WHEELCHAIR ACCESSIBILITY AUDITS: DIGITAL VS ENVIRONMENTAL
APPENDIX 1 – GUIDELINES FOR ASSESSING WHEELCHAIR ACCESSIBILITY

#### GUIDELINES FOR ASSESSING WHEELCHAIR ACCESSIBILITY

# This document is structured in following way:

- 1. Definition of urban green space
- 2. Design requirements for green space accessibility
- 3. Rubric for measurement of accessibility

# 1. Defining green space

Enter as much information as possible:

- 1. Public place (name)
- 2. Location (GPS coordinates)
- 3. Ease of access (how easy is it to arrive at park entrance)
- 4. Proximity to public transit, parking
- 5. Level of use (who typically uses park? Runners/Walkers/Residents)
- 6. Size of space (How big is the park? Are you assessing the whole park?)
- 7. Situated in an urban environment (Is park located in the downtown/business district or residential area?; Is it in east or west part of the Berlin?)
- Focus on spaces that have aesthetic elements of nature
  - Ex. Grass, trees, trails, bodies of water, community gardens
- Places that have amenities (recreation)
  - Ex. Community centres, washrooms, concession/ food options, points of interests, playgrounds, off-leash areas, recreational activities

# 2. Design requirements

How accessible are the green spaces?

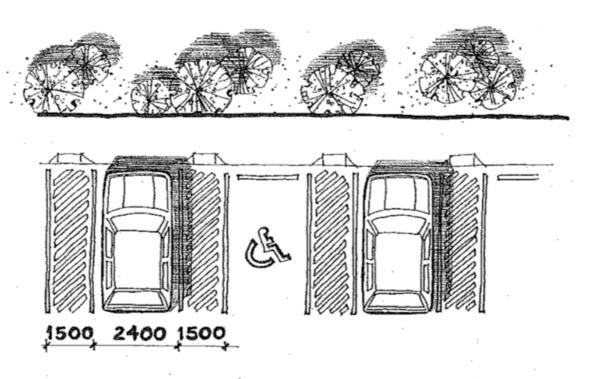
Standards for accessibility in this document are based on "Design Guidelines for Accessible Outdoor Recreational Facilities" published by Parks Canada. All images below, as well as more extensive guide, can be obtained <a href="https://example.com/here/beach-standards-new-more extensive guide">here</a>.

If the assessed object does not meet full requirements, give it reduced score and explain it in description box.

## A.Parking

1. Width: Should be at least 240 cm; Full score (5) needs to be wider than 240 cm, and have adjacent access aisles at both sides of at least 150 cm in width and 600 cm in length; it should also be a shortest possible route to entrance. For score of 4, it should have a width of 240 cm, and a single aisle on a side of 150 cm, and be on a shortest possible route to the entrance. If parking

- spot meets all the space requirements, but is far from entrance assign a **score of 3**. If the stall does not meet size requirements, assign it a **score of 2**. If the size requirements are not met (or there is no handicapped parking spot), then assign a **score of 0**.
- 2. **Number of spots:** refer to table below, if requirements are met, assign a **score of 2**, if requirements are not meant, but there are still handicapped parking spots available, assign a **score of 1**.



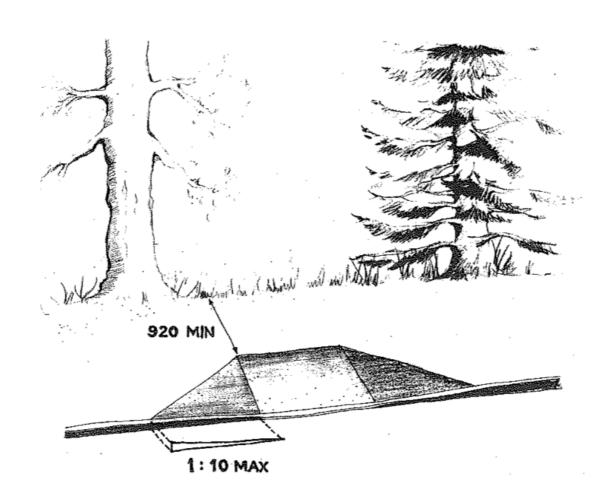
Total number of parking spaces

Minimum number of accessible spaces

up to 25	1
26 - 50	2
51 - 75	3
76 - 100	4
101 - 150	5
151 - 200	6
201 - 300	7
301 - 400	8
401 - 500	9
more than 500	2% of total

