McGill

FACILITIES MANAGEMENT AND ANCILLARY SERVICES

McGill Accessibility on Campuses

November, 2019

This document is under revision

All projects shall minimally meet the requirements prescribed in the **Quebec Construction Code Chapter I - Building, and National Building Code of Canada 2015 (amended)**

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PART 1 CONTEXTUALIZATION

1.1 INTRODUCTION

McGill's goal for accessibility on its campuses is to provide environments which can be accessed by students, faculty, staff and the public at large. McGill is committed to improving its spaces and buildings by finding creative solutions to render its campuses universally *accessible* to the widest variety of users.

1.2 MOVING FORWARD

A great number of items pertaining to Universal Design and Accessibility have already been addressed and integrated into the McGill Building Design Standards. These items can be found in their respective sections, either in the Design Standards for Special Building Areas, or in the Technical Standards.

The McGill University Physical Master Plan, adopted in 2008, outlines McGill's current '*Barrier-Free* Campuses' planning objectives. To study the issue of accessibility in greater detail and how they integrate with the Master Plan, a committee for Accessibility has been formed, whose members are composed of: Design Services, Campus Planning and Development Office, the Office of Students with Disabilities, Security Services, Human Resources, among others. This working group's mandate is to: analyze the existing conditions of the campuses, establish the goals for McGill, invite members of advocacy groups in order to better understand how to improve our campuses for a wide array of disabilities, study options and feasibility, and recommend a series of objectives. Once approved, a master plan for accessibility, including budget estimates and timeline, will be established for the implementation of these objectives.

McGill University intends to optimize its users' experience and recognizes that accessibility expectations are constantly evolving. Therefore, in order to continuously improve this document, the university encourages all users to provide feedback as well as to ask questions about this standard. For any suggestions or comments, please feel free to contact Design Services at infodesignservices@mcgill.ca.

1.3 VISION

McGill University is committed to promoting diversity, inclusion, and accessibility in its learning and employment environment, in its engagement with all communities, and within its built environment. The University aims to foster a climate of understanding and mutual respect for the dignity and worth of all persons. It strives to identify, remove, and prevent *barriers* that hinder full and meaningful participation in all aspects of campus life. It also aims to offer the proper human and financial resources to achieve these goals. All members of the McGill community share the responsibility of supporting these values and goals.

1.4 UNIVERSAL DESIGN VS BARRIER-FREE DESIGN

These two concepts are important to define and distinguish. They are often used interchangeably, yet they represent valid, yet different, methods of action.

Universal Design

Also referred to as Universal Accessibility, the goal of Universal Design is to render products, processes, services, information and environments equitable and inclusive for all, allowing all people to realize activities autonomously and equally. Universal design promotes the realization of *barrier-free* environments, whether they are buildings, exterior spaces, equipment, or objects. The guiding principle is to design a world which the entirety of its population, inclusive of people with all types of disabilities, can live freely and securely.

In practice, environments are therefore conceived in order to be frequented in the same way by the majority of users. A range of traditional disabilities is considered: physical, auditory, intellectual, developmental, language, motor skills, visual, as well as temporary incapacity. The solutions that respond to the particular needs of a group of individuals is treated in such a way that it would benefit the entire population. A simple example is the entrance to a building. *Accessible* through a gentle *slope* toward the door is much more desirable a solution than the combination of access ramp and stairs, each of which corresponds to only one segment of the population and segregates users.

Buildings and spaces conceived with the principles of Universal Design from the outset can integrate privileged, simple solutions to projects at similar costs to traditional design. All facets of the built environment can benefit from these universal concepts, from the scale of a building, to the design of exterior spaces, from services such as transportation and communication to the industrial design of objects.

The concept of accessibility also inherently implies the notion of adaptability. When implemented at the conception stage, specific elements can be easily integrated to respond to specific needs as they arise. For example, backing behind walls in bathrooms would allow for easy integration of bars if they are required later on.

Universal Design is a philosophical change in our perception and conception of our environment, and goes well beyond the requirements of the Construction Code.

Barrier-Free Design

Accessibility as prescribed by the National Building Code of Canada (Quebec Construction Code) responds to the specific requirements of the concepts of Accessibility design; these are minimal requirements which have been determined principally to respond to the needs of wheelchair users. An environment which conforms to the regulations of the Quebec Construction Code secures *accessible* paths of travel

for people with physical disabilities. Paths of travel for persons using mobility aids often differ from the paths offered to the majority of the population.

1.5 RETROFIT PROJECTS

Built environments are often required to be retrofit with the goal of improving the accessibility of existing environments. Solutions are on a case by case basis in order to respond to the needs of an individual or group of individuals; for example, the installation of electric door hardware or ramps to entrances to older buildings. These types of projects often require multiple modifications, and the costs are generally high, since the solutions are often tailor-made to the situation.

1.6 MCGILL'S CAMPUSES AND BUILDINGS

McGill's campuses and buildings are presented with unique challenges:

.1 **Topography:** The dramatic topography of the downtown campus presents significant challenges for achieving universal accessibility. Many of the north-south city streets, for instance, have *slopes* that far exceed accepted wheelchair accessibility standards.

.2 **Age of buildings:** McGill is unique among Canadian campuses – it is the oldest large urban campus. Roughly one-third of McGill buildings have been built before 1940, and only 9% was built after 1996. Evidently, many of these buildings were conceived with the notions and codes of their times and have not been designed to accommodate persons with disabilities. The retrofit of these buildings to achieve universal accessibility is often complicated and costly.

.3 **Many buildings, diverse types of buildings, smaller buildings, on two main campuses:** McGill has an average total of 880,800 m^2 split into 2 main campuses, with approximately 130 buildings in the downtown campus and 90 buildings at the Macdonald campus. The buildings types are comprised of academic, residences, animal barns/sheds, greenhouse, houses, mansions, stadium, rink, and garages. In addition, many of McGill's buildings are smaller than the average for university campuses; while the average gross area for a medium size building is 4,186m^2. This reality presents specific challenges:

.1 Large academic buildings have been made *accessible* but some of the smaller ones are not;
.2 Rendering one building *accessible* often has only a localized impact since not all buildings are interconnected;
.3 Adapted transport is required between campuses [1];

[1] Through the STM Paratransit service or private adapted taxi

.4 Diverse types of buildings require varying, non-standard solutions.

1.7 REFERENCE: PRINCIPLES OF UNIVERSAL DESIGN (VERSION 2.0 – 4/1/97)

The following 'Principles of Universal Design' have been compiled by advocates of universal design by the Center for Universal Design at NC State University. The authors, a working group of architects, product designers, engineers and environmental design researchers, collaborated to establish the following Principles of Universal Design to guide a wide range of design disciplines including environments, products, and communications. These seven principles may be applied to evaluate existing designs, guide the design process and educate both designers and consumers about the characteristics of more usable products and environments.

The Principles of Universal Design are presented here, in the following format: name of the principle, intended to be a concise and easily remembered statement of the key concept embodied in the principle; definition of the principle, a brief description of the principle's primary directive for design; and guidelines, a list of the key elements that should be present in a design which adheres to the principle. (Note: all guidelines may not be relevant to all designs.)

1.8 PRINCIPLES OF UNIVERSAL DESIGN

*(NC State University, The Center for Universal Design***,** *Version 2.0 – 4/1/97)*

The design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

.1 PRINCIPLE ONE: Equitable Use

The design is useful and marketable to people with diverse abilities.

Guidelines:

1a. Provide the same means of use for all users: identical whenever possible; equivalent when not.
1b. Avoid segregating or stigmatizing any users.
1c. Provisions for privacy, security, and safety should be equally available to all users.
1d. Make the design appealing to all users.

