



# **Accessibility Standards**

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**Approved by Council, November 6, 2006**

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# 1 Introduction and Acknowledgements

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## 1.1 Acknowledgements

We would like to thank a number of people and agencies for their support of this project.

First, we thank and recognize the contributions of the Corporation of the City of London for their generous permission to utilize the 2001 Facility Accessibility Design Standard (FADS) document as the basis for the creation of this standard.

We would also like to thank Bob Topping and Designable Environments for their generous assistance with this project.

We would also like to thank the staff of the City of Windsor, Planning Department and in particular, Christina Tizzard, MScPI, MCIP, RPP, Senior Urban Designer for her many hours of work on this important project.



## 1.2 Introduction

This standard has been compiled to assist architects, engineers, designers, builders and contractors in the construction and modification of barrier-free environments. It will also assist those who want to make their homes and businesses accessible to persons with disabilities.

Information has been gathered from a variety of sources – from within Canada, the United States and internationally. In our view, these guidelines set goals that are attainable and will provide a barrier-free environment in Windsor.

This standard provides guidelines for the accommodation of a variety of disabilities. It is important to recognize that persons with disabilities each have their own unique abilities and needs as far as accessibility is concerned. The object of universal access is to apply standards from the perspective of a person with a disability, not assumptions about what a person with a disability might want or need.

It is also important to note that as our community ages, the need for universal access will increase. Full participation through universal access is good for business and good for the community.

Within our existing environment, basic access can be achieved relatively easily by changing door hinges and handles, lowering counter tops, painting contrasting colours, installing power outlets close to telephones for TTY users or constructing ramps near building entrances. In new building construction, most of the guidelines in this standard can be easily and relatively inexpensively incorporated into the design.

We hope this standard will prompt each reader to look at and experience our built environment in a different way and encourage all Windsorites to do their part by moving towards the ultimate goal – a barrier-free community.

Windsor Accessibility Advisory Committee



# 2 Toward a Barrier-Free Community

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## 2.1 Need for Barrier-Free Standards

Windsor, Canada's southernmost city and international gateway, is a diverse community of safe caring neighbourhoods, with a vibrant economy and a healthy sustainable environment.

Windsor as both a city and a Corporation is open to all its residents. Barrier-Free Design Standards are part of opening doors to the whole community. Barrier-free standards are about *independence, dignity, equality and justice*. They are also about *good business*.

Many of Windsor's buildings were created at a time when barrier-free access was not the norm. These Barrier-Free Design Standards exist to direct the city when undertaking retrofitting projects and when constructing new buildings from the ground up.

They also exist to provide a best practice benchmark for all construction within the City of Windsor. Representing the whole community, the Corporation of the City of Windsor leads the community in recognizing the fundamental importance of full access and participation of all residents in the city.

## 2.2 Disability Barriers Defined

People with disabilities face unnecessary barriers almost everywhere – at home, at work, at school, in parks, in recreational facilities, in the streets, in theatres, in stores and in restaurants – in their day-to-day activities.

A barrier is anything that prevents a person with a disability from fully participating in all aspects of society because of his or her disability, including the following:

- **Physical Barrier:** a doorknob that cannot be operated by an elderly person with limited upper-body mobility and strength.
- **Architectural Barrier:** a hallway or door opening that is too narrow for a wheelchair or scooter to pass through.
- **Informational or Communicational Barriers:** typefaces that are too small to be read by a person with low vision.
- **Attitudinal Barrier:** a recreational program that discourages people with developmental disabilities from participating.
- **Technological Barrier:** information on a website that cannot be accessed by a person who is blind since the material is

incompatible with reading software for their computer.

- **Policy or Practice Barriers:** a practice of announcing important

messages over an intercom that people with hearing impairments cannot hear clearly.

## 2.3 Ontario Human Rights Code

This standard is intended to encompass the intent of the Ontario Human Rights Code, in terms of respecting the dignity of persons with **disabilities**. “The phrase ... ‘respects their dignity’ ... means to act in a manner which recognizes the

privacy, confidentiality, comfort, autonomy and self-esteem of persons with **disabilities**, which maximizes their integration and promotes full participation in society” (Ontario Human Rights Commission)

## 2.4 Universal Design Philosophy

This standard incorporates the belief in Universal Design that recognizes the broad diversity of people who use facilities. Universal Design is defined as: ... “the design of products and environments to be useful by all people, to the greatest extent possible, without the need for adaptation or specialized design.” The Universal Design philosophy is structured around seven (7) design principles as listed in 2.5 below.

Products, systems and environments that reflect the Universal Design philosophy are more useable, and more marketable to a larger consumer group, than those designed using a more conventional design ideology. The Universal Design process recognizes the needs of all users, regardless of age, gender, cultural background or ability

## 2.5 Principles of Universal Design

(Adapted from The Principles of Universal Design © NC State University, The Centre for Universal Design)

2.5.3

**Simple and Intuitive in Use:** Use of the design is easy to understand, regardless of the user’s experience, knowledge, language skills or current concentration levels.

2.5.1 **Equitable Use:** The design is useful and marketable to people with diverse abilities.

2.5.4

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

2.5.2 **Flexibility in Use:** The design accommodates a wide range of individual preferences and abilities.

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

2.5.6 **Low Physical Effort:** The design can be used effectively and comfortably with a minimum of fatigue.

2.5.7 **Size and Space for Approach and Use:** Appropriate size and space are provided for approach, reach, manipulation and use, regardless of user's body position, size, posture or mobility.

# 3 Scope and Application

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## 3.1 Application of Accessibility Standard

- 3.1.1 The application of the Accessibility Standard contained within this document shall be:
- a) **mandatory** for all newly designed, newly constructed, altered portions of existing facilities and retrofitted facilities owned, leased or operated by the City of Windsor; and
  - b) **encouraged** for all other public and private facilities, whether new or retrofitted.
- 3.1.2 All areas of newly designed, newly constructed, altered portions of existing facilities and retrofitted facilities shall comply with **Sections 4.0 to 13.0** of this Accessibility Standard, unless otherwise provided in this section or as modified with the additional design requirements specified in Sections 14.0 and 15.0, Recreational and Facility-Specific Requirements.
- 3.1.3 Where a facility contains **more than one use** covered by a special application section (Sections 14.0 and 15.0), each portion of the facility shall comply with the requirements for that section in addition to all other general provisions.
- 3.1.4 All facilities shall be **accessible for employees**, as well as **patrons/users**. All areas intended for use by employees shall be designed and constructed to comply with this Accessibility Standard.
- 3.1.5 This Accessibility Standard applies to temporary facilities, as well as permanent facilities.

## 3.2 Retrofitting, Alterations & Additions to Existing Facilities

- 3.2.1 Each **new element, space, feature or area added** to an existing facility shall **comply** with the applicable provision(s) of this Accessibility Standard. In addition:
- a) each addition (element, space, feature or area) to an existing facility shall be regarded as an **alteration**.
  - b) if **alterations** of single elements, when **considered together**, amount to an alteration of a room
- or space in a facility, the entire space shall be made accessible.
- c) no alteration of an existing element, space, feature or area of a facility shall impose a **requirement for greater accessibility** than that which would be required for new construction.
- 3.2.2 Except where the provision of accessible features is technically infeasible, **no alteration shall**

**decrease** or have the effect of decreasing accessibility or usability of an existing facility to below the requirements for new construction at the time of alteration.

3.2.3 If **existing elements, spaces, features or common areas are altered**, then each such altered element, space, feature or area shall comply with all applicable provisions. If the applicable provision for new construction requires that an element, space, feature or area be on an accessible route and the altered element, space, feature or area is not on an accessible route, this route shall be altered to become accessible.

3.2.4 If an **escalator or stairs** are proposed as a means of access where none existed previously, and major structural modifications are necessary for such installations, then a means of accessible access shall also be provided.

3.2.5 If a planned alteration entails **alterations to an entrance**, and the facility has an accessible entrance, the entrance being altered is required

### 3.3 Accessible Heritage Facilities

3.3.1 This standard will generally apply to **alterations to a Heritage Facility**, however, under the Ontario Human Rights Code, there are allowances for modification to the defining features of a Heritage Facility which are deemed to alter the essential nature or substantially affect the viability of the enterprise. Public

to be accessible. If the alteration work is limited solely to the electrical, mechanical or plumbing system, or to hazardous material abatement, or to automatic sprinkler retrofitting, and does not involve the alteration of any elements or spaces required to be accessible under these guidelines, then this standard does not apply (except for alarms, public telephones and assistive listening systems).

3.2.6 An alteration that affects the usability of or access to an **area containing a primary function** shall be made to ensure that, to the maximum extent feasible, the path of travel to the altered area, the restrooms, telephones and drinking fountains serving the altered area are readily accessible to and usable by individuals with disabilities.

3.2.7 Where the provision of accessible features is technically infeasible, and the standard allows a **reduction of manoeuvring space** from the requirements for new construction, the reduced dimensions are minimums. Where possible, larger manoeuvring spaces must be provided.

Heritage Facilities should be assessed for compliance to accessibility standards on an individual basis, to determine the most effective and least disruptive means of retrofit, where required.

3.3.2 **Safe egress** from a Heritage Facility is required.

3.3.3 Consider the following general Accessibility Standards guidelines for alterations to a Heritage Facility:

- a) Facilities and/or areas that are generally **used independently by the public** and have undergone extensive modernization should be permanently and fully accessible. This includes parking areas, reception areas, washrooms, food service areas and gift shops. It can also include walkways and garden areas. If accessibility is limited by non-heritage elements, those elements should be revised.
- b) Facilities and/or areas which are **used only by guided tour groups**, through which assistance could easily be provided to open doors or to place a temporary ramp, could remain as existing or with minor temporary modifications.

- c) It is desirable to provide a complete experience of a Public Heritage Facility. If an accessible area or areas can be provided to **fully experience** a given site or facility context, access to the entire site or facility is not necessary.
- d) Access to **above- and below-grade areas** is not necessary if the context of those areas can be adequately provided on the accessible floor level. If retrofit for accessibility of a main public entrance in a Heritage Facility would substantially threaten or destroy the historic significance of the facility, access shall be provided at an **alternative entrance** with directional signs at the main public entrance. The accessible entrance should have a notification system (if not generally used by the public) and remote monitoring (if security is an issue).

### 3.4 Equivalent Facilitation for Accessibility

3.4.1 In a retrofit situation where the requirements of a section of this standard are technically infeasible to implement, **equivalent facilitation** may be proposed. The Corporate Facilities Planning, Corporate

Projects and Engineering Departments of the City of Windsor will review and approve equivalent facilitation proposals on an individual basis.

### 3.5 Enforcement of Accessibility Standard

The Corporate Facilities Planning, Corporate Projects, Diversity and Accessibility Office, Planning and Building and Development Departments as well as other city departments through the project management functions, shall ensure

compliance to this standard during the pre-planning, design, construction documents preparation and contracts administration phases of any project to which this standard applies.

# 4 Definitions and Symbols

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## 4.1 Graphic Conventions

- 4.1.1 Dimensions are displayed in **metric**, unless otherwise stated.
- 4.1.2 Dimensions that are not marked maximum or minimum are **absolute**, unless otherwise indicated.

## 4.2 General Terminology

- 4.2.1 “comply with” **Meets** one or more **specifications** of this standard.
- 4.2.2 “if ... then” Denotes a specification that applies **only** when the conditions described are present.
- 4.2.3 “may” Denotes an **option or alternative**.
- 4.2.4 “shall” Denotes a **mandatory specification or requirement**.
- 4.2.5 “should” Denotes an **advisory specification or recommendation**.

## 4.3 Definitions

- 4.3.1 **Access aisle**: An *accessible* pedestrian space between *elements* – such as parking spaces, seating and desks – that provides clearances appropriate for the use of the *elements*.  
may include corridors, floors, *ramps*, elevators, platform lifts and *clear floor spaces* at fixtures. Exterior *accessible routes* may include *access aisles*, *curb ramps*, crosswalks at *vehicular ways*, *walks*, *ramps* and platform lifts.
- 4.3.2 **Accessible**: Describes a *site*, *building*, *facility* or portion thereof that complies with this standard.
- 4.3.3 **Accessible element**: An *element* specified by this standard (for example, telephone, controls, etc.).
- 4.3.4 **Accessible route**: A continuous unobstructed path connecting the *accessible elements* and *spaces* of a *facility*. Interior *accessible routes*
- 4.3.5 **Accessible space**: *Space* that complies with this standard.
- 4.3.6 **Adaptable**: The ability of a certain *building space* or *element* – such as kitchen counters, sinks and grab bars – to be added or altered so as to accommodate the needs or individuals with or without *disabilities* or to accommodate the needs of

- persons with different types or degrees of *disabilities*.
- 4.3.7 **Addition**: An expansion, extension, or increase in the gross floor area of a *facility*.
- 4.3.8 **Alteration**: A change to a *facility* that affects or could affect the usability of the *facility* or part thereof. *Alterations* include, but are not limited to, remodelling, renovation, retrofitting, rehabilitation, reconstruction, historic restoration, resurfacing of *circulation paths* or *vehicular ways*, changes or rearrangement in the plan configuration of walls and full-height partitions. Normal maintenance, painting or wallpapering, or changes to mechanical or electrical systems are not *alterations*, unless they affect the usability of the *building*.
- 4.3.9 **Area of rescue assistance**: An area which has direct access to an exit, where people who are unable to use stairs may remain temporarily in safety to await further instructions or assistance during emergency evacuation.
- 4.3.10 **Assembly area**: A room or space accommodating a group of individuals for recreational, educational, political, social, civic or amusement purposes, or for the consumption of food and drink.
- 4.3.11 **Attic or Roof Space**: The space between the roof and the ceiling of the top storey or between a dwarf wall and a sloping roof.
- 4.3.12 **Automatic door**: A door equipped with a power-operated mechanism and controls that open and close the door automatically upon receipt of a momentary actuating signal. The switch that begins the automatic cycle may be a photoelectric device, floor mat, or manual switch. (See *Power-assisted door*)
- 4.3.13 **Barrier**: Means anything that prevents a person with a disability from fully participating in all aspects of society because of his or her disability, including a physical barrier, an architectural barrier, an information or communications barrier, an attitudinal barrier, a technological barrier, a policy or a practice.
- 4.3.14 **Board Room or Conference Room or Meeting Room**: Room used for meetings, which accommodates more than six (6) people.
- 4.3.15 **Building**: A structure occupying an area greater than ten square metres (10 m<sup>2</sup>), consisting of a wall, roof and floor or any of them, or a structural system serving the function thereof, including all plumbing, fixtures and service systems appurtenant thereto; or a structure occupying an area of ten square metres (10 m<sup>2</sup>) or less that contains plumbing, including the plumbing appurtenant thereto; or structures designated in the Ontario Building Code.
- 4.3.16 **Circulation Path**: An exterior or interior way of passage from one place to another for pedestrians, including, but not limited to, *walks*,



hallways, courtyards, stairways and stair landings.

considered normal for a human being, and includes the following:

- 4.3.17 **Clear**: Unobstructed.
- 4.3.18 **Clear floor space**: The minimum unobstructed floor or ground *space* required to accommodate a single, stationary wheelchair, scooter or other mobility device, including the user.
- 4.3.19 **Closed-circuit telephone**: A telephone with dedicated line(s), such as a house phone, courtesy phone or phone that must be used to gain entrance to a *facility*.
- 4.3.20 **Common use**: Refers to those interior and exterior rooms, *spaces* or *elements* that are made available for the use of a restricted group of people (for example, occupants of a homeless shelter, the occupants of an office building, or the guests of such occupants).
- 4.3.21 **Cross slope**: The slope that is perpendicular to the direction of travel (See *running slope*).
- 4.3.22 **Curb ramp**: a short *ramp* cutting through a curb or built up to a curb.
- 4.3.23 **Detectable warning**: A standardized surface feature built into or applied to walking surfaces or other *elements* to warn visually impaired people of hazards on a *circulation path*.
- 4.3.24 **Disability**: Any restriction or lack of ability to perform an activity in the manner or within the range
- 4.3.24.1 **Coordination Disability**: Faulty coordination due to palsy from a brain, spinal or peripheral nerve injury.
- 4.3.24.2 **Hearing Disability**: Deaf or hard-of-hearing individuals who require various modes of communication as well as alternative warning signals in public settings.
- 4.3.24.3 **Non-Ambulatory Disability**: Impairments that, for all practical purposes, require an individual to use a wheelchair.
- 4.3.24.4 **Semi-Ambulatory Disability**: Impairments that cause individuals to walk with difficulty or insecurity. Semi-ambulatory includes individuals using braces or crutches, those who are spastic or amputees, and those who have arthritis or pulmonary and cardiac problems.
- 4.3.24.5 **Sight Disability**: Blindness or impairments affecting sight to the extent that the individual functioning in public areas is insecure and exposed to danger.
- 4.3.24.6 **Manifestations of the aging process** that significantly reduces mobility, flexibility, coordination and perceptiveness, but are not accounted for in the abovementioned categories (4.3.24.1 to 4.3.24.5)
- 4.3.25 **Egress, Means of**: A continuous and unobstructed way of exit travel

from any point in a *facility* to a public way. A *means of egress* comprises vertical and horizontal travel and may include intervening room spaces, doorways, hallways, corridors, passageways, balconies, *ramps*, stairs, enclosures, lobbies, horizontal exits, courts and yards. An *accessible means of egress* is one that complies with this standard and does not include stairs, steps or escalators. Areas of rescue assistance, protected lobbies or protected elevators may be included as part of an *accessible means of egress*.

4.3.26 **Element**: An architectural or mechanical component of a *building, facility, space* or *site* (for example, telephone, *curb ramp*, door, drinking fountain, seating, etc.)

4.3.27 **Entrance**: Any access point to a *building* or portion of a *facility* used for the purposes of entering. An *entrance* includes the approach *walk*, the vertical access leading to the *entrance* platform, the *entrance* platform itself, vestibules, the entry door(s) or gate(s) and the hardware of the entry door(s) or gate(s).

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

4.3.29 **Ground floor**: Any *occupiable floor* less than one *storey* above or below grade with direct access to grade. A *facility* always has at least one

*ground floor* and may have more than one *ground floor*, as where a split-level *entrance* has been provided or where a *facility* is built into a hillside.

4.3.30 **Handicap**: A disadvantage for a given individual, resulting from an *impairment* or *disability* that limits or prevents the fulfillment of a role that is normal (depending on age, sex, social and cultural factors) for that individual. A handicap is an external factor, which limits the full use of a *facility/function* for a specific individual.

4.3.31 **Heritage Facility**: Facility or portions thereof designated under the Ontario Heritage Act, or certified by the Windsor Heritage Committee.

4.3.32 **Impairment**: Any loss or abnormality of psychological, physiological or anatomical structure or function.

4.3.33 **Mezzanine** or **Mezzanine floor**: That portion of a *storey* which is an intermediate floor level, placed within the *storey* and having *occupiable space* above and below its floor.

4.3.34 **Marked crossing**: A crosswalk or other identified path intended for pedestrian use in crossing a *vehicular way*.

4.3.35 **Occupiable**: A room or enclosed space designed for human occupancy in which individuals congregate for amusement, educational or similar purposes, or in which occupants are engaged at

- labour, and which is equipped with *means of egress*, light and ventilation.
- 4.3.36 **Open Space**: Large-scale tracts of land without visible evidence of residential, commercial or industrial development. These areas may be privately or publicly owned and are generally left in a natural state and not programmed for active recreation. The benefits of open lands typically extend beyond the immediate area and usually provide community-wide benefits.
- 4.3.37 **Operable portion**: A part of a piece of equipment or appliance used to insert or withdraw objects, or to activate, deactivate, or adjust the equipment or appliance (for example, coin slot, push button, handle, etc.).
- 4.3.38 **Park**: Land that is privately or publicly held that has been developed for multiple recreational and leisure-time uses. This land benefits the entire community and balances the demands of the public for outdoor recreational facilities and other amenities; such as, pathways, plazas, picnic areas, playgrounds, water features, *spaces* for free play and leisure.
- 4.3.39 **Places of Assembly**: Places where groups of individuals gather in groups for purposes including meetings, deliberation, entertainment, socializing or worship whether public or private.
- 4.3.40 **Places of Worship**: Places where groups of individuals gather for the purpose of religious practice.
- 4.3.41 **Power-assisted door**: A door used for human passage that has a mechanism that helps to open the door or relieves the opening resistance of a door, upon the activation of a switch or a continued force applied to the door itself.
- 4.3.42 **Private open space**: Privately owned land areas within a subdivision, generally smaller in scale than open space, which have been left free from structures, parking lots and roads. These types of areas generally benefit only the residents or employees of the particular subdivision and usually remain in private ownership.
- 4.3.43 **Public Heritage Facility**: A *facility* designated under the Ontario Heritage Act or the Windsor Heritage Committee that is open and accessible to the public. (See *Heritage Facility*)
- 4.3.44 **Public use**: Describes interior or exterior rooms or spaces that are made available to the general public. *Public use* may be provided at a *facility* that is privately or publicly owned.
- 4.3.45 **Ramp**: A walking surface with a *running slope* greater than 1:25.
- 4.3.46 **Running Slope**: The slope that is parallel to the direction of travel. (See *Cross Slope*)
- 4.3.47 **Service entrance**: An *entrance* intended primarily for delivery of goods or services and not intended for use by the public.

- 4.3.48 **Service room**: A room provided in a building to contain equipment associated with *building* spaces.
- 4.3.49 **Service space**: A space provided in a *facility* to facilitate or conceal the installation of service **facilities**, such as chutes, ducts, pipes, shafts or wires.
- 4.3.50 **Signage**: Displayed verbal, symbolic, *tactile* and pictorial information.
- 4.3.51 **Site**: A parcel of land bound by a property line or a designated portion of a public right-of-way.
- 4.3.52 **Site improvement**: Landscaping, paving for pedestrian and *vehicular* ways, outdoor lighting and recreational **facilities** added to a site.
- 4.3.53 **Sleeping accommodations**: Rooms in which people sleep, for example, a dormitory.
- 4.3.54 **Space**: A definable area (for example, room, toilet room, hall, assembly area, entrance, storage room, alcove, courtyard or lobby).
- 4.3.55 **Storey**: That portion of a *building* included between the upper surface of a floor and the upper surface of the floor next above. If such portion of a *building* does not include *occupiable space*, it is not considered a *storey* for the purposes of this standard. There may be more than one floor level within a *storey*, as in the case of a *mezzanine* or *mezzanines*.
- 4.3.56 **Street Furniture**: Includes the following features and facilities: rest areas, benches, mail boxes, lamp posts, signboards, telephone booths, public toilets, newspaper kiosks, planting containers and beds, waste receptacles, etc.
- 4.3.57 **Structural frame**: The columns and the girders, beams, trusses and spandrels having direct connection to the columns and all other members which are essential to the stability of the building as a whole.
- 4.3.58 **TDD (Telecommunication Device for the Deaf)**: See *Text telephone*.
- 4.3.59 **TTY (Teletypewriter)**: See *Text telephone*.
- 4.3.60 **Tactile**: Describes an object that can be perceived using the sense of touch.
- 4.3.61 **Technically infeasible**: Means, with respect to an *alteration* of a *building* or a *facility*, that it has little likelihood of being accomplished, because (1) existing structural conditions would require moving or altering a load-bearing member which is an essential part of the structural frame; or (2) other existing physical or *site* constraints prohibit modification or addition of necessary *elements*, *spaces* or features which are in full and strict compliance with the minimum requirements for new construction.
- 4.3.62 **Temporary structure**: *Facility* that is not of permanent construction but that is extensively used, or is essential for *public use* for a period of time. Examples of temporary *facilities* covered by this standard

include, but are not limited to, reviewing stands, bleacher areas, temporary kiosks, temporary health screening services or temporary safe pedestrian passageways around a construction *site*. Structures and equipment directly associated with the actual processes of construction, such as scaffolding, bridging, materials hoists or construction trailers, are not included.

4.3.63 **Text telephone (TTY)**: Machinery or equipment that employs interactive text-based communication through the transmission of coded signals across the standard telephone network. *Text telephones* can

include, for example, devices known as TDDs (telecommunication display devices or telecommunication devices for deaf persons) or computers with special modems. *Text telephones* are also called TTYs, an abbreviation for teletypewriter.

4.3.64 **Vehicular way**: A route intended for vehicular traffic, such as a street, driveway or parking lot, within the boundary of the *site*.

4.3.65 **Walk**: An exterior pathway with a prepared surface intended for pedestrian use, including general pedestrian areas, such as plazas and courts, within the boundary of the *site*.

# 5 Accessible Space and Reach Requirements

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## 5.1 Defining Space and Reach Requirements

5.1.1 The dimensions and manoeuvring characteristics of wheelchairs and other mobility devices are as varied as the people who use them. Traditionally, accessibility standards have taken a conservative approach to wheelchair manoeuvrability, reflecting the needs of the average user in an average-sized wheelchair. Such an approach excludes the many users who are not average.

This standard more accurately reflects the vast array of equipment that is used by persons to access and use facilities, as well as the diverse range of user ability. This standard incorporates more gracious space requirements, particularly related to the dynamic movement of people using wheelchairs, scooters or other mobility devices.

Space and reach range provisions for persons who use wheelchairs, scooters and other mobility devices shall comply with this section.

## 5.2 Standards: Space Requirements for Persons Manoeuvring Mobility Devices

5.2.1 The space required for a wheelchair to make a 360-degree turn (refer to Figure 5.2-A) or a 180-degree turn (refer to Figure 5.2-B) is a clear space of 2.44m (96 in.) in diameter.

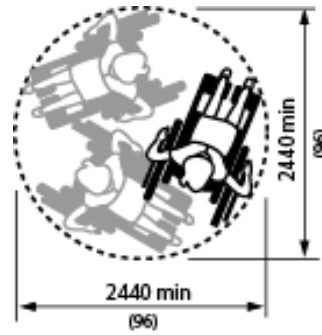


Figure 5.2-A. 360° turning space

5.2.2 The minimum clear floor or ground space required to accommodate a single, stationary wheelchair or scooter and occupant shall be 0.76m (30 in.) x 1.37m (54 in.) (refer to Figure 5.2-C and Figure 5.2-D).

5.2.2.1 The minimum clear floor or ground space for wheelchairs or scooters may be positioned for forward or parallel approach to an object.

5.2.2.2 Clear floor or ground space for wheelchairs may be part of the knee space required under some objects.

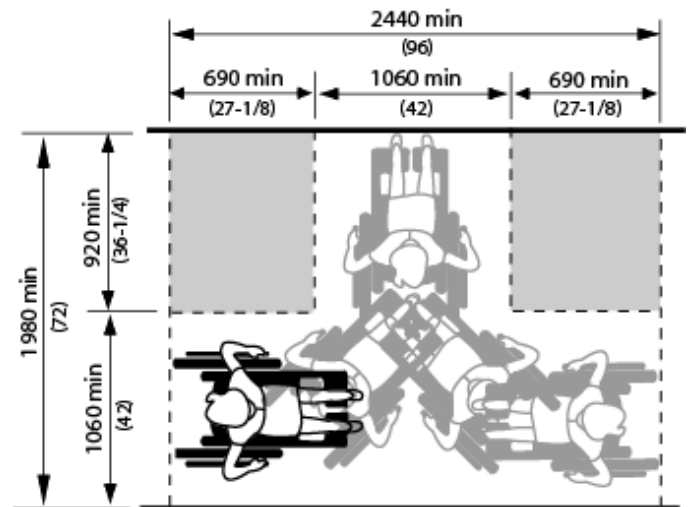


Figure 5.2-B. 180° turn

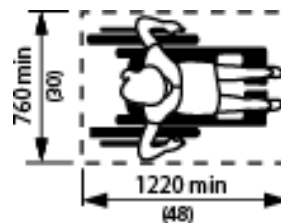


Figure 5.2-C. Clear floorspace for wheelchair

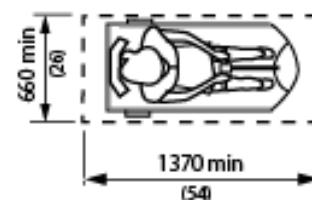


Figure 5.2-D. Clear floorspace for scooter

5.2.2.3

One full, unobstructed side of the clear floor or ground space for a wheelchair or scooter must adjoin or overlap an accessible route or overlap another wheelchair clear floor space. If a clear space is located in an alcove or otherwise confined on all or part of three sides, additional manoeuvring clearances must be provided (as shown in Figure 5.2-E, Figure 5.2-F, Figure 5.2-G and Figure 5.2-H).

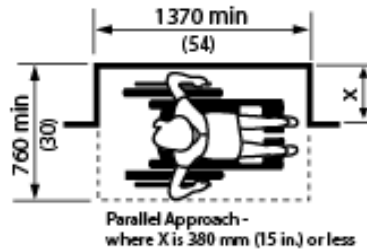


Figure 5.2-E. Clearances at alcove

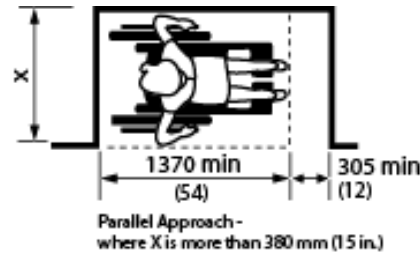


Figure 5.2-F. Clearances at alcove

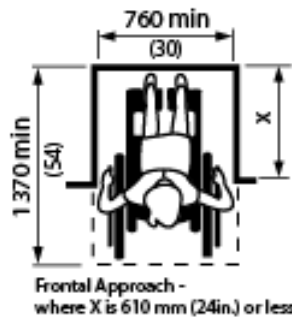


Figure 5.2-G. Clearances at alcove

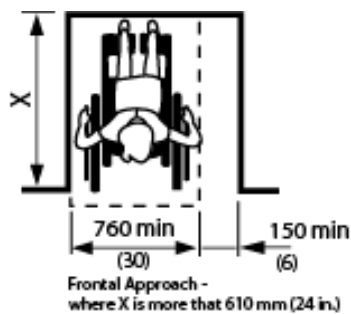


Figure 5.2-H. Clearances at alcove



## 5.3 Standards: Reach Requirements for Persons in Mobility Devices

5.3.1 Where the clear floor space only allows forward approach to an object, the maximum high forward reach allowed shall be 1.2m (47 in.) and the minimum low forward reach allowed shall be 0.4m (15-¾ in.) (refer to Figure 5.3-A). If the high forward reach is over an obstruction, reach and clearances shall be as shown in Figure 5.3-B, Figure 5.3-C and Figure 5.3-D, with 'X', 'Y' and 'Z' calculated as:

- When 'X' is less than or equal to 0.635m (25 in.); 'Z' shall be greater than or equal to 'X'.
- When 'X' is less than 0.510m (20 in.), then 'Y' shall be 1.22m (48 in.) maximum.
- When 'X' is 0.510m (20 in.) to 0.635m (25 in.), then 'Y' shall be 1.12m (44 in.) maximum.

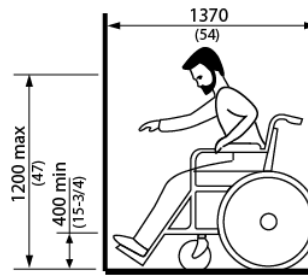


Figure 5.3-A. Forward reach

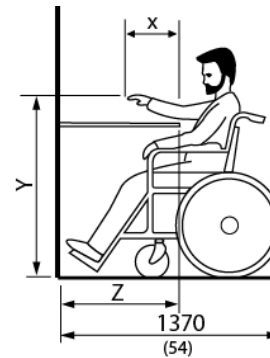


Figure 5.3-B. Forward reach over an obstruction

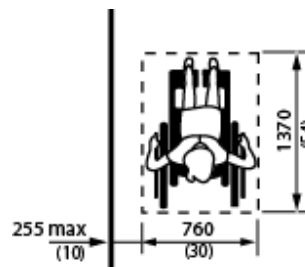


Figure 5.3-C. Side reach - maximum distance to wheelchair

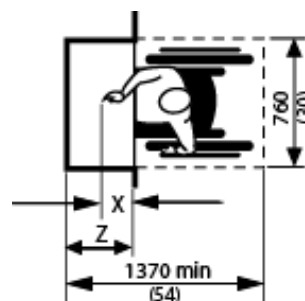


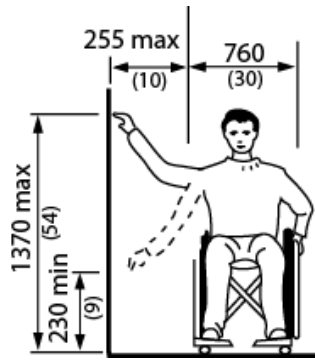
Figure 5.3-D. Forward reach over an obstruction

5.3.2 Where the clear floor space allows parallel approach to an object, the reach dimensions must comply with the following specifications:

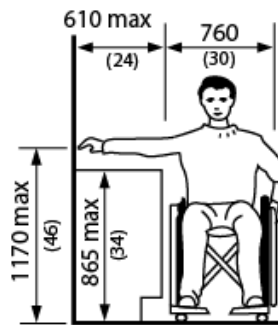
5.3.2.1 The maximum high side reach allowed shall be 1.37m (54 in.) and at a maximum depth of 0.23m (9 in.). The maximum low side reach allowed shall be 0.23m (9 in.) above the floor and at a maximum depth of 0.23m (9 in.). (refer to Figure 5.3-E)

5.3.2.2 If the side reach is over an obstruction, the reach and clearances shall be 1.17m (46 in.) and at a maximum depth of 0.61m (24 in.). (refer to Figure 5.3-F)

5.3.3 Notwithstanding these requirements, the Ontario Building Code requires all controls for the operation of facility services or safety devices, including electrical switches, thermostats and intercom switches, be mounted at not more than 1.2m (47 in.) above the floor.



**Figure 5.3-E. Side reach**



**Figure 5.3-F. Side reach over an obstruction**

# 6 Accessible Outdoor Public Areas

## 6.1 Defining Accessible Outdoor Public Areas

Streets, sidewalks and walkways should be designed to provide an environment that is pleasant, convenient, and above all, is safe. Safety involves having a wide enough pathway so that individuals who have difficulties with balance are not crowded and bumped into by pedestrians. The path must also be kept clear of street furniture, which can be a serious hazard to a person with a visual impairment who may not be able to detect the obstruction.

