



SEGD ADA White Paper Update 2006

Guidelines, Best Practices, and Innovation for Signs for the Blind and Visually Impaired

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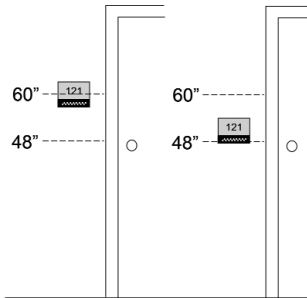
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PART 5 | Position of Text and Braille on Signs

Where text and Braille are positioned on a sign is an area of the ADA that requires a balancing act among the varying needs of individuals with different degrees of visual impairment, including blindness. The goal on text position for tactile signs is that all tactile text and Braille be positioned in exactly the same location on all signs, providing consistency in the environment. Visual sign requirements extend to all signs in the environment, from temporary identification to directional signs. Consistent visual text locations are not mandated in the ADAAG.

Position of Visual Text on Signs

While text height requirements are defined by the ADAAG for both identification and directional signs, there is no mention of visual letter position or location. Visual typography can be located in any configuration or position as long as height requirements are met.



The Position of Braille and Tactile Text on Signs

Braille is positioned directly below the lowest tactile text, in one line if possible (703.3.2). Braille must be no less than 48" off the floor (703.4.1). Since the baseline of tactile text must be no more than 60" off the floor, this permits only a small window for both text and Braille. When tactile text is on multiple lines, the Braille should be on one line, 3/8" below the bottom line of the text. (Only one line of tactile text is strongly suggested for permanent room identification.) For elevator buttons, Braille need only be 3/16" below corresponding text. In most public spaces, it is preferable that the top baseline of text be located as close to the 60" mark as possible to meet the needs of most adult users. Facilities geared to children (such as schools and children's hospitals) should locate text closer to the 48" height.

◀ There is only a narrow band where tactile information can be located

Use of Sequential Numbers and Letters

Because tactile readers take so long to read a sign, and because numbers can be understood sequentially, it is encouraged that room numbers and letters should be used for room recognition purposes, with any other descriptions used as supplementary material. If tactile text is being used with supplementary visual text on the same sign, it is important that Braille be placed in close proximity to tactile text, even though the ADAAG does not define a maximum distance between Braille and tactile letters.

Position of Tactile Text on Signs

Tactile text is strictly regulated by the ADAAG. All tactile text must be positioned with the bottom of the tactile letter at least 3/8" above the Braille, and the baseline of the tactile letter no more than 60" off the floor (703.4.1). Text must be at least 3/8" away from the closest raised border or rule line. (These rules do not apply to elevator controls.) For multiple lines of text, letter spacing from the top line of the text to the bottom line must be no less than 35% and no more than 70% of the text height. (The specific text mandates a spacing of 135% to 170% of text height from baseline to baseline of multi-line text [703.2.8].) For example, 1" letters on multiple lines should be no less than about 1/3" and no more than about 2/3" apart.

No Vertical Tactile Text!

Although it is not expressly prohibited in the ADAAG, vertical tactile text and numbers should not be used. The intent of the ADAAG is for all tactile elements to be horizontal with Braille directly beneath. This does not apply to visual text.

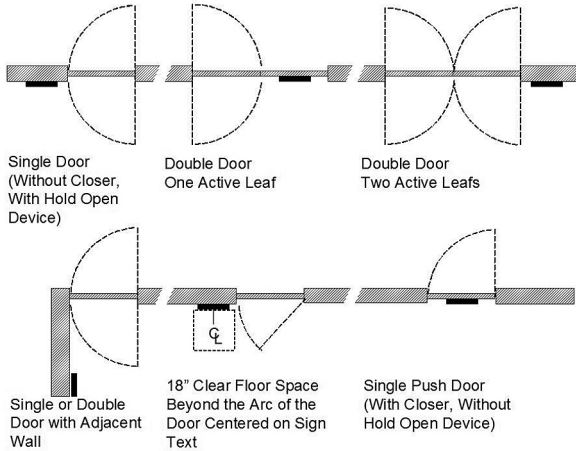
Position of Tactile Signs

Since all identification of permanent rooms and spaces is required to be tactile, the ADAAG provides specific instructions on the location of tactile signs for room doors and entrances (703.4.2).

- Where a tactile sign is provided at a door, the sign should be located alongside the door, on the latch side.
- Where a tactile sign is provided at double doors with one active leaf, the sign should be located on the inactive leaf.
- Where a tactile sign is provided at double doors with two active leaves, the sign should be located to the right of the right hand door.



