

## Documentation – CDOT Maintenance and Local Agency-22

### 1. SCOPE

This chapter intends to provide the CDOT Maintenance personnel or Colorado Local Agency personnel guidance from the beginning of the project to the closure of the portion of the materials of the project files. The materials documentation on a project needs to be accurate, complete, and processed within the officially established time frame after the issuance of the project's Final Acceptance Letter per Section 105.21 (b). The Department has stipulated that the Letter of Final Materials Certification (CDOT Form 473) will be signed by the indicated representatives within 30 calendar days to ensure that the quality of the project is maintained and to avoid legal and contractual conflicts.

### 2. GENERAL REQUIREMENTS FOR CDOT MAINTENANCE PROJECTS

The procedures referenced are to be followed as indicated for CDOT Maintenance (MTCE) projects. The materials documentation procedure begins at the Materials and Geotechnical Branch in the Documentation Unit with the creation of the *Materials Documentation Record*, CDOT Form 250, and the Region Materials Laboratory with the creation of the *Project Independent Assurance Sampling & Testing Schedule*, CDOT Form 379. Final Materials Documentation is to be prepared and reviewed as provided in this chapter. Details on Documentation procedures for individual items are contained in the applicable Sections of this Manual and they cover most situations encountered, but exceptions may require special attention.

### 3. GENERAL REQUIREMENTS FOR LOCAL AGENCY (LA) PROJECTS

The procedures referenced are to be followed as indicated for Local Agency projects within the state of Colorado. The materials documentation procedure begins at the Materials and Geotechnical Branch in the Documentation Unit with the creation of the *Materials Documentation Record*, CDOT Form 250, and the Region Materials Laboratory with the creation of the *Project Independent Assurance Sampling & Testing Schedule*, CDOT

Form 379. Final Materials Documentation is to be prepared and reviewed as provided in this chapter. Details on Documentation procedures for individual items are contained in the applicable Sections of this Manual and they cover most situations encountered, but exceptions may require special attention.

### 4. CDOT MAINTENANCE PROJECTS

When a CDOT Maintenance project goes through the CDOT contract process Maintenance will follow the Colorado Department of Transportation Federal-Aid Highway Program Stewardship Agreement, the current CDOT Standard Specifications for Road and Bridge Construction, the current applicable CDOT Field Materials Manual, and the CDOT Maintenance Projects, Guideline Manual.

These are typical CDOT Maintenance project types:

**Roadway & Pavement:**

Pavement Patching and Repair (Concrete and Asphalt), Pavement Treatment or Overlay (Less than 1.5 inches), Pavement Crack Sealing (Concrete and Asphalt), Chip/Fog Sealing Operations, Roto-milling Operations, Mud Jacking Operations.

**Traffic:**

Pavement Marking Operations, Signing Maintenance and Repair, Traffic Signal Maintenance and Repair, Overhead Lighting Maintenance and Repair, VMS Maintenance and Repair

**Bridge and Structure:**

Structure Maintenance and Repair

**Hydraulic and Drainage:**

Culvert Maintenance, Repair, and Replacement

**Other:**

Guard Rail Repair and Replacement, Pedestrian and Bike Path Repair, Remote Deicing System Maintenance and Repair, Weather Monitoring System Maintenance and Repair

**If you are unsure whether your project is eligible to become a Maintenance Contract Project, contact the State Maintenance Engineer.**

Tyler Weldon P.E., State Maintenance Engineer

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303-512-5503

- 4.1 Under existing statutes and regulations, CDOT is responsible for ensuring that all Maintenance projects are carried out following Federal requirements. CDOT is responsible for determining that Maintenance has adequate project delivery systems for projects and sufficient accounting controls to properly manage State Funds and is ultimately accountable for ensuring that requirements are met for all Maintenance projects.
- 4.2 Designate that the Documentation Unit of the CDOT Materials & Geotechnical Branch is responsible for the development of the CDOT Form 250, *Materials Documentation Record*. The checklist will also designate who is the responsible individual for updating Form 250 as work progresses, and who is the responsible individual required to sign the "Reviewed and Approved By" upon completion of the project.
  - 4.2.1 The CDOT project representative, whether the Maintenance Superintendent or Project Manager, may request a small quantity exemption Form 250 from the CDOT Materials & Geotechnical Branch if a project has only Small Quantities as defined by the OA Frequency Guide Schedule of the applicable Field Materials Manual (FMM).
    - 4.2.1.1 The Maintenance Project Manager will need to complete the appropriate sections of the CDOT Form 250 (e.g. "Added Materials Items", "Price Reduction", "Sampling & Testing Deviations", etc.).

- 4.3 Designate that the applicable CDOT Region Materials Engineer's (RME) staff is responsible for the development of the CDOT Form 379 *Project Independent Assurance Sampling & Testing Schedule*. The CDOT RME will sign the "Initial Approved By". The checklist will designate who is the responsible individual for completing CDOT Form 379 throughout the project, and who is the responsible individual required to sign the "Final Approved By" upon project completion. It will also stipulate who will apply for the subsequent "Project Review By" from the CDOT Maintenance Superintendent.
- 4.3.1 The Maintenance Project Manager shall develop the CDOT Form 473-M, *Final Materials Certification for a CDOT Maintenance Project*, and CDOT Form 474 *Final Materials Certification - Explanation of Exceptions* for a CDOT Maintenance Project as per the instructions within this chapter. The applicable CDOT Maintenance Superintendent will sign the second "Approved by" signature block with his title and date.
- 4.2.1.3 Construction administration, inspection, materials testing, and documentation for Maintenance projects shall follow the applicable Field Materials Manual and the current Local Agency Manual for general assistance.
- 4.1.2.4 CDOT Maintenance should utilize Section 6 of this chapter of the Field Materials Manual as much as is applicable in the organization and completion of their project materials documentation.
- 4.1.2.5 CDOT Maintenance should utilize Section 9 of this chapter for the Distribution of their Finals Materials Documentation.

## 5. LOCAL AGENCY (LA) PROJECTS

When projects are funded with Federal and Local Agency funds, an Inter-Governmental Agreement (IGA) is required between CDOT and the Local Agency to define project scope, project responsibilities, detailed funding amounts, encumbered project funds, and payment obligations. The State of Colorado administers, oversees, or monitors the Federal-Aid Local Agency (LA) Transportation Projects.

### 5.1 Federal Oversight Stipulations:

- 5.1.1 Per 49 CFR 18.37, States shall follow state law and procedures when awarding and administering sub-grants of financial assistance to local governments. States shall: Ensure that sub-grantees are aware of requirements imposed upon them by Federal statute and regulation.
- 5.1.2 Under existing statutes and regulations, State DOTs are responsible for ensuring that all Federal-aid projects are carried out following Federal requirements (referenced within *Legal and Regulatory Provisions Related to Oversight of Sub-recipients of Federal-aid Funds*). This responsibility was specifically clarified in 23 U.S.C. 106, as amended by Section 1904(a) of the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU, Public Law 109-59). This amendment to Section 106 specifically charges the States with the responsibility for determining that sub-recipients of Federal funds (including LPAs) have adequate project delivery systems for projects and sufficient accounting controls to properly manage federal funds. As the recipient of Federal-aid funds for the State, the State DOT may not delegate this responsibility and the State DOT is ultimately accountable for ensuring that Federal requirements are met for all Local Public Agency (LPA) - administered Federal-aid projects.

## 5.2 Local Agency Contract Administration Checklist will:

5.2.1 Designate that the Documentation Unit of the CDOT Materials & Geotechnical Branch is responsible for the development of the CDOT Form 250, *Materials Documentation Record*. The checklist will also designate who is the responsible individual for updating Form 250 as work progresses, and who is the responsible individual required to sign the “Reviewed and Approved By” upon completion of the project.

5.2.1.1 The CDOT project representative, whether the Local Agency Coordinator or Project Manager, may request a small quantity exemption Form 250 from the CDOT Materials & Geotechnical Branch if a project has only Small Quantities as defined by the OA Frequency Guide Schedule of the applicable Field Materials Manual.

5.2.1.2 The Local Agency’s Project Engineer will need to complete the appropriate sections of the CDOT Form 250 ( “Added Materials Items”, “Price Reduction”, “Sampling & Testing Deviations”, etc.).

5.2.1.3 A small quantity exemption CDOT Form 250 can only be requested by a CDOT representative who has completed the training for the Local Agency Manual – Addendum for Materials Testing and Documentation, as conducted routinely by the CDOT Materials & Geotechnical Branch.

5.2.2 Designate that the applicable CDOT Region Materials Engineer’s (RME) staff is responsible for the development of the CDOT Form 379 *Project Independent Assurance Sampling & Testing*

*Schedule*. The CDOT RME will sign the “Initial Approved By”. The checklist will designate who is the responsible individual for completing CDOT Form 379 throughout the project, and who is the responsible individual required to sign the “Final Approved By” upon project completion. It will also stipulate who will apply for the subsequent “Project Review By” from the Local Agency.

On National Highway System (NHS) projects the Independent Assurance Sampling and Testing shall be accomplished by CDOT personnel or its designated agent employed by an AASHTO Accredited Laboratory. On Non-NHS projects, the Local Agency may use their established and documented procedures to independently verify the adequacy of testing equipment and personnel if their program is approved by the FHWA.

5.2.3 The State Transportation Agency, CDOT, is responsible for the construction of Federal-aid projects. This ultimate authority cannot be delegated. The local public agency (LPA), referred to as the Local Agency by CDOT, must provide a full-time employee to be in “responsible charge” of the project. This individual shall be a public employee (an FTE) but does not need to be an engineer. The key regulatory provision is 23 CFR 635.105 and defines through seven bullets the duties and functions that are expected to be performed.

The individual in “responsible charge” shall develop the CDOT Form 473-LA, *Final Materials Certification for a Local Agency Project*, and CDOT Form 474 *Final Materials Certification - Explanation of Exceptions* per the instructions within this chapter. The applicable CDOT Resident Engineer will sign the second “Approved by” signature block with his title and date.

5.3 Construction administration, inspection, materials testing, and documentation for LA projects shall follow the applicable Field Materials Manual and the current Local Agency Manual.

5.3.1 The Local Agency should utilize Section 6 of this chapter as much as is applicable in the organization and completion of their project materials documentation.

5.3.2 The Local Agency should utilize Section 9 of this chapter for the Distribution of their Finals Materials Documentation.

