



BC Parks

Universal Design Guide Front-country Parks

June 2020

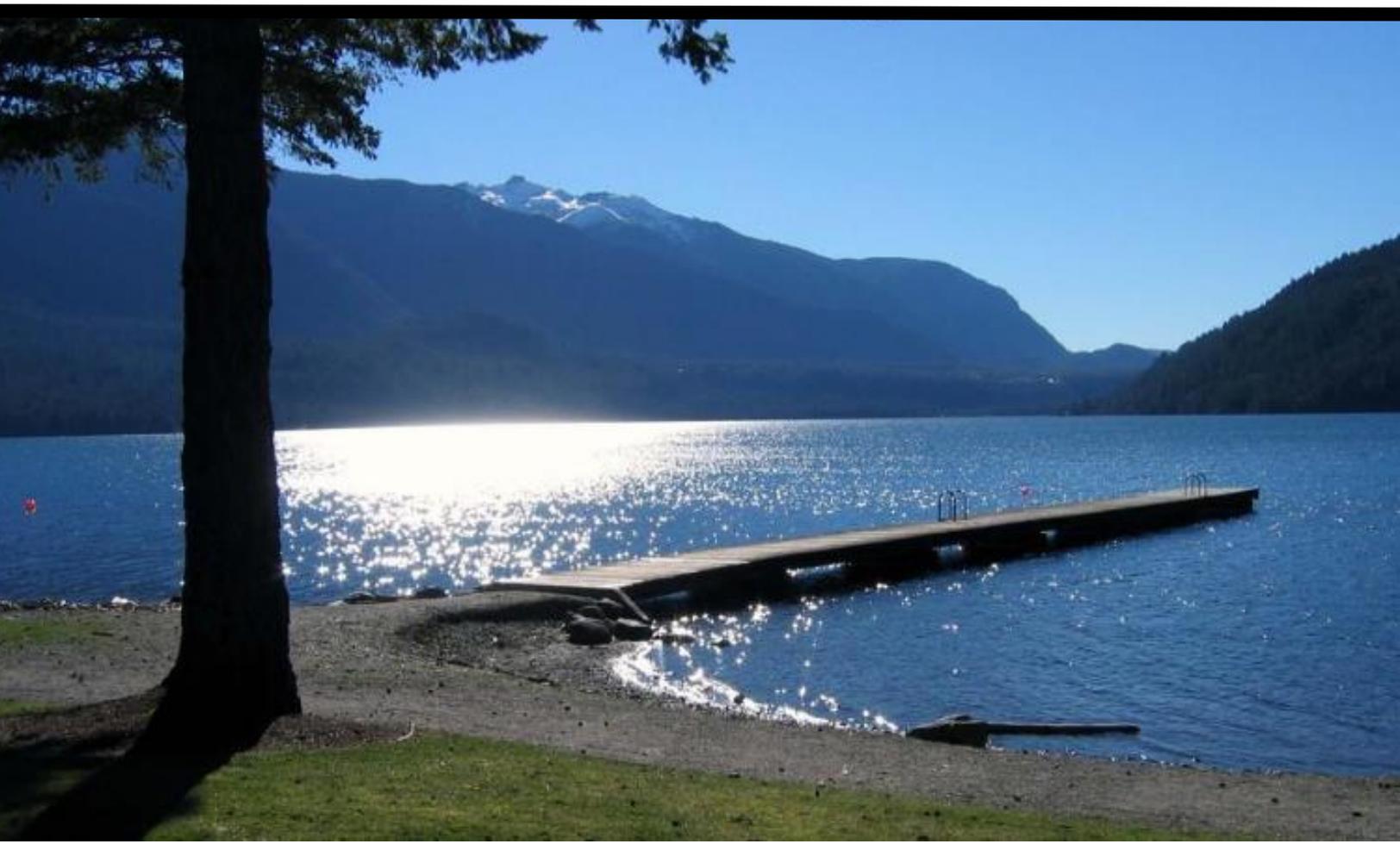


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Glossary

Access Route: The outdoor recreation path between major features and facilities that has defined characteristics as described in the *BC Parks Universal Design Guide*.

Accessible Route: A continuous unobstructed path with a slope of no greater than 1:12 connecting 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.

AFF: An abbreviation for “Above Finished Floor”.

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

Boat Launch Ramp: A sloped surface designed for launching and retrieving trailered boats and other water craft to and from a body of water.

Boat Slip: That portion of a pier, main pier, finger pier or float where a boat is moored for berthing, embarking, or disembarking.

Campground: A portion of a park that contains camp sites.

Campsite: 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.

Frontcountry Park: An area in a park or recreation area within one kilometre of either side of the centre line of a park road or a highway. Frontcountry campsites are generally accessible by vehicle and offer designated campsites, facilities and recreational opportunities.

Gangway: A variable-sloped pedestrian walkway that links a fixed structure or land with a floating structure. Gangways which connect to vessels are not included.

Outdoor Constructed Features: Picnic tables, fire rings, BBQ extensions, wood stoves, garbage and recycling receptacles, water hydrants, utility and sewage hookups, benches, provided at outdoor recreation facilities including playgrounds.

Picnic Site: A portion of a park developed for outdoor recreational day use that contains picnic tables.

Picnic Shelter: A partially or fully enclosed structure that provides shelter for campers, day users, and hikers. Some picnic shelters in developed areas have electrical outlets and basic kitchen amenities.

Signage: Information provided in the form of visual and tactile communication that incorporates one or more of the following elements:

- a) alphanumeric symbols;
- b) pictograms;
- c) illustrations (maps, etc.); or
- d) Braille.

Transition Plate: A sloping pedestrian walking surface located at the end(s) of a gangway.

Tent Pads: Defined spaces with prepared surfaces for setting up and securing tents.

Trail: A pedestrian route developed primarily for outdoor recreational purposes and intended to be an experience in itself. An access route developed primarily to connect major features, spaces, or facilities within a site is not a trail.

Trailhead: An access point to a trail, typically adjacent to a parking lot. 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 a point of interest such as a scenic vantage point, wildlife or bird watching, waterfall lookout or places where visitors congregate to take photos.

Wayfinding: Wayfinding describes how people navigate the built environment, and includes orienting oneself within a location, and moving from one place to another. Wayfinding may include signage, landmarks, floor or ground treatments, or other means of direction.



Section 1: Vehicular Access



1.1 General Comments related to Vehicular Access

People may get to a front-country park by driving, taking transit, walking, or cycling.

Vehicular access refers to the main access points serving people who arrive at a site by either motor vehicle or transit – in particular, parking, passenger drop-off and pick-up zones, and transit stops. These access points need to be safe and convenient for all the facility's intended users.

Well-designed vehicular access and parking facilities make parks more usable, safe, and attractive for people of all abilities.

1.2 Parking

1.2.1 General Guidelines

The route to the main entrance must be provided with clear, logical, and understandable directional signage which uses large font, contrasting colours and international symbols.

People with disabilities require direct access to designated accessible parking spaces. The number, location, size, and characteristics of designated accessible spaces depend on the size and intended use of the facility and the expected demand for accessible parking.

1.2.2 Access Requirements

a) Designated parking spaces for people with disabilities must:

i) be easily identified;

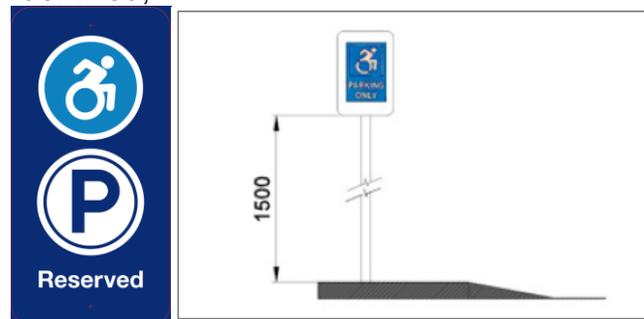


Figure 1: Vertical Accessible Parking Sign

ii) located within 30 metres of an access route and;

iii) be connected to an access route to main park features park via an accessible pathway;

iv) be a minimum of 3900 mm wide for cars, which includes 2400 mm for the vehicle plus 1500 mm for transfer space, which can be shared between two parking spaces;

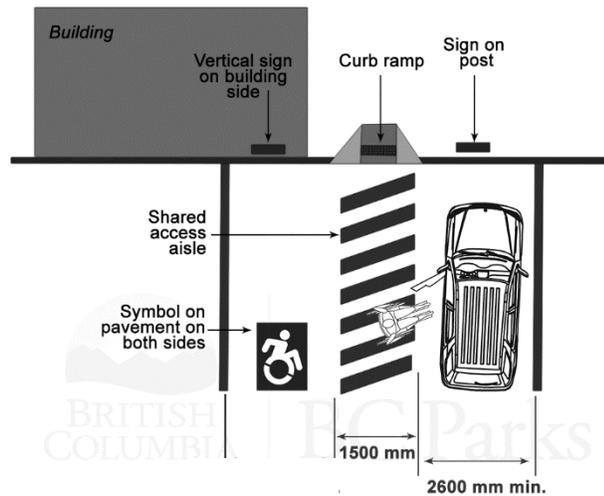


Figure 2: Example of Perpendicular Accessible Parking Stall

- v) for parallel parking, have an adjacent rear passage/aisle at least 900 mm wide; and

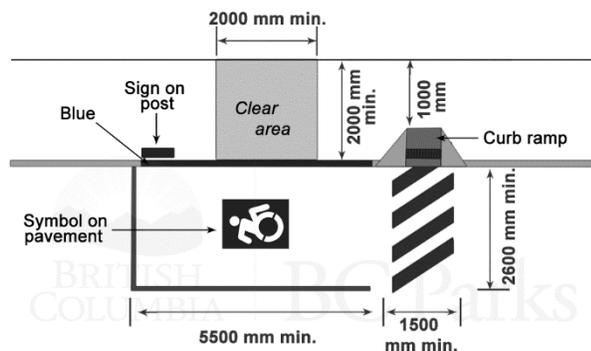


Figure 3: Example of Parallel Accessible Parking Stall

- vi) be clearly marked on a vertical sign mounted at the front of the space using the international symbol. Vertical signs must be visible while vehicles are parked in spaces.
- vii) where asphalt parking surface is used, should have international symbol of accessibility painted on the surface near the rear edge of the stall.
- b) Regardless of the size of the park there must be a minimum of one accessible parking space with an increasing number depending on the size of the parking lot. ie. 2:25, 4:50 etc.
- c) If there is a grade change between the accessible parking stalls and the pedestrian pathway, an accessibly designed curb ramp must be provided with proper landings on the pedestrian pathway
- d) Designated parking spaces for people with disabilities must:
- i) have a firm and slip resistant surface, preferably asphalt or concrete;

- ii) if paved, be clearly marked on the pavement surface with a high contrast colour, this sign being at least 1000 mm square and located in the center of the parking space; and
 - iii) be level, having a maximum cross-slope of 2% in any direction.
- e) Parking spaces should be located in various locations throughout the park, including shady areas, since people with disabilities may be hypersensitive to heat.
- f) Signs should be located at the entrance(s) to parking area to indicate where the accessible parking stalls are located.

