

## Section 2520. Field Laboratory and Field Office

### 2520.01 DESCRIPTION.

Furnish and maintain field office space or laboratory space, or both, to be used for project testing of:

- Earthwork where moisture control or moisture density control is required,
- Subbase, base, and pavement, and
- Any other designated use.

### 2520.02 MATERIALS.

None.

### 2520.03 FIELD LABORATORY AND FIELD OFFICE.

#### A. Field Laboratory.

##### 1. General.

Meet the following requirements. Items a through h are meant as a guide rather than minimum requirements. The Engineer may approve suitable alternative facilities.

- a. Weather tight field laboratory space with minimum inside dimensions of 7 feet by 18 feet (2 m by 5.5 m) with 7 feet (2.1 m) of head room.
- b. Two doors: one at least 32 inches (800 mm) wide with screens, and one for emergency.
- c. Outside walls with screened windows which can be used for ventilation.
- d. Desk with drawers, three chairs, a closet, and a suitable work table space.
- e. Splinter free and solid floor.
- f. A floor broom and fire extinguisher.
- g. Anchor bolts firmly attached to accommodate a mechanical sieve shaker (template furnished upon request).
- h. Lockable laboratory space (with appropriate number of keys) that is set level and stable for minimum vibration. The laboratory space may be independent or dependent on other space, but is for the exclusive use of the Contracting Authority.
- i. Adequate lights and heavy duty, 110 volt electrical outlets, suitably placed.
- j. An exhaust fan or fans.
- k. A laboratory stove or stoves with hoods vented to an exhaust fan
- l. A sink with potable water supply to sink faucet.
- m. Air conditioning and heat to maintain a temperature approximately between 70°F (20°C) and 80°F (27°C).
- n. ~~A touch tone telephone in the field laboratory. It may be an extension of a telephone located elsewhere at the plant site. The Contractor is responsible for paying all installation charges for the telephone. The Contracting Authority will pay for all long distance call charges made by its employees, according to Article 1109.03.~~  
Wireless connectivity. Provide a device to allow multiple inspectors to access the internet wirelessly, such as a mobile hotspot. Provide a minimum of 3 GB of data usage monthly. This device will be considered a part of the field laboratory and shall stay with the field laboratory. If the field laboratory and field office are located adjacent to each other, one device may be adequate to cover both, so long as the signal can be accessed from both trailers. The Contracting Authority will pay data charges for usage above the monthly minimum.
- o. Suitable sanitary facilities located within 75 feet (25 m) of the laboratory for use by the inspection forces.

##### 2. Furnishing Field Laboratory.

A field laboratory will be required as follows:

###### a. Field Laboratories.

- 1) Field laboratories will be required for acceptance testing when specified on the proposal. The items for which the field laboratory is intended will be designated. If base and pavement are of similar types which require similar plant and testing facilities, only one field laboratory will be shown on the proposal for both items.
- 2) Furnish the field laboratory before all work is started. Keep the field laboratory on the project at all times regardless of work being performed or testing required. Duplicate field laboratories may be required when the plant facilities are duplicated or dispersed so that plant operation of base or pavement work cannot be monitored from one field laboratory.