## 6. CDOT MAINTENANCE PROJECTS & LOCAL AGENCY PROJECTS – RESPONSIBILITIES & PROCEDURES

### 6.1 Before Construction:

1. Review the Project Plans and check the Project Special Provisions for any modified testing procedures.
2. Review the developed CDOT Form 250. This will enable the Project Engineer to be aware of the types and frequencies of tests that the project quality assurance (OA) tester will be performing.
3. Review the developed CDOT Form 379. This will enable the Project Engineer to be aware of the frequency of the independent assurance (IA) tests that will be performed.
4. Set up Project Material Books. Ensure that the format is as described in the Organizational Guide for Project Material Books in Section 16.
5. Review the Special Notice to Contractors. Make note of the applicable acceptance level for the materials being incorporated into the project.
6. Ensure items and testing frequencies included in other work are accounted for in CDOT Form 250, the CDOT Form #379, or for Pre-inspection. (For example, Structural Backfill has been included with the MSE wall.)
7. Develop a list of Pre-inspected Items.
8. Collect a submitted list of proposed materials suppliers from the Contractor. Ensure that all steel and iron products permanently incorporated in the work are domestically produced following Section 4 of the Special Notice to Contractors.
9. Evaluate the Contractor's materials suppliers list against the requirements of CP 11, the **Qualified Manufacturers List (QML)**, and the **Approved Products List (APL)** on the web. [www.codot.gov/business/apl](http://www.codot.gov/business/apl)
10. Identify sources of undesignated materials.
11. Set up Random Sampling Schedules (CP 75).
12. Assure Concrete Mix Design Approval, if required.
13. Assure Asphalt Job Mix Formula Approval, if required.
14. Attend pre-pave, pre-pour, and PC/OA meetings. **If Required**
15. Schedule and participate in pre-testing meetings. Use CP 16, Pre-Testing Meeting Agenda (CDOT Form 1322), if applicable.
16. CDOT Forms must be the most recent revisions as posted on the CDOT Forms Catalog and located on the web: <https://www.codot.gov/library/forms>

## 6.2 During Construction

1. Ensure that the Project Manager and Inspectors have communicated with the OA tester: activities, production, materials or product deliveries, Contract Modification Orders (CMO), altered quantities, and additional items not considered on CDOT Form 250.  
**Note 1:** The Project Manager needs to communicate the field-adjusted quantities from the CMOs and the Minor Contract Revisions (MCRs) to the Region Materials Engineer (RME) and the IA Tester.
2. Complete daily the sampling and testing documentation (worksheets & reports).
3. File daily all materials acceptance documents such as Certified Test Reports (CTRs), Certificates of Compliance (COCs), APL – QML Verification (AV), etc. These documents are to accompany the delivered material to the project.
4. File, within appropriate tabbed sections of the project binder(s) daily, all completed documents.
5. CDOT Maintenance submits required samples to the Region Materials Laboratory following the OA Frequency Guide Schedule.
- 5a. Local Agencies submit required samples to an AASHTO Accredited Materials Testing Laboratory consultant following the OA Frequency Guide Schedule.
6. CDOT Maintenance only may submit required samples to the Central Laboratory following the OA Frequency Guide Schedule. **At the recommendation of the Region Materials Laboratory only.**
7. Inform the CDOT Region Materials Laboratory IA Tester of any upcoming IA sampling and testing per Form 379.
8. Ensure that all required information is added to Form 250 as testing progresses. It is very important to complete the applicable portions of the last five sections [Documentation for Added Materials Items, Documentation for Deleted Materials Items, Summary of Laboratory Check Test Deviations, Summary of Sampling and Testing Deviations, and Summary of Project Price Reduction Documentation] at the time this information becomes available.
9. Perform Price Adjustment Calculations before Estimates following Sections 105.03 to 105.07 of the Standard Specifications.
10. Monthly monitor quantities from Progress Report.
11. Make sure Price Adjustments are on the Progress Report. As received from Contractor.
12. Daily keep an updated list of Exceptions to Specifications.
13. Write explanations for each Exception and keep them in the project file as they occur. This will facilitate the completion of CDOT Form 474, Explanation of Exception, at the end of the project.
14. Participate in weekly materials testing meetings as necessary utilizing CP 16, Weekly Meeting Agenda (CDOT Form 1323).

### 6.3 After Construction

**Note 2:** The project personnel is to review 100% of the Items and materials documents at this time. To indicate that the review is being performed an actual checkmark (✓) in pencil be placed on all of the applicable documents being reviewed.

1. Sort and arrange all documents within the Project Materials Books sequentially by Item number and then by date (most recent first behind the applicable tab) for ease of review. [The first tabbed section will be the documents as referenced in the Table of Documentation Distribution with all of the documents in the order shown. This will not only aid in the closure process but also facilitate the review and audit process].
2. Use the Finals Materials Documentation Checklist, (Project Closure) CDOT Form 1199 Page 1, to document that the subsequent steps have been followed. A black checkmark (✓) is to be placed within all verification boxes or click on the applicable box if it is being completed on the computer.
3. Compare final quantities from the latest Progress Estimate to Form 250 final quantities. Write the Progress Estimate Number (date) used on Page 1 of the CDOT Form 1199.
4. Verify that the Serial Numbers on CDOT Form 250 match the project documents.
5. Document on CDOT Form 250 the total number of tests taken by the OA Tester.
6. Verify that any shortages of required tests as indicated on CDOT Form 250 are explained.
7. Independent Assurance (IA) Tests:
  - 7.1 Verify that the Serial Numbers on CDOT Form 379 match the project documents and all tests agree with field acceptance tests, and if applicable, shortages and exceptions are explained.
  - 7.2 Ensure the correct number of tests on the CDOT Form 379.
  - 7.3 Ensure that IA Witness tests if performed at all did not exceed 20% of actual testing for each test element.
  - 7.4 Ensure that Independent (IA) / Acceptance (OA) / Check Test differences are explained.
  - 7.5 Ensure that CDOT Form #379 has a Final Approved By signature of the RME and then has been returned to the Project Engineer.
  - 7.6 Ensure that CDOT Form #379 has a Project Reviewed By signature of the Project Engineer.
8. Make sure all Pre-Inspected items have Form 193, when applicable.
9. Make sure a Line Item exists for each Price Adjustment. A separate Line Item is preferred.
10. Make sure there is a brief explanation for material accepted at full price, Percent of reduction in contract price (P) less than 3, is noted on the field form(s) when submitted.
 

**Note 3:** Reference to P is addressed in Standard Specifications, Section 105.03.
11. Check all Price Reduction Calculations, P greater than or equal to 3.
12. Check explanation for all material repaired or replaced, P greater than 25.
13. The Project Engineer or the Finals Materials Documentation Coordinator (if so designated by the RTD) is responsible for initially developing the *Final Materials Certification*, CDOT Form 473. This includes the Explanation of Exceptions CDOT Form 474, which must be included and should have been maintained throughout the project following "*During Construction #14*".
14. Before the submission of the last Progress Estimate, the Project Engineer shall have all the documentary evidence needed to show that the contractor has complied with the requirements of the Contract Plans and Specifications for all materials used following the CDOT Field Materials Manual - Quality Assurance Procedures for Construction and Materials Sampling and Testing chapter.
15. Ensure that all required documents from the Contractor have been received: such as: Buy America Certificate, CTRs, COCs, Approved Products Verifications, etc., so that upon Final Acceptance the Finals Materials Documentation review and audit process can be completed within 30 calendar days.

- 15.1 Ensure that the required stamps are applied to the CTRs and COCs and that they are completed with the applicable information for that material submittal.
- 16. CDOT Maintenance: 100% of the Project Material Books are to be immediately forwarded to the Region Final Materials Documentation Coordinator.
- 16.1 Local Agencies: 100% of the Project Material Books are to be immediately forwarded to the CDOT Region Local Agency Coordinator.

## 7. INDEPENDENT REVIEW REQUIREMENT

The State Maintenance Engineer or the Local Agency Coordinator will prepare the CDOT Form 1199 Page 2, Finals Materials Documentation Checklist, (Review or Audit), and list the four major items. The Items of work that involve the four largest amounts of money as indicated by the original contract shall be considered Major Items. Major Item #1 will be the most expensive and Major Item #4 will be the fourth most expensive. Using CDOT Form 1199 the State Maintenance Engineer or Local Agency Coordinator will randomly select one of the listed Major\_Items for the reviewer to check completely. The actual review process utilizing Form 1199 for the Review is similar to that used for the Project Closure; however, there are some modifications because the Project Manager or designee is performing a 100% check.

**Note 4:** To verify the steps performed by a reviewer, it is required that an actual checkmark (✓) in [blue ink](#) be placed on all of the applicable documents being reviewed.

1. Compare final quantities from the latest Progress Estimate to the Form 250 final quantities. Verify the number of the Progress Estimate used on Page 1 of the CDOT Form 1199. If a more recent Progress Estimate has been issued it should be used and noted. Document any discrepancies discovered between the "more recent" Progress Estimate and the project closure copy.
2. Verify that the Field Serial Numbers on CDOT Form 250 match the project documents.
3. Verify on CDOT Form 250 the total number of tests taken by the OA Tester.
4. Verify that any shortages of required tests as indicated on CDOT Form 250 are explained.
5. Independent Assurance (IA) Tests:
  - 5.1 Verify that the Field Sheet / Serial Numbers on CDOT Form 379 match the project documents and all tests agree with field acceptance tests, and if applicable, shortages and exceptions are explained.
  - 5.2 Ensure the correct number of tests on the CDOT Form 379.
  - 5.3 Ensure that IA Witness tests did not exceed 20% of the actual testing for each test element.
  - 5.4 Ensure that Independent (IA) / Acceptance (OA) / Check Test differences are explained.
  - 5.5 Ensure that Form 379 has a "Final Approved by" signature of the RME and a "Final Reviewed by" signature of the Project Engineer and that it has been attached to CDOT Form 473.
6. Make sure all Pre-Inspected items have a Form 193, when applicable.

7. Make sure a Line Item exists for each Price Adjustment. A separate Line Item is preferred, if a lump sum method is used, submit a detailed explanation.
8. Make sure there is a brief explanation for material accepted at full price, Percent of reduction in contract price (P) less than 3, is noted on the field form(s) when submitted.