Street furniture also causes manoeuvrability problems for wheelchair and other mobility aid users. Street furniture, especially benches, may be necessary to ensure the safety of those who tire easily, but they should be placed in a clearly defined strip adjacent to the walkway and should not protrude into the walk.

## 6.2 Standards: Sidewalk and Walkway Dimensions and Clearances

6.2.1 Sidewalks and walkways should be constructed in a straight-line pattern.

6.2.2 Sidewalks and walkways should be designed to reflect the amount of pedestrian traffic that is expected, subject to the following specifications:

6.2.2.1 The preferred minimum width for sidewalks and walkways is 1.83m (72 in.). Refer to Figure 6.2-A.

6.2.2.2 Sidewalks and walkways should have a minimum clear width of 1.06m (54 in.). Refer to Figure 6.2-A.

6.2.2.3 Where a sidewalk or walkway is less than 1.6m (54 in.) in clear width, passing areas of at least 1.6m (54 in.) wide should be provided not more than 30m (98 ft 5 in.) apart.

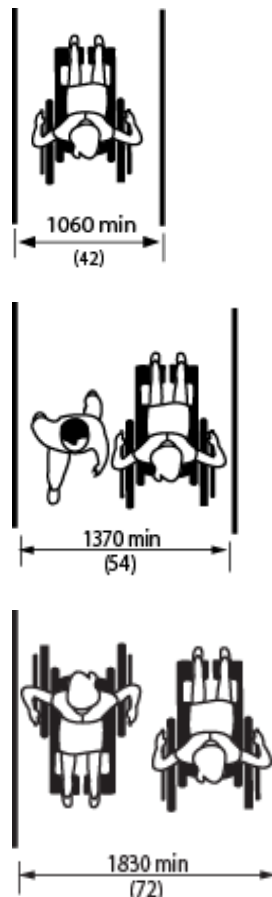
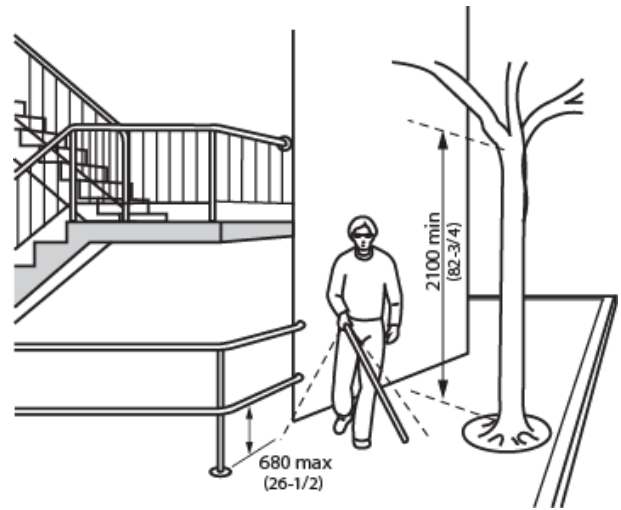


Figure 6.2-A. Access widths

6.2.2.4 Sidewalks and walkways, located in high pedestrian and vehicular traffic volume areas, should have minimum clear width of 2.44m (96 in.).

6.2.2.5 Sidewalks and walkways should have a minimum vertical clearance of 2.1m (82 ¾ in.) from the ground to any overhanging object, such as tree branches, canopies, awning, or signage. Refer to Figure 6.2-B.

6.2.3 Dimensions referenced in **Section 6.2.2** are the minimum measurements required to accommodate the expected pedestrian flow. It is important to ensure that the space available is not reduced by obstacles, such as garbage receptacles, mail boxes, planters, utility poles, lighting standards and other street furniture. If street furniture, utility poles and lighting standards are to be installed along the streetscape, the sidewalk or walkway should be widened beyond the minimum measurements required.



**Figure 6.2-B. Overhead obstructions**

### **6.3 Standards: Sidewalk and Walkway Surfaces**

6.3.1 Sidewalks and walkways should be constructed and maintained as slip-resistant, level and free from all obstructions.

6.3.2 Slip-resistant concrete surfaces should have brushed finish or an integral abrasive grain.

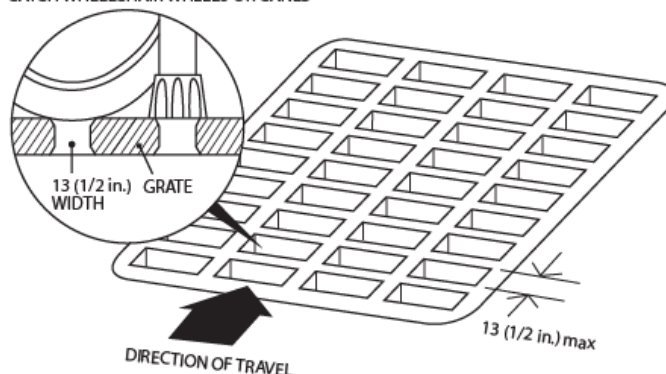
6.3.3 Sidewalks and walkways should not be constructed with large paving

joints, corrugated textures, loose gravel or cobblestones. These surfaces, however, can be used as warning or cuing surfaces as they can be detected by white cane technique.

6.3.4 Gratings and manhole covers should be eliminated from sidewalks, walkways and crosswalks. If this is

impossible, then the following specifications apply:

OPENINGS LARGER THAN 13 (1/2 in.) MAY CATCH WHEELCHAIR WHEELS OR CANES



6.3.4.1 Gratings should be flush with the pathway surface and should have narrow patterns of not more than 0.013m (1/2 in.) to prevent crutches and canes from falling between the bars. Refer to Figure 6.3-A.

6.3.4.2 Elongated grating openings should be perpendicular to the pedestrian travel path to prevent wheels from becoming stuck in the grooves.

Figure 6.3-A. Grills and gratings

## 6.4 Standards: Sidewalk and Walkway Slopes

6.4.1 Sidewalks and walkways should have a minimum slope of 1:2. Any slope greater than 1:2 is designated as a sloped floor and must follow the guidelines for **Curb Ramps** in Section 6.5 or **Ramps** in Section 8.2. Refer to Figure 6.4-A.

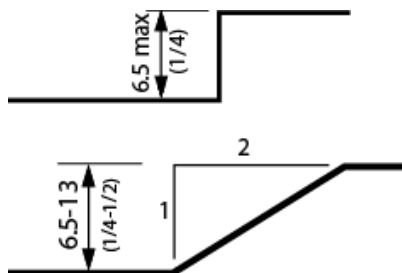


Figure 6.4-A. Changes in level

6.4.2 Sidewalks and walkways should not have a change in level of more than 0.06m (1/4 in.), which includes changes in level caused by construction joints, manhole coverings and gratings. Refer to Figure 6.4-A.

6.4.3 Sidewalks and walkways edges with a change in level ranging from 0.061m (9/32 in.) to 0.13m (1/2 in.) must be bevelled with a slope of less than 1:2. Refer to Figure 6.4-A and Table 9.4-A.

## 6.5 Standards: Sidewalk and Walkway Curb Ramps

6.5.1 Wherever sidewalks and walkways of different elevations intersect with other sidewalks or walkways, parking lots, driveways or streets, a transition between the surface of the sidewalk or walkway and such other features should be provided.

6.5.2 Sidewalk and walkway curb ramps should be constructed to the following specifications:

6.5.2.1 Sidewalk and walkway curb ramps should have a minimum width of 1.22m (48 in.) across the usable surface of the curb ramp, exclusive of flared sides.

6.5.2.2 Curb ramps shall have flared sides where pedestrians are likely to walk across them. Refer to Figure 6.5-A.

6.5.2.3 Sidewalk and walkway curb ramps should have a minimum gradient of 1:12.

6.5.2.4 Sidewalk and walkway curb ramps should have flared side slopes with a minimum gradient of 1:10.

6.5.2.5 Sidewalk and walkway curb ramps should not contain a grate, manhole or other opening.

6.5.3 The maximum running slope of a curb ramp shall be 1:10.1 to 1:12 for a maximum vertical rise between landings of 0.15m (6 in.) and a running slope of 1:8 to 1:10 for a maximum vertical rise between landings of 0.075m (3 in.).

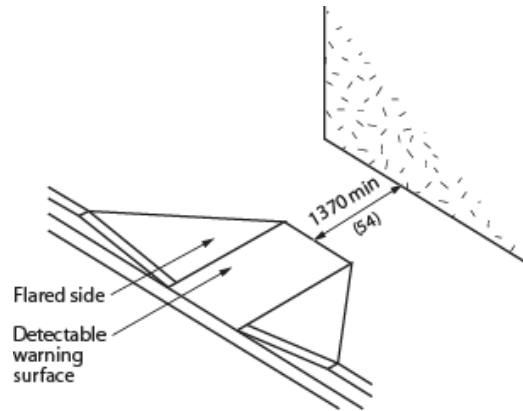
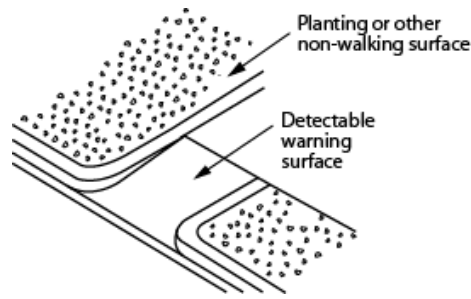


Figure 6.5-A. Curb ramp with flared sides

6.5.4 The maximum horizontal length of a curb ramp shall not exceed 2.0m (79 in.)

6.5.5 Surfaces of curb ramps shall be permanent, firm and slip resistant, of colours and texture contrasting with adjacent surfaces, and have a smooth transition from the ramp and adjacent surfaces. Refer to Figure 6.5-A and Figure 6.5-B.



**Figure 6.5-B. Curb ramp with returned sides**

## **6.6 Standards: Sidewalk and Walkway Detectable Warning Surfaces and Guiding Strips**

6.6.1 Sidewalks and walkways should have linear detectable strips that define the edges of the walkway as a warning and orientation system for people who are visually impaired.

6.6.2 Tactile cues on walking surfaces should be provided as warning of possible obstacles and hazards within and adjacent to paths of travel, conflicts between pedestrian and vehicular paths of travel, and approaches to the top and bottom landings of ramps and stairs.

6.6.3 The use and application of texture pattern for each type of tactile cue should be consistent and should not be used for purposes other than tactile cues.

6.6.4 The area of a tactile cue shall extend from hazards, paths of vehicular travel, ramps or stairs, a distance of not less than 1.0 m (39 in.) for the full width of the hazard, path of vehicular travel, ramp or stair, as the case may be.

6.6.5 Warning surfaces and guide strips should be installed according to the following specifications:

6.6.5.1 Warning surfaces and guide stripes should be slip-resistant and easily detectable by walking upon as being different from the surrounding walking surface.

6.6.5.2 Warning surfaces and guide strips should be laid in a simple and logical manner.

6.6.5.3 Warning surfaces and guide strips should have a colour that contrasts with the surrounding surface.

6.6.5.4 The warning surface and guide strips ridge profile should be parallel to the main direction of movement and should be flush with the top layer of the adjacent road surface so as not to hinder people with mobility problems.

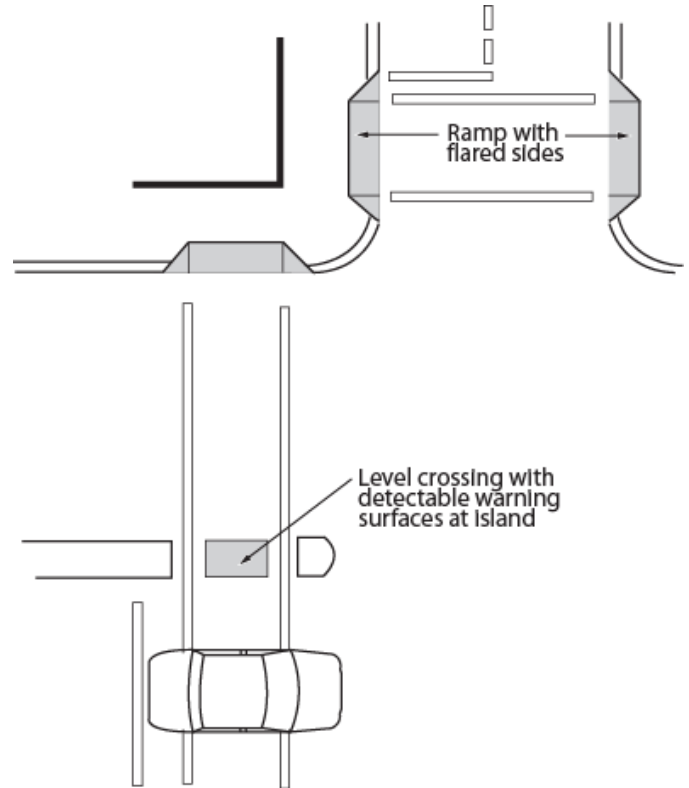
6.6.5.5 Where travel routes change direction, there should be a gradual change in the direction of the warning surface or guiding strips.

## 6.7 Standards: Pedestrian Crossings

6.7.1 Pedestrian crossings should be constructed in a straight-line pattern. Any sidewalk that is interrupted by the intersection of a public right-of-way should be continued after the interruption in the same pattern of alignment to allow an individual who is visually impaired to travel from one walkway straight to another without having to search for the start of the next sidewalk.

6.7.2 Curb ramps at pedestrian crosswalks shall be wholly contained within the area designated for pedestrian use.

6.7.3 Where medians occur in pedestrian crosswalks, the medians shall align to a level common with the crossing surface of the pedestrian crosswalk. Refer to Figure 6.7-A.

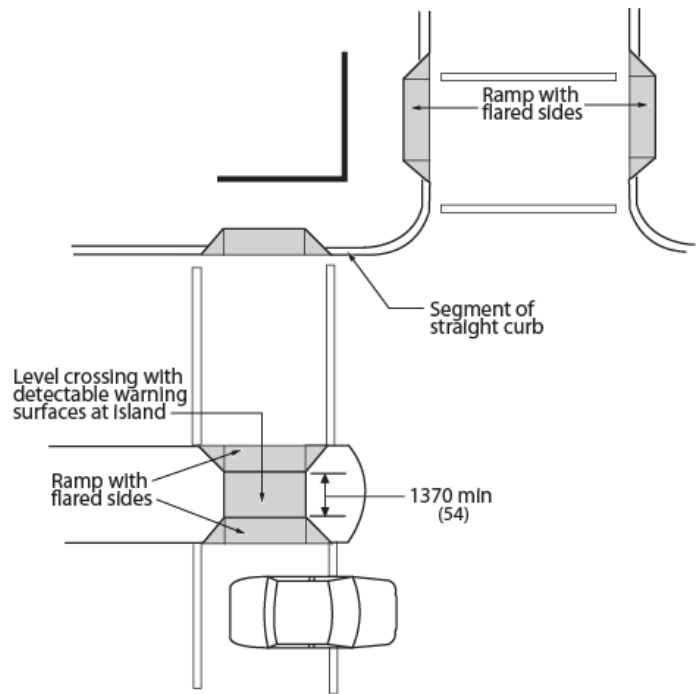


**Figure 6.7-A. Curb ramp locations at pedestrian crosswalks**



6.7.4 Where there are raised islands in pedestrian crossings, the median shall be cut through level with the street or have curb ramps at both sides and a level area not less than 1.37m (54 in.) in the middle. Refer to Figure 6.7-A and Figure 6.7-B. The median shall have detectable warning surfaces that are at least 0.92m (36 in.) in length and of a texture and colour that contrast with the surrounding walking surfaces.

6.7.5 Where traffic signals are provided at pedestrian crossings, where practical, audible signals should be provided in accordance with the Manual of Uniform Traffic Devices for Canada.



**Figure 6.7-B. Curb ramp locations at pedestrian crosswalks**

## 6.8 Standards: Placement and Type of Landscaping

6.8.1 Landscaped strips should act as a buffer zone between pedestrian and vehicular zones.

6.8.2 Plant varieties and locations within the pedestrian-travelled route should be chosen with caution.

6.8.2.1 Plants that drop seeds and fruit should be avoided as they may create a hazard underfoot.

6.8.2.2 Thorny plants should not be used within 0.915 (36in.) of adjacent pedestrian paths and/or seating areas

6.8.2.3 Trees with shallow roots are hazardous as the roots may break through the pathway surface.

6.8.3 The edges of planting beds located immediately adjacent to pedestrian walks shall incorporate clearly defined, cane-detectable curbs at least 0.075 m (3 in.) in height. Refer to Figure 6.8-A.

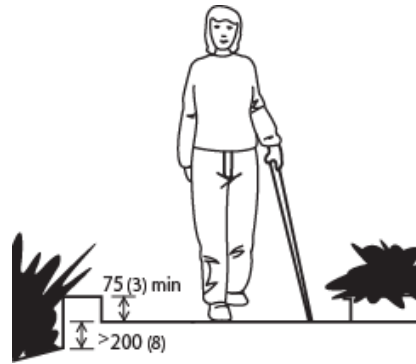


Figure 6.8-A. Edge protection

6.8.4 Accessible plant beds shall be raised 0.46m (18 in.) above the adjacent ground surface and be located along an accessible route.

6.8.5 Street and site furniture should be located on concrete pads within landscaped strips and out of the accessible path of travel.

## 6.9 Standards: Placement of Street and Site Furniture

6.9.1 **Street and site furniture** should be designed and located to provide accessible amenities convenient to all people, without obstructing the free passage of pedestrians along travel routes.

walkways and other accessible routes.

6.9.1.4

Street and site furniture typically includes the following features and facilities: resting facilities, benches, picnic tables, waste receptacles, mail boxes, lamp posts, signboards, telephone booths, newspaper kiosks, planting containers and beds, etc.

6.9.1.1 Street and site furniture should be located on firm, level surfaces providing tactile cues to differentiate the surface from the path of travel that can be cane detectable.

6.9.2

**Resting facilities** should be level areas with seating for all pedestrians, especially for those with mobility problems, subject to the following specifications:

6.9.1.2 Street and site furniture should not reduce the required width of an access route.

6.9.1.3 Street and site furniture should be located to one side of the normal path of pedestrian travel. Street furniture should be securely mounted on an amenity strip, at a minimum of 0.61m (24 in.) wide and located adjoining sidewalks,

6.9.2.1

Resting facilities should be placed outside the main circulation path in public parks, recreational places, pathway crossings, in front of accessible entrances and exits and wherever necessary.

6.9.2.2 Resting facilities should be provided at regular intervals between 100.0m and 200.0m.

6.9.2.3 Resting facilities with benches should allow a minimum of 1.2m (47 in.) of adjoining space to accommodate a wheelchair. Refer to Figure 6.9-A.

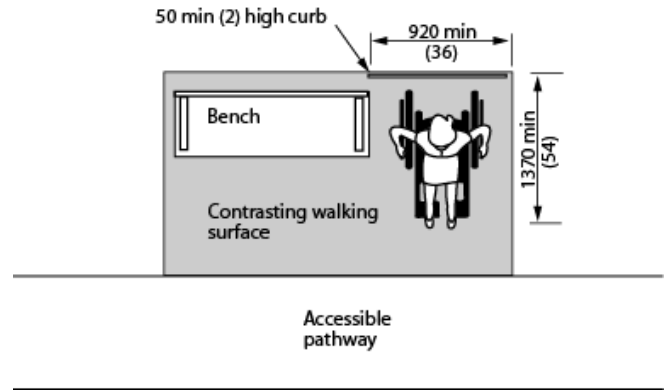


Figure 6.9-A. Rest area

6.9.3 **Benches** provide important resting places for individuals who may have difficulty with standing or walking for extended periods.

6.9.3.1 Benches should be placed adjacent to pedestrian sidewalks and walkways, providing convenient rest places without becoming obstructions.

6.9.3.2 Benches should have a seat height between 0.45m (17-<sup>3</sup>/<sub>4</sub> in.) and 0.5m (19-<sup>5</sup>/<sub>8</sub> in.) from the ground to facilitate sitting and rising for individuals, such as senior citizens. Refer to Figure 6.9-B.



Figure 6.9-B. Bench seating

6.9.3.3 Benches should have arm and back rests to provide assistance in sitting and rising.

6.9.3.4 Benches should be of contrasting colour to their background to be easily identified.

6.9.3.5 Benches should be placed on a pad of contrasting walking surface and have an adjacent level, firm ground surface of at least 0.915m (36 in.) by 1.37m (54 in.).

6.9.4 **Waste Receptacles** should be large enough to contain the anticipated amount of waste so that overflows do not cause a trip hazard and should be mounted on firm, level pads, subject to the following specifications:

6.9.4.1 Waste receptacles should be clearly identified by suitable lettering or other identifying features.

6.9.4.2 Waste receptacles should be provided close to each accessible public entrance.

6.9.4.3 Lids and openings on waste receptacles should be mounted no higher than 1.06m (42 in.) above the adjacent floor or ground surface.

6.9.5 **Mailboxes** should not cause a trip hazard and should be mounted on firm, level pads. Mailbox slots should be mounted at an accessible height between 0.915m (36 in.) and 1.2m (47 in.).

6.9.6 **Telephone Booths** are now manufactured to be wheelchair accessible and conform to the specification of Section 6 of the Canadian Standards Association Barrier-Free Design Standards.

6.9.6.1 Telephones for the hearing impaired should be equipped with hearing aid devices and amplifiers in the receiver.

Telecommunication devices should be indicated by the appropriate signage.

6.9.6.2 The minimum unobstructed area in front of a telephone should be 1.2m (47 in.) by 0.85m (34 in.) to allow for either parallel or frontal approach.

6.9.6.3 Accessible telephones should be indicated by the appropriate signage.

# 7 Accessible Parking Spaces and Passenger Loading Zones

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## 7.1 Defining Accessible Parking Spaces and Passenger Loading Zones

The objective is to provide designated accessible parking spaces and accessible passenger loading zones as close as possible to a main accessible entrance, ensuring a safe route that will allow sufficient space to get in and out of a vehicle.

Designated accessible parking spaces and passenger loading zones should allow persons with mobility aids to open the vehicle door fully, remove their aids, and exit from the vehicle. Extra width also helps those who have difficulty in bending or manipulating their legs to enter and exit vehicles.

The provision of accessible parking spaces and passenger loading zones near the main accessible entrance of a facility is important to accommodate persons with a variety of disabilities. Disabling conditions, such as arthritis or heart conditions, using crutches or pushing a wheelchair, all make it difficult to travel long distances.

Minimizing the travel distances between accessible parking spaces and main entrances is particularly important outdoors, where weather conditions and ground surfaces can make travel both difficult and hazardous. Snow and ice should be removed as soon as possible from the accessible parking spaces, passenger loading zones, curb cuts and accessible walkways.

The standards outlined in this Section are applicable to all new parking structures and surface parking lots. For existing structures and surface parking lots undergoing renovations/alterations, these standards should be employed whenever feasible.

## 7.2 Standards: Locating Accessible Parking Spaces and Passenger Loading Zones

- |       |  |   |
|-------|--|---|
| 7.2.1 | All designated accessible parking spaces and passenger-loading zones shall be located on the shortest possible circulation route, with minimal traffic flow crossing, to an accessible facility entrance (for lots serving a particular facility) or to an accessible pedestrian entrance of the | parking facility (for lots not serving a particular facility).  |
|       | 7.2.1.1  | In facilities with multiple accessible entrances with adjacent parking, accessible parking spaces shall be dispersed and located closest to the accessible entrances. |

7.2.1.2 Accessible parking spaces should be located so that the route a person must take between the vehicle and the entrance does not require the person to walk or wheel behind parked cars which is dangerous as wheelchair users are often not visible to drivers who may be pulling out of their parking space, or those that are unsteady

on their feet may fall behind a parked car and not be seen.

7.2.2 It is recommended that busy public buildings and other facilities have an accessible passenger loading zone that is located near the main accessible entrance and clearly visible from that entrance.

### **7.3 Standards: Accessible Parking Space Dimensions and Clearances**

7.3.1 The number of accessible parking spaces designated to accommodate disabled persons shall be in accordance with the minimum requirements of By-Law 9023 but shall also take into account the following for the determination of an acceptable number of spaces:

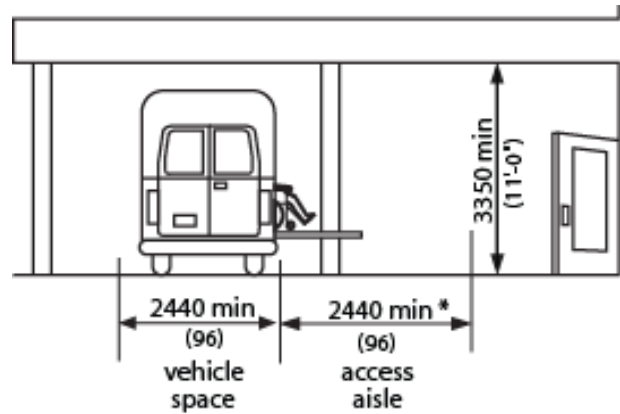
- The number of employees with disabilities employed in the facility
- The nature of the usage of the facility
- The anticipated estimated number of members of the public who will be visiting the facility who will require accessible parking

### **7.4 Standards: Passenger Loading Zone Dimensions and Clearances**

7.4.1 Where passenger-loading zones are provided, at least one shall comply with the provisions of this Section.

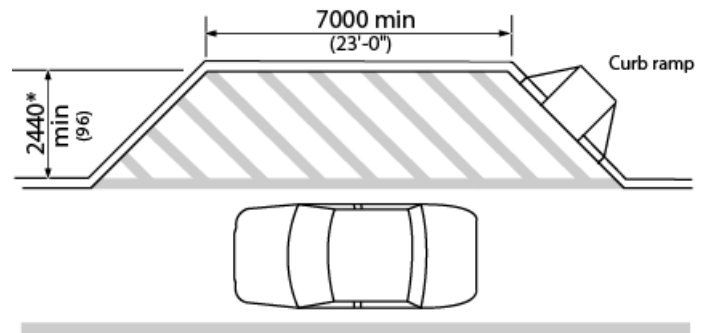
7.4.2 Accessible passenger-loading zones shall be located on an accessible route.

7.4.3 Accessible passenger-loading zones shall provide an access aisle of at least 2.44m (96 in.) wide by 7.0m (23 ft.) long, located adjacent and parallel to the vehicle pull-up space. Refer to Figure 7.4-A and Figure 7.4-B). In a retrofit situation where providing a 2.44m (96 in.) wide access aisle is technically infeasible, the access aisle width may be reduced to 2.0m (78-3/4 in.).



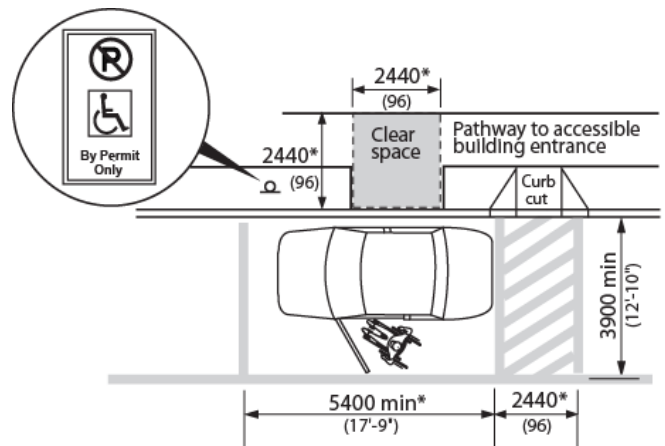
**Figure 7.4-A. Clearances at passenger loading zone**

7.4.4 Accessible passenger-loading zones shall have a curb ramp complying with Section 6.5 where there are curbs between the access aisle and the vehicle pull-up space.



**Figure 7.4-B. Passenger loading zone**

7.4.5 Accessible passenger-loading zones shall have a minimum vertical clearance of 3.35m (11 ft.) at the loading zone and along the vehicle access route to such areas to and from the site entrances. (Refer to Figure 7.4-C)



**Figure 7.4-C. Parallel parking space**

# 8 Accessible Ramps and Stairs

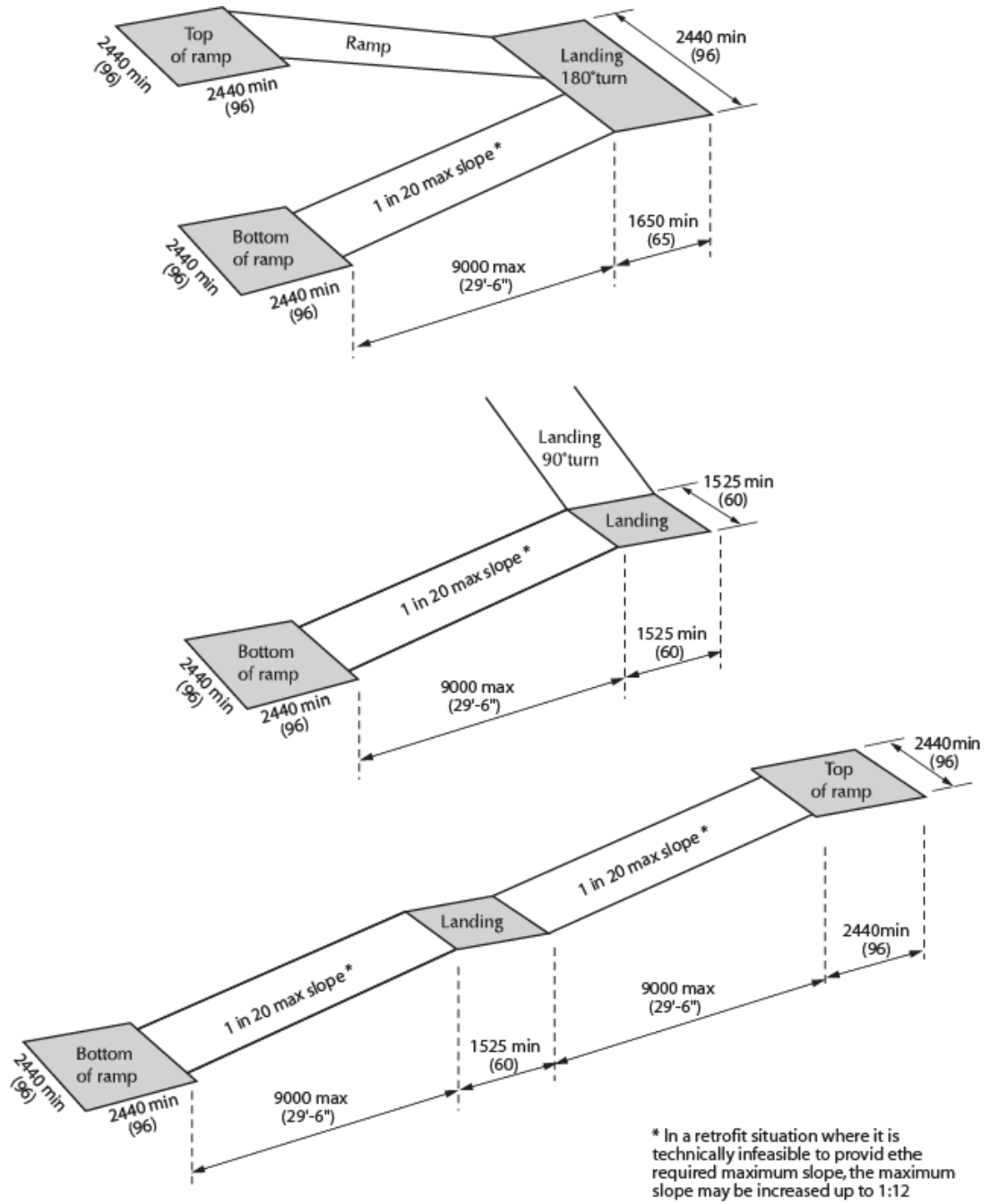
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## 8.1 Standards: Accessible Ramps

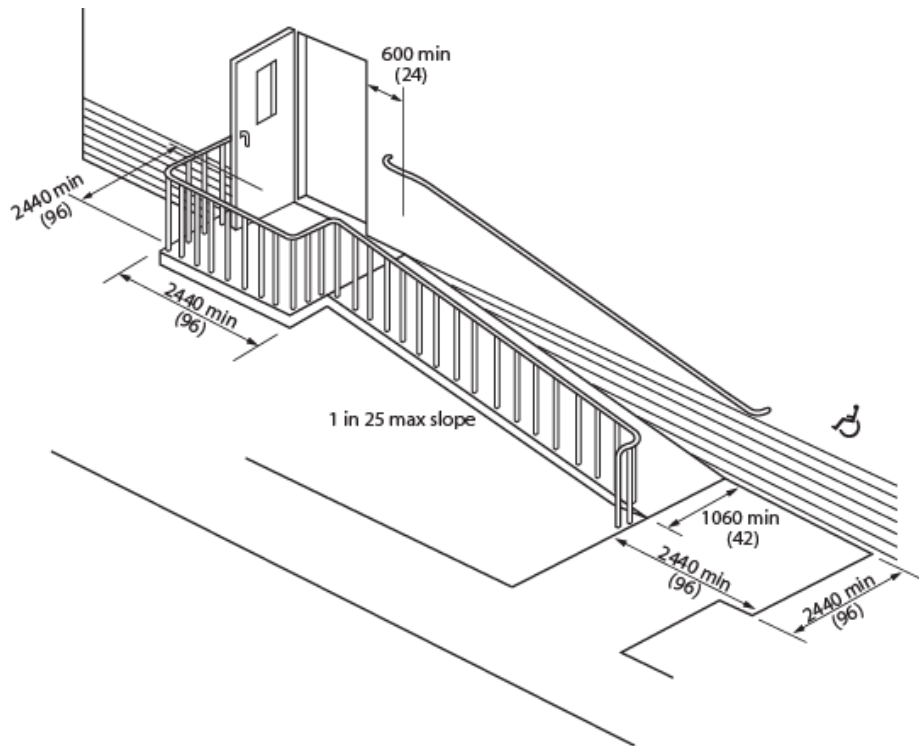
- 8.1.1 Although ramps have been synonymous with wheelchair accessibility, ramps should be considered a last resort in providing accessibility. Instead of a ramp, consideration should be given to re-grading the entrance to a building to create a more integrated approach and to avoid reliance on exterior ramps.
- 8.1.1.1 Ramps can be difficult and dangerous to negotiate and the physical space required for ramps makes them cumbersome to integrate into a facility.
- 8.1.1.2 Where a change in level already exists or cannot be avoided, a properly designed ramp can provide access to those using wheelchairs, pushing strollers or moving packages on a trolley.
- 8.1.2 Any part of an accessible route with a slope steeper than 1:25 shall be considered a ramp and shall comply with this section.
- 8.1.3 The design of the ramp is critical to its usefulness and safety.
- 8.1.3.1 A steeply inclined ramp is too difficult to push up when using a wheelchair, and it increases the risk of the wheelchair tipping backwards. A steep ramp is difficult to ascend and dangerous to come down.
- 8.1.3.2 A cross slope must be avoided, as it will increase the effort required to negotiate the ramp.
- 8.1.3.3 The placement of the ramp is important to its accessibility. Accessible ramps shall be located on an accessible route.
- 8.1.3.4 Space at the bottom of a ramp may be needed for an individual to slow their speed. Similarly, flat areas at points along a long ramp enable an individual to slow down or to rest.
- 8.1.3.5 Textured surfaces, edge protection and handrails all provide important safety functions.



