

Initial Proposed
Accessible Built Environment Standard

June 2009

Note: This document was voted on and approved for Public Review by the Committee on May 12, 2009 and subject to change; it should not be used for reference purposes.

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1.0 Introduction

1.1 *The Issue*

Over **1.85 million Ontarians report that their daily life is limited by a disability**. For over two thirds of these individuals, the limitation is barriers which prevent access to buildings, facilities, parks or other aspects of the built environment. Over 50% of Ontarians age 75 or older report having such limitations. As a result, as Ontario's population ages, the number of persons facing access limitations will grow and will include many individuals who do not now experience such difficulties.

The social value of a barrier free Ontario is substantial. It provides persons with disabilities greater ability to live independently, self sufficiently, with dignity and to participate fully in all aspects of Ontario life. People with disabilities should be able to get in and around and make use of buildings and facilities whether they are stores or factories, courts, theatres, hotels or office buildings or outdoor public spaces like sidewalks, parks, trails and playgrounds.

Ontarians with disabilities have talents and contributions to make to the economy and an accessible built environment enables such valuable contribution which benefits all Ontarians.

In a better built environment, people with various abilities will be able to live independently or at least with less need for assistance to complete the normal activities of daily living. This will reduce the need for family or care workers to provide support in the home.

The proposed built environment standards are timely. Governments across the world are supporting public infrastructure investment as a means of stimulating economies. It does not make sense for future public and private sector investment to support the creation of new barriers. At the same time, the approach to removing and preventing barriers has to work within the fiscal, economic and technical realities we are facing.

Committee members recognize that it may take many years to achieve comprehensive and fundamental changes in how we access the built environment. They believe that some measurable progress can be achieved in much shorter time-frames.

1.2 *Background*

The *Accessibility for Ontarians with Disabilities Act, 2005* (AODA) received royal Assent and became law on June 13, 2005. The purpose of the AODA is to benefit all Ontarians by developing, implementing and enforcing accessibility standards. The goal is to achieve accessibility for Ontarians with disabilities with respect to goods, services,

1.0 Introduction

facilities, accommodation, employment, buildings, structures and premises by January 1, 2025.

As required by the AODA, the Minister of Community and Social Services appointed a Standards Development Committee (SDC) to develop the proposed Accessible Built Environment (ABE) Standard. The Committee is made up of 44 individuals from various sectors of Ontario life (see Appendix A). Half of the Committee members are persons with disabilities or representatives of organizations for persons with disabilities. Their combined knowledge, skills and experience and those of the organizations and communities from which they come include designing, building, researching, running businesses and delivering services.

The Committee's task is to:

- develop an initial proposed standard that will focus on the first five years, to be submitted to the Minister for public review;
- consider comments received during the public review, making any changes the committee considers advisable; and
- submit a final proposed standard to the Minister of Community and Social Services to enact into law.

1.3 The Committee's Approach

The Committee has:

- Considered approaches, existing law and best practices across various jurisdictions, emerging trends in the area of accessibility, industry practices and innovation in research and technology.
- Reviewed data emerging trends, sector issues, practices, innovation in research and technology.
- Worked from the premise that accessibility standards should ensure access for the greatest number of people but that individual accommodation will always be required.
- Understood that balancing the goal of accessibility with technical and cost issues are not easy challenges.
- Considered specific elements of the built environment that contributes to or create barriers for people with disabilities when absent or improperly configured.
- Discussed what the key design features and "elements" should be, for example, paths of travel and washroom facilities.
- Considered approaches to accessible design including existing barrier-free requirements of Ontario's Building Code, guidelines developed by municipalities, United States Access Board requirements, Canadian Standards Association standards, Visitable Housing and Adaptable Housing.

See Appendix B for a listing of resources.

2.0 Scope and Application

2.0 Scope and Application

2.1 Scope

The Committee developed a working definition of the built environment to focus its efforts. For the purposes of the Committee's work, the built environment includes all public and private sector:

- buildings (including all features that would impede persons with disabilities from fully accessing or using the building or its facilities or circulating within it);
- site development (built elements, external parcels of land bounded by property lines);
- public ways (portions of land such as a street, road, highway, public square or other built area not designated as of a private nature); and
- public parks, trails and playgrounds.

The Committee identified and developed requirements for over 70 elements that apply to the first five years. This list is not an exhaustive list that constitutes the Built Environment. This document groups like elements in the following categories:

- common access and circulation (which addresses some elements relevant to both the interior and exterior);
- interior accessible routes;
- exterior spaces;
- communication elements and facilities;
- plumbing elements and facilities;
- building performance and maintenance;
- special rooms;
- spaces and other elements (which addresses some interior and exterior elements);
- transient residential;
- recreation elements and facilities;
- transportation elements; and
- Housing.

For each element of the built environment that the Committee had an opportunity to consider, it will provide:

- A **Rationale** – why is the Committee dealing with the particular item?
- A **Functional Description** – what is the element intended to do?
- **Technical Requirements** – measurable criteria that defines what “accessibility” looks like

2.0 Scope and Application

Note: **Reserved** – indicates a placeholder in the document

Committee Comment

There are areas of the initial proposed standard where additional expertise input and further Committee consideration is required, which the Committee will likely not have an opportunity to address in any depth within its current mandate.

For areas the Committee feels are of critical importance for further development, the document contains “placeholders” (e.g. Clause 6.7 Emergency Systems). Examples are securities systems and life safety, transit stations, bus shelters and bus stops, accessibility around construction sites, exhibition display systems, waiting line-up and queuing areas.

2.2 Application

The initial proposed standard covers elements currently regulated by the Building Code (Ontario Regulation 350/06) and also elements that are not currently regulated by the Building Code such as play areas and amusement parks. It is important to note that, where the standard does not make explicit reference to an element in the Building Code or other existing regulation, the requirements within the regulation will prevail.

For the purpose of the AODA Initial Proposed Accessible Built Environment Standard, the term “**element**” is used to designate parts of buildings, facilities, or exteriors that are found in the built environment in Ontario, examples include: stairs, doors, windows, walks, etc., primarily sub clauses 3-13, found within this standard.

The Committee did not have an opportunity to develop accessibility requirements for specific occupancies, such as heritage and secure facilities, schools and transportation facilities, business and mercantile facility, arenas, cultural and recreational facilities and hospitals.

The proposed accessibility requirements and the flexibility to achieve the same objectives with alternative solutions should provide for adapting these accessibility requirements to their unique circumstances. The proposed standard should not reduce the safety, performance levels and functions of these facilities; it should meet or exceed the proposed requirements.

In considering the application of accessibility standards and compliance timelines, the standard includes the following areas:

1. New construction;
2. Exemptions; and
3. Existing Barriers and Retrofit (see Clause 2.3).

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2.2.1 New construction including extensive renovation

2.2.1.1 New Construction

Definition

New construction means to do anything in the erection, installation, or extension of an element of the built environment.

Application

All new construction would be required to comply with the Initial Proposed Accessible Built Environment Standard with separate, specialized requirements for certain types of building and facility usage (e.g. jails, heritage sites).

2.2.1.2 Change of Use and Extensive Renovation to the Interior/ Exterior Built Environment

Definition

For interior parts of the built environment the following definition of change is applied:

- a) Where existing interior walls or ceilings or floor assemblies or roof assemblies are substantially removed in an existing building and new interior walls, ceilings, or floor assemblies are installed in the building;
- b) Where there is a change in use of the building; and
- c) The performance level of a building after material alteration or repair is less than the performance level that existed prior to renovation or repair.

For exterior parts of the built environment the following definition of change is applied:

- a) A change to the built environment where an element is wholly or partly replaced, removed or re-furnished or where any change to the component could potentially affect its usability. Examples of changes include, renovations, alterations, remodeling, rehabilitation, historic restoration, resurfacing, rearrangement, reconstruction, change of use of the component or new additions to an existing element (e.g., a new wing on an existing building, an expanded parking lot area attached to an existing building or parking area); and
- b) When changes occur to a particular area, where feasible or allowed the route to the changed area is also included in the change.

Committee Comment

There may be situations where an interior may be made accessible but the exterior route is governed by another body that is not proposing any changes. For example, a single stand-alone unit may be retrofitted and made accessible by the owner but the route to and from the building is owned and managed by someone else. The unit owner does not have the authority to change the exterior route.

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Application

All changes as defined above to an element of the interior or exterior built environment must create an element that meets the Initial Proposed Accessible Built Environment Standard.

Where the changed element can only be accessed via a non-compliant element (e.g., by using or going through an element that does not meet the Initial Proposed Accessible Built Environment Standard), access to the changed element must be provided by modifying the non-compliant element to meet the Initial Proposed Accessible Built Environment Standard either

- a) in conjunction with the change; or
- b) through a defined plan of action with specific timelines.

Committee Comment

The intent of the change of use/ extensive renovation clause is to adopt the Building Code approach to change in the Built Environment. If the performance level of a building system is affected as a result of the change, then the new construction requirements would apply.

The intent of this clause would be that the triggers (more than 300 metres square, entry step, etc.) that exist within the Building Code today would no longer apply. Accessibility requirements would need to be met for all buildings being renovated. If the building is unable to meet the requirements 'partial exemptions' would have to be sought.

2.2.1.3 Routine Maintenance and Repair of the Built Environment

Definition

Routine maintenance and repair of the built environment includes all activities performed to return the element back to the condition it was originally intended for. It does not change the original purpose, intent, use or design of the element e.g. it does not change its performance level.

Examples of routine maintenance include, removal of debris or graffiti, clearing of snow, pruning of overgrown vegetation, cleaning or restoring the operation or function of the element, replacing deteriorated/damaged/vandalized elements or parts of elements, changes to mechanical or electrical systems, re-roofing, painting or wallpapering.

Application

Routine maintenance activities do not require compliance with the Initial Proposed Accessible Built Environment Standard, except where maintenance requirements have

2.0 Scope and Application

been specified in Initial Proposed Accessible Built Environment Standard.

Committee Comment

The intent of 'routine maintenance' is to allow facilities to be maintained on a daily basis. But every effort should be made to introduce accessibility features into existing buildings.

2.2.2 Exemptions – New Construction and Change of Use/Extensive Renovation

Committee Comment

Some Committee members noted that for new construction there should be no exemptions. But where it could be technical infeasible, and for safety, exemptions may be required.

2.2.2.1 Scope

The following exemption clauses apply to

- a) New construction; and
- b) Change of Use/ Extensive Renovation.

2.2.2.2 Specific Exempted Areas

The Committee recommends that all buildings and elements are required to comply with the Initial Proposed Accessible Built Environment Standard with the exception of an area that is not normally occupied on a daily basis by people such as, but not limited to, crawl spaces, catwalks, elevator machine rooms, and utility vaults. For the purpose of employment, individual accommodations may be required to provide accessibility to those facilities for people with disabilities.

2.2.2.3 Partial Exemptions

Partial exemptions to compliance are permitted where compliance might:

- a) be technically infeasible; or
- b) be structurally impractical; or
- c) affect the natural, cultural or heritage value of a protected facility or environment; or
- d) create undue hardship as expressed by the Ontario Human Rights Code.

Where an exemption from compliance occurs an alternate solution must be determined.

Committee Comment

The committee has used the term undue hardship as a means to determine exemption. There was a concern raised, regarding the existing defined expression of undue hardship used by the Ontario Human Rights Commission (OHRC), and that this may not

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be the best measure to be used for built environment exemptions, because of how the OHRC defines the term, that it is too broad, and in many cases, organizations would not be able to use this as a means of exemption.

It was the Committee's preference to limit exemptions or have none at all. As they would like to have a built environment that will support employment for people with disabilities. However there are some circumstances in specific building areas that require exemption, and as such the clause above was developed.

2.2.3 Alternate Solutions

The Committee proposes that organizations that meet the specifications for a requirement contained in the Initial Proposed Accessible Built Environment Standard, or an approved equivalent ("an acceptable solution"), that meets the needs of persons with disabilities, will accomplish the intended result.

2.2.4 Similar Occupancies

Where the Committee has defined a proposed standard for a particular element in a particular building use, the proposed standard extends to similar elements in similar occupancies, unless otherwise indicated. For example, proposed standards for library shelving could apply to grocery store shelving.

2.3 Existing Barriers and Retrofit

2.3.1 Compliance

The standards set out in this document shall apply to built environments constructed before the date the Initial Proposed Accessible Built Environment Standard becomes effective.

Compliance shall be required by the date shown in Table 2.3, except as described in Clause 2.3.3, Administration.

Committee Comment

It is the view of this Committee that retrofit is important and must be addressed to achieve a barrier free Ontario by 2025.

The viewpoints on retrofit vary, and the Committee has proposed a framework for consideration. For more comments on retrofit see Appendix G. Committee views include the following:

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- no retrofit in the first five years of the standard, to allow Ontario to adapt to the Initial Proposed Built Environment Standard for new construction and renovation;
- allow organizations to include these requirements within their own timelines for compliance;
- addressing easy items first such as installing a small ramp, moving potted plants and tables out of the way, lowering mirrors, etc.;
- having a staggered approach to implementation of retrofitting high use facilities and public services first e.g. hospitals, government services, etc.;
- have a staggered approach to full retrofit Ontario by 2025;
- identifying specific elements or areas of the built environment that could be retrofit first e.g. entrances, doors, first floor of the building, signage, etc.;
- building owners must consider these requirements when maintaining their facilities;
- the time table, as it applies to building owners should be adjusted to meet the business cycles and assess capital to be used versus having a specific timeline; and
- the public should be aware that the committee has not been able to get the full impact of the cost and benefits of retrofit, and the full impact of the cost and benefits has not been assessed by the Committee.

The Committee understands that to develop and comply with retrofit requirements for the Built Environment in Ontario would take years, but acknowledges the importance of retrofit of the existing environment. A proposal is provided in this document that encompasses some of the views above, for input by the public.

Table 2.3 Compliance Dates

Dates for Compliance for Built Environments constructed prior to the date that the standards become effective for construction of new built Environments

#	Occupancy/Organization	Compliance Date
1	Institutional Buildings (Group B) and Medical offices from Group D – Public – see Appendix E	5 years from filing new regulations
2	Assembly Type Buildings (Group A) – Public – see Appendix E	5 years from filing new regulations
3	Institutional Buildings and Medical offices – Private similar to above, not funded by public funds	7 years from filing new regulations
4	Non Medical Office and Personal Service Buildings (Group D) – Public – see Appendix E	7 years from filing new regulations
5	Assembly type Buildings – Private similar to	8 years from filing new

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#	Occupancy/Organization	Compliance Date
	above	regulations
6	Office and Personal Service Buildings – Private similar to above	9 years from filing new regulations
7	Retail Buildings – see Appendix E	10 years from filing new regulations
8	Residential Buildings (as described in article 3.8.1.1 of Division B of the Ontario Building Code) – see Appendix E	12 years from filing new regulations
9	Industrial Buildings – see Appendix E	13 years from filing new regulations

Committee Comment

The Committee noted that where an existing accessibility plans is underway that may not meet these timelines, there is flexibility to adjust the timelines.

There should not be a single-focused approach to implementation of accessibility standards, an integrated approach to implementing the accessibility standards is required for the business community to buy in to the proposed requirements.

Some members felt that where building owners can achieve accessibility immediately they should.

We need to understand that in some cases these buildings cannot comply and in some cases they may not comply because of technical feasibility.

2.3.2 Compliance Plan

2.3.2.1 Details

Persons or organizations required to comply shall submit a compliance plan no later than **three** years prior to the date by which compliance is required in Clause 2.3.1, Compliance. Such plan shall identify

- a) the specific built environments for which compliance is required;
- b) the actions required to bring the specific built environment into full compliance with the standards and an estimate of the cost of such actions;
- c) the required actions that, in the opinion of the person or organization filing the compliance plan, can be implemented to effect compliance without causing undue hardship and the timetable for implementing such actions;
- d) where compliance is to be staged over a period of time, priority consideration should first be given to barrier-free entry to the building, then to access to goods and services and then to barrier free toilet facilities;

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- e) the required actions that, in the opinion of the person or organization filing the plan, cannot be implemented without causing that person or organization undue hardship together with information to support this opinion; and
- f) where undue hardship is claimed, proposals for alternative measures which, if implemented, would achieve the objectives of the standards without causing undue hardship and a timetable and cost estimate for implementing such proposals.

2.3.2.2 Non Compliance

Where, in the opinion of the Administration, a compliance plan falls short of the requirements in Clause 2.3.2.1, Details, the Administration shall direct the person or organization submitting the compliance plan to effect changes to the compliance plan that, if implemented, would achieve compliance.

2.3.3 Administration

2.3.3.1 Compliance Not Required

Compliance shall not be required where, in the opinion of the Administration established to regulate compliance, compliance will cause undue hardship to the person or organization required to comply.

Committee Comment

To minimize bureaucracy, some Committee members encourage the government to administer this program through enhancing existing regulatory processes which can be modified to support all or part of this administration entity, or allocating it to certified persons to support.

There are other Committee members that feel the need for a dedicated administration to support the process.

2.3.3.2 Process

Where the Administration determines that compliance would result in undue hardship, without limiting the authority of the Administration, the Administration may

- a) adjust the date by which compliance is required;
- b) limit the extent to which compliance is required, including exemption from a part of the standards; or
- c) require full or partial compliance through other means including individual accommodation.

Note: *In granting such adjustments, the Administration shall require compliance to the highest possible level that can reasonably be achieved without causing undue hardship.*

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2.3.3.3 Determination

In making a determination of “undue hardship” the Administration, in reviewing compliance plans required by this standard, shall

- a) consider matters such as technical feasibility, cost, capacity to finance, impact on continuation of use of the built environment, the availability of individual accommodation or alternative measures;
- b) assure that use of the built environment is of optimum benefit to Ontarians; and
- c) be required to provide, to the extent reasonably possible, guidelines documenting how it will interpret the expression “undue hardship” as that concept is applied under the Ontario Human Rights Code.

2.3.3.4 Reasonably Achieved

Where the Administration identifies compliance measures that can reasonably achieved without major impact on the organizations or persons required to comply with the requirement, the Administration may require organizations to comply at an earlier date than that set out in Clause 2.3.1, Compliance.

2.4 Timelines

The initial proposed standard is intended to be a first step in efforts to prevent and remove barriers in the built environment for people with disabilities that benefit all Ontarians, by 2025. The Committee has proposed the following timelines:

2.4.1 New Construction

The Committee decided a **12 month timeline** for compliance with new construction requirements after the regulations come into force.

2.4.2 Extensive Renovation and Change of Use

The Committee considered whether a different timeline was needed for substantial renovations (e.g., **12 to 36 months** after regulations come into force).

2.5 Format of the Standard

The intent of this standard is that it is to be used in its entirety for the built environment. The standard has been organized into various high level sections e.g. Common, Interior, Exterior, etc., however when something is built in the built environment, the standards that apply are those found in both the specific clause, and any other common

2.0 Scope and Application

clause or overarching clause. The intent is to use the applicable clauses in this standard when implementing in the built environment, unless otherwise indicated in this standard.

For example, when designing/building street furniture, the street furniture would be required to meet the clause of street furniture, but would be placed next to an accessible exterior route, as per the accessible exterior route clause, have ground and floor surfaces as per the ground and floor surface clause, and have colour/tonal contrasting as per the colour/tonal contrast clause.

2.6 Other

Within 36 months of the passage of the legislation enacting the built environment standard implementation of the new proposed standard shall be supported by review of programs intended to train or provide supplementary training to those who are engaged in the design, construction or operation of the Built Environment, to ensure the content of the courses support the implementation of the recommendations of the committee.

Committee Comment:

Existing staff will need to be trained to support the proposed Built Environment standard. Where appropriate, certification of designers, builders and operators to the proposed standard was discussed, but has not been included at this time

3.0 Common Access and Circulation

3.0 Common Access and Circulation

3.1 Entrances

Rationale

Design decisions concerning entrances will have an immediate impact on the independence and dignity of everyone entering a facility. Entrances that address the full range of individuals using the facility promote a spirit of inclusion that separate accessible entrances do not. Features such as canopies can limit the influence of weather conditions on this already busy area and also make an entrance more obvious to a person with a cognitive disability or someone unfamiliar with the facility.

Functional Description

This section addresses pedestrian entrances into a building. Entrances include all access and entry points into a building or facility. Entrances also function as egress points. An entrance consists of a set of elements that includes the approach to a building, facility, or controlled access area and may extend to the curb, the actual entrance, the transition area to the interior, and may include a lobby and/or a waiting area. For the purpose of determining the number of entrances to a building, several adjacent doors in a bank of doors are considered to be a single entrance.

Technical Requirements

3.1.1 Accessible Entrances

3.1.1.1 Minimum Number of Accessible Entrances

Except for transportation facilities, at least 50%, but not less than one of all pedestrian entrances to a structure or facility shall

- a) be accessible with a no-step entrance;
- b) be connected to or integrated with an accessible interior route; and
- c) comply with Clause 4.1, Accessible Interior Route and Table 3.1.1.

Table 3.1.1 – Minimum number of accessible entrances

Number of pedestrian entrances into building	Minimum number of pedestrian entrances required to be barrier-free
1 to 3	1
More than 4 to 5	2
6 or more	Not less than 50 percent

3.0 Common Access and Circulation

3.1.1.2 Entrances to Transportation Facilities

At least one entrance to each transportation station shall comply with 3.1 Entrances. All accessible entrances shall, to the maximum extent practicable, coincide with those used by the majority of the general public.

3.1.2 Main or Primary Entrances

The main or primary entrances to a building shall be accessible.

3.1.3 Pedestrian Entrances to Suites

A suite of assembly occupancy, business and personal services occupancy, or mercantile occupancy that is located in the first storey of a building, or in a storey to which an accessible route is provided, and that is separated from the remainder of the building, so that there is no access to the remainder of the building, shall have at least one accessible entrance. If there are multiple pedestrian entrances at least 50% of the entrances shall be accessible.

3.1.4 Entrance from an Enclosed Parking Garage

If a direct pedestrian entrance from an enclosed parking garage to the building is provided, at least one direct entrance from the enclosed parking garage to the building shall be accessible and comply with Clause 4.1.1, Clear Width.

3.1.5 Access to Parking Areas

An accessible route shall be provided from an accessible entrance to parking areas as follows:

- a) Where exterior parking is provided, an accessible route complying with Clause 5.1, Accessible Exterior Route shall be provided to the exterior parking area;
- b) Where interior parking is provided, an accessible route complying with Clause 4.1, Accessible Interior Route shall be provided to the door of the indoor parking area or the point where a passenger elevator serves the indoor parking level; and
- c) If a passenger elevator is provided along the accessible route it shall comply with and Clause 3.3, Elevating Devices.

3.1.6 Enclosed Pedestrian Walkway, Underpass or Overpass

If an enclosed pedestrian walkway, overpass or underpass connects two accessible storeys in different buildings the pedestrian walkway, overpass or underpass shall comply with Clauses 4.1, Accessible Interior Route and 3.2, Doors and Doorways.

3.0 Common Access and Circulation

3.1.7 Doors and Clear Spaces at Entrance Doors

3.1.7.1 Doors and Clear Spaces

All doors and clear spaces at entrances shall comply

- a) with Clause 3.2, Doors and Doorways;
- b) with Clause 4.1, Accessible Interior Route; and
- c) with Clause 5.1, Accessible Exterior Route.

3.1.7.2 Entrance at Sidewalk

Where an entrance abuts a public sidewalk, the sidewalk may be considered to be part of the clear space in front of the door.

3.1.8 Controlled Entrances

Where turnstiles, gates, or other barriers are used to control access, an alternate access system or an integrated access system shall be provided.

Note:

(1) Half-height automatic swing doors can provide independent access for people with reduced mobility.

(2) These types of entrances are provided at various occupancies types which include but are not limited to: libraries, retail stores, transit stations and recreational facilities.

3.1.9 Canopies

Where canopies are used at a pedestrian entrance, and a passenger loading area is adjacent to the entrance, the vertical clearance shall comply with Clause 9.18.3, height Clearance.

3.1.10 Lobbies and Waiting Areas

Where a lobby or waiting area is provided as part of an entrance area, a clear space of at least 1370 mm (54 in) deep by 1620 mm (64 in) wide within a seating or waiting area shall be provided adjacent to the accessible interior route.

Committee Comment

The intent is to provide an accessible, sheltered waiting area space for people with disabilities (including those using mobility devices and service animals) where there is a lobby or waiting area as part of the entrance.

3.1.11 Guards at Entrances

Accessible entrances shall be equipped with guards as follows:

- a) Where there is a change in vertical elevation greater than 600 mm (24 in), at the edges of a landing or an accessible route leading to an entrance, guards complying with Clause 3.4.8, Guards at Ramps shall be provided at the edges of

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- the landing or accessible route; and
- b) Where doors swing into an accessible interior route, a cane-detectable guard shall be installed at right angles to the wall containing the door and extending for the full width of the door.

3.1.12 Tactile and Visual Markings

Where guards are not required at entrance landings, tactile and visual markings that comply with Clause 8.7, Detectable Indicators shall be provided to identify the edge of the full landing, except the side containing the entrance door which shall be at least 300 mm (12 in) in depth.

3.1.13 Stairs and /or Ramps at Entrances

Where stairs and / or a ramp are present leading to an entrance, they shall comply with Clauses 3.4, Ramps and / or 3.5, Stairs.

3.1.14 Floor Surfaces

Ground and floor surfaces at entrances shall comply with Clause 3.6, Ground and Floor Surfaces.

3.1.15 Lighting

Entrance area lighting shall comply with:

- a) Clause 8.5, Interior Lighting; and
- b) Clause 8.6, Exterior Pedestrian Lighting.

3.2 Doors and Doorways

Rationale

Sufficiently wide doorways are advantageous to individuals using mobility aids, however a raised threshold at the base of the door could be a barrier.

For many people a heavy door is difficult to open. The independent use of doors is desirable as reliance on assistance from others to open doors is neither accessible nor dignified.

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 maneuvering space.

Glazed doors can present a hazard to all individuals and especially those with low or no vision. The inclusion of horizontal colour-contrast strips across the glass, as well as

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colour-contrasting doorframes and door hardware, will increase the safety and visibility of a glazed door for a person with low or no vision.

Functional Description

This section addresses the accessibility of doors and doorways within an accessible route, egress routes, and public spaces designed to be independently operable by all users. The accessibility of doors and doorways are an integral component of the accessible route.

Technical Requirements

3.2.1 Application Requirements

Doors located along an accessible interior route shall be accessible in compliance with this Clause 3.2, Doors and Doorways. Where a door system incorporates multiple doors at a single location, at least one of the doors shall be accessible and comply with Clause 3.2, Doors and Doorways.

3.2.2 Guards and Warning Systems

Where the doors swing onto an accessible interior route, they shall have a guard that complies with Clause 3.1.11, Guards at Entrances.

Note: *Where permitted and where acoustic privacy is not a design requirement, access openings without doors are preferred. For example, public washroom entrances in buildings with large assembly areas.*

3.2.3 Clear Width

The minimum clear opening of all doorways shall

- a) be 900 mm (35 in); and
- b) comply with Clause 3.7, Overhanging and Protruding Objects.

3.2.4 Maneuvering Area at Doors

Doorways shall have a level wheeled mobility device maneuvering space on both sides of a door in accordance with Table 3.2.4, except in the following situations:

- a) If the door provides access from only one side such as a closet, the clear space is not required on the inactive side of the door; and
- b) If the door has a power operator, the clear space on the latch or hinge side of the door is not required.

Table 3.2.4- Minimum maneuvering space at doors

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Context	Floor Space Required in mm (in)		
	Depth	Width	Space Beside latch
Side-hinged door – Front approach			
Pull side	1525 (60)	1600 (63)	600 (24)
Push side	1370 (54)	1250 (49)	300 (12)
Side-hinged door – Latch-side approach			
Pull side	1370 (54)	1600 (63)	600 (24)
Push side	1370 (54)	1525 (60)	600 (24)
Side-hinged door – Hinge-side approach			
Pull side	2440 (96)	2440 (96)	600 (24)
Push side	1370 (54)	1830 (72)	450 (18)
Sliding door			
Front approach	1370 (54)	1100 (43)	50 (2)
Side approach	1370 (54)	1550 (61)	600 (24)

Source: City of London – 2007 Facility Accessibility Design Standards

Note: The main factor to consider when determining maneuvering space is the direction of approach, rather than the position of the hinge or latch.

3.2.5 Thresholds and Changes in Level

3.2.5.1 Bevelled

Thresholds and changes in floor level or surfaces at doors of 13 mm (0.5 in) or less in height shall be bevelled at a maximum slope of 1:2 (50%).

3.2.5.2 Sloped Floors or Ramps

Thresholds and changes in floor level or surface greater than 13 mm (0.5 in) shall be provided with sloped floors or ramps.

3.2.6 Door Hardware

Door hardware, operating devices such as handles, pulls, latches, and locks on all doors throughout a facility shall

- a) be mounted no higher than 1100 mm (43 in) from the floor;
- b) meet the requirements of Clause 8.4.4, Hand-Operated Controls and

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- Mechanisms; and
- c) if it is a sliding door with operating hardware, be configured so that the operating hardware is exposed and usable from both sides when sliding doors are fully open.

3.2.7 Door Opening Force

The maximum door opening force for pushing or pulling open a door shall be

- a) 38 N (8.5 lb) for exterior doors; and
- b) 22.2 N (5 lb) for interior doors.

Committee Comment

A Committee member felt that for any door that exceeded an opening force of 22.2 N (5 lb), a power door operator must be provided. More discussion is required on this item prior to adjusting the clause. Input is requested during public review.

3.2.8 Door Closers

Except for doors at the entrances to dwelling units, closers for interior doors on a accessible interior route shall have a closing period of not less than 3 seconds, measured from when the door is in an open position of 70° to the doorway to when the door reaches a point 75 mm (3 in) from the closed position, measured from the leading edge of the latch side of the door.

3.2.9 Power Door Operator

3.2.9.1 Application

With the exception of Clause 3.2.7 Door Opening Force, all doors along and within an accessible interior route shall have a power door operator that automatically opens/closes the door.

Note: *This includes doors that access a vestibule that leads to the exterior*

Committee Comment

This requirement will allow all to independently access the building and use the facilities (e.g. washrooms).

3.2.9.2 Controls and Sensors

Where power door operators are provided, they shall

- a) allow persons to activate the opening of the door from a location on either the entry or exit side of the door when entering or leaving a facility or area;
- b) except where door operators are activated by proximity scanning devices or pressure mats, have an activation range located one above the other at each

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activation location with

- i. the upper activation height with its centreline located not less than 900 mm (35 in) and not more than 1000 mm (39 in) from the floor level or ground; and
- ii. the lower activation height with its centreline located at 175 mm (7 in) above the floor;

Committee Comment

There was concern raised regarding having an activation range, and the height of the lower device.

- c) have activation devices that are
 - i. located to allow a person using a wheeled mobility device to stop immediately adjacent to the device, out of the arc of the door swing;
 - ii. located at least 600 mm (24 in) from any inside corner;
 - iii. located not more than 1500 mm (59 in) beyond the door swing where the door opens towards the control;
 - iv. located in a clearly visible position;
 - v. operable with a closed fist;
 - vi. at least 150 mm (6 in) in width, and no more than 100 mm (4 in) deep;
 - vii. marked with the International Symbol of Accessibility;
 - viii. are colour / tonal contrasted from their surroundings in accordance with Clause 6.1.12, Colour/Tonal Contrast; and
 - ix. illuminated or otherwise visually defined in compliance with
 1. Clause 8.5, Interior Lighting; or
 2. Clause 8.6, Exterior Pedestrian Lighting; or
 3. if illumination is not practically possible, designed to be reflective and/or photoluminescent (i.e. "glow in the dark");
- d) take no more than 3 seconds to move from the closed to the 70 degree open position;
- e) require a force of not more than 66 N (14.8 lb) to stop door movement; and
- f) where door operators are activated by proximity scanning devices or pressure mats, the scanning devices or pressure mats shall be able to detect individuals using wheeled mobility devices.

3.2.10 Power Door Wiring

All doors to meeting rooms, common areas, and along an accessible interior route, shall have the necessary wiring and access to electrical power roughed-in, to enable a power door operator to be installed at a later date.

3.2.11 Colour /Tonal Contrast of Doors and Frames

High colour/ tonal contrast in accordance with Clause 6.1.12, Colour/Tonal Contrast shall be incorporated to differentiate

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- a) doors and/or doorframes from the surrounding environment; and
- b) door handles and other operating mechanisms from the door itself.

3.2.12 Fully-Glazed Doors

Fully glazed doors, frameless glass doors and sidelights in an accessible route shall be marked with a continuous opaque strip that

- a) contrasts in colour and brightness with the background of the door in accordance with Clause 6.1.12, Colour/Tonal Contrast;
- b) is at least 50 mm (2 in) wide;
- c) is located across the width of the door at a height of 1350 mm (53 in) to 1500 mm (59 in) above the finished floor; and
- d) if it incorporates a logo or symbol, is designed so that the logo or symbol does not diminish
 - i. the opacity of the strip;
 - ii. the width of the strip; or
 - iii. the colour and brightness contrast of the strip with the background of the door.

3.2.13 Revolving Doors and Turnstiles

Revolving doors or turnstiles shall

- a) not be considered an accessible entrance along an accessible route; and
- b) have an accessible, clearly designated gate or door provided adjacent to the turnstile or revolving door.

3.2.14 Sliding Doors

Installation and dimensions of sliding doors shall be consistent with Clauses 3.2.3, Clear Width to 3.2.8, Door Closers, inclusive.

Note: *Sliding doors can include pocket doors, hidden doors, patio doors, etc.*

<i>Committee Comment</i>

Sliding Doors can be problematic for persons with the ability to open with a closed fist.

3.2.15 Gates

Where an exterior gate exists, it shall

- a) comply with the width requirement of Clause 3.2, Doors and Doorways;
- b) have an operating and locking mechanism that meets the requirements of Clause 8.4, End User Controls and Operating Mechanisms;
- c) for controlled entrances/exits, provide at least one wheeled mobility device entrance that is self-operated and meets the requirements of Clause 3.1, Entrances, and Clause 8.4, End User Controls and Operating Mechanisms;
- d) if an exit gate, provide a quick-release mechanism that is no higher than 1220

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- mm (48 in); and
- e) meet the requirements set by authorities having jurisdiction for height and thickness of the fencing.

3.2.16 Vestibules

Vestibules located on an accessible route shall

- a) be arranged to allow the movement of mobility devices between doors;
- b) provide a distance between two doors in series of at least 1500 mm (59 in) plus the width of any door that swings into the space; and
- c) have power door operators on both doors.

3.3 Elevating Devices

Rationale

The buttons used on elevators need to address a range of functional needs, including reach, dexterity and vision. There is also a need to provide audible cues for individuals with low or no vision to identify different floor levels, as well as the direction of travel. These are, in fact, of benefit to anyone who uses the elevator. Adequate door-closing delays provide individuals using mobility devices additional time to reach, enter or exit the elevator car. The installation of a mirror can assist individuals using mobility devices to back out of an elevator where there is not sufficient space to turn around.

Functional Description

This section addresses passenger elevators, limited use/ limited application (LU/LA) elevators (i.e., accessible passenger lifts), moving walks, moving ramps, and escalators used to provide pedestrian access within and between levels within the built environment.

Technical Requirements

3.3.1 Application

This Clause applies to escalators, moving walks, and lifts along an accessible route, and to elevators that are required to be accessible.

3.3.2 Escalators

3.3.2.1 General

Escalators used to facilitate access between floors are considered to be part of the accessible interior route.

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3.3.2.2 Alternative Route

3.3.2.2.1

Where escalators are used, an alternative accessible interior route to access the floor levels served by the escalator shall be provided.

3.3.2.2.2

The alternative accessible interior route shall

- a) be conveniently located adjacent to or in close proximity as is technically feasible; and
- b) have signage complying with Clause 6.1, Signage, clearly displayed and directing a person to an alternative means of access.

3.3.2.3 Landings

Escalator landings shall

- a) be at least 610 mm (24 in) in length;
- b) extend for the full width of the escalator clear width; and
- c) have colour/tonal and texture on the transition threshold in accordance with Clause 6.1.12, Colour/Tonal Contrast and Clause 8.7.6 Escalator.

3.3.2.4 Flat Treads

There shall be a minimum of two and a maximum of four flat treads at the entrance and exit of every escalator.

Note: *This would be the transition zone for the escalator.*

3.3.2.5 Handrails

Handrails on escalators shall include a high colour/tonal contrasting marking in accordance with Clause 6.1.12, Colour/Tonal Contrast.

Note: *Colour/tonal contrasting may be done through the use of a marking or strip along the handrail.*

3.3.3 Moving Walks, and Moving Ramps

3.3.3.1 General

Where moving walks and moving ramps are used to facilitate movement from one point to another, they shall be considered as part of an accessible route.

Note: *Heavier scooters and power chairs may cause problems with the mechanical systems of moving walkways and moving ramps. Moving ramps can cause problem with wheeled mobility devices tipping backwards and causing falls and injuries. The slopes on moving ramps should be limited for safety reasons.*

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3.3.3.2 Alternative Path of Travel

Where moving walks and/or moving ramps are used, an alternative accessible interior route shall be provided to the same areas that the moving walks or moving ramp serves, and will comply with Clause 3.3.2.2, Alternative Route.

3.3.3.3 Landings

Landings at moving walks and moving ramps shall comply with Clause 3.3.2.3, Landings (for escalators).

3.3.3.4 Entrance/Exit Markings

Entrances to and exits from moving walks and moving ramps shall be identified with a high colour/tonal contrasting marking.

3.3.3.5 Handrail Markings

Moving walks and moving ramps shall be identified with a high colour/tonal contrasting marking that meet the requirements of Clause 6.1.12, Colour/Tonal Contrast.

3.3.3.6 Audible Signals

An audible signal shall indicate the approaching end of the moving walk or moving ramp.

3.3.4 Lifts for Persons with Disabilities

3.3.4.1 Platform/ Incline Lifts

Platform/ incline lifts shall not be used in publicly accessible buildings.

3.3.4.2 Limited-use/Limited-Application Elevators (LU/LA Elevators)

Limited-use/Limited-application elevators (LU/LA elevators) that can be operated independently in buildings with a limited number of level changes shall be used instead of controlled access lifts.

Note: *The use of controlled passenger lifts that are controlled by key access and that require an attendant is discouraged.*

3.3.4.3 Location

Where used, limited-use/limited-application elevators (LU/LA elevators) shall be accessible and located on an accessible interior route complying with Clause 4.1, Accessible Interior Route.

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3.3.5 Elevators

3.3.5.1 General

3.3.5.1.1

Unless indicated otherwise, this Standard applies to accessible passenger elevators.

3.3.5.1.2

Accessible passenger elevators shall be provided to all storeys of a building.

Committee Comment

Some committee members were concerned with having all passenger elevators be accessible and that perhaps they should be provided in all public areas of a building.

There was also concern noted regarding having every storey of a building have an elevator rather than achieving accessibility by other means e.g. ramps.

However by providing this requirement, it will provide access to more people.

The Committee discussed some exemptions should be considered including live/work buildings and infill buildings, but they have not been finalized.

3.3.5.1.3 Designated Firefighting Elevators

Unless indicated otherwise, all firefighting elevators shall be accessible.

Note: *Accessible passenger elevators, not designated for firefighting use, are not required to be designed for firefighting access.*

3.3.5.1.4 Freight / Service Elevators

Freight elevators and service elevators shall meet the accessibility requirements of Clause 3.3.5, Elevators.

3.3.5.2 Signage

Where provided, all signs shall

- a) comply with Clause 6.1, Signage; and
- b) be tactile and be reproduced in Braille

3.3.5.3 Floor Designation

Signage indicating the floor level shall

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- a) be placed on the door jamb between 1400 mm (55 in) and 1500 mm (59 in) from the finished floor to the centre of the number;
- b) be colour contrasted from the surrounding surfaces in accordance with Clause 6.1.12, Colour/Tonal Contrast; and
- c) be raised and comply with Clause 6.1.7, Tactile Requirements.

3.3.5.4 Elevator Car number Designation

Where there is more than one elevator in a facility, signage indicating the elevator car number shall

- a) be placed on the wall adjacent to the control panel;
- b) be 1400 mm (55 in) from the finished floor to the centre of the number and/or characters;
- c) be colour contrasted from surrounding surfaces in accordance with Clause 6.1.12, Colour/Tonal Contrast; and
- d) be raised and comply with Clause 6.1.7, Tactile Requirements.

3.3.5.5 Elevator Doors

Passenger elevator doors shall

- a) slide horizontally only;
- b) have a matte finish to reduce glare;
- c) on the landing side, be identified using a colour/tonal contrasting door face and jamb to differentiate it from the surrounding wall surface in accordance with Clause 6.1.12, Colour/Tonal Contrast;
- d) have a clear opening width of not less than 915 mm (36 in) and shall take into account the door location (centre, side opening) in combination with the dimensions of the elevator car; and
- e) open and close automatically.

3.3.5.6 Vertical Gates

Vertical gates are permitted on elevators that are not fully enclosed.

Note: *Vertical sliding doors and gates are discouraged on passenger elevators.*

3.3.5.7 Door Reopening Device

Elevator doors shall be provided with a reopening device / sensor that

- a) stops and reopens a car door and hoistway door automatically if the door becomes obstructed by an object or a person;
- b) does not require physical contact with an obstruction passing through the opening to be activated;
- c) has the reopening devices located within a range of 125 mm (5 in) to 1500 mm (59 in) above finish floor; and
- d) remains effective for at least 20 seconds after which the door may close, but shall reopen with an audible signal if an object or a person is still in the doorway.

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3.3.5.8 Door and Signal Timing for Hall Calls

The minimum acceptable time from notification that a car is answering a call until the doors of that car start to close shall be calculated from the following equation:

$$T = D / (445 \text{ mm (18 in) /s})$$

where T is the total time in seconds and D is the distance (in millimetres) from a point in the lobby or corridor 1525 mm (60 in) directly in front of the farthest call button controlling that car to the centreline of its hoistway door. For cars with in-car lanterns, T begins when the lantern is visible from the vicinity of hall call buttons and an audible signal is sounded. The minimum acceptable notification time shall be 5 seconds (s).

Note: *This clause allows variation in the location of call buttons, advance time for warning signals, and the door-holding period used to meet the time requirement.*

3.3.5.9 Door Delay for Car Calls

The minimum time for elevator doors to remain fully open shall

- a) be 10 seconds in response to a car call; and
- b) be reduced by the operation of the door close button.

3.3.5.10 Elevator Operation and Leveling

An elevator car shall

- a) be operated automatically; and
- b) be equipped with a self-leveling device that
 - (i) is two-way and automatic; and
 - (ii) maintains the floor level to a maximum of 13 mm (0.5 in) under rated loading conditions to zero loading.

3.3.5.11 Interior Space

Where elevators are provided in a facility, at least one elevating device in the facility shall be sized to allow for a stretcher that is 2010 mm (79 in) by 610 mm (24 in) to enter, exit and use the elevator car.

3.3.5.12 Floor Surface

The elevator car floor surface shall

- a) be firm, level, non-glare and slip resistant;
- b) facilitate movement by wheeled mobility devices and not contribute to tripping; and
- c) be colour/tonal contrasted from the walls, and texture and colour/tonal contrasted from each elevator lobby floor and meet the requirements of Clause 6.1.12, Colour/Tonal Contrast.

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3.3.5.13 Handrails in Elevators

Handrails in elevators shall

- a) be provided on all walls except where doors are located;
- b) be located between 800 mm (31 in) to 920 mm (36 in) above the elevator car's finished floor surface; and
- c) have a clear space of at least 50 mm (2 in) between the handrail and the wall of the elevator car.

3.3.5.14 Elevator Car Control and Hall Call Buttons

Elevator car controls and floor designation and hall call buttons on a panel shall

- a) be readily accessible from a wheeled mobility device upon accessing and entering the elevator;
 - b) be located at a maximum height above the elevator car floor of 1220 mm (48 in);
 - c) be located at a minimum height above the elevator car floor of 810 mm (32 in);
- Note:** *The numbering of the panel should start in the bottom left of the panel, which still allows for a single line of buttons where the number of floors permits.*
- d) be arranged with the numbers running in ascending order and from left to right on the panel;
 - e) be colour/tonal contrasted from the surrounding panel in accordance with Clause 6.1.12, Colour/Tonal Contrast;
 - f) protrude from the panel wall with a raised "collar" surrounding each button of a minimum of 1.5 mm (0.06 in);
 - g) be a minimum of 19 mm (0.75 in) in diameter;
 - h) comply with Clause 8.4.4, Hand-Operated Controls and Mechanisms.
 - i) provide button identification information, using raised tactile characters and Braille, immediately to the left of the buttons to which it applies; and
 - j) use industry standard tactile symbols and Braille messages to identify the following elevator controls:
 - i. emergency stop;
 - ii. alarm;
 - iii. door open;
 - iv. door close;
 - v. main entry floor; and
 - vi. telephone.

Committee Comment

It was noted that there was concern regarding using or not using a collar for the call buttons, and the ability of someone with limited mobility to use these types of collared buttons vs. their use for those with no/low vision.

The Committee would like more input from the public.

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3.3.5.15 Alarm and Emergency Stop Buttons

Elevator car control buttons for alarm and emergency stop shall

- a) be located at the bottom of the panel;
- b) be directly connected to a live monitoring station; and
- c) be both audible and visual.

3.3.5.16 Card Access Readers

Card access readers, where provided, shall be located within the maximum and minimum forward reach ranges of a person in a wheeled mobility device and be located between 810 mm (32 in) and 1220 mm (48 in) above the floor.

3.3.5.17 Emergency Signaling and Communications

Two-way communications shall

- a) be from within the car to a point outside;
- b) present essential information both visually and audibly; and
- c) be hands-free for security or emergency services.

3.3.5.18 Mirrors

Mirrors in elevators shall

- a) be located above the handrail on the wall opposite the door; or
- b) mounted against the ceiling opposite the elevator entrance and angled downward.

Note: *The intent is to enable visibility of the elevator entry/exit, if one was to back out of the elevator.*

3.3.5.19 Visual and Audible Signals

Visual and audible signals shall be provided

- a) at each elevator car entrance
 - i. to indicate which elevator car is answering the call;
 - ii. to indicate the direction of travel;
 - iii. to be clearly visible from within the elevator lobby area; and
 - iv. be located above the elevator door in the elevator lobby area;
- b) within each elevator car to announce the floor;
- c) with audible signals set at 10% above the ambient noise level to a maximum of 80 dBA; and
- d) within the elevator car, with the visual indicators to be clearly visible and located above the control panel.

Committee Comment

There is a suggestion that the 10% may not be high enough, and the Committee is seeking public input.

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3.3.5.20 Handrails in Lobbies

A vertical wall mounted handrail shall be used where an embankment of elevator doors limits the wall space and shall

- a) be provided in the elevator lobby adjacent to the call buttons;
- b) be placed between 800 mm (31 in) to 1200 mm (47 in) above the floor;
- c) have a clear space of at least 50 mm (2 in) between the handrail and the wall; and
- d) where the wall space is limited, horizontal handrails shall be provided between 800 mm (31 in) to 920 mm (36 in) above the floor.

3.3.5.21 Elevator Lobby Areas

Elevator lobby areas shall

- a) be at least 2500 mm (98 in) by 2500 mm (98 in) in front of the elevator doors; and
- b) be at least as wide as the accessible route accessing the elevator.

3.3.6 Illumination

Lighting for elevating devices shall comply with Clause 8.5.5.1, Task Lighting Levels.

3.4 Ramps

Rationale

Traditionally, ramps have been synonymous with wheeled mobility device accessibility. However, ramps can be problematic in providing accessibility. Ramps can be difficult and dangerous to negotiate. Also, the physical space required for ramps makes them cumbersome to integrate into a facility. However, where a change in level already exists or cannot be avoided, a properly designed ramp can provide access for those using wheelchairs or scooters, pushing strollers or moving packages on a trolley.

The design of the ramp is critical to its usefulness and safety. A steeply inclined ramp is difficult to ascend when using a wheelchair, and can increase the risk of the wheelchair tipping backwards. Descending a steep ramp can also be hazardous. Any cross slope will further increase the effort required to negotiate the ramp. Maneuvering space at the top and bottom are also important factors in the usability of ramps. Level areas at points along a long ramp enable an individual to rest.

Textured surfaces, edge protection and handrails all provide important safety features. Heated surfaces are recommended to address the safety concerns associated with snow and ice.

Functional Description

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This section addresses ramps that may be used by wheeled mobility devices, strollers, trolleys, or pedestrians to overcome level changes, both in the interior and exterior environments. Ramp elements include surfaces, landings, edge protection, and handrails. The gradient of the sloped surface determines whether the element is classified as a ramp, rather than a walkway. Walkways with a slope steeper than 1:15 (6.67%) are considered to be ramps, and are required to comply with the design requirements of this Clause.

Technical Requirements

3.4.1 Clear Width

The clear width of the ramp shall be 1100 mm (43 in)

3.4.2 Slope

3.4.2.1 Running Slope

A ramp shall have a running slope no steeper than 1:15 (6.67%).

Committee Comment

The running slope identified in this clause has received a number of comments, to increase the steepness of the ramp to 1:12 (8.33%) and to decrease the steepness to 1:20 (5%). The clause has been left at 1:15 (6.67%) for the public to consider, review and provide comment.

3.4.2.2 Cross Slope

A ramp shall have a cross slope no steeper than 1:50 (2%).

3.4.3 Required Ramp

Where there is a change in level more than 13 mm (0.5 in), a ramp or sloped floor shall be provided.

3.4.4 Landing Location

Landings shall be provided

- a) at the top and bottom of a ramp;
- b) where there is a change in direction; and
- c) at horizontal intervals not greater 9 m (29.5 ft.) apart

Note: *Level portions of ramps are referred to as landings. Landings are to be incorporated into ramps to provide maneuvering space and to allow an individual to rest.*

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3.4.5 Landing Configuration

3.4.5.1 Size

The size of landings shall

- a) be at least 1670 mm (66 in) by 1670 mm (66 in) at the top and bottom of the ramp; and
- b) be at least 1670 mm (66 in) in depth for in-line landings.

3.4.5.2 Served By Door

Where a landing is served by a door, the length of the landing be extended

- a) by 600 mm (24 in) beyond the latch side of the door opening when the door swings towards the ramp; and
- b) by 300 mm (12 in) beyond the latch side of the door opening when the door swings away from the ramp.

3.4.6 Edge Protection

On ramps and at landings, edge protection shall

- a) be provided at all edges where
 - i. the ramp surface is not at grade level; or
 - ii. there is no solid enclosure or guard; and
- b) where required, have a curb at least 50 mm (2 in) in height or have railings or other barriers that extend to within 100 mm (4 in) of the finished ramp surface.

3.4.7 Ramp Handrails

3.4.7.1 Both Sides

All ramps shall have handrails on both sides of the ramp with a clear width of at least 1100 mm (43 in) between the handrails.

3.4.7.2 Central Handrail

Where ramps are wider than 2400 mm (94 in) there shall be a central handrail with a minimum clear width of 1100 mm (43 in) between the two sets of handrails.

3.4.7.3 Detailed Requirements

Handrails shall:

- a) be continuously graspable along their entire length;
- b) except where interrupted by doors, be continuous along the entire length of the ramp and around landings;
- c) have a circular cross-section with an outside diameter not less than 30 mm (1.2 in) and not more than 40 mm (1.6 in), or any non-circular shape with a graspable

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- portion that has a perimeter not less than 100 mm (4 in) and not more than 155 mm (6 in) and whose cross-sectional dimension is not more than 57 mm (2 in);
- d) have a clearance of at least 50 mm (1.8 in) between the handrail and any wall to which it is attached or immediately adjacent to;
 - e) be between 865 mm (34 in) to 965 mm (38 in) in height, measured vertically from the ramp surface to the top of the rail;

Note: *Handrails not meeting these requirements are permitted provided they are installed in addition to the required handrails;*

- f) be terminated in a manner that will not obstruct pedestrian travel or create a hazard;
- g) extend horizontally not less than 300 mm (12 in) beyond the top and bottom of the ramp;
- h) have the horizontal rail extensions return to the post, floor, or wall;
- i) be designed and constructed such that handrails and their supports
 - i. will withstand the loading values obtained from the non-concurrent application of a concentrated load not less than 0.9 kN (202 lb) applied at any point and in any direction; and
 - ii. a uniform load not less than 0.7 kN/m (46.6 lb/ft) applied in any direction to the handrail; and
- j) be colour/tonal contrasted with their surroundings in accordance with Clause 6.1.12, Colour/Tonal Contrast.

