



**DESIGN & CONSTRUCTION GUIDELINES**

**DIVISION 11 EQUIPMENT**

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**SECTION 11 00 00 EQUIPMENT****PART 1 – GENERAL****1.1. GENERAL PROVISIONS**

- A. **EQUIPMENT CATEGORIES.** Equipment, as applied in Capital Improvements Projects, falls into one of two categories:
1. **FIXED EQUIPMENT (Contract Equipment)** is acquired through one or more of the construction contracts and is funded within the project construction budget.
  2. **MOVABLE EQUIPMENT (Non-Contract Equipment)** is acquired by the Using Agency utilizing a fund allocation within the total project funds, but independent of the project construction budget. See [Section 12, 40 00, Furniture & Accessories](#).
  3. Typically movable equipment funding allocations are provided for new building construction projects, but not for remodeling/renovation projects.
- B. **GENERAL CONTRACT ITEMS.** Unless otherwise directed by the University, the following equipment shall be classified as fixed equipment and shall be included in the General Contract work:
1. Library Shelving and Equipment.
  2. Food Service Equipment.
  3. Unit Kitchens and Cabinets.
  4. Laboratory work benches, cabinets, and associated equipment. This includes fume hoods, controlled temperature rooms, and growth chambers.
  5. Fixed Furniture Seating ([See Section 12 60 00, Multiple Seating](#)).
- C. **SEPARATE EQUIPMENT CONTRACT PRE-BID SUBMITTALS.** When separate equipment contracts are required by the Program or the University, include the following requirements in the specifications regarding bidder qualification required prior to opening of bids:
1. Minimum of five (5) years of experience in manufacture of similar or duplicate equipment.
  2. Minimum of five (5) completed installations of equal size that can be inspected prior to award.
  3. Adequate financial resources and personnel to manufacture, deliver, install, and guarantee the equipment.
- D. **EQUIPMENT CONTRACTOR OR SUPPLIER SUBMITTALS**
1. **PRICE BREAKDOWN.** A breakdown for each piece of equipment, keyed to contract drawings or shop drawings, must be stipulated to accommodate auditing and inventory needs.
  2. **ROUGH-IN DRAWINGS.** Must be required in time to enable checking by the Consultant and coordination with all concerned prime contractors.
- E. **COORDINATION.** In specifications, clearly define which contractors have responsibilities relative to equipment receiving, unloading, inventory, and installing (including accessory items such as plumbing, heating, cooling, electric hook-ups, etc.)
- F. **PENETRATION OF FLOORS AND OF WALLS.** By pipes, ducts, or other penetrations unless openings are appropriately fire stopped by fire doors, or fire dampers, and voids around pipes, ducts, conduits, etc. are sealed with fireproof materials is prohibited.

**PART 2 – PRODUCTS****2.1 LAUNDRY EQUIPMENT**

- A. If laundry equipment is required, it will be provided under a separate contract; however, the Consultant shall plan spaces, plumbing, HVAC and electric to accommodate the desired vending equipment. Check the Program and consult the University. Be certain to provide for hook-ups. A/E to provide heat load calculations with regards to additional equipment and plan/revise HVAC system accordingly.

**2.2 VENDING EQUIPMENT**

- A. If vending equipment is required, it will be provided under a separate contract; however, the Consultant shall plan spaces, plumbing, HVAC and electric to accommodate the desired vending equipment. Check the Program and consult the University. Be certain to provide for

hook-ups. A/E to provide heat load calculations with regards to additional equipment and plan/revise HVAC system accordingly.

### 2.3 LABORATORY EQUIPMENT

- A. The Consultant must plan spaces, plumbing, HVAC, and electric to accommodate all laboratory equipment. Be sure to provide for hook-ups and coordination of installation sequences.
1. FUME HOOD AND EXHAUST SYSTEM: Shall be designed and installed in accordance with American National Standards Institute (ANSI) Z9.5 - 2012. Refer to [Appendix A, Environmental Health & Safety Design Guidelines, Section 8.2](#).
  2. ALL NEW LABORATORY FUME HOODS: Shall use 100% exhaust with an average face velocity of eighty to one-hundred (80-100) feet per minute (with sash fully open for constant air volume hoods with a bypass feature) with no face velocity measurement more than plus or minus twenty percent (20%) of the average. Auxiliary air type hoods are not to be used.
  3. IN LABORATORIES: At least one (1) station in each laboratory shall be provided for the physically disabled. Said station shall have a low workbench with a clear minimum height of 30 inches under the workbench and no apron. Aisles between the tray slides and control railings shall be a minimum of 34 inches.
  4. FITTINGS AND FIXTURES: Utility fittings and fixtures specified for laboratory equipment shall be of quality at least equal to that specified for the Plumbing, HVAC, and electrical contracts. This is critical. Consultant shall certify in writing to the University that 1). The specification quality is equal, and 2). That the installation conforms to specified quality.
    - a. AUTOMATIC SHUT-OFF VALVES: Specify that these must have a ten (10) year written warranty.

### 2.4 MEDICAL EQUIPMENT

- A. EYEWASH AND EMERGENCY SHOWERS: Review need and location with University. Refer to [Appendix A, Environmental Health & Safety Design Guidelines, Section 8.1](#).

## PART 3 – EXECUTION (Not used)

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END OF SECTION 11 00 00