- 8.1.4 The running slope on an accessible ramp shall be between 1:20 and 1:24.9, and the maximum horizontal length between landings shall not exceed 9.0m (29 ft-6 in.). In retrofit situations where it is technically infeasible to provide a ramp with a running slope between 1:20 and 1:24.9, a running slope not steeper than 1:12 may be used, and the maximum horizontal length between landings shall not exceed 9.0m (29 ft-6 in.). Refer to Figure 8.1-A.
- 8.1.5 The maximum cross slope of ramp surfaces shall be 1:50.
- 8.1.6 All ramp and landing surfaces shall be slip-resistant. Outdoor ramps and their approaches shall be designed so that water will not accumulate on walking surfaces.
- 8.1.7 The minimum width of a ramp shall be 0.95m (37-½ in.) between handrails.
- 8.1.7.1 If the ramp is the only access to an entrance, it should be at least 1.55m (61 in.) wide.
- 8.1.8 Ramps shall have level landings at the top and bottom of each run and also where the ramp changes direction to provide a resting place.
- 8.1.8.1 Landings shall be at least as wide as the widest ramp run leading to it.
- 8.1.8.2 Landings shall have a minimum size not less than 2.44m (96 in.) by 2.44m (96 in.) if located at the top of bottom of a ramp or if served by a doorway. In a retrofit situation where creating a suitably sized landing is technically infeasible, the required landing size may be reduced to 1.525m (60 in.) by 1.525m (60 in.). Refer to Figure 8.1-A and Figure 8.1-B.
- 8.1.8.3 Where there is an intermediate landing at the switchback of a U-shaped ramp, the landing shall have a length not less than 1.65m (65 in.) and a width not less than 2.44m (96 in.). In a retrofit situation, where creating a suitably sized landing is technically infeasible, the required landing length may be reduced to 1.525m (60 in.) and the width may be reduced to 2.12m (84 in.). Refer to Figure 8.1-A.
- 8.1.8.4 Where there is an intermediate landing at the corner of an L-shaped ramp, the landing shall have a length and width not less than 1.525m (60 in.). Refer to Figure 8.1-A.
- 8.1.8.5 Where there is an intermediate landing at a straight ramp, the landing shall have a length not less than 1.525m (60 in.).
- 8.1.9 Ramps and landings not at grade shall have walls or guards on both sides.
- 8.1.9.1 Where a guard is provided, it shall be not less than 1.07m (42 in.) measured vertically to the top of the guard from the ramp surface.



**Figure 8.1-A. Minimum ramp landing dimensions**



**Figure 8.1-B. Ramp criteria**

- |                |   |               |  |
|----------------|---|---------------|--|
| <p>8.1.9.2</p> | <p>Where a guard is provided, it shall be designed so that no member, attachment or opening between 0.14m (5-1/2 in.) and 0.9m (35 in.) above the ramp surface being protected by the guard will facilitate climbing.</p> | <p>b)</p>     | <p>railings or other barriers that extend to within 0.05m (2 in.) of the finished ramp, or have a curb not less than 0.05m (2 in.) high.</p>   |
| <p>8.1.9.3</p> | <p>Where a guard is provided, it shall be provided with:</p> <p>a) a curb at least 0.05m (2 in.) high on any side of the ramp where no solid enclosure or solid guard is provided; and</p>                                | <p>8.1.10</p> | <p>A ramp run with a rise greater than 0.15m (6 in.) shall have handrails which are on both sides of the ramp and are also continuous on the inside of switchback (U-shaped) or dogleg (L-shaped) ramps.</p> |
|                |   | <p>8.1.11</p> | <p>All handrails for ramps shall comply with Section 8.3.</p>  |

## 8.2 Standards: Accessible Stairs

8.2.1 Interior and exterior stairs shall comply with the design standards of this Section. In a retrofit situation, stairs need not comply if they connect levels that are accessible by an elevator, ramp or other accessible means of vertical access.

8.2.2 A flight of stairs shall have: (Refer to Figure 8.2-A)

- 8.2.2.1 uniform riser heights and tread depths;
- 8.2.2.2 risers not more than 0.18m (7 in.) and not less than 0.125m (4-7/8 in.) high;
- 8.2.2.3 run not less than 0.28m (11 in.) deep, measured from riser to riser;
- 8.2.2.4 non open risers; and
- 8.2.2.5 shall incorporate detectable warning surfaces (refer to Section 13.6).

8.2.3 Nosings on accessible stair treads shall: (Refer to Figure 8.2-B and Figure 8.2-C)

- 8.2.3.1 project not more than 0.025m (1 in.);
- 8.2.3.2 have no abrupt undersides;
- 8.2.3.3 have a curved or bevelled leading edge of the tread between 0.008m (5/16 in.) and 0.013m (1/2 in.);

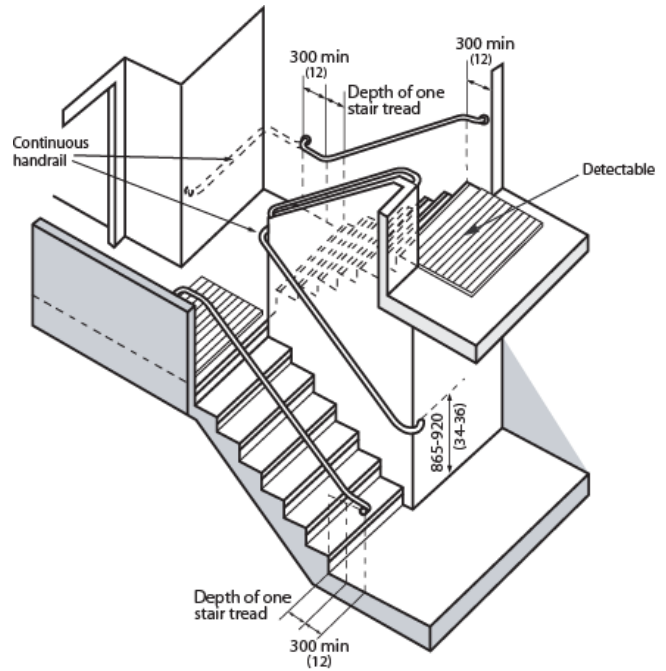


Figure 8.2-A. Stair design criteria

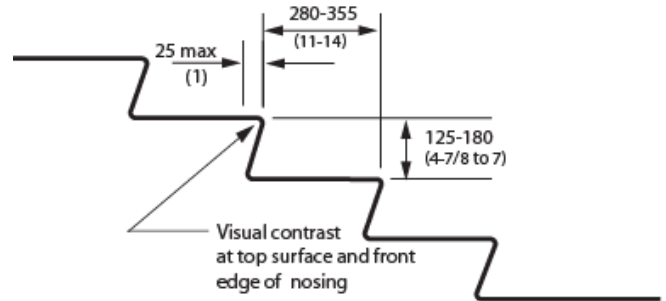


Figure 8.2-B. Stair tread criteria

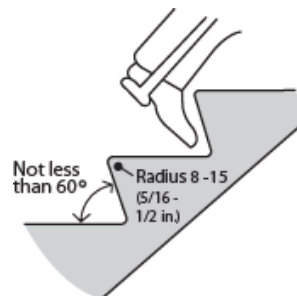


Figure 8.2-C. Raked riser

8.2.3.4 where projecting, be sloped to the riser at an angle not less than 60 degrees to the horizontal;

8.2.3.5 be illuminated to a level of at least 100 lux (9.2 ft-candles);

8.2.3.6 be slip resistant; and

8.2.3.7 have the horizontal and vertical surface of the stair nosing in colour contrast with the remainder of the riser and the tread

8.2.4 All handrails for stairs shall comply with Section 8.4.

### 8.3 Standards: Accessible Handrails for Ramps and Stairs

8.3.1 In the design of handrails, one must consider the range of hands that will grasp them. The same is true for the heights of handrails.

8.3.2 Extensions of handrails at the top and bottom of stairs, along with the use of a contrasting colour, provide important cues for a visually impaired person and provide a support to ensure a safe and stable gait before ascending or descending the stairs. A continuous handrail with no interruptions ensures that a handhold will not be broken.

8.3.3 The clear space between the wall and handrail is also essential as it must provide a clear area for the hand and knuckles but must not offer space into which the arm may slip during a fall or stumble on the stairs.

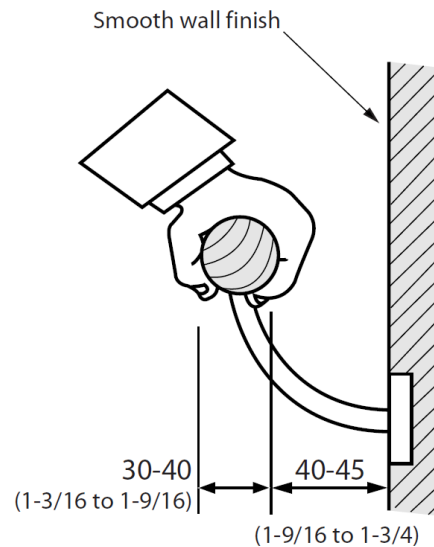


Figure 8.3-A. Handrail

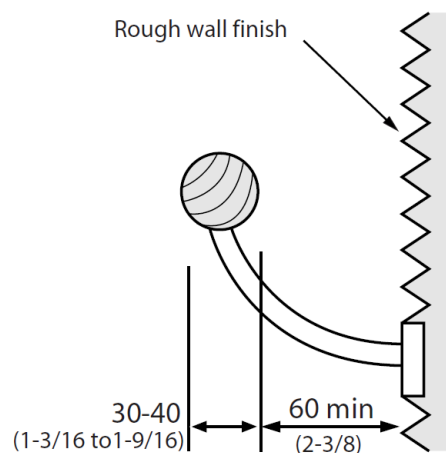


Figure 8.3-B. Handrail at rough wall

8.3.4 All handrails shall: (Refer to Figure 8.3-A and Figure 8.3-B)

8.3.4.1 Have a circular section 0.03m to 0.04m (1-3/16 in. – 1-9/16 in.) in diameter or any non-circular shape, with a graspable portion that has a perimeter not less than 0.1m (4 in.) and not more than 0.155m (6-1/8 in.) whose largest cross-sectional dimension is not more than 0.057m (2-1/4 in.).

8.3.4.2 Be free of any sharp or abrasive elements.

8.3.4.3 Have continuous gripping surfaces, without interruption by newel posts, other construction elements or obstructions that can break a handhold.

8.3.4.4 Have a clear space between the handrail and the wall of 0.04m to 0.045m (1-9/16 in. to 1-3/4 in.) or at least 0.06m (2-3/4 in.) where the wall has a rough surface.

8.3.4.5 Be terminated in a manner that will not obstruct pedestrian travel or create a hazard.

8.3.5 A recess containing a handrail shall extend at least 0.45m (17-3/4 in.) above the top of the rail. (Refer to Figure 8.3-C)

8.3.6 Handrails and their supports shall be designed and constructed to withstand the loading values obtained from the non-concurrent application of:

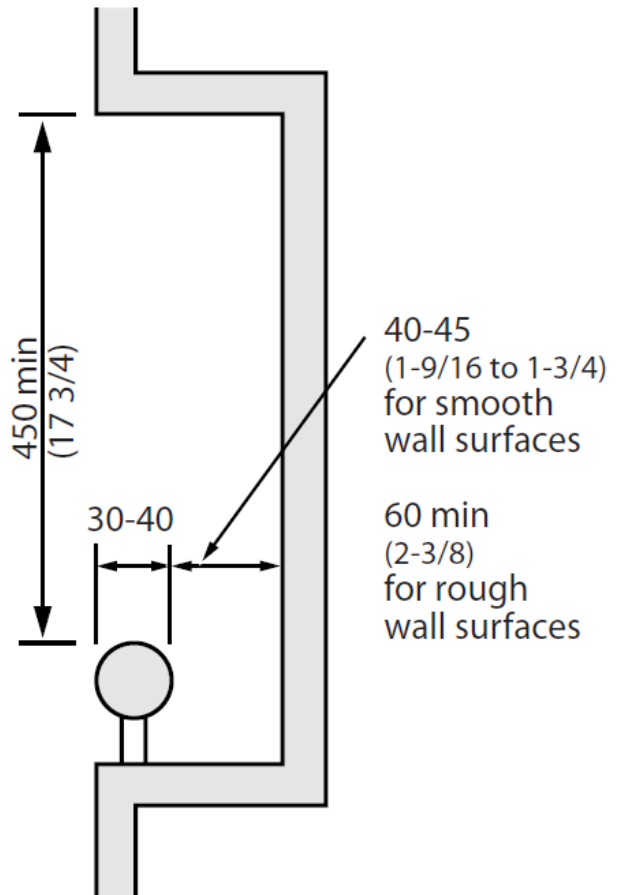


Figure 8.3-C. Handrail in recess

8.3.6.1 A concentrated load of not less than 0.9kN (200lbs) applied at any point and in any direction.

8.3.6.2 A uniform load of not less than 0.7kN/m (47lb/ft) applied in any direction to the handrail.

8.3.7 Handrails shall incorporate a pronounced colour contrast to differentiate them from the surrounding environment.

8.3.8 Additional design standards specific to accessible ramp handrails: (Refer to Figure 8.1-B, Figure 8.3-D and Figure 8.3-E)

8.3.8.1 When not continuous, handrails shall extend horizontally at least 0.3m (12 in.) beyond the top and bottom of the ramp and return to the wall, floor, or post.

8.3.8.2 The height of the handrails shall measure between 0.865m (34 in.) and 0.92m (36 in.) from the ramp surface to the top of the handrail. A lower rail should be installed at 0.5m (19 5/8 in.) to 0.7m (27 1/2 in.) from the ramp surface for children and those who are small in stature.

8.3.8.3 The distance between handrails shall be 0.95m (37 1/2 in.) to 1.0m (39 in.).

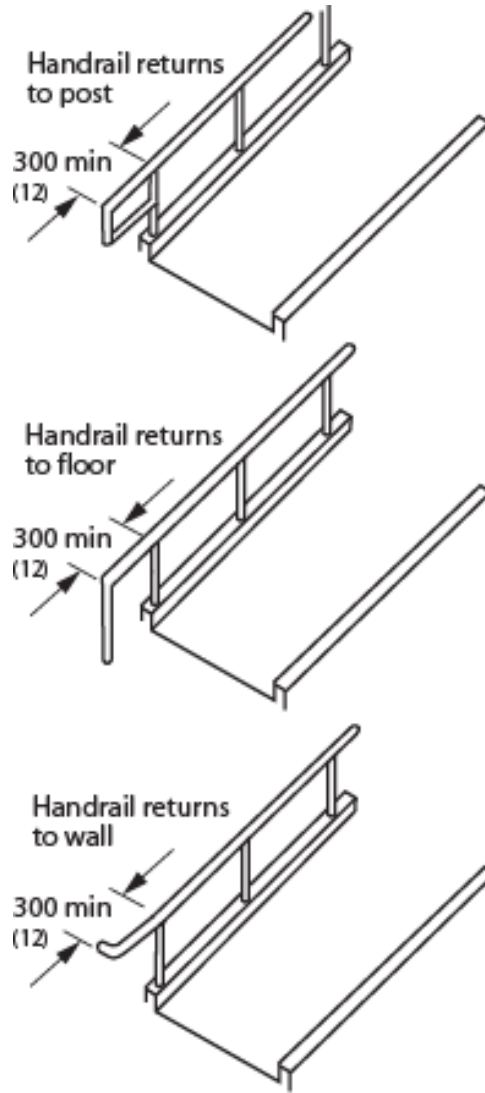


Figure 8.3-D. Horizontal handrail extensions

8.3.8.4 Handrails should be of a material that conducts heat or cold well and highly coloured to assist the sight impaired.

8.3.8.5 Where a ramp serves as an aisleway for fixed seating, the requirements for ramp handrails do not apply.

8.3.9 Additional design standards specific to accessible stair handrails:

8.3.9.1 Be installed on both sides.

8.3.9.2 Be of uniform height, ranging between 0.865m (34 in.) and 0.92m (36 in.) from the stair nosing.

8.3.9.3 Have a continuous inside handrail on switchback of dogleg stairs.

8.3.9.4 Where not continuous, extend horizontally at the top and bottom of the stairs not less than 0.3m (12 in.) at a height ranging between 0.865m (34 in.) and 0.92m (36 in.) above the floor and return to the wall or post in a manner that will not obstruct pedestrian travel or create a hazard.

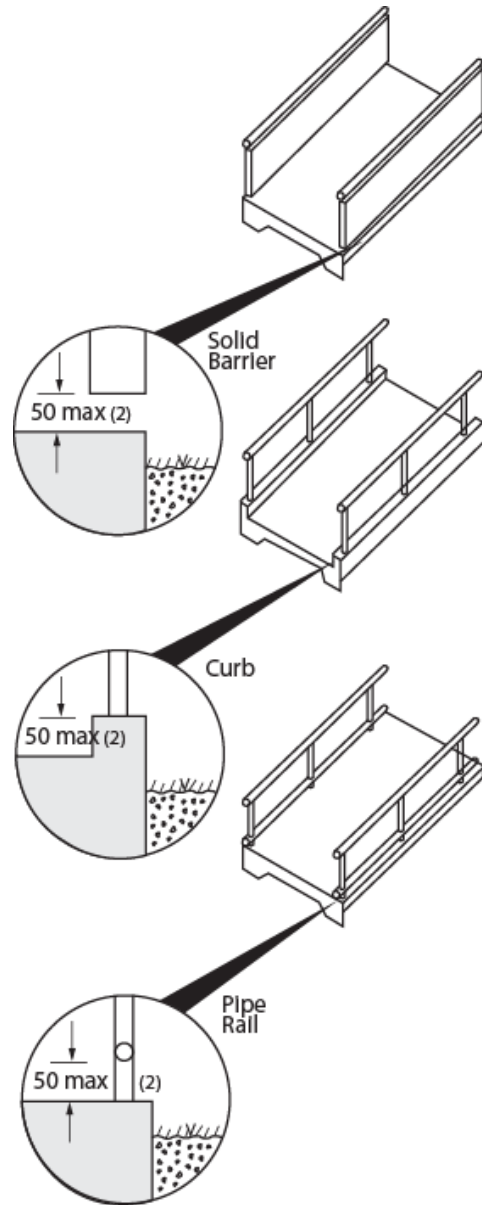


Figure 8.3-E. Edge protection at ramps



# 9 Accessible Entrances, Doors and Hallways

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## 9.1 Defining Accessible Routes

9.1.1 An **Accessible Route** is a continuous unobstructed path connecting the accessible elements and spaces of a facility. Exterior accessible routes include:

- access aisles
- curb ramps
- crosswalks at vehicular ways
- walkways
- ramps
- platform lifts

9.1.2 At least one accessible route (complying with this section) shall be provided within the boundary of the site connecting the accessible parking spaces, passenger-loading zones and public streets or sidewalks to the accessible entrances of the on-site facilities they serve. Wherever feasible, the accessible route shall coincide with the route of travel for the general public. The preferred minimum width for accessible routes is 1.83m (72in) that can accommodate two wheelchairs or scooters travelling in pairs. (Refer to Figure 6.2-A)

9.1.3 Maintaining a clear route of travel through a facility is essential. Any route of travel must provide the clear width necessary for persons using wheelchairs or scooters, those in strollers or those travelling in pairs.

9.1.4 At least one accessible route shall be provided within the boundary of the site from accessible parking spaces, passenger-loading zones and public streets or sidewalks to the accessible entrance they serve.

9.1.5 The accessible route shall, to the maximum extent feasible, coincide with the route for the general public.

9.1.6 At least one accessible route shall connect accessible buildings, facilities, elements and spaces that are on the same site. It is preferable to have all routes accessible.

## 9.2 Standards: Accessible Entrances

9.2.1 Design decisions concerning doors will have a direct influence on the independence and dignity of everyone entering or exiting a facility.

Features such as canopies can limit the influence of weather conditions on this already busy area and also make an entrance more obvious to

someone with a cognitive disability or someone unfamiliar with the facility.

9.2.2 All entrances used by staff or the public shall be accessible and comply with this section. In retrofit situations where it is technically infeasible to make all staff and public entrances accessible, at least 50% of all staff and public entrances shall be accessible and comply with this section. In retrofit situations where it is technically infeasible to make all public entrances accessible, the primary entrances used by staff and the public shall be accessible.

9.2.3 Accessible public entrances must be provided in a number at least equivalent to the number of exits required by the Ontario Building Code. (This paragraph does not require an increase in the total number of public entrances required for a facility.)

9.2.4 An accessible public entrance must be provided to each tenancy in a facility.

9.2.5 In police stations and municipal courts subject to Section 15.7, public

entrances that are secured shall be accessible, as required in Section 15.7.

9.2.6 If direct access is provided for pedestrians from an enclosed parking garage to the facility, at least one direct entrance from the parking garage to the facility must be accessible.

9.2.7 If access is provided for pedestrians from a pedestrian tunnel or elevated walkway, one entrance to the facility from each tunnel or walkway must be accessible.

9.2.8 If the only entrance to a facility or tenancy is a service entrance, that entrance shall be accessible.

9.2.9 Entrances which are not accessible shall have directional signage complying with Section 13.4 which indicates the nearest accessible entrance.

9.2.10 Accessible entrances shall be identified with signage complying with applicable provisions of Section 13.4.

## 9.3 Standards: Accessible Doors

**Table 9.3-A. Manoeuvring Space At Doors**

Context	Floor Space Required (in Metres)		
	Depth	Width	Space beside latch
<b>Side Hinged Door – Front Approach (refer to Figure 9.3-A)</b>			
Pull Side	1.525m (60 in.)	1.6m (63 in.) [*1.525m (60 in.)]	0.6m (24 in.)
Push Side	1.37m (54 in.)	1.25m (49 ¼ in.) [*1.22m (48 in.)]	0.3m (12 in.)
<b>Side Hinged Door – Latch-Side Approach (refer to Figure 9.3-B)</b>			
Pull Side	1.37m (54 in.) [1.22m (48 in.)]	1.6m (63 in.) [*1.525M (60 in.)]	0.6m (24 in.)
Push Side	1.37m (54 in.) [*1.06m (42 in.)]	1.525m (60 in.)	0.6m (24 in.)
<b>Side Hinged Door – Hinge-Side Approach (refer to Figure 9.3-C)</b>			
Pull Side	2.44m (96 in.) [*1.525m (60 in.)]	2.44m (96 in.) [*1.525m (60 in.)]	0.6m (24 in.)
Push Side	1.37m (54 in.) [*1.06m (42 in.)]	1.83m (72 in.)	0.45m (18 in.)
<b>Sliding Door (refer to Figure 9.3-D)</b>			
Pull Side	1.37m (54 in.)	1.06m (42 in.) [*0.92m (36 in.)]	0.05m (2 in.)
Push Side	1.37m (54 in.) [*1.06m (42 in.)]	1.55m (61 in.) [* 1.37m (54 in.)]	0.54m (21 ½ in.)
[*] In retrofit situations where it is technically infeasible to provide the required clearances at doors, the clearances may be reduced as shown by the *. Refer to Figure 9.3-E and Figure 9.3-F for Manoeuvring Space at Doors in Series			

9.3.1 Sufficiently wide doorways will be advantageous to individuals using wheelchairs, pushing strollers, or making a delivery. However, a raised threshold at the base of the door could impede any one of these same individuals. This same group, with the addition of children, seniors or even someone carrying packages, would have difficulty opening a heavy door and would benefit from some form of automatic door opener.

9.3.2 Careful thought to the direction of the door swing can enhance the usability and limit the hazard to other pedestrians. Sliding doors can be easier for some individuals to operate, and can also require less

wheelchair manoeuvring space. Doors that require two hands to operate are not considered to be accessible. With revolving doors, space may be an issue for persons using wheelchairs and strollers, while the timing may be difficult for children or someone with a cognitive or visual disability.

9.3.3 Glazed doors can present a hazard to persons who are visually impaired. The inclusion of colour contrast strips across the glass, mounted at eye level, as well as colour-contrasting doorframes and door hardware, will increase the visibility of a glazed door for a person with a visual impairment.

9.3.4 Wherever possible, all doors used by staff or the public shall comply with this section.

9.3.5 At each accessible entrance to a facility, at least one door shall comply with this section.

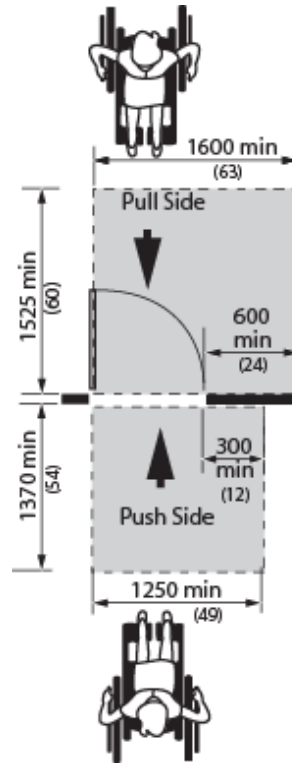
9.3.6 The door(s) for the accessible entrance(s) described in Table 9.3 shall be equipped with a power door operator in:

9.3.6.1 Buildings of Group B Division 2 or 3 major occupancy (as defined by the Ontario Building Code); and

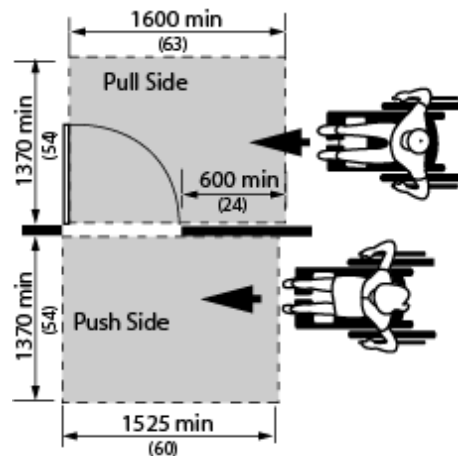
9.3.6.2 Buildings of Group A, D or E major occupancy (as defined by the Ontario Building Code) having more than 300 sq.m. (3,230 sq.ft.) in building area.

9.3.7 Revolving doors or turnstiles shall not be the only means of passage at an accessible entrance or along an accessible route. An accessible gate or door shall be provided adjacent to the turnstile or revolving door and shall be designated to facilitate the same use pattern.

9.3.8 Door hardware on all doors throughout a facility (not just those deemed accessible), shall comply with the door hardware requirements of this section.



**Figure 9.3-A. Front approach at hinged doors**



**Figure 9.3-B. Latch side approach at hinged doors**

9.3.9 Within a facility, all doors at each accessible space shall comply with this section. In a retrofit situation where it is technically infeasible to make all doors at each accessible space accessible, at least one door at each accessible space shall comply with this section.

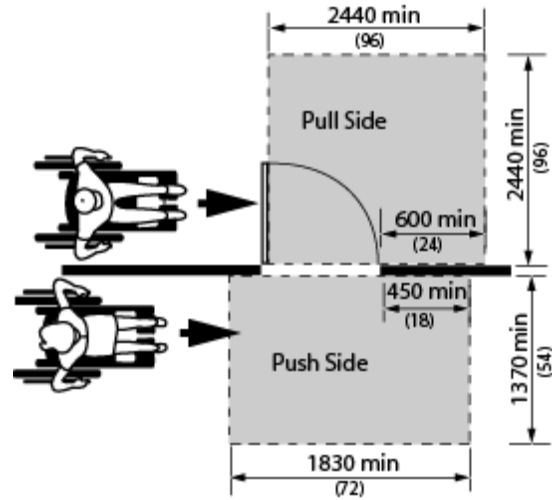
9.3.10 Accessible doors shall be on an accessible route that complies with Section 9.1.

9.3.11 The minimum clear opening of doorways shall be 0.95m (37 ½ in.), measured between the face of the door and the stop with the door open 90 degrees. In retrofit situations where it is technically infeasible to provide this clearance, the minimum clear opening of doorways may be 0.81m (32 in.). (Refer to Figure 9.3-G)

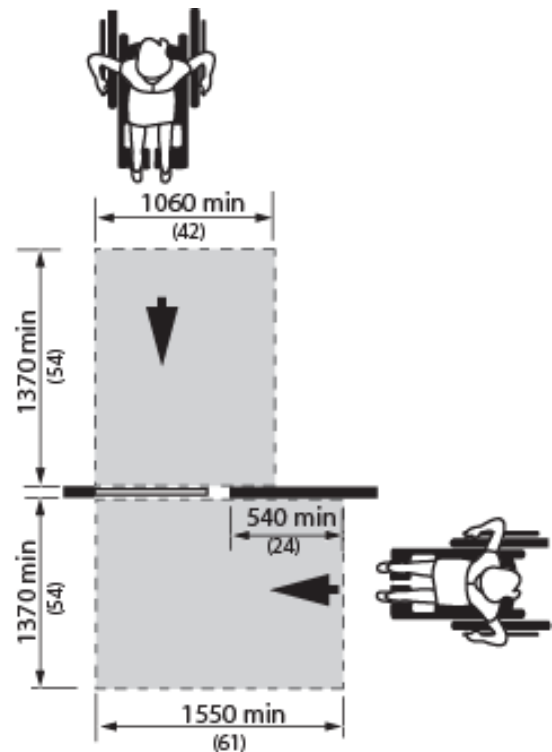
9.3.12 If doorways have two independently operated door leaves, at least one active leaf shall comply with minimum clear opening width requirements and manoeuvring space at door requirements.

9.3.13 Doorways shall have wheelchair manoeuvring space on both sides of the door, and a clear space beside the latch, as described in Table 9.3, except where access is only required from one side, such as to a closet.

9.3.14 The minimum space between two hinged or pivoted doors in series shall be 1.37m (54 in.), plus the width of any door swinging into the space.

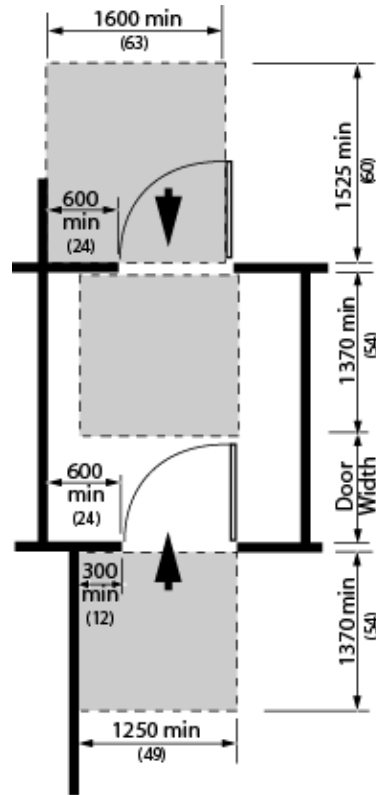


**Figure 9.3-C. Hinge side approach at hinged doors**



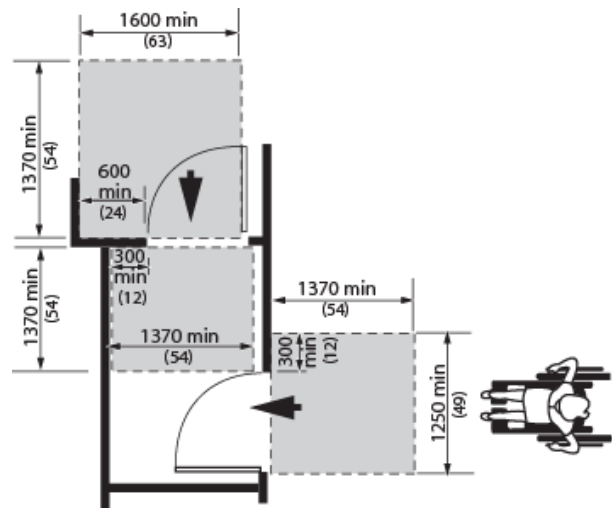
**Figure 9.3-D. Front and side approach at sliding doors**

- 9.3.15 Thresholds shall:
- 9.3.15.1 be not more than 0.013m (1/2 in.) high; and
  - 9.3.15.2 where over 0.06m (1/4 in.) high, be bevelled at a maximum slope of 1:2.
- 9.3.16 Door hardware (operating devices such as handles, pulls, latches, and locks) shall: (Refer to Figure 9.3-H)
- 9.3.16.1 be operable by one hand;
  - 9.3.16.2 not require fine finger control, tight grasping, pinching, or twisting of the wrist to operate;
  - 9.3.16.3 be mounted between 0.4m (15- 3/4 in.) and 1.2m (47 in.) from the floor.



**Figure 9.3-E. Manoeuvring doors in series**

- 9.3.17 Operating hardware on sliding doors shall be exposed and usable from both sides when sliding doors are fully open. The sweep period of door closers shall be adjusted so that, from an open position of 90 degrees, the door will take not less than 3 seconds to move to a semi-closed position of approximately 12 degrees.
- 9.3.18 The maximum door opening force for pushing or pulling open a door shall be:



**Figure 9.3-F. Manoeuvring space at doors in series**

- 9.3.18.1 38 N (8.5 lb.) for exterior hinged doors;
- 9.3.18.2 22 N (4.6 lb.) for interior hinged doors; and
- 9.3.18.3 22 N (4.6 lb.) for sliding or folding doors.

