

Figure 79—This railing is safe, meets code requirements, and provides a great view, even when you look through the rails.

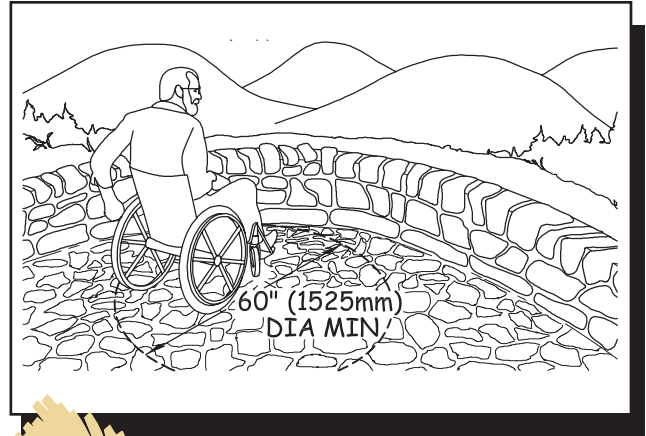


Figure 81—The requirements for turning space at a viewing area.



Figure 80—Caution: railings with horizontal rails make an inviting ladder for small children.

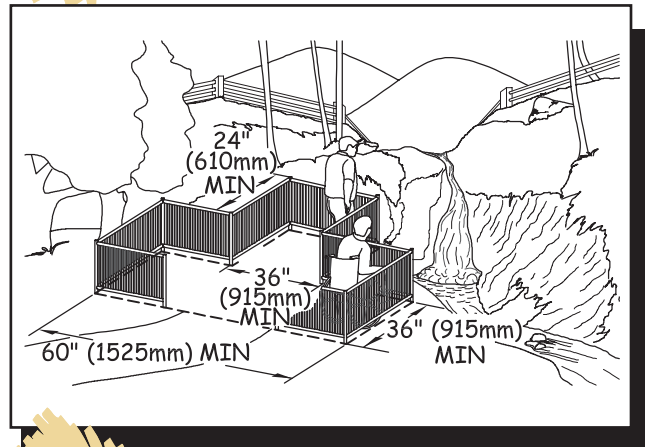


Figure 82—The requirements for a “T” turning space at a viewing area.

At least one turning space at least 60 inches (1,525 millimeters) in diameter (figure 81) or “T” shaped with a minimum 60- by 36-inch (1,525- by 915-millimeter) “arm” and a minimum 36-inch- (915-millimeter-) wide by 24-inch- (610-millimeter-) long “base” (figure 82) must be provided at each accessible viewing area. This requirement is the same as ABAAS section 304.3. This space allows someone using a wheelchair or other assistive device to approach and move about the viewing area. The slope must not exceed 1:50 (2 percent) in any direction, but may be up to 1:33 (3 percent) in any direction

where required for proper drainage. The surface should be firm and stable and of a material that is appropriate to the setting and level of development. Exemptions are allowed from slope or surface provisions where a condition for departure exists.

**Telescopes and Periscopes**—Viewing areas are sometimes equipped with mounted telescopes or periscopes to provide the visitor with a closer view of a point of interest. If one telescope or periscope is provided in a recreation site, it must meet the requirements explained below and be usable from both standing and seated positions. If several are provided, at least 20 percent of them must comply with the provisions of this section.

Accessible telescopes and periscopes must be connected to an ORAR. There is no exception to the ORAR requirement because telescopes and periscopes aren't provided in GFAs.

Controls and operating mechanisms for accessible telescopes and periscopes must comply with the provisions for reach ranges and operability specified in ABAAS sections 308 and 309 and explained in *Reach Ranges and Operability Requirements*. The eyepiece of an accessible telescope or periscope must be usable from a seated position for viewing each point of interest. Many existing telescopes and periscopes are only usable from a standing position. Requiring the eyepieces of accessible telescopes and periscopes to be usable from a seated position will provide the widest range of viewing opportunities not only for seated individuals, but also for children and people of short stature. Alternatives for meeting this requirement include an adjustable scope mount, a swivel seat, or installation of duplicate scopes mounted at different heights. Figure 83 shows one way to configure an accessible telescope area.