Note: *This clause applies to ramps that are elevated above the surrounding terrain. It does not apply to inclines.*

3.4.8 Guards at Ramps

Where the surface of the ramp is over 600 mm in height a guard or wall is required on both sides and where guards are provided they shall

- a) be not less than 1070 mm (42 in) in height measure vertically to the top of the guard from the ramp surface;
- b) be designed so that no member, attachment or opening located between 140 (6 in) mm and 900 mm (35 in) above the ramp surface being protected by the guard will facilitate climbing; and
- c) be provided with edge protection that complies with Clause 3.4.6, Edge Protection.

3.4.9 Detectable Warning Surface

A detectable warning surface on ramps shall comply with Clause 8.7.2, Ramps.

3.4.10 Surface

Ramp surfaces shall

- a) be firm and stable;
- b) be slip resistant;
- c) produce minimal glare;

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- d) be wear resistant; and
- e) comply with Clause 3.6, Ground and Floor Surfaces.

3.4.11 Drainage

Ramp and landing surfaces shall

- a) incorporate drainage to keep the ramp free of water accumulation; and
- b) not have gratings on the ramp.

Note: *It is preferred that gratings be located outside of pedestrian paths of travel wherever possible.*

Committee Comment

There were technical concerns raised regarding how to drain water from the ramp if gratings are not allowed on a ramp.

3.4.12 Illumination

Illumination shall be provided along ramps, and the lighting levels shall comply with Clause 8.5, Interior Lighting, and Clause 8.6, Exterior Pedestrian Lighting.

3.5 Stairs

Rationale

Stairs that are comfortable for many adults may be challenging for children, seniors or persons of short stature. For many people with disabilities, routes of travel may include stairs. Poorly designed nosings can present tripping hazards, particularly to persons with prosthetic devices or those using canes. Cues to warn a person with low or no vision an upcoming set of stairs are vitally important.

The appropriate application of handrails will aid all users navigating stairways.

Functional Description

This section addresses stairs that are exterior and interior to buildings, which allow persons to move from one level to another and enter/exit buildings. Stair systems incorporate steps, landings, edge protection elements, and handrails.

Technical Requirements

3.5.1 Rise and Run

A flight of stairs shall:

- a) have a rise between successive treads not less than 125 mm (5 in) and not more than 175 mm (7 in);

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- b) have a run of not less than 280 mm (11 in) and not more than 355 mm (14 in) between successive steps;
- c) not incorporate open risers;
- d) have uniform treads and risers in any one flight; and
- e) be slip resistant.

3.5.2 Nosing

Stair nosings shall

- a) project not more than 38 mm (1.5 in);
- b) have no abrupt undersides;
- c) have a radius of curvature at the leading edge of the tread not more than 13 mm (0.5 in);
- d) where projecting, be sloped to the riser at an angle greater than 60° to the horizontal; and
- e) have a horizontal strip of a minimum 50 mm (2 in) +/- 10 mm deep that:
 - i. is located at the leading edge of the tread;
 - ii. is colour contrasted with the tread and riser in accordance with Clause 6.1.12, Colour/Tonal Contrast; and
 - iii. extends the full width of the tread.

Committee Comment

There was concern noted regarding the projection of the nosing.

Dimensions are too prescriptive for the nosing, as materials may not be available or constructed in this range. Input is requested for during public review.

3.5.3 Lighting

Stairs shall be provided with sufficient lighting in compliance with Clause 8.5, Interior Lighting, and Clause 8.6, Exterior Pedestrian Lighting.

Note: *The intent is to have sufficient lighting on stairs, measured at each tread.*

3.5.4 Handrails

3.5.4.1 Both Sides

Handrails shall be provided on both sides of all stairs.

3.5.4.2 Details Requirements

Handrails shall

- a) be mounted not less than 865 mm (34 in) and not more than 965 mm (38 in) high, measured vertically from a line drawn through the outside edges of the stair nosings;

Note: *Handrails not meeting these requirements are permitted provided they are*

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- installed in addition to the required handrail;*
- b) be continuous around landings less than 2100 mm (83 in) in length, except where the landing
 - i. is intersected by an alternative accessible route; or
 - ii. has an entry door leading onto it;
 - c) be continuous on the inside edge of stairs;
 - d) have the rail extension return to the post, floor or wall;
 - e) at the top of stairs, extend at least 300 mm (12 in) parallel to the floor surface;
 - f) at the bottom of the stairs, continue to slope for a distance equal to the depth of one tread and then extend at least 300 mm (12 in) parallel to the floor surface;
 - g) have a circular cross-section with an outside diameter not less than 30 mm (1.2 in) and not more than 40 mm (1.6 in), or any non-circular shape with a graspable portion that has a perimeter not less than 100 mm (4 in) and not more than 155 mm (6 in) and whose cross-sectional dimension is not more than 57 mm (2 in);
 - h) have a clearance of at least 50 mm (2 in) between the handrail and any wall to which it is attached or immediately adjacent to;
 - i) be terminated in a manner that will not obstruct pedestrian travel or create a hazard;
 - j) be designed and constructed such that handrails and their supports
 - i. will withstand the loading values obtained from the non-concurrent application of a concentrated load not less than 0.9 kN (202 lb) applied at any point and in any direction; and
 - ii. a uniform load not less than 0.7 kN/m (46.6 lb/ft) applied in any direction to the handrail; and
 - k) be colour/tonal contrasted with their surroundings in accordance with Clause 6.1.12, Colour/Tonal Contrast.

3.5.4.3 Intermediate Handrail

Where stairs are wider than 2400 mm (94 in), one or more intermediate continuous handrails between landings shall be provided.

3.5.5 Detectable Warning Surfaces at Stairs

3.5.5.1 Location

Detectable warning surfaces at the top of stairs shall be provided

- a) at each landing incorporating an entrance into a stair system;
- b) where the regular pattern of a stairway is broken; and
- c) where the run of a landing not having a continuous handrail is greater than 2100 mm (83 in)

3.5.5.2 Details

The detectable warning surfaces at the top of stairs shall:

- a) extend the full width of the stair;

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- b) have a depth of 920 mm (36 in), commencing one tread depth from the edge of the stair; and
- c) comply with Clause 8.7.1.3, Warning Indicators.

3.5.6 Guards

Where there is more than a 600 mm (24 in) change in floor level, guards shall be installed on stairs.

3.5.7 Convex Mirrors

Convex mirrors shall be placed at each stair landing.

Note: *These mirrors are used as a simple security feature, allowing people to see what is happening behind them and to make them aware of on-coming pedestrian traffic.*

3.6 Ground and Floor Surfaces

Rationale

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 both walking and pushing a wheelchair. Slippery surfaces are hazardous to all individuals and especially hazardous for seniors and others who may not be sure-footed.

Glare from polished floor surfaces can be uncomfortable for all users and can be a particular obstacle to persons with a low vision by obscuring important orientation and safety features. Pronounced colour contrast between walls and floor finishes may be helpful for persons with a low vision, as are changes in colour/texture where a change in level or function occurs.

Patterned floors should be avoided, as they can create visual confusion.

Thick pile carpeting makes pushing a wheelchair very difficult. Small and uneven changes in floor level represent a further barrier to using a wheelchair but also present a tripping hazard to ambulatory persons.

Openings in any ground or floor surface such as grates or grilles can catch canes or wheelchair wheels.

Functional Description

This section addresses accessible ground and floor surfaces throughout buildings and exterior environments.

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Technical Requirements

3.6.1 Surfaces

The ground and floor surfaces shall be firm, stable and slip-resistant in dry and wet conditions.

Notes:

- (1) A firm surface does not deform under the vertical forces exerted by permitted users.
- (2) A stable surface does not deform or erode under the angular forces of permitted users traveling in a straight line or turning.

Committee Comment

For the designer to apply this requirement, consideration should be given to the use of the ground surface and the context of use, materials, distance to travel, environment (e.g., home, school, etc.), maintenance, etc.

There was concern that most materials used for flooring will not meet these requirements.

3.6.2 Energy Absorption

Wherever possible, ground and floors shall absorb energy of impact to reduce the chance of fracture following a fall.

Note: The designer must consider the application of the ground surface for context of use, as fractures that occur on wooden floors result less significant injury than fractures that occur on harder surfaces.

Committee Comment

Clarification should be provided as to the indication of what is sufficient to achieve the objective.

3.6.3 Floor Surface

3.6.3.1 Raised or Sunken

Ground and floor surfaces shall be designed to avoid unnecessary changes in elevations (e.g., sunken or raised rooms/areas for aesthetics).

3.6.3.2 Change in Level

Ground and floor surfaces with

- a) a vertical change in elevation between 6 mm (0.25 in) and 13 mm (0.5 in) and shall have a bevelled slope of 1:2 (50%); or
- b) a vertical change greater than 13 mm (0.5 in) shall have a slope, ramp or curb ramp.

Note: A rise in height of 6 mm (0.25 in) would be considered to be a tripping hazard for

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10% of the population, and there is not yet a consensus on a maximum acceptable rise for a fully accessible environment, although a range of 2 to 3 mm is likely to be a practical compromise.

Committee Comment

It was noted that 6 mm (0.25 in) is too narrow for expansion joints and depending on material possibly control joints.

3.6.3.3 Accessible Levels

Where there are changes in level in a building within a storey, each level must be accessible. Level changes are permitted as long as all levels meet accessibility requirements.

Committee Comment

It was noted that this requirement may have a large cost impact to some buildings.

3.6.4 Gratings

Gratings located on an accessible route on walking ground and floor surfaces shall

- a) have spaces not greater than 13 mm (0.5 in) wide in one direction; and
- b) be placed so that the long dimension is perpendicular to the dominant direction of travel.

Committee Comment

The committee is seeking input as to whether 13 mm is too small a space or is it sufficient.

3.6.5 Glare Minimization

Ground and floor surfaces shall have minimal glare.

Note: *Glare on the floor surface is caused by a variety of light reflection on the floor. The operation / maintenance of a facility (e.g., applying wax on the floor) will add to the reflection of the surface.*

3.6.6 Visual Contrast

Ground and floor surfaces shall be distinguished from the following elements through the use of high visual colour/tonal contrast in accordance with Clause 6.1.12, Colour/Tonal Contrast

- a) obstacles;
- b) adjacent wall surfaces or their baseboards; and
- c) changes in level at stairs, ramps, and curb ramps.

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3.6.7 Disruptive Patterns

Designs with high tonal contrasts or disruptive patterns shall not be used for interior and exterior ground and floor surfaces on the accessible route.

Note: *Disruptive patterns are often misinterpreted as level changes by persons with low vision and confuse persons with cognitive disabilities.*

3.6.8 Floor Mats

Floor mats shall

- a) be colour contrasted from surrounding surfaces in accordance with Clause 6.1.12, Colour/Tonal Contrast ;
- b) not exceed 13 mm (0.5 in) in height; and
- c) either have a bevelled edge or be securely fixed or placed in a depression that is level with the surrounding floor area.

Committee Comment

There was concern noted that having all floor mats be depressed may be quite costly.

3.6.9 Acoustics

Ground and floor surfaces shall comply with the acoustical specifications in Clause 8.3.3, Floor Finishes, Wall Surfaces and Ceilings.

Committee Comment

It was noted that this requirement may be difficult to enforce.

3.6.10 Roll Resistance

Ground and floor surfaces shall not increase the rolling resistance of mobility devices significantly.

Note: *There is no consensus yet on a measure and threshold in industry. Instrumented wheelchair wheels are available to measure the forces applied by a user and instrumented rolling walking aids similarly exist, but neither has been used to establish reproducible, physiologically or perceptually validated test protocols and establish thresholds for floor surfaces.*

3.6.11 Carpets or Carpet Tile

Carpets or carpet tile shall

- a) have a low loop or level pile;
- b) have a firm cushion, underpadding, or backing, where provided;
- c) have a combined carpet and pad height of not more than 13 mm; and
- d) be securely fastened.

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3.7 Overhanging and Protruding Objects

Rationale

Overhanging and protruding obstacles that are not cane detectable can be hazardous for many people, in particular to people who have low or no vision. An example of an overhanging hazard is the underside of a rising stairway. An example of a protruding hazard is a large wall-mounted lighting fixture, mounted at eye-level. This covers both exterior and interior rest areas.

Functional Description

This section addresses overhanging and protruding objects throughout and around buildings that can present a hazard or obstruction to persons with a disability.

Technical Requirements

3.7.1 Protruding Objects

Protruding objects on an accessible route, shall not protrude more than 100 mm (4 in) unless they are cane detectable at or below 680 mm (27 in) above the floor.

Note:

(1) *This does not apply to a continuous protrusion (e.g. handrail or guard), as the clear path of travel will be maintained.*

(2) *The 680 mm (27 in) height from the ground ensures the protruding object can be felt by a cane.*

3.7.2 Clear Width

Protruding objects shall not reduce the clear width of an accessible interior route to less than 1200 mm (47 in).

3.7.3 Headroom

The clear headroom

- a) along an accessible route, shall not be less than 2100 mm (83 in) high and will comply with Clause 4.1.10, Reduced Headroom; and
- b) in underground and all spaces within covered parking garages, shall not be less than 2100 mm (83 in) high for Type B parking spaces, and for Type A parking spaces be 2750 mm (108 in).

Note: *Mechanical fixtures such as lights, sprinkler heads, security cameras, etc., cannot hang below the clear headroom height.*

<p><i>Committee Comment</i></p>

<p>The above requirement was adjusted as per comments received, to ensure that new</p>
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constructed underground parking garage be a minimum of 2100 mm (83 in) in height.

3.8 Rest Areas

Rationale

Benches provide convenient resting places for all individuals and are especially important for those who may have difficulty with standing or walking for extended periods. Benches should be placed adjacent to pedestrian walkways to provide convenient rest places without becoming potential obstructions. Appropriate seat heights and arm rests can facilitate sitting and rising for individuals with various abilities. This applies to both exterior and interior rest areas.

Functional Description

This section addresses rest areas along accessible routes within a building and in the exterior environment. Rest areas are places for persons to rest, adjacent to an accessible route, which may incorporate seating. The frequency of rest areas is addressed within the circulation elements (Accessible Routes, Exterior Walkways, and Trails and Pathways).

Technical Requirements

3.8.1 Location

Rest areas and any associated furniture or amenities shall be located adjacent to an accessible route, so as not to interfere with or obstruct the path of travel.

3.8.2 Rest Area Design

3.8.2.1 Details

Rest areas shall

- a) have a ground/floor surface that is colour/tonally contrasted from the accessible route in accordance with Clause 6.1.12, Colour /Tonal Contrast;
- b) when exterior and interior, have a clear ground area at least 850 mm (33 in) wide and 1370 mm (54 in) long, adjacent to a bench or seat (where provided); and
- c) comply with Clauses, 3.6 Ground and Floor Surfaces, 4.1 Accessible Interior Route and 5.1 Accessible Exterior Route.

3.8.2.2 Electrical Outlet

Where power is available, an electrical three-prong outlet shall be provided adjacent to a rest area for mobility devices to be charged.

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3.8.2.3 Slope or Change in Level

Where the rest area abuts a downward slope or change in level greater than 200 mm (8 in), the rest area shall be separated from it by

- a) a continuous curb;
- b) a railing or guard that complies with Clause 3.4, Ramps; or
- c) a detectable warning surface that complies with Clause 8.7, Detectable Indicators.

3.8.3 Seating

Where seating is provided, there shall be at least one bench or seat that complies with 9.2.9, Benches.

Note: *Seating should be considered for all rest areas. When two benches are located in a rest area, consideration should be taken to place the benches facing each other or at a 90° angle. This arrangement allows people to see each other's faces and is better suited for people who are Deaf, deafened or hard of hearing and those with communication disabilities.*

4.0 Interior Accessible Routes

4.1 Accessible Interior Route

Rationale

Routes of travel through a facility should enable individuals with a range of disabilities to use them. They must provide the clear width necessary for persons using wheeled mobility devices, those pushing strollers, or those travelling in pairs. Consideration should be given not just to the width of items, such as wheeled mobility devices, but also to their manoeuvrability. While a corridor may be wide enough for a person to drive a scooter in a straight line, it may not be possible to make a turn around a corner.

High visual colour/tonal contrast from the surrounding environment and/or tactile pathways set into floors may be used to assist individuals with low or no vision to negotiate an environment. Edge protection that guards a change in level is an important safety feature for all users.

Functional Description

This clause addresses accessible interior routes or pedestrian circulation paths within buildings which provide access to facilities and elements within buildings and allow persons with disabilities to move throughout the interior of a building safely, easily, efficiently, and comfortably. Accessible interior routes include (but are not limited to) corridors, hallways and passageways, as well as routes across foyers and other open spaces. Accessible interior routes are permitted to include ramps, curb ramps, stairs, elevators or other elevating devices (as permitted) where a difference in elevation exists. Access should be provided to all areas of all buildings, with the exception of those noted in Clause 4.1.3, Exempted Areas.

Technical Requirements

4.1.1 Clear Width

Every accessible interior route shall have an unobstructed width of at least 1200 mm (47 in) except as required in Clauses, 4.1.2 Minimum Clear Width Exceptions, 4.1.4 Unobstructed Passing Area and 4.1.5 Reduced-Width..

4.1.2 Minimum Clear Width Exceptions

The minimum clear width of an accessible interior route shall be 1200 mm (47 in) except in the following situations:

- a) at doors, the minimum clear width shall comply with Clause 3.2.3, Clear Width;
- b) where additional maneuvering space is required at doorways, the minimum clear

4.0 Interior Accessible Routes

- width shall comply with Clause 3.2.4, Maneuvering Area at Doors;
- c) at landings for elevating devices, the minimum clear width shall comply with Clause 3.3, Elevating Devices;
 - d) at landings at the top and bottom of a ramp the minimum clear width shall comply with Clause 3.4, Ramps; and
 - e) at landings at the top and bottom of stairs the minimum clear width shall comply with Clause 3.5, Stairs.

4.1.3 Exempted Areas

An accessible interior route is not required for the following areas in a building:

- a) to elevator machinery rooms;
- b) to crawl spaces;
- c) to attic; and
- d) within portions of a floor area with fixed seats in an assembly occupancy where these portions are not part of the accessible interior route to spaces designated for wheeled mobility device use.

4.1.4 Unobstructed Passing Area

Every accessible interior route less than 1620 mm (64 in) in width shall be provided with unobstructed spaces not less than 1620 mm (64 in) in width and 1620 mm (64 in) in length, located not more than 30 m (98.5 ft.) apart, to allow for passing by one or more persons using a mobility device, service animal or personal attendant.

Committee Comment

The committee is seeking public input as to whether the space identified for the unobstructed passing area is sufficient.

4.1.5 Reduced-Width

The clear width of an accessible interior route may be reduced to a 920 mm (36 in) minimum for a maximum length of 610 mm (24 in), provided that the reduced width segments are separated by segments at least 1500 mm (59 in) long and 1200 mm (47 in) wide.

4.1.6 Areas Requiring an Accessible Interior Route

4.1.6.1 Occupied Floors

Except as identified in Clause 4.1.3, Exempted Areas, an accessible interior route shall be provided throughout the entrance storey and within all other normally occupied floor areas served by a passenger elevator, escalator, inclined moving walk, or other platform equipped passenger elevating device.

4.0 Interior Accessible Routes

4.1.6.2 All Routes

Except as identified in Clause 4.1.3, Exempted Areas, an accessible interior route shall be provided for all paths commonly used by the public and employees of a building.

4.1.6.3 Difference in Level

An accessible interior route may include ramps, independently operated passenger elevators, or other platform-equipped passenger elevating devices to overcome a difference in level.

4.1.7 Surfaces

Interior surfaces that are on an accessible interior route shall comply with Clause 3.6, Ground and Floor Surfaces.

4.1.8 Slope

4.1.8.1 Cross Slope

The cross slope for an accessible interior route shall be no greater than 1:50 (2%).

4.1.8.2 Running Slope

The running slope for an accessible interior route shall be no greater than 1:20 (5%).

4.1.9 Edge Protection

Where the edge(s) of an accessible interior route, path, or corridor is not level with the adjacent surface, except at stairs and at elevated platforms such as performance areas or loading docks, the edge(s) shall be protected as follows

- a) where the change in level is less than 200 mm (8 in), the edge shall be marked with a high colour/tonal contrast marking in accordance with Clause 6.1.12, Colour/Tonal Contrast;
- b) where the change in level is between 200 mm (8 in) and 600 mm (24 in) there shall be a colour contrasting curb at least 75 mm (3 in) high; and
- c) except at transportation facility platforms (e.g. subway platform), where the change in level is greater than 600 mm (24 in) there shall be a guard that meets the requirements of Clause 3.4.8, Guards at Ramps.

4.1.10 Reduced Headroom

Where the headroom of an area on an accessible interior route is reduced to less than 2100 mm (83 in) in height, a guard or other barrier with a leading edge at or below 680 mm (27 in) from the floor shall be provided.

4.0 Interior Accessible Routes

4.1.11 Rest Areas

An accessible interior route shall have level rest areas spaced no more than 30 m (99 ft) apart.

4.1.12 Convex Mirrors

All facilities shall have convex mirrors installed at hallway intersections along an accessible interior route to allow people who are Deaf, deafened or hard of hearing to see oncoming pedestrian traffic.

5.0 Exterior Spaces

5.1 Accessible Exterior Route

Rationale

Accessible exterior routes shall provide a clear path of travel to facilities and address the range of capabilities of the individuals that might use them. Consideration shall be given to the expected number and type of users in determining the design parameters that will enable independent, safe, and efficient use of the exterior walk by individuals of all ages and abilities. Accessible exterior routes shall provide a path of travel that is free from safety hazards or barriers that impede users. In outdoor environments, the most common barriers to use of an exterior route are inadequate drainage from rain, or snow melt, the formation of ice or a soft or unstable ground surface.

Irregular surfaces, such as cobblestones or pea-gravel finished concrete, are difficult for both walking and pushing a wheeled mobility device. Uneven surfaces can also create unpleasant and damaging vibration for wheeled mobility device users. Sand and gravel surfaces are extremely difficult for wheeled mobility devices and walking aids.

Functional Description

This section addresses accessible exterior routes. Accessible exterior routes and walkways serving buildings are pedestrian circulation paths that provide access to facilities and elements outside a building, and include elements within a privately owned site, as well as public right-of-ways. Accessible exterior routes and walkways that service buildings include (but are not limited to)

- (a) sidewalks and footpaths;
- (b) routes across plazas and other open spaces, elements within public common-use areas on a privately owned site;
- (c) public right-of-ways;
- (d) ramps;
- (e) curb ramps;
- (f) stairs; and
- (g) elevators, or other elevating devices (as permitted) where a difference in elevation exists.

Accessible exterior routes and walkways that service buildings do not include trails and pathways within parks and other natural environments, or privately owned homes.

Note: *The requirements for trails are addressed in Clause 11.1, Paths and Trails.*

Technical Requirements

5.0 Exterior Spaces

5.1.1 Criteria for Exceptions

5.1.1.1 Conditions

Accessible exterior routes and walkways shall comply with this Clause, except where compliance would

- a) cause substantial harm to cultural, historic, religious, or significant natural features or characteristics;
- b) substantially change the intended experience provided by the facility;
- c) require construction methods or materials that are prohibited by federal, provincial, or local law, other than laws whose sole purpose is to prohibit use by persons with disabilities;
- d) be impractical due to physical terrain; or
- e) compromise volunteer activity.

Note: *Exception item e) is intended to ensure that volunteers can continue to build and maintain these accessible exterior routes without having to perform work that is beyond their capacity.*

5.1.1.2 Variances

Should the criteria for exception occur as noted in Clause 5.1.1.1, Conditions, then the conditions on the exterior walk and walkways may vary to the extent indicated, but the variance should always be the minimum required over the shortest distance possible.

5.1.2 Clear Width and Reduced Width

The minimum clear width for accessible exterior routes and walkways shall

- a) be 1800 mm (71 in);
- b) if one or more of the criteria for exception exists as noted in Clause 5.1.1, Criteria for Exceptions the width of the exterior walk and walkways may be reduced to a minimum of 1200 mm (47 in), provided that passing spaces of at least 1800 mm (71 in) in width and 1800 mm (71 in) in length are provided at intervals not to exceed 50 m (164 ft.); and
- c) be reduced to 920 mm (36 in) at curb ramps.

Note: *The permitted reduction should be as small as possible, and it should continue for the shortest distance possible.*

<p><i>Committee Comment</i></p>

<p>The Committee is seeking public input on whether the space and distance provided above are sufficient.</p>

5.1.3 Running Slope

5.1.3.1 Limit

The running slope for accessible exterior routes and walkways shall

5.0 Exterior Spaces

- a) not exceed 1:20 (5%), unless one or more of the criteria for exception applies as noted in Clause 5.1.1, Criteria for Exceptions;
- b) be the minimum permitted by the terrain; and
- c) be equal to or less than the cross slope to maintain sheet drainage.

5.1.3.2 Level Rest Area

Where the running slope exceeds 1:20 (5%), a level rest area complying with Clause 3.8, Rest Areas shall be provided every 30 m (98.5 ft.).

5.1.4 Cross Slope

5.1.4.1 Exterior

The cross slope on accessible exterior routes and walkways shall;

- a) be the minimum required to maintain proper drainage;
- b) be equal to or more than the running slope to maintain sheet drainage; and
- c) not exceed 1:20 (5%) unless one or more of the criteria for exception occur (see Clause 5.1.1) and in no case exceed 1:10 (10%).

Note: *The cross slope of 1:50 (2%) as noted in Clause 9.11.4 for parking spaces and access aisles should be maintained. In high pedestrian traffic areas the cross slope should be maintained at 1:50 (2%) wherever possible.*

5.1.4.2 Level Rest Area

Where the cross slope exceeds 1:20 (5%), a level rest area shall be provided every 30 m (98.5 ft.), complying with Clause 3.8, Rest Areas.

Note: *Rest areas are provided every 30 m (98.5 ft.) so that people using assistive devices can rest periodically, and thereby manage cross slopes in these areas.*

5.1.5 Running slope plus the cross slope

5.1.5.1 Total Slope

The total slope of the running slope plus the cross slope shall not exceed 1:6.67 (15%).

5.1.5.2 Rate of Change

The rate of change of the running slope across a 2 m (6.5 ft.) distance shall not exceed 1:10 (10%).

5.1.6 Exterior Surface

An exterior surface should meet the firmness and stability requirement of ASTM F 1951 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment.

Note:

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- (1) A firm surface does not deform under the vertical forces exerted by permitted users.
- (2) A stable surface does not deform or erode under the angular forces of permitted users traveling in a straight line or turning.

5.1.7 Colour and/or Texture/Tactile Contrast

A high visual colour/tonal contrast in accordance with Clause 6.1.12, Colour/Tonal Contrast, and/or changes in surface texture shall be used to

- a) distinguish the edges of the accessible exterior routes; and
- b) clearly distinguish the exterior walk from vehicular routes.

5.1.8 Barriers

Barriers shall be provided adjacent to the exterior walk to prevent parked vehicles that are parked perpendicular or at an angle to the walk from overhanging the walk.

Note: A barrier may include a bollard, planter, curb stop, or a grassed or planted boulevard, etc.

5.1.9 Changes in Level

5.1.9.1 Exterior Walk

Changes in level along the surface of an exterior walk shall not present a tripping hazard or impede the passage of individuals using wheeled mobility devices.

5.1.9.2 Bevelled

A change in level greater than 20 mm (0.8 in) and up to 50 mm (2 in) shall be bevelled, with the bevel having a maximum slope of 1:2 (50%).

Committee Comment

The Committee is requesting public input on whether the change in level and bevelling are sufficient.

5.1.10 Gratings or Other Openings in the Surface

Gratings shall

- a) comply with Clause 3.6.4, Gratings; and
- b) be placed off the accessible route and may be located in an amenity strip on either side of an exterior walk and walking surface.

Note: Openings can include access openings, ventilation or drainage grates, utility covers, and gratings around trees.

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5.1.11 Edge Protection

5.1.11.1 Details

Edge protection, where provided to protect a change in level for user safety, shall

- a) be a minimum of 100 mm (4 in) above the walkway surface for grade differentials from 200 mm (8 in) to 600 mm (24 in);
- b) have colour/tonal contrast and/or texture complying with the requirements of Clause 6.1.12, Colour/Tonal Contrast, with the contrast located on the edge as protection and not on the surface of the walkway; and
- c) be designed so as not to impede drainage of the surface.

Note: *Edge protection can be provided in the form of a raised curb or landscaping. See Clause 3.1.11 Guards at Entrances.*

5.1.11.2 Guards

For grade differentials greater than 600 mm (24 in), guards shall be provided in accordance with Clause 3.4.8, Guards at Ramps.

5.1.12 Signage

Where signage occurs along accessible exterior routes and walkways it shall comply with Clause 6.1, Signage.

5.1.13 Ramps

Where the exterior walk or walkway has a slope of more than 1:20 (5%) and elevates the person above the surrounding terrain, the elevated section shall be considered a ramp and the ramp shall comply with Clause 3.4, Ramps.

5.1.14 Curb Ramps

Where curb ramps occur along accessible exterior routes and walkways at transitions across vehicular routes, they shall comply with Clause 5.2, Curb Ramps.

5.1.15 Pedestrian Crossings

Where pedestrian crossings occur at transitions across vehicular routes, they shall comply with Clauses 5.3, Pedestrian Crossing and 5.4, Pedestrian Crossing Signals.

5.1.16 Alternative Path of Travel

Where stairs are located on accessible exterior routes or walkways, the stairs shall not be the only means of access along the accessible exterior routes or walkways. An alternative accessible route shall be available that is immediately adjacent to the stairs and may include either a ramp or another accessible means of negotiating the elevation

change.

5.1.17 Street Furniture

Where street furniture areas occur along accessible exterior routes and walkways they shall comply with Clause 5.5, Street Furniture.

5.1.18 Picnic Areas, Patios and Terraces

Where picnic areas or patios and terraces occur along accessible exterior routes and walkways they shall comply with Clauses 11.5, Picnic Areas and 9.16 Patios.

5.2 Curb Ramps

Rationale

In the interest of moving people safely and efficiently off a roadway, the design of curb ramps is very important. The same issues related to the slopes of ramps apply equally to slopes of curb ramps. A well-designed curb ramp can be spoiled by an uneven or gapped transition between the road surface and curb ramp. Flared sides on the curb ramp eliminate the hazard of pedestrians stepping off of an edge. While a smooth transition and minimal slope are ideal for someone in a wheeled mobility device, they are a potential hazard to an individual with low or no vision who may not notice the transition from sidewalk to street. Textured surfaces become an important safety feature for curb ramps.

Functional Description

This section addresses the accessibility of curb ramps – providing access between levels where a curb is present. A curb ramp is defined as the connecting route between the vehicular travel lanes including, but not limited, to pedestrian crossings, designated accessible parking space, passenger drop-off areas, and access aisles and the adjacent exterior walkway. A curb ramp is required when the elevation of the vehicular route is different from the elevation of the exterior walkway.

Technical Requirements

5.2.1 Surface

The surface of a curb ramp, shall

- a) be stable, firm, and slip resistant;
- b) have a detectable warning surface that complies with Clause 8.7, Detectable Indicator; and
- c) have transition areas of at least 1500 mm (59 in) in diameter and have a running slope and cross slope both less than 1:20 (5%) either at the level of the vehicular

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route or the level of the pedestrian exterior walk or both.

5.2.2 Running Slope

Curb ramps shall have

- a) a running slope that is a maximum of 1:10 (10%);
- b) a counter slope of gutters and road surfaces immediately adjacent to the bottom of the curb ramp that is not steeper than the ratio of 1:20 (5%). The curb ramp shall not create a sudden transition that would impede the transition of the pedestrian from the vehicular route to the curb ramp; and
- c) a rate of change of running slope from the curb ramp to the adjacent road exterior walkway, transition area or gutter not exceeding 1:50 (2%).

5.2.3 Cross Slope

The cross slope on curb ramps shall

- a) not be steeper than the ratio of 1:50 (2%); and
- b) have a rate of change from the ramp to adjacent road or gutter not exceeding 1:17 (5.88%); and
- c) be in the direction that reduces the rate of change.

5.2.4 Curb Ramp Sides

5.2.4.1 Return Curb

Wherever possible a return curb shall

- a) be used over the full length of the curb ramp; and
- b) have high colour/tonal contrast and/or texture complying with the requirements of Clause 6.1.12, Colour/Tonal Contrast at the outside of the return curbs to clearly designate them as not intended for pedestrian travel.

Notes: *The return curb design provides a hard, detectable edge on both sides of the curb ramp that prevents people from unintentionally moving off of the curb ramp surface and provides directional guidance to people with low or no vision.*

5.2.4.2 Flared Sides

Flared sides shall not be permitted for new construction.

Committee Comment

The Committee is seeking public input on whether flared sides should be allowed in new construction.

5.2.5 Walkway Clear Width at Top of Curb Ramp

A minimum clear width of at least 920 mm (36 in).shall be provided on exterior walkways at the top of a curb ramp, to serve as a transition area where pedestrian

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traffic would bypass the curb ramp.

5.2.6 Width

The width of a curb ramp, exclusive of return curbs shall be at least 1800 mm (71 in).

5.2.7 Drainage

Curb ramp design shall provide for drainage so that water will not accumulate on the accessible route.

5.2.8 Changes in Elevation

Changes in elevation within the surface of the curb ramp, including curb and transition areas, shall not present a tripping hazard or impede the passage of individuals using assistive devices. The maximum change in level shall be 20 mm (0.8 in) if non-bevelled, and treated as a sloped surface or ramp if greater than 20 mm (0.8 in).

5.3 Pedestrian Crossing

Rationale

Certain situations may warrant the installation of a pedestrian crossing such as a signalized intersection, a sudden change from rural conditions to those of an urban business district, an extremely wide roadway, or a predominance of small children, seniors, or persons with disabilities. In all situations involving pedestrian/vehicular conflict, pedestrian safety is paramount.

Functional Description

This section addresses the accessibility of pedestrian crossings, across vehicular roadways / driveways at the points where individuals will normally be expected to cross, including through or across intermediate islands within the road system.

Technical Requirements

5.3.1 Accessible Route

Pedestrian crossings shall provide a continuous, clear, and linear accessible route across the vehicular route. Wherever possible, the path of travel shall be perpendicular to the vehicular route.

5.3.2 Curb Ramps

Pedestrian crossings that intersect curbs shall comply with Clause 5.2, Curb Ramps.

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5.3.3 Surfaces

The material used for pedestrian crossing surfaces shall comply with Clause 3.6, Ground and Floor Surfaces.

5.3.4 Edge Markings

Edge markings shall be provided at both sides of pedestrian crossings that

- a) are at least 300 mm (12 in) wide;
- b) are marked with permanent high-colour markings that meet the requirements of Clause 6.1.12, Colour/Tonal Contrast; and
- c) have a surface texture to distinguish them from the main pedestrian crossing path of travel and vehicular route/roadway.

5.3.5 Running Slope

The running slope of a pedestrian crossing shall comply with Clause 5.1, Accessible Exterior Route.

5.3.6 Cross Slope

The cross slope of a pedestrian crossing shall comply with Clause 5.1, Accessible Exterior Route.

5.3.7 Traffic Islands

Where traffic islands are provided within a pedestrian crossing, they shall

- a) have a level area for pedestrians to wait to cross that is a minimum of 2020 mm (80 in) in one direction and at least 1010 mm (40 in) in the perpendicular direction;
- b) be cut through level with the street or have curb ramps at both sides that comply with Clause 5.2, Curb Ramps; and
- c) have a tactile detectable warning surface complying with Clause 8.7, Detectable Indicators at both ends of the island crossing.

5.4 Pedestrian Crossing Signals

Rationale

Pedestrian crossing controls and standards are necessary for public safety to

- a) increase awareness that an intersection is equipped with audible pedestrian signals (APS);
- b) indicate where the push button is located;
- c) provide additional information;
- d) assist with orientation/direction; and

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- e) enable independent operation of controls.

Committee Comment

In August 2008, the Transportation Association of Canada published “Guidelines for Understanding, Use and Implementation of Accessible Pedestrian Signals”. The committee proposes that these requirements be adopted for this clause, as these are guidelines for all of Canada to use. The committee felt they will be the most applicable for Ontario.

Functional Description

This section addresses the accessibility of pedestrian crossing signals at pedestrian crossings across vehicular roadways, including but not limited to designated crosswalks and signalized intersections.

Technical Requirements

5.4.1 Requirements

Pedestrian crossing signals at pedestrian crossings across vehicular roadways shall comply with the requirements of the Transportation Association of Canada “Guidelines for Understanding, Use and Implementation of Accessible Pedestrian Signals” - August 2008.

5.5 Street Furniture

Rationale

Street furniture can provide a resting place for any individual with difficulty walking distances. Such furniture should incorporate strong colour contrasts and be located off pathways, to minimize its potential as an obstruction to pedestrians.

Functional Description

This section addresses street furniture, which includes, but is not limited to

- (a) benches;
- (b) bollards;
- (c) lighting elements;
- (d) planters;
- (e) permanent signage; and
- (f) temporary signage.

Street furniture also includes amenities that provide a specific service and/or function to the public and complement outdoor spaces, rights-of-way, and accessible route. Examples of these elements include, but are not limited to

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- (a) bicycle racks;
- (b) drinking fountains;
- (c) information kiosks;
- (d) mailboxes;
- (e) newspaper boxes;
- (f) parking meters;
- (g) recycling stations;
- (h) telephones;
- (i) vending machines; and
- (j) waste receptacles.

Technical Requirements

5.5.1 General

5.5.1.1 Accessible Route

Street furniture and amenities and the placement of street furniture and amenities relative to accessible routes shall

- a) comply with Clause 5.1, Accessible Exterior Route;
- b) not be placed within the accessible exterior route itself; and
- c) not require the movement or temporary removal of an element to provide access to and use of street furniture.

5.5.1.2 Colour/ Tonal Contrast

The ground surface where the street furniture and amenities are located shall be distinguished from the accessible route by contrasting colour / tonal and texture that meet the requirements of Clause 6.1.12, Colour/Tonal Contrast.

5.5.1.3 Operating Mechanisms

The operating mechanisms on amenities, where supplied, shall comply with Clause 8.4, End User Controls and Operating Mechanisms, and shall be designed so that they do not interfere with features intended to prevent the inappropriate use of the amenities (e.g., by animals or children).

5.5.1.4 Signage

Signage, instructions, or symbols, etc. that indicate the operation of an amenity shall comply with requirements for font size, contrast, etc., as specified in Clause 6.1, Signage.

5.5.1.5 Rest Areas

Where provided, rest areas with seating shall comply with Clause 3.8, Rest Areas.

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Note: Opportunities to provide rest areas with seating should be considered at all times, especially at drop-off locations, bus stops, and paths of travel exceeding 175 m (574 ft.).

5.5.2 Amenities

5.5.2.1 Drinking Fountains

Where drinking fountains are provided, they shall have water spouts mounted at heights suitable for both a seated adult/standing child and a standing adult, and comply with Clause 7.10, Drinking Fountains.

5.5.2.2 Parking Meter

Access to a parking meter from accessible on-street parking shall comply with Clause 9.11.15, Parking Meter / Dispensing Machine.

5.5.2.3 Lighting Elements

Illumination levels for street furniture elements shall comply with Clause 8.6, Exterior Pedestrian Lighting and not spread to adjacent properties.

5.5.2.4 Seating and benches

Seating and benches shall

- a) have a seating / bench surface located at a height of 430 mm (17 in) to 500 mm (20 in) above the surrounding grade;
- b) be 510 mm (20 in) to 610 mm (24 in) deep; and
- c) provide a minimum of one arm rest opposite of the wheeled mobility device parking space.

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6.1 Signage

Rationale

Signage must be simple and uncluttered, and incorporate plain language. The use of graphic symbols is helpful for individuals such as children, those with limited literacy or cognitive abilities, or those who speak a different language.

Sharp contrasts in colour make signage easier for everyone to read, particularly someone with low or no vision. The intent of the symbol must be evident, culturally universal, and intuitive. To enhance readability, raised tactile lettering should incorporate edges that are slightly smoothed.

Street signage and numbering systems must be legible and incorporate audible signage, it can be used by people with little or no vision.

Functional Description

This section addresses the accessibility of signage systems for both permanent and temporary signs, and both interior and exterior signs. Signage includes but is not limited to the following; wall mounted signage, signage on support posts and suspended signage.

Committee Comment

Street signage was included, as it is extremely important and assists with wayfinding, etc.

Technical Requirements

6.1.1 Essential Areas

Where entrances, means of egress, ramps, washrooms, elevators, telephones, or parking areas on an accessible route are required to accommodate persons with various abilities, they shall:

- a) be identified by a sign consisting of the International Symbol of Accessibility for Persons with Disabilities; and
- b) be supplemented with other graphic, tactile, or written directions as are needed to clearly indicate the type of facility available.

6.1.2 Entrances and Ramps

Where a building has accessible entrances to accommodate persons with disabilities

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that are not on the accessible interior route, signs incorporating the International Symbol of Accessibility shall be installed to indicate;

- a) the location of the nearest accessible entrances; and
- b) the location of ramps on a required accessible interior route serving the accessible entrances.

6.1.3 Washroom

Where a washroom is not designed to accommodate persons with disabilities in a storey to which an accessible interior route is required, signs shall be provided to indicate the location of the nearest accessible washroom, universal toilet room, or accessible water closet.

6.1.4 Orientation and Information Signage

6.1.4.1 General

Signage for general orientation and the provision of information shall;

- a) use letters that are sans serif font upper and lower case;
- b) use numbers that are Arabic font and have a width-to-height ratio between 3:5 and 1:1;
- c) have a stroke-width-to-height ratio between 1:5 and 1:10;
- d) have letters, numbers, pictograms, and symbols that comply with Table 6.1.4.1 for height and viewing distance;
- e) be finished with a matte or other glare-free surface;
- f) be positioned to avoid shadow areas and glare;
- g) be illuminated at a minimum level of 200 lx measured at the surface of the sign; and
- h) have a colour contrasted from the background and comply with Clause 6.1.12 Colour/Tonal Contrast.

Table 6.1.4.1 Height and viewing distance

Minimum Character Height (mm)	Maximum Viewing Distance (mm)
200 (8 in)	6000 (236 in)
150 (6 in)	4600 (181 in)
100 (4 in)	2500 (98 in)
75 (3 in)	2300 (91 in)
50 (2 in)	1500 (59 in)
25 (1 in)	750 (30 in)

6.1.4.2 Tactile

When tactile indicators are used for letters, numbers, and symbols, they shall comply with Clause 6.1.7, Tactile Requirements.

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6.1.4.3 Pictograms

Pictograms, if used, shall comply with Clause 6.1.9, Pictograms.

6.1.5 Electronic and Visual Displays

Where electronic and visual information is displayed, it shall

- a) have letters and numbers that use or approximate sans serif and Arabic fonts;
- b) be visible from a seated position;
- c) be displayed for no less than 10 seconds; and
- d) not use red characters on a black background.

Committee Comment

The intent of Item d) is to address colour blindness.

6.1.6 Tactile Signage

All regulatory, warning signage, and permanent room identification, and where practical and possible general orientation and information signage shall be provided as tactile and auditory.

6.1.7 Tactile Requirements

Where signs are required to be tactile, letters and numerals shall

- a) be raised at least 0.8 mm (0.03 in) above the surface;
- b) be smoothly edged;
- c) be between 16 mm (0.6 in) and 50 mm (2 in) high; and
- d) be sans serif font, accompanied by uncontracted (Grade 1) Braille.

6.1.8 Permanent Signs

6.1.8.1 Location

Where permanent identification is provided for rooms and spaces, tactile signs shall be installed on the wall adjacent to the latch side of the door, or in the case of double doors, on both sides adjacent to the door hinges.

6.1.8.2 Tactile Signs

Tactile signs for permanent identification of rooms and spaces shall

- a) be located within a range of 1200 mm above the floor or ground surface to the centre of the sign;
- b) have a clear wall area around the sign of at least 75 mm wide; and
- c) where possible have the leading vertical edge 140 to 160 mm from the edge of the door frame or where there is no wall space adjacent to the latch side of the door, including multiple-leaf doors, be placed on the nearest adjacent wall.

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6.1.8.3 Audible

Audible signs shall be considered as part of a comprehensive signage system.

6.1.9 Pictograms

Pictograms shall

- a) be accompanied by an equivalent visual and tactile verbal description, placed directly below the pictogram;
- b) have a 150 mm (6 in) minimum height and width; and
- c) where possible be consistent with international standards.

6.1.10 Street Signage

Street signage shall

- a) be reflective;
- b) comply with Clause 8.6, Exterior Pedestrian Lighting; and
- c) comply with Clause 6.1.4, Orientation and Information Signage items a), b), c), d) and g).

Note: *This requirement refers to street signs and address signs on buildings and not road traffic signs.*

6.1.11 Overhead Signage

Overhead signage can still be provided and shall comply with Clause 3.7, Overhanging and Protruding Objects.

6.1.12 Colour/ Tonal Contrast

Where high visual colour/tonal contrast is required to distinguish an element from its surroundings, the difference in tone shall be at least 70%, and this may be achieved through the use of either light on dark or dark on light.

6.1.13 Light Emitting Diode Signs

Where provided, light emitting diode (LED) signs shall be white, yellow, green, or light blue on a black background to achieve the best contrast.

Note: *Red LED's on a black background are unreadable for most people with vision loss, particularly those who are colour-blind.*

Committee Comment

The effectiveness of light emitting diode (LED) signage will depend upon the colours chosen and the angle of the sign relative to the general lighting of the area.

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6.1.14 Entrance Signage

6.1.14.1 Accessible Entrances

Accessible entrances shall have signage in compliance with Clause 6.1, Signage for entrances identifying that the entrance is accessible.

6.1.14.2 Parking Area

If the structure or facility has a parking area, signage shall be provided in compliance with Clause 9.11.2 Directional Signage to Accessible Parking Spaces and Clause 9.11.3, Directional Signage to the Nearest Accessible Facility Entrance.

<i>Committee Comment</i>

There was concern noted that there would be too many signs.

6.2 Information / Visual Display Systems

Rationale

Information should be accessible to all facility users. Where universally accessible formats are not possible, alternate formats should be available. Video display terminals may present difficulties for persons with low or no vision. Alternate technology or audio interfaces can be beneficial.

To ensure that a person using a wheelchair or scooter can access an information terminal, consideration should be given to the lower vantage point and reach ranges of all information systems provided.

Functional Description

This section addresses information display systems. Information display systems include, but are not limited to: information kiosks; electronic directories; and electronic signs.

Technical Requirements

6.2.1 General

6.2.1.1 Direct Access

Where the information display system requires direct access by the public and the user, the display shall be placed adjacent to an accessible interior route within a building or accessible exterior route outside a building.

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6.2.1.2 Placement

The information display system shall

- a) be placed
 - i. no higher than 1200 mm (47 in) and no lower than 400 mm (16 in) from the floor, without an obstruction, where a person from a seated position may be required to view or interact with the display; or
 - ii. no higher than 1100 mm (43 in) and no lower than 400 mm (16 in) from the floor, where there is an obstruction be between 500 mm (20 in) and 625 mm (25 in) in depth.
- b) have a clear floor area at least 1370 mm (54 in) wide and 1370 mm (54 in) long that allows for either a forward or a side approach by a person using a mobility device;
- c) be on a level ground surface and comply with Clause 3.6, Ground and Floor Surfaces;
- d) have controls and operating mechanisms (e.g., push buttons) that comply with Clause 8.4, End User Controls and Operating Mechanisms;
- e) have a minimum font size available suitable for a variety of vision needs and comply with Clause 6.1, Signage;
- f) have a high visual colour/tonal contrast that meet, the requirements of Clause 6.1.12, Colour/Tonal Contrast to distinguish the information display system from the surrounding environment; and
- g) be placed in a consistent location throughout a building.

6.2.1.3 Lighting Levels

Minimum lighting levels for the information display system shall be:

- a) at 150 lx minimum for the area surrounding an information display system; and
- b) at 200 lx minimum for an information display system that requires the user to be interactive (e.g., touch) by using operating controls.

6.2.2 Electronic Signs

Electronic signs shall

- a) incorporate a 10 second scroll display; and
- b) not use red text on a black background.

6.2.3 Directories

Directories should include raised print, print lettering with characters at least 16 mm (0.6 in) in height and include Braille.

6.2.4 Visual and Tactile Maps

Where provided, visual and tactile maps shall

- a) show the floor plan for a main floor and indicate the primary accessible routes to

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- services; and
- b) show the building, indicating the number of floors and the services provided on each floor.

6.3 Wayfinding

Rationale

Everyone uses cues from their environment to make their way around and find their destination in both the external and built environments. The cues include the design of the building itself, the use of signage, the placement of furnishings, lighting, the placement of security and information staff, the use of signage, the use of colour, texture and acoustics.

People with differing abilities may rely more on one certain cue. For instance, someone who is Deaf, deafened or hard of hearing will look for visual cues such as directories, signage and the use of colour. Someone who is no/low vision may rely more on texture, strong colour contrasts, acoustics and the placement of furnishings.

The design of wayfinding cues is particularly important for emergency situations when people must evacuate a facility quickly and efficiently.

Functional Description

This section addresses wayfinding in the built environment. Wayfinding is a term that describes the spatial problem-solving process that a person uses to reach a destination. A mental "map" is formed of the overall environment and the desired destination. This map is based on information obtained from "orientation cues" that are available from the environment. These cues include not only signage, but also the overall spatial forms, structures, sounds, surface textures, colours, illumination levels, etc. Tactile maps and/or recorded instruction can augment these orientation cues and enable people to find their way independently, even in complex settings. A well-designed setting can thus be spatially gratifying and simple enough for persons to navigate, if there are adequate, varied, and non-conflicting wayfinding cues available.

Technical Requirements

6.3.1 Design Principles

Any combination of the following design principles may be used to support wayfinding in the built environment

- a) Provide a logical layout that is easy to memorize for a person with no/low vision;
- b) Use textural contrasts and tactile cues with the built environment to provide directional cues;
- c) Define the space with acoustic characteristics;

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- d) Use colour and brightness contrasts to accentuate the structural and decorative design of the built environment;
- e) Use tactile signs to provide information that can be read by touching;
- f) Use audible signs to provide information that can be heard by everyone; or
- g) Use lighting both inside and out to differentiate one area from another.

Note: *The intent of wayfinding is to consider the use of design and maintenance of a built environment from the wayfinding perspective of people who have no/low vision.*

6.3.2 Wayfinding Systems

The design of wayfinding systems shall include:

- a) identifying and marking spaces;
- b) grouping spaces;
- c) linking and organizing spaces; and
- d) communicating this information to the user.

6.3.3 General Requirements

A wayfinding system shall

- a) be understandable to people of differing abilities;
- b) be on the accessible route;
- c) be provided in external areas that include, but are not limited to
 - i. parking areas;
 - ii. building sites with more than one building;
 - iii. passenger loading zones;
 - iv. accessible entrances;
 - v. public streets;
 - vi. accessible exterior routes; and
 - vii. open plazas.
- d) be provided in internal areas that take a person to/from areas that include, but are not limited to
 - i. entrances;
 - ii. elevators;
 - iii. exits;
 - iv. accessible washrooms;
 - v. information kiosks; and
 - vi. public telephones; and
 - vii. large enclosed areas (e.g. convention centres or large shopping centres).
- e) have signage complying with Clause 6.1, Signage, that identifies areas that include, but are not limited to
 - i. directions including street orientation; and
 - ii. items listed in (c) and (d);
- f) use colour and textured wall and floor surfaces to distinguish hallways and pathways;
- g) use visual colour/tonal contrast that meet the requirements of Clause 6.1.12, Colour/ Tonal Contrast;
- h) where applicable, use pictograms and universal symbols;

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- i) where possible, provide audio to differentiate hallways and pathways;
- j) be modified to account for changes made to the internal or external environment; and
- k) be of consistent design and location throughout a specific facility.

Committee Comment

It was noted that people get lost in convention centres and large shopping facilities. Signage should be located everywhere. There is a fine line between wayfinding and signage, wayfinding uses additional cues to support a person with no/low vision.

The Committee suggests that a functional test can be conducted to demonstrate the effectiveness of the wayfinding system. The functional test may include:

- a) having a person new to the internal or external environment find key areas such as those listed in Clause 6.3.1 d), within a limited time frame (still to be determined); and
- b) usability testing of the system for various abilities (e.g., low vision, hard of hearing, and cognitive disabilities).

