

## SECTION 12361 - ADAPTABLE LABORATORY FURNITURE

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Metal laboratory casework system that includes mobile and adjustable support framing, closure panels, and modular countertops.

#### 1.3 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Provide metal laboratory casework and support framing capable of withstanding the effects of the following gravity loads and stresses per support framing module without permanent deformation and excessive deflection, Rating:
  - 1. Component load
    - a. Adjustable height tables – 300 pounds.

#### 1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Verification: For each type of finish, including countertop material, in manufacturer's standard sizes.
- C. Qualification Data: For testing agency.
- D. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, indicating compliance of laboratory casework finishes and countertops with requirements specified for chemical and physical resistance.

#### 1.5 QUALITY ASSURANCE

- A. Testing Agency Qualifications: An independent agency qualified for testing indicated, as documented according to ASTM E 548.

- B. Source Limitations: Obtain laboratory casework, including countertops, sinks, service fittings, and accessories, through one source from a single manufacturer.
  - 1. Obtain through same source from same manufacturer as fume hoods specified in Division 11 Section "Laboratory Fume Hoods."
- C. Product Designations: Drawings indicate sizes and configurations of laboratory casework by referencing designated manufacturer's catalog numbers. Other manufacturers' laboratory casework of similar sizes, complying with the Specifications may be considered.
- D. Product Standard: Comply with SEFA 8, "Laboratory Furniture--Casework, Shelving and Tables--Recommended Practices."

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Protect finished surfaces during handling and installation with protective covering of polyethylene film or other suitable material.

## 1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install metal laboratory casework until building is enclosed, wet work and utility roughing-in are complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Basis of Design Product: Maxi Mobile Adaptable Laboratory Furniture as manufactured by Fisher Hamilton L.L.C. or approved equal.
  - 1. Table Frames:
    - a. Model No. ADX06300, 60" width x 23" depth and adjustable from 28" to 39" in height.
  - 2. Epoxy Countertops:
    - a. Model No. 632H 3591, modified to 72" work surface.
    - b. Model No. 632H3591, modified to 60" work surface.

### 2.2 CASEWORK SYSTEM

- A. General: Provide casework manufacturer's standard mobile and adjustable integrated system that includes support framing, closure panels, countertops, and fittings needed to assemble system.

- B. Support Framing: Casework manufacturer's standard system consisting of vertical supports and connecting braces and rails as follows:
  - 1. For crank-operated adjustable height mobile table frame.
- C. Countertops: Provide in modular lengths indicated, without seams.

### 2.3 METAL CABINET FINISH

- A. Preparation: After assembly, clean surfaces of mill scale, rust, oil, and other contaminants. After cleaning, apply a conversion coating suited to the organic coating to be applied over it.
- B. Chemical-Resistant Finish: Immediately after cleaning and pretreating, apply laboratory casework manufacturer's standard two-coat, chemical-resistant, baked-on finish consisting of prime coat and thermosetting topcoat. Comply with coating manufacturer's written instructions for applying and baking to achieve a minimum dry film thickness of 2 mils.
  - 1. Chemical and Physical Resistance of Finish System: Finish complies with acceptance levels of cabinet surface finish tests in SEFA 8. Acceptance level for chemical spot test shall be no more than four Level 3 conditions.
  - 2. Colors for Metal Laboratory Casework Finish: As selected by Architect from manufacturer's full range.

### 2.4 TABLE HARDWARE

- A. General: Provide laboratory casework manufacturer's standard satin-finish, commercial-quality, heavy-duty hardware complying with requirements indicated for each type.

### 2.5 COUNTERTOPS AND SINKS

- A. Countertops, General: Provide units with smooth surfaces in uniform plane free of defects. Make exposed edges and corners straight and uniformly beveled. Provide front and end overhang of 1 inch, with continuous drip groove on underside 1/2 inch from edge.
- B. Epoxy Countertops: Factory molded of modified epoxy-resin formulation with smooth, nonspecular finish.
  - 1. Physical Properties:
    - a. Flexural Strength: Not less than 10,000 psi (70 MPa).
    - b. Modulus of Elasticity: Not less than 2,000,000 psi (1400 MPa).
    - c. Hardness (Rockwell M): Not less than 100.
    - d. Water Absorption (24 Hours): Not more than 0.02 percent.
    - e. Heat Distortion Point: Not less than 260 deg F (127 deg C).
  - 2. Chemical Resistance: Epoxy-resin material has the following ratings when tested with indicated reagents according to NEMA LD 3, Test Procedure 3.4.5:

- a. No Effect: Acetic acid (98 percent), acetone, ammonium hydroxide (28 percent), benzene, carbon tetrachloride, dimethyl formamide, ethyl acetate, ethyl alcohol, ethyl ether, methyl alcohol, nitric acid (70 percent), phenol, sulfuric acid (60 percent), and toluene.
  - b. Slight Effect: Chromic acid (60 percent) and sodium hydroxide (50 percent).
3. Color: Black.
  4. Countertop Configuration: As indicated by manufacturer's model numbers.

### PART 3 - EXECUTION

#### 3.1 INSTALLATION OF COUNTERTOPS

- A. Install per manufacturer's written instruction.

#### 3.2 CLEANING AND PROTECTING

- A. Clean finished surfaces, touch up as required, and remove or refinish damaged or soiled areas to match original factory finish, as approved by Architect.
- B. Protect countertop surfaces during construction with 6-mil plastic or other suitable water-resistant covering. Tape to underside of countertop at minimum of 48 inches o.c.

END OF SECTION 12361