**Note 5:** Reference to P is addressed in CDOT Standard Specifications, Section 105.03.

9. Check all Price Reduction Calculations, P greater than or equal to 3.
10. Check explanation for all material repaired or replaced, P greater than 25.
11. Check all of the input values for accuracy on PC/OA projects with incentive/ disincentive specifications.
12. Ensure that verification of receipt for the final PC/OA data being sent to the RME and the Staff Materials Pavement Design Program (PC/OA Manager) is on file. Send acknowledgment e-mails as required. If it is not included in the file then send a copy of the PC/OA data to guarantee that it has been received. On CDOT Form 1199 include the date sent to the PC/OA Manager.
13. Verify the completion of CP 16, Evaluation of Materials Testing (CDOT Form 1324) for all consultants.
14. Verify that the Final Materials Certification, CDOT Form 473, has an Approved By signature of the Project Engineer. The Explanation of Exceptions, CDOT Form 474, is required to be included even if there is nothing documented on it. See the instructions for CDOT Form 474 to ensure that the Explanation of Exceptions meets the requirements for completeness.
15. As part of the final Progress Estimate, the Project Engineer has included all the documentary evidence needed to show that the contractor has complied with the requirements of the Contract Plans and Specifications for all materials used following the CDOT Field Materials

Manual - Quality Assurance Procedures for Construction and Materials Sampling and Testing chapter. The CDOT Form 325, Final Estimate Data, is to be included in this process. If there is a delay obtaining CDOT Form 325 then it will be included as soon as it is developed and signed.

If unresolved differences are identified in the complete check of the first randomly selected Major Item a second randomly selected Major Item will be checked completely. If unresolved differences are found in the second Major Item checked then both of the remaining two Major Items will be checked completely. If the existence of discrepancies or continued unresolved differences remains, a meeting will need to be scheduled between the "Reviewers", the project's Resident Engineer, and the Project Engineer.

The completion of CDOT Form 473 is required within 30 calendar days after the final acceptance to achieve a timely closure of the project. The Final Materials Certification is to have an "Approved By" signature of the Resident Engineer beneath the signature of the Project Engineer. The Explanation of Exceptions, CDOT Form 474 may be edited as necessary; however, the one provided by the Project Engineer must accompany the edited version so that the RE is aware of the changes. The CDOT Form 473, Final Materials Certification, is a requirement for the closure of each construction project whether it be CDOT Maintenance or Local Agency.

**8. CDOT MAINTENANCE & LOCAL AGENCY FINAL MATERIALS DOCUMENTATION AUDIT**

The Quality Assurance Procedures Chapter Subsection 11.12 details an audit program in which the CDOT Central Laboratory and the FHWA evaluate the Final Materials Documentation of CDOT Maintenance Projects and Local Agency Projects throughout Colorado.

These audits occur on a biennial basis. The Final Reports are distributed to the FHWA, the CDOT Chief Engineer, and all applicable parties as stipulated in the Quality Assurance Procedures Chapter.

**NOTE 6: All Local Agency Projects that, are under CDOT Audit review, shall submit to the CDOT Audit Team, a complete PC (Process Control) notebook in digital format or a Complete hard copy 3-ring binder PC notebook that contains, all Project Finals documentation.**

**9. Table of Documentation Distribution - 1  
LA Project Finals Materials Documentation Packet**

Document Order	Distribution				
	#1	#2	#3	#4	#5
Form 473-LA	X	X		X	X
Form 474, Explanation of Exceptions supporting documents (letters, CMOs, MCRs, etc)	X	X		X	X
Form 250 (all pages)	X	X		X	X
Form 379	X	X		X	X
Form 1199, Page 2	X	X		X	X
Form 1199, Page 1	X	X		X	X
Random Sample Schedule	X	X		X	

Distribution:

- #1 CDOT Resident Engineer.....Original
- #2 LA Project Engineer / Project Manager.....Copy
- #3 CDOT Region Materials Engineer.....Copy(request)
- #4 CDOT Local Agency Coordinator.....Copy
- #5 Documentation Unit, Staff Materials & Geotechnical Branch.....Copy

**Table of Documentation Distribution - 2  
CDOT Maintenance Project Finals Materials Documentation Packet**

Document Order	Distribution						
	#1	#2	#3	#4	#5	#6	#7
Form 473-M	X	X	X	X	X	X	X
Form 474, Explanation of Exceptions supporting documents (letters, CMOs, MCRs, etc)	X	X	X	X	X	X	X
Form 325, Page 1 & 2	X	X		X		X	
Final Estimate or last Progress Estimate	X	X		X		X	
Form 250 (all pages)	X	X	X	X		X	X
Form 379	X	X	X	X	X	X	X
Form 1199, Page 2	X	X	X	X	X	X	X
Form 1199, Page 1	X	X	X	X		X	X
Price Reduction Calculation	X	X		X			
PC Data-(If Needed)	X	X		X			
QA Data-(If Needed)		X	X	X			
Buy America Certificate	X	X		X		X	
Removed RSAR							

Distribution:

- #1 Maintenance Superintendent.....Original
- #2 State Maintenance Engineer.....Copy
- #3 Region Materials Engineer.....Copy
- #4 Region Finals Engineer.....Copy
- #5 Documentation Unit, Staff Materials & Geotechnical Branch.....Copy
- #6 Records Management / Records Center.....Copy

**10. CDOT FORM 211 – Completion Instruction  
[Materials Documentation Request]**

The Final Materials Documentation Project Closeout and the Final Materials Documentation Review or Audit activities will discover that occasionally required documents will be missing. Individuals performing the closeout, review, or audit should use this form or comparable e-mails to allow for a paper trail in the effort to obtain the missing documents. The original project personnel may have misplaced or lost a field materials worksheet or report. The Contractor may have not forwarded the required COCs or CTRs. Because time is critical, always indicate a due date and follow through immediately if that date has passed. If e-mail queries are being used, write on the “Subject:” CDOT Materials Documentation Request or CDOT Form 211. Staple the resolution Form 211s or e-mails to the CDOT Form 1199s.

**Note 5:** The CDOT Forms 250, 379, 473LA/473M,474, and both 1199s that have been referenced are integral to the Materials Documentation process, both at the project level and at the review and audit level. Therefore, the subsequent explanation of each of the form’s requirements is addressed at this point.

## 11. CDOT FORM 250 – Completion Instructions [Materials Documentation Record]

The Project Manager is responsible for the initial review of Form 250 and contacting the Staff Materials & Geotechnical Branch if there is a problem with the form. Ensuring the proper completion of the CDOT Form 250 and then applying the signature to Reviewed and Approved by is the Project Engineer's responsibility. If a consultant tester is utilized on the project a professional engineer with the consulting company must sign and place his PE stamp on the last page of CDOT Form 250.

Completion of the CDOT Form 250 will include the following as substantiating documentation:

1. Entering Final Materials Quantities.
2. Inclusion of Quantities added by Contract Modification Order(s) on CDOT Form 90.
3. Breakout and inclusion of Quantities not listed separately in the Bid Schedule (ie. quantities included in Lump Sum Items, etc.).
4. Verification that minimum testing frequencies have been accomplished.
5. Explanation of Exceptions for Material Specification Deviations.
6. Documentation of Exceptions, for comparison differences between Quality Assurance (OA) Test results and Independent Assurance (IA) Test results.
7. Documentation of Exceptions for Price Reductions when P is greater than or equal to 3. Specification deviations that have a price reduction factor (P) of less than 3 require that the exception be noted on the submittal sheet referenced in the Field Materials Manual – OA Schedule. A copy of the calculations is to be attached.
8. Documentation of Exceptions for remedial action when P is greater than 25.
9. Documentation of Exceptions for an insufficient number of tests.

**Note 6:** If the Guidelines for Test Frequency Reduction are utilized then reference it specifically, do not just state "waived by the Project Manager".

10. Documentation of Exceptions for a lack of tests for Items included in Lump Sum Payments. PE shall obtain the Region Materials Engineer exemption.
11. Documentation of Exceptions for a lack of tests for Items included in extra work.

Distribution:

**Note 7:** Submit the entire completed copy, not just the first and last page.

**12. CDOT FORM 379 –Completion Instructions  
[Project Independent Assurance Sampling Schedule]**

The Project Manager is responsible for ensuring that the Region Materials Engineer’s IA Staff are kept informed throughout the project. The OA Procedure Chapter, Subsection 7.5.1.2, and throughout Subsection 7.9.4 describes the exact responsibilities that the Project Engineer has concerning CDOT Form 379.

The Region Materials Engineer will assign an individual from the Region Materials Laboratory to develop the CDOT Form 379, *Project Independent Assurance Sampling & Testing Schedule*. The Region Materials Engineer, or his designee, will perform the initial approval to provide independence between development and review before distribution to the Project Engineer. The RME or his designee will send a copy of the 379 to the appropriate Project Engineer, even if a copy has been sent to the project (OA) tester. When all of the Form #379 IA sampling and testing on the project is completed, the RME will certify it through his Final Approval and then forward the signed Form 379 to the Project Engineer or if applicable the LA designee.

Upon receipt from the Region Materials Engineer, the Project Engineer or the Local Agency designee will review and accept for the files the 379 with his Project Reviewed By signature.

Completion of the CDOT Form 379 will include:

1. The actual number of tests completed.
2. An Explanation of Exceptions for comparison differences between Quality Assurance (OA) Test results and Independent Assurance (IA) Test results, as defined in Section 7.9 of the QA Procedures chapter.
3. An Explanation of Exceptions for an insufficient number of tests.
4. The Field Sheet / Serial Numbers from the CDOT Forms correlated to the applicable CDOT Form Number and the test dates.
5. The completion of the statement “*All equipment was independent except as noted: ...*”

**13. CDOT FORM 473-M, 474 and 473-LA, 474 Completion Instructions  
[Final Materials Certification]**

**13.1 CDOT Form 473-M and 474 Completion Instructions for CDOT Maintenance Projects**

The Project Manager is responsible for ensuring that the Final Materials Certification, CDOT Form 473 is developed. This includes the Explanation of Exceptions Form 474 which should have been maintained throughout the project. The Region’s Finals Materials Documentation Coordinator may be designated by the RTD to initially prepare CDOT Form 473. The Project Manager applies the first Approved By signature to the form because it is his project and he would be aware of all issues associated with his project. The Maintenance Superintendent for the project applies his signature under Approved By on CDOT Form 473 because of his ultimate responsibility and authority. He may edit the Explanation of Exceptions CDOT Form 474 as necessary, after the completion of the Final Materials Documentation Review. However, the edits should be documented if they are anything other than editorial.

Explanation of Exceptions CDOT Form #474: [Examples only, not all-inclusive.]

- Missing documents such as CTRs, COCs, Buy America, etc.
- Section 11 (Form 250) and Section 12 (Form 379) have specific Exceptions that should be placed in this document.
- The last five sections of CDOT Form 250 [Documentation for Added Materials Items, Documentation for Deleted Materials Items, Summary of Laboratory Check Test Deviations, Summary of Sampling and Testing Deviations, and Summary of Project Price Reduction Documentation] may be attached to fully document what transpired on the project.