Note: *The measure should be that a newcomer with a functional disability can find their way through the environment.*

6.3.4 Interior Lighting

Light shall be used to assist with wayfinding by the following

- a) by placing the light fixtures in the middle of the corridor provides a visual clue for orientation by helping to define the right and left sides of the corridor; and
- b) with lights on both sides of the hall where the ceiling and wall meet has the same effect.

6.4 Public Address Systems

Rationale

Public address systems should be designed to accommodate all users, especially those that may be hard of hearing. They should be easy to hear above the ambient background noise of the environment and there should be no distortion or feedback.

Background noise should be minimized through acoustic management.

Visual equivalents should be made available for individuals with who are Deaf, deafened or hard of hearing who may not hear an audible public address system.

Functional Description

This section addresses public address systems. Included are public address systems inside a building; and public address systems in the exterior environment.

Technical Requirements

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6.4.1 Speakers

Public address speakers that are surface mounted shall be mounted no lower than 2100 mm (83 in) from the floor, and provide effective sound coverage in required areas, such as:

- a) corridors, assembly and meeting room areas;
- b) recreational and entertainment facilities; and
- c) educational facilities.

Committee Comment

This requirement should be cross-reference to Information and Communication -SDC for emergency announcement/evacuation.

6.4.2 Zoning

Public address systems shall be zoned so that information can be directed to key locations only, minimizing background noise in other areas.

6.4.3 Background Music

Where public address systems are used to broadcast background music, the music shall not be broadcast continuously or throughout the entire facility and shall meet the requirements in Clause 8.3, Acoustics.

6.4.4 Configuration

Public address systems shall be configured to be:

- a) audible;
- b) comprehensible; and
- c) compatible with assistive listening devices.

6.4.5 Electronic Signage

Where possible, electronic signs shall provide visual information that will supplement auditory announcements

6.4.6 Intercom Systems

Where provided, intercoms shall comply with the Information and Communication standard.

6.5 Public Telephones

Rationale

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The placement of telephones or communication devices should address the limited reach of children or persons in a seated position. Longer cords facilitate the use of the phone for someone unable to get close to the phone due to a mobility device. Adjustable volume controls are important for persons who is Deaf, deafened, or hard of hearing, as are shelves that could support a TTY device. A fold-down seat is an asset to someone having difficulty standing for extended periods. Telephones or communication devices projecting from a wall may present a hazard, particularly to persons with low or no vision, if the sides are not configured to be cane-detectable

Functional Description

This section addresses access to public telephones and communication devices, and may be applied to intercom phones and public use phones (e.g., house phones in hotels) as well as where and how they are installed in buildings and within the exterior environment including placement, privacy, access, and location. The configuration of the telephone equipment itself is beyond the scope of the standard.

Technical Requirements

Committee Comment

The Canadian Radio Telecommunications Committee (CRTC) is currently reviewing its accessible public telephones. The outcome of this review may impact this clause.

6.5.1 Access to Public Telephones

Telephones and other communication devices shall

- a) have a clear floor space in front of the telephone or communication device at least 810 mm (32 in) wide and 1370 mm (54 in) deep, with the telephone centred or communication devices on the long dimension for a side approach or centred on the short dimension for a forward approach;
- b) if configured for a forward approach, have a clear knee space below the telephone, at least 740 mm (29 in) high, 500 mm (20 in) deep, and 810 mm (32 in) wide;
- c) have operable portions that are restricted to a maximum height, including a coin slot that is no more than 1170 mm (46 in) above the floor;
- d) have a flat shelf at least 500 mm (20 in) wide and 350 mm deep (14 in), at a height of 775 mm (31 in) to 875 mm (34 in) above the floor, and 250 mm (10 in) clear space above the shelf;
- e) have a minimum illumination level of 100 lx measured at the operating mechanisms, the directory, and shelf; and
- f) have an identification sign featuring the International Symbol of Accessibility.

Committee Comment

The intent of this clause was to provide the appropriate clearance for a person in a seated position to access a 'communication' device, and provide a shelf next to or under the device to use it. The user does not necessarily have to get under the device, but

6.0 Communication Elements and Facilities

they must be able to use the device.

6.5.2 Text Telephones (TTY)

Where text telephones are used with a public telephone for persons who are Deaf, deafened, hard of hearing, or non-verbal they shall

- a) have an identification sign featuring the International Symbol of Access for Hearing Loss;
- b) be permanently affixed within, or adjacent to, the telephone enclosure; and
- c) if an acoustic coupler is used, have a telephone cord that is sufficiently long to allow connection of the text telephone (TTY) and the telephone receiver.

6.5.3 Telephone Stall or Booth

Where a stall or booth is provide for privacy and acoustics, it shall

- a) be provided with sound-absorbing surfaces;
- b) have a clear height of at least 2100 mm (83 in);
- c) have a clear width of at least 810 mm (32 in); and
- d) have a depth of at least 1370 mm (54 in).

Note: *The use of stalls or booths can create barriers, so their use should be limited.*

6.6 Exhibition and Display Systems

Rationale

Exhibition and display systems must be accessible to all users. This includes the provision of information in a variety of different formats including visual, auditory, tactile, and electronic means. Information should be provided on a glare free surface and be colour contrasted with its background.

The objective is to ensure that people of differing abilities are able to experience the exhibition and display information in a similar fashion to all users.

Functional Description

This section addresses exhibition and display systems. Exhibition and display systems inform the community by providing exhibition and information in a variety of formats.

Technical Requirements

The technical requirements for this section are not included at this time because either a), they have not yet been developed by the Accessible Built Environment Development Committee; or b), there are other Provincial codes or standards in place – amalgamation and consolidation requires further study and is beyond the scope of work of the current Standards Development Committee.

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6.7 Emergency Systems

Rationale

In order to be accessible to all individuals, emergency exits must include the same accessibility features as other doors. 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 low/no vision or cognitive disabilities will need a means of quickly locating exits. In the event of fire when elevators cannot be used, areas of rescue assistance are a necessity for anyone who would have difficulty traversing sets of stairs.

Functional Description

This section addresses the accessibility of fire safety elements and systems, for use of persons with disabilities in emergency situations. Elements and systems include (but are not limited to), alert and alarm signals, areas of rescue assistance, protection of floor areas with accessible interior route and signage.

Technical Requirements

The technical requirements for this section are not included at this time because either a), they have not yet been developed by the Accessible Built Environment Development Committee; or b), there are other Provincial codes or standards in place – amalgamation and consolidation requires further study and is beyond the scope of work of the current Standards Development Committee.

6.8 Security Systems

Rationale

In many cases, persons such as seniors and persons with disabilities may be considered to have a higher degree of vulnerability and therefore seek more reassurance and inherent security. Items such as adequate lighting and accessible signaling devices promote this security.

Emergency signaling devices are important in individual washrooms where the potential for a fall is increased and an individual may be alone.

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 of differing abilities, including persons with reduced manual dexterity, poor vision or difficulty with reaching. The use of heat-sensing activation buttons should be avoided,

6.0 Communication Elements and Facilities

as they are indiscernible to a person who has low or no vision.

Functional Description

This section addresses the accessibility of secure entry systems.

Technical Requirements

The technical requirements for this section are not included at this time because either a), they have not yet been developed by the Accessible Built Environment Development Committee; or b), there are other Provincial codes or standards in place – amalgamation and consolidation requires further study and is beyond the scope of work of the current Standards Development Committee.

7.0 Plumbing Elements and Facilities

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7.1 Lavatories

Rationale

The accessibility of lavatories is greatly influenced by their operating mechanisms. While faucets with remote-eye technology can initially confuse some individuals, their ease of use is notable. Individuals with hand strength or dexterity difficulties can use lever-style handles. For an individual in a wheelchair, a lower counter height and clearance for knees under the counter is required.

Functional Description

This section addresses the accessibility requirements of lavatories (washbasins/ sinks) within accessible washrooms. There should be at least one accessible lavatory per grouping in each washroom and an accessible lavatory in all individual universal accessible washrooms.

Technical Requirements

7.1.1 General

An accessible lavatory shall

- a) be located so that the distance between the centreline of the lavatory is not less than 460 mm (18 in) from any obstruction;
- b) be mounted so that the top of the lavatory or, where the lavatory is in a vanity, the top of the vanity is between 820 mm (32 in) and 840 mm (33 in) above the finished floor;
- c) have a knee clearance beneath the lavatory not less than
 - i. 920 mm (36 in) wide;
 - ii. 750 mm (30 in) high at the front edge;
 - iii. 685 mm (27 in) high at a point 205 mm (8 in) back from the front edge; and;
 - iv. 230 mm (9 in) high over the distance from a point 280 mm (11 in) to a point 430 mm (17 in) back from the front edge;
 - v. have a toe clearance not less than 350 mm (12 in) high from a point 300 mm (14 in) back from the front edge to the wall;
- d) have pipes that are either located or protected so as to not present a burn hazard, or have a water supply temperature limited to a maximum of 43°C;
- e) be equipped with faucets that
 - i. are operable with a closed fist or be automatically operable;
 - ii. have the hot water on the left;
 - iii. are located so that the distance from the centreline of the faucet to the

7.0 Plumbing Elements and Facilities

edge of the basin or, where the basin is mounted in a vanity, to the front edge of the vanity, is not more than 500 mm (20 in) deep;

- f) have a minimum clear floor space 1370 mm (54 in) deep to allow for a forward approach, of which a maximum of 500 mm (20 in) shall be under the lavatory;
Note: *The 760 mm (30 in) clear floor space may overlap with the turning radius of 2500 mm (98 in).*
- g) have a clear floor space of 1500 mm (59 in) wide to allow for a side approach for a scooter; and
- h) have soap dispensers and other accessories that comply with Clause 7.3, Washroom Accessories.

Committee Comment

Any temperature superior to 34°C for any individual who is hyperasthesiac is too much. But for safety reasons the maximum temperature is provided under the National Plumbing Code and the Building Code.

7.1.2 Shelves or Other Projections

Shelves or other projections above lavatories shall

- a) be located no higher than 1100 mm (43 in) above the floor;
- b) project out no more than 100 mm (4 in) from the wall;
- c) be placed so they will not present a hazard to persons with low or no vision and can be reached from a seated position; and
- d) be placed no higher than 200 mm (8 in) above the top of the lavatory.

7.2 Washrooms

Rationale

As an integral feature of a building, washroom facilities should accommodate individuals with a range of abilities that will use the space. Although many persons with disabilities use toilet facilities independently, some can require assistance.

Where the individual providing assistance is of the opposite gender then typical gender-specific washrooms are awkward and a separate unisex washroom is preferred. Parents and caregivers with small children and strollers also benefit from a large, individual washroom with toilet and change facilities contained within the same space. (See Clause 7.7, Universal Toilet Rooms)

Circumstances such as wet surfaces and the need to transfer between toilet and a wheeled mobility device can make toilet facilities accident-prone areas. If an individual falls in a washroom, a door that swings inward could prevent his or her rescuers from opening the door. Due to the risk of accidents, design decisions such as door swings and material finishes have safety implications. Toilet facilities are a prime location for emergency call switches. The appropriate design of all features will increase the

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usability and safety of all toilet facilities.

The identification of washrooms involves design issues. For children or those who cannot read text, a symbol or pictogram is preferred. A person with a reduced or no vision also benefits from accessible signage. Features such as colour-contrasting door frames and door hardware will also increase accessibility.

Functional Description

This section addresses the requirements for the provision of accessible common-use washrooms. Common-use washrooms are facilities that contain multiple fixtures - the washroom can be used by more than one person at a time.

Note: *Requirements for Water Closets, Water Closet Stalls, Lavatories, Urinals and Washroom Accessories are presented in separate Clauses within this Standard.*

Technical Requirements

7.2.1 Access to Washrooms

Where accessible washrooms are provided they shall be on an accessible route.

7.2.2 Dimensions and Placement

7.2.2.1 Dimensions

Accessible washrooms shall

- a) be identified with wayfinding signage complying with Clause 6.1, Signage and Clause 6.3, Wayfinding;
- b) have a minimum clear floor space of 2020 mm (80 in) diameter, of which a maximum of 500 mm (20 in) shall be under the lavatory, to allow a person using a mobility device to make a 180° turn;
- c) have evenly distributed illumination throughout the washroom of at least 200 lx measured at floor level;
- d) have a minimum clearance of 1400 mm (55 in) between the outside face of the accessible stall and any wall-mounted fixture or obstruction;
- e) where a central monitoring service is provided for the building, have an emergency call switch that sends a call notification to the monitored location; and
- f) have floors that drain to the wall opposite the door at a maximum slope of 1:50 (2%), are slip resistant, and shall comply with Clause 3.6, Ground and Floor Surfaces.

Committee Comment

There is concern around the cost to implement the emergency call switch and the concern of vandalism and misuse of the emergency system that can cost \$250 per call.

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7.2.2.2 Lavatories

Accessible washrooms shall include lavatories that meet the requirements of Clause 7.1, Lavatories.

7.2.2.3 Accessories

Where washroom accessories are provided they shall meet the requirements of Clause 7.3, Washroom Accessories.

7.2.2.4 Water Closets

Water closets shall meet the requirements of Clause 7.4, Water Closets, and where water closet stalls are provided they shall meet the requirements of Clause 7.5, Water Closet Stalls.

7.2.3 Doors to Washrooms

All doors, where provided to accessible washrooms shall

- a) comply with Clause 3.2, Doors and Doorways;
- b) not swing into the space required for operating the door;
- c) have a minimum 1700 mm (67 in) clearance between the inside face of an in-swinging entrance door and the outside face of an adjacent toilet stall; and
- d) be equipped with a power-assisted door operator complying with Clause 3.2.9, Power Door Operator.

Note: The power assist device would be provided for combination washrooms.

7.2.4 Minimum Number

The minimum number of accessible washrooms shall be determined using Table 7.2.4.

Table 7.2.4 Designated Accessible Toilet Stalls

Number of water closets (toilets) per washroom per floor	Minimum number of accessible toilet stalls per washroom.	Universal Toilet Room required
1-3	1 (can be the Universal Toilet Room)	0
4-9	1	1
10-16	2	1
17-20	3	1
21-30	4	1
Over 30	1 additional accessible toilet stall for each unit of 10	1

Note: The number of water closet stalls will be determined by the occupancy loads in the Building Code.

7.0 Plumbing Elements and Facilities

7.3 Washroom Accessories

Rationale

Design issues related to washroom accessories include the hand strength, dexterity, and cognitive ability required to operate mechanisms, as well as operability with a closed fist. Reaching the accessories is another concern. Accessories that require the use of two hands to operate can present difficulties for a range of persons with disabilities whose balance or ability to reach is limited.

Functional Description

This section addresses the accessibility requirements of washroom accessories within accessible washrooms. Accessories include but are not limited to paper towel dispenser/disposal receptacles, hand dryers, paper towel, soap dispensers, and vending machines.

Technical Requirements

7.3.1 Detailed Requirements

At least one type of each washroom accessory shall

- a) be located so that where there is an obstruction between 500 mm (20 in) and 625 mm (25 in) in depth, the dispensing height is not more than 1100 mm (43 in) above the floor e.g. paper towel dispenser or hand dryer;

Note: *Dispensing height can be modified depending on accessory e.g. toilet paper dispenser versus. paper towel dispenser.*

- b) have operable portions and controls mounted between 400 mm (16 in) and 1200 mm (47 in) above the floor;
- c) where they apply to a lavatory be located within arms reach of the accessible lavatory and no more than 610 mm (24 in) from the edge of the lavatory;
- d) be self operated or operable with a closed fist;
- e) have a colour/ tonal contrast that meet the requirements of Clause 6.1.12, Colour/Tonal Contrast;
- f) have a clear floor area of 1370 mm (54 in) by 1370 mm (54 in) in front of controls and operating mechanisms for receptacles and dispensers to allow for a front or side approach;
- g) where they apply to a water closet be located in close proximity to the accessible water closet; and
- h) any additional accessories that are added to a lavatory shall take into consideration the requirements of this section.

Note: *Washroom accessories should be placed so that a person can reach them from a seated position and a person who has low or no vision will not bump into them.*

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7.3.2 Floor Clearance

Accessories located less than 875 mm (34 in) from the floor shall not encroach into the required clear floor space.

7.3.3 Protrusions

Accessories shall not protrude into the required clear floor space more than 100 mm (4 in) or shall comply with the requirements of Clause 3.7, Overhanging and Protruding Objects.

Committee Comment

This intent of this requirement is so that a person with no or low vision does not bump into any of the accessories.

7.3.4 Mirrors

Where mirrors are provided, at least one shall

- a) be mounted with its bottom edge not more than 1000 mm (39 in) from the floor;
- or
- b) be inclined from vertical to be usable from a seated position.

Committee Comment

This is provided so that a person in a seated position can see themselves in the mirror.

7.4 Water Closets

Rationale

Automatic flush controls are preferred. If flushing mechanisms are not automated, then consideration must be given to the ability to reach a switch and the hand strength or dexterity required to operate it. Lever style handles on the transfer side of the toilet facilitate these considerations. Appropriate location of the toilet paper dispenser will ensure it does not interfere with use of the grab bar.

Appropriate placement of grab bars makes sitting and standing or transfers between the toilet and a mobility device safer.

Functional Description

This section addresses the accessibility requirements of water closets (toilet fixtures) within accessible toilet stalls and universal toilet rooms.

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Technical Requirements

7.4.1 Configuration

Water closets for persons with physical disabilities shall

- a) be equipped with a seat located at not less than 430 mm (17 in) and not more than 460 mm (18 in) above the floor;
- b) be equipped with a back support where there is no seat lid or tank;
- c) not have a spring-activated seat;
- d) have toilet seats designed to avoid pinching the user;
- e) have flush controls complying with Clause 7.4.2, Flush Controls; and
- f) have internal extension guards that will not allow the seat to slide should the back attachment become loose.

7.4.2 Flush Controls

Water closets for persons with physical disabilities shall

- a) be equipped with a hands-free automatic flushing device, that can also be hand-operated in compliance with Clause 8.4, End User Controls and Operating Mechanisms; or
- b) be hand-operated by a lever that
 - i. is located on the transfer side of the toilet;
 - ii. is easily accessible to a mobility device user; and
 - iii. complies with Clause 8.4, End User Controls and Operating Mechanisms.

Note: Flush controls should not interfere with back supports if provided.

7.4.3 Toilet Paper Dispenser

A water closet shall have a toilet paper dispenser that is,

- a) wall mounted;
- b) located below the grab bar;
- c) in line with or not more than 300 mm (12 in) in front of the toilet seat; and
- d) not less than 600 mm (24 in) above the floor.

Committee Comment

The toilet paper dispenser must be placed within reaching distance while seated on the water closet (toilet).

7.4.4 Water Closet Location

A water closet shall be located so that its centreline is not less than 460 mm (18 in) and not more than 480 mm (19 in) from an adjacent side wall on one side.

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7.5 Water Closet Stalls

Rationale

The manoeuvrability of mobility devices is a significant consideration in the design of an accessible stall. The increased size of the stall is required to ensure that there is sufficient space to facilitate proper placement of any mobility device to accommodate transfer onto the toilet fixture. Not only is space required for mobility equipment, there are also instances where an individual requires assistance and the stall will have to accommodate a second person or service animal.

Door swings are normally outward for safety reasons and space considerations, but this can make it difficult to close the door once inside. A handle mounted part way along the door makes it easier for individuals to close the door behind them. The proper location of the toilet paper dispenser should ensure it is reachable from the toilet but does not interfere with use of the grab bars. Universal features include accessible hardware and a minimum stall width to accommodate persons of large stature, parents with children, or persons using a service animal.

Functional Description

This section addresses water closet (toilet fixture) stalls within common-use washroom areas for use by people with disabilities. The dimensional requirements for water closet (toilet fixture) stalls other than those for use by people with disabilities are not covered by this Clause.

Technical Requirements

7.5.1 Minimum Size

An accessible water closet stall shall have a clear floor space of at least 1500 mm (59 in) wide and 1500 mm (59 in) deep.

7.5.2 Clearance

Accessible water closet stalls shall have a clearance of at least 1700 mm (67 in) between the outside of the stall face and the face of an in-swinging washroom door, and 1400 mm (55 in) between the outside of the stall face and any wall-mounted fixture or other obstruction.

7.5.3 Stall Doors and Door Controls

An accessible water closet stall shall be equipped with a door that

- a) where the stall is approached from the front, aligns with the clear transfer space adjacent to the water closet;
- b) provides, when in an open position, a clear opening of at least 900 mm (35 in)

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- wide;
- c) is capable of being locked from the inside by a device that is operable with a closed fist, does not require fine finger control, tight grasping, pinching, or twisting of the wrist and complies with Clause 8.4, End User Controls and Operating Mechanisms;
 - d) can be released from the outside in case of emergency;
 - e) swings outward, unless a 810 mm (32 in) wide by 1370 mm (54 in) long clear floor area is provided within the stall or enclosure to permit the door to be closed without interfering with the mobility device;
 - f) Is equipped with spring-type or gravity hinges so that the door closes automatically; and
 - g) is equipped with a “D” type door pull at least 140 mm (5.5 in) long mounted horizontally on the outside of the door and inside of the door
 - i. at a height of 800 mm (32 in) to 1000 mm (39 in) above the floor; and
 - ii. aligned with a clear maneuvering space adjacent to the water closet.

7.5.4 Grab Bars

Water closet stalls shall be equipped with two grab bars where

- a) there is at least 760 mm (30 in) in length and mounted at a 30° to 50° angle sloping upwards, away from the water closet with the lower end of the bar mounted 750 mm (30 in) to 900 mm (35 in) above the floor and 50 mm (2 in) in front of the toilet bowl, or alternatively, are L-shaped with 760 mm (30 in) long horizontal and vertical components mounted with the horizontal component 750 mm (30 in) to 900 mm (35 in) above the floor and the vertical component 150 mm (6 in) in front of the toilet bowl;
- b) one is at least 600 mm (24 in) in length mounted horizontally on the wall behind the water closet from 840 mm (33 in) to 920 mm (36 in) above the floor and, where the water closet has a water tank, are mounted 150 mm (6 in) above the tank;
- c) installed to resist a load of at least 1.3kN applied vertically or horizontally;
- d) not less than 30 mm (1.2 in) and not more than 50 mm (2 in) in diameter;
- e) provided with a clearance of a minimum of 50 mm (2 in) from the wall; and
- f) have a slip resistant surface.

7.5.5 Coat Hooks

Two collapsible coat hooks shall be mounted not more than 1220 mm (48 in) from the floor on a side wall, and project not more than 50 mm (2 in) from the wall.

Note: *Collapsible is defined in Clause 14.0, Glossary.*

Committee Comment

It was suggested that a mounting height of 1200 mm (47 in) was sufficient, and there was some discussion on the whether having a collapsible hook was required. The clause has been revised to 1200 mm (47 in) high from the finished floor and collapsible remains in the clause for further discussion.

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7.5.6 Special Fixtures

A disposal drain shall be provided on the floor that provides for the disposal for urine and/or liquid waste holding systems.

Committee Comment

Wearers of electronic drain tubes (leg bags) cannot drain in public toilets because they cannot elevate their legs. To accommodate, accessible water closet stalls can have a fixture that provides for the disposal of urine and/or liquid waste holding systems. The concern is that currently people are using the drain in the floor for this, and floor drains are not provided for this purpose.

7.5.7 Colour/Tonal Contrast

Toilet stall partitions, doors, water closet stall door pulls, lock control, coat hooks, and grab bars shall have a high visual colour/tonal contrast that meet the requirements of Clause 6.1.12, Colour/Tonal Contrast.

Committee Comment

The intent is to enable people with low vision to see the difference between the walls and floors in the water closet stall.

7.5.8 Fold Down Grab Bar

Where provided, a fold down grab on the transfer side of the toilet shall comply with Clause 7.7.5, Fold Down Grab Bar.

7.6 Urinals

Rationale

A clear floor space is required in front of urinals for a mobility device. The provision of grab bars can assist individuals in rising from a seated position and steadying themselves.

Floor-mounted urinals accommodate children and persons of short stature, as well as enable easier access to drain personal care devices. Flush controls should be lever-style or automatic (preferred); manual flushing shall be provided as well.

Strong visual contrasts between the urinal, the wall, and the floor will assist persons with low or no vision.

Functional Description

This section addresses the accessibility requirements of urinals in washrooms and

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universal toilet rooms (where applicable). Where more than one urinal is provided, at least one urinal shall meet the requirements of this clause.

Technical Requirements

7.6.1 Configuration

Accessible urinals shall

- a) be wall-mounted with an elongated rim located no higher than 375 mm (15 in) above the finished floor or floor-mounted with the rim at the finished floor level;
- b) be at least 345 mm (14 in) deep, measured from the outer face of the urinal rim to the back of the fixture;
- c) be of a depth that shall not restrict reach and access to a grab bar; and
- d) be equipped with grab bars installed on each side that
 - i. comply with Clause 7.5.4, Grab Bars, items c), d), e), and f);
 - ii. are not less than 600 mm (24 in) long; and
 - iii. are mounted vertically between 380 mm (15 in) to 450 mm (18 in) from the centreline of the urinal and with the lowest end located between 600 mm (24 in) and 650 mm (26 in) above the floor.

7.6.2 Minimum Number

In each male washroom there shall be at least one accessible urinal that meets the requirements of Clauses, 7.6.1 Configuration, 7.6.3 Clear Floor Space, 7.6.5 Flush Controls and 7.6.6 Colour/Tonal Contrast.

7.6.3 Clear Floor Space

The clear floor space provided in front of each urinal shall

- a) be 810 mm (32 in) wide by 1370 mm (54 in) long; and
- b) adjoin but not overlap the accessible interior route.

7.6.4 Privacy Screen

Where privacy screens are provided they shall

- a) be mounted a minimum of 460 mm (18 in) to the centerline of the urinal;
- b) incorporate a high visual colour/ tonal contrast that meets the requirements of Clause 6.1.12, Colour/Tonal Contrast, to differentiate them from the surrounding environment; and
- c) have a vertical outer edge that contrasts in colour / tone and that meets the requirements of Clause 6.1.12, Colour/Tonal Contrast.

Note: *The placement of the privacy screens depends on where the grab bars are installed, as there must be enough hand space between the grab bars and the screens.*

<i>Committee Comment</i>

These routinely get damaged in Secondary Schools and are not recommended.

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7.6.5 Flush Controls

Where provided, flush controls shall

- a) be automatic or operable with a closed fist;
- b) be mounted no higher than 1220 mm (48 in) above the finished floor; and
- c) comply with Clause 8.4, End User Controls and Operating Mechanisms.

7.6.6 Colour/Tonal Contrast

There shall be strong colour/tonal contrast that meet the requirements of Clause 6.1.12, Colour/Tonal Contrast, between the urinal, the wall, and the floor.

7.7 Universal Toilet Rooms

Rationale

The provision of a separate universal toilet room is advantageous in a number of instances. For an individual using a mobility device, the extra space provided by a separate washroom is preferred to an accessible stall. Should an individual require an attendant of a different gender to assist them in the washroom the complication of a woman entering a men's washroom or vice versa is avoided. This same scenario would apply to a parent with a young child of a different gender.

In the event of an accident or fall by a single individual in this form of washroom, an emergency call switch and a means of unlocking the door from the outside are important safety features.

Incorporating universal toilet rooms into all public buildings will provide options for persons with disabilities and enhanced accessibility for everyone.

Functional Description

This section addresses the accessibility requirements of universal toilet rooms. Universal toilet rooms are washrooms containing a single water closet (toilet fixture) intended for private use. Universal toilet rooms are often used by more than one person at a time – a person with an attendant to assist with hygiene routines.

Technical Requirements

7.0 Plumbing Elements and Facilities

7.7.1 Detailed Requirements

7.7.1.1 Location

A universal toilet room shall be provided on every occupied floor of a building.

Committee Comment

There was a concern noted regarding safety of Universal Toilet Rooms being provided in Transportation Facilities.

7.7.1.2 Details

A universal toilet room shall:

- a) be served by an accessible interior route;
- b) have a door capable of being locked from the inside and released from the outside in case of emergency and that;
 - i. has a graspable latch-operating automatic locking mechanism or power lock located on both sides of the door not less than 900 mm (35 in) and not more than 1000 mm (39 in) above the floor and operable with a closed fist;
 - ii. if it is an outward swinging door, have a door closer, spring hinges, or gravity hinges, so that the door closes automatically;
 - iii. comply with Clause 3.2, Doors and Doorways; and
 - iv. has a power door operator and meets the requirements of 3.2.9, Power Door Operator to open and close the door;
- c) have one lavatory complying with Clause 7.1, Lavatories;
- d) have one water closet conforming to the requirements of Clause 7.4, Water Closet;
- e) have grab bars conforming to the requirements of Clause 7.5.4, Grab Bars;
- f) have no internal dimension between walls less than 2500 mm (98 in);
- g) have a coat hook that meets the requirements of Clause 7.5.5, Coat Hooks;
- h) be designed to permit a mobility device to make a 360 degree turn in an open space;
- i) be identified with signage in compliance with Clause 6.1, Signage;
- j) be equipped with a mirror and washroom accessories complying with Clause 7.3, Washroom Accessories;
- k) have a stable, slip resistant floor in compliance with Clause 3.6, Ground and Floor Surfaces; and
- l) have a clear transfer space beside the toilet to facilitate transfer to and from a mobility device which shall be at least 900 mm (35 in) wide by 1500 mm (59 in) long with the width measured from the edge of the water closet bowl.

Note: *Where there may be a large number of people in the building, accessible water closet stalls can also be provided within the same facility along with the Universal Toilet room.*

7.0 Plumbing Elements and Facilities

7.7.2 Adult Change Table

Universal toilet rooms shall have an adult change table that:

- a) is at least 810 mm (32 in) wide by 1830 mm (72 in) long;
- b) has a change surface height between 450 mm (18 in) and 500 mm (20 in);
- c) has an adjacent clear floor space not less than 760 mm (30 in) wide by 1500 mm (59 in) long;
- d) is designed to carry a minimum load of 1.33 kN (299 lb); and
- e) if of the fold-down type, has no operable portions higher than 1220 mm (48 in) from the floor.

Committee Comment

Some Committee members had concerns with making this clause mandatory and that it may only apply to certain facilities and the cost to implement would be high.

7.7.3 Controls

All controls and operating mechanisms in a universal toilet room shall

- a) have a visual colour/ tonal contrast that meets the requirements of Clause 6.1.12, Colour/Tonal Contrast;
- b) have their operable portions (e.g., electrical receptacles, thermostats, and intercom switches) located
 - i. a maximum of 1200 mm (47 in) above the floor, where there is no obstruction with a depth greater than 500 mm (20 in), to be reachable from a seated position; or
 - ii. at a maximum of 1100 mm (43 in) above the floor where there is an obstruction depth between 500 mm (20 in) and 625 mm (25 in); and
- c) meet the requirements of Clause 8.4, End User Controls and Operating Mechanisms.

7.7.4 Lighting

Universal toilet rooms shall

- a) be automatically lit when occupied (e.g. by use of motion sensors);
- b) comply with Clause 8.5.3, Washrooms; and
- c) comply with Clause 8.5.5.1, Task Lighting.

Note: *Providing lighting automatically (e.g., where it is turned on by the use of a motion sensor) will make it easier for the user of the facility who might have difficulty finding a light switch or being able to use it.*

7.7.5 Fold Down Grab Bar

Universal toilet rooms should be equipped with a fold-down grab bar that

- a) is at least 760 mm (30 in) in length;
- b) is located on the transfer side of the toilet;
- c) is mounted to the same height as the ends of the permanent horizontal bar so the bars are level;
- d) extends at least 150 mm beyond the front face of the seat and does not impede

7.0 Plumbing Elements and Facilities

- the transfer space; and
- e) does not require more than 22.2 N (5 lb) of force to pull it down.

7.7.6 Emergency Call System

Where universal toilet rooms are provided in buildings that have a monitored security system, the universal toilet rooms shall

- a) have an emergency call system linked to a central monitoring location (e.g., office or switchboard);
- b) have a visual and audible signal to indicate that help is on the way;
- c) have a strobe/ fire alarm complying with Clause 8.5.12.2, Stroboscopic Lighting; and
- d) where the room is not monitored provide a visual and audible signal both inside and outside of the room that help has been requested.

7.8 Shower Areas

Rationale

Showers can present a slipping hazard. Slip-resistant surfaces are an important feature and will benefit any individual, including those with disabilities. Grab bars also provide stability. Operating controls are subject to limitations in hand strength, dexterity, and reach.

Roll-in shower stalls eliminate the hazard of stepping over a threshold and are essential for persons with disabilities who use mobility devices in the shower. Grab bars and slip resistant materials are safety measures that will benefit any individual. Additional equipment, such as a hand-held showerhead or a folding bench, can be an asset to someone with a disability but also convenient for others. Equipment that contrasts in colour from the shower stall itself will assist individuals with no or low vision. Adopting a universal design approach for the provision of curbless shower stalls will provide options for persons with disabilities and enhanced accessibility for everyone.

Functional Description

This section addresses the accessibility requirements of shower areas where provided in public buildings including, but not limited to, recreational facilities, office facilities, and schools.

Technical Requirements

7.8.1 Configuration

Showers shall

- a) be not less than 1500 mm (59 in) wide and 900 mm (35 in) deep;

7.0 Plumbing Elements and Facilities

- b) have a clear floor space at the entrance to the shower not less than 900 mm (35 in) deep and the same width as the shower; and
- c) where enclosure screens are provided they shall not obstruct the transfer from a mobility device to the shower seat or access to the controls.

7.8.2 Shower Floor

Floors of showers shall have

- a) a slip-resistant, non-glare surface; and
- b) entry thresholds that are
 - i. level; or
 - ii. bevelled at a maximum slope of 1:2 (50%) and not more than 13 mm (0.5 in) high.

7.8.3 Shower Seat

Shower stalls shall have a hinged seat that is not spring-loaded or a fixed seat that is

- a) not less than 450 mm (18 in) wide and 400 mm (16 in) deep;
- b) mounted between 430 mm (17 in) and 460 mm (18 in) above the floor;
- c) designed to carry a minimum load of at least 1.3 kN (299 lb);
- d) placed within 500 mm (20 in) of the shower controls; and
- e) mounted with a transfer space next to the seat of at least 900 mm (35 in) wide by 1500 mm (59 in) long.

7.8.4 Grab Bars

Shower stalls shall have grab bars as follows:

- a) a horizontal grab bar on all walls of the shower that
 - i. complies with Clause 7.5.4, Grab Bars items c), d), e), and f);
 - ii. is not less than 900 mm (35 in) long;
 - iii. is mounted 850 mm (33 in) above the floor;
 - iv. Is located on the wall opposite the entrance to the shower so that not less than 300 mm (12 in) of its length is at one side of the seat; and
- b) another grab bar located on the wall under the shower head and above the controls but no higher than 850 mm (33 in) above the floor and complies with Clause 7.5.4, Grab Bars items c), d), e), and f).

7.8.5 Controls

Shower controls shall have a pressure-equalizing or thermostatic mixing valve controlled by a lever or other device operable with a closed fist from the seated position.

7.8.6 Shower Head

Shower heads in shower stalls shall be a hand-held type that

7.0 Plumbing Elements and Facilities

- a) has not less than 1500 mm (59 in) of flexible hose;
- b) is equipped with a support so that it can operate as a fixed shower head;
- c) is located so that it can be reached from the shower seat;
- d) is mounted on a vertical bar adjustable between 1100 mm (43 in) and 1800 mm (71 in) and has the vertical bar located so that it does not obstruct the use of the grab bar; and
- e) has an on/off control on the shower head.

7.8.7 Soap Holders

Showers shall have fully recessed soap holders that can be reached from the seated position and be placed between 900 mm (35 in) and 1200 mm (47 in).

Note: Soap holder is placed above the handrail and within the upper reach range.

7.8.8 Lighting

Showers shall be illuminated to at least 200 lx, at floor level.

7.8.9 Emergency Showers

Where provided, emergency showers shall have an activation device that is no higher than 1200 mm (47 in) above the ground.

7.9 Bath Tubs

Rationale

Bathing facilities can present a slipping hazard. Slip-resistant surfaces are an important feature and will benefit any individual, including those with disabilities. Grab bars also provide stability. Operating controls are subject to limitations in hand strength, dexterity, and reach. Grab bars and slip resistant materials are safety measures that will benefit any individual. Adopting a universal design approach for the provision of accessible bathtubs will provide options for persons with disabilities and enhanced accessibility for everyone.

Functional Description

This section addresses the accessibility requirements of bathtubs where provided in public and multi-unit buildings including, but not limited to, hotels, university residences and apartments.

Technical Requirements

7.0 Plumbing Elements and Facilities

7.9.1 Floor Clearance

A clear floor space of at least 900 mm (35 in) wide by 1370 mm (54 in) long shall be provided along the full length of the bathtub.

7.9.2 Bath Tub Height

The maximum height of the bathtub rim shall be 475 mm (19 in) above the floor.

7.9.3 Faucets and Other Controls

Faucets and other controls shall

- a) be non-spring loaded lever type or self operated and be operable with a closed fist;
- b) be located so as to be usable by a person seated in the bathtub;
- c) be not more than 450 mm (18 in) above the bathtub rim; and
- d) have a water supply temperature limited to a maximum of 43°C.

7.9.4 Grab Bars

A bathtub unless it is freestanding, shall have

- a) one L-shaped grab bar that
 - i. is mounted on the wall along the length of the bathtub;
 - ii. has each leg of the L-shaped grab bar at least 900 mm (35 in) long;
 - iii. has the horizontal leg of the L-shaped grab bar located between 150 mm (6 in) and 200 mm (8 in) above and parallel to the rim of the bathtub;
 - iv. has the vertical leg of the L-shaped grab bar located between 300 mm (12 in) and 450 mm (18 in) from the control end of the bathtub; and
 - v. complies with Clause 7.5.4 Grab Bars, items c), d), e), and (f); and
- b) a grab bar on each end of the tub either horizontally or vertically mounted to a minimum height of 200 mm (8 in) above the rim of the bathtub.

Committee Comment

It should be noted that freestanding bathtubs do not require grab bars as the edges of the tub can be used for this purpose.

7.9.5 Vertical Grab Bar

Where provided, a vertical grab bar that is at least 1200 mm (47 in) long should be mounted adjacent to the transfer area in front of the bathtub, and starting 200 mm (8 in) above the bathtub rim.

7.9.6 Bath Tub Base

The bottom surfaces of bathtubs shall be slip resistant.

7.0 Plumbing Elements and Facilities

Committee Comment

This requirement supports a safer floor surface within a bathtub.

7.10 Drinking Fountains

Rationale

Where drinking fountains are provided, they must be served by an interior/exterior accessible route and take into consideration the range of human functioning. The placement and design of drinking fountains must take into account persons using mobility devices (wheelchairs, scooters, walkers, crutches and canes), persons who have no or low vision, persons who have difficulty bending, and persons who have limited hand strength or dexterity.

The drinking fountain must not protrude into the main accessible route so it does not become a hazard for persons who use canes and/or persons with no or low vision, and must have sufficient access space in front of the drinking fountain to maintain the clear width of any path of travel that serves the drinking fountain

Functional Description

This section addresses the accessibility requirements of interior and exterior drinking fountains served by an accessible interior route or an accessible exterior route. It does not address hoses or other constructed outlets for water flow that are designed to provide access to drinking water.

Technical Requirements

7.10.1 Placement

Where drinking fountains are provided within a building floor area, or on an exterior site, they shall

- a) be served by an accessible route; and
- b) be placed against a wall or be free standing.

Note: *Drinking fountains are not required in all building floor areas or exterior areas.*

7.10.2 Clear Floor or Ground Area

A drinking fountain shall have a clear ground or floor area in front of or adjacent to the drinking fountain that is a minimum of 1370 mm (54 in) depth by 1370 mm (54 in) width and meet the following requirements

- a) one fully unobstructed side shall adjoin an accessible route or adjoin another clear floor or ground area;
- b) the clear ground or floor area shall allow for either a forward or parallel approach to access the drinking fountain; and

7.0 Plumbing Elements and Facilities

- c) access space shall not overlap the minimum space of the accessible route used to access the drinking fountain

7.10.3 Minimum Number of Drinking Fountains

Where a single drinking fountain can not meet the requirements for both standing and seated persons, then an additional drinking fountain shall be provided.

7.10.4 Knee and Toe Clearances

Where cantilevered drinking fountains are provided, they shall

- a) be mounted between 700 mm (28 in) and 900 mm (35 in) above the finished floor and provide knee clearance of at least 700 mm (28 in);
- b) have a clear depth under the drinking fountain of at least 500 mm (20 in);
- c) have a clear width under the drinking fountain of at least 760 mm (30 in);
- d) have a toe clearance height under the drinking fountain of at least 350 mm (14 in) above the finished floor from a point 300 mm (12 in) back from the front edge to the wall;
- e) have a depth at the foot of the drinking fountain of at least 700 mm (28 in); and
- f) where not recessed or otherwise located out of the circulation routes, be cane-detectable at or below 680 mm (27 in) above the finished floor.

Note: *The space beneath the drinking fountain may be included as part of the clear floor area or turning space, provided that appropriate toe and knee clearances are available; for a forward approach; or a parallel approach to an unrecessed or partially recessed drinking fountain*

7.10.5 Controls

Drinking fountain controls shall be

- a) located at the front of the drinking fountain;
- b) hands-free or operable by pressure plate or lever operable by a closed fist; and
- c) automatic or require a maximum force of activation of 22.2 N (5 lb).

7.10.6 Water Spout

Water spouts on drinking fountains shall

- a) be located at a maximum of 900 mm (35 in) above the finished floor;
- b) be located a maximum 125 mm (5 in) from the front of the drinking fountain;
- c) project the water at least 100 mm (4 in) high; and
- d) have the water stream provided at a vertical angle of either
 - i. 30° maximum, where water spouts are located less than 75 mm (3 in) from the front of the unit; or
 - ii. 15° maximum, where water spouts are located between 75 mm (3 in) and 125 mm (5 in) from the front of the unit.

7.0 Plumbing Elements and Facilities

7.10.7 Colour Contrast

Drinking fountains shall have a colour/tonal contrast that meet the requirements of Clause 6.1.12, Colour/Tonal Contrast.

7.10.8 Eye-wash Stations

Where provided, eye wash stations shall be placed no higher than 1100 mm (43 in) to be reached by a person in a wheeled mobility device.

7.11 Saunas and Steam Rooms

Rationale

Sauna and steam rooms should be available to people who can benefit from their use. Primary considerations for those with low or no vision should include colour and textural cues along primary routes of travel through the sauna and steam room facilities and tactile warning indicators around heating elements in the saunas and steam rooms.

Functional Description

This section addresses the accessibility facilities and elements that are unique to saunas and steam rooms and that are in addition to other accessibility requirements. It does not include requirements for manufactured equipment (e.g., pumps and mechanical systems) for sauna and steam rooms and specialized mobility devices that can be used in a sauna and steam room environment.

Technical Requirements

7.11.1 Accessible Route

All facilities with sauna and steam rooms shall

- a) have an accessible route to and from all parking areas, drop off zones, etc., and comply with Clause 6.3, Wayfinding, Clause 5.2, Curb Ramps, and Clause 5.1, Accessible Exterior Route; or
- b) have an accessible interior route from a main building entrance to the sauna and steam room area that is in compliance with Clause 4.1, Accessible Interior Route, Clause 3.1, Entrances, and Clause 6.3, Wayfinding.

7.11.2 Doors

The entrance into the sauna and steam room area shall

- a) comply with Clause 3.2, Doors and Doorways;
- b) not swing into the clear floor space designated for circulation of a wheeled mobility device;

7.0 Plumbing Elements and Facilities

- c) be equipped with vision panels extending 500 mm (20 in) to 1500 mm (59 in) above the floor or be equipped with a sidelight; and
- d) where the force to open the door is more than 22.2 N (5 lb), have a power assist device that complies with Clause 3.2.9, Power Door Operator.

Note: *Vision panels are a pane of glass within the door.*

7.11.3 Floor Space

Within the sauna or steam room there shall be

- a) a clear floor space alongside a bench that can accommodate a wheeled mobility device; or
- b) a section of bench that can be raised or easily removed to provide space for a mobility device; and
- c) a transfer space that shall be at least 900 mm (35 in) wide by 1500 mm (59 in) long with the width measured from the edge of the bench.

7.11.4 Floor Clearance

Within the sauna or steam room, there shall be a minimum floor clearance and turning space of at least 2020 mm (80 in) from the edge of seats / benches to the wall and/or any other protruding objects in the room so as to ensure toe and knee clearance and allow unobstructed access by other sauna and steam room users.

7.11.5 Dressing Rooms, Locker Rooms and Washrooms

Where dressing rooms or locker rooms are provided, they shall be located along an accessible interior route and comply with Clause 9.2, Dressing, Fitting and Locker Areas.

7.11.6 Shower and Bath Tub Facilities

Where shower and bath tub facilities are provided they shall

- a) be located within the accessible change room area; and
- b) comply with Clause 7.8, Shower Areas, Clause 7.9, Bath Tubs, and Clause 11.4, Pools, Spas and Splash Pads.

7.11.7 Bench Height

Provide at least one bench adjacent to a clear floor space as noted in Clause 7.11.3, Floor Space, shall have a seat that is at least 1065 mm (42 in) long, 450 mm (18 in) above the floor, and 610 mm (24 in) deep, with a colour/tonal contrast on the leading edge of the bench.

Note:

(1) *Additional benches of various heights should be available to accommodate persons with different needs.*

(2) *A sauna or spa bench is wider than a locker room bench, to allow the user to lie*

7.0 Plumbing Elements and Facilities

down.

Committee Comment

There was a preference to have an 1830 mm (72 in) bench to accommodate a person lying down as a minimum. Input during public review; as to whether the length should be extended is appreciated.

7.11.8 Bench Back Support

A bench shall be affixed to a wall or provide for back support. A bench back support where provided shall

- a) be at least 1065 mm (42 in) long;
- b) be positioned from a point 51 mm (2 in) maximum above the seat surface and extend to a point 455 mm (18 in) maximum; and
- c) be a maximum of 64 mm (2.5 in) from the rear edge of the seat measured horizontally or be at a maximum vertical angle of 7.5 degrees.

7.11.9 Bench Seat Surface

Where installed in wet locations, the surface of the seat / bench shall be slip resistant and not accumulate water.

7.11.10 Grab Bars

Where grab bars are provided they shall

- a) not obstruct transfer to the bench or act as an obstruction while sitting on the bench but be placed to fully facilitate transfer to the bench;
- b) meet the requirements of Clause 7.5.4, Grab Bars; and
- c) be on the wall adjacent to the bench, but not on the seat back.

Committee Comment

There was a comment that grab bars should be mandatory in a sauna, and they can also be fold down. Input on this item is sought during public review.

7.11.11 Controls and Safety

Controls within the sauna and steam rooms shall comply with Clause 8.4, End User Controls and Operating Mechanisms.

7.11.12 Floor Surfaces

Floor surfaces and markings shall comply with Clause 3.6, Ground and Floor Surfaces and Clause 11.4, Pools, Spas and Splash Pads.

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7.11.13 Tactile/ Colour/Tonal Surfaces

Tactile warning surfaces shall

- a) be provided on the floor around all heat devices;
- b) be 900 mm (36 in) wide commencing 300 mm from the hazard and may overlap the interior accessible route; and
- c) comply with Clause 8.7, Detectable Indicators.

7.11.14 Emergency Alarms

Where emergency alarms are monitored they shall

- a) be connected to a visual signal outside of the room;
- b) be both visible and audible within the sauna or steam room and
 - i. if located outside the room, be within viewing distance of the vision panel in the door; or
 - ii. if located outside the room, able to be seen through a glazed wall or window;
- c) comply with Clause 8.4, End User Controls and Operating Mechanisms and Clause 6.7, Emergency Systems; and
- d) be located no higher than 1220 mm (48 in) above the floor.

Note: *The emergency alarm should connect directly to an attendant station or to the workstation of another responsible person in the facility.*

Committee Comment

The committee was concerned with vision panels, glazed walls and windows will be fogged unless sprayed daily. And there was a suggestion that they be tested for both visibility and audibility from within the sauna or steam room over an extended period. If the test is unsuccessful, a visible alarm and a partially muted audible shall be placed within the sauna or steam room.

8.0 Building Performance and Maintenance

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8.1 Property Maintenance

Rationale

Property maintenance is important to ensure an accessible environment that is safe and useable by everyone. Snow and ice removal is an important component of property maintenance.

Functional Description

This section addresses property maintenance. Accessibility can be compromised by poor maintenance. Property maintenance involves the proper care, cleaning and repair of a facility, maintaining it in good order and safe condition.

Technical Requirements

8.1.1 Cleared and Maintained

The accessible interior route, accessible exterior route and curb ramp shall be maintained, and kept free of objects, debris, snow, ice and/or not accumulate water.

Committee Comment

The timely removal of snow, winter sand, wet leaves and other debris from curb ramps shall become a priority of the local municipality.

The committee has discussed having prompt snow removal from designated accessible parking spaces be monitored by the municipality but this may be difficult to regulate.

8.1.2 Operability

Elements installed on or adjacent to an accessible interior route and an accessible exterior route shall be maintained and kept in operable condition. These elements can include but are not limited to:

- a) elevating devices;
- b) power door operators;
- c) signage;
- d) lighting; and
- e) controls.

Committee Comment

It is advised that a specific snow storage area be designated for all entrances, stairs,

8.0 Building Performance and Maintenance

ramps, curb ramps, and for all access routes around construction sites, which does not reduce the minimum width required for an exterior accessible route.

8.1.3 Performance/ Maintenance

Elevating devices shall be maintained to ensure a safe operating environment and be operable at all times.

Note: *Maintenance includes a barrier free safe access to and inside the elevator.*

Examples are snow removal, excess water, debris and maintenance of slip resistant walking surfaces.

8.1.4 General

When a portion of an accessible exterior route is temporarily closed to users, a continuous alternative accessible exterior route that complies with Clause 5.1, Accessible Exterior Route, shall be provided. The alternative accessible exterior route shall be separated from vehicular routes, and the location and direction of the alternative accessible exterior route shall be clear and easy to detect for individuals of all abilities.

8.2 Air Quality

Rationale

Air quality can affect the health and well-being of many people, especially those with environmental sensitivity to a variety of chemicals, such as those released by building materials, through chemicals used or stored in the building or through perfumes containing manufactured fragrance (scented personal care products, such as lotions, hair care products and antiperspirants). It is estimated that approximately one-third of the Canadian population may have sensitivity to fragrances. Poor air quality can also affect the health of people with asthma and other respiratory conditions, or allergies.

Indoor air quality (in buildings) is often worse than outdoor air quality, and therefore indoor air quality can have a significant impact on the health of all of the building's occupants – up to disability for some people with environmental sensitivities. Improved standards for elements that impact on indoor air quality (listed under Functional Description, below), can improve the health, safety and productivity of all those within a building. Improved indoor air quality will also significantly improve access to buildings for people with environmental sensitivities, many of whom have limited access to most buildings due to common environmental exposures within the building.

Functional Description

This section addresses air quality within buildings.

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Many elements in a building, and the activities within, affect the indoor air quality, including:

- materials used in construction, finishes, flooring, particleboard, caulking, insulation, furniture and window treatments, amongst others, which can off-gas (emit) volatile organic compounds (VOCs) and other contaminants into the air;
- design elements (for example, poor detailing leading to water intrusion and mould growth; or inoperable windows)
- ventilation where a lack of flushing of the building's stale air can lead to sick building syndrome;
- chemicals used inside the building for activities such as cleaning, disinfecting, pest control or in day to day operations (any chemicals used, stored or created in the manufacture of a product or service, for example, solvents in hairdressing or nail salons, art supplies and other chemicals used in schools, and disinfectants used routinely in hospitals);
- pollutants, particulates, VOCs and other indoor air pollutants emitted by computers, printers, photocopy and fax machines, carbonless paper and other common machinery and products used in buildings, particularly workplaces;
- VOCs and other chemicals brought into a building by individuals wearing perfumes, colognes and other scented personal care products;
- products of combustion, including from heating (gas or oil), cooking with natural gas or propane, tobacco smoking, candle burning; and
- pollutants, particulates and fumes from underground parking.

