

State of Hawaii

Hawaii Outdoor Developed Areas Accessibility Guidelines

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Trails
Camping and Picnic Facilities
Viewing Areas
Beach Access

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CHAPTER H1: APPLICATION AND ADMINISTRATION

H101 Purpose

This State of Hawaii Outdoor Developed Areas Accessibility Guidelines (HODAAG) sets guidelines for accessibility to camping areas, picnic areas, trails and viewing areas by persons with disabilities at designated facilities of the State of Hawaii and its Political Subdivisions.

These specifications are to be applied during the design, construction and alteration of public buildings, facilities and sites to the extent required under Hawaii Revised Statutes (HRS) §103-50. These specifications are in addition to sections of the Americans with Disabilities Act Accessibility Guidelines (ADAAG), 36 CFR part 1191. For the printing purposes, the technical provisions of the ADAAG were referenced by section number and figure number rather than be duplicated in this document. ADAAG sections not referenced in this document are intended to apply without modification or addition.

Accessibility Guidelines for shared-use paths are being developed by the U.S. Access Board and are not intended to be covered by these Guidelines. Shared use paths differ from sidewalks and trails in that they are designed for a variety of users and serve both recreational and transportation purposes. Shared-use paths may be located within a highway right-of-way, provided along a riverbank, or established over natural terrain within an independent right-of-way.

H106.5 Definitions

H106.5 Defined Terms

The following terms shall, for the purpose of these specifications, have the meaning indicated in this section.

Accessible Route. A continuous, unobstructed path that connects all accessible elements and spaces of a building or facility. Interior accessible routes may include corridors, floors, ramps, elevators, lifts, and clear floor space at fixtures. Exterior accessible routes may include accessible parking space access aisles, curb ramps, crosswalks at vehicular ways, walks, ramps, and platform lifts.

Beach. An area covered with sand or small rocks that is next to an ocean or lake.

Beach Access Route. A beach access route is a continuous, unobstructed path that crosses the surface of the beach that allows pedestrians to participate in beach related activities.

Boards. Boards include, but are not limited to, wood, plastic, metal, and composite products.

Camp Shelter. A partially enclosed structure that provides campers and hikers cover from weather and that does not contain plumbing fixtures or kitchen appliances. Camp shelters are not transient lodging facilities or residential dwelling units.

Camping Facility. A site, or portion of a site, developed for outdoor recreational purposes that contains camping units.

Camping Unit. An outdoor space in a camping facility used for camping that contains outdoor constructed features, parking spaces for recreational vehicles or other vehicles, tent pads or tent platforms, or camp shelters.

Check-In Station. An area or element used by hikers, hunters, visitors or campers to check-in at an outdoor recreation facility. Check-in stations may be stand-alone elements or may be part of or contained within other facilities or constructed features such as weather shelters and trailheads.

Circulation Path. A designed exterior or interior way of passage for pedestrians.

Common Use. Interior or exterior circulation paths, rooms, spaces, or elements that are not for public use and are made available for the shared use of two or more people.

Dump Station. A properly designed and constructed facility intended to receive the discharge of wastewater from any holding tank or similar device installed in any recreational vehicle, and having a means of discharging the contents, in an acceptable manner, to an approved wastewater disposal system.

Facility. All or any portion of buildings, structures, site improvements, complexes, roads, walks, passageways, parking lots, or other real or personal property located on a site.

Outdoor Constructed Features. Check-in stations, weather shelters, picnic tables, fire rings, grills, fireplaces, wood stoves, trash and recycling receptacles, water hydrants, utility and sewage hookups, outdoor rinsing showers, benches, and viewing scopes provided at outdoor recreation facilities.

Outdoor Recreation Access Routes. An outdoor recreation access route (ORAR) is a continuous, unobstructed path that is intended for pedestrian use and that connects accessible camping units, picnic units, accessible viewing areas and trailheads with outdoor constructed features only. ORARs cannot be used at other types of facilities covered by the ADAAG, such as educational campuses, office parks, or theme parks.

Outdoor Recreation Facility. All or any portion of buildings, structures, site improvements or complexes that are covered by the Outdoor Developed Area Accessibility Guidelines. Outdoor Recreation Facilities include camping facilities, picnic facilities, viewing areas, trails and beaches.

Advisory: Constructed buildings, facilities and sites such as boating and fishing facilities, swimming pools, play areas, sports arenas, miniature golf courses, and amusement parks, which are referred to as “recreation facilities” are addressed in Chapter 10 of the 2004 ADAAG.

Pedestrian Access Routes. Often called a sidewalk, pedestrian access routes (PAR) are located in a public right-of-way and typically are parallel to a roadway. Sidewalks are designed for pedestrian transportation and are not designed for bicycles or other recreational purposes.

Pedestrian Trails. A trail typically is not parallel to a roadway and is designed primarily for recreational purposes. Trails are not necessarily part of an infrastructure connecting elements or facilities, but typically are designed to provide a recreational experience.

Trails may also be used by multiple types of users, but most are not designed for bicycles, nor do they have a transportation purpose.

Picnic Facility. A site, or portion of a site, developed for outdoor recreational purposes that contain picnic units.

Picnic Unit. An outdoor space in a picnic facility used for picnicking that contains outdoor constructed features.

Public Use. Interior or exterior rooms, spaces, or elements that are made available to the public. Public use may be provided at a building or facility that is privately or publicly owned.

Shared Use Path. A shared-use path is typically part of a transportation system in a public right-of-way that provides off-road routes for a variety of users. Where users may include bicyclists, skaters, or equestrians; shared-use paths typically are designed to serve pedestrians, including people using mobility devices such as manual or motorized wheelchairs.

Tent Pad. A clearly defined area, large enough to accommodate a tent, the required maneuvering area and can accommodate the use of tent stakes or other means for securing tents.

Tent Platform. A grade level or above grade level constructed area that provides a solid, level floor for a tent.

Trail. A designated pedestrian route or system of routes (interconnected) developed primarily for outdoor recreational purposes. A pedestrian route developed primarily to connect elements, spaces, or facilities within a site is not a trail.

Trail Identification Sign. Signs that indicate the trail name and management jurisdiction.

Trail Information Sign. Signs that provide information about the accessible characteristics of a trail.

Trailhead. An outdoor space that is designated by an entity responsible for administering or maintaining a trail to serve as an access point to the trail. The junction of two or more trails or the undeveloped junction of a trail and a road is not a trailhead.

Viewing Area. An outdoor space developed for viewing landscapes, wildlife, or other points of interest.

Weather Shelter. A structure typically enclosed on no more than three sides, with a roof or overhang. Weather shelters are often located on trails or ORARs. Weather shelters are used to take temporary shelter from inclement weather conditions.

Water Hydrant. An outdoor device for dispensing water, including water faucets on posts and hand pumps.

Water Spout. The opening on a water hydrant that dispenses the water.

CHAPTER H2: SCOPING REQUIREMENTS

H201 Application

H201.4.1 State and County agencies shall document the basis for not fully complying with a specific provision in H1017 or H1018 on a portion of a trail or beach access route based on Exception 1 in H1017 or Exception 1 in H1018, and shall maintain the documentation with the records for the trail or beach project. State and County agencies shall notify the Disability and Communication Access Board (DCAB) if an entire trail is exempted from complying with H1017 based on Exception 2 in H1017.1, and if a beach access route is not provided based on Exception 2 in H1018.1.

Advisory H201.4.1 Documentation and Notification When Exceptions Used for Trails. Forms for notifying the Disability and Communication Access Board (DCAB) if an entire trail is exempted from complying with H1017 based on Exception 2 in H1017.1, and if a beach access route is not provided based on Exception 2 in H1018.1 are available from DCAB.

H202 Existing Buildings and Facilities

In addition to the requirements of ADAAG 202, the following shall apply for HODAAG.

H202.3 Alterations.

EXCEPTIONS:

1. Unless required by ADAAG 202.4, where elements or spaces are altered and the circulation path to the altered element or space is not altered, an ORAR shall not be required.
2. In alterations, where compliance with applicable requirements is not practicable, the alteration shall comply with the requirements to the maximum extent feasible.
3. Where elements or spaces are altered in an outdoor recreation facility and the circulation path to the altered element or space is not altered, the circulation path shall not be required to comply with H1016.
4. Where individual outdoor constructed features are altered and the ground surface is not altered, the clear ground space shall not be required to comply with surface and slope requirements.
5. In alterations, when an entity determines that a condition in H1019 does not permit full compliance with a specific provision in H1011, the clear ground space shall comply with the provision to the extent practicable.

H202.3.1 Prohibited Reduction in Access. An alteration that decreases or has the effect of decreasing the accessibility of an outdoor recreation facility below the requirements for new construction at the time of the alteration is prohibited.

H202.3.2 Extent of Application. An alteration of an existing element, space, or area of an outdoor recreation facility shall not impose a requirement for accessibility greater than required for new construction.

H202.4 Alterations Affecting Primary Function Areas.

EXCEPTIONS:

1. Camping facilities, picnic facilities, viewing areas, trailheads, and trails shall not be required to comply with ADAAG 202.4.

H206 Accessible Routes

In addition to the requirements of ADAAG 206, the following shall apply for HODAAG.

H206.1 General.

EXCEPTIONS:

1. Accessible routes shall not be required where ORARs are provided at camping facilities in accordance with H244.5, picnic facilities in accordance with H245.4, viewing areas in accordance with H246.4, or trailheads in accordance with H247.3.2.
2. Accessible routes shall not be required where camping facilities, picnic facilities, viewing areas, or outdoor constructed features are provided on trails.

H212 Kitchens, Kitchenettes, and Sinks

In addition to the requirements of ADAAG 212, the following shall apply for HODAAG.

H212.3 Sinks.

EXCEPTIONS:

1. In camping facilities and picnic facilities, sinks shall not be required to comply with ADAAG 212.3 where a cooktop or conventional range is not provided.