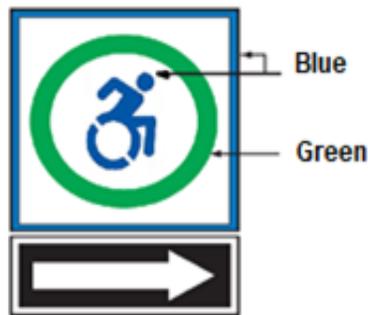


Figure 4: Directional Parking Signage

- g) Provide short-term parking spaces (10 to 15 minutes) near an entrance to prevent double-parking and reduce congestion where needed.
- h) Provide designated parking stalls with full coverage from weather.
- i) Provide courtesy or limited mobility parking for older people, parents with young children.



Figure 5: Examples of Alternative Parking Signage

1.3 Dropoff/Pickup Zones

1.3.1 General Guidelines

Passenger drop-off/pickup areas should be accessible, easy to use, and sufficient enough to support the needs of all intended users. They should not impede vehicular or passenger traffic. The size and number of drop-off areas depend on the size and intended use of the park facility.

1.3.2 Access Requirements

- a) Drop-off zones must be wide enough to accommodate wheelchair users transferring out of the car into their wheelchairs without placing the wheelchair on the sidewalk.
- b) A side access aisle must be provided on the roadway, that is:
 - i) adjacent and parallel to the accessible route and be at least 6000 mm long x 1500 mm wide; and
 - ii) separated from the walkway either by a curb which includes a curb ramp and a tactile indicator surface.
- c) Bus stops must provide a flat, non-slip surface transfer area that is a minimum of 1500 mm x 1500 mm and connected to a marked, accessible pedestrian route leading to the main access route.
- d) Bus stops and drop-off/pick-up zones must provide a bench or other seating in the immediate area, which includes arm rests and back support for users.

1.4 Pedestrian Crossings / Crosswalks

1.4.1 General Guidelines

For safety at pedestrian crossings, it is essential that adequate sight lines between drivers and pedestrians be maintained, and corners should be free from obstructions. The area where crossings should occur must be clearly indicated; exposure to conflicting traffic must be limited and refuges be provided as necessary. Pavement markings should clearly identify pedestrian crossing areas, bike lanes, and other locations where driver and pedestrian attention is especially important. Pavement marking materials should be chosen for durability and to minimize tripping or loss of traction for pedestrians and cyclists.

1.4.2 Access Requirements

- a) When a crosswalk crosses a roadway, at grade, it must cross perpendicular to traffic, and there must be a curb ramp on both sides of the road.

- b) Where a speed bump is installed, a clear level space on the roadway at least 1200 mm wide must be provided between the speed bump and the edge of the roadway.
- c) Crosswalks should be perpendicular to a vehicular traffic to minimize exposure to traffic.
- d) A crosswalk must be at least 1800 mm wide (where provided).
- e) A crosswalk must have a running slope not steeper than a ratio of 1:20 (5%), and a cross slope less than a ratio of 1:50 (2%).
- f) Where provided, crosswalk pavement markings must:
 - i. Be non-slip; and
 - ii. Comply with the *Manual of Uniform Traffic Control Devices for Canada*.
- e) Direct access must be provided from all access points to all facilities and building entrances.



Section 2: Access Route



2.1 General Comments related to Access Route and Entrance

Access route and entrance refers to any outdoor recreation routes between arrival points and any major features or facilities within the park.

An access route should provide a continuous path of travel without any obstacles to ensure the security and safety of its users. Where possible, all routes to a front-country park should be inclusive, convenient, and accessible for everyone, without labelling or segregating people with disabilities.

Where there are changes in level, access routes should be easy to understand and navigate with a choice of a ramp and stairs. Some people with mobility disabilities find it easier to use steps, while people using wheelchairs and other wheeled mobility devices, or those pushing strollers or luggage, most often prefer a ramp.

2.2 Exterior Pathways

2.2.1 General Guidelines

Exterior pathways should be level or gently sloped and provide enough width to accommodate the expected number of people, including people using power wheelchairs and scooters. If pathways are narrow, passing places should be provided. Pathways should be safe for all users, free of obstacles, well illuminated if applicable, easy to find, and well integrated with any stairs or ramps along the route. They should include any necessary crosswalk markings and curb ramps. If the route is long, it is important to provide seating.

2.2.2 Access Requirements

- a) Pathways to at least one main park entrance and all ancillary areas that are required to be accessible must:
 - i) be a continuous plane, not interrupted by steps or abrupt changes in level; and
 - ii) have a permanent, firm and slip-resistant surface.
- b) Pathways are to have an uninterrupted width of not less than 1200 mm, and a gradient no more than 1 to 20.
- c) Pathways must not have a cross slope greater than 2%.
- d) Level landings and rest areas must be provided along a pathway when a grade exists. The steeper the pathway the more often landings must be provided.
- e) Seating must be provided at regular intervals, preferably every 30 to 100 m, and be located on a level area that does not encroach in the circulation route. The seating area must have clear space for person using a mobility aid and have a clear space for a service animal to

rest. There must be a variety of seating options including seats with and without armrests. Shade or shelter should be provided where possible.

- f) Pathways are to be free from obstructions for the full width of the walk, to a height of not less than 2 m, except that handrails are permitted to project not more than 100 mm from either or both sides into the clear area.
- g) Bollards, drinking fountains, and/or other fixed items located on the pathway surface must be a contrasting colour and be cane detectable. Portable signage, such as sandwich boards, is not permitted on pathways.
- h) Pathway is to be designed as a ramp where there is a gradient slope greater than 1 in 12.
- i) Pathways should be a minimum of 1500mm in width to allow at least two people using wheelchairs or people with strollers to walk alongside or easily pass one another.
- j) Provides directional signage with distance indicator.
- k) Line the edges of the path with contrasting material such as an anchored log or embedded lumber for a visual cue of the path edge and a tap rail for someone using a cane.

2.3 Exterior Ramps

2.3.1 General Guidelines

Ramps are of obvious importance to persons in wheelchairs but can also be of benefit to elderly persons and people with strollers. However, some ambulant persons with disabilities can negotiate steps and for this reason, where a difference in elevation occurs, accessibility by both ramps and stairs should be considered.

2.3.2 Access Requirements

- a) Exterior ramps must be close to or along the main pathway.
- b) Ramps are to have an uninterrupted width of not less than 1200 mm.
- c) Ramps must have, where the vertical drop at the side of the ramp is more than 100 mm, either a curb not less than 100 mm high, or walls, railings, or other barriers that extend to within 100 mm of the finished ramp surface (See Figure 6).

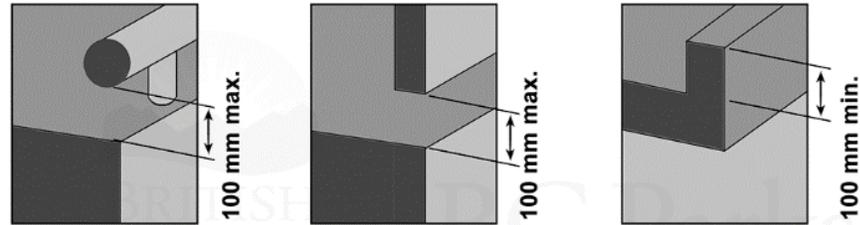


Figure 6: Curb Ramp Edge Protection

- d) Ramp surfaces must be slip-resistant. Consideration should be given to protecting ramps from snow and ice build-up, and cross slopes should be avoided.
- e) At the bottom and top ends, and at abrupt changes in direction, ramps should have an unobstructed, level area of not less than 1500 mm long by the width of the ramp.
- f) Ramps must have a level landing, not less than 1500 mm long by the width of the ramp, at approximately 10 m intervals.
- g) Slope of exterior ramps should not exceed 1:12.
- i) Best practices on exterior ramps require a 1:20 slope.
- j) Provision must be made to mitigate slopes steeper than 1:12. ie. Notification on website and clear signage at beginning of steeper sloped ramp.

2.4 Exterior Stairs

2.4.1 General Guidelines

Exterior stairs in front-country parks should be designed to accommodate all users. Avoid open risers because they may be hazardous to ambulant persons with disabilities.

2.4.2 Access Requirements

- a) Stairways must be designed to accommodate the expected volume of users by being sufficient width to allow two-way flow from either direction.
- b) Stairs must be designed in such a way that there is adequate drainage to ensure that water does not pool on stair treads.
- c) Stairs within a front-country park must have uniform closed riser heights and uniform tread depths. Where possible, a 7:11 rise over run is preferred.
- d) The tread surfaces of the stairs and the landings should be firm and non-slip. The top outer edge of each step – the stair nosing – is to be marked by a contrasting colour strip that runs the full width of the leading edge of the tread and on the vertical face of the nosing to a

depth of 50mm. Bent checker plate aluminum or abrasive strips are possible options.

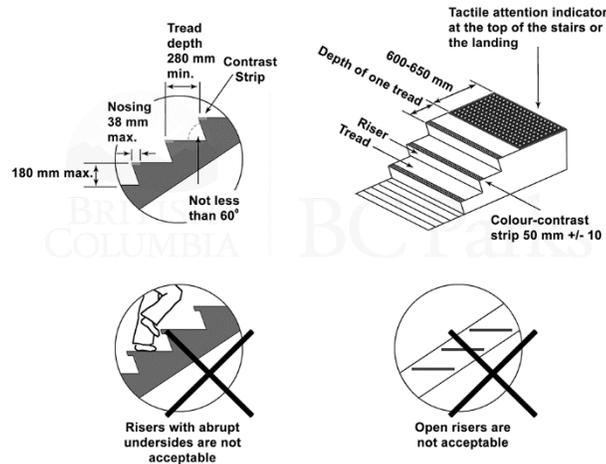


Figure 7: Stair Detail

- e) All stairways must have handrails, including at the landings.
- f) Clear headroom must be provided throughout the full length of the stairway including landings.
- g) Stairs must have a riser with a rake back of not more than 38 mm, or the underside of the nosing with an angle of not less than 60 degrees from the horizontal, with no abrupt angles on the underside.
- h) Handrails should extend past the stairs and terminate to the ground or curl inward.
- i) Provide covered entrances in front of main park buildings



Section 3: Accessible Campsites



General Comments related to Accessible Campsites

In front-country campgrounds, all campsites should be universally designed where practical. However, while BC Parks is in transition to making all sites universally designed, and where geographical limitations prevent such design, the number of campsites with universal design features should be maximized.

An accessible campsite should have a firm level surface with adequate clear space around furniture and short accessible access route to key amenities, particularly accessible toilets. Campsites are designed for use by everyone and not reserved for people with disabilities.

Information regarding the location of accessible camping sites should be provided on websites and in brochures. At the camping facility, information should be provided on the campground map at bulletin boards or information kiosks, but the campsites themselves must not have accessible labels.

3.1 Accessible Campsite Location

3.1.1 General Guidelines

Accessible campsites should be created in a variety of locations so that campers have a choice as to which amenities they prefer to be close to. Highest priority in creating accessible campsites should be given to locations near sanitary facilities.

