Rick Hansen Foundation Accessibility Advisory Services

Accessibility Gap Analysis

New Westminster Campus – Justice Institute of BC

March 2023

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Overview

Summary of Results

Thank you for taking the time to complete an accessibility assessment with the Accessibility Advisory Services team at the Rick Hansen Foundation. This report summarizes the results of the Rick Hansen Foundation Accessibility Certification (RHFAC) preliminary rating for the Justice Institute of BC's New Westminster campus.

The Justice Institute of BC is a 3 storey institutional facility located at 715 McBride Blvd, in New Westminster, BC, Canada. Building use skews towards a younger demographic of predominantly police and paramedic students, but also serves a mixed demographic of staff members, as well as friends, families, and members of the general public during ceremonies or events.

The accessibility review for Justice Institute of BC is based on as-built data captured during a physical site visit, and is inclusive of parking, common interior and exterior circulation areas, washrooms, student services, and a representative sample of classrooms and office workspace. The bookstore, gun range, and some other specialized areas related to police or paramedic training were excluded from the scope of the review for a variety of reasons.

As will be described in more detail further in the report, the current results of the rating are as follows:

Overall Score	66%
Certification Level	Accessibility Certified*

***Please note** that this is a preliminary, pre-adjudicated rating. In order to communicate the results of a rating publicly, an official third-party adjudication is required from the CSA Group, who are responsible for the hosting of the RHFAC Public Registry. The CSA Group has their own fee for official adjudication. More details on the registration process can be discussed with the Accessibility Advisory Services team, and also found in the RHFAC Clients' Guide to Certification.

Background

The Rick Hansen Foundation Accessibility Rating Certification (RHFAC) is a rating system designed to measure meaningful access in the built environment, and is based on principles of universal design that reach above and beyond existing building code requirements.

While accessibility considerations within building code often employ a mobility-centric focus, the RHFAC rating system uses a universal approach with the goal of creating spaces that can accommodate any and all users. The RHFAC rating system was developed in collaboration with a wide range of stakeholders, including leading architects and designers, experienced RHFAC Professionals, and non-profit organizations such as: the CNIB, Canadian Hard of Hearing Association, Barrier Free Canada, March of Dimes, MS Society, and Easter Seals Canada, among others.

The RHFAC rating system is not a standard in and of itself. Rather, it is a compilation of best practices based primarily on meeting CSA B651-18 accessibility standards. Additionally, consultation with key stakeholders during the development process identified components of the RHFAC rating system that must go above and beyond CSA B651-18 criteria to achieve maximum points.

The RHFAC rating system is broken down into 10 main categories, before being divided into sub-categories ("elements") and further broken down into individual line-items ("features"). Upon assessment, each feature receives a numerical score based on a pre-established set of criteria before being aggregated to establish an overall score for the project. Projects that achieve a score of 60-79% are eligible to receive an "RHF Accessibility Certified" designation, while those that achieve a score of 80% or higher will be eligible to receive an "RHF Accessibility Certified Gold" designation. In order to be certified, however, it is necessary for the project to meet the mandatory requirements that are outlined in the subsequent sections.

This report uses the terminology and section categories of the Rick Hansen Foundation Accessibility Certification (RHFAC) Rating Survey. If applicable, the CSA B651-18 standard is noted to ensure that it is easy to cross reference with the documents.

There are 10 categories in the RHFAC rating system, of which 8 are applicable to this project:

- Vehicular Access
- Exterior Approach and Entrance
- Interior Circulation
- Interior Services and Environment
- Sanitary Facilities
- Wayfinding and Signage
- Emergency Systems
- Additional Use of Space

Meaningful Access for Everyone

The provision of access for a person using a wheelchair or mobility aid is often considered to be an indication of effective design in the built environment. However, the majority of users of parking lots, buildings, and outdoor areas are pedestrians who also benefit greatly from wheelchair accessible design. Conversely, they can also be denied appropriate access if barriers are incorporated into designs.

In addition, older populations and people with disabilities in the community have a wide range of access needs that are not necessarily satisfied by accommodating for limited mobility.

