

SECTION 10400
IDENTIFICATION DEVICES

PART 1 - GENERAL

1.01 SUMMARY

- A. Provisions of Division 01 apply to this section.
- B. Section Includes:
 - 1. Interior and exterior tactile identification signs requiring braille and raised characters.
 - 2. Interior and exterior visual (non-tactile) signs that direct and inform about permanent spaces and services and accessible elements and features of the building or site.

1.02 REFERENCES

- A. Regulatory Requirements:
 - 1. ADA Design Guidelines, 2010.
- B. Standards:
 - 1. ANSI A117.1, Standard for Accessible and Usable Buildings and Facilities.
 - 2. ASTM D4802 Standard Specification for Poly (Methyl Methacrylate) Acrylic Plastic Sheet.
 - 3. ASTM B209 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
 - 4. ASTM B221 Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

1.03 SUBMITTALS

- A. Product Data: Submit material descriptions, finishes and color charts for each type of sign.
- B. Shop Drawings: Submit Shop Drawings indicating sign style, lettering, overall dimensions and quantities for each designated sign type. Shop drawing for door identification signs shall show diagram of typical installation location. Architect shall submit general drawings and specifications for each sign type. Architect shall indicate location of each sign type, including those with Symbols of Accessibility and tactile exit signs, on plans and/or door schedules.
- C. Material Samples: Submit three samples illustrating full size sample sign, of type, style and color specified. No more than two sign types shall be required at no additional charge, one tactile, one visual.
- D. Manufacturer's installation instructions.

1.04 QUALITY ASSURANCE

- A. Pre-Installation Conference: Notify OAR when signs are ready for installation. Arrange for conference at site. Do not proceed with installation until Architect's approval of specific locations and methods of attachment has been obtained.
- B. Provide signs from one manufacturer, unless otherwise approved. Electrical and non-electrical signs can be provided and installed by different manufacturers and installation companies.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver products to site and protect from damage. Store until immediately prior to installation.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Products of following manufacturers form basis for design and quality intended.
 - 1. H. Toji and Company, Long Beach, CA.
 - 2. ADA Sign Products, Long Beach, CA.
 - 3. AccuBraille, San Francisco, CA

NOTE TO ARCHITECT: Select applicable signs; delete unused paragraphs. Provide signage schedule, elevations/details for each sign type and show locations of all signs on drawings.

2.02 FABRICATION

- A. Material: Non-glare (matte), UV stable, suitable for interior and exterior use.
 - 1. Substrate Panel: 1/8 inch minimum thick, clear acrylic plastic.

NOTE TO ARCHITECT: Select options from paragraph "a" below.

- a) Corners shall be [square], [radius].
- b) Edges shall be square and eased.
- c) Colors as selected by Architect from manufacturer's custom color range.
- 2. Characters and Symbols:
 - a) All raised characters and graphics including braille shall be formed into sign face by high pressure thermoforming using a negative mold.
 - b) All raised characters and graphics including braille shall be integral to sign face. No applied, glued, welded tactile elements are acceptable. Raised characters and graphics shall have beveled, eased or rounded edges. No sharp, square edges are acceptable, All non-tactile text and graphics shall be applied to the second surface, and background color shall be applied to the second surface and protected with vinyl film.

- c) Pictograms and other symbols including the International Symbol of Accessibility, which are included on signs with raised characters and Braille, or other signs are not required to be raised.
3. Fasteners:
- a) Stainless steel tamper-proof screws and plastic anchors.
 - b) Signs mounted on fire-rated doors shall be secured with adhesive.
 - c) Adhesives and sealants shall comply with the limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA method 24).
- B. Exterior Non-Tactile Sign Materials for Accessibility Signs:
- 1. Sign: 0.080 inch aluminum with rounded corners at least 1/8 inch radius and eased edges. White figure on a blue background; non-glare, high contrast signs. The blue shall be equal to color number 15090 in Federal Standard 595B.
 - 2. Post: 2 by 2 inch galvanized steel tubing, weighing minimum of 4.31 pounds per foot and conforming to ASTM A500, Grade B, 3/16 inch thick wall thickness.
 - 3. Parking signs for accessible parking locations shall have reflective symbols and text.

2.03 DESIGN AND INSTALLATION:

A. Finish and Contrast:

- 1. Characters, symbols and their backgrounds shall have a nonglare finish.
- 2. Characters and symbols shall contrast with their backgrounds, either light on dark background or dark on light background. Contrast shall be a minimum of 70 percent, using LRV measurements. Suggested LRV for lighter color shall be 45.

B. Proportions:

- 1. Characters on visual (non-tactile) signs shall have a width-to-height percentage between 55% and 110% and a stroke width-to-height percentage between 10% and 30%.
- 2. Characters on signs requiring raised characters and braille shall have a width-to-height percentage between 55% and 110% and a stroke width-to-height maximum percentage of 15%.

C. Character Height:

- 1. Visual (non-tactile) characters on signs shall be sized according to the visual character chart 703.5.5. The minimum height shall be measured using an uppercase I.
- 2. Required tactile characters shall be minimum 5/8 inch and maximum 2 inches high. Exception: If separate but identical visual and tactile messages are displayed for the same location, the required tactile characters may be minimum 1/2 inch high.

