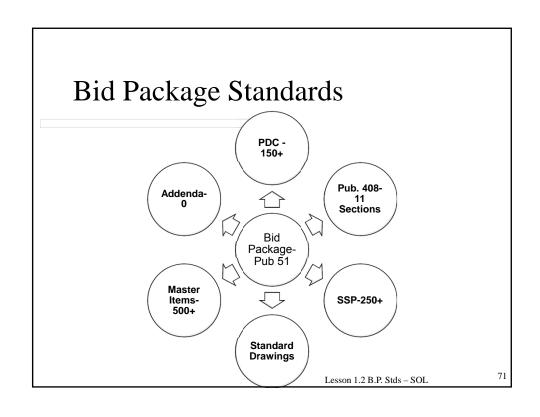
Lesson 1.2 B.P. Stds - SOL

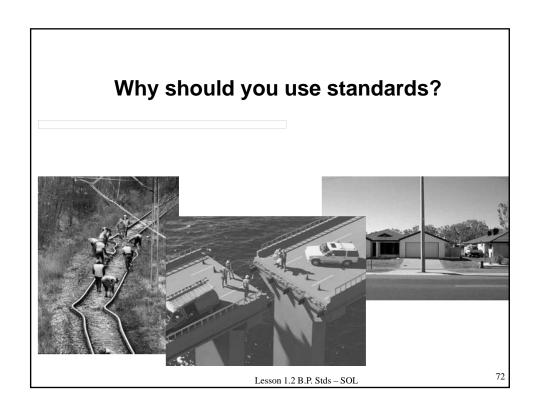
69

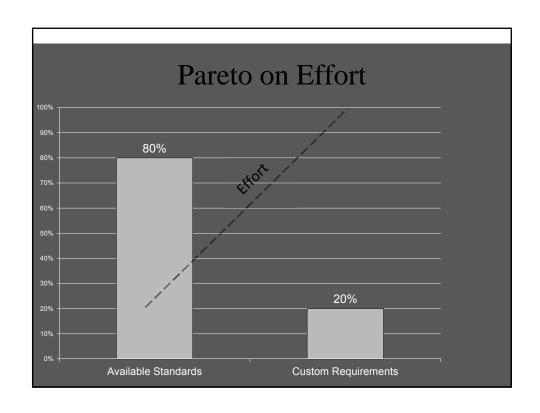
Strike-Off Letters – Access



Lesson 1.2 B.P. Stds – SOL







1.3 – BUSINESS RULES

Basic Rules

- Use as much of Pub. 408 as possible
- Use standard Items as much as possible
- Do not repeat anything
- Use Standard Special Provisions when required
- Be consistent!

Lesson 1.3 Business Rules

75

Project Manager 1. Develops PS& E Package District Contract Management Engineer 2. Assembles Bid Package Central Office Contract Development and Award 3. Reviews Bid Package FHWA 4. Reviews Bid Package Central Office Contract Development and Award 5. Publishes Bid Package

Bid Package Process

- Assembly / Review
 - o Plans
 - o Items
 - Special Provisions
 - o Estimate

Lesson 1.3 Business Rules

7

Project-Specific Special Provisions



Lesson 1.3 Business Rules

Project-Specific Special Provisions

- Use in unique situations
- Develop for non-standard work, material, sequence or others
- Not to personalize

Lesson 1.3 Business Rules

79

Project Timeline (minimum durations) Bid Advertisement Bid Pkg. Review Notice to Proceed PS&E Pkg. Bid Pkg. Preparation Letting • 6 Thursday weeks • 5 weeks 3 weeks District CM Project prior to Letting Date prior to Letting weeks weeks prior to Letting prior to Letting C.O. review date date sent to District CM Lesson 1.3 Business Rules

Project Timeline

Table 9.1 - Project Publish (Advertisement)

District Publish	Central Office Publish			
Actual Advertisement Period	Deadline for submittal of project to Central Office for review	Actual Advertisement Period		
5 Weeks prior to Let Date	7 Weeks prior to Let Date	5 Weeks		
N/A	8 Weeks prior to Let Date	6 Weeks		
N/A	12 Weeks prior to Let Date	7 Weeks		
	Actual Advertisement Period 5 Weeks prior to Let Date N/A	Actual Advertisement Period Deadline for submittal of project to Central Office for review 7 Weeks prior to Let Date N/A 8 Weeks prior to Let Date		

^{*} minimum 3 week advertisement

Lesson 1.3 Business Rules

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Contract

ECMS Highway Construction Contract 57764

Contract

Addendum issued subsequent to the printed proposal have been incorporated into the text of this contract and the modified portions are annotated in the contract - e.g., A1, A2 etc.

Incorporated Addenda are As follows:

Addendum No. 1, A1. dated 07/27/2009

Addendum No. 2, A2, dated 08/24/2009
Addendum No. 3, A3, dated 08/27/2009

THIS AGREEMENT, Made this 30 day of September A.D. 2009, between the Commonwealth of Pennsylvania by the Secretary of Transportation, hereinafter called the Commonwealth and his, his, hers, its or their execution, administrators, successors, or assigns, hereinafter called the Contractor.

- That the Contractor, for and in consideration of the payment or payments herein specified and agreed to by the Commonwealth, hereby covenants and agrees to furnish and deliver all the materials and to do and perform all the work and labor in the improvement of a certain section of highway at the <u>unit prices bill by a said</u> Contractor for the respective estimated quantities aggregating approximately the sum of such other items as are mentioned in the Contractor's original proposal, which proposal and prices halfmed, together with Publication 409/2007-4. Specifications (as specified in the proposal), are made a part of this contract and accepted as such, also the drawings of the project, prepared and/or approved by the Department of Transportation, which drawings are also agreed by each party as being a part hereof.
- 2. The location and description being situated as follows:
 This project consists of the rehabilitation of the George Wade Bridge and other miscellaneous construction, all as indicated on the approved drawings included in the Bid Package for STATE ROUTE 0081. SECTION 042, in CUMBERLAND & DAUPHIN COUNTIES, EAST PENNSBORO & SUSQUEHANNA TOWNSHIPS, and the CITY OF HARRISBURG, from Segment 06340635 Offset 1047/1295 to Segment 0670/0671 Offset 0427/0226, for an overall project length of 18,125.61 linear feet (3.433 miles).
- 042/10/20s, for an overall project length of 18,12s.51 linear reet (3.43.5 miles).

 3. The Contractor further covenants and agrees that all work shall be performed in the best and most workmanike manner. He also agrees that all materials turnished and labor performed shall be in strict and complete conformity, in every respect, with all parts of this contract and shall be subject to the inspection and acceptance of authorized representatives of the Department of Transportation. In the event that any portion of work (including materials supplied pursuant thereto) performed by the Contractor is rejected by the Department's authorized representatives as defective, unsuitable, or unacceptable, the Contractor agrees to remove and replace all such rejected portions of work in conformance with this contract and to the salisfaction on full for all labor and materials used in the performance of work on this project.

September 30, 2009 16:26:21 PM

1.4 – ROLES AND RESPONSIBILITIES

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District & Central Office

- District Project Manager
- Designer / Consultant
- District Contract Management
- Central Office, CDAS

Lesson 1.4 Roles & Resp.

Project Manager

- Responsible for:
 - o Entire project
 - o Point of contact
 - o Project design team
 - o Policies conformance
 - PS & E package



Lesson 1.4 Roles & Resp.

85

Designer / Consultant

- Responsible for:
 - PS & E package preparation
 - o Construction schedule development

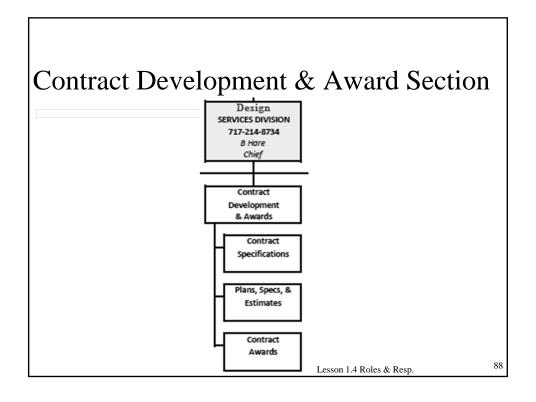


Lesson 1.4 Roles & Resp.

District Contract Management

- Responsible for:
 - PS & E package review
 - Bid Package assembly
- Expects information to be accurate

Lesson 1.4 Roles & Resp.



Contract Development & Award Section

- Responsible for:
 - o QC / QA of Bid Package
 - o Random PS & E check
 - $_{\circ}$ DBE goals / MPL
 - Advertisement
 - o Addenda
 - Estimates
 - Bid Lettings

Lesson 1.4 Roles & Resp.

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Contract Development & Award Section

- Expects Bid Package is:
 - Accurate
 - o Complete
 - Consistent
 - o Biddable

Lesson 1.4 Roles & Resp.

Importance of Accuracy

- Accurate bidding
- Equal chances
- Bid comparison
- Within budget
- Clear construction management



Lesson 1.4 Roles & Resp.

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Impact of Errors

- FHWA can withdraw funding
- Construction work orders cost \$
- Claims/disputes
- Other agencies can withdraw permits

92

Lesson 1.4 Roles & Resp.

Summary

- What are the contents of a Bid Package?
- What should you use to ensure Bid Package accuracy?

Lesson 1 - Bid Package Assembly

91

Summary

- Who is responsible for:
 - PS & E package?
 - Bid Package assembly?
 - Bid Package QC?

 $Lesson\ 1-Bid\ Package\ Assembly$

95	
~	_
	_

LESSON 2 – PLANS

9

What are Project Plans?

- Approved drawings for project construction that show:
 - o Location
 - o Quantities of work
 - Layouts
 - o Profiles
 - o Other



.

Lesson 2 - Plans

Topics Addressed

- 2.1 Roadway Plans
- 2.2 Supplemental Plans

Lesson 2 - Plans

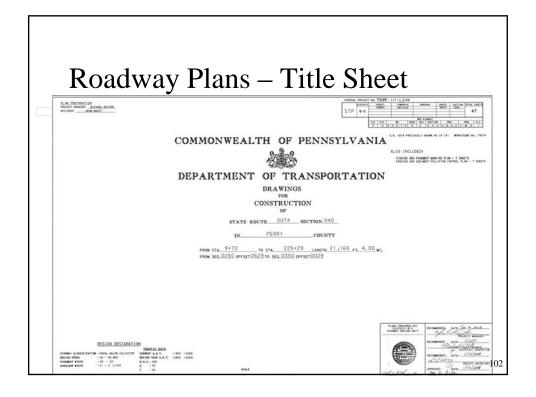
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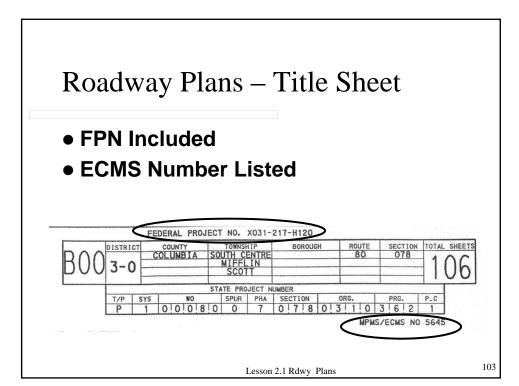
2.1 - ROADWAY PLANS

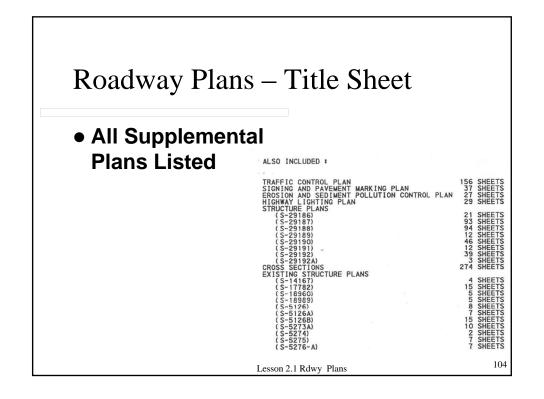
Roadway Plans

- Title Sheet
- Index Sheet
- Typical Sections & Details
- Summary and Tab Sheets
- Plan Sheets

