

Approved:

Standard Procedure No.: 510-007(SP)
Effective Date: January 19, 2010
Responsible Division: Construction
Management
Supersedes procedure dated June 1, 2009



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FINAL INSPECTION OF CONSTRUCTION PROJECTS

PURPOSE:

The purpose of this standard procedure is to establish a consistent Final Inspection process for construction projects.

AUTHORITY:

Ohio Revised Code 4733.17

Federal Aid Policy Guide 635.105

REFERENCES:

Construction and Material Specifications Sections 109.11 and 109.12

Appendix: List of Forms

DEFINITIONS:

C&MS: The Construction and Material Specifications of the Ohio Department of Transportation.

CMS: Construction Management System, the Department's computer system for administration of construction projects.

Contractor: Defined in C&MS 101.03

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Construction Monitor: The DCE appointed ODOT employee responsible for primary construction administration coordination with the LPA and its designated employees, engineers and contractors on Local let projects.

DCE: District Construction Engineer

DDD: District Deputy Director

Final Inspector: The Professional Engineer with construction experience appointed by the DDD to perform Final Inspections. See part I. of this procedure and C&MS Section 101.03. This term includes the Final Inspector's Back-up.

Engineer's Punch List: Written list, by the Project Engineer or Project Supervisor (PE/PS) of items not yet completed by the Contractor and corrective work. See part II. of this procedure.

Final Inspection Punch List: Written list, by the Final Inspector, of deficiencies found during the Final Inspection. See part IV.D. of this procedure.

LPA: Local Public Agency, which is any other State agency, local political subdivision, board, commission, or other governmental entity identified under the Ohio Revised Code Section 5501.03, Paragraph C as being eligible for assuming the administrative responsibilities for Department improvement projects known as LPA or Local Let projects.

PE/PS: Project Engineer or Project Supervisor performing the duties of the Engineer as defined in C&MS 101.03

Final Inspection Requested Date: The date the work is completed to the satisfaction of the PE/PS and is ready for Final Inspection. This date is entered into CMS KETRK (Keycode 150).

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Final Inspection Date: The date the Final Inspector physically inspects the project. This date is entered into CMS KETRK (Keycode 155).

Physical Work Complete Date: Last day of work by the Contractor including work to complete the Final Inspector's Punch List. If there were no punch list items this date is the same as the Final Inspection Requested Date. This date is entered into CMS KETRK (Keycode 160).

State Final Acceptance Date: The date of the Final Estimate Letter to the Contractor. This date represents that the requirements of ORC 5525.16, CFR 23 part 635 and C&MS 109.12 have been met. This date is entered into CMS KETRK (Keycode 370).

PROCEDURE STATEMENT:

- I. The District Deputy Director (DDD) is responsible for appointing personnel to perform the final inspections on Department and LPA projects. This inspection is performed by the Final Inspector as the authorized agent of the Director.
 - A. Each DDD shall appoint a Final Inspector and a Back-up Final Inspector to perform Final and Partial Inspections of construction projects in their District.
 1. Each Final Inspector and Back-up Final Inspector shall be a Professional Engineer, registered in the State of Ohio according to 4733 ORC.
 2. The Final Inspector and Back-up Final Inspector must have construction experience commensurate with the work being inspected.
 3. The Final Inspector and Back-up Final Inspector must have an independent and objective view of the work. Accordingly, the PE/PS shall not perform the Final Inspection.
 - B. The names of each Final Inspector and Back-up Final Inspector shall be submitted to the Central Office, Division of Construction Management who will maintain a list of Final Inspectors and verify their qualifications.

- II. Near the completion of the work, the PE/PS shall create an Engineer's Punch List, in writing, of items not yet completed or requiring correction. The Engineer's Punch List must be provided to the Contractor and all items on the list must be complete before the Final Inspection.

- III. The PE/PS shall inform the Final Inspector of the end of work and the completion of the items on the Engineer's Punch List. The Final Inspection will be performed within ten (10) business days of the Final Inspection Requested Date in accordance with C&MS Section 109.12. The date the final inspection is requested is entered into CMS as the Final Inspection Requested Date (Keycode 150) when applicable.

- IV. Final Inspection, as defined in C&MS 109.12
 - A. The PE/PS is responsible for coordinating attendance for the Final Inspection. In addition to the Final Inspector, the following people should be given an opportunity to attend the Final Inspection:
 - 1. Contractor,
 - 2. District Highway Management Administrator or County Manager, in accordance with the District's organization preferences,
 - 3. Any local government representative, in accordance with part VII of this procedure, if the project is LPA,
 - 4. FHWA, in accordance with part VI of this procedure, if the project is subject to Federal oversight,
 - 5. Other relevant personnel.