9.3.19 Power-assisted swinging doors shall:

9.3.19.1 take not less than 3 seconds to move from the closed to the fully open position; and

9.3.19.2 require a force of not more than 66 N (13.8 lb.) to stop door movement.

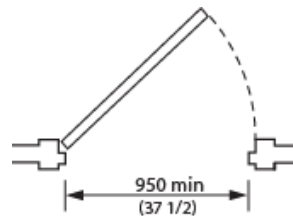
9.3.20 Permanent mats and metal gratings at entrances and in vestibules shall be sunk level with the floor, so as not to create a tripping hazard. Occasional mats (e.g., runners used in bad weather) should be level with the floor surface and/or have a gently bevelled edge, so as not to create a tripping hazard.

9.3.21 Where power door operators are provided:

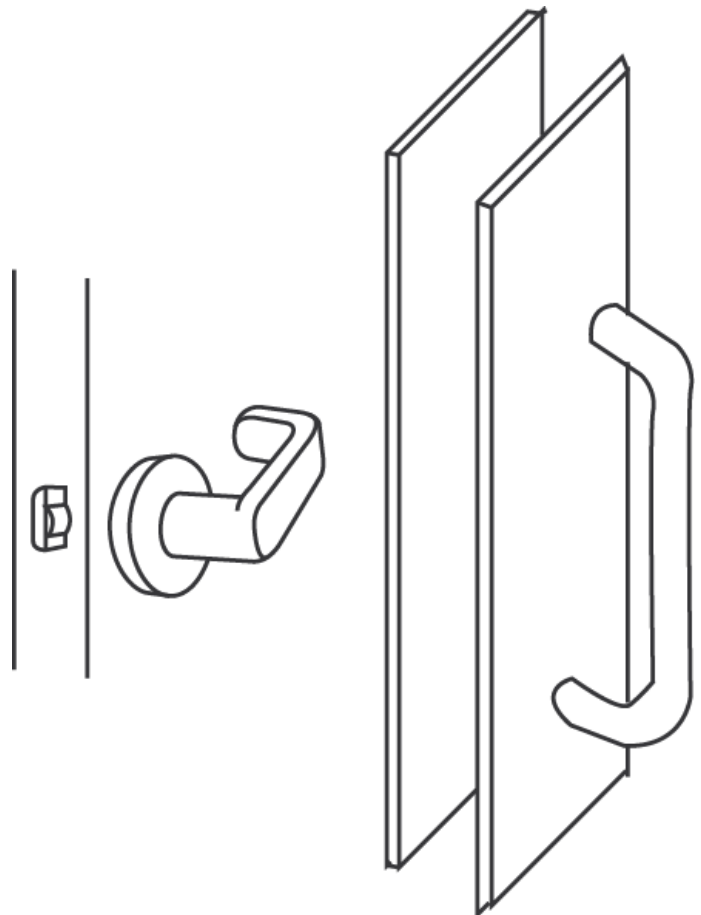
9.3.21.1 Where manually operated, they shall have controls that are clearly visible which are at least 0.15m (6 in.) in diameter, located in front and clear of the door swing, with sufficient approach space to accommodate a wheelchair or scooter.

9.3.21.2 Where pressure-sensitive mats, overhead beams or proximity scanners are used to detect traffic, the layout of mat, beam or scanner coverage shall ensure that wheelchair users are detected.

9.3.21.3 Where exterior doors swing open into a pedestrian area, they shall incorporate safety guards that project a minimum of 0.3m (12 in.) beyond both sides of the open door. (Refer to Figure 9.3-I)



**Figure 9.3-G. Minimum clear width at doors**



**Figure 9.3-H. Examples of accessible hardware**

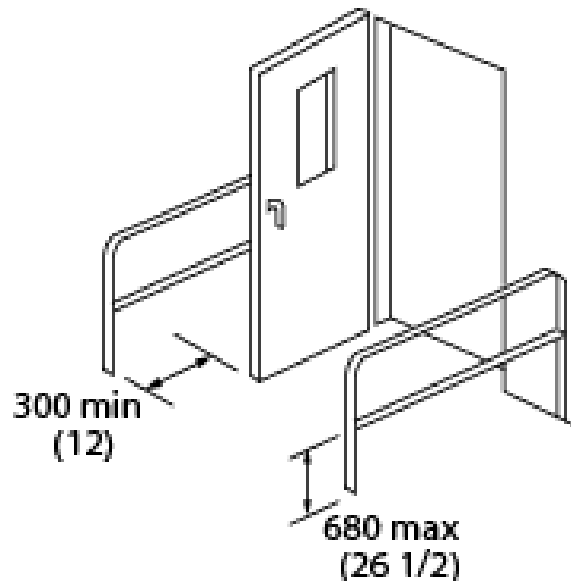
9.3.22 Doors shall incorporate pronounced colour contrast, to differentiate them from the surrounding environment. Similarly, door handles and other operating mechanisms shall incorporate pronounced colour contrast, to differentiate them from the door itself.

9.3.23 Where a door is fully glazed, it shall comply with:

9.3.23.1 Fully-glazed sidelights at exterior entrances or vestibules, as well as fully-glazed screens, shall be clearly identified with a horizontal row of decals, or a continuous stripe, minimum 0.05m (2 in.) wide and of highly contrasting colour, mounted with its centre line between 1.475m (58 in.) and 1.525m (60 in.) from the floor or ground.

9.3.23.2 Additionally, a second row of decals, or a continuous stripe, a minimum 0.05 mm (2 in.) wide and of highly contrasting colour shall be provided, mounted with its centreline between 1.17m (46 in.) and 1.22m (48 in.) above the floor or ground.

9.3.23.3 Where decals are used, they shall be located at a maximum of 0.15m (6 in.) from centre to centre. The decals can either be 0.05m (2 in.) square or round, and/or of a special design (e.g., a logo) provided the solid portion of the decals provides high colour contrast and is easy to identify by persons who are visually impaired.



**Figure 9.3-I. Detectable safety guards**



## 9.4 Standards: Accessible Floor Surfaces

- 9.4.1 Strong colour contrasts and/or tactile pathways set into floors may be used to assist visually impaired individuals to negotiate an environment.
- 9.4.2 Design decisions related to ground and floor surfaces will influence every person who enters the building. Irregular surfaces, such as cobblestones or pea-gravel finished concrete, are difficult for either walking or pushing a wheelchair. On slippery surfaces, it is the ambulatory person who is more disabled than the wheelchair user. Appropriate floor surfaces are especially important for children and seniors who may not be surefooted.
- 9.4.3 Glare from polished floor surfaces is a particular obstacle to persons with a visual impairment. Glare can obscure important orientation and safety features. It can also disorient persons with low vision, as they are unsure of the location of the ground. Pronounced colour contrast between walls and floor finishes may be helpful for a person with a visual impairment, as are changes in colour/texture where a change in level or function occurs.
- 9.4.4 Thick pile carpeting makes pushing a wheelchair very difficult. Small and uneven changes in floor level represent a further barrier to wheelchair users but also present a tripping hazard to ambulatory persons. Patterned floors should be avoided, as they can create visual confusion.
- 9.4.5 Ground and floor surfaces shall be stable, firm, slip resistant and glare-free.
- 9.4.6 Changes in level, except for elevators and other elevating devices, shall conform to Table 9.4-A.
- 9.4.7 Carpets or carpet tile shall:
- 9.4.7.1 be securely fixed;
  - 9.4.7.2 have a firm cushion, pad or backing, where used;
  - 9.4.7.3 have a level loop, textured loop, level cut pile, or level cut/uncut pile texture with a maximum pad and pile height of 0.013m (1/2 in.); and
  - 9.4.7.4 have exposed edges fastened to floor surfaces

**Table 9.4-A. Changes in Level**

Vertical Rise	Edge Treatment
0.0m to 0.006m (0 in. to ¼ in.)	May be vertical
0.0061m to 0.013 (9/32 in. to ½ in.)	Bevel, maximum slope 1:2
Over 0.013m (over ½ in.)	Treat as a sloped floor, ramp or curb ramp

## **9.5 Standards: Accessible Hallways**

9.5.1 Maintaining a clear route of travel through a facility is essential. Any route of travel must provide the clear width necessary for persons using wheelchairs or scooters, those in strollers or those travelling in pairs. Consideration should be given not just to the width of items, such as wheelchairs and scooters, but also to their manoeuvrability. While a corridor may be wide enough for a scooter driven in a straight line, it may not be possible to make a turn around a corner. The preferred minimum width for accessible routes is 1.83m (72 in.). Strong colour contrasts and/or tactile pathways set into floors may be used to assist visually impaired individuals to negotiate an environment.

9.5.2 An accessible route complying with this section shall be provided within all normally occupiable floor areas. Exceptions: The provision of an accessible route does not apply to service rooms, elevator machine rooms, janitor rooms, service spaces, crawl spaces, attic or roof spaces, high-hazard industrial, occupancies within portions of a floor area with fixed seats in an assembly occupancy where these portions are not part of an accessible route to spaces designated for wheelchair use; or within a suite of residential occupancy.

9.5.3 Accessible routes are permitted to include ramps, curb ramps, stairs, elevators or other elevating devices (such as platform lifts, etc.) where there exists a difference in elevation.

9.5.4 The minimum clear width of accessible routes shall be 1.06m (42 in.) except:

9.5.4.1 at doors, it shall be 0.95m (37 ½ in.);

9.5.4.2 where additional manoeuvring space is required at doorways (Refer to Section 9.3);

9.5.4.3 at U-turns around obstacles less than 1.22m (48 in.) wide, it shall be 1.22m (48 in.); (Refer to Figure 9.5-A)

9.5.4.4 where space is required for two wheelchairs to pass, it shall be 1.83m (72 in.).

9.5.5 Accessible routes shall:

9.5.5.1 have a running slope not steeper than 1:25; and

9.5.5.2 have a cross slope not steeper than 1:50.

9.5.6 Every accessible route less than 1.83m (72 in.) wide shall be provided with an unobstructed space of not less than 1.83m (72 in.) in width and 1.83m (72 in.) in length, located not more than 30m (98 ft. 5 in.) apart.

9.5.7 Except at stairs and at elevated platforms such as performance areas or loading docks, where the edges of accessible routes, paths or corridors are not level with the adjacent surface, they shall be protected:

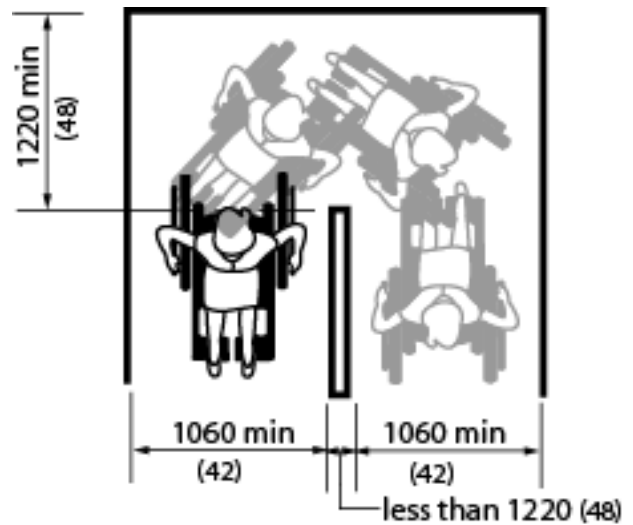


Figure 9.5-A. Turn around an obstacle

9.5.7.1	where the change in level is over 0.2m (8 in.) to 0.6m (23-5/8 in.) below the route, path or corridor, by a colour contrasting curb at least 0.075m (3 in.) high; and	(26 ½ in.) and 2.1m (82 ¾ in.) from the floor shall protrude not more than 0.1m (4 in.) into pedestrian areas, such as walkways, halls, corridors, passageways or aisles.
9.5.7.2	where the change in level is greater than 0.6m (23-5/8 in.), by a guard which meets the requirements listed in Section 8.2.	9.5.13 Objects attached to a wall with their leading edges at or below 0.68m (26 ½ in.) from the floor may protrude any amount.
9.5.8	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.	9.5.14 Freestanding objects shall not have any overhang of more than 0.3m (12 in.) between 0.68m (26 ½ in.) and 2.1m (82 ¾ in.) from the ground or floor.
9.5.9	All portions of accessible routes shall be equipped to provide a level of illumination of at least 50 lux (4.6 ft-candles).	9.5.15 The maximum height of the bottom edge of freestanding objects with a space of more than 0.3m (12 in.) between supports shall be 0.68m (26 ½ in.) from the ground or floor.
9.5.10	The creation of pathways free from protruding objects or freestanding obstacles is important to all facility users. An object protruding from a wall above the detection range of a cane is dangerous for an individual with a visual impairment but is equally hazardous to a pedestrian distracted by a conversation. Detectable surfaces around freestanding obstacles, such as light standards, are advantageous to anyone using a pathway.	9.5.16 Protruding objects shall not reduce the clear width required for an accessible route or manoeuvring space.
		9.5.17 The minimum clear headroom in pedestrian areas, such as walkways, halls, corridors, passageways, or aisles, shall be 2.1m (82 ¾ in.).
9.5.11	Protruding objects from a wall, ceiling or other location shall comply with this section.	9.5.18 A detectable guard: a guardrail or other barrier having its leading edge at or below 0.68m (26 ½ in.) from the floor shall be provided where the headroom of an area adjoining an accessible route is reduced to less than 2.1m (82 ¾ in.).
9.5.12	Objects protruding from walls with their leading edges between 0.68m	

## 9.6 Standards: Accessible Waiting and Queuing Areas

- 9.6.1 Waiting and Queuing Areas for information, tickets or services should permit persons in wheelchairs to move through the line safely and conveniently.
- 9.6.2 Barriers at queuing areas shall be laid out in parallel, logical lines, spaced at a minimum of 1.06m apart. Barriers, provided to streamline people movement, shall be firmly mounted to the floor and should have rigid rails to provide support for waiting persons.
- 9.6.3 Where floor slots or pockets are included to receive temporary or occasional supports, such slots or pockets shall be level with the floor finish and have an integral cover, so as not to cause a tripping hazard.
- 9.6.4 Permanent queuing areas shall incorporate clearly defined floor patterns/colours/textures as an aid to persons who are visually impaired. There shall also be a pronounced contrast between ropes, bars or solid barriers used to define queuing areas and the surrounding environment.
- 9.6.5 The provision of benches in waiting areas is important for individuals who may have difficulty with standing for extended periods.

# 10 Accessible Elevators, Escalators and Platform Lifts

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## 10.1 Standards: Accessible Elevators

- |          |  |            |  |
|----------|--|------------|--|
| 10.1.1   | One passenger elevator complying with this section shall serve each level, including mezzanines, in all multi-storey facilities, unless exempted below. If more than one elevator is provided, each passenger elevator shall comply with this section. Freight elevators shall not be required to meet the requirements of this section, unless the only elevators provided are used as combination passenger and freight elevators for use by the public and employees. | 10.1.2.4.1 | to provide an accessible route to a performing area in an assembly occupancy;  |
|          |  | 10.1.2.4.2 | to comply with wheelchair viewing position line-of-sight and dispersion requirements of Section 12.8;  |
|          |  | 10.1.2.4.3 | to provide access to incidental occupied spaces and rooms that are not open to the general public and which house no more than five persons, including, but not limited to, equipment control rooms and projection booths; and |
| 10.1.2   | Elevators are not required:  |            |  |
| 10.1.2.1 | In facilities that are less than three storeys and not open to the general public;   | 10.1.2.4.4 | to provide access to raised judges' benches, clerks' stations, speakers' platforms, jury boxes and witness stands or to depressed areas, such as the well of a court.  |
| 10.1.2.2 | In elevator pits, elevator penthouses, mechanical rooms, piping or equipment catwalks;   |            |  |
| 10.1.2.3 | When accessible ramps complying with Section 8.2 are used in lieu of an elevator; and  | 10.1.3     | Accessible elevators shall be on an accessible route complying with Section 9.0.   |
| 10.1.2.4 | When platform lifts (wheelchair lifts) complying with Section 10.4 and applicable Provincial Codes are used in lieu of an elevator, only under the following conditions:   | 10.1.4     | Accessible elevators shall be identified with signage complying with applicable provisions of Section 13.4.  |

- 10.1.5 Elevators shall be automatic and be provided with a two-way automatic maintaining levelling device to maintain the floor level to  $\pm 0.013$  mm (1/2 in.).
- 10.1.6 Power-operated horizontally sliding car and landing doors opened and closed by automatic means shall be provided.
- 10.1.7 The clear width for elevator doors shall be at least 0.95m (37 ½ in.). In a retrofit situation where it is technically infeasible to provide a clear elevator door width of 0.95m (37 ½ in.), the clear elevator door width may be reduced to 0.91m (35 7/8 in.).
- 10.1.8 Doors shall be provided with a door re-opening device that will function to stop and reopen a car door and an adjacent hoist way door to at least 0.95m (37 ½ in.), in case the car door is obstructed while closing. This re-opening device shall also be capable of sensing an object or person in the path of a closing door at a nominal  $0.125 \pm 0.025$ m (5  $\pm$  1 in.) and  $0.735 \pm 0.025$ m (29  $\pm$  1 in.) above the floor without requiring contact for activation. From the time the doors start to open, a minimum of 4 seconds shall elapse before the door starts to close, if it is a hall call, and 3 seconds if it is a car call. This time may be reduced by operation of the door-close button.

10.1.9 The minimum distance between the walls or between wall and door, excluding return panels, shall not be less than 1.725m x 1.525m (68 in. x 60 in.). In facilities with high public use, such as arenas, libraries or entertainment complexes, the distance between walls or between wall and door shall be 2.03m x 1.525m (80 in. x 60 in.). (Refer to Figure 10.1-A)

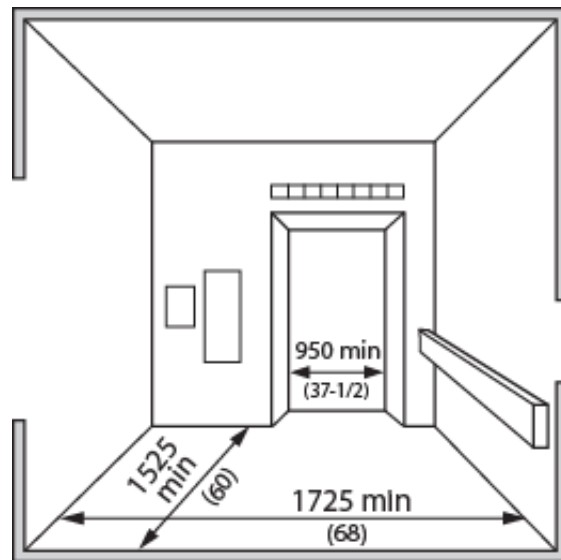


Figure 10.1-A. Elevator cab

10.1.10 Car controls shall be readily accessible from a wheelchair upon entering an elevator.

10.1.11 Floor register buttons in elevator cabs shall: (Refer to Figure 10.1-B)

10.1.11.1 be a minimum 0.019m (3/4 in.) in size and may be raised, flush or recessed. The depth of flush or recessed buttons when they are being operated shall not exceed 0.01 mm (3/8 in.); and

10.1.11.2 be provided with visual and momentary audible indicators to show when each call is registered. The visual indicators shall be extinguished when each call is answered

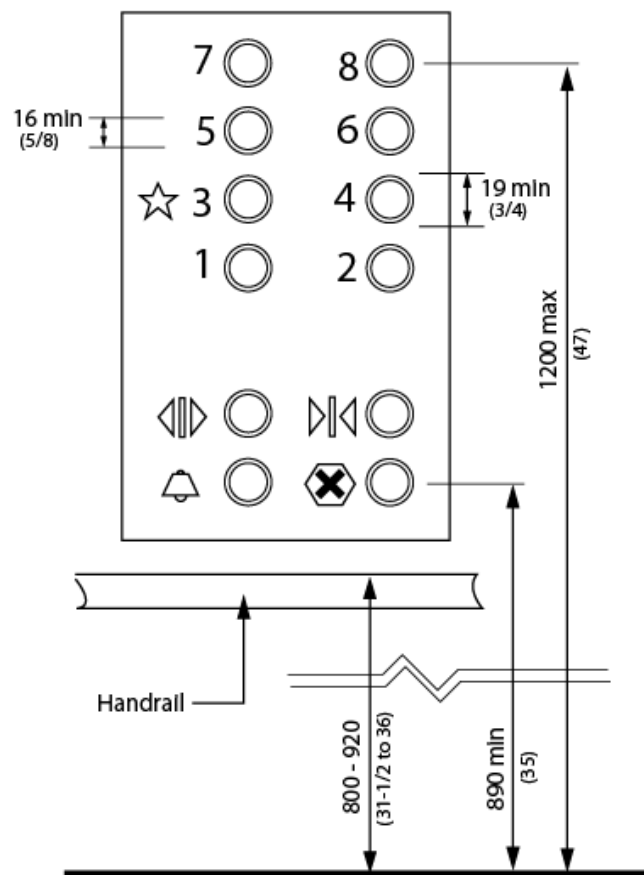


Figure 10.1-B. Control panel



10.1.12 All car control buttons shall be designated by Grade 2 Braille characters and by raised standard alphabet characters for letters, Arabic characters for numbers, and standard symbols. Markings shall be a minimum of 0.016m (5/8 in.) high and raised a minimum of 0.00075 mm (1/32 in.), placed immediately to the left of the buttons to which they apply. (Refer to Figure 10.1-C)

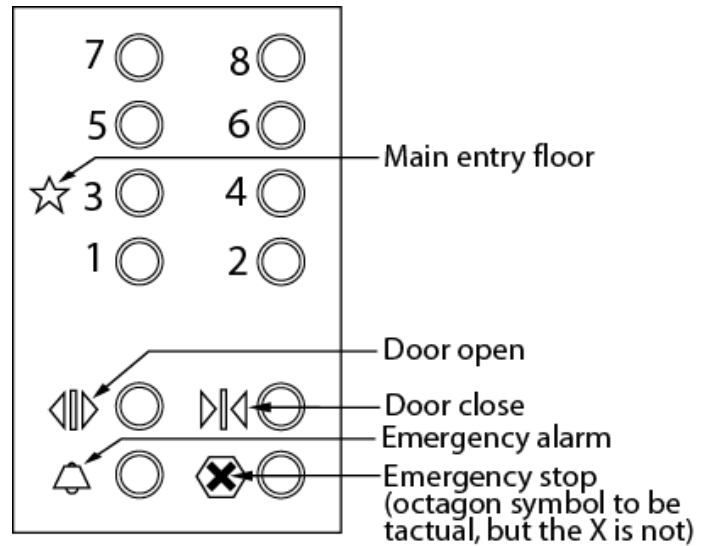
10.1.13 Exception: Where the call buttons are mechanical, the raised markings may be on the buttons.

10.1.14 Emergency car controls and door operating buttons shall be grouped together at the bottom of the control panel. The centre line of the alarm button and the emergency stop switch shall be not less than 0.89m (35 in.) from the floor.

10.1.15 The centre line of the highest floor button shall be no higher than 1.2m (47 in.) from the floor. Other controls may be located where it is convenient.

10.1.16 An indicator shall be provided in the car to show the position of the car in the hoist way, by illuminating the indicator corresponding to the landing at which the car is stopped or passing. Indication characters shall be on a contrasting colour background and a minimum of 0.016 mm (5/8 in.) high.

10.1.17 Floors of elevator cabs shall have a firm and slip-resistant surface that permits easy movement of wheelchairs.



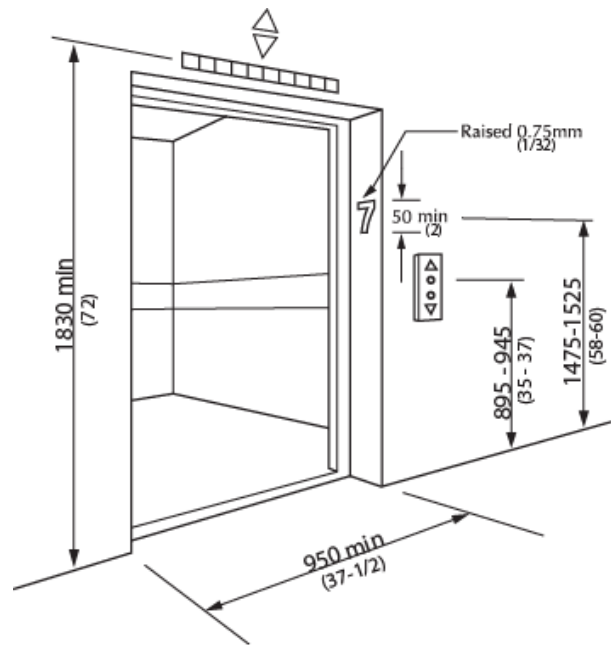
**Figure 10.1-C. Tactile symbols**

10.1.18 Handrails shall be provided on all non-access walls at a height of 0.8m to 0.92m (31 ½ in. to 36 in.) with a space of 0.04m to 0.045m (1 9/16 in. to 1-3/4 in.) between the rails and wall.

10.1.19 The illumination at the car controls and landing sill shall be not less than 100 lux (10 ft-candles). The centre line of hall call buttons shall be 0.920m ± 0.025m (36 ± 1 in.) above the floor. Buttons shall be a minimum of 0.02m (13/16 in.) in size, mounted one above the other.

10.1.20 Hall visual indication shall be provided to show each call that is registered and that is extinguished when the call is answered. Hall or in-car lanterns shall be provided. The centre line of the fixture shall be a minimum of 1.83m (72 in.) above the floor. An audible signal shall be provided when the elevator stops at the landing. Visual elements shall be a minimum of 0.06m (2-3/8 in.) in the smallest direction.

10.1.21 All elevator hoist way entrances shall have raised Arabic numerals and Braille floor designations provided on both jambs. The characters shall be a minimum of 50 mm high (2 in.) and at least 0.0075m (1/32 in.) and shall be placed on both sides of the door jambs, with the centreline at 1.5m ± 0.025m (59 in. ± 1 in.) from the floor. (Refer to Figure 10.1-D)



**Figure 10.1-D. Elevator entry**

- 10.1.22 As the car stops at a floor, the floor and direction of travel shall be announced using voice-annunciation technology. Elevators shall be linked by an emergency call system to a monitored location within the facility, with two-way communication ability. The highest operable portion of the 2- way communication system shall be a maximum of 1.2m (47 in.) from the floor of the car. It shall be identified by a raised symbol and lettering located adjacent to the device. The symbol shall be a minimum of 0.038m (1 ½ in.) high and raised a minimum of 0.0075m (1/32 in.). Permanently attached plates are acceptable. If the system uses a handset, then the length of the cord from the panel to the handset shall be at least 0.735m (29 in.). Additionally, the handset shall be equipped with a receiver that generates a magnetic field in the area of the receiver cap, and the handset shall have a volume control and shall comply with CSA Standard T515. If the system is located in a closed compartment, the compartment door and hardware shall conform to Section 13.3. The emergency intercommunication system shall not require voice communication.
- 10.1.23 Lighting in elevator cabs shall be at least 100 lux (9.2 ft-candles), measured at the floor level and at the same lighting level as the adjacent lobby space.
- 10.1.24 Mirror shall not be used within elevator cabs as a finish material on the wall opposite the door.
- 10.1.25 Floor finishes within elevator cabs shall comply with Section 9.4.
- 10.1.26 Elevator doors shall incorporate pronounced colour contrast, to differentiate them from the surrounding environment.
- 10.1.27 There shall be a pronounced colour contrast between the car sill and the facility floor.

## 10.2 Standards: Accessible Escalators

- 10.2.1 Escalator installations shall include high definition (colour contrast) of tread edges and nosing.
- 10.2.2 Detectable warning surfaces that comply with Section 13.5 shall be provided at the head and foot of the escalator.
- 10.2.3 The surface of escalator treads shall be in a matte finish, to minimize reflected glare.
- 10.2.4 Lighting over escalators shall be a minimum of 200 lux (18.4 ft-candles), evenly distributed, from a low-glare light source.

## 10.3 Standards: Accessible Platform Lifts

- 10.3.1 As with ramps, platform lifts have long been considered an accessibility requirement. In fact, these lifts tend to segregate persons with disabilities and limit space at entrance and stair locations. Furthermore, independent access is often compromised, as access to platform lifts is controlled by key operation.
- 10.3.2 Whenever possible, grading or integrated elevator access should be incorporated to avoid the use of lifts. If there are no suitable alternatives, lifts must be selected to permit the use of scooters, as well as wheelchairs.
- 10.3.3 Platform lifts may only be used in lieu of an elevator or ramp where allowable under section on elevators.
- 10.3.4 Accessible platform lifts shall:
- 10.3.4.1 be on an accessible route complying with Section 9.1;
  - 10.3.4.2 be identified with signage complying with applicable provisions of Section 13.4;
  - 10.3.4.3 comply with CSA standard CAN/CSA B355; and
- 10.3.4.4 facilitate unassisted entry, operation, and exit from the lift.
- 10.3.5 The platform size shall be no less than 1.22m x 1.525m (48 in. x 60 in.). The doors to the platform lift shall comply with Section 9.3.
- 10.3.6 Controls and operating mechanisms shall comply with Section 13.2.
- 10.3.7 Platform lifts shall be linked by an emergency call system to a monitored location within the facility, with two-way communication ability. The highest operable portion of the two-way communication system shall be a maximum of 1.2m (47 in.) from the floor of the car. If the system uses a handset, then the length of the cord from the panel to the handset shall be at least 0.735m (29 in.). If the system is located in a closed compartment, the compartment door and hardware shall conform to Section 13.3.
- 10.3.8 Floor finishes within platform lifts shall comply with Section 9.4 and Section 13.10.

# 11 Accessible Washroom Facilities

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## 11.1 Defining Accessible Washroom Facilities

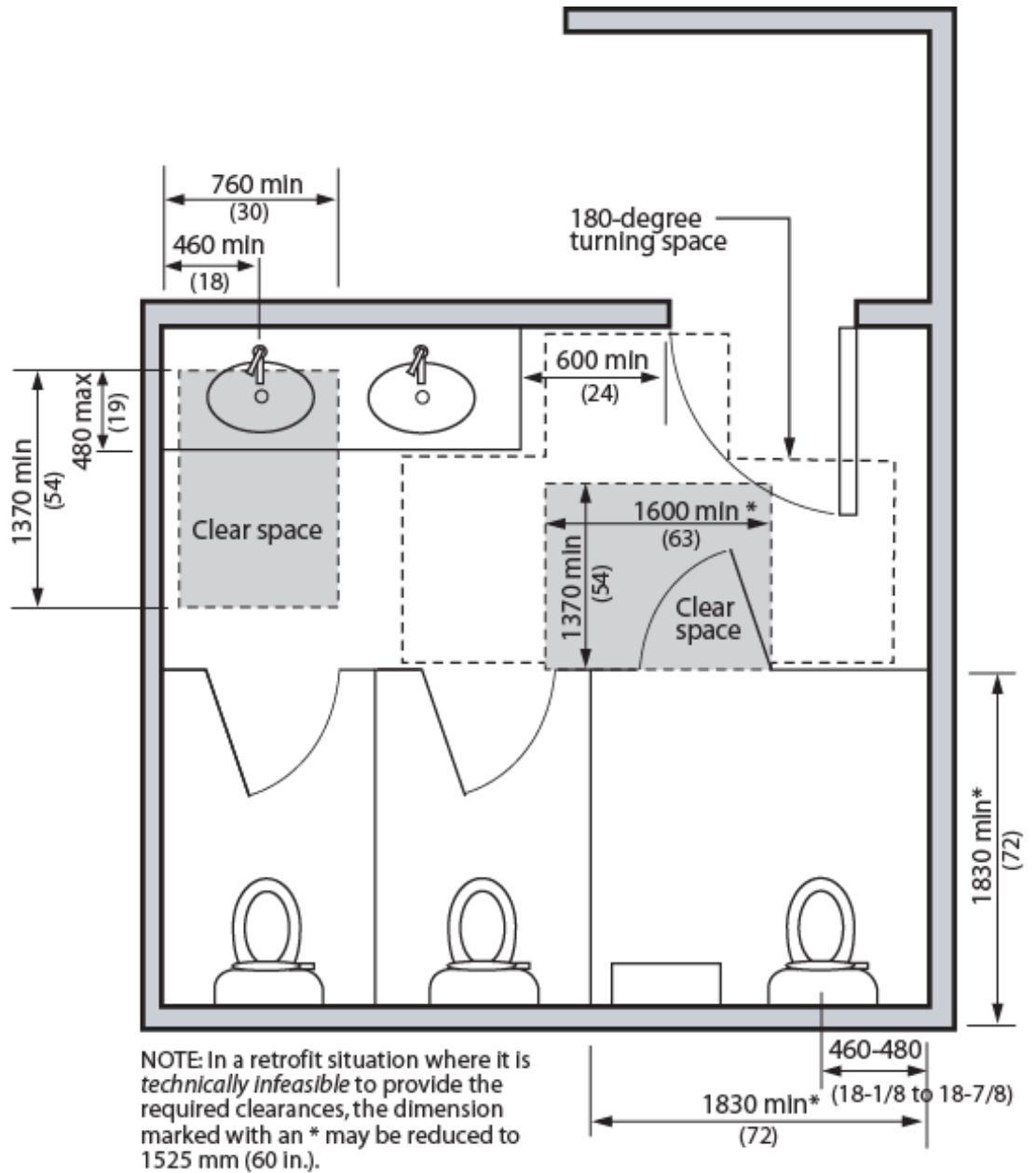
The objective is to provide washroom facilities that allow easy access for all. In order to assist all users, the location and installation of washroom fixtures and accessories should be located away from the normal flow of traffic and at a height that can be reached from a seated position.

Several factors must be taken into consideration when designing accessible washrooms:

- a) There must be enough room to allow persons in a wheelchair to navigate through the washroom to the necessary stall and fixtures.
- b) Washroom facilities can be accident-prone areas as they are notorious places for falls to occur, whether it due to a wet surface, the act of transferring between toilet and wheelchair, or an incorrect door swing.
- c) The identification of washroom facilities to assist those who have visual impairments involves clear directional signage to the facilities; text, internationally-recognized symbols and tactile lettering to identify the specific rooms; and additional features such as colour-contrasting doorframes and door hardware.