Lesson 2.1 Rdwy Plans







Roadway Plans – Title Sheet

Station & Segment Offset Match

STATE ROUTE 80 SECTION 078

COLUMBIA COUNTY, FROM WB STA 411+00.00 TO WB STA 832+00.00 LENGTH 20,550.00 FT 3.892 MI FROM SEG 2355 OFFSET 1954 TO SEG 2435 OFFSET 2450 FROM EB STA 415+00.00 TO EB STA 777+00.00 FROM SEG 2354 OFFSET 2281 TO SEG 2424 OFFSET 2249

STATE ROUTE 8006 STATE ROUTE 8008

PUC APPLICATION DOCKET NO A-2009-2114409

Lesson 2.1 Rdwy Plans

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Roadway Plans – Title Sheet

• Design Designation Matches

DESIGN DESIGNATION

MEDIAN

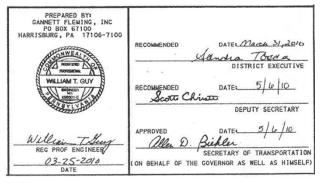
TRAFFIC DATA - 33,600 (2010) HIGHWAY CLASSIFICATION - RURAL INTERSTATE CURRENT ADT DESIGN SPEED - 70 MPH DESIGN YEAR ADT - 70,348 (2035) PAVEMENT WIDTH - 2 2 24' DHV - 7,035 SHOULDER WIDTH - 12'-0" OUTSIDE D - 55%
- 8'-0" INSIDE T - 31%

- VARIES 43' TO 136'

Lesson 2.1 Rdwy Plans

Roadway Plans – Title Sheet

- Signed and Dated
- PE Seal and Signature Included



Lesson 2.1 Rdwy Plans

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Roadway Plans – Title Sheet

• Combined Projects

INDEX OF PLANS	
COMBINATION PLAN	2 SHEETS
SR 0036 SEC 07B	3 SHEETS
ALSO INCLUDED: EXISTING PROADBAY PLAN SR 0036 SEC. 02M EXISTING PROADBAY PLAN SR 0053 SEC. 015 STRUCTURE PLAN S-29881C EXISTING STRUCTURE PLAN S-1373 EXISTING STRUCTURE PLAN S-13479	
SR 0056 SEC 26B ALSO INCLUDED! EXISTING ROADBAY PLAN SR 0056 SEC. 010 STRUCTURE PLAN S-29921C EXISTING STRUCTURE PLAN S-17542	3 SHEETS 63 SHEETS 5 SHEETS 22 SHEETS
SR 9900 SEC 8P5 EXISTING STRUCTURE PLAN S-24840 EXISTING STRUCTURE PLAN S-17315 EXISTING STRUCTURE PLAN S-21541 EXISTING STRUCTURE PLAN S-14962A EXISTING STRUCTURE PLAN S-26357 EXISTING STRUCTURE PLAN S-26357 EXISTING STRUCTURE PLAN S-26357	10 SHEETS 10 SHEETS 26 SHEETS 53 SHEETS 27 SHEETS 22 SHEETS 12 SHEETS

Roadway Plans – Title Sheet

• Design-Build Projects

```
ALSO INCLUDED:

CONCEPTUAL TRAFFIC CONTROL PLAN 5 SHEETS
CONCEPTUAL EROSION AND SEDIMENT POLLUTION CONTROL PLAN 3 SHEETS
CONCEPTUAL STRUCTURE PLANS 4 SHEETS
CONCEPTUAL CROSS SECTIONS 8 SHEETS
```

Lesson 2.1 Rdwy Plans

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Roadway Plans – Index Sheet

• Sheet Index Block

DESCRIPTION	SHEET
TITLE SHEET	1
INDEX MAP	2 - 3
LOCATION MAP AND GENERAL NOTES	4 - 5
RECORD OF EXISTING ROAD TYPES	6 - 8
PROJECT COORDINATES	9 - 10
REFERENCE CIRCLES	11 - 12
TRAVERSE COORDINATES	13
HORIZONTAL CURVE DATA	14 - 15
INTERCHANGE GEOMETRY SHEETS	16 - 17
TYPICAL SECTIONS	18 - 23
DETAILS	24 - 31
SUMMARY SHEETS	32 - 36
TABULATION SHEETS	37 - 66
PLAN AND PROFILE SHEETS	67 - 106
SUPPLEMENTAL PLANS	
TRAFFIC CONTROL PLAN	156 SHEETS
SIGNING AND PAVEMENT MARKING PLAN	37 SHEETS
EROSION AND SEDIMENT POLLUTION CONTROL PLAN	27 SHEETS
HIGHWAY LIGHTING PLAN	29 SHEETS
STRUCTURE PLANS	
(S-29186)	21 SHEETS
(S-29187)	93 SHEETS
(S-29188)	94 SHEETS
(S-29189)	12 SHEETS
(S-29190)	46 SHEETS
(S-29191)	12 SHEETS
(S-29192)	39 SHEETS
(S-29192A)	3 SHEETS
CROSS SECTIONS	274 SHEETS
EXISTING STRUCTURE PLANS	
(S-14167)	4 SHEETS
(S-17782)	15 SHEETS
(S-18960)	5 SHEETS
(S-18989)	5 SHEETS
(S-5126)	8 SHEETS
(S-5126A)	7 SHEETS
(S-5126B)	15 SHEETS
(S-5273A)	10 SHEETS
(S-5274)	2 SHEETS
(S-5275)	7 SHEETS
(S-5276-A)	7 SHEETS

Roadway Plans - Index Sheet

Public Utilities List



Roadway Plans – General Notes

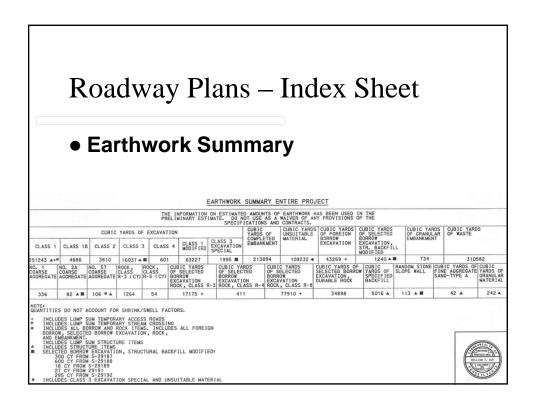
GENERAL NOTES

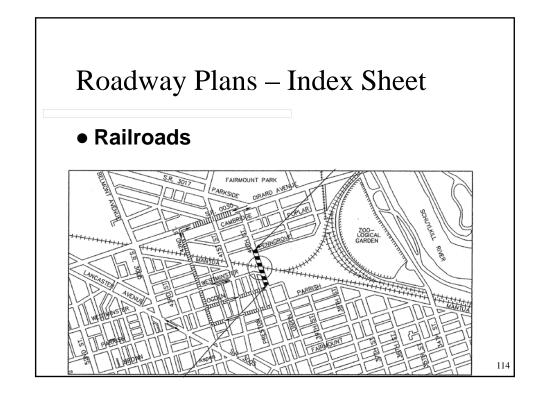
- Verify ROW
- Review notes
- Verify Pub. 408 reference
- Verify Standard Drawings

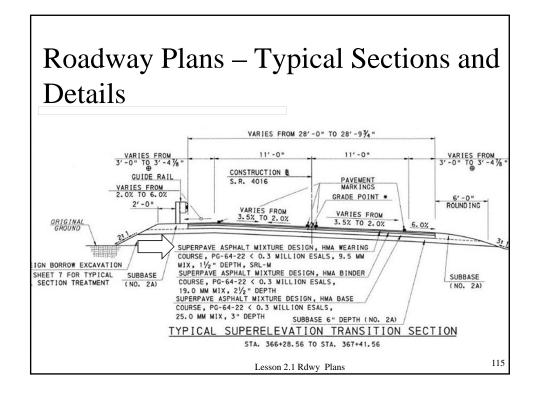
THE LEGAL RIGHT OF WAY ON S.R. 0074, FORMERLY KNOWN AS LR 191, 1S 33 FEET IN WIDTH FROM STA. 3+20 TO 5TA. 71+34 IN PERRYRY COUNTY, REVIEW OF JANUARY 1839, QUARTER SESSIONS DOCKED C. PG 31.

THE LEGAL RIGHT OF WAY ON S.R. 0074, FORMERLY KNOWN AS LR 191, 1S 35,5 FEET IN WIDTH FROM STA. 71+24 TO STA. 73+34 IN PERRYR RIGHT OF WAY ON S.R. 0074, FORWERLY KNOWN AS LR 191, 1S 35,5 FEET IN WIDTH FROM STA. 71+24 TO STA. 15+34 IN PERRYR RIGHT OF WAY ON S.R. 0074, FORWERLY KNOWN AS LR 191, 1S 35,5 FEET IN WIDTH FROM STA. 71+34 TO STA. 10+80 IN PERRY COUNTY, REVIEW OF JANUARY 1839, QUARTER SESSIONS DOCKED C., PG 31.

THE LEGAL RIGHT OF WAY ON S.R. 0074, FORWERLY KNOWN AS LR 191, 1S 35 FEET IN WIDTH FROM STA. 10+34 TO STA. 10+80 IN PERRY COUNTY, BASED ON RECORDS IN OFFICE OF CLERK OF COUNTS, PERRY COUNTY, BASED ON PECOROS IN OFFICE OF CLERK OF COUNTS, PERRY COUNTY, BASED ON PLAN FOR S.R. 0074, FORWERLY KNOWN AS LR 191, 1S VARIABLE IN WIDTH FROM STA. 10+00 TO STA. 145+95 IN PERRY COUNTY CO





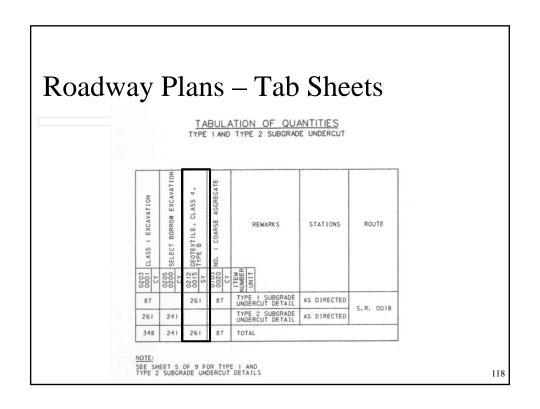


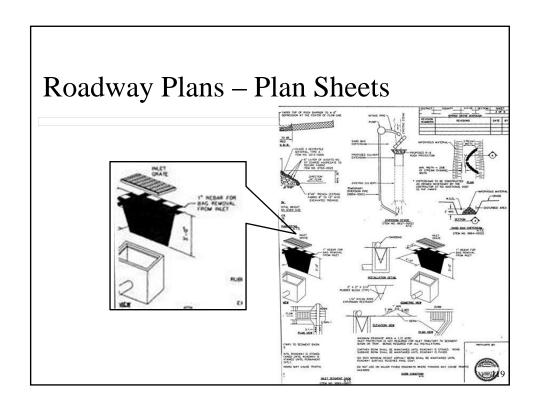
Roadway Plans – Typical Sections and Details

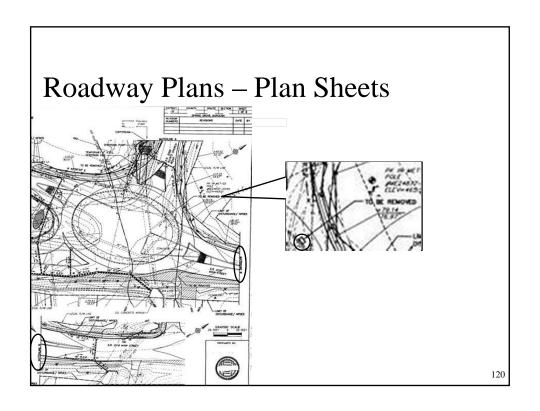
- Typical Pavement Sections
- Special Provisions
- Constructibility