Completion of the CDOT Form 473 will include:

1. The creation of Explanation of Exceptions CDOT Form 474 is a compilation of recorded and documented explanations from throughout the project and also those recorded on CDOT Form 250 (refer to the examples above).
2. All issues that were referenced on the CDOT Form 1199 Page 1 and Page 2 were reviewed.
3. All CDOT forms and documents are assembled in the required order stipulated in Table Documentation-1. These are to be physically attached with pages stapled together as much as is possible or with binder clips if necessary.

13.2. CDOT Form 473-LA and 474 Completion Instructions for Local Agency Projects:

The Local Agency's individual in "responsible charge" shall be responsible for ensuring that the Final Materials Certification, CDOT Form 473-LA, is developed. This includes the Explanation of Exceptions, CDOT Form 474, which should have been maintained throughout the project. This individual applies the first "Approved By" signature to the CDOT Form 473-LA as stated in Subsection 5.2.3 of this chapter. The Resident Engineer applies the second "Approved by" signature block on the CDOT Form 473-LA because this ultimate authority cannot be delegated. The Resident Engineer or their CDOT designee may edit the Explanation of Exceptions as necessary, after the completion of the Final Materials Documentation Review.

Explanation of Exceptions: [Examples only, not all-inclusive.]

- Missing documents such as CTRs, COCs, and Buy America (if applicable)
- Section 11 (CDOT Form 250) and Section 12 (CDOT Form 379) have specific Exceptions that should be placed in this document.
- The last five sections of CDOT Form 250 [Documentation for Added Materials Items, Documentation for Deleted Materials Items, Summary of Laboratory Check Test Deviations, Summary of Sampling and Testing Deviations, and Summary of Project Price Reduction Documentation] may be attached to fully document what transpired on the project.

Completion of the CDOT Form 473-LA will include:

1. The creation of Explanation of Exceptions is a compilation of recorded and documented explanations from throughout the project and also those recorded on CDOT Form 250.
2. All issues that were referenced on the CDOT Form 1199 Page 1 and/or Page 2 were reviewed.
3. All CDOT forms and documents are assembled in the required order stipulated under the Documentation tab, Section 9, Table of Documentation Distribution-1 of the Field Materials Manual. These are to be physically attached with pages stapled together as much as is possible.

**CDOT Form 474 (Adobe Acrobat DC version)**

1. The Project Tester or the Project Engineer (rarely) initiates the Form.
2. The Project Tester fills out project information including the Contract ID, Region, Acceptance Date, Project Number, Project Location, Contractor, and Project Final Documentation Completion Date. The Project Final Documentation Completion date shall be the same date that appears on the final copy of the Owner Acceptance Sampling & Testing Checklist. **(See an example of the checklist in this Section).**
3. The Project Tester selects the type of project and testing requirements for the project by checking the box for either Owner Acceptance, Independent Assurance, Innovative Contract, Local Agency, CDOT Maintenance, or Other
4. The Project Tester fills in the consulting company's name and if/whether sampling and testing are performed by a consultant.
5. The Project Tester checks the boxes for asphalt and/or concrete quality level. They also electronically sign the boxes to verify the concrete and asphalt data has been reviewed and checked. These boxes, reviewed by and checked by, are signed by different individuals.
6. Whoever reviews the project data (usually the Project Tester, Head Tester, Project Engineer, or a combination) fills out the bulk of the form which shall contain a detailed list with explanations of all exceptions or changes to a project, incentives and disincentives, failing tests, missing documents, etc.
7. The Project Tester or Project Engineer electronically signs the document, locking all their input from future alterations.

**CDOT Form 473, Page 2**

Form 473, Page 2 has been replaced with CDOT Form 474. Older versions of CDOT Form 473 shall not be used, even if specified in the Field Materials Manual required for the project. Project personnel should replace any older versions of CDOT Form 473 (pages 1 and 2) with the newest versions of CDOT Forms 473 and 474 and document the change in the project.

**CDOT Form 474**

CDOT's directive to go paperless was the primary direction for creating CDOT Form 474, which is essentially the old and cumbersome CDOT Form 473, Page 2. CDOT Form 474, CDOT Final Materials Certification/Explanation of Exceptions was created for supplemental project documentation. Some of the items that must be included on CDOT Form 474 include shortages of tests, missing COC/CTR's, price reductions, and CAR quality level reports. As the title suggests this form also requires signatures that were previously on CDOT Form 473, Page 2.

**Signature Blocks**

Both CDOT Forms 473 and 474 have a signature lock feature built into them. Each signature will lock the entire section that particular the signature block is responsible for completing. Thus, each signer must verify their section is correct before signing, as once a signature is applied no changes can be made to that section. A more detailed list of instructions for filling and signing these two forms is as follows.

**CDOT Form 473**

There are six required signatures for CDOT Form 473, the following illustrates the proper order in a step-by-step process for correctly filling out this form.

**CDOT Form 474**

Is essentially the old CDOT Form 473 Page 2, but with a couple of upgrades. Similar to the new CDOT Form 473, electronic signatures will lock in the various areas the signee is responsible for. The following illustrates the proper step-by-step process for correctly filling out this form.

**Step 1:** The Project Tester or (in rare cases) the Project Engineer fill out the following:

- Item A1: Contract Id, Region, Acceptance Date, Project Number, Project Location, Contractor, and Project Final Documentation Completion Date.
- Item A2: Select the type of project and testing requirements for the project by check the box for either owner acceptance, independent assurance, innovative contract, Local Agency, CDOT Maintenance, or "Other".
- If "Other" is selected then a description must be typed in this box.
- Item A3: Type CDOT or the consulting company's name in the box adjacent to the signature.
- Item A4: Select 'Yes' or 'No' if the CDOT Project sampling and testing are performed by a consultant.
- Item A5: The Project Tester or Project Engineer checks the box(s) for asphalt and/or concrete quality Level. They also electronically sign the boxes to verify the concrete and asphalt data has been reviewed and checked. These boxes, reviewed by and checked by, are signed by different individuals.
- Item A6: whoever reviews the project data fills this section. Usually, it is the Project Tester, Head Tester, Project Engineer, or a combination depending on who has reviewed the project data. This box should contain a detailed list with explanations of all exceptions or changes to a project, incentives, and disincentives, failing tests, missing documents, etc.
- Item A7: The Project Tester or Project Engineer electronically signs the document, locking all their input (outlined in Red) from future alterations.

**Step 2:** Item B: Signed by the Consultant Firm's PE, if a consultant tester was used. If no consultant tester was used, then this block will remain blank.

**Step 3:** Item B1: This block is for comments made by the Consultant Firm's PE if a consultant tester was used. If no consultant tester was used, then this block will remain blank.

**Step 4:** Consultant Firm P.E. Electronic Stamp as per PD 508.1. Instructions:

The signature of the Project Tester or Project Engineer shall be signed after explanations are complete. Wet Signatures are not acceptable, only electronic signatures will be accepted.

On or before January 2020, all CDOT, Local Agency, and consulting Engineers shall utilize electronic Sealing. Requests for exemptions shall be submitted to the Chief Engineer before mechanical Seals being utilized with the reason why an electronic Sealing cannot be used.

Beginning January 2021, there will be no exemptions to the electronic Sealing requirement, except where stated in section (V) (C) of the CDOT Policy Directive 508.1, REQUIREMENTS FOR THE USE OF THE PROFESSIONAL ENGINEER'S SEAL

See FMM Documentation chapters - After Construction - for more information

All CAR - Quality Level Reports must be Final Report with no errors.

<b>Colorado Department of Transportation</b> <b>Final Materials Certification</b> <b>Explanation of Exceptions</b>		Contract ID: _____	Region: _____	Page ____ of ____
		Project Acceptance Date: _____		
<input type="checkbox"/> Owner Acceptance <input type="checkbox"/> Independent Assurance <input type="checkbox"/> Innovative Contract <input type="checkbox"/> Local Agency <input type="checkbox"/> CDOT Maintenance <input type="checkbox"/> Other		Project Number: _____		
		Project Location: _____		
		Contractor: _____		
		Project Final Documentation Completion Date: _____		
Electronic signature of Project Tester or Project Engineer		CDOT or Consultant Company Name: _____		
CDOT Project Sampling and Testing by Consultant: YES <input type="checkbox"/> NO <input type="checkbox"/>				
<b>CAR - Quality Level Reports</b>				
<b>FINAL CAR report</b>		<b>Data Reviewed by:</b>		<b>Data Checked by:</b>
<input type="checkbox"/> Asphalt Quality Level	Electronic Signature: _____	Electronic Signature: _____		Electronic Signature: _____
<input type="checkbox"/> Concrete Quality Level	Electronic Signature: _____	Electronic Signature: _____		Electronic Signature: _____
Consultant Firm PE Comments:				
<b>Instructions: Signature of Project Tester or Project Engineer shall be signed after explanations are complete. Hand signed document is not acceptable, only electronic signatures.</b> On or before January 2020, all CDOT, local agency and consulting Engineers shall utilize electronic Sealing. Requests for exemptions shall be submitted to the Chief Engineer prior to mechanical Seals being utilized with the reason why an electronic Sealing cannot be used. Beginning January 2021, there will be on exemptions to the electronic Sealing requirement, except where stated in section (V) (C) of the CDOT Policy Directive 508.1, REQUIREMENTS FOR THE USE OF THE PROFESSIONAL ENGINEER'S SEAL See FMM Documentation chapters - After Construction - for more information <b>All CAR - Quality Level Reports must be Final Report with no errors.</b>		Consultant Firm PE Electronic Signature		
		Consultant Firm PE Electronic Stamp as per PD 508-1:		

A2

A7

A5

B1

A1

A3

A4

A6

B

# INSTRUCTIONS FOR ATTACHING DOCUMENTS TO THE CDOT FORM 474

The screenshot shows the Adobe Acrobat Pro DC interface with the CDOT Form 474 open. The 'Attachments' panel on the left is expanded, showing a list of attachments. A blue box with text provides instructions on how to use the paperclip icon to attach documents. The main form area contains a 'Final Materials Certification' section with various checkboxes and signature lines. Below this is a 'CAR - Quality Level Reports' section with a table for 'Data Reviewed by' and 'Data Checked by'. A large blue box with text is overlaid on the form, and another blue box with text is overlaid on the 'Attachments' panel. The form also includes a 'Consultant Firm PE Comments' section and a 'Consultant Firm PE Electronic Signature' section.

2) Click on Paperclip Icon to show Attachment options.  
3) Click on Paperclip with + sign to attach documents. Save file before signing the CDOT Form 474, documents will always be with the form for future reference.