Accessible campsites must be connected by the shortest possible accessible route to all important amenities including: washrooms and shower rooms; garbage and recycling facilities; water standpipes; and day use areas or park attractions.

3.1.2 Access Requirements

For a campsite to be designated accessible, it must be within 30m of an accessible toilet facility and connected to an accessible route that connects to the main park features.

3.2 Accessible Campsites

3.2.1 General Guidelines

3.2.2 Access Requirements

- a) The campsite surface must be firm and stable, and constructed of materials such as rock crusher fines, packed soil and grass, or asphalt.
- b) The campsite slope must not exceed 2% or 1:50.
- c) To accommodate vehicles and RVs equipped with a lift, the width of campsites must be:
 - i) at least 4.9 m (16') wide, for vehicles;
 - ii) at least 6 m (20') wide, for RVs.
- d) Tent pads must have a clear usable space of at least 1220 mm (48") around the entire tent pad.
- e) All campsite furniture should comply with accessible furniture requirements in Section 4 of this design guide.
- f) Clear space should be provided around all furniture – 1.2m of firm compact clear space max 2% around fire ring and picnic table.
- g) Install a picnic table with the top table boards overhanging on one end by 16" on the side of the site away from the campfire.
- h) The maximum threshold to access concrete picnic table pads is 13 mm.
- i) Concrete picnic table pads must be designed in a way that prevents a wheelchair user from having the wheels roll off the edge of the pad. At minimum, the accessible end of the picnic table must have 1500mm x 1500mm of clear space and be attached to an accessible pathway or route.
- j) Provide potable water within close proximity of accessible campsites. Ensure faucet control is levered style, and mounted at approximately 900 mm.
- k) Provide electrical service to campsites. Ensure that electrical outlet is located between 450 and 900 mm height.
- l) Ensure campsite is located in shady area or have shade shelter provided.



Section 4: Park Furniture



4.1 General Comments related to Park Furniture

Park furniture refers to outdoor constructed items such as picnic tables, garbage and recycling receptacles, benches, and water standpipes.

4.2 Picnic Tables

4.2.1 General Guidelines

Access requirements apply to all picnic tables provided. Clear ground space around picnic tables is a minimum to be exceeded where possible.

4.2.2 Access Requirements

- a) All picnic tables must:
 - i) be located on a level and firm surface that extends at least 1200 mm on all sides;
 - ii) be located adjacent or connected to an access route;
 - iii) have sufficient clear ground space measured from the back edge of the seats or benches of at least 915 mm;
 - iv) have an overhanging portion with knee clearance of at least 750 mm wide x 480 mm deep x 680 mm high.
- b) Picnic table pads must be built in such a way that there is not a transition of surface materials within 1500 mm of the picnic table base at overhanging area. The difference in grade between the pad and the adjacent surface should not exceed 13 mm.
- c) All picnic tables must have an accessible overhanging end.

4.3 Garbage and Recycling Receptacles

4.3.1 General Guidelines

Currently, garbage and recycling receptacles with hinged lids and latches to keep out large animals require a person to operate the latch or handle by tightly grasping, pinching, or twisting the wrist, and by applying more than 5 pounds of force. Until products with compliant operable parts become commercially available, compliance is required to the extent possible and practical. Garbage and recycling receptacles with side hinges are preferred over top hinges because they are lighter for the user.

4.3.2 Access Requirements

- a) Where a garbage receptacle and/or recycling bin is provided, it must:
 - i) be located adjacent or connected to an accessible route;

- ii) be securely fastened to the ground;
- iii) be cane detectable from the ground;
- iv) be colour-contrasted with its surroundings; and
- v) have a clear ground space of:
 - i. at least 950 mm x 1220 mm for a forward approach to the receptacle opening; or
 - ii. at least 760 mm x 1525 mm for a parallel approach to the receptacle opening.

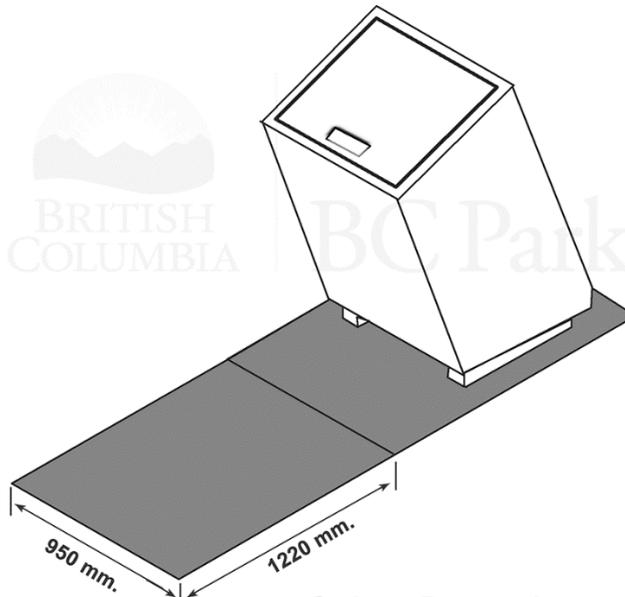


Figure 8: Garbage Receptacle

4.4 Benches

4.4.1 General Guidelines

Benches and seating should be located adjacent to accessible routes, but not interfere with routes of travel. Room for mobility devices should be provided adjacent to benches and seating.

4.4.2 Access Requirements

- a) Where a bench or seating is provided, it must:
 - i) be secure and stable;
 - ii) be located on a firm, stable and level surface;
 - iii) have a seat height between 450 mm and 500 mm from the ground;
 - iv) have a backrest and at least one armrest;
 - v) have a firm and level adjacent clear ground space of at least 915 mm x 1200 mm for wheelchair seating.

4.5 Water Standpipes

4.5.1 General Guidelines

Water standpipes include outdoor devices for dispensing water, including water faucets on posts and hand pumps.

Water from the standpipe should hit the drain grating rather than the ground to minimize splashing onto the user.

4.5.2 Access Requirements

- a) Where water faucets are provided, they must:
 - i) be between 711 mm (28") and 915 mm (36") above the ground'
 - ii) be located between 280 mm (11") and 305 mm (12") from the rear centre of the long side of the space;
 - iii) have a clear and level ground space of at least 1829 mm (72") x 1219 mm (48") with the long side of the space adjoining or overlapping an access route or another clear ground space.

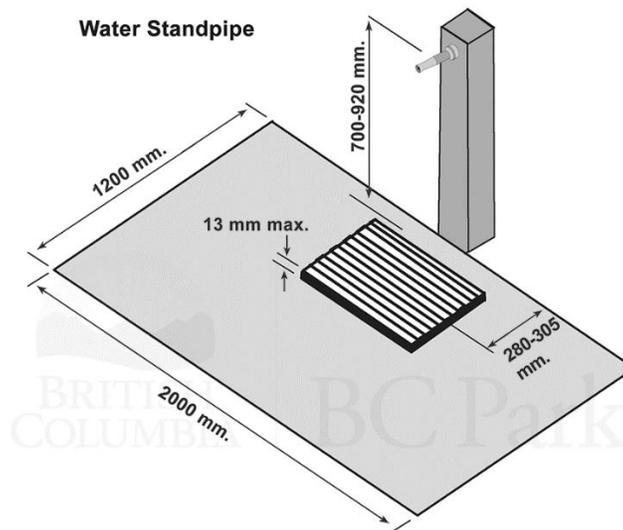


Figure 9: Water Standpipe

- b) Any water standpipe operable controls, such as handles or levers, must:
 - i) be located between 700 mm and 920 mm above the ground;
 - ii) be operable with one hand, using a closed fist, or another method that does not require tight grasping, pinching, or twisting of the wrist, and with a force that does not exceed 22N. Lever or push-button handles are preferred.
- c) Ensure that a lever handle tap that is not spring loaded will automatically shut off.

- d) Where an additional faucet for a foot wash station is provided, ensure the faucet control is located between 700 mm and 920 mm above the ground with a levered handle, and not at the same height as the spout.

4.6 Outdoor Rinsing Shower

4.6.1 General Guidelines

Outdoor rinsing showers allow people to rinse sand, dirt, and debris; they also help combat swimmers itch. They are not intended for bathing. As they do not offer privacy, people usually are not allowed to disrobe when using them.

If self-closing devices are used, they should remain open and allow water to flow for at least 10 seconds.

4.6.2 Access Requirements

- a) Where an outdoor rinsing shower is provided, it must:
 - i) have a clear ground space of at least 1525 mm (60") x 1525 mm (60");
 - ii) have the shower head centered to enable people using mobility devices to turn in the space;
 - iii) have a shower pedestal or wall with shower heads located at the rear end; and
 - iv) have a fixed shower head mounted at 1220 mm (48") above the ground.
- b) Where an outdoor rinsing shower has operable controls, they must:
 - i) be located between 380 mm and 1220 mm above the ground;
 - ii) be operable with one hand, using a closed fist, or another method that does not require tight grasping, pinching, or twisting of the wrist, and with a force that does not exceed 22N
- c) Outdoor rinsing showers can have more than one hand-held spray unit or fixed shower head.
- d) A foot-level shower head is preferred for washing feet.



Section 5: Pit Toilets, Toilet-Shower Buildings and Change rooms



5.1 General Comments related to Sanitary Facilities

There is no more fundamental access issue than having meaningful access to washrooms for all people with disabilities.

A recurring problem for people with disabilities is the practice of locating the paper towel dispensers and electric hand dryers well away from the sinks, often on the opposite wall. For mobility aid users this creates a problem because, to dry their hands, they must move over to the paper towel dispensers. There is a real inconvenience of travelling with wet hands because almost immediately hands get dirty again. Losing grip could possibly result in a serious fall.

Although universal access to all sinks is recommended, at least one sink should have soap dispenser and paper towel dispenser or electric dryer within easy reach of the sink from the seated position.

Sanitary facilities including pit toilets, washrooms, showers, and change rooms must be located on an accessible route, close to the feature area(s). Appropriate directional signage will clearly identify all sanitary facilities and enhance safe, easy to use, clean, and comfortable access for everyone. Clear signage on the exterior of pit toilets, toilet / shower buildings and change rooms are also important for wayfinding.

Creating accessible sanitary facilities goes well beyond ensuring barrier-free entrances or installing grab bars. They must ensure the protection of an individual's privacy, dignity, and security, while accommodating the widest user group possible. Demand for real accessibility in public or commercial sanitary facilities continues to increase due to an aging population combined with a more active community of people with disabilities.

To accommodate a range of users, no-touch features are recommended. These include screen walls or motion-controlled power operated doors, automated toilets, faucets, hand driers, dispensers, and other accessories.

Single-user restrooms at trailheads, including prefabricated restroom units, should be located on an accessible route. They must meet technical requirements for signage, have clear floor space inside the restroom and around the toilet, and have grab bars and accessible door closing mechanisms; and where possible, have lavatory sinks, urinals, switches and controls, and electrical outlets.

5.2 Pit Toilets

5.2.1 General Guidelines

Pit toilets should be located close to accessible routes. Signs at pit toilet entrances should be mounted on the exterior wall next to the entrance and be visible from the access route.

