

# **FINALS UNIT MANUAL**

**MAY 2012 EDITION**



**pennsylvania**  
DEPARTMENT OF TRANSPORTATION  
[www.penndot.gov](http://www.penndot.gov)

PUB 11 (2-19)

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## INTRODUCTION

The District has the responsibility to perform a comprehensive and complete check of quantities submitted by Department personnel on construction projects, to verify final pay quantities and to process the forms necessary to close out the contract. It is the intent of Publication 11, *Finals Unit Manual (FUM)* to provide a means of standardizing the checking procedure to expedite this phase of the work and to assist auditors in the performance of their duty. In this regard, Central Office advocates compliance with the procedures set forth herein to standardize the operations of the District.

One must keep in mind that auditors are not familiar with the project and must rely entirely upon the information submitted to them in the records. An audit trail of project documents must be provided as indicated in Publication 2, *Project Office Manual (POM)* in order that original source documents can be quickly located to verify the accuracy of the quantities.

Source documents contain the original recording of the field information and should always be referenced through the Project Site Activity (PSA) Record, Field Inspector's Diary (FID) or other field records, which will contain the quantities for which the payment estimate is being approved.

A source document is that written record or plan sheet upon which field data is written and signed, and is to remain part of the final records. Source documents include, but are not limited to, the following:

- Field Inspector's Diary (FID)
- Field Survey Books (Black Book)
- Concrete Inspector's Daily (CID) Record Books
- Items Quantity Book, Form CS-4346
- Master Diary
- Annotated Drawings
- Plan Sheets
- Delivery Tickets
- Certification Slips

For more details on each of these source documents, refer to Publication 2, *Project Office Manual* B.1.2-2.

In the process of checking final quantities, it is important that the checker sign their name and date the source documents and all other records checked. The Department would prefer that all records be checked to the source document to confirm their accuracy; however, time does not always permit that this be done. In such cases, random checks to the source document will be acceptable (see Section C). All such checks should be documented by signature and date.

The Department wishes to acknowledge and extend appreciation for the information submitted by Department personnel that has been included in this manual. The Department realizes that this manual is not complete; therefore, it will be necessary to make changes and additions from time to time. Any questions regarding contents, or suggestion for improvement of this manual should be directed to the Contract Management Section, Bureau of Project Delivery.

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<b>CONTRACT INITIATION</b>				

The Finals Unit Supervisor should be notified when there is a new construction project. Typically, notification occurs when:

- A copy of the ECMS bid results is received from District contract management staff, or
- A copy of the pre-construction meeting announcement is received from the Assistant Construction Engineer (ACE).

Once notified, the Finals Unit Supervisor or District designee may perform the following:

- Assign a lead auditor to the project.
- Start a Finals Unit file for the project (see Section A.3.1).
- Coordinate the preparation of the project start-up package:
  - Prepare the Materials Book(s).
  - Prepare the Item / Estimate (I/E) Book (if applicable).
  - Prepare the Labor Compliance Manual.
  - Compile all necessary records for construction project staff (see Section A.2.1).
- Coordinate the submission of the leased computers request for the project's field office.

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<b>RECORDS ISSUANCE</b>				

Once it has been determined that the construction project will be administered as a CDS NeXtGen or non-CDS NeXtGen ("paper based") project, the Finals Unit Supervisor may coordinate the issuance of project records for the construction field staff. For all construction projects, the following source documents may be issued, either electronically or in hardcopy:

- Form CS-472, *Concrete Inspector's Diary (CID)*, as applicable.
- Form CS-4346, *Items Quantity Book*.
- Form D-428, *Field Survey Book*.
- Materials Book.
- Labor Compliance Manual.

For CDS NeXtGen projects, the Project Site Activity (PSA) worksheet or Field Inspector's Diary (FID) is issued, either electronically or in hardcopy.

For non-CDS NeXtGen ("paper based") projects, the following additional items are issued, either electronically or in hardcopy:

- Form CS-4333, *Field Inspector's Diary (FID)*.
- Form CS-4334, *Master Diary*.
- Items/Estimate (I/E) Book - printed and assembled.

Additional source documents may be issued for all construction projects to assist the field inspection staff; these may be in an electronic or in hardcopy format:

- *Construction - RMS Pavement Data Form.*
- Form CS-1PA, *Asphalt Adjustment.*
- Form CS-2PA, *Diesel Adjustment.*
- Form CS-111, *Subcontractor/Supplier Request for Estimate Monitoring.*
- Form CS-901, *Work Zone Traffic Control Compliance Checklist and Notification.*
- Form CS-4136, *Punchlist.*
- Form CS-4137, *Final Inspection.*
- Form EO-354, *DBE Commercially Useful Function Report.*
- Form EO-363, *Contractor's On-The-Job Training Program Classifications for PennDOT Approval.*
- Form EO-364, *PennDOT OJT Program Enrollment Form.*
- Form EO-365, *Highway Contractor's Monthly Training Report.*
- Form EO-1391, *Federal-Aid Highway Construction Contractors Annual EO-1391 Report.*
- Form LLC-25, *Weekly Payroll Certification for Public Works Projects.*
- Form M-937R, *Route/Bridge Restriction.*
- Form M-937RO, *Route/Bridge Restriction Opening.*
- Form RW-397, *Authorization to Enter (Non-Waiver of Claim).*
- Form RW-397A, *Authorization to Enter (Waiver of Claim).*

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- Federal Form WH-347, *Payroll*.
- Form TR-478A, *Report on Compaction Density using Non-Movement*.
- Form TR-4238A, *District's Letter of Project Materials Certification*.
- Form TR-4252, *Daily Summary of Tests; Compaction and Soil Moisture Density Results*.
- Form TR-4254, *Straight Line Analysis Chart*.
- Form TR-4276A, *Report on Compaction Density by Nuclear Test Method*.

Other reference documents may be issued for all construction projects to assist the field inspection staff; these may be in an electronic or in hardcopy format:

- Excerpts from Publication 2, *Project Office Manual*:
  - B.1.3, *Project Site Activity (PSA) Reports / Field Inspector's Diary (Form CS-4333; FID Reports)*.
  - B.2.2, *Rounding-Off Pay Quantities (Estimates and Final)*.
  - D.3.9, *Construction Project - Quality Survey for Design Items*.
- Excerpt from Publication 693, Appendix F, *Non-Standard Item Numbering Guidelines*.
- SOL 422-09-05, *Local Sponsored Project Oversight*.

Templates and logs may also be included to assist the construction field staff, as appropriate:

- Project funding information sheet.
- Checklist of construction records to be submitted when the project is returned to the Finals Unit.
- As-built Plan Instructions and Cover Page.
- Cross-Section Instructions and Cover Page.
- General documentation checklist of "do's and don'ts".
- Checklist for finalizing NeXtGen projects (NeXtGen project only).
- Traffic Barrier Pre-installation Review Checklist.
- Superpave Tracker Spreadsheet.
- Subcontractor Approval List (blank log sheet).
- Refer Slip - Blank form to be filled out by inspector if a PSA/FID is not being prepared.
- Payroll Identification Form.
- Material Buck Slip Form, with instructions.
- Material Invoice Cover Sheet with instructions.
- Final Package Checklist.
- Summary of Conversion Factors (Metric / English, Item Specific, etc.).
- Procedures for Design Build As-Built Plans.
- Contractor Design Evaluation Sign-off sheet.
- Contract Bridge Work Completion Form.
- Summary of Construction Records to Be Submitted at Finalization.
- Procedures for As-Built Plans.

Section D.2.1 provides the records that field personnel need to submit to the Finals Unit to finalize a construction project.

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<b>FINALS UNIT FILES</b>				

Once a construction project is initiated and the records are issued for the field staff, a corresponding project file is created within the District's Finals Unit. This file may contain in hardcopy or electronic format the following items:

- Project summary sheet identifying:
  - ECMS / Contract number
  - State route number
  - Section number
  - County
  - Key project personnel assigned (Inspector-in-Charge, ACE, etc.)
- Project award sheet
- Pre-construction meeting notification and minutes
- Form TR-4238A, *District's Letter of Project Materials Certification*
- Project finalization checklist
- Project related correspondence and submissions from the field
- Log sheet of field books issued

The issuance of field activity log books with serial numbers, such as the Field Inspector's Diary (FID) and Concrete Inspector's Diary (CID), must be tracked in the Finals Unit. For each construction project, a log sheet is created in the Finals Unit for a project representative to sign, recording the issuance and transfer of these items to the construction project staff. This record is then kept in the Finals Unit's project folder to reference when the construction records are returned for finalization. All items issued by the Finals Unit must be returned for project finalization. A sample log sheet is shown on the next page.

### Sample Log Sheet of Field Books Issued

COUNTY \_\_\_\_\_ ECMS # \_\_\_\_\_

S.R. \_\_\_\_\_ Sec. \_\_\_\_\_

**Field Inspector's Diary**

Number	Date Issued	Initials	Date Returned	Not Used
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

**Master Diary**

Number	Date Issued	Initials	Date Returned	Not Used
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

**Concrete Inspector's Book**

Number	Date Issued	Initials	Date Returned	Not Used
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

**Miscellaneous**

Number	Date Issued	Initials	Date Returned	Not Used
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

I/Q Book \_\_\_\_\_

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

\_\_\_\_\_  
Signed Out By

\_\_\_\_\_  
Signed In By

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<b>INITIAL DOCUMENTATION REVIEW INTRODUCTION</b>				

Early in a construction project, an initial documentation review may be performed on the project's records by a member of the Finals Unit. Typically, this review is performed in the field office before the third estimate is paid to the contractor. The review can be initiated by either field or Finals Unit staff. The documentation review provides the Finals Unit staff an opportunity to examine project records and identify deficiencies to ensure that field staff is following Department policies and procedures for construction documentation. Documentation review is a broader review of supporting project records as compared to an audit, which focuses on payment documentation. The results of a documentation review may indicate the frequency and type of future audits.

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<b>GENERAL FILING SYSTEM</b>				

- Identify the documentation system being used for the project (manual documentation, CDS NeXtGen or ECMS).
- Verify that the field office staff has access to required Project Office Library documents (hardcopy or electronic shortcuts/bookmark), per Publication 2, *Project Office Manual*, Section B.1.1.
- Identify how the field office's hardcopy files are organized.
- Verify that source documentation files are stored in a fireproof location, as per the Publication 2, *Project Office Manual*, Section B.1.2.

