

Accessibility Standards Canada Normes d'accessibilité Canada

CAN-ASC-2.3-2023

Model Standard for the Built Environment – Accessibility for Federally Regulated Entities as Defined in the Accessible Canada Act

June 2023



Note: This draft is under development and subject to change; it should not be used for reference purposes. ***Revised February 2024***

Please direct comments regarding the content of this draft standard to: <u>ASC.technical.committees-comites.techniques.NAC@hrsdc-rhdcc.gc.ca</u>.

Canadä

About Accessibility Standards Canada

Accessibility Standards Canada, under whose auspices this draft standard has been produced, is a Government of Canada departmental corporation mandated through the *Accessible Canada Act.* Accessibility Standards Canada's Standards contribute to the purpose of the *Accessible Canada Act*, which is to benefit all persons, especially persons with disabilities, through the realization of a Canada without barriers through the identification, removal, and prevention of accessibility barriers.

Disability, as defined by the *Accessible Canada Act*, means any impairment, including a physical, mental, intellectual, cognitive, learning, communication or sensory impairment — or a functional limitation — whether permanent, temporary, or episodic in nature, or evident or not, that, in interaction with a barrier, hinders a person's full and equal participation in society.

All of Accessibility Standards Canada's standards development work, including the work of our technical committees, is carried out in recognition of, and in accordance with, the following principles in the *Accessible Canada Act*:

- all persons must be treated with dignity regardless of their disabilities;
- all persons must have the same opportunity to make for themselves the lives that they are able and wish to have regardless of their disabilities;
- all persons must have barrier-free access to full and equal participation in society, regardless of their disabilities;

- all persons must have meaningful options and be free to make their own choices, with support if they desire, regardless of their disabilities;
- laws, policies, programs, services, and structures must take into account the disabilities of persons, the different ways that persons interact with their environments and the multiple and intersecting forms of marginalization and discrimination faced by persons;
- persons with disabilities must be involved in the development and design of laws, policies, programs, services, and structures; and
- the development and revision of accessibility standards and the making of regulations must be done with the objective of achieving the highest level of accessibility for persons with disabilities.

These principles align with the principles of the United Nations' *Convention on the Rights of Persons with Disabilities,* ratified by the Government of Canada in 2010 to recognize the importance of promoting, protecting, and upholding the human rights of persons with disabilities to participate fully in their communities.

Accessibility Standards Canada seeks to create standards that are aligned with its vision. This includes commitments to break down barriers to accessibility and abide by the principle of "nothing without us" in our standards development process, where everyone, including persons with disabilities, can expect a Canada without barriers.

Standards developed by Accessibility Standards Canada are designed to achieve the highest levels of accessibility. This means that Accessibility Standards Canada standards create equity-based technical requirements while taking into consideration national and international best practices, as opposed to focusing on minimum technical requirements.

Accessibility Standards Canada applies an intersectional framework to capture the experiences of people with disabilities who also identify as LGBTQ2+, Indigenous Peoples, women, and visible minorities. Its

standards development process requires that technical committees apply a cross-disability perspective to ensure that no new barriers to accessibility are unintentionally created. In addition, standards developed by Accessibility Standards Canada align with 14 of the 17 United Nations Sustainable Development Goals, which were adopted by Canada in 2015 to promote partnership, peace and prosperity for all people and the planet by 2030.

Accessibility Standards Canada is engaged in the production of voluntary accessibility standards, which are developed by technical committees using a consensus-based approach. Each technical committee is composed of a balanced group of experts who develop the technical content of a standard. At least 30 % of these technical experts are people with disabilities and lived experience and 30% are from equity seeking groups including LGBTQ2+, indigenous peoples, women and visible minorities. These technical experts also include consumers and other users, government and authorities, labour and unions, other standards development organizations, businesses and industry, academic and research bodies, and non-governmental organizations.

All Accessibility Standards Canada standards also incorporate related findings from research reports conducted through Accessibility Standards Canada's Advancing Accessibility Grants and Contributions program. This program involves persons with disabilities, experts, and organizations to advance accessibility standards research and supports research projects that help with the identification, removal, and prevention of new barriers to accessibility.

Accessibility Standards Canada standards are subject to review and revision to ensure that they reflect current trends and best practices. Accessibility Standards Canada will initiate the review of this standard within four years of the dates of publication. Suggestions for improvement, which are always welcome, should be brought to the notice of the respective technical committee. Changes to standards are issued either as separate amendments or in new editions of standards. As a Standards Council of Canada Accredited Standards Development Organization, all Accessibility Standards Canada standards are developed through an accredited standards development process. These voluntary standards apply to federally regulated entities and can be recommended to the Minister responsible for the *Accessible Canada Act* (i.e., the Minister of Employment, Workforce Development and Disability Inclusion).

In addition to its focus on developing accessibility standards, Accessibility Standards Canada has been a leader amongst Canadian federal organizations for promoting and adopting accessibility internal to government. Accessibility Standards Canada is the first organization in the federal government to have a Board of Directors majority-led by persons with disabilities. Accessibility Standards Canada has a state-of-the-art accessible office space for its employees, Board of Directors, and Technical Committee Members. The carefully designed accessible workspace aligns with the organization's belief in the importance of universal accessibility.

To obtain additional information on Accessibility Standards Canada, its standards or publications, please contact:

 Web <u>https://accessible.canada.ca/</u>
 E-mail <u>Info.Accessibility.Standards-Normes.Accessibilite.Info@canada.gc.ca</u>
 Mail Accessibility Standards Canada 320, St-Joseph Boulevard Suite 246 Gatineau. QC K1A 0H3

ASC LEGAL NOTICE – PUBLIC REVIEW DRAFT STANDARD

Note: This draft is under development and subject to change; it should not be used for reference purposes.

Please read this Legal Notice before using the draft standard document.

Legal Notice for Standards

The Canadian Accessibility Standards Development Organization (operating as "Accessibility Standards Canada") standards are developed through a consensus-based standards development process approved by the Standards Council of Canada. This process brings together volunteers representing varied viewpoints and interests to achieve consensus and develop standards.

Although Accessibility Standards Canada administers the process and establishes rules to promote fairness in achieving consensus, it does not independently test, evaluate or verify the content of the standards. During this process, Accessibility Standards Canada makes the draft standard available for comment, review, and approval.

Disclaimer and exclusion of liability

This is a draft document for the purpose of comment, review and approval only. This document is provided without any representations, warranties, or conditions of any kind, expressed or implied, including, without limitation, implied warranties or conditions concerning this document's fitness for a particular purpose or use, its merchantability, or its non-infringement of any third party's intellectual property rights. Accessibility Standards Canada does not warrant the accuracy, completeness or currency of any of the information published in this document. Accessibility Standards Canada makes no representations or warranties regarding this document's compliance with any applicable statute, rule, or regulation. IN NO EVENT SHALL ACCESSIBILITY STANDARDS CANADA, ITS CONTRACTORS, AGENTS, EMPLOYEES, DIRECTORS, OR OFFICERS, OR HIS MAJESTY THE KING IN RIGHT OF CANADA, HIS EMPLOYEES, CONTRACTORS, AGENTS, DIRECTORS, OR OFFICERS BE LIABLE FOR ANY DIRECT, INDIRECT, OR INCIDENTAL DAMAGES, INJURY, LOSS, COSTS, OR EXPENSES, HOWEVER CAUSED, INCLUDING BUT NOT LIMITED TO SPECIAL OR CONSEQUENTIAL DAMAGES, LOST REVENUE, BUSINESS INTERRUPTION, LOST OR DAMAGED DATA, OR ANY OTHER COMMERCIAL OR ECONOMIC LOSS, WHETHER BASED IN CONTRACT, TORT (INCLUDING NEGLIGENCE), OR ANY

OTHER THEORY OF LIABILITY, ARISING OUT OF OR RESULTING FROM ACCESS TO OR POSESSSION OR USE OF THIS DOCUMENT, EVEN IF ACCESSIBILITY STANDARDS CANADA OR ANY OF THEM HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, INJURY, LOSS, COSTS, OR EXPENSES.

In publishing and making this document available, Accessibility Standards Canada is not undertaking to render professional or other services for or on behalf of any person or entity or to perform any duty owed by any person or entity to another person or entity. The information in this document is directed to those who have the appropriate degree of knowledge and experience to use and apply its contents, and Accessibility Standards Canada accepts no responsibility whatsoever arising in any way from any and all use of or reliance on the information contained in this document.

Accessibility Standards Canada publishes voluntary standards and related documents. Accessibility Standards Canada has no power, nor does it undertake, to enforce conformance with the contents of the standards or other documents published by Accessibility Standards Canada.

Intellectual property and ownership

As between Accessibility Standards Canada and users of this document (whether it be printed, electronic or alternate form), Accessibility Standards Canada is the owner, or the authorized licensee, of all copyright and moral rights contained herein. Additionally, Accessibility Standards Canada is the owner of its official mark. Without limitation, the unauthorized use, modification, copying, or disclosure of this document may violate laws that protect Accessibility Standards Canada and / or others' intellectual property and may give rise to a right in Accessibility Standards Canada and / or others to seek legal redress for such use, modification, copying, or disclosure. To the extent permitted by licence or by law, Accessibility Standards Canada reserves all intellectual property and other rights in this document.

Patent rights

Some elements of this standard may be the subject of patent rights or pending patent applications. Accessibility Standards Canada shall not be held responsible for identifying any or all such patent rights. Users of this standard are expressly informed that determination of the existence and / or validity of any such patent rights is entirely their own responsibility.

Assignment of copyright

In this legal notice, a "comment" refers to all written or orally provided information, including all suggestions, that a user provides to Accessibility Standards Canada in relation to a standard and/or a draft standard. By providing a comment to Accessibility Standards Canada in relation to a standard and / or draft standard, the commenter grants to Accessibility Standards Canada and the Government of Canada a non-exclusive, royalty-free, perpetual, worldwide, and irrevocable licence to use, translate, reproduce, disclose, distribute, publish, modify, authorize to reproduce, communicate to the public by telecommunication, record, perform, or sublicense the comment, in whole or in part and in any form or medium, for revising the standard and/or draft standard, and/or for non-commercial purposes. By providing the comment, the commenter being the sole owner of the copyright or having the authority to license the copyright on behalf of their employer, confirms their ability to confer the licence and the commenter waives all associated moral rights, including, without limitation, all rights of attribution in respect of the comment. Where the provider of the comment is not the comment's author, the provider confirms that a waiver

of moral rights by the author has been made in favour of the provider or the comment's copyright owner. At the time of providing a comment, the commenter must declare and provide a citation for any and all intellectual property within the comment that is owned by a third party.

Authorized Uses of this document

This document, in all formats including alternate formats, is being provided by Accessibility Standards Canada for informational, educational and noncommercial use only. The users of this document are authorized to do only the following:

- Load this document onto a computer for the sole purpose of reviewing it;
- Search and browse this document;
- Print this document if it is in electronic format; and

Users shall not and shall not permit others to:

- Alter this document in any way or remove this Legal Notice from the attached standard;
- Sell this document without authorization from Accessibility Standards Canada; or
- Use this document to mislead any users of a product, process or service addressed by this standard.

This Work contains substantial copyrighted material from the *ICC A117.1-2017 Standard for Accessible and Usable Buildings and Facilities*, which is a copyrighted work owned by the International Code Council, Inc. Without advance written permission from Accessibility Standards Canada, no part of this book may be reproduced, distributed or transmitted in any form or by any means, including, without limitation, electronic, optical or mechanical means (by way of example and not limitation, photocopying, or recording by or in an information storage retrieval system). For information on permission to copy material exceeding fair use, please contact: info.accessibility.standards-normes.accessibilite.info@canada.gc.ca. The International Code Counsel has not reviewed the Work and makes no representations or warranties as to the quality or content herein.

If you do not agree with any of the terms and conditions contained in this Legal Notice, you must not load or use this document or make any copies of the contents hereof. Use of this document constitutes your acceptance of the terms and conditions of this Legal Notice.



Contents

| A | bout | t Accessibility Standards Canada | 2 |
|---|------|--|----|
| 0 | In | itroduction | 20 |
| 1 | So | соре | 20 |
| | 1.1 | Terminology | 20 |
| 2 | D | efinitions, symbols, and abbreviations | 20 |
| 3 | A | pplication | 29 |
| | 3.1 | Buildings required to be accessible | 29 |
| | 3.2 | Buildings out of scope of this standard | 29 |
| | 3.3 | Access to floor areas | 29 |
| | 3. | 3.1 Areas required to be accessible | 29 |
| | 3. | .3.2 Areas not required to be accessible | 30 |
| | 3. | .3.3 Dwelling units | 30 |
| | 3. | 3.4 Access to entrances | 30 |
| | 3. | 3.5 Access to floor levels | 31 |
| | 3. | 3.6 Passenger loading zones | 31 |
| | 3. | 3.7 Access aisles | 31 |
| | 3. | 3.8 Horizontal paths of travel | 31 |
| | 3. | 3.9 Doorways, doors and gates | 31 |
| | 3. | 3.10 Stairways | 32 |
| | 3. | 3.11 Ramps | 32 |
| | 3. | 3.12 Elevators | 32 |
| | 3.4 | Building facilities and systems | 32 |
| | 3. | 4.1 Controls | 32 |
| | 3. | 4.2 Public counters and work surfaces | 33 |
| | 3. | 4.3 Shelves and counters for telephones | 33 |
| | 3. | 4.4 Signs and wayfinding | 33 |
| | 3. | 4.5 Assistive listening system | 35 |

| 3.5.1 Required accessible washroom facilities | |
|--|----------------|
| 3.5.2 Universal washrooms | |
| 3.5.3 Showers | |
| 3.5.4 Bathtubs | |
| 3.5.5 Drinking fountains and bottle filling stations | 40 |
| 3.6 Evacuation facilities | 40 |
| 3.6.1 Emergency notification systems | 40 |
| 3.6.2 Fire protection and refuge | 40 |
| 3.6.3 Exiting | 41 |
| 3.7 Building and occupancy requirements | 41 |
| 3.7.1 Assembly occupancies | 41 |
| 3.7.2 Detention occupancies | 42 |
| 3.7.3 Business and personal service occupancies | 43 |
| 4 Fundamental design components | 44 |
| | |
| 4.1 Surface conditions | 44 |
| 4.1 Surface conditions 4.1.1 General | 44 44 |
| 4.1 Surface conditions4.1.1 General4.1.2 Carpet | 44 44 44 |
| 4.1 Surface conditions 4.1.1 General 4.1.2 Carpet 4.1.3 Floor mats | |
| 4.1 Surface conditions | |
| 4.1 Surface conditions | |
| 4.1 Surface conditions | |
| 4.1 Surface conditions 4.1.1 General 4.1.2 Carpet 4.1.3 Floor mats 4.2 Change in level 4.3 Clear area and height 4.3.1 Clear floor or ground area 4.3.2 Clear height | |
| 4.1 Surface conditions 4.1.1 General 4.1.2 Carpet 4.1.3 Floor mats 4.2 Change in level 4.3 Clear area and height 4.3.1 Clear floor or ground area 4.3.2 Clear height 4.4 Knee and toe clearance | |
| 4.1 Surface conditions 4.1.1 General 4.1.2 Carpet 4.1.3 Floor mats 4.2 Change in level 4.3 Clear area and height 4.3.1 Clear floor or ground area 4.3.2 Clear height 4.4 Knee and toe clearance 4.4.1 Knee clearance | |
| 4.1 Surface conditions 4.1.1 General 4.1.2 Carpet 4.1.3 Floor mats 4.2 Change in level 4.3 Clear area and height 4.3.1 Clear floor or ground area 4.3.2 Clear height 4.4 Knee and toe clearance 4.4.1 Knee clearance 4.4.2 Toe clearance | |
| 4.1 Surface conditions 4.1.1 General 4.1.2 Carpet 4.1.3 Floor mats 4.2 Change in level 4.3 Clear area and height 4.3.1 Clear floor or ground area 4.3.2 Clear height 4.4 Knee and toe clearance 4.4.1 Knee clearance 4.4.2 Toe clearance 4.5 Protruding objects | |

| | 4.5.2 Objects with a leading edge 685 mm minimum above the finisher floor surface | ed .46 |
|---|---|-----------|
| | 4.5.3 Objects with a leading edge less than 685 mm above the finisher floor surface | əd .46 |
| | 4.5.4 Rails and barriers | .47 |
| | 4.5.5 Handrails | .47 |
| 4 | .6 Reach ranges | .47 |
| | 4.6.1 Forward reach | .47 |
| | 4.6.2 Side reach | .47 |
| 4 | .7 Operable parts | .48 |
| | 4.7.1 Location | .48 |
| | 4.7.2 Operation | .48 |
| | 4.7.3 Push-button type controls | .48 |
| | 4.7.4 Specialized knowledge | .48 |
| | 4.7.5 Operation force | .48 |
| | 4.7.6 Identification | .49 |
| | 4.7.7 Illumination | .49 |
| | 4.7.8 Visual displays | .49 |
| 4 | .8 Illumination | .49 |
| | 4.8.1 Glare | .49 |
| | 4.8.2 Paths of travel | .49 |
| | 4.8.3 Signs and operable parts | .49 |
| 5 | Paths of travel | .50 |
| 5 | .1 General | .50 |
| | 5.1.1 Surface conditions | .50 |
| | 5.1.2 Change in level | .50 |
| | 5.1.3 Curb ramp | .50 |
| | 5.1.4 Clear height | .51 |
| | 5.1.5 Obstructions | .51 |

| 5.1.6 Handrails | 51 |
|---|----|
| 5.1.7 Guards | |
| 5.2 Passenger loading zone | 54 |
| 5.2.1 General | 54 |
| 5 2 2 Clear height | 55 |
| 5.2.2 Clear area | |
| 5.2.4 Vertical signage | |
| 5.3 Access aisle | |
| 5.3.1 Conoral | |
| 5.3.2 Clear area | |
| 5.3.2 Clear area | |
| 5.3.3 Access alse identification | |
| 5.3.4 Passenger loading zone identification | |
| 5.4 Horizontal path of travel | 56 |
| 5.4.1 Exterior | 56 |
| 5.4.2 Interior | 57 |
| 5.5 Doorways, doors and gates | 58 |
| 5.5.1 Clear height of doorway | 58 |
| 5.5.2 Clear width | 58 |
| 5.5.3 Projections into clear width | 58 |
| 5.5.4 Vision panels | 59 |
| 5.5.5 Door differentiation | 59 |
| 5.5.6 Door hardware | 60 |
| 5.5.7 Power door operators | 61 |
| 5.5.8 Door opening | 62 |
| 5.5.9 Threshold | 62 |
| 5.5.10 Doorway clear floor area | 62 |
| 5.6 Stairways | 65 |
| 5.6.1 Surface conditions | 65 |