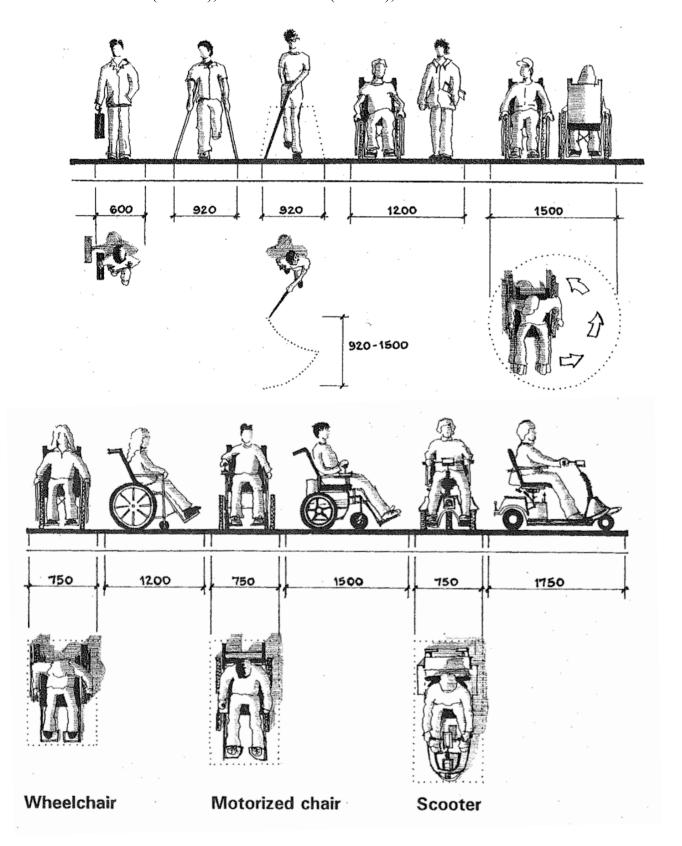
# B. Curb Ramps

1. Curb ramps do not require handrails, they should have a max. running slope of 1:8 (7 degrees). Have a minimum width of 1200 mm, not including flared sides. Have a slip-resistant surface that is texture- and colour- contrasted with adjacent surfaces. Have adjacent gutters and surfaces with counter slope of 1:20. The adjacent sidewalks on top of the ramp should be at least 92 cm to allow people to walk behind. If all 6 criteria are met, assign a score of 5. If less criteria are met, deduct 1 point for each that is not met to a minimum of 0.

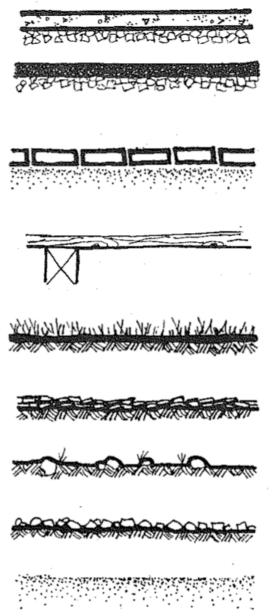


# C.Sidewalks and paths

1. Width should be ideally 150+ cm (Score 5); 120 cm - 150 cm (Score 4); 100 cm - 120 cm (Score 2); 80 cm - 100 cm (Score 1); <80 cm - Inaccessible.



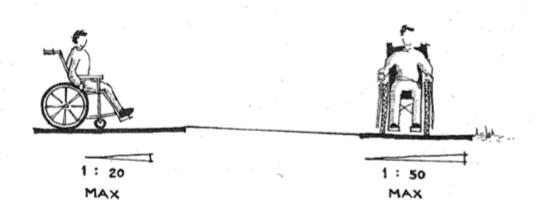
2.Surfaces (ie. Material) General requirements require that surfaces need to be firm (highly resistant to deformation), stable (surface does not move unpredictably), and slipresistant (not slippery when wet). If the surface is uneven and/or slippery when wet, scores should be lowered to reflect that. Note if these issues in the table.