Lesson 2.1 Rdwy Plans

u wa	ут	Plans – Sum	11110	пу	S II	
Qty	Ite	em # Description		Sheet #	+	
♦ - S E S	SPECIAL R	ovisions		SL	MMA	RY
QUANTI	ITEM	DESCRIPTION	DESIGN	FOR TAB SEE SHEET	QUANTITY	ITEM NO UNIT
348	0203 0001 CY	CLASS 1 EXCAVATION		7		
261	0205 0200 CY	SELECTED BORROW EXCAVATION		7		
261	0212 0015 SY	GEOTEXTILE, CLASS 4, TYPE B		7		
\searrow	0608 0001	MOBILIZATION	(NO TAB		
\times	0686 0051 LS	CONSTRUCTION SURVEYING, TYPE D		NO TAB	ν.	
\sim	0689 0002	NETWORK SCHEDULE		NO TAB		
	0703 0020	NO. 1 COARSE AGGREGATE		7		







Roadway Plans – Plan Sheets

- Right-of-Way and Easements
- Notes
- Constructibility of Plan

Lesson 2.1 Rdwy Plans

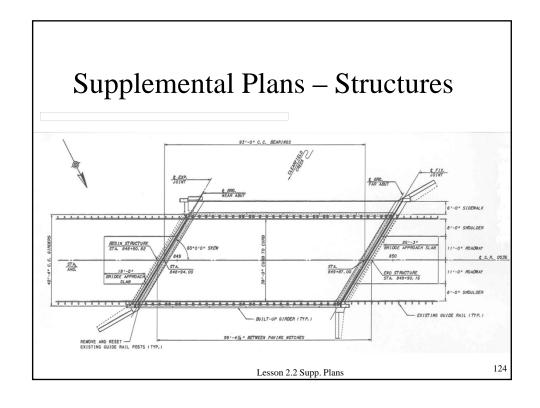
121

2.2 - SUPPLEMENTAL PLANS

Supplemental Plans

- Structure
- Traffic Control
- Erosion & Sedimentation Control
- Traffic Signal
- Utility Relocation

Lesson 2.2 Supp. Plans



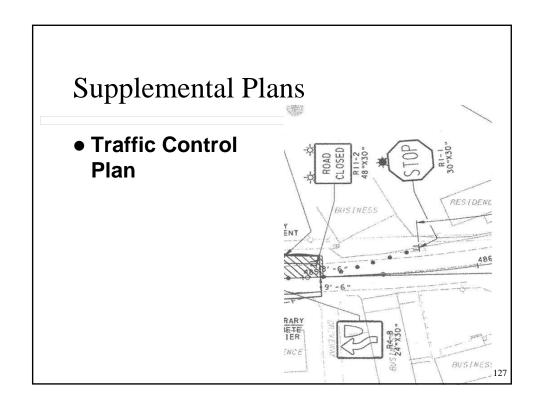
Supplemental Plans – Structures

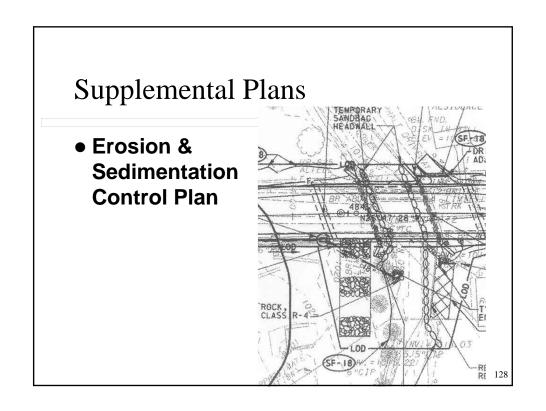
	TABULA	TION OF	BRIDGE BID ITEMS & APPROX	IMATE (QUANTI	TIES	
QUANTITY	I TEM NUMBER UNI T	INFORMAL QUANTITY & UNIT	DESCRIPTION	ABUT 1	ABUT 2	SUPER- STRUCTURE	MOMENT SLABS
EITHER LS	8010-0090 LS	BRIDGE ST	RUCTURE, AS DESIGNED, S-29190				
		150 CY	HIGH PERFORMANCE CONCRETE - SUPERSTRUCTURE (1)(3)(9)			133	17
		72 CY	CLASS AA CEMENT CONCRETE (9	3	3	9	57
		72 CY	CLASS A CEMENT CONCRETE	36	36		
		4 LS	STEEL BEAM TEST PILES, HP 10x57 (6	2 @ 67'	2 @ 67'		
		59 SY	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (EPOXY RESIN) (5)			59	-
		691 SY	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, REINF. CONC. SUBSTRUCTURE) (4)	279	295		117
		60 SY	MEMBRANE WATERPROOFING SYSTEM INSTALLED ON OTHER SURFACES	30	30		
-		308 LF	PRESTRESSED CONCRETE SPREAD BOX BEAMS, 48*x36*			308	
			Lesson 2.2 Supp. Plans		•		125

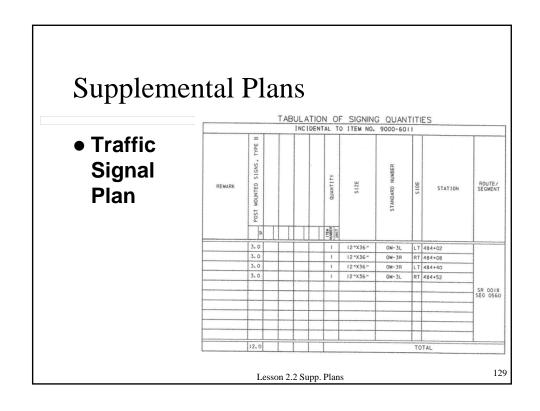
Supplemental Plans – Structures

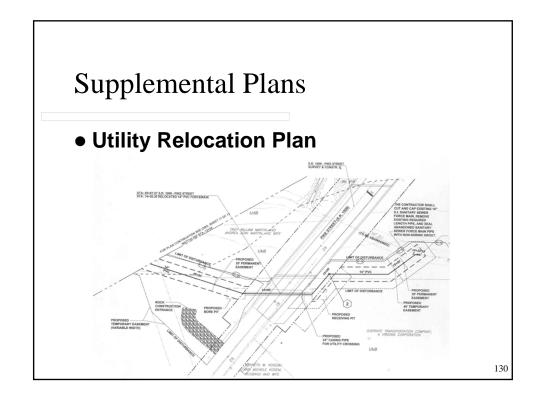
Seq	Item	Description	UoM	Quantity	Unit Price	Total	WCC
10		HIGH PERFORMANCE CONCRETE - SUPERSTRUCTURE	CY	150.000			S1
20	1001-0001	CLASS AA CEMENT CONCRETE	CY	72.000			S , S1 , S2
30	1001-0010	CLASS A CEMENT CONCRETE	CY	72.000			S , S1 , S2
40		STEEL BEAM TEST PILES, HP 10 X 57, ABUTMENT 1, 2 @ 67'	LS	1.000			U
50		STEEL BEAM TEST PILES, HP 10 X 57, ABUTMENT 2, 2 @ 67'	LS	1.000			U
60	1019-0020	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (EPOXY RESIN)	SY	59.000			G1 , K2 , S
70	1019-0040	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, REINFORCED CONCRETE SUBSTRUCTURE SURFACES)	SY	691.000			G1 , K2 , S
80	0680-0121	MEMBRANE WATERPROOFING SYSTEM INSTALLED ON OTHER SURFACES	SY	60.000			K2 , S1
90	1080-0441	PRESTRESSED CONCRETE SPREAD BOX BEAMS, 48" X 36"	LF	308.000			S1

Lesson 2.2 Supp. Plans









Summary

- What is on the Title Sheet?
- Where do you check for the correct Pub. 408 reference?

Lesson 2 - Plans

131

Summary

- What is the point of Supplemental Sheets?
- What are the types of Supplemental Plans?

Lesson 2 - Plans

LESSON 3 – DESIGN ITEMS AND FUND CODES

13

Topics Addressed

- 3.1 Standard Items
- 3.2 Modified Items
- 3.3 8000 Items
- 3.4 9000 Items
- 3.5 Fund Codes

FOR MORE INFO...

Review Publication 51, Chapters 1 and 5

3.1 - STANDARD ITEMS

13

Standard Item Numbers

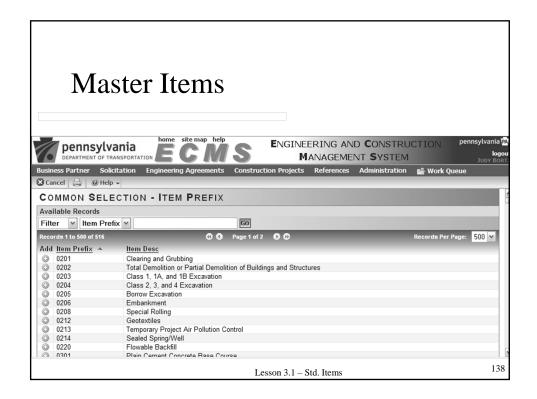
- Begin with 0 or 1 for English projects; 2 or 3 for Metric projects
- Items that can be constructed with information in Pub. 408
- May have Special Provision provided it does not:
 - o Revise measurement of item
 - Add or subtract costs to contractor for item

 $Lesson\ 3.1-Std.\ Items$

Standard Item Numbers

0804-0012SEEDING AND SOIL SUPPLEMENTS - FORMULA CLB2804-0012SEEDING AND SOIL SUPPLEMENTS - FORMULA CKG1002-0053REINFORCEMENT BARS, EPOXY COATEDLB3002-0053REINFORCEMENT BARS, EPOXY COATEDKG

Lesson 3.1 – Std. Items



3.2 – MODIFIED ITEMS

139

Modified Item Numbers

- Begin with 4 or 5 for English projects;
 6 or 7 for Metric projects
- Items that can be constructed with information in Pub. 408
- Cannot have revised unit of measure
- Require Special Provision describing unique work to project
- Cannot change Description other than adding "modified"

Lesson 3.2 - Mod. Items

Modified Item Numbers

4804-0012 SEEDING AND SOIL SUPPLEMENTS - FORMULA C, MODIFIED LB
6804-0012 SEEDING AND SOIL SUPPLEMENTS - FORMULA C, MODIFIED KG
5002-0053 REINFORCEMENT BARS, EPOXY COATED, MODIFIED LB
7002-0053 REINFORCEMENT BARS, EPOXY COATED, MODIFIED KG

Lesson 3.2 - Mod. Items

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3.3 – 8000 ITEM NUMBERS

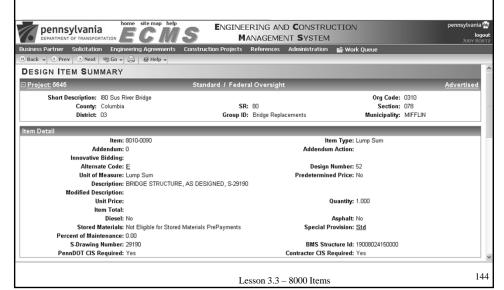
8000 Item Numbers – Structures

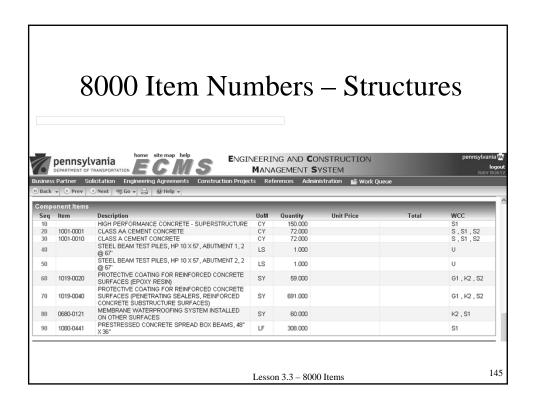
- Construction item numbers require Contractor-supplied Component Item Schedule
- As-designed structures require PennDOTsupplied Component Item Schedule
- Specific numbers identify type of structure to be built
- Require a Special Provision
- Unit of measure is Lump Sum

Lesson 3.3 - 8000 Items

143

8000 Item Numbers – Structures





3.4 – 9000 ITEM NUMBERS

9000 Item Numbers – Non-Standard

- Require Special Provision
- Review following attributes:
 - Unit of Measure
 - Work Class Codes
 - Pre-determined Price

Lesson 3.4 - 9000 Items

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9000 Item Numbers – Unit of Measure

9866-0002 Linear Foot 113.000 TEMPORARY DIVERSION BARRIER M2

ITEM 9866-0002 - TEMPORARY DIVERSION BARRIER Provision Body:

<u>DESCRIPTION</u> - This work is the furnishing, placing, maintaining, and removing temporary barriers.