Our assessment and recommended enhancements have been made using a universal approach to inclusive design, based on best practices and our knowledge of the needs of the following disability groups, among others:

- People who are deaf or hard of hearing
- People who are blind or have vision impairments
- People with mobility impairments
- People with agility impairments
- People with sensory or cognitive impairments

Examples of a range of access challenges:

People who **use wheelchairs** face difficulties such as abrupt changes in levels (e.g. steps and steep slopes/gradients) and limited access under sinks, counters, and tables. They also require an increased circulation area, particularly around doorways and where changes in direction occur.

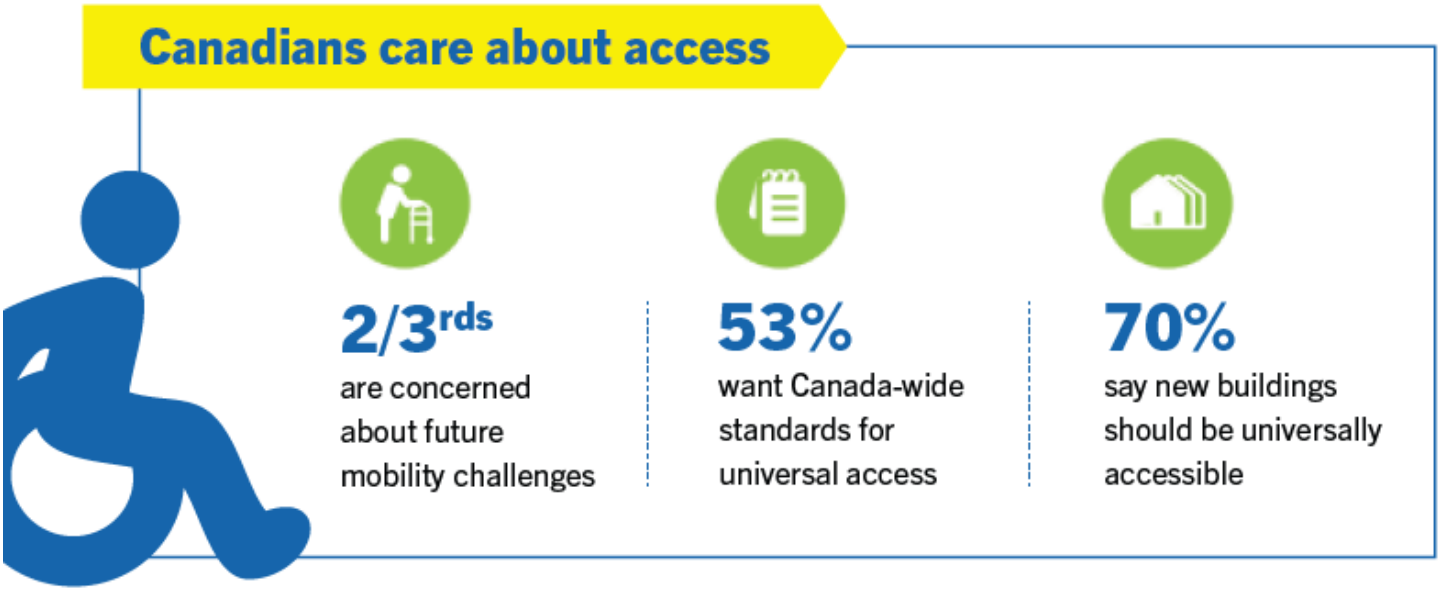
People who **experience difficulty walking** may have stiff hips, poor balance or uncoordinated movements which require attention to stairs and handrails, seating in waiting areas, slip resistant floor finishes and ramps with a gentle slope/gradient. They may also have limited endurance, which results in a need for increased seating and effective handrail installation along the path of travel.

People with **agility difficulties and limited dexterity** in their upper extremities require appropriately selected handles, switches, buttons (in lifts) and faucets to allow sufficient ease of use.

