

Material Certification For LAP Projects The...1...2...3's

NCDOT Materials & Tests Unit

May 28, 2025

Define Projects

LAP (Local Administered Projects):

Are Federally or State Funded contracts/projects that must follow NCDOT Standards and Specifications. These projects are administered by the municipalities and/or their representatives.

Federally Funded Contracts:

Are required to be accepted by the Federal Highway Administration (FHWA) to enable the Department/Municipality to be reimbursed for project expenditures. Federally Funded projects are administered differently based on the type of letting. The Requirements are the same. Locally Administered contracts must meet same requirements. Alternate project tracking is required.

The...1...2...3's

The material certification is a documented process that verifies to FHWA that **ALL** materials and workmanship on each Federal-Aid project are in compliance with NCDOT specifications and FHWA requirements.

Just because it meets the "Contract" requirements,
doesn't mean it meets FHWA requirements.



The...1...2...3's

This presentation will review the basic guidelines for material operations for the following categories:

- *General Information*
- *Contractors*
- *Acceptance of Materials*
- *Laboratories*
- *Material Certification*
- *Notable Extras*

Local Administered Project Materials Acceptance Guide



The...1...2...3's General Information

- There is a new and available “LAP Material Acceptance Guide”. This guide provides guidance and direction for material receiving, acceptance of materials, sampling & testing requirements, laboratory approval, certification requirements, and material certification operations. It can be found at the following link.

- <https://connect.ncdot.gov/resources/Materials/LAP/Pages/default.aspx>

The...1...2...3's

General Information

LAP Material Staffing – Each Division is assigned a LAP Material Representative. Please contact the representative prior to construction.

| Divisions | M&T Representative | Phone No. | Email Contact |
|------------|--------------------|--------------|--------------------------|
| 1 – 2 - 4 | Emily Nichols | 919-646-0052 | ext-ecnichols@ncdot.gov |
| 3 - 9 -10 | Pam Carriker | 704-798-4332 | ext-pdcarriker@ncdot.gov |
| 5 | Angela Pace | 919-646-0052 | ext-acpace@ncdot.gov |
| 6 – 8 - 12 | Randy Pace | 919-348-8540 | rpace@pacepllc.com |
| 7 -11-13 | Jerry Sands | 919-646-0052 | ext-grsands@ncdot.gov |
| 14 | Sam Frederick | 984-272-5545 | sjfrederick@ncdot.gov |

The...1...2...3's

General Information

NCDOT Resources and Links – the following links are noted in the LAP guide for assistance:

- Minimum Sampling Guide (MSG)
- Approved Producer/Supplier
- Approved Products List (APL)
- Precast Concrete & Prestressed Concrete RFID Verification
- Qualified Products List (QPL)
- Certified Construction Technicians
- Approved Concrete Mix Design Verification
- Fabricators & Pedestrian Bridge verification

Additional links and information are referenced in the
"LAP Materials Acceptance Guide"

The...1...2...3's

General Information

Receiving Materials – all materials arriving on site are received by MRR or Ticket:

- Materials Received Report (MRR)
 - ❑ M&T Form 251R, or similar electronic format with detailed information.
 - ❑ The on-site technician will complete the MRR each day that materials are received on the project.
 - ❑ This applies to temporary and permanent materials.
- Shipping Tickets
 - ❑ Examples of materials received by shipping tickets are quarry materials, concrete, and asphalt.
 - ❑ The on-site technician shall review and verify all information on the ticket has been completed and meets NCDOT policies/specifications prior to acceptance of the material.
 - ❑ Ticket books shall be created when any material received by weight is delivered to a project (quarry materials and asphalt).

The...1...2...3's

Contractor

Every material that arrives on site typically is required to have some type of documentation for acceptance. Examples include:

- Certification: Type 1-7; Section 106-3 NCDOT Spec Book
- Documentation: Bill of Lading, Invoices, Buy America
- Sampling/Testing: On-site, Preapproval, Pretested
- Tracking: RFID, Heat Numbers, Manufacture Certification

The...1...2...3's

Contractor

Shortage:

- Insufficient amount of a particular material for which a contractor receives payment; or,
- Lack of required certification, verification, sampling and/or testing of a particular material for which a contractor receives payment.
- A non-payment is applied in this case.