H213 Toilet Facilities and Bathing Facilities

In addition to the requirements of ADAAG 213, the following shall apply for HODAAG.

H213.1 General.

EXCEPTION: Pit toilets provided on trails and in camping facilities shall not be required to comply with ADAAG 213.

Advisory H213.1 General. A pit toilet is a primitive outhouse consisting of a toilet riser over a hole dug into the ground or receptacle to receive and naturally decompose human waste.

H216 Signs

In addition to the requirements of ADAAG 216, the following shall apply for HODAAG.

H216.13 Trailhead Signs.

EXCEPTION: Trail identification and trail information signs are not required to comply with ADAAG 216 where trail information signs are provided at trailheads

on newly constructed or altered trails designed for use by hikers or pedestrians; the signs shall comply with H1017.10.

Advisory H216.13 Trailhead Signs. New trail information signs are required to comply with H1017.10 regardless of whether the newly constructed or altered trails comply with H1017.

H244 Camping Facilities

H244.1 General. Camping facilities, other than camping facilities on trails, shall comply with H244.

Advisory H244.1 General. Camping facilities on trails are addressed in H247.4.1.

H244.2 Camping Units with Mobility Features. Camping facilities shall provide camping units with mobility features complying with H244.2 in accordance with Table H244.2. Where a camping facility provides different types of camping units, Table H244.2 shall apply to each type of camping unit provided.

Table H244.2 Camping Units with Mobility Features

Total Number of Camping Units Provided in Camping Facility	Minimum Number of Camping Units with Mobility Features Required
1	1
2 to 25	2
26 to 50	3
51 to 75	4
76 to 100	5
101 to 150	7
151 to 200	8
201 and over	8, plus 2 percent of the number over 200

Advisory H244.2 Camping Units with Mobility Features. Camping units for recreational vehicles only, camping units for tent camping only, and camping units with camp shelters are different types of camping units.

Camping units with mobility features are not required to be identified by signs. Entities should provide information on the location of camping units with mobility features on websites, in brochures, and at bulletin boards or information kiosks at the camping facility. Where entities operate reservation systems for camping units or assign camping units upon arrival, entities should establish policies to ensure that camping units with mobility features are available for individuals with disabilities until all the camping units are occupied.

H244.2.1 Alterations and Additions. Where camping units are altered or added, the requirements of H244.2 shall apply only to the camping units that are

altered or added until the number of camping units with mobility features complies with the minimum number required in Table H244.2.

EXCEPTION: Where an entity is implementing a transition plan for program accessibility that designates specific camping units to provide mobility features complying with H244.2, the entity shall not be required to comply with H244.2 when altering individual elements within camping units that are not designated to provide mobility features complying with H244.2 and the required number of camping units with mobility features, under the transition plan is provided.

Advisory H244.2.1 Alterations and Additions Exception. When all the elements within a camping unit are altered, the altered camping unit is required to comply with H244.2 unless the minimum number of camping units with mobility features required in Table H244.2 is provided.

H244.2.2 Dispersion. Camping units required to provide mobility features complying with H244.2 shall provide choices of camping units comparable to, and integrated with, those available to others.

H244.2.3 Elements Within Camping Units with Mobility Features. Elements within camping units required to provide mobility features shall comply with H244.2.3.

H244.2.3.1 Outdoor Constructed Features. Where provided, at least one of each type of outdoor constructed features shall comply with H1011. Where more than one of the same type of outdoor constructed features is provided, at least two of the same type of outdoor constructed features shall comply with H1011.

H244.2.3.2 Parking Spaces. Where provided, parking spaces shall comply with H244.2.3.2.

H244.2.3.2.1 Recreational Vehicles. Where parking spaces are provided for recreational vehicles, at least one parking space shall comply with H1012.2, H1012.4, and H1012.5. Where more than one parking space is provided for recreational vehicles, at least two parking spaces shall comply with H1012.2, H1012.4, and H1012.5.

H244.2.3.2.2 Vehicles Other Than Recreational Vehicles. Where parking spaces are provided for vehicles other than recreational vehicles, at least one parking space shall comply with H1012.3, H1012.4, and H1012.5. Where more than one parking space is provided for a vehicle other than a recreational vehicle, at least two parking spaces shall comply with H1012.3, H1012.4, and H1012.5.

H244.2.3.3 Tent Pads and Tent Platforms. Where provided, at least one tent pad and tent platform shall comply with H1013. Where more than one tent pad and tent platform is provided, at least two tent pads and tent platforms shall comply with H1013.

H244.2.3.4 Camp Shelters. Where provided, at least one camp shelter shall comply with H1014. Where more than one camp shelter is provided, at least two camp shelters shall comply with H1014.

H244.3 Outdoor Constructed Features in Common Use and Public Use

Areas. Where provided in common use and public use areas that serve camping units with mobility features, at least 20 percent, but not less than one, of each type of outdoor constructed feature provided at each location shall comply with H1011.

EXCEPTION: Where provided, each Check-In Station to comply with H1011 and each Weather Shelter to comply with H1011.

H244.4 Pull-up Spaces for Recreational Vehicles at Dump Stations. Where provided, pull-up spaces for recreational vehicles at dump stations shall comply with H1012.2, H1012.4, and H1012.5.

H244.5 Outdoor Recreation Access Routes (ORAR). Camping facilities shall provide ORARs complying with H1016 in accordance with H244.5.

Advisory H244.5 Outdoor Recreation Access Routes (ORAR). In alterations to existing camping facilities, there are exceptions in H1016.1 that can be used where conditions specified in H1019 apply.

H244.5.1 Routes Within Camping Units with Mobility Features. At least one ORAR shall connect accessible elements, spaces, and facilities provided within camping units with mobility features.

H244.5.2 Routes to and Within Common Use and Public Use

Areas. Common use and public use areas serving camping units with mobility features shall provide ORARs in accordance with H244.5.2.

EXCEPTION: ORARs shall not be required to connect camping units with mobility features and recreational vehicle dump stations where a pull-up space complying with H1012.2, H1012.4, and H1012.5 is provided at the dump station for recreational vehicles.

H244.5.2.1 Routes to Common Use and Public Use Areas. At least one ORAR shall connect each camping unit with mobility features with common use and public use areas serving the unit.

H244.5.2.2 Routes Within Common Use and Public Use Areas. At least one ORAR shall connect accessible elements, spaces, and facilities provided within common use and public use areas serving camping units with mobility features.

H244.5.3 Routes to Adjacent Recreation Facilities. Where a circulation path connects camping facilities and adjacent recreation facilities, at least one ORAR shall connect camping units with mobility features to an accessible route serving the adjacent recreation facilities.

Advisory H244.5.3 Routes to Adjacent Recreation Facilities. H244.5.3 does not modify the accessible route requirements in ADAAG 206 that apply to recreation facilities covered by the 2004 ADAAG. (i.e. Boating and fishing facilities, play areas, swimming pools, etc.)

H244.5.4 Location. ORARs required by H244.5.2 and H244.5.3 shall coincide with or be located in the same area as general circulation paths.

Advisory H244.5.4 Location. Where a vehicular way serves as the general circulation path for pedestrians at a camping facility, the ORAR can be provided within the vehicular way.

H245 Picnic Facilities

H245.1 General. Picnic facilities, other than picnic facilities on trails, shall comply with H245.

Advisory H245.1 General. Picnic facilities on trails are addressed in H247.4.2.

H245.2 Picnic Units with Mobility Features. Picnic facilities shall provide picnic units with mobility features in accordance with H245.2.

Advisory H245.2 Picnic Units with Mobility Features. Picnic units with mobility features are not required to be identified by signs. Entities should provide information on the location of picnic units with mobility features on websites, in brochures, and at bulletin boards or information kiosks at the picnic facility.

H245.2.1 Picnic Facilities with Two or Fewer Picnic Units. Where picnic facilities contain two or fewer picnic units, each picnic unit shall provide mobility features complying with H245.2.

H245.2.2 Picnic Facilities with More Than Two Picnic Units. Where picnic facilities contain more than two picnic units, at least 20 percent, but not less than two, of the picnic units shall provide mobility features complying with H245.2.

H245.2.3 Alterations and Additions. Where picnic units are altered or added, the requirements of H245.2 shall apply only to the picnic units that are altered or added until the number of picnic units with mobility features complies with the minimum number required in H245.2.1 or H245.2.2.

EXCEPTION: Where an entity is implementing a transition plan for program accessibility that designates specific picnic units to provide mobility features complying with H245.2, the entity shall not be required to comply with H245.2 when altering individual elements within picnic units that are not designated to provide mobility features complying with H245.2 and the required number of picnic units with mobility features, under the transition plan is provided

Advisory H245.2.3 Alterations and Additions Exception. When all the elements within a picnic unit are altered, the altered picnic unit is required to comply with H245.2 unless the minimum number of picnic units with mobility features required in H245.2.1 or H245.2.2 is provided.

H245.2.4 Dispersion. Picnic units required to provide mobility features complying with H245.2 shall provide choices of picnic units comparable to, and integrated with, those available to others.

H245.2.5 Elements Within Picnic Units with Mobility Features. Elements within picnic units required to provide mobility features shall comply with H245.2.5.

H245.2.5.1 Outdoor Constructed Features. Where provided, at least one of each type of outdoor constructed feature shall comply with H1011. Where more than one of the same type of outdoor constructed feature is provided, at least two of the same type of outdoor constructed features shall comply with H1011.

H245.2.5.2 Parking Spaces. Where provided, at least one parking space shall comply with H1012.3, H1012.4, and H1012.5. Where more than one parking space is provided, at least two parking spaces shall comply with H1012.3, H1012.4, and H1012.5.

H245.3 Outdoor Constructed Features in Common Use and Public Use

Areas. Where provided in common use and public use areas that serve picnic units with mobility features, at least 20 percent, but not less than one, of each type of outdoor constructed feature provided at each location shall comply with H1011.

