



DESIGN & CONSTRUCTION GUIDELINES

DIVISION 10 SPECIALTIES

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SECTION 10 00 00 SPECIALTIES**PART 1 – GENERAL****1.1 GENERAL PROVISIONS**

- A. Plug anchorage by use of wood, lead or plastic is prohibited.

1.2 VISUAL DISPLAY BOARDS**A. WHITEBOARDS/MARKERBOARDS:**

1. **GUARANTEE:** Include the following provisions in the specifications:
GUARANTEE: Furnish a written guarantee to the University signed by an officer of the manufacturer of the whiteboard/markerboard stating that all whiteboards/markerboards which do not retain the original writing quality, the original erasing quality, and the original visual acuity for twenty (20) years after date of acceptance will be replaced and installed without charge to the University.
2. **MATERIALS AND CONSTRUCTION:** Whiteboards/markerboards shall be glass or porcelain enameled steel of construction equal to, or better than, the following:
 - a. **WRITING SURFACE:** Shall have a minimum of 2 coats of porcelain enamel on 24 ga cold rolled stretcher-leveled enameling steel.
 - b. **CORE:** Shall be 3/8 inch tempered hardboard or 80 pfc density particleboard.
 - c. **BACKING** shall be aluminum .015 inch thick.
 - d. **TRIM:** Aluminum in manufacturer's standard sections; include marker trough and map rail complete with map hooks, four (4) hooks per section.
3. **MOUNTING:** Mount on primed wood grounds. Except for approved special conditions, all whiteboards/marker boards shall be mounted with the marker trough 36 inches above the floor and with a vertical dimension of 48 inches from marker trough to top of board.
4. **ELECTRICALLY OPERATED BOARDS:** Provide access panels for servicing motors, drives and controls. Switches shall be key operated. Coordination with [Division 26, Electrical](#) is required.

1.3 TOILET PARTITIONS

- A. METAL TOILET COMPARTMENTS ARE NOT TO BE USED.
- B. HIGH DENSITY POLYETHYLENE (HDPE), SOLD PLASTIC PARTITIONS.
1. **TOILET STALL PARTITIONS AND URINAL SCREENS:** Specify solid plastic as Santana, or other manufacturer meeting the requirements, as alternate bid. No particle-board.
 2. **TOILET PARTITION DOOR LATCHES:** Installer shall furnish extra locking mechanisms (one-half as many as doors installed). Toilet partitions and door-latches shall be metal.
 3. **TOILET PARTITION ANCHORS AND FASTENERS:** Anchors shall be screw anchors, toggle bolts, hollow wall anchors, or other approved type to suit construction on which compartments are hung: Wood, lead, and plaster plugs are prohibited. Fasteners shall be vandal-proof type screws.
 4. **TOILET PARTITION DOOR LATCHES AND PULLS:** When it is necessary to provide out-swinging doors, specify slide latches and door pulls.
- C. Provide wire pull on interior face of accessible toilet stalls.

1.4 LOUVERS AND VENTS

- A. **METAL WALL LOUVERS:** Louvers and vents for air distribution systems should be specified in [Division 23, Heating, Ventilating & Air Conditioning](#). The HVAC Contractor shall be required to furnish and install all interior louvers and vents. If such items are an integral part of the exterior design of a building and are not connected directly to an air distribution system, specify in [Division 23, Section 23 37 13, Diffusers, Registers & Grills](#).

1.5 IDENTIFYING DEVICES

- A. **EXTERIOR SIGNS:** The University has a standardized modular grid system for all campus signage. The [Architect/Engineer \(A/E\)](#) shall follow the guides published in this manual and any additional directions issued by the [USF Facilities Management \(USF-FM\)](#) in preparing drawings and specifications for signage.
1. **BUILDING NUMBER AND NAMES**

