

## SECTION 400.00 – PROJECT MATERIALS CERTIFICATION

The Department has implemented procedures in accordance with State and Federal regulations for ensuring the materials incorporated into highway projects meet the required contract specifications.

**400.01 Materials Certification Submittal Requirements by Project Type.** The following documents are used for project materials certification to demonstrate that the materials incorporated into the project meet the required contract specifications:

- Materials Certification Letter (See Section 470.00)
- Materials Summary Report, (MSR) (See Section 420.00)
- ITD-852 Materials Certification Checklist (See Section 450.00)
- ITD-854 Resident Engineer's Letter of Inspection (See Section 430.00)
- ITD-860 Independent Assurance Test Log (See Section 440.00)

Instructions for the above documents are detailed in the indicated Sections.

Table 400.01.1 lists the documents that are required for project materials certification based on funding and project type as shown on the table. The District Engineer's Final Letter of Acceptance is used to document project materials certification for projects not requiring a Materials Summary Report and Materials Certification Letter.

**For all projects, adequate records to document proper testing and inspection are required and must be maintained in the project files.**

**Table 400.01.1. Project Materials Certification Requirements**

Type of Project	Are there materials incorporated in the project?	HQ Submittal Materials		District Engineer Final Letter of Acceptance
		Materials Certification Checklist (ITD-852)	Materials Certification Letter and Materials Summary Report (including IA Log & RE Letter)	
Federal-Aid On State Highway System	Yes	Yes	Yes	Yes
	No	Yes	No	Yes
Federal-Local On-System No State Funds	Yes	Yes	Yes	Yes
	No	Yes	No	Yes
Federal-Local Off-System No State Funds Federal-Aid Limit \$500k or more	Yes	Yes	Yes	Yes
	No	Yes	No	Yes
Federal-Local Off-System No State Funds Federal-Aid Limit less than \$500k	Yes	Yes	No	Yes
	No	Yes	No	Yes
State-funded on NHS	Yes	Yes	Yes	Yes
	No	Yes	No	Yes
State-funded off NHS	Yes	Yes	Yes	Yes
	No	Yes	No	Yes

**SECTION 410.00 – REPORTS AND DOCUMENTATION.** All field test reports, laboratory test reports, certifications, and other miscellaneous reports involving inspection, testing, and acceptance of materials, are a part of the documentation of project records. These reports are considered a permanent record and are to be preserved with other permanent records such as survey notes, quantity measurements, etc. These records form the basis for certifying compliance with specification requirements of the contract to State auditors and the Federal Highway Administration for the materials used in construction.

The project files must sufficiently document that the acceptance of material was performed in accordance with the minimum testing requirements and the contract specifications. Specific instructions for each test report form are to be followed with the understanding that complete documentation is required for each contract. Any reports or records that apply from another contract must be duplicated. There must be no doubt of the validity of the record applying to the pertinent project. Required materials documentation must be in the item files. If the same material is used for another item, an additional copy must be added in the project item file. Add posting in the MSR for each item.

**410.01 Materials Acceptance Plan (MAP) or ITD-862 Sampling Schedule.** Project personnel must plan ahead using the minimum testing requirements (MTRs) and the contract specifications to determine the requirements for acceptance of all bid items and change orders. Each district must develop a project Materials Acceptance Plan (MAP) or ITD-862 Sampling Schedule for reference by the project personnel before construction and update during construction.

The development of the MAP or Sampling Schedule should be a joint effort by District Materials and project personnel. The final MAP must summarize the acceptance requirements for all items including any small quantities (see Section 270.04), items using nonstandard acceptance (see Section 270.05), or special provision items (see Section 270.06). The final MAP should be reviewed and signed by the Resident Engineer and the District Materials Engineer. When requested by the District, HQ Construction /Materials will review and provide comment on the MAP for non-standard special provision items.

**410.02 Checking Test Reports and Documents.** Laboratory tests, field tests, and certification reports are forwarded to the Resident Engineer whose staff regularly checks the reports so that deviations from specifications and poor documentation are mitigated. It is required that the person checking test reports have ITD STQP qualification for the test being checked or an Idaho PE license (see Section 210.01). Any discrepancies, lack of information, or incompleteness of the reports must be corrected without delay. After the checks are made, the reports are recorded for the Materials Summary Report (see Section 425.00 for directions) and placed in the project files. Any items receiving less than the minimum requirements of sampling and testing and/or varying from specifications must have the corrective action or remedy efforts explained by the Resident Engineer. The explanation must include the justification for acceptance, rejection, or price adjustment of noncompliant material. The explanation is recorded and noted for the Materials Summary Report.