D. Character Style:

- 1. Lettering Style for visual (non-tactile) signs: Non-decorative non-script fonts. Oblique or italic fonts shall not be used. Non-decorative serif and sans serif fonts are allowed. Use upper and lower case characters, except for headings, emphasis, or regulatory signs that require all uppercase.

2. For required raised characters, use only uppercase non-decorative sans serif fonts. Oblique or italic fonts shall not be used.

E. Character and Line Spacing:

1. Visual (non-tactile) characters. Character spacing shall be measured between the two closest points of adjacent characters, excluding word spaces. Spacing between individual characters shall be 10 percent minimum and 3 percent maximum of characters height. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 160 percent maximum of the character height.
2. Required tactile characters. Character spacing shall be measured between the two closest points of adjacent raised characters within a message, excluding word spaces. Where characters have rectangular cross sections, spacing shall be 1/8 inch minimum and 4 times the raised character stroke maximum. Where characters have other cross sections, spacing shall be 1/16 inch minimum and 4 times the raised character stroke maximum at the base, and 1/8 inch minimum, and 4 times the raised character stroke maximum at the top of the cross sections. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 160 percent maximum of the character height.

F. Placement of Sign Elements:

1. Separate all tactile elements by a minimum of 3/8 inch space. Frames that project above the sign surface shall be located a minimum of 3/8 inch away from all raised characters and braille.

G. Braille:

1. Where required. Required uppercase characters shall be accompanied by Contracted (Grade 2)Braille, located no less than 3/8 inches below the corresponding raised characters. Capitalization shall be allowed only as per 703.3.1. Braille dots shall be domed or rounded in shape.
2. Braille dot and cell specifications. Braille dots and cells shall be sized and spaced as per the chart 703.3.1.
3. Placement. Braille shall be flush left or centered. When tactile text is multi-lined, all Braille shall be placed together below all lines of tactile text.

H. Pictorial Symbol Room Identification Signs (pictograms):

1. Pictorial symbols that are used to identify a room or space shall be accompanied by corresponding verbal identification placed directly below the pictogram. The identification text shall follow the standards for tactile (raised) characters and braille in Section 703. Additional pictorial symbols, such as those located on overhead signs, shall not be required to have raised character and braille descriptions placed directly below them. Other pictorial symbols, such as the International Symbol of Accessibility, are not required to be accompanied by text or raised characters and braille.
2. The outside dimension of the pictogram field shall be a minimum of 6 inches in height.

I. Mounting Locations and Height:

1. Identification signs for rooms and spaces shall be installed on the wall adjacent to the door they identify on the entrance side, preferably on the latch side of the door. Tactile exit signs are installed on the exit side, preferably on the latch side.
2. Where there is no wall space on the latch side, including at double leaf doors, signs shall be placed on the nearest adjacent wall, preferably on the right. Double doors with one inactive leaf, may have the sign mounted directly on the inactive leaf. Any flat surface adjacent to the door may be used as the mounting wall, as long as the reader may approach the sign without obstruction. Exception: If the door opens away from the sign reader, has an automatic closing device, and does not have a hold-open device, the sign may be mounted directly on the door.
3. Tactile (Raised Character and Braille) signs shall be centered within an 18 inch square clear space located adjacent to the door that the sign identifies, so that the person reading the sign shall not encounter obstacles or stand within the swing of a door opened to a 45 degree angle.
4. Mounting height shall be determined so that the baseline of the highest line of raised characters is no more than 60 inches above the finish floor or ground, and the baseline of the lowest line of braille is no less than 48 inches above the finish floor or ground.

J. Pictorial Symbols, General:

1. Pictorial symbols that do not located on room identification signs, or are not one of the four required Symbols of Accessibility, shall comply with the requirements for high dark to light or light to dark contrast, and non-glare surfaces. Pictorial symbols used on directional and informational signs should be sized according to the viewing distance and height on the wall.

K. Symbols of Accessibility

1. General: Symbols of Accessibility shall comply with the requirements for high dark to light or light to dark contrast, and non-glare surfaces. Symbols of Accessibility should be sized according to the viewing distance and height on the wall.
2. International Symbol of Accessibility (wheelchair pictogram). Use this Symbol when specifications for a specific accessible element or feature of the building or site require it, such as for accessible entrances, paths of travel, restrooms and elevators when not all are accessible.
3. International Symbol of Hearing Loss or Deafness (ear pictogram). Use this Symbol exactly as shown, since it is recognized internationally by persons who are deaf or hard of hearing. The Symbol is used to inform that an Assistive Listening System is available. Preferably, locate the sign with the Symbol and the words "Assistive Listening System Available," followed by more specific information if possible, at a ticket window, in the lobby or foyer of the assembly area, at an information desk, or at a main entrance to the space. It is not suggested to mount it inside the area, since it may not be easily located.

4. Symbol for TTY or Text Telephone. (keyboard pictogram). Use this sign to identify or direct to a TTY, or to inform that a portable TTY is available. If located at a telephone bank, mount the sign high enough so it can be seen over the heads of phone users.
5. Symbol for Volume Controlled Telephone. (telephone handset). All public telephones must now have this type of equipment, and the phones usually have the required Symbol directly on the phone, so a separate sign is no longer necessary. If a separate sign is required, it should be mounted high enough so it can be seen over the heads of phone users.

END OF SECTION