- a. Building emergency address numbers (example: 13311): 9 inches Gemini formed plastic numbers. Font: Goudy extra bold. Color: black. Installation: stud-mounted in masonry (or white vinyl on glass, if necessary). Location: 8 to 10 feet above grade, whenever possible, thus visible 1). At all main pedestrian entrances and 2). From emergency vehicles as it approaches from all possible emergency routes. See existing campus examples.
 - b. Building name (example: STUDENT SERVICES): Gemini formed plastic letters.
 - i. Font: Goudy bold.
 - ii. Color: Pantone 2162 green.
 - iii. Size: 24 inches high, if building is 3 stories tall or more; 18 inches high, if building is 2 stories or less.
 - iv. Location: uppermost portions of facades, thus visible from all approaches. See existing campus examples.
 - c. Regional campuses may provide building name and emergency address letters using alternative materials, font style and/or color. All alternative letters shall be submitted to the USF Building Code Official (BCA) for approval.
- B. INTERIOR SIGNS
1. GENERAL PROVISIONS
 - a. Americans with Disability Act (ADA) compliance: Required for all signage. ADA Graphics Requirements: Letters and numerals shall be raised 1/32 inch upper case sans serif type and shall be accompanied with Grade 2 Braille. Raised characters shall be at least 5/8 inch high, but no higher than 2 inches. Pictograms shall be accompanied by the equivalent verbal descriptions placed directly below the pictograms. The border dimensions for the pictogram only shall be 6 inches in height. The characters and background of sign shall be eggshell, matte, or other non-glare finish. Minimum contrast between characters, symbols, and background shall be 70%.
 2. RELATED DOCUMENTS
 - a. Drawings and general provisions of the Master Contract, including General and Supplementary Conditions, apply to this section.
 3. SUMMARY
 - a. This Section includes the following types of signs:
 - i. Panel signs.
 - ii. Pictograms.
 - b. Related Sections: The following sections contain requirements that relate to this section:
 - i. Subparagraph 1.2, Visual Display Boards. Overhead panels, department identification, room numbers, menus, change panels, and pictograms.
 4. SUBMITTALS
 - a. General: Submit the following in accordance with Conditions of the Contract and Division 1, General Requirements.
 - b. Product Data: Include manufacturer's construction details relative to materials, dimensions of individual components, profiles, and finishes for each type of sign required.
 - c. Shop Drawings: Provide shop drawings for fabrication and erection of signs. Include plans, elevations, and large-scale sections of typical members and other components. Show anchors, grounds, reinforcement, accessories, layout, and installation details.
 - a. Provide message list for each sign required, including typical large-scale details of wording and layout of lettering.
 - d. Samples: Provide the following samples of each sign component for initial selection of color, pattern, and surface texture as required and for verification of compliance with requirements indicated.
 - i. Samples for verification of color, pattern, and texture selected, and compliance with requirements indicated:
 - ii. Cast Acrylic Sheet and Plastic Laminate: Provide a sample panel not less than 8-1/2 X 11 inches for each material indicated. Include a panel for each color, texture, and pattern required. On each panel, include a representative sample of the graphic image process required, showing graphic style, and colors and finishes of letters, numbers, and other graphic devices.
 5. QUALITY ASSURANCE

- a. Single-Source Responsibility: For each separate type of sign required, obtain signs from one source, from a single manufacturer.
 - b. Design Criteria: The drawings indicate size, profiles, and dimensional requirements of signs and are based on the specific type and model indicated. A low profile construction is stipulated. Sign to be manufactured by bonding two (2) thin acrylic sheets with radius corners. Signs by all manufacturers will be considered, provided that deviations from dimensions and profiles are minor and do not change the design concept as judged by the A/E. Signs must be constructed in such a way that colored and/or lettered inserts can be replaced easily.
6. PROJECT CONDITIONS
- a. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication to ensure proper fitting. Show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delay.

