

# **USDA FOREST SERVICE**

## **EXHIBIT**

### **ACCESSIBILITY**

#### **CHECKLIST**

based on  
the Smithsonian Institution Exhibition  
Accessibility Checklist

**USDA Forest Service  
ACCESSIBILITY PROGRAM**

**EXHIBIT ACCESSIBILITY CHECKLIST**

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## **I. ROUTE TO AND THROUGH THE EXHIBIT**

\_\_\_\_\_A. The route from the accessible entrance to the exhibit space and through the exhibit space provides a clear path of travel without obstructions that block the route and without changes in level (or provides ramps, lifts, or elevators to negotiate those changes).

\_\_\_\_\_B. The route has sufficient width (minimum 36" [914mm]), lighting (minimum 10 footcandles), and good directional signs.

\_\_\_\_\_C. Objects are not to protrude more than 4 inches from the wall unless their bottom edges are less than 27 inches above the floor and therefore cane detectable.

\_\_\_\_\_D. There is 80" of clear headroom above the floor.

## **II. EXHIBIT SPACE**

### **Exhibit Content and Collections**

\_\_\_\_\_A. The exhibit content is offered in such a way that information can be gathered redundantly or in part – aurally, tactually, and visually.

For example, someone who is deaf can understand all key points of an exhibit because he/she can receive the information visually; someone who is blind or has

low vision can understand all the same key points by receiving the information tactually or aurally.

\_\_\_\_\_B. The content presentation offers several levels of intellectual access (i.e., people who have cognitive disabilities can understand key information presented in the exhibit).

\_\_\_\_\_C. Objects, models, or reproductions that illustrate key exhibit information and convey a coherent story are available for tactile examination.

\_\_\_\_\_D. Audio description is required for all visitor center exhibits, tours and audio visual programs as well as all FS training, informational and multimedia productions that contain visual information necessary to comprehend the content, regardless of format. (36 CFR Part 1145)

\_\_\_\_\_E. The audio description symbol is displayed to indicate its availability.

\_\_\_\_\_F. Appropriate equipment for accessing the audio description is available on site, and directions for obtaining the equipment are shown at the exhibit entrance.

### **Exhibit Content and Collections Continued**

\_\_\_\_\_G. There are no obstructions to seeing objects in the exhibit space if the visitor is short or seated (e.g., high pedestals, railings that obscure the view).

\_\_\_\_\_H. Railings can be detected by a cane. (Railings at the lowest point may be no higher than 27" [685mm] above the floor to be cane detectable.)

### **Color In Exhibits**

\_\_\_\_\_A. There is 70% light reflectance value contrast between the colors of the floors and the walls to differentiate vertical and horizontal planes. The following formula for determining contrast is located in the appendix section of the Americans with Disabilities Act Accessibility Guidelines, Section A4.30:

Contrast =  $[(B1 - B2)/B1] \times 100$  where B1=light reflectance value of the lighter area

and B2 = light reflectance value of the darker area.

Note that in any application both white and black are never absolute; thus B1 never equals 100 and B2 is always greater than 0.

\_\_\_\_\_B. The furniture color contrasts the floor and walls nearby. Furniture should not be the same color as the flooring so that it can be seen clearly and does not become a tripping hazard.

\_\_\_\_\_C. There are no patterns created by color and shape in the flooring which create an optical illusion of depth or height change. For example, a herringbone pattern of bricks with beveled edges may give the illusion of a raised edge at the center of each row; dark colors may appear as a lowered section of the floor.

\_\_\_\_\_D. The colors work with the lighting to create a well-lit, easily navigated exhibit space. Dark colors will absorb the limited light; light colors may be reflected in cases, potentially creating confusing areas.

## **Exhibit Lighting**

\_\_\_\_\_A. If light levels in galleries change from room to room, there is a gentle transition in lighting level from room to room.

\_\_\_\_\_B. The level of light on circulation routes is at least 10 footcandles. If  
light levels are restricted by conservation requirements, there are at least  
10 footcandles of light on the floor and label text.

\_\_\_\_\_C. The light is adequate and even (i.e., not creating shadows and under-lit areas) across all objects and the galleries.

\_\_\_\_\_D. The lighting in the space minimizes the pooling of light and shadow on the floor that can cause problems with depth perception.

\_\_\_\_\_E. The lighting minimizes the glare on the objects, labels, panels, and cases for a visitor who is either standing or seated.

\_\_\_\_\_F. The visitor creates no shadows on objects, labels, and text when standing or sitting in front of them.

## **Furniture in Exhibits**

\_\_\_\_\_A. Cases, benches, and exhibit barriers are positioned so the circulation route is clear and predictable (i.e., cases and objects do not jut out unexpectedly and all open edges (corners) of materials, including that of Plexiglas, glass and other materials are rounded).

\_\_\_\_\_B. There is seating with arm and back support in the galleries and corridors (50% of the seating in every area is recommended).