**SECTION 420.00 – MATERIALS SUMMARY REPORT.** The Materials Summary Report (MSR) shows the basis for acceptance of all bid items and change orders of the contract as required by the minimum test requirements (MTRs) and contract specifications and includes:

- Acceptance test results.
- Manufacturer's certifications.
- Laboratory acceptance and verification test results.
- Notes to explain the resolution for any failing test results or lack of minimum testing.
- Notes to explain the basis for accepting any material not tested or not certified according to the minimum testing requirements or contract specifications.

The MSR is compiled for each construction contract as indicated in Table 401.00.1 by posting all of the field and laboratory test reports and manufacturer's certifications into the electronic Materials Summary Program. Post data daily to ensure current reporting. Post all test reports as soon as possible after they are received and checked. It is good practice to maintain the MSR so that it is contemporaneous with the most current pay estimate.

See Section 425.00 for the required postings for the MSR.

The MSR must be printed after each pay estimate and kept in a binder or file folder for easy access.

Adequate documentation of failures and/or deviations from specification requirements must be included in the MSR to justify acceptance, rejection, or price adjustment of contract items. Section 215.00 contains details about documentation for non-compliant material.

**SECTION 425.00 – COMPLETING THE MSR.** The following guidelines are provided for use in typical project situations to accurately complete a project Materials Summary Report (MSR).

The acceptance documents are posted in the MSR under the contract item where the material was paid for. When material is incidental to a contract item, the posting must be shown under the associated contract item.

- The posting must be done using the electronic Materials Acceptance Program.
- Every contract item, including change orders, where there was material used on the project must be included in the MSR.
- Some contract items will have multiple postings in the MSR because there is more than one acceptance requirement as shown in the MTR tables.
- The postings of test result data for items that require statistical analysis (QASP items) must be checked for accuracy by someone other than the person who posted the data.
- Accepted material on ITD-0854 Resident Engineer’s Letter of Inspection of Contract Items must have the required material documentation in the project item file.
- Required materials documentation must be in the item files. If the same material is used for another item, an additional copy must be added in the project item file. Add posting in the MSR for each item.
- Documentation (such as a printout of the QPL page showing approval of the item) must be placed in the project files and posted in the MSR for QPL items that were on ITD’s QPL at the time of the project.
- Documentation of individual sign components (aluminum sheet, reflective coating, etc.) must be listed separately on the ITD-0851 Manufacturer’s Material Certification form.
- Documentation of all steel and iron products must be in compliance with Section 230.03.03.
- ITD-0858 Materials Summary for District IA Audits showing deficiency findings must not be deleted from its record. All resolutions and final determinations must be on the ITD-0858 form for all deficiencies initially found by the District IA.
- All MSR information must be present or documented in the project file
- HQ handles the review and documentation of items such as pre-stressed girders. But the district must review the packets sent from HQ and document them in the MSR like all other project items.
- File memos must present a clear and complete picture of what occurred and how project specifications were met. These explanations must be clear to an individual not associated with the project.
- F&t failures must be addressed in documentation in project item files.

- HMA lot quantities must be based on work shift totals as defined in the QASP.
- Independent assurance testing must be done in the district and documented in the project files.
- Non-standard items must be identified on ITD-0862 form.
- Quality Control, Acceptance, and verification samples must not be collected at the same location. They must be taken independent of one another.
- Document compaction effort (such as bridge abutments, back fill, embankment, etc.) for each lift on the ITD-0850 form. All pertinent information must be filled out completely.
- Records of FOP for AASHTO T-27 must be documented when using “Too Granular to Test” per lift on the ITD-0850 form. Granular Borrow must have the Sand Equivalent test done for ITD-0850 form.

Use Table 425.00.1 to determine the minimum information required in the MSR. Find the contract bid item in the Section 270.00 MTR tables of the Quality Assurance Manual, and then use the MTR tables to identify the type of acceptance requirements. Then, find the type of acceptance in the left column of the table below and provide the required information in the MSR as is described in the corresponding right hand column.

Note: The Acceptance Test Strip is required to be shown on the MSR; post both passing and failing test strips and the disposition of the failing test strip(s). The smoothness results are not required on the MSR.

