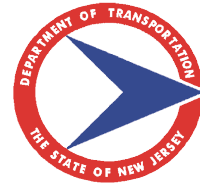


*New Jersey Department of Transportation*  
1035 Parkway Avenue, PO Box 600, Trenton, New Jersey 08625-0600



## *Baseline Document Change Announcement*

**ANNOUNCEMENT: BDC23S-22**

**DATE: March 19, 2024**

**SUBJECT: Materials Field Laboratory and Curing Facility Field and Office Equipment**  
**- Revisions to Subsection 156.03 and Subparts 156.03.01 and 156.03.03, and Subsection 156.04 of the 2019 Standard Specifications for Road and Bridge Construction.**

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Subsection 156.03 of the Standard Inputs and Subparts 156.03.01 and 156.03.03, and Subsection 156.04 of the 2019 Standard Specifications for Road and Bridge Construction have been revised to modernized office and field equipment standards for materials labs and curing facilities based on coordination with Regional materials Engineers.

The following revisions have been incorporated into the 2019 Standard Specifications via 2019 Standard Inputs, SI2019:

### **SECTION 156 – MATERIALS FIELD LABORATORY AND CURING FACILITY**

#### **156.03 PROCEDURE**

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**CONTACT THE APPROPRIATE REGIONAL MATERIALS ENGINEER'S OFFICE TO DETERMINE THE NEED FOR MATERIALS FIELD OFFICE AND/OR CURING FACILITY AND THE EQUIPMENT NEEDED (EXAMPLE: FLEX BEAM TESTER, NUCLEAR GAUGE, OR COMPRESSION TESTER).**

**REGION NORTH  
MR. STEVENSON GANTHIER  
TELEPHONE: (973) 810-9155**

**\*\*\*\*\*OR\*\*\*\*\***

**REGION CENTRAL  
MS. HANY NASRALLE  
TELEPHONE: (732) 379-0123**

\*\*\*\*OR\*\*\*\*

REGION SOUTH  
MS. AMANDA THORN, P.E  
TELEPHONE: (856) 414-8505

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**156.03.01 Materials Field Laboratory**

THE ENTIRE SUBPART IS CHANGED TO:

Do not provide or procure the materials field laboratory or associated equipment until the RE notifies that this item is required.

Within 15 days of RE notification, provide and maintain a materials field laboratory for the exclusive use of the Department, until no longer required by the Department, at a location approved by the ME. Do not lock out, or make the Materials Field Laboratory inaccessible to, the RE or any Department employees, consultants, or representatives at any time. Do not use buildings scheduled for demolition under the Contract as a materials field laboratory. The ME will not conduct testing until the materials field laboratory is ready for use.

If the field laboratory is a temporary structure within State ROW, secure the necessary permits from the New Jersey Department of Community Affairs, and remove the structure as directed by the RE.

Provide a Uniform Code Type Four Fire Permit according to the New Jersey Department of Community Affairs regulations. The Contractor may obtain information concerning the permit fees and the permit application process from the Department’s Bureau of Materials.

Ensure that the materials field laboratory is weatherproof with a minimum ceiling height of 7 1/2 feet. Ensure that one of the rooms has a minimum area of 450 square feet. Ensure that there is an additional room or enclosure with a concrete floor with a minimum area of 600 square feet. Ensure that each room has at least four 3 prong electrical outlets, having a minimum of two 20 ampere, 120 volt circuits.