Where washroom facilities are provided, each public or common use washroom facility shall comply with this Section and the following:

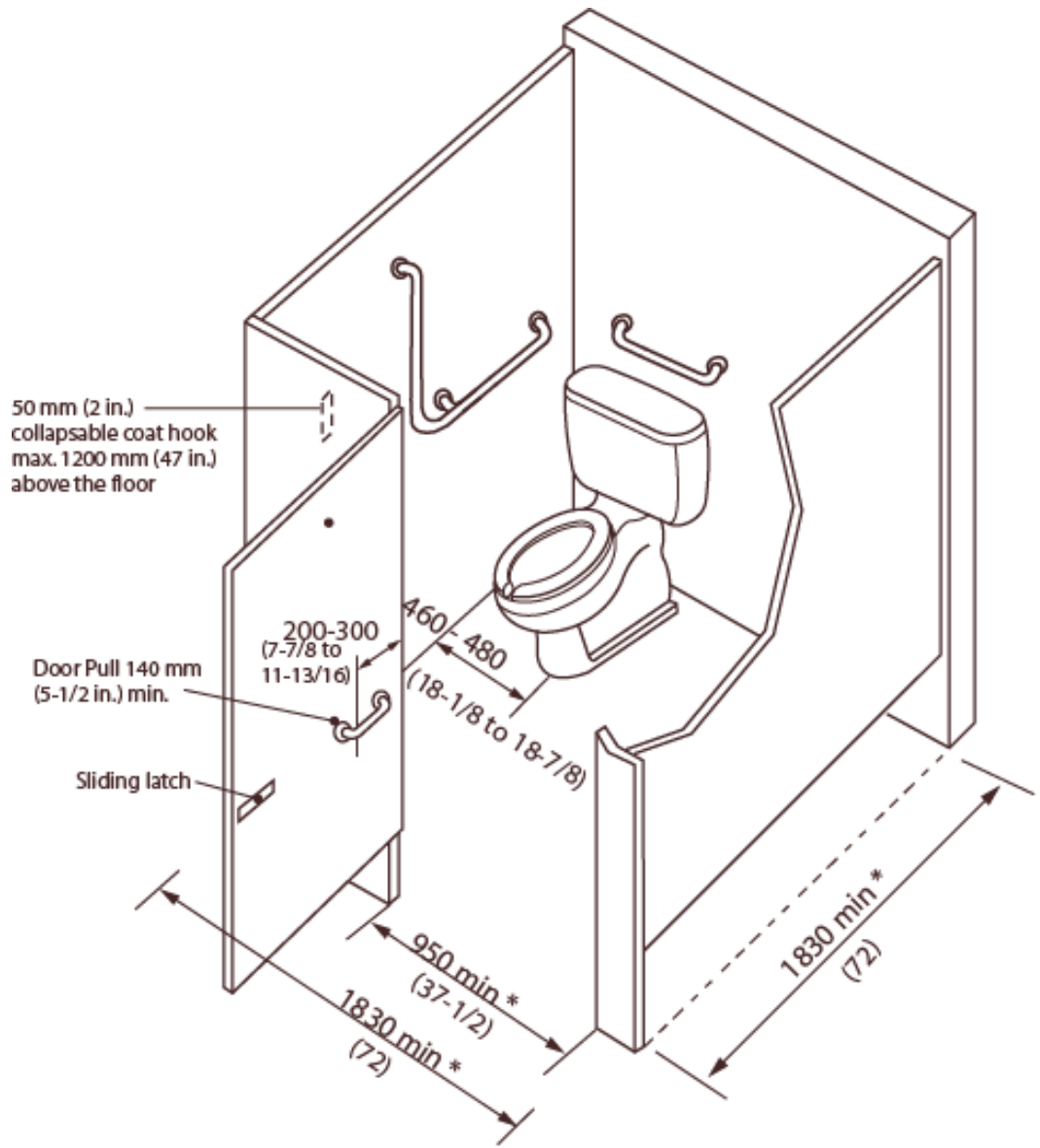
- a) Other washrooms provided for the use of specific spaces (eg. A washroom provided for a private office) shall be adaptable.
- b) In a retrofit situation where it is technically infeasible to make existing public or common use toilet facilities accessible, the installation of at least one individual accessible washroom per floor, located in the same area as existing toilet facilities, will be permitted in lieu of modifying existing toilet facilities to be accessible.
- c) In addition to any accessible public or common use washroom facilities, at least one individual accessible washroom should be provided in all public buildings. If the individual accessible washroom is not visible from the common or public use washrooms, directional signage shall be provided.
- d) Where an individual accessible washroom is provided primarily for the use of persons of both sexes with physical disabilities, in lieu of facilities for persons with physical disabilities in washrooms used by the general public, the individual washroom shall be provided on the same floor level within 45m (147 ½ feet) of the washrooms used by the general public.



**Figure 11.1-A. Washroom dimensions**

## 11.2 Standards: Accessible Toilet Facilities

- 11.2.1 Manoeuvrability of a wheelchair or scooter is a principal consideration in the design of an accessible stall. The increased size of an accessible stall is required to ensure there is sufficient space to facilitate the proper placement of a wheelchair/scooter to accommodate a transfer onto the toilet fixture. Not only is the space required for the mobility equipment, but there may also be instances where an individual requires assistance and the stall will have to accommodate a second person.
- 11.2.2 If toilet stalls are provided in a washroom facility, then the number of accessible toilet stalls designated to accommodate disabled persons shall comply with the following ratios:
- a) If the number of toilet stalls within the washroom is between one (1) and five (5), then the required number of accessible toilet stalls is one (1).
  - b) If the number of toilet stalls within the washroom is six (6) or more, then the required number of accessible toilet stalls is two (2).
- 11.2.3 An accessible toilet stall shall have internal dimensions of 1.83m (72 in.) by 1.83m (72 in.). In a retrofit situation, where providing the required internal dimensions is technically infeasible, the internal dimensions may be reduced to 1.525m (60 in.) by 1.525m (60 in.). (Refer to Figure 11.2-A as well as Section 11.2.4.2.)



NOTE: In a retrofit situation where it is *technically infeasible* to provide the required clearances, the dimensions marked with an \* may be reduced.

**Figure 11.2-A. Accessible toilet stall.**

11.2.4 Toilet stall doors shall:

11.2.4.1 Toilet stall doors shall swing outward, unless additional space is provided within the stall.

11.2.4.2 Toilet stall doors shall provide a clear opening of at least 0.95m (37 ½ in.) with the door in the open position. In a retrofit situation

11.2.4.3

where it is technically infeasible to provide the required clear opening, the clear opening may be reduced to 0.81m (32 in.).

Toilet stall doors shall be capable of being locked from the inside by a device that is operable with one hand; does not require fine finger



control, tight grasping, pinching or twisting of the wrist and requires a force of not more than 22N (4.9 lb) to activate.

11.2.4.4 Toilet stall doors shall be equipped with gravity hinges so that the door closes automatically.

11.2.4.5 Toilet stall doors shall be provided with a “D”-type colour-contrasting door pull at least 0.14m (5 ½ in.) long, on the inside of an out-swinging door, located so that the centre line is between 0.2m (8 in.) and 0.3m (12 in.) from the hinged side of the door, at outside door handle height. The outside of the door shall also be equipped with a “D”-type colour-contrasting door pull near the latch side of the door.

11.2.5 The location and operation of toilet fixtures shall conform with the following: (Refer to Figure 11.2-B)

11.2.5.1 Toilets shall be located 0.46m (18 in.) to 0.48m (19 in.) from the centre line to the adjacent wall. Wall-mounted toilets are preferred.

11.2.5.2 A minimum 0.915m (36 in.) wide clear transfer space shall be provided on one side of the toilet fixture. In a retrofit situation where it is technically infeasible to provide a 0.915m (36 in.) wide clear transfer space, the space may be reduced to 0.76m (30 in.). No devices, such as a sanitary napkin disposals or toilet paper dispensers, shall be mounted within the minimum clear transfer space.

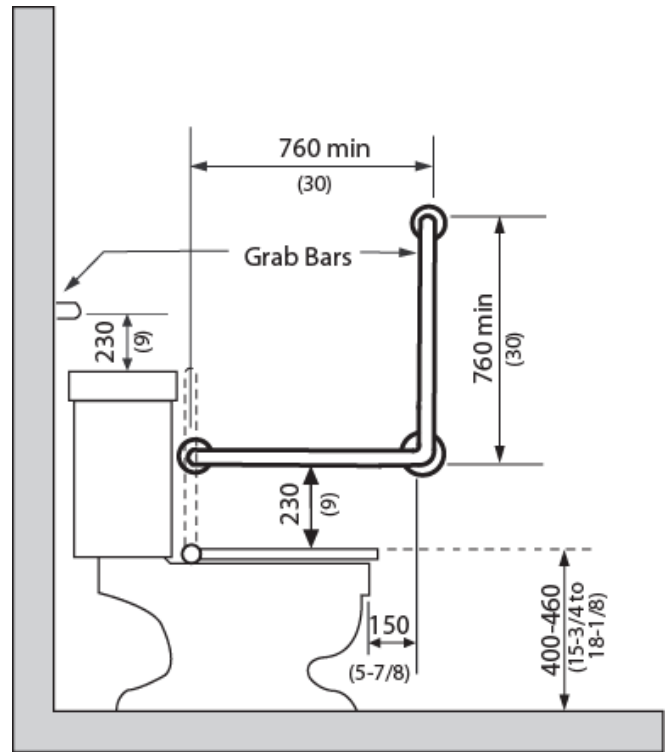
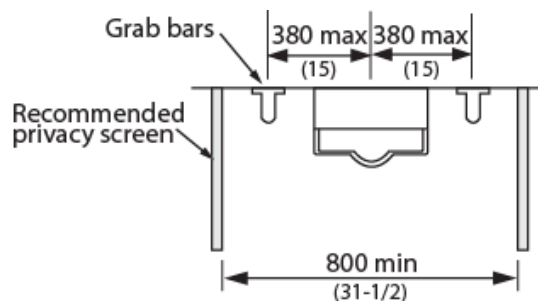


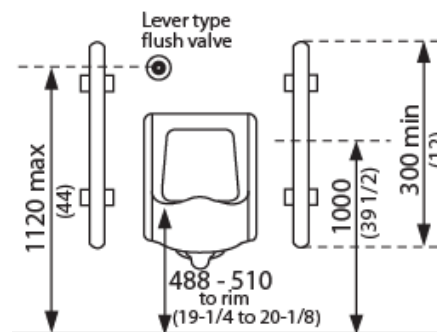
Figure 11.2-B. Grab bar configuration

- 11.2.5.3 Toilet fixtures shall have:
- a) the top of the seat located between 0.4m (15 ¾ in.) and 0.46m (18 in.) from the floor;
  - b) no spring-activated seat;
  - c) a back support where there is no seat lid or tank; and
  - d) the tank top securely attached.



**Figure 11.2-C. Urinal**

- 11.2.5.4 Toilet flush controls shall be hand-operated on the transfer side of the toilet or be electronically automatically controlled.



**Figure 11.2-D. Urinal**

- 11.2.6 Where urinal fixtures are provided in an accessible washroom facility, they shall comply with the following: (Refer to Figure 11.2-C and Figure 11.2-D)

- 11.2.6.1 Wall-mounted urinals with an elongated rim shall be located with the rim between 0.488 (19 ¼ in.) and 0.512m (20 in.) above the finished floor. Floor-mounted urinals shall be located with the rim level at the finished floor.

- 11.2.6.2 A clear floor space of 0.76 (30 in.) by 1.37m (54 in.) shall be provided in front of the urinal to allow for a forward approach. This clear space shall adjoin or overlap the accessible route.

- 11.2.6.3 Where privacy screens are provided, there shall be at least 0.8m (31 ½ in.) of clearance between them and they shall incorporate a pronounced colour contrast to differentiate them from the surrounding environment, with a vertical outer edge that contrasts with the screen and the surrounding environment.
- 11.2.6.4 The urinal shall have grab bars installed on each side, vertically mounted, not less than 0.3m (12 in.) long, with the centre line 1.0m (39 ½ in.) above the floor and located not more than 0.38m (15 in.) from the centre line of the urinal.
- 11.2.6.5 The urinal flush controls that are hand-operated or automatic shall be mounted at no more than 1.12m above the finished floor.
- 11.2.7 Toilets and toilet stalls shall be equipped with grab bars that shall conform with the following:
- 11.2.7.1 Grab bars shall be “L”-shaped with 0.76m (30 in.) long horizontal and vertical components mounted with the horizontal component located 0.23m (9 in.) above the toilet seat and the vertical component 0.15m (6 in.) in front of the toilet bowl.
- 11.2.7.2 Grab bars shall be at least 0.6m (23 ½ in.) in length, mounted horizontally on the wall behind the toilet, from 0.84m (33 in.) to 0.92m (36 ¼ in.) above the floor, and where the water closet has a water tank, be mounted 0.15m (6 in.) above the tank.
- 11.2.8 Toilet stalls should also contain the following assistance devices and accessory features:
- 11.2.8.1 Each accessible toilet stall should be equipped with a collapsible coat hook mounted not more than 1.2m (47 ¼ in.) from the floor on a sidewall and not projecting more than 0.5m (19 ¾ in.) from the wall.
- 11.2.8.2 A toilet paper dispenser shall be wall mounted and located below the grab bar. The dispenser shall be in line with and the toilet and not more than 0.3m (12 in.) in front of the toilet seat, be no less than 0.6m (23 ½ in.) above the floor and finished in a contrasting colour to the wall.

### 11.3 Standards: Accessible Sinks and Wash Basins

- 11.3.1 The accessibility of sinks and basins is greatly influenced by their operating mechanisms and protection of users from protruding parts, such as the basin itself, water pipes, etc. In a retrofit situation where it is technically infeasible to have all sinks comply with this section, at least one sink in each accessible washroom shall comply.
- 11.3.2 Accessible sinks and basins shall be located on an accessible route with a minimum clear floor space of 0.78m (30 ¾ in.) wide by 1.37m (54 in.) deep, of which a maximum of 0.48m

(19 in.) in depth may be under the sink.

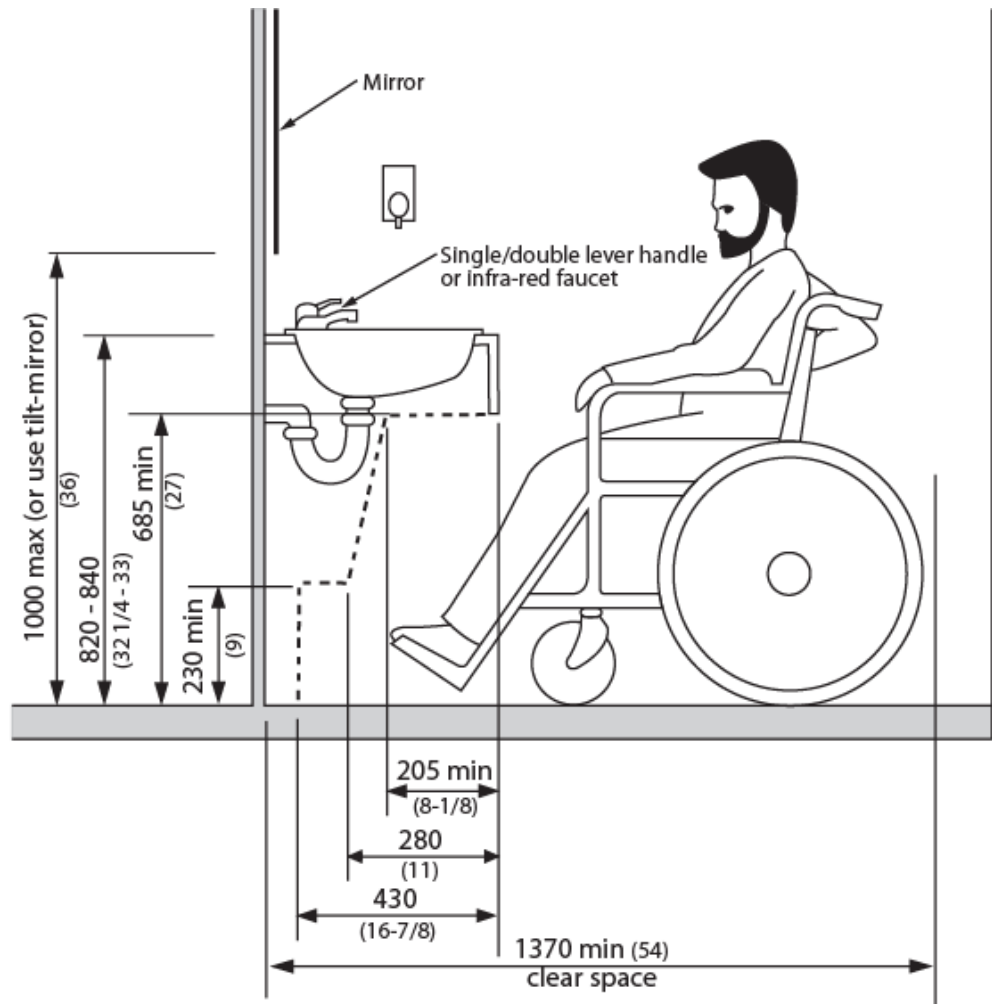
½ in.) wide by 0.72m (28 ¼ in.) high.

- 11.3.3 Accessible sinks and basins shall: (refer to Figure 11.3-A)
- a) be mounted so that the minimum distance between the centre line of the fixture and the sidewall is 0.46m (18 in.).
  - b) have the top located between 0.82 (32 ¼ in.) and 0.84m (33 in.) from the finished floor.
  - c) have a knee space of at least 0.76m (30 in.) wide, 0.735m (29 in.) high at the front edge, 0.685m (27 in.) high at a point 0.205m (8 in.) back from the front edge, and 0.23m (9 in.) high over the distance from a point 0.28m (11 in.) to a point 0.42m (16 ½ in.) back from the front edge.
  - d) have a vanity with a front apron minimum clearance of 0.75m (29

- 11.3.4 Faucets and other controls for accessible sinks and basins shall have handles of the lever style (not self-closing) operable with a clenched fist, or be electronically controlled. While faucets with remote-eye technology might initially confuse some individuals, their ease of use is notable.

- 11.3.4.1 Faucets shall be located so that the distance from the centre line of the faucet to the edge of the basin, or where the basin is mounted in a vanity, to the front edge of the vanity is not more than 0.485m (19 in.).

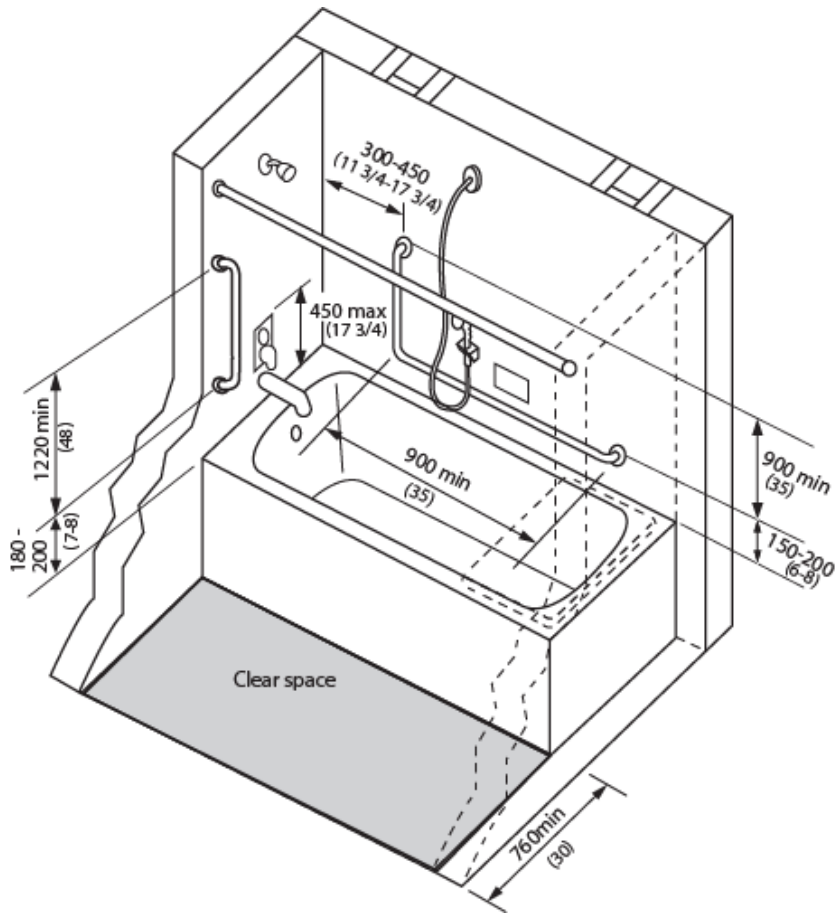
- 11.3.5 Water supply should be limited to a maximum temperature of 43 degrees Celsius. All exposed pipes under sinks shall be insulated to prevent burns.



**Figure 11.3-A. Lavatory criteria**

## 11.4 Standards: Accessible Bathing Facilities

- 11.4.1 Accessible bathtubs and shower stalls shall be located on an accessible route. wide along the length of the bathtub.
- 11.4.2 Accessible bathtubs shall comply with the following: (Refer to Figure 11.4-A)
  - 11.4.2.1 Bathtubs shall have a clear floor space of at least 0.76m (30 in.)
  - 11.4.2.2 A sink or basin may encroach a maximum of 0.3m (12 in.) into the clear floor space, provided there is clear knee space and toe space under the sink.



**Figure 11.4-A. Bathtub**

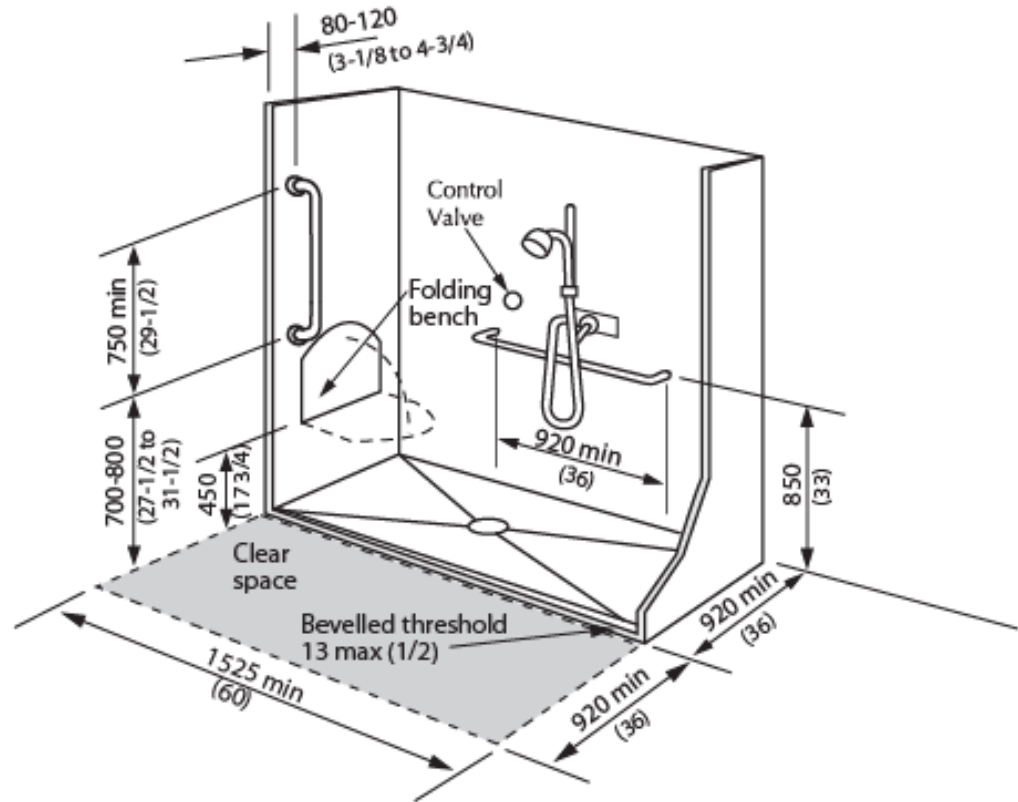
**11.4.2.3** Unless the bathtub is freestanding, an “L”-shaped grab bar shall be mounted on the wall so that each leg of the grab bar shall be at least 0.9m (35 ½ in.) long, with the legs of the “L” being separated by 90 degrees. The horizontal leg of the “L” shall be located between 0.15m (6 in.) and 0.20m (8 in.) above and parallel to the rim of the bathtub, and the vertical leg of the “L” being located between 0.3m (12 in.) and 0.45m (17 ¾ in.) from the control end of the bathtub.

**11.4.2.4** Unless the bathtub is freestanding, a grab bar, which is at least 1.22m (48 in.) long, shall be mounted vertically on the wall at the foot

end of the bathtub adjacent to the clear floor space, with the lower end 0.18 (7 in.) to 0.2m (8 in.) above the bathtub rim.

**11.4.2.5** Accessible bathtubs shall have faucet handles of the lever type that are not spring-loaded or that are automatically operable. The faucet handles shall be located so that they are usable by a person seated in the bathtub, that is, not more than 0.45m (17 ¾ in.) above the bathtub rim.

**11.4.3** Accessible shower stalls shall comply with the following: (Refer to Figure 11.4-B)



**Figure 11.4-B. Shower stall**

- |          |   |          |   |
|----------|---|----------|---|
| 11.4.3.1 | Accessible shower stalls shall have a clear floor space at the entrance to the shower of at least 0.92m (36 ¼ in.) in depth and the same width as the shower.   |          | depth. The seat should be mounted approximately 0.45m (17 ¾ in.) above the floor and designed to carry a minimum load of 1.33 kN (300 lbs.).  |
| 11.4.3.2 | Accessible shower stalls shall have a slip-resistant surface.   | 11.4.3.5 | Accessible shower stalls shall be equipped with a horizontal grab bar that shall be at least 0.92m (36 ½ in.) in length, be mounted horizontally approximately 0.85m (33 ½ in.) above the floor, and be located on the wall so at least 0.3m (12 in.) of its length is reachable from one side of the seat. |
| 11.4.3.3 | Accessible shower stalls shall have no threshold, or a bevelled threshold not exceeding 0.013m (1/2 in.) above the finished floor.  | 11.4.3.6 | Accessible shower stalls shall be equipped with a vertical grab bar that shall be at least 0.75m (29 ½ in.) in length and be mounted 0.08m (3 in.) to 0.12m (4 ¾ in.)   |
| 11.4.3.4 | Accessible shower stalls shall be equipped with a wall-mounted folding seat that is not spring-loaded, or make provisions for a portable seat that is 0.38m (15 in.) to 0.62m (24 ½ in.) less than the shower stall depth in width and 0.43 (17 in.) to 0.53m (21 in.) in |          |   |

from the front edge, starting between 0.70m (27 ½ in.) and 0.80m (31 ½ in.) from the floor.

11.4.4 Accessible bathtubs and shower stalls shall be equipped with a pressure-equalizing or thermostatic-mixing valve, operable from the seated position.

11.4.5 Accessible bathtubs and shower stalls shall be equipped with a hand-held shower head with at least 1.525m (60 in.) of flexible hose, located so that it can be reached from the seated position, and

equipped with a support so that it can be operated as a fixed shower head.

11.4.6 Accessible bathtubs and shower stalls shall be equipped with soap holders that are reachable from a seated position, ideally fully recessed.

11.4.7 Accessible bathtubs and shower stalls shall be equipped with enclosures that shall not obstruct controls, interfere with a person transferring from a wheelchair, or have tracks mounted on the bathtub rim.

## **11.5 Standards: Accessible Individual Washrooms**

11.5.1 The provision of a separate individual washroom is advantageous in numerous instances. For an individual using a wheelchair, the extra space provided with a separate washroom is preferred to an accessible stall. Should the disabled person require an attendant to assist them in the washroom, then the complication of a man entering a women's washroom or vice versa is avoided. This same scenario would apply to a parent with a young child of a different gender.

11.5.2 Accessible individual washrooms shall be located on an accessible route and identified with the appropriate signage and markings.



11.5.3 Accessible individual washrooms shall comply with the following: (refer to Figure 11.5-A)

11.5.3.1 Be designed to permit a wheelchair to turn in an open space that has a diameter of not less than 2.44m (96 in.). In a retrofit situation where providing a 2.44m (96 in.) wheelchair turning space is technically infeasible, the wheelchair turning space may not be less than 2.13m (84 in.).

11.5.3.2 Be equipped with a door that:

- a) Is capable of being locked from the inside with one hand and being released from the outside in case of an emergency;
- b) Has graspable latch operating and locking mechanisms located not less than 0.9m (35 ½ in.) and not more than 1.0m (39 ½ in.) above the floor; and
- c) If it swings outward, has a door pull not less than 0.14m (5 ½ in.) long, located on the inside so that its midpoint is not less than 0.2m (8 in.) and not more than 0.3m (12 in.) from the hinged side of the door and not less than 0.9m (35 ½ in.) and not more than 1.0m (39 ½ in.) from the floor.

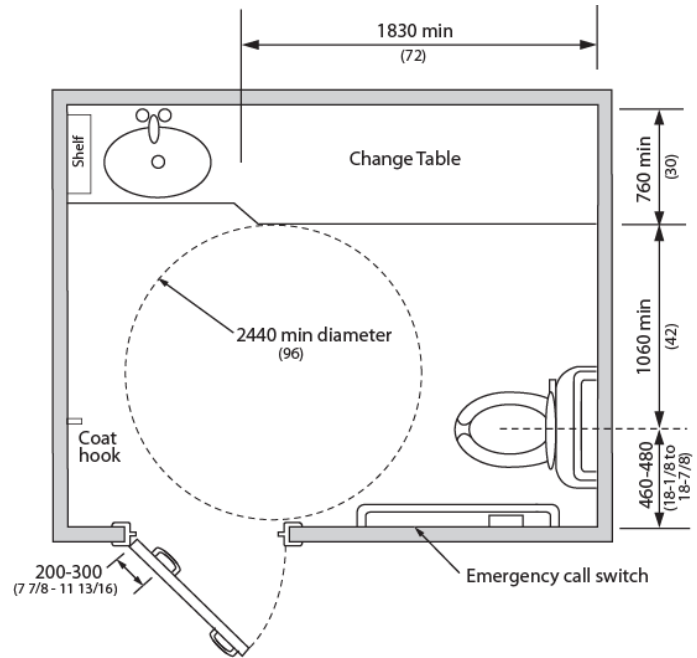


Figure 11.5-A. Individual washroom

- 11.5.3.3 Be equipped with:
- a) a toilet conforming with Section 11.2;
  - b) a sink conforming with Section 11.3;
  - c) grab bars conforming with Section 11.6; and
  - d) fixtures with clearances conforming with Section 11.6.

11.5.3.4 Where accessible individual washrooms are provided in larger public buildings, the washrooms shall incorporate an emergency call system linked to a central location (for example, an office or switchboard).

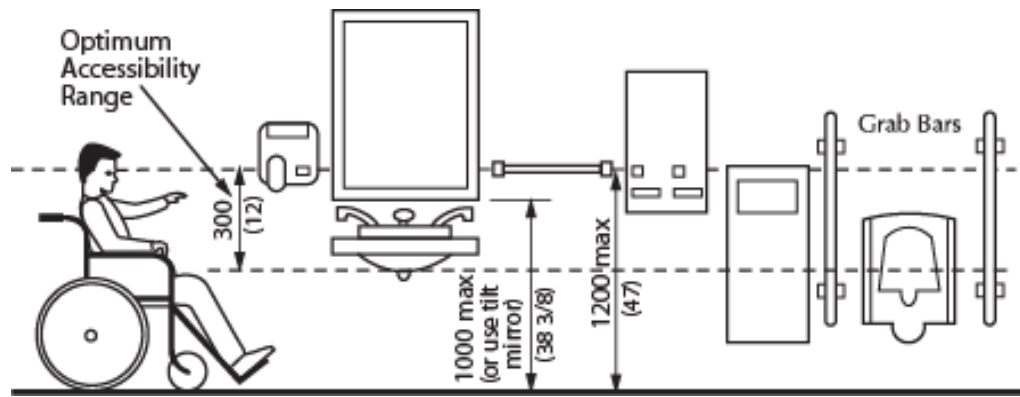
- 11.5.3.5 Accessible individual washrooms shall incorporate a change table conforming to the following:
- a) at least 0.76m (30 in.) wide by 1.83m (72 in.) long;
  - b) located with the change surface no higher than 0.865m (34 in.);
  - c) incorporates an adjacent clear floor space not less than 0.76m (30 in.) by 1.37m (54 in.);
  - d) designed to support the weight of an adult; and
  - e) if of the fold-down type, have no operable portions higher than 1.2m (47 ¼ in.).

## 11.6 Standards: Accessible Washroom Accessories

11.6.1 Design issues related to washroom accessories include the hand strength and dexterity required to operate mechanisms.

11.6.1.1 Where washroom accessories are provided in a washroom facility, they shall comply with this section. In a retrofit situation where it is technically infeasible to make all washroom accessories comply with this section, at least one of each type of washroom accessory shall comply in all accessible washroom facilities.

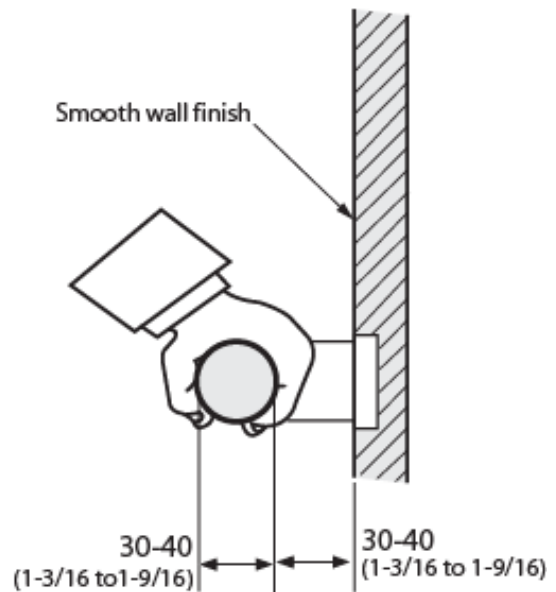
11.6.2 All washroom accessories, except those located within the toilet stalls, shall have operable controls mounted between 0.9m (35 ½ in.) and 1.2m (47 ¼ in.) from the finished floor – within the optimum accessibility range. These accessories include hand dryers, soap dispensers, towel dispensers, sanitary product dispensers, trash receptacles, etc. (Refer to Figure 11.6-A)



**Figure 11.6-A. Washroom accessories**

11.6.3 All grab bars shall: (Refer to Figure 11.6-B)

- a) Be installed to resist a load of at least 1.3 kN (300 lbs), applied vertically or horizontally;
- b) Be not less than 0.3m (12 in.) and not more than 0.4m (15 ¾ in.) in diameter;
- c) Have a clearance of 0.3m (12 in.) to 0.4m (15 ¾ in.) from the wall;
- d) Be free of any sharp or abrasive elements;
- e) Be colour-contrasted with the surrounding environment; and
- f) Have a slip-resistant surface.