 - B. The Final Inspector shall review the pertinent Contract Documents and shall physically inspect the project.
 - 1. District wide projects (e.g., pavement marking, guardrail, etc.) may be checked by randomly selecting sections rather than inspecting all affected routes.
 - 2. Particular attention must be made to the following critical items:

- a. Rideability - If the project involves new pavement, resurfacing, bridge replacement, or a bridge overlay, it must be checked to see if it meets the applicable contract surface tolerance requirements. If the surface tolerances do not meet the contract requirements, the project must not be accepted.
 - b. Drainage - The pavements, a random selection of underdrains, ditches, conduits, catch basins, and other items must have positive drainage and be free of obstructions.
 - c. Structures - Bridges must be checked for all items which constitute the completed structure, both above and below the deck.
 - d. Erosion Control - Roadside items must be checked to see that all erosion control items have been placed or established. The project's post construction Best Management Practices must be checked to ensure they are installed and working properly.
 - e. Safety - Guardrail, end treatments, impact attenuators, lighting, pavement markings, signing, traffic signals, and other safety items must be in place, properly installed, and functioning.
 - f. Cleanup - The project is not acceptable if cleanup in accordance with 104.04 is not complete. All borrow and waste areas must be restored in accordance with 105.16.
3. The Final Inspector shall also pay particular attention to items that are, by experience, known to be problematic.

C. Report of Final Inspection (Form C-85-Final)

1. The Final Inspector shall complete Form C-85-Final to document the condition of the Work inspected during the Final Inspection.
 - a. The Final Inspection Date on the C-85-Final shall be the date the Final Inspector performs the Final Inspection. This date is entered into CMS (key code 155) when applicable.
 - b. If there are no punch list items, the Final Inspector will fill in the date that the Physical Work was completed on the C-85-Final. This date is entered into CMS (key code 160) when applicable.

- c. The Remarks section of the C-85 shall list Final Inspection Punch List items found during the Final Inspection.
- d. The Form C-85-Partial or Form C-85-Final shall list the dates of the beginning of the warranty periods by item and location in the Remarks section.

D. The Final Inspection Punch List

1. The Final Inspection Punch List is a list written by the Final Inspector denoting deficiencies found during the Final Inspection.
2. There shall be only one Final Inspection Punch List on a project. Punch lists created by local authorities or other Department personnel will have no standing unless they are included on the Final Inspection Punch List by the Final Inspector.
3. At the Final Inspection, the Final Inspector and Contractor shall agree to a duration or date for the completion of the Final Inspection Punch List. The Final Inspection Punch List shall state:
 - a. The detailed list of items and locations found deficient during the Final Inspection.
 - b. The duration or date established for completion of the Final Inspection Punch List (this is the “stipulated time” denoted in 109.12.B).
 - c. The statement: Failure of the Contractor to complete the punch list items by the stipulated time will result in the assessment of a liquidated damage in accordance with 108.07 for every day beyond the stipulated time the punch list work remains incomplete and beyond the revised Completion Date.
4. The PE/PS shall notify the Final Inspector, in writing, of the satisfactory completion of the Final Inspection Punch List.

E. Report of Punch List Completion

1. When the Contractor completes the Final Inspection Punch List to the satisfaction of the PE/PS, the Final Inspector will complete the Report of Punch List Completion.

- a. The date of Punch List Completion shall be entered on the CMS KETRK screen as the date of Physical Work Completed Date (code 160) when applicable.
 - b. Copies of the signed Form C-85, and Report of Punch List Completion shall be sent to the Contractor and the maintaining agency.
2. Liquidated Damages can be waived as per the requirements of 108.07 and 109.12.B. if the Contractor completes the punch list work in the stipulated time.

F. End of Contractor Maintenance Responsibility

1. When the Final Inspector completes the Final Inspection and finds the work acceptable, or finds the work substantially complete with punch list items completed and documented on the Report of Punch List Completion, the Contractor is relieved of maintenance responsibilities for the project, except for:
 - a. Defects in their work that become known before the final estimate is paid.
 - b. Specific items on projects that specify a guarantee, support, establishment period, or warranty period, in accordance with the applicable specification.
2. The District shall immediately inform the appropriate maintaining agency of the end of the Contractor's maintenance responsibility for the project. This is particularly important when guardrail, stop signs, traffic signals, or other safety devices are part of the project.
3. The Final Inspection does not waive any available rights of the Department, nor divest the Contractor of any responsibility for compliance with the contract.