The...1...2...3's

Contractor

Buy America:

Review submitted letter from the contractor stating:

"All steel and iron products furnished as domestic products shall be melted, cast, formed, shaped, drawn, extruded, forged, fabricated, produced, or otherwise processed and manufactured in the United States."

The...1...2...3's

Contractor

RFID Tracking Program:

- Precast Concrete and Prestressed Concrete must come from an approved Producer/Supplier.
- The contractor needs to ensure that the material being produced/supplied by the approved producer/supplier is also NCDOT approved.
- RFID tags are cast in all pieces produced for Local Administered Projects.
- If no RFID with correct status on material =

No Pay!!

The...1...2...3's

Contractor

Weight Tickets:

- Materials which require or specify a weighmaster stamp and are incorporated on LAP, or projects fully or partially supported by FHWA funding, must be signed by the active certified weighmaster to receive payment for that individual material.
- Tickets, receipts, or invoices without proper stamp and signature will not be approved or accepted on the project.
- Hard signatures, electronic signatures, or computer generated signatures are all acceptable methods, as long as it is provided by the active certified weighmaster who verifies the accurate weight.
- All tickets shall only display one weighmaster and their respectful signature, and not multiple names.

The...1...2...3's

Acceptance of Material

Sample – Testing - Inspection:

- These are materials accepted by sampling, testing, or detailed inspection at the time of arrival on-site.
- These material types have a defined frequency – how often samples are taken for a given amount of material received.
- All sampling/testing shall be conducted by an active, certified technician.
- Samples, tests, and inspections conducted by a technician who is not certified will void the test results and no credit will be given for the sample accepted quantity.

The...1...2...3's

Acceptance of Material

Pretested:

- These are typically prestress and precast materials.
- These materials are tested and accepted off site by M&T or their certified representative during the manufacturing/fabrication process.
- These materials are recorded in the HiCAMS system and Field Investigation Reports (FIR) provide acceptance information.
- These materials utilize the RFID system and must be verified by the on-site technician prior to utilization on the project.

The...1...2...3's

Acceptance of Material

Certification Type:

- These materials are accepted by specified and required certification types.
- The on-site technician should verify the certification prior to acceptance of the material.
- **No Certification = No Pay!!**
- Section 106-3 in the "NCDOT Standard Specifications for Road and Structures" describes each of the 7 certification types.

The...1...2...3's

Acceptance of Material

Approved List:

- Selective materials are part of the pre-approval program and can be found on the NCDOT Approved list.
- Certification types are still required on approved materials.
- The on-site technician should indicate and/or record which approved material was received and accepted.
- QPL – ITS and Signals Qualified Products List
- APL – Vendor Approved Products & Technicians

The...1...2...3's

Acceptance of Material

Catalog Cut:

- Catalog Cut – specification sheets for an individual and specified product.
- Data Sheets are not Catalog Cut sheets.
- Catalog Cut materials do require Certification Types.
- Materials which arrive on site that are accepted by catalog cut sheets should be verified before utilization by the on-site technician.
- Keep all records for verification in the material certification process.

The...1...2...3's

Laboratories

NCDOT Central & Regional Laboratories:

- The NCDOT M&T Central or any NCDOT M&T Regional laboratory can be utilized for testing material.
- All NCDOT M&T laboratory locations are fully accredited.
- Please contact the local laboratory prior to the construction phase and review operations for submitting samples to be tested.

The...1...2...3's

Laboratories

Non-NCDOT & 3rd Party Laboratories:

- Non-NCDOT or 3rd party laboratories can be utilized if the following accreditations are current during the life of the project:
 - AASHTO Accreditation
 - NCDOT Certification
- All laboratories certifications have limited expiration dates – make sure your selected laboratory is certified during the life of the project.
- Certification certificates should be reviewed and verified prior to selecting a testing facility.

The...1...2...3's

Laboratories

Non-NCDOT Laboratory Testing Technicians:

- Active, certified laboratory technicians are the ONLY technicians allowed to conduct tests on acceptance samples.
- The practice of “over-seeing” or “observing” is not permitted during final acceptance testing.
- It is permitted to allow a qualified technician conduct subsequent testing and/or analysis, but NOT on acceptance samples.
- Certification certificates should be reviewed and verified for laboratory technicians.