.2 PRINCIPLE TWO: Flexibility in Use

The design accommodates a wide range of individual preferences and abilities.

Guidelines:

2a. Provide choice in methods of use.
2b. Accommodate right- or left-handed access and use.
2c. Facilitate the user's accuracy and precision.
2d. Provide adaptability to the user's pace.

.3 PRINCIPLE THREE: Simple and Intuitive Use

Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

Guidelines:

3a. Eliminate unnecessary complexity.
3b. Be consistent with user expectations and intuition.
3c. Accommodate a wide range of literacy and language skills.
3d. Arrange information consistent with its importance.
3e. Provide effective prompting and feedback during and after task completion.

.4 **PRINCIPLE FOUR: Perceptible Information**
The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

Guidelines:

4a. Use different modes (pictorial, verbal, *tactile*) for redundant presentation of essential information.
4b. Provide adequate contrast between essential information and its surroundings.
4c. Maximize "legibility" of essential information.
4d. Differentiate elements in ways that can be described (i.e., make it easy to give instructions or directions).
4e. Provide compatibility with a variety of techniques or devices used by people with sensory limitations.

.5 **PRINCIPLE FIVE: Tolerance for Error**
The design minimizes hazards and the adverse consequences of accidental or unintended actions.

Guidelines:

5a. Arrange elements to minimize hazards and errors: most used elements, most *accessible*; hazardous elements eliminated, isolated, or shielded.
5b. Provide warnings of hazards and errors.
5c. Provide fail safe features.
5d. Discourage unconscious action in tasks that require vigilance.

.6 **PRINCIPLE SIX: Low Physical Effort**
The design can be used efficiently and comfortably and with a minimum of fatigue.

Guidelines:

6a. Allow user to maintain a neutral body position.
6b. Use reasonable operating forces.
6c. Minimize repetitive actions.
6d. Minimize sustained physical effort.

.7 **PRINCIPLE SEVEN: Size and Space for Approach and Use**
Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.

Guidelines:

7a. Provide a clear line of sight to important elements for any seated or standing user.
7b. Make reach to all components comfortable for any seated or standing user.
7c. Accommodate variations in hand and grip size.

7d. Provide adequate space for the use of assistive devices or personal assistance.

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1.9 GLOSSARY AND DEFINITIONS

The terms in italic in the subsequent parts of this document have the following definitions.

***Accessible*:** Refers to space, features, elements, sites, environment, *facilities*, services, programs or practices that are capable of being reached and used by persons with disabilities.

Barrier: Anything — including anything physical, architectural, technological or attitudinal, anything that is based on information or communications or anything that is the result of a policy or a practice — that hinders the full and equal participation in society of persons with an impairment, including a physical, mental, intellectual, cognitive, learning, communication or sensory impairment or a functional limitation. (Bill C-81, Canada)

***Barrier-Free*:** "*Barrier-free* means that a building and its *facilities* can be approached, entered, and used by persons with physical or sensory disabilities." 1.4.1.2. Defined Terms, National Building Code of Canada (2015).

***Clear Floor Space*:** Unobstructed floor space to accommodate one self-powered or motorized wheelchair, 4-wheel scooter or other mobility device, including its user.

Clear Width: "*Clear width* is intended to be measured from a line tangent to horizontal protrusions such as handrails." A-3.4.3.4. Clear Height and Width, National Building Code of Canada (2015).

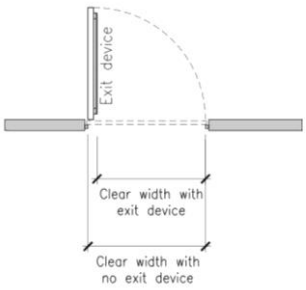
***Cross Slope*:** Perpendicular *slope* to the direction of travel.

Disability: Any impairment, including a physical, mental, intellectual, cognitive, learning, communication or sensory impairment — or a functional limitation — whether permanent, temporary or episodic in nature, or evident or not, that, in interaction with a *barrier*, hinders a person's full and equal participation in society. (Bill C-81, Canada)

***Door Operators*:** Hardware that opens and closes doors. They may be related to a system with push buttons.

Door Width: "Every doorway that is located in a *barrier-free* path of travel must have a *clear width* of not less than 800 mm when the door is in the open position and therefore it is important that this dimension be measured correctly. [The following figure] shows a door opened to 90°. […] The *clear width* of not less than 800 mm is measured from the face of the door to the outside edge of the stop on the doorframe. […] Other factors, including location of door stops other that on the door frame, and the installation of door

closers and exit devices, should be taken into account." A-3.8.3.6. Doorway Width, National Building Code of Canada (2015).



***Facility*:** All or any portion of buildings, structures, elements, improvement, equipment, roads, walks, passageways, parks, parking lots or other real or personal property located on a site and where programs or services are provided.

***Front Approach*:** Approach of a person who uses an element of the environment by positioning their body or their mobility aid facing the element in front.

Hinge Side: The *hinge side* of a door is the side that may contain the joint that attaches the door to a wall. It is usually the side from which the door rotates.

Individual washroom: For the purpose of this document, an *individual washroom* is a lockable room that contains a *water closet*, a *lavatory* and other toilet accessories. It is intended to be used individually or with assistance.

Latch Side: The *latch side* of a door is the side of a door that may contain a handle. It is the side where the door may swing to open.

Lavatory: For the purpose of this document, a *lavatory* is a vessel with the function of washing. This term refers most commonly to sinks.

***Parallel Approach*:** See *Side Approach*.

***Side Approach*:** Approach of a person who uses an element of the environment by positioning their body or their mobility aid perpendicular to the element.

***Signage*:** Information conveyed through visual, audible and *tactile* signs. The information can be about direction, location, safety or form of action.

Slope: *Slopes* used in this document are a ratio of one-part rise to a certain amount of parts run. For example, in a ratio of 1:20, a rise of one (1) meter will have a run of twenty (20) meters.

***Tactile*:** Object that can be perceived by touch.

Vision Panel: Glass panel in doors in order to see behind the door without opening it.

Washroom: For the purpose of this document, unless stated otherwise, a *washroom* is room that contains multiple *water closets*, possible multiple *lavatories* and other toilet accessories. It may also contain urinals. It is a public room intended to be used by multiple people simultaneously.

Washroom stall: For the purpose of this document, a *washroom stall* is a space enclosed by toilet partitions inside a *washroom* that includes a *water closet* and other toilet accessories.

Water closet: For the purpose of this document, a *water closet* is a toilet bowl and its accessories.

PART 2 GENERAL APPLICATION

2.1 SUMMARY

The requirements of these standards are mandatory for all newly constructed and retrofitted facilities owned by McGill University. Whenever construction interventions are initiated, accessibility has to be taken into consideration and improvements must be made. Notwithstanding the exceptions listed below, all facilities of the university shall be accessible for employees, students and visitors.

2.2 EXCEPTIONS

The following facilities are exempt from the requirements of the Accessibility Design Standards:

Building types:

1. High-hazard industrial occupancy buildings (CNBC Group F, Division 1 major occupancy).
2. Service buildings that are not intended to be occupied on a daily or full-time basis (examples: Power House, Data Centre facilities, electrical substations, utility/storage sheds, etc.).

Room types:

1. Service rooms and spaces;
2. Elevator machine rooms;
3. Janitor rooms;
4. Crawl spaces and attic or roof spaces;
5. Mechanical rooms;
6. Utility sheds;
7. Storage rooms.

Projects with limited architectural interventions:

1. Where a project consists of construction interventions that are considered solely ‘cosmetic’ in nature – for example, repainting or furniture replacement – application of the Accessibility Design Standards within the scope of the project will not be required.
2. Where a project consists of construction interventions that are limited to electrical, mechanical or plumbing systems, to hazardous material abatement, or to automatic sprinkler retrofitting, application of the Accessibility Design Standards within the scope of the project will not be required.