Ensure that the materials laboratory doors and windows have locks, and provide the keys to the ME. Ensure that the materials field laboratory has one or more closets of sufficient capacity for the office’s size. Provide the following for the materials field laboratory:

1. **Utilities and Lighting.** Provide all utility services and connections including water, sewer, gas, electricity, telephone, and broadband internet. Provide a separate telephone line for each telephone and computer modem as specified in 156.03.01.4. Provide a field office with sufficient natural and artificial light. Provide adequate insulation, heat, and air-conditioning to maintain an ambient temperature of 68 to 80 °F.
2. **Lavatory.** Provide a lavatory as specified in 155.03.01.3.
3. **Parking.** Provide 6 free parking spaces on a paved or hard surfaced area adjacent to the materials field laboratory.
4. **Communication Equipment.** Provide the following communication systems:
  - a. **Telephones.** Provide 2 cordless phones with auto-switching.
  - b. **Computer System.** Provide a computer system meeting the following requirements:
    1. Processor having a clock speed of 3.5 GHz or faster, 8 GB RAM, 896 MB Video RAM, 250 GB hard drive designated as drive C. Ensure the system is USB 2.0 compatible and has at least two front USB ports.
    2. Wireless Ethernet Hub Switch with appropriate number of ports and cables and a print server. Ensure there is at least one (1) Ethernet switch.
    3. High-speed broadband connection and service with a minimum speed of 250 Megabytes per second (mbps) with dynamic IP address for the duration of the project.
    4. Twenty inch or larger Flat Screen LCD monitor with tilt/swivel capabilities.
    5. Forty-two inch or larger flat screen wall mounted television with integrated or attached video camera with microphone capabilities.

6. Two Hundred Fifty Gigabyte or larger external drive with backup software for MS-Windows, and fifteen (15) corresponding formatted data cartridges corresponding to the tape drive size.
7. Twelve USB 64 GB (or larger) Flash/Jump memory drives.
8. One Flatbed USB version 2.0 Color Scanner with automatic document feed.
9. Uninterruptible power supply (UPS).
10. Surge protector for the entire computer configuration to be used in conjunction with the UPS.
11. Six computer workstations as needed, chair, printer stand, and/or table having both appropriate surface and chair height.
12. Six cans of compressed air and screen cleaning solution every other month for the duration of the contract.
13. Computer Software Requirements.
  - a. Microsoft Windows, latest version, with upgrades for the duration of the entire project.
  - b. Microsoft Office Professional, latest version.
  - c. Norton's System Works for Windows, latest version, or compatible software package with future upgrades and latest virus patches.
  - d. Anti-Virus software, latest version with monthly updates for the duration of the project.
  - e. Adobe Acrobat Professional, latest version, or compatible software.

If more than one computer configuration is specified, provide one wireless network card for the base computer configuration, and hardwire connections between computer configurations as directed by the ME.

Do not procure the computer system until reviewing the system requirements with the ME. Ensure that the computer system is compatible with the Department's construction management software and other specified software.

When the computer system is no longer required by the ME, the Department will remove and destroy the hard drive and return the computer system to the Contractor. The Department will retain other data storage media.

- c. **Printer.** Provide a printer meeting the following requirements:

Discuss with Bureau of Construction for printer specifications.

5. **Office Furnishings.** Provide furnishings, as specified in 155.03.01.5, and the following as needed:
  - a. Four desks with 4 desk chairs and 4 chairs, as needed.
  - b. A work bench having a minimum area of 2 1/2 × 10 feet, and 2 stools.
  - c. Shelving having a minimum area of 45 square feet.
  - d. One water cooler having both hot and cold water dispensers, and bottle water service.
  - e. A 24-person first-aid kit according to ANSI Z308.1, tick removal tweezers, and 4 aerosol cans of insect repellent containing DEET. Restock first aid supplies and insect repellent as needed.
  - f. A wastepaper basket.
  - g. One type ABC, fire extinguisher having UL approval.
6. **Office Equipment.** Provide the following:
  - a. A copier with scanning capabilities and automatic document feed, 15 pages per minute copy speed, variable reduce/enlarge capability, and letter, legal, and ledger size capabilities. Erase the copier hard drive before removing the copier from the field office and provide the RE with a certification stating that the copier hard drive has been erased.
  - b. A calculator, with trigonometric function capability.
  - c. A paper shredder with a minimum throat of 8.75 inches, and a minimum feed capacity of 10 sheets.
  - d. File cabinets as specified in Table 155.03.01-1.
  - e. Legal size hanging folders, as needed.
  - f. Legal size manila file folders – three tabs, as needed.
7. **Laboratory Equipment.** Provide the following:
  - a. **Primary Laboratory Room.** Equip the primary laboratory room with the following as needed:

1. A 12 inch diameter exhaust fan or alternative means for venting heat, dust, and fumes.
  2. Two gas stoves, each having at least 2 burners.
  3. Either commercially bottled gas service or gas supplied by a Utility with at least 2 connections to be located as directed by the ME.
  4. A sink with hot and cold running water, having adequate pressure, and equipped with 2 drain boards, and a drain-disposal system (silt trap or similar) capable of handling elutriable material.
  5. A metal stand to hold sieves used in washing elutriable material.
  6. Two wheelbarrows.
  7. A light duty oil-less air compressor listed by UL with a 2.5 gallon storage tank, a start/stop switch 94 pounds per square inch over 125 pounds per square inch, a 115 volt universal motor, an ASME safety valve, and a 25 foot air hose, equipped with a quick-change blow gun kit and nozzle kit consisting of a high-flow safety nozzle, a 6 inch extension safety nozzle, a rubber tip nozzle, a needle tip nozzle, and an air screen safety nozzle.
  8. An exhaust vent hood enclosed on 3 sides, top, and bottom, of such size to enclose the operations of drying and weighing a recycled concrete aggregate sample, and other operations in which a vapor or gas is emitted. Design and construct the hood so that any operation involving testing within the hood does not require the insertion of any portion of the tester's body, other than hands and arms. Ensure that the exhaust system is capable of producing an air speed of 80 to 120 feet per minute at the face of the opening.
  9. Shovels and scoops for sampling soil aggregate and concrete.
  10. Provide a nomograph. Supply the instruments necessary to measure air temperature, relative humidity, and wind speed, including 2 battery operated psychrometers, 2 concrete thermometers, and 2 wind gauges. Obtain certification from an independent, ME-approved laboratory that all instruments are in good working order and have been calibrated as requested by the ME.
- b. Additional Room or Enclosure.** Equip the additional room or enclosure with the following as needed:
1. Two 12 inch diameter exhaust fans or alternative means for venting heat, dust, and fumes.
  2. A 7 day spring-driven temperature recording device capable of producing a permanent record of the room temperature, with a supply of recording charts and pens.
  3. Install a concrete block weighing a minimum of 200 pounds and measuring approximately 10 × 10 × 24 inches with a 10 × 10 × 1 inch steel plate fastened to the top. Install the block on a firm foundation at a location directed by the ME.
  4. Two sound-dampened and dustproof cabinets constructed of at least 3/4 inch plywood or other suitable material and of sufficient size to house the mechanical sample shaker and the mechanical sieve shaker.
  5. A separate cabinet for the purpose of housing and storing a nuclear density gauge. Ensure that the cabinet is constructed of 3/4 inch plywood or particle board and lead sheathing, or any other acceptable materials, to ensure that a radiation reading of no higher than 2 nanorads per hour is obtained by contact measurement of the outside wall of the storage cabinet. This second cabinet must be securable and have a door equipped with a heavy-duty lock with 2 keys provided. Before this cabinet is constructed, obtain approval from the ME of the exact location, materials to be used for its construction, and locking system.
  6. Water tanks capable of storing three hundred 4 × 8 inch concrete cylinders fully submerged and in an upright position. Provide a 5/8 inch water hose at least 50 feet in length. Equip the water tank with a heater capable of maintaining a water temperature of 73 ± 3 °F.
- 8. Laboratory Testing Equipment.** Provide testing equipment and apparatus conforming to that listed in AASHTO R 60, T 11 (including a mechanical washing machine), T 23, T 27, T 99, T 119, T 121, T 152, T 248, and T 309. Provide 4 units or the number specified by the ME, of the testing apparatus to satisfy the inspection and testing frequency anticipated. In addition, ensure that scales are electronic, except for those required for AASHTO T 121. Ensure that scales are inspected and certified by an independent scale company accredited according to the International Organization of Standards/International Electrotechnical Commission 17025, or a State or county Office of Weights and Measures. Provide the ME with a copy of the certification at the time of installation. Ensure that the scales are re-certified annually, or every 6 months if directed by the ME.
- 9. Inspection Equipment.** Provide the following, as needed:

- a. Six Hardhats - orange, reflectorized hard hats according to ANSI Z89.1.
- b. Six Safety garments – orange, reflectorized, 360° high visibility safety garments according to ANSI/ISEA Class 3, Level 2 standards. To be replaced yearly for the duration of the contract.
- c. Six Sets of rain gear with reflective sheeting.
- d. Six Sets of hearing protection with a NRR rating of 22 dB.
- e. Six Sets of eye protection according to ANSI Z87.1.
- f. Six Lantern flashlight, 6V with monthly battery replacements.
- g. Three Magnetic Mount 12 V LED amber lights for Private Vehicles.
- h. Six Working gloves.
- i. Six Heat resistant gloves that will withstand up to 1000° F.
- j. Six Hard Bound Daily Diaries, 5 1/2" X 8" minimum with one day per page. To be provided yearly for the duration of the contract.

### **156.03.03 Curing Facility**

THE ENTIRE SUBPART IS CHANGED TO:

Do not provide or procure the curing facility or associated equipment until the RE notifies that this item is required.

Within 15 days of RE notification, provide and maintain a curing facility for the exclusive use of the Department, until no longer required by the Department, at a location approved by the ME. Do not lock out, or make the Curing Facility inaccessible to, the RE or any Department employees, consultants, or representatives at any time. Do not use buildings scheduled for demolition under the Contract as a materials field laboratory. The ME will not conduct testing until the curing facility is ready for use.

Maintain the curing facility until no longer required by the ME. Assume that the curing facility will be required for a minimum of 1 month after Completion. If the curing facility is a temporary structure, secure the necessary permits from the New Jersey Department of Community Affairs, and remove the structure as directed by the RE.

Ensure that the curing facility is weatherproof with a minimum ceiling height of 7 1/2 feet. Ensure that the curing facility has a concrete floor and a minimum area of 300 square feet. The room shall have a minimum of three 3 prong electrical outlets.

Ensure that the curing facility doors and windows have locks, and provide all keys to the ME. Provide the following for the curing facility:

- 1. Utilities and Lighting.** Provide all utility services and connections including water, sewer, gas, and electricity. Provide a curing facility with sufficient natural and artificial light. Provide adequate insulation, heat, and air-conditioning to maintain an ambient temperature of 68 to 80 °F.
- 2. Furnishings.** Provide the following:
  - a. One work bench having a minimum area of 2 ½ × 10 feet, and 2 stools.
  - b. One type ABC, fire extinguisher having UL approval.
  - c. Two desks with two desk chairs and one chair.
  - d. One water cooler having both hot and cold water dispensers, and bottle water service.
  - e. A 24-person first-aid kit according to ANSI Z308.1, tick removal tweezers, and 4 aerosol cans of insect repellent containing DEET. Restock first aid supplies and insect repellent as needed.
  - f. A wastepaper basket.
- 3. Equipment.** Provide the following:
  - a. One sink with hot and cold running water.
  - b. One wheelbarrow.
  - c. One light duty oil-less air compressor listed by UL with a 2.5 gallon storage tank, a start/stop switch 94 pounds per square inch over 125 pounds per square inch, a 115 volt universal motor, an ASME safety valve, and a 25 foot air hose, equipped with a Quick-Change Blow Gun Kit and Nozzle Kit consisting of a high-flow safety nozzle, a 6 inch extension safety nozzle, a rubber tip nozzle, a needle tip nozzle, and an air screen safety nozzle.
  - d. One 7 day spring-driven temperature recording device capable of producing a permanent record of the room temperature.
  - e. Two 12 inch diameter exhaust fans or alternative means for venting heat, dust, and fumes.