People **with sensory disabilities,** which affect either their hearing or vision, require clear, easy to understand signage and tactile indicators. This requires attention to a variety of factors including luminance, colour, contrast, print size, levels of illumination and the provision of appropriate communication systems in public areas. Background noise and excessive brightness or lighting fluctuations may also have a negative impact on the user experience.

People **with intellectual disabilities** may have difficulty finding their way in new environments. Therefore, direct access routes and clear directional signage with graphics are important.

As a wide range of physical issues impact on the provision of access for people with disabilities, responsive design, incorporating a continuous accessible path of travel, needs to be equitable and therefore inclusive of the needs of all of the community. Access should cater to both pedestrians and users of wheelchairs and other mobility aids. In addition, consideration must be given to the needs of users who may require assistance from other people as well as assistance animals.



Prioritizing Accessibility Improvements

Criteria listed below are guidelines for prioritizing future works and upgrades. As priorities are subjective in nature, it's recommended that the user group, including people with disabilities, be included in deciding the priorities that will best provide meaningful access for the site, as well as the timeframes.

Short-Term Areas of Opportunity

Opportunities which are classified as a 'short term' priority for barrier removal fall into one of the following categories:

- Poses an immediate health and safety risk for users of the site
- Is a significant barrier for users of the site
- Has a low-cost implication

Long-Term Areas of Opportunity

Opportunities which are classified as a 'long term' priority for barrier removal fall into the one of the following categories:

- Best practice items
- To be upgraded when that area of the building is renovated
- To be considered in the long-term planning of capital expenditure of the building

Certification

Certification Levels and Requirements

RHFAC offers two levels of certification: **RHF Accessibility Certified Gold** and **RHF Accessibility Certified**. The certification level for a project is determined by:

1. Achieving the minimum rating score, which is the total earned score divided by the total available score, expressed as a percentage; **and**

2. Meeting the Mandatory Certification Requirements (MCR) and Mandatory Gold Certification Requirements (MGCR).

In order to be certified, a Site must meet the mandatory certification requirements. RHFAC Professionals are required to confirm that a Site has met the mandatory certification requirements before submitting a rating. If a Site does not meet the mandatory certification requirements, RHFAC Professionals should identify why this is not the case in the Scope of Rating.

Certification Level Requirements

Certification Level	Rating Score	Meet Mandatory Certification Requirements	Meet Mandatory GOLD Certification Requirements
RHF Accessibility Certified GOLD	80%+	✓	✓
RHF Accessibility Certified	80%+	✓	✗
	60–79%	✓	✗
Not Certified	0–100%	✗	✗

Note: Sites are required to meet the mandatory certification requirements to be certified, regardless of their rating score.

Mandatory Certification Requirements

Project: New Westminster Campus – Justice Institute of BC

Legend

- Meets or exceeds MCR/MGCR
- Partially meets MCR/MGCR
- Does not meet MCR/MGCR

Mandatory Certification Requirements – Accessibility Certified (AC)

✓	Accessible public entrance
✓	Access to all key functional spaces

Mandatory Gold Certification Requirements - Accessibility Certified Gold (ACG)

✓	Designated accessible parking space(s), if parking is provided for site users
✓	Access to public transit, if the site is located in an area serviced by transit
✓	Accessible path(s) of travel leading to building entrance and throughout the building
✓	An accessible primary entrance for public and staff (if separate)
✓	Access to all floors expected to be used by elevator or lift usable by everyone
✓	At least one universal washroom
✗	Emergency systems with visual and audible fire alarms in both public and private areas
✓	Wayfinding strategies in place to navigate throughout the site
!	Safety warning features, such as tactile attention indicators at the top of stairs, and cane-detectable features, if there are overhead or protruding hazards along the pathway
!	Tactile markings for permanent room identification signs
✗	Assistive listening and communication enhancement technologies, when applicable to the site
✓	Accessibility provision(s) for the key functional facilities of the site