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<b>REVIEW SOURCE DOCUMENTATION</b>				

The Finals Unit representative, or a designee, should perform the following tasks as a part of the source documentation review:

- Review As-built Drawings to verify changes are noted on a full sized set of plans as follows (See Publication 2, *Project Office Manual*, Section B.1.16):
  - Verify that all changes in black ink.
  - Verify that the following project data is on the Title Sheet in the upper left hand corner:
    - Contractor's name and address
    - District Executive
    - Assistant District Engineer – Construction
    - Assistant Construction Engineer
    - Inspector-In-Charge
    - Original completion days
    - Calendar days used
    - Pertinent dates – starting, completion, and final inspection
  - Verify that the limits of work beginning and end on Title Sheet are marked "final".
  - Verify that quantities on Summary Sheets of plan are revised to match final quantities paid in ECMS. Any items where work will not be visible when the project is complete needs to have the quantities and locations adjusted on the Tab Sheets.
  - Verify that all extra items, quantities and locations are added on Summary Tab and Plan Sheets.
  - Verify that changes to the locations and/or lengths of pipe, underdrain, and other drainage structures (including inlets, manholes, and sections, etc.) are indicated on the as-built plans. If the drainage facilities are not shown on the plan sheets, such as underdrain, pipe, inlets, then the new lengths and locations are to be shown on the Tabulation Sheets. Any utilities discovered on the project that are not shown on the plans need to be indicated on the plan sheets and color coded such as: water, sewer, and gas.
  - Verify that anything deleted or alternatives not used from the plan are "X" out.
  - Verify that quantities on the Bridge Summary of Quantities Sheet are revised.
  - Verify that any structure changes (footer elevations, rebars, piling, etc.) are indicated on the Structure Drawings.
- Review Concrete Inspector's Diary (CID)
  - Verify that CID entries are complete and current.
  - Verify that CID entries include air and curing temperatures.
  - Verify that the batcher-mixer slips are signed by the inspector.
  - Verify lot and subplot calculations, per PTM 1, and Publication 408, *Specifications*, Section 704.1(d)5.

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- Verify that trucks numbers and test locations for acceptance testing are recorded in the CID, per PTM 1; Publication 408, *Specifications*, Section 704.1(d)5.
  - Verify that the disposition of rejected and/or failed materials is document, per Publication 2, *Project Office Manual*, Section B.6.2.
  - Verify that straight-line diagrams for slump, air content, water/cement ratio, and compressive strength (minimum 10 tests per class of concrete) were created for monitoring, per Publication 2, *Project Office Manual*, Section B.1.13 and Publication 2, *Project Office Manual*, Section B.6.5-11.
  - Verify that results of field verification testing performed at required frequency for each type of concrete are documented, per Publication 408, *Specifications*, Section 704.1(d)6.
- Review Field Inspector's Diary (FID)
    - Verify that FID entries are filled out daily and completely, per Publication 2, *Project Office Manual*, Section B.1.3. Entries must be signed by the inspector and dated. Entries should be clear, concise and legible.
    - Verify that the reported information is sufficient to justify payment, per Publication 2, *Project Office Manual*, Section B.1.2.
    - Verify that personnel and equipment are listed or referenced, per Publication 2, *Project Office Manual*, Section B.1.3.
    - Verify audit trail to other source documents, per Publication 2, *Project Office Manual*, Section B.1.2 (e.g., Field Book, I/E Book).
    - Verify that all changes to a report entry are lined out, initialed, and dated, no erasures, per Publication 2, *Project Office Manual*, Section B.1.3.
    - Verify that pages have not been removed from the bound FID book.
    - Verify that all unused portions of the diary page are crossed out.
    - Verify that pay quantities are computed and rounded per Publication 2, *Project Office Manual*, Section B.2.2.
    - Verify that all computations are checked.
    - Verify that report is properly formatted and contains necessary information Publication 2, *Project Office Manual*, Section B.1.3 and Section B.1.7.
    - Verify that the inspector has voided pages that are incorrect.
    - Verify that corrections made by the inspector to the hard copy are made to the carbon copy and visa-versa.
  - Review Field Survey Book (see Section B.1.5.)
  - Review Item Estimate (I/E) Book. See Publication 2, *Project Office Manual*, Section B.1.4.
    - Verify that Extra Work and Force Account Work Items have been added to the I/E Book.
    - Verify that entries are filled out daily and completely. Entries should be clear, concise and legible.
    - Verify audit trail to other source documents (i.e., FID, Field Book).
    - Verify that strikethrough text is initialed and dated.

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- Verify that all computations and measurements are signed and dated.
- Verify estimated and actual pay are documented in the correct columns.
- Review Item Quantity Book
  - Verify that calculations and diagrams present have been signed and dated by the inspector.
  - Verify that calculations and diagrams present have been checked and signed by a second individual.
  - Verify that item numbers and plan stations are clearly referenced for each calculation.
  - Verify that the table of contents has been populated.
  - Void pages that are incorrect.
  - Verify that pages have not been removed from the bound Field Book.
  - Verify that strikethrough text is initialed and dated.
  - Verify audit trail to other source documents (e.g., FID, I/E Book).
  - Verify that entries are filled out daily and completely. Entries should be clear, concise and legible.
- Review Master Diary entries
  - Verify that Master Diary entries are filled out daily and completely. Entries should be clear, concise and legible.
  - Verify audit trail to other source documents (e.g., FID, Field Book, I/E Book).
  - Verify that strikethrough text is initialed and dated.
  - Verify that the unused portion of each page in the Master Diary is crossed out.
  - Verify that the inspector has signed and dated no lower than one line below last entry on the narrative page.
  - Verify that all necessary information recorded when master diary used in lieu of FID, per Publication 2, *Project Office Manual*, Section B.1.3.
- Review Project Site Activities (PSAs)
  - Verify that PSA entries are filled out daily and completely. Entries should be clear, concise and legible.
  - Verify audit trail to other source documents (e.g., Field Book, I/E Book).
  - Verify that the PSA is completed per, Publication 2, *Project Office Manual*, Section B.1.3.
  - Verify that pay quantities are computed and rounded per, Publication 2, *Project Office Manual*, Section B.2.2.
  - Verify that personnel and equipment are listed or referenced, per Publication 2, *Project Office Manual*, Section B.1.3.

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<b>REVIEW PAYMENT DOCUMENTATION</b>				

Review a sample of items from the current estimate.

- Verify that stored material payments were processed per Publication 2, *Project Office Manual*, Section B.2.3.
  - Verify the CS-110 Form, *Payment Authorization for Material Stored or On Hand*, has been completed for all stored materials payments.
- Review adjustments made in ECMS (i.e., rebates, disincentives).

The Work Order Specialist will perform a complete review of work order/force account documentation as a part of the work order's approval process. However, the Finals Unit representative should perform the following tasks as a part of the payment documentation review:

- Review work order documentation, per Publication 2, *Project Office Manual*, Section B.3.1.
  - For major changes to Federal Oversight projects (i.e., project changes that will result in a cost increase or decrease equal to or greater than \$500,000 or 10% of the original contract amount, whichever is less), verify prior FHWA approval of FHWA-1365 Form, *Record of Authorization to Proceed with Major Contract Revision*.
- Verify that force account documentation is completed, processed, and filed per Publication 2, *Project Office Manual*, Section B.3.1.

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<b>REVIEW MATERIALS DOCUMENTATION</b>				

The Materials Unit will perform a complete review of the materials files before the District Materials Engineer signs off on the material certifications. However, the Finals Unit representative should perform the following tasks as a part of the materials documentation review:

- Review Field Survey Book:
  - Verify that entries are filled out daily and completely. Entries should be clear, concise and legible.
  - Verify audit trail to other source documents (e.g., FID, I/E Book).
  - Verify that strikethrough text is initialed and dated.
  - Verify that all computations and measurements are signed and dated.
  - Void pages that are incorrect.
  - Verify that pages have not been removed from the bound Field Book.
  - Verify that POM guidelines are followed when measuring and computing pay quantities.

The Finals Unit representative may perform the following additional tasks as a part of the materials documentation review:

- Verify bituminous price adjustment(s) has been completed.
- Verify diesel fuel price adjustment(s) has been completed.
- Verify steel price adjustment(s) has been completed.
- Verify material deficiency adjustment(s) has been completed.
- For the reviewed items, verify that all necessary material(s) invoices, delivery tickets and certifications are present.

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SUBJECT	<b>REVIEW LABOR COMPLIANCE DOCUMENTATION</b>			

The District Labor Contract Compliance Officer will perform a complete review of the labor compliance files. However, the Finals Unit representative may verify that the applicable sections of the Labor Compliance Manual are maintained.

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SUBJECT <b>REVIEW SUBCONTRACTOR DOCUMENTATION</b>				

The District Labor Contract Compliance Officer will perform a complete review of the subcontractor files. However, the Finals Unit representative may perform the following tasks as a part of the subcontractor documentation review:

- Verify that subcontractors, service providers and minority suppliers are approved prior to starting work on the project, per Publication 408, *Specifications*, Section 108.01(e).
- Verify that the applicable sections of the Labor Compliance Manual are maintained.

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<b>REVIEW SAFETY RELATED DOCUMENTATION</b>				

The District Project Safety Officer will perform a complete review of the safety related files. However, the Finals Unit representative may perform the following tasks as a part of the safety related documentation review:

- Verify that the contractor's safety plan is on file, per OSHA 1926.20, and Publication 2, *Project Office Manual*, Section B.4.6, and Publication 408, *Specifications*, Section 107.08.
- Verify that material safety data sheets (MSDS) are accessible on the project for inspection staff, per OSHA 1926.59.
- Verify that emergency phone numbers are posted for ambulance, hospitals, and physicians, per OSHA 1926.50(f).
- Verify that the applicable sections of the Labor Compliance Manual are maintained.

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<b>REVIEW MAINTENANCE AND PROTECTION OF TRAFFIC (MPT) DOCUMENTATION</b>				

- Verify that MPT is checked twice daily on major construction projects where traffic is maintained through the construction zone, per Publication 2, *Project Office Manual*, Section B.5.1.
- Verify that detour routes are checked per Publication 2, *Project Office Manual*, Section C.9.2.
- Verify that the Form CS-901 is completed and on-file, per Standard Special Provision a07019 or Publication 408, *Specifications*, Section 901.3.