Attach documents, photos or videos to the CDOT Form 474 before signing the document.

1) Click on arrow to expand or hide the Attachment Section

Colorado Department of Transportation  
Final Materials Certification  
Explanation of Exceptions

<input type="checkbox"/> Owner Acceptance	<input type="checkbox"/> Independent Assurance	Contract ID:	Region:	Page ___ of ___
<input type="checkbox"/> Innovative Contract	<input type="checkbox"/> Local Agency	Project Acceptance Date:		
<input type="checkbox"/> CDOT Maintenance	<input type="checkbox"/> Other	Project Number:		
Electronic signature of Project Tester or Project Engineer		Project Location:		
		Contractor:		
		Project Final Documentation Completion Date:		
		CDOT or Consultant Company Name:		

CDOT Project Sampling and Testing by Consultant: YES  NO

CAR - Quality Level Reports

FINAL CAR report	Data Reviewed by:	Data Checked by:
<input type="checkbox"/> Asphalt Quality Level	Electronic Signature: [Signature]	Electronic Signature: [Signature]
<input type="checkbox"/> Concrete Quality Level	Electronic Signature: [Signature]	Electronic Signature: [Signature]

Consultant Firm PE Comments (for this page only, more pages may follow).

Instructions: Signature of Project Tester or Project Engineer shall be signed after explanations are complete. Hand signed document is not acceptable, only electronic signatures. Header information will populate to all pages from Page 1. Document has 6 pages available. Explain all shortages of tests, missing CDC/CTR's, and price reductions. Explain CAR - Quality Level Reports for processes, Pay Factor of 1, quantity discrepancies and total Incentive/disincentive payments if QLRs apply to the contract. Final package shall include all supporting documentation for price reductions, CMO/MCR's, and CDOT Form 105 detailing deleted items by the PE. See FMM Documentation chapters - After Construction - for more information. All CAR - Quality Level Reports must be Final Report with no errors.

Consultant Firm PE Electronic Signature

Consultant Firm PE Electronic Stamp or Wet Stamp:

Previous editions of this form are obsolete and may not be used. CDOT Form 474 4/19

**14. CDOT FORM 1199, Page 1 – Completion Instructions  
[Final Materials Documentation Checklist, (Project Closure)]**

The CDOT Form 1199 Page 1 is a checklist to be used by the Project Manager. The Project Manager should utilize this form in the process of completing the CDOT Form 473LA as both a guide and a means of documenting that specific issues were addressed and the required supplemental documentation was included in the finals packet.

It is understood that a subsequent Progress Estimate may be created after the Project Engineer has started to close out the project; therefore, the latest Progress Estimate number is to be recorded.

Thoroughly compare the latest Progress Estimate with CDOT Form 250 to ensure that the quantities of the materials are correct. Verify that the form numbers and their respective serial numbers match the project documents. Verify that the required tests match the tests reported (those performed). This process is repeated utilizing CDOT Form 379.

Ensure that all of the supplemental documents referenced in the lower half of Form 1199 are completed and available for inclusion in the final packet.

The Finals Materials Documentation Checklist for Project Closure is to be signed and dated by the Project Engineer or his designee.

**15. CDOT FORM 1199, Page 2 – Completion Instructions  
[Final Materials Documentation Checklist, (Review or Audit)]**

The CDOT Form 1199 Page 2 is a checklist to be used in the Region Final Materials Documentation Audit. The Resident Engineer's reviewer or the Finals Materials Documentation Coordinator should utilize this form in the process of reviewing and auditing the submitted project files from the Project Engineer.

As stated in the Region Finals Materials Documentation Audit instructions this activity is not meant to repeat the 100% project files check performed by the Project Engineer. Reviewing more than one Major Item is to be reserved for responding to discrepancies and problems discovered in the review process.

Utilize the directions from Page 1 concerning comparing the Final Estimate with CDOT Form 250. Verify the testing concerning CDOT Form 379. Ensure that all of the supplemental documents referenced in the lower half of Form 1199 were completed and included in the final packet.

The Final Materials Documentation Checklist for the Review or Audit is to be signed and dated by the Reviewer or the Finals Materials Documentation Coordinator.

## 16. ORGANIZATIONAL GUIDE FOR PROJECT MATERIAL BOOKS

### SCOPE

The Field Materials Manual includes the “OA Frequency Guide Schedule for Minimum Sampling, Testing, and Inspection. This is the essential document to use when determining which CDOT forms to use as worksheets, which CDOT forms to collect as test reports, and what materials acceptance documents are required.

Utilize this Organizational Guide for Project Materials Books in both initially establishing the binders and maintaining them throughout the project. It is not inclusive of every material Item, but it references the primary Items that you will encounter. It is critical to follow the Item numbering in sequential order to aid in locating project paperwork. Check Project Specials and Project Standard Revisions for additional paperwork that may be required.

The Materials Books need to be marked on both the cover and on the spine to indicate which item numbers are included within the book. No exceptions! Each bullet represents a subsection within the item and therefore needs to be properly divided. Sheet dividers or tabs properly identified will help to delineate the paperwork for ease in locating forms used as worksheets and test reports. Place the most recent or newest documents behind the applicable tab.

Core Project Documents: The required filing order in the first book is established to mirror the Project Finals Materials Documentation Packet. Applicable for either CDOT Maintenance or Local Agency projects.

- CDOT Form 473LA/473M and 474.
- Progress Estimate (from the first through to the Final Estimate).
- CDOT Form 250 in its entirety, even though a copy may be divided with the respective Item pages within each tab.
- CDOT Form 379.
- CDOT Form 1199, Page 2 & Page 1.
- Random Sample Schedule(s). \*
- Price Reduction Calculation (copies).
- PC Data. \*\*
- OA Data. \*\*
- Buy America Certificate(s).
- CDOT Form 1324, Evaluation of Materials Testing (per CP 16).
- Field Lab & Personnel Qualification Checklist (per CP 10).

\* Random Sample Schedules need to be marked for the item number and the testing element.

\*\* Random Sample Schedule copies and PC/OA Data copies should be filed with the applicable item.

### 203 Embankment

- CDOT Form 564 (Soil Classification) / CDOT Form 24 (Curves) / Computer Moisture / Density with Rock Correction printouts with Curve numbers on it.
- Each Curve will have all of the above stapled/attached. Make an extra copy of the computer Moisture/Density curve to go with the gauge book.
- CDOT Form 564 (Soil Classifications) for your completed roadway Soil Survey data. (1 per 1000 ft. or change of soils.) Get these tests done as fast as you can so they can be submitted for an R-value in case there is a Stability problem.
- CDOT Form 157 – This is for the samples sent to the Central / Region Laboratory for an R-value to complete your Soil Survey. Attach the test results from the Lab, to the corresponding CDOT Form 157 serial number.  
**Note:** For faster R-value results, attach a copy of your Form 564 (soil classification) that you completed above for that sample.
- CDOT Form 212 (Densities) – with the field test worksheets (in chronological order by date and test number) stapled and attached to this. Make sure your classifications match what is on your computer Moisture/Density curve. The Project Engineer must sign this form when it is completed. You do not wait until the end of the project to fill this out. This form can be filled in and submitted weekly, bi-weekly, monthly, or however your Project Engineer may want this information to be submitted for signature. Communication between you and the Project Engineer is very important.
- CDOT Form 219(Roadbed Soil Survey). You fill this in from the test results you receive from the CDOT Form 157 samples submitted. When this is completed, sign it and have it signed also by the Project Engineer. Then submit this to Region Lab, as soon as possible, for final approval. You will get a signed copy back, when it is approved, for your file.
- Sulfate testing for preliminary roadway soil survey data (1 per 1000 ft. or change of soils.) will use the preliminary soil survey CDOT Form 555. Soils sampled for sulfate testing will be identified for each soil layer and boring on this form. Additional information will be submitted on CDOT Form 157 identifying the test bore number, number, and type (soil or water) of tests being submitted. The completed soil survey will include the sulfate percentage for each sample submitted.
- Sulfate testing for imported embankment (1 per 2000 yd<sup>3</sup> or change in soils) will use the Laboratory Report on Item 203 (Embankment or Borrow) CDOT Form 323.
- Corrosion tests for pipe material type selection will be submitted on CDOT Form 157 and CDOT Form 555 identifying the test bore or location number, number, and type (soil or water) of tests being submitted.

## 206 Structural Backfill

### Class 1

- CDOT Form 157 – Sample submitted to Central / Region Laboratory for a gradation compliance check and a moisture/density curve. Attach the Lab test results to the corresponding 157 serial number.
- (Gradations) CDOT Form 6 that have the field gradation test worksheets (CDOT Form 565) stapled/attached that are represented on that form in chronological order by test number and date.
- (Density) CDOT Form 6 that have the field density worksheets (CDOT Form 427) stapled/attached that are represented on that form in chronological order by test number and date.

### Class 2

- Classification (CDOT Form 564) / Curve (CDOT Form 24) / Computer printout of Moisture / Density Curve with rock correction.  
All of this needs to be attached with a Curve number on it (if there are several curves). Make an extra copy of the computer printout to go to the gauge book.
- CDOT Form 212 (Densities). Same as per Item 203.

### Flow fill

- You only need the 157 filled out for each Flow-Fill Mix Design used. Do not submit this mix design to the Central Laboratory. This stays in project records. Keep batch tickets.

### Filter Material or Bed Course

- You only need the CDOT Form 6. Attach field test sheets (CDOT Form 565) to this form and get them signed by the project engineer.

### Form 194

- Structural Backfill Density Report is a summary to be filled out at the end of the project when you have the correct number of cross pipes, side drain pipes, minor structure, and major structure with their quantities broken out by the type of backfill. You will get this data from your Project Engineer, as well as the Project Plans and As-Builds.

### Item 207

- You will need to have a section for the test results and the CDOT Form 157 that was filed to delineate if it was a Contractor's Source, and this documentation should be accompanied by the Certified Test Reports (CTRs) the Contractor should submit with samples of the material. Check and document that the one the lab used was the one approved for use.
- If the Material used was generated on the project, document it on CDOT Form 157 and have the Project Engineer sign the CDOT Form 157.

Item 208

- You should file a 157 for each of the items that you are documenting. Silt fence, Erosion Bales, and the Miscellaneous Items that were used. Make sure the materials have the proper documentation, and if applicable are on the Approved Products List (APL). It is helpful to print the applicable Form 595 with the information on the product found on the APL and file it behind CDOT Form 157 for that item.

