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Section 105. CONTROL OF MATERIALS

105.01. Quality and Source of Supply. Unless otherwise required by the contract, the Contractor must:

- A. Provide new materials and fabricated items that meet the requirements of the specifications and are certified by the supplier in writing or approved by the Engineer in writing before use in the work.
- B. Upon award of the contract, provide the information requested on the Department's Materials Source List (Form 0501) for the materials to be used in the work.
- C. Notify the Engineer in writing, at least 7 days prior to when materials are required on site, that materials are ready for sampling, testing or inspection by the Department, including materials obtained from Department-approved certifiers or selected from the Department's Qualified Products List.
- D. Change the source of supply only after providing the Department with a reasonable time to perform the required sampling, testing or inspection.
- E. Provide the required documentation and obtain written approval from the Engineer before transferring materials that the Department has accepted, for use on another Department contract.

If the Department determines that a source of supply does not provide an acceptable product as required by the contract, the Engineer may require the Contractor to provide acceptable material from other sources. The Contractor is not entitled to a time extension or compensation for delays, inconvenience, or any other cause attributed to the Contractor providing acceptable material from other sources.

105.02. Natural Material Sources Found within the Excavation Limits. The Contractor may use natural material found within the excavation limits if the material meets the contract requirements of the work for which it is used, as determined by the Engineer. The Department will pay the Contractor for excavating this material at the corresponding contract unit price and for the pay item for which the excavated material is used.

105.03. Borrow Material. The Department defines borrow material as material found outside the excavation limits. Unless otherwise required by the contract, the Contractor must provide borrow material. The cost of excavating borrow material is included in the contract unit price of the pay items for which the borrow material is used.

The Contractor may not remove borrow material from the project limits unless approved by the Engineer in writing. If approved by the Engineer, the Contractor must reimburse the Department for the materials removed from the project limits at a rate of \$1.00 per cubic yard, in-place volume.

The contract may identify a source of Department-provided borrow material for the Contractor's use on the project. After removing the borrow material, the Contractor must not waste other material in the borrow area until approved by the Engineer in writing.

If the contract identifies a source of borrow materials, it is the Contractor's responsibility to determine the equipment and work required to produce acceptable material from that source. Variations in the quantity and quality of borrow materials from a Department-provided source are normal. Based on material test results, the Engineer may limit removal of material from a source and may reject portions of the material from the source in accordance with subsection 105.08.

Before using material from sources other than those identified in the contract, the Contractor must provide written certification to the Engineer that the material is environmentally acceptable, acquire required rights and permits, and submit a copy of any permits to the Engineer. The cost of acquiring these sources, obtaining necessary permits, and using the material from these sources is included in the contract unit price of the pay item for which the material is used.

Granular material excavated from underwater must be stockpiled and drained so it is free of water before placement on a prepared subgrade. If the Contractor chooses to dewater borrow material by temporarily lowering the water table, the Contractor is responsible for damages caused by this method.

After completing the work, the Contractor must restore sources of borrow material in accordance with subsection 205.03.H.2.

The Contractor is responsible for necessary construction, maintenance, and rehabilitation of routes used to haul borrow material, unless otherwise required by the contract. The cost to build and maintain routes to haul borrow material is included in the contract unit price for the relevant pay items. The Contractor is responsible for damages caused by hauling operations in accordance with section 107.

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The Contractor must make provisions for haul routes involving a private railroad crossing in accordance with subsection 107.20.

105.04. Miscellaneous Quantities. If it is not possible to determine the location and quantity of a pay item until after construction has begun, the plans will reflect a miscellaneous quantity. If the pay item with the miscellaneous quantity involves the purchase of materials, the Contractor must not order those materials until the Engineer has determined the actual quantity of those materials.

105.05. Approval of Materials Incorporated into the Work. The Engineer may inspect materials that the Contractor will incorporate into the work at any time and at any place during the preparation, storage, and use of the materials. The Engineer will perform inspections of the materials, including sampling and testing, in accordance with the methods required by the contract to determine if the material meets the contract requirements. References within the contract to the Department's procedures for inspection, sampling, testing, and certification of materials refer to the edition of the relevant manuals, MTMs, standard plans and standard specifications that are current as of the advertisement date, unless otherwise required by the contract.

If the Engineer inspects the materials at the plant, the Contractor must ensure the producer, supplier, or manufacturer provides and maintains accommodations, for the exclusive use of the Engineer in performing tests, in accordance with section 809.

A. Approval by Certification or Qualified Products List. A materials certification or inclusion on the Qualified Products List is not to be construed as Department acceptance, warranty, or guarantee that the material provided by the Contractor meets the requirements of the contract. If the Contractor chooses to obtain materials under certification by the supplier or from the Qualified Products List, the Contractor must ensure the supplier provides materials that meet the contract requirements.