2.3 LEVELS OF CONFORMITY

The Accessibility Design Standards are divided into three different levels of conformity.

Optimal Requirements

For all newly constructed *facilities* and major reconstruction of existing buildings (where project alterations affect more than 50% of the total floor-area of the *facility*), and for every re-designs, alterations, retrofits, and renovations wherever deemed **attainable** (with respect to space constraints) and **reasonable** (with respect to usage, function, and scope of intervention). When optimal requirements do not exist, the design shall respect the prescribed requirements.

Prescribed Requirements

For all re-designs, alterations, retrofits, and renovations of existing *facilities* (where project alterations affect less than 50% of the total floor-area of the *facility*), and wherever deemed **attainable** (with respect to space constraints) and **reasonable** (with respect to usage, function, and scope of intervention). When prescribed requirements do not exist, the design shall respect the minimum requirements.

Prescribed requirements are applicable also for leasehold improvement projects in facilities leased and operated by McGill University and for the following building types: detached houses, semi-detached houses, houses with a secondary suite, duplexes, triplexes, townhouses, row houses, and boarding houses.

Minimum Code Requirements

Notwithstanding the optimal and prescribed requirements, all projects are expected to meet the requirements from the latest version of the Quebec Construction Code and other applicable codes and regulations.

They are the minimum level of conformity only if the optimal or prescribed standards are deemed to be not easily attainable (not technically feasible) nor reasonable for the function, usage, or scope of intervention that is being initiated.

When the optimal or prescribed requirements are different than the prescriptions from the Quebec Construction Code, the design consultant shall evaluate the context of the requirements and present their recommendations to Design Services for approval, per project.

Confirmation of Conformity

Each design consultant shall confirm that the accessibility measures implemented for a given project is in conformity with the appropriate level of Accessibility Design Standards by completing the Design Standards Conformity Form available on the McGill Design Standards website (https://www.mcgill.ca/buildings/design-standards).

2.4 VARIANCE FORM

Any deviation from the Accessibility Design Standards shall be addressed in the completion of a Variance Request Form available on the McGill Design Standards website (https://www.mcgill.ca/buildings/design-standards).

1. For all newly constructed *facilities* and major reconstruction of existing buildings, when **Optimal requirements** cannot be met, the Prescribed requirements become the design criteria that Design Services will use to evaluate the design consultant's alternate proposals.

2. For all other construction interventions (re-designs, alterations, retrofits and renovations) of existing *facilities*, if the **Prescribed requirements** cannot be met, the Minimum Code requirements become the design criteria that Design Services will use to evaluate the design consultant's alternate proposals.

3. Wherever **Minimum Code requirements** cannot be met, additional derogations from Municipal or Provincial jurisdictions may be required.

PART 3 DESIGN STANDARDS

3.1 SPACE, REACH AND OPERATION REQUIREMENTS

Vehicles come in all shapes and sizes and are essential for the mobility of many people. Traditionally, accessibility standards have mostly focused their attention on self-powered wheelchairs. However, as technology evolves, new kinds of vehicles such as 4-wheel scooters are now in use and require more space to be maneuvered. This standard therefore wants to accommodate itself to new vehicles to fulfill a fundamental need of mobility as well as to consider a new, more faithful portrait of society.

1. **Wheelchair *clear floor spaces***

    1. **Optimal**: For a large motorized chair or a 4-wheel scooter, the *clear floor space* shall be no less than 1650 mm by 760 mm (length by width).
    2. **Prescribed**: For a motorized chair, the *clear floor space* shall be no less than 1370 mm by 760 mm (length by width).
    3. **Minimum**: For a self-powered chair, the *clear floor space* shall be no less than 1220 mm by 760 mm (length by width).

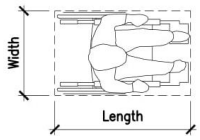


Figure 1
Clear Floor Space for a Vehicle

2. **360º Turning space – Turning diameter**

    1. **Optimal**: The turning diameter of a turning space shall be of no less than 2440 mm.
    2. **Prescribed**: The turning diameter of a turning space shall be of no less than 1980 mm.
    3. **Minimum**: The turning diameter of a turning space shall be of no less than 1500 mm.

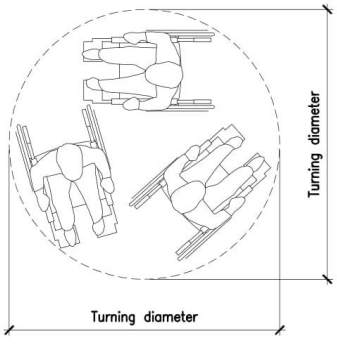


Figure 2
360° Turning Space

3. **Clearance at an alcove – *Front approach***

    1. **Prescribed**: If the alcove is 610 mm deep or less, its width shall be not less than 760 mm. If the alcove is more than 610 mm deep, its width shall be not less than 910 mm.

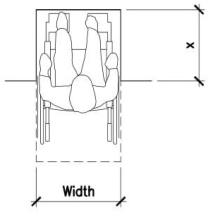


Figure 3
Clearance at an Alcove – Frontal Approach Where x is 610 mm or Less

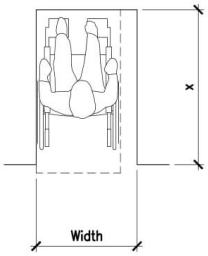


Figure 4
Clearance at an Alcove – Frontal Approach Where x is More than 610 mm

4. **Clearance at an alcove – *Parallel approach***

    1. **Optimal**: If the alcove is 380 mm deep or less, its length shall be not less than 1650 mm. If the alcove is more than 380 mm deep, its length shall be not less than 1955 mm.

    2. **Prescribed**: If the alcove is 380 mm deep or less, its length shall be not less than 1370 mm. If the alcove is more than 380 mm deep, its length shall be not less than 1675 mm.

    3. **Minimum**: If the alcove is 380 mm deep or less, its length shall be not less than 1220 mm. If the alcove is more than 380 mm deep, its length shall be not less than 1525 mm.

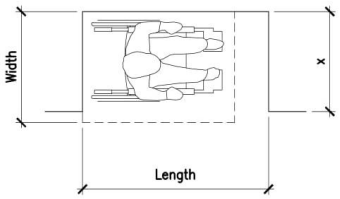


Figure 5
Clearance at an Alcove – Parallel Approach Where x is more than 380 mm

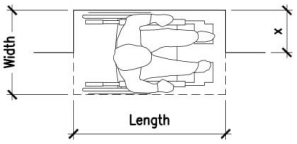


Figure 6
Clearance at an Alcove – Parallel Approach Where x is 380 mm or Less

5. **Side reach**

    1. **Prescribed**: If the *clear floor space* allows *parallel approach* to an object, the object shall be at a height between 230 and 1370 mm from the floor. The object shall be at a horizontal distance of not more than 255 mm.

        If the reach is over an obstruction, the object shall be at not more than 1170 mm from the ground and at a horizontal distance of not more than 610 mm. The obstruction shall be not more than 865 mm high.

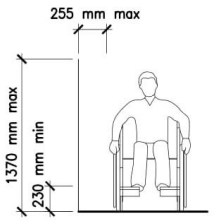


Figure 7
Side Reach – Front View

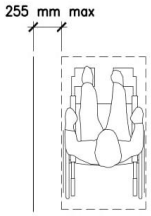


Figure 8
Side Reach – Plan View

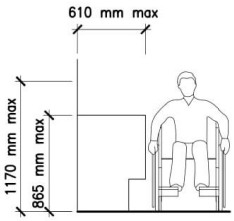


Figure 9
Side Reach over an Obstruction

6. **Forward reach**

1. **Prescribed**: Minimum: If the *clear floor space* allows a *front approach* to an object, the object shall be at a height between 400 and 1200 mm from the floor.