EXCEPTION: Where provided, each Check-In Station to comply with H1011 and each Weather Shelter to comply with H1011.

H245.4 Outdoor Recreation Access Routes (ORAR). Picnic facilities shall provide ORARs complying with H1016 in accordance with H245.4.

Advisory H245.4. Outdoor Recreation Access Routes (ORAR). In alterations to existing picnic facilities, there are exceptions in H1016.1 that can be used where conditions specified in H1019 apply.

H245.4.1 Routes Within Picnic Units with Mobility Features. At least one ORAR shall connect accessible elements, spaces, and facilities provided within picnic units with mobility features.

H245.4.2 Routes to and Within Common Use and Public Use

Areas. Common use and public use areas serving picnic units with mobility features shall provide ORARs in accordance with H245.4.2.

H245.4.2.1 Routes to Common Use and Public Use Areas. At least one ORAR shall connect each picnic unit with mobility features with common use and public use areas serving that unit.

H245.4.2.2 Routes Within Common Use and Public Use Areas. At least one ORAR shall connect accessible elements, spaces, and facilities provided within common use and public use areas serving picnic units with mobility features.

H245.4.3 Routes to Adjacent Recreation Facilities. Where a circulation path connects picnic facilities and adjacent recreation facilities, at least one ORAR shall connect picnic units with mobility features to an accessible route serving the adjacent recreation facilities.

Advisory H245.4.3 Adjacent Recreation Facilities. H245.4.3 does not modify the accessible route requirements in ADAAG 206 that apply to adjacent recreation facilities covered by the 2004 ADAAG. (i.e. Boating and fishing facilities, play areas, swimming pools, etc.)

H245.4.4 Location. ORARs required by H245.4.2 and H245.4.3 shall coincide with or be located in the same area as general circulation paths.

Advisory H245.4.4 Location. Where a vehicular way serves as the general circulation path for pedestrians at a picnic facility, the ORAR can be provided within the vehicular way.

H246 Viewing Areas

H246.1 General. Viewing areas, other than viewing areas on trails, shall comply with H246.

Advisory H246.1 General. Viewing areas on trails are addressed in H247.4.3.

H246.2 Distinct Viewing Locations. Each distinct viewing location within a viewing area shall comply with H1015.

Advisory H246.2 Distinct Viewing Locations. Viewing areas can provide more than one distinct viewing location. For example, a viewing area can provide a distinct viewing location for observing a mountain range, and another distinct viewing location for observing a river. Distinct viewing locations within a viewing area can be designated by signs or other markers.

H246.3 Outdoor Constructed Features. Where provided within viewing areas, at least 20 percent, but not less than one, of each type of outdoor constructed feature shall comply with H1011.

H246.4 Outdoor Recreation Access Routes (ORAR). At least one ORAR complying with H1016 shall connect accessible parking spaces or other arrival points serving the viewing area with accessible elements, spaces, and facilities provided within the viewing area.

EXCEPTION: Viewing areas along trails are not required to be connected by an outdoor recreation access route.

Advisory H246.4. Outdoor Recreation Access Routes (ORAR). There are exceptions in H1016.1 that can be used where conditions specified in H1019 apply.

H247 Trails

H247.1 General. Where a trail is designed for use by hikers or pedestrians and directly connects to a trailhead or another trail that substantially meets the requirements in H1017, the trail shall comply with H1017.

Advisory H247.1 General. The Federal Trail Data Standards classify trails by their designed use and managed use. A trail has only one designed use that determines the design, construction, and maintenance parameters for the trail. A trail can have more than one managed use based on a management decision to allow other uses on the trail. Trails that have a designed use for hikers or pedestrians are required to comply with H1017. Trails that have a designed use for other than hikers or pedestrians are not required to comply with H1017.

A trail system may include a series of connecting trails. Only trails that directly connect to a trailhead or another trail that substantially meets the requirements in H1017 are required to comply with H1017.

H247.2 Existing Trails. Where the original design, function, or purpose of an existing trail is changed and the altered portion of the trail directly connects to a trailhead or another trail that substantially meets the requirements in H1017, the altered portion of the trail shall comply with H1017.

Advisory H247.2 Existing Trails. Routine or periodic maintenance activities that are performed to return an existing trail to the condition to which the trail was originally designed are not required to comply with H1017.

Maintenance on trails is the routine or periodic repair of existing trails or trail segments to restore them to their originally designed and built condition. Maintenance does not change the original design, purpose, intent, or function for which a trail is designed. Maintenance may include:

- Removing debris and vegetation, such as fallen trees or broken branches on the trail; clearing the trail of encroaching brush or grasses; and removing rock slides.
- Maintaining trail tread, such as filling ruts, reshaping a trail bed, repairing a trail surface or washout, installing riprap to retain cut and fill slopes, and constructing retaining walls or cribbing to support trail tread.
- Performing erosion control and drainage work, such as replacing or installing drainage dips or culverts.

Advisory H247.2 Existing Trails (continued).

- Repairing or replacing deteriorated, damaged, or vandalized trail or trailhead structures or parts of structures, including sections of bridges, boardwalks, information kiosks, fencing and railings; painting; and removing graffiti.

H247.3 Trailheads. Trailheads shall comply with H247.3.

Advisory H247.3 Trailheads. Trailhead information signs are addressed in H216.13.

H247.3.1 Outdoor Constructed Features. Where provided within trailheads, at least 20 percent, but not less than one, of each type of outdoor constructed feature shall comply with H1011.

EXCEPTION: Where provided, each Check-in Station to comply with H1011 and each Weather Shelter to comply with H1011.

H247.3.2 Outdoor Recreation Access Routes (ORAR). At least one ORAR complying with H1016 shall connect the following:

1. Accessible parking spaces or other arrival points serving the trailhead;
2. Starting point of the trail or trail system; and
3. Accessible elements, spaces, and facilities provided within the trailhead.

Advisory H247.3.2 Outdoor Recreation Access Routes (ORAR). In alterations to existing trailheads, there are exceptions in H1016.1 that can be used where conditions specified in H1019 apply.

H247.4 Trail Facilities. Where provided on trails, facilities shall comply with H247.4.

Advisory H247.4 Trail Facilities. Facilities are required to comply with H247.4 regardless of whether the trail complies with H1017. ORARs are not required at camping facilities, picnic facilities, or viewing areas provided on trails.

H247.4.1 Camping Facilities. Camping facilities provided on trails shall comply with H244.2 and H244.3.

H247.4.2 Picnic Facilities. Picnic facilities provided on trails shall comply with H245.2 and H245.3.

H247.4.3 Viewing Areas. Viewing areas provided on trails shall comply with H246.2 and H246.3.

H247.4.4 Routes. Routes that connect trails complying with H1017 to camping facilities, picnic facilities, viewing areas, pit toilets, and accessible elements provided within the facilities shall comply with H1017.

H247.4.4.1 Bridges. Where bridges are provided along trails that substantially comply with the technical requirements for trails, the bridges must be constructed to comply with H1017.

Advisory H247.4.4. Routes. Routes that connect trails that do not comply with H1017 to camping facilities, picnic facilities, viewing areas, pit toilets, and accessible elements provided within the facilities are not required to comply with H1017. An exception to H213.1 exempts pit toilets from the requirements for accessible toilet facilities.

H247.5 Outdoor Constructed Features. Where outdoor constructed features are provided on trails, other than within facilities specified in H247.4, at least 20 percent, but not less than one, of each type of outdoor constructed feature at each location shall comply with H1011.

EXCEPTION: Where provided, each Check-in Station to comply with H1011 and each Weather Shelter to comply with H1011.

H248 Beach Access Routes

H248.1 General. Beach access routes complying with H1018 shall be provided in accordance with H248.1. Beach access routes shall be permanent or removable.

EXCEPTION: Beach access routes shall not be required where pedestrian access to the beach is not permitted.

Advisory H248.1 General. There are exceptions in H1018.1 that can be used where conditions specified in H1019 apply. Removable beach access routes can be moved to a protected storage area during storms and other periods when the routes are subject to damage or loss.

H248.1.1 Facilities Serving Beaches. Beach access routes shall be provided in a number complying with H248.2 where the entity that administers or manages a beach constructs or alters any of the following facilities to serve the beach:

1. Circulation paths;
2. Parking facilities;
3. Toilet facilities; or
4. Bathing facilities.

EXCEPTION: The entity shall not be required to expend more than 20 percent of the costs of constructing or altering the facilities to provide beach access routes.

H248.1.2 Beach Nourishment. Beach access routes shall be provided in a number complying with H248.2 where the entity that administers or manages a beach undertakes a beach nourishment project.

EXCEPTION: The entity shall not be required to expend more than 20 percent of the costs of a beach nourishment project to provide beach access routes.

H248.2 Minimum Number. Where beach access routes are required by H248.1, at least one beach access route shall be provided for each 1/2 mile (0.8 km) of beach shoreline administered or managed by the entity.

EXCEPTION: The number of beach access routes shall not be required to exceed the number of pedestrian access points provided by the entity to a beach.

Advisory H248.2 Minimum Number Exception. Pedestrian access points to a beach include parking facilities that serve beaches, dune crossings, and stairways or ramps leading from boardwalks to the beach.

H248.3 Location. Beach access routes shall coincide with or be located in the same area as pedestrian access points to the beach.

CHAPTER H6: PLUMBING ELEMENTS AND FACILITIES

H606 Lavatories and Sinks

In addition to the requirements of ADAAG 606, the following shall apply for HODAAG.

H606.2 Clear Floor Space

EXCEPTION:

1. A parallel approach complying with ADAAG 305 shall be permitted to a sink in outdoor developed areas. The centerline of the clear floor space shall align with the centerline of the bowl.