**Figure 11.6-B. Grab bar**

11.6.4 Mirrors shall be mounted with its bottom edge not more than 1.0m (39 ½ in.) from the floor, or be inclined along the vertical to be usable by a person in a wheelchair.

11.6.4.1 It is useful to have at least one full-length mirror, which can be used by both a standing and a seated person.

11.6.5 Shelves shall be located so they are accessible and colour-contrasted from the surrounding environment so as not to present a hazard to persons with a visual disability. Shelves and the tops of vanities should not be more than 0.84m (33 in.) above the floor.

# 12 Accessible Building Features and Amenities

## 12.1 Defining Accessible Building Features and Amenities

12.1.1 Building features and amenities that are convenient and accessible can make an area pleasant. It is critical that these features and building elements are carefully designed, easily located and usable by all.

## 12.2 Standards: Accessible Drinking Fountains, Telephones, Vending Machines and Waste Receptacles

12.2.1 Drinking Fountains should be constructed to accommodate persons with disabilities, with specific design consideration given to wheelchair users. Drinking fountains should be located in recessed alcoves, outside of the pedestrian route, where they are not a hazard to persons with visual impairments. (Refer to Figure 12.2-A, Figure 12.2-B, and Figure 12.2-C)

12.2.1.1 Drinking fountain spouts should be located at an approximate height of 0.9m (35 ½ in.).

12.2.1.2 Drinking fountains can have two (2) spouts located at different heights, one convenient to wheelchair users at approximately 0.85m (33 ½ in.) and one at approximately 0.95m (37 ½ in.) for non-disabled persons.

12.2.1.3 Freestanding drinking fountains should be equipped with an extended basin and spout to allow for wheelchair access directly under the basin.

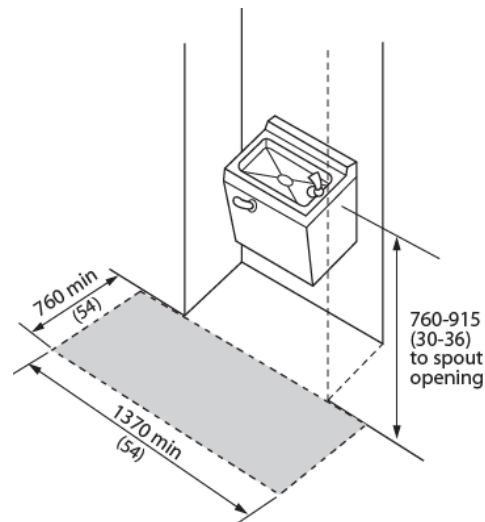


Figure 12.2-A. Parallel approach

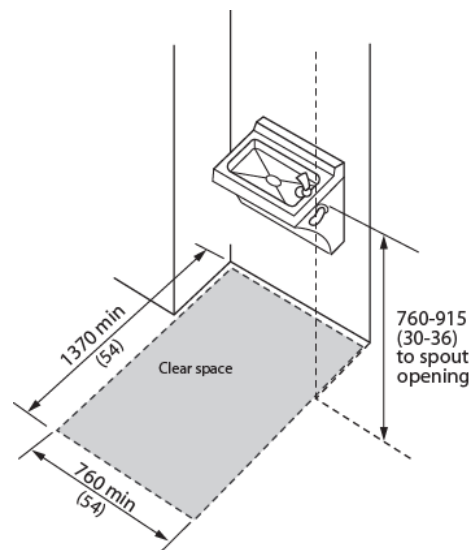


Figure 12.2-B. Frontal approach

12.2.1.4 Wall-mounted drinking fountains should be recessed beneath the basin to allow room for wheelchair access.

12.2.1.5 The underside of all fountain basins – either recessed or extended – should not be less than 0.74m (29 in.) above the ground, provide knee space at least 0.2m (7 ¾ in.) deep and toe clearance of 0.15m (6 in.) deep by 0.23m (9 in.) high.

12.2.1.6 A large push plate should be installed on the fountain, as it is the easiest control to activate running water. Drinking fountains are now available with electronic touch pads on the front and sides which activate the fountain for 7 to 10 seconds when touched by any body part.

12.2.2 Telephone Booths are now manufactured to be wheelchair accessible and conform to the specification of Section 6 of the Canadian Standards Association Barrier-Free Design Standards. At public telephone booths, one telephone should be accessible to a wheelchair user and another to a person with a hearing impairment. (Refer to Figure 12.2-D, Figure 12.2-E, Figure 12.2-F and Figure 12.2-G)

12.2.2.1 Accessible telephones should be clearly indicated by the appropriate signage.

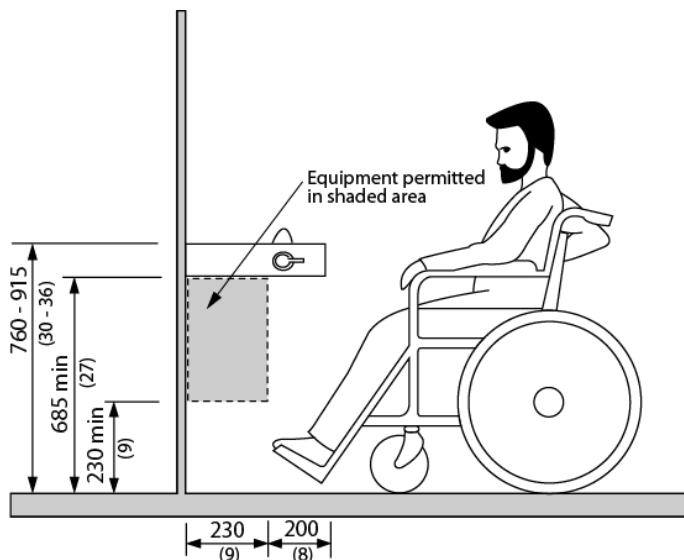


Figure 12.2-C. Clearances

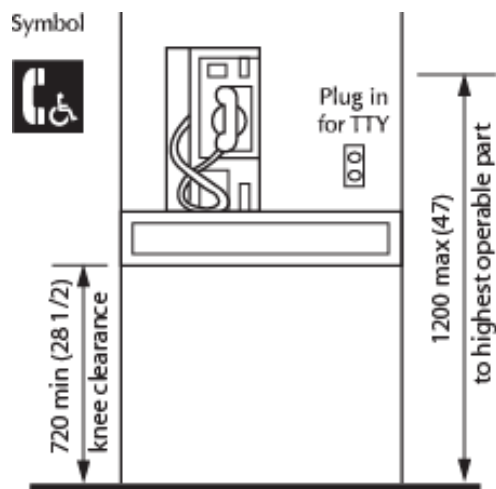


Figure 12.2-D. Telephone

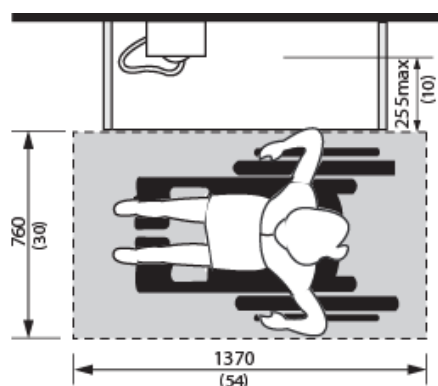


Figure 12.2-E. Parallel approach

12.2.2.2 Telephones for the hearing impaired should be equipped with hearing aid devices and amplifiers in the receiver. Telecommunication devices should be indicated by the appropriate signage.

12.2.2.3 A push-button telephone numbering system, with raised letters to be read by touch, should be used for the convenience of sightless users and other disabled people.

12.2.2.4 A folding seat should be provided in accessible telephone booths for the convenience of people with mobility problems.

12.2.2.5 The minimum unobstructed area in front of a telephone should be 1.2m (47 ¼ in.) by 0.85m (33 ½ in.) to allow for either parallel or frontal approach.

12.2.2.6 The coin slot should be mounted at an accessible, comfortable height between 0.9m (35 ½ in.) and 1.2m (47 ¼ in.).

12.2.2.7 The telephone cord length should be at least 0.75m (29 ½ in.).

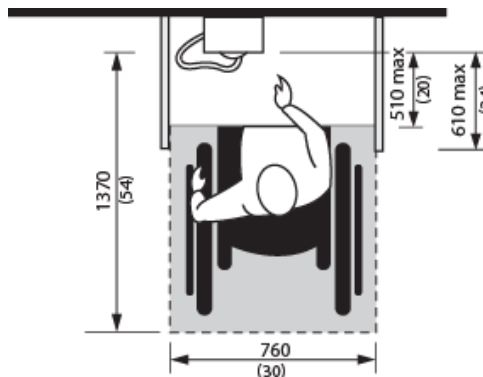


Figure 12.2-F. Frontal approach

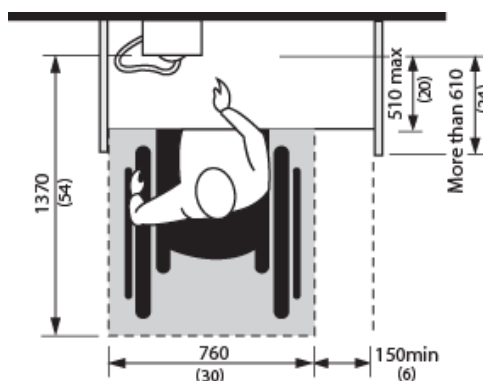


Figure 12.2-G. Frontal approach

12.2.3 Vending Machines (Refer to Figure 12.2-H)

12.2.3.1 Vending machines should have enough space at the front of the machine to allow for maximum manoeuvrability and meet the space requirements of wheelchairs and scooters.

12.2.3.2 Vending machines should contain operating mechanisms that are within reach of children and individuals in wheelchairs. The mechanisms should be operable with one hand and minimal strength.

12.2.3.3 Vending machines should have coin deposit slots no higher than 1.2m (47 ½ in.) above the floor and the retrieval door and change return no lower than 0.4m (15 ¾ in.) above the floor.

12.2.3.4 Vending machines should have lighting levels and colour contrasts to make the machine more accessible to those with visual impairment.

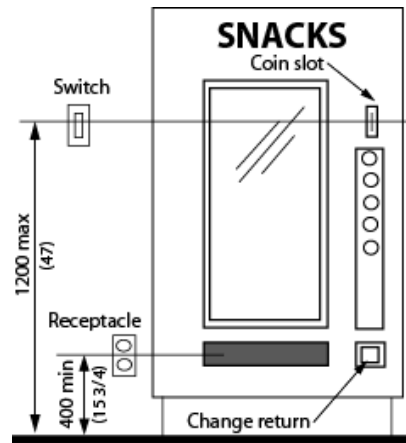


Figure 12.2-H. Vending machine



- |        |  |          |  |
|--------|--|----------|--|
| 12.2.4 | Waste Receptacles should be large enough to contain the anticipated amount of waste so that overflows do not cause a trip hazard, subject to the following specifications: | 12.2.4.1 | Waste receptacles should be clearly identified by suitable lettering or other identifying features.                |
|        |  | 12.2.4.2 | Lids and openings on waste receptacles should be mounted no higher than 1.06m (41 ¾ in.) above the adjacent floor. |

## **12.3 Standards: Accessible Offices, Work Areas and Meeting Rooms**

- |          |  |          |   |
|----------|--|----------|---|
| 12.3.1   | Offices providing services or programs to the public should be accessible to all, regardless of mobility or functional profile. Furthermore, office and related support areas should be accessible to staff and visitors with varying levels of ability. |          | c) Incorporate an accessible route through the space that does not require a person in a wheelchair to travel backwards to enter/leave the space.   |
| 12.3.2   | Wherever offices, work areas or meeting rooms are provided for use by the general public, employees, clients or customers, they shall comply with the following:   | 12.3.2.2 | Offices, work areas and meeting rooms shall incorporate a clear floor space allowing a person in a wheelchair to make a 180-degree turn.  |
| 12.3.2.1 | Offices, work areas and meeting rooms shall:   | 12.3.2.3 | Offices, work areas and meeting rooms shall incorporate a clear floor space in front of equipment (such as photocopiers, fax machines, computers) provided for use by the general public, clients or customers. |
|          | a) Be located on a accessible route;   |          |   |
|          | b) Incorporate an accessible route that connects the primary activity elements within the office, work area or meeting room; and   | 12.3.2.4 | Offices, work areas and meeting rooms shall incorporate knee clearance below work surfaces for an individual in a wheelchair, in compliance with Section 12.4.  |
|          |  | 12.3.2.5 | Offices, work areas and meeting rooms shall incorporate access to storage, shelving or display units in compliance with Section 12.6.   |

## 12.4 Standards: Accessible Tables, Counters and Work Surfaces

12.4.1 Tables, counters and work surfaces should accommodate the needs of a range of users. Consideration should be given to standing-use as well as seated use. For individuals using wheelchairs, tables need to be high enough to provide knee space with enough clear space to pull into. The furniture placement at tables and manoeuvring space at counters should provide sufficient turning space for a person using a wheelchair or scooter. (refer to Figure 12.4-A, Figure 12.4-B and Figure 12.4-C)

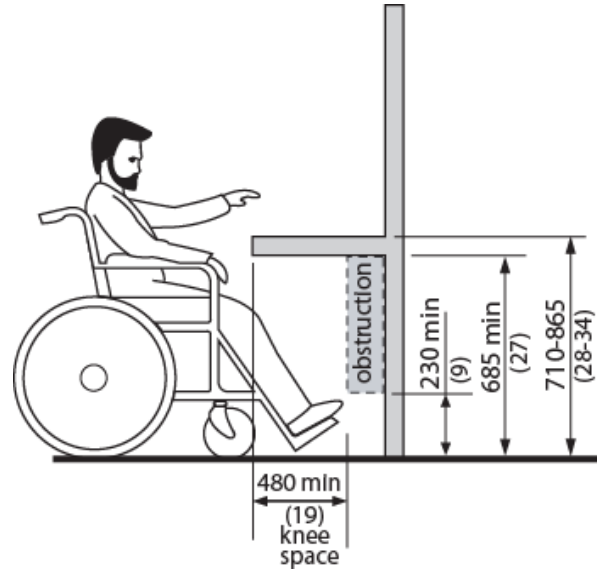


Figure 12.4-A. Clearances

12.4.2 If fixed or built-in tables, counters and work surfaces (including, but not limited to, dining tables and study carrels) are provided in accessible public or common use areas, at least 10%, but not less than one, of the fixed or built-in tables, counters and work surfaces shall comply with this section.

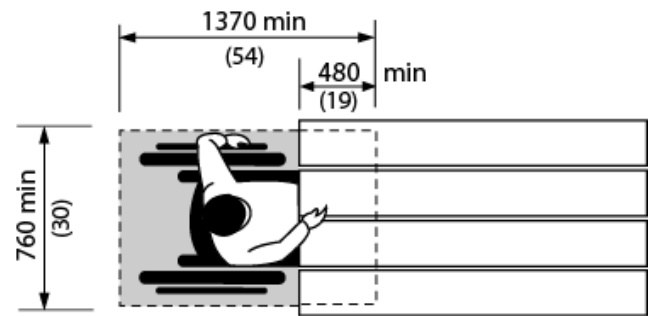


Figure 12.4-B. Parallel approach

12.4.3 Accessible tables, counters and work surfaces shall be located on an accessible route complying with Section 9.1.

12.4.4 Wheelchair seating spaces at accessible tables, counters and work surfaces shall incorporate a clear floor space of not less than 0.76m (30 in.) by 1.37m (54 in.).

12.4.5 Where a forward approach is used to access a wheelchair seating space, a clear knee space of at least 0.76m (30 in.) wide, 0.48m (19 in.) deep and 0.685m (27 in.) high shall be provided. It may overlap the clear floor space by a maximum of 0.48m (19 in.).

12.4.6 The top of accessible tables, counters and work surfaces shall be located between 0.71m (28 in.) to 0.865m (34 in.) above the finished floor or ground.

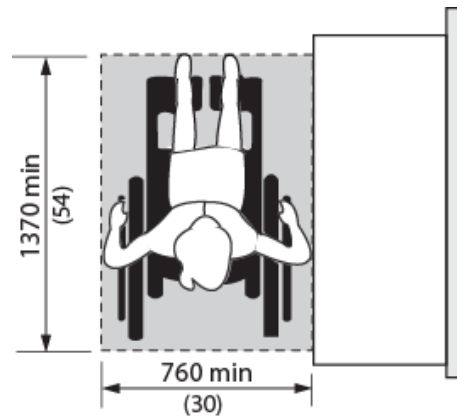


Figure 12.4-C. Parallel approach

## 12.5 Standards: Accessible Information, Reception and Service Counters

12.5.1 Information, Reception and Service Counters should have a variety of counter heights to provide a range of options for a variety of persons, including writing spaces. The use of colour contrast, tactile difference or audio landmarks can assist individuals with visual impairment to more precisely locate service counters or speaking ports.

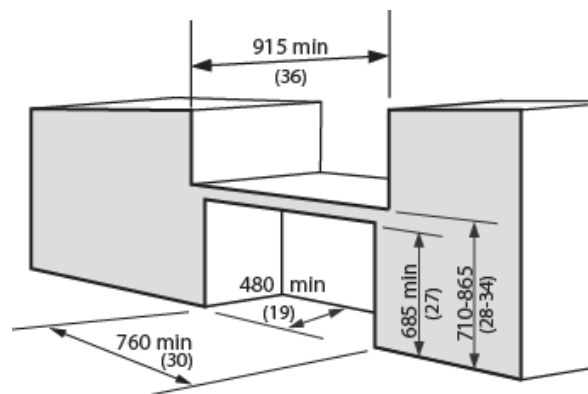


Figure 12.5-A. Service Counter

12.5.2 Accessible information, reception and service counters shall have at least one section usable by persons in wheelchairs, that is located between 0.71m (28 in.) and 0.865m (34 in.) above the finished floor and be at least 0.915m (36 in.) wide. (Refer to Figure 12.5-A)

- 12.5.3 Accessible information, reception and service counters shall have, on both sides of the counter, knee space below of at least 0.685m (27 in.) high by 0.48m (19 in.) deep.
- 12.5.4 Wheelchair seating spaces at accessible sections of information, reception and service counters shall incorporate a clear floor space not less than 0.76m (30 in.) by 1.37m (54 in.).
- 12.5.5 Where a forward approach is used to access a wheelchair seating space, a

clear knee space of at least 0.76m (30 in.) wide, 0.48m (19 in.) deep and 0.685m (27 in.) high shall be provided. The clear knee space may overlap the clear floor space by a maximum of 0.48m (19 in.).

- 12.5.6 Where speaking ports are provided at information, reception and service counters, at least one such position shall have a speaking port no higher than 1.06m (41 ¾ in.) above the finished floor.

## 12.6 Standards: Accessible Storage, Lockers, Shelving and Display Units

- 12.6.1 The heights of storage, shelving, and display units should address the lower vantage points of children and persons in wheelchairs. Providing displays at two heights may also assist individuals with vision impairments and those with back and reach problems.
- 12.6.2 If fixed or built-in storage facilities, such as cabinets, closets, shelves and drawers, are provided in accessible spaces, at least one of each type provided shall contain storage/display space complying with this Section.
- 12.6.3 For accessible storage facilities, a clear floor space of at least 0.76m (30 in.) by 1.37m (54 in.) shall be provided, to allow either forward or parallel approach by a person using a wheelchair. (refer to Figure 12.6-A)

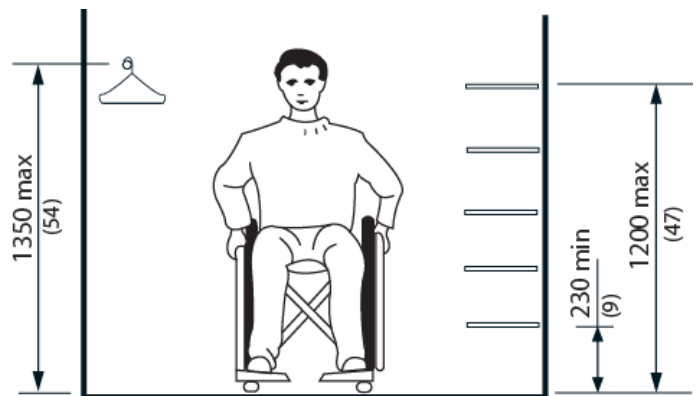


Figure 12.6-A. Reach limits for storage

- 12.6.4 Accessible storage spaces shall be within at least one of the reach ranges specified in Section 5.0. Clothes rods shall be a maximum of 1.37m (54 in.) above the finished floor for a side approach. Where the distance from the wheelchair to the clothes rod or shelf is 0.25m (9 ¾ in.) to 0.53m (21 in.), then the height of the rod or shelf shall be no more than 1.2m (47 ¼ in.) and no less than 0.23m (9 in.).
- 12.6.5 Where public or private storage lockers are provided, at least some of the storage units should be usable by persons in wheelchairs. In accessible public or common use areas, at least 10%, but not less than one, of the locker storage units shall comply with this Section
- 12.6.6 Aisle spaces in front of locker storage units should be a minimum of 1.37m (54 in.) deep to permit forward and lateral approach by wheelchair users.
- 12.6.7 Locker storage units shall have their bottom shelf no lower than 0.4m (15 ¾ in.) and their top shelf no higher than 1.2m (47 ¼ in.) above the floor.
- 12.6.8 The operating mechanisms of storage lockers should be mounted no higher than 1.06m (41 ¾ in.) from the floor and should be operable by individuals with restrictions in hand dexterity.
- 12.6.9 Numbers or names on locker storage units should be in clearly legible lettering, raised or recessed and of a highly contrasting colour or tone.

## 12.7 Standards: Accessible Balconies, Porches, Terraces and Patios

- 12.7.1 Balconies, Porches, Terraces and Patios shall be located on an accessible route and have a minimum depth of 2.44m (96 in.). In retrofit situations, the minimum depth may be 1.525m (60 in.), where providing a depth of 2.44m (96 in.) is technically infeasible.
- 12.7.2 Exterior balconies, porches, terraces and patios, where directly accessible from the interior spaces, shall incorporate a threshold with the following requirements:
- 12.7.2.1 If the change in vertical rise is between 0.06m (2 ¼ in.) and 0.13m (5 in.), then a bevel edge shall be used to make the transition.
- 12.7.2.2 If the change in vertical rise is 0.13m (5 in.) and greater, then treat as a sloped floor and install a curb cut or ramp to make the transition.
- 12.7.3 Balcony, porch, terrace and patio surfaces shall be sloped to ensure removal of water and be sloped no more than 2%.

12.7.4 Railings and guards at balconies, porches, terraces and patios shall comply with the requirements of the Ontario Building Code, be designed to allow clear vision below the rail for persons seated in wheelchairs and incorporate pronounced colour contrast between the railings and guards and the surrounding environment.

12.7.5 Doors opening out onto balconies shall be located to open against a sidewall or rail.

12.7.6 Where a number of balconies, porches, terraces or patios are provided, it is desirable to consider options for different levels of sun and wind protection, as an aid to seniors and other persons with disabilities.

## 12.8 Standards: Accessible Viewing Positions and Elevated Platforms

12.8.1 Designated viewing areas are required for individuals unable to use typical seating. Viewing areas need to provide adequate space to manoeuvre a mobility device as large as a scooter and should not be limited to one location. Designated companion seating should also be provided. Guards placed around a viewing area should not interfere with the line of sight of someone sitting in a wheelchair. A choice of locations and ticket price range should be available.

12.8.2 In places of assembly with fixed seating, accessible wheelchair locations shall comply with this section and shall be provided in numbers as indicated by Table 12.8 below. In addition, 1%, but not less than one, of all fixed seats shall be aisle seats with no armrests on the aisle side, or shall have removable or folding armrests on the aisle side. A sign or marker shall identify each of the seats. Signage notifying patrons of the availability of such seats shall be posted at the ticket office.

**Table 12.8-A. Number of Wheelchair Viewing Locations**

Number of Fixed Seats in Seating Area	Minimum Number of Spaces Required for Wheelchairs
Up to 100	2
101 to 200	3
201 to 300	4
301 to 400	5
401 to 600	6
Over 600	Not less than 1% of the seating capacity

12.8.3 Accessible wheelchair locations shall adjoin an accessible route complying with Section 9.1 without infringing on egress from any row of seating or any aisle requirement.

12.8.4 Each accessible wheelchair location shall be: (Refer to Figure 12.8-A)

12.8.4.1 an integral part of any seating plan. Seats shall be distributed in a manner that provides people with physical disabilities a choice of admission prices and lines of sight comparable to those for members of the general public;

12.8.4.2 clear and level, or level with removable seats;

12.8.4.3 if the wheelchair enters from a side approach, not less than 0.92m (36 in.) wide and 1.525m (60 in.) long;

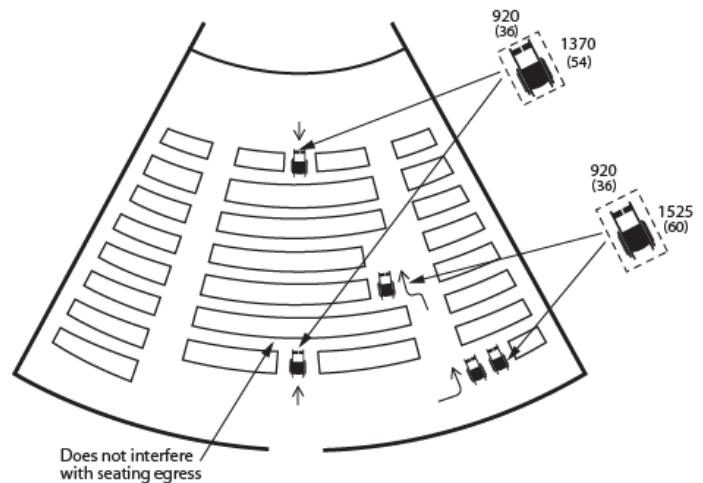
12.8.4.4 if the wheelchair enters from a front or rear approach, not less than 0.92m (36 in.) wide and 1.37m (54 in.) long;

12.8.4.5 arranged so that at least two designated wheelchair locations are side by side;

12.8.4.6 arranged so that at least one companion fixed seat is provided next to each wheelchair seating area; and

12.8.4.7 where the seating capacity exceeds 100, provided in more than one location.

12.8.5 Elevated platforms, such as stage areas, speaker podiums, etc., should be accessible to all. A marked accessible route should be provided, along with safety features to assist persons who are visually impaired.



**Figure 12.8-A. Distribution of wheelchair locations**

- |          |   |          |  |
|----------|---|----------|--|
| 12.8.6   | Elevated platforms shall:   | 12.8.7   | The detectable warning surface on elevated platforms shall:  |
| 12.8.6.1 | be located on an accessible route that complies with Section 9.1;   | 12.8.7.1 | comply with the requirements of Section 13.5;  |
| 12.8.6.2 | be capable of being illuminated to at least 100 lux (9.3 ft-candles) at floor level at the darkest point;   | 12.8.7.2 | be consistent throughout the setting;  |
| 12.8.6.3 | be sized to safely accommodate wheelchairs and other mobility equipment in compliance with Section 5.0; and | 12.8.7.3 | be positioned parallel to the open platform edge, extending the full length of the platform; and                 |
| 12.8.6.4 | have open platform edges defined by detectable warning surface.   | 12.8.7.4 | be a minimum depth of 0.61m (24 in.) and a maximum of 0.915m (36 in.), flush from the open edge of the platform. |

## 12.9 Standards: Accessible Dressing and Changing Rooms

- |          |  |   |
|----------|--|---|
| 12.9.1   | Accessible Dressing and Changing Rooms shall be located on an accessible route and shall have sufficient space to accommodate two people and a wheelchair, along with benches and other accessories.                                     | 0.5m (19 ¾ in.) above the finished floor;   |
| 12.9.2   | Accessible dressing and changing rooms entered through a swinging or sliding door shall have a clear floor space allowing a person using a wheelchair to make a 180-degree turn. No door shall swing into any part of the turning space. | 12.9.3.2 Have clear floor space provided alongside the bench to allow a person using a wheelchair to make a parallel transfer onto the bench;   |
| 12.9.3   | Accessible dressing and changing rooms shall have a bench fixed to the wall along the longer dimension of the room, and shall conform to the following requirements:   | 12.9.3.3 Be designed to carry a minimum load of 1.33 kN (300 lb.); and  |
| 12.9.3.1 | The dimensions of the bench shall be 0.61m (24 in.) by 1.22m (48 in.) and mounted 0.45 (17 ¾ in.) to   | 12.9.3.4 Where installed in conjunction with showers, swimming pools, or other wet locations, be designed so that water shall not accumulate on the surface of the bench and the top surface is slip-resistant. |



12.9.4 Accessible dressing and changing rooms shall have a full-length mirror measuring at least 0.46m (18 in.) wide by 1.37m (54 in.) high and shall be mounted in a position affording a view to a person on the bench, as well as to a person in a standing position.

12.9.5 In a retrofit situation where it is technically infeasible to have all dressing and changing rooms comply with this Section, 10% of dressing rooms, but never less than one, for each type of use in each cluster of dressing rooms shall be accessible and comply with this Section.

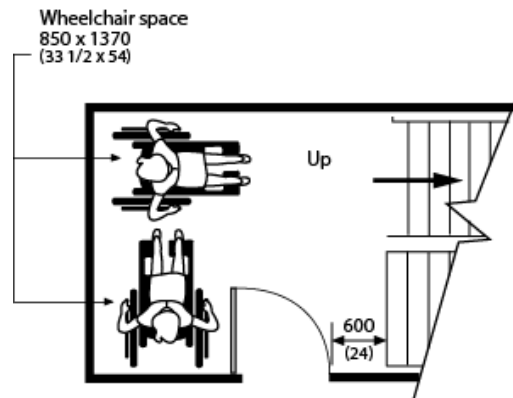
# 13 Accessible Controls, Systems and Functions

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## 13.1 Standards: Accessible Emergency Exits, Fire Evacuation and Areas of Refuge Assistance

- 13.1.1 In order to be accessible to all individuals, emergency exits must include the same accessibility features as other doors specified in Section 9.3. The doors and routes must also be marked in a way that is accessible to all individuals, including those who may have difficulty with literacy, such as children or persons speaking a different language. Persons with a visual impairment will need a means of quickly locating exits – audio or talking signs could assist. In the event of fire when elevators cannot be used, areas of rescue assistance are an asset to anyone who would have difficulty traversing sets of stairs.
- 13.1.2 In facilities, or portions of facilities, required to be accessible, accessible means of egress shall be provided in the same number as required for exits by the Ontario Building Code. Where a required exit from an occupiable level above or below a level of accessible exit discharge is not accessible, an area of rescue assistance shall be provided on each such level (in a number equal to that of inaccessible required exits). Every occupiable level in non-residential occupancies above or below the first storey (as defined by the Ontario Building Code) that is accessible, shall:
- 13.1.2.1 be served by an elevator that has protection features, as specified in 3.3.1.7 of the Ontario Building Code; or
  - 13.1.2.2 be divided into at least two zones by fire separations, as specified in 3.3.1.7 of the Ontario Building Code
- 13.1.3 In occupiable levels above or below the first storey in residential occupancies, the requirements for a protected elevator or two fire zones may be waived, if an appropriate balcony (as specified in 3.3.1.7 of the Ontario Building Code) is provided for each suite.
- 13.1.4 Areas of refuge assistance shall comply with this section.
- 13.1.5 A horizontal exit, meeting the requirements of the Ontario Building Code, shall satisfy the requirements for an area of rescue assistance. Exception: The requirements for protected elevators, separate fire zones, and areas of rescue assistance are not required in facilities having a supervised automatic sprinkler system.

- 13.1.6 Where emergency warning systems are provided, then they shall include both audible alarms and visible alarms. Visual alarms shall comply with Section 13.3.
- 13.1.7 Accessible means of egress shall comply with Section 9.0. Accessible means of egress shall be identified with signage complying with applicable provisions of Section 13.4.
- 13.1.8 Areas of rescue assistance shall be:  
(Refer to Figure 13.1-A)
- 13.1.8.1 located on an accessible route complying with Section 9.0;
- 13.1.8.2 of a size that allows a minimum floor space of 0.85m (33 ½ in.) x 1.37m (54 in.) per non-ambulatory occupant, with no fewer than 2 such spaces;
- 13.1.8.3 separated from the floor area by a fire separation having a fire resistance rating at least equal to that required for an exit;
- 13.1.8.4 served by an exit or fire fighters' elevator;
- 13.1.8.5 designated as an area of rescue assistance for persons with disabilities on the facility plans and in the facility
- 13.1.8.6 smoke protected in facilities of more than three storeys; and
- 13.1.8.7 identified with signage complying with applicable provisions of Section 13.4.



**Figure 13.1-A. Area of rescue assistance**

## **13.2 Standards: Accessible Controls and Operating Mechanisms**

- 13.2.1 Operating mechanisms that require a high degree of dexterity or strength will be difficult for many people to use. They can also be obstacles for children, individuals with arthritis or even someone wearing gloves. Controls that require two hands to operate can also be difficult for some people, particularly those with reach or balance limitations, or those who must use their hands to hold canes or crutches.
- 13.2.2 The placement of controls is integral to their accessibility. For the individual using a wheelchair, the height of the controls and the space to position the wheelchair in front of the controls are important. Controls placed high on a wall are also difficult for children or persons of short stature.
- 13.2.3 Individuals with a visual impairment may have difficulty with flush mounted buttons, touch screens or controls without Braille. Controls that contrast in colour from their background, including colour-contrasted raised letters, may be easier to find by an individual with a visual impairment.
- 13.2.4 Persons with cognitive challenges may find counterintuitive controls or graphics difficult.
- 13.2.5 Controls and operating mechanisms generally used by staff or public (e.g., light switches and dispenser controls) shall comply with this section.