Pit toilets should not be gender specific.

5.2.2 Access Requirements

- The pit toilet doorway must include a firm level surface in front of the door of at least 1500 mm x 1500 mm.
- Appropriate signage must be attached in a visible location on the outside of all pit toilets. See section 6.3.2 for signage location and design detail.
- The pit toilet door must provide a clear opening of at least 865 mm with the door in the open position and have either an automatic door closer or a spring-type/gravity hinge. Hinge must close the door in 2-5 seconds without excessive force.

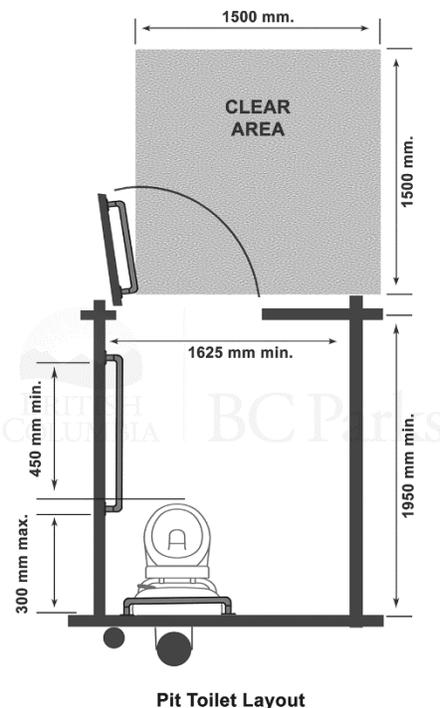


Figure 10: Pit Toilet Layout

- A D-type pull must be installed on free-swing doors and be at least 140 mm long, be mounted horizontally on the inside of an out-swinging door with its centerline located between 200 mm and 300 mm from the hinge edge, and at a height of 800 - 950mm above the floor.

- e) The minimum interior size of an accessible pit toilet stall is 1625 mm wide and 1950 mm deep. Further, the pit toilet stall door should align with the transfer space adjacent to the toilet and must open outward
- f) The pit toilet must be located with the center line of the fixture between 460 mm and 480 mm from the side wall carrying the grab bar, and at least 900 mm from any obstruction on the non-grab bar side. The seat is to be 430 mm to 485 mm above the floor and be a non-spring style, capable of functioning as a supporting back rest.
- g) Toilet paper dispensers must be within easy reach from the sitting position. An ideal location is approximately 50 – 100 mm below the mid-point of the side grab bar, and 300 mm from the edge of the toilet.
- h) Conventional open roll dispensers must be used for all toilet paper dispensers in accessible pit toilets and stalls.
- i) Hand-operated flushing controls, if provided, must be located on the transfer side of the toilet – the side opposite to the wall.
- j) A sliding style of deadbolt lock must be capable of being latched from the inside with a closed fist.
- k) 90-degree side grab bars must be minimum 900mm in length, be mounted horizontally on non-transfer side of toilet on the wall and be 30 - 40mm in diameter with 35 - 45mm clearance. The mounting height should be between 840 mm and 920 mm AFF, with the mid-point of the length in line with the front edge of the toilet.
- l) Install hand sanitizer dispenser located with the operable part no higher than 1100 mm and be operable with one hand to dispense sanitizer on the palm of that hand.
- m) The pit toilet shall include a coat hook mounted on the side wall, not on the door. This hook must be mounted not more than 1100 mm above the floor and projecting not more than 50 mm from the wall.
- n) For universal access, stall doors must open outward and provide a clear width of 920 mm.
- o) Feminine napkin disposals must be located on the side wall under the grab bar and near the front edge for the toilet, not the rear wall.

5.3 Washrooms

5.3.1 General Guidelines

People with disabilities making transfers onto toilets place greater than average shear force on seats and fittings, therefore mounting techniques and hardware need to anticipate this reality. Deodorizers that emit perfume should be avoided as they can cause reactions in people with environmental sensitivities. The minimum level of illumination must be 200 lux. Light switches, coat hooks and similar items should offer a minimum of 70% tonal contrast to their surroundings and be mounted at universally accessible heights.

Quick links:

[5.3.2 Overall Access Requirements](#)

[5.3.3 Access Requirements for Sinks and Counters](#)

[5.3.4 Access Requirements for Toilet Stalls](#)

[-Grab bars in accessible toilet stalls](#)

[5.3.5 Universal Washrooms](#)

5.3.2 Overall Access Requirements

- a) If the washroom is not accessible, a directional sign to the nearest accessible washroom should be posted.
- b) Accessible washrooms must be designed to provide maneuvering space sufficient for a person in a wheelchair to access each type of fixture.
- c) Each washroom should provide for all types of users, including parents with children, gender non-binary individuals, or people with an attendant or a spouse. If this is difficult, universal washrooms can be used.
- d) Automatic door closers on entry doors must be adjusted to the minimum resistance setting of max 5 lbs. on all 3 settings: latch, back-swing and hold. Door closer units installed on washrooms should be low-resistance, delayed action closers and set to at least a 3 second delay or be eliminated completely
- e) Signage for washrooms should use standardized symbols consistently throughout the facilities and have raised lettering or symbols within the sign. Lettering should be raised 1 - 3 mm in height. Signs should be mounted 1200 – 1350 mm above the floor, on the wall - on the latch side of the door where doors are present – not on the door itself. Where there is no entry door, signs should be located on the left as the user enters the washroom. For more detail, see section 6.3.2.
- f) Accessories must be within easy reach of the accessible sink, at an operating height of between 915 mm and 1050 mm AFF, and approximately 760 mm from the center of the sink. This technique is most easily achieved on sinks closest to the corner wall.

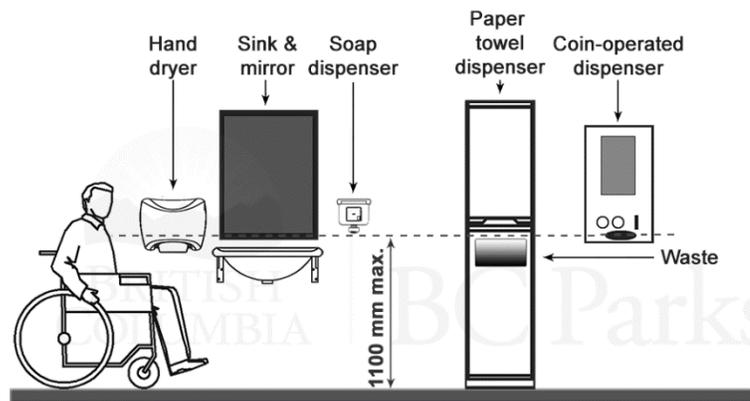


Figure 11: Heights for Washroom Accessories

- g) Garbage cans or other obstacles must not block access to the paper towel dispensers or the required pull space beside the exit door.
- h) Paper towel dispensers must be easy to operate. Many designs require users to reach up – often with both hands – grasp firmly and pull down. Dispensers should be lever-operated or hands-free.
- i) Where possible, entry doors should be eliminated in favour of screen walls. Two doors in a series must be avoided at washrooms.
- j) Urinals must be identified by a raised vertical marker strip on the wall directly above the urinal that is a contrasting colour to the wall.
- k) Urinals must be located within a clear area of 1350 x 800 mm.
- l) Where provided as a courtesy for limited mobility, grab bars must be installed on each side of the urinal according to Figure 13.

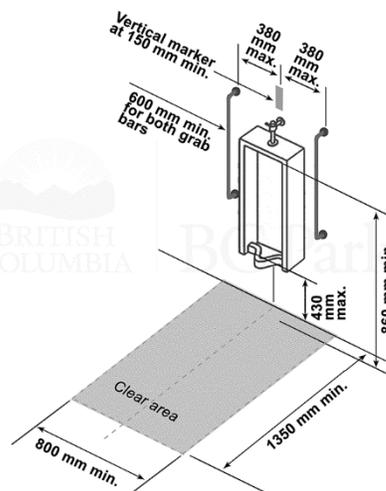


Figure 12: Grab Bars for Urinal

5.3.3 Access Requirements for Sinks and Counters

- a) The counter surface for the lavatory area of the washroom must have a minimum of 735 mm clearance under the front edge of the counter/ sink;
- b) have a center line not less than 460 mm from a side wall;
- c) have its rim not more than 865 mm above the floor;
- d) have a clear area centered under the wash basin not less than 760 mm wide and reducing to not less than 685 mm high at a point 250 mm back from the front face of the apron;
- e) have a further clear space 250 mm above the floor to a point 500 mm back from the front face of the apron;
- f) have a clear floor space centered in front of the wash basin not less than 800 mm wide and 1100 mm deep, exclusive of space under the wash basin;
- g) have pipes insulated or otherwise protected where they may constitute a burn hazard to persons in wheelchairs;
- h) have a soap dispenser located close to the wash basin, not more than 1000 mm above the floor, accessible to persons in wheelchairs, and operable with one hand to dispense the soap on the palm of that one hand;
- i) have a towel dispenser or other hand-drying equipment located close to the wash basin, not more than 1100 mm above the floor in an area accessible to persons in wheelchairs; and

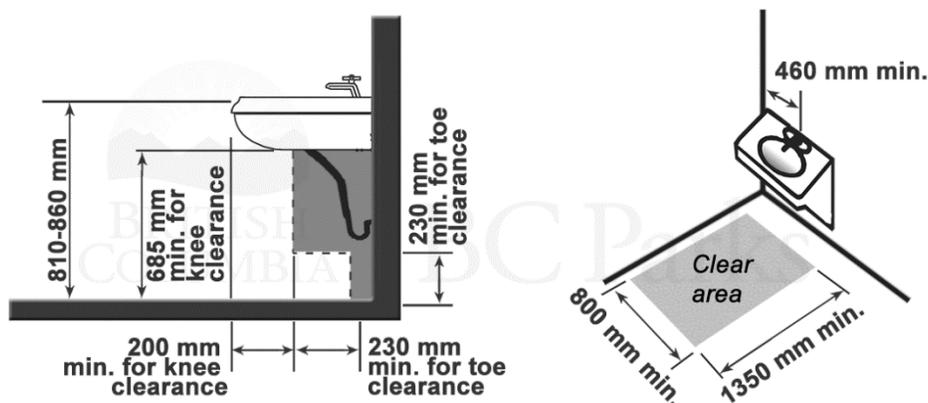


Figure 13: Example of Sink Area

- j) have a mirror on the wall behind the sink mounted at 915mm above the floor. While tilt equipped mirrors meet minimum requirements, fixed full height mirrors with their

base 1000 mm above the floor should be provided where possible.

- k) Hot water tank temperature should be adjusted to a maximum of 49 degrees C to prevent scalding.
- l) Washroom sinks intended for use by people with disabilities must include a counter or adjacent shelf.
- m) Hands-free automatic faucets are preferred, particularly in family washrooms. The minimum requirement is for a single, thermostatically controlled and lever-operated faucet. Separate controls for hot water and cold water are not permitted. Water temperature must not exceed 49 degrees Celsius. Faucets must:
 - i) operate automatically, or
 - ii) have lever-type handles that do not close under spring action;
 - iii) be operable without tight grasping, pinching, or twisting of the wrist. The extra length of the handles serves as a fulcrum to allow use with a minimum of pressure.
 - iv) be within reach of the user, as close to the front of a vanity as possible, while still maintaining the required clearances.
- n) Loud flushing toilets and loud air hand dryers are to be avoided to reduce reverberation noise within concrete buildings.