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<b>AUDIT INTRODUCTION</b>				

A project audit is performed by a member of the Finals Unit, or a representative designated by the Finals Unit. Starting with the Project Site Activity (PSA) records, or the Field Inspector's Diaries (FID), the auditor will review all source documentation relating to the pay quantities for the contract items included in the audit. The auditor will follow references to other source documents (e.g., Concrete Inspector's Diary (CID), materials book) to verify payments made are in accordance with the plan's identified locations and quantities.

- A.** The scope of an audit performed can be defined as either sample or full. The determination between a sample and full audit is at the discretion of the Finals Unit.
- 1.** When a sample audit is performed, only a portion of items and plan locations, and all associated actual locations, are selected for audit. The sampling process is defined further in Section C.2.2. and it is executed in the same manner regardless of the type of audit being performed; interim or final. All projects should have sample audits performed, at a minimum.
  - 2.** When a full audit is performed, all the items on the selected estimate numbers (or all estimate numbers for a final audit) are to be audited as well as all the plan locations associated with the items. All actual locations associated with a plan location will be audited. If a sample audit is identifying multiple payment discrepancies on a given project, then a full audit is required.
- B.** There are two types of audits performed; interim and final.
- 1.** Interim audit is performed in the field when the physical work is not yet complete. An interim audit is performed on one or more selected, approved estimates. If the interim audit is performed on multiple estimates, they must be consecutive. The estimate numbers selected can only break sequence if the estimate excluded has already had a full audit completed. This is because the interim audits build on each other. The frequency one performs an interim audit will depend on many factors (e.g., contract amount, duration), but as a best practice interim audits are performed when a project is 30% and 75% complete (at a minimum) or annually for multi-year projects.
  - 2.** Final audit is performed in the Finals Unit when the physical work is complete. A final audit must be performed as a part of the project's finalization process. When performed manually, a final audit will include, at a minimum, all the estimate numbers that were not audited during a previous interim audit. If the audit module in CDS NextGen is utilized, the final audit will include all of the project estimates, regardless of their inclusion in previous interim audits.

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<b>PROCEDURE FOR STATISTICAL AUDIT OF QUANTITIES – CDS NEXTGEN/ECMS SELECTION</b>				

- A. CDS NeXtGen Audit Item Selection.** CDS NeXtGen, starting with version 4.00, contains an Audit Facility module. Project data regarding funding and financial information, project information, users, Project Site Activities (PSA), item numbers and item type codes, estimate information, and more is passed from the documentation contained within CDS NeXtGen to the Audit Facility tables.

*Audit Facility User Guide* describes how CDS NeXtGen can be used to perform sample and full audits for both interim and final audits.

The Audit Facility is restricted and can only be accessed by users directly involved with the audit processes. Audit Facility access and privileges are available to the following CDS NeXtGen profiles:

Profile	Privileges
Auditor	<ul style="list-style-type: none"> <li>• Create Audit.</li> <li>• Perform Audit.</li> <li>• Complete Audit.</li> <li>• Create Punch List Error record.</li> <li>• Complete Punch List Corrections record.</li> </ul>
Finals Unit	<ul style="list-style-type: none"> <li>• Create Audit.</li> <li>• Perform Audit.</li> <li>• Complete Audit.</li> <li>• Create Punch List Error record.</li> <li>• Complete Punch List Corrections record.</li> </ul>
Comptroller	<ul style="list-style-type: none"> <li>• View Only</li> </ul>
Inspector in Charge	<ul style="list-style-type: none"> <li>• Enter Punch List Corrections.</li> <li>• View Only all else.</li> </ul>
Coordinator	<ul style="list-style-type: none"> <li>• No Access to Audit Facility.</li> <li>• Must set Profiles for all users including Audit Facility users.</li> </ul>

- B. Engineering and Construction Management System (ECMS) Audit Item Selection.** ECMS provides several functions related to performing Field Audits for a construction project. These include the ability for the District Finals Unit to set a completion percentage for an audit. The percentage represents a portion of the total value of the construction items on the project. When ECMS determines that the percentage has been reached (as calculated

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by summing the total approved estimates and adjustments), it sends an email notification to the District Finals Unit Supervisor informing them that the project is due for auditing.

Once the need for a Field Audit has been determined, Finals Unit personnel can add an audit checklist item to the Finalization Checklist. The checklist item screen allows the user to enter a title for the audit checklist item, indicate whether the audit is final, assign auditors and indicate the date the auditors were assigned. A "Create Report" button on the checklist item allows the user to access the report header to enter the From/To dates and then generate the Field Audit Report. Once the field audit has been completed, the audit checklist item can be updated to indicate the date the audit was completed, whether a punch list was created as a result of the audit, and whether the audit resulted in work orders, estimates, or invoices being generated.

*ECMS Wave 5 Training Manual*, Chapter 15 describes how to set the completion percentage for an audit, how to add the checklist item that is used to track the audit, and how to create the audit report.

Similar to CDS NeXtGen's Audit Facility, the audit functions within ECMS are only available to the following ECMS user profiles: The following table outlines the steps, users and functions that comprise the Project Audits process:

<b>User Profile</b>	<b>Audit Privileges / Steps</b>
Finals Unit Supervisor Bureau of Project Delivery Contract Admin	Set an Audit Notification Percentage.  The Audit Notification value is set in ECMS and will generate an email when that percentage of project payments has been reached.
Finals Unit Finals Unit Supervisor Bureau of Project Delivery Contract Admin	Add an Audit Checklist Item to the Finalization Checklist.
Finals Unit Finals Unit Supervisor Bureau of Project Delivery Contract Admin	Create a Field Audit Report.  A report is generated with the list of construction items to audit.

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<b>User Profile</b>	<b>Audit Privileges / Steps</b>
Finals Unit Finals Unit Supervisor Bureau of Project Delivery Contract Admin Any ECMS PENNDOT User (once the report has been saved)	View a Field Audit Report. The Audit Checklist Item is updated to reflect the results of the Field Audit.
Finals Unit Finals Unit Supervisor Bureau of Project Delivery Contract Admin	Delete an Audit Checklist Item from the Finalization Checklist. The item is removed from the checklist.

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<b>PROCEDURE FOR STATISTICAL AUDIT OF QUANTITIES – MANUAL SELECTION OF ITEMS</b>				

A. Selection of the contract items to be audited.

1. Select the largest valued items that total at least 30% of the final total contract amount. Exclude non-work lump sum items including, but not limited to, mobilization, inspector's field office, maintenance and protection of traffic, survey items.
2. Random sample the remaining contract items.
  - a. Print the list of construction items or a Crystal Report of Final Quantities.
    - (1) List of all items (excluding non-work lump sum items) sorted by the largest item total with an accumulative total which will show you the 30% mark.
  - b. Number all remaining items that do not fall under A.2.a.(1) above.
  - c. To determine the sample size, take 10% of the last line number and round-off to the next highest whole number.
  - d. Use the Random Number Table in PTM 1 to identify the contract items that will be audited as a part of this sample:
    - (1) To determine the first contract item to be audited, enter the Random Number Table at the line number corresponding to the current date or the date that the audit was initiated and multiply the decimal fraction in Column X by the last line number on estimate and round-off to the nearest whole number.
    - (2) The whole number obtained by A.2.d.(1) above will be the line number of the report referenced by 2.a. above for the contract item to be audited.
    - (3) Continue this process using consecutive decimal fractions from Random Number Table until the required sample of items as determined in A.2.c., is obtained.
3. In addition to the items identified for audit by A.1. and A.2. above, all work order items that are price adjustments should be audited.


B. Selection of the Item Estimate Book / Items Quantities Report line items comprising a contract item.

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1. Consecutively number the plan station line items for each selected contract item in the left margin of the Items Estimate Book / Items Quantities Book.
  2. To determine the sample size, take 10% of the total number of line items counted and round-off to the highest whole number.
  3. Use the Random Number Table in PTM 1 to identify the plan stations that will be audited for each contract item in this sample:
    - (1) To determine the first line item to be audited, enter Random Number Table at the line number used in A.2.d(1) and multiply the decimal fraction in Column Y by the line number and round-off to the nearest whole number.
    - (2) Continue this process using consecutive decimal fractions from Random Number Table until the required sample as determined in A.2.c., is obtained.
  4. Circle the line item numbers selected for audit.
- C. Sample audit forms are shown on the following pages. These forms are provided to assist in the determination and identification of items to be audited, using the methods described in this section.



### Sample Audit Forms (Continued)

Item No.	Random Audit Item Sheet	Random Table			
0000-0000	(X) x No. Of Items = Line Item To Audit (Round To Nearest Whole No.)	-X-	-Y-	-X-	-Y-
	(Y) x No. Of Lines For Item = Item Line To Audit (Audit 10% Of Lines For Item) (Round To Nearest Whole No.)	1- 0.29	R 0.66	51- 0.87	L 0.36
		2- 0.74	R 0.49	52- 0.34	L 0.19
		3- 0.89	L 0.79	53- 0.37	R 0.33
		4- 0.60	R 0.39	54- 0.97	L 0.79
		5- 0.88	R 0.31	55- 0.13	R 0.56
		6- 0.72	L 0.54	56- 0.85	R 0.64
		7- 0.12	R 0.08	57- 0.14	L 0.04
		8- 0.09	L 0.94	58- 0.99	R 0.74
		9- 0.62	L 0.11	59- 0.40	L 0.76
		10- 0.71	R 0.59	60- 0.37	L 0.09
		11- 0.36	L 0.38	61- 0.90	R 0.74
		12- 0.57	R 0.49	62- 0.09	L 0.70
		13- 0.35	R 0.90	63- 0.66	L 0.97
		14- 0.69	L 0.63	64- 0.89	L 0.55
		15- 0.59	R 0.68	65- 0.67	L 0.44
		16- 0.06	L 0.03	66- 0.02	R 0.65
		17- 0.08	L 0.70	67- 0.93	R 0.17
		18- 0.67	L 0.68	68- 0.40	R 0.50
		19- 0.83	R 0.97	69- 0.44	R 0.15
		20- 0.54	R 0.58	70- 0.03	L 0.60
		21- 0.82	R 0.50	71- 0.19	L 0.37
		22- 0.66	R 0.73	72- 0.92	L 0.45
		23- 0.06	L 0.27	73- 0.20	L 0.85
		24- 0.03	L 0.13	74- 0.05	R 0.56
		25- 0.55	L 0.29	75- 0.46	R 0.58
		26- 0.64	L 0.77	76- 0.43	R 0.91
		27- 0.30	R 0.57	77- 0.97	L 0.55
		28- 0.51	R 0.67	78- 0.06	R 0.51
		29- 0.29	R 0.09	79- 0.72	L 0.78
		30- 0.63	R 0.82	80- 0.95	L 0.36
		31- 0.53	L 0.86	81- 0.16	L 0.61
		32- 0.99	R 0.22	82- 0.29	R 0.47
		33- 0.02	R 0.89	83- 0.48	R 0.15
		34- 0.61	L 0.87	84- 0.73	R 0.64
		35- 0.76	R 0.16	85- 0.05	L 0.94
		36- 0.87	L 0.77	86- 0.43	L 0.05
		37- 0.41	L 0.10	87- 0.87	R 0.98
		38- 0.28	R 0.23	88- 0.37	L 0.71
		39- 0.22	L 0.18	89- 0.94	L 0.26
		40- 0.21	L 0.94	90- 0.57	L 0.63
		41- 0.27	L 0.52	91- 0.26	R 0.80
		42- 0.39	R 0.91	92- 0.01	L 0.79
		43- 0.57	L 0.10	93- 0.83	R 0.59
		44- 0.82	L 0.12	94- 0.71	L 0.21
		45- 0.14	L 0.94	95- 0.65	L 0.63
		46- 0.50	R 0.58	96- 0.65	L 0.87
		47- 0.93	L 0.03	97- 0.72	R 0.92
		48- 0.43	L 0.29	98- 0.85	L 0.78
		49- 0.99	L 0.36	99- 0.04	L 0.46
		50- 0.61	R 0.25	100- 0.29	L 0.95
	Page ____ Of ____	S.R. _____ Contract No. _____			

