

SECTION 901 -- FIELD LABORATORIES, FIELD OFFICES, AND SCALE HOUSES

901.01 -- Description

1. The Contractor shall provide, furnish, and place the field office, laboratory, or scale house and then make all utility connections for the buildings as prescribed in the plans and specifications.

2. The field offices, laboratories, and scale houses are for the exclusive use of the Engineer.

901.02 -- Material Requirements

1. General Requirements:
 - a. (1) All buildings shall be completely insulated and weathertight.
(2) All buildings shall be constructed from wood or metal.
 - b. The outside door(s) and windows shall be provided with screens and locks.
 - c. The floors shall be vinyl tile or a similar surface material.
 - d. The Contractor shall provide cleaning and janitorial services for only those buildings with utility connections.
 - e. The Contractor shall furnish a safe, satisfactory, and dependable source of electricity for power and lights (120 volts AC) in all field laboratories and offices.
 - f. The Contractor shall furnish an adequate and constant supply of clean water to the pressure system or the supply tanks as required to perform the necessary testing for the type of field laboratories furnished.
 - g. The Contractor shall equip all field offices, laboratories, and scale houses with a suitable heating system which will maintain the temperature in the building at 21°C.
 - h. The Contractor shall install a phone outlet and provide an operational and activated phone at field offices. The Department will pay the monthly service fees.
 - i. The Contractor shall provide and maintain a commercial Underwriters' Laboratory approved fire extinguisher capable of controlling Class A, B, and C fires.
 - j. Light fixtures shall provide illuminance of 1000 lx on all working surfaces.

2. Field Laboratory, Type A:

a. In addition to the general requirements, the field laboratory, Type A shall meet/have the following requirements:

(1) The building's interior dimensions (approximate) shall be:

(i) Width - 2.75 m.

(ii) Ceiling height - 2.15 m.

(iii) Minimum floor area - 21.5 m².

b. Two exterior doors and sufficient sliding or swinging type windows in each room to provide adequate light and ventilation.

c. The building shall have a transverse partition and door to provide a drying-sieving room with floor area of approximately 6.5 m². The drying-sieving room shall be equipped with a suitable work bench, an exhaust fan(s) capable of changing the air in the room every minute, and at least 1 exterior door and 1 window.

d. (1) The field laboratory room shall be equipped with solid work benches, a writing table or desk, and 2 chairs.

(2) The work bench shall have a sink with a faucet and a hose bib connector.

(3) Waste water shall be drained from the building so as to avoid health and safety problems.

e. The building shall be equipped with an adequate water supply system, either a pressure or a gravity feed system with a minimum storage capacity of 400 L.

f. A minimum of 8 conveniently located 120 VAC duplex wall outlets shall be furnished.

g. The building shall be air conditioned so it can maintain constant temperature of 24°C in the working space at all times.

3. Field Laboratory, Type B:

a. In addition to the general requirements, the field laboratory, Type B shall have the following requirements:

(1) The building's interior dimensions (approximate) shall be:

(i) Width - 2.2 m.

(ii) Ceiling height - 2.2 m.

(iii) Minimum floor area - 14.0 m².

b. An exterior door and sufficient sliding or swing type windows to provide adequate light and ventilation.

c. (1) Solid work benches, a writing table or desk, and a chair.

(2) The work bench shall have sink with a faucet and hose bib connector.

(3) Waste water shall be drained from the building so as to avoid health and safety problems.

d. An adequate water supply with either a pressure or a gravity feed system with a minimum storage capacity of 400 L.

e. (1) The field laboratory, Type B, when required on projects with asphaltic concrete pay items, shall be equipped with a tabletop fume hood, balance table, and a microwave oven.

(2) The microwave oven shall be grounded and have the capability of producing a power output of 500 w minimum, 120 VAC at 60 Hz, and have heating volume dimensions of approximately 400 mm x 300 mm x 225 mm (height).

(3) An isolated, grounded circuit protected from current overload by a 15 amp circuit breaker shall be provided specifically for the microwave.

(4) Leakage flux must be 5 mW/cm² or less at 915 or 2450 MHz.

(5) The oven must be placed on a solid flat work surface with at least 75 mm of space on all sides and a 25 mm space above the oven for proper air flow.

f. The building shall be air conditioned so it can maintain constant temperature of 24°C in the working space at all times.

g. The building shall have at least 6 duplex electrical outlets.

4. Field Laboratory, Type C:

a. In addition to the general requirements, the field laboratory, Type C shall have the following:

(1) The building's interior dimensions (approximate) shall be:

(i) Width - 2.15 m.

(ii) Ceiling height - 2.15 m.

(iii) Minimum floor area - 8.5 m².

b. An exterior door and sufficient sliding or swinging type windows to provide adequate light and ventilation.

c. Solid work benches, a writing table or desk, and a chair.

d. An adequate water supply for projects requiring water for testing.

e. Two 120 VAC duplex wall outlets.

5. Field Offices.

a. In addition to the general requirements, the field office shall have the following requirements:

(1) The building's interior dimensions (approximate) shall be:

(i) Width - 2.2 m.

(ii) Ceiling Height - 2.2 m.

(iii) Minimum floor area - 9.8 m².

b. An exterior door and sufficient sliding or swing type windows to provide adequate light and ventilation.

c. The building shall be air conditioned so it can maintain a constant temperature of 24°C at all times.

d. The field office shall be equipped with a 2 or 4-drawer filing cabinet, an office type desk having surface dimensions of approximately 750 mm x 1.5 m, 2 chairs, and a working table or inclined surface suitable for supporting and examining a full size set of plans.

e. The field office shall be equipped with a minimum of 4 conveniently located duplex wall outlets.

6. Scales and Scale Houses.

a. Material mass shall be measured on approved scales.

b. The Contractor shall furnish a weather-proof scale house.

c. The scale house shall have or provide:

(1) A floor area of approximately 4 m² and ceiling height of 2.15 m (approximate).

(2) A window facing the platform, capable of sliding open to allow transfer of documents.

(3) One desk and two chairs.

- (4) Minimum light on working surfaces and dials of 1000 lx.

901.03 -- Construction Methods

1. The Contractor shall place the building (office, laboratory, and/or scale house) in locations as directed by the Engineer and relocate the building, as necessary, as the work progresses when directed by the Engineer.

2. The building shall be leveled and solidly supported to eliminate vibration.

3. The Contractor shall connect all utilities to the office, laboratory, and scale house.

901.04 -- Method of Measurement

Field laboratories and offices are measured for payment by the each.

901.05 -- Basis of Payment

1.	<u>Pay Item</u>	<u>Pay Unit</u>
	Field Laboratory, Type _____	Each (ea)
	Field Office	Each (ea)

2. The furnishing and operation of scales and scale houses by the Contractor will not be paid for directly but shall be considered to be subsidiary to items being measured.

3. Payment is full compensation for all work prescribed in this Section.