- 1. (Score 5) Paved Surface. Should have a light texture preventing surface from being slippery when wet.
- 2. (Score 5) Asphalt. Should be even and textured, preventing it from being slippery
- 3. (Score 4) Concrete Pavers. If Blocks are even and drainage is allowed, the score of 4 can be assigned. If the surface is uneven and the blocks have significant angles (uneven) between each other, score should be lowered to 2 or even 0 depending on how significant issues are.
- 4. (Score 4) Wood Decking. Planks should be laid perpendicular to direction of travel and joints should be less than 1.3 cm. If this criteria are not met, score should be lowered to appropriate level.
- 5. (Score 3) Grass. If the grassed surface is even and reinforced from below (surface is stable), than full score can be awarded. If not, reduce the score appropriately.
- 6. Score (2 or 1) Wood Chips. Small chips are acceptable if they are compacted and create even surface.
- 7. (Score 2 or 1) Untreated soil. Soil is highly variable and can change from erosion, thus score should reflect usability on wheelchair.
- 8. (Score 0) Gravel. Not recommended, as it is unusable by people in wheelchairs.
- 9. Score (0) Sand. Not recommended. Packed sand can be passable for a score of 1.

#### 3. **Slope** (angle of the surface)

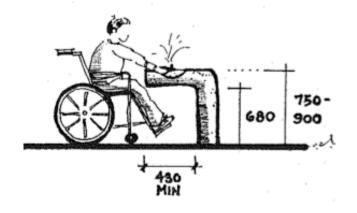
Accessible routes should have a running slope not steeper than 1:20 (2.86 degrees or 5%). Cross slope should not exceed 1:50 (1 degree or 2%). If slope is steeper than 1:20 it should be designated as a ramp and have handrails or allow other types of assistance. If the grade is 1:20, and lasts for more than 45m it should have a rest area at the end 150x150 cm in size. If all the requirements are met, the score of 5 should be assigned. If some of the requirements are not meant, reduce the score based on number of requirements that are met. If slopes exceed designated angles, assign score of 0 and provide description.



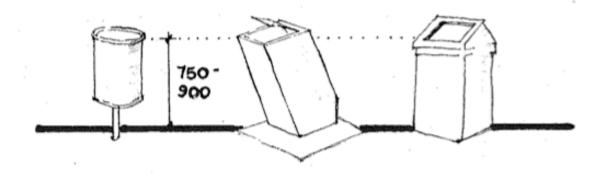
## D. Access to components in parks

Access to objects in parks such as viewing scopes, benches should be within a reach for a person using wheelchair. If the requirements outlined in the image on the right are fully met, assign a **score** of 3, if they are partially met assign a **score** of 2. If they are not met at all (wildly out of range) assign a **score** of 0.

Drinking fountains: should have a clear area at least 75 cm x 120 cm in front of them, and be connected to accessible route, knee space should be at least 75 cm wide, 43 cm deep and 68 cm high, have flow parallel to the front of the unit and have a water flow of at least 100mm high. If the fountain meets all requirements assign a **score of 3**, if it partially meets requirements assign score based on your perceived usability and leave a description.

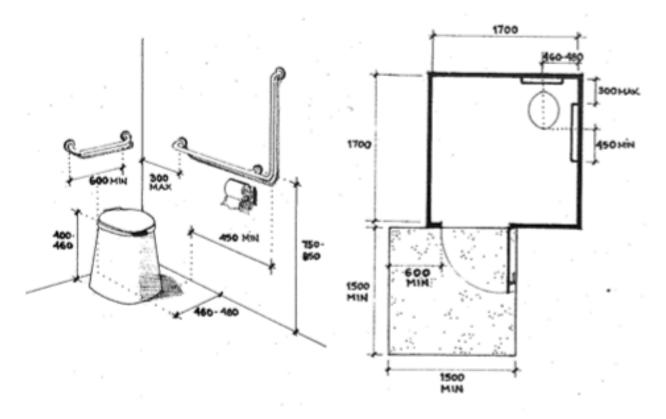


Access to trashcans: height of opening should be 75 to 90cm high, and have a clear area in front of them of at least 75 x 120cm.