People with environmental sensitivities can experience symptoms when exposed to any of the above indoor air quality contaminants, among others (or a combination of contaminants), which prevent the affected person from either entering a building or, more frequently, remaining in the building and/or functioning, once he or she is exposed to the offending environmental agents.

Technical Requirements

8.2.1 Materials

All building materials, including, but not limited to, doors and cabinetry; floor surfaces; wall surfaces and finishes; caulking; insulation; and furnishings and fixtures shall be inert, i.e. no or low off-gassing of volatile organic compounds (VOCs).

Note: *This will improve indoor air quality and therefore, increase accessibility for those with environmental sensitivities.*

8.2.2 Portable and Temporary Structures

8.2.2.1 Well Drained Surface

The portable shall be placed over a well-drained surface and surface run-off shall be directed away from the structure.

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8.2.2.2 Well Ventilated

The space under the structure shall be well-ventilated to prevent rot from ground moisture.

8.2.2.3 Water Damage

Cement board and non-cellulose based wall panels shall be used to minimize the impact of water damage.

8.2.2.4 Roof

The roof shall be sloped to provide adequate drainage and to not retain large depths of snow, and comply with Building Code clause 9.26.3.1 and Building Code table 9.26.3.1.

Committee Comment

The Building Code table and content has been provided in Appendix C.

8.2.2.5 Scheduled Maintenance

For buildings that remain for more than one year – include a scheduled maintenance inspection regime, including the inspection of caulking and flashing around windows and service posts.

Committee Comment

Portable structures, such as classrooms, have a history of mould growth, which can exacerbate symptoms for people with environmental sensitivities (ES), and can even cause ES, in some cases. To eliminate mold growth, specific building materials, humidity and ventilation requirements and building design parameters should be followed.

8.2.3 Kitchens

Ventilation in the kitchen and seating area shall meet American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) standards at a minimum, and meet minimum requirements and comply with Clause 8.2.8.1, Ventilation Rates.

Committee Comment

Fumes from cooking (e.g. gas and propane) can travel into the seating area and storage areas if the kitchen is not properly ventilated. These fumes and odours can exacerbate symptoms for people with environmental sensitivities. Adequate ventilation in both the kitchen and seating areas is required to mitigate air quality problems.

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8.2.4 Passenger Loading Zones

8.2.4.1 Idling

A limited or non-idling requirement shall be required.

Committee Comment

Vehicles emit pollutants while idling, which can exacerbate symptoms in people with environmental sensitivities.

8.2.4.2 Air Intake

The air intake to the building shall be located away from passenger loading zones, parking lots, loading docks, smoking areas, and other obvious sources of outdoor air pollutants. Loading docks shall be designed to prevent vehicle exhaust fumes from entering the building.

8.2.5 Parking

8.2.5.1 General

For general parking, outdoor lots and open air parking structures shall be constructed with the least off gassing materials, whenever possible, e.g. concrete versus asphalt.

8.2.5.2 Indoor

Indoor parking shall meet at a minimum American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 62-1989 Ventilation for Acceptable Indoor Air Quality Standard.

Committee Comment

Parking garages have poorer indoor air quality than most other indoor spaces, therefore they require increased ventilation and other considerations to minimize exposure to volatile organic compounds and particulates, especially for people with environmental sensitivities.

8.2.6 Reserved

8.2.7 Ventilation Exhaust

Ventilation exhaust for rooms that store chemicals (e.g. toner for printers, copiers, cleaners, etc.) shall be provided.

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8.2.8 Ventilation

8.2.8.1 Ventilation Rates

The ventilation rates within a building shall be consistent with the standards developed by The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) at minimum and comply with Building Code clause 6.2.3.9.

8.2.8.2 Air Exchanges and HEPA Filters

Air exchangers and High Efficiency Particulate Air (HEPA) filters shall be installed in all new buildings.

8.2.9 Odour Controlling Devices

8.2.9.1 Washrooms

Odour controlling materials/devices within the washroom shall be replaced with ones with no or low off-gassing of volatile organic chemicals (VOCs).

8.2.9.2 Urinals and Water Closets

Whenever possible, odour controlling materials/devices within urinals or water closet e.g. urine pucks and drip installed cleaning agents, shall be replaced with materials with no or low off-gassing of volatile organic chemicals (VOCs).

Note: *Waterless urinals can be installed as an alternative.*

Committee Comment

Urine pucks off gas VOCs, which can make washrooms inaccessible for people with environmental sensitivities.

8.2.10 Emissions from Office Equipment and Stored Chemicals

8.2.10.1 Exhaust Ventilation

Exhaust shall be provided, whenever possible, for rooms where chemicals are used or stored (e.g. toner for printers, copiers, cleaners, etc.).

8.2.10.2 Dedicated Exhaust

When possible, office equipment that off-gasses VOCs (e.g. photocopy machines) shall be placed in an enclosed room with dedicated exhaust ventilation.

Committee Comment

Even when volatile chemicals are stored in closed containers, some can escape. For people with environmental sensitivities, this can decrease accessibility to that room and nearby rooms. In addition, the off-gassing of VOCs from photocopy machines and

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printers can cause symptoms for people with environmental sensitivities if they are located too close to the equipment.

8.2.11 Products

Any product used in the day to day operations, cleaning and maintenance of the building shall be fragrance-free and contain no or low VOCs. This includes, but is not limited to:

- a) cleaning products, floor waxes, disinfectants and other solvents; and
- b) products used in renovations to the building.

Note: *Scented office and school products, such as scented markers and art supplies off-gas volatile organic compounds (VOC), therefore fragrance-free non-volatile organic compound products should be used.*

8.2.12 Low Maintenance Materials

Surface materials (e.g. floors, walls, counter tops, etc.) that require minimum maintenance shall be selected, e.g. those that require minimal use of harsh cleaning and maintenance products.

8.3 Acoustics

Rationale

The acoustic environment is an integral component that can enhance a building's usability for everyone. Routes of travel through a facility, large open spaces and dedicated areas can be audibly detected by people based on the different sound qualities of the spaces. People who have low or no vision often learn to use acoustical cues to assist them in orientation and wayfinding. These acoustical cues are created by the sound quality, reverberation and design of these spaces.

People who are Deaf, deafened or hard of hearing rely on their residual hearing and their hearing amplification systems together with the acoustical environment to enable them to hear. The careful design of acoustic treatments includes the control of sound reverberations, and the use of soft and hard surfaces.

Functional Description

In areas of all buildings, acoustics play an important role in accessible design, since they can distort or enhance auditory information cues. For example, the careful application of sound insulation and absorbing materials on ceilings, walls, and floors is important in many settings (for work, entertainment, transportation, shopping, dining, etc.), particularly for persons who are Deaf, deafened or hard of hearing. In other circumstances, appropriate auditory cues along circulation routes and at destination

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points serve as useful wayfinding clues, especially for persons who have low or no vision and who rely upon hearing to orient themselves.

Technical Requirements

Committee Comment

It was suggested that these requirements should be considered a guideline vs. a mandatory requirement.

8.3.1 Public Corridors

Every public corridor shall be designed and constructed to facilitate wayfinding by using acoustic treatments to differentiate main corridors from secondary corridors.

Notes:

- (1) *This involves the selection of sound-reflective or sound-absorbent materials that create different acoustic cues and the control of sound reverberations; and*
- (2) *Wayfinding should be considered with the use of texture and acoustical cues.*

8.3.2 Accessible interior route

The sound transmission/reflection characteristics of finished materials along an accessible interior route where decision-making is necessary shall aurally differentiate major and secondary paths of travel.

Note:

- (1) *Finishing materials should be selected with this in mind.*
- (2) *Appendix F includes World Health Organization (WHO) Guidelines for Community Noise Values that should be considered when designing the Built Environment.*

8.3.3 Floor Finishes, Wall Surfaces and Ceilings

Floor finishes, wall surfaces (e.g. textured, or textured wallpaper), and ceilings (e.g. lowered) shall be selected so that occasional noise is not unduly amplified.

Note: *Hard surfaces such as marble or terrazzo will allow each footstep to be heard by persons who have no or low vision, but add another level of noise for persons who are Deaf, deafened or hard of hearing.*

8.3.4 Ceiling Shapes

Except as specified, ceiling shapes shall be designed so that echoes do not occur; unless an alternate acoustical treatment is incorporated.

Note: *Domed shapes tend to distort sound.*

Committee Comment

It was noted that a domed or vaulted ceiling profiles being eliminated is not acceptable as it unduly limits design possibilities which for many reasons, e.g. attractive lighting, spatial scale, atmosphere, are desirable. However the requirement has been left in for

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public input and comment.

8.3.5 Public Address and Call Systems

Public address and call systems shall be capable of also being zoned to key areas, rather than blanketing all areas of a facility at all times, and shall meet the requirements of Clause 6.4, Public Address Systems.

8.3.6 Meeting Room and Assembly Areas

In meeting rooms and assembly areas where sound is transmitted, all unnecessary background noise (e.g., from fans, other mechanical equipment, air diffusers, open windows, fluorescent lighting, piped in music, etc.) shall

- a) be dampened;
- b) include adequate sound insulation;
- c) be located away from rooms that are inherently noisy (e.g. copy room); and
- d) comply with Clause 9.4.1, Configuration.

8.4 End User Controls and Operating Mechanisms

Rationale

End user controls and operating mechanisms both within and around a building facility must be designed and constructed in such a manner as to provide life safety and operational opportunities equally for all those who utilize them. The challenge involves locating these controls in areas accessible to all and providing control mechanisms that can be manipulated by an end user group characterised through a broad range of abilities. Proper location and construction and implementation of these control systems will provide maximum independence for all users equally.

Functional Description

This section addresses the recognition, accessibility, and operability of end user controls and operating mechanisms in both the internal and external environments. End user controls may include (but may not be limited to) the following; light switches, wall outlets, alarm pulls, thermostats, door handles, lever hardware, and faucets. The requirements provided in this clause can be considered for controls for products and services such vending machines, pay-stations for parking and ticketing devices, touch screens for information and self service kiosks, and other activation devices.

Technical Requirements

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8.4.1 Lighting

Controls and operating mechanisms that shall be illuminated will comply with Clause 8.5.5.1, Task Lighting Levels.

8.4.2 Additional Lighting

Where a liquid crystal display (LCD) panel or its equivalent is used for a control it shall be illuminated and comply with Clause 8.5.5.1, Task Lighting Levels.

Note: Many controls have LCD panels that are not back lit, for some displays an appropriate amount of front lighting is needed to enable the user to read the display.

8.4.3 Colour Contrast

Controls and operating mechanisms shall incorporate a high visual colour/tonal contrast that meet the requirements of Clause 6.1.12, Colour/Tonal Contrast.

8.4.4 Hand-Operated Controls and Mechanisms

Hand-operated controls and mechanisms shall be operable

- a) with a closed fist;
- b) without tight grasping, pinching, or twisting of the wrist; and
- c) with a force of not more than 22.2 N (5 lb).

8.4.5 Reach

Controls for the operation of building services or safety devices, including electrical switches, remote controls, thermostats, and intercom switches, intended to be operated by the occupant and located on an accessible interior route shall

- a) be mounted not less than 400 mm (16 in) and not more than 1200 mm (47 in) above the floor where there are no obstructions and where there is an obstruction, between 500 mm (20 in) to 625 mm (25 in) in depth; the mounting height shall be reduced to 1100 mm (43 in) above the floor; and
- b) be placed where the maximum high forward reach depth of 500 mm (20 in) is not exceeded, in cases where there is an obstruction.

Committee Comment

There are concerns that have a range of heights for controls will not align to having consistent placement for devices.

The intent of this requirement is to be general for controls. Specific height dimensions for controls such as light switches and power door operators have been provided elsewhere in the document.

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8.4.6 Control Responses

For operating controls in a building, there shall be multiple forms of feedback (e.g., audible, visual, tactile) provided.

Notes:

(1) Controls include building entry systems, elevators, thermostats, and fire alarms, and exclude light switches;

(2) Tactile response allows the user to feel the control mechanism being used; and

(3) Audible response allows the user to hear the control mechanism being used.

8.4.7 Clear Floor Area for Front Approach

A clear, level floor area at least 1370 mm (54 in) wide by 1370 mm (54 in) depth shall be provided to allow a front approach by persons using mobility devices to controls and operating mechanisms such as at light switches, wall outlets/ receptacles, alarm pulls, thermostats, and dispensers. The clear, level floor area may overlap the adjacent interior accessible route.

8.4.8 Faucets and Other Similar Controls

Faucets and other similar controls shall be hand-operated and comply with Clause 8.4.4, Hand-Operated Controls and Mechanisms, or shall be automatically controlled.

8.4.9 Doors and Doorways

Controls and operating mechanisms on door and doorways including power door operating controls shall comply with Clause 3.2, Doors and Doorways.

8.4.10 Elevators and Elevating Devices

Controls and operating mechanisms for elevators and elevating devices shall comply with Clause 3.3, Elevating Devices.

8.4.11 Water Closet Stalls

The controls in a water closet stall shall also comply with Clause 7.5, Water Closet Stalls.

8.4.12 Water Closet

The controls in a water closet shall also comply with Clause 7.4, Water Closets.

8.4.13 Lavatories

The controls in a lavatory shall also comply with Clause 7.1, Lavatories.

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8.4.14 Washroom Accessories

The controls for washroom accessories shall comply with Clause 7.3, Washroom Accessories.

8.4.15 Universal Toilet Room

The controls for a universal toilet room shall also comply with Clause 7.7, Universal Toilet Rooms.

8.4.16 Bath Tub and Showers Facilities

The controls for bath tubs and showers shall also comply with Clause 7.9, Bath Tubs and Clause 7.8, Shower Areas.

8.4.17 Drinking Fountains

The controls for drinking fountains shall also comply with Clause 7.10, Drinking Fountains.

8.4.18 Emergency Alert Controls

Emergency alert controls shall

- a) be linked to a central monitoring location (e.g., office or switchboard);
- b) meet the requirements of Clause 7.7.6, Emergency Call System; and
- c) have a visual and audible signal to indicate that help is on the way.

8.4.19 Signage

Where signage is provided at controls and operating mechanisms, it shall comply with Clause 6.1, Signage.

8.5 Interior Lighting

Rationale

Adequate lighting is the single most important aid to vision. Inadequate and limited spectrum lighting is associated with increased fall risk, reduced visual performance, headaches, Seasonal Affective Disorder (SAD), and depression.

The essential properties of proper lighting are sufficient quantity of light for all contemplated seeing activities, appropriately directed lighting, and the absence of direct or reflected glare from light sources.

Artificial lighting and natural light sources should provide comfortable, evenly distributed

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light at all working areas, in all circulation routes and in all areas of potential hazard such as at stairs, ramps, drop-offs, changes in level, and decision making points, etc.

Functional Description

This Clause addresses installed lighting systems, portable lighting and lighting elements along circulation routes and within functional spaces in buildings.

Technical Requirements

8.5.1 Lighting Level

An exit, a public corridor, a corridor providing access to exit for the public, a corridor serving patients or residents, a corridor serving classrooms, a step or steps, a stairway, a ramp, and an electrical equipment room shall be illuminated to an average level not less than 200 lx measured at floor level.

8.5.2 Elevating Devices

Lighting levels in elevator lobbies (e.g. area in front of elevator) shall be similar to the lighting levels in elevating devices (e.g. elevators, cabs, escalators, and lifts), to minimize tripping hazards, and in no case shall be less than 200 lx measured at floor level.

8.5.3 Washrooms

Lighting levels in washrooms shall be evenly distributed and be no less than 200 lx measured at floor level.

8.5.4 Dressing Rooms

Lighting levels in dressing rooms shall be evenly distributed and be no less than 200 lx measured at floor level.

8.5.5 Task Lighting

8.5.5.1 Task Lighting Levels

Appropriate lighting levels for the nature of the task shall be provided, as follows

- a) 200 lx, measured at the floor for lobbies and waiting areas;
- b) 500 lx measured at the floor for halls and inquiry / reception stations;
- c) 200 lx measured at the floor for circulation areas, corridors, elevators, and stairs;
- d) 200 to 300 lx measured at the floor for lounges;
- e) 200 lx measured at the work surface for kitchen and food preparation areas;
- f) 500 lx measured at the work surface for offices and general lighting;
- g) 300 lx measured at the work surface for computer workstations;
- h) 100 lx measured at the control and operating mechanism where provided; and

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- i) 150 lx measured at the control for an LCD panel.

Committee Comment

The requirements above are the recommended standard by the Canadian National Institute for the Blind (CNIB). One in 7 people over 60 have macular degeneration which requires this level of lighting to maximize their residual vision.

Illuminating Engineering Society (IES) of North America suggested lighting levels should be increased by a range of 25 to 50 per cent for people with no or low vision. This recommendation is in line with other current guidelines such as “Building Sight,” published by the United Kingdom’s Royal National Institute of Blind People.

8.5.5.2 LED Lighting

Where provided LED lighting shall be used for task lighting it shall

- a) light up instantly;
- b) be easily dimmed;
- c) operate silently; and
- d) require only a low-voltage power supply.

8.5.5.3 Lighting Safety

Lighting used in task spaces shall be moved out of the way from the accessible interior route or have a cover to prevent injury.

Note: *Lights give off a great deal of heat and person with vision loss could inadvertently sit or stand underneath and be injured from the heat.*

8.5.6 Signage

Lighting for 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 lx measured at the working surface.

8.5.7 Meeting Rooms

Lighting in meeting rooms and assembly areas shall

- a) be evenly distributed such that lighting levels are equal through the room and comply with Clause 8.5.11, Distribution;
- b) be capable of being adjusted (e.g. dimmers);
- c) comply with Clause 8.5.5 Task Lighting; and
- d) have where possible, multiple areas of lighting such as, but not limited to
 - i. areas surrounding projection screens;
 - ii. work surfaces; and
 - iii. lectern areas.

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8.5.8 Delivery of Live Communication

Lighting at lecterns, podiums/platforms or other live communication speaker locations shall be capable of being enhanced, even when other lighting is dimmed/brightened, to permit ease of speech reading and/or viewing of a sign language interpreter.

8.5.9 Glare

Lighting fixtures (luminaires) should be used that do not provide a view of the light source, either directly or by specular reflection, from common lines of sight.

8.5.10 Colour

Light sources shall provide as full a spectrum of light as possible, as an aid to edge and colour definition.

Committee Comment

It was suggested that fluorescent lighting, shall not be permitted, however this was not included as a requirement and is left for the public to provide input.

8.5.11 Distribution

Lighting shall be configured to create an even distribution at floor level and to minimize pools of light and areas of shadow.

8.5.12 Emergency Lighting

8.5.12.1 Accessible interior route

Emergency lighting for stairs and ramps, in an exit or accessible interior route, shall be not less than 200 lx measured at floor level.

8.5.12.2 Stroboscopic Lighting

Emergency stroboscopic lighting shall be provided as a visual enhancement to a fire alarm and/or emergency system. The stroboscopic lighting shall have a maximum frequency of 5 Hz and be active for a duration of not less than 30 seconds between rest periods.

8.5.13 Lighting System

The lighting system in a facility shall be capable of providing the appropriate lighting level as per clause 8.5.5.1, Task Lighting Levels, depending on the required activity in the facility.

Note: *Dimmer switches and other controls can be used to achieve the lighting levels.*

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Committee Comment

In specific facilities such as restaurants and nightclubs, they use lighting for ambiance. For these facilities, they must meet the appropriate lighting levels, but can have dimmer switches or other controls that will enable the lighting levels to be achieved, but still provide an appropriate atmosphere.

8.6 Exterior Pedestrian Lighting

Rationale

Ensuring adequate vision is an important component of individual safety and security, and independent access for many individuals.

The level of illumination is only one of the factors to be considered in relation to accessible lighting for exterior pedestrian facilities. The even distribution of light (eliminating shadows or very bright spots) and the reduction of glare or other reflective surfaces also play a significant role and must be considered.

For the purposes of this clause, “building” refers to a temporary or permanent structure with walls, a roof, and an entrance (e.g., campsite outhouses and port-o-potties).

Functional Description

This section addresses installed lighting systems and lighting elements along exterior accessible routes, including but not limited to sidewalks, pathways, stairs, ramps, etc. and at functional areas exterior to buildings, including entrances, parking, passenger drop off areas, curb ramps etc.

Technical Requirements

8.6.1 Location

Exterior pedestrian lighting shall be provided

- a) on accessible exterior routes;
- b) on accessible exterior routes leading to public buildings; and
- c) at accessible building entrances, passenger loading zones, and accessible parking facilities.

8.6.2 Light Levels

Exterior pedestrian lighting shall

- a) be evenly distributed over the accessible route;
- b) be positioned so as to not cause any obstruction, protrusions, or tripping hazard;
- c) along an accessible exterior route, illuminate the walk to at least 100 lx, measured at ground level;

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- d) at accessible building entrances, accessible parking facilities, and accessible passenger loading zones, be equipped to provide non-glare illumination to an average level not less than 100 lx, measured at ground level; and
- e) along accessible exterior routes leading to steps and ramps and at exterior steps and ramps
 - i. be equipped to provide illumination to an average level not less than 100 lx, measured at ground level; and
 - ii. clearly illuminate or be reflective and/or radiant / glowing (glow in the dark) at the treads, risers, and nosings at stairs.

8.6.3 Glare

Lighting fixtures (luminaries) that do not provide a view of the light source, either directly or by specular reflection, from common lines of sight shall be used.

8.6.4 Colour

Light sources shall provide as full a spectrum of light as possible as an aid to edge and colour definition.

8.6.5 Supplementary Lighting

Where supplementary lighting, such as landscape or accent lighting, is provided, it shall be designed and incorporated into the site so as not to spill onto exterior walkways or cause glare conditions.

8.7 Detectable Indicators

Rationale

Detectable indicators provide important navigational cues for persons with low or no vision. These surfaces alert all pedestrians to potential hazards, such as crosswalks, ramps and stairs or drop-offs at transit platforms. Suitable surfaces include a change in texture and high colour contrast but should not present a tripping hazard. Detectable indicators should be used consistently throughout a facility.

Functional Description

This section addresses detectable surfaces used to identify potential hazards through the use of distinct changes in colour and texture. Detectable indicators have a texture that can be felt under foot or detected by a person using a long cane. The texture is either built-in or applied to the walking surface. Typical locations for detectable indicators include (but are not limited to): top of stairs; curb ramps; and at unprotected edges with a change in level (such as at the edge of a transit platform).

<i>Committee Comment</i>

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It was noted that for some applications of these requirements a different profile for the tactile surface may be used e.g. transportation.

Tactile systems should be selected to be appropriate to the hazard or intended use. Existing standards do not include sufficient information to prescribe specific tactile system designs.

Technical Requirements

8.7.1 Indicators

8.7.1.1 Types

Detectable floor and ground warning surfaces shall be used to inform persons who are walking over them of three possible situations:

- a) a hazard indicator signals that a person should stop;
- b) a warning indicator signals that caution should be taken; and
- c) a direction indicator facilitates wayfinding in open areas and signals a route to be taken.

8.7.1.2 Hazard Indicators

8.7.1.2.1 Hazard Surfaces

Detectable hazard surfaces shall

- a) be used consistently throughout a facility;
- b) be detectable when walked upon as being different in texture from adjoining surfaces;
- c) have a visual colour/tonal contrast with adjoining surfaces that meet the requirements of Clause 6.1.12, Colour/Tonal Contrast;
- d) be slip resistant;
- e) have minimum glare; and
- f) be composed of truncated domes that
 - i. have a height of 5 mm (0.2 in) \pm 0.5 mm (0.02 in);
 - ii. have a base diameter of 23 mm (1 in) \pm 2 mm (0.08 in);
 - iii. are not be more than 3 mm (0.1 in) above or below the surrounding surface; and
 - iv. are organized in a regular pattern with spacing of 60 mm (2.4 in) \pm 5 mm (0.2 in) on centre.

Note: *Applying a paint finish to a concrete surface does not provide appropriate detectability.*

8.7.1.2.2 Location

A detectable hazard indicator shall be located at

- a) an unprotected drop-off edge, such as a transit platform, where

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- i. the change of elevation is greater than 250 mm (10 in); and
- ii. the slope is steeper than the ratio of 1:3 (33.3%);
- b) the unprotected edges of a reflecting pool;
- c) curb ramps; and
- d) an entry into a vehicular route or area where no curbs or other elements separate it from the pedestrian route of travel (e.g. traffic islands at pedestrian crossings).

8.7.1.2.3 Installation of Hazard Indicators

A detectable hazard indicator shall be installed

- a) a distance of 600 mm to 650 mm (24 in to 26 in) from the edge of the hazard;
- b) along the full width of the hazard;
- c) so that the base surface is level with, or not more than 3 mm (0.1 in) above, the surrounding surface; and
- d) without creating a tripping hazard.

8.7.1.3 Warning Indicators

8.7.1.3.1 Location of Warning Indicators

A detectable warning indicator for stairs shall

- a) be provided
 - i. where the stairs are not enclosed;
 - ii. at each landing incorporating an entrance into a stair system;
 - iii. where the regular pattern of a stairway is broken; and
- b) where the run of a landing not having a continuous handrail is greater than 2100 mm (83 in);
- c) extend the full width of the stair; and
- d) have a depth of 900 mm to 920 mm (35 in to 36 in), commencing one tread depth from the edge of the stair.

8.7.1.3.2 Configuration of Warning Indicators

A detectable warning indicator shall be composed of continuous ridges that

- a) have a height of 4 mm (0.16 in) \pm 1 mm (0.04 in);
- b) have a width of 6 mm (0.24 in) \pm 2 mm. (0.08 in); and
- c) are spaced from 50 mm (2 in) \pm 10 mm (0.4 in) on centre.

8.7.1.3.3 Installation of Warning Indicators

A detectable warning indicator shall

- a) have ridges that run perpendicular to the route of travel;
- b) not create a tripping hazard; and
- c) have the base surface level with, or not more than 3 mm (0.1 in) above, the surrounding surface.

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8.7.1.4 Directional Indicators

8.7.1.4.1 Configuration of Directional Indicators

A detectable direction indicator shall be composed of continuous ridges that

- a) have a height of 2 mm (0.08 in) \pm 0.5 mm (0.02 in) from the base surface;
- b) are spaced from 15 mm (0.6 in) \pm 9 mm (0.35 in) on centre; and
- c) have a top width of 0.16 times the spacing width.

8.7.1.4.2 Installation of Directional Indicators

A detectable direction indicator shall

- a) have a width of 600 mm (24 in) to 800 mm (32 in);
- b) have a clear space of at least 320 mm (13 in) on each side;
- c) be installed with the ridges running in the direction of the route of travel;
- d) not create a tripping hazard; and
- e) be installed with the base surface level with, or not more than 3 mm (0.1 in) above, the surrounding surface.

8.7.2 Ramps

Detectable indicators at ramps shall

- a) be provided at the top, intermediate level and bottom of the ramp;
- b) extend the full width of the ramp;
- c) have a depth of at least 920 mm (36 in) with an offset of 300 mm (12 in) from the landing; and
- d) comply with Clause 8.7.1.2, Hazard Indicators.

8.7.3 Curb Ramps

Detectable indicators at curb ramps shall

- a) be provided at the top and bottom of the curb ramp;
- b) extend the full width of the ramp;
- c) have a length of 600 mm (24 in) to 650 mm (26 in), starting at 150 mm (6 in) to 200 mm (8 in) from the curb; and
- d) comply with Clause 8.7.1.2, Hazard Indicators.

8.7.4 Elevated Platforms

Detectable indicators at elevated platforms shall

- a) be consistent throughout the setting; and

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- b) be positioned parallel to the open platform edge, extending the full length of the platform;
- c) be 610 mm (24 in) deep from the edge of the elevated platform; and
- d) comply with Clause 8.7.1.2, Hazard Indicators.

Note: *Elevated platforms such as stage areas, speaker podiums, etc. should be accessible to all.*

8.7.5 Pedestrian and Vehicular Intersection

If a pedestrian 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

- a) be defined by a continuous detectable warning surface along the full length of the crossing boundary between the walking surface and the vehicle way; and
- b) have a depth of at least 920 mm (36 in).

8.7.6 Escalator

Escalators shall incorporate detectable warning surfaces in compliance with Clause 8.7.1.2, Hazard Indicators and shall be provided at the head and foot of the escalator.

9.0 Special Rooms, Spaces and Other Elements

9.0 Special Rooms, Spaces, and other Elements

9.1 Courtrooms and Public Assembly Rooms

Rationale

Court facilities shall accommodate persons with disabilities who can be members of the judiciary, courthouse staff, crown, police, defence counsels, in addition to defendants, members of counsel, and members of the public. Based on functionality, there are four distinct groups/areas (i.e., judge/court officials, defendants, counsel/jury, and general public) that need to be considered when addressing courthouse accessibility. All areas of the court should be accessible to all persons.

Functional Description

This section addresses the accessibility facilities and elements within courtrooms, public meetings rooms, and similar public assembly type facilities.

Note: The requirements in this clause can also be applied to other occupancies with similar features.

Technical Requirements

9.1.1 Courtrooms and Adjacent Areas

Every aspect of courtrooms and adjacent areas shall be made accessible, including the holding cell, prosecutor area, judicial chambers, and public gathering spaces.

Courtrooms and adjacent areas shall have

- a) a clear accessible interior route that complies with Clause 4.1, Accessible Interior Route;
- b) tables, work surfaces, and service counters that comply with Clause 9.14, Service Counters;
- c) lighting that complies with Clause 8.5, Interior Lighting;
- d) where provided, bench seating that complies with Clause 9.2.9, Benches;
- e) accessible seating that complies with Clause 9.13, Accessible Seating Spaces;
- f) ramps that complies with Clause 3.4, Ramps;
- g) accessible washrooms that complies with Clause 7.2, Washrooms;
- h) adaptive systems that complies with Clause 9.17, Adaptive Systems for Assembly; and
- i) access to raised areas in compliance with Clause 9.10.1, General.

9.1.2 Holding Cells

Holding cells shall have:

- a) a clear accessible interior route that complies with Clause 4.1, Accessible Interior

9.0 Special Rooms, Spaces and Other Elements

- Route, lighting that complies with Clause 8.5, Interior Lighting;
- b) where provided, bench seating that complies with Clause 9.2.9, Benches;
- c) accessible washrooms that comply with Clause 7.2, Washrooms;
- d) an adjacent accessible telephone, hearing aid-compatible or text-based, complying with Clause 6.5, Public Telephones; and
- e) an audible and visual emergency system.

9.2 Dressing, Fitting and Locker Areas

Rationale

In addition to the provision of accessible common-use dressing rooms, a separate unisex dressing room is useful, particularly where an attendant or parent of a different gender is providing assistance. Key elements of accessibility include sufficient space to accommodate a wheeled mobility device user, an accessible change bench, and accessible clothes hooks and shelving. Consideration should also be given to non-mobility disabilities

Functional Description

This section addresses the accessibility facilities and elements that are unique to dressing, fitting, and locker rooms, and that are in addition to other accessibility requirements in this Standard.

Technical Requirements

9.2.1 Accessible Route

Dressing/change, fitting and locker rooms shall be located adjacent to an accessible path of travel that complies with Clause 4.1, Accessible Interior Route.

9.2.2 Dressing/Change Rooms

9.2.2.1 Minimum

Where provided, at least 50% of the dressing/change rooms, but never less than two, shall be accessible in a recreational or other facility and comply with Clause 4.1.7, Surfaces, and the locker room requirements of Clause 9.2.3, Locker Rooms.

9.2.2.2 Individual and Communal Rooms

Recreational facilities shall provide both individual and communal accessible dressing rooms.

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9.2.3 Locker Rooms

Where locker rooms are provided, at least 10 %, but never less than one of each type of amenity shall be accessible.

Note: Amenities include an accessible route, benches, grab bars, lockers, hooks, showers, and lavatories.

9.2.4 Clear Width

Dressing/ change rooms and locker rooms shall maintain an accessible route width throughout the room of 1200 mm (47 in) and meet the requirements of Clause 4.1, Accessible Interior Route.

9.2.5 Lockers

Where lockers are provided, locker doors and locks shall be operable with a closed fist and shall meet the requirements of Clause 8.4, End User Controls and Operating Mechanisms.

9.2.6 Lavatories

All dressing/change rooms and locker rooms, where lavatories are provided, shall have at least one lavatory that complies with Clause 7.1, Lavatories.

9.2.7 Showers

All dressing/change rooms and locker rooms where showers are provided, shall have

- a) at least one shower that complies with Clause 7.8 Shower Areas; and
- b) an adjacent clear floor area that is 1500 mm (59 in) by 900 mm (35 in) with a splash barrier that can serve as a storage area for mobility aids and a drying off area.

9.2.8 Lighting

Lighting in dressing/change rooms and locker rooms shall comply with Clause 8.5.4, Dressing Rooms.

9.2.9 Benches

Where permanent benches are provided, they shall

- a) be 510 mm (20 in) to 610 mm (24 in) deep, with a back of 762 mm (30 in) in height on the bench, unless the bench is permanently located against a wall;
- b) have the seat located between 430 (17 in) to 460 mm (18 in) above the floor; and
- c) provide a visual colour/tonal contrast that meet the requirements of Clause 6.1.12, Colour/Tonal Contrast, to distinguish the bench from the surrounding area.

Notes:

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- (1) *If the bench is too narrow and without a back, the user could fall off the bench. A wider bench allows the user to lie down if necessary.*
- (2) *The height of the bench allows a mobility device user to transfer easily, it is not designed to be a change table.*

9.2.10 Coat Hooks

Where coat hooks are provided, they shall meet the requirements of Clause 7.5.5, Coat Hooks.

9.2.11 Grab Bars

Grab bars shall be provided in dressing/change rooms and locker rooms beside the accessible benches, and comply with Clause 7.5.4, Grab Bars, items c), d), e) and f).

Note: *Support is required on both sides of a bench and can include horizontal, vertical, or L-shaped grab bars*

9.2.12 Floor Surfaces

Floor surface design shall

- a) drain water;
- b) be slip-resistant; and
- c) comply with Clause 3.6, Ground and Floor Surfaces.

9.2.13 Shelves

Where provided, wall-mounted shelves shall

- a) be placed a maximum of 1220 mm (48 in) above the finished floor where there is no obstruction greater than 500 mm (20 in) deep; if there is an obstruction between 500 and 625 mm, it shall be placed no higher than 1100 mm above the floor;
- b) have a visual colour/tonal contrast that meet the requirements of Clause 6.1.12, Colour/Tonal Contrast, on the edge of the shelf distinguishing it from its surroundings;
- c) have a bench or other object located below and in front of the shelf to comply with Clause 3.7, Overhanging and Protruding Objects; and
- d) have an adjacent clear floor space of 1370 mm (54 in) by 1370 mm (54 in).

Note: *Where there is a bench in front of the shelf, a person with low vision or no vision would feel the bench with their cane and the shelf would not be an obstruction or protruding object.*

Committee Comment

There was consideration to include grab bars to this clause however more input is requested during public review.

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9.2.14 Signage

Locker numbers or other signage shall

- a) be large enough for low-vision users to see any numbers or other information and comply with Clause 6.1.12, Colour /Tonal Contrast; and
- b) have accompanying tactile signage.

9.2.15 Mirrors

Where provided, mirrors in dressing or change rooms and locker rooms shall be installed so that the user can see both their head and feet.

9.2.16 Universal Toilet Room

Facilities that have dressing/change rooms and/or locker rooms shall have at least one universal toilet room that

- a) complies with Clause 7.7, Universal Toilet Rooms; and
- b) where possible, includes a shower that complies with Clause 7.8, Shower Areas.

Note: *The universal toilet room can be used as the family washroom.*

Committee Comment

There was consideration to make the shower mandatory for these rooms in a facility that provides dressing rooms/ locker rooms. More input is requested during public review.

9.2.17 Universal Dressing/Change Room

Facilities shall have at least one accessible dressing/change room that is at least 2500 mm (98 in) wide by 2500 mm (98 in) long, and large enough to allow a person in a mobility device to make a 180° turn and be accompanied by an attendant, and comply with Clause 9.2.18, Cubicles.

Note: *This room can also include the features of a universal toilet room.*

9.2.18 Cubicles

Where an accessible cubicle is provided in a dressing/change room or locker room, it shall

- a) have a minimum 2500 mm (98 in) diameter turning space in the room;
- b) have a door that meets the requirements of Clause 7.5.3, Stall Doors and Door Controls;
- c) have a handle and locking mechanism that is operable with a closed fist and that meets the requirements in Clause 7.7.1, Detailed Requirements of a Universal Toilet Room;
- d) where provided, have a bench that meets the requirements of Clause 9.2.9, Benches;

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- e) provide a collapsible hook that meets the requirements of Clause 7.5.5, Coat Hooks; and
- f) have a firm, level, and slip resistant floor surface that complies with Clause 9.2.12, Floor Surfaces.

9.2.19 Referees' Change Room

Where a separate referee dressing/change room is provided, at least one of these dressing/change rooms shall be accessible and comply with Clause 9.2, Dressing, Fitting and Locker Areas.

9.2.20 Fitting Rooms

Where gender-specific fitting rooms are provided, at least one accessible fitting room for each gender or at least one unisex accessible fitting room shall be provided that meets the following requirements

- a) it shall have doors, that meet the requirements of Clause 3.2, Doors and Doorways;
- b) have a minimum 2500 mm (98 in) diameter of turning space in the room;
- c) handles, and a locking mechanism that meets the requirements of 8.4, End User Controls and Operating Mechanisms;
- d) a bench, that meets the requirements of Clause 9.2.9 Benches;
- e) a coat hook, that meets the requirements of Clause 7.5.5, Coat Hooks;
- f) floor surface that meet the requirements in Clause 3.6, Ground and Floor Surfaces; and
- g) it shall have a grab bar that meets the requirements of Clause 7.5.4, Grab Bars.

9.2.21 Emergency Systems

Where locker rooms and dressing/change rooms are provided and where a building has a monitored security system, the universal toilet rooms shall have an emergency system that complies with 7.7.6, Emergency Call System.

9.3 Kitchens and Kitchenettes

Rationale

Kitchens, kitchenettes, and coffee stations require an appropriate level of access if they are to be used by persons of varying abilities.

Functional Description

This section addresses the accessibility of common-use kitchens and kitchenettes that are intended for use by staff or members of the public (e.g. in offices, common areas of apartment buildings and hotel suites).

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Technical Requirements

9.3.1 Galley Kitchens

Galley kitchens where counters, appliances, or cabinets are on two opposing sides or opposite a parallel wall shall

- a) have a minimum clearance of 1200 mm (47 in) between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas; and
- b) have two doorways with one at each end.

9.3.2 U-Shaped Kitchens

U-shaped kitchens enclosed on three continuous sides shall have a minimum clearance of 1500 mm (59 in) between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas.

9.3.3 Storage Elements

Storage elements shall

- a) be located on an accessible route;
- b) comply with at least one of the reach ranges specified in Clause 9.14.2, Counter Depth;
- c) comply with Clause 8.4, End User Controls and Operating Mechanisms; and
- d) except in a galley kitchen, have clear floor space in compliance with Clause 9.8.1.1 Random Access.

9.3.4 Colour and Tonal Contrast

Kitchen elements shall incorporate colour and tonal contrast that meet the requirements of Clause 6.1.12, Colour/Tonal Contrast, to visually differentiate

- a) the cabinets and appliances from adjacent wall and floor surfaces;
- b) the countertop from the cabinets and adjacent walls; and
- c) operable hardware on cabinets.

Note: *The use of colour and tonal contrast between kitchen elements will assist persons with low vision to locate surfaces, appliances, and controls.*

9.3.5 Kitchen Sinks and Wet Bars

9.3.5.1 Parallel Approach to Kitchen Sinks and Wet Bars

A parallel approach may be provided to a kitchen sink or wet bars where a cook top or conventional range is not provided.

9.3.5.2 Forward Approach to Kitchen Sinks and Wet Bars

Except where permitted in Clause 9.3.5.1, Parallel Approach to Kitchen Sinks and Wet Bars, kitchen sinks or wet bars shall be located on an accessible route with adjacent

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clear floor space for a forward approach as noted in Clause 9.3.1, Galley Kitchens or Clause 9.3.2, U-Shape Kitchens.

9.3.5.3 Designated Section of Counter

Where a forward approach is provided, there shall be a designated section of counter for wheelchair access measuring at least:

- a) 500 mm (20 in) deep maximum;
- b) 760 mm (30 in) wide minimum; and
- c) 730 mm (29 in) underside counter clearance.

Committee Comment

There was consideration for toe height to be included in the clause. More input is requested during public review.

9.3.5.4 Knee Space

Kitchen sinks or wet bars shall incorporate knee space such that the height of the sink rim or the countertop, whichever is higher, is within the range of 775 mm (31 in) to 875 mm (34 in).

9.3.5.5 Faucets and Other Control

Faucets and other sink or wet bars controls shall comply with Clause 8.4, End User Controls and Operating Mechanisms.

9.3.5.6 Surfaces under the Sink or Wet Bars

Surfaces located under the sink or wet bars shall:

- a) if a water supply or drainpipe is located under the sink be insulated or otherwise configured to protect against contact; and
- b) not have sharp or abrasive surfaces used under the sink.

9.3.6 Kitchen Appliances

9.3.6.1 Accessible Route to Kitchen Appliances

Kitchen appliances shall be located on an accessible route complying with Clause 4.1, Accessible Interior Route and with adjacent clear floor space complying with Clause 9.3.1, Galley Kitchens or Clause 9.3.2, U-Shaped Kitchens.

9.3.6.2 Clear Floor Space at Kitchen Appliances

Except for a galley kitchen, kitchen appliances including dishwashers shall incorporate clear floor space complying with Clause 9.8.1.1, Random Access.

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9.3.6.3 Controls for Kitchen Appliances

Controls and operable portions of kitchen appliances that are not doors or door-latching devices shall comply with Clause 8.4, End User Controls and Operating Mechanisms.

9.3.7 Ranges and Cook Tops

9.3.7.1 Forward Approach

Where a forward approach is provided, there shall be a designated section of counter that complies with Clause 9.3.5.3, Designated Section of Counter.

9.3.7.2 Controls

Range and cook top controls shall be located to avoid reaching across the burners.

9.3.7.3 Work Surface

A work surface shall be

- a) provided at the same height of the cooktop;
- b) at least 400 mm (16 in) wide;
- c) located on each side of the cooktop; and
- d) heat resistant.

Committee Comment

There was consideration for toe height to be included in the clause. More input is requested during public review.

9.3.8 Ovens

9.3.8.1 Controls

Appliance controls shall

- a) be located on the front panels of the appliance;
- b) be mounted no higher than 1220 mm (48 in) above the floor; and
- c) comply with Clause 8.4, End User Controls and Operating Mechanisms.

9.3.8.2 Side-hinged Doors

Appliances with side-hinged doors shall

- a) be located a work surface adjacent to the latch side of the door; and
- b) incorporate a pull-out shelf below the oven.

9.3.8.3 Bottom-hinged Doors

Where bottom-hinged doors are used, ovens shall be located with an adjacent work surface positioned adjacent to one side of the door.

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9.3.9 Refrigerators and Freezers

Where provided, refrigerators and freezers shall

- a) be configured so that at least 50% of the freezer space is no higher than 1220 mm (48 in) from the floor; and
- b) incorporate a clear floor area in front of the refrigerator/freezer, positioned for a parallel approach immediately adjacent to the refrigerator/freezer, with the centreline of the clear floor area offset by 610 mm (24 in) maximum from the front face of the refrigerator/freezer.

Note: *Enough space should be provided to pull up to the freezer/refrigerator in a mobility device and still have space to open the door.*

9.3.10 Tables, Counters and Work Surfaces

9.3.10.1 Accessible Route

Accessible tables, counters, and work surfaces shall

- a) be located on an accessible route in accordance with Clause 4.1, Accessible Interior Route; and
- b) have an accessible route leading to and around fixed or built-in tables, counters, and work surfaces.

9.3.10.2 Forward Approach

Where a forward approach is provided to access a wheelchair seating space, at accessible tables, counters and work surfaces, there shall be a clear knee space complying with Clause 9.3.5.3, Designated Section of Counter.

Note: *The clear knee space may overlap the clear floor space by a maximum of 500 mm (20 in).*

9.3.10.3 Counter Top Height

The top of accessible tables, counters, and work surfaces shall be located between 775 mm (31 in) and 914 mm (36 in) above the finished floor or ground surface.

9.4 Meeting Rooms

Rationale

Meeting rooms must be designed to address accessibility challenges relating to user circulation, and visual and outside environmental conditions conducive to effective use of the space for all occupants.

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Functional Description

This section addresses the accessibility of facilities and elements that are unique to meeting rooms and that are in addition to other accessibility requirements. The accessibility of typical building elements, such as accessible routes, doors, controls, etc., is addressed through other Clauses in this Standard.

Technical Requirements

9.4.1 Configuration

Where meeting rooms are provided for use by the general public, clients, customers, or staff, no less than one meeting room shall

- a) be located on an accessible route complying with Clause 4.1, Accessible Interior Route;
- b) where equipped with a door, have a door that complies with Clause 3.2, Doors and Doorways;
- c) have a clear floor space of 2500 mm (98 in) by 2500 mm (98 in) within the room, allowing a person using a wheeled mobility device to make a 180° turn;
- d) have an accessible route at least 1200 mm (47 in) in width throughout the space that connects the primary activity elements within the meeting room; and
- e) have knee and toe clearances and work surfaces that comply with Clause 9.14, Service Counters;
- f) be equipped with an assistive listening system that complies with Clause 9.17, Adaptive Systems for Assembly;
- g) be configured to control and minimize glare; and
- h) have temporary wires and cables equipped with standard metal, double-amp protection.

Note: *These meeting rooms have movable tables and chairs, not fixed seating.*

9.5 Offices and Work Areas

Rationale

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 accommodate individual equipment or assistive devices.

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.

All persons, but particularly those with who are Deaf, deafened or hard of hearing, would benefit from having a quiet acoustic environment. Background noise from mechanical equipment such as fans should be limited. Appropriate communication

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technology should be supplied to support persons who are Deaf, deafened or hard of hearing (two-way for those who cannot communicate verbally). Appropriate communication technology should be supplied to support Deaf, deafened and hard of hearing people and may include assistive listening systems, captioning and American Sign Language interpreters.

Circulation areas, tables, and workstations should address the knee space and manoeuvring space requirements of individuals who use mobility devices.

Functional Description

This section addresses the accessibility of facilities and elements that are unique to offices that are intended to be accessed and used by the general public, clients or customers, and that are in addition to other accessibility requirements. It also addresses common-use work areas that are intended to be accessed and used by the general public, employees, clients or customers, and that are not dealt with elsewhere in this Standard. Common-use work areas include (but are not limited to) work rooms, photocopy rooms and storage rooms. The accessibility of typical building elements, such as accessible routes, doors, controls, etc., is addressed through other clauses in this standard. These requirements do not include details for a specific workstation.

Technical Requirements

9.5.1 Offices and Related Work Areas

Offices and related work areas shall

- a) be located on an accessible route that meets the requirements of Clause 4.1, Accessible Interior Route;
- b) where equipped with a door, have the door in compliance with Clause 3.2, Doors and Doorways; and
- c) have a clear floor space 1500 mm (59 in) wide by 1500 mm (59 in) long allowing a person using a wheeled mobility device to make a 180° turn.

9.5.2 Common-Use Work Areas

Common-use work areas that are intended to be accessed and used by the general public, employees, clients, or customers shall

- a) be located on an accessible interior route that meets the requirements of Clause 4.1, Accessible Interior Route;
- b) where equipped with a door, have the door in compliance with Clause 3.2, Doors and Doorways;
- c) have a clear floor space 1500 mm (59 in) wide by 1500 mm (59 in) deep allowing a person using a wheeled mobility to device to make a 180° turn;
- d) have an accessible route that connects the activity elements within the work area;
- e) where provided, have knee and toe clearance below work surfaces that comply

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- with Clause 9.14, Service Counters;
- f) be free of unnecessary background noise, permit comprehension by a person with hearing loss and meet the requirements of Clause 8.3, Acoustics.
 - g) where provided, access to storage, shelving and display units, so that they
 - i. are located a maximum of 1220 mm (48 in) above the floor where there is no obstruction greater than 500 mm deep; if there is an obstruction between 500 (20 in) and 625 mm (25 in), it shall be placed no higher than 1100 mm above the floor.; and
 - ii. have a clear floor space 1370 mm (54 in) wide by 1370 mm (54 in) long in front of the units.

9.6 Libraries

Rationale

Traditional and automated systems for book and information retrieval should be available to all patrons and staff. Both the design of the facility and the provision of services should be considered when accommodating persons with various abilities. Lighting requirements have a large impact on the ability to maneuver in a library. The provision of workstations equipped with assistive technology such as large displays, screen readers, etc., will increase the accessibility of a library. The provision of book drop-off slots at different heights for standing and seated use will enhance usability.

Functional Description

This section addresses the accessibility or facilities and elements that are similar to library rooms. A library room can be a room or space in a public or private library building, or it can be a designated room in a building used for another purpose. The requirements in this clause can also be applied to other occupancies with similar features.

Technical Requirements

9.6.1 Location

Accessible fixed seating, tables, and study carrels shall be located on an accessible route in compliance with Clause 4.1, Accessible Interior Route.

9.6.2 Clearances

Clearances between fixed seating, tables, and study carrels shall comply with Clause 4.1, Accessible Interior Route.

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9.6.3 Shelving

Where shelving is provided at fixed seating, tables, or study carrels, the shelving shall

- a) be no higher than 1220 mm (48 in) where there is no obstruction; and
- b) be no higher than 1100 mm (43 in) where there is an obstruction between 500 mm (20 in) and 625 mm (25 in) deep.

9.6.4 Study Carrels

Accessible fixed study carrels shall

- a) incorporate work surfaces and knee/toe clearance in compliance with Clause 9.14, Service Counters;
- b) incorporate an electrical outlet that meets the requirements of 8.4, End User Controls and Operating Mechanisms; and
- c) meet the requirements in Clause 8.5, Interior Lighting, at the work surface.

9.6.5 Security Gates

Where provided, controlled access, traffic control, or book security gates shall have a clear width of 900 mm (35 in) and comply with Clause 3.1.8, Controlled Entrances.

9.6.6 Aisles and Self-Service Areas

9.6.6.1 Aisle Configuration

Aisle configurations shall incorporate a clear floor space of 2020 mm (80 in) allowing a person in a wheelchair to make a 180° turn within the configuration.

Note: *A turning space can be provided at the end of the aisle.*

Committee Comment

The requirement does not suggest the aisle width is 2020 mm (80 in) wide, but that the configuration allows for it.

9.6.6.2 Self Service

The self-service area shall

- a) have a minimum clear aisle space at card catalogues, study carrel, microfiches, computer stations, etc., and at stacks complying with Clause 4.1, Accessible Interior Route;
- b) meet the requirements of Clause 9.14, Service Counters; and
- c) have a minimum of one movable chair provided at every information service counter, computer catalogue, or computer workstation.

9.6.7 Reach

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Reach heights at card catalogues shall be a maximum of 1220 mm (48 in) from the floor to allow a person from a seated position to reach the card catalogues.

9.6.8 Shelf Height

Shelf height in stack areas is unrestricted, and thus assistance shall be provided to customers to access unreachable items on shelves.

9.6.9 Book Drops

Book drop slots shall

- a) be located on an accessible route complying with Clause 4.1, Accessible Interior Route and Clause 5.1, Accessible Exterior Route;
- b) be located adjacent to a 2500 mm (98 in) by 2500 mm (98 in) level clear floor space that complies with Clause 3.6, Ground and Floor Surfaces;
- c) contrast to the wall in compliance with Clause 6.1.12, Colour/Tonal Contrast; and
- d) have a slot that is operable using a closed fist, located between 860 mm (34 in) and 900 mm (35 in) above the floor.

9.6.10 Lighting

Lighting in a library shall meet the requirements of Clause 8.5, Interior Lighting.

9.6.11 Acoustics

The acoustic quality shall be free of unnecessary background noise and shall permit comprehension by persons with hearing loss and meet the requirements of Clause 8.3, Acoustics.

9.6.12 Separate Space

Where there is a separate space provided for listening or reviewing library materials without disturbing other library users, the provided space shall be on an accessible interior route and shall meet the requirements of Clause 3.2, Doors and Doorways, Clause 4.1, Accessible Interior Route and Clause 9.14, Service Counters.

9.6.13 Signage

Informational and directional signage shall comply with Clause 6.1, Signage and Clause 6.3, Wayfinding.

