

Section 105 CONTROL OF MATERIALS

105.01 Quality and Source of Supply. Unless otherwise specified in the contract, only new materials or fabricated items conforming to the requirements of the specifications, and certified by the supplier or approved by the Engineer before use, shall be used in the work. Upon award of the contract, the Contractor shall provide the information requested on the Department's testing order form for the materials and the fabricated items to be incorporated in the work. The Contractor will be permitted to change the source of supply provided the Department is given reasonable time to carry out the required inspection and testing. If accepted materials are transferred from another contract, the Contractor shall obtain prior approval from the Engineer and provide the required documentation.

If it is found that a source of supply does not provide an acceptable and uniform product, or if for any reason the product from any source at any time proves to be unsatisfactory to the Department, the Engineer may require the Contractor to provide acceptable material from other sources. The Contractor shall have no claim for increased cost because of the requirement.

105.02 Natural Material Sources Found within the Grading Limits. The Contractor may use material found within the grading limits of the project as determined suitable by the Engineer. The Contractor will be paid for the excavation of the material at the corresponding contract unit price and for the pay item for which the excavated material is used. All material removed and used which was suitable for use as in place material shall be replaced. The removal and replacement with other acceptable material shall be at the Contractor's expense.

105.03 Borrow Material. Material found outside the grading limits is considered borrow. Unless called for on the plans or in the proposal, the Contractor shall furnish the borrow material. The Contractor will not be paid for excavation of borrow material.

The Contractor shall not remove borrow from the highway right-of-way unless authorized by the Engineer. If authorization is received, the Contractor will reimburse the Department for the materials used.

A source of borrow material may be provided for in the contract. Where called for in the contract documents, the Department will furnish the borrow material. After the borrow earth has been removed, no other material shall be wasted in the borrow area by the Contractor until the Engineer has given approval.

When sources of natural materials are designated in the contract to be used on the project, the Contractor shall determine the amount of equipment and work required to produce acceptable material from the sources. Since it is not feasible to determine from samples the limits or quality of an entire deposit, variations shall be considered normal. The Engineer may limit removal of material to specific portions of a deposit and may reject portions of the deposit as unacceptable, based on the Engineer's test results.

If the Contractor wants to use material from sources other than those designated, the Contractor shall take necessary action to certify that the material is environmentally acceptable and acquire all required rights and permits. The Contractor shall bear all costs related to acquisition and use of such sources. A copy of the permit(s) shall be given to the Engineer before the use of the material on the project.

Granular materials excavated from under water shall be stockpiled for sufficient time to be drained of free water before placing on a prepared subgrade. If the Contractor elects to accomplish de-watering of borrow material by a temporary lowering of the water table, the Contractor shall be responsible for any damages resulting from use of this method.

Upon completion of the work, sites from which borrow material has been removed shall be restored according to subsection 205.03.H.

The Contractor shall perform all necessary construction, maintenance, and rehabilitation of borrow haul routes unless otherwise provided in the contract. Payment for work and materials required to build and maintain borrow haul routes will be considered as having been included in the contract unit prices bid for other contract items. The Contractor will be held liable for all damages caused by the Contractor's hauling operations and will be required to pay for damages according to section 107.

If the haul road involves a private railroad crossing, provisions shall be made by the Contractor according to subsection 107.20.

105.04 Miscellaneous Quantities. When the location and quantity of an item cannot be determined until after construction has started, an estimate of the miscellaneous quantity will be included on the plans. If the item involves the purchase of materials, the Contractor shall not order materials until the quantities have been determined by the Engineer.

105.05 Approval of Materials Incorporated into the Work. Materials to be incorporated into the work may be inspected and tested any time and any place during their preparation, storage and use. All tests of materials will be performed according to methods specified in the contract. Material inspection may be made at the plant or source. When inspection is made at the plant, the producer shall furnish and maintain accommodations, for the exclusive use of the Inspector in performing tests, according to section 809.

Materials will be sampled by a representative of the Department and tested for conformance with the contract requirements. The Department's procedures will be followed for sampling or for certification. The edition of manuals, MTMs, standards and standard specifications current at the date of advertisement for proposals shall apply, unless specifically stated otherwise in the contract.