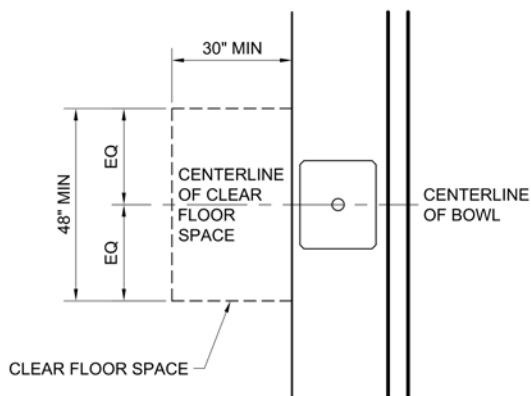


Figure H606.2, Exception 1
Clear Floor Space

H606.5 Exposed Pipes and Surfaces

EXCEPTION:

1. Where a parallel approach is provided to sinks in outdoor developed areas where hot water is not provided, drain pipes under sinks shall not be required to be insulated or otherwise configured to protect against contact.

CHAPTER H10: OUTDOOR RECREATION FACILITIES

H1001.1 Scope. The provisions of Chapter 10 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

Advisory H1001.1 Scope. Unless otherwise modified or specifically addressed in Chapter 10, all other requirements in this document apply to the design and construction of outdoor recreation facilities.

The requirements in H1011 through H1019 apply only to public buildings, facilities or sites constructed or altered by State or County agencies or by private entities pursuant to Hawaii Revised Statutes (HRS) §103-50. See ADAAG 201.4. The requirements in H1011 and H1019 allow for limitations and other constraints posed by the existing outdoor environment.

H1011 Outdoor Constructed Features

H1011.1 General. All outdoor constructed features shall comply with H1011.2 and H1011.3. Outdoor constructed features specified in H1011.4 through H1011.9 shall comply with those provisions, as applicable.

Advisory H1011.1 General. The requirements in H1011 apply to outdoor constructed features provided within camping facilities, picnic facilities, viewing areas, and trailheads or on trails.

H1011.2 Clear Ground Space. A clear ground space complying with H1011.2 shall be provided at outdoor constructed features.

EXCEPTIONS:

1. Where individual outdoor constructed features are altered and the ground surface is not altered, the clear ground space shall not be required to comply with H1011.2.2 and H1011.2.3.
2. In alterations, when an entity determines that a condition in H1019 does not permit full compliance with a specific provision in H1011.2, the clear ground space shall comply with the provision to the extent practicable.

H1011.2.1 Size and Location. The size and location of the clear ground space shall be in accordance with Table H1011.2.1. Unless otherwise specified in Table H1011.2.1, one full unobstructed side of the clear ground space shall adjoin or overlap an ORAR or a trail, as applicable, or another clear ground space.

Table H1011.2.1 Clear Ground Space

Outdoor Constructed Feature	Minimum Size and Location
Picnic tables	36 inches (915 mm) on all usable sides of the table measured from the back edge of the benches.
Fire rings, grills, fireplaces, and woodstoves	48 inches (1220 mm) by 48 inches (1220 mm) on all usable sides of the fire ring, grill, fireplace, and woodstove. Center the space on each usable side of the grill, fireplace, and woodstove.
Trash and recycling receptacles	36 inches (915 mm) by 48 inches (1220 mm) positioned for forward approach to the receptacle opening; or 30 inches (760 mm) by 60 inches (1525 mm) positioned for a parallel approach to the receptacle opening.
Water hydrants	72 inches (1830 mm) by 48 inches (1220 mm) with the long side of the space adjoining or overlapping an ORAR or trail, as applicable, or another clear ground space. Locate the space so that the water spout is 11 inches (280 mm) minimum and 12 inches (305 mm) maximum from the rear center of the long side of the space.
Utility and sewage hookups	30 inches (760 mm) by 60 inches (1525 mm) with the long side of the space adjoining or overlapping an accessible parking space or pull-up space for recreational vehicles. Locate the space so that the hook-ups are at the rear center of the space. Bollards or other barriers shall not obstruct the clear ground space in front of the hook-ups.

Outdoor Constructed Feature	Minimum Size and Location
Outdoor rinsing showers	<p>60 inches (1525 mm) by 60 inches (1525 mm) centered on the shower heads.</p> <p>Locate the space so that the shower pedestal or wall with the shower head are at the rear end of the space.</p>
Benches	<p>36 inches (915 mm) by 48 inches (1220 mm) positioned near the bench with one side of the space adjoining an ORAR or trail, as applicable.</p> <p>The clear ground space shall not overlap the ORAR or trail, or another clear ground space.</p>
Viewing Scopes	<p>36 inches (915 mm) by 48 inches (1220 mm) positioned for forward approach to the viewing scope.</p> <p>Provide knee and toe clearance complying with ADAAG 306 under the viewing scope.</p> <p>Locate the space so that the eyepiece is centered on the space.</p>
Check-In Stations	<p>Centered on check-in element, 36 inches (915 mm) by 48 inches (1220 mm) positioned for forward approach; or 30 inches (760 mm) by 60 inches (1525 mm) positioned for a parallel approach.</p> <p>One full unobstructed side of the clear ground space shall adjoin or overlap an ORAR or a trail.</p>

Outdoor Constructed Feature	Minimum Size and Location
Weather Shelter	<p>A clear ground space shall be wholly contained within the weather shelter. The clear ground space shall be 36 inches (915 mm) minimum by 48 inches (1220 mm) minimum. The clear ground space shall adjoin or overlap an ORAR or trail. Where benches or seating is provided within a weather shelter the clear ground space shall be located either at one end of a seat or shall not overlap the area within 18 inches (460mm) from the front edge of the seat.</p> <p>A turning space complying with ADAAG 304.3 shall be provided. The turning space may overlap the clear ground space.</p>

Advisory H1011.2.1 Size and Location. The usable sides of picnic tables, fire rings, grills, fireplaces, and woodstoves are the sides of the outdoor constructed feature that can be used for eating or serving food, building a fire, or cooking. All sides of picnic tables are generally usable, unless the picnic table is placed against a rock or tree that renders the side against the rock or tree not usable. All sides of fire rings and grills are generally usable, unless there is a wall or other structure on a side that renders the side not usable. The front sides of fireplaces and woodstoves are generally the usable side.

H1011.2.2 Surface. The surface of the clear ground space shall be firm and stable.

H1011.2.3 Slope. The slope of the clear ground space surface shall not be steeper than 1:48 in any direction.

EXCEPTION: Where the surface is other than asphalt, concrete, or boards, slopes not steeper than 1:20 shall be permitted when necessary for drainage.

H1011.2.4 Openings. Openings in the clear ground space surface shall not allow the passage of a sphere more than 1/2 inch (13 mm) in diameter.

Advisory H1011.2.4 Openings. Where possible, drainage grates should be located outside of the clear ground space surface. Elongated openings should be placed so that the long dimension is perpendicular, or as close to perpendicular as possible, to the dominant direction of travel.

H1011.3 Operable Parts. Operable parts shall comply with ADAAG 205, ADAAG 309.3 and ADAAG 309.4.

EXCEPTIONS:

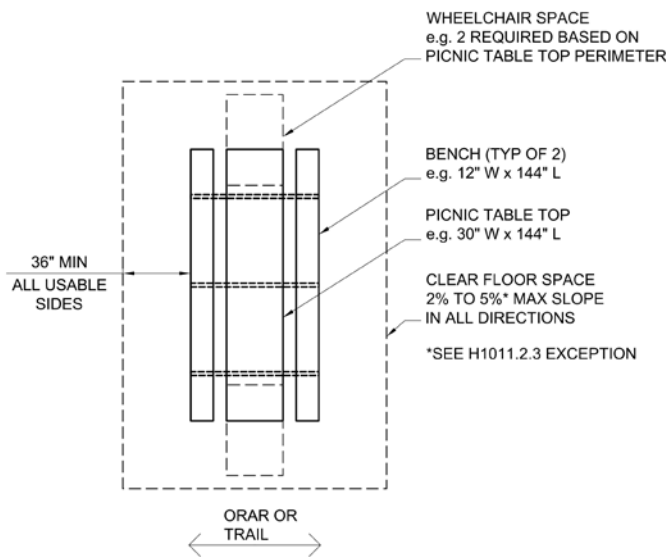
1. Fire rings, grills, fireplaces, wood stoves, water hydrants, and water utility hookups shall comply with ADAAG 309.4 to the extent practicable.
2. Trash and recycling receptacles with hinged lids and controls to keep out large animals shall comply with ADAAG 309.4 to the extent practicable.
3. Dumpster type trash and recycling receptacles shall not be required to comply with ADAAG 309.3 and ADAAG 309.4.
4. Sewage hatches shall not be required to comply with ADAAG 309.3 and ADAAG 309.4.

Advisory H1011.3 Operable Parts. New products may be developed with operable parts that comply with ADAAG 309.4. As products with operable parts that comply with ADAAG 309.4 become available, entities should provide these products to enable individuals with disabilities to operate them.

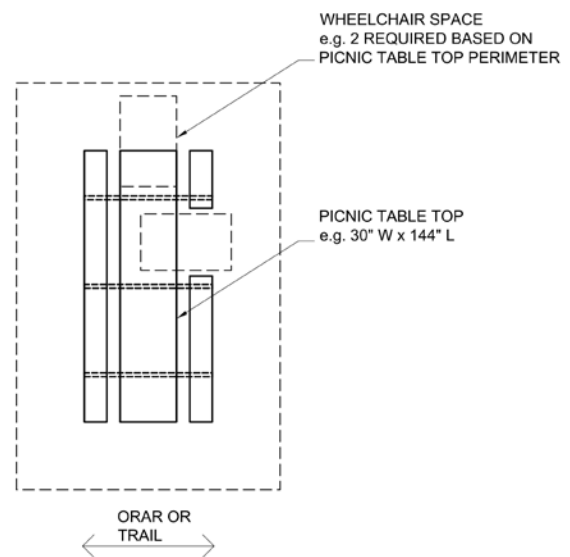
H1011.4 Picnic Tables. Picnic tables shall comply with H1011.4.