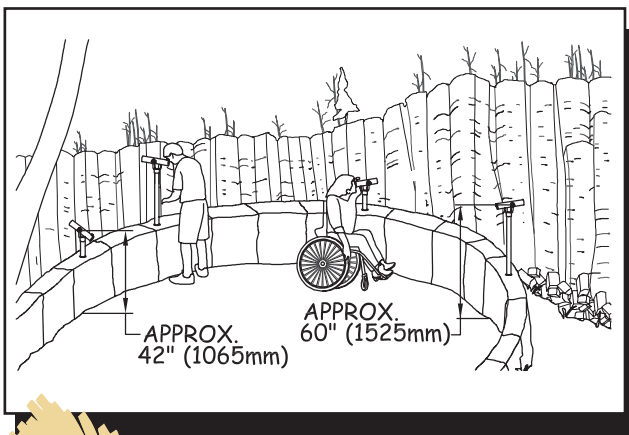


Figure 83—The requirements for telescopes and periscopes.

Turning space must be provided at all accessible telescopes and periscopes so that someone using a wheelchair or other assistive device can approach and move around them. This maneuvering space must be at least

60 inches (1,525 millimeters) in diameter (see figure 81) or “T” shaped with a minimum 60- by 36-inch (1,525- by 915-millimeter) “arm” and a minimum 36-inch- (915-millimeter-) wide by 24-inch- (610-millimeter-) long “base” (figure 82). This requirement is the same as ABAAS section 304.3.

The slope of the maneuvering space can't exceed 1:50 (2 percent). However, a slope of up to 1:33 (3 percent) in any direction is allowed where required for proper drainage. The surface of the maneuvering space must be firm and stable, and made from a material that is appropriate to the level of development and setting.

**Storage Facilities for Assistive Devices**—Storage for assistive devices is required when individuals using a wheelchair or other assistive device must transfer to another device or vehicle to participate in the services or programs offered at a recreation site. For instance, at ski areas, people who use wheelchairs typically transfer to some type of adaptive ski equipment. They need to store their wheelchairs safely while they're out skiing. Each storage facility for assistive devices such as wheelchairs must meet the requirements explained below, and must be connected to the other major features of the recreation area by an ORAR.

Storage facilities designed for assistive devices must be at least 38 inches (965 millimeters) high, at least 28 inches (710 millimeters) wide, and at least 40 inches (1,015 millimeters) long. A clear floor or ground space that is 30 by 48 inches (760 by 1,220 millimeters) and positioned for a side approach must be provided in compliance with ABAAS section 305.3. The slope of this clear space can't exceed 1:33 (3 percent) in any direction, and the surface must be firm, stable, and made from a material that is appropriate to the setting and level of development. Compliance with the surface provision isn't mandatory if a condition for departure exists.

Controls and operating mechanisms must comply with the provisions for reach ranges and operability requirements specified in ABAAS sections 308 and 309 and explained in *Reach Ranges and Operability Requirements*.

**Pit Toilets in General Forest Areas**—Generally, pit toilets are located in remote, undeveloped areas. They are provided primarily for resource protection, rather than for visitor convenience and comfort. Pit toilets are primitive outhouses that may consist simply of a hole dug in the ground covered by a toilet riser (figure 84). The pit toilet riser may or may not be surrounded by walls and may or may not have a roof. Pit toilets may be permanent installations or they may be moved from one location to another as the hole is filled or the area has become overused. Waste disposal in pit toilets may be directly into the ground (pit) or may include moldering or composting processes.



Figure 84—A fiberglass riser for a pit toilet in the Boundary Waters Canoe Area.

Designers should not confuse pit toilets provided in general forest areas (GFAs) with toilets provided in recreation sites. Pit toilets are provided only in general forest areas and are NEVER appropriate in a recreation site with a Forest Service recreation site development level of 3 or higher.



#### DESIGN TIP—

***It's not a pit toilet if it's not in a general forest area.***

Vault toilets, flush toilets, and composting toilets are all common in recreation sites. They are not considered pit toilets and they must meet the ABAAS requirements for toilet buildings. Regardless of the waste disposal system or design of the building, toilet buildings that aren't in GFAs and that have one riser must comply with section 603 of the ABAAS requirements for toilet and bathing rooms. Toilet buildings that aren't in GFAs and that have multiple risers must comply with the requirements of section 604 of the ABAAS. Designers should be careful not to confuse the requirements for toilet stalls with those for single riser toilet rooms. Each toilet building in a recreation site also must comply with the requirements for grab bars, controls, and dispensers.

If pit toilets are provided in GFAs, each one must meet the requirements described below. Pit toilets in GFAs don't have to be connected to ORARs.

The design of pit toilets varies widely depending on the setting, the amount of expected use, and the system used to manage the waste. If an accessible pit toilet has walls, a floor, a door, or a roof, these components must comply with the appropriate provisions of the ABAAS. If the pit toilet has a riser and toilet seat, the total height of that seat and the riser it rests on must be 17 to 19 inches (430 to 485 millimeters) above the ground or floor.