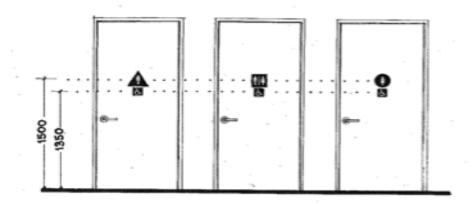


### E. Access to washrooms

Minimum requirements: have a floor area of at least  $1700 \times 1700 \text{mm}$ , toilet fixture with centreline located between 460 and 480mm from adjacent wall, top of the seat between 400 and 460mm from the floor. Two bars should be mounted on adjacent walls: one 600mm horizontal grab bar behind the toilet, 750-850mm from the floor, and L-shaped grab bar with horizontal element 750-800mm from floor and no more than 300mm from rear wall; vertical element at least 450mm long. The toilet paper dispenser should be no more than 300mm away from the toilet.



The bathroom door should swing out and have a clear opening of at least 810mm wide. This is the same criteria for individual private washrooms and handicap stalls.

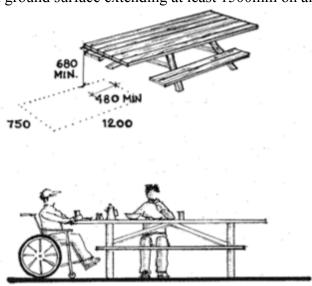


### F. Resting areas

These areas are located within the green space vicinity and provide a large space (minimum 6000mm x 6000mm) without any obstructions. Examples of obstructions include loud noises, visual obstructions, and accessible route. Surface does not have to been paved, but should be level and firm; rank in same order as section C.2. Resting areas that have elements that make for a better experience should receive a higher score. These elements can include: shade, picnicking area (see below for optimal design), space that fosters social interaction, public art, commerce activity, entertainment or performances, special events.

#### Picnic tables should:

- 1) Have an accessible route
- 2) Have knee space under the table of at least 750mm wide x 480mm deep x 680mm high
- 3) Have a level and firm ground surface extending at least 1500mm on all sides of the table



The following pages are made for you to rank your observations from 1-5. Some features follow a quantitative ranking (use the above descriptions to measure your observations) but others are qualitative and based on your subjective opinion. Please use the observations section as much as possible to provide context to the space that you are observing. When ranking, be sure to take into account the level of **importance**, **frequency**, **and quality** of what you are observing. The final scores should reflect both quantitative and qualitative observations.

#### Scores:

Scores.	
5	Excellent
4	Above average
3	Average
2	Seldom
1	Never

5	Yes
0	No

### REFER TO MAIN DOCUMENT FOR DESCRIPTION OF REQUIRED PARAMETERS FOR SCORES OF 0 TO 5

NAME OF GREEN SPACE:			
LOCATION AND NEIGHBOURHOOD:_ DESCRIPTION OF GREEN SPACE:			
PARKING:			
	Descriptor: Size/ Number	Score (0-5)	Comments/Observations
Width/Width of access aisles	<u> </u>		
width width of access aisies			
Number of Handicapped Spots per 25			
spots			
		Final Score:	
CURB RAMPS	T		
	Descriptor: measurement, yes or no	Score (0-5)	Comments/ Observations
Width (minimum 120 cm, not including flared sides)			
Type of surface/ Is it texture and colour-contrasted?			
Slope (max 1:8 or 7 degrees)			
Adjacent gutters and counter slope (max 1:20)			
Adjacent sidewalks (min. 92 cm wide)			
		Final Score:	

	Descriptors: measurement/ type	Score (0-5)	Comments/ Observations
Width			
Type of surface			
Running Slope (no steeper than 1:20 or 5%) Railing required if slope is >1:20 Cross Slope (should not exceed 1:50			
or 2%)			
		Final Score:	
CCESS TO COMPONENTS IN PA	RK:		
CCESS TO COMPONENTS IN PA	RK:  Descriptors: measurement/ yes or no	Score (0-5)	Comments/Observations
Drinking Fountains: Area in front min 75cm x 120cm Connected to accessible route Knee space min 75 cm x 43 cm x 68 cm Water flow min 10 cm high		Score (0-5)	Comments/Observations
Drinking Fountains: Area in front min 75cm x 120cm Connected to accessible route Knee space min 75 cm x 43 cm x 68 cm Water flow min 10 cm high Trashcans: Height of opening 75-90cm high		Score (0-5)	Comments/Observations
Drinking Fountains: Area in front min 75cm x 120cm Connected to accessible route Knee space min 75 cm x 43 cm x 68 cm Water flow min 10 cm high Frashcans:		Score (0-5)	Comments/Observations

Accessibility

Usability