

**SECTION 10 44 00**  
**INTERIOR SIGNS**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. This section specifies interior signage for room numbers, directional signs, directories, code required signs, telephone identification signs and temporary interior signs.

**1.2 RELATED WORK**

- A. Lighted EXIT signs for egress purposes are specified under Division 26.
- B. Exterior signs: Section 10 43 00, EXTERIOR SIGNAGE.
- C. Color Finish: SECTION 09 05 00, INTERIOR/EXTERIOR FINISHES, MATERIALS AND FINISH SCHEDULE

**1.3 MANUFACTURER'S QUALIFICATIONS**

- A. Sign manufacturer shall provide evidence that they regularly and presently manufactures signs similar to those specified in this section as one of their principal products.

**1.4 SUBMITTALS**

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Samples: Sign panels and frames, with letters and symbols, each type.
- C. Manufacturer's Literature: Showing the methods and procedures proposed for the concealed anchorage of the signage system to each surface type.
- D. Samples: Sign location plan, showing location, type and total number of signs required.

**1.5 DELIVERY AND STORAGE**

Deliver materials to job in manufacturer's original sealed containers with brand name marked thereon. Protect materials from damage.

**1.6 APPLICABLE PUBLICATIONS**

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. Council of American Building Officials (CABO):  
A117.1-98.....Accessible and Usable Buildings and Facilities
- C. American National Standards Institute (ANSI):  
N2.1-89.....Warning Symbols - Radiation Symbol
- D. Americans with Disabilities Act - 1990
- E. American Society for Testing and Materials (ASTM):  
B209-04.....Aluminum and Aluminum-Alloy Sheet and Plate  
B221-05.....Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and tubes.

F. Federal Specifications (Fed Spec):

MIL\_P 8184E.....Plastic Sheet, Acrylic, Modified.

A-A-59502.....Plastic Sheet, Polycarbonate.

**1.7 MINIMUM SIGN REQUIREMENTS**

A. Permanent Rooms and Spaces:

1. Tactile and Braille Characters, raised minimum 0.793 mm (1/32 in). Characters shall be accompanied by Grade 2 Braille.
2. Type Styles: Characters shall be uppercase, Helvetica Medium, Helvetica Medium Condensed and Helvetica Regular.
3. Character Height: Minimum 16 mm (5/8 in) high, Maximum 50 mm (2 in).
4. Symbols (Pictograms): Equivalent written description shall be placed directly below symbol, outside of symbol's background field. Border dimensions of symbol background shall be minimum 150 mm (6 in) high.
5. Finish and Contrast: Characters and background shall be eggshell, matte or other non-glare finish with adequate contrast with background.
6. Mounting Location and Height: As shown. Mounted on wall adjacent to the latch side of the door and to avoid door swing and protruding objects.

B. Directional/Informational and Overhead Signs:

1. Type Styles: As shown. Characters shall have a width-to-height ratio between 3:5 and 1:1. Characters shall have a stroke width-to-height ratio of between 1:5 and 1:10.
2. Character Height: minimum 75 mm (3 in) high for overhead signs. As shown, for directional signs.
3. Finish and Contrast: Same as for signs of permanent rooms and spaces.
4. Mounting Location and Height: As shown.

**1.8 COLORS AND FINISHES, SECTION 09 05 00:**

**PART 2 - PRODUCTS**

**2.1 GENERAL**

- A. Signs of type, size and design shown on the drawings and as specified.
- B. Signs complete with lettering, framing and related components for a complete installation.

**2.2 PRODUCTS**

A. Aluminum:

1. Sheet and Plate: ASTM B209.
2. Extrusions and Tubing: ASTM B221.

- B. Cast Acrylic Sheet: MIL-P-8184E; Type II, class 1, Water white non-glare optically clear. Matt finish water white clear acrylic shall not be acceptable.

- C. Polycarbonate: Mil-P-46144C; Type I, class 1.
- D. Vinyl: 0.1 mm thick machine cut, having a pressure sensitive adhesive and integral colors.

