



SECTION 601

FIELD LABORATORIES

601.1 Description. This work shall consist of providing one or more laboratories at the site of work and at locations designated by the engineer.

601.2 Laboratory Requirements. A laboratory shall be furnished for each item of work that is specified in the contract as requiring such a unit. Separate laboratories will not be required for successive items of work when any preceding item has been completed, provided that the laboratory complies with the requirements for specific work. Additional laboratories may be required for the proper control of the work when simultaneous operations on the same item of work are being carried on at more than one location separated by a distance of one mile (1.6 km) or more and separate testing operations are necessary. The engineer will specify the number of laboratories required based on the operations of the contractor.

601.2.1 The laboratory shall be located and maintained at the site of current operations by the contractor. Work that requires the use of a field laboratory will not be permitted until a laboratory is provided. The laboratory shall remain the property of the contractor, and shall be disposed of by the contractor upon completion of the work requiring the laboratory.

601.2.2 Regardless of the number of field laboratories specified on the plans, the number may be increased, decreased or completely underrun at the discretion of the engineer.

601.3 Type 1 Field Laboratory. The Type 1 field laboratory shall be substantially constructed and weatherproof with wood or concrete floors, windows on at least two sides and at least one outside door. Windows and doors shall be equipped with screens and locks, and the necessary keys shall be furnished to the engineer. The laboratory shall have a minimum of 120 square feet (11 m²) of floor space. The ceiling shall be no less than 7 feet (2.1 m) high. The laboratory shall have at least one worktable 30 inches (760 mm) high, with a smooth one-piece top, no less than 8 feet (2.4 m) long and 30 inches (760 mm) wide. The laboratory shall be equipped with a storage shelf, a fire extinguisher, a desk and a chair. An operational electric hot plate or gas burner, having no less than two burners with adjustable temperature controls and capability of accommodating two 14 x 20-inch (355 x 510 mm) sample pans, shall be provided. A faucet-equipped sink capable of accommodating a 14 x 20-inch (355 x 510 mm) sample pan and connected to an operating water source of at least a 50-gallon (190 L) capacity shall be provided. The contractor shall keep an adequate supply of potable water available at all times. Lighting facilities shall be located to adequately illuminate all work in the interior of the laboratory. When required by the engineer, grounded electrical outlets with 110 to 120 volts, 60-Hertz continuous current and a climate control capable of maintaining an ambient temperature range of 72 to 80 F (22 to 27 C) shall be provided. Laboratories shall be relocated on the project as directed by the engineer.

601.4 Type 2 Field Laboratory. The laboratory shall be in accordance with [Sec 601.3](#), except as follows. The laboratory shall have a minimum of 200 square feet (19 m²) of floor space. The laboratory shall be constructed with a dividing wall and doorway to allow for a separate testing work area and an office area suitable for computer operation meeting the engineer's approval. Telephone service shall be provided. The laboratory shall be provided with an exhaust fan capable of moving a volume of air equal to at least ten times the volume of the laboratory each hour. Grounded electrical outlets with 110 to 120 volts, 60-Hertz

continuous current and a climate control capable of maintaining an ambient temperature range of 72 to 80 F (22 to 27 C) shall be provided. When a field laboratory is provided in accordance with [Sec 502](#), at least one window shall provide a direct view of plant operations.

601.5 Type 3 Field Laboratory. The laboratory shall be in accordance with [Sec 601.4](#), except as follows. At least one window shall provide a direct view of plant operations. A locked storage area for nuclear equipment shall be provided that is at least 15 feet (4.5 m) from the normal work areas. A steel box shall be provided in the storage area with locks for the purpose of storing nuclear equipment in accordance with Nuclear Regulatory Commission specifications.

601.5.1 In accordance with [Sec 401](#) or [402](#), a thermostatically controlled operating oven, capable of maintaining a minimum temperature of 375 F (191 C) and having a capacity to accommodate at least one standard gallon (4 L) can, shall be furnished. The laboratory shall have a minimum of 300 square feet (28 m²) of floor space. The laboratory shall contain a sieve shaker in accordance with AASHTO T 27, including time controls, a minimum sieve stacking height of 28 inches (710 mm), platform adapters to accommodate 8 or 10-inch (200 or 250 mm) sieves, and a sample splitter meeting AASHTO T 248 requirements, having a minimum length of 20 inches (510 mm) with a 2-inch (50 mm) maximum opening size, complete with a minimum of three pans.

601.5.2 When a field laboratory is provided in accordance with [Sec 403](#), the laboratory shall have a minimum of two outside doors and four windows. The outside doors shall be located such that ingress and egress is permitted from opposite ends of the building. Each window shall provide at least 4 square feet (0.37 m²) of glazed area. The laboratory shall have a minimum of 320 square feet (29.7 m²) of floor space, with a minimum width of 8 feet (2.5 m). An exhaust fan shall be provided that is capable of moving a volume of air each hour equal to at least ten times the volume of the laboratory. Anchored tables of adequate dimensions shall be furnished. All tables shall have smooth, one-piece tops. The laboratory shall be equipped with storage shelves, a minimum of four chairs, a two-drawer filing cabinet and the bituminous mixture equipment described in [Sec 403.6](#). Circuitry shall be such that all indicated equipment can be used without disruption. The contractor may provide a facsimile machine with a private line, at the contractor's expense, to provide faster communications when mix adjustments are needed.

601.6 Basis of Payment. Unless otherwise specified, no direct payment will be made for Type 1 or Type 3 Field Laboratories. When provided in accordance with [Sec 203](#), authorized Type 2 Field Laboratories, complete in place, will be paid for at the contract unit price. No direct payment will be made for relocation of Type 2 Field Laboratories. No direct payment will be made for furnishings, maintenance, utilities, heating and cooling facilities, including operation and fuel, and final removal of the laboratory.