The...1...2...3's

Laboratories

Test Results & Documentation:

- All test results and related documentation shall be placed in the project files and stored. These documents will be verified during the material certification phase.
- Final acceptance test reports are required to document the technician's name who conducted the tests and be signed by the laboratory supervisor.
- If you utilize a NCDOT M&T laboratory, make sure you request a final report on every acceptance sample.

The...1...2...3's

Laboratories

Non-Participating Amounts:

- If a laboratory is utilized which does not meet the certification requirements, a non-participating amount will be applied.
- If a discrepancy is found regarding test results and/or documentation, a non-participating amount will be applied.
- If a laboratory and/or technician's certification expires and they continue to conduct acceptance testing, a non-participating amount will be applied.

The...1...2...3's

Material Certification

A “Material Certification” shall be conducted at the end of the construction phase, prior to final payment to the contractor. During this process, **ALL** line items/pay items are reviewed and verified. Each line item shall have the required documentation, be legible, and kept on file for verification during the material certification process.

The material certification process is referred to as the “Final Project Certification” within the Locally Administered Project Municipality Agreement.

The...1...2...3's

Material Certification

Material Review:

- Documentation shall be available, well organized, clearly labeled, and structured.
- If the documentation is not well organized and accessible, the review will be canceled, and the agency will have 14 days to assemble and reschedule the review.
- A maximum of 3 reviews will be permitted to resolve *ALL* discrepancies.

The...1...2...3's

Material Certification

If the material certification process exposes discrepancies or non-participating amounts, the local agency or their representative will have 30 days to resolve any issues. After 30 days, any remaining discrepancies are then considered non-participating amounts and will not be reimbursed.

The...1...2...3's

Material Certification

Lump Sum:

- Lump sum line items are reviewed and verified during the material certification.
- If materials are incorporated in a lump sum line item, the individual material must be listed in detail and the required documentation must be associated with each individual material.
- If a material discrepancy is not resolved, the entire line item is appointed a non-participating amount.

The...1...2...3's

Material Certification

Division Responsibility:

- After the material certification is complete, the Division office is responsible for the following:
 - ❑ 1446LAP – Division will need to complete this document, sign and date it, and send to M&T - Sam Frederick.
 - ❑ Final Voucher – A Final Voucher date is issued by FHWA. Once this date is issued, Division will generate a letter stating the date and the beginning of the record retention period. This letter will be sent to the local agency.

The...1...2...3's

Notable Extras

Fabricators & Pedestrian Bridges:

- **Fabrication of a structure and/or pedestrian bridge, shall come from an approved producer/supplier and submit shop drawings for approval prior to production.**
- The fabricator shall complete and submit the "Materials & Tests Notification of Work Form" prior to any production.
- Prior to any production, the fabricator shall receive confirmation from M&T the notification of work has been received and approved.

The...1...2...3's

Notable Extras

Fabricators & Pedestrian Bridges:

- Inspections and approval of fabrication will be conducted by M&T or their approved representative at the fabricator's location.
- Approval will **NOT** be conducted after the structure arrives on site.
- Fabrications and Pedestrian Bridges should be discussed/reviewed with the potential fabricator prior to the first pre-construction meeting.

The...1...2...3's

Notable Extras

Pipe (Concrete, Metal, Plastic):

- All categories of pipe must come from an NCDOT approved producer/supplier.
- All categories of pipe received on site shall utilize the RFID tag program.
- The RFID status shall be "Available" when accepting pipe. Nonpayment will be applied to pipe which does not meet this requirement status.
- The on-site inspector shall clearly indicate the corresponding RFID number on the MRR.

The...1...2...3's

Notable Extras

Welders and Field Welding:

- All field welders shall have an active, certification, and be qualified by the Department.
- Once all field welding is completed, inspection of each weld shall be conducted by a qualified inspector in accordance with AWS QC-1.
- Documentation referencing the inspection of welds and welder shall be accessible during the material certification process for verification.
- The above requirements also apply to handrails.

The...1...2...3's

Notable Extras

Traffic Control & Traffic Products:

- All traffic control products must be verified approval for use and listed on the NCDOT APL.
- Traffic control items require a Type 3 (new) or Type 7 (used) certification.
- Traffic control products must be documented on a MRR for receipt and acceptance.
- Flaggers – the following must be verified:
 - Qualification Statement all flaggers are trained.
 - Indicate if flaggers are supplied by the prime contractor or sub-contractor.

The...1...2...3's Questions?