RHFAC Scorecard

RHFAC Scorecard

Project: New Westminster Campus – Justice Institute of BC

Pre-Adjudicated RHFAC Score: 66%

1. Vehicular Access	**60.3%**
Parking	55.3%
General Vehicular Access	70.0%
2. Exterior Approach and Entrance	**71.8%**
Exterior Pathways to Facilities on Site	56.8%
Exterior Stairs	63.4%
Building Entrances	87.5%
3. Interior Circulation	**75.3%**
Interior Doors and Doorways	68.3%
Path of Travel	72.2%
Corridors and Hallways	80.6%
Interior Ramps	68.6%
Elevators	83.1%
Interior Stairs	75.6%
4. Interior Services and Environment	**68.6%**
Lobby and Reception Areas	77.8%
Reception Desks, Service Counters, and Self-Service Kiosks	55.2%
Waiting Areas, General Seating, Meeting Rooms, and Lounges	67.9%
Kitchens	69.8%
Acoustic Considerations	85.7%
Illumination and Building Systems	71.4%

5. Sanitary Facilities	**45.2%**
Washrooms	53.8%
Showers	26.2%
6. Wayfinding and Signage	**75.0%**
General Wayfinding and Signage	76.2%
Room Identification Signage	72.2%
7. Emergency Systems	**52.3%**
Emergency Exits and Areas of Refuge	57.1%
Fire Alarm Systems and Equipment	35.3%
Evacuation Instructions	60.0%
8. Additional Use of Space	**62.3%**
Workstations	66.7%
Public Assembly Areas	73.0%
Cafeterias, Restaurants and Bars	68.9%
Fitness Centre	38.9%
Change Rooms	48.0%

Key Areas of Success

1. Vehicular Access

- Accessible parking spaces are provided within a short distance from building entrances.
- Ground surfaces around accessible parking spaces are generally in good condition with no obvious tripping hazards.
- Public transit is available within a short distance of the facility. The nearest bus stop includes sufficient shelter and seating options, with clear area to turn and maneuver with a mobility device.

2. Exterior Approach and Entrance

- Signage for the building is highly visible upon approach from surrounding areas.
- Pathways are generally free of any significant grade, or include alternative routes in close proximity. The route to the lower viewing area of the pond is an exception to this rule.
- The building includes multiple accessible entrances with automatic sliding doors.
- Building entrances are sheltered from weather, with landings that are level and spacious around doors.

3. Interior Circulation

- Power operated doors are installed in high traffic areas and at entrances to key spaces, such as the library.
- Doors are equipped with accessible lever-style hardware and include low thresholds, not exceeding 13mm in height.
- Hallways include sufficient clear width for two-way travel. The curved design of the building is helpful in reducing the occurrence of sharp 90-degree corners that can be hazardous for some users with low vision or hearing.
- Elevators are easy to locate and include controls with raised lettering and braille installed within an accessible height range.
- Interior stairwells include large, spacious landings that can serve as areas of refuge, or simply an area to rest outside of the path of travel.

4. Interior Services and Environment

- Most lobby and reception areas are logically arranged, with seating areas in clear view of the desk and separated from the main path of travel.

- Though lacking variety in some areas, most seating styles provided are accessible and would work well for most individuals. Tables have surfaces at an accessible height with knee clearance below.
- Illumination levels are generally consistent throughout the site, with no abrupt changes when transitioning between outdoor and indoor spaces.

5. Sanitary Facilities

- The number of accessible washroom facilities provided is sufficient for expected use.
- Sink and counter surface heights are accessible, with sufficient knee clearance provided (though some sinks did have inadequate plumbing protection beneath).
- Washroom doors and trim are highly colour-contrasted with surrounding wall surfaces.
- Washroom floor surfaces are firm, stable, and reasonably slip resistant.

6. Wayfinding and Signage

- Signage is comprehensive and mounted within clearly visible sightlines. Signage uses correct font and numeral styles, and symbols where applicable.
- All key spaces and amenities are identified with room signage mounted on the wall to the latch side of the door. Room numbering is logical and consistent.