Item 209

- You should document if the Landscaping water used was potable, or if a CTR was submitted and approved for use.
- If Magnesium Chloride is used for a Dust Palliative, document on CDOT Form 157 and file the Certificate of Compliance (COC) behind it.
- If an Asphaltic material was used for a Dust Palliative, follow Item 403/411 requirements, and document.
- Embankment Moisture Control should be documented per specification.

Item 212

- You should have separated areas for the seed, sod, and fertilizer. File the COCs behind Form 157 documenting the quantities approved and that each meets CDOT Standards. Make sure you have copies of the Seed tickets filed behind CDOT Form 157 and COC. Fertilizer should meet requirements of Standard Specification Subsection 212.02.

Item 213

- There should be separate sections for Wood Cellulose, Mulch Tackifier, and Straw or Hay used.
- Wood Cellulose Fiber should be accompanied by a COC.
- The Mulch Tackifier should be accompanied by a COC.
- Straw and Hay should be accompanied by a COC stating material is "Weed Free." then file behind Form 157 documenting that it was acceptable.

Item 214

- You need separate sections for Plants, Humus, and Fertilizer.
- Plants are accepted by COCs, document on Form 157, and file COC behind Form 157.
- Humus is approved by HQ Staff Landscape Architect. Document on Form 157 and file any paperwork given by HQ behind your Form 157.
- Fertilizer should be accepted by COC. File with Form 157 stating material meets requirements.

Item 215

- Plants are accepted by the Right-Of-Way Engineer, document on #157 his acceptance.
- Fertilizer should be accepted by COC. File with #157 stating material meets requirements.

Item 216

- Soil Retention Blanket should be located on the APL, document and file APL document. It should be weighed, and measured, and document that the material is acceptable.

Item 217

- This material is accepted by Staff Landscape Architect, document on Form 157 their acceptance and any paperwork from HQ should follow your Form 157.

Item 304

- CDOT Form 157's are for the samples sent to Central / Region Laboratories for R-value, Moisture / Density curve, gradation verification, LA Abrasion, etc. Follow "Guide Schedule for Minimum Materials Sampling, Testing, and Inspection." Attach the test results with the appropriate CDOT Form 157 serial number that you receive back from the Lab.
- CDOT Form 6 (Gradations / Atterberg Limits) with the attached field test worksheets attached to this form. The Project Engineer needs to sign this form.
- CDOT Form 6 (Densities) with the attached field test worksheets attached to this form. The Project Engineer needs to sign this form.

The above section applies to all types of aggregate base courses (ABC). If you have several different types of ABC you need the three (3) sections for each type.

Item 306

- Follow Item 203 requirements for documentation for this item, follow the schedule of Item 306 for the frequency of tests needed.

Item 307 Hydrated Lime

- CDOT Form 157 for each shipment (one per source, 1 per 100 ton, 2<sup>nd</sup> 100 ton, etc.).
- Keep shipment invoices listing "Date, BOL/COC number, tons shipped, and accumulative total". This will help you know when to ship the samples you took per truck represents 100 tons or a fraction thereof for testing. For every 4 samples (1 per truck @ 25 tons per truck) you need to ship all of this to the Central Lab.

Item 307

There should be separate sections for the following:

- Lime Treated Sub-Grade
  1. Density reports on CDOT Form 212
  2. CDOT Form 157 documenting the Moisture Density Curves, (copy of curves should be kept in Nuclear Gauge book for field use).
  3. The section should be kept for "depth" of lime treatment measurements.
  4. Check the schedule for lime samples to be submitted to HQ for testing, file results behind CDOT Form 157.
- Quick Lime CTRs and CDOT Form 157 documenting percent purity, source, and supplier.
- Mineral Fillers
  1. Document gradations on Form 6.
  2. Submit samples to Central Lab for testing every 500 tons, file results behind CDOT Form 157.
  3. Document the Source, Supplier, and any other required information on CDOT Form 157 or other documents required by provisions.

Item 308

- Portland Cement Treated Base
  1. Densities should be recorded on CDOT Form 6.
  2. Gradations should be recorded on CDOT Form 6.
  3. Atterberg Limits should be recorded on proper forms and worksheets and filed.
  4. Moisture and Density Curves should be filed behind Form 157 for each blend of soil and Cement.
- Portland Cement and Fly Ash
  1. The product must be on the APL. Print the information and file behind Form 157 that the product is acceptable.
  2. Then file behind the CDOT Form 157 if the Engineer requested Bill of Lading and CTRs from the supplier. Then file results behind CDOT Form 157.

Item 310

- Document as per the Project Contract.

Item 403 HMA

- Form 43 (In this tab, file Form 157 and supporting documents of mix design from the private lab, CDOT Form 429, and Central Lab CP 52 results).
- Asphalt Content Gauge (Include stat and drift test, & CDOT Form 772). Not needed if Ignition Oven used on Quality Assurance tests.
- Correction Factors Asphalt Content Gauge or Ignition Oven Correction factor. Moisture Density correction factor Form 469 or equivalent, and supporting documentation.
- Check Tests Include QA and QC results, and report passing/failing.
- Random Schedules
- Verification Test Results
- Quality Assurance Result
  1. QPM Report
  2. Asphalt Content or Voids include Form 1304's, 106's,
  3. Gradation
  4. Mat Density
  5. Joint Density
- Micro-Deval
- Hydrated Lime
- Rut Testing

Repeat the same bookkeeping organization for the top mat of HMA. These need to be separated, especially if it is with a different asphalt binder.

405 Hot-In-Place Recycle

- Document in-place densities on Form #69 or computer-generated report, and a specific gravity test result for each density on Form #69.
- Asphalt Rejuvenating Agent, follow Item 411 requirements.

#### 406 Cold Bituminous Pavement (recycle)

- In-place densities should be reported on Form 69.
- Gradations should be reported on Form 6.
- Free moisture should be documented on applicable forms, suggest using Form 6.
- Hveem Stability and Lottmans should be documented and results filed behind Form 157.
- Asphalt Rejuvenating Agent and Asphalt Emulsion should follow Item 411 for documentation.

#### 408 Joint and Crack Sealant

- Hot Poured (HMA only)
  - Document on Form 157 that material is on APL, file APL review sheet behind Form 157. (ENSURE BATCH NUMBERS MATCH)
- Silicone (PCCP only)
  - Document on Form 157 that material is on APL, file APL review sheet behind Form 157.

#### 409 Cover Coat Material

- Submit samples per Field Materials Manual to Central Lab, and file results behind Form 157 used to submit samples.
- Report Gradations on Form 6.
- Report Fractured Faces on Form 6.

#### 411 and test results Asphalt Binders and Emulsions

- Keep a Bill of Lading / COCs daily total of all material shipped with a running accumulative total, just like you do for Item 307.
- CDOT Forms 411. (Separate CDOT Form 411 by type of binder if you have several on the project.) Even if you do not ship in a sample (i.e., like emulsion, and it is pre-approved), you still need to put the quantity on the correct form number for that item.

#### 412 Portland Cement Concrete Pavement

- Follow the frequency outlined in the Project Documents and the Field Materials Manual. Review Item 601 for areas of commonality. Have separate sections as listed below:
- CDOT Form 1373, Concrete Mix Design Report.
- Air Contents, temperatures, yields, slumps, and water-cement ratios should be recorded on Form 156. This should be signed by Project Engineer as soon as reasonable to keep him/her up to date with test results.
- Compressive and Flexural Strengths results should be filed behind Form 82 that samples were turned in for testing.

**Note:** Flexural strengths conducted by the Contractor should be filed behind Form 157 or other applicable Forms.

- Sand Equivalent test results should be filed behind Form 157.
- Pull Test for Tie bars (if applicable) should be filed behind Form 157.
- Tining and Saw Cut Depth test results should be filed behind Form 157.
- Pull Tests for Joint Sealants should be reported on Form 389.
- Portland Cement, follow Item 308 requirements.
- Joint Sealant, follow Item 408 requirements.
- Contraction Joint Plastic Strip: Field inspect and document on Form 157 that product is acceptable.

- Reinforcing Steel, Dowels, Tie Bar (follow Item 602).
- Provide the MIT Report.
- Smoothness.
- Other Items not listed, document as necessary.

#### 420 Geosynthetics

- Geosynthetics, which includes Geomembranes, are accepted by COC. File copies behind a CDOT Form 157 stating material are acceptable and note that batch numbers match.
- Geotextiles are located on the New York State Approved Products List. Cross-reference this list and document behind a CDOT Form 157 stating material is acceptable and note that batch numbers match.
- Geogrids are accepted on a project-by-project basis. Geogrids that are used in conjunction with MSE walls need to be reviewed by Staff Bridge Design & Management Branch for acceptability. Geogrids that are used in conjunction with embankment and roadway need to be reviewed by the Soils & Geotech Program of the Staff Materials & Geotechnical Branch for acceptability. Document behind a CDOT Form 157 stating material is acceptable and note that batch numbers match.
- When Performance Graded Binders or Asphalt Cement is used, follow item 411 of the schedule requirements.

#### 501 Steel Sheet Piling

- Sheet Piling is accepted by COC and Mill Tests Reports. File copies of each behind a Form 157 stating that the materials meet the specifications, and list the heat numbers, reference the mill test reports that are attached, and that the material is acceptable for use.
- Reinforced Sheet Metal Piling Tips should be on a separate CDOT Form 157, with the same information as above.

#### 502 Piling

- Sheet Piling is accepted by COC and Mill Tests Reports. File copies of each behind a Form 157 stating that the materials meet the specifications, and list the heat numbers, reference the mill test reports that are attached, and that the material is acceptable for use.
- Reinforced Sheet Metal Piling Tips should be approved by the Soils & Geotech Program of the Materials and Geotechnical Branch at CDOT, document this acceptance on CDOT Form 157.

#### 503 Drilled Caissons

- Concrete should be documented the same as Item 601 of the Schedule.
- Reinforcing materials should be documented the same as Item 602 of the Schedule.

#### 504 Soil Nail Wall

- Steel Cribbing should be accepted by CTR and Mill Tests. Document on Form 157 that material is acceptable and file all appropriate test results behind Form 157.
- Concrete Cribbing should be documented the same as Item 601 of the Schedule.
- Timber Cribbing should be documented the same as Item 508 of the Schedule.

504 Mechanically Stabilized Earth Wall

- Have the following sections delineate the acceptance of the wall.
- Foundation Soils should be submitted to the Central Laboratory for Direct Shear, Friction Angles, and possibly Moisture/Density Curves. File test results behind each Form 157 for each type of material that is encountered.