13.2.6 A clear, level floor area at least 0.76m (30 in.) x 1.37m (54 in.) shall be provided at controls and operating mechanisms, such as dispensers and receptacles. (Refer to Figure 13.2-A)

13.2.7 The operable portions of controls and operating mechanisms, such as dispensers and receptacles, shall be located between 0.4m (15 3/4 in.) and 1.2m (47 in.) from the floor.

13.2.8 Faucets and other controls shall be hand-operated or electronically controlled.

13.2.9 Hand-operated controls and operating mechanisms shall be operable:

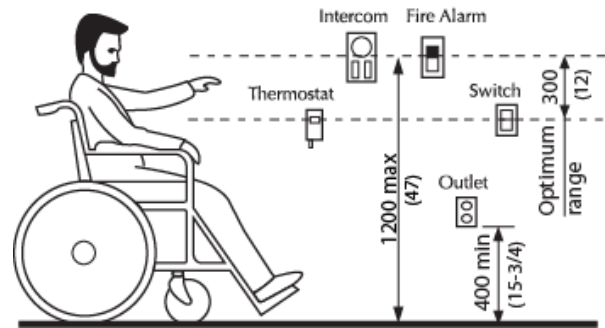
13.2.9.1 with one hand

13.2.9.2 without tight grasping, pinching, or twisting of the wrist; and

13.2.9.3 with a force of less than 22N (5 lbf.).

13.2.10 Controls and operating mechanisms shall be capable of being illuminated to at least a level of 100 lux (9.2 ft-candles).

13.2.11 Controls and operating mechanisms shall incorporate a pronounced colour contrast, to differentiate them from the surrounding environment.



**Figure 13.2-A. Reach range for accessibility controls**

### 13.3 Standards: Accessible Visual Alarm Systems

Visual alarms are essential for the deaf, deafened and hard of hearing individuals who may not hear audible alarms.

13.3.1 Visual alarms shall comply with this section.

13.3.2 At a minimum, visual alarm appliances shall be provided in facilities in each of the following areas: restrooms and any other general usage areas (e.g., meeting rooms), hallways, lobbies and any other areas for common use.

13.3.3 Visual alarm signal appliances shall be integrated into the facility alarm system. If single-station audible alarms are provided, then single station visual alarms shall be provided.

13.3.4 Visual alarm signals shall have the following minimum photometric and location features:

13.3.4.1 the lamp shall be a Xenon strobe type or equivalent;

13.3.4.2 the colour shall be clear or nominal white (i.e. unfiltered or clear filtered white light);

13.3.4.3 the maximum pulse duration shall be two-tenths of one second (0.2 sec) with a maximum duty cycle of

40 percent. The pulse duration is defined as the time interval between initial and final points of 10% of maximum signal; the intensity shall be a minimum of 75 candela;

13.3.4.4 the flash rate shall be a minimum of 1 Hz and a maximum of 3 Hz;

13.3.4.5 the appliance shall be placed 2.030m (80 in.) above the floor level within the space or 0.152m (6 in.) below the ceiling, whichever is lower

13.3.4.6 in general, no place in any room or space required to have a visual signal appliance, shall be more than 15.0m (50 ft.) from the signal (in the horizontal plane). In large rooms and spaces exceeding 30.0m (100 ft.) across, without obstructions 2.0m (6 ft.) above the finished floor, such as auditoriums, devices may be placed around the perimeter, spaced a maximum of 30.0m (100 ft.) apart, in lieu of suspending appliances from the ceiling; and

13.3.4.7 no place in common corridors or hallways in which visual alarm signalling appliances are required shall be more than 15.0m (50 ft.) from the signal.

## 13.4 Standards: Accessible Signage Systems

	Signage should be simple, uncluttered and incorporate plain language. The use of graphic symbols is helpful for individuals such as children with literacy concerns or individuals speaking a different language. Sharp contrasts in colour make signage easier for anyone to read, particularly those with a visual impairment.	13.4.4.3	accessible entrances when not all are accessible (inaccessible entrances shall have directional signage to indicate the route to the nearest accessible entrance);
		13.4.4.4	accessible toilet and bathing facilities, including single-use portable units, when not all are accessible;
	The intent of the symbol must be evident, culturally universal and not counterintuitive. To enhance readability, raised tactile lettering should incorporate edges that are slightly smoothed.	13.4.4.5	accessible telephones
		13.4.4.6	accessible elevators and other elevating devices;
		13.4.4.7	accessible means of egress; and
13.4.1	Signage shall comply with this section.	13.4.4.8	areas of rescue assistance.
13.4.2	Signs that designate permanent rooms or spaces shall be wall mounted and include tactile characters and numbers.	13.4.5	Audible signs (infrared and digital) that are readable by visually impaired persons using a receiving device may be the sole orientation aid across open spaces. Consideration should be given to including wire drops for future installation.
13.4.3	Signs that provide direction to, or information about, functional spaces, shall comply with this section. Exception: Facility directories, menus and all other signs that are temporary are not required to comply.	13.4.6	Letters and numbers on signs shall:
		13.4.6.1	be sans serif;
		13.4.6.2	have Arabic numbers;
13.4.4	Elements and spaces of accessible facilities that shall be identified by the International symbol of Accessibility are:	13.4.6.3	have a width-to-height ratio between 3:5 and 1:1; and
		13.4.6.4	have a stroke-width-to-height ratio between 1:5 and 1:10.
13.4.4.1	parking spaces, designated as reserved for individuals with disabilities;	13.4.7	Character height dimensions for viewing distance shall comply with Table 13.4.
13.4.4.2	accessible passenger loading zones;		

**Table 13.4-A. Character Height on Signs**

Minimum Character Height	Maximum Viewing Distance
0.2m (7-7/8 in.)	6.0m (19 ft. 8 in.)
0.15m (5-7/8 in.)	4.6m (15 ft.)
0.1m (3-15/16 in.)	2.5m (8 ft. 2 ½ in.)
0.075m (2-15/16 in.)	2.3m (7 ft. 6 ½ in.)
0.05m (2 in.)	1.5m (4 ft. 11 in.)
0.025m (1 in.)	0.75m (2 ft. 5 ½ in.)

13.4.8 Characters, symbols and backgrounds of signs shall have an eggshell, matte or other glare-free finish.



13.4.9 Characters and symbols shall contrast with their background: either light characters on a dark background or dark characters on a light background. (Refer to Figure 13.4-A)

**Figure 13.4-A. Colour contrast on signs**

13.4.10 Where signs are required to be tactile, letters and numerals shall be: (Refer to Figure 13.4-B)



13.4.10.1 raised at least 0.008m (1/32 in.), not sharply edged

**Figure 13.4-B. Tactile lettering**

13.4.10.2 be between 0.016m (5/8 in.) and 0.050m (2 in.) high; and

13.4.10.3 be sans serif, accompanied by Grade 2 Braille.



13.4.11 Pictograms shall be accompanied by the equivalent verbal description, placed directly below the pictogram. (Refer to Figure 13.4-C)

**Figure 13.4-C. Pictograms**

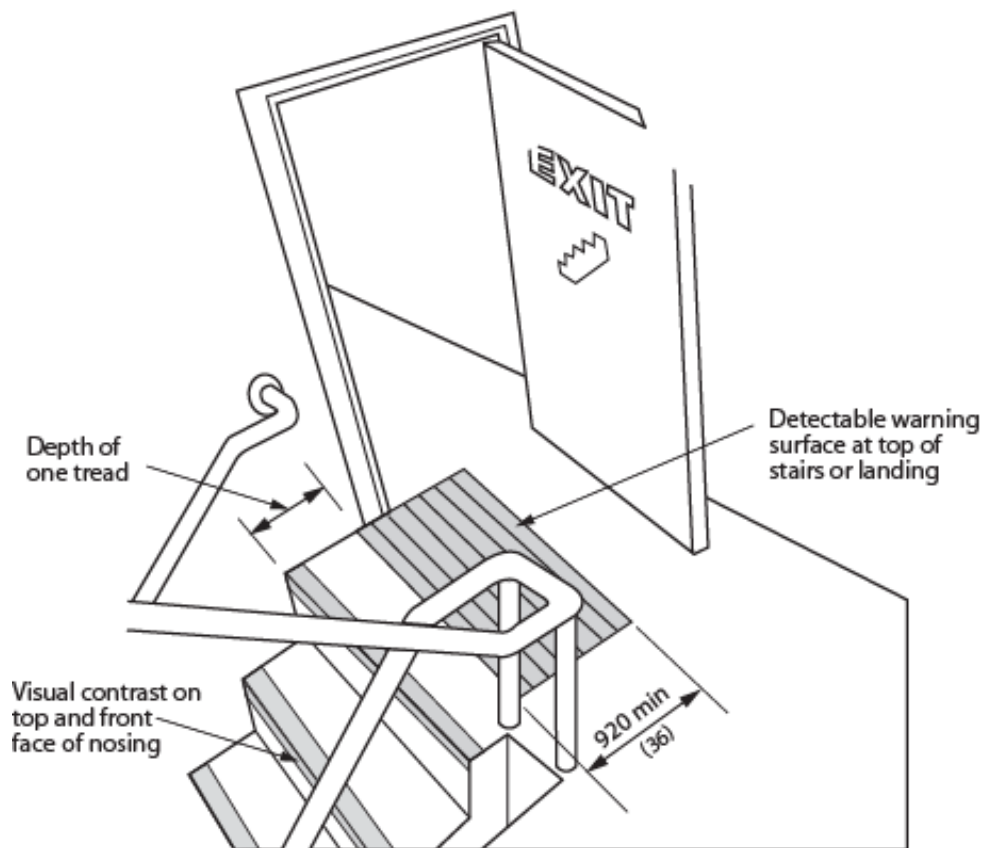
(must incorporate equivalent verbal description)



- 13.4.12 The border dimension of the pictogram shall be 0.15m (6 in.) minimum in height.
- 13.4.13 Where permanent identification is provided for rooms and spaces, signs shall be installed on the wall adjacent to the latch side of the door, located with their centre line at a height between 1.475m (58 in.) and 1.525m (60 in.).

- 13.4.14 Where there is no wall space to the latch side of the door, including at double leaf doors, signs shall be placed on the nearest adjacent wall.
- 13.4.15 The minimum level of illumination on signs shall be 200 lux (18.4 ft-candles).

### 13.5 Standards: Accessible Detectable Warning Surfaces



**Figure 13.5-A. Detectable warnings at stairs**

Detectable warning surfaces provide important cues for persons with a visual impairment to navigate an environment. These surfaces alert a person with a visual impairment to potential hazards, such as crosswalks or stairs. Suitable surfaces include a change in texture and high colour contrast but should not be a tripping hazard.

13.5.4 Detectable warning surfaces shall contrast visually with adjoining surfaces, being either light on dark or dark on light.

13.5.5 Detectable warning surfaces at stairs shall: (Refer to Figure 13.5-A)

13.5.5.1 be provided at the top of the stairs and at landings; and

13.5.5.2 extend the full width of the stair for a depth of at least 0.92m (36 in.) commencing one tread depth back from the stair.

13.5.6 If a walk crosses or joins a vehicular way and the walking surfaces are not separated by curbs, railings or other elements between the pedestrian areas and vehicular areas, the boundary between the areas shall be defined by a continuous detectable warning surfaces, which is 0.92m (36 in.) wide.

13.5.1 Detectable warning surfaces should be used consistently throughout a facility.

13.5.2 Detectable warnings at walkways, curb ramps, stairs and raised platforms shall comply with this section.

13.5.3 All textured surfaces used as detectable warning surfaces shall be cane-detectable and clearly differentiated from the surrounding ground or floor surfaces. (Refer also to Section 13.11).

## 13.6 Standards: Accessible Assistive Listening, Public Access and Information Systems

### Assistive Listening Systems:

13.6.1 This section applies to assembly areas where audible communications are integral to the use of the space (e.g., concert theatres, meeting rooms, classrooms, auditoria, etc.). These assembly areas – defined as those with the ability to accommodate at least 50 persons, with audio amplification systems, with a floor area greater than 100 m<sup>2</sup> (1080 sq.ft.), or with fixed seating – shall have a permanently installed

listening system complying with this section.

- 13.6.2 For other assembly areas, a permanently installed listening system or an adequate number of electrical outlets or other supplementary wiring necessary to support a portable assistive listening system shall be provided. The minimum number of receivers to be provided shall be equal to 4% of the total number of seats, but no less than two.
- 13.6.3 Signage complying with applicable provisions of Section 13.4 shall be installed to notify patrons of the availability of a listening system.
- 13.6.4 Induction loops, infrared systems and FM radio frequency systems shall be considered acceptable types of assistive listening systems for persons who are hard of hearing.
- 13.6.4.1 Where an induction loop system is installed, dimmer switches and other controls that incorporate transformer coils shall be located so as not to interfere with the audio induction loop.
- 13.6.4.2 Where an induction loop system is utilized, at least half the seating area shall be encompassed. Where the listening system provided serves individual fixed seats, such seats shall be located within a 15.0m (50 ft.) viewing distance of the stage or playing area and shall have a complete view of the stage or playing area.
- 13.6.4.3 Where infrared assistive listening devices are used, overhead incandescent lights shall be located so as not to cancel out the infrared signal at the receiver.
- 13.6.4.4 Where an FM loop system or other assistive listening devices are available in public facilities or meeting areas, portable headsets that are compatible with personal hearing aids shall be made available.
- Public Address Systems**
- 13.6.5 Public address systems need to be easy to hear above the ambient background noise. There should be no distortion or feedback, to assist persons with hearing impairments. Background noise should be minimized. Visual provisions should be made for individuals who may not hear an audible public address system.
- 13.6.6 Public address systems shall comply with this section.
- 13.6.7 Public address speakers shall be mounted above head level, and provide effective sound coverage in required areas, such as corridors, assembly and meeting room areas, recreational and entertainment facilities, educational facilities, and common use areas in institutional settings.
- 13.6.8 Public address systems shall be zoned so that information can be directed to key locations only, minimizing background noise in other areas.

- 13.6.9 Where public address systems are used to broadcast background music, the music shall not be broadcast continuously or throughout the entire facility.
- 13.6.10 All-point call systems shall only be utilized for fire and emergency information.
- Information Systems**
- 13.6.12 Video display terminals may present difficulties for persons with visual impairments. Alternate technology or audio interfaces are required.
- 13.6.13 Seated eye-level, reach and knee space provisions should also be considered, to ensure that a person using a wheelchair can access an information terminal.
- 13.6.14 Information systems, such as display kiosks and video display terminals, shall comply with this section.
- 13.6.15 Where information is provided by video display terminals to the general public, clients or customers, the same information shall be provided in an alternative format, such as audio, Braille and large-text print. The minimum font size for large text print shall be 16 point.
- 13.6.16 Information systems designed for direct access by the public, such as
- 13.6.11 Paging systems for staff and other key persons shall be discreet and low volume, and sound only at those devices or locations where such persons might expect to be located.
- touch-screen video display, keyboard or keypad access, shall be mounted at a height suitable for use by persons using wheelchairs or scooters (Refer to Section 13.2).
- 13.6.17 Essential print information shall be printed in large text on a highly contrasting background colour, and should also be available in other formats, such as audiotape and large-text print.
- 13.6.18 Push buttons or other controls for accessing public information systems should be clearly identifiable by colour and/or tone from the background colour, and should include raised numbers, numerals or symbols for easy identification by persons who are visually impaired.
- 13.6.19 Tactile identification shall comply with Section 13.11.

## 13.7 Standards: Accessible Card Access and Security Systems

Today, in urban, suburban and rural sites, seniors and persons with disabilities are conscious of their own vulnerability and therefore tend to seek more reassurance and inherent security than in the past. Where card-access systems are selected as a means of entry to particular facilities or spaces, the systems and components selected should be suitable for use by persons with varying abilities, including persons with reduced manual dexterity, poor vision or difficulty with reaching. The use of heat-sensing activation buttons should be avoided, as they are indiscernible to a blind person.

- 13.7.1 Card-access, safety and security systems shall comply with this section.
- 13.7.2 Adequate lighting shall be provided continuously along public walkways, steps and ramps that are actively used at all times of year and/or where staff and public parking is provided.
- 13.7.3 An audible signalling device (bell, buzzer, or similar device) or a two-way communication system shall be provided for persons requiring assistance at the primary accessible entrance and/or at any covered accessible parking areas. An accessible public telephone complying with Section 12.2 shall be

located at, or close to, primary accessible entrances, for the use of persons requiring assistance.

- 13.7.4 Where accessible individual washrooms in compliance with Section 11.5 are provided in larger public facilities, such as recreation facilities, the washroom shall incorporate an emergency call system linked to a central location (e.g., office or switchboard).
- 13.7.5 Card-entry systems shall:
- 13.7.5.1 be wall-mounted, no higher than 1.06m (42 in.) above the floor or ground, adjacent to the door and free of the door swing; and
- 13.7.5.2 use cards that incorporate a distinctive colour, texture or raised graphic/lettering on one side.
- 13.7.6 Encoded-entry/exit systems, such as keypads, shall:
- 13.7.6.1 be wall-mounted, no higher than 1.06m (42 in.) above the floor or ground, adjacent to the door and free of the door swing; and
- 13.7.6.2 incorporate buttons that are raised; mounted on a clearly differentiated coloured background, and
- 13.7.6.3 include raised numerals or letters in a constant array.

## 13.8 Standards: Accessible Lighting and Glare Sources

Artificial lighting and natural light sources should provide comfortable, evenly distributed light at all working areas, in all circulation routes and in all areas of potential hazard. Also, outdoor lighting should be provided

at entrances, along frequently used access routes and at frequently used outdoor amenities.

13.8.1 Exterior and interior lighting systems shall comply with this section.

### Exterior Lighting

13.8.2 Exterior lighting shall be in compliance with I.E.S.N.A. Standards in all public thoroughfares, and at all pedestrian routes, to provide safe access for persons with disabilities from sidewalks, bus stops and parking areas to nearby facilities and amenities.

minimum 30 lux (3 ft-candles) consistently over the parking spaces, measured at the ground.

13.8.6 At frequently used steps and stairs, lighting shall be located at or beside the steps or stairs, to clearly define the treads, risers and nosings.

13.8.3 At pedestrian entrances, lighting levels should be minimum 100 lux (9.4 ft-candles) consistently over the entrance area, measured at the ground.

13.8.7 All lighting shall be evenly distributed to minimize cast shadows and provide a good colour spectrum.

13.8.8 Supplementary lighting shall be provided to highlight key signage and orientation landmarks.

13.8.4 Over frequently used pedestrian routes, including walkways, paths, stairs and ramps, lighting levels shall be minimum 30 lux (3 ft-candles) consistently over the route, measured at the ground.

13.8.9 Low-level lighting shall be high enough to clear normal snow accumulation.

13.8.5 At frequently used accessible parking spaces, lighting levels shall be

13.8.10 Lighting fixtures shall comply with the relevant parts of Section 9.0 and Section 6.9.

### Interior Lighting

13.8.11 Light sources and fixtures shall be selected to minimize direct glare or indirect glare on nearby reflective surfaces. Light sources shall provide as full a spectrum of light as possible, as an aid to edge and colour definition.

13.8.12 Where fluorescent or quartz light sources with a high blue content are used, the light quality should be enhanced with incandescent lights, to ensure the warm end of the spectrum is adequately present.

- |         |   |         |   |
|---------|---|---------|---|
| 13.8.13 | Lighting shall be configured to create an even distribution at floor level and to minimize pools of light and areas of shadow.  | 13.8.20 | Direct or reflected glare of floors, walls or work surfaces is a major problem for persons with reduced vision. Therefore, every attempt should be made to select light sources, materials and finishes which do not add to the problem, and to ensure that natural daylight is controllable, particularly on west and southwest exposures.   |
| 13.8.14 | The leading edge of stairs, steps, ramps or escalators shall be evenly lighted to minimize tripping hazards.  |         |   |
| 13.8.15 | Lighting levels in elevator lobbies shall be similar to the lighting levels in elevator cabs, to minimize tripping hazards, and in no case shall be less than 200 lux (20 ft-candles).  | 13.8.21 | While the strategic use of lighting is valuable to all individuals, it is especially important for individuals with some form of visual impairment. Glare can make navigating an environment more difficult for an individual with a visual impairment and is in fact uncomfortable for any other individual. In addition, offering a variety of task lighting at work areas is beneficial to all.  |
| 13.8.16 | Emergency lighting over stairs and ramps, in an exit or path of travel, shall be at least 100 lux (10 ft-candles), generally at the walking surface, and in no place less than 50 lux (5 ft-candles).   |         |   |
| 13.8.17 | Lighting over directional or informational signage, or highlighting other orientation features, at public telephones, information or service counters, and card or keypad security systems, shall be no less than 200 lux (20 ft-candles) at the working surface. | 13.8.22 | Systems used to control glare and excessive reflected light shall comply with this section.   |
|         |   | 13.8.23 | Monolithic floor surfaces, such as stone, granite, marble or terrazzo, shall have a matte or honed finish, to minimize reflected glare.   |
| 13.8.18 | Lighting in meeting rooms and assembly areas shall be evenly distributed, and shall be capable of being adjusted (e.g. dimmers).  | 13.8.24 | Extensive high-gloss floor finishes are not acceptable but high-gloss materials may be incorporated into floor finish details, as long as they do not result in large reflective surfaces. Finishes such as vinyl, other composition materials, quarry tile, glazed tile or mosaics, used on horizontal surfaces, such as floors and work surfaces, shall be in matte or satin finishes. Extensive high gloss floor finishes are not acceptable, but high-gloss materials |
| 13.8.19 | Lighting at lecterns, podiums/ platforms or other speaker locations shall be capable of being enhanced, even when other lighting is dimmed, to permit ease of lip-reading and/or viewing of the hand actions of a nearby signer for persons who are deaf.         |         |   |

may be incorporated into floor finish details, as long as they do not result in large reflective surfaces.

13.8.27 Light fixtures shall be selected with diffusers, lenses or recessed light sources, so that no glare is created.

13.8.25 Finishes such as paint, vinyl wall coverings, stone, marble, wood, metals, plastic laminate, etc., used on vertical surfaces, such as walls and columns, shall have matte or satin finishes. Extensive high-gloss wall finishes are not acceptable, but high-gloss materials may be incorporated into wall finish details, as long as they do not result in large reflective surfaces.

13.8.28 Where surface-mounted fluorescent ceiling fixtures are used, they shall have darkened sides (i.e., not wrap-around lenses) and be positioned perpendicular to the dominant direction of travel, or used in valance-type lighting at the sides of the space, so that the lighting is indirect.

13.8.26 Curtains, blinds or other sun screening systems shall be provided at windows and other places where direct sunlight can adversely affect the level of lighting and/or reflected glare.

13.8.29 The location of special features and key orientation elements shall be enhanced through the use of supplementary lighting. Such lighting shall have upward or downward components only.

## 13.9 Standards: Accessible Acoustics

The acoustic environment of public buildings and spaces should accommodate the unique needs of persons who are hearing impaired and who need to differentiate essential sounds from general background noise.

13.9.1 The acoustical environment of facilities used by the general public, clients, customers and employees shall comply with this section.

13.9.2 Floor finishes, wall surfaces and ceilings shall be selected so that occasional noise is not unduly amplified. (e.g., Hard surfaces such as marble or terrazzo will allow each foot step to be heard by persons who are visually impaired, but add

another level of confusion for persons who are hearing impaired.) At accessible routes in large facilities where wayfinding is problematic, the sound transmission/reflection characteristics of finish materials shall aurally differentiate major and secondary paths of travel. Ceiling shapes shall be designed so that echoes do not occur. (Note: domed shapes tend to distort sound.)

13.9.3 Public address and call systems shall be capable of being zoned to key areas, rather than blanketing all areas of a facility at all times. (Refer to Section 13.6)



- 13.9.4 In meeting rooms and assembly areas where the spoken word is key to comprehending the proceedings, all unnecessary background noise (e.g., from fans or other mechanical equipment, air diffusers, etc.) shall be dampened and/or the room shall include adequate sound insulation.

## 13.10 Standards: Accessible Materials and Finishes

- The selection of flooring materials can be critical to the safe and easy movement of persons using all kinds of mobility aids, as well as persons with low vision. easily travel over them without using undue energy or tripping.
- 13.10.1 Floor finishes, such as carpet, should be selected and installed so that persons using wheelchairs and walkers or other mobility aids can easily travel over them without using undue energy or tripping.
- 13.10.2 Finishes should be slip-resistant and should be selected to minimize reflected light and glare.
- 13.10.3 Exterior and interior materials and finishes shall comply with this section.
- Exterior Finish Materials**
- 13.10.4 Suitable paving surfaces for walkways include macadam, concrete, compacted gravel screenings, interlocking brick and patio stones. Such materials used as walkways shall:
- 13.10.4.1 have joints that are no greater than 0.006m (1/4 in.) wide, with variations in level of no more than 0.003m (1/8 in); and
- 13.10.4.2 be laid to drain.
- 13.10.5 Where possible, gratings and grills shall be located to one side of the pedestrian walkways, so as not to impede the accessible route. Where this is not possible, the bars of the grating or grill shall be located perpendicular to the dominant path of travel, with openings of no greater than 0.013m (1/2 in.).
- 13.10.6 Steps shall be finished with a nonslip material and incorporate highly contrasted nosings.
- 13.10.7 Ramp surfaces shall be firm and non-slip.
- 13.10.8 Handrails and guards shall be continuous, smooth and well maintained.
- 13.10.9 The finish of walls adjacent to ramps and stairs shall be non-abrasive.
- Interior Materials and Finishes**
- 13.10.10 Carpet shall be of low-level loop construction, 10- or 12-gauge non-static fibre, directly glued to the sub-floor.
- 13.10.11 Where hard, monolithic materials are selected, they shall be non-slip and non-glare, complying with Section 13.8.

13.10.12 Where floor tiles, bricks or pavers are used, joints should be no wider than 0.006m (1/4 in.) and should be flush.

13.10.13 Wall surfaces in corridors, adjacent to stairs or ramps or any other part of the normal path of travel should have a non-abrasive finish.

## 13.11 Standards: Accessible Textures and Colours

Many persons with visual impairments are highly dependent on visual and tactile cues, which can be provided through the careful use of colour and texture.

13.11.1 Caution is recommended in the selection of heavy or distinct patterns on walls or floors, since these can add visual confusion to settings for persons with low vision. Simple, repetitive, non-directional patterns that feature monochromatic or low-colour contrast are preferred. Changes in material or texture should not necessitate a threshold.

13.11.2 Textural and colour systems shall be used to enhance accessibility and shall comply with this section.

13.11.3 Exterior colour schemes shall incorporate a pronounced colour contrast, to differentiate boundaries of objects, distinguish objects from their background, and to generally enhance spatial orientation. Generally, for seniors and persons with low vision, colours in the warm end of the spectrum (yellow, orange, bright red, etc.) are easier to recognize than those at the cool end of the spectrum.

13.11.4 Signs shall incorporate pronounced glare-free colour contrast. A minimum contrast of 70% light reflectance is required. For signs, the

most visible colours are white or yellow on a black, charcoal or other dark background, such as brown, dark blue, dark green or purple. Black lettering on white is also acceptable, although less readable than the reverse. Unacceptable background colours are light grey and pastel colours. Red lettering on a black background is also unacceptable.

13.11.5 Colour contrast shall be used as a safety measure to define edges or boundaries of objects (e.g., stair nosings, doors, handrails, etc.).

13.11.6 Colour or tone shall be used to visually define the boundaries of a room (i.e., where the wall meets the floor). Baseboards in monochromatic environments shall be highly contrasting with the wall and floor colours, to provide boundary definition.

13.11.7 Colour shall be used consistently to visually identify distinctive objects (e.g., exit doors).

13.11.8 Bright colours and/or a highly contrasting tone shall be used to assist with wayfinding. (e.g. A signage band located on the wall at eye level is easier to follow than monolithic wall colouring and can be the visual cue for other essential signs.)

- 13.11.9 End walls or return walls in long corridors shall be visually defined using highly contrasting colours or tone, to enhance a change of direction or the end of the space. deeply grooved concrete, terrazzo or other stone-like materials, with closely centred grooves at right angles to the path of travel, or applied carborundum or other non-slip strips
- 13.11.10 Detectable warning surfaces shall be used to define potential hazards. (Refer to Section 13.5) All textured surfaces used as detectable warning devices shall be cane-detectable and clearly differentiated from the surrounding paving surfaces. 13.11.10.3 Supplementary textural cues shall also be provided (e.g., by using different floor textures or materials, in major and minor routes).
- 13.11.10.1 Suitable exterior textures include saw-cut concrete with regular grooves, positioned no more than 0.05m (2 in.) apart; grooves should be at right angles to the path of travel. 13.11.10.4 Clearly defined boundaries of materials like carpeting or floor tiles shall enhance wayfinding by defining such as the junction between walls and floors, doorway recesses and corridor intersections.
- 13.11.10.2 Suitable interior textures include raised domes, dots or squares, 13.11.10.5 Throughout any one site, the same texture shall be used to identify the same type of hazard.

# 14 Accessible Recreational Facilities

## 14.1 Standards: Accessible Arenas, Halls

Opportunities for recreation, leisure and active sport participation should be available to all members of the community. Access should be provided to halls, arenas, and other sports facilities, including access to the site, all activity spaces, gymnasias, fitness facilities, lockers, change rooms and showers. Persons who are disabled may be active participants, as well as spectators, volunteers and members of staff.

In addition to the design requirements specified in Section 5.0 through to Section 13.0, all recreational facilities shall comply with this section.

14.1.1 Arenas, halls and other indoor recreation facilities shall:

14.1.1.1 where **visitor, spectator and/or participant seating** is provided, have accessible seating options in compliance with Section 12.8;

14.1.1.2 provide an **accessible route** in compliance with Section 9.0 to the arena/facility floor and/or ice surface, including access panels or gates providing at least 0.95m (37 ½ in.) clear width;

14.1.1.3 where facilities are provided for performances and other events, have a direct **accessible route** in

compliance with Section 9.0 from the lobby/entrances and viewing locations to all performing areas, including stages, dressing rooms, washrooms and all other spaces used by performers;

14.1.1.4 where **dressing facilities** are provided, have dressing facilities that comply with Section 12.9;

14.1.1.5 where **lockers or shelving** is provided, have lockers and shelving that comply with Section 12.6;

14.1.1.6 where **coat hooks** are provided, have at least 10%, but never less than one, within the reach ranges specified in Section 5.0;

14.1.1.7 where **toilets and bathing facilities** are provided, have toilets and bathing facilities that comply with Section 11.0;

14.1.1.8 where **concessions or other service counters** are provided, comply with Section 12.5;

14.1.1.9 where **swimming pool, hot pools or therapy pools** are provided, comply with Section 14.3; and

14.1.1.10 where **staff accommodation and related support areas, offices or meeting rooms** are provided, comply with all relevant sections.

14.1.2 Arenas, halls and other indoor recreation facilities shall comply with all relevant parts of Sections 5.0 through to Section 13.0.

## 14.2 Standards: Accessible Outdoor Recreational Facilities

Opportunities for recreation, leisure and active sport participation should be available to all members of the community. Access should be provided to playing fields and other sports facilities, including access to the site, all activity areas, outdoor trails, docks, swimming areas, play spaces, lockers, change rooms and showers. Persons who are disabled may be active participants, as well as spectators, volunteers and members of staff.

In addition to the design requirements specified in Section 5.0 through to Section 13.0, the outdoor recreation facilities listed below shall comply with this section.

14.2.1 Where boardwalks are provided, they shall:

14.2.1.1 have a minimum width of 2.44m (96 in.);

14.2.1.2 incorporate surfaces constructed of firm, non-slip materials. (Where wooden planks are used, they shall be laid perpendicular to the path of travel and have joints no greater than 0.006 mm (1/4 in.);

14.2.1.3 incorporate a continuous up-stand edge where the grade drop-off on any side of the boardwalk is greater than 0.2m (8 in.). The up-

stand edge shall be at least 0.1m (4 in.) high and of a contrasting colour to the surrounding terrain;

14.2.1.4 incorporate handrails, guards or other suitable barriers where the grade drop-off is greater than 0.450m (18 in.);

14.2.1.5 incorporate access points to boardwalks that allow easy wheelchair access; and

14.2.1.6 incorporate benches, garbage cans, drinking fountains, etc., where provided, shall be located adjacent to the boardwalk on firm, level surfaces at the same elevation as the boardwalk. (Refer also to Section 6.9)

14.2.2 Where pathways, trails and footbridges are provided:

14.2.2.1 where significant changes in grade occur, pathway and trail routes shall ideally be sloped at no greater than 1:20, or have adjacent steps and ramps;

14.2.2.2 the slope on bridges shall not exceed 1:20;

14.2.2.3 the surfacing shall be of non-slip materials and include suitable colour-contrasting handrails and/or guards;

14.2.2.4	A different ground colour and/or texture shall be used to indicate the following: risk areas, such as intersections, ramps or steps; and functional changes, such as seating areas, viewpoints or outlooks (Refer to Section 13.11); and	14.2.4.3	have accessible paths and trails that incorporate tactile mapping at the start of the trail and periodically along its length;
14.2.2.5	all garbage cans, light standards, benches and other potential obstructions shall be located adjacent to pathways and trails (Refer to Section 6.9).	14.2.4.4	where special lookout locations or wildlife viewing areas are provided, they shall be identified with clear signage;
14.2.3	Where rest areas are provided, they shall:	14.2.4.5	have information and interpretative signage that incorporates Braille.
14.2.3.1	be provided on trails, pathways and walkways;	14.2.5	Where playing fields are provided, they shall:
14.2.3.2	be positioned adjacent to the trail, pathway or walkway;	14.2.5.1	have controlled access points that are designed to accommodate persons using wheelchairs (for example, where turnstiles are used, an adjacent accessible gate shall be provided;
14.2.3.3	have accessible ground surfaces in compliance with Section 6.3;	14.2.5.2	have level seating areas provided beside sports fields for spectators or participants with disabilities;
14.2.3.4	use a contrasting ground finish material to identify functional change; and	14.2.5.3	(where provided) have public viewing areas that comply with Section 12.8;
14.2.3.5	incorporate at least one bench, in compliance with Section 6.9.	14.2.5.4	(where provided) have public washrooms that comply with Section 11.0; and
14.2.4	Where natural areas are available, they shall:	14.2.5.5	(where provided) have public showers and change rooms that comply with Section 11.0 and Section 12.9.
14.2.4.1	have accessible pathways, trails and footbridges where environmental conditions will permit;		
14.2.4.2	have accessible paths and trails that incorporate rest areas with appropriate seating;		

- 14.2.6 Where parks, parkettes and playgrounds are provided, they shall:
- 14.2.6.1 incorporate entrance gates, paths and walkways throughout the park that are accessible to persons using wheelchairs or scooters;
  - 14.2.6.2 provide picnic and play areas in both sunny and shaded areas;
  - 14.2.6.3 provide children's play areas and playground equipment, sandboxes or other amenities that are designed to be accessible to and useable by children with varying disabilities;
  - 14.2.6.4 provide equipment with colour contrasts;
  - 14.2.6.5 provide surfaces that are firm, level, non-abrasive and drain rapidly; and
  - 14.2.6.6 (where provided) all surfaces below playground equipment, including swings, slides and climbing structures, shall be level, free-draining and provide a safe, resilient landing surface.
- 14.2.7 Where grandstands and other viewing areas are provided, they shall have accessible seating options for visitors, spectators and/or participants that is in compliance with Section 12.8.
- 14.2.8 Where outdoor pools are provided, they shall comply with Section 14.3.
- 14.2.9 Where washrooms are provided, they shall comply with Section 11.0.
- 14.2.10 Where dressing facilities are provided for use by the general public, clients, customers, performers or staff, at least 50%, but never less than one, for each type of use in each cluster of dressing facilities shall be accessible and in compliance with Section 12.9. It is preferable to have all dressing facilities accessible.