7. Emergency Systems

- Areas of refuge are located consistently within emergency staircases and are sufficiently sized to accommodate at least two mobility device users.
- Evacuation signage is well organized with simple and effective layouts, symbols to show key amenities, and highly contrasting colours.

8. Additional Uses of Space

- Most office workspaces are sized appropriately, or have alternative layouts in close proximity. Staff areas include height adjustable seating.
- The cafeteria is laid out efficiently, with clear pathways and tray rails installed at an accessible height at each station. Microwave placement in the cafeteria is safe and accessible for users of wheelchairs and other mobility devices.

Key Areas of Opportunity

1. Vehicular Access

1.1 Parking: Number of Accessible Spaces

Observations

The quantity of accessible parking spaces (6) provided is on the lower end of the CSA B651-18 recommendation for a lot of this total size.

Accessibility Considerations

CSA B651-18 recommends providing 5-10 accessible parking spaces for a lot with a total size of 200-300 spaces.

Providing additional parking for limited mobility, or other courtesy parking (family, pregnancy, veteran, etc) in close proximity to entrances is also recommended as a best practice. Limited mobility spaces do not require additional clear width or access aisles.

Additional Information

RHFAC: 1.1.1

CSA B651-18: 9.4.1

Timeline: Long-Term

1.2 Parking: Dimensions of Accessible Spaces

Observations

Accessible space dimensions range between 2500mm and 4000mm.

Access aisles 1500mm in width are provided alongside 2500mm spaces.

Accessibility Considerations

Consider re-evaluating the existing parking layout to accommodate additional/alternative spaces with the recommended clear width of 2600mm, per CSA B651-18.

The set of 3 parking spaces referenced in **Figures 1.1 & 1.2** includes sufficient area to accommodate 3 spaces 2600mm in width, each with adjacent access aisles 2000mm in width.

Additional Information

RHFAC: 1.1.3

CSA B651-18: 9.4.1

Figure: 1.1 & 1.2

Timeline: Short/Long-Term

1.3 Parking: Safe Pedestrian Pathways

Observations

Multiple pedestrian crossings within parking areas include potential hazards to site users.

Accessibility Considerations

The unmarked crossing on the north side of the building should have highly visible ground markings and signage added. Tactile attention indicators should be installed at the top of each curb

A set of curb ramps on the north side of the building lead directly into an unmarked crossing of an active vehicular lane **(Figure 2.1)**.

The rainbow crosswalk, while highly visible, includes a small and uneven transition area on the parking side. The visibility of site users may also be impacted by parked cars nearby.

ramp to warn people with low vision that they are about to enter a vehicular route.

Consider re-configuring the area around the rainbow crossing to allow additional level area at the transition between parking and pathway. Each parking space should also border on an access aisle of 2000mm in width. Adding highly visible signage for the crossing would be helpful as a general precaution.

Additional Information

📖 RHFAC: 1.1.6

📖 CSA B651-18: 9.2

📷 Figure: 1.1 & 2.1

🕑 Timeline: Short-Term

1.4 General Vehicular Access: Passenger Drop-Off

Observations

The passenger drop-off area in front of the main entrance lacks certain accessible features.

Accessibility Considerations

Per CSA B651-18, passenger pickup/drop-off zones should include the following:

- Highly visible signage identifying the location and height clearance (if applicable) of the passenger drop-off/pick-up area.
- Tactile attention indicators (TAIs) installed along the transition between vehicle and pedestrian pathways, where flush.
- Accessible seating with arm/backrests, adjacent clear space, and overhead shelter for users to wait comfortably.

Additional Information

📖 RHFAC: 1.1.6

📖 CSA B651-18: 9.2

📷 Figure: 1.3

🕑 Timeline: Short-Term

Additional Considerations for Best Practice

- Vertical signage should be installed at each accessible space to ensure that spaces are identifiable during inclement weather events (i.e, snow) and any other situations where the ground signage may be obstructed.
- Providing a sheltered area for accessible parking would be beneficial to site users who require additional time to enter/exit vehicles, particularly if using an electric mobility device.
- Consider paving the dirt pathway leading from the nearby bus stop to the nearest entrance(s). For some people with limited mobility, this could significantly reduce the time and effort required to reach the building.