5.3.4 Access Requirements for Toilet Stalls

- a) The minimum interior size of an accessible toilet stall is 1500 x 1500 mm. Further, the toilet stall door should align with the transfer space adjacent to the toilet. Stall doors must open outward and provide a clear width of 920 mm.

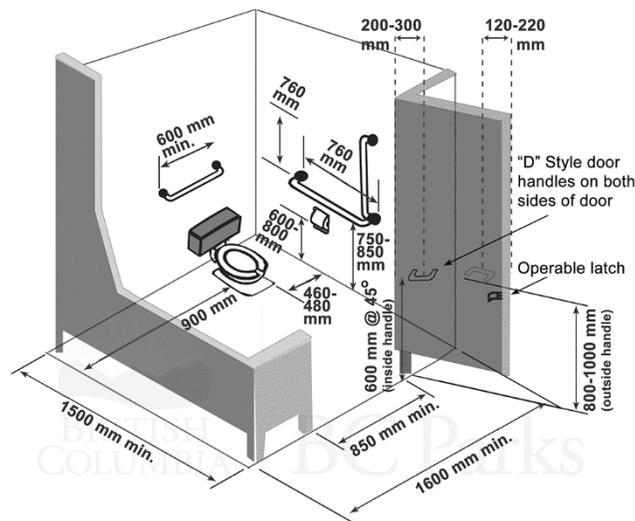


Figure 14: Example of Accessible Toilet Stall

- b) Toilet paper dispensers must be within easy reach from the sitting position. An ideal location is approx. 50 – 100 mm below the mid-point of the side grab bar.
- c) Conventional open roll dispensers must be used for all toilet paper dispensers in accessible pit toilets and stalls
- d) Toilet flush handles must be located on the transfer side of the toilet – the side opposite to the wall.
- e) A sliding style of deadbolt lock must be capable of being latched from the inside with a closed fist.
- f) A coat hook must be mounted not more than 1100 mm above the floor on a side wall and projecting not more than 50 mm from the wall.
- g) The toilet stall door must have a graspable pull on the inside face of the door, at least 140 mm long, located with the midpoint between 200 mm and 300 mm from the hinge edge of the door and between 800 mm and 1000 mm AFF.
- h) Feminine napkin disposals must be located on the side wall under the grab bar and near the front edge for the toilet, not the rear wall.
- i) Stalls must be located with the center line of the fixture between 420 mm and 480 mm from the side wall carrying the grab bar, and at least 900 mm from any obstruction on the non-grab bar side.

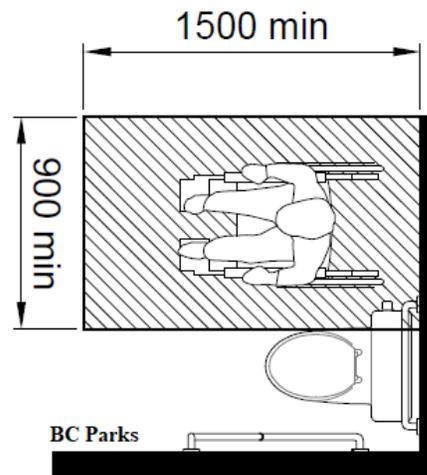


Figure 15: Transfer Area

- j) The seat must be 430 mm to 480 mm above the floor, and must not be the spring-up type.
- k) Where tank-type water closets are provided, tank lids must be bolted down.
- l) Where tank-type water closets are not used, a toilet seat cover must be provided that rests against the grab bar at an angle of between 95° and 110° to provide back support.

- m) Some of the standard toilet stalls should be equipped with grab bars to assist people with limited mobility.
- n) Toilet stalls best practice size is 1700 x 1800 mm to accommodate larger power wheelchair and scooter users.

Grab bars in accessible toilet stalls must:

- a) be 30 mm to 40 mm in diameter;
- b) not be less than 900 mm long;
- c) be mounted with a clearance of 35 mm to 45 mm from the wall;
- d) include an L-shaped grab bar mounted on the side wall closest to the toilet which:
 - i) has horizontal and vertical components that are at least 760 mm long;
 - ii) is placed such that the horizontal component is 760 to 850 mm above the floor; and
 - iii) the vertical component is 150 mm in front of the toilet edge.
- e) Include a horizontal grab bar mounted on the rear wall which:
 - i) is centred over the toilet;
 - ii) is not less than 600 mm long; and
 - iii) is mounted at the same height as the grab bar on the side wall, except where the toilet has an attached water tank, in which case the grab bar shall be mounted 1000 mm above the top of the tank.

5.3.5 Universal Washrooms

Single user Universal Washrooms are an important part of providing an accessible environment for people with disabilities. These washrooms are essential for people who require assistance in the washroom, since often the attendant – or companion willing to assist – is of a different gender.

Further, Universal Washrooms allow people with disabilities to look after their personal needs in privacy and with dignity. These spaces are truly universal because many families prefer these washrooms. Therefore, Universal Washrooms are strongly advised with all newly constructed washroom facilities.

All the previous washroom recommendations also apply to Universal Washrooms, plus:

- a) Automatic closers on Universal Washroom doors should be eliminated and replaced with a power-operated door opener or a 100 mm 'D' handle mounted on the pull side of the door – 485 mm from the hinge side of the door and 1020 mm from the floor, to assist wheelchair users to close the door behind themselves.

- b) The lock on the entrance door should be operable with one hand, and of a sliding bolt style but not a twist style; if twist style is used, must have extra-long handle.
- c) Where baby change facilities are provided, they should be mounted at an operating height of 865 mm and provide a minimum of 760 mm of clearance and 485 mm depth underneath.
- d) Where several Universal Washrooms are provided in different locations, the toilets should be located with the transfer space on alternate sides to accommodate the greatest number of people.

5.4 Showers and Change Rooms

5.4.1 General Guidelines

To enable people with reduced agility, balance, stamina and/or mobility to use the shower facilities, at least one shower in each area must be made accessible. To accommodate people who are unable to stand while getting dressed, an accessible change bench must be included.

Specifically designed for people with disabilities, this bench would permit users to lie down to dress or undress. The bench is higher than a typical bench to make transfers from wheelchairs or rising with reduced leg strength, easier. The bench also offers grab bars to assist the user to return to the sitting position and a padded, waterproof top to minimize the risk of pressure sores or cuts. Rounded corners are important to prevent injuries to assistants.

5.4.2 Basic Access Requirements

An accessible shower stall must have:

- a) a lever-operated or low-resistance push button faucet that is operable with a closed fist with a maximum operating force of 13 N;
- b) the water controls mounted on the wall a maximum of 750 mm from the floor and 750 mm from the end wall and be offset toward the outside edge of the enclosure;
- c) a portable or wall-mounted folding seat that is located a maximum of 455 mm above the finished shower floor. This seat should be a minimum of 480 mm deep and 900 mm long, be capable of supporting a minimum load of 1.33 kN and be waterproof, padded and easily cleaned;
- d) a hand-held shower with mounting points located within easy reach of the seated position. The hose on this showerhead should be at least 1500 mm in length;
- e) soap holders or shelves located within easy reach from the seated position and preferably recessed into the wall;

- f) grab bars that are not less than 750 mm by 900 mm set horizontally with the center line of the grab bar 750 mm above the shower floor with the 750 mm length located on the same wall as the shower seat.
- g) shower heads which direct water towards a person in the seated position, in the case of fixed shower heads.
- h) A universal accessible shower should:
 - i) have a thermostatically controlled valve that is offset from center by 150 mm to protect users from scalds; and
 - ii) provide hot water not exceeding 49 degrees C.



Section 6: Signage and Wayfinding



6.1 General Comments related to Signage and Wayfinding

Wayfinding describes how people navigate the built environment to get from one place to another. Good wayfinding allows people to move independently through parks settings and within buildings by providing multiple cues and engaging the senses. Wayfinding is particularly important in complex environments. Without it, people can become disoriented and frustrated. Wayfinding consists of four main components: determining a location, determining a destination, development of a plan to get to that destination, and getting to that destination.

Wayfinding strategies should be effective for the greatest number of people, including those with a wide range of sensory abilities, intellectual abilities, literacy levels, languages and physical statures. Good wayfinding is also invisible in the sense that it is part of the natural surroundings and doesn't stand out.

6.2 General Signage

6.2.1 General Guidelines

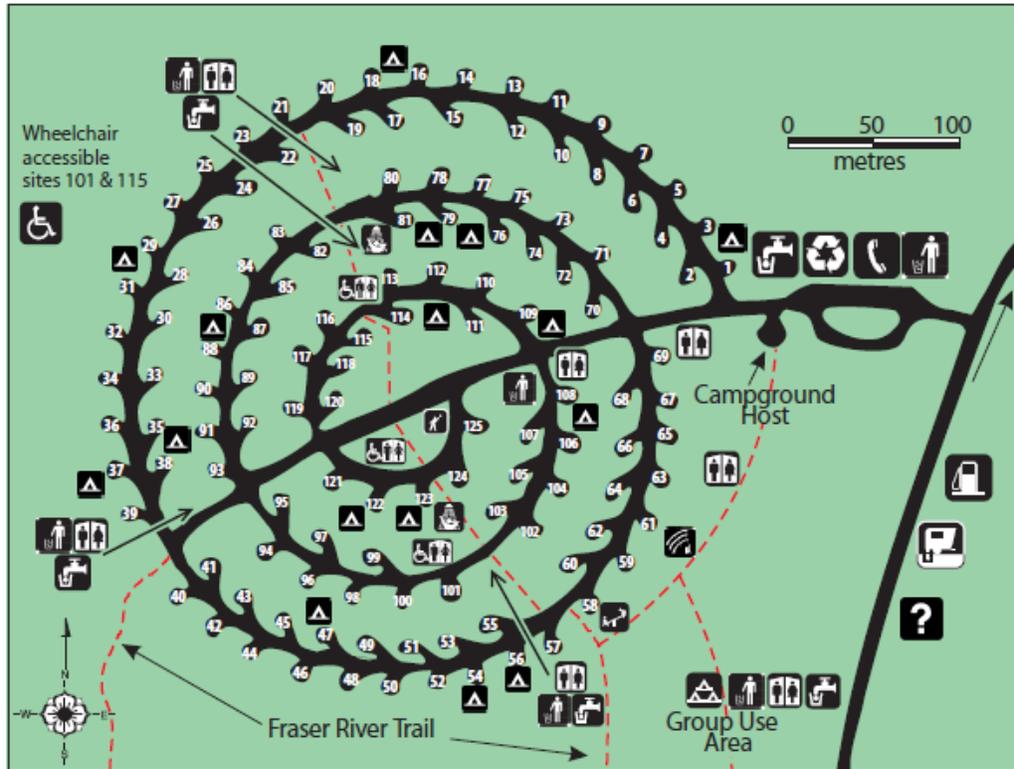
All signage, including electronic displays, should be placed at decision-making points along routes of travel, including exits and entrances, and junctures in trails. The signage must be consistently located and be facing the direction of travel.