   If the reach is over an obstruction, the object shall be at not more than 635 mm from the border of the obstruction. For distances less than 510 mm from the border, the object shall be not more than 1220 mm high from the floor. From 510 to 635 mm from the border, the object shall be not more than 1120 mm high from the floor.

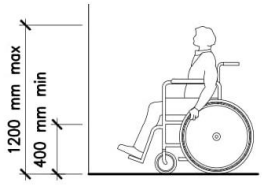


Figure 10
Forward Reach

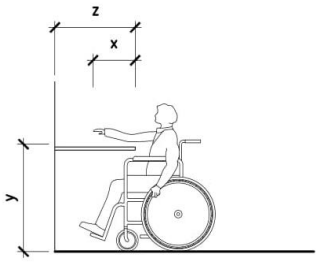


Figure 11
Forward Reach over an Obstruction

x must be less than or equal to 635 mm z shall be greater than or equal to x.

When x is less than 510 mm, then y shall be 1220 mm max.

When x is 510 to 635 mm, then y shall be 1120 mm max.

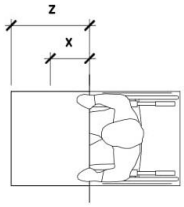


Figure 12
Forward Reach over an Obstruction

x must be less than or equal to 635 mm z shall be greater than or equal to x.

When x is less than 510 mm, then y shall be 1220 mm max.

When x is 510 to 635 mm, then y shall be 1120 mm max.

7. **Operation requirement**

    1. **Prescribed**: When an object is to be manipulated by one's hand, it shall be operable with one hand in a closed fist position, without requiring tight grasping, pinching with fingers, or twisting of the wrist.

3.2 EXTERIOR ACCESS AND *FACILITIES*

1. ***Accessible* routes**

    1. **Optimal**: It is preferable to have all routes leading to a building *accessible*.
    2. **Prescribed**: At least one *accessible* route shall connect *accessible* buildings, *facilities* elements, and exterior spaces that are on the same site.
    3. **Minimum**: *Accessible* routes shall connect *accessible* entrances with all *accessible* spaces and elements within the *facility.* Walkways or pedestrian bridges that connect *accessible* floors in different buildings shall be *accessible*.

2. **Horizontal circulation**

    1. **Optimal**: All circulation elements (routes, paths, walkways, sidewalks, entrances to building, etc.) shall be *accessible* to all, created via grading, wherever possible, rather than using a ramp or an elevating device.

3. **Exterior walkway edge protection**

    1. **Optimal**: Where exterior walkways are not levelled with adjacent surfaces, with a change in level between 200 mm and 600 mm, the borders shall have an edge protection of not less than 75 mm in height.
    2. **Prescribed**: Exterior walkways shall have a texture and a colour contrast to differentiate the edge from the path.

4. **Exterior ramp width**

    1. **Optimal**: Where exterior ramps are created via grading with a slope of 1:20 at most, ramps shall have a width of 1500 mm minimum.
    2. **Minimum**: Exterior ramps shall have a width not less than 1100 mm, with 870 mm to 920 mm clearance between two handrails.

5. **Exterior ramp slope**

    1. **Optimal**: Exterior ramps shall have a *slope* of 1:20 at most.
    2. **Prescribed**: Exterior ramps shall have a *slope* of 1:16 at most.

6. **Exterior *cross slope***

    1. **Minimum**: Exterior ramps shall have a *cross slope* of 1:50 at most.

7. **Exterior ramp edge protection**

    1. **Minimum**: Exterior ramps and landings not at grade or adjacent to a wall shall have an edge protection consisting of a curb not less than 75 mm high, or a raised *barrier* or rail located not more than 100 mm from the ramp or the landing surface.

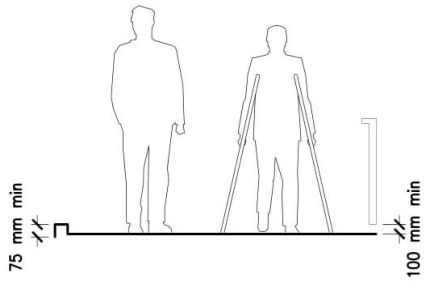


Figure 13
Edge Protection

8. **Exterior landings**

    1. **Prescribed**: Landings are required at the top and bottom of a ramp, at intervals not more than 9000 mm along the ramp's length, at abrupt changes in direction as well as at changes in the *slope*.

9. **Dimensions for top and bottom exterior landings**

    1. **Optimal**: 2440 mm by 2440 mm.
    2. **Prescribed**: 1980 mm by 1980 mm.

10. **Dimensions for exterior intermediate landings**

    1. **Prescribed**: Intermediate landings shall have the same dimensions as the top and bottom landings.

11. **Exterior handrails**

    1. **Prescribed**: On both sides of a ramp, two handrails shall be installed: one at 750mm from the floor, and another one at 920 mm from the floor.

12. **Exterior handrail size and shape**

    1. **Prescribed**: Handrails shall have a circular cross-section (with an outside diameter between 30 and 45 mm).

13. **Exterior handrail properties**

Minimum:

1. Handrails shall be provided on each side of a ramp.
2. Handrails shall be continuously graspable along their entire length and be free of any sharp or abrasive elements.
3. If a handrail is along a wall, it should not blend with the surrounding environment. It can be differentiated with texture, colour, lighting, etc.
4. At least one handrail at the side of a ramp shall extend horizontally not less than 300 mm beyond the top and bottom of the ramp.
5. Where a ramp is wider than its required exit width, handrails shall be located along its most direct path of travel.
6. Handrails shall be terminated in a manner than will not obstruct pedestrian travel or create a hazard.
7. The clearance between a handrail and any surface behind it shall be not less than 50 mm or 60 mm if the surface behind the handrail is rough or abrasive.

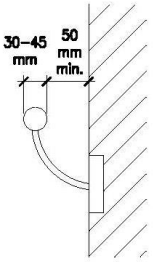


Figure 14
Handrail with a Smooth Wall Finish

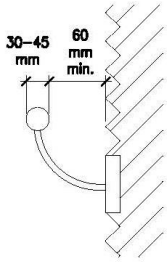


Figure 15
Handrail with a Rough Wall Finish

3.3 ENTRANCES TO A BUILDING

1. **Markers for entrances**

1. **Optimal:** Entrances must be marked with *tactile* or Braille sign and be equipped with audible cues through recessing or by covering entrance doors with canopies, and transitional lighting to diminish differences between interior and exterior lighting levels for both day and night.

2. **Entrance doors**

1. **Optimal**: All entrances and doorways to access a building, whether main or secondary, shall be *barrier-free* and *accessible*.
2. **Prescribed**: All main entrances and doorways of a building complex are required to be *barrier-free* and *accessible*.

   For secondary entrances and doorways which are not *accessible*, directional *signage* shall be provided to indicate the nearest *accessible* entrance. *Signage* shall be in accordance with McGill's *Signage* Standards (https://mcgill.ca/buildings/signage-standards).

1. **Type of doors**

    1. **Optimal**: Main entrances doors shall be sliding doors equipped with an automatic operation system activated by motion sensors. Revolving doors shall be avoided.

    2. **Prescribed**: Main entrance doors shall be swing doors equipped with an automatic operation system activated by motion sensors. Revolving doors shall be avoided.