H1011.4.1 Height. The tops of picnic tables shall comply with ADAAG 902.3.

H1011.4.2 Wheelchair Space. Picnic tables shall provide at least one wheelchair space for each 24 linear feet (7320 mm) of usable table surface perimeter. Wheelchair spaces shall be 30 inches (760 mm) minimum by 48 inches (1220 mm) minimum. Wheelchair spaces shall be positioned for a forward approach to the table and provide knee and toe clearance complying with ADAAG 306 under the table.



**Figure H1011.4(a)
Wheelchair Space**



**Figure H1011.4(b)
Wheelchair Space**

H1011.5 Fire Rings, Grills, Fireplaces, and Wood Stoves. Fire rings, grills, fireplaces, and wood stoves shall comply with H1011.5.

Advisory H1011.5 Fire Rings, Grills, Fireplaces, and Wood Stoves. Fire rings with double walls or insulation on the sides are recommended to prevent burns.

H1011.5.1 Fire Building Surfaces. Fire building surfaces shall be 9 inches (230 mm) minimum above the ground.

H1011.5.2 Cooking Surfaces. Where provided, cooking surfaces shall be 15 inches (380 mm) minimum and 34 inches (865 mm) maximum above the ground.

H1011.5.3 Raised Edges or Walls. Where fire rings, grills, or fireplaces are constructed with raised edges or walls, the depth of the raised edge or wall shall be 10 inches (255 mm) maximum.

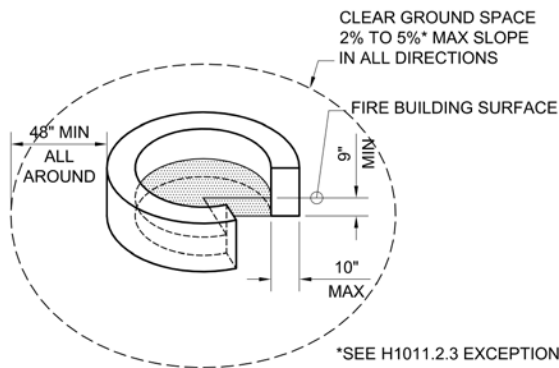


Figure H1011.5(a) Fire Building Surfaces

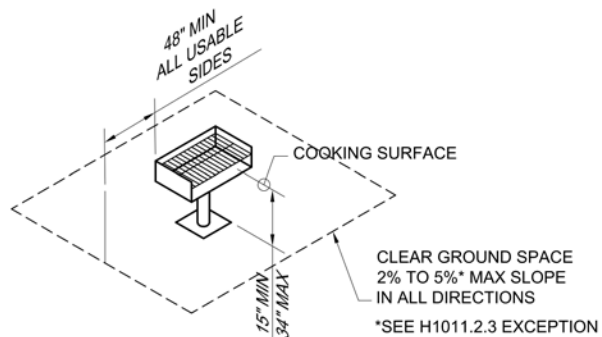


Figure H1011.5(b) Cooking Surfaces

H1011.6 Water Spouts. Water spouts at water hydrants and water utility hook-ups shall be 28 inches (710 mm) minimum and 36 inches (915 mm) maximum above the ground.

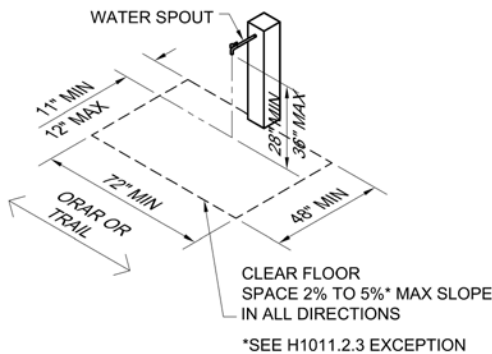


Figure H1011.6 Water Spouts

H1011.7 Outdoor Rinsing Showers. Outdoor rinsing showers shall provide at least two-fixed showerheads. One fixed showerhead shall be 48 inches (1220 mm) above the ground surface, and one fixed showerhead shall be 72 inches (1830 mm) minimum above the ground surface.

EXCEPTION: A hand-held shower spray unit with a hose 59 inches (1500 mm) long minimum shall be permitted in place of fixed showerheads. The hand-held shower spray unit shall have a non-positive shut-off, and have at least one fixed position located 15 inches minimum (380 mm) and 48 inches (1220 mm) maximum above the ground.

H1011.7.1 Grab Bars. Grab bars shall be provided and shall comply with ADAAG Section 609. In addition, at least one grab bar shall comply with one of the following provisions:

- a) **Vertical Grab Bar.** Where the showerhead is mounted on a post, a vertical grab bar shall be provided under the showerhead and shall start 33 inches (840 mm) maximum above the floor and extend to within at least 3 inches (75 mm) of the showerhead. Where vertical grab bars are provided, the grab bar shall be permitted to be offset a maximum of 6 inches from the vertical alignment of the fixed showerhead.

EXCEPTION: Where a hand-held shower spray is provided, an 18 inch (455 mm) minimum vertical grab bar offset not more than 6 inches (150 mm) maximum from the fixed position of the hand-held shower spray shall be permitted.

- b) **Circular Grab Bar.** Where the showerhead is mounted on a post, a grab bar that surrounds the usable part of the post shall be provided. The grab bar shall be provided 33 inches (840 mm) minimum to 36 inches (915 mm) maximum above the floor.
- c) **Horizontal Grab Bar.** A horizontal grab bar extending 18 inches (455 mm) minimum in both directions from the centerline of the showerhead shall be provided under the showerhead. The grab bar shall be provided 33 inches (840 mm) minimum to 36 inches (915 mm) maximum above the floor.

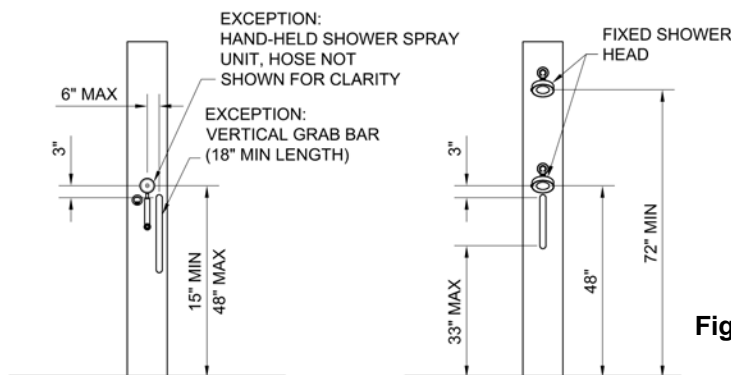
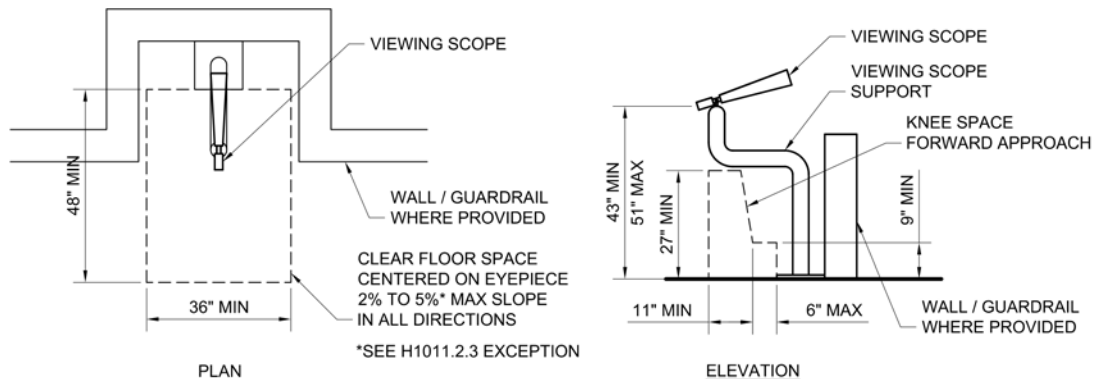


Figure H1011.7 Outdoor Rinsing Showers
Vertical Grab Bar option shown

H1011.8 Viewing Scopes. Eyepieces on viewing scopes shall be 43 inches (1090 mm) minimum and 51 inches (1295 mm) maximum above the ground.



**Figure H1011.8
Viewing Scopes**

H1011.9 Reach Ranges. Reach ranges at outdoor constructed features shall comply with ADAAG 308.2.1 and ADAAG 308.3.1.

H1012 Parking Spaces Within Camping Units and Picnic Units

H1012.1 General. Parking spaces within camping units and picnic units with mobility features and pull-up spaces for recreational vehicles at dump stations shall comply with H1012.

H1012.2 Recreational Vehicles. Parking spaces and pull-up spaces for recreational vehicles shall be 20 feet (6100 mm) wide minimum.

EXCEPTION: Where two adjacent parking spaces are provided for recreational vehicles, one parking space shall be permitted to be 16 feet (4880 mm) wide minimum.

H1012.3 Other Vehicles. Parking spaces for vehicles, other than recreational vehicles, shall be 16 feet (4880 mm) wide minimum.

EXCEPTION: Where two adjacent parking spaces are provided for vehicles, other than recreational vehicles, one parking space shall be permitted to be 8 feet (2440 mm) wide minimum.

H1012.4 Surface. The surface of parking spaces and pull-up spaces shall be firm and stable.

H1012.5 Slope. The slope of the surface of parking spaces and pull-up spaces shall not be steeper than 1:48 in any direction.

EXCEPTION: Where the surface is other than asphalt, concrete, or boards, slopes not steeper than 1:20 shall be permitted when necessary for drainage.