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<b>VERIFICATION OF ITEM(S)</b>				

For each item audited, the following verification steps will be performed:

- Verify the field quantity in the Project Site Activity (PSA) Record/Field Inspector's Diary (FID) and Master Diary (if applicable) entry with the plan quantity from the Tab Sheets.
- Verify that all mathematical computations shown or referenced in the PSA/FID entry were calculated correctly and checked by a second individual.
- Verify source documentation and audit trail, as appropriate for the item audited (see B.1, *Documentation Verification*). Auditor is required to initial and date documents where audit trail has been verified.
- For Manual projects, verify final quantity amount logged in the Item Estimate Book / Items Quantity Book.
- Verify that item work descriptions are complete and detailed, per Publication 2, *Project Office Manual*.
- Record any discrepancies found on the audit punchlist, to be addressed by the Inspector-in-Charge.

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<b>ITEM SPECIFIC AUDIT PROCEDURES</b>				

**A. Audit of the selected line item.**

1. A complete audit shall be made to verify the field quantity and corresponding source documentation of field measurements. The audit trail will be traced to its source(s) through the documentation references provided by the inspector(s). All mathematical computations shall be checked or verified that a previous calculation check was performed. The source of all figures used in computations shall be readily discernible. As the auditor progresses through the audit trail, the auditor will initial and date each source document.
2. The final quantity for the line item as determined by the reviewer shall be entered in the source document in the final quantity column.
3. A difference between the field quantity and the final quantity under +/- \$125.00 may be considered acceptable.
4. A difference between the field quantity and the final quantity over +/- \$125.00 shall require that the next line item also be audited.
  - a. A difference between the sums of the two field quantities and the two final quantities under +/- \$250.00 may be considered acceptable.
  - b. A difference over +/- \$250.00 shall require that all line items for that contract item be audited.
5. The final pay quantity for the contract item shall be the sum of the final quantity for each line item audited plus the sum of the field quantity for the line items not audited. A work order need not be processed if the net difference of all items is +/- \$250.00

**B. Rejection of project records.**

1. All documentation and/or payment discrepancies/errors found during the audit operation are to be noted on the audit punchlist, which is then given to the project staff to address upon completion of the audit. At the first instance the audit reveals inadequate source verification of any sort necessary to substantiate final payment or if the condition described in A.4.b. occurs twice, the audit operation may cease at the discretion of the auditor. If the auditor determines that the audit operation cannot progress, the Assistant Construction Engineer (ACE) is to be notified for corrective action.
2. Upon corrective action, the audit shall resume.

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**C. The following are item-specific procedures to be followed.** When performing an audit of any item, if a significant difference between plans and actual quantity is encountered, the checker will need to refer to the "As-Built" Plans. If the difference is not apparent here or explained in the field records, the Inspector-in-Charge (IIC) should be called upon to explain the difference.

**1. Earthwork, Section 200**

- a.** Clearing and Grubbing, 0201-0001 (LS) and 0201-0100 (ACRE) – The project personnel record in the Project Site Activity (PSA) Record, Field Inspector's Diary (FID) or other field records where Clearing and Grubbing has been completed. The payment entry is then referenced to the source document which contains the stations and percentages completed. The Finals Unit representative checks to insure that 100% of the item has been paid and that the established basis for payment designated by the Department was adhered to. If the checker verifies this, the checker then designates the item as 100% complete; signs and enters the date the source document was checked.
- b.** Demolition and Partial Demolition (LS), 0202 Series – The project records must indicate where demolition and partial demolition have been performed. The payment entry is reference to the Project Site Activity (PSA) Record, Field Inspector's Diary (FID) or other field records, which contain locations and account of work completed. The Finals Unit representative checks to see that all units specified for demolition in the contract have been included in the records if the work was completed. This is verified by the checker, who designates the item 100% complete, signs and dates the source document as having been checked.

Any structures shown on the drawings to be demolished, but were demolished under a previous contract, should be so noted in the project records. Adjustment of the contract amount by the deletion from the contract will be made by work order.

**c. Class 1 Excavation (CY), 0203-0001**

- (1) On waste projects, final sections are taken only on a random basis (every 100-200 feet) in cut areas to determine if the contractor has excavated to the original template. A check should be made of the preliminary areas of these cross-sections. If the preliminary areas are verified as correct and the contractor submits a letter accepting plan quantities, the contractor is then paid plan quantity for the main roadway. This pertains to waste projects only.
- (2) On borrow projects, final cross-sections are taken where ever the original section were shown. When a borrow project is completed, final cross-sections are taken. The final survey notes, (that are referenced by the cross-sections), are reduced and plotted on the preliminary sections and checked by a second



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person. The IIC and ACE are then consulted to determine if the contractor should be paid for any excavation or embankment outside the limits of the original template before earth quantities are computed. The IIC can then verify the areas for each station by the "stripping" method or by using a digitizer. Areas of excess cut or fill are computed and checked individually and the area for each station is noted at the side of the cross-section paper. The name of the person making the computation and the person checking it are placed on the cross-section sheets.

After all the areas have been computed and checked, determine final volume. The computations are prepared by one person and a second person checks them. The quantities are then placed in the source document and on the Earthwork Analysis Sheets. Verify that "Earthwork Analysis on Borrow Projects" sheet was completed and signed by inspection staff. Final Earthwork Analysis Sheets need not be completed for waste projects if their check value is in agreement with the preliminary area.

When cross-sections are provided for larger approaches, unsuitable areas, and some benching, the checking procedure discussed above is then utilized. If cross-sections are not available, use field measurements and compute. Sketches may be provided for smaller approaches, unsuitable areas and some benching. The checker verifies that the dimensions from the sketches match the computations and the method of computation. A Finals Unit representative performs a mathematical recheck of the computation made and verifies the signature of the person checking is noted.

- d. Class 2 Excavation (CY), 0204-0001 – Class 2 Excavation may be calculated from cross-sections plotted on roadway cross-sections or from calculations made in final record books. The Finals Unit representative must check the reference from the payment entry to the applicable source document. This source should be checked to verify the figures in the computations. Where pay limits are determined by Department standards, a check is made for compliance with these standards.

If field measurements and computations are placed in project books, the Finals Unit representative checks the mathematics if a second individual is not listed as previously checking the calculation. If quantities are computed from cross-sections, the Finals Unit representative checks the "stripping" or digitizing of the areas and then the computation of volumes. The final quantities are checked, signed, dated and posted in the payment entry.

The procedure for checking inlet and outlet ditch excavation is very similar to the above description.

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- e. Class 3 Excavation (CY), 0204-0100 – There are two methods of computing Class 3 Excavation. One method utilizes the average depths and the second employs the use of cross-sections. The method of using cross-sections appears to be the most common; however, either method may be used at the discretion of the IIC. PennDOT survey personnel should provide the original cross-sections accompanied by a sketch noting the location of the base line and stations for the sections. The sections, (which are preferred to survey notes) are plotted on cross-section paper and the computed on Computation of Earthwork.
- It is preferable that sections be prepared by the field personnel and checked by the Finals Unit representative where they are checked, reduced, plotted and the computations are prepared. This procedure is only recommended when there are sufficient personnel in the Finals Unit to perform the work.
- Quantities computed by project personnel, which are compared with those of the Finals Unit representative, provide an excellent check. After all quantities are computed, the figures are checked and/or entered in the source document. The person in the Finals Unit doing the work places their name on the cross-section sheet at the proper location.
- If the sketching and computing are performed by field personnel and checked by the Finals Unit, the person in the Finals Unit checks the reduction of the survey notes. Finals Unit representative then checks either the plans or the concrete computations for proper dimensions. Then the Finals Unit representative "strips" the areas and makes a mathematical check of the computations on Form D-412A. After the final quantity has been verified, the Finals Unit representative checks and/or enters it in the source document, signs and dates the entry.
- Usually where the average depth method is used, the sketch showing the dimensions and depths is prepared and checked in the field. The origin of these depths and dimensions must be verified. After a mathematical check is conducted, all computations are signed and dated by the person performing the check.
- f. Class 4 Excavation (CY), 0204-0150 – Class 4 Excavation is sketched and computed based on pipe dimensions and pipe factors contained in the Field Computation guide contained in Appendix A of Publication 2, *Project Office Manual*. The Finals Unit representative checks the reference from the payment entry to the applicable source document to verify all dimensions used in computations. Linear dimensions should be in agreement with lengths of pipe runs. The pay width and pay length, including headwall deductions are checked for compliance with Department standards. All dimensions and calculations of endwall footer excavation for metal plate pipe arches shall be shown.

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After completing the check of excavation quantities for individual locations, the final quantity is determined. All field records checked together with the payment entry must be signed and dated by the checker.