9.7 Temporary Facilities

Rationale

Temporary facilities provide goods and services similar to permanent facilities. They

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may be constructed to meet emergency situations and, as such, are required to provide services to all residents, including people with disabilities. Temporary facilities such as first aid facilities and special event structures are also covered by human rights legislation requiring accessibility for persons with disabilities.

People with a wide range of different disabilities, including those who have low or no vision, are Deaf, deafened, or hard of hearing and people who use wheeled mobility devices, those pushing strollers or those with temporary disabilities require access to temporary facilities. In emergency situations, there may be a larger than normal use of these facilities by people with disabilities.

Functional Description

This section addresses the accessibility of facilities and elements that are unique to temporary facilities, which include, but are not limited to school classrooms, washrooms, special event facilities, first aid and emergency shelters, and temporary housing

Technical Requirements

9.7.1 Detailed Requirements

Temporary facilities shall meet the requirements of the Accessible Built Environment Standard, as they apply to permanent facilities.

Note: *This also includes emergency systems requirements.*

9.7.2 Portable Classrooms

Portable classrooms shall

- a) be on a accessible route and meet the requirements of Clause 4.1, Accessible Interior Route or Clause 5.1, Accessible Exterior Route;
- b) have doors and entrances that meet the requirements of Clause 3.2, Doors and Doorways and Clause 3.1, Entrances;
- c) where provided, have a ramp that meets the requirements of Clause 3.4, Ramps;
- d) where provided, have stairs that meet the requirements of Clause 3.5, Stairs; and
- e) where provided, have a washroom that meets the requirements of Clause 7.1, Lavatories, or Clause 7.2, Washrooms;
- f) have acoustic quality free of unnecessary background noise, permit comprehension by persons with hearing loss and meet the requirements of Clause 8.3, Acoustics; and
- g) comply with Clause 8.2.2, Portable and Temporary Structures.

Committee Comment

Clause 3.9.3.9 (1) in the current Building Code exempts portable classrooms from having to meet accessibility requirements if the main school building complies. That is why a clause specifically for portable classrooms is provided.

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9.7.3 Washrooms

Where washrooms are provided in a temporary facility, accessible washrooms shall be provided complying with Clause 7.2, Washrooms, as well as Clause 7.5, Water Closet Stalls, or Clause 7.7, Universal Toilet Rooms.

9.8 Cafeterias and Restaurants

Rationale

Cafeteria serving line and seating area designs must consider lower sightlines, reduced reach, and the knee/toe-space and maneuvering requirements of a person using a wheeled mobility device. Cafeterias and restaurants should enable independence. Patrons should be able to obtain service as independently as possible.

Patrons using mobility devices might not be able to hold a tray or food items while supporting themselves on canes or while maneuvering a wheeled mobility device. Tray slides should be designed to move trays with minimal effort.

Features such as colour contrasts and large print signage can assist persons with low or no vision.

Functional Description

This section addresses the accessibility facilities and elements that are unique to fixed items in cafeterias and restaurants within buildings and that are in addition to other accessibility requirements.

Committee Comment

The customer service standard should be applied to service patrons in cafeterias. Menus are addressed in the Customer Service Standard and/or the Information Communications Standard.

Technical Requirements

9.8.1 Layout

9.8.1.1 Random Access

Where random access layouts in a cafeteria are provided, the following shall be provided:

- a) counter heights in accordance with Clause 9.14, Service Counters;
- b) access to food/drink stations with a clear floor area of 1370 mm (54 in) width and 1370 mm (54 in) length for both a forward approach and side approach; and

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- c) where possible, a mobile tray (e.g. walkalator) on wheels that will allow patrons to obtain their own food and drink.

Note: *The trend in cafeteria design is to have a random access service layout that consists of various stations. Random access plans for cafeterias do not work unless they have accessibility features built in.*

9.8.1.2 Cash Register

Where a cash register counter is used, the following shall be provided;

- a) counter heights in accordance with Clause 9.14, Service Counters;
- b) access to stations with a clear floor area for both a forward approach of 810 mm (32 in) width and 1370 mm (54 in) length and side approach of 1370 mm (54 in) width by 810 mm (32 in) length;
- c) where possible, a mobile tray on wheels that will allow the customer to obtain their own food/drink; and
- d) where possible, the cash register display shall be facing the customer.

Note: *Where possible, assistance so that the patron is able to get to a table from the cash register counter should be provided.*

9.8.2 Tray Rails

Where provided, tray rails shall have a maximum side reach for grasping of 500 mm (20 in) and a height in accordance with Clause 9.14, Service Counters to allow a patron to reach over the tray rails.

9.8.3 Food Display and Overshelf

9.8.3.1 Overshelf Height

Where provided, an overshelf shall have a maximum height range of 1220 mm (48 in). Where the obstruction is 254 mm (10 in) or less, the maximum height cannot exceed 1170 mm (46 in).

9.8.3.2 Open Space

The open space between sections of the overshelf/display shall have a minimum width of 610 mm (24 in) at specified intervals depending on the length of the service line.

Committee Comment

If open spaces are not provided, extra service would need to be provided to carry the food item to the customer around the counter or at the cash.

The intent of the open space is to have a break in the overshelf, so something can be transferred e.g. food, between the serving area and the person requesting the service.

9.8.4 Beverage Dispensers

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Beverage dispensers shall have

- a) a space provided to set down a cup in front of beverage dispensers; and
- b) a clear floor space to access a beverage dispenser provided for both a forward approach of 810 mm (32 in) width and 1370 mm (54 in) length and side approach of 1370 mm (54 in) width by 810 mm (32 in) length.

9.8.5 Fixed Seating

Restaurants with fixed seating shall

- a) comply with the requirement in clause 9.13.1 Designated Space; and
- b) have an accessible interior route between fixed seating in accordance with Clause 4.1, Accessible Interior Route.

9.8.6 Non-Fixed Seats

Accessible seating for non-fixed seats shall

- a) provide a minimum floor clearance of 500 mm (20 in) deep that is not part of the accessible route, for wheeled mobility devices at the seat;
- b) provide a minimum floor clearance of 600 mm (24 in) adjacent to the 500 mm (20 in) for the customer and other customers in the facility to be able to access the table; and
- c) maintain an accessible interior route in accordance with Clause 4.1, Accessible Interior Route.

9.8.7 Service Lanes

9.8.7.1 Width

Where a rail separates a cafeteria service line from the rest of the space the clear distance between the tray rail and the separating rail shall be between 920 mm (36 in) and 1100 mm (43 in) wide.

Note: *The intent of this clause is to ensure the space is adequate for a person in a wheeled mobility device to move forward through a service line.*

9.8.7.2 Directional Indicators

Service lanes shall have directional indicators that comply with Clause 8.7.1.4, Directional Indicators to assist people with low or no vision.

9.8.8 Floor Level Changes

Only accessible level changes are permitted in a cafeteria or restaurant, and shall meet the requirements of Clause 3.6.3.3, Accessible Levels.

9.9 Reserved

Note: *This clause is reserved for future use.*

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9.10 Stages

Rationale

Stages and stage equipment must address all accessibility issues. The issues include but are not limited to circulation access to stage areas, raked seating, spaces required for sign language interpreters, adjustable podiums and microphones, assistive listening systems and visual, life safety devices and tactile.

Functional Description

This section addresses the accessibility of facilities and elements that are unique to stages and daises, which are defined as raised platforms. Stages are elements comprised of raised platforms, exterior and interior to buildings, generally used for performances and presentations. Traditionally, stages are provided in auditoria, theatres and in lecture halls. Stages are raised to allow for easy viewing by an audience. They are accessed via a ramp and stairs and are generally equipped with a podium and microphone. Assistive listening systems are provided to accommodate audience members who are people who are hard of hearing.

Technical Requirements

9.10.1 General

Stages/daises, including any portable or temporary ramps and stairs designed to access them, shall

- a) be considered as floor areas;
- b) be free of obstacles;
- c) where provided, have overhanging, and protruding objects that comply with Clause 3.7, Overhanging and Protruding Objects; and
- d) meet the design requirements of Clauses 3.6, Ground and Floor Surfaces, 4.1, Accessible Interior Route, 3.4, Ramps, and 3.5, Stairs.

Note: *This clause applies to both interior and exterior stages/daises.*

9.10.2 Location

Stages/daises shall be located on an accessible interior route to both the audience and backstage areas.

9.10.3 Assistive Listening Devices

Assistive listening devices for audience members shall be provided in compliance with Clause 9.17, Adaptive Systems for Assembly.

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9.10.4 Stage Edges

The edge of the stage shall be marked from the surrounding surfaces with contrasting colour / tonal contrast that meet the requirements of Clause 6.1.12, Colour/Tonal Contrast.

9.10.5 Sign Language Interpreters

Space for sign language interpreters and captioning shall be provided on the stage, near the speaker and be sufficiently illuminated to be easily seen from all areas where the audience may be located.

9.11 Parking

Rationale

Some of the barriers that currently exist with regard to parking are as follows:

- a) Standard parking spaces are not always adequate for many persons with disabilities (i.e., spaces too small, inadequate clear height, inadequate access zones for vehicle ramps, etc.);
- b) Poor identification and signage make it difficult to find accessible spaces;
- c) Parking is hampered by poor maintenance — the accumulation of ice and snow, storage of shopping carts.

This section addresses two types of parking spaces:

Type A parking space — Mobility –aided: for people who need larger parking spaces for larger vehicles (such as vans), as well as clear access space for entering and exiting the vehicle (such as lifts to assist wheeled mobility aids).

Type B parking space — Distance-limited: for people who have difficulty traveling a great distance to the building entrance but do not necessarily have a larger vehicle. There is also a need for adequate access to exit the vehicle by opening the door sufficiently wide to manage a mobility aid such as a walker or cane.

Functional Description

This section addresses the accessibility of accessible parking facilities within interior and exterior parking lots, including enclosed and open air parking garages, exterior surface parking, on-street parking, and access to parking meters and ticket machines.

Technical Requirements

9.11.1 Access from Parking Spaces to an Accessible Entrance

An accessible route shall

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- a) be provided from the accessible parking spaces to the accessible building entrance and be part of the shortest accessible route to the building or facility entrance;
- b) wherever possible, be designed to avoid entering the vehicular routes and drives;
- c) be designed to avoid curbs. Where curbs cannot be avoided, they shall comply with Clause 5.2, Curb Ramps; and
- d) comply with Clause 5.1, Accessible Exterior Route.

9.11.2 Directional Signage to Accessible Parking Spaces

Where the location of designated accessible parking spaces is not obvious or is distant from the approach viewpoints, directional signage shall

- a) be placed along the route leading to the designated parking spaces;
- b) incorporate the International Symbol of Access and the appropriate directional arrows; and
- c) comply with Clause 6.1, Signage.

9.11.3 Signage

9.11.3.1 Directional Signage to the Nearest Accessible Facility Entrance

Where the location of the nearest accessible entrance is not obvious or is distant from the approach viewpoints, and/or the accessible parking spaces, directional signs shall

- a) be placed along the route leading to the nearest accessible entrance to the facility;
- b) incorporate the symbol of access and the appropriate directional arrows; and
- c) comply with Clause 6.1, Signage.

9.11.3.2 Placement

Each accessible parking space shall be designated with signage that is

- a) mounted vertically on a post that is colour contrasted with the surrounding and background environment, and meets the requirements of Clause 6.1.12, Colour/Tonal Contrast;
- b) at least 300 mm (12 in) wide and 450 mm (18 in) high;
- c) installed at a height of 1500 mm (59 in) to 2500 mm (98 in) from the ground/floor surface to the centre line of the sign;
- d) for perpendicular or angled parking, centred on and at the front of the parking space;
- e) for parallel parking, located adjacent to and toward the front of the parking space; and
- f) incorporated with pavement markings that
 - i. are located near the back of the designated parking space for 90° or angled parking, and centered on the parking space for parallel parking spaces;
 - ii. are 1525 mm (60 in) wide by 1525 mm (60 in) deep;
 - iii. have a white border with a blue background field colour; and

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- iv. contain the International Symbol of Access.

9.11.4 Parking Spaces

Accessible parking spaces and adjacent access aisles shall

- a) be located on an accessible route complying with Clause 4.1, Accessible Interior Route or Clause 5.1, Accessible Exterior Route;
- b) have a firm, stable, and slip resistant surface;
- c) have a maximum running slope of 1:50 (2%);
- d) have a maximum cross slope of 1:50 (2%); and
- e) incorporate post-mounted signage and pavement markings, as outlined in Clause 9.11.3.1, Signage.

9.11.5 Access Aisles for Vehicles Parked at 90°

Access aisles for vehicles parked at 90° shall

- a) adjoin an accessible route. Two parking spaces may share a common access aisle and may be placed on either side of the parking space;
- b) extend the full length of the parking spaces they serve;
- c) be marked so as to discourage unauthorized parking;
- d) not overlap the vehicular way;
- e) have markers and painting with slip resistant finish; and
- f) be 1500 mm (59 in) in width.

Note: Caution should be used when using paint to mark the access aisle area. Painting the entire access aisle area could make the surface slippery when wet. Sand or some other similar abrasive material could be added to the paint.

9.11.6 Parking Spaces

All buildings, for which parking is provided, shall provide accessible parking spaces.

9.11.7 Type A Mobility-Aided Parking Dimensions

Where Type A parking spaces are provided, they shall

- a) be at least 4600 mm (181 in) wide inclusive of access aisle;
- b) have a height clearance of at least 2750 mm (108 in) at the parking space and along the vehicle access and egress routes; and

Note: If adequate clear height cannot be obtained in an enclosed parking garage, the minimum required number of Type A spaces should be located at grade.

- c) be marked with unique signage that notes that this accessible parking space has been designated for people who need larger parking spaces for larger vehicles (e.g. vans).

Note: Type A parking spaces are for people who need larger parking spaces for larger vehicles (such as vans), as well as clear access space for entering and exiting the vehicle (such as lifts to assist wheeled mobility aids).

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9.11.8 Type B Distance-Limited Parking Dimensions

Where Type B parking spaces are provided they shall

- a) be at least 2400 mm (94 in) wide;
- b) have an adjacent access aisle at least 2015 mm (79 in) wide clearly indicated by floor markings. Two adjacent spaces may share an access aisle;
- c) be a maximum of 30 m (98.4 ft) from the accessible main building entrance or main facility entrance; and
- d) have a height clearance of at least 2100 mm (83 in) at the parking space and along the vehicle access and egress routes.

Note: *Type B parking spaces are for people who have difficulty traveling a great distance to the building entrance, but do not necessarily have a larger vehicle. There is also a need for adequate access to exit the vehicle by opening the door sufficiently wide to manage a mobility aid such as a walker or manual wheelchair.*

9.11.9 Number of Designate Type A and Type B Parking Spaces

Accessible parking spaces shall be provided as follows:

- a) If only one parking space is provided, that space must meet Type A parking dimensions but not be designated an accessible parking space;
- b) If there are two to five spaces provided, there shall be one designated accessible space that meets the dimensions of Type A;
- c) If there are six to twenty parking spaces provided, there shall be at least one space that meets the dimensions of Type A and one space that meets the dimensions of Type B;
- d) At least 5% of the total parking spaces in a parking lot or structure shall be accessible for over 20 spaces, no less than 50% shall be Type A parking spaces; and
- e) Where more than one parking facility (lot or structure) is provided on a site, the number of accessible spaces provided on the site shall be calculated according to the number of spaces required for each parking facility (lot or structure).

Note: *For specific high use facilities such as hospitals and pharmacies, additional accessible parking spaces may be required.*

Committee Comment

The Committee identified the minimum number of accessible parking spaces based on understanding the number of accessible parking permits issued.

The Committee seeks input from the public regarding the number of accessible spaces, and what may be a reasonable increase for high use facilities such as hospitals, pharmacies, etc.

9.11.10 Number of On-Street Parking Spaces

Five per cent of on-street angled parking spaces shall be designated as accessible Type A parking spaces, as determined by the municipalities.

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9.11.11 On-Street Parking Spaces for Vans

Designated accessible on-street parking spaces for vans shall

- a) be at least 2600 mm (102 in) wide by 5500 mm (217 in) in length;
- b) have an adjacent access aisle at least 2000 mm (79 in) deep for the full length of the parking space;
- c) have an adjacent rear access aisle at least 2000 mm (79 in) deep by the full width of the parking space;
- d) where curbs are present at the rear access aisle, have a curb ramp that complies with Clause 5.2, Curb Ramps, to access an accessible route;
- e) where curbs are not present at the rear access aisle and/or adjacent to the length of the parking space, then be separated from the walkway by a detectable warning surface that complies with Clause 8.7, Detectable Indicators; and
- f) have signage that notes that the accessible parking space has been designated for people who need parking spaces for larger vehicles (e.g. vans).

9.11.12 On-Street Parking Spaces for Cars

Designated accessible on-street parking spaces for cars shall

- a) be at least 2400 mm (94 in) wide;
- b) have an adjacent access aisle at least 1500 mm (59 in) wide for the full length of the parking space;
- c) have an adjacent rear access aisle at least 1500 mm (59 in) deep by the full width of the parking space;
- d) where curbs are present at the rear access aisle, have a curb ramp that complies with Clause 5.2, Curb Ramps to access an accessible route;
- e) where curbs are not present at the rear access aisle and/or adjacent to the length of the parking space, then be separated from the walkway by a detectable warning surface that complies with Clause 8.7, Detectable Indicators; and
- f) have signage that notes that the parking space has been designated as an accessible parking space.

9.11.13 Indoor Parking Structures

Convex mirrors shall be positioned in indoor parking lots to assist people who are Deaf, deafened and hard of hearing to see on-coming vehicle or pedestrian traffic.

9.11.14 Lighting

The accessible parking space, access aisle and path of travel shall be well lit and comply with Clause 8.5, Interior Lighting and/or Clause 8.6, Exterior Pedestrian Lighting.

9.11.15 Parking Meter / Dispensing Machine

Where provided, a parking meter or ticket-dispensing machine shall

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- a) have a clear ground/ floor area of 1370 mm (54 in) wide by 1370 mm (54 in) long to allow for either a forward or side approach;
- b) have its operating mechanisms located no higher than 1220 mm (48 in) above the ground/floor;
- c) comply with Clause 8.4, End User Controls and Operating Mechanisms;
- d) comply with Clause 3.6, Ground and Floor Surfaces; and
- e) where these requirements are impossible to meet there should be a means for the parking patron to obtain assistance to purchase a ticket.

9.11.16 Vehicle Block Heater Receptacles

Where vehicle block heaters are supplied they shall

- a) be located no higher than 1200 mm (47 in) above the ground;
- b) be located off the path of travel; and
- c) be accessible to a person using a wheeled mobility device.

9.11.17 Shopping Cart Storage

Where there is storage in the parking area for shopping carts, there shall be shopping cart return areas in close proximity to the accessible parking spots.

9.12 Waiting, Line-up and Queuing Areas

Rationale

Queuing areas for information, tickets or services should permit persons who use wheelchairs, scooters and other mobility devices as well as persons with a varying range of user ability to move through the line safely and conveniently.

Waiting and queuing areas need to provide space for mobility devices, such as wheelchairs and scooters. Queuing lines that turn corners or double back on themselves will need to provide adequate space to maneuver mobility devices. Providing handrails in queuing lines may be useful support for individuals and guidance for those with low or no vision. The provision of benches in waiting areas is important for individuals who may have difficulty with standing for extended periods. It is important to provide and use visual indicators for Deaf, deafened and hard of hearing people in queuing areas.

Functional Description

The section addresses waiting, line-up and queuing areas within a building and in the exterior environment.

Technical Requirements

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9.12.1 Access

Waiting line-up and queuing areas shall be on an accessible route complying with Clause 4.1, Accessible Interior Route or Clause 5.1, Accessible Exterior Route.

9.12.2 Waiting Line-Up and Queuing Area Guides

Waiting line-up and queuing area guides shall

- a) be separated by a clear width of at least 1100 mm (43 in);
- b) have a clear floor area of at least 1500 mm (59 in) by 1500 mm (59 in) where line-ups change direction and where they begin and end;
- c) be cane detectable at or below 680 mm (27 in) from the floor;
- d) be stable and not move easily;
- e) be colour / tone contrasted with their surroundings and meet the requirements of Clause 6.1.12, Colour/Tonal Contrast;
- f) have a glare-free finish; and
- g) where waiting line-up and queuing area guides are permanent, use directional indicators and comply with Clause 8.7.1.4, Directional Indicators.

Note:

(1) Ropes should not be used for queue line as they are difficult to detect with a long cane.

(2) These waiting line-up and queuing area guides may or may not be permanent.

9.12.3 Floor Surface

The floor surface through a waiting line-up and queuing area shall

- a) comply with Clause 3.6, Ground and Floor Surfaces; and
- b) contrast in colour / tone and texture with the surrounding surfaces, and meet the requirements of Clause 6.1.12, Colour/Tonal Contrast.

9.12.4 Seating

Seating for a waiting line-up and queuing area shall

- a) be provided and comply with Clause 9.13, Accessibility Seating Spaces; and
- b) be located adjacent to, but attached to the accessible interior route.

9.12.5 Signage

Directional signage identifying the waiting line-up and queuing area shall be provided and comply with Clause 6.1, Signage.

9.12.6 Signals

Signals for available service in queuing areas shall be visual as well as auditory.

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Note: An example would be where a bell rings when the next available service window is available, etc.

9.12.7 Call Button

Where permanent waiting line-up and queuing area guides are present, a call button shall be placed at the beginning and end of the queuing line so that assistance can be requested.

9.13 Accessibility Seating Spaces

Rationale

Accessible viewing and sitting areas are required for indoor and outdoor environments, including, but not limited to, theatres, performance halls, religious institutions, sporting/recreation/competition venues, and outdoor environments such as natural and built amphitheatres and outdoor sporting/recreation/competition venues.

Designated viewing areas are required for individuals unable to use typical fixed seating. Viewing areas should provide adequate space to manoeuvre a mobility device as large as a scooter and should not be limited to one location. Adjacent 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 wheeled mobility device. A choice of locations and a range of ticket prices should be available.

People who are distance challenged need to have ergonomic seating at regular intervals to rest. As well, some users of mobility devices will want to transfer to a fixed seat and have a space to store their mobility device.

Functional Description

This section addresses accessible seating spaces and adjacent areas with fixed seating, for persons who use wheelchairs, power chairs, scooters, service animals, or who may use other assistive devices

Technical Requirements

9.13.1 Designated Space

The minimum number of spaces designated for wheelchair, power chair, or scooter use in an assembly occupancy with fixed seats shall conform to the following Table 9.13.1.

Table 9.13.1 Designated Accessible Spaces

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Number of fixed seats in seating area	Minimum number of accessible spaces
Up 100	2
101 to 150	3
151 to 200	6
201 to 250	7
Over 250	Not less than 3% of the seating capacity, rounded up to next whole number.

Committee Comment

The Committee discussed that fixed seating should not be used as it reduces the flexibility of the seating, but felt that if it is used then specific accessible seating should be provided.

The Committee would like input from the public regarding whether a quota for fixed seating is required, and if what has been identified is appropriate.

9.13.2 Detailed Requirements

Spaces designated for a wheeled mobility device use shall

- a) have a clear and level floor area;
- b) have a clear floor space to allow a mobility device user to make either a forward or side approach and have space to transfer as follows
 - i. not less than 1525 mm (60 in) wide and 900 mm (35 in) long to permit a wheeled mobility device to enter from a side approach; or
 - ii. 900 mm (35 in) wide by 1370 mm (54 in) long from the front or rear of the space;
- c) be arranged so that at least two accessible designated spaces are side by side;
- d) be located adjoining an accessible route without infringing on egress from any row of seating or any aisle requirements;
- e) be situated, as part of the designated seating plan, to provide a choice of viewing locations and a clear view of the event taking place where possible, in spaces exceeding 200 seats, a choice of seating shall be provided. Designated seating shall not be limited to the back or front of the seating area;
- f) have at least one companion (e.g. support person, children) seat provided next to each wheelchair seating area;

Note: Companion seating to be calculated in addition to the required accessible seating spaces identified in the Table 9.13.1 Designated accessible spaces.
- g) be permitted to have temporary seats to be used in designated accessible areas that, if not required, can be used by someone else;
- h) be dispersed throughout the seating area on all levels; and
- i) where provided, comply with Clause 9.17, Adaptive Systems for Assembly.

9.13.3 Storage Space and Location

Storage space shall

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- a) be provided for mobility devices to be stored;
- b) accommodate at least one mobility device in facilities with less than 200 seats and two mobility devices in facilities with more than 200 seats; and
- c) have a minimum floor space of 810 mm (32 in) wide by 1370 mm (54 in) deep per device.

Note: *Storage space for mobility devices shall be located on the same level as the related designated seating spaces.*

9.13.4 Accessible Seating

In addition to spaces designated for persons using wheelchairs, power chairs, or scooters, at least one per cent, but no less than one seat of the fixed seating shall be an aisle seat with removable, foldable or no armrest, and the availability of this seating shall be clearly posted and comply with Clause 6.1, Signage.

Note: *This type of seating can be used for persons to transfer from a wheel chair or scooter into the fixed seating.*

9.13.5 Force

The force required to open a seat that closes under a spring action shall not exceed 22.2 N (5 lb).

9.14 Service Counters

Rationale

Service counters must be designed to address a wide range of accessibility issue. Heights and reach of counters must address mobility and mobility device issues: colour, contrast, texture and sound must address visual accessibility issue.

Functional Description

This section addresses the accessibility facilities and elements that are unique to service counters, including (but not limited to); reception desks, check-out stations, teller counters, information kiosks, money (ATM's), and food (food vendors) and that are in addition to other accessibility requirements

Technical Requirements

9.14.1 Designated Section

Service counters that are designed to be accessible shall have a designated accessible section suitable for wheeled mobility devices or persons seated in chairs. The designated service counter section shall:

- a) have a clear floor space, in front of the designated counter area that is

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- i. at least 810 mm (32 in) wide by 1370 mm (54 in) long for a forward approach;
 - ii. at least 1370 mm (54 in) wide by 810 mm (32 in) long for a side approach; and
 - iii. centred on the designated service counter section;
- b) have a clear knee-space under the counter that is at least 500 mm (20 in) deep by 760 mm (30 in) wide by 730 mm (29 in) high;
 - c) have a clear toe-space under the counter that is at least 600 mm (24 in) deep by 760 mm (30 in) wide by 350 mm (14 in) high;
 - d) where intended to be accessible from both sides, have clear floor space, knee-space and toe-space on both sides in compliance with this Clause;
 - e) have a visual colour/ tonal contrast to distinguish the surface/edge of the counter from surrounding finishes, that meets the requirements of Clause 6.1.12, Colour/Tonal Contrast; and
 - f) have its countertop no higher than 810 mm (32 in) above the floor.

9.14.2 Counter Depth

Where a service counter is intended for seated use on both sides by wheelchair users, the depth of the section of the counter designated for use shall

- a) where a forward reach is required, be no more than 635 mm (25 in) deep;
- b) where a side reach to touch is required, be no more than 610 mm (24 in) deep;
- c) where a side reach to grasp reach is required, be no more than 500 mm (20 in) deep; and;
- d) be less than 1000 mm (39 in) deep.

9.14.3 Assistive Listening Devices

All service counters shall have assistive listening systems (e.g. counterloops, etc.)

9.14.4 Partitions

The positioning of grills, slats, talk through baffles, intercoms, shall be such that the individuals face is still visible for those who rely on visual communication especially the Deaf, deafened and hard of hearing individuals.

9.15 Balconies, Terraces and Porches

Rationale

Where a number of balconies, porches, or terraces are provided for a single building, it is desirable to consider options for different levels of sun and wind protection. This is of benefit to individuals with varying tolerances for sun or heat.

Examples of design considerations include the following:

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- a) Doors incorporating large expanses of glazing should be appropriately marked to increase their visibility.
- b) Thresholds at balcony doors should be avoided by sinking the door tracks or framing.
- c) The placement of railings and guards should take into account the viewing characteristics of seated persons and should be colour-contrasted to enhance visibility for everyone, but particularly persons with low vision.

Functional Description

This section addresses spaces that may be used as building exits and areas of refuge, such as common-use balconies, porches, and terraces in buildings. Private balconies, porches, and terraces that are attached to dwelling units are not considered in this clause.

Technical Requirements

9.15.1 Location and Depth

Balconies, porches and terraces shall have

- a) an accessible interior route and comply with Clause 4.1, Accessible Interior Route; and
- b) a minimum depth of 2000 mm (79 in).

9.15.2 Threshold, Door Stop and Door Openers

Balconies, porches and terraces shall have

- a) thresholds at balconies, porches, and terraces used for exiting or refuge be
 - i. bevelled at a maximum slope of 1:2 (50%) at changes in level of not more than 13 mm (0.5 in); and
 - ii. provided with sloped floors or ramps at changes in level of more than 13 mm (0.5 in);
- b) a door stop and door sweep to threshold, still, track or glide that does not impede access to the balcony, porch, or terrace; and
- c) automatic door openers for common balconies, porches, terraces used for exit or refuge, in compliance with Clause 3.2.9, Power Door Operator.

9.15.3 Guardrails and Guards

Balconies, porches and terraces shall have

- a) where doors open directly into an accessible route, cane detectable guardrails or other barriers located perpendicular to the wall containing the door; and
- b) guards at balconies, porches, and terraces used for exiting or refuge that
 - i. are designed to facilitate visibility through the guard; and

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- ii. have a visual colour contrast between horizontal and vertical guard/floor surface and horizontal colour contrast at the top of the guard, that meets the requirements of Clause 6.1.12, Colour/Tonal Contrast.

Note: *Guards at balconies, porches, and terraces may consist of vertical pickets or glass.*

9.15.4 Surfaces

The ground/floor surface of balconies, porches, and terraces used for exit or refuge shall

- a) be firm, slip resistant and comply with Clause 3.6, Ground and Floor Surfaces;
- b) be sloped at a ratio of no more than 1:50 (2%) to permit drainage;
- c) where provided have spacers for drainage no wider than 6 mm (0.25 in); and
- d) have a clear accessible interior route through the area and comply with Clause 4.1, Accessible Interior Route.

9.16 Patios

Rationale

Patios that are part of an outdoor common use area should have sufficient space between elements such as tables, chairs, service stations, storage areas, etc., to allow unobstructed circulation.

Where table seating is provided, there should be a variety of locations that allow patrons to have a choice that will enable them to enjoy views or sunshine, or be protected from outdoor elements such as wind or rain.

When fences, rails, or guards are used to define a patio area, they often protrude into a public right of way or travel route located outside of the space. This causes an obstruction for those using mobility devices and can cause a potential hazard for those with low or no vision.

Shadows caused by trellises, overhangs, planters, branches, canopies, and other exterior elements can create uneven light distribution and potentially hazardous conditions for those with low vision.

Functional Description

This section addresses access to patios within the exterior environment, including those that are related to the exterior of a building, such as those that serve as an extension of restaurants, bars and retail shops, hotel banquet facilities, viewing areas, etc.

This Clause does not apply to

- a) outdoor areas that are part of private residential dwelling such as a detached or

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- semi-detached house, townhouse, or condominium; and
- b) areas around pools, spas, or designated rest and viewing areas.

Technical Requirements

9.16.1 Accessible Route

The accessible route to a patio from a parking or drop-off area shall comply with Clause 4.1, Accessible Interior Route, for interior spaces and Clause 5.1, Accessible Exterior Route, for exterior spaces.

9.16.2 Entrances

The entrances into a patio shall comply with Clause 3.1, Entrances.

9.16.3 Surface

The ground or floor surface of a patio shall

- a) be level, firm, and slip resistant; and
- b) comply with Clause 3.6, Ground and Floor Surfaces.

9.16.4 Fencing, Handrails, and Guards

Where fencing, railings, or guards are

- a) used to identify patio area limits they shall
 - i. not protrude onto an accessible route, travel route, etc.;
 - ii. be cane detectable complying with Clause 3.7.1, Protruding Objects;
 - iii. where a railing or guard is not an independent structure of the facility comply with Clause 9.15.3, Guardrails and Guards; and
 - iv. comply with other jurisdictions having authority, Clause 3.4.8 Guards at Ramps; and
- b) not used to identify patio area limits, the perimeter of the surrounding surface shall be clearly demarcated so that tables, chairs, and other related items do not extend into the pedestrian right of way or designated pedestrian accessible route.

9.16.5 Lighting

Light from a patio area shall

- a) not spill onto, or create glare, on an accessible route located outside of and adjacent to the patio area; and
- b) comply with Clause 8.6, Exterior Pedestrian Lighting.

9.16.6 Seating

Tables and seats in a designated patio area shall accommodate patrons using a variety of mobility devices.

9.0 Special Rooms, Spaces and Other Elements

9.16.7 Amenities

Where washroom or lavatory facilities are provided, they shall

- a) comply with Clause 7.1, Lavatories and Clause 7.2, Washrooms; and
- b) be located near a patio and on an accessible route in compliance with Clause 4.1. Accessible Interior Route and/or Clause 5.1, Accessible Exterior Route.

9.16.8 Other

Where shade umbrellas, hanging baskets, heaters, and other related items are used, they shall not be located in an accessible route to create overhanging or protruding hazards and shall comply with Clause 3.7, Overhanging and Protruding Objects.

9.17 Adaptive Systems for Assembly

Rationale

Captioning and descriptive video systems enable people who are Deaf, deafened and hard of hearing or who have low or vision to participate in assembly facilities.

Functional Description

This section addresses systems that enable people with sensory disabilities to attend and participate as audience members at assembly facilities. Assistive listening systems are sound amplifications systems that include infrared, inductive loop systems, FM, and direct wire systems. These systems transmit sound that can be picked up by someone with a hearing aid or with a special receiver.

Adaptive systems for assembly enable people with sensory disabilities to have access to information shared in assembly facilities (movies theatres, educational and religious institutions, and other places of assembly). This may be accomplished by the use of assistive listening devices, rear view captioning (Rear Window® Captioning; RW®C), descriptive video (Descriptive Video Service®; DVS®), or other developing technologies.

Technical Requirements

9.17.1 Support Measures

An assembly facility shall include technology to provide the appropriate support for

- a) patrons with low or no vision; and
- b) Deaf, deafened, and hard of hearing patrons.

9.0 Special Rooms, Spaces and Other Elements

Note: The ability of an exhibitor to offer captioning in movie theatres depends on the studio that distributes the film providing a captioned version. If the studio does not caption a film, neither RW@C nor any other captioning technology will provide captions to be shown in a movie theatre, even where the exhibitor has installed a captioning system.

Committee Comment

The Committee used a performance-based approach, requesting technology be provided, but not dictating the technology.

The Building Code's Clause 3.8.3.7, Assistive Listening Devices, will still apply.

The Building Code clause for reference is as follows:

3.8.3.7. Assistive Listening Devices

(1) In buildings of assembly occupancy, all classrooms, auditoria, meeting rooms and theatres with an area of more than 100 m² and an occupant load of more than 75 shall be equipped with assistive listening systems encompassing the entire seating area.

9.17.2 Assistive Listening Devices

In buildings of assembly occupancy, all classrooms, auditoria, meeting rooms and theatres with an area of more than 100 m² (120 yd²) and an occupant load of more than 75 shall be equipped with assistive listening systems encompassing the entire seating area.

9.17.3 Minimum number of devices

New theatres and movie houses shall be equipped with assistive listening or captioning devices on a minimum of three screens or 20% of screens, whichever is greater.

Committee Comment

The above requirement is based on an Ontario Human Rights Commission ruling.

9.17.4 Universal Hook Up

Listening device systems shall be provided with universal hook up and electrical outlets where required.

9.18 Passenger Loading Areas

Rationale

Passenger loading areas are important features for individuals who have difficulty walking distances, for those who use specialized transit or mobility devices, and for those who require someone to accompany them (e.g. a person with low or no vision or a cognitively disability, the very young, and seniors). Passenger loading areas should

9.0 Special Rooms, Spaces and Other Elements

allow persons to be dropped off or picked up in a safe, convenient, comfortable, and efficient manner. From the loading zone, they will be able to easily access the building or facility they are attending.

Functional Description

This section addresses the characteristics of barrier free passenger loading areas both exterior to and within a building where passengers transfer from vehicles such as cars, vans, taxis and buses, to a pedestrian area which provides an accessible route to a building or other facility. It should be noted that bus stops and bus shelters are not passenger loading areas.

Technical Requirements

9.18.1 Accessible Route

Accessible routes for loading areas shall:

- a) be on an accessible route complying with Clauses 4.1, Accessible Interior Route and/ or 5.1, Accessible Exterior Route;
- b) be removed from the flow of traffic;
- c) be sheltered from the weather;
- d) where provided, have bench seating that meets the requirements of Clause 9.2.9, Benches;
- e) where curbs are used, have at least one curb ramp complying with Clause 5.2, Curb Ramps; and
- f) where curbs are not used, be separated from the walkway by a detectable hazard indicator that complies with Clause 8.7.1.2, Hazard Indicators.

9.18.2 Access Aisle

Passenger loading areas shall provide an access aisle at least 2500 mm (98 in) wide and 7000 mm (276 in) long, adjacent and parallel to the vehicle pull-up space.

9.18.3 Height Clearance

Passenger loading areas shall have a minimum vertical clearance of 5000 mm (197 in) at the loading area and along the vehicle access route to such areas as the site entrances.

9.18.4 Signage

Passenger loading areas shall have appropriate signage marking the area complying with Clause 6.1, Signage.

9.18.5 Lighting

9.0 Special Rooms, Spaces and Other Elements

Passenger loading areas shall meet the requirements in Clause 8.5, Interior Lighting or Clause 8.6, Exterior Pedestrian Lighting, as applicable.

9.18.6 Drop Offs

All facilities shall include a passenger load areas.

9.19 Windows

Rationale

Windows and glazed screens, when designed for the purpose of view, are a barrier when placed at a height not permitting view for persons with disabilities; it should be noted that some glazed panels are not meant for viewing.

Operating controls for windows are a barrier when placed in a location not accessible to persons with disabilities. The window-opening controls (for ventilation purposes) are a barrier when the equipment is difficult to grasp or requires significant strength or twisting to operate.

Functional Description

This section addresses space requirements for access to windows, glazed screens, vision panels in doors, and fully-glazed sidelights intended for viewing and ventilation

Technical Requirements

9.19.1 Sill Height

Windows and glazed screens when designed for the purpose of view, shall

- a) be located no more than 660 mm (26 in) above the floor; and
- b) elsewhere, be no more than 1100 mm (43 in) above the floor.

9.19.2 Horizontal Structures

Horizontal structures or beams used across windows shall not be located between 900 mm (35 in) and 1300 mm (51 in) above the floor.

Committee Comment

The intent of this clause is to not have a support structure for a window be at the eye level of a person seating in a wheeled mobility device.

9.19.3 Operating Controls

Window-operating controls provided for ventilation purposes shall

9.0 Special Rooms, Spaces and Other Elements

- a) be located between 380 mm (15 in) and 1220 mm (48 in) above the floor to be reachable from a seated position;
- b) have a clear floor area of 1370 mm (54 in) in length by 1370 mm (54 in) in width to permit both forward and side approach and use by a person using a mobility device; and
- c) comply with Clause 8.4, End User Controls and Operating Mechanisms.

9.19.4 Colour/Tonal Contrast Band

Wall systems that incorporate large expanses of windows, glazed screens or vision panels shall be marked with a horizontal band that complies with Clause 3.2.12, Fully-Glazed Doors and Clause 6.1.12, Colour/Tonal Contrast.

9.20 Community Mailboxes

Rationale

Community mailboxes are locations where people collect and send their mail from a common delivery or sending area. This clause addresses the location of such mailboxes, as well as the ability of persons with disabilities to access them. The configuration of the mailboxes themselves is beyond the scope of this Standard due to the fact that mailboxes are under federal jurisdiction.

Community mailboxes should be located on an accessible route and have appropriate space beside them for a wheeled mobility device user to park.

The design and placement of the mailboxes is under federal jurisdiction according to the Canada Post *Delivery Planning Standards Manual* (February 2004). Given this limitation, the committee has provided requirements that address access to, egress from, and the ground surrounding the mailboxes and mail drop boxes.

Functional Description

This section addresses community mailboxes, which are defined as places where people collect or send their mail from a common delivery or sending area. It provides requirements for the location of such mailboxes, as well as provisions to enable persons with disabilities to access them.

This section does not address the design and configuration of mailboxes.

Note: *The design and configuration of mailboxes is under federal jurisdiction. Canada Post's Delivery Planning Standards Manual (February 2004) sets out specifications for mailbox design and location.*

Technical Requirements

9.0 Special Rooms, Spaces and Other Elements

9.20.1 Exterior Community Mailboxes

Where provided, exterior mailboxes and exterior community mailboxes shall

- a) be cane detectable and be no higher than 680 mm (27 in) above the floor/ground surface;
- b) be located along an accessible exterior route in compliance with Clause 5.1, Accessible Exterior Route;
- c) have a minimum clear floor area 810 mm (32 in) wide and 1370 mm (54 in) long for a forward approach and the minimum clear floor area 1370 mm (54 in) wide and 810 mm (32 in) long for a side approach to the mailbox by an occupied mobility device;
- d) have at least 10% of mailboxes, and no less than one mailbox, for users to pick up mail, that is be reachable from a seated position;

Committee Comment

The Committee included item d) although it may be out of scope for this element or possibly fall under the Customer Service Standard.

- e) where a mail drop-off box/slot is provided, be reachable from a seated position;

Committee Comment

The Committee included item e) although it may be out of scope for this element or possibly fall under the Customer Service Standard.

- f) have operating mechanisms in compliance with Canada Post's Delivery Planning Standards Manual (February 2004) and Clause 8.4, End User Controls and Operating Mechanisms;
- g) provide signage that complies with Clause 6.1, Signage;
- h) incorporate wayfinding that complies with Clause 6.3, Wayfinding; and
- i) where curb ramps are provided, they shall comply with Clause 5.2, Curb ramps.

Committee Comment

The above requirements would be superseded by the Canada Post Standards Delivery Planning Standards Manual (February 2004) where requirements for mailboxes are prescribed.

9.20.2 Drop-off Area and Short Duration Parking for Exterior Community Mailboxes

A drop-off area and short duration parking area adjacent to the accessible exterior route leading to the community mailbox shall be provided. The drop-off area shall be provided in accordance with Clause 9.18, Passenger Loading Areas. The parking area

9.0 Special Rooms, Spaces and Other Elements

shall be provided in accordance with Clause 9.11, Parking.

9.20.3 Interior Mail Boxes

Where provided in venues such as offices complexes, apartment complexes, and retail stores, pick-up mailboxes shall

- a) have a minimum clear floor area 810 mm (32 in) wide and 1370 mm (54 in) long for a forward approach and the minimum clear floor area of 1370 mm (54 in) wide and 810 mm (32 in) long for a side approach to the mailbox by an occupied mobility device;
- b) have operating mechanisms in compliance with Canada Post's Delivery Planning Standards Manual (February 2004) and Clause 8.4, End User Controls and Operating Mechanisms;
- c) provide signage that complies with Clause 6.1, Signage;
- d) incorporate wayfinding that complies with Clause 6.3, Wayfinding;
- e) be located on or near flooring that is glare-free and slip resistant, and kept dry;
- f) be located on a clear accessible interior route in accordance with Clause 4.1, Accessible Interior Route; and
- g) be cane detectable no higher than 680 mm (27 in) maximum above the floor/ground surface.

Note: *Where mail service must be accessible because of occupant needs, Canada Post should be consulted.*

10.0 Transient Residential

10.1 Transient Lodging Guest Rooms

Rationale

As persons with disabilities could be guests, staff, or visitors, it is important to ensure access to all areas of transient lodging facilities including, but not limited to, all lobby areas, reception areas, restaurants, business centres, recreation centres, pools, spas and saunas. This clause addresses only the sleeping areas in transient lodges.

Within the rooms, it is important to consider the needs of everyone. Lower door viewers, as well as storage provided at a variety of heights, accommodate persons using a mobility device, as well as people of short stature. Providing a clear transfer space adjacent to the bed accommodates persons using mobility aids, as well as people who might require assistance from a caregiver. Balconies and decks associated with transient lodging should have a zero step threshold and a door meeting the minimum clear width requirements to ensure they are accessible to all guests, visitors, and staff. Bathrooms, kitchens, and kitchenettes are integral to the use of the rooms and should be accessible.

Visual alarms are an invaluable safety feature and should be provided in all public spaces and in all guest rooms to ensure the safety of all guests, staff, and visitors, including people who are Deaf, deafened, or hard of hearing

Functional Description

This section addresses the accessibility facilities and elements that are unique to transient lodging guest rooms, including (but not limited to) rooms in hotels, motels, student residences, and boarding houses, and that are in addition to other accessibility requirements.

Technical Requirements

10.1.1 Design Considerations

At least 10% of a facility's transient lodging guest rooms shall

- a) be distributed among accessible storeys;
- b) have an accessible interior route extending to a balcony;
- c) have a bathroom that
 - i. conforms to the requirements of Clause 7.7, Universal Toilet Rooms; and
 - ii. has a bath or shower that conforms to the requirements of Clause 7.8, Showers Areas and Clause 7.9, Bath Tubs;
- d) have a power door operator that complies with Clause 3.2.9, Power Door

10.0 Transient Residential

Operators;

- e) be located near an elevator or an area of rescue assistance, in case of an emergency; and
- f) have a fire separation rating of 2 hrs.

10.1.2 General

All guest units, sleeping guest rooms, and guest suites and shall

- a) be on an accessible interior route that complies with Clause 4.1, Accessible Interior Route;
- b) have an accessible interior route extending to the inside of each guest room;
- c) have a 1200 mm (47 in) clear width maneuvering space located along both sides of a bed;

Note: where two beds are provided, this requirement may be met by providing a 1200 mm (47 in) wide maneuvering space between the two beds.

- d) have sufficient space around furniture to allow persons using mobility aids to move around easily (minimum of 1070 mm (42 in));
- e) have an accessible interior route connecting all accessible spaces and elements (e.g., living room, sleeping area, balcony, kitchen) including telephones;
- f) have controls that comply with Clause 8.4, End User Controls and Operating Mechanisms;
- g) have thermostats, electrical switches, and duplex outlets mounted no lower than 380 mm (15 in) and
 - i. where there is no obstruction, no higher than 1200 mm (47 in) from the floor; and
 - ii. where there is an obstruction between 500 mm (20 in) and 625 mm (25 in), no higher than 1100 mm (43 in) high from the floor;
- h) have an air-conditioning system easily accessed and controlled; and
- i) have window drapes and/or blind controls, cords, or fling rods that are easy to reach and use and that are no lower than 380 mm (15 in) and no higher than 1220 mm (48 in) from the floor.

Committee Comment

It was suggested that these requirements should not apply to Student Residences. Input on this is requested during public review.

10.1.3 Duplex Outlet

At least one accessible guest room or suite shall include at least one duplex outlet on emergency power for a guest who might require ventilation or other constant electrical support equipment.

10.1.4 Doors

Doors and doorways designed to allow passage into and within all sleeping guest rooms, suites, or other covered units shall

10.0 Transient Residential

- a) comply with Clause 3.2, Doors and Doorways; and
- b) have a lower peephole provided no higher than 1100 mm above the floor.

10.1.5 Floor Surfaces

Floor surfaces shall comply with the following requirements:

- a) all floor materials shall be laid so that there are no open joints or projecting elements that might cause a tripping hazard;
- b) the junctions between floors and walls shall be clearly visible (e.g. through the use of a different tone or coloured baseboard, complying with Clause 6.1.12, Colour/ Tonal Contrast);
- c) all floor finishes in accessible suite bathrooms, showers, and powder rooms shall be of slip resistant, non-glare materials and shall be compliant with Clause 3.6, Ground and Floor Surfaces; and
- d) carpet shall be of firm, low loop pile and easy for a mobility device user to roll over without difficulty (e.g., level loop, non-static, securely fastened).

10.1.6 Wall Surfaces

All walls shall be in matte or non-glossy finishes that do not reflect glare.

10.1.7 Balconies

Where balconies are provided, the balcony doors and the thresholds shall comply with Clause 9.15, Balconies, Terraces and Porches.

10.1.8 Storage

When located in accessible spaces, fixed or built-in storage facilities (e.g., cabinets, shelves, closets, and drawers) shall

- a) provide at least 1500 mm (59 in) clear floor space in front of coat closets or other storage units, for easy access by persons using mobility devices;
- b) comply with the reach, dexterity, and height requirements specified in Clause 8.4, End User Controls and Operating Mechanisms; and
- c) be reachable from a seated position at a maximum of 1220 mm (48 in) high from the top of the finished floor.

Note: *Additional storage may be provided outside of the required dimensions.*

10.1.9 Bathroom Storage

A storage space in the accessible bathroom shall be provided for any special bathing and toileting supplies required by a guest with a disability.

10.1.10 Kitchens, Kitchenettes, and Wet Bars

Where provided as an accessory to a sleeping guest room or suite, kitchens,

10.0 Transient Residential

kitchenettes, wet bars, or similar amenities shall comply with Clause 9.3, Kitchens and Kitchenettes.

10.1.11 Furniture

Furniture in guest rooms shall

- a) have the top of the mattress on the bed be located between 430 mm (17 in) to 460 mm (18 in) from the floor, so that persons can easily transfer from a mobility device to the bed;
- b) have table lamps or standard lamps be sturdy and of the touch-type variety, so that persons with limited reach or dexterity can turn them on/off with a closed fist;
- c) have tables or desks that have a knee clearance of at least 810 mm (32 in) wide by 740 mm (29 in) long to accommodate mobility devices;
- d) have telephone jacks provided at the bedside and the desk;
- e) have portable/cordless phones comply with Clause 6.5, Public Telephones;
- f) have central information telephones (e.g., at the reception desk) fitted with a TTY device for persons who are Deaf, deafened or hard of hearing; and
- g) provide assistive technology such as amplified telephones, captioning units for TVs, bedshakers and visual signalers to indicate someone is at the door, telephone is ringing, wake up call or room service.

10.1.12 Fire Safety

Accessible suites shall have

- a) exit instructions that are available printed in large text and mounted in an accessible, highly visible location in each suite; and compliant with Clause 6.1, Signage;
- b) fire alarms that have both a visual and audible signal; and
- c) vibrating pagers, pillow or bed shakers to notify persons with hearing loss that a fire alarm has been activated.

10.1.13 Adjoining Guest Room Doors

Where provided, adjoining guest room doors shall

- a) have a clear open width of 900 mm (35 in); and
- b) be easily left open.

11.0 Recreation Elements and Facilities

11.0 Recreation Elements and Facilities

11.1 Paths and Trails

Rationale

Opportunities for recreation, leisure and active participation should be available to all members of the community. Outdoor trails and pathways which offer a range of levels of difficulty will allow each individual to choose their preferred route based on their abilities and desired level of challenge.

The accessibility strategy commonly applied to natural environments is to provide appropriate accessibility for persons with disabilities wherever practical, and to provide relevant information on the grade, cross-slope, width, surface, or length of the trail where it is not practical or appropriate to fully comply with the requirements.

Functional Description

This section addresses the accessibility of trails in natural exterior environments such as parks and wilderness areas. Such recreation areas typically contain a wide variety of trails. A trail is distinguished from an exterior walkway. Trails are themselves the recreational activity (such as hiking, biking, and nature trails) and should be designed to meet a variety of needs and interests. Trails are also a voluntary activity. Unlike exterior walkways, trails do not provide an essential link to outdoor facilities and elements. Exterior walkways that provide access to outdoor facilities and elements that people use on a daily basis shall comply with Clause 5.1, Accessible Exterior Route.

Technical Requirements

11.1.1 Criteria for Exception

11.1.1.1 Conditions

For recreation trails that are designated for pedestrian use, regardless of the surface material used (boardwalk, pavement, dirt, concrete, asphalt, etc.), the specifications of Clauses 11.1.2 through 11.1.16 shall be met on the trail and the connecting surfaces to the trail, except where the following criteria for exception would occur such that compliance would

- a) cause substantial harm to cultural, historic, religious or significant natural features or characteristics (environmentally sensitive areas);
- b) substantially change the intended experience provided by the facility;
- c) require construction methods or materials that are prohibited by federal, provincial, or local law, other than laws whose sole purpose is to prohibit use by persons with disabilities;
- d) be impractical due to physical terrain; or

11.0 Recreation Elements and Facilities

e) compromise volunteer activity.

Note: The exception item e) is intended to ensure that volunteers can continue to build and maintain these parks and trails without having to perform work that is beyond their capacity.