MATERIAL -

Precast Concrete Median Barrier - Section 714

Polyethylene, 6 mil - AASHTO - M171.

Fine Aggregate - Section 703.1.

Bags - Polypropylene or acrylic material.

<u>CONSTRUCTION</u> - Construct as indicated on the Construction Plans and as follows:

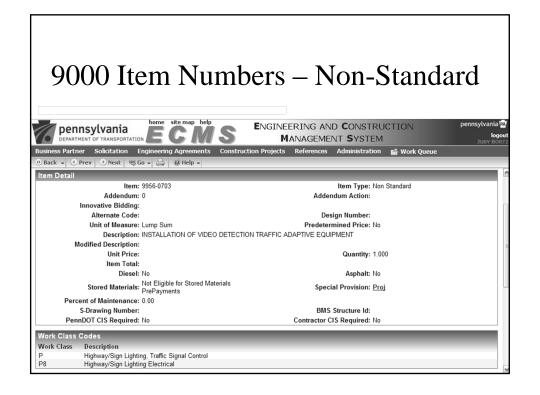
Maintain the barrier as required to construct the project. Relocate barrier during construction operations as required. Upon notification, remove the barrier, restore the area to its original condition, and suitably dispose of material removed.

MEASUREMENT AND PAYMENT - Linear Foot.

148

Lesson 3.4 – 9000 Items

9000 Item Numbers – Work Class Codes 9866-0002 Linear Foot 113.000 TEMPORARY DIVERSION BARRIER M2 Roadside Landscaping M М1 Selective Tree Removal, Trimming Silt Barrier Fence, Gabions, Erosion Control **M2 M3** Seeding and Soil Supplements Ν **Building Construction and Related Trades N1 Related Building Trades** Miscellaneous X **Project Preparation and Miscellaneous Maintenance Type Services** Ζ ZZ **Specialty Item Prequal Exempt** 149 Lesson 3.4 - 9000 Items



Hierarchy of Items

- Items Catalog first
- Modified Items
- Project-specific Items

Lesson 3.4 - 9000 Items

151

Items Check

- Compare Design Items to Summary Sheet
- Compare Special Provision indicators to Summary Sheet
- Verify Item numbers
- Check quantity of 4804 Items
- Lump Sum items require estimate breakdown

Lesson 3.4 - 9000 Items

3.5 - FUND CODES

FOR MORE INFO...

Review Publication 51, Chapter 5, Section F

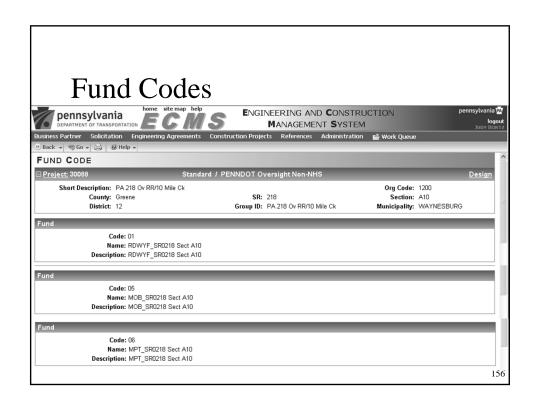
15

Fund Codes

- Define categories of work
- Allow information to be reported to FHWA
- Determine costs for specific elements of project
- Represent specific combination of funding
- Link to each Design Item

 $Lesson\ 3.5-Fund\ Codes$

nd Codes – Name Pi	∙ofiv
	CHA
FUND CODE NAME PREFIX CHART (Pul). 51, Sec. 5.7
CATEGORY OF WORK	PREFIX
Roadway – Federal Funding involved	RDWYF_
Roadway – Local Funding	RDWYL_
Roadway – 100% State	RDWYS_
Structures - Bridge	STRB_S-XXXXX
Structures - Culvert	STRC_S-XXXXX
Structures - Walls	STRW_S-XXXX
Structures – Tunnels	STRT_S-XXXXX
Structures - Signs	STRS_S-XXXXX
Utilities	UTL_
Construction Engineering	CENG_
Trainees	TRN_
Mobilization	MOB_
Maintenance and Protection of Traffic	MPT_
Design-build design activities – excluding quality assurance by peer review	DES_
Design-build, quality assurance by peer review	DESQA



Fund Codes – Roadway Items

- RDWYF
 - o Mainline roadway items with federal funding
- RDWYS
 - 100% State funded items on Federal-Aid project
 - o Mainline roadway items with state funding
- RDWYL
 - Work funded by local funds

Lesson 3.5 – Fund Codes

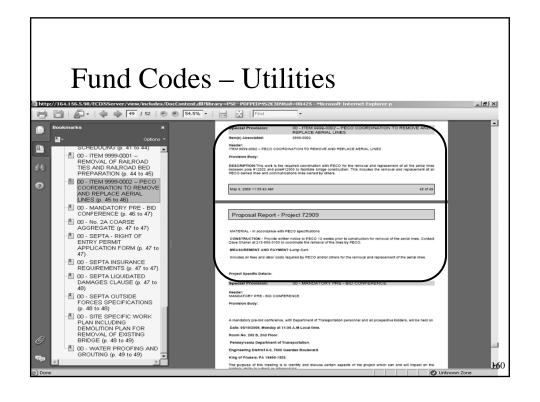
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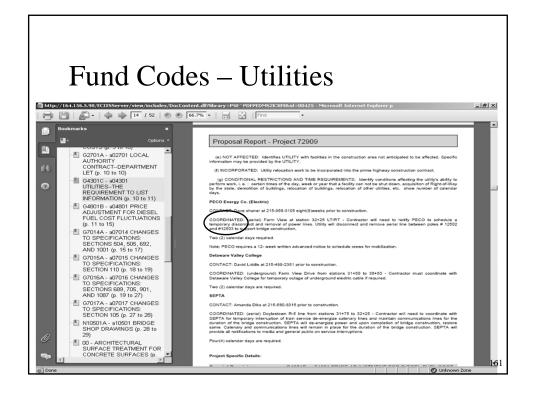
Fund Codes – Structures

- Each structure requires fund code
- Name prefix identifies type of structure and also includes structure number
- Name Prefixes are:
 - STRB
 - STRC_
 - STRW
 - STRT_
 - STRS

 $Lesson\ 3.5-Fund\ Codes$

Fund Codes — Utilities Name Prefix = UTL_ Utility "incorporated" work as designated on D-419 Two-digit code designated based on type of utility and % of reimbursement for Item Code: 50 Name: UT_50 SANITARY SEWER RELOCATION Description: Sanitary Sewer Relocation - Incorporated Work Lesson 3.5 - Fund Codes





Fund Codes – Construction Engineering

- Name Prefix = CENG_
- Percentage of cost can be covered by federal funding.
- Most common items covered by federal funding:
 - o Core Borings
 - Inspector's Field Office and Inspection Facilities
 - Field Laboratory
 - Microcomputer w/ battery backup systems

 $Lesson\ 3.5-Fund\ Codes$

Fund Codes – Trainees

- Name Prefix = TRN_
- If trainees required, separate fund code required
- Item Numbers
 - o Federal projects 1999-9999 (E) / 3999-9999 (M)
 - o State projects 1999-0000 (E) / 3999-0000 (M)

Lesson 3.5 - Fund Codes

163

Fund Codes – Mobilization

- Name Prefix = MOB_
- Two options:
 - o Create separate fund code, OR
 - Allocate appropriate portion to roadway and structure fund codes

 $Lesson\ 3.5-Fund\ Codes$

Fund Codes - Maint./Protection Traffic

- Name Prefix = MPT
- Two options:
 - Create separate fund code, OR
 - Allocate appropriate portion to roadway and structure fund codes



Lesson 3.5 - Fund Codes

165

Fund Codes – Design-Build Design

- Design-related Items of Design-Build project
- Can use same fund code, except for QA by peer review
- DES_ = Design activities (excluding QA by peer review)
- DESQA_ = QA elements of project

Summary

- Why should you use the Master Items List?
- How can you identify a non-standard Item number?

Lesson 3 – Design Items

167

Summary

- What is an Item Number starting with a "4" and what does it need?
- With which Item Numbers is it possible to change Measurement and Payment?

Lesson 3 - Design Items

LESSON 4 – OTHER TOPICS

16

Topics Addressed

- 4.1 DBE/MBE/WBE
- 4.2 Trainees
- 4.3 Project Information
- 4.4 Structures
- 4.5 Project Team

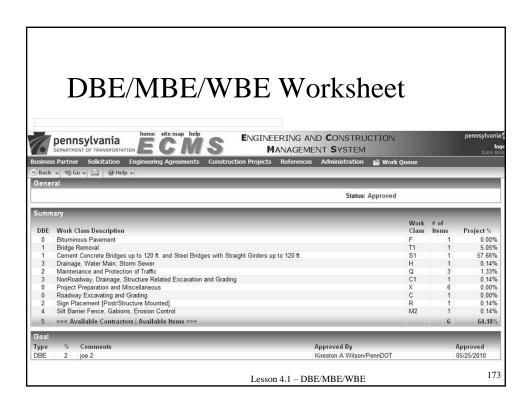
4.1 – DBE / MBE / WBE

171

DBE / MBE / WBE Goal

- Verify goal was approved
- Verify approved goal entered in Governing Specification under appropriate DSP

 $Lesson\ 4.1-DBE/MBE/WBE$



4.2 – TRAINEES

Trainee Worksheet

- Complete for projects with estimate over \$3 million
- Requires separate fund code
- Link to PDC; not included in Bid Package

Lesson 4.2 - Trainees

175

Trainee Worksheet

OISTRICT 12-0 ECMS # 2-99-15

USE THE FOLLOWING TO DETERMINE THE NUMBER OF TRANSES

> \$1004 = 2 Trainese
> \$1004 = 3 Trainese
> \$1004 = 3 Trainese
| \$1004 =

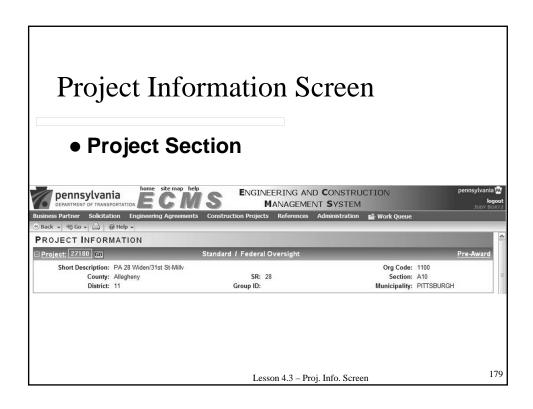
4.3 - PROJECT INFORMATION

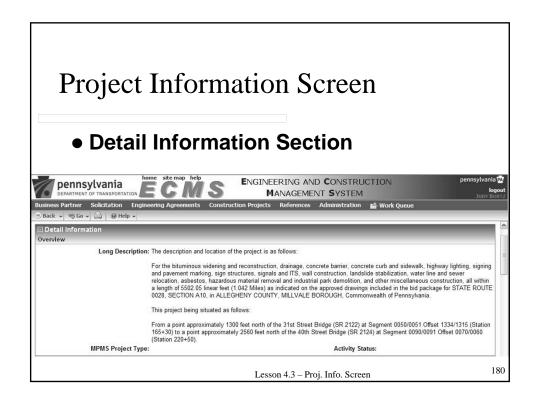
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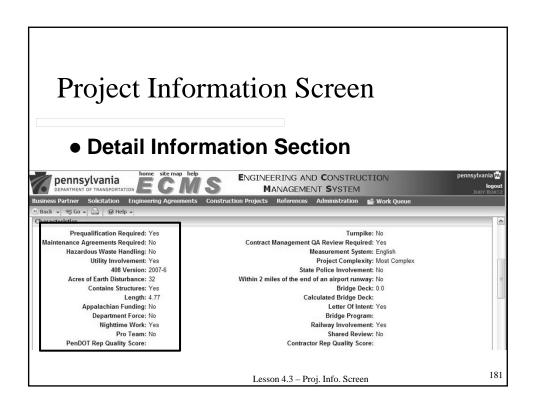
Project Information Screen