**Table 425.00.1: Minimum Information Required in MSR**

<b>Acceptance Type from MTR Tables</b>	<b>Postings Required in the MSR</b>
Statistical Analysis (QA Special Provisions)	Results of Bonus Summary Report showing the pay factor for each lot
	Remarks explaining actions taken when any lot falls below .85 or below .75
	Copy of F&T report for each day of production testing
	Remarks to indicate evaluation procedures taken when there is a t test failure
Field Tests (other than statistical analysis) <sup>1</sup>	Date sampled
	Test number
	Indication of pass or fail test results
	A remark indicating the location of the in-place density test for pipe or structure backfill
	Remarks to indicate tests that are considered check tests for failing tests
	Remarks to indicate the corrective action taken for a failing test
	Remarks to indicate acceptance when testing is not performed, such as, too granular to test
Manufacturer's or Fabricator's Certification	Date certification statement signed
	Quantity of material certified
	Manufacturer or fabricator company signing certification
Laboratory Verification Tests	Date sampled
	Sample number
	Laboratory number
	Indication of pass or fail test results
	Remarks to indicate corrective action or price adjustment for a failing test
Laboratory Acceptance Tests	Date sampled
	Sample number
	Laboratory number
	Indication of pass or fail test results
	Remarks to indicate corrective action or price adjustment for a failing test
Pre-Tested or Pre-Approved Tests (Approved Lists)	Remarks to indicate the material/product used on the project is included on the approved list maintained by HQ Materials Section
Acceptance by Inspection	Item will be shown on the <u>ITD-854</u> , Resident Engineer's Letter of Inspection
Small Quantity or Non-Standard Acceptance (see <u>Section 270.04 &amp; 270.05</u> )	Remarks to summarize the basis of acceptance including the following where applicable: <ul style="list-style-type: none"> <li>• Remarks to indicate aggregates obtained from approved materials source</li> <li>• Remarks to indicate mix design approval for plant mix or concrete</li> <li>• Post core test results for plant mix paving on mainlines or intersections</li> <li>• Remarks to indicate visual inspection during installation, placement or compaction</li> </ul>
<sup>1</sup> (field tests are: in-place density, gradation, sand equivalent, fracture count, cleanness value, field saybolt viscosity, presence of anti-strip additive, asphalt content of plant mix, plant mix test strip, air/slump/temperature/unit weight of concrete)	

<b>Acceptance Type from MTR Tables</b>	<b>Postings Required in the MSR</b>
Special Provisions (see <a href="#">Section 270.06</a> )	Post acceptance information as indicated in the special provision OR as indicated below if not specified in the special provision.
	When material is included in MTR table and used in a standard application, find MTR acceptance type above and post the same information
	When special provision indicates the material must meet a given specification, such as AASHTO or ASTM: Post same information shown above for manufacturer's certification.
	When material is not included in MTR tables or not used in standard application: Remarks to summarize basis of acceptance as determined by the Engineer and District Materials Engineer.
Change Orders (see <a href="#">Section 270.07</a> )	Post acceptance information as indicated in the change order OR as indicated below if not specified in the change order.
	For standard pay items or when material is included in MTR tables and used in a standard application, find MTR acceptance type above and post the same information
	When change order indicates the material must meet a given specification, such as AASHTO or ASTM: Post same information shown above for manufacturer certification.
	When material is not included in MTR tables or not used in standard application: Remarks to summarize basis of acceptance as determined by the Engineer and District Materials Engineer



**SECTION 430.00 – RESIDENT ENGINEER'S LETTER OF INSPECTION (ITD-854).** The purpose of the Resident Engineer's Letter of Inspection (ITD-854) is for the Resident Engineer to document the inspection of certain materials and to document the materials are acceptable according to the plans and specifications. The form should not be used as a catchall for items usually accepted by sampling and testing. Inclusion on the form does not excuse the inspector from sampling and testing or obtaining manufacturer certifications as required by the Minimum Testing Requirements. A copy of the completed Resident Engineer's letter must be submitted with the MSR at the completion of the project. The required material documentation must be added to the project item file. See Section 250.00 for complete information on the Resident Engineer's Letter of Inspection.

**SECTION 440.00 – INDEPENDENT ASSURANCE TEST LOG (ITD-860).** Independent Assurance tests are not posted in the Materials Summary Report, but are recorded on the IA Test Log (form ITD-860) by the Department project personnel. A copy of the complete IA test log must be submitted with the MSR at the completion of the project. See Section 370.00 for information on completion of the IA Test Log.