- f. Water tanks capable of storing 300, 4 × 8 inch concrete cylinders fully submerged and in an upright position. Provide a 5/8 inch water hose at least 50 feet in length. Equip the water tank with a heater capable of maintaining a water temperature of  $73 \pm 3$  °F.
- g. A copier with automatic document feed, 15 pages per minute copy speed, variable reduce/enlarge capability, and letter, legal, and ledger size capabilities. Erase the copier hard drive before removing the copier from the curing facility and provide the RE with a certification stating that the copier hard drive has been erased.
- h. A paper shredder with a minimum throat of 8.75 inches, and a minimum feed capacity of 10 sheets.

**4. Communication Equipment.** Provide the following communication systems:

**a. Computer System.** Provide a computer system meeting the following requirements:

1. Processor having a clock speed of 3.5 GHz or faster, 8 GB RAM, 896 MB Video RAM, 250 GB hard drive designated as drive C. Ensure the system is USB 2.0 compatible and has at least two front USB ports.
2. Wireless Ethernet Hub Switch with appropriate number of ports and cables and a print server. Ensure there is at least one Ethernet switch.
3. High-speed broadband connection and service with a minimum speed of 250 Megabytes per second (mbps) with dynamic IP address for the duration of the project.
4. Twenty inch or larger Flat Screen LCD monitor with tilt/swivel capabilities.
5. Two Hundred Fifty Gigabyte or larger external drive with backup software for MS-Windows, and fifteen corresponding formatted data cartridges corresponding to the tape drive size.
6. Four USB 32 GB (or larger) Flash/Jump memory drives.
7. One Flatbed USB version 2.0 Color Scanner with automatic document feed.
8. Uninterruptible power supply (UPS).
9. Surge protector for the entire computer configuration to be used in conjunction with the UPS.
10. Six computer workstations as needed, chair, printer stand, and/or table having both appropriate surface and chair height.
11. Six cans of compressed air and screen cleaning solution every other month for the duration of the contract.
12. Computer Software Requirements.
  - a. Microsoft Windows, latest version, with upgrades for the duration of the entire project.
  - b. Microsoft Office Professional, latest version.
  - c. Norton's System Works for Windows, latest version, or compatible software package with future upgrades and latest virus patches.
  - d. Anti-Virus software, latest version with monthly updates for the duration of the project.
  - e. Adobe Acrobat Professional, latest version, or compatible software.

If more than one computer configuration is specified, provide one wireless network card for the base computer configuration, and hardwire connections between computer configurations as directed by the ME.

Do not procure the computer system until reviewing the system requirements with the ME. Ensure that the computer system is compatible with the Department's construction management software and other specified software.

When the computer system is no longer required by the ME, the Department will remove and destroy the hard drive and return the computer system to the Contractor. The Department will retain other data storage media.

**b. Printer.** Provide a printer meeting the following requirements:

Discuss with Bureau of Construction for printer specifications.

**5. Lavatory.** Provide a lavatory as specified in 155.03.01.3.

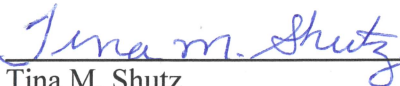
**156.04 MEASUREMENT AND PAYMENT**  
THE SECOND PARAGRAPH IS CHANGED TO:

The Department will include the installation of telephone services in the MATERIALS FIELD LABORATORY SET-UP.

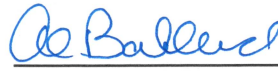
**Implementation Code R (ROUTINE)**

Changes must be implemented in all applicable Department projects scheduled for Final Design Submission at least one month after the date of the BDC announcement. This will allow designers to make necessary plan, specifications, and estimate/proposal changes without requiring the need for an addenda or postponement of advertisement or receipt of bids.

**Recommended By:**

  
\_\_\_\_\_  
Tina M. Shutz  
Acting Director  
Capital Program Support

**Approved By:**

  
\_\_\_\_\_  
Parth Oza, P.E.  
Assistant Commissioner  
Capital Program Management  
and Deputy State Transportation Engineer

TS: MS