THIS SHOULD BE DONE RIGHT AWAY, AND BEFORE THE WALL IS BEING BUILT.

- Other Test's results should be recorded similar to Item 203, if applicable.
- Structure Backfill should be documented the same as Item 206.
- Reinforcing Elements are accepted by COCs, file behind Form 157.
- Facing Elements are accepted by COCs, file behind Form 157.
- Treated Timbers should be documented per Item 508 of the Schedule.
- All other miscellaneous items should be documented as applicable.

506 Rip Rap

- Test and record the specific gravity of the material, document on Form 157 that material was tested, and indicate general sizes and other applicable information.
- Bed Course Materials follow Item 206 instructions.
- Gabions and Slope Mattress are COC accepted. Document on Form 157 that the material is acceptable.
- Concrete and Reinforced Concrete, follow the Item 601 and 602 instructions.

507 through 518

- Follow the applicable directions for each item for documentation.

601 Structural Concrete

- Form 1188 (Mix Design Review Sheet), the approved mix designs should be filed behind the copy of Form 1188.
  - Form 1373, Concrete Mix Design Report. Attach changes and approvals.
  - Form 82 with the 28 days (or 56 days if applicable) compressive or flexural strength test results recorded on the CDOT Form 192 attached.
  - Form 156 Signed by Project Engineer
  - Form 157 for curing compounds, water, and other incidental items.
  - Price Reductions and explanations of deviations.
  - Copy of the Structural Concrete Pre-Pour conference agenda.
- Do this for each class of concrete (i.e., Class B, D, etc.)

602 Reinforcing Steel

- Reinforcing Steel is accepted by COC and Mill Tests Reports. File copies of each behind a #157 stating that the materials meet the specifications, and list the heat numbers, reference the mill test reports that are attached, and that the material is acceptable for use.
- Reinforcing Steel, Buy America.
- Test Reports from Central Lab, CDOT Form 1372

607 Fences

- Follow applicable directions for each sub-category as it is listed in the Field Materials Manual.
- For Masonry Sound Barrier Walls, call HQ or the designer for copies of the Universal Building Code sections covering the requirements for testing and sampling masonry walls. File test reports behind applicable forms relating to each test. (ie. Prisms, grout, and mortar).

641 Shotcrete

- CDOT Form 1188 (Mix Design Review Sheet), the approved mix designs should be filed behind the copy of Form 1188.
- CDOT Form 1373, Concrete Mix Design Report
- CDOT Form 82 with the 28-day compressive test results recorded on the CDOT Form 192 attached.
- CDOT Form 156 Signed by Project Engineer
- CDOT Form 157 for curing compound, water, and other incidental items.
- CDOT Form 276 report of concrete placed.
- Price Reductions and explanations of deviations.
- Copy of the Contractor's Quality Control Plan.
- Document if pre-bagged.

**Note 1:** File the remaining Items by Item Number. Use the Field Materials Manual to determine what paperwork is appropriate for that item. Any items not listed above should have an adequate explanation in the Field Materials Manual.

**Note 2:** The "Special Notice to Contractors" describes in detail what is needed on both the COC and CTR. Look at this Notice to determine if a COC or CTR is the applicable acceptance method.

**ATTENTION**

All of the referenced CDOT Materials Forms have been revised. All of these forms state: *Previous editions are obsolete and may not be used.* The use of Materials Forms older than what is indicated is not authorized!

The examples of forms and some completed forms are in the chapter Materials Forms – Instructions & Examples of the FMM.

<b>COLORADO DEPARTMENT OF TRANSPORTATION MATERIALS DOCUMENTATION REQUEST</b>	Project No. NH-0503-089	Project Code (SA#) 21255
	Region 2	Date 08/03/2018
	Proj. location US 50, Royal Gorge West, SH 9 JC	

To: James Caretto Address: 5651 Wills Blvd  
Pueblo, Co. 81009

Upon reviewing the above project for Materials Certification purposes, during the Finals Materials Documentation Checking Procedure, the following items were found to have shortages in materials documentation. Please review these shortages and reply by 08/10/2018.  
 Please return the original Form #211, for tracking purposes, with the missing documentation by 08/24/2018.

Item	Description	Materials documentation needed	Date received
602	Reinforcing Steel	Summary of Buy America Certifications Received for Installed Steel/Iron Products. The Summary for the month of July 2018 has not been received.	

Signed <i>Anthony Hernandez</i>	Title EPS-Technician III	Date 08/07/2018
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- Distribution:**
- Resident Engineer
  - Project Engineer
  - Project Tester
  - Materials Project Files

CDOT Form #211 3/04

Colorado Department of Transportation  
CDOT Form #250, 7/18  
Version 19.0

**MATERIALS DOCUMENTATION RECORD**  
Estimated Field Requirements for Minimum Materials  
Sampling, Testing, and Inspection and Record of Field  
and Central Laboratory Documentation of Materials.

Contract ID:  
Project Number:  
Project Location:  
Region:  
Date Developed:  
Contractor:

**PROJECT TO BE TESTED AND DOCUMENTED PER THE 2019 CDOT FIELD MATERIALS MANUAL**

Comply with the Buy America requirements in Section 4 of the Special Notice to Contractors in the Field Materials Manual.

Forward to the Staff Bridge Fabrication Inspectors Unit the list of materials suppliers and subcontractors upon receipt from the contractor.

Attach additional sheets to this form if more space is needed for documentation.

All samples are to be selected using a stratified random sampling schedule. See Colorado Procedure 75 for details on stratified random sampling. Generate and print all random sampling schedules needed before the work begins. Use the random schedule program contained in the Asphalt103 or Void103 computer programs to generate schedules. Contact the Pavement Design Program at the Materials and Geotechnical Branch if you have questions. 303 398-6563.

Tests designated for the Central Lab can be performed in the Field Lab or the Region Lab if adequate facilities and equipment are available.

All CDOT Forms referenced on the Form #250 are to be the most current versions. Verify the revision dates with those listed in the Appendix to the Field Materials Manual and with those listed on the CDOT Form Catalog at [www.dot.state.co.us/forms/mgmt/](http://www.dot.state.co.us/forms/mgmt/), and then use the most recent.

The CDOT Form #250 is to be used in conjunction with the QA Frequency Guide Schedule of the CDOT Field Materials Manual and all referenced Sections or Subsections of the Standard Specifications for Road and Bridge Construction.

**Please reference page 40 and 41 of the QA Schedule of the CDOT Field Materials Manual for guidance on small quantities.**

**LOCAL AGENCY PROJECTS**

All documentation issues should be directed to your CDOT Local Agency Coordinator.

All Local Agency Projects shall use the CDOT Form #250 as developed by the Documentation Unit of CDOT's Materials and Geotechnical Branch.

All Local Agency Projects shall use the CDOT Form #379 as developed by the applicable CDOT Region Materials Engineer.

All Local Agency Projects shall use the CDOT Field Materials Manual referenced on the Form #250 for specific guidance on documentation of project files.

The Field Materials Manual is available for viewing at the CDOT External Web Address: <http://www.dot.state.co.us/DesignSupport/> (see Manuals). The QA Procedures Chapter, the Documentation Chapter, and the Special Notice to Contractors Chapter provide guidance and justification.

**The Item Number, Description, Type of Tests, Plan Quantity, Test Required and Central Laboratory (CL) Test Frequency in this Materials Documentation Record, Colorado Department of Transportation Form #250, shall not be altered in any form or by any means.**





Colorado Department of Transportation  
CDOT Form #250, 7/18  
Version 19.0

**MATERIALS DOCUMENTATION RECORD**

Estimated Field Requirements for Minimum Materials  
Sampling, Testing, and Inspection and Record of Field  
and Central Laboratory Documentation of Materials.

Contract ID:  
Project Number:  
Project Location:  
Region:  
Date Developed:  
Contractor:

**SUMMARY OF PROJECT PRICE REDUCTION DOCUMENTATION**  
Fully document and explain all price reductions on CDOT Form #473 Explanation of Exceptions (page 2).

ITEM NUMBER	DESCRIPTION	PRICE REDUCTION AMOUNT	CALCULATIONS #266 / #105 DATES	CMO / MCR NUMBERS	LINE ITEM NO. ON FINAL ESTIMATE

**SUMMARY OF SAMPLING AND TESTING DEVIATIONS**  
Deviations from sampling and testing requirements must be fully documented on the CDOT Form #473 Explanation of Exceptions (page 2).

ITEM NUMBER	TEST ELEMENT OR ACCEPTANCE	EXPLANATION

**SUMMARY OF LABORATORY CHECK TEST DEVIATIONS**  
Fully document and explain all laboratory check test deviations on CDOT Form #473 Explanation of Exceptions (page 2).

ITEM NUMBER	DESCRIPTION	MEMO DATE	CDOT Form #157 FS#	Document Significant Independent Assurance differences as per 11.4 of the QA Procedures in the Field Materials Manual.

Colorado Department of Transportation CDOT Form #250, 7/18 Version 19.0	<b>MATERIALS DOCUMENTATION RECORD</b>	Contract ID: Project Number: Project Location: Region: Date Developed: Contractor:
Estimated Field Requirements for Minimum Materials Sampling, Testing, and Inspection and Record of Field and Central Laboratory Documentation of Materials.		
Isolated relatively small quantities of concrete, reinforcing steel, wire mesh, bolts etc. which are paid for incidentally shall be field inspected to determine conformance with specifications and Document in Project Records. If any questions arise concerning the proper documentation of materials during construction, contact the Documentation Unit of the Central Laboratory in Denver @ 303-398-6563.		
FIELD DOCUMENTATION ENTERED BY:	DATE:	PROJECT ENGINEER / Title:
Distribution: (Includes the entire and completed CDOT Form #250) Resident Engineer Region Materials Engineer Region Finals Engineer Documentation Unit (Materials and Geotechnical Branch) FHWA (Oversight Projects only)		
End	Ref # ITOR184-12WB139	



**COLORADO DEPARTMENT OF TRANSPORTATION  
FINAL MATERIALS DOCUMENTATION CHECKLIST, (PROJECT CLOSURE)**

Project no. FBR 0404-050	Contract ID C18180	Acceptance Date 07/01/2015
Project Location US 40 Over Sand Creek		Region 4
Contractor Hamon Contractors, Inc.	Project Engineer Karl Larson	Resident Engineer Travis Miller
<input checked="" type="checkbox"/> Project Basis	<input type="checkbox"/> System Basis	<input checked="" type="checkbox"/> Progress Estimate number: 6-31-2015 (latest issued)

In order for materials documentation to be complete, the following items need to be checked 100%:

- Final Quantities between Progress Estimate and CDOT Form #250 agree. (If different, it is noted)
- Field Sheet/Serial number(s) on CDOT Form #250 match project documents, of the item(s) checked.
- Tests required and tests reported on the Form #250 agree. (If different, it is noted.)

yes	no	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	If IA tests are involved, Field Sheet/Serial number(s) on CDOT Form #379 match project documents and all test(s) agree with field acceptance tests, and if applicable, shortages and exceptions are explained.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Ensure the correct number of tests on the CDOT Form #379.
<input type="checkbox"/>	<input type="checkbox"/>	IA Witness tests did not exceed 20% of actual testing, for each test element.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Independent (IA)/Acceptance (QA)/Check Test differences are explained.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form #250 signed by the Project Engineer and the Form #379 has Final Approved by signature of the Region Materials Engineer and Project Review by signature of the Project Engineer.