PART 2 - PRODUCTS

2.1. MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the work are not limited.

2.2. MATERIALS

- A. Cast Acrylic Sheet: Provide cast (not extruded or continuous cast) methyl methacrylate monomer plastic sheet, in sizes and thicknesses indicated, with a minimum flexural strength of 16,000 psi when tested in accordance with American Society for Testing and Materials (ASTM) D 790, a minimum allowable continuous service temperature of 176 degrees F (80 degrees C), and of the following general types:
 1. Transparent Sheet: Where sheet material is indicated as "clear", provide colorless sheet in matte finish, with light transmittance of 92 percent, when tested in accordance with the requirements of ASTM D 1003.
 2. Opaque Sheet: Where sheet material is indicated as "opaque", provide colored opaque acrylic sheet in colors and finishes as selected from the manufacturer's standards.
- B. Regulatory Signs
 1. Tactile Plate: Injection molded ABS plastic. 1/8 inch thick. Texture surface is 15 degrees gloss. Comply with ADA Standards for Accessible Design for raised letters and braille.
 - a. Size: Available in 8 inches x 8 inches only.
 - b. Corners: 5/16 inch radius.
 - c. Depth: 1/8 inch thick.
 - d. Background Colors: To be selected Standard from Beige Color range.
 - e. Letter Color: Thermal transfer foil in Brown.
 - f. Typestyle: 5/8 inch Helvetica Medium upper case width.
 2. Signs may be submitted in manufacturer's standard styles and colors for approval of A/E. Approval must be obtained prior to bidding.
 3. Colored Coating for Acrylic Plastic Sheet: Use colored coatings, including inks and paints for copy and background colors that are recommended by acrylic manufacturers for optimum adherence to acrylic surface and are non-fading for the application intended.

2.3. LOW PROFILE SIGNS

- A. General: Comply with requirements indicated for materials, thicknesses, finishes, colors, designs, shapes, sizes, and details of construction.
 1. Produce smooth, even, level sign panel surfaces, constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally.
- B. Unframed Panel Signs: Fabricate signs with edges mechanically and smoothly finished to conform to the following requirements:
 1. Edge Condition: Rounded.
 2. Corner Condition: Corners rounded to radius indicated.
- C. Laminated Sign Panels: Permanently laminate face panels to backing sheets of material and thickness indicated using the manufacturer's standard process.

- D. Graphic Content and Style: Provide sign copy that complies with the requirements indicated for size, style, spacing, content, position, material, finishes, and colors of letters, numbers, and other graphic devices.
- E. Subsurface Copy: Apply copy to the back face of clear acrylic sheet forming that panel face by either of optional process indicated to produce precisely formed opaque images, free from rough edges.
 - a. Reverse silk-screen process to print copy; over-spray the copy with an opaque background color coating, or:
 - b. DuPont "Chromalin" heat and pressure-laminates photopolymer film system to form copy and background color.
 - i. The manufacturer has the option of selecting either process indicated above.
- F. Raised Copy: Machine-cut copy characters from matte-finish opaque acrylic sheet and chemically weld onto the acrylic sheet forming sign panel face. Produce precisely formed characters with square cut edges free from burrs and cut marks.
- G. Applied Copy: Die-cut characters from vinyl film with pressure-sensitive adhesive backing. Apply copy to the exposed face of the sign panel.
 - a. Panel Material: Matte-finished clear acrylic sheet with opaque color coating subsurface applied.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Locate sign units and accessories where indicated, using methods of the type described and in compliance with the manufacturer's instructions.
 - 1. Install signs level, plumb, and at the height indicated, with sign surfaces free from distortion or other defects in appearance.
- B. Wall Mounted Panel Signs: Attach panel signs to wall surface using the methods indicated below:
 - 1. Silicone-Adhesive Mounting: Use liquid silicone adhesive recommended by the sign manufacturer to attach sign units to irregular, porous, or vinyl-covered surfaces. Use double-sided vinyl tape to hold the sign in place until the adhesive has fully cured.

3.2. CLEANING AND PROTECTION

- A. At completion of the installation, clean soiled sign surfaces in accordance with the manufacturer's instructions. Protect units from damage until acceptance by the Owner.