    3. **Minimum**: Main entrance doors shall be swing doors equipped with manual push buttons. Hardware shall be in accordance with McGill's Hardware Standards (https://www.mcgill.ca/buildings/files/buildings/mcgill_08_71_10_hardware_10.pdf)

2. ***Door width***

    1. **Prescribed**: The *clear width* of a door shall be at least 915 mm when the door is in an open position.

3. **Space for *front approaches* at doors**

    1. **Optimal**: On the *latch side*, there should be a minimum of 750 mm clearance where the door opens towards one and a minimum of 470 mm clearance where the door opens away from one.

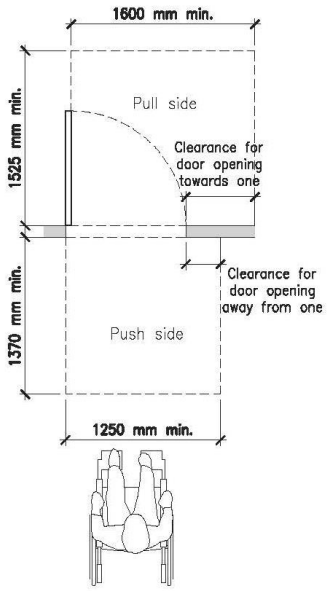


Figure 16
Front Approach at Doors

4. **Distance between doors in series**

    1. **Optimal**: The distance between two doors in series shall not be less than 2440 mm plus the width of any door that swings into the space in the path of travel from one door to another.

    2. **Prescribed**: The distance between two doors in series shall not be less than 1980 mm plus the width of any door that swings into the space in the path of travel from one door to another.

    3. **Minimum**: The distance between two doors in series shall not be less than 1525 mm plus the width of any door that swings into the space in the path of travel from one door to another.

        The floor surface on each side of a door in a *barrier-free* path of travel shall be level within a rectangular area as wide as the door plus the clearance required on the *latch side*, and whose dimension perpendicular to the closed door is not less than 1370 mm on the push side and 1525 mm on the pull side of the door.

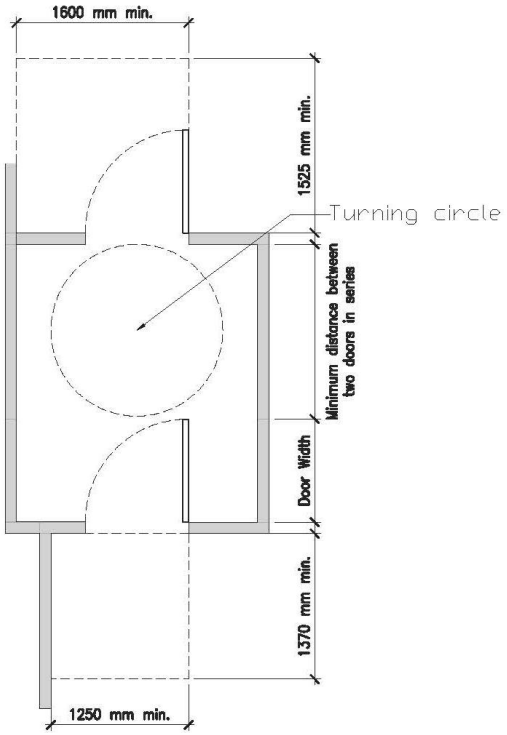


Figure 17
Maneuvering Space at Doors in Series & Turning Diameter in a Vestibule

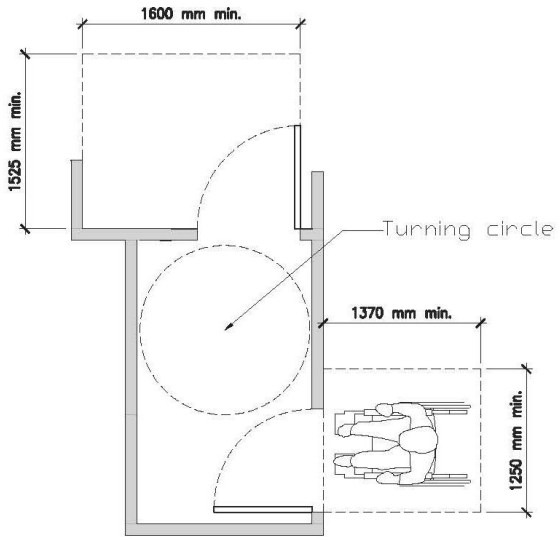


Figure 18
Maneuvering Space at Doors in Series

5. **Vestibule dimensions**

    1. **Optimal**: The vestibule shall provide a turning diameter of 2440 mm within the vestibule clear of any door swing.

    2. **Prescribed**: The vestibule shall provide a turning diameter of 1980 mm within the vestibule clear of any door swing.

3. **Minimum**: The vestibule shall be not less than 1800 mm long and provide a turning diameter of 1500 mm within the vestibule clear of any door swing.

   (Refer to Figures 17 and 18 above)

3.4 INTERIOR CIRCULATION

1. Platform lifts

1. **Prescribed**: Design physical alternatives such as ramps to give access to spaces instead of platform lifts.
2. **Minimum**: When no other physical alternative is feasible, platform lifts shall be in accordance with McGill's Elevators Standards, section "Lifts for Persons with Physical Disabilities" (https://www.mcgill.ca/buildings/files/buildings/mcgill_14_21_23_elevators.pdf).

2. Horizontal circulation

1. **Optimal**: All horizontal circulation (corridors, interior doorways, walkways connecting different wings of a building or connecting different buildings in a complex, etc.) shall be *accessible* to all.

3. *Slope*

1. **Optimal**: Floors or walkways shall be leveled.
2. **Prescribed**: Floors or walkways shall have a running *slope* no steeper than 1:25.
3. **Minimum**: A maximum *slope* of 1:2 at changes in level between 6 mm and 13 mm is allowed. Sloped door transitions or ramps are required at changes in level more than 13 mm.

   Floors or walkways having a *slope* steeper than 1:20 shall be designed as ramps.

4. Width of corridors

1. **Optimal**: Corridors shall be at least 2440 mm wide.
2. **Prescribed**: Corridors shall be at least 1980 mm wide.
3. **Minimum**: Corridors shall be at least 1500 mm wide.

5. Passing places

1. **Optimal**: For corridors measuring over 20 m long, passing places shall be provided at every 20 m at most. The passing places shall measure 2400 mm by 2400 mm.

2. **Prescribed**: For corridors measuring over 30 m long, passing places shall be provided at every 30 m at most. The passing places shall measure 1980 mm by 1980 mm.

6. **Handrails for corridors**

1. **Optimal**: On corridors over 20 m long, continuous handrails shall be provided on both sides of the corridor.

7. **Handrails for ramps**

1. **Prescribed**: On both sides of a ramp, two handrails shall be installed: one at 750mm from the floor, and another one at 920 mm from the floor.

8. **Handrail size and shape**

1. **Prescribed**: Handrails shall have a circular cross-section (with an outside diameter between 30 and 45 mm).

9. **Handrail properties**

See 3.2.13 - Exterior handrail properties requirements shall apply to interior handrails.

10. **Glass markings**

1. **Optimal**: Glass partitions along circulation shall have horizontal markings at 1067 mm and at 1500 mm high above the floor. The markings shall have visual contrast from the glass, and at least 50 mm in height.

Horizontal strips are preferred, but they can be replaced by another design if it is demonstrated that the alternative design provides visual contrast with the glass.

11. **Type of glass markings**

1. **Optimal**: Glass markings shall be of high tonal contrast frosted film.
2. **Prescribed**: Glass markings shall be of translucent frosted film.

12. ***Signage***

1. **Prescribed**: Where there is a change in direction along an *accessible* route and the intended destination of the route is not evident, directional *signage* shall be provided.

An example would be a 180-degree turning corridor.