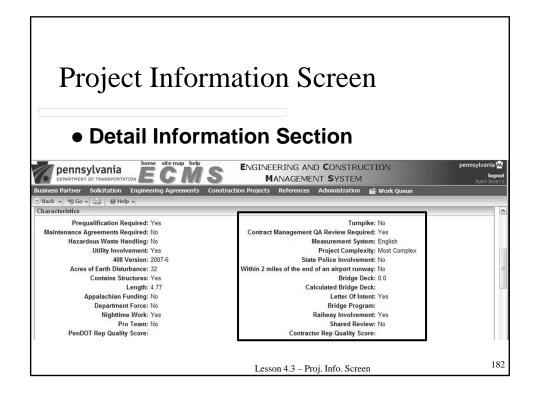
- Project
- Detail Information
- Schedule Information
- Financial Information
- Minority Information

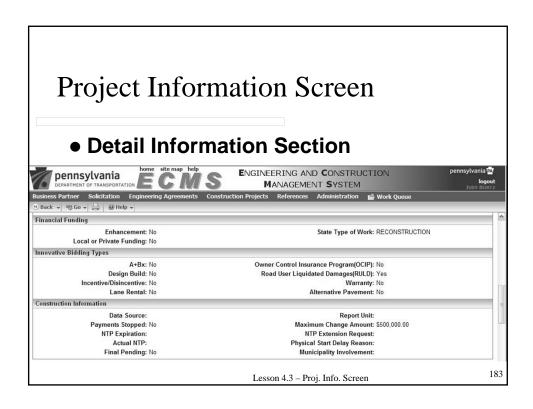
Lesson 4.3 – Proj. Info. Screen

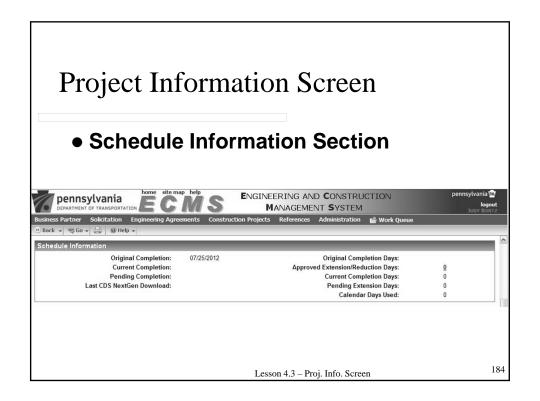


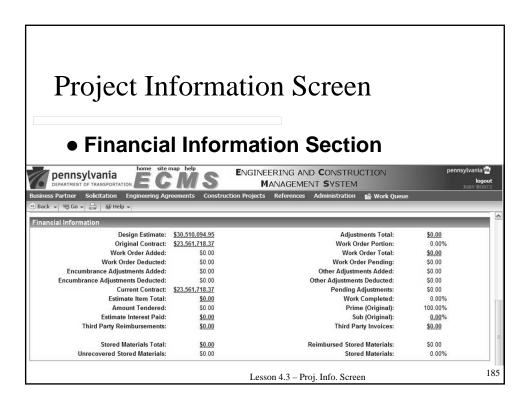


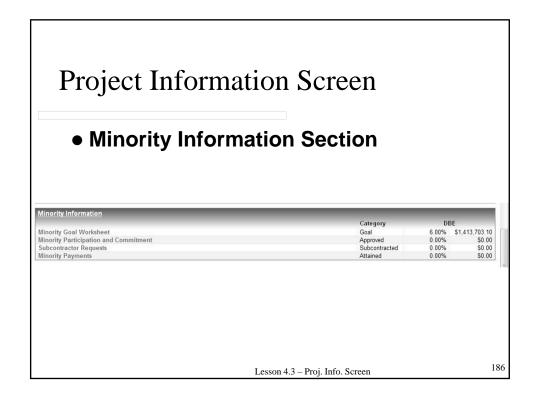












4.4 – STRUCTURES

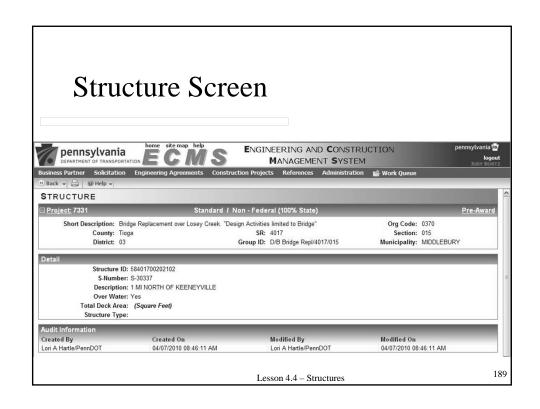
18

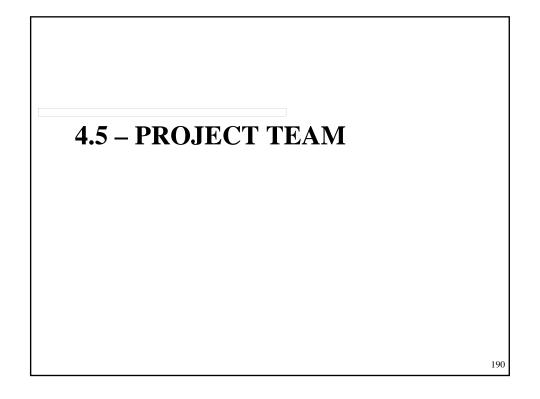
Structures Screen

• S-Number

- Match Plans, Design Items, and Special Provision
- On construction drawings not existing plans
- Design-Build project S-number may not be available until later

 $Lesson\ 4.4-Structures$





Project Team

• Design Team

o Add Central Office unit head and reviewer

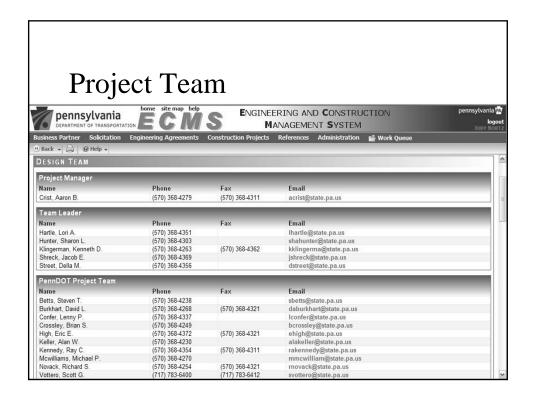
FHWA

Add Area Engineer for Federal Oversight projects

Business Partners

 Add municipality or other third party contributor for municipal projects

Lesson 4.5 - Project Team



Summary

- A trainee worksheet is required for projects over \$____?
- Which ECMS Screen indicates the Publication 408 version?

Lesson 4 - Other Topics

193

		195
		196

LESSON 5 – ATTACHMENTS

19

Topics Addressed

- 5.1 Items to Include
- 5.2 Items to Exclude

FOR MORE INFO...

Review Publication 51, Chapter 4
Publication 51, Exhibit 4D – List of Attachments

What is an Attachment?

- Documents not in other Bid Package components
 - Relevant to construction and administration of work
- Necessary information for contractor

199

5.1 – ITEMS TO INCLUDE

Include – Wages

- Wages
 - o State
 - Federal
 - Heavy ConstructionWage Rates



Lesson 5.1 Items Include

201

Davis-Bacon Act Provisions

- Federal-aid contracts within right-of-way exceeding \$2,000
- Not required for projects on local roads or rural minor collectors
- Non-highway construction projects are subject to Davis-Bacon and Contract Work Hours

Lesson 5.1 Items Include

Include – Attachments

- Standard Attachments
 - Publication 51, Exhibit 4D List of Attachments

Lesson 5.1 Items Include

203

Include – Environmental Permits

• Environmental Permits



- Submission of Bid Package certifies that all necessary permits have been obtained, OR
- No permits are required

2007

Include – Construction Schedule

- Pre-Bid Construction Schedule
 - Several formats
 - Shows project completion within timeframe
 - o Review out of season work
 - Critical component of construction documents

Lesson 5.1 Items Include

205

5.2 – ITEMS TO EXCLUDE

Exclude

- D-419
- Estimates
- Confidential Documents
- Correspondence
- Pre-Bid Meeting Minutes



Lesson 5.2 Items Exclude

207

Summary

- What is an example of an attachment to a Bid Package?
- What is an example of an attachment to exclude from a Bid Package?

Lesson 5 - Attachments

LESSON 6 – ADDENDA

20

Topics Addressed

- 6.1 General Information
- 6.2 Bidders' Questions and Responses
- 6.3 Addenda Screens
- 6.4 Addenda Components

FOR MORE INFO...

Review Publication 51, Chapter 2

6.1 – GENERAL INFORMATION

21

What is Addenda?

- Change to Bid Package
- Part of contract
- An inconvenience for bidders
- Should be exception, not the rule!

Lesson 6.1 Addenda Gen. Info.

General Information

- Result of:
 - Lack of, or unclear, information in bid package
 - o Mistakes in quantity computations
 - Inconsistencies between Pub. 408 and bid package
 - Discrepancies between plans & proposal report
 - o Bidders' questions

Lesson 6.1 Addenda Gen. Info.

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General Information

- Every effort made to reduce / eliminate need for addenda
- Prepare and review with original rules

.

Lesson 6.1 Addenda Gen. Info.

General Information

Approvals

o Same level of approvals required

Lesson 6.1 Addenda Gen. Info.

215

General Information

Timeframes

- Minimally, publish 7 calendar days before bid opening
- Execute Rules due 72 hours before bid opening
- Within 3 days of Let Date, delay bid opening or Let as is
- o Allow 3 business days for FHWA approval

 $Lesson\ 6.1\ Addenda\ Gen.\ Info.$

6.2 – BIDDER'S QUESTIONS & RESPONSES

21

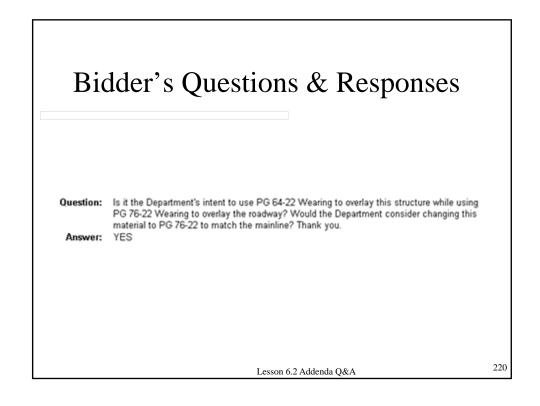
Bidder's Questions & Responses

• ECMS Q & A

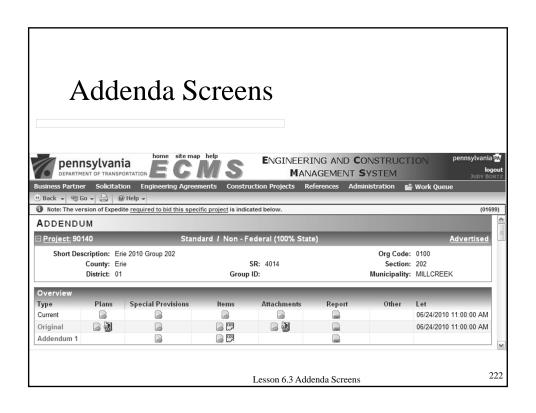
- Prior to 11 a.m. Monday before bid opening
- o No verbal responses
- Answer within 2 business days (1.5 days before bid opening)
- o Brief and clear answers
- Only addenda change Bid Package