11.1.1.2 Variances

Should one or more of the criteria for exception outlined in Clause 11.1.1.1, Conditions be met, then the conditions on the recreation trail can vary, to the minimum required over the shortest distance possible.

11.1.2 Daily Basis

Exterior walkways that provide access to outdoor facilities and elements that people use on a daily basis shall comply with Clause 5.1, Accessible Exterior Route.

11.1.3 Width

11.1.3.1 Minimum Width

The minimum width of the trail surface shall be 1500 mm (59 in).

11.1.3.2 Variance in Width

Should one or more of the criteria for exception outlined in Clause 11.1.1, Criteria for Exception be met, the trail width may be reduced to less than 1500 mm (59 in), provided that passing spaces at least 1500 mm (59 in) in width and 1500 mm (59 in) long are provided at intervals not to exceed 100 m (109 yd.). The reduction in width shall be as small as possible, to an absolute minimum of 1000 mm (39 in), and the reduced width shall occur for the shortest distance possible.

11.1.4 Running Slope

11.1.4.1 General

The running slope shall be the minimum permitted by the terrain

11.1.4.2 Limit

The running slope shall not exceed 1:20 (5%) unless one or more of the criteria for exception outlined in Clause 11.1.1 applies, in which case a greater slope may be used if necessary, in accordance with Clause 11.1.4.3, Maximum.

11.1.4.3 Maximum

The maximum running slope shall not exceed 1:10 (10%) except at the bottom of open drainage structures where the running slope may be a maximum of 1:7.1 (14%) for a distance of 1500 mm (59 in).

11.0 Recreation Elements and Facilities

11.1.4.4 Sheet Drainage

The running slope shall be equal to or less than the cross slope to maintain sheet drainage.

11.1.4.5 Provision of Level Rest Area

Where the running slope exceeds 1:20 (5%), a level rest area shall be provided every 100 m (109 yd.).

11.1.4.6 Elements or Facilities

Where there are elements or facilities along the trail that are intended for use or operation by users of the trail, an area shall be provided on all operating sides of the element or facility that has a running slope of 1:20 (5%) or less and is at least 1500 mm (59 in) in diameter

Note: *Elements or facilities could include washrooms, drinking fountains, etc.*

11.1.4.7 Rate of Change

The rate of change of the running slope across a 2 m (6.5 ft.) distance shall not exceed 1:10 (10%).

11.1.5 Cross Slopes

11.1.5.1 Minimum

The cross slope shall be the minimum permitted by the terrain

11.1.5.2 Limit

The cross slope shall not exceed 1:20 (5%) unless one or more of the criteria for exception outlined in Clause 11.1.1 occurs, in which case a greater cross slope may be used if necessary, in accordance with Clause 11.1.5.3, Maximum.

11.1.5.3 Maximum

The maximum cross slope shall not exceed 1:10 (10%).

11.1.5.4 Sheet Drainage

The cross slope shall be equal to or greater than the running slope to maintain sheet drainage.

11.1.5.5 Level Rest Area

Where the cross slope exceeds 1:20 (5%), a level rest area will be provided every 100 m (109 yd.).

11.0 Recreation Elements and Facilities

11.1.5.6 Elements or Facilities

Where there are elements or facilities along the trail that are intended for use or operation by users of the trail, an area shall be provided on all operating sides of the element or facility that has a cross slope of 1:20 (5%) or less and is at least 1500 mm (59 in) in diameter.

Note: *Elements or facilities could include washrooms, drinking fountains, etc.*

11.1.5.7 Rate of Change

The rate of change of the cross slope across a 2 m (6.5 ft.) distance shall not exceed 1:10 (10%).

11.1.6 Total Slope

The total slope of running and cross slopes shall not exceed 1:6.67 (15%).

11.1.7 Surface

11.1.7.1 General

The surface of the trail shall be

- a) firm, stable, and produce minimal glare; and
- b) resistant to damage by normally occurring weather conditions and able to sustain the wear and tear produced by normally permitted uses between planned maintenance cycles.

11.1.7.2 Information

Where one or more of the criteria for exception (see Clause 11.1.1) prevent the creation of a firm and stable trail surface, either temporarily or throughout the permitted seasons of use, information describing the surface conditions shall be made available to trail users.

Note: *For example, sand dunes are constantly shifting and a trail on the dune surface might not be firm and stable. In this case, information about the trail surface that complies with the Clause 11.1.13, Provision of Information, should be made available to trail users with disabilities.*

11.1.8 Colour and/or Texture Contrast

High colour/tonal changes that comply with Clause 6.1.12, Colour/Tonal Contrast, and/or changes in surface texture shall be used to distinguish the edge of the trail and to identify the location of facilities and elements along the trail as needed.

Note: *This will enable individuals with low or no vision to independently and safely negotiate the environment.*

Committee Comment

A question was noted as to whether the use of audio, Braille, or alternative methods to

11.0 Recreation Elements and Facilities

mark texture changes were considered.

11.1.9 Protruding Objects

Overhanging and protruding objects on a trail shall comply with Clause 3.7, Overhanging and Protruding Objects.

11.1.10 Changes in Level

11.1.10.1 Tripping Hazard

Changes in level on the surface of a trail shall not present a tripping hazard or impede the passage of individuals using mobility aids with wheels.

11.1.10.2 Bevelled

A change in level greater than 20 mm (0.8 in) and up to 50 mm (2 in) shall be bevelled, with a maximum slope of 1:2 (50%).

11.1.10.3 Colour/ Tonal Contrast

If the change in level requirement cannot be met due to the criteria for exception (see Clause 11.1.1), then high colour/tonal contrast that complies with 6.1.12 Colour/Tonal Contrast, and texture changes shall be implemented to highlight the location of the non-compliant changes in level and information shall be provided as specified in Clause 11.1.13, Provision of information.

11.1.10.4 Total Slope

Where elements or facilities exist that trail users are expected to operate (e.g., gates), the total slope shall not exceed 1:40 (2.5%).

11.1.11 Openings in the Surface

11.1.11.1 Sinking

Openings in the trail surface (e.g., grates or spaces between boards on a boardwalk) shall be designed so as not to allow any permitted users or their assistive devices to sink below the level of the surrounding trail surface.

11.1.11.2 Elongated Openings

Elongated openings shall have the long dimension of the opening perpendicular or diagonal to the direction of travel.

11.0 Recreation Elements and Facilities

11.1.11.3 Size of Opening

The opening shall not allow passage of a sphere 13 mm (0.5 in) in diameter.

11.1.12 Edge Protection

11.1.12.1 Trails Near Water

Edge protection shall be provided on boardwalks or other trails or paths adjacent to water.

11.1.12.2 Drainage

The edge protection shall be designed so as not to impede drainage of the trail surface.

11.1.12.3 Colour or Texture Contrast

Where edge protection is provided, a high colour/tonal contrast that complies with Clause 6.1.12, Colour/Tonal Contrast, and/or texture contrast marking shall be provided and placed on the edge protection, not on the surface of the trail.

11.1.13 Provision of Information

11.1.13.1 Information

Information shall be provided at each designated entry point to a trail, that

- a) objectively describes the typical conditions of the trail tread (length of trail, running slope, cross slope, surface, width);
- b) objectively describes any extreme conditions (e.g., steep slopes, narrow widths) or obstacles that occur on the trail; and
- c) can be independently accessed by users of all abilities before the user embarks on the trail.

Note: *The provision of this information can help to compensate for the widely varied conditions that can occur on existing trails and to facilitate access to the trails by the largest percentage of the potential users. The information provided should be objective (i.e. gathered through systematic measuring), and it should be specific (e.g., the trail tread typically has a 1:20 (5%) running slope). Subjective descriptions (e.g., moderately difficult, relatively steep) should be avoided.*

11.1.13.2 Availability

Existing trails for which objective information has not yet been gathered shall be marked to indicate that the information is not yet available and the date by which it will be provided.

11.0 Recreation Elements and Facilities

11.1.14 Signage

11.1.14.1 Regulatory

Where regulatory signage is provided for trail users, it shall be designed to be easily understood and detectable by users of all abilities, and shall meet the requirements of Clause 6.1, Signage.

11.1.14.2 Non-regulatory

Where signage that is not regulatory is provided to indicate risks, it shall be easily understood and detectable by users of all abilities, and shall meet the requirements of Clause 6.1, Signage.

11.1.15 Trails Allowed to Move by Design

If a trail is intended to move by design, it shall comply with the requirements in Clauses 11.1.3 through 11.1.14, and in addition the trail shall

- a) incorporate slip resistant materials;
- b) have a width of at least 2000 mm (79 in); and
- c) incorporate a handrail on both sides of the movable section of trail tread.

Note: *Examples of this type of trail include suspension bridges and floating boardwalks.*

11.1.16 Seating

Where level seating is provided it shall meet the requirements of Clause 9.2.9, Benches.

Note: *Intervals for bench spacing should respect the demographics of the trail user.*

11.2 Amusement Parks

Rationale

Opportunities for participation should be available to all members of the community.

Functional Description

This section addresses the accessibility of amusement parks and rides. An amusement ride is a system that moves people through a fixed course within a defined area for the purpose of amusement. These requirements apply to newly designed or newly constructed and altered amusement rides. A new ride refers to the “first use” of the ride by patrons. If a ride is moved to a different location, it is not considered “new” if patrons have taken a ride on the device at a previous location. The requirements do not apply to existing rides, except that the ride entrance and exit must be located on an accessible exterior route.

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These requirements do not provide the designs for amusement rides. Rather, they are intended to provide specifications for elements of amusement rides that are important for enabling people of all abilities to enjoy the ride. Enjoyment of a ride encompasses access to the ride, as well as use of specific elements.

Vehicles, such as trams or gondolas, that can be enjoyable but are primarily used to transport people (e.g., to the top of a mountain) are not covered by this clause. Other elements found in amusement parks that are not part of a ride (e.g., toilet facilities, theatres, swimming facilities) are not covered by this clause but must comply with the appropriate provincial regulations.

Technical Requirements

11.2.1 Exterior Walkways

All accessible exterior routes within an amusement park shall meet the requirements of Clause 5.1, Accessible Exterior Route, and shall

- a) connect all facilities, rides, and elements within an amusement park; and
- b) connect all entrances to and exits from the amusement park with passenger loading/unloading areas, sidewalks, transit stops, and parking areas that serve the amusement facility.

11.2.2 Controls

Controls and operating mechanisms that a patron uses during the ride shall

- a) meet the requirements of Clause 8.4, End User Controls and Operating Mechanisms; and
- b) have a high visual colour/ tonal contrast that complies with 6.1.12 Colour/Tonal Contrast, and/or changes in surface texture shall be used to clearly identify surfaces that the patron is expected to use.

11.2.3 Travelling Rides

11.2.3.1 General

Rides that require the patron to walk, slide, or otherwise use their own physical effort to travel through the ride shall comply with Clauses 11.2.3.2 to 11.2.3.9.

11.2.3.2 Running Slope and Cross Slope

The patron's accessible interior route through the ride shall have a running slope and a cross slope that are 1:10 (10%) or less.

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11.2.3.3 Width

11.2.3.3.1 Minimum

The accessible interior route through a ride shall have a minimum width of 1000 mm (39 in).

11.2.3.3.2 Two Rider Minimum

A minimum width of 1800 mm (71 in) shall be required on rides where a patron (e.g., a young child) might need to be held by another person.

11.2.3.4 Protruding Objects

Protruding objects along the patron's accessible interior route shall comply with Clause 3.7, Overhanging and Protruding Objects.

11.2.3.5 Changes in Level

Changes in level within the ride, including the loading and unloading areas, shall

- a) not present a tripping hazard or impede the passage of individuals using assistive devices;
- b) be bevelled at a slope of no more than 1:2 (50%) if the change in floor level is between 20 mm (0.8 in) 50 mm (2 in); and
- c) not exceed 50 mm (2 in).

11.2.3.6 Surface

11.2.3.6.1

The surface of the accessible interior route through the ride shall

- a) be firm, stable, and slip-resistant;
- b) meet the requirements of Clause 3.6, Ground and Floor Surfaces;
- c) not have openings in the surface unless they are essential to the safe operation of the ride or the provision of the intended ride experience;
- d) where openings are required, not allow any portion of permitted users or their assistive devices to sink below ground level; and
- e) where elongated openings are provided, have the long dimension of the opening perpendicular or diagonal to the direction of travel.

11.2.3.6.2

The floor of an amusement ride with wheelchair spaces and the floor of its load and unload areas shall be coordinated so that, when the amusement ride is at rest in the load and unload position, the vertical difference between the floors shall be within 20

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mm (0.8 in) and the horizontal gap shall be no greater than 75 mm (3 in) under normal passenger load conditions.

11.2.3.7 Patron Seating

Seating for patrons that is provided within the ride shall comply with the bench requirements in Clause 9.2.9, Benches.

11.2.3.8 Patron Loading and Unloading

The patron loading and unloading area shall have a turning space of 1800 mm (71 in) in diameter at each loading/unloading area, to allow a user of a wheeled mobility aid to turn out of the loading/unloading area.

11.2.3.9 Patron Transfer

Rides that require the patron to transfer into or onto a moving vehicle or surface shall have a staged loading/unloading procedure such that the movement of the patron onto or off of the moving surface is separate from the transfer into or out of the assistive mobility device.

11.2.4 Transport Rides

11.2.4.1 General

Rides that transport patrons in such a way that they are not required to walk, slide, or otherwise use their own physical effort to travel through the ride shall meet the requirements of Clauses 11.2.4.2 to 11.2.4.7.

11.2.4.2 Running Slope and Cross Slope

The surface on which the patron sits or stands while travelling through the ride shall have running and cross slopes that are 1:20 (5%) or less, unless the ride securely attaches the patron in a static position within the ride vehicle so that the patron's position cannot change with a change in slope, in which case the ride shall meet the slope requirement while the vehicle is stationary and throughout the loading and unloading areas, but does not have to meet this requirement while the ride is in progress and the patron is restrained.

11.2.4.3 Width

11.2.4.3.1 Minimum

The accessible interior route through a ride shall have a minimum width of 1000 mm (39 in), unless the ride securely attaches the patron in a static position within the ride vehicle so that the patron's position cannot change during the ride, in which case the width requirement does not apply.

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11.2.4.3.2 Two Rider Minimum

Where a patron (e.g., a young child) might need to be held by another person the rides width shall comply with Clause 11.2.3.3.2 Two Rider Minimum (Travelling Rides).

11.2.4.4 Protruding Objects

Protruding objects along the patron's accessible interior route shall comply with Clause 3.7, Overhanging and Protruding Objects.

11.2.4.5 Surface

The surface on which a patron sits or stands while travelling through the ride shall comply with clause 11.2.3.6.1, items a) to e).

11.2.4.6 Patron Seating

Patron seating shall

- a) have at least 1 accessible seat per 20 patron seats in use; and
Note: *An access seat can be a seating space suitable for a person using an assistive mobility device, a seat designed for transfer, or a transfer device designed to transfer a person using a wheelchair from the load and unloads area to a ride seat. The ride operator/designer/manufacture determines which type(s) of access seats will be provided for the ride.*
- b) have a restraint system that will secure the head, torso, and limbs of the patron in a safe position throughout the ride. Except on rides where restraining a portion of the patron's body would compromise the intended ride experience, the ride operator is responsible for ensuring that patrons understand the potential for injury and the risk to which a paralyzed or uncontrolled body part could be exposed due to sudden changes in movement.
Note: *When designing patron restraint systems, ride designers should bear in mind that some patrons might not have independent control of all body parts.*

Committee Comment

Liability is incurred as ride operators are not knowledgeable in this area, and even if they were, certain persons with disabilities are incapable of understanding.

11.2.4.7 Patron Loading and Unloading

Patron loading and unloading areas shall

- a) be designed so that the patron can move on and off of the ride at their preferred speed of movement;
- b) have a turning space that complies with clause 11.2.3.8 Patron Loading and Unloading (Travelling Rides);
- c) where rides require the patron to transfer into/onto a moving vehicle or surface, have a staged loading/unloading procedure such that the patron's movement

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onto or off of the moving surface is separate from the transfer into or out of the assistive mobility device; and

- d) where rides require the patron to transfer, provide an area to safely store the mobility device while the patron is on the ride and a means for the patron to return to the mobility device at the end of the ride.

11.3 Play Areas

Rationale

Children with disabilities require access to play facilities to provide opportunities for the development of motor skills and cognitive skills. Requiring play facilities to be accessible is the only way to ensure that children with disabilities or the children of a parent with a disability have equal opportunities for peer interaction and the development of socialization skills. Children without disabilities will also benefit from the increased diversity within play areas provided by accessible play facilities.

The integration of universally accessible play features within play areas will also have benefits for parents of children with disabilities. Reducing travel costs to take their children to a “special” accessible play area, and allowing parents and other adults with disabilities better supervision of children in play areas, are two of these benefits.

Where planting beds are provided as part of the play space, consider using raised beds, fragrant planting materials and Braille signage, to provide added value for persons who have no or low vision or for persons using mobility aids.

Functional Description

This section addresses children’s public play structures, the areas around them, and the related site elements and facilities required to accommodate both children with disabilities and their caregivers. It is intended to make play spaces accessible to, and usable by, persons with physical or sensory disabilities such as mobility, hearing, low or no vision, reaching and/or dexterity disabilities.

This standard applies to accessibility to public-use play spaces and play equipment found in schools, parks, childcare facilities, institutions, multiple-family dwellings, private resort and recreation developments, restaurants, and other areas of public use. It does not cover movable toys, sport facilities and other types of recreational facilities.

Committee Comment

Although the intent is to have integrated play, there was concern noted regarding making 50% of playspaces accessible, as it may lead to a reduction in any playground being built.

The Committee requests input from the public on the percentage of playspaces that

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should be provided.

Technical Requirements

11.3.1 Measurements

Where provided, play areas shall meet the applicable requirements of the following clauses

- a) Clause 5.1, Accessible Exterior Route;
- b) Clause 5.2, Curb ramps;
- c) Clause 7.2, Washrooms, and/or Clause 7.7, Universal Toilet Rooms;
- d) Clause 9.11, Parking; and
- e) Clause 9.18, Passenger Loading Areas.

11.3.2 Safety

Children's play spaces shall be designed and built to meet the applicable safety requirements of existing standards such as CAN/CSA Z614-07, Children's Play Spaces and Equipment.

11.3.3 General

All play spaces, including stand-alone play elements (e.g., slides, sandboxes, and water tables), shall meet the requirements of this standard.

11.3.4 Egress to Play Space

11.3.4.1 Egress Points

When the play space is not surrounded by an exterior walk or trail, then a minimum of two accessible egress points shall be provided to the play space, and these shall

- a) be located along a walkway or trail that is in compliance with Clause 5.1, Accessible Exterior Route, or Clause 11.1, Paths and Trails;
- b) connect to surfacing within the play space that is firm, stable, and slip-resistant, and meets the requirements of ASTM 1951;
- c) lead to various play components within the play space that meet the requirements of Clause 11.3.2, Safety; and
- d) have an opening that is a minimum of 1500 wide and meets the requirements of Clause 3.1, Entrances.

Notes:

(1) Play components designed for children with disabilities should be fully integrated into a play space so as to ensure that a variety of opportunities and challenges are available to them in the company of their school friends and peers.

(2) The height of the fence and gate openings/entrances can be subject to occupancy loads under the Building Code and authorities having jurisdiction.

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11.3.4.2 Locking or Latching Mechanism

If an accessible egress point is equipped with a gate that has a locking or latching mechanism, the locking or latching mechanism shall meet the requirements of Clause 8.4, End User Controls and Operating Mechanisms.

11.3.5 Ground Level Play Components

11.3.5.1 Path to Ground-Level Play Components

Ground-level play components shall be located on walkways that comply with Clause 5.1, Accessible Exterior Route.

11.3.5.2 Slope

The maximum slope for an accessible route connecting ground level play components within the boundary of a playspace shall be 1:16 (6.25%). A slope exceeding 1:15 (6.67%) on an accessible route connecting ground level play components shall be considered to be a ramp and shall meet the requirements of Clause 3.4, Ramps, except for Clause 3.4.7 Ramp Handrails.

11.3.5.3 Reduced Path

11.3.5.3.1 Width

The clear width of paths of travel may be reduced to 915 mm (36 in) for a distance not greater than 3.0 m (10 ft.), provided that multiple reduced width segments are separated by segments that are not less than 1524 mm (60 in) in width and 1524 mm (60 in) in length.

11.3.5.3.2 Turning Space

In play spaces less than 92.9 m² (111 yd²) the clear width of paths of travel may be reduced to a minimum of 1117.6 mm (44 in) provided that at least one turning space 1524 mm (60 in) in diameter is provided in cases where the restricted path of travel is greater than 3.0 m (10 ft.) in length.

11.3.5.4 Seated Users

Consideration shall be given to providing play components that offer appropriate activities and challenges for users who are sometimes in a seated position on the ground.

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11.3.6 Elevated Play Components

11.3.6.1 Access to Elevated Components

11.3.6.1.1 Minimum

Where elevated play components are provided, at least 50% of elevated play components shall be located on a path of travel that meets the requirements of Clause 5.1 Accessible Exterior Route.

11.3.6.1.2

Where elevated play components are connected by exterior walks or transfer systems the exterior walks or transfer systems shall comply with Clauses 5.1 Accessible Exterior Route or 11.3.7 Transfer Systems as applicable.

11.3.6.2 Reduced Width of Path

The clear width of accessible routes connecting elevated play components may be reduced to 812.8 mm (32 in) for a distance not greater than 609.6 mm (24 in) provided that the reduced width segments are separated by segments that are not less than 914.4 mm (36 in) in width and not less than 1219.2 mm (48 in) in length.

11.3.6.3 Slope

11.3.6.3.1

A slope exceeding 1:15 (6.67%) shall be treated as a ramp, and shall meet the requirements of Clause 3.4 Ramps, including the requirements for handrails and edge protection.

11.3.6.3.2

The maximum run of a slope that connects elevated play components shall be 3657.6 mm (144 in) from a level landing or turning space. The level landing or turning space shall be 1524 mm (60 in) minimum in a straight line in the running direction and 914.4 mm (36 in) minimum across.

11.3.6.4 Ground-level Alternatives to Elevated Play Components

11.3.6.4.1

Where elevated play components are provided that are not located on an accessible exterior route or transfer system, ground-level play components providing the same play experience as the elevated play components shall be provided as specified in Table 11.3.6.4, except under the conditions outlined in Clause 11.3.6.4.2.

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Table 11.3.6.4

<i>Number of elevated play components not on an exterior walkway or transfer system</i>	<i>Number of additional ground-level play components providing the same play experience</i>
1 to 10	1 to 10 (i.e., for each elevated play component not on a path of travel you have to provide the same play component at ground level)
11 to 20	10
More than 20	15

11.3.6.4.2

The provision of alternative ground-level play components as specified in Table 11.3.6.4 is not required if all of the following conditions apply:

- at least 50% of the elevated play components are connected by an exterior walkway;
- at least 75% of the elevated play components are connected by an exterior walkway or transfer system; and
- the elevated play components connected by an exterior walkway or transfer system represent the full range of play experiences provided among all of the elevated play components.

11.3.6.5 Platform Lifts

Platform lifts complying with provincial and local building codes may be used as a part of an accessible route.

Note: *Since lifts are required to be independently operable, operators should carefully consider the appropriateness of their use in unsupervised settings.*

11.3.6.6 Connection via Elevated Play Elements

Where elevated play components are used to connect to another elevated play component instead of a path of travel, careful consideration shall be used in the selection of the play components used for this purpose.

11.3.7 Transfer Systems

11.3.7.1 General

Transfer systems may be used to connect elevated play components.

Note: *Transfer systems are a means of accessing composite play structures. Transfer systems generally include a transfer platform and a series of transfer steps. Children who use wheelchairs or other mobility devices transfer from their wheelchair or mobility devices onto the transfer platform, lift themselves up or down the transfer steps, and*

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move along the decks or platforms to access elevated play components. Some children are unable to use transfer systems or choose not to do so.

11.3.7.2 Distance Covered by Transfer System

Where transfer systems are provided, the distance between the point where a child transfers from a wheelchair or mobility device and the point where the elevated play components are located should be as short as possible, consistent with safety considerations.

Note: *Moving between a transfer platform and a series of transfer steps requires significant exertion for some children.*

11.3.7.3 Supports

Transfer supports shall be provided on transfer platforms and transfer steps to assist children when transferring.

Note: *Examples of supports include a rope loop, a loop-type handle, a slot in the edge of a flat horizontal or vertical member, poles or bars, or solid D-shaped rings affixed to corner posts.*

11.3.7.4 Width and Depth

The clear width and depth of transfer platforms and steps connecting elevated play components shall be not less than 610 mm (24 in).

11.3.7.5 Return to Start

Where a transfer system onto play components is provided it shall be designed so as to provide a means for the child to arrive back at the original starting point.

11.3.7.6 Minimum Transfer Systems

Where 20 or more elevated play components are provided, no more than 50% of the elevated play components shall be connected by a transfer system. Where less than 20 elevated play components are provided, no more than 25% shall be connected by a transfer system. Where less than 5 elevated play components are provided, all shall be connected by a ramp.

11.3.7.7 Transfer Platform

11.3.7.7.1 General

A transfer platform shall be provided where transfer is intended from a wheelchair or other mobility aid.

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11.3.7.7.2 Height

The transfer platform surface shall be between 279.4 and 457.2 mm (11 and 18 in) above the ground level.

11.3.7.8 Transfer Step

11.3.7.8.1 General

Transfer steps shall be provided where movement is intended from a transfer platform to another level.

11.3.7.8.2 Height

Each transfer step shall be not more than 203.2 mm (8 in) high.

11.3.8 Transfer Area

A minimum clear area 900 mm (35 in) wide by 1370 mm (54 in) long shall be provided at all transfer locations onto play components.

11.3.9 Play Tables

11.3.9.1 Clearances

Where play tables are provided,

- a) knee clearance shall not be less than 610 mm (24 in) high, 432 mm (17 in) deep, and 762 mm (30 in) wide, except as provided, in Clause 11.3.9.2; and
- b) the height of rims, curbs, or other obstructions shall be not greater than 689 mm (27 in).

11.3.9.2 Age 5 and Under

For play tables designed or constructed primarily for children ages 5 and under, knee clearance may be less than that specified in Clause 11.3.9.1 provided there is a clear ground space as specified in Clause 11.3.10.3, Clear Ground Space that allows for a parallel approach; and the height of the rim surface is not greater than 610 mm (24 in).

11.3.10 Play Components

11.3.10.1 Height

Where a play component requires transfer to the entry point or seat, the entry point or seat shall be between 280 mm (11 in) and 457 mm (18 in) above the clear ground space.

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11.3.10.2 Turning Space

11.3.10.2.1

At least one turning space shall be provided on the same level as play components, and this turning space shall be either:

- a) a wheelchair manoeuvring space that is 1524 mm (60 in) in diameter; or
- b) a T-shaped space within a 1524 mm (60 in) minimum square, which meets the following requirements
 - i. the arms and base of the T-shaped space are 914.4 mm (36 in) minimum;
 - ii. each arm of the T is clear of obstructions for 609.6 mm (24 in) in each direction; and
 - iii. the base is clear of obstructions for 609.6 mm (24 in), thereby allowing a wheelchair to make a 180° turn.

11.3.10.2.2

The maneuvering space shall have a slope not steeper than 1:50 (2%) in all directions. The maneuvering space for a swing shall be located immediately adjacent to the swing.

11.3.10.3 Clear Ground Space

A clear ground space not less than 762 mm by 1219.2 mm (30 in by 48 in) shall be provided at each play component. The clear ground space shall have a slope not greater than 1:50 (2%) in all directions.

11.3.10.4 Colour/Tonal Contrast

Play components shall comply with Clause 6.1.12, Colour/Tonal Contrast

11.3.10.5 Supports

Where a play component requires transfer to the entry point or seat, a means of support for transferring shall be provided.

11.3.10.6 Reach Range at Destination

Where transfer systems are used, play components that offer appropriate activities and challenges shall be located at a destination platform or transfer system within the reach of users who are in a seated position on the platform.

11.3.11 Stand Alone Play Elements

Stand-alone play features or elements within a play space such as slides, rocking toys, or sand tables shall be on an accessible route that is firm and stable.

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11.3.12 Swing Seats

Where a single-user swing seat is used, adjustable elements may be used to hold the child upright or to prevent the child from falling out.

11.3.13 Circulation Area

11.3.13.1 General

11.3.13.1.1

The circulation area (non-encroachment zone) within a play space shall

- a) not overlap or be part of the safety surfacing material for play equipment;
- b) comply with the most current edition of ASTM F1951; and
- c) be a minimum of 1800 mm (71 in) wide around designated protective surfacing.

Note: Item c) is a recommended minimum; it might be necessary to enlarge it depending on the occupancy load for the playground.

11.3.13.1.2

A non-encroachment zone may overlap or be located along a walkway to the play space.

11.3.13.2 Furniture and Amenities

Site furniture and amenities shall not be located on or within the circulation area.

11.3.14 Drainage

Play spaces shall be graded to ensure adequate drainage and circulation.

11.3.15 Washrooms

Where public washrooms can be provided, they shall be located in close proximity to a play space and within a maximum distance of 90 m (295 ft.) and meet the requirements of Clause 7.2, Washrooms.

11.3.16 Signage

Wayfinding and playground signage shall be provided in accordance Clause 6.1, Signage, and Clause 6.3, Wayfinding, and applicable requirements from the authorities having jurisdiction.

Committee Comment

It is recommended that a contact number be provided and posted in the area where the public can report any damage, safety hazards, or vandalism in the play space or

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surrounding area.

Consideration should also be provided for an area for service animals to relieve themselves away from the play space.

11.3.17 Handrails

11.3.17.1 All Ramps

Handrails shall be provided on all ramps, except those located within ground-level protective surfacing zones.

11.3.17.2 Diameter

Handrails shall be between 24 mm and 40 mm (1 in and 1.6 in) in diameter or maximum cross-section.

11.3.17.3 Height

The top of handrail gripping surfaces shall be between 508 mm and 711.2 mm (20 in and 28 in) above the ramp surface.

11.4 Pools, Spas and Splash Pads

Rationale

Swimming is an important recreational and therapeutic activity for many persons with disabilities. The buoyancy and freedom offered by an immersive water environment can be enabling in themselves. Primary considerations for accommodating persons who have mobility disabilities 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. Many persons who have no or low vision will benefit from colour and textural cues along primary routes of travel and at potentially dangerous locations, such as the edge of the pool, at steps into the pool and at railings.

Functional Description

This section addresses the accessibility of interior and exterior swimming pools, wading pools, spas (whirlpools, hot tubs) and splash pads intended for general use at public and private recreational facilities and buildings.

It does not apply to pools and spas that are located at private residential dwellings and are not available for public use. It does not address specifications for equipment or other related items such as motors, pumps, sprays, slides, and play features.

Technical Requirements

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11.4.1 Path of Travel

11.4.1.1 Parking and Drop off

Pools, spas, wading pools, and splash pads shall have an accessible route to and from all parking areas, drop-off zones, etc., that meets the requirements of Clause 6.3, Wayfinding, Clause 5.2, Curb Ramps, and Clause 5.1, Accessible Exterior Route.

11.4.1.2 Entrance

Interior and exterior pools, spas, wading pools, and splash pads shall have at least one accessible route from a main building entrance to the water area, and to the change room, showers, and washroom facilities if provided, which meets the requirements of Clause 4.1, Accessible Interior Route and/ or Clause 5.1, Accessible Exterior Route,, Clause 3.1, Entrances, and Clause 6.3, Wayfinding.

11.4.2 Change Rooms

Where change rooms, showers, and lockers facilities are provided, they shall meet the requirements of Clause 9.2, Dressing, Fitting, and Locker Rooms.

11.4.3 Detailed Requirements

11.4.3.1 General

All accessible pools, spas, and splash pads (modified pools) shall comply with the Ontario Building Code Section 3.11.

Committee Comment

Appendix C contains section 3.11 of the Building Code.

11.4.3.2 Perimeter

All pools, spas, and splash pads (modified pools) shall have

- a) a clearly demarcated route of travel around the perimeter of a pool deck that is a minimum of 1200 mm (47 in) wide; and
- b) a tactile warning surface at the edge of the pool that complies with Clause 8.7.4, Elevated Platforms.

Note: *The designated route of travel around the pool deck should be kept free and clear of sunbathers, towels, toys, etc.*

Committee Comment

It was noted that a turning space on the deck is not required, as the minimum deck width in Building Code Clause 3.11 is 1800 mm (71 in).

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11.4.3.3 Storage

All pools, spas, and splash pads (modified pools) shall have an area where mobility aids or assistive devices that are not in use can be stored and secured so as not to obstruct circulation around the pool deck.

11.4.3.4 Deck

11.4.3.4.1

All pools, spas, and splash pads (modified pools) shall have a surrounding deck with a firm, stable, and slip-resistant surface.

11.4.3.4.2

If the surface is graded to drain water the running slope and cross slope shall not exceed 1:50 (2%).

11.4.3.4.3

Surface drains, if present, shall have openings no greater than 13 mm (0.5 in).

11.4.3.5 Service Animals Area

All pools, spas, and splash pads (modified pools) shall have an area where service animals can wait so as not to obstruct circulation around the pool deck.

11.4.4 Entry and Exit Points

11.4.4.1 Minimum

All pools, spas, and splash pads shall have a minimum of two egress points located along an accessible interior route and/or surface deck.

Note: *Egress points may include ramps, transfer walls, stairs, and lifts.*

11.4.4.2 Ramp, Steps and Transfer Wall

An egress point into a pool shall have a minimum of

- a) one ramp, complying with Clause 3.4, Ramps; and
- b) one transfer wall or stairs complying with Clause 3.5, Stairs.

11.0 Recreation Elements and Facilities

11.4.5 Transfer Walls

11.4.5.1 Height

Transfer walls, if provided, shall have a height between 405 mm (16 in) and 485 mm (19 in) measured from the deck.

11.4.5.2 Depth

A transfer wall shall have a depth of 305 mm (12 in) minimum.

11.4.5.3 Surface

Transfer walls shall be slip resistant. Edges shall be rounded and there shall be no sharp corners.

11.4.5.4 Grab Bar

The transfer wall shall be equipped with at least one grab bar that

- a) meets the requirements of Clause 7.5.4, Grab bars, items c), d), e) and f);
- b) is perpendicular to the pool wall and extends the full depth of the transfer wall;
- c) has the top of its gripping surface 100 mm (4 in) minimum and 150 mm (6 in) maximum above the transfer walls; and
- d) has a clearance of 610 mm (24 in) minimum on both sides, or if two grab bars are provided, has a clearance between grab bars of 610 mm (24 in) minimum.

Committee Comment

Ensure that the grab bars for wet areas have the appropriate gripping (versus grab bars in dry areas).

11.4.6 Transfer Platform

11.4.6.1 Location

Where provided, a transfer platform shall be provided at the head of each transfer system.

11.4.6.2 Clear Area

Transfer platforms shall provide 485 mm (19 in) minimum clear depth and 610 mm (24 in) minimum clear width.

11.4.6.3 Transfer Space

A transfer space shall be provided for a user to make a lateral transfer to a platform and

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leave the mobility device on the deck. The transfer space shall

- a) be outside and adjacent to the accessible route;
- b) be a clear space of 900 mm (35 in) minimum by 1370 mm (54 in) minimum;
- c) have a slope less than 1:50 (2%) provided at the base of the transfer platform surface;
- d) be centred along a 610 mm (24 in) minimum side of the transfer platform; and
- e) have no obstructions at the side of the transfer platform serving the transfer space.

11.4.6.4 Height

The height of the transfer platform shall be 405 mm (16 in) minimum and 485 mm (19 in) maximum, measured from the deck.

11.4.6.5 Transfer Steps

Transfer steps shall be 180 mm (7 in) high, and the surface of the bottom tread shall be at a depth of 455 mm (18 in) minimum below the stationary water level.

Note: *Where possible, the height of the transfer step should be minimized to decrease the distance an individual is required to lift up or move down to reach the next step to gain access.*

11.4.6.6 Surface

The surface of the transfer system shall be slip resistant. Edges shall be rounded and there shall be no sharp corners.

11.4.6.7 Size

Each transfer step shall have a tread clear depth of 355 mm (14 in) minimum and 430 mm (17 in) maximum and shall have a tread clear width of 610 mm (24 in) minimum.

11.4.6.8 Grab Bars for Transfer Platforms

11.4.6.8.1

A transfer platform shall have at least one grab bar on each transfer step and on the transfer platform, or a continuous grab bar serving each transfer step and the transfer platform that meets the following requirements:

- a) where a grab bar is provided on each step, the tops of gripping surfaces shall be 100 mm (4 in) minimum and 150 mm (6 in) maximum above each step and the transfer platform; or
- b) where a continuous grab bar is provided, the top of the gripping surface shall be 100 mm (4 in) minimum and 150 mm (6 in) maximum above the step nosing and transfer platform.

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11.4.6.8.2

Grab bars shall

- a) be located on at least one side of the transfer system;
- b) be located at the transfer platform and not obstruct transfer; and
- c) comply with Clause 7.5.4 Grab Bars, items c), d), and e).

11.4.7 Pool Lifts

11.4.7.1 Requirements

Where a ramp, transfer wall, or steps are not feasible due to limited space, then a pool lift shall be incorporated and shall comply with the requirements in Clauses 11.4.7.2 to 11.4.7.10

Note: *There are a variety of seats available on pool lifts, ranging from sling seats to those that are preformed or molded. Pool lift seats with backs will enable a larger population of persons with disabilities to use the lift. Pool lift seats that consist of materials that resist corrosion and provide a firm base to transfer will be usable by a wider range of people with disabilities. Additional options such as armrests, headrests, seat belts, and leg support will enhance accessibility and better accommodate people with a wide range of disabilities.*

11.4.7.2 Location

Pool lifts shall be located where the water level does not exceed 1220 mm (48 in), except where the entire pool depth is greater than 1220 mm (48 in). Where multiple pool lift locations are provided, no more than one pool lift shall be required to be located in an area where the water level is 1220 mm (48 in) maximum.

11.4.7.3 Seat Location

In the raised position, the centreline of the seat shall be located over the deck and 405 mm (16 in) minimum from the edge of the pool. The deck surface between the centerline of the seat and the pool edge shall have a slope not steeper than 1:48 (2.08%).

11.4.7.4 Clear Deck Space

On the side of the seat opposite the water, a clear deck space shall

- a) be provided parallel with the seat;
- b) be 915 mm (36 in) wide minimum;
- c) extend forward 1220 mm (48 in) minimum from a line located 305 mm (12 in) behind the rear edge of the seat; and
- d) have a slope not steeper than 1:50 (2%).

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11.4.7.5 Seat Height

The height of the lift seat shall be designed to allow a stop at 405 mm (16 in) minimum to 485 mm (19 in) maximum measured from the deck to the top of the seat surface when in the raised (load) position.

11.4.7.6 Seat Width

The seat shall be 405 mm (16 in) wide minimum.

11.4.7.7 Footrest

Footrests shall be provided on all pool lifts, except those in spas, and footrests shall move with the seat.

11.4.7.8 Armrest

If provided, the armrest positioned opposite the water shall be removable or shall fold clear of the seat when the seat is in the raised (load) position.

11.4.7.9 Operation

The lift shall be capable of unassisted operation from both the deck and water levels. Controls and operating mechanisms shall be unobstructed when the lift is in use and shall comply with Clause 8.4, End User Controls and Operating Mechanisms.

Note: *The provision for unassisted operation from both the deck and water levels allows the user to call the pool lift when the pool lift is in the opposite position. It is extremely important for a person who is swimming alone to be able to call the pool lift when it is in the up position so he or she will not be stranded in the water for an extended period of time awaiting assistance. The requirement for a pool lift to be independently operable does not preclude assistance from being provided.*

11.4.7.10 Submerged Depth

The lift shall be designed so that the seat will submerge to a depth of 455 mm (18 in) minimum below the stationary water level.

11.5 Picnic Areas

Rationale

Picnic tables with an extension of the table surface make them accessible to a person using a wheelchair. A firm, level surface around the table, with an accessible path leading to the table, is required for wheelchair accessibility. A change in texture from a pathway to the picnic table area is an important cue for a person with low or no vision.

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Where a number of picnic tables are provided, it is desirable to consider options for different levels of sun, shade and wind protection. This is of benefit to individuals with varying tolerances for sun or heat.

Functional Description

This section addresses areas are eating and recreational areas for public use which incorporate a picnic table and may include, but are not limited to: benches, cooking grills, fire pits, lighting, picnic tables, public restrooms, shelters, trash receptacles, and water outlets.

Technical Requirements

11.5.1 Access to Picnic Areas

Access to picnic area elements and related facilities shall

- a) be provided by an accessible exterior route that complies with Clause 5.1 Accessible Exterior Route, or by a trail complying with Clause 11.1 Paths and Trails; and;
- b) be marked with signage that complies with Clause 6.1, Signage and Clause 6.3, Wayfinding.

11.5.2 Clear Space - General

The clear space on all operating sides of the picnic elements shall

- a) comply with Clause 5.1, Accessible Exterior Route, or where the element is on a trail, Clause 11.1, Paths and Trails;
- b) not overlap with the accessible exterior route that provides access to the element, except;
 - i. at toilets without walls; and
 - ii. on all sides of a picnic table except one; and
- c) extend a minimum of 2000 mm (79 in) from the edge of a fixed seat or other picnic area element, to the edge of the designated picnic surface.

11.5.3 Clear Space at Heat- Generating Elements

The clear space on all sides of heat-generating elements such as barbeque grills or fire pits shall

- a) be a minimum of 1500 mm (59 in) wide; and
- b) have a continuous detectable warning surface installed at a minimum of 600 mm (24 in) from the leading edge of the heat-generating element.

11.5.4 Ground Surface

The ground surface of a picnic area shall

- a) be firm and stable;
- b) be sloped not steeper than 1:50 (2%) for drainage; and

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- c) have a visual colour/tonal contrast that complies with Clause 6.1.12, Colour/Tonal Contrast, and texture contrast from the surrounding area.

11.5.5 Picnic Tables

Where provided, picnic area tables shall

- a) comply with Clause 9.14, Service Counters;
- b) be designed to provide a variety of seating options; and
- c) have space at the table where a person in a wheeled mobility device may either sit in their device or transfer onto a seat.

11.5.6 Washroom Facilities

Where enclosed washrooms are provided, they shall comply with Clause 7.5, Water Closet Stalls.

11.5.7 Controls and Operating Mechanisms

Controls and operating mechanisms on picnic area elements shall comply with Clause 8.4, End User Controls and Operating Mechanisms, and lighting on controls will be provided where power is available.

11.6 Exercise Equipment Placement

Rationale

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

Appropriate access to exercise equipment primarily relates to providing a clear path of travel to reach the equipment, as well as sufficient clear floor space adjacent to the equipment for transfer or for use of the equipment by an individual seated in a wheelchair.

Functional Description

This section addresses access to exercise machines and other types of exercise equipment.

Note: *Internationally accepted accessibility standards for the operation and use of exercise equipment are currently being developed through a joint European and North American initiative.*

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Technical Requirements

11.6.1 Accessible Routes and Clear Floor Space

11.6.1.1 Accessible Route

The route of travel to exercise equipment areas shall comply with Clause 4.1, Accessible Interior Route and Clause 6.3, Wayfinding.

11.6.1.2 General

Exercise equipment areas shall

- a) have floor surfacing along the route of travel comply with Clause 3.6, Ground and Floor Surfaces (i.e., it shall be slip resistant and non-glare); and
- b) have lighting that complies with the interior lighting requirements of Clause 8.5, Interior Lighting.

11.6.1.3 Clear Space

Exercise machines and equipment shall

- a) be positioned for ease of transfer and for use by an individual using a mobility aid; and
- b) have a clear floor space of 810 mm (32 in) wide by 1370 mm (54 in) long, which may overlap with the clear floor or ground space of adjacent equipment.

11.7 Other Recreational Areas

Committee Comment

Sport and recreation facilities and outdoor spaces/venues are critical components of the built environment that must be accessible to people with disabilities. The list of recreational facilities/elements for which Accessible Built Environment Standards have been developed only addresses only a small portion of the sport and recreation built environment.

While the importance of ensuring that recreation facilities and outdoor spaces/venues are accessible to people of all abilities cannot be in dispute, it is equally important that the unique features that often characterize recreation facilities be recognized. These unique features, such as steep inclines, ice, water or sand, typically cannot comply with “traditional” accessibility standards for the built environment and yet are essential to the recreation activity and experience. Until additional standards are developed, the only

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recreation facilities subject to the current proposed standards for the built environment will be recreation trails, amusement parks, play areas, pools/spas/splash pads, picnic areas and the placement of exercise equipment placement.

A proposal has been developed that outlines how standards for the other sports and recreation facilities/elements could be developed by the end of 2010.

12.0 Transportation Elements

12.1 Transit Stations

Rationale

Reserved

Functional Description

Reserved

Technical Requirements

The technical requirements for this section are not included at this time because either a), they have not yet been developed by the Accessible Built Environment Development Committee; or b), there are other Provincial codes or standards in place – amalgamation and consolidation requires further study and is beyond the scope of work of the current Standard Development Committee.

12.2 Bus Shelters

Rationale

Reserved

Functional Description

Reserved

Technical Requirements

The technical requirements for this section are not included at this time because either a), they have not yet been developed by the Accessible Built Environment Development Committee; or b), there are other Provincial codes or standards in place – amalgamation and consolidation requires further study and is beyond the scope of work of the current Standard Development Committee.

12.3 Bus Stops

Rationale

12.0 Transportation Elements

Reserved

Functional Description

Reserved

Technical Requirements

The technical requirements for this section are not included at this time because either a), they have not yet been developed by the Accessible Built Environment Development Committee; or b), there are other Provincial codes or standards in place – amalgamation and consolidation requires further study and is beyond the scope of work of the current Standard Development Committee.

13.0 Housing

13.1 Overview

The housing clause has a different format than the other clauses in this standard, as some of the items such as scope, and application apply solely to this clause.

Background

Home construction in Canada has evolved based on practice and design focused primarily on security and durability. Although current housing standards incorporate some but not all of the features necessary to meet the needs of persons with disabilities and some builders have been providing new custom homes, the supply of such homes is limited. Further, most such housing in Ontario has been created through expensive renovation.

A variety of design concepts have been developed that provide housing that either meets the needs of persons with disabilities or has the potential to be readily adapted to meet these needs. In both circumstances the additional cost is likely to be substantially less than renovation of stock housing.

Examples of such design standards, including adaptable housing, flex housing, universal design, visitable housing, and accessible housing, are described in Appendix D - Housing Concepts.

These concepts are set out in documents published by the Canadian Standards Association (CSA), guidelines provided under the Americans with Disabilities Act (ADA), and the Canadian Mortgage and Housing Corporation (CMHC) concepts of Flex Housing and the “Grow House”.

The Committee reviewed these concepts and has developed recommendations that, if implemented, would provide a sufficient supply of housing which meets or could be adapted to meet the needs of persons with disabilities to achieve the AODA purpose.

Rationale

The availability of an adequate supply of housing that meets the needs of person with disabilities is important to achievement of the goals of the AODA. The absence of such housing significantly limits the opportunity for many persons with disabilities to participate in the social and family life enjoyed by other Ontarians. A society which provides housing that is visitable and adaptable assures persons with disabilities the opportunity to participate fully in Ontario society with independence, dignity and self respect.

It is important to note that the concepts used to meet the needs of persons with

disabilities will also benefit senior Canadians by increasing their chances of continuing to live independently in their homes and by eliminating hazards that may result in injury caused by falls or other accidents.

Affordability is a key concern in designing housing policy. Implementation of the measures recommended will add to the cost of new home construction. The offset to this is a reduction in the higher expenditures (in some cases supported by public funding) required to renovate housing that was not originally built to meet or be adaptable to meet the needs of persons with disabilities and a reduction in healthcare and institutional housing expenditures.

Functional Description

An objective of this clause is to limit the probability that, as a result of the design or construction of a building, a person with a physical or sensory disability will be unacceptably impeded from accessing the building or circulating within it. The dwelling should be constructed to be adaptable to support accessible requirements. Adaptable homes and major renovations will initially add a minor cost during new construction; however they will minimize future costs when accessible features may need to be added to the dwelling.

Committee Comment

Costs of housing standards have not yet been addressed by the Costing Consultants or considered by the Committee.

While some of the material costs may be relatively low, additional space requirements or non-standard design features proposed could significantly affect the cost of some housing including social housing and small affordable units.

13.2 Scope, Timelines and Application

13.2.1 Scope

For the Housing clause, the Committee uses the term housing and includes the occupancies found within Group C of the Building Code with some exclusions. The recommendations are limited to a sub-group of the Group C occupancies. Specifically excluded are buildings that may be used for residential occupancies but serve special purposes such as, Hotels and motels, shelters, and temporary accommodation such as for transient workers. Other residential occupancies within Group B in the Building Code such as Hospital, long term care facilities and detention facilities are also not covered by these requirements.

The housing standard applies to the new construction and major renovation of:

- Single detached houses

- Semi-detached houses
- Townhouses/ row houses
- Apartments
- Stacked rowhouses
- Duplexes
- Triplexes
- Boarding and Rooming Housing (for less than 8 boarders)

The intention of identifying the exclusions within this clause is that the proposed Accessible Built Environment Standard Clauses 1.0-12.0 will apply to these excluded occupancies and not the requirements identified in Clause 13.0.

Specific Group C occupancies have been identified in this standard, where neither the proposed housing requirements nor the proposed accessible built environment standard would apply, such as self-contained attic and basement apartment units, (see Clause 13.2.3.6.1, Self contained apartments).

13.2.2 Timelines

The timelines of Clause 2.4, Timelines shall apply to the housing requirements.

13.2.3 New Construction and Major Renovation

Note: *The definition of new construction and major renovation is provided in Clause 2.2, Application of this standard.*

13.2.3.1 Housing – New Construction and Major Renovation

The Committee could not agree on how the requirements apply to single detached, semi-detached, row houses and stacked rowhouses, thus two options have been identified below for public input.

Option 1:

Single detached, semi-detached, townhouses/ row houses, stacked rowhouses, duplexes, triplexes, boarding and rooming houses (for less than 8 boarders), will not need to comply with the requirements proposed.

Option 2:

All newly constructed single detached, semi-detached, row houses and stacked rowhouses, duplexes, triplexes, boarding and rooming houses (for less than 8 boarders), will comply with the requirements proposed.

Committee Comment

It was noted that having all new construction (except the exemptions) will be very expensive for the social and affordable housing sector and will likely result in fewer units being built. This unintended consequence is not what the Committee wants. The committee may need some better ideas about how to achieve useful and

meaningful accessibility while not affecting affordability.

Options are provided for public review input and comment.

13.2.3.2 Multi Unit Residential with No Elevator (Walk up Units) – New Construction and Major Renovation

Multi unit residential buildings with no elevators will not be newly constructed in Ontario.

Committee Comment

The Committee agreed that as the Proposed Accessible Built Environment Standard indicates all new buildings built in Ontario must have an elevating device, they agreed that those types of buildings will not be built in Ontario in the future.

Some Committee members did not agree that all new multi unit residential buildings will require elevators.

13.2.3.3 Multi Unit Residential with Elevator (Apartment and Condominium Buildings) – New Construction and Major Renovation

All multi unit residential buildings shall meet the requirements of the housing clause and have at least one elevator that complies with Clause 3.3.5, Elevators.

Committee Comment

The Committee discussed if all units or a percentage of units should comply. Public Input is requested on the application of the housing standard to all new apartments/condominium buildings.

There is a current Building Code requirement that not less than 10% of residential suites in apartment buildings be provided with a barrier-free path of travel from the entrance door into the suite and includes some barrier-free features. The Committee would like to extend the existing requirement, but felt that all new units should meet the adaptable requirements identified in this clause.

13.2.3.4 Boarding or Rooming Houses – less than 8 boarders – New Construction and Major Renovation

All boarding or rooming houses with fewer than 8 boarders or roomers shall comply with the following:

- a) provide one zero step entrance, meeting the requirements of Clause, 13.3.2 Accessible Entrance;
- b) all interior doorways must have a minimum clear width of 810 mm (32 in) and meet the requirements of Clause, 13.3.3.4 Interior Doors;
- c) corridors must be 1100 mm (42 in) wide and meet the requirements of 13.3.3.3, Corridors;

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- d) be at a minimum a 1/2 bath on the same floor as the zero-step entrance, with the ability to enter with a wheeled mobility device and close the door;
- e) materials used for construction/renovation and finishing shall be inert (no or lowest off-gassing of volatile organic compounds); and
- f) ventilation and filtration systems for the environmentally sensitive.