3.5 INTERIOR DOORS

1. **Main door of high-traffic spaces**

    1. **Optimal**: Shall be a sliding door equipped with an automatic operation system activated by motion sensors.

    2. **Prescribed**: Shall be a swing door equipped with an automatic operation system activated by motion sensors.

    3. **Minimum**: Shall be a swing door equipped with manual push buttons in accordance with McGill's Hardware Standards (https://www.mcgill.ca/buildings/files/buildings/mcgill_08_71_10_hardware_10.pdf)

        Examples of high-traffic spaces are auditoriums, gymnasiums, large cafeterias, etc.

2. ***Door width***

    1. **Prescribed**: The *clear width* of a door shall be at least 915 mm when the door is in an open position.

3. **Turning diameter in front of doors in a corridor**

    1. **Optimal**: There shall always be adequate clearance in front of a door in a corridor to accommodate the appropriate turning diameter. Recess doors or provide alcoves as required.

4. **Space for *front approaches* at doors**

    1. **Optimal**: On the *latch side*, there should be a minimum of 750 mm where the door opens towards one or 470 mm where the door opens away from one. (Refer to figure 16 on page 23)

    2. **Minimum**: On the *latch side*, there should be a minimum of 600 mm where the door opens towards one or 300 mm where the door opens away from one. If these clearances cannot be met, install manual push buttons in accordance with McGill's Hardware Standards. (https://www.mcgill.ca/buildings/files/buildings/mcgill_08_71_10_hardware_10.pdf)

5. **Distance between doors in series**

    1. **Optimal**: The distance between two doors in series shall not be less than 2440 mm plus the width of any door that swings into the space in the path of travel from one door to another.

    2. **Prescribed**: The distance between two doors in series shall not be less than 1980 mm plus the width of any door that swings into the space in the path of travel from one door to another.

3. **Minimum**: The distance between two doors in series shall not be less than 1525 mm plus the width of any door that swings into the space in the path of travel from one door to another.

   The floor surface on each side of a door in a *barrier-free* path of travel shall be level within a rectangular area as wide as the door plus the clearance required on the *latch side*, and whose dimension perpendicular to the closed door is not less than 1370 mm on the push side and 1525 mm on the pull side of the door.

   (Refer to figures 17 and 18 on page 24)

6. ***Vision panels***

   1. **Prescribed**: Where vision glass is provided in doors or sidelights, the lowest edge of the glass shall be no higher than 900 mm above floor level.

7. **Push button and card reader location**

   1. **Prescribed**: Push buttons and card readers shall be located on the *latch side* of the door. The height of installation shall be in accordance with McGill's Hardware Standards. (https://www.mcgill.ca/buildings/files/buildings/mcgill_08_71_10_hardware_10.pdf)

8. **Door swinging in the hallway**

   1. **Prescribed**: If a door swings outward into a hallway, the door shall be recessed completely in an alcove.

3.6 SANITARY *FACILITIES*

1. ***Accessible washrooms***

   1. **Optimal**: Every *washroom facility* shall have at least one *accessible water closet*, be it in an *individual washroom* or in a *washroom stall*.

   2. **Prescribed**: Every floor of a *facility* shall have at least one *accessible water closet*, be it in an *individual washroom* or in a *washroom stall*.

      The *washroom facilities* adjacent to high-traffic spaces shall have at least one *accessible water closet*, be it in an *individual washroom* or in a *washroom stall.*

2. ***Accessible individual washrooms***

   1. **Optimal**: If a *facility* contains an *individual washroom*, said *individual washroom* shall be gender-neutral and *accessible*.

2. **Prescribed**: If a *facility* contains multiple *individual washrooms* on the same floor, one of those *individual washrooms* shall be gender-neutral and *accessible*.

3. ***Accessible washroom stalls***

1. **Optimal**: If an *accessible washroom* contains multiple *washroom stalls*, provide the number of *accessible washroom stalls* as per the following table:

Number of *washroom stalls* within the *washroom*	Required number of *accessible washroom stalls*
1 to 6	1
7 to 16	2
17 to 20	3
21 to 30	4
Over 30	5 plus 1 for each additional 10 stalls

4. ***Signage* for *washroom facilities***

1. **Prescribed**: Where a *washroom facility* is not *accessible*, there should be directional *signage* to indicate location of the nearest *accessible washroom facility* on the same floor.

Signage shall also identify clearly, indicating male or female where applicable, with other accessibility features (e.g. braille, *tactile*, International Symbol of Accessibility). *Accessible washroom facilities* shall be marked with International Symbol of Accessibility.

5. ***Individual washroom* dimensions**

1. **Optimal**: *Washrooms* shall be designed to permit a wheelchair to back in alongside the *water closet* and be designed to permit a wheelchair to turn in an open space not less than 2440 mm in diameter.

2. **Prescribed**: *Washrooms* shall be designed to permit a wheelchair to back in alongside the *water closet* and be designed to permit a wheelchair to turn in an open space not less than 1980 mm in diameter.

6. ***Accessible washroom stall* dimensions**

1. **Optimal**: An *accessible washroom stall* shall be not less than 1800 mm wide by 1700 mm deep, to allow for the optimal *clear floor space* as transfer space.

When there are multiple *accessible washroom stalls* within a *washroom facility*, the stalls shall be configured with the clear transfer space on opposite sides of the *water closet*.

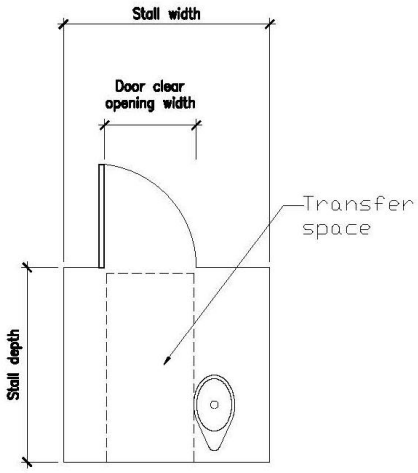


Figure 19
Clear Transfer Space in an Accessible Washroom Stall

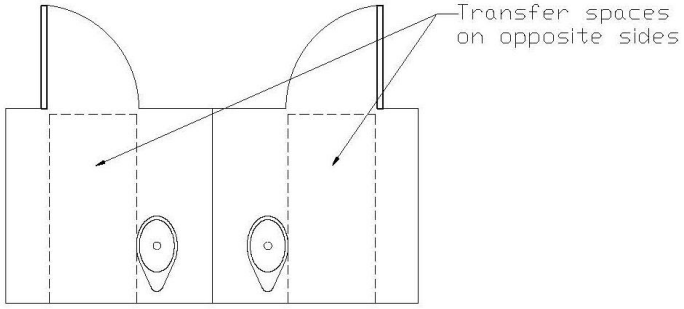


Figure 20
Transfer Spaces on Opposite Sides

7. **Width of an *accessible washroom stall* door**

    1. **Optimal**: A stall door shall provide a clear opening of not less than 950 mm wide when it is open. It shall be aligned with the transfer space adjacent to the *water closet*. (Refer to figure 19 above)
    2. **Prescribed**: A stall door shall provide a clear opening of not less than 900 mm wide when it is open. It shall be aligned with the transfer space adjacent to the *water closet*.
    3. **Minimum**: A stall door shall provide a clear opening of not less than 850 mm wide when it is open. It shall be aligned with the transfer space adjacent to the *water closet*.

8. **Door swing of the stall door**

    1. **Optimal**: Swing outward, unless there is sufficient *clear floor space* of at least 820 mm by 1440 mm provided within the stall and does not interfere with the arc of the door swing. The door shall be aligned with the clear transfer space.
    2. **Prescribed**: Swing outward, unless there is sufficient *clear floor space* of at least 800 mm by 1350 mm provided within the stall and does not interfere with the arc of the door swing. The door shall be aligned with the clear transfer space.