| 5.6.2 Clear height | |
|--|-------------|
| 5.6.3 Clear width | 66 |
| 5.6.4 Treads and risers | 66 |
| 5.6.5 Landings | 67 |
| 5.6.6 Handrails | 68 |
| 5.6.7 Guards | 68 |
| 5.6.8 Tactile walking surface indicator | 68 |
| 5.6.9 Signage | 68 |
| 5.6.10 Curved flights and merged stair-ramps | (stramps)69 |
| 5.7 Ramps | 69 |
| 5.7.1 Floor surface | 69 |
| 5.7.2 Clear width | 69 |
| 5.7.3 Slope | 69 |
| 5.7.4 Landings | 69 |
| 5.7.5 Handrails | 70 |
| 5.7.6 Guards | 70 |
| 5.7.7 Edge protection | 70 |
| 5.7.8 Tactile walking surface indicator | |
| 5.7.9 End of ramp indicator | 71 |
| 5.8 Elevators | 71 |
| 5.8.1 Vertical platform area for a stretcher | 71 |
| 5.8.2 Elevator controls | 72 |
| 5.8.3 Floor numbering | 72 |
| 5.8.4 Occupant evacuation elevators | 72 |
| 6 Building facilities and systems | 72 |
| 6.1 Public counters and work surfaces | 72 |
| 6.1.1 Public counters | 72 |
| 6.1.2 Work surfaces | |

| 6.2 Shelves and counters for telephones | 73 |
|--|----|
| 6.2.1 General shelves and counters for public telephones | 73 |
| 6.2.2 Public telephones | 73 |
| 6.3 Signs and wayfinding | 74 |
| 6.3.1 Locations | 74 |
| 6.3.2 Illumination | 74 |
| 6.3.3 Tactile sign height | 75 |
| 6.3.4 Tactile maps | 75 |
| 6.3.5 Visual characters | 75 |
| 6.3.6 Raised characters | 77 |
| 6.3.7 Braille | 81 |
| 6.3.8 Graphic symbols | 82 |
| 6.3.9 Graphic symbols of accessibility | 83 |
| 6.3.10 Attention Tactile walking surface indicators (TWSI) | 84 |
| 6.4 Assistive listening system | 85 |
| 6.4.1 Coverage | 85 |
| 6.4.2 Receiver systems | 85 |
| 6.4.3 Sound level and quality | 87 |
| 6.4.4 Lecture platforms | 87 |
| 7 Sanitary facilities | 88 |
| 7.1 Grab bars | 88 |
| 7.1.1 General | 88 |
| 7.1.2 Cross-section | 88 |
| 7.1.3 Mounting location | 88 |
| 7.1.4 Identification | 89 |
| 7.2 Washrooms | 89 |
| 7.2.1 Door | 89 |
| 7.2.2 Clear floor area | 89 |

| 7.2.3 Accessible water closet enclosures | 89 |
|--|-----|
| 7.2.4 Standard-sized water closet enclosures | 96 |
| 7.2.5 Urinals | 97 |
| 7.2.6 General urinals | 98 |
| 7.2.7 Lavatories, mirrors and accessories | 98 |
| 7.2.8 Wayfinding | 101 |
| 7.3 Universal washrooms | 101 |
| 7.3.1 Use | 101 |
| 7.3.2 Surface conditions | 101 |
| 7.3.3 Clear floor area | 101 |
| 7.3.4 Door | 102 |
| 7.3.5 Lavatory, mirror and accessories | 103 |
| 7.3.6 Water closet and grab bars | 103 |
| 7.3.7 Toilet paper dispenser | 103 |
| 7.3.8 Hooks | 103 |
| 7.3.9 Shelf | 103 |
| 7.3.10 Lighting | 104 |
| 7.3.11 Height-adjustable adult change table | 104 |
| 7.3.12 Baby change table | 104 |
| 7.3.13 Ceiling lift system | 105 |
| 7.3.14 Emergency notification system | 105 |
| 7.4 Showers | 106 |
| 7.4.1 Clear floor area | 106 |
| 7.4.2 Clear height | 107 |
| 7.4.3 Surface conditions | 107 |
| 7.4.4 Changes in level | 107 |
| 7.4.5 Seat | 107 |
| 7.4.6 Faucets and controls | |

| 7.4.7 Grab bars | 109 |
|--|-----|
| 7.4.8 Shower head | 110 |
| 7.4.9 Soap holder | 111 |
| 7.4.10 Clothes hook | 111 |
| 7.5 Bathtubs | 111 |
| 7.5.1 Clear floor area | 111 |
| 7.5.2 Length and height | 112 |
| 7.5.3 Access | 112 |
| 7.5.4 Doors and enclosure walls | 112 |
| 7.5.5 Surface condition | 112 |
| 7.5.6 Seat | 112 |
| 7.5.7 Faucets and controls | 113 |
| 7.5.8 Grab bars | 114 |
| 7.5.9 Shower head | 115 |
| 7.5.10 Soap holder | 115 |
| 7.6 Drinking fountains and bottle filling stations | 116 |
| 7.6.1 Location | 116 |
| 7.6.2 Clear floor area and clearances | 116 |
| 7.6.3 Controls | 116 |
| 7.6.4 Cup dispensers | 117 |
| 7.6.5 Spout | 117 |
| 7.6.6 Water | 118 |
| 7.6.7 Identification | 118 |
| 8 Evacuation facilities | 118 |
| 8.1 Emergency notification systems | 118 |
| 8.1.1 Visible device location | 118 |
| 8.1.2 Where a fire alarm system is provided | 118 |
| 8.1.3 Where a fire alarm system is not provided | 119 |

| | 8.1 | .4 Smoke alarms in assisted living facilities | 119 |
|-----|------|---|-----|
| 8. | 2 | Fire protection and refuge | 120 |
| | 8.2 | .1 Means of egress | 120 |
| | 8.2 | .2 Occupant evacuation elevator | 120 |
| | 8.2 | .3 Areas of refuge | 120 |
| 8. | 3 | Exiting | 122 |
| 9 | Oc | cupancy requirements | 122 |
| 9. | 1 | Assembly occupancies | 122 |
| | 9.1 | .1 Location | 122 |
| | 9.1 | .2 Floor surface | 123 |
| | 9.1 | .3 Clear floor area | 123 |
| | 9.1 | .4 Lines of sight | 124 |
| | 9.1 | .5 Storage spaces | 125 |
| | 9.1 | .6 Podiums and stage areas | 126 |
| | 9.1 | .7 Sign language interpreter stations | 126 |
| 9. | 2 | Detention occupancies | 127 |
| 9. | 3 | Business and personal service occupancies | 127 |
| Anr | ıex | A (informative) | 128 |
| A | .1 G | Grants and Contributions Research | 128 |

0 Introduction

Reserved.

1 Scope

1.1 Terminology

In this Standard, "shall" is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard; "should" is used to express a recommendation or that which is advised but not required; and "may" is used to express that which is permissible within the limits of the Standard.

Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate explanatory or informative material.

Notes to tables and figures are considered part of the table or figure and may be written as requirements.

Annexes are designated normative (mandatory) or informative (nonmandatory) to define their application.

2 Definitions, symbols, and abbreviations

The following definitions shall apply in this Standard:

Access aisle – refers to an accessible and safe pedestrian space or route used for loading and unloading from vehicle, as well as safe travel to and from designated accessible parking spaces to nearest accessible route / entrance. Access aisles include pavement markings for easy identification and are often shared between accessible parking spaces.

Access to exit – that part of a means of egress within a floor area that provides access to an exit serving the floor area.

Accessible – any space, feature, element, site, environment or facility that can be used (e.g., located, approached, entered, exited or operated) by people with varying disabilities, with or without the use of mobility aids or assistive devices. Can also refer to services, practices and programs.

Alteration – a change or extension to any matter or thing or to any occupancy regulated by this Standard.

Architrave – the molding around a rectangular opening (such as a door).

Area of refuge – A designated waiting area where a person can safely gather inside the building for a temporary period of time until first responders arrive to assist the person.

Assistive listening system – A system that provides assistive listening and communication enhancement technologies (e.g., hearing loop) to amplify sound for people who are hard or hearing, where information is exchanged and ensures text to text communication system is available for people who are deaf.

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

Braille – a system of touch reading where raised dots are used to represent numbers and letters. Unified English Braille (UEB) is the English Braille standard for Canada and code de braille français uniformisé (CBFU) is the French Braille standard for Canada.

Building – any structure used or intended for supporting or sheltering any use or occupancy.

Building height (in storeys) – the number of storeys contained between the roof and the floor of the first storey.

Cane-detectable – any object or a change in surface texture that falls within the detection range of a long white cane.

Candela (cd) – the metric measurement of luminance intensity, equal to the luminous intensity in a given direction, of a source that emits monochromatic

radiation of frequency 540 \times 1012 Hz and has a radiant intensity in the direction of 1/683 W/sr.

Clear floor space – The amount of unobstructed floor or ground space required to accommodate a single stationary user with a mobility device / aid, such as wheelchairs, scooters, canes, crutches and walkers.

Communication – includes languages, display of text, Braille, tactile communication, large print, accessible multimedia as well as written, audio, plain-language, human-reader and augmentative and alternative modes, means and formats of communication, including accessible information and communication technology.

Curb ramp –a short and steep ramp that is cut through a curb to deal with changes in elevation from 13 mm to 200 mm high. Curb ramps can have flared sides, curb returns or a combination of flared sides and curb returns. (See also definition of ramp).

Disability – Any impairment, including a physical, mental, intellectual, cognitive, learning, communication, or sensory impairment — or a functional limitation — whether permanent, temporary, or episodic in nature, or evident or not, that, in interaction with a barrier, hinders a person's full and equal participation in society.

Dwelling unit – means a building or suite operated as a housekeeping unit, used or intended to be used by one or more persons and usually contains cooking, eating, living, sleeping and sanitary facilities.

Emergency – an incident or set of incidents, natural or human-caused, that requires responsive actions to protect life, property, the environment, and/or critical systems.

Evacuation – an emergency response procedure for the movement of people, animals, and/or materials from dangerous or potentially dangerous areas to a safe place.

Exit – that part of a means of egress, including doorways, that leads from the floor area it serves to a separate building, an open public way, or an

exterior open space protected from fire exposure from the building and having access to an open public thoroughfare.

Exterior amenity space – An occupiable space that is outside the building exterior walls.

Fire-resistance rating – the time in minutes or hours that a material or assembly of materials will withstand the passage of flame and the transmission of heat when exposed to fire under specified conditions of test and performance criteria, or as determined by extension or interpretation of information derived therefrom as prescribed in the applicable Building Code.

Fire separation – a construction assembly that acts as a barrier against the spread of fire.

First storey – the uppermost storey having its floor level not more than 2 m above grade.

Flight – a series of steps between landings.

Floor area – exterior amenity spaces serving a building and the space on any storey of a building between exterior walls and required firewalls, including the space occupied by interior walls and partitions, but not including exits, vertical service spaces, and their enclosing assemblies.

Forward approach – where a person will make use of a service counter, drinking fountain, or any other usable element of the built environment, by positioning their body or mobility aid directly in front of and facing the element.

Grab bars – any type of grab bar that is fixed in place (straight, curved, angled, L-Shaped, swing down etc.).

Glare – refers to bright light reflected from a surface, floor, window or screen. Glare occurs when one part of the environment is much brighter than the general surrounding area, causing annoyance, discomfort or loss in visual performance. **Grade** – the lowest of the average levels of finished ground adjoining each exterior wall of a building, except that localized depressions need not be considered in the determination of average levels of finished ground.

Graphic symbol – A visually perceptible figure with a particular meaning used to transmit information independently of language.

Guard – a protective barrier 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. Such a barrier may or may not have openings through it.

Hazard – A potentially damaging event or human activity that could cause a structure, obstruction, or barrier (natural or constructed) and risk of emotional/physical damage.

High-hazard industrial occupancy (Group F, Division 1) —an industrial occupancy containing sufficient quantities of highly combustible and flammable or explosive materials which, because of their inherent characteristics, constitute a special fire hazard.

Illumination – the combined amount and intensity of lighting provided, as measured in lux (lx).

Incident – A situation that might be or could lead to, a disruption, loss, emergency, or crisis.

Language – includes spoken and signed languages and other forms of non spoken language.

Luminance – the intensity of light emitted or reflected in a given direction from the surface element divided by the area of the element in the same direction.

Luminance contrast – the difference in light reflectance value between adjacent surfaces, calculated using the Michelson Contrast (C_M) formula in conformance with CSA B651, "Accessible design for the built environment," and expressed as a percentage difference.

High luminance contrast – a luminance contrast (C_M) that is greater than 60%.

Medium luminance contrast – a luminance contrast (C_M) that is between 30% and 60%.

Visual contrast – visual perception between one element of a building and another.

Note: Visual contrast can be achieved through a difference in luminance (also referred to as luminance contrast). It can also be achieved through luminance contrast if there is adequate lighting for users to perceive the difference in colour.

Lux – The metric measurement for light intensity or illumination.

Major occupancy —the principal occupancy for which a building or part thereof is used or intended to be used, and shall be deemed to include the subsidiary occupancies that are an integral part of the principal occupancy. The major occupancy classifications used in this Standard are as follows:

- A1 Assembly occupancies intended for the production and viewing of the performing arts
- A2 Assembly occupancies not elsewhere classified in Group A
- A3 Assembly occupancies of the arena type
- A4 Assembly occupancies in which the occupants are gathered in the open air
- B1 Detention occupancies in which persons are under restraint or are incapable of self-preservation because of security measures not under their control
- B2 Treatment occupancies
- B3 Care occupancies
- B4 Home-type care occupancies

- C Residential occupancies
- D Business and personal services occupancies
- E Mercantile occupancies
- F1 High-hazard industrial occupancies
- F2 Medium-hazard industrial occupancies
- F3 Low-hazard industrial occupancies
- G1 High-hazard agricultural occupancies
- G2 Agricultural occupancies not elsewhere classified in Group G
- G3 Greenhouse agricultural occupancies
- G4 Agricultural occupancies with no human occupants

Means of egress – a continuous path of travel provided for the escape of persons from any point in a building or contained open space to a separate building, an open public way, or an exterior open space protected from fire exposure from the building and having access to an open public way. Means of egress includes exits and access to exits.

Mobility Aids (or Devices) – A term used to encompass the variety of assistive devices used by people with mobility / physical types of disabilities, including but not limited to manual and power wheelchairs, scooters, walkers, canes and crutches.

Occupancy – the use or intended use of a building or part thereof for the shelter or support of persons, animals or property.

Occupant evacuation elevator – An elevator that can be used for selfevacuation during a fire emergency.

Passenger pick-up/drop-off zone – designated and signed area used for loading and unloading of passengers into or out of a waiting vehicle.

Power-operated door (automatic door) – A door with a mechanism that opens the door automatically, upon the activation of electronic sensors, a

switch, button or a control. The door also remains in the "open" position for a set period of time to allow safe passage. Power operated doors include automatic doors.

Public way – a sidewalk, street, highway, town/city square or other open space to which the public has access, as of right or by invitation, expressed or implied.

Ramp – A sloped surface or inclined plane that provides an accessible connection between changes in ground elevation. (See also definition of curb ramp).

Reach Range – the limit of which a person can grasp and/or use an item or surface.

Side approach – Where a person will make use of a service counter, drinking fountain, or any other usable element of the built environment, by positioning their body or mobility aid perpendicular to the element.

Signage – A sign is a means of conveying information about direction, location, safety or form of action and in general should be designed to be clear, concise and consistent. Signage displays text, graphic symbols, tactile, braille, pictorial and digital information.

Slip resistant – A surface that provides sufficient frictional counterforce to the forces exerted in walking to permit safe ambulation.

Slope – the ratio of rise to run on an inclined surface.

Cross-slope – the slope that is perpendicular to the direction of travel, expressed as a ratio of rise to run.

Running slope – the slope that is parallel to the direction of travel, expressed as a ratio of rise to run.

Service space – space provided in a building to facilitate or conceal the installation of building service facilities such as chutes, ducts, pipes, shafts or wires.

Sprinklered – that the building is equipped with a system of automatic sprinklers.

Storey - that portion of a building that is situated between the top of any floor and the top of the floor next above it, and if there is no floor above it, that portion between the top of such floor and the ceiling above it.

Suite – a single room or series of rooms of complementary use, operated under a single tenancy, and includes dwelling units, individual guest rooms in motels, hotels, boarding houses, rooming houses and dormitories as well as individual stores and individual or complementary rooms for business and personal services occupancies.

Tactile – Describes an object that can be perceived using the sense of touch, and typically provided for users with vision loss.

Tactile walking surface indicator (TWSI) – a surface, detectable underfoot or by a long white cane, to assist persons with low vision or blindness by alerting or guiding them. There are two types of TWSIs. An TWSI (attention) indicates a warning (raised truncated domes) and a TWSI (directional) indicates a direction indicator (raised elongated bars).

Transfer space – an unobstructed area adjacent to a fixture or furniture allowing the positioning of a mobility aid to enable a person to transfer to the fixture or furniture.

Wayfinding – a term used to describe a variety of means for spatial orientation and finding the way to a destination. Wayfinding design describes a variety of means for helping people find their way, through touch, print, signage, architecture, landscaping, digital and navigation for example.

3 Application

Note: The Standard includes features that enable access and the use of a building for a wide variety of people. The maintenance of these features is critical for access to and useability of the building. A comprehensive, inspection, testing and maintenance program should be implemented for the life of the building.

3.1 Buildings required to be accessible

Except as permitted by Clause 3.2, the requirements of this Standard shall apply to any one or more of the following:

- a) the design, construction and occupancy of all new buildings,
- b) the alteration, major renovation, reconstruction, relocation and occupancy of all existing buildings, and
- c) both site-built and factory-constructed buildings.

3.2 Buildings out of scope of this standard

The requirements of this standard do not apply to:

- a) detached houses, semi-detached houses, houses with a secondary suite, duplexes, triplexes, townhouses, row houses and does not include buildings used for short term accommodation or group homes.
- b) construction camps, and
- c) Farm buildings not more than 3 storeys in building height and not more than 600 m² in building area used for major occupancies classified as Group G, Division 1, 2, or 3 agricultural occupancies.

3.3 Access to floor areas

3.3.1 Areas required to be accessible

Except as permitted by Clauses <u>3.3.2</u> and <u>3.3.3</u>, and notwithstanding Clause <u>3.3.4</u>, all elements in a path of travel shall be in conformance with Clauses <u>3.3.4</u> to <u>3.3.12</u>:

- a) from the outdoors at sidewalk, roadway, street level or exterior parking facility to all building entrances,
- b) from all building entrances, and interior parking facilities to all floor areas of a building,
- c) from all exits to exterior exit doors, and
- d) from all exterior exit doors to a public way.