If the Department approves the use of materials from a certified supplier or from the Qualified Products List, the Contractor is responsible for removal and replacement of nonconforming materials, even after final acceptance, unless the Contractor can prove all of the following:

1. The Contractor provided the notice required by subsection 105.01.C.

2. The Contractor provided the Department a reasonable time to sample, test, or inspect the material prior to incorporation into the work.
3. The Contractor did not know, and had no reason to know through reasonable inquiry, that substandard materials had been supplied.
4. The materials provided matched the material described in the certification statement or Qualified Products List.
5. The material described in the certification statement or Qualified Products List corresponded to the description in the specification.

The Contractor must notify the Engineer if the Contractor has, or by reasonable inquiry should have, reason to believe that a material supplier, producer, or manufacturer's circumstances have changed so that the quality of the materials certified for use on the project or materials on the Qualified Products List might not meet the contract requirements. The Contractor must notify the Engineer if the Contractor has any doubt about the approval of materials certified for use on the project or materials from the Qualified Products List.

B. Approval by Test. The Contractor must provide such facilities as may be required by the contract for the Engineer to collect samples of materials and forward the samples to the testing laboratory. The materials represented by the samples being tested are not to be used until the Engineer determines that the materials meet the contract requirements. The Contractor must provide required samples to the Engineer at no additional cost to the Department. The Contractor must prepay transportation charges for shipment of samples to the testing laboratory designated by the Department. The Department will test these samples at its own expense.

105.06. Storage of Materials. The Department may designate portions of the right-of-way or other Department property on the plans as possible locations for storing materials, in accordance with subsection 104.12. The Contractor must restore locations used for storage in accordance with section 205.

The Contractor must store materials as follows:

- A. In a manner that will preserve the quality of the materials and prevent damage to existing woody vegetation not identified for removal.
- B. Using shelters to protect items susceptible to damage.
- C. In a location that does not prohibit or delay the Engineer's inspections.

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D. On private property only if approved by the owner and lessee in writing. If storing materials on private property, the Contractor must provide a copy of the written permission to the Engineer.

If the Engineer approved materials before the Contractor stored them, the Engineer may inspect the materials again before the Contractor incorporates them into the work.

105.07. Handling and Transporting Materials. The Contractor must handle materials in a manner that will preserve the quality of the materials.

The Contractor must transport materials from a storage location to the location that the Contractor will incorporate the materials into the work using vehicles constructed and maintained to prevent loss or segregation of materials after loading and measuring.

105.08. Nonconforming Materials.

A. Nonconforming Materials Identified before Incorporation into the Work. The Engineer will take one of the following actions for nonconforming materials identified before incorporation into the work:

1. The Engineer will reject the nonconforming materials and direct the Contractor to correct the rejected materials or remove the rejected materials from the project and replace with materials that meet the contract requirements. The Contractor must correct or remove and replace the rejected materials at no additional cost to the Department. Before incorporating corrected materials into the work, the Contractor must obtain the Engineer's approval.
2. The Engineer will allow the nonconforming materials to be incorporated into the work and will make a reduction in the contract unit price for the relevant pay item or accept a guaranty bond in accordance with subsection 104.04.

B. Nonconforming Materials Identified after Incorporation into the Work. The Engineer will take one of the following actions for nonconforming materials identified after incorporation into the work:

1. The Engineer will reject the nonconforming materials in accordance with subsection 104.04.
2. The Engineer will allow the nonconforming materials to remain in place and will make a reduction in the contract unit price for the relevant pay item or accept a guaranty bond in accordance with subsection 104.04.

105.09. Materials not Incorporated into the Work. Before the Engineer will grant final acceptance, the Contractor must remove materials not incorporated into the work from the project in accordance with subsection 205.03.P, except for materials specially produced for the project.

The Department may purchase the materials specifically produced for the project but not incorporated into the work. If the Department decides to purchase these materials, the Department will only purchase the surplus quantity of these materials not incorporated into the work. The surplus quantity is the difference between the quantity of the material shown on the plans and the actual quantity of materials incorporated into the work. The Department will only pay the Contractor for the cost to produce, deliver, and handle these materials in accordance with subsection 109.05.C, excluding overhead and profit.

105.10. Source of Steel and Iron. The Contractor must provide steel and iron materials, for permanent incorporation into the work, that were produced only in the United States. FHWA may grant a waiver for steel and iron materials if they are not produced in sufficient and reasonably available quantities that are of satisfactory quality. Steel and iron materials include steel, steel products, and products that include steel components.

The Contractor must ensure that the manufacturing processes, including the application of coatings, for these materials and products occur in the United States. The application of coatings includes processes that protect or enhance the value of the material to which the coating is applied.

The Contractor may provide a minimal amount of foreign steel materials on the project, if the total invoice cost of the foreign steel materials permanently incorporated in the project does not exceed 0.1 percent of the original contract amount or \$2,500, whichever is greater. The Department defines the total invoice cost as the total value of the foreign steel materials delivered to the project.

The Contractor must submit written certification of compliance with the requirements of this subsection to the Engineer.