Committee Comment

This specific type of housing is included as a clause as this is currently exempt from accessibility requirements in the current Building Code.

13.2.3.5 Boarding or Rooming Houses –8 or more boarders – New Construction and Major Renovation

Boarding or rooming houses with 8 or more boarders shall meet the housing standards defined in Clause 13.0.

13.2.3.6 Exemptions – New Construction and Major Renovation

13.2.3.6.1 Self Contained Apartments

Construction of new self contained apartment units in homes such as basement or attic units, are exempt from the requirements.

Note: *If the committee agrees that all new housing must be accessible, this exemption clause may be modified to include additional types of housing.*

Committee Comment

The Committee had discussions on exemptions, for both having them and not, as well where they would apply. The Committee identified the above exemption, as there was concern that these types of residential accommodations will be provided illegally, but there was also concern that there would be new accommodations that are inaccessible.

There is also a concern regarding safety, liability and risk of making these units accessible.

The Committee requests input during public review as to whether more types of housing should be exempt from these requirements, such as second floor apartments, non self-contained apartments, duplexes, tri-plexes and stacked townhouses.

13.2.3.6.2 Other Group C Occupancies

Hotels and motels, school residences, shelters, and temporary accommodation such as for transient workers are exempt from these requirements. For these occupancies the proposed Accessible Built Environment Standards Clauses 1.0-12.0 would apply.

13.2.4 Building Permit Application – In process at time of Standard

Implementation

13.2.4.1 Buildings Under Construction at time of Standard Implementation

Any housing projects that are under construction at the time that the new regulations come into effect may continue as designed following existing applicable codes.

13.2.4.2 Building Permit Applications In Process

Any projects that have been filed for building permit up to 12 months from the date the new regulations come into effect may continue as designed following the existing applicable codes.

Note: *The date for when the building permit process starts is that date that a building permit application is filed with the municipality.*

13.2.5 Retrofit of Existing Units

13.2.5.1 General

The intent is to increase the number of residential units available to people with disabilities, therefore, consideration is given to changes that must be made to the existing housing stock to make more units accessible. Following are recommendations that will be used to make existing housing units accessible, by enforcing retrofit of the building where no changes are contemplated. The administrative authority defined by the Accessible Built Environment Standards Development Committee would apply to Housing to render decisions on when a retrofit would be an undue hardship.

13.2.5.2 Single Detached, Semi-detached, and Row houses – Retrofit

The Committee has identified some options for retrofit for single, semi-detached and row houses for the public to consider.

Option 1:

All residential accommodations built to Part 9 of the Building Code, which includes but is not limited to: single detached, semi-detached, and row houses, stacked rowhouses, duplexes and triplexes, boarding and rooming houses, bed and breakfast accommodation, apartments above stores where there is no elevator, will not be required to retrofit to the proposed standards.

Option 2:

Residential accommodations built to Part 9 of the Building Code, which includes but it not limited to: single detached, semi-detached, and row houses, stacked rowhouses, duplexes and triplexes, apartments above stores where there is no elevator, will not be required to retrofit to the proposed standards, except for boarding and rooming houses and bed and breakfast accommodations, which will be required to retrofit.

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Committee Comment

Bed and breakfast accommodations and boarding and rooming houses were identified as potential retrofit options, as they would open up cheaper travel accommodations and allow for accessible housing in these types of residences.

The Committee could not decide what retrofit should apply to for single semi-detached, and row houses and has provided two options for the public to provided input on.

13.2.5.3 Multi Unit Residential Buildings with Elevators – Retrofit

Multi unit residential buildings with elevators, will not be required to retrofit to the proposed standards.

Committee Comment

If there were to be a retrofit requirement, the suggestion would be that there not be a requirement to modify the residential units but that there be a requirement to retrofit systems such as elevator controls, automatic main entry doors to the building, fire alarms, etc. and that these requirements not come into effect until 2020 or be phased in starting in 2015.

Some Committee members did not agree that all new multi unit residential buildings will require elevators.

13.2.5.4 Multi Unit Residential Buildings with No Elevators – Retrofit

The Committee was divided on how retrofit would apply to multi unit residential buildings with no elevators and thus there are three options for the public to consider and provide input on:

Option 1:

Multi Unit Residential buildings with no elevators will not be required to retrofit to the proposed standards.

Option 2:

Certain elements of the multi unit residential building with no elevators shall be retrofitted, they include:

- a) Having an accessible interior route through the common areas of the building;
- b) Provide handrails on stairs that meet the handrail requirements in the Proposed Accessible Built Environment Standard; and
- c) Provide grab bars in washrooms in specific units that meet the grab bar requirements in the Proposed Accessible Built Environment Standard.

Option 3:

Multi Unit Residential buildings shall be full retrofit and meet the requirements of

the housing clause. Timelines would be based on the staged timelines put forth within the Proposed Accessible Built Environment Standard.

Committee Comment

There was good discussion of retrofitting to specific requirements for these buildings, and the need because of the aging population.

There was also concern raised when a unit is retrofit for accessibility, these units may not be 'wanted' once the occupant with accessibility needs moves out. And there may be more cost incurred by the owner of implementing and removing the accessibility features.

Notwithstanding that the current code requirements may require accessibility provisions be met for existing buildings in the case of extensive renovations, where certain conditions are in place but not in all circumstances, e.g. if the front entrance is planned to be altered. The concern is that the current code is a discouragement to building owners to maintain or improve existing housing stock for accessibility.

There should be an alternate mechanism to encourage the upgrading of existing apartment buildings to alter these buildings to be accessible. One such mechanism could be to change the tax rate for apartments that renovate for accessibility. It should be noted that the property tax rate for apartments under the Municipal act, may be the same as commercial buildings which can be double that residential rates. The actual rates depend on the individual municipality.

13.2.5.5 Stairs – Retrofit

Stairs in existing buildings will not be required to be altered to meet the requirements of the proposed standards.

13.2.5.6 Elevators – Retrofit

Elevators in existing buildings will not be required to be altered to meet the requirements of the proposed standards.

13.2.5.7 Other Units – Retrofit

Existing basement, second floor flat, flat above a garage, granny flat, coach house or attic units within homes will not need to be altered to meet the requirements of the proposed standards.

13.3 Building Elements

13.3.1 Exterior

13.3.1.1 Exterior Ramp

The ramp must have individual flights not longer than 10 m (394 in) for gradients not steeper than 1:15 (6.67%), or 5 m (197 in) for gradients not steeper than 1:12 (8.33%) and all ramp requirements of the Accessible Built Environment will apply.

Committee Comment

If the full committee has a different ratio then that should be adopted. It should also be noted that there is no consensus on what a minimum ramp should be and that 1:15 may be too shallow. For homes the 1:15 (6.67%) may make it impossible on some sites to even consider a ramp.

It was also noted that one member disagreed with this ratio and preferred 1:20 (5%).

13.3.1.2 Site Grading

Except where technically infeasible, there shall be an entrance on grade with the exterior ground surface. Otherwise a ramp (or ramping system) shall be used and meet the requirements of clause 13.3.1.1, Exterior Ramp.

Note: *This was identified as a solution of re-grading the land to achieve a zero step entrance.*

Committee Comment

It should be noted that the height of the entry floor level at or above grade is the product of a number of factors related to the design of the house and site conditions. As well, the distance of the entrance from the property line determines whether or not there is sufficient room to grade the site or provide a ramp to the entrance.

13.3.2 Accessible Entrance

13.3.2.1 General Requirements

13.3.2.1.1 Entry Level Accessible Entrance

There shall be at least one accessible entrance on the entry level of the dwelling.

Note: *The accessible entrance can be the main door, side door, back/patio door or garage door.*

13.3.2.1.2 Covered Accessible Entrance

The accessible entrance shall be covered to prevent the user from getting wet.

Note: *The size of the cover will depend on orientation of the door. The accessible*

entrance can be the main door, side door or garage door.

Committee Comment

Installing a canopy at the entrance may be problematic in some locations, especially for small homes.

It was noted that if installing a canopy at the entrance maybe problematic then eliminate the cover. Architects and home designers have expertise and knowledge available that will figure this out without legislation.

13.3.2.2 Door Width

The accessible entrance doorway shall have a clear width of 900 mm (35 in).

Committee Comment

It was noted that one committee member disagreed with the width, and that it should be wider, however it was agreed to not include an option, but obtain input during public review on the width of the door.

13.3.2.3 Door Sill

The step at the entry level door sill to a dwelling shall be eliminated, thereby making the entry level a zero clearance threshold.

Committee Comment

Technically this step is provided to prevent water from getting into homes, snow build up, etc.

It was noted that eliminating the step, eliminates the possibility of installing a storm door. The only reason a flush entrance would possibly eliminate a storm door is if the snow is so deep and heavy that the storm door would not open and then the ‘person in a mobility device’ would potentially not be able to negotiate the exit..

It should be noted that the step at the door is separate from any steps that may lead from grade level to a raised porch that may be required as a result of the terrain and the design of the building in that context. The Building Code currently allows one step no higher than 150 mm (6 in) where there is danger of blockage from ice and snow at an exit door including exterior doors to dwelling units. The Building Code does not address storm doors.

13.3.2.4 Threshold – Exterior

An exterior threshold shall

- a) have a maximum of 6 mm (0.25 in) where no transition is required;
- b) where it is between 6 mm and 13 mm (0.25 in to 0.5 in), have a transition of 1 to 1 provided;

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- c) where it is between 13 mm and 50 mm (0.25 in to 2 in), have a transition of 1 to 8 provided;
- d) where it is between 50 mm and 75 mm (2 in to 3 in), have a transition of 1 to 10 provided;
- e) where it is over 75 mm (3 in) meet the requirements of Clause 13.3.1.1, Exterior Ramp; and
- f) have a colour contrast and tactile difference from outside to inside the house.

Note:

(1) *The exterior threshold occurs at doors that separate the interior of the house from the outdoors or a garage attached to, and accessible from the house.*

(2) *For both an interior and exterior threshold, where a raised threshold is required for technical reasons, a zero step entrance can be achieved by providing a sloped transition.*

13.3.2.5 Threshold – Interior

The interior door threshold shall

- a) be permitted to have a vertical transition up to 13 mm (0.5 in) from the interior finished floor; and
- b) where it is above 13 mm, have a sloped transition. The outside of the door sill shall be permitted to a maximum vertical difference in level of 6 mm (0.25 in),

Note: *Level door sills can be provided but there is no guarantee against water penetration.*

Committee Comment

The Committee discussed a level door threshold, but agreed that if a transition was required at a threshold it would be permitted.

13.3.2.6 Door Controls

The door controls shall not require tight grasping or twisting of the wrist and shall be operable with a closed fist.

13.3.2.7 Accessible Entrances to Multi Unit Residential Buildings - Power Door Operators

All accessible entrances to multi unit residential buildings shall comply with Clause 3.2, Doors and Doorways and have a power door operator that complies with Clause 3.2.9, Power Door Operators.

Note: *The accessible entrance excludes stairwells and fire escapes.*

Committee Comment

There was general consensus that at a minimum it shall be applied to the accessible entrances, it should also apply to all entrances but not the stairwells and fire escapes, but cost for implementing was noted.

13.0 Housing

This recommendation will have an impact to cost especially affordable housing, and as a result fewer of these units may be built.

It was suggested that the requirement should include an automatic door operator.

13.3.2.8 Entrance Maneuvering Space

Entrance maneuvering spaces shall be provided in accordance with the Clause 3.2, Doors and Doorway.

Committee Comment

This recommendation will have a significant impact on the space for entrances required in small homes and apartment units.

13.3.2.9 Garage Entry

If the garage entry is the only accessible entry, it shall comply with the following:

- a) the entry shall meet the requirements of Clause 13.3.2, Accessible Entrance;
- b) the garage dimension and the garage door shall be enlarged to accommodate a path of travel for a wheeled mobility device next to a parked vehicle that complies with Clause 9.11, Parking; and
- c) if a ramp is required it shall meet the requirements of Clause 13.3.1.1, Exterior Ramp shall apply.

Note: *Multi unit residential accommodations with garages (e.g. high-rise buildings) will refer to the Proposed Accessible Built Environment Standard for parking standards.*

13.3.2.10 Deck

13.3.2.10.1 Deck Threshold

Where provided or installed the deck shall have a zero threshold to the outside sill of the door.

13.3.2.10.2 Deck Doorway

The doorway to the deck shall have a minimum clear width opening of 900 mm (35 in).

Committee Comment

This item is personal to a home. However if one is provided it is recommended that it meets the requirements identified.

13.3.3 Interior Mobility

13.3.3.1 Interior Ramps within a Dwelling Unit

Committee Comment

13.0 Housing

The requirements for an interior ramp are different within a dwelling unit than for a building (as per the Proposed Accessible Built Environment Standard), as there are space limitations to be concerned with.

13.3.3.1.1 Slope

The maximum slope of an interior ramp within a dwelling unit shall be 1:10 (10%).

13.3.3.1.2 Width

The minimum width of an interior ramp within a dwelling unit is 860 mm (34 in) between the handrails.

13.3.3.1.3 Handrails

Handrails on interior ramps within dwelling units shall

- a) be provided on at least one side of the ramp;
- b) be continuously graspable along their entire length;
- c) except where interrupted by doors, be continuous along the entire length of the ramp and around landings;
- d) have a circular cross-section with an outside diameter not less than 30 mm (1.2 in) and not more than 40 mm (1.6 in), or any non-circular shape with a graspable portion that has a perimeter not less than 100 mm (4 in) and not more than 155 mm (6 in) and whose cross-sectional dimension is not more than 57 mm (2.2 in);
- e) have a clearance of at least 50 mm (1.8 in) between the handrail and any wall to which it is attached or immediately adjacent to;
- f) be between 865 mm (34 in) to 965 mm (38 in) in height, measured vertically from the ramp surface to the top of the rail;
(Note: handrails not meeting these requirements are permitted provided they are installed in addition to the required handrails);
- g) have the horizontal rail extensions return to the post, floor, or wall;
- h) be designed and constructed such that handrails and their supports
 - i. will withstand the loading values obtained from the non-concurrent application of a concentrated load not less than 0.9 kN (202 lb) applied at any point and in any direction; and
 - ii. a uniform load not less than 0.7 kN/m (46.6 lb/ft) applied in any direction to the handrail.

13.3.3.1.4 Maximum Height

The maximum height of a change in level where an interior ramp within a dwelling unit is permitted shall be 1225 mm (48 in).

13.3.3.2 Interior Ramps within a Multi Unit Residential Building

Where an interior ramp is provided in the common areas of a multi unit residential building, it must meet the ramp requirements in Clause 3.4, Ramps.

13.3.3.3 Corridors in Dwelling Units

Corridors in dwelling units larger than 900 square feet (84 square metres) shall be a minimum of 1100 mm (42 in) wide.

Committee Comment

It was noted that achieving these dimensions in corridors may be an issue for small houses or apartment units (less than 900 sq feet), thus they have been made exempt from the clause.

13.3.3.4 Interior Doors

Interior doorways shall have a minimum clear width of 810 mm (32 in).

Committee Comment

There was some discussion on the difference in door width of interior doors and exterior doors.

It was noted that there are spaces where having the interior door the same as the outside door is physically impossible.

It may be possible to achieve the clear opening width with the use of different hinges rather than a wider door.

There are also conditions where it is not necessary to have a door of this width such as pantries or hall closets.

There was one committee member who preferred to have the minimum clear width be 850 mm as per the entrance of the house.

13.3.3.5 Maximum Interior Floor Transitions

Interior floor transitions for a change of floor materials on the same level and a change in level shall

- a) for up to 13 mm (0.5 in) have a transition of 1:2 (50%); and
- b) for transitions greater than 13 mm (0.5 in) be compensated with sloped flooring.

13.3.3.6 Interior Floor Transitions for Common Areas

Where an interior floor transition is provided, in a common area (e.g. lobby, party room, corridor, etc.) in a multi unit residential building, it shall have a tactile warning indicator and be colour contrasted by minimum of 70% from its surrounding environment.

13.3.3.7 Stairs

Steps for stairs shall have a:

- a) rise between successive treads not less than 125 mm (5 in) and not more than 175 mm (7 in); and
- b) run of not less than 280 mm (11 in) and not more than 355 mm (14 in) between successive steps.

Committee Comment

Reducing the rise will have significant impact on interior space required for stairs, especially in small homes, which could be up to 10% more.

13.3.4 Bathrooms in a Dwelling Unit

13.3.4.1 Bathroom on Entry Level

A two piece or a three piece bathroom shall be provided on the entry level on the dwelling unit.

13.3.4.2 Two-piece Bathroom on Entry Level

13.3.4.2.1 Minimum Requirements

A two piece bathroom on the entry level shall at a minimum contain a water closet (toilet) and a lavatory (sink), with no dimension between opposite walls less than 1700 mm (67 in).

13.3.4.2.2 Clear Floor Space Next to Toilet

There shall be a minimum clear floor space adjacent to the toilet of 1500 mm (59 in) long by 900 mm (35 in) wide for a person in a wheeled mobility device to transfer to a toilet.

13.3.4.2.3 Toilet Placement

The toilet shall be placed a minimum of 460 to 480 mm (18 to 19 in) from the wall, measured from the centre line of the toilet.

Committee Comment

It was noted that this requirement will be an issue for small houses or apartment units (less than 900 sq feet).

For visitability it is not necessary to turn around in the bathroom it is necessary to be able to enter and use the facility.

It was noted that the minimum distance of the water closet from the wall will require that

the water closet is always adjacent to a wall and may restrict flexibility in the design of the space.

13.3.4.3 Three-piece Bathroom on Entry Level

13.3.4.3.1 Minimum Requirements

Where there is only one bathroom in a dwelling unit there shall

- a) be a water closet (toilet) and lavatory (sink) provided; and
- b) if the space permits, a bathtub; otherwise, a roll in shower shall be provided.

Note: *Sentence 9.5.2.3.(1) of the Building Code requires that Reinforcement for future installation of grab bars on the wall adjacent to the water closet and shower or bathtub where the walls enclosing the main bathroom are constructed from wood or steel stud framing.*

13.3.4.3.2 Clear Floor Space Near Toilet

There shall be a minimum clear floor space next to the toilet of 1500 mm (59 in) long by 900 mm (35 in) wide for a person in a wheeled mobility device to transfer to the toilet.

13.3.4.3.3 Toilet Placement

The toilet shall be placed a minimum of 460 mm to 480 mm (18 in to 19 in) from an adjacent wall, measured from the centre line of the toilet.

13.3.4.3.4 Turning Space

A minimum clear turning circle with a diameter of 1500 mm (59 in) shall be provided.

Committee Comment

It was noted that there should be no need to design for scooters turning circle, but if someone is to live in the home, a turning space for a wheelchair should be provided.

It was also noted that the bathroom is not big enough for an attendant to help the person in the mobility device.

It was noted that the cost of implementing these requirements is a concern, especially for a smaller unit and providing these amenities may reduce the amount of affordable housing.

The Committee Comment did not fully agree as to whether it was required to have to provide a clear turning circle in bathroom. And requested input by the Full Committee on whether the inclusion of a clear turning radius as part of the requirement. It is suggested that the space may not need to be provided if there are other means of adapting a bathroom easily. For instance the bathroom may back onto a closet and when the closet space is considered the bathroom may be of sufficient size. Also roll in

showers allow for greater maneuverability.

The Building Code requires that in the 10% of apartment units where barrier-free requirements apply, one bathroom on the same level as the barrier-free entrance to the unit shall be not less than 4.5 m². A minimum turning radius is not specified. See Building Code Sub clause 3.8.2.1.(4)(b)(ii).

Cost is always a concern for housing. The concern is that the non-bathroom living space will be reduced if the bathroom size is increase, especially in smaller units (e.g. a 900 sq. ft or smaller).

13.3.4.3.5 Clear Floor Space Near Bathtub or Shower

A clear floor space of at least 900 mm (35 in) wide by 1370 mm (54 in) long, along the full length of the bathtub or shower shall be provided and will comply with Clause 7.8, Shower Areas or Clause 7.9, Bathtubs.

13.3.4.4 Toilet Height on Entry Level

The toilet shall be not less than 430 mm (17 in) and not more than 460 mm (18 in) above the floor. The seat height can be adjusted using toilet seats of different thickness.

13.3.4.5 Reinforcement for Grab Bars in Entry Level Bathroom

The walls adjacent to the water closet and to the shower or bathtub shall be reinforced to permit the future installation of grab bars in three piece bathrooms.

Committee Comment

The above requirement is similar to the current Building Code requirement. Current Building Code requirement is Sentence 9.5.2.3.(1) of the Building Code requires that Reinforcement for future installation of grab bars on the wall adjacent to the water closet and shower or bathtub where the walls enclosing the main bathroom are constructed from wood or steel stud framing.

13.3.4.6 Bathroom Doorway on the Entry Level

The entry level bathroom doorway shall have a minimum clear width of 810 mm (32 in).

Committee Comment

The bathroom door width can be achieved by use of special offset hinges so that a 32" door will provide the 810 mm (32 inch) clear width.

It was suggested that this door width be the same as the entrance clear door width of 900 mm (35 in). But the width was left at 810 mm for public input.

13.3.4.7 Direction of door swing for all bathrooms

The entry level bathroom door shall swing out, and cannot interfere with clear area clearances required in the space outside of the bathroom.

Committee Comment

It was noted that this may be an issue for small houses or apartment units (less than 900 sq feet).

13.3.5 Kitchens

Committee Comment

The Committee agreed that the kitchen should be adaptable for future conversion to an accessible kitchen. This will eliminate future construction costs to make a kitchen accessible, as the necessary space dimensions will be available.

13.3.5.1 Size

A clearance between counters and all opposing base cabinets, counter tops, appliances, or walls in kitchens shall be at least 1500 mm (59 in) (e.g. galley kitchen, u-shape, etc.).

Committee Comment

It was noted that this may be an issue for small houses or apartment units (less than 900 sq feet).

This is the current requirement of CSA B651 Accessible Built Environment Standard.

It was noted that a clear path still needs to be addressed.

13.3.5.2 Access to kitchen

Where possible, the kitchen shall be provided on the accessible entry level.

Committee Comment

The Committee discussed that it is recommended to have the kitchen on the same level as the accessible entrance.

This will be problematic for small homes which may be on different levels.

It was noted that 'where possible' should be removed from the statement, but more discussion may be required for this item by the full committee.

13.3.5.3 Counter Surface

Where possible, all counter top surfaces shall be heat resistant.

Committee Comment

The Committee did not fully agree to have heat resistant counter tops and that is why the 'where possible' is included in this requirement. It was noted that it is possible to add a heat resistant surface over a counter top, by the owner or tenant, at reasonable cost.

More discussion may be required for this item by the full committee, as it may be more cost effective to always provide heat resistant counter top surfaces.

13.3.6 Electrical/ Heating Ventilation and Air Conditioning (HVAC) Controls

13.3.6.1 Height of Controls and Switches

Electrical and thermostat controls and switches shall be located between 1015 mm (40 in) and 1120 mm (44 in) above the finished floor.

Committee Comment

A comment was provided that perhaps consideration should be given to establishing a fixed height for controls etc to assist those with no or low vision with location of control and orientation e.g. a person with no or low vision person having to figure out controls from room to room or building to building instead of being able to simply 'know' where they are from habit. A range is provided as it aligns to clauses 1-12.

13.3.6.2 Additional Wiring

An additional length of 300 mm (12 in) of wiring should be left in the wall so that the homeowner can move the electrical controls and thermostat controls if required.

Committee Comment

Some additional wiring should be left in the wall so that the home owner can move, if required, difficult to read controls such as a thermostat with small number and letters.

It was confirmed that this does not conflict with the Electrical Code.

13.3.6.3 Operability

Electrical and thermostat controls and switches shall be operable with a closed fist.

13.3.7 Electrical Outlets

13.3.7.1 Height of Electrical Outlet

Exclusive of outlets for dedicated appliances such as garbage compactors, ranges, refrigerators, floor mounted outlets etc., electrical outlets shall be located at a minimum of 450 mm (18 in) above the finished floor.

13.3.7.2 Spacing/ Location of Electrical Outlets

Rooms in dwelling units shall have a minimum of five electrical outlets, with each being no less than 2440 mm (8 ft) apart and shall comply with Clause 8.4, End User Controls and Operating Mechanisms.

Committee Comment

As more and more items (e.g. assistive devices) are requiring power to support them, increasing the number of electrical outlets per room allows for users to better access to them.

There may be other safety considerations especially fusing and overload that must be reviewed. Each outlet adds cost and if there are enough additional outlets added a larger service may be required or at the very least a larger panel to accommodate additional breakers.

13.3.8 Dwelling Unit Entrance Door Power

It is recommended that a single electrical outlet shall be provided over each accessible entrance door for possible installation of a future automatic power door operator.

Committee Comment

It was determined that installing an electrical outlet during construction would assist with the future installation of a power door operator.

It was noted that for apartment buildings, consideration could be given for installing these at the entrance to each suite.

13.3.9 Other Controls

13.3.9.1 Height of other controls

Controls and switches shall be located between 450 mm (18 in) and 1220 mm (48 in) above the finished floor with specific accommodation to suit the needs of an individual.

13.3.9.2 Operability

All controls and switches shall be operable with a closed fist, and meet the requirements in the Proposed Accessible Built Environment Standard for Clause 8.4, End User Controls and Operating Mechanisms.

13.3.10 Multi Unit Residential Common Elements

13.3.10.1 General

Except as indicated in clauses 13.3.10.2 – 13.3.10.4, for common elements in multi unit residential buildings, such as a utility room, office area, garbage room, party rooms,

meeting rooms, etc., Clause 1.0-9.0 of this standard shall apply.

13.3.10.2 Corridor Garbage Room Doors

If the force necessary to open the door exceeds 22N (5 lbs), then there shall be a power door operator on the garbage room door.

Committee Comment

The corridor garbage room door should not trap a person inside.

This may be problematic as the power door operator may have to be interconnected with the alarm system to disable its operation during an alarm for safety purposes. This issue needs further study.

There was no intent to have a person be able to turn around in the space provided for a garbage/trash room.

13.3.10.3 Multi Unit Intercom System

Where provided, intercoms shall comply with the Information and Communication standard.

13.3.10.4 Fire Plan/ Evacuation

All fire plans shall address occupants of the buildings and their accessibility needs.

13.3.11 Emergency

13.3.11.1 Multi Unit Residential Visible and Audible Alarm

All large and small multi unit residential buildings shall have visible and audible monitoring alarms (smoke/fire), provided and hard wired in each unit and in common areas.

13.3.11.2 Single Family Homes Visible and Audible Alarm

Single family homes shall have hard wired visible and audible monitoring alarms (smoke/fire) on each floor of the dwelling.

Committee Comment

In most cases smoke detector alarms could be easily swapped for alternate designs.

It is recognized that the visible and audible are coincident, but a break in the audible is not necessarily bad (provided that it is short enough not to confuse the intention).

13.3.11.3 Carbon Monoxide Detectors

Where applicable, carbon monoxide detectors shall be provided and hard wired for single family homes and multi-unit residential units.

13.3.12 Air Quality

13.3.12.1 Materials

All materials used for housing shall be inert with no or low off-gassing of volatile organic compounds.

13.3.12.2 Heating and Ventilation

Heating and ventilation systems must be designed to minimize the impact to persons with environmental sensitivities by optimizing the filtration of the air flow and reducing the potential for biological contamination.

13.3.13 Property Maintenance

Property maintenance shall comply with Clause 8.1, Property Maintenance.

13.4 Other Recommendations for Accessible Units

The following items were discussed by the Committee, and whether the following items are within the intent of an adaptable dwelling, but they are items that should be considered as part of a fully accessible unit, but may be difficult to mandate. The Committee requests public input on whether the following should be included as mandatory clauses for an 'adaptable dwelling unit'.

13.4.1 Appliances

Where appliances are provided as part of the tenancy of a fully accessible unit the appliances should be accessible.

Committee Comment

The Committee did not achieve consensus on this item. Individual assessment must be done to provide an appliance for an occupant.

The concern is not the device, but the availability of the appliance to the occupant.

Though these appliances are available there are times that they are a hazard for instance for families with small children and appliances with front mounted controls.

It would be easier and more economical for these appliances to be made available if

needed and not be made mandatory.

It is an individual accommodation to determine the accessible appliances. And this would be difficult to legislate.

These items are out of scope for the Built Environment standard. But appliances are something that should be considered as part of an accessible dwelling and they would include a wall oven and counter top elements.

Some requirements for accessible appliances include: all oven doors should be side-hinged; adaptable to hinge either side like refrigerators, alternatively, they could fold into a space above the oven like garage doors.

13.4.2 Emergency Backup

Emergency backup installation and design should be considered or offered for accessible units.

Committee Comment

There was discussion on this topic but no consensus. The government should do more research for more cost effective ways of doing this. One idea was to have the electrical system installed so that a backup generator could be easily installed for instance an external plug that a generator could be plugged into to service the house.

With assistive devices today electricity is required. But the cost makes this prohibitive to install this on every home –costs can vary, and depending on the disability the needs can vary.

It would be easier and more economical for persons requiring emergency back up to have self contained battery backup units.

13.4.3 Framing for Elevators

Where possible floors or walls should be framed for future elevator installations for houses built under Part 9 of the Building Code and of wood frame construction.

Note:

- (1) Assume that this applies to LULA (Low Use, Limited Access) elevating devices
- (2) This can be provided by stacking closets one above another, or deeming a floor space on multiple levels where a future elevator can be installed

Committee Comment

This clause was considered as a really nice to have, but could make the layout designs of home too restrictive.

It will be very restrictive in small homes with multiple levels, and tight urban settings

and social housing.

13.4.5 Balcony

Where there is a balcony, a zero threshold, no step entry should be provided.

Committee Comment

There was strong disagreement with having a level no step to the balcony because of cost implications from an ongoing maintenance perspective.

The concern is water getting into the unit with having a flush balcony. Having designers consider doing this and ensuring the water/weather does not create water issues within the unit.

We must consider that this may be the only place for someone to access the outside. And these tend to be areas of refuge as well.

The Committee was not able to achieve consensus as to whether this item should be a recommendation or requirement and they would like to have input by the full committee.

The current building code (OBC 3.3.1.7.) sets out requirements for the design of balconies where provided and on floor areas served by a barrier-free path of travel and 3.3.1.7.(7) requires that there be no projection above the walking surface more than 13 mm.

The key here is the issue of a safe refuge during a fire. That should guide design and at a minimum the rise must be easily traversable with a slight ramping of the lip.

Buildings are not required to provide balconies and where not provided fire safety is achieved in other ways.

13.4.6 Stairs – Straight Run- Inside a Unit

Where technically feasible, a straight run for stairs should be installed. In those spaces where it is infeasible to accommodate a straight run, a turn can be placed.

Committee Comment

The intent is to provide additional safety and future installation of a chair lift.

There was strong objection as it would unduly restrict designers and homeowners. Straight stairs may in fact be hazardous when they have a total rise of ten feet and no mid landing for resting. Also stair lifts can be made to accommodate curved or u shaped stairs.

13.0 Housing

Building Code sets requirements for stair winders, and landings for a stair within a dwelling unit. See Building Code 9.8.4.4, 9.8.4.5., 9.8.6.2. and 9.8.6.3.

14.0 Glossary and Units

14.1 Glossary and Definitions

Note: *This glossary contains terms used in the standard provided for clarification. It is still a work in progress and will continue to be refined.*

The following definitions apply in this Standard

accessible exterior route – a route or path of travel that can be used by persons with physical or sensory disabilities outside of a building

accessible interior route – a route or path of travel that can be used by persons with physical or sensory disabilities within a building

accessible route – refers to both an accessible interior route and an accessible exterior route

assembly area – an area where a group of people can gather and be addressed audibly or visually as a group

automatically operable – to be operable without human interaction

barrier - 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

barrier-free - when applied to a building and its facilities, that the building and its facilities can be approached, entered and used by persons with physical or sensory disabilities

bevelled threshold – the sloped edge of a threshold

Braille (grade 1) – the Braille alphabet where each letter has a corresponding Braille sign

building systems - a combination of elements or components that form a complete major division of construction in the design of a building or part of a building (e.g. roofing, corridor, stair systems)

built environment - all public and private sector:

- buildings (including all features that would impede persons with disabilities from

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- fully accessing or using the building or its facilities or circulating within it);
- site development (built elements, external parcels of land bounded by property lines);
- public ways (portions of land such as a street, road, highway, public square or other built area not designated as of a private nature); and
- public parks, trails and playgrounds.

circulation zone – An open area or space identified between fixed buildings, elements or components that is designated for the purposes of unrestricted pedestrian movement

closed fist test – ability to open and close locks and/or doors using one hand held in a fist

collapsible - to suddenly lose force and give way under a specific weight

common-use – areas available for use by the public

community mailbox – a grouping of many individual mailboxes provided to a community within the public realm or public street where mail can be picked up by an individual residents/businesses or may also apply to mailboxes within a multi-residential building or commercial mailbox facility

cross slope – The gradient change in level that runs perpendicular to an accessible route

dressings/ change room - team/guest team locker rooms that are not for the general public, but dedicated to the group using the playing field e.g. hockey arena, basketball court. Generally contains showers, benches and cubby holes, hooks, etc.

disruptive patterns – heavily contrasted multi-directional surface design used in resilient flooring and wall materials that can be confusing to individuals with low vision

elevating device – A mechanical piece of equipment that is used to transport people and equipment vertically over varying levels, in a building or facility

elevator lobby – area in front of an elevator

exterior walk – A hard surface area that is used for exterior pedestrian circulation purposes and may extend beyond a facility's property limits

Note: the Building Code uses exterior walks only to refer to walks that are attached to a building and are not part of a public way. Since the SDC is using a different meaning, it would be helpful to make this clear in the glossary.

firm - a firm surface does not deform under the vertical forces exerted by permitted users

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fitting rooms - a gender based change room generally provided in a clothing store to try on clothes

fixture - a receptacle, plumbing appliance, apparatus or other device that discharges sewage or clear water waste, and includes a floor drain

Note: *Building Code definition* The Building Code does not address or define other types of fixtures and fittings that are addressed in the standard such as pre-manufactured restaurant, retail or library shelving, displays and service fixtures or furnishings.

forward approach – where a person will make use of a service counter, drinking fountain, etc. with themselves (and/or a mobility device) facing the item (service counter, drinking fountain, etc.)

freight elevator – an elevator designed for carrying freight

galley kitchen - A full kitchen in which there are two sides, and one would walk through the centre

guards - a protective barrier, with or without openings through it, that is around openings in floors or at the open sides of stairs, landings, balconies, mezzanines, galleries, raised walkways or other locations to prevent accidental falls from one level to another.

Note: *Building Code definition.*

glazed – to be fitted with glass

handrail – Handrails are typically used to define the horizontal rail installed at stairs, ramps, escalators, elevators and some level changes to guide and assist the users of those elements. Handrails may be attached to a wall or guard. See definition of guard

heritage - any property that is listed in a municipal register as being of cultural heritage value or interest as per section 27 of the Ontario Heritage Act, or designated by the Minister of Culture under section 34.5 of the Ontario Heritage Act, or designated as of national historic significance by the Minister of the Environment for Canada on the advice of the Historic Sites and Monuments Board of Canada

hoistway – A passage through which an object may be raised; for example, an elevator shaft

hotel - floor areas, a floor area or part of a floor area that contains four or more suites and that provides sleeping accommodation for the travelling public or for recreational purposes

Note: *Building Code definition.*

inclined platform lift – a device with a flat space that can fit a wheelchair and can

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transport people up and down inclines (e.g. Stairs)

kitchenette – a small room, not a full working kitchen

lavatory – a washbasin or sink used for personal hygiene

limited spectrum – weak lighting intensity

locker room – locker rooms for the general public. Generally contains showers, benches, lockers, hooks, etc. Sports teams will use a dressing/ change room.

lux – measurement of illuminance

main entrance – primary entrance

mobility devices – includes a range of devices used by persons with disabilities in order to aid mobility and may include wheelchairs, scooters, walkers, canes and other mobility devices

monitored security system – a security system that has a person monitoring the system

newton (N) – measurement of force

non-glare - non-reflective surface

nosing - The horizontally projecting edge of a stair tread or the shield covering this edge

off-gassing - the evaporation of volatile chemicals in non-metallic materials at normal atmospheric pressure. This means that building materials can release chemicals into the air through evaporation

park – land that is privately or publicly held that has been developed for multiple recreational and leisure-time uses

particulates – tiny particles of solid or liquid suspended in gas

Note: *Particulates have the ability to impact an individual's health.*

passenger drop off zones – an area designated for cars to drop off their passengers without idling or parking

pedestrian entrances - public, employee and service entrances

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performance level - the level of performance under which all or part of an existing building functions with respect to its building systems

pictogram – a pictorial sign or symbol representing a word or idea

planar elevation - the level of height of a flat surface

pool lift – a seated device used to lower and raise people into and out of pools

public corridor - a corridor that provides access to an exit from more than one suite

Note: *Building Code definition*

public use – when applied to plumbing fixtures, fixtures in general washrooms of schools, gymnasiums, hotels, bars, public comfort stations and other installations in which fixtures are installed so that their use is unrestricted

Note: *Building Code definition.*

public way - a sidewalk, street, highway, square or another open space to which the public has access, as of right or by invitation, expressed or implied

Note: *Building Code definition.*

ramp – a sloped surface having a gradient between of 1:15 (6.67%), used to overcome changes in ground level

Note:

(1) *Slope should be consistent with standard or remove reference to the gradient range altogether.*

(2) *Ramps incorporate wheeling/walking surfaces, landings, edge protection elements, and handrails.*

random access plans – used in food service facilities and cafeterias where different products are displayed and accessed from independently located stations within the facility rather than a single linear service line

rest areas – an area for someone to sit or stop on an accessible route

return curb – a curb cut which provides a hard, detectable edge on both sides of the curb ramp that prevents people from unintentionally moving off the curb ramp surface and provides directional guidance to people with low or no vision.

riser – the vertical part of a stair step

rolling resistance– the resistance that occurs when a round object rolls on a flat surface, typically caused by the deformation of the object, surface or both

run - the horizontal distance between successive risers on a flight of steps or a staircase

14.0 Glossary and Units

running slope – straight line slope of travel pertaining to a ramp, curb ramp, or walkway

sans serif - a style of typeface that does not have the small feature of a line at the beginning or end of a letter stroke. These small lines are called “serifs”

seasonal affective disorder – a mood disorder in which people who have normal mental health throughout most of the year experience depressive symptoms because of a change of season

sick building syndrome – a cluster of symptoms experienced by individuals, caused by a building with indoor climate problems

specular reflection - the perfect, mirror-like reflection of light from a surface, in which light from a single incoming direction is reflected into a single outgoing direction

service counters – a raised surface on which business is transacted

Note: *Service counters can comprise of either built-in (e.g. kiosks) or loose furniture (e.g. podiums). Examples of service counters include: ATMs, checkout counters, self service kiosks, food vendors, and information counters).*

service lanes (in cafeterias)- a linear service line where different products are displayed and accessed in food service facilities and cafeterias

side approach – where a person will make use of an item e.g. service counter, drinking fountain, etc. with themselves (and/or a mobility device) parallel to the item

service elevator – an elevator designed for carrying large or heavy items, or service people

splash pad – an area for water play that has no standing water usually used by children

stable - a stable surface does not deform or erode under the angular forces of permitted users traveling in a straight line or turning

stage / dais – a raised platform, located inside a building or in the exterior environment that is intended for use in performances and presentations

Note(s):

(1) Traditionally, stages are provided in auditoria, theatres and in lecture halls.

(2) Stages are raised to allow for easy viewing by an audience.

stair system – a set of stairs including its: treads and risers, landings, edge protection elements; and handrails

storage element – a storage unit used for food and/or beverages in a cafeteria and/or restaurant

14.0 Glossary and Units

street - any highway, road, boulevard, square or other improved thoroughfare that is 9 m (29.5 ft.) or more in width, that has been dedicated or deeded for public use and that is accessible to fire department vehicles and equipment

Note: *Building Code definition.*

suite - a single room or series of rooms of complementary use, operated under a single tenancy, and includes

(a) dwelling units,

(b) individual guest rooms in motels, hotels, boarding houses, rooming houses and dormitories, and

(c) individual stores and individual or complementary rooms for business and personal services occupancies.

Note: *Building Code definition.*

text telephone - a device that uses text instead of voice to communicate via telephone lines

threshold - the sill of a door; that forms the bottom of a doorway and offers support when passing through a doorway. Not just wood or stone

touch-type – to type by means of a touch system.

trails and pathways – a path of travel used for recreational purposes

transfer system – a device used to move a person from point to another without substantial agitation of the body

transition zone (escalators) – the flat portion at the top or bottom of moving escalator stairs

transition threshold (escalators) - the horizontal edge marking the top and bottom of an escalator

tread - the horizontal upper surface of a step in a stair, on which the foot is placed

truncated domes – a type of textured floor surface material used as a detectable warning surface consisting of raised discs set in a regular pattern that can be detected underfoot or using a cane or mobility device

type A parking space - mobility-aided - or people who need larger parking spaces for larger vehicles (such as vans), as well as clear access space for entering and exiting the vehicle (such as lifts to assist wheeled mobility aids)

type B parking space - distance-limited - For people who have difficulty travelling a great distance to the building entrance, but do not necessarily have a larger vehicle. There is also a need for adequate access to exit the vehicle by opening the door

14.0 Glossary and Units

sufficiently wide to manage a mobility aid such as a walker or manual wheelchair

understandable – capable of being understood by the intended audience

universal toilet room – a fully accessible room that contains at a minimum a water closet and a lavatory

utility room – a room used for keeping large appliances (washer/dryer) and/or cleaning supplies

vestibule – an enclosed area between doors

washroom - a facility provided to allow use of a toilet by members of the public, or by patrons or customers. At a minimum, a washroom can be a single unit featuring a toilet and hand basin for hand washing. Washrooms can also be larger facilities, which may also include bathing facilities or showers, changing rooms and baby facilities

water closet – a toilet

wayfinding - encompasses all of the ways in which people and animals orient themselves in physical space and navigate from place to place

wear resistant – resistance to wear due to hard particles or hard protuberances forced against and moving along a solid surface

14.2 Units of Measure

Measure	Unit
Time	s - seconds
Force	N – newton kN – kilonewtons lb – pound
Length	mm – millimetre in – inches m - metre ft – foot yd - yard
Illuminance	lx – lux

Appendix A Committee Members

(This appendix item is for information only.)

This is referenced by Clause 1.2.

ACCESSIBLE BUILT ENVIRONMENT STANDARDS DEVELOPMENT COMMITTEE MEMBERS

CHAIR

Ron Meredith Jones

VOTING MEMBERS

A. Disability Community Representatives

1. Jo-Ann Bentley, Canadian Hearing Society (Toronto)
2. Brian Dunne, Participation House Support Services – London and Area (London)
3. Geoffrey Fernie, Toronto Rehabilitation Institute (Toronto)
4. Joan Gallagher-Bell, Individual (Burlington)
5. David Grightmire, Individual (Kingston)
6. Collinda Joseph, Individual (Stittsville)
7. Barry McMahon, Individual (Ottawa)
8. Doug Millman (Burk's Falls) Individual
9. Brent Page, Ontario March of Dimes/March of Dimes Canada (Toronto)
10. Greg Papp, Individual (Toronto)
11. Rev. Charles Payne, Individual (Windsor)
12. Scott Pigden, Individual (Oshawa)
13. Warren Rupnarain, Individual (Toronto)
14. Suzanne Share, Individual (Toronto)
15. Lynda Staples, Canadian Paraplegic Association (Toronto)
16. Richard Théberge, Individual (Ottawa)
17. Catherine Topping, MS Society (St. Thomas)
18. Stacey Headey Komenda, Canadian National Institute for the Blind (St. Catharines)

B. Representatives of Private/Not for Profit Organizations

Private Sector:

19. Rocky Cerminara, Ontario Society of Professional Engineers (London)
20. Pamela Cluff, Ontario Association of Architects (Toronto)
21. Randal Froebelius, Building Owners and Managers Association (Toronto)
22. Stuart Johnston, Ontario Chamber of Commerce (Toronto)
23. Terry Mundell, Greater Toronto Hotel Association (Erin)

Appendix A List of Resources

24. Susan Ruptash, Individual (Toronto)
25. Albert Schepers, Ontario Home Builders' Association (Windsor)

Not-for-Profit:

26. Wayne Morgan, Community Heritage Ontario (Sutton West)
27. Lindsey Reed, Social Housing Services Corporation (Toronto) Alt: Hugh Lawson

C. Broader Public Sector and Municipal Representatives

Broader Public Sector:

28. Tony Humphries, Ontario Hospital Association (Toronto)
29. Bob Mahony, Ontario School Boards' Association and the Ontario Catholic School Trustees' Association (St. Catharines)
30. Richard Merrill, Ontario Professional Planners Institute (Toronto)
31. Jule Mycan, Council of Ontario Universities (Toronto)
32. Mike Walter, Ontario Long-Term Care Association (St. Catharines)

Municipal:

33. Chuck Donohue, City of Toronto (Toronto)
34. Leo Grellette, Ontario Building Officials Association and the Large Municipalities Chief Building Officials (Vaughan)
35. Susan Reed Tanaka, Toronto Transit Commission (Toronto)
36. Diana Simpson and Wendy Goss, Association of Municipalities of Ontario (Toronto)

ADVISORY MEMBERS

Ontario Ministry Advisors:

37. Mary Bartolomucci, Ministry of Energy and Infrastructure
38. Israel Lyon, Ministry of Economic Development and Trade
39. Robert Taylor, Ministry of Municipal Affairs and Housing
40. Coty Thompson, Ministry of Health and Long-Term Care

Disability Advisors:

41. Robert Bailey, Accessibility Standards Advisory Council (Amherstburg)
42. David Borthwick, Accessibility Standards Advisory Council (Oakville)
43. Nancy Bradshaw, Women's College Hospital, Environmental Health Clinic (Toronto)
44. Patricia Longmuir, Get Active Now (Port Perry)

Appendix A List of Resources

Appendix B List of Resources

(This appendix item is for information only.)

This is referenced by clause 1.3.

The following is the list of resources consulted by the Accessible Built Environment Standards Development Committee:

Research:

1. Betty Dion Enterprises Ltd and DesignAble Environments Inc., *ABE-SDC Inter-jurisdictional Review of Accessible Built Environment Standards*, completed for the Accessible Built Environment Standards Development Committee, 2007
2. Steinfield, E., Maisel, J., and Feathers, *Standards and Anthropometry for Wheeled Mobility*, compiled by Center for Inclusive Design and Environmental Access (IDEA). Final Report, United States, 2005
<http://www.ap.buffalo.edu/idea/Anthro/FinalAccessReport.htm>

Regulatory Standards:

3. Ministry of Municipal Affairs and Housing, Building and Development Branch , *2006 Building Code Compendium, (Ontario Regulation 350/06), Volume 1 (Building Code Act and Regulations) and Volume 2 (Appendices and Supplementary Guides)*, Queen's Printer for Ontario 2006, 2006

Non-Regulatory Standards and Guidelines:

4. American Society of Heating, Refrigerating, and Air-Conditioning Engineers, *Ventilation for Acceptable Indoor Air Quality* (Standard 62-1989), United States, 1989.
5. American Society for Testing and Materials, *Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment* (ASTM F1951 – 08), United States, 2008
6. Canadian Standards Association, *Accessible Design for the Built Environment*, (B651-04), Toronto, 2004
7. Canadian Standards Association, *Children's Playspaces and Equipment*, (Z614-07), Toronto, 2007

Appendix B List of Resources

8. Canada Post, *Delivery Planning Standards Manual*, Ottawa, 2004
9. Illuminating Engineering Society, *Lighting and the Visual Environment for Senior Living* (ANSI/IES RP-28-07), United States, 2007
10. The Canadian National Institute for the Blind (CNIB), Ontario Division, *Clearing Our Path*, Ontario, 1998
11. United States Access Board, *American Disability Act (ADA) Requirements*, United States, September 2002
<http://www.access-board.gov/adaag/html/adaag.htm>
12. United States Department of Agriculture, Forest Service, *Accessibility Guidebook for Outdoor Recreation and Trails*, United States, 2006.

Other Publications consulted:

13. City of Winnipeg MB, *2006 City of Winnipeg Accessibility Design Standards*, 2006
http://www.winnipeg.ca/ppd/ud/4.0/4.1/4.1.1_space_reach.stm
14. City of Windsor ON, *Accessibility Standards*, November 6, 2006
<http://www.citywindsor.ca/DisplayAttach.asp?AttachID=6764>
15. City of London ON, *Facility Accessibility Design Standards*, November 1 2007
<http://www.london.ca/d.aspx?s=/Accessibility/accessibilitystandards.htm>
16. J. Panero and M. Zelnik, *Human Dimensions and Interior Space*, Whitney Library of Design, New York, 1979

Appendix C Building Code Cross References

Appendix C Building Code Cross References

(This appendix item is for information only.)

Building Code cross reference for Clause 11.4.3.1 Pools, Spas, Splashpads – General

(The following is an excerpt from the 2006 Building Code (Ontario Regulation 350/06.))

Section 3.11. Public Pools

3.11.1. General

3.11.1.1. Application

- (1) This Section applies to every *public pool*.
- (2) This Section applies to the design and construction of site assembled and manufactured pools that are intended for use as *public pools*.
- (3) Where material alterations to a *public pool* or the equipment installed in a *public pool* affect the bottom slope, the water volume or the capacity of the *recirculation system*, the adversely affected portions shall comply with the requirements of this Division.
- (4) Where material alterations or repairs concern any pool fitting passing water and/or air in or out of the pool tank, the affected fitting shall comply with Sentences 3.11.8.1.(14) to (20).

3.11.2. Designations of Public Pools

3.11.2.1. Pool Designations

- (1) Every *public pool* shall be designated as being either a Class A pool or a Class B pool in accordance with Sentence (2) or (3).
- (2) A Class A pool is a *public pool* to which the general public is admitted or that is,
 - (a) operated in conjunction with or as a part of a program of an educational, instructional, physical fitness or athletic institution or association, supported in whole or in part by public funds or public subscription, or
 - (b) operated on the premises of a *recreational camp*, for use by campers and their visitors and camp personnel.
- (3) A Class B pool is a *public pool* that is,
 - (a) operated in conjunction with six or more *dwelling units, suites*, single family residences, or any combination of them for the use of occupants or residents and their visitors,

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- (b) operated in conjunction with a mobile home park for the use of residents or occupants and their visitors,
- (c) operated on the premises of a *hotel* for the use of its guests and their visitors,
- (d) operated on the premises of a *campground* for the use of its tenants and their visitors,
- (e) operated in conjunction with a club for the use of its members and their visitors, or
- (f) operated in conjunction with an establishment or institution classified in Table 3.1.2.1. as,
 - (i) Group B, Division 1, *major occupancy*, or
 - (ii) Group B, Division 2 or 3, *major occupancy*, for the use of residents or occupants and their visitors.

3.11.3. Pool and Pool Deck Design and Construction Requirements for all Class A and Class B Pools

3.11.3.1. Construction Requirements

(1) Except as otherwise required in Subsections 3.11.4., 3.11.5., 3.11.6., and 3.11.7. or otherwise exempted in Sentences (2) and (3), Class A pools and Class B pools shall be designed and constructed to comply with Sentences (2) to (25).

(2) Where a Class B pool is constructed for use solely in conjunction with a club, child care facility, *day camp* or establishment or institution for the care of persons who are infirm, aged or in custodial care, the pool shall be exempt from the requirements of Clause (9)(a) and Sentences (13) and (14).

(3) Where a Class B pool is constructed for use solely in conjunction with an establishment or institution for the treatment of persons who are disabled or ill, the pool shall be exempt from the requirements of Sentences (6) and (7), Clause (9)(a) and Sentences (13) and (14).

(4) A *public pool* shall be constructed to have a water depth of not less than 750 mm except for,

- (a) a *modified pool*,
- (b) a *wave action pool*,
- (c) a pool for therapeutic use,
- (d) a beach entry ramp, and
- (e) a pool described in Sentence 3.11.5.1.(1).

(5) The beach entry ramp permitted in Clause (4)(d) shall be protected with permanent barriers between 900 mm to 1200 mm along the *pool deck* to prevent entry into the pool until the minimum water pool depth is 750 mm.