Note: Floor areas include exterior amenity space such as patios.

3.3.2 Areas not required to be accessible

The requirements of this standard do not apply to the following areas and dedicated paths of travel to these areas:

- a) elevator machine rooms,
- b) service spaces,
- c) crawl spaces,
- d) attic or unoccupied roof spaces, and
- e) floor areas of high hazard industrial occupancy (Group F, Division 1).

Note: The exemption for high hazard industrial occupancies does not apply to the floor areas of other occupancies in the same building.

3.3.3 Dwelling units

The requirements of this standard do not apply to the interior of individual dwelling units.

3.3.4 Access to entrances

A change in level in a path of travel to an entrance required by Clause 3.3.1a) shall be in conformance with any one or a combination of Clauses 4.2, 5.1.3, 5.7 or 5.8.

Note: A stair, escalator or inclined moving walk may be provided as part of a secondary path of travel to an entrance, provided it is in addition to the primary path of travel to an entrance required by this Clause.

3.3.5 Access to floor levels

Access to a floor level within a building shall be provided in conformance with Clauses 5.7 or 5.8.

Notes:

1) A stair, escalator or inclined moving walk may be provided as part of a secondary path of travel to a floor level.

2) The location of a path of travel in conformance with this Clause should be considered relative to the size of the floor level served. To limit the distance an occupant would have to travel to reach such points of access, additional paths of travel in conformance with this Clause should be provided where those distances are considered excessive.

3.3.6 Passenger loading zones

Where provided, a passenger loading zone shall be in conformance with Clauses 5.1 and 5.2.

3.3.7 Access aisles

An access aisle shall be in conformance with Clauses 5.1 and 5.3.

3.3.8 Horizontal paths of travel

Horizontal paths of travel shall be in conformance with Clauses 5.1 and 5.4.

3.3.9 Doorways, doors and gates

3.3.9.1 General

All doorways and the active leaf or leaves of swinging, sliding and folding doors or gates in a path of travel shall be in conformance with Clauses 5.1 and 5.5.

3.3.9.2 Power door operators

All doors in a path of travel shall have power door operators in conformance with Clause 5.5.7.2, provided with power back up for a duration in

conformance with the applicable Building Code for emergency lighting, with the exception of:

- a) doors without a self-closing device,
- b) the inactive leaf of a multiple-leaf door, and
- c) the secondary doorways where more than one doorway is provided at an entrance.

Note: In selecting which doorway to equip with a power door operator where more than one doorway is provided at an entrance, consideration should be given to the location so that it is easy to access, reduces amount of travel, does not create a hazard, and minimizes congestion.

3.3.10 Stairways

Stairways shall be in conformance with Clauses 5.1 and 5.6.

3.3.11 Ramps

A ramp shall be provided where floors, walks or ground surfaces have a slope steeper than 1:25 and shall be in conformance with Clauses 5.1 and 5.7.

3.3.12 Elevators

A minimum of two elevators in conformance with Clause 5.8 shall provide access from an entrance storey to all other storeys and mezzanines of a building.

3.4 Building facilities and systems

3.4.1 Controls

Where not otherwise required by this Standard, controls adjacent to a path of travel required by Clause 3.3 and intended to be operated by a building occupant shall be in conformance with Clause 4.7 and shall include, but not be limited to:

- a) electrical switches,
- b) thermostats,

- c) faucets,
- d) door hardware,
- e) emergency and panic controls,
- f) intercom switches,
- g) power door operators,
- h) drinking fountain controls,
- i) bottle filling station controls,
- j) shower controls,
- k) bathtub controls,
- I) electrical outlets,
- m)water closet enclosure doors,
- n) audible and visual signal for operation of building security system,
- o) elevator controls,
- p) change table controls,
- q) toilet paper dispensers, and
- r) telephone controls.

Note: The list of controls to which this Clause applies is not exhaustive.

3.4.2 Public counters and work surfaces

Every counter at which the public is served and intended as a work surface shall be in conformance with Clause 6.1.

3.4.3 Shelves and counters for telephones

Built-in shelves and counters shall be provided for public telephones in conformance with Clause 6.2.

3.4.4 Signs and wayfinding

3.4.4.1 Required signs

Signs shall be installed in conformance with Clause 6.3 to indicate the location of:

- a) accessible spaces in seating areas,
- b) refreshment facilities,
- c) checkout lanes,

- d) public telephones,
- e) washrooms,
- f) showers,
- g) passenger-elevating devices,
- h) passenger loading zones
- i) facilities for persons that are deaf or hard of hearing,
- j) changing rooms,
- k) hoists providing access to swimming pools,
- I) service animal facilities,
- m)locations where audible and tactile information is provided,
- n) telephones and emergency call facilities, equipped with sound amplification,
- o) provision of an assistive listening system, and
- p) text displays of audible messages.

Note: The list of locations indicated by this Clause is not exhaustive.

3.4.4.2 Maps and floor plans

Tactile maps and floor plans in conformance with Clause 6.3 shall be provided at all building entrances and all exits.

3.4.4.3 Tactile walking surface indicators

A tactile walking surface indicators in conformance with Clause 6.3.10 shall be provided along the edge of a platform that is not protected by a guard and where the platform is:

- a) higher than 100 mm above the adjacent surface, or
- b) above an adjacent slope having a gradient of more than 1:3.

Note: Examples of a platform in this Clause include a transit platform and loading platforms. An example of a platform to which this Clause does not apply includes sidewalks.

3.4.4.4 Tactile signs and braille

Signs that include high luminosity contrast tactile text and braille in conformance with Clause 6.3 shall be provided in the following locations:

- a) graphic symbols on panels in elevators,
- b) water closet enclosures,
- c) multi-stall and universal washrooms,
- d) all points of entry and exits at stairwells,
- e) directional wayfinding signage,
- f) at all meeting rooms,
- g) at all lockers, closets, storage rooms,
- h) office identification signs,
- i) emergency egress signs,
- j) all dangerous area signs,
- k) room numbers in hotels,
- I) knobs in universal washrooms,
- m)emergency notification system controls,
- n) accessible shower rooms, and
- o) accessible changing rooms.

Note: The list of locations indicated by this Clause is not exhaustive.

3.4.5 Assistive listening system

A permanent assistive listening system shall be provided where there is an exchange of information in conformance with Clause <u>6.4</u>, <u>including</u> in the following floor areas:

- a) assembly occupancies:
 - i) classrooms,
 - ii) auditoria,
 - iii) public meeting rooms,
 - iv) theatres,
 - v) on stages and platforms,
 - vi) courtrooms,
 - vii) sporting venues and other arenas,
 - viii) public transport buildings,
 - ix) at public service counters,
- b) buildings of care and treatment occupancy,
- c) general areas:
 - i) at counters associated with service provision,
 - ii) self serve customer kiosks,

- iii) in elevators,
- iv) as part of emergency warning intercom systems,
- v) as part of all public address and audio-visual presentations,
- vi) as part of public announcement systems and at security checkpoints, and
- d) areas greater than 75 m² regardless of whether sound reinforcement is provided.

3.5 Sanitary facilities

3.5.1 Required accessible washroom facilities

3.5.1.1 Water closets and water closet enclosures

3.5.1.1.1 General water closet enclosures

Except as required by Clause 3.5.1.1.2, water closet enclosures shall be in conformance with Clause 7.2.4.

3.5.1.1.2 Accessible water closet enclosures

The minimum number of accessible water closets and water closet enclosures in a washroom shall conform to Table 1 and be in conformance with Clause 7.2.3.

Table 1Minimum number of water closet enclosures required to be
accessible

(See Clause <u>3.5.1.1.2</u>)

| Number of water closets per washroom | Minimum number of accessible water closets and water closet enclosures per washroom |
|--------------------------------------|---|
| 1 to 3 | All |
| 4 to 16 | 3 |
| 17 to 20 | 4 |
| Number of water closets per washroom | Minimum number of accessible water closets and water closet enclosures per washroom |
|--------------------------------------|--|
| 21 to 30 | 5 |
| Over 30 | 5, plus 1 for each additional increment of 10 water closets and water closet enclosures per washroom in excess of 30 water closets and water closet enclosures per washroom |

3.5.1.2 Urinals

3.5.1.2.1 **General urinals**

Except as required by Clause 3.5.1.2.2, urinals shall be in conformance with Clause 7.2.6.

3.5.1.2.2 Accessible urinals

Where urinals are provided, the minimum number of accessible urinals in a washroom shall conform to Table 2 and be in conformance with Clause 7.2.5.

| Table 2 |
|---|
| Minimum number of urinals required to be accessible |

| Number of urinals provided per washroom | Minimum number of accessible urinals per washroom |
|---|---|
| 1 | 1 |
| 2 to 10 | 2 |
| Over 10 | 2, plus 2 for each additional increment of 10 urinals per washroom in excess of 10 urinals per washroom |

(Soo Clause 3 5 1 2 2)

3.5.1.3 Lavatories, mirrors and accessories

A washroom shall have a minimum of:

- a) one accessible lavatory in conformance with Clause 7.2.7.1,
- b) one accessible mirror in conformance with Clause 7.2.7.2,
- c) one accessible soap dispenser in conformance with Clause 7.2.7.3,
- d) two towel dispensers or hand dryers, or a minimum of one of each in conformance with Clause <u>7.2.7.4</u>, and
- e) one shelf in conformance with Clause 7.2.7.5.

3.5.1.4 Wayfinding

A washroom shall include wayfinding in conformance with Clause 7.2.8.

3.5.2 Universal washrooms

A minimum of one universal washroom in conformance with clause <u>7.3</u> shall be provided:

- a) on each storey, and
- b) within 10 metres of multi-stall washroom clusters.

Note: Universal washroom are not counted as part of the minimum number of water closet enclosures required to be accessible in Table 1.

3.5.3 Showers

An accessible shower in conformance with Clause <u>7.4</u> shall be provided in:

- a) conformance with Table 3 for suites of a hotel, motel and temporary accommodation,
- b) buildings of care or treatment occupancy (Group B, Division 2 or 3), and
- c) conformance with Table 4 where showers are provided in a building.

Table 3Minimum number of showers required to be accessible(See Clause 3.5.3 a))

| Number of suites in a hotel, motel or temporary accommodation | Minimum number of suites with an accessible shower |
|---|---|
| 1 to 4 | 1 |
| Over 4 | 1, plus 1 for each additional increment of 4 suites |

Table 4 Minimum number of showers required to be accessible (See Clause 2.5.2 c))

| (See Clause <u>3.5.3</u> c)) | |
|------------------------------|---|
| Number of showers provided | Minimum number of accessible showers |
| 1 to 7 | 1 |
| Over 7 | 1, plus 1 for each additional increment of 7 in a group of showers in excess of 7 showers |

3.5.4 Bathtubs

An accessible bathtub in conformance with Clause 7.5 shall be provided in:

- a) conformance with Table 5 for suites of a hotel, motel and temporary accommodation, and
- b) buildings of Group B, Division 2 or 3 occupancy where individual bathtubs are provided for patients or residents.

Table 5Minimum number of bathtubs required to be accessible(See Clause 3.5.4 a))

| Number of suites in a hotel, motel or temporary accommodation | Minimum number of suites with an accessible bathtub |
|---|--|
| 1 to 5 | 1 |
| Over 5 | 1, plus 1 for each additional increment of 5 suites |

3.5.5 Drinking fountains and bottle filling stations

In each location where drinking fountains and bottle filling stations are provided,

- a) at least one of each type provided shall be in compliance with Clause 7.6, or
- b) be combined into a single unit in compliance with Clause 7.6.

3.6 Evacuation facilities

3.6.1 Emergency notification systems

In addition to audible alarm signals, visible signal devices shall be installed throughout all floor areas in conformance with Clause $\frac{8.1}{2}$.

3.6.2 Fire protection and refuge

Every floor area that does not provide direct access to the building exterior and a public through fare in conformance with Clause 8.2.1 shall be provided with:

- a) an occupant evacuation elevator in conformance with Clause 8.2.2, and
- b) an area of refuge in conformance with Clause <u>8.2.3</u>.

3.6.3 Exiting

Exit doors discharging to the exterior of a building or another building through a horizontal exit (all of which shall be accessible) shall be in conformance with Clause 8.3.

3.7 Building and occupancy requirements

3.7.1 Assembly occupancies

3.7.1.1 Number

In an assembly occupancy with fixed seats, the minimum number of accessible spaces and the minimum number of fixed seats designated for adaptable seating shall conform to Table 6 and be in conformance with Clause 9.1.

Note: The required number of accessible spaces does not include companion seating required by Clause 9.1.1.2.

| Table 6 |
|--|
| Designated spaces for accessible and adaptable seating |

| Number of fixed seats in seating area | Minimum number of accessible spaces | Minimum number of fixed seats designated for adaptable seating |
|---------------------------------------|---|--|
| Up to 50 | 2 | 2 |
| 51 to 150 | 4 | 8 |
| 151 to 300 | 5 | 15 |
| 301 to 500 | 6 | 25 |
| Over 500 | 3% of the seating capacity | The greater of 25 seats or 5% of the aisle seating capacity |

(See Clause <u>3.7.1.1</u>)

3.7.1.2 Location

Designated accessible spaces and adaptable seating shall be:

- a) dispersed at a variety of distances from the event to provide viewing options, except for assembly areas with 300 seats or less where all accessible space locations are within the front 50% of the total rows,
- b) dispersed amongst distinct seating areas with amenities and price range of seating that differ from other distinct seating areas, accessible space locations shall be provided within each distinct seating area,
- c) horizontally dispersed where seating encircles a stage or field, in whole or in part, except in assembly areas with 300 or fewer seats if the accessible spaces are located within the 2nd and 3rd quartile of the row length, including intermediate aisles in determining the total row length, and if the row length in the 2nd and 3rd quartile of the row is insufficient to accommodate the required number of companion seats and accessible spaces, the additional companion seats and accessible spaces shall be permitted to extend into in the 1st and 4th quartile of the row,
- d) dispersed in theatres in the:
 - i) tiered seating area on a riser or a cross-aisle for spaces with seating on risers,
 - ii) rear 60% of the seats provided, and
 - iii) area of a theatre in which the vertical viewing angles, as measured to the top of the screen, are from the 40th to the 100th percentile of vertical viewing angles for all seats as ranked from the seats in the first row (1st percentile) to seats in the back row (100th percentile).

3.7.2 Detention occupancies

The minimum number of accessible cells in detention occupancies shall conform to Table 7 and be in conformance with Clause 9.2.

Table 7

Minimum number of cells in a detention occupancy required to be accessible

(See Clause 3.7.2)

| Number of cells in a detention occupancy | Minimum number of accessible cells |
|--|--|
| 1 to 5 | 1 |
| Over 5 | 1, plus 1 for each additional increment of 5 cells |

3.7.3 Business and personal service occupancies

The minimum number of accessible examination or treatment rooms in physician clinics and offices shall conform to Table 8 and be in conformance with Clause 9.3.

Table 8

Minimum number of examination and treatment rooms required to be accessible

(See Clause <u>3.7.3</u>)

| Number of examination or treatment rooms in a physician clinic or office | Minimum number of accessible examination or treatment rooms |
|--|--|
| | |
| Over 5 | 1, plus 1 for each additional increment of 5 examination and treatment rooms |

4 Fundamental design components

4.1 Surface conditions

4.1.1 General

A ground or floor surface shall:

- a) be stable, firm and slip-resistant,
- b) have a cross slope of 1:50 maximum,
- c) have no opening that will permit the passage of a sphere more than 13 mm in diameter,
- d) have any elongated openings oriented perpendicular to the direction of travel, and
- e) have a low-glare or matte floor surface with no heavily patterned flooring.

Note: *Disorienting, disruptive, and confusing ground or floor surface designs should be avoided.*

4.1.2 Carpet

Carpet or carpet tile shall:

- a) be securely attached and, and where cushion or pad is provided it is to be firm,
- b) have a level loop, textured loop, level cut pile, or level cut/uncut pile texture,
- c) have pile that is 6 mm maximum in height,
- d) have exposed edges of carpet fastened to the floor and have trim along the entire length of the exposed edge, and
- e) have a combined carpet and pad height of 13 mm maximum.

4.1.3 Floor mats

Floor mats shall:

- a) be securely attached,
- b) have a mat height of 13 mm maximum with beveled edges, and
- c) provide a high luminance contrast with surrounding surfaces.

Note: Consider use of recessed grills instead of floor mats for entrance vestibules and other high traffic areas.

4.2 Change in level

A change in level at a ground or floor surface shall:

- a) be beveled at a slope of 1:2 maximum at changes in level up to 13 mm,
- b) have a slope of 1:25 maximum, or
- c) be designed as a ramp in conformance with Clause 5.7.

4.3 Clear area and height

4.3.1 Clear floor or ground area

A clear floor or ground area:

- a) for a forward approach shall be:
 - i) 1,500 mm minimum in depth, and
 - ii) 900 mm minimum in width,
- b) for a parallel approach shall be:
 - i) 2,200 mm minimum in depth, and
 - ii) 900 mm minimum in width,
- c) for an area that requires approach and transfer shall be 2,100 mm minimum in depth and width, or
- d) for turning shall be 2,500 mm minimum in diameter.

4.3.2 Clear height

A clear floor area and clear width shall have a clear height of 2,400 mm minimum measured vertically from the:

- a) ground surface,
- b) finished floor surface, or
- c) straight-line tangent to the tread and landing nosings of a stairway to the lowest element above.

4.4 Knee and toe clearance

4.4.1 Knee clearance

Knee clearance shall be 685 mm minimum above the finished floor surface to a point 300 mm minimum from the front edge of the element.

4.4.2 Toe clearance

Toe clearance shall be 350 mm minimum above the finished floor surface to a point 500 mm minimum from the front edge of the element.

4.5 **Protruding objects**

Note: To assist pedestrians in avoiding protruding objects, place elements (e.g., benches, trash receptacles, planters) in an area adjacent to the path of travel with ground or floor finishes that contrast in colour and texture to the path of travel.

4.5.1 General

Except as permitted by Clauses 4.5.2 and 4.5.5, protruding objects shall not reduce the clear width or clear floor area.

4.5.2 Objects with a leading edge 685 mm minimum above the finished floor surface

Except where permitted by Clauses 4.5.4 and 4.5.5 objects with a leading edge 685 mm minimum above the finished floor surface shall not protrude more than 100 mm into the clear width or clear floor area.

4.5.3 Objects with a leading edge less than 685 mm above the finished floor surface

Objects with a leading edge less than 685 mm above the finished floor surface shall not protrude into a clear width or clear floor area.