- g.** Common Borrow Excavation (CY), 0205-0001 – Common Borrow Excavation is measured in the borrow pit, therefore, it is necessary to have both the preliminary and final survey books to plot cross-sections for the calculation of this quantity. After this quantity is determined, the Computation of Earthwork and the Final Earthwork Analysis sheets are computed. The Final Earthwork Analysis Sheets provide the final pay quantity for borrow. It is preferable that these sheets be completed by project personnel; however, if it is completed by the Finals Unit, the check should be made by an independent party. All computations and quantities checked by the Finals Unit representative are signed and dated by the checker.
- h.** Foreign Borrow Excavation (CY), 0205-0100, and Selected Borrow Excavation (CY), 0205-0200 through 0205-0224 – If these items of work are computed in the field by the project personnel, the Finals Unit representative should verify that the cross-sections and templates were checked to insure the accuracy of the computations. If the calculation of these items is to be performed by the Finals Unit representative, then another check should be performed to verify the final quantity that is posted in the payment entry, should be signed and dated by the person performing the check.
- i.** Geotextiles (LF or SY), 0212 Series – The source document may contain a sketch with limiting stations and actual final measurements or it may contain a tabulation which shows Plan, Station to Station, Plan Length and for Widths, Actual Station to Station and Actual Length.

By using either method, the audit trail for the field quantities must be referenced from the payment entry to the source document. If the source document quantities agree, the final pay quantity is checked and/or entered in the source document.

The checker must sign and date the source document and payment entry after checking the quantities therein.

- j.** Subbase (SY), 0350 Series – The project records should include the average width of subbase as recorded by field checks. This should be compared with the plan width and no widths in excess of plan width should be paid without an explanatory note in the records by the IIC. The "As-Built" plans should be checked to determine if areas occupied by structures have been deducted from the mainline pavement. Lengths are checked against the stations to verify the accuracy of linear dimensions. A check of PSA/FID or Master Diaries should be made to substantiate the fact that depth checks were made.

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Computations for irregular shaped areas, driveways, side roads, and ramps are shown with sketches and dimensions. The Finals Unit representative should refer to the source document to check conformity of dimensions with sketches and computations. A mathematical check is made of the computations. The total quantity is then checked and/or entered in the source document. All field records checked together with the payment entry are signed and dated by the checker.

**2. Base Courses and Pavements, Sections 300, 400 and 500**

- a.** Bituminous Surface Course (Tons), 0400 Series – The final field quantity is referenced from the payment entry to the source document. This record contains information obtained from the Form TR-465, *Daily Bituminous Mixture Certification*. It contains the daily compilation of weights of material placed between the limiting stations. The total weight of Bituminous Surface Course placed should be compared with the plan quantity. These records should indicate that yield checks were made periodically.

The Finals Unit representative should sign and date all project records checked for the final quantity in the payment entry.

- b.** Bituminous Tack Coat (SY or Gal), 0460 Series – The final field quantity is referenced from the payment entry to the source document. When units are in gallons, the source document can be meter readings noted in the PSA/FID or daily received invoices. When units are in square yards (SY), the source document may contain a sketch with limiting stations and actual measurements.

The Finals Unit representative shall check if the records indicate that yield checks were made periodically and that the accumulation of daily invoices does not exceed received affidavits.

The Finals Unit representative should sign and date all project records checked for the final quantity in the payment entry.

- c.** Milling of Bituminous Pavement Surface (SY), 0491 Series; Reinforced or Plain Cement Concrete Paving (SY), 0500 Series; Bituminous Concrete Base Courses (SY), 0305 Series – The Finals Unit representative checks the reference from the payment entry to the respective source document. Flat chained measurements, sketches and computations are provided in the field books for these items. The PSA/FID should verify that these field measurements were made. Linear dimensions are checked by field measurements. Results of cores taken on the job or depth checks should be recorded in the source document.

Computations for irregular shaped areas, side roads, ramps and driveways are shown with sketches in the field record books. The Finals Unit representative

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checks the dimensions and calculations from the source document through the computations.

After the quantities are completed, the total is entered in the payment entry. All calculations checked and entries made in the source document are signed and dated by the checker.

Other sources for checking:

- (1) The final topography book, if such a book has been prepared, to check pavement widths and flat chained measurements.
- (2) The final earthwork cross-sections to check pavement widths.
- (3) The "As-Built" plans to verify that areas occupied by structures were deducted from the mainline pavement.

3. Incidental Construction, Section 600 – The Finals Unit representative checks the reference from the payment entry to the source document. The source document records plan quantity, final measured length and stake-out length. Reasons for paying lengths in excess of plan length must be documented in the source document. Generally, the pay length is the actual length or stake-out length whichever is less.

PSA/FID reports should indicate that pipe installed has been inspected, measured and properly backfilled. Pipe approvals from the Bureau of Project Delivery, Innovations and Support Services Division should be included in project records and length of pipe approved should be equal to or greater than the pay lengths shown on the final estimate. If pipe totals are found to be in agreement, the final quantities are checked and/or posted in the payment entry. All source documents checked, including the payment entry, are signed and dated by the checker.

- a. Inlets (EA), 0605 Series, and Manholes (EA) – The Finals Unit representative checks the reference from the payment entry to the source document. The number of inlets or manholes recorded in the payment entry is compared with those recorded in the source document to ensure agreement. A check of the source document should indicate that the inlets and/or manholes were built and inspected in conformance with Publication 72M, *Roadway Construction Standards*. After checking the individual locations and the final quantity checked and/or posted in the payment entry. The payment entry and the source document are signed and dated. An alternate check can be made of the cross-sections and "As-Built" plans to confirm that inlets and manholes were built.
- b. Mobilization (LS), 0608-0001; Inspector's Field Office and Inspection Facilities (LS), 0609 Series – The Finals Unit representative need only check the payment entry and Items Quantity Book to see that these items have been paid 100%. If complete payment has not been made, the source document or other records must offer justification why payment has been withheld. A check of the source

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document should indicate that the established basis for payment designated by the Department was adhered to.

After verifying the payments, the totals are checked and/or entered in the payment entry. The payment entry and source documents are signed and dated by the checker.

- c. Pipe End Sections and Slope Pipe Fittings (EA), 0616 Series – The Finals Unit representative checks the reference from the payment entry to the source document. The number of end sections and/or slope pipe fittings recorded in the payment entry is compared with those recorded in the source document to ensure agreement. A check of the source document should indicate that the end sections were installed and inspected in conformance with the Publication 72M, *Roadway Construction Standards*. After checking the individual locations, the final quantities are checked and/or entered in the payment entry and signed and dated. An alternate check can be made of the cross sections and "As-Built" plans to confirm that pipe end section and/or slop fittings were built.
- d. Pipe Underdrain (LF), 0610 Series; Pavement Base Drains (LF), 0610 Series; Subsurface Drains (LF), 0615 Series; and Subgrade Drains (LF), 0612 Series – The first operation of the Finals Unit representative is to check the reference from the payment entry to the source document.

If a straight line diagram is shown in the Items Quantity Book, the Finals Unit representative checks the lengths shown on this diagram against the lengths recorded in the source document. If they are in agreement, the quantities are placed in the payment entry; sub-totals and totals are then checked. The source document must be checked to make certain that measurements used comply with source data.

If a tabular listing is made in the source document, the Finals Unit representative compares the lengths shown with the lengths in the payment entry. The source document must be checked for agreement with measurements used. Verification of length can be made by subcontracting limiting stations for each string of the pipe to be sure there are no errors. In cases where there is a large difference between plan quantity and the actual measured quantity, the "As-Built" plans are reviewed.

The final quantities are entered in the payment entry. This record and the source document are signed and dated by the checker if the checker is satisfied the quantities are correct.

- e. Guide Rail (LF), 0620 Series; Median Barrier (LF), 0621 Series; and Right-of-Way Fence (LF), 0624 Series – The Finals Unit representative checks the reference from the payment entry to the source document which may contain a straight-line diagram. The following details in the source document are then checked and compared: plan and actual stationing, plan and actual length, height, offsets, dates

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and signatures of persons taking the measurements. Source measurements are checked for conformity with pay quantities. Check the actual lengths against the length shown on the "As-Built" plans. The final operations of the Finals Unit representative are to enter the final quantities and to check sub-totals and total in the payment entry. The checker signs and dates the payment entry and other records checked.

- f. End Anchorage (EA), 0620-0860; End Treatment for Guard Rail (EA), 0620-1250 through 0620-1300; End Treatments for Median Barrier (EA), 0621-0513 and 0621-0522; and Terminal Sections (EA), 0620-0400 through 0620-0402 – The Finals Unit representative checks the reference from the payment entry to the source document. The Finals Unit representative checks the item recorded in the payment entry against that in the source document to ensure agreement. The source document must be checked for conformity with the pay quantities. After the check has been made, sub-totals and totals are checked.

The checker then checks and/or enters the final quantity in the payment entry. The checker signs and dates this information with the source document.

- g. Concrete Median Barrier (LF), 0623 Series; Concrete Traffic Separator (LF), 0629 Series; Plain Cement Concrete Curb (LF), 0630 Series; and Plain Concrete Mountable Reflecting Curb (LF), 0633 Series – The source document may contain a sketch with limiting stations and actual final measurements or it may contain a tabulation which shows: Plan, Station to Station, Plan Length, Actual Station to Station and Actual Length.

By using either method the audit trail for the field quantities must be referenced from the payment entry to the source document. If the source document quantities agree, the final pay quantity is checked and/or entered in the payment entry. When a significant difference between plan and actual quantity is encountered the checker will refer to the "As-Built" plans.

The checker must sign and date the source document and the payment entry after checking and/or posting the final quantity therein.

- h. Shoulders (SY), 0651 Series through 0659 Series (Paved, Concrete, Stabilized) – Flat chained measurements, sketches, and computations of completed shoulders is provided in the source document by the field personnel.

The Finals Unit representative checks the reference from the payment entry to the source document. The flat chained measurements are checked by subtracting stations and reviewing sketches recorded in the source document. A check is made of the field quantities recorded in the payment entry against the source document field quantities to ensure they are in agreement. A further check is made to verify conformance of the PSA/FID sketches and measurements with those in the source

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document. The "As-Built" plans are checked to determine if proper deductions are checked and the final pay quantities are posted in the payment entry. The name of the checker and the date of the check are recorded in the source document and payment entry.