### 2.3 SIGN TYPES

- A. General:
  - 1. The interior sign system is comprised of sign types families that are identified by a letter and number which identify a particular group of signs. An additional number identifies a specific type of sign within that family.
    - a. IN indicates a component construction based sign.
- B. Prohibit and Control Sign Type WM-4:
  - 1. All text and graphics are to be first surface silk-screened.
  - 2. Colors: Black text on white background with symbol color in red.
  - 3. Mounting: Silastic adhesive.
  - 4. Size: As indicated on drawings.
- C. Pictogram/Symbol signage and room identification sign type WM-6, WM-8:
  - 1. Signs to be black acrylic photopolymer plate with a minimum .010" steel backing with homogenous whites raised letters (1/32" min.) and symbols with Grade 2 Braille tags directly below the verbal description.
  - 2. Sign sizes as indicated on drawings.
  - 3. Corners of signs shall have radius corners as shown on the drawings.
  - 4. Letter characters shall be provided in uppercase, 5/8" to 2" in height, and must be accompanied with Grade 2 Braille directly below the verbal description.
  - 5. Raised letters and symbols shall have a minimum thickness of 1/32".
  - 6. Letter style shall be sans-serif, uppercase letters only. Letters and numbers on signs shall have a width-to-height ratio between 3:5 and 1:1 and a stroke width-to-height ratio between 1:5 and 1:10 such as Helvetica Medium.
  - 7. Symbols (Pictograms) shall have a minimum of 6" vertical field, and be accompanied by the verbal description placed directly below the symbol and Grade 2 Braille translation directly below the verbal description.
  - 8. The surface finish shall be matte or non-glare.
  - 9. The letters and symbols shall contrast with the background a minimum of 70%.
  - 10. Sign text shall be bottom left justified. Directional arrows to be right justified, except when shown otherwise on drawings.

11. The custom tactile sign shall be mounted to the backer plate with 3M VHB .005" double back adhesive tape or approved equal.
- D. Custom Tactile Sign Backer Plate: The photopolymer faceplate material shall be applied directly to the backer plate.
  1. Backer plate shall be a minimum 3/16" thick acrylic or plex-I-glass.
  2. The backer plate shall have 1/2" radius corners as shown on the drawings.
  3. The backer plate shall be light grey in color with a matte or non-glare surface finish. The backer plate may be back spray painted to achieve the designed color with the surface finish being matte or non-glare.
  4. The backer plate shall be surface mounted to walls with silicone adhesive held in place double sided vinyl tape until adhesive has fully cured. Other methods of mounting shall need prior approval.

#### **2.4 FABRICATION**

- A. Design components to allow for expansion and contraction for a minimum material temperature range of 56 °C (100 °F), without causing buckling, excessive opening of joints or over stressing of adhesives, welds and fasteners.
- B. Form work to required shapes and sizes, with true curve lines and angles. Provide necessary rebates, lugs and brackets for assembly of units. Use concealed fasteners whenever and wherever possible.
- C. Shop fabricate so far as practicable. Joints fastened flush to conceal reinforcement, or welded where thickness or section permits.
- D. Contact surfaces of connected members be true. Assembled so joints will be tight and practically unnoticeable, without use of filling compound.
- E. Signs shall have fine, even texture and be flat and sound. Lines and miters sharp, arises unbroken, profiles accurate and ornament true to pattern. Plane surfaces be smooth flat and without oil-canning, free of rack and twist. Maximum variation from plane of surface plus or minus 0.3 mm (0.015 inches). Restore texture to filed or cut areas.
- F. Level or straighten wrought work. Members shall have sharp lines and angles and smooth sulrfaces.
- G. All painted surfaces properly primed. Finish coating of paint to have complete coverage with no light or thin applications allowing substrate or primer to show. Finished surface smooth, free of scratches, gouges, drips, bubbles, thickness variations, foreign matter and other imperfections.

- H. No signs are to be manufactured until final sign message schedule and location review has been completed by the Owner's Representative & forwarded to contractor.

**PART 3 - EXECUTION**

**3.1 INSTALLATION**

- A. Protect products against damage during field handling and installation. Protect adjacent existing and newly placed construction, landscaping and finishes as necessary to prevent damage during installation. Paint and touch up any exposed fasteners and connecting hardware to match color and finish of surrounding surface.
- B. Mount signs in proper alignment, level and plumb according to the sign location plan and the dimensions given on elevation and sign location drawings. Where otherwise not dimensioned, signs shall be installed where best suited to provide a consistent appearance throughout the project. When exact position, angle, height or location is in doubt, contact Resident Engineer for clarification.
- C. Contractor shall be responsible for all signs that are damaged, lost or stolen while materials are on the job site and up until the completion and final acceptance of the job.
- D. Remove or correct signs or installation work Resident Engineer determines as unsafe or as an unsafe condition.
- E. At completion of sign installation, clean exposed sign surfaces. Clean and repair any adjoining surfaces and landscaping that became soiled or damaged as a result of installation of signs.
- F. Locate signs as shown on the drawings.

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