4.5.4 Rails and barriers

4.5.4.1 Location

Where objects protrude more than 100 mm into a clear width or clear floor area, rails or barriers shall be provided 685 mm maximum above the finished floor surface and shall bound the area projected on the floor by the protruding object.

4.5.4.2 Identification

Rails or barriers shall have a medium luminance contrast with the surrounding surface.

4.5.5 Handrails

Handrails in conformance with Clause 5.1.6 are permitted to protrude 100 mm maximum into a clear width or clear floor area.

4.6 Reach ranges

4.6.1 Forward reach

Forward reach shall be:

- a) 1,200 mm maximum above the finished floor surface for an unobstructed high reach,
- b) 1,100 mm maximum above the finished floor surface for an obstructed high reach, and
- c) 500 mm minimum above the finished floor surface for a low reach.

4.6.2 Side reach

Side reach shall be:

- a) 1,200 mm maximum above the finished floor surface for an unobstructed high reach,
- b) 860 mm maximum above the finished floor surface for an obstructed high reach, and
- c) 230 mm minimum above the finished floor surface for a low reach.

4.7 Operable parts

4.7.1 Location

Unless otherwise required by this Standard, the centreline of operable parts shall be:

- a) located between 400 mm minimum and 1,100 mm maximum from the finished floor surface,
- b) adjacent to and centered on the width or length of a clear floor area required by Clause <u>4.3.1</u>, and
- c) 600 mm minimum from any adjacent wall.

4.7.2 Operation

Operable parts shall be:

- a) automatic,
- b) operable with one hand in a closed fist position, without requiring tight grasping, pinching with fingers or twisting of the wrist, or
- c) operable by another method that does not require tight grasping, pinching, or twisting of the wrist.

Note: Automatic controls are preferred.

4.7.3 Push-button type controls

Push-button type controls shall have a surface with a minimum diameter of 13 mm and shall not be recessed.

4.7.4 Specialized knowledge

Operable parts shall not require specialized knowledge to operate.

4.7.5 Operation force

If not automatic, operable parts shall be operable with a force of:

- a) 19.5 N maximum for mechanically operable parts, and
- b) 5 N maximum for electrically operable parts.

4.7.6 Identification

Operable parts shall:

- a) have a high luminance contrast with their background,
- b) provide tactile and auditory information to indicate function, position, and confirmation of activation, and
- c) Not be obscured by shadows or obstructed.

Note: Important controls including security and safety related controls, should include braille.

4.7.7 Illumination

Operable parts shall be illuminated in conformance with Clause <u>4.8</u>.

4.7.8 Visual displays

Information on visual displays shall be:

- a) supplemented by tactile and auditory information,
- b) colour-contrasted to its background, and
- c) located on a surface that minimizes glare.

4.8 Illumination

4.8.1 Glare

Illumination shall not result in glare.

4.8.2 Paths of travel

Illumination to an average level of 100 lx minimum shall be provided at:

- a) ground or floor surface for paths of travel,
- b) elevators, and
- c) tread level for stairs.

4.8.3 Signs and operable parts

The surface of signs and operable parts shall be provided with illumination to an average level of:

- a) 50 lx minimum where internally illuminated,
- b) 100 lx minimum where reading is not required, and
- c) 200 lx minimum where reading is required.

5 Paths of travel

5.1 General

5.1.1 Surface conditions

A path of travel shall have a ground, floor, tread or landing surface in conformance with Clause 4.1.

5.1.2 Change in level

A change of level of a path of travel shall be in conformance with Clause 4.2, except where permitted by:

- a) Clause <u>5.1.3</u> for a change in level between elements of a path of travel
 - i) to a building entrance, or
 - ii) within interior parking areas and passenger drop-off zones, or
- b) Clause <u>5.6</u> for stairs.

5.1.3 Curb ramp

5.1.3.1 General

A curb ramp is permitted to overcome a maximum change of 200 mm.

5.1.3.2 Slope

A curb ramp shall have a running slope of 1:20 maximum.

5.1.3.3 Flared sides

A curb ramp shall have flared sides with a slope of 1:15 maximum where pedestrians are likely to walk across them.

5.1.3.4 Width

A curb ramp shall be 1,500 mm minimum in width, not including flared sides.

5.1.3.5 Identification

The change in level between a curb ramp and the adjacent surface shall be:

- a) indicated with a high luminance contrast, and
- b) texture contrasted on the leading edge of the curb ramp in conformance with Clause <u>6.3.10</u>.

5.1.4 Clear height

Except where permitted by Clauses 5.1.5 and 5.5.1, the clear height of a path of travel shall be:

a) 3,600 mm minimum for passenger loading zones and access aisles, and b) in conformance with Clause 4.3.2 for other path elements.

5.1.5 Obstructions

Where obstructions cannot be avoided along a path of travel, they shall comply with Clause 4.5.

5.1.6 Handrails

5.1.6.1 General

Handrails shall:

- a) be easy to grasp and maintain grip along their length,
- b) be terminated in a manner that will not obstruct pedestrian travel or create a hazard,
- c) not rotate within their fittings,
- d) not protrude into transverse paths, and
- e) where located adjacent to a wall, have a high luminance contrast with the wall surface.

5.1.6.2 Location

A stair, ramp and intermediate landing shall have upper and lower handrails on each side.

5.1.6.3 Intermediate handrails

Intermediate upper and lower handrails shall be provided so that:

- a) there is 1,650 mm maximum in width between handrails,
- b) a handrail is reachable within 750 mm of all portions of the required pathway width, and
- c) at least one portion of the pathway shall have the minimum required pathway width.

5.1.6.4 Height and measurement

5.1.6.4.1 Measurement

The height of a handrail shall be measured vertically from the top of the handrail to:

a) a straight line drawn tangent to the tread nosings of a stair, or

b) surface of a landing or ramp.

5.1.6.4.2 Height

The height of a handrail above the finished floor surface or ground surface shall be between:

- a) 850 mm minimum and 1,000 mm maximum in height for the upper handrail, and
- b) 600 mm minimum and 750 mm maximum in height for the lower handrail.

5.1.6.5 Cross-section

A handrail shall be circular in cross-section and have an outside diameter between:

- a) 32 mm minimum and 43 mm maximum for the upper handrail, and
- b) 25 mm minimum and 32 mm maximum for the lower handrail.

5.1.6.6 Clearance

A handrail shall have a clearance of 60 mm minimum on the top 270 ° arc along its entire length.

5.1.6.7 Extension

A handrail shall,

- a) in the case of a stair,
 - i) extend horizontally at the required height, 300 mm minimum beyond the top riser, and
 - ii) continue to slope for a depth of one tread beyond the bottom riser followed by a 300 mm horizontal extension, and
- b) in the case of a ramp, extend horizontally at the required height, 300 mm minimum beyond the top and bottom edges of the incline.

5.1.6.8 Load

Handrails and their supports shall be designed and constructed to withstand the following loads, which need not be considered to act simultaneously:

- a) a concentrated load 1.7 kN minimum applied at any point and in any direction, and
- b) a uniform load 0.7 kN/m minimum applied in any direction.

5.1.7 Guards

5.1.7.1 Location

Every stair, ramp and landing shall have a wall or a well-secured guard on each side, where:

- a) there is a difference in elevation of more than 100 mm between the stair, ramp or landing surface and the adjacent surface, or
- b) the adjacent surface within 1.2 m of the stair, ramp or landing surface has a slope of more than 1:2.

5.1.7.2 Height

5.1.7.2.1 Interior

The height of a guard for interior stairs, ramps and landings shall be 1,070 mm minimum, measured vertically to the top of the guard from:

a) from a line drawn through the outside edges of the stair nosings, or b) the surface of the ramp or landing.

5.1.7.2.2 Exterior

The height of a guard shall be 1,070 mm minimum for exterior stairs, ramps and landings more than 10 m above adjacent ground level, measured vertically to the top of the guard from:

a) from a line drawn through the outside edges of the stair nosings, or

b) the surface of the ramp or landing.

5.1.7.3 Windows

A window for which the distance measured vertically between the bottom of the window and a line drawn through the outside edges of the stair nosings is less than 900 mm, or a window that extends to less than 1,070 mm above the surface of the ramp or landing, shall be:

- a) protected by a guard that is:
 - i) 900 mm minimum in height above a line drawn through the outside edges of the stair nosings, or
 - ii) 1,070 mm minimum in height measured to the top of the guard from the surface of the ramp or landing, or
- b) fixed in position and designed to resist the lateral design loads specified for guards and walls pursuant to the applicable Building Code.

5.1.7.4 Differentiation

A guard shall have a medium luminance contrast with the surrounding surface.

5.2 Passenger loading zone

5.2.1 General

A passenger loading zone shall:

- a) be marked,
- b) be 25 m maximum travel distance from the nearest building entrance served by the passenger loading zone, and
- c) connect to an access aisle in conformance with Clause 5.3, and
- d) have overhead protection for users from the elements.

5.2.2 Clear height

A passenger loading zone shall have a clear height of 3,000 minimum above the ground level.

5.2.3 Clear area

A passenger loading zone shall have:

- a) a clear width of 3,400 mm minimum, and
- b) a clear length of 7,400 mm minimum.

5.2.4 Vertical signage

Signage identifying the passenger loading zone shall:

- a) be 300 mm minimum in width and 600 mm minimum in height,
- b) be located between 1,500 mm minimum and 2,000 mm maximum above ground level,
- c) have the International Symbol of Access in conformance with Clause <u>6.3.8</u>,
- d) have Information text in conformance with Clause 6.3, and
- e) be in conformance with Clause 4.5.

5.3 Access aisle

Note: Access aisles should be regularly maintained and kept clear of debris and snow.

5.3.1 General

An access aisle shall:

- a) be marked in accordance with Clause 5.3.3,
- b) be parallel to a passenger loading zone, and
- c) have overhead protection for users from the elements.

5.3.2 Clear area

An access aisle shall:

- a) have a clear width of 2,440 mm minimum, and
- b) have a clear length of 7,400 mm minimum.

5.3.3 Access aisle identification

An access aisle shall have diagonal pavement markings that:

- a) are visible,
- b) have a high luminance contrast to the surrounding surface, and
- c) extend the full length of the passenger loading zone.

5.3.4 Passenger loading zone identification

A passenger loading zone shall have diagonal pavement markings that:

- a) are visible, and
- b) have a high luminance contrast to the surrounding surface.

5.4 Horizontal path of travel

5.4.1 Exterior

5.4.1.1 Surface conditions

A path of travel to a building entrance shall be designed to prevent the accumulation of water.

5.4.1.2 Clear width

A path of travel to a building entrance shall have a clear width of 2,500 mm minimum.

5.4.1.3 Clear floor or ground area

A path of travel to a building entrance shall have a clear floor or ground area in conformance with Clause 4.3.1 d):

- a) where the path of travel provides a turn of more than 90 °, and
- b) at intervals of 20 m minimum.

5.4.1.4 Edge barrier

An edge barrier with a height of 100 mm minimum above the ground level shall be provided along the edge of a path of travel to a building entrance where the change in level between the top surface of the path of travel and the adjacent surface is greater than 100 mm and there is no wall, railing or other barrier.

5.4.1.5 Path differentiation

A path of travel to a building entrance that is at the same level with the adjacent ground or floor surface shall:

- a) have a medium luminance contrast, and
- b) have a different texture than the adjacent surface, without causing a tripping hazard.

5.4.2 Interior

5.4.2.1 Clear width

Except as permitted by Clause <u>5.4.2.2</u>, horizontal paths of travel and corridors shall have a minimum clear width of 1,800 mm.

5.4.2.2 Reduced width

The clear width of horizontal paths of travel and corridors may be reduced to:

- a) 1,100 mm minimum between any two structures or fixtures in public aisles in merchandising establishments and exhibition facilities:
 - i) to a maximum distance of 600 mm, and
 - ii) provide a minimum clear floor area in conformance with Clause <u>4.3.1</u>d) on both side of points of width reduction, or
- b) 1,000 mm minimum for permanent food service lines, controlled checkout lanes or other restricted passageways constructed to control the flow or pedestrian traffic.

5.4.2.3 Clear floor area

Horizontal paths of travel and corridors shall have a clear floor area in conformance with Clause 4.3.1 d):

- a) where the horizontal path of travel or corridor provides a turn of more than 90 °, and
- b) at intervals of 10 m minimum.

5.4.2.4 Path differentiation

Horizontal paths of travel and corridors shall have a medium luminance contrast between:

- a) floor and wall surfaces, and
- b) floor surfaces of the path of travel and adjacent floor areas that may contain obstructions.

5.5 Doorways, doors and gates

5.5.1 Clear height of doorway

The clear height of a doorway shall be 2,030 mm minimum.

5.5.2 Clear width

Except as permitted by Clause 5.5.3, every doorway or gate in a path of travel shall have a clear width of 950 mm minimum:

- a) for swinging doors and gates, when measured from the face of the active door, in the open position of 90 $^{\circ}$ to the doorway, to the outside edge of the stop on the door frame.
- b) for sliding doors, when measured from the edge of the door, in the open position, to the outside edge of the stop on the door frame.

Note: Off-set hinges should not be used.

5.5.3 Projections into clear width

The clear width of doorways shall:

- a) have no projections within 865 mm minimum above the finished floor surface, and
- b) be permitted to have door closers and stops, located 2,030 mm minimum above the finished floor surface.

5.5.4 Vision panels

Where provided, the visible glazing of vision panels in a door shall:

- a) have a width of 150 mm minimum,
- b) have a lower edge 600 mm maximum above the finished floor surface,
- c) have an upper edge 1,600 mm minimum above the finished floor surface,
- d) have its side edge 200 mm maximum from the latch edge, and
- e) be permitted to have subdivided cross-sections that are 200 mm maximum in width.

5.5.5 Door differentiation

5.5.5.1 General

A doorway or door shall have a medium luminance contrast strip that is 50 mm minimum in width between:

- a) door leaf and door jamb,
- b) door leaf and adjacent wall,
- c) architrave and wall,
- d) door leaf and architrave, or
- e) door jamb and adjacent wall.

5.5.5.2 Glazed doors

Where a door has glazing of such size and location that it could be mistaken for an open door, the glazing in the door shall be marked with two continuous opaque strips, where:

- a) the strips have a high luminance contrast to the door,
- b) the strips are 75 mm minimum in width and extend the width of the door,
- c) the centreline of the first opaque strip is located between 900 mm minimum and 920 mm maximum above the finished floor surface,

- d) the centreline of the second opaque strip is located between 1,350 mm minimum and 1,500 mm maximum above the finished floor surface,
- e) the opaque strips are permitted to incorporate a logo or symbol and highcontrast patterns, and
- f) mirrored or highly reflective glass is not permitted.

5.5.6 Door hardware

5.5.6.1 Door handle

A door handle shall:

- a) be between 900 mm minimum and 1,100 mm maximum above the finished floor surface,
- b) have a clearance between 35 mm minimum and 45 mm maximum from the back plate or the door face,
- c) be 80 mm minimum in length,
- d) be located 500 mm minimum from an internal wall corner,
- e) be located 60 mm minimum from the door jamb or doorstop when in the open or closed position for sliding doors, and
- f) have a high luminance contrast to the door surface.

5.5.6.2 Panic hardware

Panic hardware shall be mounted between 900 mm minimum and 1,100 mm maximum above the finished floor surface.

5.5.6.3 Outward swinging doors

5.5.6.3.1 Hardware

Where a swinging door is not self-closing, a horizontal D-shaped handle shall be fixed on the closing face side of the door mounted at no less than 900 mm and no more than 1,100 mm.

5.5.6.3.2 Guard

Unless opening up against a wall or is recessed, a cane-detectable guard shall be installed on the hinged side of a door that swings into a path of travel.

5.5.7 Power door operators

5.5.7.1 Power door activation

A power door operator shall activate automatically or by controls that:

- a) are located in the path of travel,
- b) are marked with the International Symbol of Access,
- c) are located adjacent to and centered on a clear floor area in conformance with Clause <u>4.3.1</u> and allows for a parallel or forward approach,
- d) be located 600 mm minimum and 1,500 mm maximum beyond the door swing where the door opens towards the control,
- e) are operable from a height above the finished floor surface between:
 - i) 150 mm minimum and 300 mm maximum, and
 - ii) 900 mm minimum and 1,100 mm maximum, and
- f) are operable in conformance with Clause 4.7.

Note: A sliding power-operated door does not swing into a path of travel and is therefore preferred over a swinging power-operated door.

5.5.7.2 Power door operation

A power door operator shall:

- a) be equipped with safety sensors at a height of 500 mm and 1000 mm, designed to prevent contact with any user or service animal,
- b) have an opening time:
 - i) of 3 seconds minimum for sliding doors, and
 - ii) between 3 seconds minimum and 6 seconds maximum for swinging doors,
- c) have a door hold open time between 5 seconds minimum and 10 seconds maximum for swinging and sliding doors, and
- d) require a force of 65 N maximum to stop movement of the door.

5.5.7.3 Marking

The swing path of a power-operated door shall be marked on the ground or floor surface with a high luminance contrast to the ground or floor surface.

5.5.8 Door opening

5.5.8.1 Door closers

Door closers shall:

- a) have adjustable delayed action or hold open function, other than door closers located within a fire separation.
- b) have a closing period of 3 seconds minimum measured from when the door is in an open position of 70 ° to the doorway, to when the door reaches a point 75 mm from the closed position, measured from the leading edge of the latch side of the door.

5.5.8.2 Door opening force

Except for a door with a power door operator, when unlatched, a door shall open when the force applied to the handle, push plate or latch-releasing device is 15 N maximum for an exterior swinging door, interior swinging door, or sliding door.

5.5.9 Threshold

Where provided, a threshold for a doorway shall:

- a) be in conformance with Clause 4.2, and
- b) have a medium luminance contrast with the adjacent floor surface.

5.5.10 Doorway clear floor area

5.5.10.1 Swinging doors

5.5.10.1.1 Door swinging towards forward approach

Where a door swings towards the forward approach, a clear floor area in front of the door shall be:

- a) 1,700 mm minimum measured perpendicular to the doorway,
- b) the width of the door assembly plus 660 mm minimum beside the latching jamb of the door, and
- c) 110 mm minimum beside the hinge jamb of the door.

5.5.10.1.2 Door swinging away from forward approach

Where a door swings away from the forward approach, a clear floor area in front of the door shall be:

- a) 1,700 mm minimum measured perpendicular to the doorway, and
- b) the width of the door assembly plus 510 mm minimum beside the latching jamb of the door.

5.5.10.1.3 Door swinging towards hinge side approach

Where a door swings towards the hinge side approach, a clear floor area in front of the door shall be:

- a) 1,700 mm minimum measured perpendicular to the doorway,
- b) the width of the door assembly plus 915 mm minimum beside the latching jamb of the door, and
- c) 660 mm minimum beside the hinge jamb of the door.