- i.** Brick Masonry Plan (CY), 0663 Series; Reinforced Cement Concrete (Approach Slabs) (CY), 0666-0001; Cement Concrete Paving for Stream Beds (CY), 0667-0001; Cement Concrete Spillways (CY), 0670 Series, and Concrete Slope Wall (CY), 0673 Series – The Finals Unit representative checks the reference from the payment entry to the source document. The actual measurements, sketches and the computations are checked by the Finals Unit representative to the source documents. The Finals Unit representative then posts the final quantities in the payment entry and totals the individual entries. The checker then signs and dates the source document and payment entry.
- j.** Plain Cement Concrete Gutter (SY), 0640-0641 Series; and Cement Concrete Sidewalks (SY), 0676-0001 – Flat chained measurements, sketches and computations are provided in the source document by the project personnel.

The Finals Unit representative checks the reference from the payment entry to the source document. A check is made of the measurements and/or calculations shown in the Items Quantity Book to the sketches and computations of the PSA/FID. The Finals Unit representative then checks the formulas and mathematics involved in the computations. After the above checks are completed, the final pay quantities are checked and/or posted in the payment entry.

The checker signs and dates both the source document and the payment entry.

Another source for checking is the final topography book, (if such a book has been prepared). To check sidewalk widths and flat chained measurements.

- k.** Selected Material Surfacing (CY) 0677-0001, (Ton) 0677-0002 – The field personnel make computations and sketches in a source document for selected material surfacing.

The Finals Unit representative checks the payment entry reference to the source document. They check the dimensions along with the computations and formulas. Quantities are computed on a square foot basis and using the specified depth they are then converted to cubic yards. After the checking operation is completed, the final quantities are entered in the payment entry. Totals are run and the name of the person performing the check and the date are placed in the source document and payment entry.

- l.** Permanent Barricades (LF), 0678-0110 – The source document may contain a sketch that shows the limiting stations and the actual and the field measurements



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used to develop the final quantities, or it may contain a tabulation which shows: Plan Station to Station, Plan Length, Actual Station to Station and Actual Length. In either case, the field quantities are referenced from the payment entry to the source document. The audit trail must refer to the source document which should be compared with the computations or measurements to confirm their accuracy.

After checking the field quantities, the final quantity is entered in the payment entry. However, if a significant difference between plan and actual quantities occurs, the checker will refer to the "As-Built" plans.

When the checker is certain the final quantity is correct, the checker checks and/or posts it in the payment entry. This record and the source document are signed and dated by the checker.

- m.** Deflection Test (EA), 0679-0110; Holes Drilled (EA), 0679-021; Cement Grout Material, Slab Stabilization (bag), 0679-0301, and Cement Grout Material, Slab, Jacking (bag), 0681-0300 – The payment entry quantity is referenced to the source document. The source document contains the following information part of which is obtained from delivery tickets: Date, Station to Station, Holes Drilled, Holes Filled, Invoice Number, Bags and PSA/FID Number.

The Finals Unit representative checks from the payment entry reference to the source document. Delivery tickets are checked against the entries in the source document for complete agreement. The plan quantities are broken down according to Station to Station, location and use and checked against field quantities. Results of deflection tests are to be recorded. If no errors are found, a total of the entries is completed and entered in the payment entry.

**4. Roadside Development, Section 800.**

- a.** Top Soil (CY), 0802-0001 and 0803 Series; Seeding and Soil Supplements (SY), 0804 Series; Mulching (SY Ton), 0805 Series; Erosion Protection (SY), 0806 Series; Shrub Bed Preparation (SY), 0808-0001; and Sodding (SY), 0809-0001 – Stations, pay widths and computed areas are provided in the source document by the field personnel and/or Roadside Development Unit. The source document should be checked for conformance.

The Finals Unit representative checks the reference from the payment entry to the source document. A mathematical check is made of the source document. The field quantities in the payment entry are checked against the source document. If the above checks are in agreement, the final pay quantities are posted in the payment entry.

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If the measurements and computations are made by the Roadside Development Engineer assisted by inspectors, this data should be placed in the project files and be readily accessible to the Finals Unit representative for checking.

Form M-609, *Roadside Development Daily Reports*, should be documented by addition of the office number and made a part of the project records. They should be compared with the source document to assure conformity.

The type of seed used should be indicated in the source document along with invoices from manufacturers of erosion protection, lime, fertilizer (type) etc. Tickets from seed containers should be retained in the project records.

The name of the checker and the date of the check are recorded in the source document and payment entry when checking is complete.

- b.** Tree and Shrub Planting and Transplanting (EA), 0808 Series – The Field quantities are recorded in the source document by the field personnel. The Finals Unit representative checks the reference and field quantities from the payment entry to the source document. (The source document may be Form M-609). If there is agreement, the final pay quantities are checked and/or posted in the payment entry. The checker signs and dates both the source document and the payment entry.

If measurement and calculation of quantities is assumed by the Roadside Development Engineer and authorization for payment is based upon these quantities, the Roadside Development Engineer will then present a signed statement to this effect for the project files together with the measurements and calculations.

In this case, the Finals Unit representative posts the final pay quantity submitted by the Roadside Development Engineer in the payment entry and references the pay quantity to the above mentioned statement.

Form M-609, *Roadside Development Daily Reports*, are documented into project office records by addition of office numbers to the reports.

- c.** Selective Tree Removal and trimming (Acre, LS, EA), 0810 Series – The Roadside Development Unit, with the assistance of Inspectors, designate the work to be performed for this item. Measurements by stations, pay widths and computed areas are provided in the source document.

The Finals Unit representative checks the audit trail from the payment entry to the source document and conducts a mathematical check of the latter. The field quantities in the payment entry are checked for agreement with the source document.

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If the above checks are in agreement the final pay quantities are checked and/or posted in the payment entry and the source document.

**5. Traffic Accommodation and Control, Section 900**

- a.** Calcium Chloride (Tons), 0901-0025 – The final field quantity is referenced from the payment entry through the PSA/FID. The source document contains the following information some of which is obtained from the load tickets: Slip Number, Location Used, Quantity, Date, Reason for Placement, and Inspector.

The Finals Unit representative checks the payment entry quantities with the source document. The load slips are checked against the entries in the source document for complete agreement. If no errors are found, a total of the entries is completed and the final quantity is posted in the payment entry.

The Finals Unit checker signs and dates both the payment entry and the source document.

- b.** Maintenance and Protection of Traffic During Construction (LS), 0901-0001; Maintenance and Protection of Traffic During Temporary Suspension of Work (LS), 0902-0001; and Temporary Bridges and Approaches (LS), 0903 Series – The field personnel record percentages of the items completed in the payment entry. For this reason, the Finals Unit representative can do little more than check to ensure 100% is paid and that the established basis for payment agreed upon was adhered to.

The percentages are referenced from the payment entry to the Items Quantity Book. The Finals Unit representative checker ascertains that 100% is paid, makes note in the payment entry "pay 100%", signs and dates both source document and payment entry.

**6. Structures, Section 1000**

- a.** Cement Concrete (LS or CY), 1001 Series – A sketch is shown in the source document or it is shown on the large sketch prepared for calculation of concrete quantities for structures.

The Finals Unit representative conducts a check of the computations shown in the Items Quantity Book for the concrete. The source document is reviewed for conformity with the plans. If satisfied that the quantity is correct, the checker posts the final quantity in the payment entry. The checker then signs and dates both the payment entry and the source document.

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- b.** Prestressed Concrete Bridge Superstructure (LS), 1080 Series – The current estimate payment is based on the component parts of the superstructure completed, (e.g., beams placed 40%, reinforcing steel).

These components are referenced to a source document where documentation is provided giving proof that the work was performed and checked by the references in the source document to determine the relation between theoretical and actual quantities. The Finals Unit representative checks to ascertain that 100% of the item is paid and that all work has been completed.

After entering the final quantity in the payment entry the checker then signs and dates both the payment entry and the source document.

- c.** Reinforcement Bars (Lbs), 1002 Series – A tabulation of reinforcement steel used for each portion of structure, (pier, abutment, wingwall, etc.) is listed in an Items Quantity Book. This list contains: Mark, Size, Plan Length, Actual Length, Plan Number, Number Placed, Weight Placed, Date Placed, Remarks and PSA/FID Number. This list is checked by the Finals Unit representative by comparing the reinforcement bar list used to check the steel as it was placed in the forms, (the source document) with the plan tabulation. The calculations of steel weights are then checked for agreement with the source document. Invoices of reinforcement steel with shipping weights can be used as a check of total weights.

On large structures where reinforcement bar lists are very long, it is expedient to use the steel supplier's lists to check the steel as it is placed in the forms and also to make the steel weight calculations. After this list is checked, it can be entered in the source document for proper documentation.

All records checked by the Finals Unit representative checker should be signed and dated before the final quantity is checked and/or entered in the payment entry. The payment entry is also signed and dated.

- d.** Test Piles (LS), 1005-0001 through 1005-0702 – Documented evidence that test piles were driven and tested to the satisfaction of the Engineer is ample verification for payment of this item.

When the length of pile driven exceeds that specified by the contract, the excess length will be paid for at the unit price specified for bearing piles of like type and size.

A check of the "Summary of Pay Lengths" pages of the Pile Book is compared to the payment entry for agreement. If there is agreement, the Pile Book is signed and dated and the final quantities are checked and/or entered in the payment entry. The payment entry is then signed and dated by the checker.

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- e. Piles (LF), 1005-0080 through 1005-1108 – Pile driving data is recorded in the Pile Book (source document) by the project personnel during the driving operation. The driven pile lengths are recorded in the "Summary of Pay Lengths" pages of this book.

The Pile Book is sent to the Finals Unit representative for checking. A mathematical check is made to see that there is agreement between the payment entry lengths and the "Summary of Pay Lengths" in the Pile Book.

If there is agreement, the final pay quantities are checked and/or entered in the payment entry. The Pile Book and payment entry are both signed and dated by the Finals Unit checker.

- f. Removal of Existing Bridge (LS), 1018-0001 through 1018-0059; Removal of Existing Bridge Superstructures (LS), 1018-0125 through 1018-0134 – The Finals Unit representative checks the reference from the payment entry to the source document. If complete payment of the item has not been made, justification must be given in the source document to explain why payment was withheld.

After verifying the payments, totals are entered in the payment entry. This record together with the source document are signed and dated by the checker.