Figures

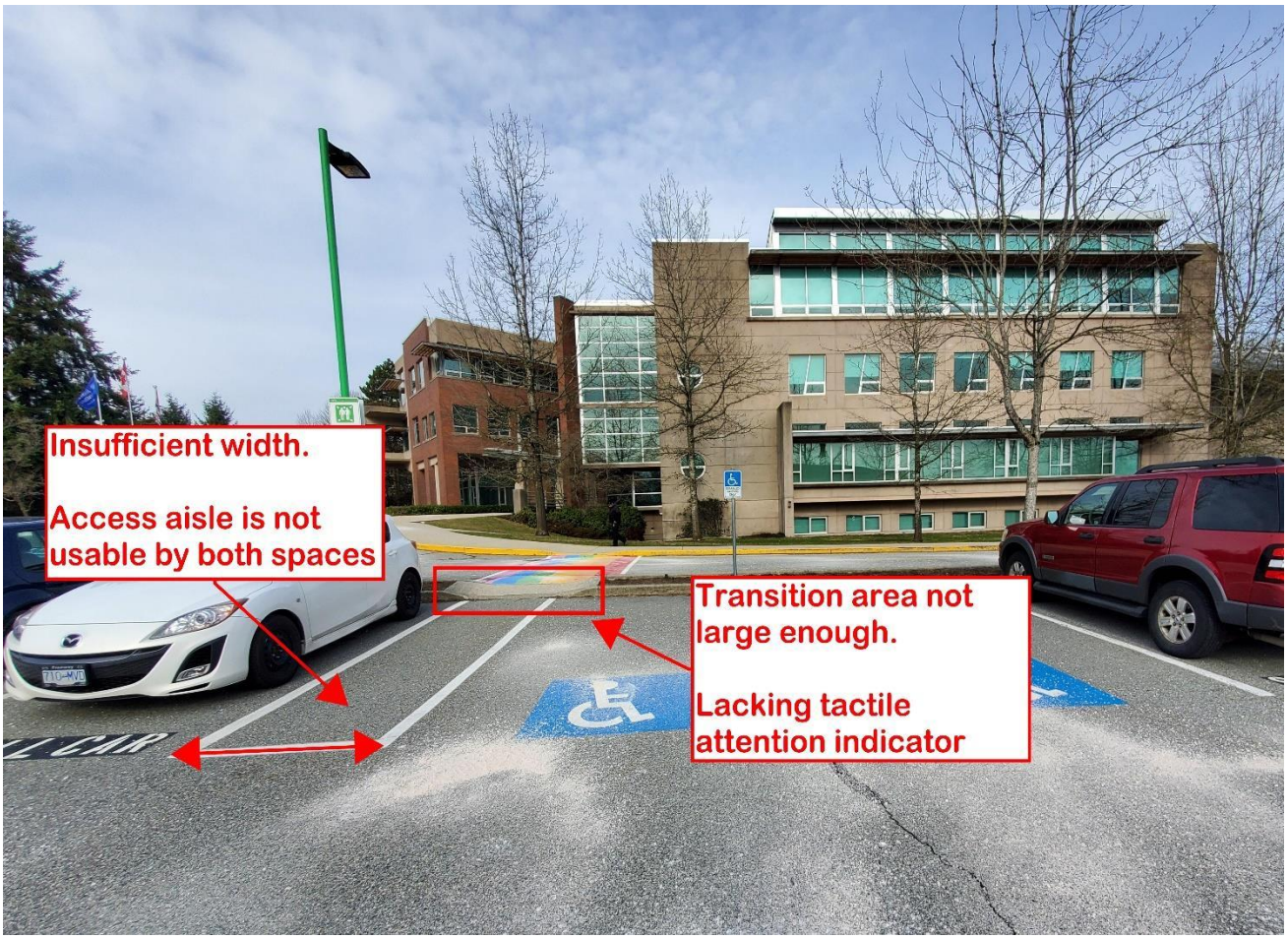


Figure 1.1 – Inaccessible aisle and curb transition

