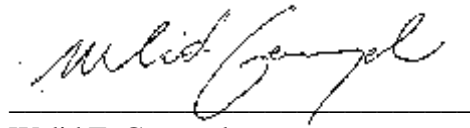


Approved:

Standard Procedure No.: 510-007(SP)

Effective Date: February 5, 2003

Responsible Division: Construction Administration



Walid E. Gemayel,

Deputy Director Division of Construction Management

FINAL INSPECTION OF CONSTRUCTION AND LPA PROJECTS

PURPOSE:

The purpose of this standard procedure is to establish a consistent Final Inspection procedure of construction projects to assure they were completed in reasonable conformance with the contract and specifications. It provides guidelines of specific inspection points to insure a consistent and uniform level of Final Inspection among the various Districts.

REFERENCES:

Sections 109.11 and 109.12 of Construction and Material Specifications, January 1, 2002.

Sections 109.071, 109.072, and 109.073 of Construction and Material Specifications, January 1, 1997.

Appendix A: Form C-85 for Final, Partial, and LPA Inspection and Acceptance.

DEFINITIONS:

C&MS: Construction and Material Specifications 2002 edition.
Relevant sections of the 1997 edition are given in parentheses.

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

Contractor: Defined in C&MS Section 101.03 (97 edition Section 101.14.)

DDD: District Deputy Director

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- Final Inspector:** 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 in responsible charge of an ODOT project.
- Physical Work Complete:** PWC the date when the work has been completed to the satisfaction of the PE/PS and it is ready for Final Inspection. This is the date entered into CMS KETRK.
- State Final Inspection Date:** The date the Final Inspector physically inspects the project. This is the date entered into CMS KETRK. This is also the date that the Contractor is relieved of maintenance responsibilities except for punch list items.
- State Final Acceptance Date:** The date all punch list items on the Final Inspector's Punch List are completed. This is the date entered into CMS KETRK. If there were no punch list items then this date is the same as the State Final Inspection Date.

PROCEDURE STATEMENT:

- I. The District Deputy Director (DDD) is responsible for appointing personnel to accept Department projects completed in reasonable conformance with the contract and specifications, and to accept LPA projects completed in general conformity with the approved plans and scope of the project. This acceptance is granted by the Final Inspector as the authorized agent of the Director.
 - A. Each DDD shall appoint two qualified people to perform the Final Inspection of all completed construction projects in their District.
 1. Each Final Inspector shall be a Professional Engineer, registered in the State of Ohio according to 4733 ORC.
 2. The Final Inspector must have construction experience commensurate with the work being inspected.
 3. A Back Up to the Final Inspector shall also be designated by the DDD.
 - a. The Back Up shall have the same qualifications as the Final Inspector.
 - b. The Back Up shall be trained by the Final Inspector.
 4. The Final Inspector must have an independent and objective view of the work. Accordingly, the Project Engineer shall not perform the Final Inspection.
 - B. The number of people doing Final Inspection should be minimized in the interests of consistency and uniformity. If practical, only one person should be appointed in a District to perform the Final Inspection and one Back Up appointee.
 - C. The names of each Final Inspector and Back Up shall be submitted to the Office of Construction Administration. They will maintain a list of Final Inspectors.
- II. Near the completion of the work, the PE/PS shall create an Engineer's Punch List, in writing, of items not yet completed.
 - A. Districts may use Inspection Review Teams to inspect and comment on the project when the work is substantially complete.
 1. This review shall be performed before the Engineer's Punch List is finalized.

2. These Review Teams shall not constitute the Final Inspection. Their findings may be forwarded to the PE/PS for action provided the Team findings are within the requirements of the contract.
 - B. The Engineer's Punch List must be given 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 done within ten (10) business days of the Physical Work Completed (PWC) date in accordance with C&MS Section 109.12 (97 edition Section 109.073).
- IV. Final Inspection
 - A. The Final Inspector shall physically inspect the project in person.
 - B. The PE/PS is responsible for contacting the following people, who should be given an opportunity to attend the Final Inspection, and coordinating the schedule and meeting times:
 1. Final Inspector.
 2. Contractor.
 3. District Highway Management Administrator or County Manager, in accordance with the District's organization preferences.
 4. Any local government representative.
 5. Other relevant personnel.
 6. FHWA, in accordance with part V. of this procedure, if the project is subject to Federal oversight.
 - C. The Final Inspector shall review the plans, notes, and applicable specifications and then inspect the full length of the project.
 1. District wide projects (e.g., pavement marking, guardrail, etc.) may be checked by randomly selected sections rather than inspecting all affected routes.