       The door shall be self-closing so that, when at rest, the door is ajar by not more than 50 mm beyond the jamb.

9. **Lock of the stall door**

1. **Prescribed**: The lock shall be sliding type, mounted between 900 to 1000 mm above the floor, operable with one hand in a closed fist position, without requiring tight grasping, pinching with fingers, or twisting of the wrist.

10. **Door handles of the stall door**

    2. **Prescribed**: Door handles shall be provided on both sides of the door. They shall be D-shaped, visually contrasting, not less than 140 mm long.

       For out-swinging doors, the handle on the inside shall be horizontal, located 200 mm to 300 mm from the *hinge side*, and with centerline mounted 900 mm to 1000 mm above the floor.

       For in-swinging doors, the handle on the outside shall be located so that its midpoint is 140 mm to 220 mm from the *latch side*, and with centerline mounted 900 to 1000 mm above the floor.

11. ***Accessible* urinals**

    1. **Optimal**: Minimum one in six urinals shall be *accessible*.
    2. **Prescribed**: Minimum one urinal shall be *accessible* per *accessible washroom*.

12. ***Clear floor space* for an *accessible* urinal**

    1. **Optimal**: The *clear floor space* of an *accessible* urinal shall be no less than 1370 mm by 915 mm (length by width).
    2. **Prescribed**: The *clear floor space* of an *accessible* urinal shall be no less than 1370 mm by 810 mm (length by width).

13. **Privacy screens**

    1. **Optimal**: If privacy screens are used, the privacy screens of the *accessible* urinals shall provide no less than 915 mm of clearance between them.
    2. **Prescribed**: If privacy screens are used, the privacy screens of the *accessible* urinals shall provide no less than 810 mm of clearance between them.

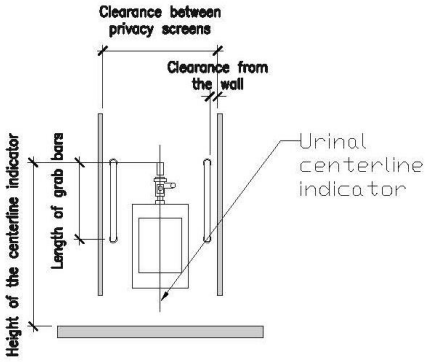


Figure 21
Dimensions of Urinal Accessories

14. **Flush controls**

1. **Prescribed**: Flush controls shall be automatic sensors in accordance with McGill's Appareil Sanitaires Standards. (https://www.mcgill.ca/buildings/files/buildings/mcgill_22_42_03_appareils_sanitaires_-_lavabos_w_-c_et_urinoirs_4.pdf)

15. **Urinal grab bars length**

1. **Optimal**: *Accessible* urinals shall be equipped on each side with a vertically mounted grab bar that has a length of not less than 600 mm, with centerline mounted 1000 mm above the floor, and at maximum 380 mm from the centerline of the urinal.

16. **Urinal centerline indicator**

1. **Optimal**: All urinals shall have a centerline indicator on the wall behind the urinals. It shall be no more than 50 mm wide, extend no less than 1300 mm above the floor but no less than 150 mm above the upper urinal rim. The centerline indicators shall have a high tonal contrast compared with the back wall and shall be raised no less than 3 mm from the back wall. (Refer to figure 21 on page 31)

17. **Grab bars beside toilet fixtures**

1. **Optimal**: *Individual washrooms* and *accessible washrooms stalls* shall have L-shaped grab bars beside the toilet fixture. Additionally, fold-up grab bars shall be provided in *individual washrooms*.

   Fold-up grab bars shall have an emergency button or an emergency string connected to an exterior alarm outside of the *washroom*.

   L-shaped grab bars shall have the horizontal component no less than 900 mm in length and the vertical component shall be no less than 760 mm in length. They shall be mounted with the horizontal centerline 750

mm from the floor, and the vertical centerline 150 mm from the front rim of the toilet fixture.

2. **Prescribed**: *Individual washrooms* shall have L-shaped grab bars. The horizontal component shall be no less than 900 mm in length and the vertical component shall be no less than 760 mm in length. They shall be mounted with the horizontal centerline 750 mm from the floor, and the vertical centerline 150 mm from the front rim of the toilet fixture.

3. **Minimum**: Grab bars beside toilet fixtures shall be horizontal, shall extend 450 mm in both directions from the most forward point of the toilet fixture, and be mounted with the horizontal centerline 840 mm to 920 mm from the floor.

   Angled grab bars shall be avoided.

18. **Grab bar clearance from the wall**

    1. **Prescribed**: Grab bars shall have a clearance of not less than 38 mm and not more than 50 mm from the wall.

19. **Coat hooks**

    1. **Optimal**: In each *washroom stall* and *individual washroom*, two coat hooks shall be provided, the first at a height of no more than 1050 mm and the second at a height of no more than 1600 mm.

    2. **Prescribed**: In each *washroom stall* and *individual washroom*, at least one coat hook shall be provided at a height of no more than 1200 mm.

20. **Height of *washroom* accessories**

    1. **Optimal**: All *washroom* accessories shall have their operation and/or dispensing element at a height between 900 mm and 1200 mm above the floor.

    2. **Minimum**: All *washroom* accessories shall have their operation and/or dispensing element at a height of no more than 1200 mm above the floor.

21. **Toilet paper dispensers**

    1. **Prescribed**: The bottom of toilet paper dispensers shall be at no more than 1200 mm from the floor. It is recommended to mount the toilet paper dispenser above the grab bars.

22. **Sanitary napkin disposal units**

1. **Optimal**: Sanitary napkin disposal units shall be provided in all gender-neutral *washrooms stalls* and *individual washrooms*, and in all *accessible* gendered *washroom stalls*.
2. **Prescribed**: Sanitary napkin disposal units shall be provided in all gender-neutral *washroom stalls* and *individual washrooms*.

23. **Location of sanitary napkin disposal bins**

1. **Prescribed**: Sanitary napkin disposal units shall be mounted in such a way to avoid overextension and torsion from the users.

24. **Soap dispensers**

1. **Optimal**: All soap dispensers shall be mounted in such a way to avoid overextension or torsion from the users.
2. **Prescribed**: The soap dispenser that is closest to an *accessible lavatory* shall be mounted in such a way to avoid overextension or torsion from the users. They shall be at no more than 300 mm measured horizontally from the edge of the *lavatory*.

25. **Clear space around *lavatories***

1. **Optimal**: *Lavatories* shall have a *clear floor space* of no less than 920 mm wide by 1370 mm deep, of which a depth up to 500 mm is allowed under the *lavatory*.
2. **Prescribed**: *Lavatories* shall have a *clear floor space* of no less than 760 mm wide by 1370 mm deep, of which a depth up to 480 mm is allowed under the *lavatory*.

26. **Mirrors**

1. **Optimal**: The mirror closest to the *accessible lavatory* shall be inclined from vertical to be usable by a person in a wheelchair. Provide an additional mirror that extend from 600 to 1600 mm above the floor.
2. **Prescribed**: The mirror closest to the *accessible lavatory* shall be inclined from vertical to be usable by a person in a wheelchair.
3. **Minimum**: The mirror closest to the *accessible lavatory* shall be mounted with its bottom edge not more than 1000 mm above the floor, or be inclined from vertical to be usable by a person in a wheelchair.

27. **Adult-sized changing tables**

1. **Optimal**: All *accessible individual washrooms* shall have an adult-sized changing table, as well as a baby-changing station.

2. **Prescribed**: Near high-traffic spaces or inside clinical spaces, there shall be an *accessible individual washroom* equipped with an adult-sized changing table, as well as a baby-changing station.