H1013 Tent Pads and Tent Platforms

H1013.1 General. Tent pads and tent platforms shall comply with H1013.

EXCEPTION: When an entity determines that a condition in H1019 does not permit full compliance with a specific provision in H1013, the tent pad and tent platform shall comply with the provision to the extent practicable.

Advisory H1013.1 General. Tent pads and tent platforms are defined spaces with prepared surfaces for setting up and securing tents.

H1013.2 Clear Ground Space. Clear ground space complying with H1013.2 shall be provided on all usable sides of tent pads and tent platforms.

H1013.2.1 Size. The clear ground space shall be 48 inches (1220 mm) wide minimum.

H1013.2.2 Surface. The surface of the clear ground space shall be firm and stable. The surface shall allow use of tent stakes and other tent securement devices.

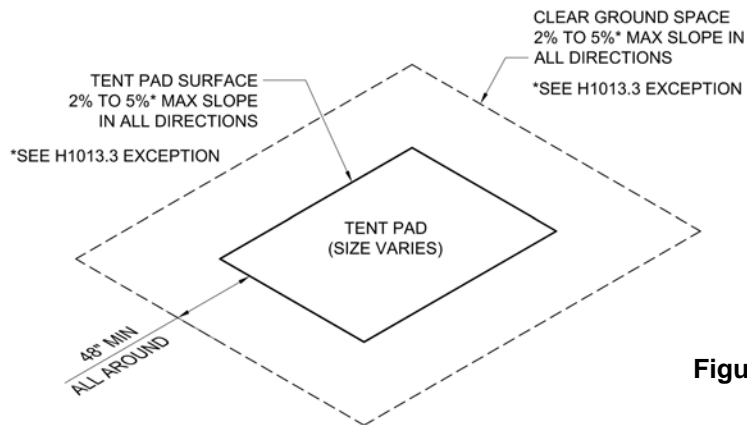


Figure H1013.2 Tent Pad

H1013.3 Slope. The slope of the surface of tent pads, tent platforms, and clear ground spaces shall not be steeper than 1:48 in any direction.

EXCEPTION: Where the surface is other than asphalt, concrete, or boards, slopes not steeper than 1:20 shall be permitted where necessary for drainage.

H1013.4 Height. Tent platforms shall be 19 inches (485 mm) high maximum measured from the clear ground space to the tent platform surface.

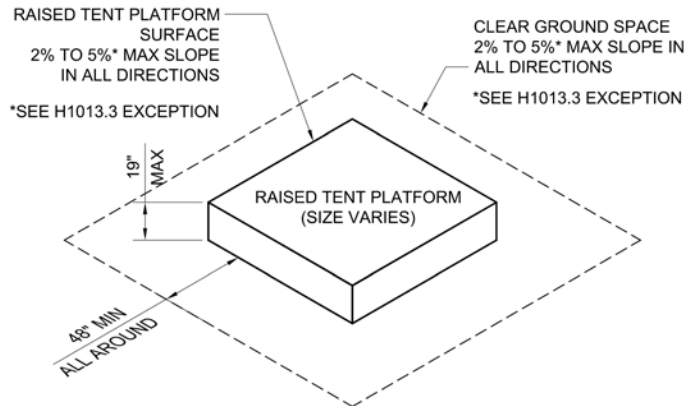


Figure H1013.4 Raised Tent Platform

H1014 Camp Shelters

H1014.1 General. Camp shelters shall comply with H1014.

EXCEPTIONS:

1. When an entity determines that a condition in H1019 does not permit full compliance with a specific provision in H1014, the camp shelter shall comply with the provision to the extent practicable.
2. Camp shelters shall not be required to comply with ADAAG 307.

H1014.2 Entrance. Camp shelters shall provide an entrance complying with H1014.2.1 or H1014.2.2.

H1014.2.1 Transfer Access. Where transfer access is provided at the entrance to a camp shelter, the entrance shall comply with H1014.2.1.

H1014.2.1.1 Clear Ground Space. A clear ground space shall be provided at the entrance to the camp shelter. The clear ground space shall be 36 inches (915 mm) minimum by 48 inches (1220 mm) minimum and shall be positioned for a parallel approach to the camp shelter. One full unobstructed side of the clear ground space shall adjoin or overlap an ORAR or trail, as applicable, or another clear ground space.

H1014.2.1.1.1 Surface. The surface of the clear ground space shall be firm and stable.

H1014.2.1.1.2 Slope. The slope of the surface of the clear ground space shall not be steeper than 1:48 in any direction.

EXCEPTION: Where the surface is other than asphalt, concrete, or boards, slopes not steeper than 1:20 shall be permitted where necessary for drainage.

H1014.2.1.2 Floor Height. The camp shelter floor at the entrance shall be 19 inches (485 mm) high maximum measured from the clear ground space.

H1014.2.2 Roll-in Access. Where roll-in access is provided at the entrance to a camp shelter, the entrance shall comply with H1014.2.2.

H1014.2.2.1 Level or Sloped Entry Route. Camp shelters providing roll-in access shall have a level or sloped entry route complying H1016 or H1017, as applicable.

H1014.2.2.2 Turning Space. A turning space complying with ADAAG 304.3 shall be provided within the camp shelter.

H1014.3 Floor. The floor within camp shelters shall comply with H1014.3.

H1014.3.1 Surface. The floor surface shall be firm and stable.

H1014.3.2 Slope. The slope of the floor surface shall not be steeper than 1:48 in any direction.

EXCEPTION: Where the floor surface is other than asphalt, concrete, or boards, slopes not steeper than 1:20 shall be permitted when necessary for drainage.

H1015 Viewing Areas

H1015.1 General. Viewing areas shall comply with H1015.

EXCEPTION: In alterations, when an entity determines that a condition in H1019 does not permit full compliance with a specific provision in H1015, the viewing area shall comply with the provision to the extent practicable.

H1015.2 Clear Ground Space. A clear ground space shall be provided at each distinct viewing location. The clear ground space shall be 36 inches (915 mm) minimum by 48 inches (1220 mm) minimum and shall be positioned for either a forward or parallel approach to the viewing location. One full unobstructed side of the clear ground space shall adjoin or overlap an ORAR or trail, as applicable, or another clear ground space.

H1015.3 Viewing Space. Each distinct viewing location shall provide a viewing space adjacent to the clear ground space required by H1015.2 through which the point of interest is viewable. The viewing space shall be 32 inches (815 mm) maximum and 51 inches (1295 mm) minimum high above the ground and shall extend the full width of the clear ground space.

EXCEPTION: Guards or similar safety barriers shall be permitted to obstruct the viewing space to the extent the obstruction is necessary for the guard or safety barrier to serve its intended purpose.

H1015.4 Turning Space. A turning space complying with ADAAG 304.3 shall be provided within viewing areas.

H1015.5 Surface. The surface of clear ground spaces and turning spaces shall be firm and stable.

H1015.6 Slope. The slope of the surface of clear ground spaces and turning spaces shall not be steeper than 1:48 in any direction.

EXCEPTION: Where the surface is other than asphalt, concrete, or boards, slopes not steeper than 1:20 shall be permitted when necessary for drainage.

H1016 Outdoor Recreation Access Routes (ORAR)

H1016.1 General. ORARs shall comply with H1016.

EXCEPTIONS:

1. In alterations to existing camping facilities, picnic facilities, and trailheads, when an entity determines that a condition in H1019 does not permit full compliance with a specific provision in H1016 on a portion of an outdoor recreation access route, the portion of the ORAR shall comply with the provision to the extent practicable.
2. At viewing areas, when an entity determines that a condition in H1019 does not permit full compliance on a portion of an ORAR with a specific provision in H1016, the portion of the ORAR shall comply with the provision to the extent practicable.
3. Where ORARs are provided within vehicular ways, ORARs shall not be required to comply with H1016.4, H1016.7, and H1016.8.

H1016. 2 Surface. The surface of ORARs, passing spaces, and resting intervals shall be firm and stable.

H1016.3 Clear Width. The clear width of ORARs shall be 36 inches (915 mm) minimum.

H1016.4 Passing Spaces. ORARs with a clear width less than 60 inches (1525 mm) shall provide passing spaces complying with H1016.4 at intervals of 200 feet (61 m) maximum. Passing spaces and resting intervals shall be permitted to overlap.

Advisory H1016.4 Passing Spaces. Entities should consider providing either a 60 inches (1525 mm) minimum clear width on ORARs or passing spaces at shorter intervals if the clear width is less than 60 inches (1525 mm), where the route is:

- Heavily used or adjoins elements, space, or facilities that are heavily used; or
- A boardwalk or otherwise not at the same level as the ground surface adjoining the route.

H1016.4.1 Size. The passing space shall be either:

1. A space 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum; or
2. The intersection of two ORARs providing a T-shaped space complying with 304.3.2 where the base and the arms of the T-shaped space extend 48 inches (1220 mm) minimum beyond the intersection. Vertical alignment at the intersection of the ORARs that form the T-shaped space shall be nominally planar.

Advisory H1016.4.1 Size. Where the passing space is the intersection of two ORARs, the intersection must be as flat as possible so that all of the wheels of a mobility device touch the ground when turning into and out of the passing space.

H1016.4.2 Slope. Where passing spaces and resting intervals overlap, the slope of the ground surface shall comply with H1016.8.3.

H1016.5 Obstacles. Obstacles on ORARs, passing spaces, and resting intervals shall not exceed 1/2 inch (13 mm) in height measured vertically to the highest point.

EXCEPTION: Where the surface is other than asphalt, concrete, or boards, obstacles shall be permitted to not exceed 1 inch (25 mm) in height measured vertically to the highest point.