5.5.10.1.4 Door swinging away from hinge side approach

Where a door swings away from the hinge side approach, a clear floor area in front of the door shall be:

- a) 1,700 mm minimum measured perpendicular to the doorway,
- b) the width of the door assembly plus 340 mm minimum beside the latching jamb of the door, and
- c) 560 mm minimum beside the hinge jamb of the door.

5.5.10.1.5 Door swinging towards latch-side approach

Where a door swings towards the latch side, a clear floor area in front of the door shall be:

- a) 1,700 mm minimum measured perpendicular to the doorway,
- b) the width of the door assembly plus 900 mm minimum beside the latching jamb of the door, and
- c) 110 mm minimum beside the hinge jamb of the door.

5.5.10.1.6 Door swinging away from latch-side approach

Where a door swings away from the latch side, a clear floor area in front of the door shall be:

- a) 1,700 mm minimum measured perpendicular to the doorway,
- b) the width of the door assembly plus 660 minimum beside the latching jamb of the door, and
- c) 240 mm minimum beside the hinge jamb of the door.

5.5.10.2 Sliding and folding doors

5.5.10.2.1 Forward approach

A clear floor area in front of a sliding or folding door for a forward approach shall be:

- a) 1,700 mm minimum measured perpendicular to the doorway,
- b) the width of the door assembly plus 300 mm minimum beside the latching jamb, and
- c) 300 mm minimum beside the slider jamb of the door.

5.5.10.2.2 Slider side approach

A clear floor area for a sliding or folding door for a slider side approach shall be:

- a) 1,700 mm minimum measured perpendicular to the doorway,
- b) the width of the door assembly plus 540 mm minimum beside the latching jamb, and
- c) 660 mm minimum beside the slider jamb of the door.

5.5.10.2.3 Latch side approach

A clear floor area for a sliding or folding door latch side approach shall be:

- a) 1,700 mm minimum measured perpendicular to the doorway,
- b) the width of the door assembly plus 660 mm minimum beside the latching jamb, and
- c) 185 mm minimum beside the slider jamb of the door.

5.5.10.3 A doorway not equipped with a door

5.5.10.3.1 Forward approach

A clear floor area for a forward approach to a doorway not equipped with a door shall be:

a) 1,700 mm minimum measured perpendicular to the doorway, andb) the width of the clear opening of the doorway.

5.5.10.3.2 Side approach

A clear floor area for a side approach to a doorway not equipped with a door shall be:

- a) 1,700 mm minimum measured perpendicular to the doorway, and
- b) the width of the clear opening of the doorway.

5.5.10.4 Door in series

A clear floor area between doors in series shall be provided in conformance with Clause 4.3.1 d), and any door swing shall not encroach on the clear floor area.

5.5.10.5 Guard at power-assisted doors

A power-assisted door that swings into the path of travel shall be provided with a cane-detectable guard on the hinged side of the door.

5.6 Stairways

5.6.1 Surface conditions

- a) Stair treads and landings shall be designed to:
 - i) prevent the accumulation of water,
 - ii) be free of ice and snow accumulations for exterior stairs, and
 - iii) accommodate ease of snow and ice removal for exterior stairs.
- b) The leading edge of a stair tread shall have a durable strip with a high luminance contrast to the stair tread that is designed to:
 - i) extend the full width of the tread,
 - ii) be between 40 mm minimum and 60 mm maximum in depth, and

iii) be 10 mm maximum down from the tread surface on the front face of the nosing or riser.

5.6.2 Clear height

The clear height of a stair shall be 2,050 mm minimum.

5.6.3 Clear width

The clear width of a stair shall be:

- a) 1,500 mm minimum, or
- b) 1,650 mm minimum for stairs serving treatment occupancies (Group B, Division 2).

5.6.4 Treads and risers

5.6.4.1 Number of steps

Stairs shall have 3 risers minimum for interior stairs.

5.6.4.2 Treads

Treads for stairs shall:

- a) have a run of 280 mm minimum between successive steps,
- b) have a uniform run with a tolerance of:
 - i) 5 mm maximum between adjacent treads, and
 - ii) 5 mm maximum between the deepest and shallowest treads in a flight,
- c) not differ significantly in run of treads in successive flights in any stair system, and
- d) have a front edge at right angles to the direction of exit travel for exits and public access to exits.

5.6.4.3 Risers

Risers for stairs shall:

- a) be closed,
- b) have rise between successive treads that is between 125 mm minimum and 180 mm maximum, measured as the vertical nosing-to-nosing distance,

- c) be of uniform height in any one flight with a tolerance of:
 - i) 5 mm maximum between adjacent treads or landings, and
 - ii) 10 mm maximum between the tallest and shortest risers in a flight,
- d) not differ significantly in rise of risers in successive flights in any stair system, and
- e) have no rakeback or a rakeback of 38 mm maximum.

5.6.4.4 Nosing

Where provided, nosing of stair treads shall:

- a) extend the full width of the tread,
- b) be uniform,
- c) have either a radius or a bevel:
 - i) between 6 mm minimum and 10 mm maximum in horizontal dimension, or
 - ii) 3 mm minimum where resilient material is used to cover the nosing of a stair tread,
- d) not project more than 38 mm, and
- e) on the underside:
 - i) have no abrupt angles, and
 - ii) be at a minimum angle of 60 ° from the horizontal.

5.6.5 Landings

5.6.5.1 Location

A landing shall be provided:

- a) at the top and bottom of each flight of interior and exterior stairs,
- b) where a doorway opens onto a stair,
- c) where a stair opens onto a ramp, and
- d) to limit the height of a stair to:
 - i) 3.7 m maximum, or
 - ii) 2.4 m maximum in treatment occupancies (Group B, Division 2).

5.6.5.2 Length

The length of a landing shall be 1,700 mm minimum.

5.6.5.3 Width

The width of a landing shall be at least the required width of the stair served.

5.6.6 Handrails

Handrails for stairs and intermediate landings shall be in conformance with Clause 5.1.6.

5.6.7 Guards

Guards for stairs and intermediate landings shall be in conformance with Clause 5.1.7.

5.6.8 Tactile walking surface indicator

5.6.8.1 Location

A flight of stairs shall have a tactile walking surface indicator at the top in conformance with Clause 6.3.10.

5.6.8.2 Dimensions

A tactile walking surface indicator shall be:

- a) located one tread width:
 - i) back from the top riser of a stair, and
 - ii) forward from the bottom riser of a stair, and
- b) between 600 mm minimum and 650 mm maximum by the full width of the stair.

5.6.9 Signage

5.6.9.1 Storeys

An enclosed stairway shall have a sign identifying the storey in raised characters and braille in conformance with Clause 6.3.7 and with a high luminance contrast to its background at each landing that provides access to a floor area.

5.6.9.2 Handrails

Stair handrails shall have raised characters with braille, in conformance with Clauses 6.3.6 and 6.3.7, permanently fixed on the horizontal section, at the beginning and at the end of every handrail on stairs indicating:

- a) the storey number, and
- b) the direction of egress.

5.6.10 Curved flights and merged stair-ramps (stramps)

Curved flights of stairs and merged stair-ramps (stramps) are prohibited.

5.7 Ramps

Note: Curved ramps should be avoided.

5.7.1 Floor surface

Ramp and landing floor surfaces shall be:

a) designed to be free of ice and snow accumulations for exterior ramps, and

b) be designed to prevent the accumulation of water.

5.7.2 Clear width

A ramp shall have a clear width of 1,000 mm minimum.

5.7.3 Slope

A ramp shall have a slope of 1:20 maximum.

5.7.4 Landings

5.7.4.1 Location

A ramp shall have a landing at the top, bottom, changes in direction, door and stairway access points and at intervals of 9 m maximum.

5.7.4.2 Transition

Where ramps are constructed with a change in direction, the angle of approach shall form a 90 $^{\circ}$ angle to the line of transition between the ramp surface and the landing surface.

5.7.4.3 Area

A landing shall be:

- a) in conformance with Clause <u>4.3.1</u> d) at the top, bottom and at door and stairway access points, or
- b) the full width of the ramp and along its length for 1,670 mm minimum at changes in direction and at intervals of 9 m maximum.

5.7.5 Handrails

Handrails for ramps and intermediate landings shall be in conformance with Clause 5.1.6.

5.7.6 Guards

Guards for ramps and intermediate landing shall be in conformance with Clause 5.1.7.

5.7.7 Edge protection

A ramp shall have a curb 100 mm minimum in height on any side where no solid enclosure or solid guard is provided, and where a raised barrier or rail is provided, it shall be located 100 mm maximum horizontally from the ramp or landing surface.

5.7.8 Tactile walking surface indicator

5.7.8.1 Location

A ramp shall have a tactile walking surface indicator at the top of each ramp section in conformance with Clause 6.3.10.

5.7.8.2 Dimensions

A tactile walking surface indicator shall be:

- a) located between 150 mm minimum and 200 mm maximum:
 - i) back from the top of the ramp, and
 - ii) forward from the bottom of the ramp, and
- b) between 600 mm minimum and 650 mm maximum by the full width of the ramp, but not including flared sides of the ramp.

5.7.9 End of ramp indicator

The end of each section of ramp shall be provided with a slip-resistant strip that:

- a) is located on the end of the ramp slope,
- b) has a high luminance contrast with adjacent surfaces,
- c) is the full width of the ramp, and
- d) is 40 mm minimum to 60 mm deep.

5.8 Elevators

Note: Where possible, elevator cars should be equipped with a mirror on the back wall opposite the door.

5.8.1 Vertical platform area for a stretcher

5.8.1.1 Space

All elevators shall provide a clear floor area 2,010 mm minimum in length and 610 mm minimum in width to accommodate a stretcher in the prone position and additional space for two persons.

5.8.1.2 Exemption

Accommodation of a stretcher in an elevator shall not be required for:

- a) a limited use limited application (LULA) elevator designed and installed in accordance with the relevant elevating devices safety regulation, or
- b) an elevator designed and installed in accordance with CAN/CSA-B355 "Lifts for Persons with Physical Disabilities."

5.8.1.3 Identification

An elevator that is designed to accommodate a stretcher shall be clearly identified on every level the elevator serves.

5.8.2 Elevator controls

Elevator car controls shall be mounted on both walls of the front wall containing the elevator door.

5.8.3 Floor numbering

Raised character Arabic numerals and braille indicating the assigned floor number shall be mounted permanently on both jambs of passenger elevator hoistway entrances in conformance with Appendix E of ASME A17.1/CSA B44, "Safety Code for Elevators and Escalators."

5.8.4 Occupant evacuation elevators

Occupant evacuation elevators shall be in conformance with Appendix E of ASME A17.1/CSA B44, "Safety Code for Elevators and Escalators."

6 Building facilities and systems

6.1 Public counters and work surfaces

6.1.1 Public counters

The public portion of public counters shall have at least one section that:

- a) have a clear floor area for a parallel approach along the entire length of the counter in conformance with Clause <u>4.3.1</u> b) ii),
- b) provide a clear floor area for a forward approach at a minimum of one point along the length of the counter in conformance with Clause <u>4.3.1</u> a) and provide knee and toe clearance at that location in conformance with Clause <u>4.4</u>,
- c) have a counter surface height at the point of forward approach identified in b) between 660 mm minimum and 865 mm maximum above the finished floor surface,
- d) have no obstructions within 305 mm above the counter surface,
- e) have no vertical barriers between the public and any non-public portion of the counter that is more than 1,090 mm above the finished floor surface unless the barrier is transparent security glazing,
- f) have a non-glare finish, and
- g) have no sharp edges.

6.1.2 Work surfaces

Work surfaces shall:

- a) provide a clear width below the work surface of 900 mm minimum,
- b) have a clear floor area centered on the clear width for a forward approach in conformance with Clause 4.3.1 a),
- c) have a knee and toe clearance centered on the clear width in conformance with Clause 4.4,
- d) have a surface height between 660 mm minimum and 865 mm maximum above the finished floor surface,
- e) have a low-glare finish,
- f) have no sharp edges, and
- g) be illuminated in conformance with Clause 4.8.

6.2 Shelves and counters for telephones

6.2.1 General shelves and counters for public telephones

Built-in shelves and counters for public telephones shall have a:

- a) level surface,
- b) depth between 350 mm minimum and 510 mm maximum, and
- c) 500 mm minimum clear surface width for each telephone within 250 mm above the surface.

6.2.2 Public telephones

A minimum of one telephone in each group of telephones shall:

- a) have built-in shelves and counters:
 - i) 500 mm minimum clear surface width centered on the telephone,
 - ii) with a surface height between 775 mm minimum and 875 mm maximum above the finished floor surface and centered on the telephone,
 - iii) with a clear floor area centered on the telephone for a forward approach in conformance with Clause 4.3.1 a), and
 - iv) with a knee and toe clearance centered on the clear width in conformance with Clause <u>4.4</u>,
- b) where provided, have a coin slot and receiver for a wall-hung telephone 1200 mm maximum above the finished floor surface,
- c) where provided, have a payment device and receiver for a wall-hung telephone 1200 mm maximum above the finished floor surface, and
- d) be provided with a built-in communication system or device for persons who are deaf, deafened, deafblind or hard of hearing and use sign language.

6.3 Signs and wayfinding

6.3.1 Locations

Signs shall be provided:

- a) so as to avoid shadow areas and surface glare,
- b) directional and functional signage shall be located between 1,200 mm minimum and 1,600 mm maximum above the finished floor surface,

Note: Functional signs contains explanatory information.

- c) at changes in direction,
- d) 2,100 mm minimum above the finished floor surface where a sign can be obstructed, and
- e) at consistent locations on each floor of a building.

6.3.2 Illumination

Signs shall be illuminated in conformance with Clause 4.8.

6.3.3 Tactile sign height

Tactile characters shall be 60 mm minimum in height.

6.3.4 Tactile maps

Tactile maps shall:

- a) be angled between 20 ° minimum and 30 ° maximum from the horizontal,
- b) have the bottom edge 900 mm minimum above the finished floor surface,
- c) have the key located at the bottom of the map and left justified, and
- d) have a recessed braille locator provided on the left-hand side to assist in locating the legend.

6.3.5 Visual characters

6.3.5.1 Case

Visual characters shall be uppercase for up to 3 words maximum and a mix of uppercase and lowercase for 4 or more words.

6.3.5.2 Type

Visual characters shall be conventional in form, not be italic, oblique, script, highly decorative, or of other unusual forms.

Note: Examples of acceptable visual character types are those of sans serif type including Helvetica, Arial, or Open sans.

6.3.5.3 Character height

6.3.5.3.1 General

The uppercase letter "I" shall be used to determine the allowable height of all characters of a font in conformance with Table 9.

Table 9 Visual character height (See Clause <u>6.3.5.3</u>)

| Required viewing distance (m) | Minimum height of letters (mm) |
|----------------------------------|--------------------------------|
| 2 | 6 |
| 4 | 12 |
| 6 | 20 |
| 8 | 25 |
| 12 | 40 |
| 15 | 50 |
| 25 | 80 |
| 35 | 100 |
| 40 | 130 |
| 50 | 150 |

6.3.5.3.2 Viewing distance

Viewing distance shall be measured as the horizontal distance between the character and:

- a) an obstruction preventing further approach towards the sign.
- b) where someone is expected to view the sign.

6.3.5.4 Character width

The uppercase letter "O" shall be used to determine the allowable width of all characters of a font and shall be between 55% minimum and 110% maximum of the height of the uppercase "I" of the font determined in conformance with Clause 6.3.5.3.1.

6.3.5.5 Stroke width

The uppercase letter "I" shall be used to determine the allowable stroke width of all characters of a font and shall be between 10% minimum and 30% maximum of the height of the uppercase "I" of the font determined in conformance with Clause 6.3.5.3.1 of the font.

6.3.5.6 Character spacing

Spacing between individual characters shall be 10% minimum and 35% maximum of the character height and shall be measured between the two closest points of adjacent characters within a message, excluding word spaces.

6.3.5.7 Line Spacing

Spacing between the baselines of separate lines of characters within a message shall be 135% minimum and 170% maximum of the character height.

6.3.5.8 Height above floor

Visual characters shall be 1015 mm minimum above the finished floor surface of the viewing position, measured to the baseline of the character.

6.3.5.9 Finish and contrast

Characters and their background shall have a non-glare finish and shall have a high luminance contrast with their background.

6.3.5.10 Glare

The glare from coverings, the finish of characters and their background shall be 19 gloss units (gu) maximum as measured on a 60 ° gloss meter.

6.3.6 Raised characters

6.3.6.1 General

Raised characters shall be duplicated in braille.

6.3.6.2 Case

Raised characters shall be uppercase.

6.3.6.3 Depth

Raised characters shall be raised 0.8 mm minimum above the surface.

6.3.6.4 Style

Raised characters shall be sans serif, not be italic, oblique, script, highly decorative or of other unusual forms.

6.3.6.5 Character height

The uppercase letter "I" shall be used to determine the allowable height of all characters of a font and the height of the uppercase letter "I" of the font, measured vertically from the baseline of the character, shall be between 16 mm minimum and 51 mm maximum.

6.3.6.6 Character height exception

Where separate raised and visual characters with the same information are provided, the height of the raised uppercase letter "I" shall be permitted to be 13 mm minimum.

6.3.6.7 Character width

The uppercase letter "O" shall be used to determine the allowable width of all characters of a font and shall be between 55% minimum and 110% maximum of the height of the uppercase "I" of the font determined in conformance with Clause 6.3.5.3.1 of the font.

6.3.6.8 Stroke width

The uppercase letter "I" of the font shall be used to determine the allowable stroke width of all characters of a font and shall be:

- a) 15% maximum of the height of the uppercase letter "I" measured at the top surface of the character,
- b) 30% maximum of the height of the uppercase letter "I" measured at the base of the character, and

c) 10% minimum of the height of the uppercase letter "I", when characters are both visual and raised.

6.3.6.9 Character spacing

6.3.6.9.1 Character to character spacing

Character spacing shall be measured between the two closest points of adjacent raised characters within a message, excluding word spaces and shall be

- a) 3.2 mm minimum measured at the top surface of the characters,
- b) 1.6 mm minimum measured at the base of the characters, and

c) a maximum of four times the raised character stroke width.

6.3.6.9.2 Character to other elements spacing

Characters shall be separated from raised borders and decorative elements 9.5 mm minimum.

6.3.6.10 Line spacing

Spacing between the baselines of separate lines of raised characters within a message shall be between 135% maximum and 170% minimum of the raised character height.

6.3.6.11 Height above floor

The height of raised characters above the finished floor surface shall be:

- a) 1200 mm minimum measured to the baseline of the lowest raised character, and
- b) 1525 mm maximum measured to the baseline of the highest raised character.