14.2.11 Where picnic tables are provided, they shall: (Refer to Figure 14.2-A)

14.2.11.1 incorporate an extension of the table surface to make them accessible to persons using wheelchairs;

14.2.11.2 have the top of the accessible picnic table 0.71m (28 in.) to 0.865m (34 in.) above the finished floor or ground;

14.2.11.3 have knee space under the table of at least 0.76m (30 in.) wide by 0.48m (19 in.) deep and 0.685m (27 in.) high;

14.2.11.4 comprise of at least 10%, but not less than one, of each cluster of picnic tables (although it is preferable to have all picnic tables comply with this section);

14.2.11.5 be located adjacent to an accessible route complying with Section 9.0;

14.2.11.6 incorporate a firm, level surface around the table, extending at least 2.0m (78 ¾ in.) on all sides of the table, with an accessible path leading to the table; and

14.2.11.7 incorporate a change in texture from a pathway to the picnic table area as an important cue for the visually impaired.

14.2.12 Where drinking fountains are provided, they shall comply with Section 12.2.1.

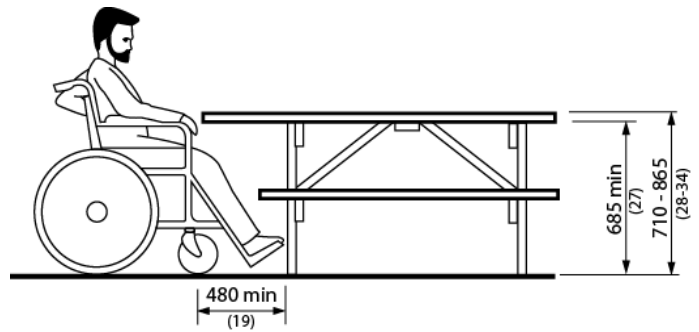


Figure 14.2-A. Picnic table



- 14.2.13 Where public telephones are provided, they shall comply with Section 12.2.2.
- 14.2.14 Where illumination (where applicable) is provided, it shall:
- 14.2.14.1 be a minimum of 10 lux (1ft-candle);
  - 14.2.14.2 be maintained at 5 lux (0.5 ft-candles) in areas of heavy trees and shrubbery;
  - 14.2.14.3 be maintained at 5 lux (0.5 ft-candles) in all other areas of park at ground level; and
  - 14.2.14.4 be indirect, non-glare, non-flickering type and provide even levels of light distribution. (Refer to Section 13.8)
- 14.2.15 Where waterfront areas are provided, they shall:
- 14.2.15.1 Incorporate paths and/or lookout points that are accessible to all individuals;
  - 14.2.15.2 Incorporate accessible seating along the paths and lookout points that are in compliance with Section 6.9.2 and Section 6.9.3; and
- 14.2.15.3 (where provided) locate accessible parking as close as possible to the waterfront area with an accessible route provided from the parking area to paths and/or lookout points.
- 14.2.16 Where dock facilities for fishing, boating or swimming are provided, they shall:
- 14.2.16.1 be located on an accessible route in compliance with Section 9.0;
  - 14.2.16.2 where changes in elevation are necessary, incorporate ramps or curb ramps in compliance with Section 6.5 and Section 8.2. Ramps with a slope no greater than 1:12 are acceptable;
  - 14.2.16.3 incorporate a continuous up-stand edge, at least 0.1m (4 in.) high and of a contrasting colour where dock surfaces are greater than 0.2 (8 in.) above the surface of the water;
  - 14.2.16.4 incorporate a guardrail where dock surfaces are greater than 0.45m (18 in.) above the surface of the water; and
  - 14.2.16.5 where steps are provided to access the water for swimming, incorporate colour-contrasting handrails at the steps. Such handrails shall extend to a minimum of 0.6m (24 in.) above the dock surface and return down to the dock.

## 14.3 Standards: Accessible Swimming Pools

Swimming is an important recreational and therapeutic activity for many persons with disabilities. Primary considerations for accommodating persons who have mobility impairments include accessible change facilities and a means of access into the water. Ramped access into the water is preferred over lift access, as it promotes integration (everyone will use the ramp) and independence.

- |          |  |           |  |
|----------|--|-----------|--|
| 14.3.1   | In addition to the design requirements specified in Section 5.0 through to Section 13.0, swimming pools, wading pools, hot pools and therapy pools shall comply with this section.                         | 14.3.2.5  | where steps are provided into the pool, steps marked with a colour-contrasting strip at least 0.05m (2 in.) wide, at both the riser and the tread;   |
| 14.3.2   | Swimming pools, wading pools, hot pools and therapy pools shall have:  | 14.3.2.6  | where steps are provided into the pool, colour-contrasting handrails on both sides of the steps. Such handrails shall extend at least 0.3m (12 in.) beyond the pool edge;                            |
| 14.3.2.1 | where the pool is indoors, a direct accessible route in compliance with Section 9.0 from the lobby/entrance to the change rooms;   | 14.3.2.7  | where an up-stand edge is provided, it shall be a minimum of 0.2m (8 in.) and a maximum of 0.4m (16 in.) in height;  |
| 14.3.2.2 | a direct accessible route in compliance with Section 9.0 from the change rooms to the pool deck;   | 14.3.2.8  | pool boundaries clearly defined by both a textural change and a colour contrast to both the water surface and surrounding pavement;  |
| 14.3.2.3 | access from the pool deck into the water, provided by a ramp sloped no steeper than 1:12. In retrofit situations where it is technically infeasible to provide a ramp, a mechanical pool lift can be used; | 14.3.2.9  | firm, slip-resistant materials and finishes used on the pool perimeter, deck or paved areas surrounding the pool;  |
| 14.3.2.4 | a shower chair available at each facility for use in transferring into the water;  | 14.3.2.10 | non-abrasive and easy-to-clean pool perimeter finishes;  |
|          |  | 14.3.2.11 | adequate drainage on the pool deck to drain water quickly;   |
|          |  | 14.3.2.12 | where pool-depth indicator marking is provided, depth indicator markings, as well as 'SHALLOW END' and 'DEEP END' markings, of a highly contrasting colour and sufficient size to be easily visible; |

- |           |   |           |   |
|-----------|---|-----------|---|
| 14.3.2.13 | where diving boards or platforms are provided, they shall be clearly marked and protected. Overhead clearances should be a minimum of 2.03m (6'-8") or protected by suitable guards;              | 14.3.2.16 | safety equipment and other accessories shall be stored such that they do not present a tripping hazard; and   |
| 14.3.2.14 | where lanes, and/or lane markers are provided, they shall be of a highly contrasting colour. Tie-off devices for lane markers shall be positioned such that they do not create a tripping hazard; | 14.3.2.17 | lifeguard chairs, slides and other pool related structures shall be in highly contrasting colours.  |
| 14.3.2.15 | where starting blocks are provided, they shall be of a highly contrasting colour and capable of being securely fixed in place;  | 14.3.3    | Wading pool access shall be safe and gradual, so that a child with a disability can be assisted into the water easily and/or use a wheelchair to enter. |
|           |   | 14.3.4    | Swimming pools shall be of 'level deck' design.   |

# 15 Additional Facility-Specific Accessibility Requirements

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## 15.1 Standards: Accessible Civic Facilities

- 15.1.1 The role of persons with disabilities should not be restricted or limited to that of the customer or consumer. Workspaces should be designed with a view to future adaptation or accommodation of individual equipment or assistive devices.
- 15.1.2 In addition to the design requirements specified in Section 5.0 through to Section 13.0, civic facilities shall comply with this section.
- 15.1.3 In areas used for transactions where counters are provided for the distribution of goods or services to the public (such as ticketing counters, teller stations, registration counters, information counters, box office counters and library check-out areas), at least one shall have a portion of the counter accessible and in compliance with this section.
- 15.1.3.1 A portion of the main counter which is a minimum of 0.865m (34 in.) in length shall be provided with a maximum height of 0.865m (34 in.) or an auxiliary counter with a maximum height of 0.865m (34 in.) in close proximity to the main counter shall be provided.
- 15.1.3.2 Where counters are dispersed throughout the facility, the accessible counters must also be dispersed throughout the facility.
- 15.1.3.3 All accessible service counters shall be on an accessible route that complies with Section 9.0.
- 15.1.4 In public facilities where counters or teller windows have solid partitions or security glazing to separate personnel from the public:
- 15.1.4.1 at least one shall provide a method to facilitate voice communication. Such methods may include, but are not limited to, grills, slats, talk-through baffles, intercoms or telephone handset devices; and
- 15.1.4.2 the method of communication provided shall be accessible to both individuals who use wheelchairs and individuals who have difficulty bending.

## 15.2 Standards: Accessible Transportation Facilities

- 15.2.1 Links to usable transportation are essential to all members of a community. This includes public and private bus, taxi, train, and airplane arrival and departure points. A variety of lift devices may need to be accommodated, and alternatives to audio- and/or visual only scheduling should be available.
- 15.2.2 In addition to the design requirements specified in Section 5.0 through to Section 13.0, transportation facilities located within a site shall comply with this section.
- Bus Shelters**
- 15.2.3 Bus shelters shall:
- 15.2.3.1 be located on firm, level pads approximately at the same elevation as the sidewalk or walkway
- 15.2.3.2 have clearances around at least two sides of the shelter, including the landing pad side, of at least 1.22m (48 in.);
- 15.2.3.3 provide a clear view of oncoming traffic;
- 15.2.3.4 incorporate sufficient clear floor space to accommodate a person using a wheelchair or scooter; and
- 15.2.3.5 feature at least one seat with armrests and a seat height between 0.4m (16 in.) and 0.45m (18 in.).
- 15.2.4 All glazed panels surrounding bus shelters shall incorporate decals, and other safety features as specified in Section 4.1.8.
- Bus Stops**
- 15.2.5 Bus stops shall:
- 15.2.5.1 incorporate a paved, firm, level surface, in compliance with local authority standards; and
- 15.2.5.2 not be impeded by adjacent street furniture, such as dispensers, vending machines, waste boxes, planters, posts, signs and guy wires.
- Transit Terminals**
- 15.2.6 Where bus platforms or other boarding platforms are provided, they shall allow safe access for persons using wheelchairs, and where possible, provide level access into buses.
- 15.2.7 The edges of platforms shall incorporate a continuous detectable warning surface at least 610 mm (24 in.) wide that complies with Section 13.5.
- 15.2.8 Lighting levels at all boarding platforms shall be at least 100 lux (10

ft-candles) at the platform or boarding-surface edge. Boarding locations shall incorporate visible and audible warning signals to advise travellers of approaching vehicles.

15.2.9 Where special lifting devices are used, either on the vehicle or at the

boarding point, appropriate manoeuvring space shall be provided around the boarding point for waiting passengers using wheelchairs.

15.2.10 Seating shall be provided in compliance with Section 6.9.3. at or close to boarding points.

## 15.3 Standards: Accessible Libraries

15.3.1 In addition to the design requirements specified in Section 5.0 through to Section 13.0, libraries shall comply with this section.

15.3.2 Where fixed seating, tables or study carrels are provided, at least 10% shall be accessible and in compliance with this section. It is preferable to have all fixed seating, tables and study carrels accessible.

15.3.3 At least one lane at each checkout area shall be accessible and comply with this section. It is preferable to have all lanes at all checkout areas accessible.

15.3.4 Where computer catalogues or workstations are provided, at least 50% shall be accessible and shall comply with this section. It is preferable to have all computer catalogues and workstations accessible, including the provision of information in Braille and large print.

15.3.5 Where provided, computer catalogue or computer workstation shall incorporate: (Refer to Figure 15.3-A)

15.3.5.1 knee and toe space below in compliance with Section 5.0 and Section 12.4;

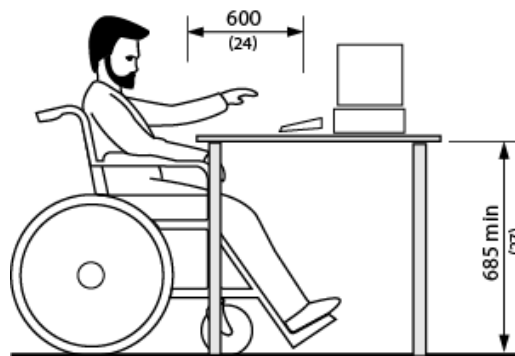


Figure 15.3-A. Work surface

15.3.5.2 a maximum work surface height of 0.865m (34 in.); and

15.3.5.3 a maximum table depth of 0.9m (35 in.).

15.3.6 Accessible fixed seating, tables and study carrels shall be located on an accessible route in compliance with Section 9.0.

15.3.6.1 Clearances between fixed seating, tables and study carrels shall comply with Section 9.0.

15.3.7 Where shelving is provided at fixed seating, tables or study carrels, the shelving shall be no higher than 1.2m (47 in.). (Refer to Figure 15.3-B) Accessible fixed study carrels shall incorporate:

15.3.7.1 work surfaces and knee/toe clearance in compliance with Section 5.0;

15.3.7.2 an electrical outlet; and

15.3.7.3 lighting levels of at least 100 lux (9.3 ft-candles) at the work surface.

15.3.8 Where provided, traffic control or book security gates shall comply with Section 4.1.7.

15.3.9 Minimum clear aisle space at card catalogues and at stacks shall comply with Section 5.0. Aisle configurations shall incorporate a clear floor space allowing a person in a wheelchair to make a 180-degree turn. (Refer to Figure 15.3-C)

15.3.10 Maximum reach heights at card catalogues shall comply with Section 5.0.

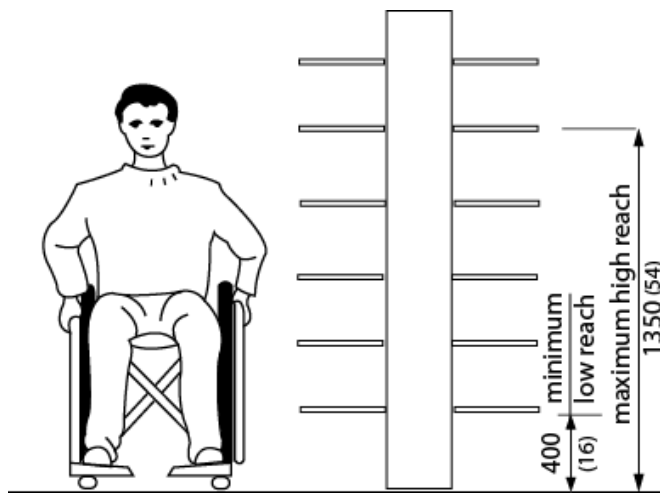


Figure 15.3-B. Reach heights

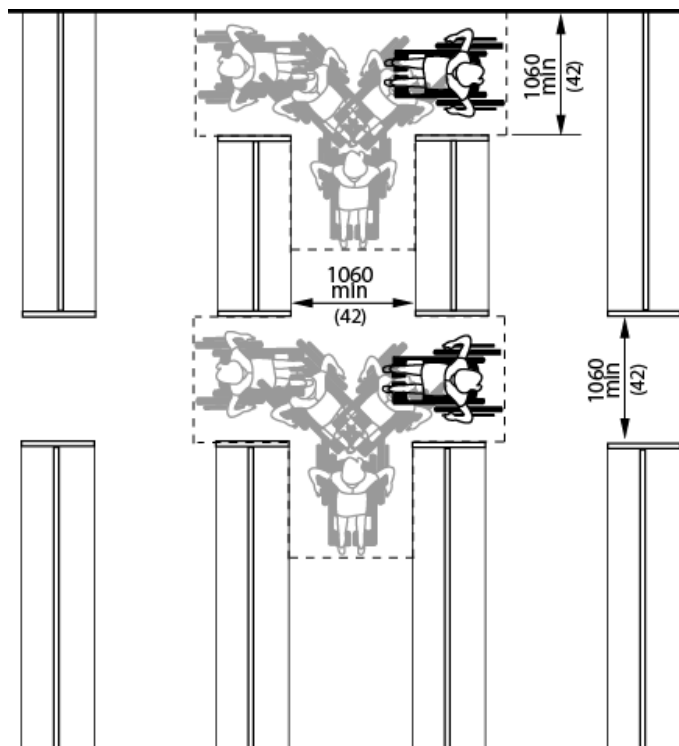


Figure 15.3-C. Aisle width

- 15.3.11 Circulation service counters and information service counters shall comply with Section 12.5.
- 15.3.12 A minimum of one movable chair shall be provided at every information service counter, computer catalogue or computer workstation.
- 15.3.13 Book drop slots shall:
  - 15.3.13.1 be located on an accessible route complying with Section 9.0;
  - 15.3.13.2 be located adjacent to a 2.44m (96 in.) by 2.44m (96 in.) level platform. In a retrofit situation where it is technically infeasible to create a 2.44m by 2.44m (96 by 96 in.) platform, the platform may be reduced to 1.525m (60 in.) by 1.525m (60 in.); and
- 15.3.13.3 have a slot that is operable using one hand, located between 0.86m (34 in.) and 0.9m (35 in.) above the floor.
- 15.3.14 Lighting at book stacks shall be mounted directly over the aisle space and provide a minimum of 200 lux (20 ft-candles) at a nominal working height of 0.92m (36 in.).
- 15.3.15 The acoustic quality shall be free of unnecessary background noise and should permit comprehension by persons with limited hearing. (Refer also to Section 13.9)
- 15.3.16 Where CDs tapes, talking books, etc. are available as part of the library resource materials, or for loan purposes, a separate space shall be provided for auditing this material without disturbing other library users.

## **15.4 Standards: Accessible Municipal Courts**

- 15.4.1 Municipal court facilities should accommodate persons with disabilities, who may be members of the judiciary, court clerks or other officials, defendants, members of counsel and members of the public.
  - 15.4.1.1 Court facilities usually incorporate changes in level at the judge's dais and court officials' areas. While it is not required to make all of these areas fully accessible, it is a requirement that they be easy to adapt, should the need arise in the future to accommodate a mobility impaired person.
  - 15.4.1.2 Other areas of the court generally used by the public, defendants, witnesses and counsel should be accessible to all persons.
  - 15.4.2 In addition to the design requirements specified in Section 5.0 through to Section 13.0, municipal courts shall comply with this section.
  - 15.4.3 In addition to the accessible entrances used by staff or the public as required in Section 9.2, where provided, at least one restricted entrance and one secured entrance to the facility shall be accessible.



- 15.4.3.1 Restricted entrances are those entrances used only by judges, public officials, facility personnel or other authorized parties on a controlled basis.
- 15.4.3.2 Secure entrances are those entrances to judicial facilities used only by detainees and detention officers. Exception: Secured entrances, doors and doorways operated only by security personnel shall not be required to have accessible door hardware.
- 15.4.4 An accessible route, complying with Section 9.0, shall be provided through fixed security barriers at required accessible entrances. Where security barriers incorporate equipment such as metal detectors, fluoroscopes, or other similar devices, which cannot be made accessible, an accessible route shall be provided adjacent to such security screening devices, to facilitate an equivalent circulation path.
- 15.4.5 Where a two-way communication system is provided to gain admittance to a facility, or to restricted areas within a facility, the system shall provide both visual and audible signals and shall comply with Section 13.2.
- 15.4.6 Where provided, the following elements and spaces shall be on an accessible route complying with Section 9.0:
- 15.4.6.1 Spectator, Press and other areas with Fixed Seats. Each spectator, press and other area with fixed seats having a seating capacity of 25 or less, shall have within its defined area a clear floor space complying with Section 5.0. Where the seating capacity of a spectator, press and other area with fixed seats is greater than 25, seating provision shall be provided in compliance with Section 12.8.
- 15.4.6.2 Jury Boxes and Witness Stands. Each jury box and witness stand shall have within its defined area clear floor space complying with Section 5.0. Exceptions: In alterations, accessible wheelchair spaces are not required to be located within the defined area of jury boxes or witness stands and may be located outside these spaces where ramp or lift access poses a hazard by restricting or projecting into a required means of egress.
- 15.4.6.3 Judges' Benches and Courtroom Stations. Judges' benches, clerks' stations, bailiffs' stations, court reporters' stations, and litigants' and counsel stations shall comply with Section 12.4. Exceptions: Vertical access to raised judges' benches or courtroom stations need not be installed, provided that the requisite areas and manoeuvring spaces are installed at the time of initial construction, to allow future installation of a means of vertical access complying with Section 8.1, Section 10.1 or Section 10.3 without requiring substantial reconstruction of the space.
- 15.4.7 Permanently installed assistive listening systems in compliance with

Section 13.6 shall be provided in each courtroom. The minimum number of receivers shall be 4% of the room occupant load, but not less than two receivers. An informational sign indicating the availability of an assistive listening system shall be posted in a prominent place.

15.4.8 Where provided in areas for jury assembly or deliberation, the following elements or spaces shall be

on an accessible route complying with Section 9.0 and shall comply with the following provisions:

15.4.8.1 refreshment areas, kitchenettes and fixed or built-in refreshment dispensers shall be accessible to persons with disabilities.

15.4.8.2 where provided, drinking fountains shall comply with Section 12.2.

## 15.5 Standards: Accessible Police Stations

15.5.1 Police stations should accommodate persons with disabilities, who may be members of the public, detainees, members of counsel or police staff. All areas of the police station that are used by the public, members of staff and counsel should be fully accessible to persons with disabilities. Secure areas, such as cells and common areas used by detainees, should have provisions to accommodate persons with disabilities.

15.5.2 In addition to the design requirements specified in Section 5.0 through to Section 13.0, police stations shall comply with this section, including all common use areas serving accessible cells or rooms and all public use areas.

15.5.2.1 Exception: Requirements for areas of rescue assistance in Section 13.1 do not apply. Compliance with requirements for elevators and stairs is not required in multi-storey housing facilities where accessible cells or rooms, all common use areas serving them

and all public use areas are located on an accessible route.

15.5.2.2 Exception: Secured entrances, doors and doorways operated only by security personnel shall not be required to have accessible door hardware.

15.5.3 Where **security systems** are provided at public or other entrances required to be accessible by this section, an accessible route complying with Section 9.0 shall be provided through fixed security barriers at required accessible entrances. Where security barriers incorporate equipment such as metal detectors, fluoroscopes, or other similar devices, which cannot be made accessible, an accessible route shall be provided adjacent to such security screening devices, to facilitate an equivalent circulation path.

15.5.4 In **non-contact visiting areas** where detainees are separated from visitors, the following elements, where provided, shall be accessible and

	located on an accessible route complying with Section 9.0:	15.5.5.2	At least one toilet and one bathing facility shall comply with Section 11.0.
15.5.4.1	Cubicles and Counters: 5%, but not less than one, shall comply with Section 13.4 on both the visitor and detainee sides. Where counters are provided, they shall comply with Section 12.5 on both the visitor and detainee sides. Exception: Non-contact visiting areas not serving accessible cells or rooms.	15.5.5.3	Accessible beds shall have manoeuvring space at least 0.915m (36 in.) wide along one side.
		15.5.5.4	At least one drinking fountain and/or water cooler shall comply with Section 12.2.
		15.5.5.5	Fixed or built-in tables, counters or work surfaces shall comply with Section 12.4.
15.5.4.2	Partitions: Solid partitions or security glazing separating visitors from detainees through which communication is necessary shall incorporate communication systems, which are accessible to both individuals who use wheelchairs and individuals who have difficulty bending. If such communication systems incorporate a telephone handset, at least one telephone handset shall be equipped with a volume control.	15.5.5.6	At least one fixed bench shall comply with Section 6.9.3.
		15.5.5.7	Fixed or built-in storage shall comply with Section 12.6.
		15.5.5.8	All controls intended for operation by detainees shall comply with Section 13.2.
15.5.5	<b>Accessible cells</b> shall be located on an accessible route in compliance with Section 9.0 and the following elements or spaces shall be accessible to serve accessible cells:	15.5.6	At least 2%, but not less than one of the total number of cells shall comply with this section. Where special cells are provided (e.g., orientation, protective custody, disciplinary, segregation, detoxification or medical isolation), at least one of each purpose shall comply with this section. In addition to the aforementioned cell requirements, at least 2%, but not less than one, of general cells shall be equipped with audible emergency warning systems or permanently installed telephones within the cell, in compliance with this section.
15.5.5.1	All doors and doorways on an accessible route shall comply with Section 9.3. Exception: Secured entrances, doors and doorways operated only by security personnel shall not be required to have accessible door hardware.		

- 15.5.7 **Medical care facilities** providing physical or medical treatment or care shall be accessible to persons with disabilities.
- 15.5.8 Where **audible emergency warning systems** are provided to serve occupants of cells, visual alarms complying with Section 13.3 shall also be provided.
- 15.5.8.1 Exception: Visual alarms are not required where detainees are not allowed independent means of egress. Where permanently installed telephones are provided within cells, they shall have volume controls.

## 15.6 Standards: Accessible Places of Worship

- 15.6.1 Access to all areas of worship should be provided. Access assumes that persons with disabilities may be participants, leaders, staff or volunteers.
- 15.6.2 In addition to the design requirements specified in Section 5.0 through to Section 13.0, churches, chapels and other places of worship and/or reflection shall comply with this section.
- 15.6.3 All areas in churches, chapels and other places of worship and/or reflection shall be accessible to
- disabled persons, including main areas of worship, meeting rooms, washrooms, coatrooms and offices.
- 15.6.3.1 accessible seating shall be provided in compliance with Section 12.8;
- 15.6.3.2 pulpits, altars, daises and choir areas shall comply with Section 12.8;
- 15.6.3.3 public address systems shall comply with Section 13.6; and
- 15.6.3.4 assistive listening systems shall comply with Section 13.6.

## 15.7 Standards: Accessible Business and Mercantile Facilities

- 15.7.1 The role of persons with disabilities should not be restricted or limited to that of the customer or consumer. Workspaces should be designed with a view to future adaptation or accommodation of individual equipment or assistive devices.
- 15.7.2 In addition to the design requirements specified in Section 5.0 through to Section 13.0, business
- and mercantile facilities shall comply with this section.
- 15.7.3 In areas used for transactions where counters have cash registers and are provided for sales and distribution of goods or services to the public, at least one shall have a portion of the counter accessible and in compliance with this section.

- 15.7.3.1 The counter shall have a portion of the counter that is at least 0.92m (36 in.) in length, with a maximum height of 0.865m (34 in.) above the finished floor.
- 15.7.3.2 Such counters shall include, but not be limited to counters in retail stores and distribution centres.
- 15.7.3.3 Where counters are dispersed throughout the facility, the accessible counters must also be dispersed throughout the facility.
- 15.7.4 In areas used for transactions that may not have a cash register but at which goods and services are sold, including, but not limited to, ticketing counters, teller stations, registration counters, information counters, box office counters and library check-out areas, either:
- 15.7.4.1 a portion of the main counter which is a minimum of 0.865m (34 in.) in length shall be provided with a maximum height of 0.865m (34 in.); or
- 15.7.4.2 an auxiliary counter with a maximum height of 0.865m (34 in.) in close proximity to the main counter shall be provided.
- 15.7.5 All accessible sales and service counters shall be on an accessible route that complies with Section 9.0.
- 15.7.6 Accessible checkout aisles shall be provided in conformance with Table 15.7.

**Table 15.7-A. Required Number of Accessible Checkout Aisles**

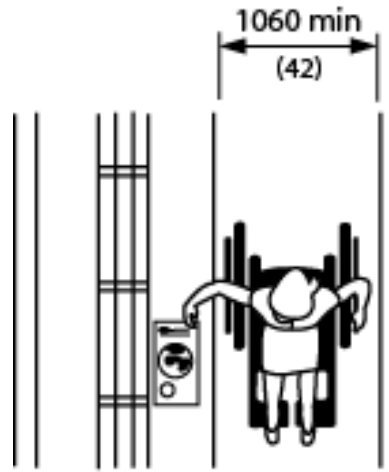
Total checkout aisles of each design	Minimum number of accessible checkout aisles
1 to 4	1
5 to 8	2
9 to 15	3
Over 15	3 + 20% of additional aisles

- 15.7.7 The clear width of accessible checkout lines shall comply with Section 9.0, and the maximum adjoining counter height shall not exceed 0.965m (38 in.) above the finished floor. The top of the lip shall not exceed 1.015m (40 in.) above the finished floor.
- 15.7.8 Signage identifying accessible checkout aisles shall incorporate the International Symbol of Access and shall be mounted above the checkout aisle in the same location where the checkout number or type of checkout is displayed.
- 15.7.9 Any devices used to prevent the removal of shopping carts from store premises shall not prevent access or egress to people in wheelchairs. An alternate entrance that is equally convenient to that provided for ambulatory persons is acceptable.

## 15.8 Standards: Accessible Cafeterias

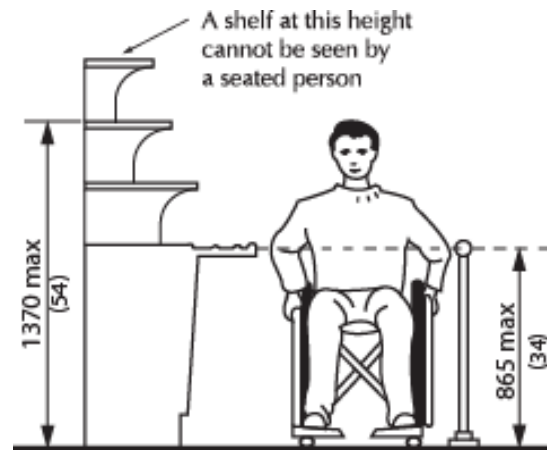
- 15.8.1 Cafeteria design needs to reflect the lower sight lines, reduced reach, knee-space and manoeuvring requirements of persons using wheelchairs or scooters.
- 15.8.2 In addition to the design requirements specified in Section 5.0 to Section 13.0, cafeterias shall comply with this section.
- 15.8.3 Where fixed tables or counters are provided, at least 10%, but not less than one, shall be accessible and shall comply with Section 12.4. It is preferable to have all fixed tables accessible.
- 15.8.4 In new construction, and where practicable in alterations, the fixed tables (or counters) shall be distributed throughout the space of facility.
- 15.8.5 At least one lane at each cashier area shall be accessible and comply with this section. It is preferable to have all lanes at all cashier areas accessible.
- 15.8.6 Where food or drink is served at counters exceeding 0.865m (34 in.) in height for consumption by customers seated on stools or standing at the counter, a portion of the main counter which is 1.525m (60 in.) in length (minimum) shall be provided in compliance with Section 12.5, or service shall be available at accessible tables within the same area.
- 15.8.7 All accessible fixed tables shall be accessible by means of an access aisle at least 1.06m (42 in.) clear between parallel edges of tables or between a wall and the table edges.
- 15.8.8 Dining areas, including raised or sunken dining areas, and outdoor seating areas shall be accessible.
- 15.8.9 In a retrofit situation where it is technically infeasible to provide access to all levels within a dining area, or to all parts of outdoor seating areas, at least one dining area shall be accessible. The accessible area must feature the same level of service and décor as the rest of the dining area and it must not be restricted to use by people with disabilities.

- 15.8.10 Food service lines shall have a minimum clear width of 1.06m (42 in.). (Refer to Figure 15.8-A)
- 15.8.11 Tray slides shall be mounted no higher than 0.865m (34 in.).
- 15.8.12 If self-service shelves are provided, at least 50% must be within the reach ranges specified in Section 5.0. It is preferable to have all self-service shelves accessible. (Refer to Figure 15.8-B)



**Figure 15.8-A. Aisle width**

- 15.8.13 Self-service shelves and dispensing devices for tableware, dishware, condiments, food and beverages shall be installed to comply with Section 5.0.
- 15.8.14 In banquet rooms or spaces where a head table or speaker's lectern is located on a raised platform, the platform shall be accessible in compliance with Section 8.1 or Section 10.3, as well as Section 12.8.



**Figure 15.8-B. Self-serve counter**

- 15.8.15 Spaces for vending machines, beverage dispensers and other equipment shall comply with Section 5.0 and shall be located on an accessible route in compliance with Section 9.1.
- 15.8.16 Cashier locations should feature at least one access aisle, which is a minimum of 1.06m (42 in.) wide. It is preferable to have all aisles accessible.
- 15.8.17 Queuing areas shall comply with Section 9.6.
- 15.8.18 Access to outdoor eating areas shall comply with Section 12.7.