28. **Faucets**

1. **Prescribed**: Faucets shall be equipped with motion sensors.
2. **Minimum**: Faucets shall be operable with one hand in a closed fist position, without requiring tight grasping, pinching with fingers, or twisting of the wrist. Lever type faucets are preferred.

29. **Pipe insulation**

1. **Minimum**: Exposed piping in sanitary *facilities* shall be insulated where they would otherwise present a burn hazard.

3.7 LOCKER ROOMS

1. ***Accessible* locker rooms**

1. **Optimal**: All locker rooms shall be *accessible*, with a *clear floor space* with a turning diameter of no less than 2440 mm.
2. **Prescribed**: All locker rooms shall be *accessible*, with a *clear floor space* with a turning diameter of no less than 1980 mm.
3. **Minimum**: *Accessible* locker rooms shall have a *clear floor space* with a turning diameter of no less than 1500 mm.

2. ***Accessible* shower stalls**

1. **Prescribed**: All locker rooms with shower stalls shall have at least one *accessible* shower stall with the proper *clear floor space*. The stalls shall have no threshold, or a bevelled threshold not exceeding 13 mm above the floor.

3. **Shower stalls**

1. **Optimal**: An *accessible* shower stall shall be no less than 1650 mm by 915 mm (length by width). It shall have at its entrance a *clear floor space* with a turning diameter of no less than 2440 mm.
2. **Prescribed**: An *accessible* shower stall shall be no less than 1525 mm by 915 mm (length by width). It shall have at its entrance a *clear floor space* with a turning diameter of no less than 1980 mm.
3. **Minimum**: An *accessible* shower stall shall be no less than 1525 mm by 915 mm (length by width). It shall have at its entrance a *clear floor space* with a turning diameter of no less than 1500 mm.

4. **Seat inside shower stalls**

    1. **Optimal**: An *accessible* shower stall shall have a seat that is no less than 450 mm by 400 mm (width by depth), mounted 450 mm above the floor.

5. **Grab bars inside shower stalls**

    1. **Optimal**: *Accessible shower stalls* shall have an L-shaped grab bar between the shower head and the controls, and a vertical grab bar beside the seat.

        The L-shape grab bar's horizontal component shall be no less than 900 mm in length and the vertical component shall be no less than 760 mm in length. It shall be mounted with the horizontal centerline 850 mm from the floor, and with the horizontal component overlapping the seat by at least 300 mm.

        The vertical grab bar shall be no less than 760 mm in length, starting at 700 to 800 mm from the floor.

6. **Benches inside locker rooms**

    1. **Optimal**: All locker rooms shall have at least one bench that is no less than 1830 mm by 915 mm (width by depth), mounted 450 to 500 mm from the floor.
    2. **Prescribed**: All locker rooms shall have at least one bench that is no less than 1830 mm by 600 mm (width by depth), mounted 450 to 500 mm from the floor.
    3. **Minimum**: All accessible locker rooms shall have at least one bench that is no less than 915 mm by 600 mm (width by depth), mounted 450 to 500 mm from the floor.

7. **Coat hooks**

    1. **Optimal**: In each shower stall, two coat hooks shall be provided, the first at a height of no more than 1050 mm and the second at a height of no more than 1600 mm.
    2. **Prescribed**: In an *accessible* shower stall, at least one coat hook shall be provided at a height of no more than 1200 mm.

8. **Lockers**

    1. **Prescribed**: Changing rooms shall offer lockers with a variety of heights.

3.8 CLASSROOMS, AUDITORIUMS, AND OTHER ASSEMBLY SPACES

1. ***Accessible* spaces in fixed seating**

1. **Prescribed**: In an assembly space with fixed seating, provide the number of *accessible* spaces designated for wheelchair users as per the following table:

Number of fixed seats in the room	Required number of *accessible* spaces for wheelchair users
2 to 100	3
101 to 200	4
201 to 300	5
Over 300	6 plus 1 for each additional 100 seats

The *accessible* spaces shall have the proper *clear floor spaces* (refer to 3.1.1.).

2. ***Accessible* spaces in non-fixed seating**

1. **Prescribed**: In an assembly space with non fixed seating, 10% of the seats shall have increased width and weight capacity, 10% of the seats shall have increased legroom, and 10% of the seats shall be adjustable in height.

Where seats are on casters, 10% of the seats shall have no casters.

Where seats have armrests, 10% of the seats shall have removable armrests.

3.9 FIRE SAFETY AND SECURITY

1. **Fire alarms**

1. **Prescribed**: Fire alarms shall be audible and visual, type “beacon” or “strobe”.

2. **Areas of refuge outside buildings**

1. **Optimal**: All areas of refuge shall be *accessible*.
2. **Prescribed**: The areas of refuge closest to the *accessible* entrances shall be *accessible*.

3. **Fire extinguishers**

1. Fire extinguishers shall have their operation element mounted at a height between 900 mm and 1200 mm above the floor.

4. **Public address systems**

    1. To be developed.

5. **Equipment in safety**

    1. **Optimal**: Provide two-way communication equipment suitable for deaf and hard of hearing people with amplifiers or teleprinters. Equipment shall be operable with one hand in a closed fist position, without requiring tight grasping, pinching with fingers, or twisting of the wrist. Put in place appropriate and well-localized *signage* that facilitates orientation. Avoid hearing overload (background music or reverb).

3.10 MISCELLANEOUS BUILDING ACCESSORIES AND EQUIPMENT

1. **Letter boxes**

    1. **Prescribed**: Letter boxes shall have a lower side that is 800 mm from the floor. Letter boxes include but are not limited to pigeonholes.

3.11 INTERIOR FINISHES

1. **Floor surfaces**

    1. **Minimum**: All floor surfaces shall be stable, firm and slip resistant.

2. **Wall surfaces**

    1. **Minimum**: All wall finishes shall be free of any sharp or abrasive elements.

3. **Visual contrast**

    1. **Optimal**: There shall be a contrast between the finishes of the floor and the walls to delimit the two surfaces.
    2. **Prescribed**: There shall be a contrast to the bottom of the walls, such as a color contrasted baseboard, to delimit the wall from the floor.

3.12 SPECIAL ACCOMMODATIONS

The following are examples of various *disability barriers* that may require special accommodations that either go beyond the physical design of the space or that may require an adaptable design that is applicable only to the individuals in need. This is to be assessed on a case-by-case basis and may require further input from other McGill Services. When required, provide the appropriate adaptable infrastructure to allow for their implementation.

1. **Hearing**

Barriers	Accommodations
To be developed	To be developed

2. **Mental health**

Barriers	Accommodations
To be developed	To be developed

3. **Vision**

Barriers	Accommodations
To be developed	To be developed

4. **Learning *disability***

Barriers	Accommodations
To be developed	To be developed

5. **Language and communication**

Barriers	Accommodations
To be developed	To be developed

PART 4 BIBIOGRAPHY AND RELATED STANDARDS

4.1 Bibliography – References to Other Standards

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4.2 Related Technical Sections

The technical sections of the McGill Building Design and Technical Standards should be consulted with the current document, most notably (but not limited to) the following:

Section Number	Title of Section
Special Building Areas 1	Animal Facilities
Special Building Areas 2 and 3	Classrooms

Special Building Areas 4	Corridors and Hallways
Special Building Areas 8	Entrance Vestibules
Special Building Areas 9	Laboratories
Special Building Areas 10	Landscape
Special Building Areas 12	Offices
Special Building Areas 14	Staff Rooms
Special Building Areas 15	Stairs and Ramps
Special Building Areas 17	Washrooms

McGill Building Design Standards: https://www.mcgill.ca/buildings/design-standards

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