**SECTION 450.00 – MATERIALS CERTIFICATION CHECKLIST (ITD-852).** Resident

Engineer’s office prepares the ITD-852 Materials Certification Checklist by completing each checkbox shown on the form. Explanations must be included in the “Remarks” field for any items checked “No.” Known exceptions to the materials acceptance requirements for the project must be identified on the form. Once complete, the checklist is provided to the Resident Engineer and Engineering Manager for review and signature. For projects not requiring a Materials Summary Report, per Table 401.00.1, check the appropriate box to indicate no Materials Summary Report is required and complete the remainder of the form as applicable for the project.

**SECTION 460.00 – DISTRICT AUDIT OF MATERIALS SUMMARY REPORT.** The District will perform an independent assurance audit of the Materials Summary Report (MSR) for all projects. Independent Assurance audits must be performed by individuals who are:

- 1) Currently qualified in all WAQTC modules along with the Concrete Laboratory Testing Technician (CLTT)
- 2) Independent of both the project, other construction projects, and the residency
- 3) Deemed by the District Engineer as knowledgeable in the preparation and review of Materials Summary Reports.

The audit must be done periodically as the project progresses. The most current pay estimate must be used as a guide to determine that material paid for was accepted in accordance with the contract requirements. Any deviations or exceptions found during the audit must be resolved to the satisfaction of the District Materials Engineer or the District Engineer before issuance of the Materials Certification Letter.

- District audit of MSR report must be completed using the ITD-858 form.
- The District Materials Engineer or the District Engineer will review this MSR audit, make final resolution, and then sign the ITD-858 form.
- A close-out should be held with Department project personnel to discuss any deviations found and to obtain a resolution statement. See Section 360.03 of this manual.
- A copy of the completed ITD-858 must be included in the project files. Any ITD-0858 forms with deficiency findings must not be deleted from record. All resolutions and final determinations must be on the ITD-0858 form for all deficiencies initially found by the District IA.

**460.10 District Audit of GARVEE and Consultant CE&I projects.** The GARVEE and Consultant CE&I projects have an assigned Department Resident Engineer. The individual assigned to audit the records will contact the assigned Resident Engineer to make arrangements for the on-site review of the project materials records.

**SECTION 470.00 – MATERIALS CERTIFICATION LETTER.** When the MSR and associated documentation is considered acceptable, the District will prepare the Materials Certification Letter using the inter-department memo (ITD-500) addressed to the Construction/Materials Engineer (see Example 470.02 at the end of this section) for the District’s Engineer signature. The Materials Certification Letter is prepared and submitted to the District Engineer along with a copy of ITD-860, ITD-852, ITD-854, and the Materials Summary Report for review, signature, and distribution.

The Materials Certification Letter must contain the following statement (per 23 CFR 637):

*This is to certify that:*

*The results of the tests used in the acceptance program indicate that the materials incorporated in the construction work, and the construction operations controlled by sampling and testing, were in conformity with the approved plans and specifications. All independent assurance samples and tests are within tolerance limits of the samples and tests that are used in the acceptance program.*

*Explanations for exceptions to the plans and specifications are as follows:*

The Materials Certification Letter must list, by contract item, any exceptions and how they were resolved, which includes an explanation for justification of acceptance of the contract item. See Example 470.02 at the end of this section.

For Federal-aid projects of interest, the FHWA will review the below listed items in order to concur in the Materials Certification.

1. District Engineer Materials Certification Letter.
2. ITD-0858 Materials Summary Report District IA Audit.
3. Final Estimate.
4. ITD-0852 Materials Certification Checklist.
5. ITD- 0854 Resident Engineer’s letter of Inspection of Contract Items.
6. ITD-0860 Independent Assurance Log.
7. Materials Summary report for any contract pay items that has exceptions to the contract specifications or plans including the following notes:
  - a. Notes to explain the resolution for any failing test results or lack of minimum testing.
  - b. Notes to explain the basis for accepting any material not tested or not certified according to the minimum testing requirements or contract specifications.

Submit these documents (via cc) to the FHWA for review and approval. Upon review and approval; submit final non-participation determinations to the Department's Financial Services. See Example 470.03 at the end of this section.

**470.01 Exceptions.** An exception is considered any instance where non-specification material is identified, the non-specification material is allowed to remain, and corrective action was required. A failing test with an immediate passing check test is not considered non-specification material. Corrective action is remedial methods, such as price adjustments or contractor repair work.