The source document or referenced diary should indicate the disposition of the superstructure. If it was previously agreed that it be paid at a designated place, the records should indicate that this was accomplished.

The checker should sign and date the final amounts posted in the payment entry.

- g. Fabricated Structural Steel (LS), 1056-0001 through 1056-0084 and (Lbs), 1056-0100 through 1056-0140 – When this item is bid on a lump sum basis, the Finals Unit representative will compare the payment entry with the source document for agreement. If the source document verifies the fact that the steel has been erected according to plan, then the Finals Unit representative checker signs and dates the source document and payment entry and enters the lump sum amount as the final quantity in the payment entry.

When this item is bid on a weight basis, the weight given on the shop drawings will be compared with the scale weights of the invoice to determine if they are in close agreement. These weights should compare closely with the weight specified in the contract. If there is considerable difference, an explanation should be included in the records to justify the pay quantity.

Invoices or other supporting data must be included in the project records to substantiate the weight of steel quantity for this item. After posting the final

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quantity in the payment entry, both the payment entry and the source document are signed and dated.

**D. Final Review with Construction Unit and Evaluation of Project Records.**

**1. Final Review with Construction Unit.**

- a.** Discrepancies in source documentation or differences in final pay quantities are either added to the punch list made previously during the preliminary documentation review or a new punch list is compiled and sent to the Assistant District Executive for Construction with copy retained by the Finals Unit.
- b.** Cross-section areas shall be marked-up by the ACE and IIC to determine if any areas involve penalties for excavation or borrow.
- c.** Form D-412A, *Computation of Earthwork*, may be completed by the Finals Unit representative.
- d.** The ACE and the IIC make any necessary corrections to computations and audit trail. They also determine availability of excavation for Form CS-4196, *Final Earthwork Analysis*.
- e.** The Finals Unit representative should check any corrections made per D.1.d. above.

**E. Rebuilding Destroyed or Missing Records.**

- 1.** The following procedures should be utilized in the event project documentation is missing or has been destroyed by justifiable or extenuating circumstances.
  - a.** Notify Central Office and your FHWA Area Engineer (if applicable) of the situation.
  - b.** Prepare an action plan as to how project documentation can be rebuilt to adequately close-out the project.
  - c.** Involve all parties concerned in preparing an action plan such as the contractor, FHWA (if applicable) and local officials (if municipal project). The action plan may include rebuilding documentation by re-measuring items, verify by retesting, certifications, utilizing ECMS/CDS NeXtGen, or checking payments processed by the Comptroller's Office.
  - d.** Obtain Central Office and FHWA (if applicable) approval of the proposed action plan.

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SUBJECT	<b>FINALS UNIT MANUAL</b>	DATE <b>May 1, 2012</b>		
<b>PROJECT FINALIZATION INTRODUCTION</b>				

Project finalization is necessary to ensure formal acceptance of the project from the Department, Contractor, and FHWA, if necessary. Part D will include the necessary procedures and processes the Finals Unit Supervisor must take to ensure all necessary project records are completed and submitted, all necessary payments/invoicing have been made, all final evaluations have been completed, all formal approvals have been received, and all of the necessary fiscal/funding reviews have been completed. Upon completion of the project finalization, the construction records are archived according to the appropriate timeline.

In order to identify the steps necessary to complete project finalization, Execute Rules can be run in ECMS at any time.

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<b>TRANSFER OF PROJECT RECORDS</b>				

After physical work is complete, the Inspector-in Charge is to transfer all project records to the District's Finals Unit. In order to facilitate the proper handling and storage of project documents, the following procedures will be used in the submission of Construction Records to the Finals Unit:

- All project documents are to be transmitted to the District Office. It is Department regulation that under no circumstances will any official document be intentionally disposed of at the field office.
- Structure drawings, borrow pit/excavation cross-sections and borrow pit/excavation computations, (where performed in field) are to, when possible, be submitted to the Finals Unit at the earliest possible date following the completion of these construction items. It is not necessary that these project documents be kept in the field until the end of the job. Final auditing of structures and borrow pit quantities can take place while construction is still in progress.
- The Finals Unit Supervisor will keep a log sheet outlining all documents received from the construction job for every occasion on which project documents are submitted to the Finals Unit.
- If incomplete final field records are submitted to the Finals Unit, an itemized list of the records will be sent to the Assistant Construction Engineer/Inspector-in-Charge by the Finals Unit for their submission of the missing records.

<b>Construction Records to be Submitted to the Finals Unit</b>	<b>For Final Audit</b>	<b>For Storage</b>	<b>For Disposal</b>
"As-Built" plans showing construction field changes not shown on the contract drawings.	X	X	
All computations and sketches (work sheets etc.) used to arrive at final pay quantities.	X	X	
All Estimate Forms.	X	X	
All Plant Inspectors Diaries, Project Material Records, Concrete Inspectors Daily Record Book, Batch Mixer Slips, Concrete Plant Slips, and Plant Inspection Notices.	X	X	
Approved work orders.	X	X	
All Project files as per Publication 2, <i>Project Office Manual</i> .	X	X	
Cross-sections showing any additional or extra work or field changes, not shown on original cross-sections and computations for same.	X	X	
Field cross-sections that do not show any additional or extra work. (Sections with pertinent data to be turned in with project records and used for the Final Audit).			X
Item Estimate Books.	X	X	
Labor Compliance Documentation.		X	

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<b>Construction Records to be Submitted to the Finals Unit</b>	<b>For Final Audit</b>	<b>For Storage</b>	<b>For Disposal</b>
All FID Reports (Carbon Copies)/PSAs, Master Diaries, other original source documents, and other reports containing documentation for payment of contract items and extra work. Copies of the FID Reports shall be bound by clips with a cover page included.	X	X	
Material delivery Tickets and invoices (i.e. reinforcement steel, structural steel, concrete, etc.).	X	X	
Accident reports.		X	
All property and/or driveway releases (Authorization to Enter (RW-397A), Borrow Agreements).		X	
All structural steel shop drawings.		X	
Claim Files.		X	
Contractor's Payroll and certification.		X	
Files on Public Utilities.		X	
Grade sheets (Stakeouts – slope stakes, etc.).		X	
CAMMS laboratory reports (approvals or rejections).		X	
Field Blue Prints (Pertinent data should be on the As-Built Plan).			X

All construction field records and documentation for final quantities shall be maintained in accordance with Publication 2, *Project Office Manual*. For manual projects, the final quantity column in the Item Estimate Book (Project Log) will be completed by the Finals Unit.

Once the project records are received, the Finals Unit Supervisor will enter the Records Received from Field Date in ECMS. The Finals Unit Supervisor will also inventory all documentation and ensure the Final CDS NeXtGen backup is stored with the project records, if applicable.

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<b>CONDUCT FINAL DOCUMENTATION REVIEW</b>				

*(See also Section B.1, Documentation Verification)*

After all project records have been inventoried, the District Finals Unit will conduct a Final Documentation review. The Finals Unit Supervisor will:

- Verify completion of As-built Drawings.
- Review cross-sections for "Pay" and/or "No Pay" labels.
- Verify all construction item quantities are balanced.
- Verify completion and submission of FIDs/PSAs and any log books issued to the field.
- Verify completion and submission of CS-4136, *Punchlist Form*.
- Verify completion and submission of CS-4137, *Final Inspection Form*.
- Verify completion and submission of TR-455, *Disposition of Failed Materials*, as applicable.
- Verify completion and submission of EO-354, *DBE Commercially Useful Function Report*.
- Verify completion and submission of CS-2, *Construction Project - Quality Survey for Design Items*.
- Verify completion and submission of Environmental Commitment Mitigation Tracking Form, if applicable.
- Verify completion and submission of I/Q Report.
- Verify completion and submission of CS-4401, *Curb Ramp Inspection Form*, if applicable.
- Verify Final Minority Payment was accepted. See Section D.3.3, *Verify Final DBE/MBE/WBE Payment was Submitted*.
- Verify that the contractor and subcontractor evaluations are completed. See Section D.3.4, *Verify that the Contractor and Subcontractor(s) Evaluations are Completed*.
- Verify or link TR-4238A, *District's Letter of Project Materials Certification*, to the ECMS Finalization Checklist.
- Verify Authorizations for Contract Work are attached to a Work Order or placed in Work Not Complete Status.

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SUBJECT		DATE		
<b>REVIEW LOCAL AGREEMENTS / THIRD PARTY AGREEMENTS</b>		<b>May 1, 2012</b>		

Once the Final Audit is complete, the Finals Unit Supervisor will review all Local Agreements and Third Party Agreements. The Finals Unit Supervisor will:

- Coordinate processing of all Third Party Invoices for the specified Agreement.
- Coordinate processing of all Third Party Reimbursements for the specified Agreement.
- Verify that items and/or percentages from agreement match.

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SUBJECT	<b>FINALS UNIT MANUAL</b>	DATE <b>May 1, 2012</b>		
<b>REVIEW COMPLETION DATE</b>				

The Finals Unit Supervisor will verify the Current Completion date in ECMS is on or after the Physical Work Complete date. The Finals Unit Supervisor will verify that all Time Extensions have been approved or withdrawn and also assess the status of liquidated damages and open/potential claims.

If the Physical Work Complete date is after the Current Completion date, contact the Assistant Construction Engineer (ACE) to determine if Liquidated Damages will be assessed or if a Time Extension will be processed, if necessary. The ACE will initiate the appropriate action to be taken. Once complete, the Finals Unit Supervisor will enter the Time Extension Requests Resolved date in ECMS.

Confirm with the ACE if an open/potential claim exists; if so do not proceed with project finalization. Once resolved, or if no claims exist, the Finals Unit Supervisor will enter the Verification of Claims date in ECMS and proceed with project finalization.

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DATED		DATE <b>May 1, 2012</b>		
SUBJECT <b>VERIFY FINAL DBE/MBE/WBE PAYMENT WAS SUBMITTED</b>				

The Finals Unit Supervisor must verify final DBE/MBE/WBE payments were submitted prior to issuing project acceptance. If no final payment exists, notify the Inspector-in-Charge and/or District Labor and Contract Compliance Agent for further action. If the final payment has been accepted, proceed with project finalization.