2. Particular attention must be made to the following critical items and items that from the Final Inspector's experience are often neglected by Contractors.
 - 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.
 - 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 (97 edition 104.06) is not complete. All borrow and waste areas must be restored in accordance with 105.16 (97 edition 105.151).
- D. Final Inspection Punch List
1. The Final Inspection Punch List is a list written by the Final Inspector listing deficiencies found during the Final Inspection and when corrected to the satisfaction of the PE/PS will result in an acceptable Final Inspection without a reinspection by the Final Inspector.
 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 set a time limit (number of calendar days or specific date) for the completion of the Final Inspection

Punch List. The Final Inspection Punch List shall state:

- a. The time limit allowed to complete the items on the Final Inspection Punch List.
 - b. A statement that failure to complete the items on the Final Inspection Punch List within the time limit will result in an assessment of an administrative fee of \$100 a day for every calendar day beyond the stipulated time any punch list item is not complete.
4. The PE/PS shall notify the Final Inspector, in writing, of the satisfactory completion of the Final Inspection Punch List.

E. Report of Final Inspection

1. The Final Inspector shall complete a Form C-85 to document the Department acceptance of completed physical work and to document the condition of the Work during the Final Inspection.
 - a. The date of the Final Inspection on the C-85 shall be the date the Final Inspector inspected the project.
 - b. The Remarks section of the C-85 shall state if there were any Final Inspection Punch List items found during the Final Inspection. The date of completion of the Final Inspection Punch List shall be added later.
2. Within 30 calendar-days of the Final Inspection or when the Contractor completes the Final Inspection Punch List to the satisfaction of the PE/PS, the Final Inspector shall sign and distribute the Form C-85.
 - a. The date of Final Inspection or the completion of the Final Inspector's Punch List shall be entered on the CMS KETRK screen as the date of State Final Acceptance Date.
 - b. Copies of the signed Form C-85 shall be sent to the Contractor and the maintaining agency.
3. If there is a project guarantee, support, or establishment period between the PWC date and Final Completion date:

- a. The Form C-85 shall be issued for a Partial Inspection within 30 calendar days from the inspection date or completion of the Final Inspection Punch List.
 - b. Once the guarantee period or period of establishment and any corrective work is complete, the Form C-85 for the Final Inspection shall be issued.
 4. If an item or items on a project specify a warranty period:
 - a. When the Contractor requests and the PE/PS and the Final Inspector concur that the conditions conform to the guidelines stated in part VI.C. of this procedure, the Final Inspector shall perform a Partial Inspection on a portion of a warranty project when the portion is completed to the extent that the warranty period can be started in accordance with the applicable specification.
 - b. The Final Inspection on a warranty project shall start the warranty period for any portion of warranty work not already started by a Partial Inspection. The Final Inspection on a warranty project shall be conducted as provided in this section.
 - c. The Form C-85 issued on a Partial or Final Inspection shall list the dates of the beginning of the warranty periods by item and location.
 5. If there is a 659 or 661 pay item period of establishment for grass, trees, shrubs, or vines, the Final Inspector will note this period on the C-85 but shall accept the project without any regard to any 659 or 661 period of establishment if such grass or planting appear viable during the Final Inspection. The Final Inspector is not responsible for the required inspection at the end of a 659 or 661 establishment period.
- F. End of Contractor Maintenance Responsibility
1. When the Final Inspector completes the Final Inspection and finds the work acceptable, the Contractor is relieved of all maintenance responsibilities for the project, except for:
 - a. Defects in their work that become known before the final estimate is paid.
 - b. Final Inspection Punch List items to be completed, provided the items on the list do not require a reinspection by the Final Inspector.

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- c. Full relief of maintenance responsibility is limited 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 stop signs, traffic signals, or other safety devices are part of the project.

V. FHWA Notification

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

VI. A partial inspection may be performed by the Final Inspector in accordance with C&MS 109.11 (Sections 109.071 and 109.072 of the 1997 edition).

- A. A Partial Inspection will be performed on a completed portion of the project, at the end of a construction season (November 30) provided:
 - 1. All safety items are in place including permanent pavement markings.
 - 2. The Contractor will not return to that portion of the project the following year.
 - 3. 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 will be performed on a completed overhead bridge provided:
 - 1. All the work on the approaches to the bridge is complete, including the 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 below the bridge deck that is scheduled after the requested Partial Inspection for the deck and approaches, will not prohibit Partial Acceptance of the deck and approaches.
- C. Warranty Work:
 - 1. One Inspection, either Partial or Final, will be performed a construction season for

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warranty work.