Advisory H1016.5 Obstacles. The vertical alignment of joints in concrete, asphalt, or board surfaces can be obstacles. Natural features such as tree roots and rocks on ORARs can also be obstacles. Where an ORAR is provided within a vehicular way, traffic calming devices can be obstacles. Where possible, obstacles that cross the full width of ORARs should be separated by a distance of 48 inches (1220 mm) minimum.

H1016.6 Openings. Openings in the surface of ORARs shall not allow the passage of a sphere more than 1/2 inch (13 mm) in diameter.

Advisory H1016.6 Openings. Spaces between the boards in a boardwalk and drainage grates are examples of openings. Where possible, drainage grates should be located outside the minimum clear width of the outdoor recreation access route. Elongated openings should be placed so that the long dimension is perpendicular, or as close to perpendicular as possible, to the dominant direction of travel.

H1016.7 Slopes. The slopes of ORARs shall comply with H1016.7.

H1016.7.1 Maximum Running Slope and Segment Length. The running slope of any segment of an ORAR shall not be steeper than 1:10 (10%). Where the running slope of a segment of an ORAR is steeper than 1:20 (5%), the maximum length of the segment shall be in accordance with Table H1016.7.1, and a resting interval complying with H1016.8 shall be provided at the top and bottom of each segment.

Table H1016.7.1 Maximum Running Slope and Segment Length

Running Slope of ORAR Segment		Maximum Length of Segment
Steeper than	But not Steeper than	
1:20 (5%)	1:12 (8.33%)	50 feet (15 m)
1:12 (8.33%)	1:10 (10%)	30 feet (9 m)

Advisory H1016.7.1 Maximum Running Slope and Segment Length. Gradual running slopes are more useable by individuals with disabilities. Where the terrain results in steeper running slopes, resting intervals are required more frequently. Where running slopes are less severe, resting intervals are permitted to be further apart.

H1016.7.2 Cross Slope. The cross slope shall not be steeper than 1:48.

EXCEPTION: Where the surface is other than concrete, asphalt, or boards, cross slopes not steeper than 1:20 shall be permitted when necessary for drainage.

H1016.8 Resting Intervals. Resting intervals shall comply with H1016.8.

H1016.8.1 Length. The resting interval length shall be 60 inches (1525 mm) long minimum.

H1016.8.2 Width. Where resting intervals are provided within an outdoor recreation access route, resting intervals shall be at least as wide as the widest segment of the ORAR leading to the resting interval. Where resting intervals are provided adjacent to an outdoor recreation access route, the resting interval shall be 36 inches (915 mm) wide minimum.

H1016.8.3 Slope. Resting intervals shall have slopes not steeper than 1:48 in any direction.

EXCEPTION: Where the surface is other than concrete, asphalt, or boards, slopes not steeper than 1:20 shall be permitted when necessary for drainage.

H1016.8.4 Turning Space. Where resting intervals are provided adjacent to an outdoor recreation access route, a turning space complying with 304.3.2 shall be provided.

Vertical alignment between the outdoor recreation access route, turning space, and resting interval shall be nominally planar.

H1016.9 Protruding Objects. Constructed elements on ORARs, passing spaces, and resting intervals shall comply with 307.

Advisory H1016.9 Protruding Objects. Protruding objects on ORARs, passing spaces, and resting intervals can be hazardous for individuals who are blind or have low vision. Signs and other post mounted objects are examples of constructed elements that can be protruding objects.

H1017 Trails

H1017.1 General. Trails shall comply with H1017.

EXCEPTIONS:

1. When an entity determines that a condition in H1019 does not permit full compliance with a specific provision in H1017 on a portion of a trail, the portion of the trail shall comply with the provision to the extent practicable.

2. After applying Exception 1, when an entity determines that it is impracticable for the entire trail to comply with H1017, the trail shall not be required to comply with H1017.

Advisory H1017.1 General Exception 2. An entity must apply Exception 1 before using Exception 2. The entity should consider the portions of the trail that can and cannot fully comply with the specific provisions in H1017 and the extent of compliance where full compliance cannot be achieved when determining whether it would be impracticable for the entire trail to comply with H1017. The determination is made on a case-by-case basis. State and County agencies must document the basis for their determination when using Exceptions 1 or 2, and must notify the Disability and Communication Access Board (DCAB) when using Exception 2. See ADAAG 201.4.1.

H1017.2 Surface. The surface of trails, passing spaces, and resting intervals shall be firm and stable.

Advisory H1017.2 Surface. A firm trail surface resists deformation by indentations. A stable trail surface is not permanently affected by expected weather conditions and can sustain normal wear and tear from the expected uses between planned maintenance.

H1017.3 Clear Tread Width. The clear tread width of trails shall be 36 inches (915 mm) minimum.

H1017.3.1 Clear Tread Width at Turn. Where constructed barriers require users to make 90-degree or 180-degree turns, the space provided shall comply with ADAAG 403.5.2. Where provided, gates shall comply with ADAAG 404.2.4.1 and ADAAG 404.2.6.

H1017.4 Passing Spaces. Trails with a clear tread width less than 60 inches (1525 mm) shall provide passing spaces complying with H1017.4 at intervals of 1000 feet (300 m) maximum. Where the full length of a trail does not fully comply with H1017, a passing space shall be located at the end of the trail segment that fully complies with H1017. Passing spaces and resting intervals shall be permitted to overlap.

Advisory H1017.4 Passing Spaces. Entities should consider providing either a 60 inches (1525 mm) minimum clear tread width or passing spaces at shorter intervals if the clear tread width is less than 60 inches (1525 mm), where a trail is:

- Heavily used; or
- A boardwalk or otherwise not at the same level as the ground surface adjoining the trail.

Where the full length of the trail does not fully comply with H1017, locating a passing space at the end of the trail segment that fully complies with H1017 enables a person who uses a mobility device to turn and exit the trail.

H1017.4.1 Size. The passing space shall be either:

1. A space 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum; or
2. The intersection of two trails providing a T-shaped space complying with ADAAG 304.3.2 where the base and the arms of the T-shaped space extend 48 inches (1220 mm) minimum beyond the intersection. Vertical alignment at the intersection of the trails that form the T-shaped space shall be nominally planar.

Advisory H1017.4.1 Size. Where the passing space is the intersection of two trails, the intersection must be as flat as possible so that all of the wheels of a mobility device touch the ground when turning into and out of the passing space.

H1017.4.2 Slope. Where passing spaces and resting intervals overlap, the slope of the ground surface shall comply with H1017.8.3.

H1017.5 Tread Obstacles. Tread obstacles on trails, passing spaces, and resting intervals shall not exceed 1/2 inch (13 mm) in height measured vertically to the highest point.

EXCEPTION: Where the surface is other than asphalt, concrete, or boards, tread obstacles shall be permitted to not exceed 2 inches (50 mm) in height measured vertically to the highest point.

Advisory H1017.5 Tread Obstacles. The vertical alignment of joints in concrete, asphalt, or board surfaces can be tread obstacles. Natural features such as tree roots and rocks within the trail tread can also be tread obstacles. Where possible, tread obstacles that cross the full width of the trail tread should be separated by a distance of 48 inches (1220 mm) minimum.

H1017.6 Openings. Openings in the surface of trails, passing spaces, and resting intervals shall not allow the passage of a sphere more than 1/2 inch (13 mm) in diameter.

Advisory H1017.6 Openings. Elongated openings should be placed so that the long dimension is perpendicular, or as close to perpendicular as possible, to the dominant direction of travel.

H1017.7 Slopes. The slopes of trails shall comply with H1017.7.

H1017.7.1 Maximum Running Slope and Segment Length. Not more than 30 percent of the total length of a trail shall have a running slope steeper than 1:12 (8.33%). The running slope of any segment of a trail shall not be steeper than 1:8 (12%). Where the running slope of a segment of a trail is steeper than 1:20 (5%), the maximum length of the segment shall be in accordance with Table H1017.7.1, and a resting interval complying with H1017.8 shall be provided at the top and bottom of each segment.

Table H1017.7.1 Maximum Running Slope and Segment Length

Running Slope of Trail Segment		Maximum Length of Segment
Steeper than	But not Steeper than	
1:20 (5%)	1:12 (8.33%)	200 feet (61 m)
1:12 (8.33%)	1:10 (10%)	30 feet (9 m)
1:10 (10%)	1:8 (12%)	10 feet (3050 mm)

Advisory H1017.7.1 Maximum Running Slope and Segment Length. Gradual running slopes on trails are more useable by individuals with disabilities. Where the terrain results in steeper running slopes, resting intervals are required more frequently. Where running slopes are less severe, resting intervals are permitted to be further apart.

H1017.7.2 Cross Slope. The cross slope shall be not be steeper than 1:48.

EXCEPTION: Where the surface is other than concrete, asphalt, or boards, cross slopes not steeper than 1:20 shall be permitted when necessary for drainage.

H1017.8 Resting Intervals. Resting intervals shall comply with H1017.8.

H1017.8.1 Length. The resting interval length shall be 60 inches (1525 mm) long minimum.

H1017.8.2 Width. Where resting intervals are provided within the trail tread, resting intervals shall be at least as wide as the widest segment of the trail tread leading to the resting interval. Where resting intervals are provided adjacent to the trail tread, the resting interval clear width shall be 36 inches (915 mm) minimum.

H1017.8.3 Slope. Resting intervals shall have slopes not steeper than 1:48 in any direction.

EXCEPTION: Where the surface is other than concrete, asphalt, or boards, cross slopes not steeper than 1:20 shall be permitted when necessary for drainage.

H1017.8.4 Turning Space. Where resting intervals are provided adjacent to the trail tread, a turning space complying with ADAAG 304.3.2 shall be provided. Vertical alignment between the trail tread, turning space, and resting interval shall be nominally planar.

H1017.9 Protruding Objects. Constructed elements on trails, passing spaces, and resting intervals shall comply with ADAAG 307.