When there are indications of acceptance of non-specification material in the materials summary report, then the corrective action taken must be included in the summary remarks and in the certification letter. For QA Special Provision contract items, non-specification material is a lot where the pay factor for any quality characteristic is below 0.75 and the material was allowed to remain.

An exception is also when contract specifications and/or minimum testing requirements were not met. This may be lack of acceptance testing, lack of IA testing, or lack of manufacturer's certifications. It is usually not possible to remedy or justify these exceptions, especially if not discovered until the project is complete. A full explanation of the circumstances is necessary to ascertain the consequences of the deviation from the specifications, including the quantities accepted without the required testing or certifications. In some cases, material quantities may not be eligible for Federal-aid participation. The District will determine non-participation using the current memorandum of understanding between the Department and the Federal Highway Administration Idaho Division Office.

Exceptions must be listed by contract item number on the Materials Certification Letter as follows:

- Number of tests representing non-specification material out of the total number of tests performed. This includes remarks for justification that allowed material to remain in place.
- Total number of tests performed and number of tests required by the minimum testing requirements when the number of tests performed is less than the required minimum, including lack of or failure to perform Independent Assurance testing.
- Lack of required manufacturer's certifications covering the quantity of material paid for.
- QA Special Provision item where the pay factor was less than 0.75 and a description of action taken.
- QA Special Provision item where t test failed and there is no indication an evaluation was made.
- Price adjustment, if applied, or justification for acceptance or rejection of material with failing laboratory test.

The items ineligible for Federal-aid participation including the dollar amount must be shown on the Materials Certification Letter.

Exceptions to the Buy America specification must be presented to FHWA for a determination of a resolution, see Section 230.03.03 Buy America.

**470.02 Materials Certification Letter Example (Non-Full Oversight Project Example)****IDAHO TRANSPORTATION DEPARTMENT**

Department Memorandum

**DATE: PROJECT NO.(S):****TO: NAME**

CONSTRUCTION/MATERIALS ENGINEER

**FROM: NAME:**

DISTRICT \_\_\_\_ ENGINEER

**RE: MATERIALS CERTIFICATION LETTER (NON-FULL OVERSIGHT PROJECT)**

This is to certify that:

The results of the tests used in the acceptance program indicate that the materials incorporated in the construction work, and the construction operations controlled by sampling and testing, were in conformity with the approved plans and specifications. All independent assurance samples and tests are within tolerance limits of the samples and tests that are used in the acceptance program.

Explanations for exceptions to the plans and specifications are as follows:

303-005A 19mm Aggregate Base: Lot #3 had a pay factor of .74 and was removed and replaced by the contractor.

405-025A PL MX PAV CL I: Acceptance Test Strip #1 failed and was paid at 50%.

602-035A 450mm Pipe Culvert: There are no required manufacturer's certifications for 150 meters of pipe.

640 Subgrade Geotextile: No required laboratory verification tests were performed. The item was accepted by manufacturer's certification.

S501-010 MSE Retaining Wall: The Department laboratory test was failing for cement and a price adjustment of 25% was applied.

The original of the Materials Summary Report, correspondence, manufacturer's certifications, and test reports are on file in the project records.

CC:

DE \_\_\_\_

District \_\_\_\_ Engineering Manager

DMTL w/attach

RE (original attach)

DRI (w/attach)

C/M Engineer (w/attach)

Financial Services

**470.03 Materials Certification Letter Example (Full Oversight Project)****IDAHO TRANSPORTATION DEPARTMENT**

Department Memorandum

**DATE: PROJECT NO.(S):****TO: NAME**

CONSTRUCTION/MATERIALS ENGINEER

**FROM: NAME:**

DISTRICT \_\_\_\_ ENGINEER

**RE: MATERIALS CERTIFICATION LETTER (FULL OVERSIGHT PROJECT)**

This is to certify that:

The results of the tests used in the acceptance program indicate that the materials incorporated in the construction work, and the construction operations controlled by sampling and testing, were in conformity with the approved plans and specifications. All independent assurance samples and tests are within tolerance limits of the samples and tests that are used in the acceptance program.

Explanations for exceptions to the plans and specifications are as follows:

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The original of the Materials Summary Report, correspondence, manufacturer's certifications, and test reports are on file in the project records.

CC:

DE \_\_\_\_

District \_\_\_\_ Engineering Manager

DMTL w/attach

RE (original attach)

DRI (w/attach)

C/M Engineer (w/attach)

FHWA (w/ attachment)