**NOTE: The following materials records are required to be attached to complete the finals materials documentation process, if applicable for this project:**

- Letters, CMOs, MCRs, field sheets, etc. if used as the primary documentation within the Explanation of Exceptions
- Progress Estimate (latest issued)
- Random Sample Schedule
- Price reduction calculations.(with supporting documentation)
- QC/QA Data for Item: 403 . (reference applicable Items)
- Buy America Certificate, for steel products, All individual certifications + each monthly summary report included.
- Roadway Surface Accomplishment Report (RSAR).
- Evaluation of Materials Testing, Form #1324 (per CP 16).

Review notes:  
All documents required were included in the project files and in the final documentation packet. Form #473, Explanation of Exceptions was used as required. The file is being forwarded to the Finals Materials Documentation Coordinator.

This is to certify that the review of the materials documentation indicates the documentation is complete and accurate.

Name (Printed) Leslie Kochis	Name (signed)	Title: EPST III	Date: 07/02/2015
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- Distribution:** Previous editions are obsolete and may not be used. Page 1 of 2 CDOT Form #1199 7/14
- Resident Engineer, (included with Project Final Documentation)
  - Project Engineer
  - Region Materials Engineer
  - Region Finals Engineer
  - FHWA (Oversight Projects Only)
  - Documentation Unit, Materials & Geotechnical Branch

COLORADO DEPARTMENT OF TRANSPORTATION <b>FINAL MATERIALS DOCUMENTATION CHECKLIST, (REVIEW or AUDIT)</b>		
Project No. FBR 0404-050	Contract ID C18180	Acceptance Date 07/01/2015

Residency Finals Review  or Region Finals Audit  Progress Estimate number: 6-31-2015

Major Item 1.) 403	Major Item 2.) 206
Major Item 3.) 412	Major Item 4.) 203

1.)	2.)	3.)	4.)	In order for materials documentation to be complete, the following items need to be checked:
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Final Quantities between Progress Estimate and CDOT Form #250 agree. (If different, it is noted)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Field Sheet/Serial number(s) on CDOT Form #250 match project documents, of the item(s) checked.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Tests required and tests reported on the Form #250 agree. (If different, it is noted.)

yes	no	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	If IA tests are involved, Field Sheet/Serial number(s) on CDOT Form #379 match project documents and all test(s) agree with field acceptance tests, and if applicable, shortages and exceptions are explained.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Ensure the correct number of tests on the CDOT Form #379.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	IA Witness tests did not exceed 20% of actual testing, for each test element.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Independent (IA)/Acceptance (QA)/Check Test differences are explained.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form #250 signed by the Project Engineer and Form #379 has Final Approved by signature of the Region Materials Engineer and Project Review by signature of the Project Engineer.
<b>NOTE: The following materials records are required to be attached to complete the finals materials documentation process, if applicable for this project:</b>		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Letters, CMOs, MCRs, field sheets, etc. if used as the primary documentation within the Explanation of Exceptions
<input checked="" type="checkbox"/>	<input type="checkbox"/>	CDOT Form #325, Final Estimate Data. (If not yet developed, indicate this in Review Notes.)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Progress Estimate. <i>Note if a more recent version was used since the Project Closure.</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Random Sample Schedule
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Price reduction calculations.(with supporting documentation)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	QC/QA Data for Item: <u>403</u> . (reference applicable Items)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Buy America Certificate, for steel products, All individual certifications + each monthly summary report included.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Roadway Surface Accomplishment Report (RSAR).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Evaluation of Materials Testing, Form #1324 (per CP 16).

Review notes:  
 The Region Finals Audit discovered no problems. I was impressed with the timeliness in which finals packet was delivered to me, and the order and completeness of all of the documents.

This is to certify that the review of the materials documentation indicates the documentation is complete and accurate.			
Name (Printed) Steve Heimmer	Name (signed)	Title: EIT 3	Date: 07/07/2015

<b>COLORADO DEPARTMENT OF TRANSPORTATION</b> <b>FINAL MATERIALS</b> <b>CERTIFICATION</b> <b>FOR A LOCAL AGENCY PROJECT</b>	Project No.	CDOT Region
	Contract ID	Acceptance date
	Project Location	
	Contractor	

This is to Certify that:

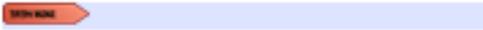
The results of the tests on the acceptance samples indicate that the material incorporated in the construction work, and the construction operations controlled by sampling and testing, were in conformity with the approved plans and specifications; and such results compare favorably with the results of the Independent Assurance sampling and testing.

All results from the Independent Assurance sampling and testing are within tolerance limits of the results of sampling and testing that are used in the acceptance program.

Exceptions to the plans and specifications are explained on Explanation of Exceptions, #474. A CDOT Form #474 is always required to be attached to the #473.

The referenced documents below are attached with applicable signatures to this form in the order indicated.

- Yes     No    Explanation of Exceptions, Form #474, (as many pages as required.)
- Yes     No    Explanation of Exceptions, Supplemental Documents.
- Yes     No    Materials Documentation Record, Form #250.
- Yes     No    Project Independent Assurance Sampling & Testing Schedule, Form #379.
- Yes     No    Finals Materials Documentation Checklist, (Project Closure) Form #1199, page 1.
- Yes     No    Finals Materials Documentation Checklist, (Review or Audit) Form #1199, page 2.

Approved by: Person in Responsible Charge, Local Agency 	Title: 
Approved by: The Designated CDOT Engineer 	Title: 

**Distribution:**

- cc:  CDOT Resident Engineer
- xc:  LA Project Engineer / Project Manager
- CDOT Region Materials Engineer
- CDOT Local Agency Coordinator
- cdot\_pavement.design@state.co.us

<b>COLORADO DEPARTMENT OF TRANSPORTATION FINAL MATERIALS CERTIFICATION FOR A CDOT MAINTENANCE PROJECT</b>	Project No.	CDOT Region
	Contract ID	Acceptance date
	Project Location	
	Contractor	

This is to Certify that:

The results of the tests on the acceptance samples indicate that the material incorporated in the construction work, and the construction operations controlled by sampling and testing, were in conformity with the approved plans and specifications; and such results compare favorably with the results of the Independent Assurance sampling and testing.

All results from the Independent Assurance sampling and testing are within tolerance limits of the results of sampling and testing that are used in the acceptance program.

Exceptions to the plans and specifications are explained on Explanation of Exceptions, #474. A CDOT Form #474 is always required to be attached to the #473.

The referenced documents below are attached with applicable signatures to this form in the order indicated.

- Yes  No Explanation of Exceptions, Form #474, (as many pages as required.)
- Yes  No Explanation of Exceptions, Supplemental Documents.
- Yes  No Materials Documentation Record, Form #250.
- Yes  No Project Independent Assurance Sampling & Testing Schedule, Form #379.
- Yes  No Finals Materials Documentation Checklist, (Project Closure) Form #1199, page 1.
- Yes  No Finals Materials Documentation Checklist, (Review or Audit) Form #1199, page 2.
- Yes  No Evaluation of Materials Testing, Form #1324. Attach only if Consultant Testing.

Approved by: Project Manager   (printed name and signature)	Title:  
Approved by: Maintenance Superintendent   (printed name and signature)	Title:  

**Distribution:**

- cc:  Maintenance Superintendent  
 State Maintenance Engineer  
 Region Materials Engineer  
 Regions Final Engineer  
 cdot\_pavement.design@state.co.us  
 ProjectWise

Previous editions are obsolete and may not be used.

CDOT Form #473-M

4/19

CDOT 473M

<b>Colorado Department of Transportation</b> <b>Final Materials Certification</b> <b>Explanation of Exceptions</b>		Contract ID: _____	Region: _____	Page _____ of _____
		Project Acceptance Date: _____		
<input type="checkbox"/> Owner Acceptance <input type="checkbox"/> Independent Assurance <input type="checkbox"/> Innovative Contract <input type="checkbox"/> Local Agency <input type="checkbox"/> CDOT Maintenance <input type="checkbox"/> Other _____		Project Number: _____		
		Project Location: _____		
		Contractor: _____		
		Project Final Documentation Completion Date: _____		
Electronic signature of Project Tester or Project Engineer [Signature]		CDOT or Consultant Company Name: _____		
CDOT Project Sampling and Testing by Consultant:    YES <input type="checkbox"/> NO <input type="checkbox"/>				
<b>CAR - Quality Level Reports</b>				
<b>FINAL CAR report</b>	<b>Data Reviewed by:</b>		<b>Data Checked by:</b>	
<input type="checkbox"/> Asphalt Quality Level	Electronic Signature: [Signature]	Electronic Signature: [Signature]	Electronic Signature: [Signature]	
<input type="checkbox"/> Concrete Quality Level	Electronic Signature: [Signature]	Electronic Signature: [Signature]	Electronic Signature: [Signature]	
Consultant Firm PE Comments (for this page only, more pages may follow).				
Instructions: Signature of Project Tester or Project Engineer shall be signed after explanations are complete. Hand signed document is not acceptable, only electronic signatures. Header information will populate to all pages from Page 1. Document has 6 pages available. Explain all shortages of tests, missing COC/CTR's, and price reductions. Explain CAR - Quality Level Reports for processes, Pay Factor of 1, quantity discrepancies and total incentive/disincentive payments if QLRs apply to the contract. Final package shall include all supporting documentation for price reductions, CMO/MCR's, and CDOT Form 105 detailing deleted items by the PE. See FMM Documentation chapters - After Construction - for more information <b>All CAR - Quality Level Reports must be Final Report with no errors.</b>			Consultant Firm PE Electronic Signature [Signature]	
			Consultant Firm PE Electronic Stamp or Wet Stamp:	

Previous editions of this form are obsolete and may not be used

CDOT Form 474 4/19