- Where there is no wall space at the door handle of a single door or at the right side of double doors, the sign should be located on the nearest adjacent wall.
- Signs containing tactile characters should be located so that a clear floor space of 18 inches square (centered on the tactile characters) is provided beyond the arc of the door swing, between the closed position and the 45 degree (half-open) position.
- Signs with tactile characters are allowed on the push side of doors with closers but without hold-open devices. This situation is most often seen on restroom and hotel room signs.



◀ The location of tactile signs under a variety of entrance situations.

Position of Visual Text and Signs

Visual identification and directional sign location is much less restrictive than for tactile signs. Wall-mounted or floor-mounted signs must have the bottom line of text a minimum of 40" off the floor, with the exception of elevator controls (703.5.6). For directional and identification signs projecting into the right of way, the minimum height to the bottom of the sign must be 84".

Size and Position of Symbols on Signs

Symbols on tactile signs must sit inside a field at least 6" square, though symbols smaller than 6" or multiple symbols can be used as long as they sit inside the field (703.6.1). Text or Braille cannot sit inside the same field as the symbol, but must sit directly below the symbol, with tactile lettering below the symbol and Braille below the lettering with a min. 3/8" clearance, and follow all tactile text size and position guidelines (706.6.3). The symbol by itself does not have to be tactile and does not need to follow minimum or maximum height rules. Directional sign symbols have no minimum or maximum size standards because, in this case, the symbols are providing directions to permanent rooms and spaces, not identifying them.



^ This sign, designed by Corbin and manufactured by APCO, uses a small ISA symbol paired with a larger symbol inside one field.

Specific international accessibility symbols are mandated for use by ADAAG (703.7.2.1-703.7.2.4) and include:



International symbol of accessibility



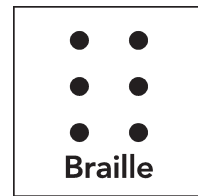
International symbol of TTY



Assistive listening systems



Volume control telephones



Braille

(These symbols were designed by Roger Whitehouse and available through SEGD.)

Consistency Plan

While not written in state and local codes, code enforcement officials generally look favorably on a formal plan for the consistent placement of tactile and visual signs. This plan sets a consistent guideline for signs under a variety of conditions in the building.

PART 6 | Color Contrast

Color contrast requirements between foreground letters and a background are required for visual signs, or for visual and tactile signs if they are coordinated together. However, if both visual and tactile information is provided on a single sign, tactile text should not contrast with the background. Braille does not need to contrast with its background.

Color Contrast

The ADAAG recommends a 70% Light Reflectance Value (LRV)(Appendix to Part 1192), but this is not a strict requirement. There are a number of color combinations in the 60-70% range that work well, which is why 70% is not a requirement. However, the intent of the ADAAG is that the percentage not fall too far below the recommendation. Most major paint manufacturers include LRVs for their colors in swatch books.

Color Contrast is determined by a calculation:

$$\text{Contrast} = \frac{(B_1 - B_2)}{B_1 \times 100}$$

B₁ = LRV of the lighter area

B₂ = LRV of the darker area

There can never be a color contrast of 100%, since the LRV for B₁ and B₂ can never be 0 or 100.

Color Contrast in the Real World

There is nothing in the ADAAG about the level of ambient light needed for visibility, but public space lighting should follow the minimum International Building Code requirement of 10 foot candles of light. Code enforcement officials provide the following recommendations to improve visibility.

- In low light levels, use high contrast (75% +) signs with a lighter background and dark foreground, or light the sign internally or externally.
- In high light levels, use lower contrast (65-75%) signs with a dark background to absorb light and prevent glare. The ADAAG recommends this combination based on research on optimal lighting conditions for readability.

Methods for Determining Color Contrast

Spectrometer Analysis – The only way to truly tell the color contrast of two colors or materials in an environment is by using a spectral reflectometer.

LRV Color Number – All paint colors have an LRV number that can be found in paint manufacturer swatch books.

Matte or Gloss Finish

There is a reference in the Federal ADAAG (703.7.1) focused on requiring a non-glare finish for foreground or background signs. A number of state and local codes have specified the level of glare further, though most leave it up to the judgment of the individual code official. A guideline recommendation (Appendix to Part 1192) provides a specific recommendation for an eggshell finish (11 to 19 degree gloss on 60 degree glossimeter). Since most designers and regulators do not have access to a glossimeter, it is a good idea to get that information from the paint or material specifications.

Summary of Recommendations

- Create a 12" vertical space for sign location that all tactile elements must fit.
- Create a guideline for the placement of tactile and visual signs under various building conditions.
- Observe the general light level of a space before specifying a color contrast for signs.
- Have a specific methodology for determining color contrast.

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