2. The start date of the warranty period entered on the C-85 will be within 30 days of the following dates as applicable:
 - a. The date the warranted work was open to traffic, or
 - b. If there was punch list work related to the warranted item, then the start of the warranty period is the date these punch list items were completed, or
 - c. If the warranty work is in a completed portion of the project that will not be opened to traffic until a later date, then the start of warranty will be the date partial acceptance of that portion of the project according to part VI. A. of this standard procedure.

- D. There will be no Partial Inspections for completed items of work that are part of or components of a larger project. These items include, but are not limited to the following:
 1. Highway lighting systems.
 2. Traffic signals, however, partials will be performed on signals with a guarantee period.
 3. Guardrail runs.

VII. LPA Projects

- A. The LPA will notify the Final Inspector to establish a time and date for the Final Inspection once the following has occurred:
 1. The project is completed.
 2. Corrective work items identified by the LPA are finished.

- B. Prior to the Final Inspection, the Final Inspector shall review the plans to determine the intent and scope of the project.

- C. The Final Inspector and LPA representative shall inspect the full length of the project.

- D. If the project was completed in general conformity with the approved plans and scope of

the project, the Final Inspector shall accept the project and complete the Form C-85 for a LPA Final Inspection.

1. Final Inspection Punch List items identified by the Final Inspector shall be noted on Form C-85 and assurance of completion is the responsibility of the LPA, but not a condition of acceptance.
 2. The Final Inspector shall sign and distribute copies of the completed form to the:
 - a. District LPA Coordinator
 - b. Office of Accounting
 - c. LPA
- E. Projects not in general conformance with the approved plans or scope of the project shall be reported in writing to the District LPA Coordinator for appropriate action.

TRAINING:

The Office of Construction Administration will schedule meetings of Final Inspectors to insure a consistent and uniform level of Final Inspection among the Districts. The Office of Construction Administration will conduct Quality Assurance Reviews on Final Inspection.

FISCAL ANALYSIS:

This policy will not have any monetary impact.

Form C-85

This Appendix contains copies of Form C-85 for:

- A. Report of Final Inspection and Acceptance
- B. Report of Partial Inspection and Acceptance
- C. Report of Final Inspection (Local Public Agency Administered Project)



STATE OF OHIO

DEPARTMENT OF TRANSPORTATION
FORM C-85

REPORT OF FINAL INSPECTION AND ACCEPTANCE

Project No.	County/Route/Section
Federal No.	PID No.
Contractor	
Work Started	Physical Work Completed

Work Performed:

Date of Final Inspection _____ and transfer of maintenance responsibilities to:

I inspected the ___ project or a ___ representative selection(s), and found it was completed, subject to provision of any warranty items, in substantial conformance with the contract documents, ___ without any further work required, subject to any warranty provisions. ___ with the punch list referenced below.

Remarks/Warranties/Punch List (___ listed below or ___ attached sheet):

STATE FINAL ACCEPTANCE DATE _____ and punch list items (if any) complete.

FINAL INSPECTOR

c: Accounting, Construction Administration, Contractor, Contracts, County Manager, Maintaining Agency, District Warranty Coordinator (if warranty items), and FHWA (if a Federal oversight project).

Original of file in District Construction Office



STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

FORM C-85

REPORT OF PARTIAL INSPECTION AND ACCEPTANCE

Project No.	County/Route/Section
Federal No.	PID No.
Contractor	Work Started

Location and Description of Items of Work Accepted Prior to Physical Work Completed:

__ without any corrective work required.

__ with punch list items referenced below.

Date of Partial Inspection _____ and transfer of maintenance responsibilities to:

Date of Partial Inspection _____ and start of warranty period for items:

I inspected this portion of the project and found it was completed in substantial conformance with the contract documents:

FINAL INSPECTOR

c: Contractor, County Manager, Maintaining Agency, District Warranty Coordinator (if warranty items), and FHWA (if a Federal oversight project)

Original of file in District Construction Office



STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

**REPORT OF FINAL INSPECTION
(Local Public Agency Administered Project)**

Project Designation	County/Route/Section
Federal No.	PID No.
Contractor	
Work Started	Work Completed

Location and Description of Project inspected

Remarks/Exceptions

Final Inspection was made on _____, and we find the above Project was completed in general conformity with the approved plans and scope of the project.

Future maintenance is the responsibility of _____

Physical Work Accepted on _____ by _____

FINAL INSPECTOR

c: District LPA Coordinator - Accounting - LPA

Original of file in District Construction Office