Advisory H1017.9 Protruding Objects. Protruding objects on trails, passing spaces, and resting intervals can be hazardous for individuals who are blind or

Advisory H1017.9 Protruding Objects (continued).

have low vision. Signs and other post mounted objects are examples of constructed elements that can be protruding objects.

H1017.10 Trailhead Signs. Trail information signs at trailheads shall include the following:

1. Trail Identification;
2. Length of the trail or trail segment;
3. Surface type;
4. Typical and minimum tread width;
5. Typical and maximum running slope; and
6. Typical and maximum cross slope.

Advisory H1017.10 Trailhead Signs. Signs can provide additional information to help people with disabilities decide whether or not to attempt a trail. It is helpful to have a caution notice indicating that the posted information reflects the condition of the trail when it was constructed or assessed and on what date the information was current.

H1018 Beach Access Routes

H1018.1 General. Beach access routes shall comply with H1018.

EXCEPTIONS:

1. When an entity determines that a condition in H1019 does not permit full compliance with a specific provision in H1018 on a portion of a beach access route, the portion of the beach access route shall comply with the provision to the extent practicable.
2. After applying Exception 1, when an entity determines that it is impracticable to provide a beach access route complying with H1018, a beach access route shall not be required.
3. Removable beach access routes shall not be required to comply with H1018.7, H1018.8, and H1018.10.

Advisory H1018.1 General Exception 2. An entity must apply Exception 1 before using Exception 2. The entity should consider the portions of the beach access route that can and cannot fully comply with the specific provisions in H1018 and the extent of compliance where full compliance cannot be achieved to determine whether it would be impracticable to provide a beach access route complying with H1018. The determination is made on a case-by-case basis. State and County agencies must document the basis for their determination when using Exceptions 1 or 2, and must notify the Disability and Communication Access Board (DCAB) when using Exception 2. See H201.4.1.

H1018.2 Connections. Beach access routes shall connect an entry point to the beach to the:

1. High tide level at tidal beaches;
2. Mean high water level at river beaches; or
3. Normal recreation water level at lake, pond, and reservoir beaches.

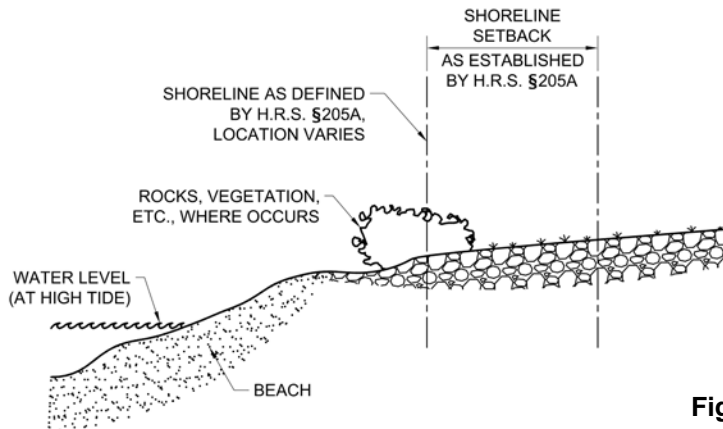


Figure H1018.2 Connections

H1018.3 Surface. The surface of beach access routes and resting intervals shall be firm and stable.

H1018.4 Clear Width. The clear width of beach access routes shall be 60 inches (1525 mm) minimum.

EXCEPTION: At dune crossings, the clear width of beach access routes that are not removable shall be permitted to be reduced to 48 inches (1220 mm) minimum.

H1018.5 Obstacles. Obstacles on beach access routes and resting intervals shall not exceed 1/2 inch (13 mm) in height measured vertically to the highest point.

EXCEPTION: Where the surface is other than asphalt, concrete, or boards, obstacles shall be permitted to not exceed 1 inch (25 mm) in height measured vertically to the highest point.

Advisory H1018.5 Obstacles. The vertical alignment of boards on a beach access route or removable sections of a beach access route can be obstacles.

H1018.6 Openings. Openings in the surface of beach access routes and resting intervals shall not allow the passage of a sphere more than 1/2 inch (13 mm) in diameter.

Advisory H1018.6 Openings. Elongated openings should be placed so that the long dimension is perpendicular, or as close to perpendicular as possible, to the dominant direction of travel.

H1018.7 Slopes. The slopes of beach access routes shall comply with H1018.7.

H1018.7.1 Maximum Running Slope and Segment Length. The running slope of any segment of a beach access route shall not be steeper than 1:10 (10%). Where the running slope of a segment of a beach access route is steeper than 1:20 (5%), the maximum length of the segment shall be in accordance with Table H1018.7.1, and a resting interval complying with H1018.8 shall be provided at the top and bottom of each segment.

Table H1018.7.1 Maximum Running Slope and Segment Length

Running Slope of Beach Access Route Segment		Maximum Length of Segment
Steeper than	But not Steeper than	
1:20 (5%)	1:12 (8.33%)	50 feet (15 m)
1:12 (8.33%)	1:10 (10%)	30 feet (9 m)

Advisory H1018.7.1 Maximum Running Slope and Segment Length. Gradual running slopes on beach access routes are more useable by individuals with disabilities. Where the terrain results in steeper running slopes, resting intervals are required more frequently. When running slopes are less severe, resting intervals are permitted to be further apart.

H1018.7.2 Cross Slope. The cross slope shall not be steeper than 1:48.

EXCEPTION: Where the surface is other than concrete, asphalt, or boards, cross slopes not steeper than 1:20 shall be permitted when necessary for drainage.

H1018.8 Resting Intervals. Resting intervals shall comply with H1018.8.

H1018.8.1 Size. Resting intervals shall be 60 inches minimum (1525 mm) by 60 inches (1525 mm) minimum.

H1018.8.2 Slope. Resting intervals shall have a slope not steeper than 1:48 in any direction.

EXCEPTION: Where the surface is other than concrete, asphalt, or boards, cross slopes not steeper than 1:20 shall be permitted when necessary for drainage.

H1018.9 Protruding Objects. Constructed elements on beach access routes and resting intervals shall comply with ADAAG 307.

Advisory H1018.9 Protruding Objects. Protruding objects on beach access routes and resting intervals can be hazardous for individuals who are blind or have low vision. Signs and other post mounted objects are examples of constructed elements that can be protruding objects.

H1018.10 Dune Crossings. Where the slope of a beach access route at a dune crossing is steeper than 1:20 (5%), handrails complying with ADAAG 505 and curbs or barriers shall be provided. The curbs or barriers shall prevent the passage of a 2 inch (50 mm) diameter sphere, where any portion of the sphere is within 2 inches (50 mm) of the crossing surface.

H1019 Conditions for Exceptions

H1019.1 General. Exceptions to specific provisions in H1011, H1013, H1014, H1015, H1016, and H1017, and H1018 shall be permitted when an entity determines that any of the following conditions does not permit full compliance with the provision:

1. Compliance is not practicable due to terrain.
2. Compliance cannot be accomplished with the prevailing construction practices.
3. Compliance would fundamentally alter the function or purpose of the facility or the setting.
4. Compliance is limited or precluded by any of the following laws, or by decisions or opinions issued or agreements executed pursuant to any of the following laws:
 - Endangered Species Act (16 U.S.C. §§ 1531 et seq.);
 - National Environmental Policy Act (42 U.S.C. §§ 4321 et seq.);
 - National Historic Preservation Act (16 U.S.C. §§ 470 et seq.);
 - Wilderness Act (16 U.S.C. §§ 1131 et seq.); or
 - Other federal, state, or local law the purpose of which is to preserve threatened or endangered species; the environment; or archaeological, cultural, historical, or other significant natural features.

Advisory H1019.1 General. Exceptions in the following sections require compliance to the extent practicable when an entity determines that a condition in H1019 does not permit full compliance with a specific provision:

- H1011.2 Exception (clear ground space in alterations to outdoor constructed features);
- H1013.2 Exception (any provision for tent pads and tent platforms);
- H1014.1 Exception 1 (any provision for camp shelters);
- H1015.1 Exception (any provision in alterations to viewing areas);
- H1016.1 Exception 1 (any provision for outdoor recreation access routes in alterations to existing camping facilities, picnic facilities, and trailheads);
- H1016.1 Exception 2 (any provision for outdoor recreation access routes at viewing areas);
- H1017.1 Exception 1 (any provision for trails)
- H1018.1 Exception 1 (any provision for beach access routes).

Entities should consider all design options before using the exceptions. On outdoor recreation access routes, and trails, the exceptions apply only on the

Advisory H1019.1 General (continued).

portion of the route where the condition applies. The outdoor recreation access route, trail, or beach access route is required to fully comply with the provisions in H1016, and H1017 and H1018 as applicable, at all other portions of the route where the conditions do not apply. There are additional exceptions that apply to an entire trail in H1017.1 and H1018.1.

Condition 4 allows the following to be a basis for using the exceptions:

- Opinions issued by the Secretary of the Interior pursuant to the Endangered Species Act stating how a federal agency can implement an action without jeopardizing the continued existence of any endangered species or threatened species, or destroying or adversely modifying the habitat of such species (16 U.S.C. 1536 (b) (3) (A));
- Decisions issued by a federal agency pursuant to the National Environmental Policy Act in actions requiring environmental impact statements stating how it will avoid or minimize environmental harm (42 U.S.C. 4332; 40 CFR 1505.2);
- Agreements executed or decisions issued by a federal agency pursuant to National Historic Preservation Act stating how it will avoid, minimize, or mitigate adverse effects on historical properties (16 U.S.C. 470f and 470h-2; 36 CFR 800.6 (b) (iv) and 800.7 (c) (4)); and
- Provisions in the Wilderness Act that require federal agencies to preserve the wilderness character of designated wilderness areas and prohibit any structure or installation within such areas (16 U.S.C. 1131 (b) and (c)).

Condition 4 also applies where archaeological, cultural, historical, or other significant natural features are eligible for protection under federal, state, or local law.