\_\_\_\_\_C. There is enough space (36" [914mm] wide for routes; 30" X 48" [760mm X 1220mm] for clear floor space; 5' [1525mm] diameter for turnaround) around all sides of exhibit cases for people using wheelchairs, walkers and crutches to circulate and view the exhibits.

\_\_\_\_\_D. The cases are not bumping or tripping hazards. Wall-mounted cases protruding out from the wall must have their lower edges no higher than 27" [914mm] above the floor to be cane detectable. If their lower edges are cane detectable, they can protrude any amount as long as they do not diminish the required 36" [914mm] wide circulation route. Objects are not to protrude more than 4 inches from the wall unless their bottom edges are less than 27 inches above the floor and therefore cane detectable.

\_\_\_\_\_E. Case floors are low enough for someone who is short or seated to see everything inside the case. (Actual maximum floor height varies with the size and number of objects within the case.)

## **Labels in Exhibits**

\_\_\_\_\_A. The letters are in a readable type face (sans serif or slab serif). See Appendix A.

\_\_\_\_\_B. The letters are in a readable size (minimum: 1/4" [6.5mm] x-height).

\_\_\_\_\_C. There is enough letter spacing so that letters are neither crowded nor separated from each other by large amounts of white space.

\_\_\_\_\_D. Type is flush left. Label text of more than 3 lines is never centered.

\_\_\_\_\_E. There is high color contrast between the letters and the background (a minimum of 70% is recommended).

\_\_\_\_\_F. Letters are not printed over a patterned background in a way that they are difficult to read.

\_\_\_\_\_G. The labels are placed so that they can be seen and read if someone is short or seated. (For example, labels should not be placed on a horizontal surface higher than 36" [914mm] above the floor.) Wall-mounted labels should be located between 43" [1220mm] and 67" [1675mm] above the floor (depending on type size) for easy viewing by both those seated and standing.

\_\_\_\_\_H. Labels are placed in consistent, predictable locations, with relation to the objects, so that they are easy to find.

\_\_\_\_\_I. The text is written in concise, simple language.

\_\_\_\_\_J. Label text is provided on the audio described tour medium.

\_\_\_\_\_K. As with cultural and gender equity, where appropriate, information and/or photos of people with disabilities participating in the activities being described are integrated in the content.

\_\_\_\_\_L. When included, references to people with disabilities utilize appropriate terminology, such as person first i.e. a person who is deaf not a deaf person. The term "handicapped" is not used.

## **SIGNS in Exhibits**

\_\_\_\_\_A. The letters are in a readable typeface (sans serif or slab serif). See Appendix A.

\_\_\_\_\_B. The letters are in a size that when mounted are readable by both those seated and standing.

\_\_\_\_\_C. There is enough letter spacing so that letters are neither crowded nor separated from each other by large amounts of white space.

\_\_\_\_\_D. There is high color contrast between the letters and the background (a minimum of 70% is recommended).

\_\_\_\_\_E. Letters are not printed over a patterned background in a way that they are difficult to read.

\_\_\_\_\_F. The signs are placed so that they can be seen and read if someone is short or seated. (For example, signs should not be placed on a horizontal surface higher than 36" [914mm] above the floor) for easy viewing by both those seated and standing see Fig. 3 below.

\_\_\_\_\_G. Signs are placed in consistent, predictable locations, with relation to the objects, so that they are easy to find.

\_\_\_\_\_H. The text is written in concise, simple language.

\_\_\_\_\_I. Sign text -- on the audio described tour medium OR sign text is audio described on the tour medium.

\_\_\_\_\_J. As with cultural and gender equity, where appropriate, information and/or photos of people with disabilities participating in the activities being described are integrated in the content.

\_\_\_\_\_K. When included, references to people with disabilities utilize appropriate terminology, such as person first i.e. a person who is deaf not a deaf person. The term "handicapped" is not used.

## **Audiovisuals and Manipulatives in Exhibits**

\_\_\_\_\_A. There is enough room for a wheelchair user to use an interactive station. Wheelchair users need clear floor space of at least 30" [760mm] wide by 48" [1220mm] long to use a station.

\_\_\_\_\_B. There is knee clearance of 19" [485mm] deep X 27" [685mm] high x 30" [760mm] wide.

\_\_\_\_\_C. The controls at the stations are reachable by people who are short or seated. Controls, at the highest position, can be no higher than 48" [1220mm] above the ground. If a barrier obstructs the controls, they can be no higher than 42" [1065mm] above the barrier.

\_\_\_\_\_D. The controls are not difficult to use. Controls must require use by only one hand, no more than 5 pounds of force, and no pinching, grasping, and twisting to operate.

\_\_\_\_\_E. The control buttons are large enough. Buttons should be at least 3/4" [19mm] at the smallest diameter.