6.2.2 Access Requirements

- a) Signs must use only Arabic numerals and sans-serif lettering.
- b) All signs must have a glare free surface and not be mounted on reflective backgrounds or beneath Plexiglas.
- c) Signs should be mounted so that a person using a wheelchair, as well as people with vision impairments, can see them easily. Overhead signage alone is ineffective for most people who have vision impairments. The midpoint height of a sign should be at approximately 1350mm
- d) Signs must have characters and symbols in colours that highly contrast with the single coloured background of the sign. Colour-contrast should be at least 70%.

Mount Robson PROVINCIAL PARK

ROBSON MEADOWS CAMPGROUND



LEGEND			
		Park Boundary	
		Trail	

This example map shows how disorienting a campground can be.

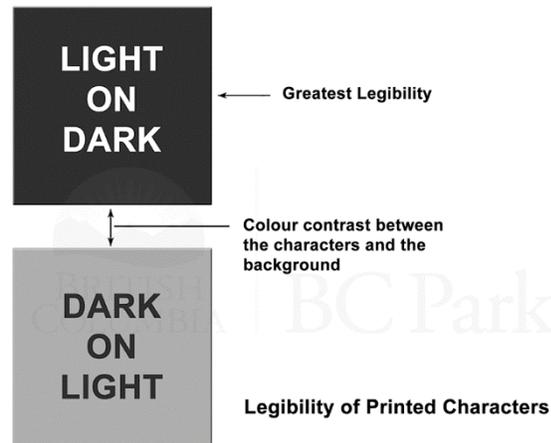


Figure 16: Signs - Contrast

- e) Signs must have characters with a stroke width-to-height ratio of 1:6 to 1:10, and a character width-to-height ratio of 3:5 to 1:1. Most common fonts such as Helvetica have this characteristic.
- f) The use of international symbols is encouraged in all signage.



Figure 17: Signs - International Symbols

- g) The use of pictograms improves the usability of a sign for people with language skill problems.
- h) In addition to good signage, wayfinding can be augmented using information garnered from surrounding surfaces. Consistent surface treatments can provide people with vision impairments with important information. For example, all rest areas should share common surface colour and texture.

6.3 Tactile Signs

6.3.1 General Guidelines

Tactile markings should supplement the text of all signs which are:

- a) regulatory – forbidding or requiring certain actions
- b) warning – alerting to potential or real hazard
- c) identification – where to find washrooms, offices, exits, etc.

6.3.2 Access Requirements

- a) Tactile signs must include Grade 1 Braille near the bottom edge of the sign. Overhead signs which cannot be reached for touching are exempt from this requirement.
- b) Tactile characters, pictograms and symbols on signs should be raised between 0.8 and 1.5 mm above the surface and follow all the other rules for signage.
- c) A tactile sign by a door must:
 - i) be mounted on the wall beside the latch edge of the door;
 - ii) have the leading vertical edge at 150mm from the door jamb;
 - iii) be mounted on the nearest wall, if double-leaf doors are used, or no wall space adjoins the door's latch edge;
 - iv) allow a person to come within 100 mm without encountering protruding objects or standing within a door swing;
 - v) be mounted with the horizontal centerline between 1475 mm and 1525 mm from the floor; and
 - vi) have a clear wall area of at least 75 mm on all sides of the sign.

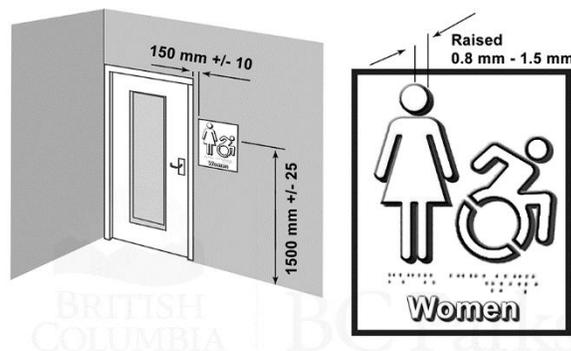


Figure 18: Door Signage Size and Placement

6.4 Directional Signs

6.4.1 General Guidelines

Directional signs are particularly useful where parks and park facilities cover a large area, preventing people unable to travel long distances from wasting energy going in the wrong direction. Exterior route information should include approximate distance and gradient information where appropriate. Directional signs should be used to indicate an alternate main entrance, alternate access routes, accessible viewing positions, accessible refreshment facilities, and accessible washrooms.

6.4.2 Access Requirements

- a) Directional signs should be mounted at 1100mm bottom height.
- b) Directional signs should include direction of travel and total distance, as well as expected maximum slope.
- c) Direction signs should include distance travelled and distance to end of trail and include information related to rest intervals.

6.5 Illumination

6.5.1 General Guidelines

Although uncommon in parks and campgrounds, lighting is helpful for these people in these circumstances. Lights outside toilet/shower buildings are common and must have photovoltaic or timed sensors to make travelling to the bathroom at night safe and easy.

6.5.2 Access Requirements

- a) Where possible the busiest pathways, ramps, and stairways must be well illuminated for safe use both during the day and night, especially in areas where there are amphitheatres designed for evening interpretive programming
- b) Lighting must be evenly distributed to minimize shadow and reflective glare.
- c) Task and local lighting control must be provided such that lighting levels can be localized.
- d) Interior lights in toilet/shower buildings can be equipped with motion activated sensors.

6.6 Trailhead Information Signs

6.6.1 General Guidelines

The purpose of trailhead information is to help all hikers make informed objective decisions about which trail is most appropriate for allowable time, people in their group, and the type of hike that best suits their abilities, needs and interests.

6.6.2 Access Requirements

- a) Trailhead information signs should have the following information:
- i) distance / length of the trail or trail segment;
 - ii) type of trail surface;
 - iii) average and maximum grade;
 - iv) average and maximum cross slope;
 - v) average and minimum width;
 - vi) maximum height and location of significant obstacles; and
 - vii) distance between benches or rest areas.

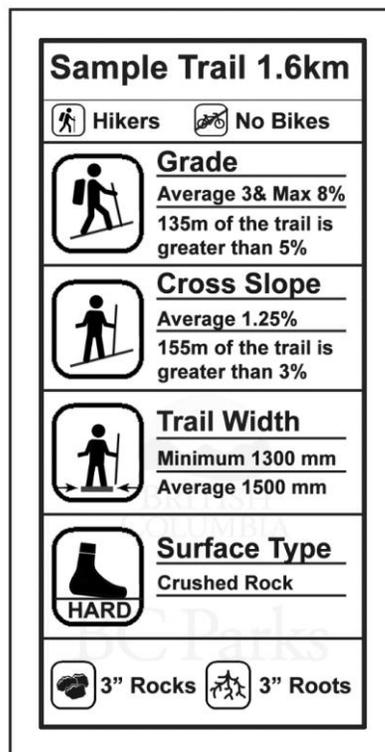


Figure 19: Trailhead Signage

- b) Information signs must use plain language for better comprehension by all users, including those with English as a second language, or people with low reading comprehension levels.

Section 7: Picnic Shelters



7.1 General Comments related to Picnic Shelters

A **picnic shelter** is a partially enclosed structure that provides campers, day users, and hikers shelter from weather. Some picnic shelters in developed areas have electrical outlets and basic kitchen amenities.

7.1.1 General Guidelines

Picnic shelters should be connected to an accessible route. There must be a level entry point with a minimum allowable clearance to allow passage by people using mobility aids such as scooters, wheelchairs and walkers. There should be at least one accessible picnic table within the shelter and preferably clear paths of travel throughout the shelter.

7.1.2 Access Requirements

- a) Minimum clear space within picnic shelters is 1500mm x 1500mm.
- b) At least one accessible picnic table with overhanging top is required.
- c) The floor surface is to be non-slip, firm, and level.
- d) Where kitchen amenities are installed a clear floor area of 750mm x 1200mm is to be provided in front of kitchen fixtures.

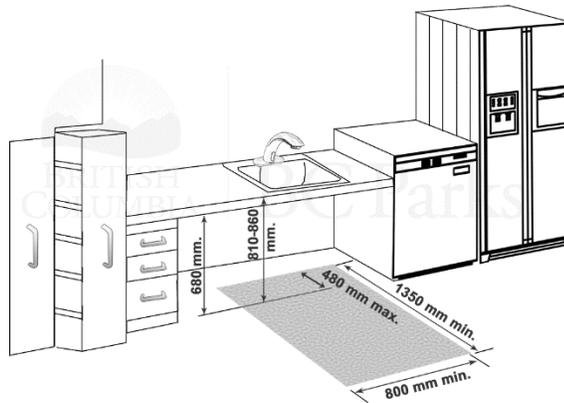


Figure 20: Counter Clearance Requirements

- e) At least one accessible counter area should be provided with knee clearance. The counter should have eased edges with no sharp or abrasive surfaces.
- f) Where supplied counters should be at least 750mm wide and 600mm deep with a top height between 730-860mm. Knee clearance should be at least 750mm wide x 480mm deep and have clearance height of 685mm.

- g) Food preparation sinks require standard accessibility dimensions similar to f) above.
- h) Sink faucets are to be lever style.
- i) Drain pipes are to be insulated or protected.
- j) Where available electrical outlets should be at the side or the front of counter.
- k) Countertops linking the food prep area should be continuous.
- l) Provide height options for counters, within an optimal counter surface height range between 730 and 860 mm.
- m) Where electricity is provided, supply electrical charging stations.
- n) All picnic tables provided are accessible with clear space between and around the perimeter while remaining under cover.



Section 8: Viewing Areas, Docks, Fishing Piers



8.1 General Comments related to Viewing Areas, Docks, Fishing Piers

8.2 Viewing Areas

8.2.1 General Guidelines

Viewpoints should be safe and accessible for everyone. It is essential that shelter and seating is provided to allow people to safely rest and take in the surroundings. Often, information is provided to explain the history or significance of the area. This information should be easily read and interpreted by all users.

While it is understood that geographical constraints of the natural environment may prevent some viewing areas from being accessible to everyone, attempts should be made to provide accessible viewing areas wherever possible.

8.2.2 Access Requirements

- a) The surface of clear ground spaces and turning spaces at viewing areas must be;
 - i) firm and stable;
 - ii) have a slope no steeper than 2% (1:50) in any direction, when constructed of asphalt, concrete, or board decking;
 - iii) or when constructed of other materials, have a slope no steeper than 5% (1:20) in any direction.
- b) The clear ground space must be at least 950 mm x 1250 mm, be positioned for either a forward or parallel approach, and must be provided at each distinct viewing location.
- c) One full, unobstructed side of the clear ground space must adjoin or overlap an access route or trail, as applicable, or another clear ground space.
- d) Turning space provided must allow persons using mobility devices a turning space of at least 1500 mm in diameter; or
- e) Be a T-shaped space with an arm at least 1500 mm x 950 mm and a base at least 950mm x 600 mm.
- f) The viewing space must be free and clear of obstructions between 800 mm and 1250 mm above the ground and extend the full width of the clear ground space.
- g) The railings should be designed in a way to prevent kids from climbing up and over them.
- h) Signs must be viewable between 750 mm to 1200 mm.