- 3) Relocate laboratories used to control asphalt binder or Portland cement proportioning as the plant facilities are relocated. Field laboratories used primarily to test densities of base, subbase, or earthwork may be required to be relocated once for each 4 miles (6.5 km) or fraction thereof in the length of the project.
- b. Field Laboratories for Materials Inspection.**
- 1) Materials will be inspected at the project site if prior inspection has not been made, and a materials laboratory may be required for this purpose. If inspection prior to shipment to the project site is necessary, in the opinion of the Engineer, or agreeable to the Engineer and Contractor, furnish inspection facilities near the location for inspection.
  - 2) Inspection facilities will be necessary at the site of production or warehousing of:
    - Pipe,
    - Cement,
    - Asphalt,
    - Structural steel and other metal items,
    - Precast concrete,
    - Aggregates,
    - Other materials requiring or utilizing approved warehousing, and
    - Proportioning and mixing plants for concrete and bituminous mixtures at permanent facilities.
  - 3) Ensure inspection facilities are suitable for the use intended, including testing space or office space for record keeping, or both. Facilities may vary from designated or separate space in a shared building for occasional inspection, to a materials laboratory (defined below) for continuous and full time use.
  - 4) Material laboratories will be required for any inspection for individual or combinations of projects involving more than:
    - 5,000 tons (5000 Mg) of aggregate from an individual source for use in pavement, base, or subbase, or
    - 10,000 tons (10,000 Mg) of aggregate for other purposes.
  - 5) Ensure laboratories are located close to production operations. For facilities furnished jointly, ensure the laboratory is within a driving distance of 5 miles (8 km) from each source.
  - 6) For the materials laboratory, furnish facilities similar to those specified in [Article 2520.03, A, 2, a](#). Equip the laboratory for testing the type of material to be produced according to an equipment listing available upon request. The Engineer may modify parts of this specification to allow for:
    - Facilities furnished prior to first use of this specification,
    - Small amounts of material to be furnished from widely separated sources, or
    - Unusual testing procedures.

**B. Field Office.**

**1. General.**

Meet the following requirements. Items a through i are meant as a guide rather than minimum requirements. The Engineer may approve suitable alternative facilities.

- a. Office space separate and apart from any building occupied by the Contractor and for the exclusive use by the Contracting Authority.
- b. Conveniently located near the work, as may be directed by the Engineer.
- c. Weather tight, insulated, and painted, and of a size as to enclose a nominal area of 192 square feet (18 m<sup>2</sup>) of floor space.
- d. At least five windows having a total sash area no less than 30 square feet (3 m<sup>2</sup>).
- e. Windows fitted with locking devices and hung to open and close.
- f. Outside door fitted with a cylinder lock, and all keys turned over to the Engineer.
- g. Fit the windows and door with screens.
- h. A plan table, a plan storage rack, a desk, three straight chairs, a drafting stool, a water cooler dispenser, a floor broom, and a 10 pound (4.5 kg) rated capacity carbon dioxide fire extinguisher.
- i. Non-furnished area partitioned from the larger area for use as storage.
- j. Heating and air conditioning to maintain an approximate temperature between 70°F (20°C) to 80°F (27°C).

- k. No less than two wall power outlets and sufficient ceiling lighting fixtures in the office to provide a minimum of 70 foot-candles (750 luxes) of light on all working surfaces.
- l. ~~A single trunk telephone in the office.~~  
Wireless connectivity. Provide a device to allow multiple inspectors to access the internet wirelessly, such as a mobile hotspot. Provide a minimum of 3 GB of data usage per month. This device will be considered a part of the field office and shall stay with the field office. If the field laboratory and field office are located adjacent to each other, one device may be adequate to cover both, so long as the signal can be accessed from both trailers.
- m. Suitable sanitary facilities within 75 feet (25 m) of the office for the use of the inspection forces.
- n. An all weather access road and parking area (both maintained) for not less than five vehicles at the field office for the use of the inspection forces.

**2. Furnishing Field Office.**

- a. Furnish the field office before all work is started. For the duration of this contract, maintain the building in a satisfactory state of repair and supply all heating fuel, electricity, and drinking water. The Contractor is responsible for paying all installation charges. ~~The Contracting Authority will pay for monthly telephone charges. The Contracting Authority will pay data charges for usage above the monthly minimum.~~
- b. Notify the Engineer 3 calendar days before removing a field office.

**C. Limitations.**

Contractor's maintenance of these facilities does not include normal housekeeping.

**2520.04 METHOD OF MEASUREMENT.**

The Engineer will count the Field Laboratories or Field Offices, or both, furnished according to this specification, as required by the contract documents. Field laboratories furnished for materials inspection will not be counted for payment.

**2520.05 BASIS OF PAYMENT.**

- A. Payment for each Field Laboratory or Field Office, or both, will be the contract unit price.
- B. Payment is full compensation for furnishing, moving, and maintaining the field laboratory or field office, or both, and for furnishing the utilities and sanitary facilities.