4. If there is a project guarantee, operational support, continued maintenance that specifies a period of establishment (eg. traffic control equipment, grass, trees, shrubs, or vines) the Final Inspector will note this period on the C-85 but shall accept the project without regard to completion of the establishment period. The Project Engineer is responsible for the inspection at the end of specified establishment period.
- V. Partial Inspection, as defined by C&MS 109.11. A Partial Inspection will only be performed following a request by the Contractor.
- A. A Partial Inspection may be performed on a completed portion of the project roadway section provided:
 1. All safety items are in place including permanent pavement markings.
 2. Traffic is in its final pattern.
 4. The completed portion of the project constitutes a complete geographical section of the project or a direction of traffic on a divided highway.
 - B. A Partial Inspection may be performed on a completed bridge provided:
 1. All the work on the bridge and approaches are complete, including all safety items and permanent pavement markings.
 2. The Contractor will not return to the bridge for any work except as allowed in 4.
 3. Traffic is in its final pattern.
 4. Painting of structural steel is either completed or scheduled to be performed.

C. Report of Partial Inspection (Form C-85-Partial)

1. If the Final Inspector determines that the work for which Partial Inspection was made was acceptable the Final Inspector shall complete a Form C-85-Partial to document the Partial Inspection.
 - a. The Partial Inspection Date on the C-85-Partial shall be the date the Final Inspector performs the Partial Inspection.
 - b. The Final Inspector will fill in the work completed date for the work for which Partial Inspection was made on the C-85-Partial. This date is entered into CMS (key code 130) when applicable.
 - c. The Remarks section of the C-85-Partial shall state if there were any Warranty items accepted during the Partial Inspection and list the specific location and item.
2. If the Final Inspector determines that the work for which Partial Inspection was made was unacceptable, the Contractor's request for partial acceptance is denied and a subsequent partial inspection will not be granted.

D. End of Contractor Maintenance Responsibility

1. When the Final Inspector completes the Partial Inspection the Contractor is relieved of maintenance responsibilities for the items of work identified on the C-85-Partial, except for:
 - a. Defective work or damage caused by the Contractor as defined by 109.11.
 - b. Specific items on projects that specify a guarantee, operational support, establishment period, or warranty period, in accordance with the applicable specification.
2. The Partial Inspection does not waive any available rights of the Department, nor divest the Contractor of any responsibility for compliance with the contract.

- E. The District shall immediately inform the appropriate maintaining agency of the end of the Contractor's maintenance responsibility for the items of work identified on the C-85-Partial. This is particularly important when guardrail, stop signs, traffic signals, or other safety devices are part of the partial inspection.

VI. FHWA Notification

- A. If a project is designated as a Federal oversight project, the FHWA representative shall be notified of the date of the Partial or Final Inspection and invited to participate.
- B. If the project is exempt from Federal oversight, FHWA shall be notified when the project has been accepted.

VII. For ODOT administered projects, the Final Inspector shall sign and distribute copies of the completed C-85-Partial, and C-85-Final forms to:

- A. Office of Accounting
- B. Office of Construction Administration
- C. Office of Contracts
- D. County Manager
- E. Maintaining Agency
- F. District Warranty Coordinator (if Warranty items)
- G. FHWA (if federal oversight project)

H. Contractor

I. District LPA Coordinator (for traditional LPA projects)

J. Local Participating Agency (for traditional LPA projects)

VIII. For Nontraditional LPA projects, The LPA will notify the Construction Monitor of the established time and date for the Final Inspection once the project is finished and corrective work items identified by the LPA are completed. The Construction Monitor will coordinate with the DCE/Designee, or other ODOT / FHWA representatives as appropriate, for attendance at the Final Inspection “walk-through” with the LPA and complete a District Construction Inspection Report marked “Final Inspection.” Final Inspection Punch List items identified shall be noted in the “Remarks/Exceptions” section of the District Construction Inspection Report and assurance of completion is the responsibility of the LPA. The LPA will supply the remaining close-out documentation to the District who will then close out the encumbrance.

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TRAINING:

The Division of Construction Management will provide management level training and consultation on the finalization of construction projects. District management shall provide training to their personnel assigned to the administration of time extensions and/or waiver of liquidated damages requests.

Reviews will be conducted by the Division of Construction Management as necessary to ensure compliance with this policy.

FISCAL ANALYSIS:

This standard procedure will not have any monetary impact.

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Appendix List of Forms

- Form C-85 Report of Final Inspection
- Form C-85 Report of Partial Inspection
- Report of Punch List Completion
- Sample Final Estimate Letter

Forms are published on the Division of Construction Management website at the following internet address:

<http://www.dot.state.oh.us/Divisions/ConstructionMgt/Pages/ConstructionPolicies.aspx>