**Construction & Inspection Details**

***Material Testing, Sampling & Certifications***

1. The minimum number of samples and tests required will be determined by the construction contract and the frequency guide schedule in the [**VTrans’ *Materials Sampling Manual*.**](https://outside.vermont.gov/agency/vtrans/external/docs/construction/04MatTestCert/VTrans%20Materials%20Sampling%20Manual.pdf)
2. Acceptance sampling and testing shall be conducted in accordance with VTrans’

[***Quality Assurance Program* (QAP).**](https://outside.vermont.gov/agency/vtrans/external/docs/construction/04MatTestCert/VTrans%20Quality%20Assurance%20Program.pdf)

1. If the Resident Engineer accepts a material that fails a test, does not meet testing requirements, or was not tested at all, the Resident Engineer should provide an explanation for the justification of why the material was accepted.

For failed tests, this explanation should indicate the following:

• How the material failed

• The quantity of the test material represented

• The planned quantity of the material

• The magnitude of the material failure (for example, 4% high passing the #200 sieve)

• Why the material was accepted

• If any corrective action was taken, if appropriate

1. **Increase in Certified Quantity** [**(Procedure)**](https://outside.vermont.gov/agency/VTRANS/external/MAB-LP/Shared%20Documents/8.%20%20Construction/Construction%20Inspection%20Forms/TA555%20Increase%20in%20Certified%20Quantity%20Guidance.pdf)**:**

The Resident Engineer may extend the quantity of the certification to match the installed quantity in the case of an installed material quantity exceeding the certified quantity by an amount not to exceed 20% and with the extra material coming from the same manufacturer and of the same type, lot, batch, or heat number. To extend the certified amount of an item, the Resident Engineer shall verify that the additional material being incorporated in the project is from the same manufacturer and is of the same type, lot, batch, or heat number as the original certification. The Resident Engineer will then complete the [***TA-555*** ***Increase in Certified Quantity*** form](https://outside.vermont.gov/agency/VTRANS/external/MAB-LP/Shared%20Documents/8.%20%20Construction/Construction%20Inspection%20Forms/TA555%20Increase%20in%20Certified%20Quantity.docx).

1. **List of Materials with Advanced Certification** [**(ACL Procedure):**](https://outside.vermont.gov/agency/VTRANS/external/MAB-LP/Shared%20Documents/8.%20%20Construction/Construction%20Inspection%20Forms/TA555%20Advance%20Certification%20List%20Guidance.pdf)

The Materials Section publishes an annual List of Materials with Advanced Certification (*ACL*), which contains materials and the manufacturers who have certified that their materials conform to VTrans’ specifications. If a Contractor obtains material from such an approved source, the Resident Engineer will complete the [***TA-555 Materials with Advance Certification*** form](https://outside.vermont.gov/agency/VTRANS/external/MAB-LP/Shared%20Documents/8.%20%20Construction/Construction%20Inspection%20Forms/TA555%20Advance%20Certification%20List%20Form.docx) in lieu of the Contractor obtaining a certification directly from the manufacturer.

1. [**Approved Products List**](https://vtrans.vermont.gov/highway/construct-material/test-cert/certification/approved-products-and-advanced-certifications)[**(APL Procedure):**](https://outside.vermont.gov/agency/VTRANS/external/MAB-LP/Shared%20Documents/8.%20%20Construction/Construction%20Inspection%20Forms/TA556%20Approved%20Products%20List%20Guidance.pdf) VTrans requires the use of approved products for certain materials and items, and these products may be confused with materials requiring certification. The most important distinction between approved products and materials requiring certification is that the requirement for material certification may not be waived. Materials must appear on the VTrans Approved Products List (APL), which is also produced on an annual basis. The Resident Engineer will document the use of an approved product by completing the [***TA 556 Approved Products List*** form](https://outside.vermont.gov/agency/VTRANS/external/MAB-LP/Shared%20Documents/8.%20%20Construction/Construction%20Inspection%20Forms/TA556%20Approved%20Products%20List%20Form.docx).
2. **Minor Quantity Declaration** [**(Minor Quantity Procedure)**](https://outside.vermont.gov/agency/VTRANS/external/MAB-LP/Shared%20Documents/8.%20%20Construction/Construction%20Inspection%20Forms/TA557%20Minor%20Quantity%20Declaration%20Guidance.pdf): The *VTrans Material Sampling Manual* describes the allowable basis for the declaration of minor quantities. A minor quantity is defined as any total quantity, for the whole project, of one material, which is equal to or less than 230 CM (300 CY) for aggregates and 20% of the minimum sampling frequency for structural concrete and bituminous concrete. Minor quantities of materials may be accepted without sampling and testing. The acceptance of a minor quantity is the sole responsibility of the Resident Engineer. Sampling and testing of minor quantities will be determined on a project-by-project basis. Materials that meet the criteria for minor quantities should be from reliable sources, perform satisfactorily, and meet the requirements for the intended purpose. This will be documented by the Resident Engineer using the [***TA 557 Minor Quantity Declaration*** form](https://outside.vermont.gov/agency/VTRANS/external/MAB-LP/Shared%20Documents/8.%20%20Construction/Construction%20Inspection%20Forms/TA557%20Minor%20Quantity%20Declaration.docx).
3. **Waive Small Quantity** [**(Small Quantity Procedure)**](https://outside.vermont.gov/agency/VTRANS/external/MAB-LP/Shared%20Documents/8.%20%20Construction/Construction%20Inspection%20Forms/TA555%20Waive%20Small%20Quantity%20Guidance.pdf)**:** The RE may waive the requirement for submitting a certification for projects with small quantities of material having a cost of less than $5,000 and that are not directly involved with the safety of the structure or the roadway. The material must still meet or exceed the specified material requirements. While the requirement to provide documentation may be waived, the material must still comply with all applicable specifications. Certification of minor quantities cannot be used for items that are subject to the Buy America Provisions. The RE must complete a [**TA555 Waive Small Quantity form**](https://outside.vermont.gov/agency/VTRANS/external/MAB-LP/Shared%20Documents/8.%20%20Construction/Construction%20Inspection%20Forms/TA555%20Waive%20Small%20Quantity.docx)**.**