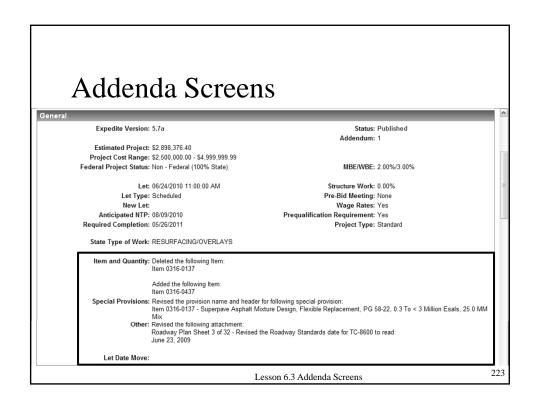
Lesson 6.2 Addenda Q&A

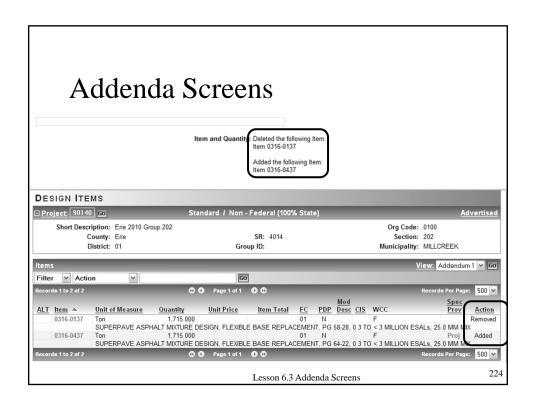
Business Partner Solication Employers Agreements Construction Projects References Administration Work Queue Wo

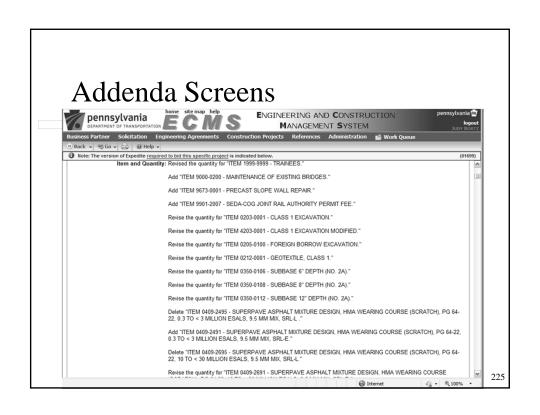


6.3 –ADDENDA SCREENS









6.4 –ADDENDA COMPONENTS

Addenda – Plans

- Minor revisions noted in Other section
- Major revisions require new sheet
- Whenever possible, follow Plan Revision Procedures in DM-1A
- Include note:

"Revised plan sheets will be given to the successful bidder at the Pre-Construction conference."

Lesson 6.4 Addenda Comp.

227

Addenda – Special Provisions

- List brief revisions on Special Provision block on Addendum screen
- Add/delete Items link Special Provisions
- Show revisions in bold
- Obtain approvals

Lesson 6.4 Addenda Comp.

Addenda – Special Provisions

The Representative reserves the right to order an inspection dewatering and manual cleaning/inspection or by diving or other acceptable methods if this procedure does not obtain the appropriate information.

2. Drilled Shaft Side Integrity Inspection (RQD Requirements).

Determine the Rock Quality along each drilled shaft using a downhole camera and/or other means considered appropriate by the Representative.

Provide full time inspection services with personnel qualified as PENNDOT Level 2 Drilling Inspectors to log the RQD.

June 4, 2010 14:11:46 PM

Page 18 of 58

ADDENDUM Report - Project 69245

Furnish the downhole camera and accessories to PennDOT District 12-0 after the drilled shafts have been accepted. Using the downhole camera, observe and complete a Field Boring Log in accordance with Publication 222 and BC-795M for each drilled shaft including elevations, material type, RQD, weathering, etc. Compare with subsurface boring information.

Lesson 6.4 Addenda Comp.

229

Addenda – Items & Quantities

- List Design Item revisions on both Items and Addendum screen
- Add/delete associated Special Provisions
- Avoid small quantity changes that do not affect unit cost or project design

Lesson 6.4 Addenda Comp.

Addenda – Attachments

- Permits
- Pre-bid Schedule
- Wages
 - o Federal: within 10 calendar days of Let
 - State: awarded within 120 days of wage determination date
- Refer to Attachments in Spec. Prov.

FOR MORE INFO...

on wages, refer to Publication 51, Chapter 4

Lesson 6.4 Addenda Comp.

231

Addenda – Other

- Milestone Dates revised, review other dates
- Pre-Bid Meeting added, ensure adequate time

232

Lesson 6.4 Addenda Comp.

Summary

- How can a bidder clarify the information in the Bid Package?
- What is addenda?

Lesson 6 - Addenda

233

	225
	235
	236

LESSON 7 – SPECIAL PROVISIONS

23

What is a Special Provision?

 Additions and revisions to Standard Specifications covering conditions pertaining to an individual project.

 $Lesson\ 7-Spec.\ Prov.$

Golden Rules



- Consistency, consistency, consistency
- Don't reinvent the wheel

 $Lesson\ 7-Spec.\ Prov.$

220

Classes of Special Provisions

- Publication 408 changes
- Standard Special Provisions
- Project Specific Special Provisions

 $Lesson\ 7-Spec.\ Prov.$

Standard Special Provisions

• Pub. 408 Changes

G	a07022 CHANGES TO SPECIFICATION: SECTION 107	These changes are to Section 107.	Α
G	a07026 CHANGES TO SPECIFICATIONS: SECTIONS 107, 601, AND 609	These changes are to Sections 107, 601 and 609. For use on projects let on or before October 1, 2010.	В
G	a07027 CHANGES TO SPECIFICATIONS: SECTION 608	These changes are to Sections 608. For use on projects let on or before August 5, 2010.	Α
G	a07028 CHANGES TO SPECIFICATIONS: SECTION 1105	For use on all projects. For use on projects let on or before March 31, 2011.	Α

Lesson 7 - Std. Spec. Prov.

241

Order of Use

- 1. Publication 408 and Changes
- 2. Standard Special Provisions
- 3. Project Specific Special Provisions

242

 $Lesson\ 7-Spec.\ Prov.$

7.1 – STANDARD SPECIAL PROVISIONS

24

Standard Special Provisions

Five different indices:

- G General Provision
- N -
- S -
- I –
- P –

Lesson 7.1 – Std. Spec. Prov.

Standard Special Provisions

Five different indices (cont'd):

- G -
- N − Non Pay
- S Section Related
- I -
- P -

Lesson 7.1 - Std. Spec. Prov.

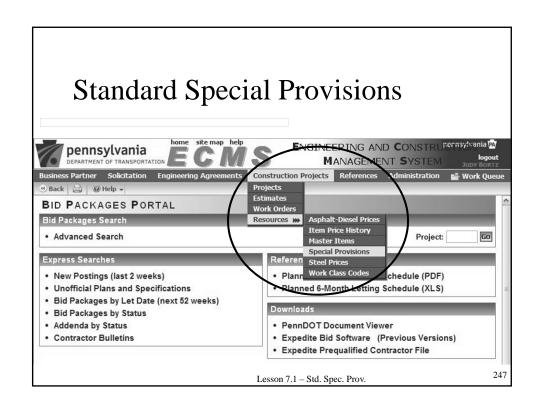
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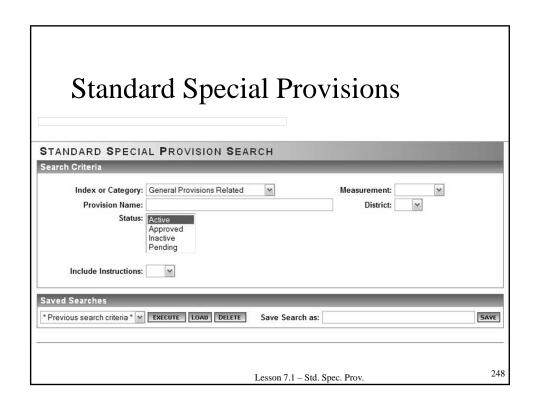
Standard Special Provisions

Five different indices (cont'd):

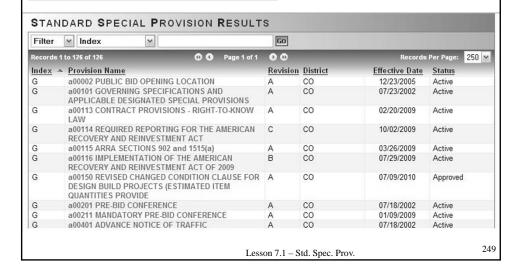
- G -
- N -
- S -
- I Item Related
- P Provisional

 $Lesson\ 7.1-Std.\ Spec.\ Prov.$





Standard Special Provisions



Standard Special Provisions

- Approved through transmittal process
- Approved by FHWA
- Always use a Central Office Standard Special Provision, when applicable

 $Lesson\ 7.1-Std.\ Spec.\ Prov.$

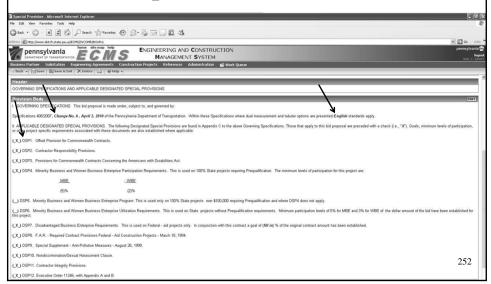
Standard Special Provisions - Customized

- Complete with project-specific details
 - Example: a00101 Governing Specification (DSPs)

Lesson 7.1 - Std. Spec. Prov.

25

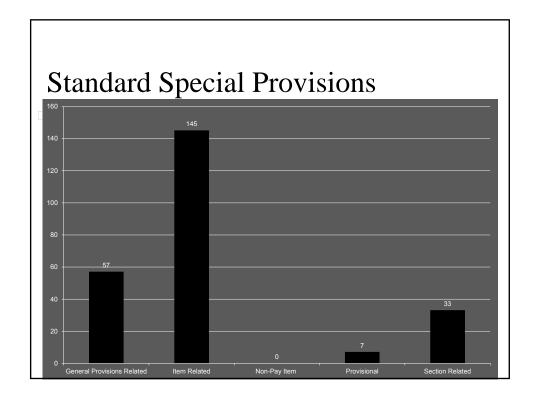
Standard Special Provisions



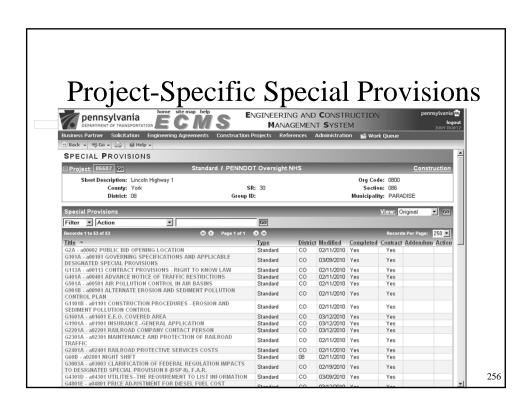
CLASS EXERCISE – DSP WORKSHEET

 $Lesson\ 7.1-Std.\ Spec.\ Prov.$

25.



7.2 – PROJECT SPECIFIC SPECIAL PROVISIONS



Format

- o Follow Publication 408 basic format
- Written in imperative mood, active voice, gender neutral
- o Correct grammar and punctuation
- Acceptable and fair to both Department and Contractor

FOR MORE INFO...

Review Publication 51, Chapter 1, Section E.3

Lesson 7.2- Proj. Spc. Std. Spec. Prov.

257

Project-Specific Special Provisions

- Format 5 C's
 - o Clear
 - o Concise
 - o Complete
 - Correct
 - Consistent



258

Lesson 7.2-Proj. Spc. Std. Spec. Prov.