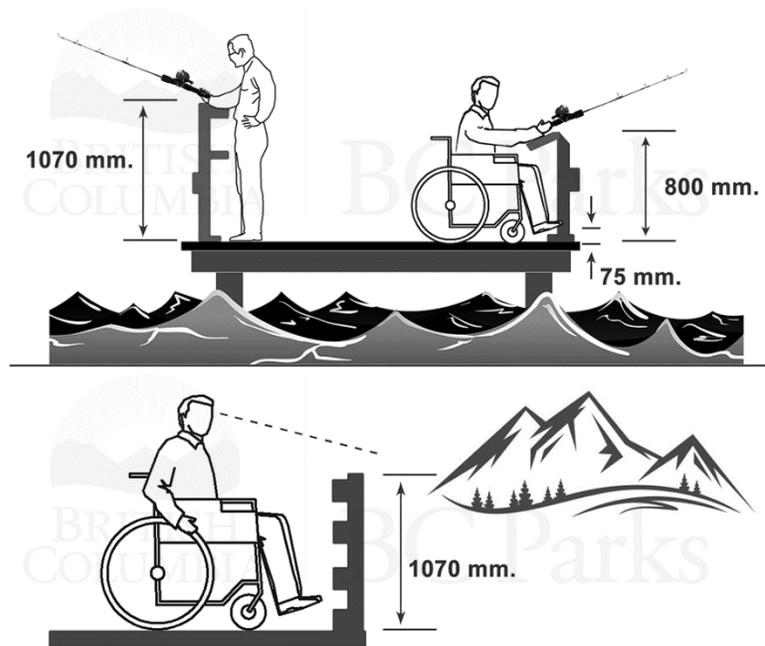


Figure 21: Dock and Pier Barriers

- i) Guards or similar safety barriers may obstruct the viewing space only to the extent that the obstruction is necessary for the guard or other safety barrier to serve its intended purpose.
- j) See-through panels or wire fencing may be used to provide safety while still allowing a person using a mobility device, or a person of short stature, to view the point of interest.

8.3 Docks / Boating Facilities

8.3.1 General Guidelines

8.3.2 Access Requirements

- a) Recreational boating facilities can include fixed and floating facilities and vary in size. Docks must:
 - i) be connected to a continuous accessible route;
 - ii) be firm, stable and slip-resistant;
 - iii) have no horizontal or vertical joints wider than 13 mm (0.5"); and
 - iv) have edge protection.
- b) As a minimum, gangways should be designed to provide for a maximum 1:12 (8.33%) slope but are not required to be longer than 24 m; it is understood that slopes will vary with fluctuations in tides and water.

- c) The clear pier space may be a minimum of 915 mm wide for a maximum length of 610 mm, provided that multiple narrow sections are separated by sections that are a minimum of 1500 mm wide x 1500 mm long.
- d) Edge protection is permitted at the continuous clear openings provided that it is a maximum of 100 mm high and 50 mm wide.

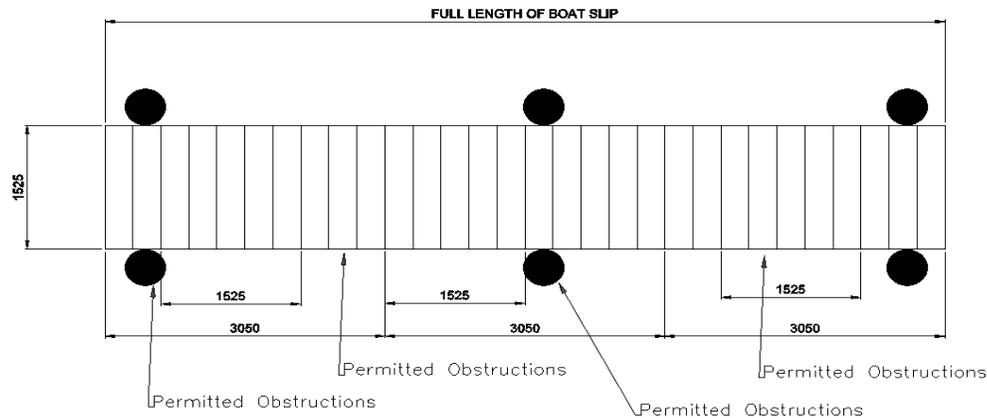


Figure 22: Piers

8.4 Fishing Piers and Platforms

8.4.1 General Guidelines

Lowered railings, guards, or handrails should be dispersed throughout the fishing pier or platform. Portions of the railings that are lowered to provide fishing opportunities for persons with disabilities must be in various locations on the fishing pier or platform to give people a variety of locations to fish. Different fishing locations may provide varying water depths, shade (at certain times of the day), vegetation, and proximity to the shoreline or bank.

8.4.2 Access Requirements

- a) At least one accessible fishing pier or platform should be included in front-country parks where possible. Fishing piers and platforms must:
 - i) allow a minimum width of 1200 mm per angler at docks, 1500 mm per angler at shore pads, and 3800 mm for two anglers;
 - ii) be a minimum of 2500 mm in depth;
 - iii) provide 1 seat for each 2 fishing stations;
 - iv) have guards and edge protection; and
 - v) have a firm, stable, and slip-resistant surface.
- b) At least 25% of the railings, guard, or handrail must be 865 mm maximum above the ground or deck surface.

- c) Edge protection must be provided and must extend 50 mm above the ground or deck surface.
- d) At least one clear floor or ground space of at least 1500 mm x 1500 mm must be provided.
- e) At least one manoeuvring space of 2250 mm x 2250 mm must be provided.

Section 9: Trails



9.1 General Comments related to Trails

Typical front-country accessible pedestrian trails include greenway trails, short distance hiking trails, and interpretive trails. Some trails may only be accessible for a portion of the length due to topography and other constraints. Such trails must be clearly signed at the beginning of the trail, and again at the point where inaccessibility begins. A degree of professional judgement is required to define a trail as frontcountry or backcountry, but the underlying principle is to consider accessibility for the greatest number of people as a primary concern when developing, upgrading and maintaining trails.

Fully accessible trails must meet guidelines related to surfaces, width, grade, resting intervals, edge protection, and obstacles. Accessible seating areas are desirable but must be located where tree falling hazards are minimal.

9.2 Trails

9.2.1 General Guidelines

Accessible trails should be level or gently sloped and provide adequate width to accommodate the expected number of people, including people using power wheelchairs and scooters. If pathways are narrow, passing places should be provided at reasonable intervals. Trails should be safe for all users, free of obstacles, well-illuminated, easy to find, and well-integrated with any stairs or ramps along the route. They should also include any necessary crosswalk markings and curb ramps. If the route is long, seating should be provided along the way. Design trail widths according to the expected volume of visitation. A wider trail is easier to use but can diminish from the experience if the size of the infrastructure is incongruent to the volume of traffic.

9.2.2 Access Requirements

- a) An accessible trail surface must be firm and stable.
- b) The trail width should be at least 1200 mm, although 1500 mm is preferred to allow for passing space for people using wheelchairs or scooters
- c) Grade pathways with a 2% crown or side slope to ensure water pooling is minimal and ensure that drainage channels do not obstruct path of travel.
- d) Passing spaces should be provided at least every 100m if the trail width is less than 1500 mm.
- e) The running slope of the trail should be minimized, and regular level landings should be provided. The ideal slope of a trail is 1:20, but a target sustainable slope would be 1:12, with rest intervals every 30 m.

- f) Provide seating or rest area with seats that have back support and at least one armrest with adequate heel space to allow people to stand up with ease.
- g) Identify rest area with clearly visible changes in surface materials (e.g. texture and colour)
- h) Provide regular seating intervals every 30m if intended use warrants it and before level changes.
- i) Ensure seating areas are level and within sight of one another.
- j) Provide visually-contrasting surfaces in high pedestrian traffic areas.

9.3 Trail and Pathway Ramps

9.3.1 General Guideline

Trail and pathway ramps should be provided in areas along a route where the gradient exceeds 5% (1:20). A maximum rise of 450mm between landings and a maximum ramp length of 9000mm is also recommended. Long ramps with a significant change in elevation should be avoided. Ramps should have handrails and/or edge protection for safety.

9.3.2 Access Requirements

- a) Ramps should provide adequate width to accommodate the expected number of people, including power wheelchairs and scooters.
- b) To ensure safety, ramps should be equipped with accessible handrails or edge protection and good illumination.
- c) Surfaces should be firm, stable and slip resistant.
- d) Level landings are required at both the top and bottom of each run, and between runs and wherever a ramp changes direction.
- e) Ramps can have one of the following configurations:
 - i) Straight run
 - ii) 90° turn
 - iii) Switch-back or 180° turn
- f) Install contrasting colour edge protection.
- g) Ensure ramp surfaces contrast visually with landing surfaces to highlight change in plane to assist people with low vision and install top and bottom landings colour contrasting strips.

9.4 Trail and Pathway Stairs

9.4.1 General Guidelines

Stairs need to be well-dimensioned to provide a stable footing and ensure the safety and comfort of all users. They should not be too steep, and surfaces should be firm, stable, and slip resistant. Stairs should be provided in conjunction with a ramp to offer choice and to meet all users' needs. Where possible, the top and bottom of a ramp should be adjacent to the top and bottom of an associated set of stairs. Single steps should be avoided in an access route, as they are not as obvious as a longer flight of stairs and may present a tripping hazard. If a change in level is equivalent to the rise of a single step, the surface should be gently graded.

9.4.2 Access Requirements

- a) Stair dimensions should be consistent throughout a flight of stairs and be designed with quantity of expected users in mind.
- b) Stair treads must be firm and stable with high visible/tactile nosing design.
- c) Circular stairs and stairs with tapered treads should be avoided, as they can be difficult for people with low vision to navigate.
- d) Stairs should be equipped with accessible handrails and tactile walking surface indicators
- e) Stairs should be kept clear of all obstacles, including litter and leaves.
- f) Landings must be installed at regular intervals, being the full width of the stairs with no steps in landing itself.
- g) Ensure tactile attention indicators are placed at the top of the stairs to notify people who are blind or have low vision. The material is to be contrasting in colour with the surrounding surface material and of a different texture. Indicators must extend the full width of the stairs and be of sufficient length in the direction of travel to provide adequate warning to people who are blind or have low vision.
- h) Install contrasting strip wraps around tread nosings that continues down the riser so that it is visible when both ascending and descending the stairs.

9.5 Trail / Pathway Wayfinding and Signage

9.5.1 General Guidelines

Good wayfinding ensures everyone knows where they are in an environment, where their desired location is, and how to get there from their present location. Wayfinding is important for navigating access on and around nature trails and pathways due to the possible unfamiliarity and often changing outdoor elements. People need visual cues such as maps, directions, and symbols to help guide them to their destinations. Effective wayfinding systems contribute to a sense of wellbeing, safety, and security.