6.3.6.12 Location at doors

6.3.6.12.1 Single door

Where a sign containing raised characters and braille is provided at a door, the sign shall be:

- a) located alongside the door, at the latch side of the door on the wall space,
- b) located to have a clear wall area of at least 75 mm wide,
- c) located with the leading vertical edge of the sign placed 140 mm minimum to 160 mm maximum from the edge of the door frame, or
- d) on the nearest adjacent wall, where there is no wall space on the latch side of the door.

6.3.6.12.2 Double door – one active leaf

Where a sign containing raised characters and braille is provided at double doors with one active leaf, the sign shall be located on the inactive leaf.

6.3.6.12.3 Double door – two active leaves

Where a sign containing raised characters and braille is provided at double doors with two active leaves, the sign shall be:

- a) to the right of the right-hand door.
- b) on the nearest adjacent wall, where there is no wall space to the right side of double doors.

6.3.6.12.4 Clear floor area at a door

Signs containing raised characters and braille shall be located so that a clear floor area 455 mm minimum in width and 455 mm minimum in depth, centered on the raised characters is provided on the latch side of the door. (See Clause 6.3.7.5).

6.3.6.12.5 Doors with closers and without hold-open devices

Signs containing raised characters and braille shall be on the push side of doors with closers and without hold-open devices.

6.3.6.13 Finish and contrast

Except where separate raised characters and visual characters with the same information are provided, characters and their background shall have a non-glare finish and a high luminance contrast with their background.

6.3.7 Braille

6.3.7.1 Uppercase letters

The indication of an uppercase letter or letters shall only be used before the first word of sentences, proper nouns and names, individual letters of the alphabet, initials or acronyms.

6.3.7.2 Dimensions

Braille dots shall have a domed or rounded shape and shall be in conformance with Table 10.

| (See Clause <u>6.3.7.2</u>) | | |
|--|--------------------|--|
| Measurement range | Min and max | |
| Dot base diameter | 1.5 mm to 1.6 mm | |
| Distance between two dots in the same cell | 2.3 mm to 2.5 mm | |
| Distance between corresponding dots in adjacent cells | 6.1 mm to 7.6 mm | |
| Dot height | 0.6 mm to 0.9 mm | |
| Distance between corresponding dots from one cell directly below | 10.0 mm to 10.2 mm | |

Table 10 **Braille dimensions** \sim \sim \sim = \sim

6.3.7.3 Position

Braille shall be:

a) left justified,

- b) below the corresponding text and if text is multilined, shall be placed 8 mm minimum below the entire text, and
- c) be separated 9.5 mm minimum from:
 - i) any other raised characters, and
 - ii) raised borders and decorative elements.

6.3.7.4 Mounting height

Braille shall be between 1,220 mm minimum and 1,525 mm maximum above the finished floor surface, measured to the baseline of the braille cells.

6.3.7.5 Clear floor area

A clear floor area shall be provided in front of and centered on tactile and braille signs in conformance with Clause 4.3.1 a) for a forward approach.

6.3.7.6 Arrows

Where an arrow is used in the tactile sign, a small arrow shall be provided for braille readers.

6.3.7.7 Braille numerals

Braille numerals shall be preceded by a braille numerical sign.

6.3.7.8 Multiple lines of text and characters

On signs with multiple lines of text and characters, a semi-circular braille locator on the left margin shall be horizontally aligned with the first line of braille text.

6.3.8 Graphic symbols

6.3.8.1 Graphic symbol field

Graphic symbols shall have a field that is 150 mm minimum in height and characters or braille shall not be located in the graphic symbol field.

6.3.8.2 Finish and contrast

6.3.8.2.1 General

Graphic symbols and their fields shall have a nonglare finish and shall have a high luminance contrast with their fields.

6.3.8.2.2 Nonglare finish

The glare from coverings and the finish of graphic symbols and their fields shall be 19 gloss units (gu) maximum as measured on a 60 ° gloss meter.

6.3.8.2.3 Character contrast

Characters shall have a high luminance contrast with their background.

6.3.9 Graphic symbols of accessibility

6.3.9.1 Finish and contrast

Graphic symbols of accessibility and their backgrounds shall have a nonglare finish and shall have a high luminance contrast with their backgrounds.

6.3.9.2 Nonglare finish

The glare from coverings and the finish of graphic symbols of accessibility and their backgrounds shall be 19 gloss units (gu) maximum as measured on a 60 $^{\circ}$ gloss meter.

6.3.9.3 Graphic symbols

6.3.9.3.1 International symbol of access

The International Symbol of Access shall consist of two elements: a stylized figure in a wheelchair pointing to the right on a plain square background:

- a) the proportional layout of the symbol of access shall be in accordance with ISO 7001:2007 "Graphical symbols—Public information symbols,"
- b) the colour of the figure shall be white on a blue background and the blue shall be B21 ultramarine, or similar, and

c) for signs indicating the direction to a facility, an arrow shall be used in combination with the international symbol of access.

6.3.9.3.2 International symbol of access for hearing loss

The International Symbol of Access for Hearing Loss shall include the following:

- a) symbol for deafness shall consist of two elements a stylized ear and a diagonal slash on a plain square background,
- b) proportional layout of the symbol for deafness shall be in accordance with ISO 7001:2007 "Graphical symbols—Public information symbols," and
- c) the colour of the symbol shall be white on a blue background and the blue shall be B21, ultramarine, or similar.

6.3.9.3.3 Symbol of accessible egress

Signage indicating the accessible egress route to an area of refuge shall be in conformance with Figure 38 a) of CSA B651-23, "Accessible design for the built environment."

6.3.10 Attention Tactile walking surface indicators (TWSI)

6.3.10.1 General

Attention tactile walking surface indicators shall be:

- a) composed of truncated domes in conformance with Clause 6.3.10.2, and
- b) slip-resistant and durable and shall have a high luminance contrast with adjacent surfaces.

6.3.10.2 Truncated domes

6.3.10.2.1 Size

Truncated domes shall have

- a) a base diameter between 23 mm minimum and 36 mm maximum, and
- b) a top diameter between 50% minimum and 65% maximum of the base diameter.

6.3.10.2.2 Height

Truncated domes shall have a height between 4 mm minimum and 5 mm maximum, and shall be detectable when walked upon as being different from the surrounding surface.

6.3.10.2.3 Spacing

Truncated domes shall have a:

- a) center-to-center spacing between 41 mm minimum and 61 mm maximum, and
- b) a base-to-base spacing of 16.5 mm minimum, measured between the most adjacent domes on the grid.

6.3.10.2.4 Alignment

Truncated domes shall be aligned in a square grid pattern.

6.4 Assistive listening system

6.4.1 Coverage

6.4.1.1 Assistive listening systems

Assistive listening systems shall encompass the entire seating area.

6.4.1.2 Induction loop systems

Induction loop systems shall encompass 80% minimum of the floor area or room served.

6.4.2 Receiver systems

6.4.2.1 Coverage

A system requiring the use of receivers shall be available to 100% minimum of the floor area of the room or space served by the inbuilt amplification system.

6.4.2.2 Receivers

6.4.2.2.1 Number

The number of receivers provided shall be:

Table 11Minimum number of receivers

(See Clause <u>6.3.7.2</u>)

| Number of persons the room or space accommodates | Minimum number of receivers |
|--|--|
| 1 to 50 | 2 |
| 51 to 500 | 2, plus 1 for each additional increment of 25 persons in excess of 50 persons |
| 501 to 1,000 | 20, plus 1 for each additional increment of 33 persons in excess of 500 persons |
| 1,001 to 2,000 | 35, plus 1 for each additional increment of 50 persons in excess of 1,000 persons |
| More than 2,000 | 55, plus 1 for each additional increment of 100 persons in excess of 2,000 persons |

6.4.2.2.2 Receiver jacks

Receiver jacks required for use with an assistive listening system shall include a 3.2 mm standard monaural (monophonic) jack.

6.4.2.2.3 Hearing aid compatible receivers

Neck loop receivers or other hearing aid technologies shall be provided to

6.4.3 Sound level and quality

6.4.3.1 Sound level

Assistive listening systems shall be capable of providing a sound pressure level between 110 dB minimum and 118 dB maximum, with a dynamic range on the volume control of 50 dB.

6.4.3.2 Signal-to-noise ratio

The signal-to-noise ratio for internally generated noise in assistive listening systems shall be 18 dB minimum.

6.4.3.3 Peak clipping

Peak clipping shall not exceed 18 dB of clipping relative to the peaks of speech.

6.4.3.4 Reverberation times

Rooms shall have adequate reverberation times for the control of noise and for improved speech intelligibility.

6.4.4 Lecture platforms

Note: See Clause <u>9.1.6</u> for requirements for access to podiums.

6.4.4.1 Location

Assistive listening systems shall be located at the lecture platform and have visual contact with the speaker.

6.4.4.2 Partial coverage

Where only part of an area is covered by an induction loop system, a map indicating the area covered by the system shall be provided.

6.4.4.3 Field amplification system

6.4.4.3.1 Components

Where a sound field amplification system is provided, it shall consist of:

- a) an audio amplifier,
- b) a lapel wireless microphone system, or head-worn microphone, for the primary user,
- c) the greater of one speaker per 10 m² minimum or four speakers, and
- d) each speaker mounted between 2 m minimum and 7 m maximum from a speaker.

6.4.4.3.2 Coverage

No position in the room shall be more than 7 m from speaker equipment.

7 Sanitary facilities

7.1 Grab bars

7.1.1 General

A grab bar shall:

- a) be slip-resistant,
- b) be free of any sharp or abrasive elements,
- c) be mounted on surfaces that are free of any sharp or abrasive elements,
- d) not rotate within their fittings, and
- e) be able to resist a load of 1.3 kN minimum applied vertically or horizontally.

7.1.2 Cross-section

A grab bar shall have a circular diameter between 30 mm minimum and 50 mm maximum.

7.1.3 Mounting location

A grab bar shall be located:

- a) 50 mm minimum and 60 mm maximum from the wall on which it is mounted,
- b) 380 mm minimum from projecting objects below,
- c) 305 mm minimum from projecting objects above, and

d) 50 mm minimum from controls, fittings, and other grab bars.

7.1.4 Identification

Grab bars shall have a high luminance contrast with the surrounding surface.

7.2 Washrooms

Notes:

 Accessible water closet enclosures, lavatories, urinals and mirrors should be placed as close as possible to washroom entrance doors and each other.
Consider the use of privacy walls or specialized configuration of entrance vestibules to avoid the need for doors and power door operators.

7.2.1 Door

Where provided, a washroom door shall be provided with a power door operator in conformance with Clause 5.5.7.

7.2.2 Clear floor area

7.2.2.1 General

A washroom shall have a clear floor area in conformance with Clause 4.3.1 d).

7.2.2.2 Clear floor area overlap

The clear floor area required by Clauses $\underline{7.2.2.1}$, $\underline{7.2.3.1.1}$, $\underline{7.2.4.1.1}$, $\underline{7.2.5.1}$ and $\underline{7.2.7.1.1}$ are permitted to overlap.

7.2.3 Accessible water closet enclosures

7.2.3.1 Clear floor area

7.2.3.1.1 Entrance clear floor area

An accessible water closet enclosure shall have a clear floor area for turning in conformance with Clause 4.3.1 d), located on the exterior of the enclosure and centered on the enclosure entrance door.

7.2.3.1.2 Interior clear floor area

The interior of an accessible water closet enclosure shall provide a clear floor area unobstructed by the water closet in conformance with Clause 4.3.1 c).

7.2.3.2 Door

7.2.3.2.1 Type

A door providing access to an accessible water closet enclosure shall:

- a) not swing inward,
- b) be soft close, and
- c) self-closing such that the door is ajar by 50 mm maximum beyond the jamb when at rest.

7.2.3.2.2 Clear width

The clear door width of a door providing access to an accessible water closet enclosure shall be 950 mm minimum when in the open position.

7.2.3.2.3 Handle

Door handles on a door providing access to an accessible water closet enclosure shall:

- a) be D-shaped,
- b) be mounted horizontally,
- c) be 120 mm minimum in length,
- d) be located between 800 mm minimum and 1,000 mm maximum above the finished floor surface,
- e) be mounted such that its midpoint is between:
 - i) 200 mm minimum to 300 mm maximum from the hinged side on the inside of the door, or
 - ii) 120 mm minimum to 220 mm maximum from the latch side on the outside of the door,
- f) have a clearance from the back plate or the door face between 35 mm minimum and 45 mm maximum, and
- g) have a high luminance contrast to the door surface.

7.2.3.2.4 Latch

A latch on a door providing access to an accessible water closet enclosure shall:

- a) latch from the inside,
- b) be capable of being released from the outside in case of an emergency,
- c) be located between 800 mm minimum and 1,000 mm maximum above the finished floor surface, and
- d) have a high luminance contrast to the door surface.

Note: A latch should not require fine motor skills to operate.

7.2.3.3 Partitions

Accessible water closet enclosure partition walls shall:

- a) not be removable, and
- b) where not fully enclosed, have a bottom edge 350 mm minimum above the finished floor surface.

7.2.3.4 Accessible water closets

7.2.3.4.1 Clear floor area

Note: Provide the clear floor area for an accessible water closet on alternating sides distributed throughout a building to allow users to choose their preferred transfer side.

7.2.3.4.2 Location

- a) The centre line of an accessible water closet shall be 460 mm minimum and 480 mm maximum from one side wall.
- b) The distance from the front edge of an accessible water closet seat to the rear wall shall be between 650 mm minimum to 800 mm maximum.

7.2.3.4.3 Water closet seat

An accessible water closet shall have a seat:

- a) height located between 460 mm minimum and 485 mm maximum above the finished floor surface,
- b) that is not a spring-up type, and
- c) that is an elongated style, continuous and uninterrupted at the front.

7.2.3.4.4 Water closet back support

An accessible water closet shall be equipped with a flip-up type seat cover or other back support that:

- a) is 600 mm minimum in width,
- b) is between 500 mm minimum and 550 mm maximum from the front edge of the seat, and
- c) where provided, does not obstruct the operation of an automatic control sensor.

7.2.3.4.5 Water closet controls

Accessible water closet controls shall be:

- a) automatic or a manual control in conformance with Clause 4.7,
- b) located between 500 mm minimum and 900 mm maximum above the finished floor surface,
- c) 350 mm maximum from the transfer side of the water closet, and
- d) have a medium luminance contrast to the water closet.

7.2.3.4.6 Water closet tank

Where an accessible water closet is equipped with a tank, the top of the tank shall be securely attached.

7.2.3.5 Grab bars

7.2.3.5.1 General

Grab bars shall be in conformance with Clause 7.1 and this Clause.

7.2.3.5.2 L-shaped grab bar

An accessible water closet enclosure shall be provided with an L-shaped grab bar:

- a) mounted on the side wall closest to the water closet, and
- b) with horizontal and vertical components 760 mm minimum in length mounted with:
 - i) the horizontal component between 750 mm minimum and 850 mm maximum above the finished floor surface, and
 - ii) the vertical component between 150 mm minimum to 250 mm maximum in front of the water closet.

7.2.3.5.3 Horizontal grab bar

An accessible water closet enclosure shall be provided with:

- a) one horizontal grab bar 600 mm minimum in length and centred over the water closet on the rear wall, or
- b) two horizontal grab bars 300 mm minimum in length and located on either side of the flush valve and mounted:
 - i) on the rear wall, and
 - ii) at the same height as the horizontal component of the grab bar required by Clause <u>7.2.3.5.2</u> or 100 mm minimum above the top of a water tank attached to the water closet.

7.2.3.5.4 Pull-down grab bar

An accessible water closet enclosure shall be provided with a horizontal pulldown grab bar on the transfer side of the water closet:

- a) 750 mm minimum in length, and
- b) located 390 mm minimum and 410 maximum from the centre line of the water closet

7.2.3.6 Hooks

7.2.3.6.1 General

An accessible water closet enclosure shall be provided with a hook.

7.2.3.6.2 Type

The hook shall have no sharp edges.

7.2.3.6.3 Location

The hook shall be mounted on a fixed enclosure wall:

- a) between 1,000 mm minimum and 1,200 maximum above the finished floor surface, and
- b) projecting 50 mm maximum from the wall.

7.2.3.6.4 Identification

The hook shall have a high luminance contrast with the wall on which it is mounted.

7.2.3.7 Toilet paper dispenser

7.2.3.7.1 General

An accessible water closet enclosure shall be provided with a toilet paper dispenser.

7.2.3.7.2 Type

The toilet paper dispenser shall be of an open-roll design that does not control delivery of paper flow.

7.2.3.7.3 Location

A toilet paper dispenser shall:

- a) be mounted:
 - i) on the side wall closest to the accessible water closet,
 - ii) with the closest edge of the dispenser 300 mm maximum from the front of the accessible water closet,
 - iii) below the grab bar, and
 - iv) with the bottom of the dispenser between 600 mm minimum and 700 mm maximum above the finished floor surface, and
- b) project 170 mm maximum from the wall.

7.2.3.8 Shelf

An accessible water closet enclosure shall be provided with a shelf:

- a) located between 1,015 mm minimum and 1,200 mm maximum above the finished floor surface,
- b) with no sharp edges,
- c) does not obstruct a path of travel, and
- d) placed such that it does not create a hazard for someone.

Note: A shelf shall be placed such that it does not create an obstacle to use of the grab bars (See Clause 7.1.3).

7.2.3.9 Sanitary disposal receptacle

7.2.3.9.1 General

An accessible water closet enclosure shall be provided with a sanitary disposal receptacle.

7.2.3.9.2 Type

The sanitary disposal receptacle shall not have a spring- or foot-operated lid.

7.2.3.9.3 Location

The sanitary disposal receptacle shall:

- a) be wall mounted,
- b) have the closest edge of the receptacle 150 mm maximum from the front of the accessible water closet,
- c) be adjacent to the toilet paper dispenser, and
- d) be 460 mm maximum measured from the top of the lid to the finished floor surface.

7.2.4 Standard-sized water closet enclosures

7.2.4.1 Clear floor area

7.2.4.1.1 Entrance clear floor area

Where the approach is to the latch side of the standard-sized water closet enclosure door, a clearance between the door side of the compartment and any obstruction shall be 1,065 mm minimum.

7.2.4.1.2 Interior clear floor area

The interior of a standard-sized water closet enclosure shall have a clear floor area 1,200 mm minimum in width and 1,500 mm minimum in depth.

7.2.4.2 Door

A standard-sized water closet enclosure shall be provided with a door having:

- a) a clear width of 815 mm minimum when the door is in the open position,
- b) a latch on the inside face of the door that is operable in conformance with Clause 4.7,
- c) a door handle on both sides of the door mounted:
 - i) near the latch, and
 - ii) between 900 mm minimum and 1,100 mm maximum above the finished floor surface, and
- d) an outward door swing or maintain the clear floor area within the enclosure.