- Suggested Principles
 - o Prepare outline
 - o Each requirement definite and complete
 - Avoid conflicting requirements
 - Do not give reasons nor suggestions
 - Specify standard sizes and approved material
 - Avoid repetition

Lesson 7.2- Proj. Spc. Std. Spec. Prov.

259

Project-Specific Special Provisions

- Suggested Principles (cont'd)
 - o Do not impose harsh / unfair conditions
 - o Avoid long and cumbersome sentences
 - Use complete sentences
 - Do not cover more than 1 item, requirement in a single paragraph
 - Have all specifications reviewed and approved

260

Lesson 7.2- Proj. Spc. Std. Spec. Prov.

- Suggested Principles (cont'd)
 - Avoid words:

mustas needed

if requiredreasonable

if applicablein order to

shouldas per

shall

Lesson 7.2- Proj. Spc. Std. Spec. Prov.

261

Project-Specific Special Provisions

- Technical Review
 - o Innovative Bidding Techniques
 - o Deviations from current policy
 - Complements contract drawings and attachments
 - \circ Pays for work described
 - No internal conflicts
 - Meets state and federal requirements

Lesson 7.2- Proj. Spc. Std. Spec. Prov.

- Technical Review Description
 - o Work is sufficiently described

Lesson 7.2- Proj. Spc. Std. Spec. Prov.

263

Project-Specific Special Provisions

- Technical Review Material
 - Identify materials needed to complete work



Lesson 7.2-Proj. Spc. Std. Spec. Prov.

- Technical Review Construction
 - Reference publications
 - o Implementation difficulties
 - o Scheduling difficulties



Lesson 7.2- Proj. Spc. Std. Spec. Prov.

265

Project-Specific Special Provisions

- Technical Review Measurement and Payment
 - Unit of measure matches Design Item unit
 - Included / Excluded work descriptions
 - o Method and timing of payments
 - o Quantity equals actual estimate

Lesson 7.2- Proj. Spc. Std. Spec. Prov.

845.4 MEASUREMENT AND PAYMENT— Dollar

- The proposal will include an item and a predetermined amount of money for Unforeseen Water Pollution Control. The contract item will have a unit of measure of Dollar, a unit price of \$1.00, and a quantity equal to the predetermined amount.
- Due to the contingent or unpredictable nature of the work being performed, the provisions of Section 110.02(d) are not applicable to this item.
- Measured and paid for, under the Unforeseen Water Pollution Control item as follows:
- (a) Contract Items. The Department will pay for performance of work, identified as having similar items listed in the contract, at the contract unit price.
- (b) Non-Contract Items. The Department will pay for items of work not identified in the contract as follows:
- Negotiated Price. At price agreed upon with the Department before performing the work. If applicable, agreement is also required with FHWA.
- 2. Force Account Basis. Section 110.03(d)

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Lesson 7.2- Proj. Spc. Std. Spec. Prov.

Project-Specific Special Provisions

• Considerations:

- Conditions
 - Cost/Bid Price of an item
 - Construction Schedule
- Restrictions
 - Implementation difficulties
 - Enforceability difficulties

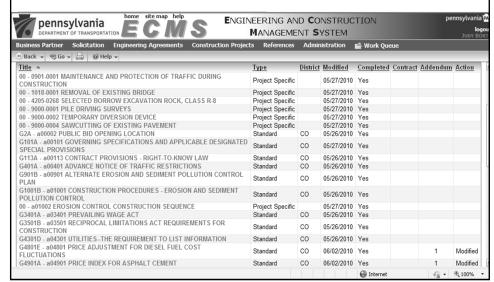
Order of Special Provisions

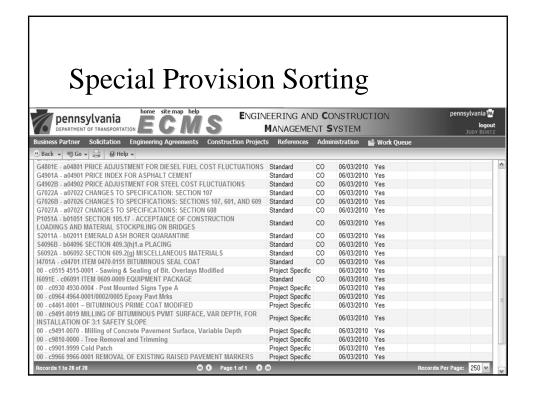
- By Word Title / Header
- By Section Title / Header
- By Item Title / Header

Lesson 7.2- Proj. Spc. Std. Spec. Prov.

269

Special Provision Sorting





Design-Build Special Provisions

- Special Bidding
- Design Activities Qualifications and Requirements
- Engineering Involvement Restrictions
- Right-of-Way Design and Acquisition Services
- Utility Relocation Information

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Lesson 7.2- Proj. Spc. Std. Spec. Prov.

Summary

- What is the purpose of a Special Provision?
- What are the classes of a Special Provision?

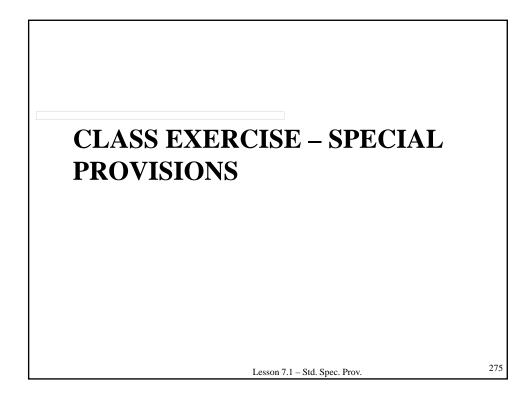
Lesson 7 - Spec. Prov.

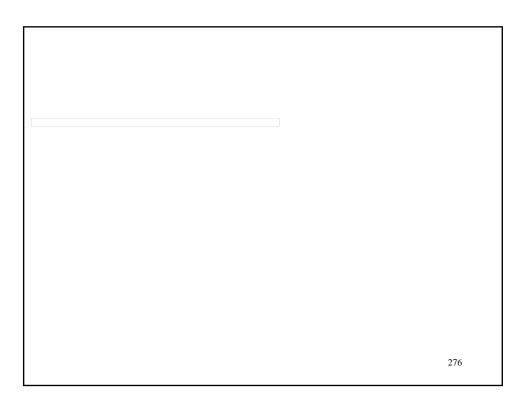
273

Summary

- What are the 5 indices of Standard Special Provisions?
- In what mood and voice are Special Provisions written?

Lesson 7 - Spec. Prov.





LESSON 8 – PROJECT DEVELOPMENT CHECKLIST

27

Topics Addressed

- 8.1 Introduction
- 8.2 PDC Categories
- 8.3 Project Condition
- 8.4 Execute Rules

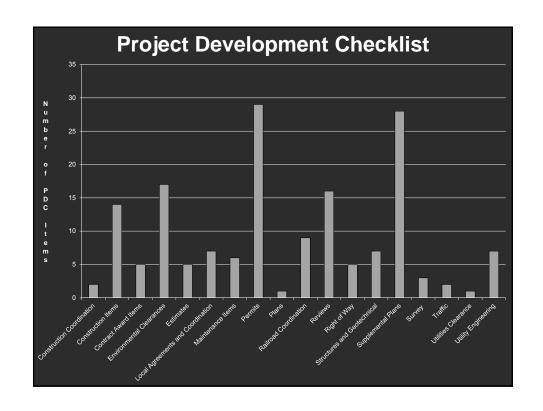
8.1 - INTRODUCTION

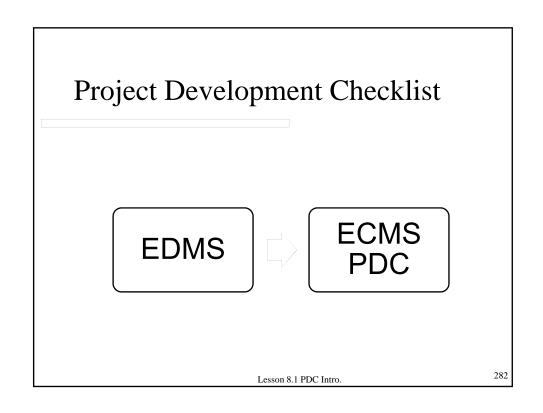
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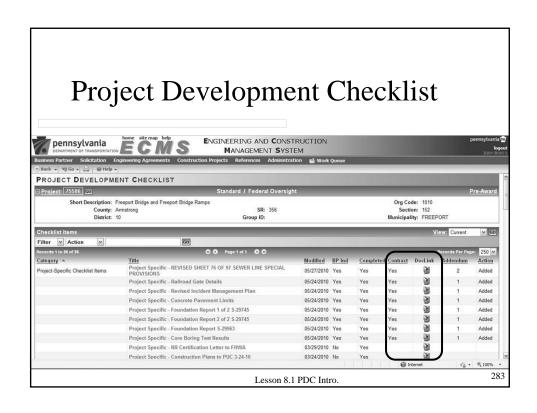
Introduction

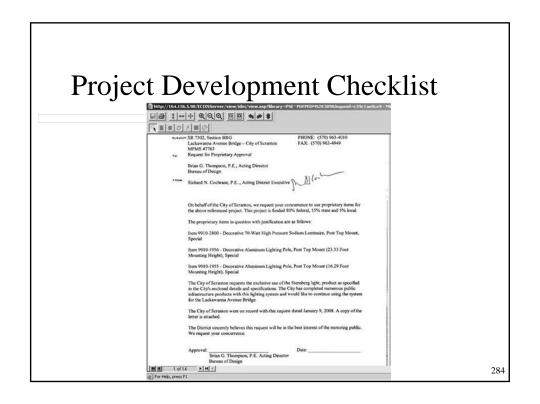
- PDC is organizational tool
- Who uses it?
 - o District Project Manager
 - ${\color{gray}\circ} \ \textbf{District Contract Management staff}$
 - o Central Office Contract Management staff

Lesson 8.1 PDC Intro.









8.2 - PDC CATEGORIES

28

PDC Categories

- Project-Specific Checklist Items
- Reviews
- Contract Award Items
- Local Agreements and Coordination
- Environmental Clearances
- Permits

PDC Categories (cont'd)

- Plans
- Supplemental Plans
- Right of Way
- Survey
- Utilities Clearance
- Utility Engineering
- Construction Items

Lesson 8.2 PDC Categories

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PDC Categories (cont'd)

- Structures and Geotechnical
- Railroad Coordination
- Traffic
- Construction Coordination
- Maintenance Items
- Estimates

Lesson 8.2 PDC Categories

Project-Specific Items

- Items unique to project
 - In reviewing, consider how items are used on a project
 - Cannot conflict with plans, specifications, Special Provisions, or Department policy

Lesson 8.2 PDC Categories

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Project Reviews

- All concerns addressed in Bid Package
- Check reviews were conducted
 - o Constructability Review
 - o Engineering and Environmental Scoping Field View
 - Design Field View
 - o Final Design Office Meeting
 - o Final Plans (Construction) Review
 - o PS & E Review (Certification List, Pub. 51, Exh. 3B)
 - o Safety Review
 - o Value Engineering Review

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Lesson 8.2 PDC Categories

Contract Award Items

- LLL Form Disclosure of Lobbying Activities
- Wages
- Trainee Worksheet



Lesson 8.2 PDC Categories

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Permits / Environmental Clearances

- Permits
 - As per Design Manual
 - Review permit
- Environmental Clearances
 - As per Design Manual

Lesson 8.2 PDC Categories

Plans / Supplemental Plans

- Refer to Publication 51
 - details on how to submit plans for inclusion in EDMS
 - instruction on obtaining PennDOT Secretary signature
- Plans are included in Bid Package

Lesson 8.2 PDC Categories

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Right-of-Way

- Clearance Certificate
- After 1/1/2011, no conditional clearances

Lesson 8.2 PDC Categories

Right-of-Way (cont'd)

- Special Provision
- Plans
- Notice to Proceed Date

Lesson 8.2 PDC Categories

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Utilities Clearance

- Utilities Clearance
 - o **D-419**
 - Plans Coordination
 - Special Provision
 - Design Items
 - Schedule
 - Document
 - **Outility Agreement**
 - o Private Utilities
 - O Utilities for PennDOT-owned utilities