\_\_\_\_\_F. The interactive exhibits are captioned (including instructions for use) for those who cannot hear narration or instruction.

\_\_\_\_\_G. Instructions for the interactive are easy to understand.

\_\_\_\_\_H. Audiovisuals are to be captioned if they contain speech or other audio information necessary for the comprehension of the content.

\_\_\_\_\_I. Audio presentations are not loud or located near each other so that they conflict with each other or provide distracting background noise.

\_\_\_\_\_J. Audio-only presentations have provided a transcript of the narration within the exhibit space.

## **Public Programming Spaces in Exhibits**

\_\_\_\_\_A. Assistive listening systems are available, the assistive listening system symbol is displayed and directions for obtaining the equipment are shown at the exhibit entrance.

\_\_\_\_\_B. The video / multimedia presentation is captioned. The video / presentation is recommended to be shown with the captioning open, regardless of the anticipated audience.

\_\_\_\_\_C. The presentation/exhibit is audio described. (36 CFR Part 1194) The audio description symbol is displayed to indicate its availability. Appropriate equipment for accessing the audio description is available on site, and directions for obtaining the equipment are shown at the exhibit entrance.

\_\_\_\_\_D. There are locations for seating for wheelchair users (minimum 30" [760mm] wide by 48" [1220mm] long), and there are signs to indicate the

locations. Required number of seating locations is listed in Appendix B.

\_\_\_\_\_E. Designated wheelchair locations are dispersed to provide a variety of views comparable to those offered in fixed seat locations.

\_\_\_\_\_F. Locations for wheelchair users are next to spaces with seats.

\_\_\_\_\_G. One percent of the total seats (no fewer than one seat) are available with removable or no armrests. These seats are located on the aisle.

\_\_\_\_\_H. If there is a raised stage designated for audience and staff involvement, it must be accessible from both the audience level and behind stage with the following characteristics:

\_\_\_\_\_1. There is a ramp that meets all access requirements up to the stage.

\_\_\_\_\_2. There is enough maneuvering room on the stage for a wheelchair user.

\_\_\_\_\_3. There is a detectable warning at the edge of the stage (e.g., railing, color strip, detectable surface change).

## **Emergency Egress**

\_\_\_\_\_A. Emergency routes out of the exhibit are accessible paths of travel (i.e., free of changes in level, sufficient width and light level, accessible doors and hardware, accessible signs directing to the exits).

\_\_\_\_\_B. The accessible paths of travel to the emergency egress are indicated by direction signs including the International Symbol of Accessibility (this ISA is the wheelchair symbol)

\_\_\_\_\_C. Emergency routes connect directly to accessible routes within the museum.

\_\_\_\_\_D. Emergency exits are obvious and clearly marked as such.

\_\_\_\_\_E. There are the required number and configuration of visual fire alarms within the exhibit space.

\_\_\_\_\_F. Information on emergency egress (i.e., floor plans indicating accessible egress) is available to visitors.

\_\_\_\_\_G. The information on emergency egress is also provided on the audio described tour medium.

## APPENDIX A

### Slab Serif, Serif and Sans Serif Fonts

#### Slab serif

Sort of a cross between sans serif (see below) and serif fonts, they are very similar to serif fonts, except that the serifs are thick slabs. Examples include Litho Antique.

Slab serifs present a feeling of strength and foundation. Because of their design, slab serifs are wonderfully legible even in poor printing conditions. Great for headlines too.

Note that Courier New, a font used extensively in text editors, is in fact a slab serif font.

#### Serif font – Times New Roman

#### **This is a serif font**

#### Sans serif

No serifs. The best example of a sans-serif font is Arial (Helvetica on the Mac). Also Verdana and Futura. Very legible fonts, useful in headings and posters, because they are easily visible from a distance. Not a very good idea for lots of printed text, because the lack of serifs make them less readable than serif fonts. Paradoxically, the opposite is true on screen, where sans-serif fonts tend to be easier to read, since the letterforms are simpler and easier to represent on a pixilated display (especially on older LCD panels).

#### Sans serif font (font is Futura Light)

Sans serifs are often used to present a contemporary feel. They also make great headlines, especially when paired with a serif font, such as Times New Roman, for the body copy.

## APPENDIX B

|  |  |
|--|--|
| <b>Capacity of seating<br/>in assembly areas</b> | <b>Number of required<br/>wheelchair locations</b> |
|--|--|

|             |                                     |
|-------------|-------------------------------------|
| 4 to 25     | 1                                   |
| 26 to 50    | 2                                   |
| 50 to 75    | 3                                   |
| 76 to 100   | 4                                   |
| 101 to 150  | 5                                   |
| 151 to 200  | 6                                   |
| 201 to 300  | 7                                   |
| 301 to 400  | 8                                   |
| 401 to 500  | 9                                   |
| 501 to 1000 | 2 percent of total                  |
| Over 1000   | 20 plus 1 for each<br>100 over 1000 |