7.2.4.3 Water closet

The centre line of a standard-sized water closet shall be 430 mm minimum and 485 mm maximum from one side wall.

7.2.4.4 Hooks

A standard-sized water closet enclosure shall have a hook in conformance with Clause 7.2.3.6.

7.2.4.5 Grab bars

A standard-sized water closet enclosure shall have an L-shaped grab bar on both sides of the water closet in conformance with Clause <u>7.2.3.5.2</u>.

7.2.4.6 Toilet paper dispenser

A standard-sized water closet toilet paper dispenser shall be in conformance with Clause 4.7 and be mounted with the closest edge of the dispenser 300 mm maximum from the front of the water closet.

7.2.5 Urinals

7.2.5.1 Clear floor area

An accessible urinal shall have a clear floor area in conformance with Clause <u>4.3.1</u> c) and centered on the urinal.

7.2.5.2 Steps

An accessible urinal shall not have a step in front of it.

7.2.5.3 Rim height

An accessible urinal shall have a rim height of 380 mm minimum and 430 maximum above the finished floor surface.

7.2.5.4 Depth

An accessible urinal shall have a depth of 345 mm maximum measured from the outer face of the urinal rim to the finished wall surface.

7.2.5.5 Controls

Controls for an accessible urinal shall be in conformance with Clause 4.7.

7.2.5.6 Grab bars

An accessible urinal shall have a vertically mounted grab bar installed on each side that:

a) is 600 mm minimum in length, with the centreline 1,000 mm maximum above the finished floor surface, and

b) located 380 mm maximum from the centre line of the urinal.

7.2.5.7 Privacy screens

Where privacy screens are provided, they shall be located:

- a) 460 mm minimum from the centreline of the urinal, and
- b) 50 mm minimum from any grab bar.

7.2.5.8 Identification

An accessible urinal shall have a high luminance contrast to the wall on which it is mounted and to the adjacent partitions.

7.2.6 General urinals

A general urinal shall have a rim height of 500 mm minimum above the finished floor surface.

7.2.7 Lavatories, mirrors and accessories

7.2.7.1 Lavatory and faucets

7.2.7.1.1 Clear floor area

An accessible Lavatory shall have a clear floor area in conformance with Clause 4.3.1 a) of which 430 mm maximum is beneath the lavatory to allow a forward approach, centered on the lavatory.

7.2.7.1.2 Height

The rim height of an accessible lavatory shall be between 750 mm minimum and 850 mm maximum above the finished floor surface.

7.2.7.1.3 Knee and toe space and width

The clear space under an accessible lavatory shall:

- a) be 920 mm minimum in width,
- b) be 735 mm high at the front edge,
- c) provide a knee and toe clearance in conformance with Clause <u>4.4, and</u>
- d) be centered on the lavatory.

7.2.7.1.4 Obstructions

The space below an accessible lavatory shall not have any sharp or abrasive surfaces and plumbing pipes shall be insulated or protected against contact and shall not obstruct the knee and toe space required by Clause 7.2.7.1.3.

7.2.7.1.5 Controls

Accessible lavatory faucet controls shall:

- a) be automatic or a manual control in conformance with Clause 4.7,
- b) be located between 280 mm minimum and 400 mm maximum from the front edge of the lavatory,
- c) not require the application of continuous force to maintain water flow,
- d) provide 10 s minimum of water flow where metered, and
- e) limit water temperature to 40 °C maximum.

7.2.7.2 Mirrors

7.2.7.2.1 Width

An accessible mirror shall have a width of 350 mm minimum.

7.2.7.2.2 Height

The height of the bottom of an accessible mirror above the finished floor surface shall be:

- a) between 900 mm minimum and 1,850 mm maximum where located above the accessible lavatory, or
- b) between 780 mm minimum and 1,850 mm maximum where located adjacent to the accessible lavatory.

7.2.7.3 Soap dispenser

7.2.7.3.1 Location

An accessible soap dispenser shall be located:

- a) between 900 mm minimum and 1,100 mm maximum above the finish floor surface, and
- b) 280 mm maximum from the front of the accessible lavatory.

7.2.7.3.2 Controls

Accessible soap dispenser controls shall be:

- a) automatic or a manual control in conformance with Clause 4.7,
- b) and200 mm minimum in length.

7.2.7.4 Towel dispenser or hand dryer

7.2.7.4.1 Clear floor area

An accessible towel dispenser or accessible hand dryer shall have a clear floor area in conformance with Clause 4.3.1 a) or b) to allow a forward or parallel approach, centered on the towel dispenser or hand dryer.

7.2.7.4.2 Location

The control for an accessible towel dispenser or accessible hand dryer shall be located:

- a) 1,100 mm maximum above the finish floor surface, and
- b) 610 mm maximum measured horizontally from the edge of the accessible lavatory.

7.2.7.4.3 Controls

Accessible towel dispenser or accessible hand dryer controls shall be automatic or a manual control in conformance with Clause 4.7.

7.2.7.5 Shelves

An accessible lavatory shall have a shelf:

- a) located 200 mm maximum above the top surface of the accessible lavatory,
- b) located 850 mm maximum above the finished floor surface, and
- c) project 100 mm maximum from the wall on which it is mounted.

7.2.8 Wayfinding

7.2.8.1 Floor decals

A washroom shall have tactile floor decals leading from the washroom entrance to all:

- a) accessible water closet enclosures, and
- b) accessible urinals.

7.2.8.2 Signage

Accessible water closet enclosures shall have tactile signage with braille and high luminance contrast compared to its mounting surface.

7.3 Universal washrooms

Note: Entrances to universal washrooms should be provided independent of entrances to multi-stall washrooms and should be in closer proximity to a building entrance than a multi-stall washroom.

7.3.1 Use

A universal washroom shall not be used for any other purpose than a sanitary facility.

7.3.2 Surface conditions

A universal washroom shall have a floor surface:

- a) in conformance with Clause 4.1,
- b) designed to limit water pooling on the floor surface, and
- c) that has a medium to high luminance contrast with the walls.

7.3.3 Clear floor area

7.3.3.1 General

A universal washroom shall have a clear floor area:

a) 3.7 m² minimum with no dimension less than 1,700 mm when the door swings out, or

b) 4.0 m² minimum with no dimension less than 1,800 mm when the door swings in.

7.3.3.2 Clear floor area overlap

The clear floor area required by Clauses <u>7.3.3</u>, <u>7.3.5</u>, <u>7.3.6</u> a) and <u>7.3.11</u> are permitted to overlap.

7.3.3.3 Obstructions

The following are permitted to encroach into clear floor area below 900 mm:

- a) toilet paper dispenser,
- b) grab bars, and
- c) lavatory and vanity with an encroachment not more than 100 mm.

7.3.4 Door

7.3.4.1 Locking mechanism

7.3.4.1.1 Operation

A door providing access to a universal washroom shall be equipped with a locking mechanism that is operable:

- a) to engage the lock by interior buttons in conformance with Clause <u>4.7</u>, from a height above the finished floor surface between:
 - i) 150 mm minimum and 300 mm maximum, and
 - ii) 900 mm minimum and 1,100 mm maximum,
- b) to engage the lock manually from the interior in conformance with Clause 4.7,
- c) to disengage the lock from the exterior by a key, and
- d) to automatically disengage the lock:
 - i) upon loss of power to the locking mechanism,
 - ii) upon activation of the emergency notification system required in conformance with Clause <u>7.3.14</u>, or
 - iii) where a building is equipped with a fire alarm system, by actuation of the alarm signal.

7.3.4.1.2 Indication

When a universal washroom door is locked, a visual and audible feature shall be provided on the outside of the door to indicate that the washroom is occupied.

7.3.4.1.3 Sign

Instructions for the operation of the door locking mechanism shall be indicated by a sign with raised characters in conformance with Clause 6.3.6 and braille in conformance with Clause 6.3.7, located adjacent to the door and in proximity to the door operation mechanisms.

7.3.5 Lavatory, mirror and accessories

A universal washroom shall be provided with a lavatory, mirror, soap dispenser, towel dispenser/hand dryer, and shelf in conformance with Clause 7.2.7.

7.3.6 Water closet and grab bars

A universal washroom shall be provided with:

- a) a water closet in conformance with Clause 7.2.3.4, and
- b) grab bars in conformance with Clause 7.2.3.5.

7.3.7 Toilet paper dispenser

A universal washroom shall be provided with a toilet paper dispenser in conformance with Clause 7.2.4.6.

7.3.8 Hooks

A universal washroom shall be provided with a hook in conformance with Clause <u>7.2.3.6</u>.

7.3.9 Shelf

A universal washroom shall be provided with a shelf:

- a) mounted between 1,015 mm minimum and 1,200 mm maximum above the finished floor surface,
- b) having a usable surface with a width of 400 mm minimum and depth of 200 mm minimum,
- c) with no sharp edges, and
- d) project 100 mm maximum from the wall.

7.3.10 Lighting

A universal washroom shall have lighting controlled by a motion sensor.

7.3.11 Height-adjustable adult change table

A universal washroom shall be provided with a height-adjustable adult change table that:

- a) has a surface height above the finished floor surface that can be adjusted between 450 mm minimum and 900 mm maximum,
- b) has a width of 1,000 mm minimum and depth of 2,000 mm minimum,
- c) is designed to carry a load of 227 kg minimum,
- d) has a clear floor area parallel to the long side of the change table with a width of 1500 mm minimum and depth of 2,100 mm minimum,
- e) does not encroach into the water closet clear transfer space required by Clause <u>7.3.6</u>,
- f) has operating mechanisms located in conformance with Clause <u>4.6</u>, and
- g) is located within 1,000 mm of an electrical outlet.

7.3.12 Baby change table

Where installed, a baby change table in a universal washroom shall:

- a) have a surface height 820 mm maximum above the finished floor surface,
- b) have a clearance underneath 720 mm minimum when in the open position, and
- c) not encroach into the clear floor area of the universal washroom when in the folded-up position.

7.3.13 Ceiling lift system

A universal washroom shall be provided with a lift system that is designed to:

- a) carry a load of 227 kg minimum, and
- b) transport an adult to the water closet, lavatory or change table.

7.3.14 Emergency notification system

7.3.14.1 Operation

A universal washroom shall include an emergency notification system that is operable by interior buttons in conformance with Clause 4.7, from a height above the finished floor surface between:

- a) 150 mm minimum and 300 mm maximum, and
- b) 900 mm minimum and 1,100 mm maximum.

7.3.14.2 Location

The buttons required in conformance with Clause 7.3.14.1 shall be located so as not to be confused with the:

- a) buttons required in conformance with Clause 7.3.4.1.1 a) for the operation and release of the door locking mechanism, and
- b) controls required in conformance with Clauses <u>7.2.1</u> and <u>5.5.7.1</u> e) for the operation of the power door operator.

7.3.14.3 Notification

Note: Where the universal washroom is located in a building equipped with a monitored system, the emergency notification system should be connected to that system to notify onsite personnel when the system is activated.

A universal washroom shall include a combination flashing light and audible alarm, on the exterior wall and adjacent to the door, that will operate upon operation of the buttons required in conformance with Clause 7.3.14.1.

7.3.14.4 Signs

Instructions for the operation of the emergency notification system shall be indicated by a sign with raised characters in conformance with Clause 6.3.6 and braille in conformance with Clause 6.3.7, located adjacent to the buttons required to operate the emergency notification system.

7.4 Showers

7.4.1 Clear floor area

7.4.1.1 Shower entrance

The room in which an accessible shower is located shall be provided with a clear floor area:

- a) for turning in conformance with Clause 4.3.1 d), and
- b) at the entrance to the accessible shower for a forward approach that is:
 - i) in conformance with Clause 4.3.1 b) i), and
 - ii) the greater of the width of the accessible shower or the width in conformance with Clause 4.3.1 b) i).

7.4.1.2 Shower

The clear floor area of the shower shall be in conformance with Clause 4.3.1 a).

7.4.1.3 Clear floor area overlap

The clear floor area required by Clause 7.4.1.1 a) for turning can overlap with the clear floor area required by Clause 7.4.1.1 b) adjacent to the accessible shower.

7.4.1.4 Obstructions

7.4.1.4.1 Fixtures

Accessible shower fixtures are permitted to project into the shower stall clear floor area provided they do not restrict access to the shower.

7.4.1.4.2 Doors and curtains

Where provided, accessible shower enclosure doors and curtains shall not obstruct the controls or the clear floor area at the entrance to the accessible shower stall.

7.4.2 Clear height

The entrance of an accessible shower stall and the accessible shower stall shall have a clear height of 2,000 mm minimum.

7.4.3 Surface conditions

An accessible shower clear entrance floor area and shower stall shall have a floor surface in conformance with Clause 4.1.

7.4.4 Changes in level

An accessible shower stall threshold shall be level with the adjacent finished floor surface or be in conformance with Clause 4.2.

7.4.5 Seat

7.4.5.1 General

A seat shall be provided in an accessible shower.

7.4.5.2 Type

An accessible shower seat shall be a folding-type that folds in an upward direction and is not spring-loaded.

7.4.5.3 Size

An accessible shower seat shall be:

- a) 500 mm minimum in width, and
- b) 450 mm minimum in depth.

7.4.5.4 Location

An accessible shower seat shall have its front edge 500 mm maximum from the accessible shower controls and when folded down:

- a) have its top surface between 460 mm minimum and 480 mm maximum above the finished floor surface, and
- b) be spaced 40 mm maximum from the rear wall.

7.4.5.5 Support

An accessible shower seat shall have:

- a) a fastener mounting device or supporting structure mounted on a side wall, and
- b) support a load of 227 kg minimum.

7.4.5.6 Surface

An accessible shower seat surface shall:

- a) be padded,
- b) be smooth,
- c) be slip-resistant,
- d) have no rough edges,
- e) have front corners that are rounded to a radius of between 10 mm minimum and 15 mm maximum,
- f) have top edges that are rounded to a radius of between 2 mm minimum and 3 mm maximum,
- g) be designed to be easily cleaned, and
- h) be impervious to water and self-drain, where holes or slots in single unit seats or by gaps between slats in compound seats, the diameter of the holes, the width of the slots and the gaps between slats shall be between 4 mm minimum and 6 mm maximum.

7.4.6 Faucets and controls

7.4.6.1 General

Accessible shower faucets and controls shall be in conformance with Clause <u>4.7</u>.
7.4.6.2 Type

An accessible shower shall have a pressure-equalizing or thermostaticmixing valve.

7.4.6.3 Location

Accessible shower controls shall be mounted:

- a) on the wall opposite the entrance to the shower (back wall),
- b) between 405 mm minimum and 685 mm maximum from the wall behind the seat, and
- c) between 965 mm minimum and 1,200 mm maximum above the shower finished floor surface.

7.4.6.4 Water temperature

Accessible shower water temperature shall be 49 °C maximum.

7.4.7 Grab bars

7.4.7.1 General

An accessible shower shall have two grab bars in conformance with Clauses 7.1, 7.4.7.2 and 7.4.7.3.

7.4.7.2 Vertical grab bar

A vertical grab bar shall:

- a) be mounted on the same side wall as the seat,
- b) be located between 50 mm minimum and 80 mm maximum from the adjacent clear floor area,
- c) have the lower between 600 mm minimum and 650 mm maximum above the accessible shower finished floor surface, and
- d) be 1,000 mm minimum in length.

7.4.7.3 L-shaped grab bar

An L-shaped grab bar shall:

- a) be mounted on the back wall, opposite the entrance to the accessible shower
- b) have a horizontal member:
 - i) 1,000 mm minimum in length,
 - ii) mounted between 750 mm minimum and 870 mm maximum above the accessible shower finished floor surface,
- c) have a vertical member:
 - i) 750 mm minimum in length, and
 - ii) mounted between 400 mm minimum and 500 mm maximum from the side wall on which the vertical grab bar required by Clause <u>7.4.7.2</u> is mounted.

7.4.8 Shower head

7.4.8.1 General

An accessible shower shall be provided with:

- a) a fixed shower head that complies with Clause 7.4.8.2, and
- b) a hand-held shower head that complies with Clause 7.4.8.3.

7.4.8.2 Fixed shower head

A fixed shower head shall:

- a) be mounted between 1780 mm minimum and 2030 mm above the finished floor surface, and
- b) have controls that comply with Clause <u>7.4.6</u> to allow water flow between either the fixed shower head or the hand-held shower head.

7.4.8.3 Hand-held shower head

A hand-held shower head shall:

- a) be within reach from a seated position,
- b) have a flexible hose length 1,800 mm minimum,
- c) have an adjustable height between 400 mm minimum and 1,400 mm maximum above the accessible shower finished floor surface,
- d) be mounted on a bracket to allow a seated person to use the hand-held shower head as a fixed shower head,

- e) allow the graspable portion of the showerhead to be positioned at various angles,
- f) have a nonpositive shutoff feature, and
- g) not obstruct the use of the grab bars.

7.4.9 Soap holder

An accessible shower shall have soap holder that is:

- a) fully recessed,
- b) reachable from a seated position in conformance with Clause <u>4.6</u>, and
- c) located on the adjacent wall between 100 mm minimum and 200 mm maximum in front of the seat.

7.4.10 Clothes hook

Two clothes hanging devices shall be provided and be within reach of an accessible shower seat in conformance with Clause 4.6.

7.5 Bathtubs

7.5.1 Clear floor area

7.5.1.1 General

The room in which an accessible bathtub is located shall be provided with a clear floor area:

- a) for turning in conformance with Clause 4.3.1 d), and
- b) at the entrance to the accessible bathtub for a parallel approach that is:
 - i) the width in conformance with Clause 4.3.1 b) ii), and
 - ii) the greater of the length of the accessible bathtub or the depth in conformance with Clause 4.3.1 b) i).

7.5.1.2 Clear floor area overlap

The clear floor area required by Clause 7.5.1.1 a) for turning can overlap with the clear floor area required by Clause 7.5.1.1 b) adjacent to the accessible bathtub.

7.5.1.3 Obstructions

Obstructions are permitted to project into the clear floor area provided they do not restrict access to the accessible bathtub.

7.5.2 Length and height

An accessible bathtub shall be 1500 mm minimum in length and have a rim height between 400 mm minimum and 460 mm maximum above the finished floor surface.

7.5.3 Access

An accessible bathtub shall be accessible along its entire length with no tracks mounted on the rim.

7.5.4 Doors and enclosure walls

Accessible bathtub doors and enclosure walls are permitted where they do not obstruct:

- a) controls, faucets, shower and spray units, or
- b) transfer from a wheelchair onto bathtub seats or into bathtubs.