 Lesson 8.2 PDC Categories



Utility Engineering

- Utility Clearance Assurance Letter
 - Attached through UR-EDMS
 - Federal Oversight projects before project submitted to FHWA
 - PennDOT oversight projects before project is Let

Lesson 8.2 PDC Categories

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Construction Items

- Design Exceptions
- D4332 Pavement Design
- Pre-bid Construction Schedule
- Proprietary Item Approval
- Material Retention
- Experimental Item Approval

Lesson 8.2 PDC Categories

Construction Items (cont'd)

- Salvage Credit Approval
- Warranties
- Pre-bid Meeting Minutes
- Inspector's Field Office and Inspection Facilities
- RULD

Lesson 8.2 PDC Categories

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Structure and Geotechnical

- Structure Policy Letters
 - o Contractor designed item
 - o Should be included in Bid Package
 - Special Provision



Lesson 8.2 PDC Categories

Railroad Coordination

- Plans
- Coordinate with Grade Crossing Unit
- Special Provisions
- Attachments
- Project Information Screen
- Project Development Checklist

Lesson 8.2 PDC Categories

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Traffic Coordination

- Plans
- Special Provisions
- Attachments
- Project Development Checklist

Lesson 8.2 PDC Categories

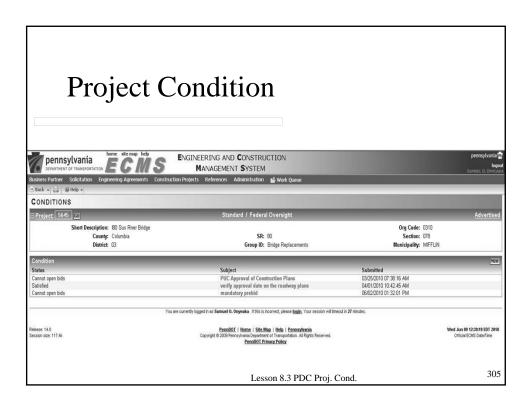
Estimates

- Estimates
 - 4232 Approval
 - Do <u>not</u> publish a project without 4232 approval
 - o Goal
 - Estimate within ±10% of low bid

Lesson 8.2 PDC Categories

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8.3 - PROJECT CONDITION



8.4 – EXECUTE RULES

Execute Rules

- Powerful tool used during Bid Package preparation
 - o Conditions / requirements met
 - o Run at various levels
 - o Advances to next level

Lesson 8.4 PDC Exec. Rules

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Execute Rules – Levels

- Submit Package (or Addendum)
- Publish Package (or Addendum)
- Open Bids
- Award Contract
- Issue NTP
- Finalization

Lesson 8.4 PDC Exec. Rules

Execute Rules – Errors

- All errors cleared to advance
 - o Fix error
 - o Override error
 - Requires Central Office Approval

Lesson 8.4 PDC Exec. Rules

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Execute Rules – Warnings

- Warnings
 - o Not necessary to clear to advance
 - o Flag inconsistencies
 - o Indicate possible future errors

Lesson 8.4 PDC Exec. Rules

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Execute Rules – Warnings

```
M W Project conditions simil with a status of Cannot Open Blate.

While School Control Control
```

Lesson 8.4 PDC Exec. Rules

Execute Rules – Escalation

- Escalation of Rules
 - o E/Y: warning overrideable error
 - o E/N: warning error not overrideable

Lesson 8.4 PDC Exec. Rules

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Summary

- What is the purpose of the PDC?
- What feature in ECMS checks that all conditions and requirements have been met for Letting?

Lesson 8 - PDC

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LESSON 9 – OBSTACLES TO LETTING

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Obstacles to Letting

- DBE / MBE / WBE
 - Goal on Bid Package screen must match Governing Specification
- Municipal / Local
 - o Executed agreement attached to PDC
 - o Registered business partner
 - o Include standard Special Provision

Lesson 9 Obstacles to Letting

Mandatory Pre-Bid

- o If checked on Bid Package screen:
 - Include pre-bid Special Provision
 - Attach list of contractors attending meeting to PDC

Lesson 9 Obstacles to Letting

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Obstacles to Letting

Mandatory Pre-Bid

Heade

MANDATORY PRE-BID CONFERENCE

Provision Body

A mandatory pre-bid conference, with Department of Transportation personnel and all prospective bidders, will be held on (<u>enter date</u> <u>here</u>) at (<u>enter time here</u>) Local Time, at the (<u>enter place, street address, city, state, and zip code here</u>), telephone number (<u>enter telephone number here</u>). The purpose of this meeting is to identify and discuss certain aspects of the project which can and will impact on the bidder's ability to submit an informed bid.

The bidder's attendance at this pre-bid conference is MANDATORY. If unable to attend the meeting in person, the bidder must send a duly authorized personal representative.

Failure of the bidder, or the bidder's accredited personal representative, to attend this pre-bid conference, and register with the Department official in charge of the meeting, will be cause for rejection of the bid proposal.

In compliance with the Americans with Disabilities Act of 1990, the Department has scheduled the pre-bid conference at a facility which is accessible to persons having disabilities. Any person having special needs or requiring special assistance is requested to contact (enter name of contact person here) at (enter telephone number here) by (enter date here), in order that special needs may be accommodated and/or assistance provided.

Direct any questions regarding the pre-bid conference to (enter name of contact person here) at (enter telephone number here).

Lesson 9 Obstacles to Letting

Reciprocal Limitations

- 100% state funded project, include standard Special Provision
- Any amount of federal funding, do not use Special Provision
- Emergency projects do not use Special Provision if any chance of applying for federal funds
- Lobbying
 - o Attach LLL Form for all federal projects

Lesson 9 Obstacles to Letting

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Obstacles to Letting

- Environmental Clearance
- Right-of-Way
 - Verify clearance level
 - o Verify attachment matches ECMS level

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Lesson 9 Obstacles to Letting

- Wages
 - o Federal wages
 - $\circ \, \textbf{State wages}$



Lesson 9 Obstacles to Letting

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Obstacles to Letting

- Project Description
 - No blank spaces
- Railroad
 - Include SSP if railroad insurance box checked
 - o Attach completed 4279A Form

Lesson 9 Obstacles to Letting

- Non-Override Errors
 - o Do not overlook
- Project Conditions
 - Placed on project ensuring item will be cleared

Lesson 9 Obstacles to Letting

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Summary

- How can federal wages be an obstacle to Letting?
- How can the DBE Goal information be an obstacle to Letting?

Lesson 9 Obstacles to Letting

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LESSON 10 – EMERGENCY & LOCAL PROJECTS

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10.1 - EMERGENCY PROJECTS

FOR MORE INFO...

Review Publication 51, Chapter 6
Review Publication 51, Appendix – Procedure for Declared Emergency
Review Publication 550, Disaster Recovery Manual

Emergency Projects

- FHWA Declared Emergency
 - o Follow Publication 550
 - o Follow Publication 51 Appendix

Lesson 10.1 Emer. Proj.

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Emergency Projects



• FEMA Emergency

Follow Publication550

Lesson 10.1 Emer. Proj.

Emergency Projects

- Types of Projects
 - o Federal ER Funds Emergency Repair
 - o Federal ER Funds Permanent Repair
 - o Federal Non-ER Funds
 - o 100% State Funded Projects

Lesson 10.1 Emer. Proj.

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Emergency Projects

- List of Requirements for Proposal/ Contract
 - Follow Publication 51, Appendix B, Procedure for Declared Emergency

Lesson 10.1 Emer. Proj.

10.2 - LOCAL PROJECTS

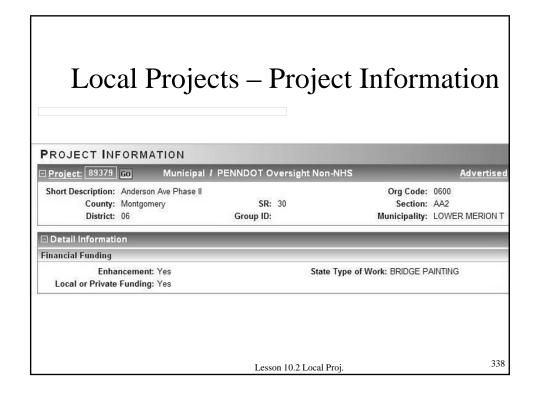
33

Local Projects

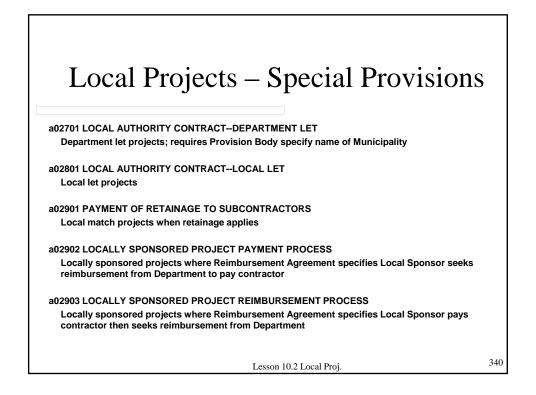
- Executed Agreement attached to PDC
- Project Information Screen
- Project Team
- Standard Special Provisions
- Funding

Lesson 10.2 Local Proj.

Local Projects — Agreement | STECTIVE DATE | 120/05 | AMBEDIONY NO. | 200/01 | PERMITTED NO. |



PROJECT TE	Local Projects – Project Team					
□ Project: 89379		I PENNDOT Oversight No	n-NHS	Advertise		
State of the Company	Anderson Ave Phase II Montgomery 06	SR: 30 Group ID:	Org Code: Section: Municipality:			
DESIGN TEAM						
Project Manager Name Coscia, John J. BUSINESS PAR	Phone (215) 238-285	Fax Email 9 jcoscie	ijr@dvrpc.org			
Construction Man	nagement	BP ID				
Contractor Team Type No records found.		Name	BP ID	Contract		



Local Projects – Funding FUND CODES Municipal / PENNDOT Oversight Non-NHS ∃ Project: 72999 Go Short Description: El Centro Stscapes Org Code: 0650 County: Philadelphia SR: Section: EC0 Municipality: PHILADELPHIA District: 06 Group ID: Records 1 to 3 of 3 25 🕶 Fund A Name WBS WBS FPN **FPN** Other Total P-072999T7EC0-Landscaping and Other Scenic 0.00% T065-136-L220 100.00% \$579.319.00 Beautification (TE funding) Landscaping and Other Scenic P-072999T7EC0-0.00% T065-136-L220 0.00% Local 100.00% \$1,575,981.00 Beautification (State RACP 0650-375-2 Funding funding) (State RACP Funds) Landscaping and Other Scenic Beautification (City and Other P-072999T7FC0-0.00% T065-136-L220 100 00% 0.00% Local \$44 700 00 0650-375-2 Funding Funding) (City and Other) 341 Lesson 10.2 Local Proj.

Local Projects

- If project not in ECMS, verify paper copies are included
- Scanned copies located on P drive
- Determine attachments to be used

Lesson 10.2 Local Proj.

Summary

- On local projects, what document is necessary for PennDOT to open bids?
- Which Special Provision states that PennDOT will Let the local project?

Lesson 10 - Emer./Local Projects

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COURSE CONCLUSION

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Learning Outcomes

- Prepare and review Bid Packages to improve biddability
- Use available standard information to prepare Bid Packages
- Check completeness and consistency of Bid Packages to reduce errors/addendum

Topics Addressed – Day 1

- 1. Bid Package Assembly
- 2. Plans
- 3. Design Items
- 4. Other ECMS Screens
- 5. Attachments
- 6. Addenda

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Topics Addressed – Day 2

- 7. Special Provisions
- 8. Project Development Checklist
- 9. Obstacles to Letting
- 10. Emergency & Local Projects

Key Points

- Bid Package communicates project details and expectations to both contractor and Department staff
- Use standards as much as possible
- Attention to detail is crucial
- Bid Package should be accurate, complete, consistent and biddable

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THANK YOU!