LABORATORY CASEWORK

General

In general, follow the guidelines below when specifying laboratory casework, fixtures and related items. Unless otherwise indicated, these guidelines are not intended to restrict or replace professional judgment.

Consult with the University Project Coordinator for general layout and specific casework requirements.

Related Sections

Tab 11 Equipment; Section 11610 Laboratory Fume Hoods

University Preferred Manufacturers

Preferred manufacturers are listed in a separate document, "Architectural Preferred Manufacturers List." Obtain current copy from Project Coordinator.

Design Requirements

Casework

Types

Specify standard laboratory grade wood or metal casework.

- Consult with the University Project Coordinator regarding selection of wood or metal.
- When wood is selected, usually specify red oak veneer.
- Seal wood casework to prevent absorption of spilled materials.

Hardware

In newer buildings, and as otherwise possible, match existing handles and hinge styles. Usually specify manufacturers' standard units.

Finish

Manufacturer's standard finish is acceptable. Unless otherwise directed by the University Project Coordinator, include following requirements for wood casework:

- Sides which will be concealed in final assembly shall be of same species and finish as exposed surfaces.

- Bottoms of cases more than 48 inches above floor shall be of same species and finish as exposed surfaces.

Topset Cove Base Molding

Base can be specified in either casework or resilient flooring sections. If base is incorporated into resilient flooring specification, take the following precautions:

- Legshoes, if any, must still be provided by the casework manufacturer, since they are not a standard item for resilient flooring manufacturers.

- Where casework will be installed in areas that will not receive new flooring, check to ensure base required for casework is included in the scope of resilient flooring work.

Miscellaneous Fillers and Scribes

Show and specify fillers at gaps between individual cabinets, and between walls and cabinets. Include closure panels below all knee spaces to conceal pipe spaces. Fillers and scribes should match adjacent materials and finishes.

Countertops

The following materials are listed as guidance for selection. Select top materials with appropriate characteristics in consultation with University Project Coordinator.

- Epoxy Resin: Most commonly used material and generally preferred in most circumstances. Usually specify 1 inch thickness.

- Stainless Steel: Specify where seamless surfaces are required, such as processing areas for highly radioactive materials.

- Plastic Laminate: Generally, avoid plastic laminate in areas around sinks or otherwise subject to becoming wet. Chemically resistant laminates should be considered, but if chemical resistance is required, another top material may be better suited to intended use.

- Resin Impregnated Sandstone: These tops are as expensive, but less resistant to wear and chemicals than epoxy resin tops. Usually not specified.

- Man-Made Stone: Not acceptable for University projects.

- Methyl Methacrylate ("Corian"): Use care when specifying Corian to ensure chemicals used in laboratory will not stain or destroy the top. Corian is often specified when a white, chemically resistant top is required. However, Epoxyn makes a white epoxy resin top which could be considered. Seam sealants may also present a weakness, since silicone is generally used in lieu of the more chemically resistant epoxy sealants used with black tops.

- Solid Hardwood: Where desired by University Project Coordinator; of suitable construction, thickness and finish for intended purpose.

Shelves and Shelf Supports

Usually 45 pound density particle board with baked-on black acid resistant coating, smooth finished both sides with all edges radiused, and 1 inch thick (Kemshield or equal). In consultation with University Project Coordinator, select epoxy resin, solid hardwood, plastic laminate or other appropriate materials.

Typically, specify "Unistrut" standards and brackets spaced not more than 36 inches on center to prevent shelf sagging. Brackets and standards should be finished as follows:

Paint standards after erection, but prior to installation of brackets. Spray apply paint and allow to dry thoroughly before installing brackets.

Brackets should be painted with spray application methods and allowed to dry thoroughly before installation

Accessories

Sinks

Usually select epoxy resin sinks for lab installations. Select stainless steel sinks in consultation with University Project Coordinator for appropriate uses (such as integral top and sink installations, or in plastic laminate tops). Consider including stainless steel or PVC sink in laboratories where dry ice must be disposed (dry ice can cause epoxy resin to shatter).

Mechanical Service Fittings

Usually show and specify mechanical service fittings such as sinks, faucets, gas, vacuum and air outlets, and similar devices as part of Section 12345, for installation by plumbing trades.

Fittings for water, gas, air, vacuum and similar services should be brass, with at least 81 percent copper content.

Water fixtures should always be specified with integral vacuum breakers in every application. Integral vacuum breakers are available for almost all types of fittings, however, in the rare case where integral vacuum breakers are not available for a required fitting, provide in-line type units.

For distilled (purified) water faucets, specify PVC units with self-closing valves and integral PVC vacuum breakers. Do not specify plastic fittings in any use, except for deionized (purified) water outlets. For deionized water consider chrome plated brass faucet with polypropylene lining.

Electrical Service Fittings

Usually show and specify electrical service fittings such as pedestal outlets, and outlets and switches on fume hoods as part of Section 12345, for installation by electrical trade.

Receptacles: Receptacles supplied with electrical fixtures included in this Section shall be 125 volt, 20 amp, 2 pole, 3 wire, specification grade, extra heavy duty grounding type with nylon or Lexan bodies. Provide ground fault circuit interrupter receptacles within 6 feet of fume hoods and sinks. GFCI receptacles shall be rated for 2000 amps interrupting capacity and trip in 25 milliseconds or less when ground currents exceed 5 milliamps.

Switches: Switches supplied with electrical fixtures included in this Section shall be 120/277 volt, 20 amp, specification grade, extra heavy duty type.

Coordinate electrical locations of electrical outlets, wiremold and similar electrical items with casework layout.