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SUBJECT	<b>FINALS UNIT MANUAL</b>	DATE	<b>May 1, 2012</b>	
<b>VERIFY THAT THE CONTRACTOR AND SUBCONTRACTOR(S) EVALUATIONS ARE COMPLETED</b>				

The Finals Unit Supervisor will verify that the Contractor and Subcontractor(s) have approved Final Evaluations for the project in ECMS. If the Final Evaluations have not been completed, the Finals Unit Supervisor will contact the Inspector-in-Charge/Assistant Construction Engineer to make sure the remaining necessary evaluations are completed.

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SUBJECT		DATE		
<b>ENSURE BILLING OF OVERPAYMENTS, IF NECESSARY, WITH A NEGATIVE ESTIMATE</b>		<b>May 1, 2012</b>		

The Finals Unit Supervisor will determine if there were any overpayments made. The Finals Unit Supervisor will:

- Verify that adjustments have been processed (i.e. penalties, rebates, asphalt, diesel, steel, etc.)
- Compile necessary backup and coordinate billing with the District Fiscal Unit.
  - Verify Accounts Receivable has been set up in SAP.
  - Verify invoice has been generated in SAP.
  - Verify the invoice was submitted to the contractor.

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SUBJECT <b>PROJECT ACCEPTANCE</b>				

Project Acceptance is established after the Finals Unit Supervisor or designee:

- Verifies or inputs the correct Physical Work Complete date, Final Inspection date, and Required Documents Received Date are entered in ECMS on the Finalization Checklist screen.
- Verifies that all punchlist items have been completed with accurate information and signed off.
  - Scans and links Form CS-4137, *Final Inspection Form*, to the Finalization Checklist in ECMS.
  - Scans and links Form CS-4136, *Punchlist Form*, to the Finalization Checklist in ECMS.
- Verifies all audits have been completed.
- Receives completed Form TR-4238A, *District's Letter of Project Material Certification*, and attaches it to the Finalization Checklist screen. (The TR-4238A is to be attached after Physical Work Completion date).

The Project Acceptance date automatically populates in ECMS based on the later of the Physical Work Complete date and Required Documents Received date.

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<b>ISSUE ACCEPTANCE CERTIFICATE (CS-4138)</b>				

Once the Project Acceptance date is populated in ECMS, the Finals Unit Supervisor will create and submit the Acceptance Certificate to the District Executive for approval in accordance with Publication 408, *Specifications*, Section 110.08(b). Issuance of the Acceptance Certificate relieves the Contractor of further work on the project.

For manual projects, process and submit Form CS-4138, *Acceptance Certificate*, to the District Executive.

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<b>VERIFY ACCRUED UNBILLED COSTS (AUC) HAVE BEEN RESOLVED</b>				

Prior to issuing the Notification of Final Quantities, the Finals Unit Supervisor must verify that no Accrued Unbilled Costs remain on the project. Verifying that any Accrued Unbilled Costs have been resolved requires coordination between the Finals Unit Supervisor, District Planning and Programming Coordinator, and District Fiscal Officer. To resolve Accrued Unbilled Costs:

- The Finals Unit Supervisor will coordinate with the District Planning and Programming Coordinator and District Fiscal Officer to determine whether Accrued Unbilled Costs exist on the project. The following are options to address AUCs:
  - The District Planning and Programming Coordinator will process necessary Federal funding adjustments and/or the Inspector-in-Charge generates a funding change work order.
  - The District Planning and Programming Coordinator will notify the District Fiscal Officer when the necessary Federal funding adjustments have been approved.
  - The District Fiscal Officers will process the necessary fiscal adjustments in SAP to resolve the Accrued Unbilled Costs.
- The Finals Unit Supervisor will verify with the District Fiscal Officer or District Planning and Programming Coordinator that the Accrued Unbilled Costs have been resolved.
- The Finals Unit Supervisor will enter the Accrued Unbilled Costs Resolution date in the ECMS Project Finalization Checklist.

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<b>ISSUE NOTICE OF FINAL QUANTITIES (NFQ)</b>				

After it has been verified that no Accrued Unbilled Costs exist or Accrued Unbilled Costs issues have been resolved on the project, the Finals Unit Supervisor will submit the Notification of Final Quantities (NFQ) via ECMS. The Contractor will have 10 days to respond to the NFQ. If the Contractor does not respond to the NFQ within 10 days, the Assistant District Executive – Construction can override the NFQ Submitted status in ECMS and the NFQ will be marked as No Response.

If the contractor rejects the final quantities, the Assistant Construction Engineer/Inspector-in-Charge will follow up with the contractor to resolve the issue. If necessary, a meeting may be held to resolve the problem areas. Minutes of this meeting and any subsequent meetings shall be kept in the project records. The rejection of the NFQ could result in additional Accrued Unbilled Costs. The Finals Unit Supervisor should follow up with the Assistant Construction Engineer/Inspector-in-Charge regarding the final disposition of the rejected NFQ to determine if the NFQ can be reissued.

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SUBJECT	<b>FINALS UNIT MANUAL</b>	DATE <b>May 1, 2012</b>		
<b>DETERMINE INTEREST PAYMENTS</b>				

In order to determine whether interest payments are necessary, the Finals Unit Supervisor will:

- Review and print out the Interest Worksheet Calculation in ECMS and contact the Assistant Construction Engineer/Inspector-in-Charge to indicate pay, adjust or bypass. Interest amounts less than \$50 need not be processed for payment. If payment for an item or items is withheld due to lack of required information from the contractor, interest charges will not be paid for the applicable item(s).
- Document the reasons for adjusting or bypassing any interest payments.
- Make adjustment in ECMS per estimate to days/money for interest payment, if required.
- If interest payment is made, process and submit a screen print of the ECMS Interest Calculation Worksheet to the Comptroller's Office, with signature, through the District Fiscal Officer or representative.

Interest payments shall be as specified in Publication 408, *Specifications*, Section 110.09.

The interest period is the difference between the physical work completion date and the treasury paid date less 30 calendar days.

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SUBJECT	<b>FINALS UNIT MANUAL</b>	DATE	<b>May 1, 2012</b>	
<b>FINALIZE FEDERAL OVERSIGHT PROJECTS</b>				

The Finalization of Federal Oversight projects also require the Final Unit Supervisor to:

- Verify the Form TR-4238C, *Letter of Certification*, has been linked to the ECMS Finalization Checklist. If the document is not available, contact the Bureau of Project Delivery, Innovation and Support Services Division, Engineering Technology and Information, Evaluations and Research Section to receive a status update.
- Add Form FHWA-1446B, *Final Acceptance Report*, to the Finalization Checklist in ECMS for processing.

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<b>FINALIZE INNOVATIVE BIDDING PROJECTS</b>				

The Finalization of projects that utilized Innovative Bidding procedures also require the Final Unit Supervisor to:

- Review project Standard Provisions.
- Verify necessary documentation has been completed.
- Verify that all necessary requirements have been met.
- Enter the appropriate date on the ECMS Finalization Checklist.

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<b>VERIFY WBS ELEMENT HAS BEEN CLOSED</b>				

Prior to placing the project into Final Status, the Finals Unit Supervisor must coordinate with the District Fiscal Officer to verify that the construction phase WBS Element has been closed in SAP. To verify closure of the WBS Element:

- The Finals Unit Supervisor will notify the District Fiscal Officer that the project is ready to be placed in Final status in ECMS.
- The Finals Unit Supervisor and District Fiscal Officer will confirm that no additional charges will be made against the WBS Element (i.e. final Construction Management/Construction Inspection invoice and payroll).
- The Finals Unit Supervisor and District Fiscal Officer will confirm that all remaining Commitments on the project can be released in SAP.
- The District Fiscal Officer will close the WBS Element in SAP.
- The District Fiscal Officer will notify the Finals Unit Supervisor that the WBS Element has been closed.
- The Finals Unit Supervisor will enter the WBS Closed in SAP date in ECMS.

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<b>PUT JOB IN FINAL STATUS</b>				

When placing the project in Final Status, the Finals Unit Supervisor will:

- Run Execute Rules in ECMS to verify all necessary requirements have been met. If any errors occur while running Execute Rules in ECMS, the Finals Unit Supervisor must take the appropriate action to resolve the errors before the project can be put into Final status.
- Enter records box location for archival in ECMS.
- Place the project into Final status in ECMS by clicking on the Final Button.

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<b>ARCHIVE RECORDS INTRODUCTION</b>				

Proper archiving of project records is necessary in order to ensure that all records are collected, stored, and disposed of properly. Part E will include the necessary procedures and processes the Finals Unit Supervisor must take to ensure all necessary project records are collected, consolidated, assigned the appropriate storage location, and destroyed according to Department policy.

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<b>COLLECT RECORDS TO ARCHIVE</b>				

The Finals Unit Supervisor will issue a notice to all other District personnel to turn in any project records, in their possession, that should be archived.

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SUBJECT	<b>CONSOLIDATE/PURGE RECORDS</b>			

After all project records have been received from other District personnel, the Finals Unit Supervisor will consolidate or purge the records as noted in Section D.2.1.

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<b>ASSIGN A STORAGE LOCATION</b>				

Once, all records have been consolidated, the Finals Unit Supervisor submits the project records to the State Records Center or to the District specific archiving location. After submitting the records for storage, the Finals Unit Supervisor should update the storage location on the ECMS Finalization Checklist or District log sheet (for manual projects only).

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<b>DESTROY RECORDS</b>				

When destroying records the Finals Unit Supervisor will:

- Notify all District personnel of the pending disposal of project records as the destroy records date approaches.
- Verify that the generated destroy date is accurate.
  - Construction records can be destroyed seven years after the Final Status date for 100% state funded projects.
  - For Federally funded projects, the records can be destroyed seven years after the Final Status date or three (3) years after the Final Voucher date, whichever occurs later. See example retention timelines below.
- Destroy the project records in accordance with Records Management File Plan.
- Enter the Actual Destroy Date on the ECMS Finalization Checklist or District log sheet (for manual projects only).

If notified that the records are to be retained, manually enter the District/Central Office Override Destroy Date on the ECMS Finalization Checklist or update District log sheet.

For records stored at the State Records Center, the Finals Unit Supervisor will receive a notification that the specific projects have destroy dates approaching. The Finals Unit Supervisor must respond to the notification with approval before the State Records Center will proceed.

Example Retention Timelines:

<b>Project #</b>	<b>Funding Type</b>	<b>Final Status Date</b>	<b>Final Voucher Date</b>	<b>Records Destroy Date</b>
12345	100% Federal	1/1/2012	2/1/2012	1/1/2019
54321	90% Federal	1/1/2012	1/1/2017	1/1/2020

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