3.3 FIRE PROTECTION SPECIALTIES

A. FIRE EXTINGUISHERS, CABINETS, AND ACCESSORIES

- 1. GENERAL: All portable fire extinguishers and non-valved cabinets shall be furnished and installed by the General Contractor. All portable fire extinguishers and components shall conform to National Fire Protection Association (NFPA) Pamphlet 10, latest edition. Each extinguisher shall be approved by Underwriter's Laboratory (UL) and bear their label.
- 2. APPROVALS: The selection and locations of the fire extinguishers are subject to the review and approval of the USF-FM and designated University personnel from the USF Facilities Management-Environmental Health & Safety (FM-EHS). Extinguishers meeting the described requirements, including those manufactured by Amerex or Buckeye will be considered for acceptance.
- 3. SELECTION AND QUANTITY: Refer to NFPA Pamphlet 10, Chapters 2, 3, and 4. Chapter 2 is used to determine the classification of potential fires and the rating or relative fire extinguishing effectiveness of various types of extinguishers. Chapter 3 assists in selection of extinguishers which is dependent upon the character of anticipated fires, property construction and occupancy, the vehicle or hazard to be protected, ambient temperature conditions, and other factors. The quantity of extinguisher is determined by Chapter 4.
- 4. CAUTION: Penetration of walls by cabinets or other penetrations, unless openings and voids are sealed with fireproof materials, is prohibited. Fire-rated walls must not have the rating reduced by penetrations or reduction of thickness.

5. Provide each fire extinguisher with locked, break-glass fronted fire equipment cabinet with a knocker or other glass breaking means. Attach knocker in a manner which will allow breaking of glass without removing knocker.
- B. FIRE EXTINGUISHERS: All fire extinguishers are to be complete, tested, certified, ready for use, and conform to the following:
 1. CARBON DIOXIDE EXTINGUISHERS: Red enameled-steel or aluminum equipped with valve, discharge hose and horn, squeeze-grip lever, and mounting bracket, if not cabinet installed. Minimum rating 5 BC.
 2. MULTI-PURPOSE EXTINGUISHERS: Red enameled-steel, pressurized type equipped with pressure gauge, discharge nozzle, squeeze-grip lever, and mounting bracket, if not cabinet installed. These extinguishers are dry chemical for Class A, B, and C fires. Minimum rating 4A 60 BC.
 3. SPECIAL EXTINGUISHERS:
 - a. For computer rooms, expensive laboratory installations, and similar locations, which must be protected from damage, provide appropriate system.
 - b. For electrical main distribution boards and mechanical equipment rooms, provide 20 pound, dry chemical fire extinguisher equal to Ansul Chemical Company's hand extinguisher.

3.4 PARTITIONS

- A. DEMOUNTABLE PARTITIONS: If outlets, switches, etc. are furnished by the partition manufacturer, specify devices of same quality as those specified in [Division 26, Electrical](#). (Note limitations and prohibitions regarding conduit types and sizes.)

3.5 TOILET AND SHOWER ACCESSORIES

- A. TOILET ACCESSORIES
 1. TOILET TISSUE DISPENSERS:
 - a. Owner furnished, contactor installed.
 - b. Contractor purchased toilet tissue dispensers – provide keyless dispensers.
 2. TOWEL DISPENSERS AND DISPOSALS: Each toilet room shall have a towel dispenser and disposal. Contractor must coordinate location with the University and provide appropriate blocking.
 3. SOAP DISPENSERS: Furnished by the University and installed by the Contractor. Contractor must coordinate location with the University and provide appropriate blocking.
 4. SANITARY NAPKIN DISPENSERS AND DISPOSALS: Each women's toilet room shall have a sanitary napkin dispenser and disposal. Contractor must coordinate type and location with the University.
 5. GARMENT HOOKS: Each toilet stall shall have a garment hook. The hooks shall be mounted on the partition; hooks in stalls for the disabled shall be on the partition, reachable from the water closet and approximately 40 inches above the floor. Hook can incorporate door bumper (and purse hook in stalls for women).
 6. SHELVES: Each public toilet room shall have a stainless steel shelf for books, purses, etc. Each toilet stall in buildings with heavy student traffic shall have a shelf for books, etc. Exception to be made for residence type "private" toilets.
 7. MIRRORS: Each toilet room shall have a stainless steel framed mirror without shelves. If possible, locate mirrors on walls opposite lavatories. Specify long mirrors, for use of disabled persons, with bottom 2 feet above floor and with top located at same height as smaller mirrors. Check and coordinate mirror locations to prevent image reflection through room entrances.
- B. SHOWER ACCESSORIES
 1. EMERGENCY SHOWERS AND EYE WASHES, are needed within 100 unobstructed feet or within 10 seconds of a chemical substance deemed hazardous. All emergency showers shall have floor drains accessible in immediate area and required signage.

END OF SECTION 10 00 00