7.5.5 Surface condition

The bottom surface of an accessible bathtub shall be slip-resistant.

7.5.6 Seat

7.5.6.1 General

A seat shall be provided in an accessible bathtub.

7.5.6.2 Type

An accessible bathtub seat shall be permanent or movable.

7.5.6.3 Size

An accessible bathtub seat shall have:

a) a width of 380 mm minimum for a permanent seat,

b) a width of 450 mm minimum and minimum depth of 400 mm for a moveable seat, and

7.5.6.4 Support

An accessible bathtub seat shall have:

- a) a fastener mounting device or supporting structure, and
- b) support a load of 1.3 kN minimum.

7.5.6.5 Surface

The surface of an accessible bathtub seat shall:

- a) be padded,
- b) be smooth,
- c) be slip-resistant,
- d) have no rough edges,
- e) have front corners that are rounded to a radius of between 10 mm minimum and 15 mm maximum,
- f) have top edges that are rounded to a radius of between 2 mm minimum and 3 mm maximum,
- g) be designed to be easily cleaned, and
- h) be impervious to water and self-drain, where holes or slots in single unit seats or by gaps between slats in compound seats, the diameter of the holes, the width of the slots and the gaps between slats shall be between 4 mm minimum and 6 mm maximum.

7.5.7 Faucets and controls

7.5.7.1 General

Accessible bathtub faucets and controls shall be in conformance with Clause <u>4.7</u>.

7.5.7.2 Type

An accessible bathtub shall have a pressure-equalizing or thermostaticmixing valve.

7.5.7.3 Location

Accessible bathtub controls shall be:

- a) located on the centre line or between the centre line of the bathtub and the exterior edge of the accessible bathtub rim,
- b) located 450 mm maximum above the rim, and
- c) within reach of the seat in conformance with Clause 4.6.

7.5.7.4 Water temperature

Accessible bathtub water temperature shall be 49 °C maximum.

7.5.8 Grab bars

7.5.8.1 General

An accessible bathtub shall have four grab bars in conformance with Clauses 7.1, 7.5.8.2 and 7.5.8.3.

7.5.8.2 Back wall

Two horizontal grab bars shall be mounted on the back wall 380 mm minimum from the head end of the wall and extend 305 mm minimum from the control end wall, such that:

- a) one grab bar is located between 840 mm minimum and 915 mm maximum above the floor of the accessible bathtub, and
- b) one grab bar is located between 205 mm minimum and 255 mm maximum above the rim of the accessible bathtub.

7.5.8.3 Control end wall

A horizontal and vertical grab bar shall be mounted on the control end wall such that:

- a) the horizontal grab bar is located near the front edge of the accessible bathtub, extending toward the inside comer of the bathtub 610 mm minimum in length.
- b) the vertical grab bar is:
 - i) located inward from the front edge of the bathtub 100 mm maximum,
 - ii) 455 mm minimum in length, and

iii) between 75 mm minimum and 150 mm maximum above the horizontal grab bar.

7.5.9 Shower head

7.5.9.1 General

An accessible bathtub shall be provided with:

- a) a fixed shower head that complies with Clause 7.5.9.2, and
- b) a hand-held shower head that complies with Clause 7.5.9.3.

7.5.9.2 Fixed shower head

A fixed shower head shall:

- a) be mounted between 1780 mm minimum and 2030 mm above the floor of the bathtub, and
- b) have controls that comply with Clause 7.5.7 to allow water flow between either the fixed shower head or the hand-held shower head.

7.5.9.3 Hand-held shower head

A hand-held shower head shall:

- a) be within reach from a seated position,
- b) have a flexible hose length 1,800 mm minimum,
- c) have an adjustable height between 400 mm minimum and 1,100 mm maximum above the finished floor surface,
- d) have a nonpositive shutoff feature, and
- e) not obstruct the use of the grab bars.

7.5.10 Soap holder

An accessible bathtub shall have a soap holder that is:

- a) fully recessed, and
- b) reachable from a seated position in conformance with Clause 4.6.

7.6 Drinking fountains and bottle filling stations

7.6.1 Location

Where not recessed, an accessible drinking fountain or accessible bottle filling station shall be provided with guards on both sides with the lower edge of the guard 680 mm maximum above the finished floor surface.

Note: Drinking fountains should be recessed where possible to avoid creating an obstruction in a path of travel.

7.6.2 Clear floor area and clearances

7.6.2.1 Clear floor area

An accessible drinking fountain and accessible bottle filling station shall have a clear floor area in conformance with Clause 4.3.1 a) and b) to allow a forward and parallel approach.

7.6.2.2 Knee and toe clearance

An accessible drinking fountain and accessible bottle filling station shall have a knee and toe clearance in conformance with Clause 4.4.

7.6.3 Controls

7.6.3.1 General

Accessible drinking fountain and accessible bottle filling station shall be provided with controls in conformance with Clause 4.7.

7.6.3.2 Location

Where manual controls are provided for an accessible drinking fountain or accessible bottle filling station, they shall be:

a) located at the centre of the front face, or

b) located on both sides and 180 mm maximum from the front edge.

Note: If a manual control is provided, a large push bar type control or lever control is preferred.

7.6.3.3 Foot operated controls

Foot operated controls are permitted for an accessible drinking fountain or accessible bottle filling station where provided in addition to the controls required in conformance with Clause 7.6.3.1.

7.6.3.4 Identification

Accessible drinking fountain and accessible bottle filling station controls shall have a medium luminance contrast with the drinking fountain or bottle filling station.

7.6.4 Cup dispensers

7.6.4.1 General

Where a cup dispenser is provided for an accessible drinking fountain or accessible bottle filling station, the controls shall comply with Clause 4.7.

7.6.4.2 Location

The operable parts of a cup dispenser provided for an accessible drinking fountain or accessible bottle filling station shall be 1,100 mm maximum above the finished floor surface.

7.6.5 Spout

7.6.5.1 Height

The height of the spout of a drinking fountain above the finished floor surface shall be:

- a) between 750 mm minimum and 800 mm maximum, or
- b) between 950 mm minimum and 1,050 mm maximum where more than one drinking fountain is provided.

7.6.5.2 Depth

The spout of an accessible drinking fountain shall be 380 mm minimum from the vertical support of the drinking fountain and 90 mm maximum from the front edge of the drinking fountain, including bumpers.

7.6.6 Water

7.6.6.1 Height

An accessible drinking fountain shall have a water flow height of 100 mm minimum from the spout.

7.6.6.2 Angle

The angle of the water flow from the spout of an accessible drinking fountain, measured relative to the front face of the drinking fountain, shall be:

- a) 30 ° maximum within 75 mm of the front of the drinking fountain, and
- b) 15 ° maximum between 75 mm minimum and 125 mm maximum from the front of the drinking fountain.

7.6.7 Identification

An accessible drinking fountain and accessible bottle filling station shall have a high luminance contrast to the adjacent wall and floor.

8 Evacuation facilities

8.1 Emergency notification systems

8.1.1 Visible device location

Visible signal devices shall be installed so that the signal from at least one device is visible throughout the floor area, portion thereof, or compartment in which they are installed.

8.1.2 Where a fire alarm system is provided

Where a fire alarm system is provided, the visible warning system shall consist of strobe lights conforming to CAN/ULC-S526, "Visible Signal Devices for Fire Alarm Systems, Including Accessories" that are designed to operate as part of the fire alarm system, and:

a) have a luminous intensity of 75 candela minimum.

- b) produce between 1 and 3 flashes per second, with the flashes synchronized when more than one strobe light is visible from a single location,
- c) have a clear or white translucent lens with the word "FIRE" clearly visible on the:
 - i) lens, or
 - ii) attached nameplate,
- d) be installed throughout all floor areas, and
- e) be located in conformance with the installation requirements for visible signal devices in CAN/ULC-S524, "Installation of Fire Alarm Systems."

8.1.3 Where a fire alarm system is not provided

Where a fire alarm system is not provided, the visible warning system shall consist of strobe lights conforming to CAN/ULC-S526, "Visible Signal Devices for Fire Alarm Systems, Including Accessories" that shall:

- a) be connected to, and activated by:
 - i) the smoke alarms required by the applicable Building Code, or
 - ii) the smoke detectors permitted by the applicable Building Code,
- b) have a luminous intensity of 75 candela minimum,
- c) produce between 1 and 3 flashes per second, with the flashes synchronized when more than one strobe light is visible from a single location,
- d) have a clear or white translucent lens with the word "SMOKE" clearly visible on the:
 - i) lens, or
 - ii) attached nameplate,
- e) be installed throughout all floor areas, and
- f) be located 2,100 mm minimum above the finished floor surface on a wall or ceiling in a location that will maximize effectiveness.

8.1.4 Smoke alarms in assisted living facilities

Smoke alarms required in suites in an assistive living facility shall upon actuation provide an audible and visual signal to staff serving those suites, so that the suite containing the actuated smoke alarm or smoke detector can be easily identified.

8.2 Fire protection and refuge

8.2.1 Means of egress

The means of egress from all floor areas to a public way shall be designed in conformance with Clause 5.

8.2.2 Occupant evacuation elevator

A building that is 6 storeys or more in building height shall be provided with an occupant evacuation elevator.

8.2.3 Areas of refuge

8.2.3.1 General

An area of refuge shall be equipped with a first aid kit.

8.2.3.2 Number

The number of areas of refuge on each storey shall be provided based on half the number of exits required by the applicable Building Code serving that storey but:

- a) shall not be less than 1, and
- b) where there is an odd number of required exits, the number of areas of refuge shall be rounded up to the next whole number.

8.2.3.3 Size

An area of refuge shall provide two adjacent clear floor areas in conformance with Clause 4.3.1 a).

8.2.3.4 Location

An area of refuge shall be located:

- a) within an exit stair shaft, provided it is outside the egress width required by the applicable Building Code so that direct access is provided to: an exit, or a fire fighter elevator required by the applicable Building Code; or
- b) within a fire compartment that is separated from the remainder of the floor area by a fire separation having a fire-resistance rating not less than that

required by the applicable Building Code for an exit enclosure on the same storey so that direct access is provided to:

- i) an exit,
- ii) a fire fighter elevator required by the applicable Building Code, or
- iii) an occupant evacuation elevator in conformance with Clause <u>5.8.4</u>.

Note: An example of a fire compartment in this Clause includes an elevator *lobby.*

8.2.3.5 Doors

Doors providing access to an area of refuge shall be leakage-rated in conformance with NFPA 105, "Standard for Smoke Door Assemblies and Other Opening Protectives."

8.2.3.6 Communication

An area of refuge shall be equipped with a hands-free communication system that is:

- a) in conformance with Clause 4.7,
- b) connected to an emergency response system, and
- c) a two-way texting system in conformance with International Telecommunications Union (ITU) V.18, "Operational and interworking requirements for DCEs operating in the text telephone mode," to support people who are deaf or hard of hearing.

8.2.3.7 Signs

An area of refuge shall:

- a) be identified by directional signage indicating the direction of the accessible egress route in conformance with Clause 6.3,
- b) have the evacuation route to it identified by signage in conformance with Clause <u>6.3</u>,
- c) be identified on all publicly displayed evacuation plans in conformance with Clause <u>6.3</u>,

8.2.3.8 Fire safety plan

Each area of refuge shall be designated in the fire safety plan for the building required by the applicable Fire Code.

8.2.3.9 Evacuation Device

Each area of refuge shall be provided with an evacuation device.

8.3 Exiting

An accessible exit door, in compliance with Clause 5.5, discharging to the exterior of a building or another building through a horizontal accessible exit shall:

- a) have a sign with raised characters and braille, in conformance with Clauses 6.3.6 and 6.3.7, displaying the word "EXIT,"
- b) if discharging direct to the exterior, lead to an accessible exterior path of travel and the exterior assembly area, and
- c) if discharging to another building, lead to a path of travel that complies with this Standard.

9 Occupancy requirements

9.1 Assembly occupancies

9.1.1 Location

9.1.1.1 Accessible spaces

Spaces designated for accessible use shall:

- a) be arranged so that at least 2 designated spaces are side by side,
- b) not infringe on egress from any row of seating or any aisle requirements,
- c) be part of the designated seating plan, and
- d) have a clear floor area in conformance with Clause <u>4.3.1</u> c) adjoining each accessible space.

9.1.1.2 Companion seating

Companion seating shall be provided beside each group of designated spaces, if two or more designated spaces are arranged side by side in a group and shall:

- a) be equivalent in size, quality, comfort and amenities to the seats in the immediate area to the accessible space location,
- b) be moveable,
- c) be located to provide shoulder alignment with the accessible space occupant, and
- d) have a finished floor surface at the same elevation as the finished floor surface of the designated accessible space accompanied.

9.1.1.3 Adaptable seating

Adaptable seating shall:

- a) not infringe on egress from any row of seating or any aisle requirements, and
- b) be equipped with a movable or removable armrest on the side of the seat adjoining the aisle.

9.1.1.4 Designated aisle seating

Where provided, designated aisle seating shall:

- a) be located adjacent to an aisle,
- b) be identified by a sign or marker, and
- c) where armrests are provided on seating in the immediate area of designated aisle seats, have folding or retractable armrests on the aisle side of the designated aisle seat.

9.1.2 Floor surface

Spaces designated for accessible and adaptable seating shall be in conformance with Clauses 4.1 and 4.2.

9.1.3 Clear floor area

Accessible spaces shall:

- a) be 915 mm minimum in width,
- b) be 2,450 mm minimum in depth from the back of the seating to the back of the fixed seating directly in front of the accessible space, and
- c) have 1,200 mm minimum clearance from the back of the fixed seating directly in front of the accessible space.

9.1.4 Lines of sight

Note: Lines of sight should be considered in the design of guards and handrails in accessible and adaptable seating areas.

9.1.4.1 Lines of sight over seated spectators

Where spectators are expected to remain seated during events, spectators seated in an accessible space shall be provided with lines of sight to the performance area or playing field comparable to that provided to seated spectators in closest proximity to the accessible space location over:

- a) the heads of seated individuals in the first row in front of the accessible space location, or
- b) the shoulders and between the heads of seated individuals in the first row in front of the accessible space location.

9.1.4.2 Lines of sight over standing spectators

Accessible spaces required to provide a line of sight over standing spectators shall:

- a) be 305 mm maximum from the back of the chair or bench in front, and
- b) have a finished floor surface height at the accessible space location that complies with Table 12.

| Table | 12 |
|-------|----|
|-------|----|

Accessible space location elevation over standing spectators

| Riser Height (mm) | Rows less than 840 mm | Rows 840 mm to 1,120 mm | Rows over 1,120 mm | | |
|----------------------|--------------------------|----------------------------|-----------------------|--|--|
| 0 | 405 | 405 | 405 | | |

(See Clause <u>9.1.4.2</u>)

| Riser Height (mm) | Rows less than 840 mm | Rows 840 mm to 1,120 mm | Rows over 1,120 mm |
|----------------------|--------------------------|----------------------------|-----------------------|
| 100 | 560 | 535 | 535 |
| 205 | 785 | 760 | 710 |
| 305 | 1,015 | 940 | 890 |
| 405 | 1,245 | 1,145 | 1,065 |
| 510 | 1,475 | 1,345 | 1,245 |
| 610 | NA | 1,550 | 1,420 |
| 710 | NA | 1,750 | 1,600 |
| 815 | NA | NA | 1,780 |
| 915 and higher | NA | NA | 1,955 |

9.1.5 Storage spaces

9.1.5.1 Number

A storage space for mobility assistive devices shall be provided on the same level and in proximity to spaces designated for accessible use and seats designated for adaptable seating and where the number of fixed seats is not more than 200, only one storage space shall be required.

9.1.5.2 Size

A storage space for mobility assistive devices shall be 810 mm minimum in width by 1,370 mm minimum in depth.

9.1.6 Podiums and stage areas

9.1.6.1 Access

Ramped access shall be provided to form a continuous accessible path of travel to a podium or stage.

9.1.6.2 Clear floor area

A stage area shall have a clear floor area in conformance with Clause 4.3.1 d).

9.1.6.3 Controls

Controls and facilities on a podium shall be in conformance with Clauses 4.6 and 4.7.

9.1.6.4 Illumination

Lighting of a podium or stage shall be 200 lx minimum.

9.1.7 Sign language interpreter stations

9.1.7.1 Location

Where provided, a sign language interpreter station shall be located to provide a direct line of sight from the seating area it serves.

9.1.7.2 Lines of sight

The seating area within an arc from the sign language interpreter station and measured to the left and to the right 60 ° within 19.8 m horizontal distance from the station shall have sight lines providing a view of the sign language station from a height between 915 mm minimum and 1,830 mm maximum above the finished floor surface of the station.

9.1.7.3 Size

A sign language interpreter station shall be 610 mm minimum in depth and 915 mm minimum in width.

9.1.7.4 Illumination

A sign language interpreter station shall be illuminated at the level required for a reading surface while signing is underway in conformance with Clause 4.8.

9.1.7.5 Backdrop

A sign language interpreter station shall be provided with a backdrop with a flat, smooth surface with a monochromatic, low-luster finish treatment, and where the station is located with a permanent wall 3,050 mm maximum behind the station, the permanent wall to a height 2,440 mm minimum from the finish floor surface shall be considered as a backdrop.

9.2 Detention occupancies

Cells in detention occupancies required to have accessible features shall:

- a) have a clear floor area within the cell in conformance with Clause <u>4.3.1</u> d),
- b) where beds are provided, have a clear floor area in conformance with Clause <u>4.3.1</u> b) for a parallel approach to the side of the bed,
- c) where sanitary facilities are provided as part of a cell, be in conformance with Clause <u>7</u>, and
- d) where audible emergency alarm systems are provided to serve the occupants of cells who are permitted to have independent means of egress, provide visible alarms in conformance with Clause <u>8.1</u>.

9.3 Business and personal service occupancies

Accessible examination rooms and treatment rooms shall be provided with:

- a) a lavatory designed in conformance with Clause 7.2.7,
- b) a height-adjustable adult change table in conformance with Clause 7.3.11, and
- c) a ceiling lift system in conformance with Clause 7.3.13.

Annex A (informative)

Bibliography

A.1 Grants and Contributions Research

Indigenous Communities and Federal Accessibility Standards. March 31, 2021. Indigenous Communities and Federal Accessibility Standards: A Situational Review.

McMaster University. April 26, 2021. Sustainable Environments Needs to be Accessible: Understanding the Knowledge base for Accessibility of Buildings and the Built Environment.

PEACH Research Unit and EyeCandy Signs. 2023. Advancing Communication Through Wayfinding and Signage.

The Kite Research Institute. September 2021. Recommendations for Evacuating Individuals with Disabilities from the Built Environment.