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(6) Except for a *modified pool*, a *wave action pool* and a pool used exclusively for scuba diving, the slope of the bottom of any portion of a *public pool* shall not exceed,

- (a) 8% where the water depth is 1 350 mm or less,
- (b) 33% where the water depth is more than 1 350 mm and less than 2 000 mm, and
- (c) 50% where the water depth is 2 000 mm or more.

(7) Except for a *modified pool* and *wave action pool*, where the slope of any portion of the bottom of a *public pool* is more than 8%, the walls of the pool shall be equipped with recessed fittings to which a safety line supported by buoys can be attached across the surface of the water and the recessed fittings shall be installed at a horizontal distance of at least 300 mm measured from the vertical projection of the top of the slope in the direction of the shallow end of the pool.

(8) Except for a *modified pool*, *wave action pool* and a pool described in Sentence 3.11.5.1.(1), the side and end walls of a *public pool* shall be vertical from the top of the walls to within 150 mm of the bottom except at steps or recessed ladders or in water depths of 1 350 mm or more.

(9) Except for a *modified pool* and *wave action pool* and except as provided in Sentence (11), a *public pool* shall be surrounded by a hard-surfaced *pool deck* that shall,

- (a) except for a pool described in Sentence 3.11.5.1.(1), be not less than 1 800 mm wide and provide at least 900 mm width of clear passage,
 - (i) behind any *diving board* and its supporting structure, and
 - (ii) between any column piercing the deck and the edge of the pool or between the column and outer perimeter of the *pool deck*,
- (b) in the case of an *outdoor pool*, be sloped away from the pool to waste drains or to adjacent lower ground at a slope of between 2% and 4%, and
- (c) in the case of an *indoor pool*, be impervious and sloped away from the pool to waste drains at a slope of between 1% and 4%.

(10) Where a *public pool* is constructed with a ledge, the ledge shall,

- (a) be placed only in parts of the pool where the water depth is 1 350 mm or more,
- (b) be not more than 200 mm wide,
- (c) be at least 1 000 mm below the water surface,
- (d) where located on the side of the pool, be gradually tapered towards the shallow end of the pool in such a manner as to prevent a harmful obstruction, and
- (e) have a band of contrasting colour along the entire juncture of the side and top of the ledge.

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(11) Notwithstanding Sentences (12) to (16), where a *public pool* is constructed on any level surface with walls rising above that surface and has a constant water depth not exceeding 1 100 mm and a water surface area not exceeding 100 m², the *pool deck* may be an elevated platform surrounding the pool if it has,

- (a) an unobstructed width of not less than 900 mm,
- (b) a height of at least 75 mm above grade or pavement elevation,
- (c) 6 mm wide openings for drainage, and
- (d) a non-slip surface that is capable of being kept clean and disinfected.

(12) Except for a *modified pool* and *wave action pool*, where a *pool deck* projects over the water surface, the projection shall not exceed 50 mm.

(13) Except for a *modified pool* and *wave action pool*, the *pool deck* shall be separated from any adjacent spectator area or gallery and from any spectator access to such area or gallery by a gate or other barrier.

(14) Except for a *modified pool* and *wave action pool*, the perimeter of the *pool deck* shall be clearly delineated by painted lines or other means where any area contiguous to the *pool deck* may be confused with the deck.

(15) Perimeter drainage shall be provided where necessary to prevent surface run-off from draining onto the *pool deck*.

(16) Except for a *modified pool*, one or more hose bibs shall be installed near the perimeter of the *pool deck* in locations convenient for flushing the *pool deck*.

(17) Except for a *modified pool* and *wave action pool*, where access to the pool enclosure is over any surface that is not subject to regular cleaning and sanitizing, a foot spray to wash feet by means of a spray running freely to waste shall be provided at each such access.

(18) Except for a *modified pool* and *wave action pool*, at least one ladder or set of steps shall be provided in both the deep and shallow areas of a *public pool* for entry into and egress from the pool water.

(19) The *pool deck*, the submerged parts of a *public pool*, the walls or partitions adjacent to a *pool deck* and the pavement or floor adjacent to a *pool deck* shall have surfaces that permit thorough cleaning.

(20) Except for markings for safety or competition purposes, submerged surfaces in *public pools* shall be finished white or light in colour.

(21) Except in a *modified pool*, a black disc 150 mm in diameter on a white background shall be affixed to the bottom of a *public pool* within the area of its greatest depth.

(22) A *public pool* shall be equipped with lockable doors or other barriers capable of preventing public access to the *pool deck*.

(23) Except for a *modified pool*, *wave action pool* or a pool installed at a *recreational camp*, a Class A pool shall be provided with,

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- (a) where the water surface area is greater than 150 m² but not greater than 230 m², at least one lifeguard control station, and
- (b) where the water surface area is greater than 230 m², at least two lifeguard control stations.

(24) Except for a *modified pool*, every *public pool* shall display on the deck clearly marked figures, not less than 100 mm high, that set out,

- (a) the water depths indicating the deep points, the breaks between gentle and steep bottom slopes and the shallow points,
- (b) the words **SHALLOW AREA** at one or more appropriate locations, and
- (c) where the water depth exceeds 2 500 mm, the words **DEEP AREA** at one or more appropriate locations.

(25) Except for a *modified pool* and a pool to which Sentence 3.11.5.1.(4) applies, every *public pool* having a maximum water depth of 2 500 mm or less shall display a warning notice posted in a location clearly visible to divers on which is printed in letters at least 150 mm high, the words **CAUTION — AVOID DEEP DIVES** or **SHALLOW WATER — NO DIVING**.

(26) Except where no space is provided between ladder treads and the pool wall, the space between the pool wall and submerged portions of any treads of a ladder for entry into and egress from the water shall be not more than 150 mm and not less than 75 mm.

3.11.4. Public Pools Equipped with Diving Boards or Diving Platforms

3.11.4.1. Diving Boards or Platforms

(1) No *diving board* or *diving platform* shall be installed in a *public pool* unless the requirements of Sentences (5) to (17) are met but the requirements for a *diving platform* do not apply to a *starting platform*.

(2) No *diving board* or *diving platform* shall be installed in a *modified pool* or a *wave action pool*.

(3) Where a *public pool* is equipped with a *diving board* or a *diving platform*, the board or platform shall have a non-slip surface.

(4) Where a *diving board* or a *diving platform* in a *public pool* is more than 600 mm above the water surface, the board or platform shall be equipped with one or more adjacent handrails.

(5) Where a *public pool* is equipped with a *diving board* or a *diving platform* not more than 3 m in height above the water surface, the pool shall be designed and constructed in conformance with Sentences (6) to (15).

(6) The depth of water in the area directly below a horizontal semi-circle in front of a *diving board* or *diving platform* having a radius of 3 m measured from any point on the front end of the board or platform shall not be less than,

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- (a) 2 750 mm, where a board is 600 mm or less in height above the water surface,
- (b) 3 m, where a board or platform is greater than 600 mm but not more than 1 000 mm in height above the water surface, and
- (c) 3.65 m, where a board or platform is greater than 1 000 mm but not more than 3 m in height above the water surface.

(7) Except as permitted in Sentence (8), the water depth in a *public pool* shall be at least 1 350 mm at the horizontal arc having a radius of 9 m measured from any point on the front end of the *diving board* or *diving platform* and intersecting the vertical projections of the walls of the pool.

(8) Where a Class B pool is equipped with a *diving board* 600 mm or less in height above the water,

- (a) the water depth shall be at least 1 350 mm at the horizontal arc having a radius of 7.5 m measured from any point on the front end of the *diving board*, and
- (b) a warning notice, on which is printed in letters at least 150 mm high, the words **DANGER — AVOID DEEP OR LONG DIVES**, shall be posted in a location clearly visible to divers.

(9) The slope of the bottom of a *public pool* having a *diving board* or *diving platform* shall not change by more than 17% where the water depth is less than the applicable depth set out in Sentence (6) and greater than the depth set out in Sentence (7) or (8), as applicable.

(10) The horizontal distance between the vertical projection of the centre line of a *diving board* or *diving platform* and the vertical projection of the centre line of another board or platform shall be at least 2 750 mm.

(11) The horizontal distance between the centre line of a *diving board* or *diving platform* and the vertical projection of the closest side or any ledge on the closest side of a *public pool* shall be at least,

- (a) 3 m, where a *diving board* or *diving platform* is 1 000 mm or less in height above the water surface, and
- (b) 3.6 m, where a *diving board* or *diving platform* is greater than 1 000 mm in height above the water surface.

(12) A *diving board* or a *diving platform* 600 mm or less in height above the water surface shall project over the water a horizontal distance of at least 900 mm from the vertical projection of a pool wall under it.

(13) A *diving board* greater than 600 mm in height above the water surface shall project over the water a horizontal distance of at least 1 500 mm from the vertical projection of the pool wall under it.

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(14) A *diving platform* greater than 600 mm in height above the water surface shall project a horizontal distance of at least 1 200 mm from the vertical projection of the pool wall under it.

(15) The space above a *diving board* or *diving platform* shall be unobstructed and shall consist of at least,

(a) a space having a width of 2 500 mm on each side of the centre line of the board or platform, a length equal to the sum of the horizontal distance the board or platform projects over the water plus 3 m, and a height of,

(i) 3.65 m above a *diving board* 3.65 m or less in length,

(ii) 5 m above a *diving board* greater than 3.65 m in length, or

(iii) 3 m above a *diving platform*, and

(b) the space below the planes originating from the front and sides of the uppermost horizontal plane of the space determined under Clause (a) and sloping downwards at 30° from the horizontal.

(16) A *diving board* or *diving platform* greater in height than 3 m above the water surface shall be equipped with a gate, barrier or other device capable of preventing access to the *diving board* or *diving platform*.

(17) Where a *public pool* is to be equipped with *diving boards* or *diving platforms* greater than 3 m in height above the water surface, the design of the *diving boards* or *diving platforms* and the corresponding water depths and clearances shall be in accordance with the “Rules and Laws Governing Swimming, Diving, Water Polo and Synchronized Swimming” published by FINA.

3.11.5. Ramps into Public Pools in Group B, Division 2 or 3, Major Occupancies

3.11.5.1. Ramps into Pools

(1) Notwithstanding Sentences 3.11.3.1.(4) and (7) and Clause 3.11.3.1.(9)(a), where a *public pool* is constructed in a *building* containing a Group B, Division 2 or 3, *major occupancy*, and has a water depth not exceeding 1 500 mm and a water surface area not exceeding 100 m², the *pool deck* contiguous to not more than 50 per cent of the total perimeter of the pool may be replaced by one or more ramps that will permit a bather seated in a wheelchair to enter the water with or without the wheelchair.

(2) Where a *public pool* has one or more ramps as described in Sentence (1), the pool shall be designed and constructed to comply with Sentences (3) to (8).

(3) A ramp referred to in Sentence (1) shall have,

(a) a handrail having a height between 800 mm and 900 mm along each side of the ramp and running parallel to the slope of the ramp,

(b) a width of at least 1 100 mm,

(c) a curb or other means to prevent a wheelchair from falling off the side of the ramp,

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(d) surface finishes capable of being kept clean, sanitary and free from slipperiness, and

(e) a landing at the bottom at least 1 500 mm in length and the same width as the ramp.

(4) Notwithstanding Sentence 3.11.3.1.(25), a warning notice, on which is printed in letters at least 150 mm high, the words **CAUTION — NO DIVING**, shall be posted conspicuously on each wall or fence line enclosing the pool.

(5) There shall be a curb along the perimeter of the pool except at steps, ladders and ramp entrances.

(6) The curb shall have,

(a) a height of 50 mm,

(b) rounded edges,

(c) a coved base, and

(d) a raised nosing at the top to serve as a fingerhold for a bather in the water.

(7) Where a ramp that is not submerged is adjacent to the pool wall and is used for access to the water, the pool shall be constructed so that,

(a) the landing at the bottom of the ramp is at least 450 mm but not more than 550 mm below the top of the wall separating the ramp from the pool,

(b) the landing is equipped with a floor drain at its lowest point,

(c) the top of the wall between the pool and the ramp is at least 250 mm and not more than 300 mm in width,

(d) the *pool deck* is capable of accommodating a movable barrier separating the deck from the ramp,

(e) the water depth at the landing shall be accurately and clearly marked at the landing in figures at least 100 mm high on the top of the wall separating the pool from the ramp, and

(f) the ramp shall have a slope not exceeding 8%.

(8) Where a submerged ramp is adjacent to the pool wall and is used for access to the water, the pool shall be constructed so that,

(a) the water depth at the bottom of the ramp is at least 600 mm and not greater than 900 mm,

(b) a hard-surfaced area that is at least 750 mm wide is contiguous to the entire length of the part of the submerged ramp that pierces any part of the deck,

(c) the area described in Clause (b) is capable of accommodating a movable barrier that separates the area from the deck,

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(d) the finishes in submerged portions of the ramps and curbs are different in colour or shade from each other and from that of the pool walls and bottom, and

(e) the submerged ramp has a slope not exceeding 11%.

3.11.6. Modified Pools

3.11.6.1. Construction Requirements

(1) A *modified pool* is exempt from Sentences (4) to (9), (12), (13), (14), (16), (17), (18), (21), (23), (24) and (25) of Article 3.11.3.1. and Sentence 3.11.8.1.(12).

(2) A *modified pool* shall be designed and constructed to comply with Sentences (3) to (9).

(3) A *modified pool* and its *pool deck* shall be constructed of hard-surfaced material that permits thorough cleaning.

(4) The slope of the bottom of any portion of a *modified pool* shall not exceed 8%.

(5) The depth of the water in any portion of a *modified pool* shall not be more than 1 800 mm.

(6) A *modified pool* shall be surrounded on all sides by a hard-surfaced *pool deck* that shall,

(a) be at least 3 m wide,

(b) have a continuous crest surrounding the pool at least 100 mm above the pool water surface, and

(c) be sloped to shed water from the crest to the outer perimeter of the *pool deck*.

(7) A *modified pool* shall be provided with two or more drain fittings covered with protective grilles with openings having an aggregate area of at least 10 times the internal cross-sectional area of the outlet pipe or pipes connected to the *recirculation system* that is capable of completely draining the pool.

(8) Provision shall be made for lifeguard control stations adjacent to the edge of the water at intervals of not more than 60 m.

(9) The bottom of a *modified pool* shall be marked with continuous black contour lines,

(a) 150 mm wide located where the water depth is 600 mm and

(b) 300 mm wide located where the water depth is 1200 mm.

3.11.7. Wave Action Pools

3.11.7.1. Construction Requirements

(1) A *wave action pool* is exempt from Sentences (4) to (9), (12) to (14), (17), (18) and (23) of Article 3.11.3.1. and Sentence 3.11.8.1.(12).

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(2) A *wave action pool* shall be designed and constructed to comply with Sentences (3) to (11).

(3) The slope of the bottom of any portion of a *wave action pool*,

(a) shall not exceed 8% where the still water depth is less than 1 000 mm, and

(b) shall not exceed 11% where the still water depth is 1 000 mm or more.

(4) The walls of a *wave action pool* shall be vertical from the water surface to within 150 mm of the bottom.

(5) There shall be a hard-surfaced *pool deck* at least 3 m wide immediately adjacent to the pool wall at the shallow end of the pool and at least 1 500 mm wide immediately adjacent to all walls of the pool.

(6) Provision shall be made for two or more lifeguard control stations on each side of the *pool deck* adjacent to which the still water depth exceeds 1 000 mm.

(7) Sets of steps or ladders recessed into pool side walls and having continuous vertical grab bars on each side of them shall be located at intervals of not more than 7.5 m along portions of the pool where the still water depth exceeds 1 000 mm, except that no steps or ladders shall be located within 3 m of the corners at the deep end of the pool.

(8) Except at recessed steps or ladders, the *pool deck* along each side of a *wave action pool* adjacent to which the water depth is 2300 mm or less shall be equipped with a barrier supported by posts or a wall that,

(a) is 1 000 mm in height,

(b) is located 1 000 mm or less from the side of the pool, and

(c) has warning notices affixed to the barrier or wall at intervals not exceeding 7.5 m signifying clearly that jumping and diving are prohibited along the sides of the pool.

(9) Skimming devices shall be designed and suitably located to remove surface film when no waves are induced in a *wave action pool*.

(10) A system capable of deactivating the wave-making equipment shall be installed with readily accessible push buttons located on the *pool deck* not more than 30 m apart, adjacent to each side and the deep end of the pool.

(11) A *wave action pool* shall be equipped with a first-aid room located within 50 m of the pool.

3.11.8. Recirculation for Public Pools

3.11.8.1. Recirculation Systems

(1) Every *public pool* shall be equipped with a *recirculation system*.

(2) For the purposes of this Subsection, the water in a *public pool* and its *recirculation system* shall be deemed not to be *potable water*.

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(3) The water in a *public pool* and its *recirculation system* shall be separated from the *potable* water supply and from the sewer or drainage system into which it drains by *air gaps* or other devices that prevent,

- (a) the water in the pool or its *recirculation system* from flowing back into the *potable* water supply, and
- (b) the water in the sewer or *drainage system* from flowing back into the pool or its *recirculation system*.

(4) The *recirculation system* of a *public pool* shall be designed, constructed and equipped to comply with Sentences (5) to (20).

(5) The *recirculation system* of a *public pool* shall be capable of filtering, disinfecting and passing through the pool each day a volume of water of at least,

- (a) in the case of a Class A pool, other than a *modified pool* or a *wave action pool*, six times the total water volume of the pool,
- (b) in the case of a Class B pool, other than a *wave action pool*, four times the total water volume of the pool,
- (c) in the case of a *modified pool*, three times the total water volume of the pool, and
- (d) in the case of a *wave action pool*, six times the total water volume of the pool.

(6) A *recirculation system* shall be equipped with a flow meter registering the rate of water flow.

(7) All pools shall be provided with automatic *make-up water* devices and provided with water meters to register the volume of all *make-up water* added to a *public pool* or its *recirculation system*.

(8) Equipment shall be installed to continuously disinfect the water in a *public pool* by means of,

- (a) a chlorination or hypochlorination system provided with a chemical controller for regulating the dosage of chlorine and capable of providing not less than,
 - (i) in the case of an *outdoor pool*, other than a *wave action pool*, 300 g of chlorine per day per 10 000 L of total pool capacity,
 - (ii) in the case of an *indoor pool*, other than a *wave action pool*, 200 g of chlorine per day per 10 000 L of total pool capacity,
 - (iii) in the case of an *outdoor wave action pool*, 1 200 g of chlorine per day per 10 000 L of total pool capacity, and
 - (iv) in the case of an *indoor wave action pool*, 800 g of chlorine per day per 10 000 L of total pool capacity, or
- (b) a bromination system capable of maintaining in the pool water a total bromine residual of 3 mg/L.

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(9) Chlorination equipment for a *public pool* shall contain a mechanism whereby the chlorine feed shall automatically terminate whenever the *recirculation system* ceases to supply *clean water* to the pool.

(10) All exposed *potable* water piping and chlorine piping within a *public pool* water treatment *service room* shall be colour coded by means of,

- (a) painting the entire outer surface of the piping, or
- (b) coloured bands at least 25 mm in width that are spaced along the piping at intervals of not more than 1200 mm (47 in).

(11) The colour coding referred to in Sentence (10) shall be yellow for chlorine and green for *potable* water.

(12) Except for a *modified pool* and *wave action pool*, a *public pool* shall be equipped with overflow gutters or surface skimmers connected to the *recirculation system* that are capable of removing surface film from the surface of the water and withdrawing each day and discharging to the waste drains up to 15 per cent of the total volume of pool water.

(13) A *public pool* shall be equipped with *clean water* inlets arranged in conjunction with surface skimmers or overflow gutters to provide uniform distribution and circulation of *clean water*.

(14) Except as permitted in Sentence (19), all fittings at or below the water surface that allow water and/or air to be passed to or from the *public pool* shall,

- (a) have a maximum opening of 7 mm in one direction, and
- (b) be securely held in place by corrosion resistance fastening that require a tool for removal and are galvanically compatible with the fittings and grilles or covers.

(15) Except as provided in Sentence 3.11.6.1.(7) for a *modified pool*, all fittings below the water surface that provide suction or gravity flow in a *public pool* shall,

- (a) be provided with a minimum of two suction or gravity outlets interconnected to a full size manifold, and
- (b) be separated by a clear distance of not less than 1 200 mm.

(16) Except as provided in Sentence 3.11.6.1.(7) for a *modified pool*, water in all *public pools* shall be capable of being emptied through the pool drains in twelve hours or less.

(17) Except as provided in Sentence 3.11.6.1.(7) for a *modified pool*, openings in suction or gravity fittings shall,

- (a) be such that the flow of water does not exceed 0.45 m/s and the velocity is calculated assuming all possible sources of suction flow are present at one time, and

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(b) be such that every suction fitting located within 1 000 mm of the water surface, except for skimmers and gutter fittings, contain openings with a minimum aggregate area of 0.2 m².

(18) Except for skimmers and gutters, all submerged suction and gravity fittings shall be clearly and permanently marked with a 50 mm wide band in a contrasting colour.

(19) Fittings returning water and/or air to the pool tank that are located within 300 mm (12 in) of the water surface are permitted to have openings with one dimension more than 7 mm but shall contain no openings more than 25 mm in diameter.

(20) Submerged skimmer equalizer fittings and vacuum fittings are not permitted in *public pools*.

3.11.9. Dressing Rooms, Locker Facilities and Plumbing Facilities for all Public Pools

3.11.9.1. Dressing Rooms and Sanitary Facilities

(1) Except as otherwise permitted in Sentences (2) and (3), every *public pool* shall be equipped with dressing rooms, locker rooms, shower heads, water closets, urinals, lavatories and drinking fountains that shall be designed, constructed and equipped to comply with Sentences (4) to (14).

(2) Where a Class A pool is installed on the premises of a *recreational camp*, dressing rooms, locker rooms, shower heads, water closets, urinals, lavatories and drinking fountains are not required if,

(a) dressing, water closet and shower facilities are conveniently available for bathers elsewhere on the premises, and

(b) foot sprays are provided in accordance with Sentence 3.11.3.1.(17).

(3) Where a Class B pool is installed, dressing rooms, locker rooms, shower heads, lavatories, water closets, drinking fountains and urinals are not required if,

(a) dressing, water closet and shower facilities are conveniently available elsewhere on the premises for bathers when the pool is open for use, and

(b) foot sprays are provided in accordance with Sentence 3.11.3.1.(17).

(4) The minimum number of water closets, urinals and lavatories shall be determined from Article 3.7.4.3. and Table 3.7.4.3.C. for an *occupant load* based on,

(a) the formula in Sentence 3.1.17.3.(1) for all *public pools*, except a *wave action pool*, or

(b) the formula in Sentence 3.1.17.3.(2) for a *wave action pool*.

(5) A minimum of one shower head shall be provided for every 40 bathers.

(6) Where dressing and locker rooms, water closets and urinals are provided in conjunction with a *public pool*, they shall be located in such a manner that bathers, after using them, shall pass through or by a shower area to reach the *pool deck*.

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(7) All shower heads shall be supplied with *potable* water at a pressure of at least 140 kPa.

(8) The shower water system shall have one or more tempering devices capable of being adjusted to ensure that water supplied to shower heads does not exceed 40°C.

(9) Floors in washrooms, shower areas and passageways used by bathers shall slope to waste drains at not less than 1% and shall be of hard surfaced materials that do not become slippery when wet.

(10) Joints between floors and walls shall be covered in areas described in Sentence (9) and in dressing and locker rooms.

(11) Hose bibs shall be provided in safe locations convenient for flushing down the walls and floors in washrooms, shower areas and passageways used by bathers.

(12) *Partitions* or walls shall be provided to ensure privacy of dressing rooms, washrooms and shower areas.

(13) The bottom of interior *partitions* in dressing rooms and washrooms shall be between 250 mm and 350 mm above the floor.

(14) Dressing and locker room floors shall have non-slip surfaces that permit convenient and thorough cleaning and disinfecting.

3.11.10. Emergency Provisions for All Public Pools

3.11.10.1. Lighting and Emergency Provisions

(1) Except as provided in Sentences (2) and (3), rooms and spaces used by the public in conjunction with a *public pool* shall be capable of illumination to levels in compliance with Subsection 3.2.7.

(2) Dressing rooms, locker rooms, shower rooms, washrooms and passageways shall have an illumination level of at least 200 lx at floor level.

(3) An *indoor pool* or an *outdoor pool* that is intended to be open for use after sundown shall be equipped with a lighting system,

(a) that will maintain at any point on the *pool deck* and on the pool water surface an illumination level of at least,

(i) 200 lx in the case of an *indoor pool*, and

(ii) 100 lx in the case of an *outdoor pool*, and

(b) that makes the underwater areas of the pool clearly visible from any point on the *pool deck*.

(4) An *outdoor pool* that is intended to be open for use after sundown and an *indoor pool* shall be equipped with an independent emergency lighting system that automatically operates whenever the normal electrical power supply to a *public pool* lighting system fails.

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(5) The independent emergency lighting system required in Sentence (4) shall be capable of illuminating the *pool deck*, washroom, shower, locker areas, pool water surface and all means of egress to a level of at least 10 lx.

(6) An emergency power supply for the emergency lighting system required in Sentence (4) shall comply with Sentences 3.2.7.4.(1) and 3.2.7.7.(1) and Article 3.2.7.5.

(7) An emergency telephone directly connected to an emergency service or to the local telephone utility shall be installed adjacent to the *pool deck* of every Class A pool.

(8) A telephone accessible for emergency use shall be installed for every Class B pool within 30 m of the pool.

(9) Every *wave action pool* shall have a public address system that shall be clearly audible in all portions of the pool.

(10) Every *wave action pool* shall have a communication system for the use of persons engaged in supervision or operation of the pool that shall be interconnected with each lifeguard control station, the first-aid room and the bather admission control centre.

(11) The public address system and the communication system described in Sentences (9) and (10) shall be interconnected.

(12) All recirculating pumps used in a *public pool* shall be capable of being deactivated by an emergency stop button clearly labelled and located at,

- (a) a Class A pool beside the telephone that is required in Sentence (7), and
- (b) a Class B pool on the deck area.

(13) The emergency stop button in Sentence (12) shall when used activate an audible and a visual signal located by the emergency stop.

(14) An emergency sign containing the words **IN THE EVENT OF AN EMERGENCY PUSH EMERGENCY STOP BUTTON AND USE EMERGENCY PHONE, AUDIBLE AND VISUAL SIGNAL WILL ACTIVATE** shall be in letters at least 25 mm high with a 5 mm stroke and posted above the emergency stop button.

3.11.11. Service Rooms and Storage for All Public Pools

3.11.11.1. Service Rooms and Storage Facilities

(1) In addition to the requirements of this Subsection, *service rooms* shall comply with the requirements of Sentences 3.6.2.1.(5), 3.6.2.1.(7) and 3.6.2.1.(8) and Articles 3.5.3.3. and 3.6.2.2.

(2) Where compressed chlorine gas is used as a pool water disinfectant, the cylinders or containers of gas shall be located in a *service room* that,

- (a) except as provided in Sentences 3.1.9.4.(3) to (8), is separated from the remainder of the *building* by a 1 h *fire separation* that is substantially gas tight,

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- (b) is designed for the sole purpose of containing all installed pressurized chlorine gas apparatus and piping and storing all chlorine gas containers or chlorine gas cylinders that are individually secured against toppling,
- (c) is located at or above ground level,
- (d) is provided with an *exit* door opening to the outdoors,
- (e) has screened openings to the outdoors with at least one opening located within 150 mm from the floor and at least one opening located within 150 mm from the ceiling, each opening being 2% of the area of the floor,
- (f) is equipped with emergency mechanical ventilation capable of producing at least 30 air changes per hour, taking suction at a maximum of 900 mm above the floor level and discharging at least 2 500 mm above ground level directly to the outdoors, and
- (g) contains a platform weigh scale of at least 135 kg capacity for each chlorine cylinder in use.

(3) Storage facilities shall be provided for the safe storage of all chemicals required in pool operations.

(4) The storage facilities shall be ventilated and shall be equipped with a water hose connection and a floor drain

(5) *Service rooms* and storage facilities, including rooms and facilities that contain electrical or mechanical equipment or chemicals or chemical feeders, shall be equipped with a secure locking device.

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Building Code Cross reference for Clause 8.2.2.4, Roof

(The following is an excerpt from the 2006 Building Code (Ontario Regulation 350/06.))

9.26.3. Slope of Roof Surfaces

9.26.3.1. Slope

(1) Except as provided in Sentences (2) and (3), the slopes on which roof coverings may be applied shall conform to Table 9.26.3.1.

(2) Asphalt and gravel or coal tar and gravel roofs may be constructed with lower slopes than required in Sentence (1) when effective drainage is provided by roof drains located at the lowest points on the roofs.

(3) Profiled metal roof cladding systems specifically designed for low-slope applications are permitted to be installed with lower slopes than required in Sentence (1), provided they are installed in conformance with the manufacturer's written recommendations.

(4) Except where back-slope will not adversely affect adjacent supported or supporting elements due to water ingress, roofs and elements that effectively serve as roofs shall be constructed with sufficient slope away from,

(a) exterior walls, and

(b) *guards* that are connected to the roof, or to an element that effectively serves as a roof, by other than pickets or posts.

(5) The slope required in Sentence (4) shall be sufficient to maintain a positive slope,

(a) after expected shrinkage of the *building* frame, where these surfaces are supported by exterior walls and on exterior columns, and

(b) once design loading is taken into consideration, where these surfaces are cantilevered from exterior walls.

Table 9.26.3.1.
Roofing Types and Slope Limits
Forming Part of Sentence 9.26.3.1.(1)

Column 1	Column 2	Column 3
Type of Roofing	Minimum Slope	Maximum Slope
Asbestos-Cement Corrugated Sheets	1 in 4	no limit
Asphalt Shingles		
Low slope application	1 in 6	no limit
Normal application	1 in 3	no limit

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Column 1	Column 2	Column 3
Built-up Roofing		
Asphalt base (without gravel)	1 in 25	1 in 2
Asphalt base (gravelled)	1 in 50 ⁽¹⁾	1 in 4
Coal-tar base (gravelled)	1 in 50 ⁽¹⁾	1 in 25
Cold process	1 in 25	1 in 1.33
Cedar Shakes	1 in 3	no limit
Clay Tile	1 in 2	no limit
Glass Fibre Reinforced Polyester Roofing Panels	1 in 4	no limit
Modified Bituminous Membranes	1 in 50	1 in 4
Profiled Metal Roofing	1 in 4 ⁽²⁾	no limit
Roll Roofing		
480 mm wide selvage asphalt roofing	1 in 6	no limit
Cold application felt	1 in 50	1 in 1.33
Smooth and mineral surfaced	1 in 4	no limit
Sheet Metal Shingles	1 in 4 ⁽²⁾	no limit
Slate Shingles	1 in 2	no limit
Wood Shingles	1 in 4	no limit

Notes to Table 9.26.3.1.:

⁽¹⁾See Sentence 9.26.3.1.(2).

⁽²⁾See Sentence 9.26.3.1.(3).

Building Code Cross reference for Clause 8.2.9.1, Ventilation Rates

(The following is an excerpt from the 2006 Building Code (Ontario Regulation 350/06.))

6.2.3.9. Interconnection of Systems

(1) In a *residential occupancy*, air from one *suite* shall not be circulated to any other *suite* or to a *public corridor* or public stairway.

(2) Except as permitted by Sentence (3) and Sentence 6.2.3.8.(6), air duct systems serving *storage garages* shall not be directly interconnected with other parts of the *building*.

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(3) *Exhaust ducts* referred to in Sentence 6.2.3.8.(6) may exhaust through an enclosed *storage garage* prior to exhausting to the outdoors provided,

- (a) the *storage garage* exhaust system runs continuously,
- (b) the capacity of the *storage garage* exhaust system is equal to or exceeds the volume of the exhaust entering the garage, and
- (c) a leakage rate 1 smoke/fire damper rated in accordance with CAN/ULC-S112.1-M, "Leakage Rated Dampers for Use in Smoke Control Systems", is provided near the duct outlet location in the *storage garage* to prevent air from the *storage garage* from entering the exhaust ductwork system in the event the *building's* exhaust fan is shut down.

(4) Except for Sentence 3.3.1.4.(4) and Sentences (5) and (6), a *public corridor* or corridor serving the public shall not be used as a portion of a supply, return or exhaust air system serving adjoining areas, other than as part of a supply air system serving toilet rooms, bathrooms, shower rooms and similar auxiliary spaces opening directly to the *public corridor* or corridor used by the public.

(5) A *public corridor* may be used as part of an engineered smoke control system.

(6) Infiltration due to corridor pressurization is permitted into a *residential occupancy* from a *public corridor*.

Building Code Cross reference for Clause 9.16.4 Fencing, Handrails, and Guards

(The following is an excerpt from the 2006 Building Code (Ontario Regulation 350/06.))

3.3.1.17. Guards

(1) Except as provided in Sentence (6) and Articles 3.3.2.8. and 3.3.4.7., a *guard* not less than 1 070 mm high shall be provided,

- (a) around each roof to which access is provided for other than maintenance,
- (b) at openings into smoke shafts referred to in Subsection 3.2.6. that are less than 1 070 mm above the floor, and
- (c) at each raised floor, *mezzanine*, balcony, gallery, interior or exterior vehicular ramp, and at other locations where the difference in level is more than 600 mm.

(2) Except as provided in Sentence (3) and Sentence 3.3.2.8.(4), openings through any *guard* that is required by Sentence (1) shall be of a size that will prevent the passage of a sphere having a diameter more than 100 mm unless it can be shown that the location and size of openings that exceed this limit do not represent a hazard.

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(3) Openings through any *guard* that is required by Sentence (1) and that is installed in a *building of industrial occupancy* shall be of a size which will prevent the passage of a sphere having a diameter more than 200 mm unless it can be shown that the location and size of openings that exceed this limit do not represent a hazard.

(4) Openings through any *guard* that is not required by Sentence (1) and that serves a *building of other than industrial occupancy*, shall be of a size that,

(a) will prevent the passage of a sphere having a diameter more than 100 mm, or

(b) will permit the passage of a sphere having a diameter more than 200 mm unless it can be shown that the location and size of openings that exceed these limits do not represent a hazard.

(5) Unless it can be shown that the location and size of openings do not present a hazard, a *guard* shall be designed so that no member, attachment or opening located between 140 mm and 900 mm above the level protected by the *guard* will facilitate climbing.

(6) Sentence (1) does not apply at the front edges of *stages*, floor pits in *repair garages* and loading docks.

Appendix D Housing Terms

(This appendix item is for information only.)

This clause is referred to by Clause 13.1.

Adaptable Housing

(Source Sanich, BC)

Basic Adaptable Housing is required for newly-constructed residential buildings serviced by an elevator containing apartment or congregate housing uses

The mandatory features include:

- barrier-free access to all suites and amenity areas,
- wider doorways,
- manoeuvring room at suite entries and corridors, access to a main-floor bathroom,
- reinforcement of bathroom walls for future installation of grab bars
- accessible door handles, switches, and outlets

Most adaptable features are "invisible" e.g.:

- Blocking in wall to add grab bars in future
- Wider doors

Flex Housing

(Source: Canadian Mortgage and Housing Corporation
http://www.cmhc-schl.gc.ca/en/co/buho/flho/flho_001.cfm)

FlexHousing™ is a concept in housing that incorporates, at the design and construction stage, the ability to make future changes easily and with minimum expense, to meet the evolving needs of its occupants.

The intention of FlexHousing™ is to allow homeowners to occupy a dwelling for longer periods of time, perhaps over their entire lifetimes, while adapting to changing circumstances and meeting a wide range of needs. Similar concepts are referred to as Universal Housing in the United States and Lifetime Homes in the United Kingdom.

Sooner or later, a growing family reaches the point at which yesterday's dream home becomes too small. Usually, the only choice is to move to a bigger house. But moving can be difficult, disruptive and costly. And, when the children have grown up and moved out, the second, larger home may be too big or too difficult to maintain -- and the search begins all over again

FlexHousing™ allows homeowners to adapt their dwellings, instead of moving, as their

circumstances change:

- A large bedroom can be renovated into two smaller ones
- An existing bedroom can be converted into a home office
- An attic can be converted to a large family room or master bedroom
- The basement can be adapted to become a rental suite

Universal Design

(Source: http://en.wikipedia.org/wiki/Universal_design)

Universal design is a relatively new paradigm that emerged from "[barrier-free](#)" or "[accessible design](#)" and "[assistive technology](#)." Barrier free design and assistive technology provide a level of accessibility for people with [disabilities](#) but they also often result in separate and stigmatizing solutions, for example, a [ramp](#) that leads to a different entry to a building than a main [stairway](#). Universal design strives to be a broad-spectrum solution that helps everyone, not just people with disabilities. Moreover, it recognizes the importance of how things look. For example, while built up handles is a way to make utensils more usable for people with gripping limitations, some companies introduced larger, easy to grip and attractive handles as feature of mass produced utensils. They appeal to a wide range of consumers.

Principles of Universal Design (from the [Center for Universal Design](#))

"The authors, a working group of architects, product designers, engineers and environmental design researchers, collaborated to establish the following Principles of Universal Design to guide a wide range of design disciplines including environments, products, and communications." - ^[1]

1. [Equitable](#) use
2. [Flexibility](#) in use
3. [Simple](#) and [intuitive](#)
4. [Perceptible](#) information
5. [Tolerance for error](#)
6. Low physical effort
7. Size and space for approach and use

These principles are broader than that of accessible design.

Visitable Housing

Visitability refers to newly constructed, single-family homes with at least the following minimum features:

Appendix D Housing Terms

- A zero-step entrance at the front, back or side entrance of the house to the main floor (located on an accessible route from the street)
- Wider doorways on all main floor doors
- A half bath on the main floor (minimum requirements include a sink, toilet and a wider doorway) home.

Other visitable / adaptable features may include:

- Reinforced bathroom walls (for the installation of grab bars, if desired)
- Levered door handles and single-lever kitchen and bathroom faucets
- Raised electrical outlets - 18 in (45.7 centimetres) from the door
- Lowered climate controls
- Lowered light switches - 48 in (121.9 centimetres) from the door

Minimum features:

- One level entry to the main floor level
- Wider doors on main floor level
- Access to a half bath (water closet, sink, wider door) on the main entry level

Appendix E Occupancies

(This appendix item is for information only.)

This is referenced by clause

Building Code A-3.1.2.1.(1) Major Occupancy Classification.

To ensure the correct classification, refer to the definitions for each occupancy in Part 1 of Division A of the Building Code

Appendix E Occupancies

<p>Group A, Division 1 Motion picture theatres Opera houses Television studios admitting a viewing audience Theatres, including experimental theatres</p> <p>Group A, Division 2 Art galleries Auditoria Bowling alleys Child care facility Churches and similar places of worship Clubs, non-residential Community halls Courtrooms Dance halls Exhibition halls (other than classified in Group E) Gymnasias Lecture halls Libraries Licensed beverage establishments Museums Passenger stations and depots Recreational piers Restaurants Schools and colleges, non-residential Undertaking premises</p> <p>Group A, Division 3 Arenas Indoor swimming pools Rinks</p>	<p>Group A, Division 4 Amusement park structures (not elsewhere classified) Bleachers Grandstands Reviewing stands Stadia</p> <p>Group B, Division 1 Jails Penitentiaries Police stations with detention quarters Prisons Psychiatric hospitals with detention quarters Reformatories with detention quarters</p> <p>Group B, Division 2 Facilities for developmentally handicapped residents Homes for the aged Hospitals Infirmaries Long term care Nursing homes Psychiatric hospitals without detention quarters Reformatories without detention quarters Sanatoria without detention quarters</p> <p>Group B, Division 3 (See also Sentence 3.1.2.5.(1).) Children's custodial homes Convalescent homes Group homes for developmentally handicapped residents Residential care facilities Sanatoria without detention quarters</p>
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Appendix E Occupancies

<p>Group C</p> <ul style="list-style-type: none">ApartmentsBoarding housesCamps for housing workersClubs, residentialColleges, residentialConventsDormitoriesGroup homesHalfway houses, drug and alcohol treatmentHostelsHotelsHousesLodging housesMonasteriesMotelsOpen and semi-secure detention for youthRecreational campsRooming housesSchools, residentialShelters for homelessShelters for women <p>Group D</p> <ul style="list-style-type: none">BanksBarber and hairdressing shopsBeauty parloursDental officesDry cleaning establishments, self-service, not using flammable or explosive solvents or cleanersLaundries, self-serviceMedical officesOfficesPolice stations without detention quartersRadio stationsSmall tool and appliance rental and service establishments	<p>Group E</p> <ul style="list-style-type: none">Department storesExhibition hallsMarketsRestaurants with an occupant load not more than 30 persons consuming food and drinkShopsStoresSupermarkets
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Appendix E Occupancies

<p>Group F, Division 1</p> <ul style="list-style-type: none">Bulk plants for flammable liquidsBulk storage warehouses for hazardous substancesCereal millsChemical manufacturing or processing plantsDistilleriesDry cleaning plants using flammable or explosive solvents or cleanersFeed millsFlour millsGrain elevatorsLacquer factoriesPaint, varnish and pyroxylin product factoriesRubber processing plantsSpray painting operations	<p>Group F, Division 2</p> <ul style="list-style-type: none">Aircraft hangarsCold storage plantsDry cleaning establishments not using flammable or explosive solvents or cleanersElectrical substationsFreight depotsHelicopter landing areas on roofsLaboratoriesLaundries, except self-servicePlaning millsPrinting plantsRepair garagesSelf-service storage buildingsService stationsStorage roomsTelevision studios not admitting a viewing audienceTire storageWarehousesWoodworking factories <p>Group F, Division 3</p> <ul style="list-style-type: none">CreameriesLaboratoriesPower plantsStorage garages, including open air parking garagesStorage roomsWarehouses
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Appendix F Community Noise Guidelines

Appendix F Community Noise Guidelines

(This appendix item is for information only.)

This is referenced by Clause 8.3.2.

Source: World Health Organization Guidelines For Community Noise, 1999

(<http://www.who.int/docstore/peh/noise/guidelines2.html>)

Guidelines for Community Noise

World Health Organization (WHO) Guideline Values (excerpt from Chapter 4)

The WHO guideline values in Table 4.1 are organized according to specific environments. When multiple adverse health effects are identified for a given environment, the guideline values are set at the level of the lowest adverse health effect (the critical health effect). An adverse health effect of noise refers to any temporary or long-term deterioration in physical, psychological or social functioning that is associated with noise exposure. The guideline values represent the sound pressure levels that affect the most exposed receiver in the listed environment.

The time base for LAeq for "daytime" and "night-time" is 16 h and 8 h, respectively. No separate time base is given for evenings alone, but typically, guideline value should be 5 –10 dB lower than for a 12 h daytime period. Other time bases are recommended for schools, preschools and playgrounds, depending on activity.

The available knowledge of the adverse effects of noise on health is sufficient to propose guideline values for community noise for the following:

- a. Annoyance.
- b. Speech intelligibility and communication interference.
- c. Disturbance of information extraction.
- d. Sleep disturbance.
- e. Hearing impairment.

The different critical health effects are relevant to specific environments, and guideline values for community noise are proposed for each environment. These are:

- a. Dwellings, including bedrooms and outdoor living areas.
- b. Schools and preschools, including rooms for sleeping and outdoor playgrounds.
- c. Hospitals, including ward and treatment rooms.
- d. Industrial, commercial shopping and traffic areas, including public addresses, indoors and outdoors.
- e. Ceremonies, festivals and entertainment events, indoors and outdoors.
- f. Music and other sounds through headphones.
- g. Impulse sounds from toys, fireworks and firearms.
- h. Outdoors in parkland and conservation areas.

It is not enough to characterize the noise environment in terms of noise measures or indices based only on energy summation (e.g. LAeq), because different critical health effects require different descriptions. Therefore, it is important to display the maximum values of the noise fluctuations, preferably combined with a measure of the number of

Appendix F Community Noise Guidelines

noise events. A separate characterization of noise exposures during night-time would be required. For indoor environments, reverberation time is also an important factor. If the noise includes a large proportion of low frequency components, still lower guideline values should be applied.

Supplementary to the guideline values given in Table 4.1, precautionary recommendations are given in Section 4.2 and 4.3 for vulnerable groups, and for noise of a certain character (e.g. low-frequency components, low background noise), respectively. In Section 3.10, information is given regarding which critical effects and specific environments are considered relevant for vulnerable groups, and what precautionary noise protection would be needed in comparison to the general population.

Table 4.1: Guideline values for community noise in specific environments.

Specific environment	Critical health effect(s)	LAeq [dB]	Time base [hours]	LAm _{ax, fast} [dB]
Outdoor living area	Serious annoyance, daytime and evening Moderate annoyance, daytime and evening	55 50	16 16	- -
Dwelling, indoors Inside bedrooms	Speech intelligibility and moderate annoyance, daytime and evening Sleep disturbance, night-time	35 30	16 8	45
Outside bedrooms	Sleep disturbance, window open (outdoor values)	45	8	60
School class rooms and pre-schools, indoors	Speech intelligibility, disturbance of information extraction, message communication	35	during class	-
Pre-school bedrooms, indoors	Sleep disturbance	30	sleeping-time	45
School, playground outdoor	Annoyance (external source)	55	during play	-
Hospital, ward rooms, indoors	Sleep disturbance, night-time Sleep disturbance, daytime and evenings	30 30	8 16	40 -
Hospitals,	Interference with rest and	#1		

Appendix F Community Noise Guidelines

Specific environment	Critical health effect(s)	LAeq [dB]	Time base [hours]	LAm _{ax, fast} [dB]
treatment rooms, indoors	recovery			
Industrial, commercial shopping and traffic areas, indoors and outdoors	Hearing impairment	70	24	110
Ceremonies, festivals and entertainment events	Hearing impairment (patrons:<5 times/year)	100	4	110
Public addresses, indoors and outdoors	Hearing impairment	85	1	110
Music through headphones/earphones	Hearing impairment (free-field value)	85 #4	1	110
Impulse sounds from toys, fireworks and firearms	Hearing impairment (adults) Hearing impairment (children)	- -	- -	140 #2 120 #2
Outdoors in parkland and conservation areas	Disruption of tranquillity	#3		

Legend

#1: as low as possible;

#2: peak sound pressure (not LAm_{ax, fast}), measured 100 mm from the ear;

#3: existing quiet outdoor areas should be preserved and the ratio of intruding noise to natural background sound should be kept low;

#4: under headphones, adapted to free-field values

Appendix G Committee Comments on Retrofit

Appendix G Committee Comments on Retrofit

(This appendix item is for information only.)

This appendix is referenced in Committee Comment Box in Clause 2.3.1, Compliance.

Committee members nominated the issue of applying the standards to existing built environments and requiring them to be retrofitted to comply with the standards as “the elephant on the Committee’s table”

Section 1 of the AODA legislation states

“Recognizing the history of discrimination against persons with disabilities in Ontario, the purpose of this Act is to benefit all Ontarians by,

(a) *developing, implementing and enforcing accessibility standards in order to achieve accessibility for Ontarians with disabilities with respect to goods, services, facilities, accommodation, employment, buildings, structures and premises on or before January 1, 2025*

and

(b) *providing for the involvement of persons with disabilities, of the Government of Ontario and of representatives of industries and of various sectors of the economy in the development of the accessibility standards.”*

The majority view of the committee was that this purpose cannot be achieved by 2025 unless the standards developed were applied to both new and existing built environments.

The majority of the committee also recognized that the significant difficulty of applying standards to existing construction would lead to a high probability that for some built environments compliance with some parts of the standard would cause significant levels of undue hardship and that, in these situations, compliance with the standard should not be required or, if required would contravene the requirements of the Ontario Human Rights Code and as a result, not be enforceable.

These circumstances were recognized in the Committee’s terms of reference directive to the committee to

“recognize that while the built environment in Ontario should be accessible to people with as wide a range of disabilities and abilities as possible, there will continue to be a need for individual accommodation for persons with disabilities;”

The Committee recognizes that not all of the existing environment can be brought up to the standards that will apply to new construction. To do so in some cases would require the built environment to be demolished and rebuilt.

In the words of one committee member

“I share some of your concerns on how to address retrofits. I feel that we have to address some areas and yet maybe we don’t have to address all areas. The problem

Appendix G Committee Comments on Retrofit

being, which ones.”

The proposed standard provide in this document attempts to strike a balance between the objective of a removing all barriers in the built environment and recognition of the difficulty of achieving this objective without causing undue hardship to those required to effect compliance.

The proposed standard relies on the standards developed for new construction as its starting point. The requirements for an entrance, a path, a washroom or most other elements of the built environment to be barrier free do not generally differ between new construction and existing construction.

It then requires those who are required to comply to identify the actions necessary to bring their built environment into compliance with the standards and to separate these into those that can be achieved without causing undue hardship and those that can't.

Where full compliance would cause undue hardship, the standard requires identification of actions that would achieve partial compliance to the maximum extent possible without causing undue hardship.

The Committee recognized the impossibility of producing detailed prescriptive standards that would identify all circumstances which would produce undue hardship.

As an alternative the standard provides for the filing with and review of compliance plans by an Administration who is empowered to provide relief from where undue hardship on a case by case basis taking into account individual circumstances and required to provide advance guidance so as to minimize uncertainty.

Such advance guidance would encompass compliance actions which could be described as “low cost” or “readily achievable” or even “no cost”

For example one committee member described the following

“there are plenty of situations where low cost no cost can come into play and make buildings more accessible. It's not only related to the building itself in terms of their construction but where things are placed in that construction. I have come across a huge number of barriers that have been created because designs, maintenance, placement of furniture, placement of switches, placement of automatic door openers and the list goes on, were not thought out carefully. And if these things were done at the outset they would certainly be low cost, no cost!

A perfect example is one that happens at every single gas station I go to - there are accessible parking spots out front of the store, a nice curb cut leading to the walkway that leads to the front door of the store - and what's all along that walkway??? An ice machine, a rack of wood for sale, a rack of windshield washer fluid, racks of bottled water and soft drinks - so that nice new walkway that was accessible is no longer accessible. How much would it cost to move those racks? Nothing!

Another example - a hotel lobby that is really easy to move around in - with a set of elevators that are clearly marked and can be easily located - too bad the call buttons to the elevator are blocked by a very large marble table advertising the restaurants and

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hotel bars! Or are blocked by a large trash can with the logo of the hotel pushed into the nicely laid out sand in the ashtray!

And another one - the wheelchair accessible bathroom in a hotel room that is wheelchair accessible. Very large room, wheel-in shower, lots of grab bars, sink that you can wheel under, etc., but for some reason the mirror on the wall above the sink is placed 12 inches above the sink and in a seated position - you can't use it! Not that I want to some mornings - but that's beside the point!

My point, I guess, is that there are a significant number of barriers that are created that can be eliminated with a low-cost, no cost solution and there are plenty of examples around”

Another committee member noted that the issue has been dealt with in other jurisdictions. Regulators in the USA developed a checklist of “readily achievable” actions. The list can be found at <http://www.ada.gov/adata1.pdf>

Other views expressed by members included

“Its complicated but with the right mindset and the right people involved then priorities can be made and the whole standard can be perceived as a positive step in the right direction with the end goal of total accessibility by 2025, meanwhile the standard will identify areas that need to be retrofitted and a plan must be in place to accomplish that.

I still like the low cost no cost scenario and would like to see it incorporated some how but it can't be left too much to discretion as it will never get done. A first time standard needs some teeth in it to be effective or it will be perceived as not being useless.

Sorry for my ramblings but I am still waiting for the light to go on within my head on this retrofit topic. I don't believe I am a fence sitter but I want to consider impact and reality and yet make this new standard accomplish what we all set out to do.”

“Does something need to be done? Yes! So let us propose a solution that considers all factors including cost, vacancies, and legal agreements and so on. A utopian ideal of all existing buildings meeting the proposed standards will not fly so let us propose something that can be achieved.”

“It is recognized that retrofitting existing construction involves significantly greater difficulty than application of the standards to new construction. However, given the timeframe of decades for renewal and replacement of built environments, retrofit is essential for accessibility despite the increased costs. The degree of difficulty and the nature of the difficulty to retrofit existing built environments to the standard will vary for each clause of the standard, and will also vary significantly by age and type of built environment.”

The standard includes a timetable for compliance based on occupancy categories used in the Building Code. Other views were expressed but these general followed the approach of requiring the public sector built to take the lead in complying with requirements for existing built environments.