- A. **Acceptance by Certification or Qualified Products List.** A materials certification or inclusion on the Qualified Products List is not to be construed as acceptance, warranty or guarantee by the Department that the material being supplied to projects meets the contract requirements. In the event that the Contractor elects to obtain materials under certification by the supplier or from the Qualified Products List, the Contractor shall determine that the supplier can and will supply materials meeting the requirements of the contract.

When materials are approved for incorporation into the work based on certification by a supplier or from the Qualified Products List, the Contractor remains responsible, even after final acceptance of the project, for the cost of removing and replacing unacceptable materials, unless the Contractor shows that:

1. The materials were inspected for defects or damage using reasonable methods of visual examination;
2. The defects or damages were not detectable by reasonable methods of visual examination;
3. The Contractor did not know, and had no reason to know through reasonable inquiry, that substandard goods had been supplied;
4. The materials furnished matched the material described in the certification statement or Qualified Products List; and
5. The material described in the certification statement or Qualified Products List corresponded to the type, grade, size, color, etc. described in the specification.

The Contractor has a duty to notify the Department if the Contractor has, or by reasonable inquiry should have, reason to believe the supplier's circumstances have changed so that the quality of the materials certified for the projects or materials on the Qualified Products List might be other than as specified. Any doubt about the acceptability of certified material or material from the Qualified Products List shall be called to the attention of the Engineer before use.

- B. **Acceptance by Test.** The Contractor or the supplier shall provide such facilities as the Engineer may require for collecting and forwarding samples and shall not use the materials represented by the sample until they have been found to satisfy the requirements of the contract. The Contractor or the supplier shall furnish the required samples without charge and shall prepay the transportation charges for shipment of samples to the testing laboratory. These samples will be tested by and at the expense of the Department.

105.06 Storage of Materials. Materials shall be stored to assure the preservation of their quality. Items susceptible to damage shall be protected by suitable shelters. Stored materials, though approved before storage, may be inspected again before their use in the work. Stored materials shall be located to facilitate their prompt inspection.

Portions of the right-of-way or other Department property, may be used during the life of the contract for storage when approved by the Engineer. All additional space required must be provided by the Contractor. Private property shall not be used for storage purposes without written permission of the owner and lessee. A copy of the written permission shall be furnished to the Engineer. Storage sites shall be restored to a satisfactory condition, according to section 205.

105.07 Handling and Transporting Materials. All materials shall be handled in a manner to preserve their quality.

Materials shall be transported from the storage site to the work in vehicles constructed and maintained to prevent loss or segregation of materials after loading and measuring.

105.08 Unacceptable Materials. Materials not conforming to the requirements of the contract will be rejected unless otherwise directed by the Engineer. Rejected material shall be removed immediately from the work site.

105.09 Unused Material. Furnished materials, except for specially produced materials, not incorporated in the work shall remain the property of the Contractor and shall be removed from the project before acceptance of the work.

Specially produced materials that are specifically produced for the project may be purchased by the Department. Purchase of excess specially produced materials will be limited to the amounts that represent the difference between plan quantities and the quantities actually used. Payments for purchases will be limited to the Contractor's cost of furnishing or producing, delivering, and handling, as verified by the Engineer, with no allowance for overhead and profit.

105.10 Source of Steel and Iron. All steel and iron materials permanently incorporated in this project shall have been produced in the States, Territories, or Possessions of the United States, unless the materials are no longer produced in the United States. These materials shall include steel, steel products, and products that include steel components.

All manufacturing processes, including application of a coating, for these materials and products must have occurred within the States, Territories, or Possessions of the United States. Coating includes all processes which protect or enhance the value of the material to which the coating is applied. This specification allows the minimal use of foreign steel materials on the project, if the total invoice cost of the materials permanently incorporated in the project does not exceed one-tenth of one percent of the total contract cost or \$2,500, whichever is greater.

For purposes of this specification, the total cost is that shown to be the total value of the steel products and materials as they are delivered to the project.

Written certification of compliance shall be submitted by the Contractor to the Engineer.