If there are sturdy walls around the pit toilet riser, standard riser dimensions, placement, and grab bars are required as shown in ABAAS sections 603, 604, and 609. Grab bar size, strength, finish, and position requirements are explained in *Grab Bars*. Grab bar location requirements for pit toilets are explained below.

Grab bars must comply with the reach ranges required in ABAAS section 308 and explained in Reach Ranges and Operability Requirements. As required in ABAAS section 604.5, grab bars for toilets must be installed in a horizontal position, 33 to 36 inches (840 to 915 millimeters) above the finished floor, measured to the top of the gripping surface.

The grab bar beside the riser must be at least 42 inches (1,065 millimeters) long, located no more than 12 inches (305 millimeters) from the wall behind the toilet, and extend at least 54 inches (1,370 millimeters) from the rear wall. The grab bar behind the riser must be at least 36 inches (915 millimeters) long and extend from the centerline of the water closet at least 12 inches (305 millimeters) on the side closest to the side wall grab bar and at least 24 inches (610 millimeters) on the other side (figure 85).

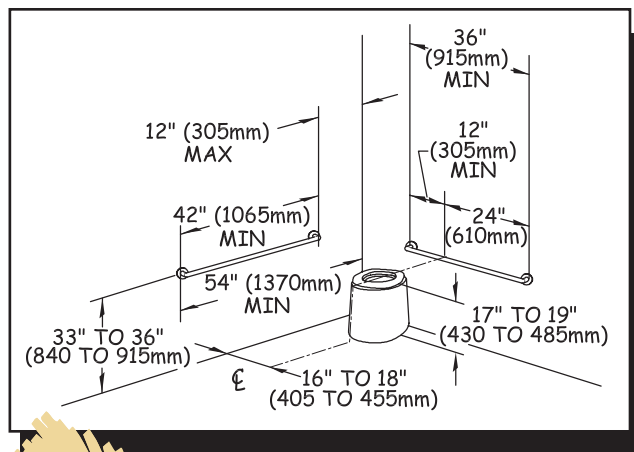


Figure 85—The requirements for grab bars in pit toilets.

For pit toilets enclosed by walls, the back of the riser must be against the wall behind the riser. A clear floor space that is at least 60 inches (1,525 millimeters) wide and 56 inches (1,420 millimeters) deep is required around the toilet. If there is a condition for departure, the space can be reduced to 56 by 48 inches (1,420 by 1,220 millimeters).

Of the required width of clear floor space, only 16 to 18 inches (405 to 455 millimeters) can be on one side of the centerline of the riser, and the rest must be on the other side. Turning space of at least 60 inches (1,525 millimeters) in diameter or “T” shaped with a minimum 60- by 36-inch (1,525- by 915-millimeter) “arm” and a minimum 36-inch- (915-millimeter-) wide by 24-inch- (610-millimeter-) long “base” is also required. Portions of the turning space may overlap the toilet clear floor space or be located directly outside the entrance (figure 86).

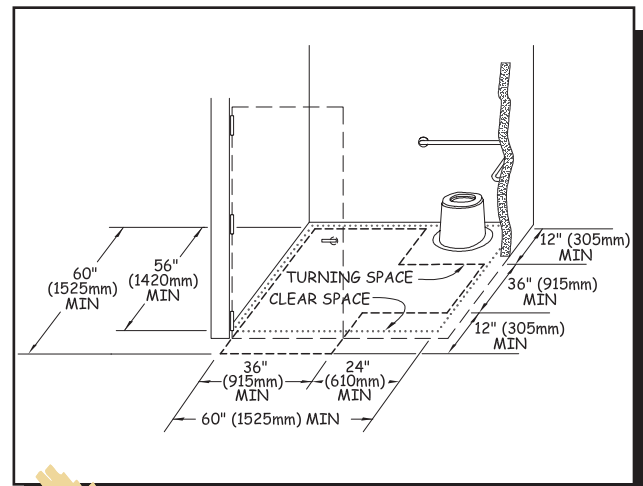


Figure 86—The requirements for a “T” turning space in a pit toilet.

If walls are provided, doorways or wall openings that provide entrance to the toilet must have a minimum clear width of 32 inches (815 millimeters), in compliance with ABAAS section 404.2.3. Door swings can’t obstruct the clear floor space inside the pit toilet. Doors that open out or slide are space-efficient ways to provide the required interior clear space. Door hardware such as handles, pulls, latches, and locks must comply with the provisions for reach ranges and operability specified in ABAAS sections 308 and 309 and explained in *Reach Ranges and Operability Requirements*.