9.5.2 Access Requirements

- a) Access information about trails and pathways must be made available to everyone, both to enhance the experience and for safety.
- b) The most basic trail signs are those identifying the trail. They may provide the name of the trail, mark the route of the trail, or include simple information, such as difficulty rating, mileage point, and symbols showing allowable uses of the trail. Identification of the trail is often incorporated into the directional sign.
- c) Adequate signage must be installed for the comfort and confidence of users in navigating the trail system and thereby promote trail use.
- d) A variety of information formats may be used to convey trail information in a variety of locations; for example, providing both a map and descriptive text about the trail at the trailhead and on the park website.
- e) Simplified text and reliance on universal symbols provides best information delivery to individuals with limited reading abilities or limited understanding of the local language.
- f) An effectively designed sign face is clear, concise, simple, and legible with well-spaced typography and plenty of space in the margin.
- g) Provision of on-trail signage is essential in ensuring users do not become disoriented as it allows them to accurately estimate their ability to meet the challenges required with their choice of route, and to ensure they can find their way back to parking or the trailhead.
- h) Trail and pathway signage should be a part of a cohesive plan. It should be designed consistently and follow universal design guidelines, with consideration given to the aesthetics and its compatibility with the natural environment.
- i) Signs should be located where they can easily be seen by trail users.
- j) Signs should present information in a format that users find easy to understand. Text should be limited to what is necessary.

- k) Signs should be supplemented with universally understood graphics.
- l) Universal symbols should be used when possible.
- m) Section 6.2.2. describes access requirements for trailhead signs.

9.6 Trailhead Signs or Directories

9.6.1 General Guideline

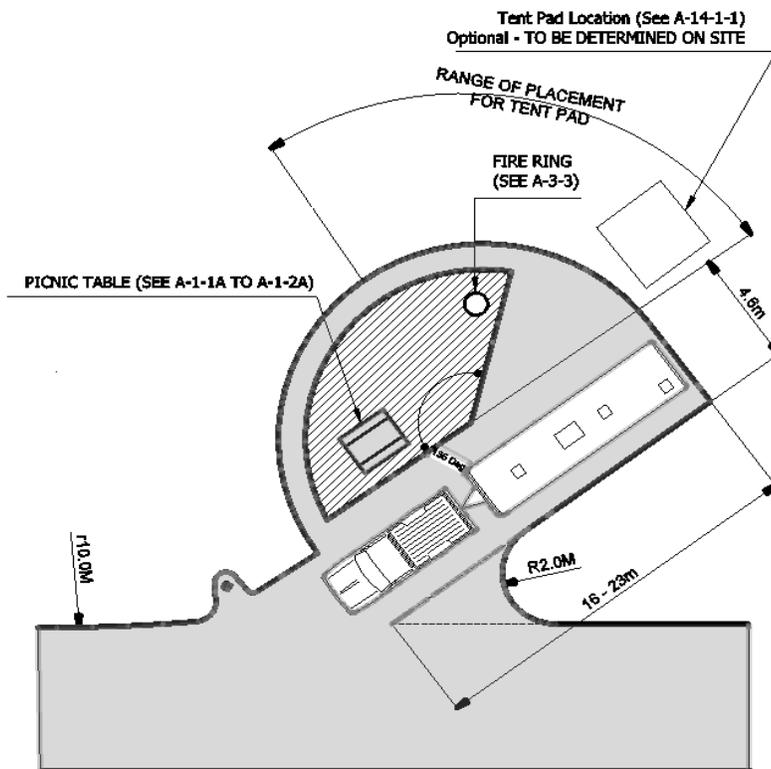
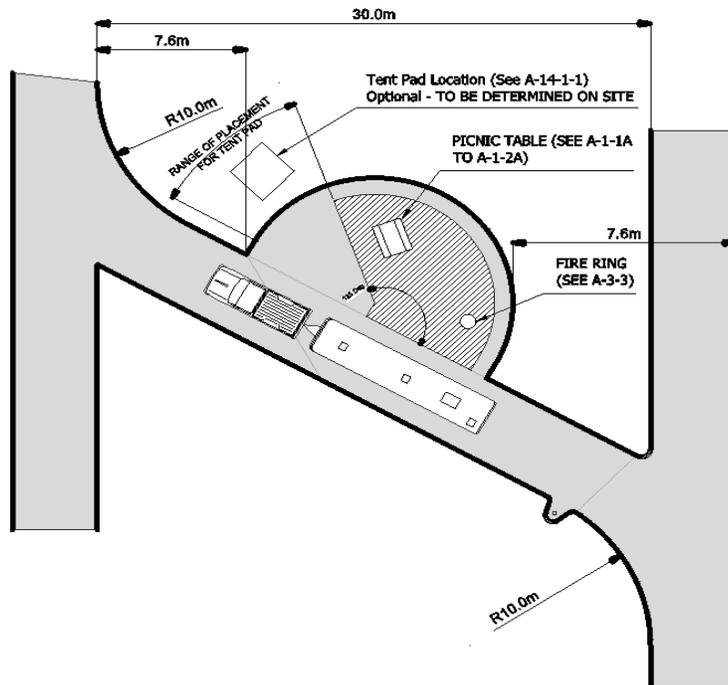
A trailhead directory is a map of the trail or system located at the start of a trail. A trailhead directory should include all the information users need to select an appropriate and safe trail.

9.6.2 Access Requirements

- a) Trailhead signs or directories must include;
 - i) trail-specific trail symbol
 - ii) distance as well as one-way or loop designation
 - iii) running slope (average and maximum grade)
 - iv) surface type including firmness and stability
 - v) known trail hazards
 - vi) cross slope (average and maximum)
 - vii) cumulative elevation change (gain and loss)
 - viii) profile of the trail grade showing changes in surface type and accessibility
 - ix) clear tread width (minimum and average)
 - x) tread obstacles (magnitude and frequency)
 - xi) any major height obstacle, such as boulders, in the trail tread
- b) All information on the trailhead directory should be accessible, using only Arabic numerals and sans-serif lettering.
- c) The size of the letters or symbols should also allow the directory to be read from a reasonable viewing distance.
- d) Trailhead signs may be posted on an informational kiosk if is at the trailhead of a single trail.
- e) In locations without a trail-specific kiosk, the single-sided trailhead sign should be posted conspicuously so that it is readily visible to users entering the trail.
- f) At secondary trail junctions and road crossings, marker posts may be used to provide trail-specific information instead of using trailhead signs.
- g) Distance marker signage provided along long trails, preferably every 1500 mm. Where the trail may be more difficult to locate, markers may be placed more frequently.

- h) Education signage provided with information related to natural, cultural, historical and recreational features, in symbols and simple descriptions.
- i) Design and provide navigation and informational mobile app that provides a variety of information about accessible trails and pathways, such as their location and level of difficulty.
- j) Provide shelter for seating areas.
- k) Illuminate ramps and landing surfaces for universal use.
- l) Provide colour-contrasted landing surfaces on stairs.
- m) Provide stairways with closed riser design with no abrupt undersides.
- n) Written information should be provided in alternative formats such as Braille, large print, multiple languages, or an audible format (e.g. the text of a trailhead sign could be made available on pre-recorded audio).

Appendix A: Campsite Layouts



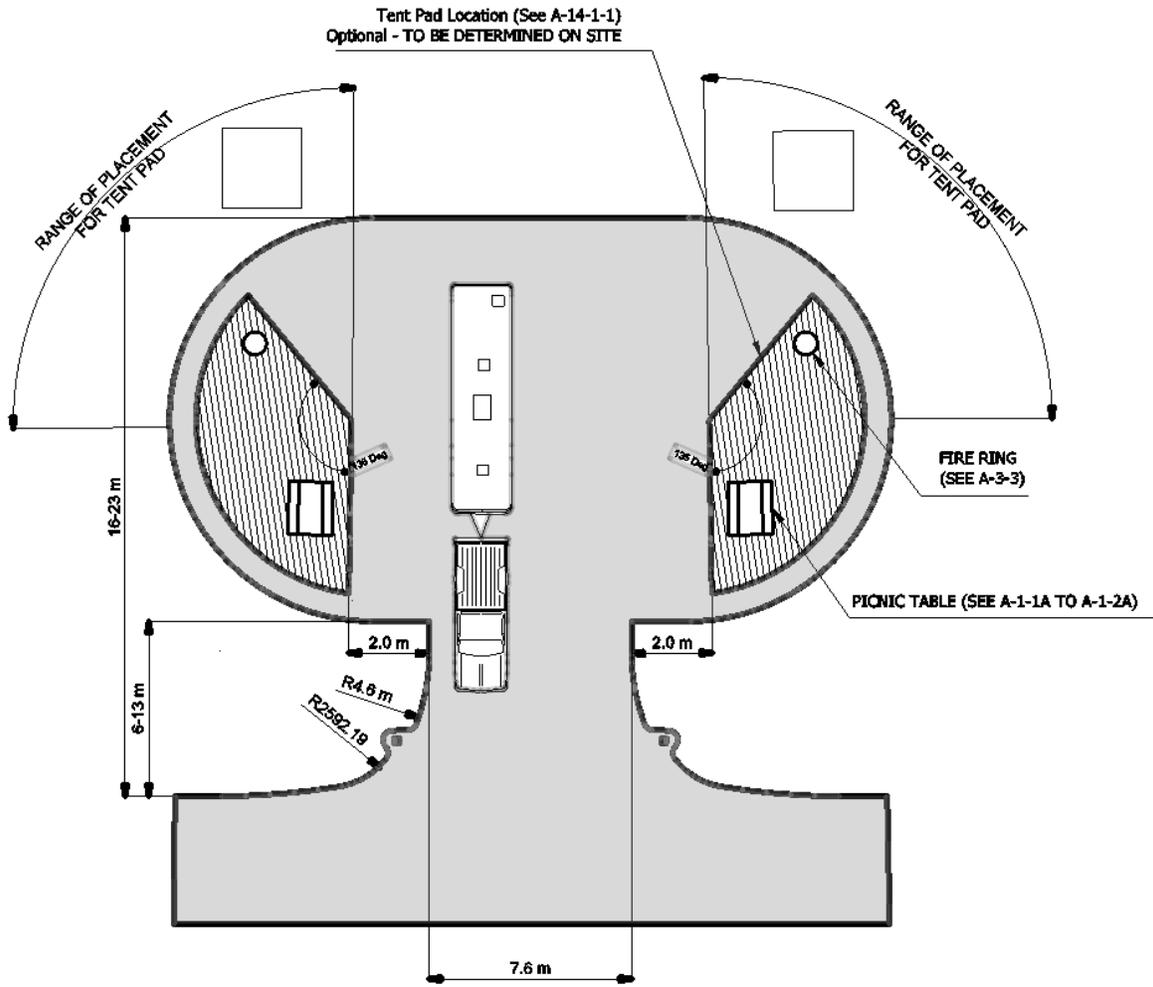


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Optional version control for consideration:

Version control	Date	Changes / updates summary
V.1.	May 2018	First edition
V.2.	June 2020	Updated figures and language in Section 3,4 and 8.
V.3	August 2020	Second edition