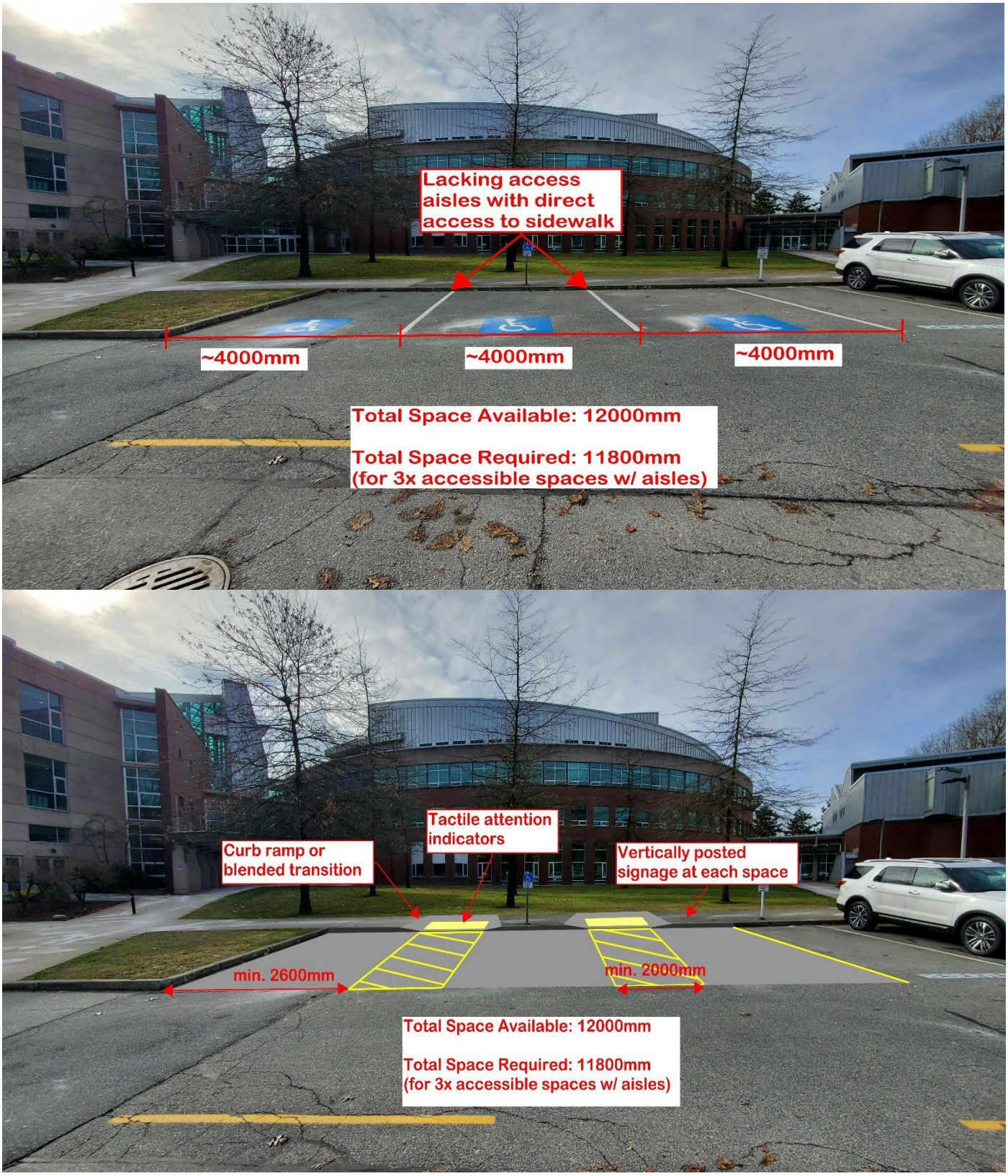


Figure 1.2 – Potential parking re-configuration with accessible dimensions

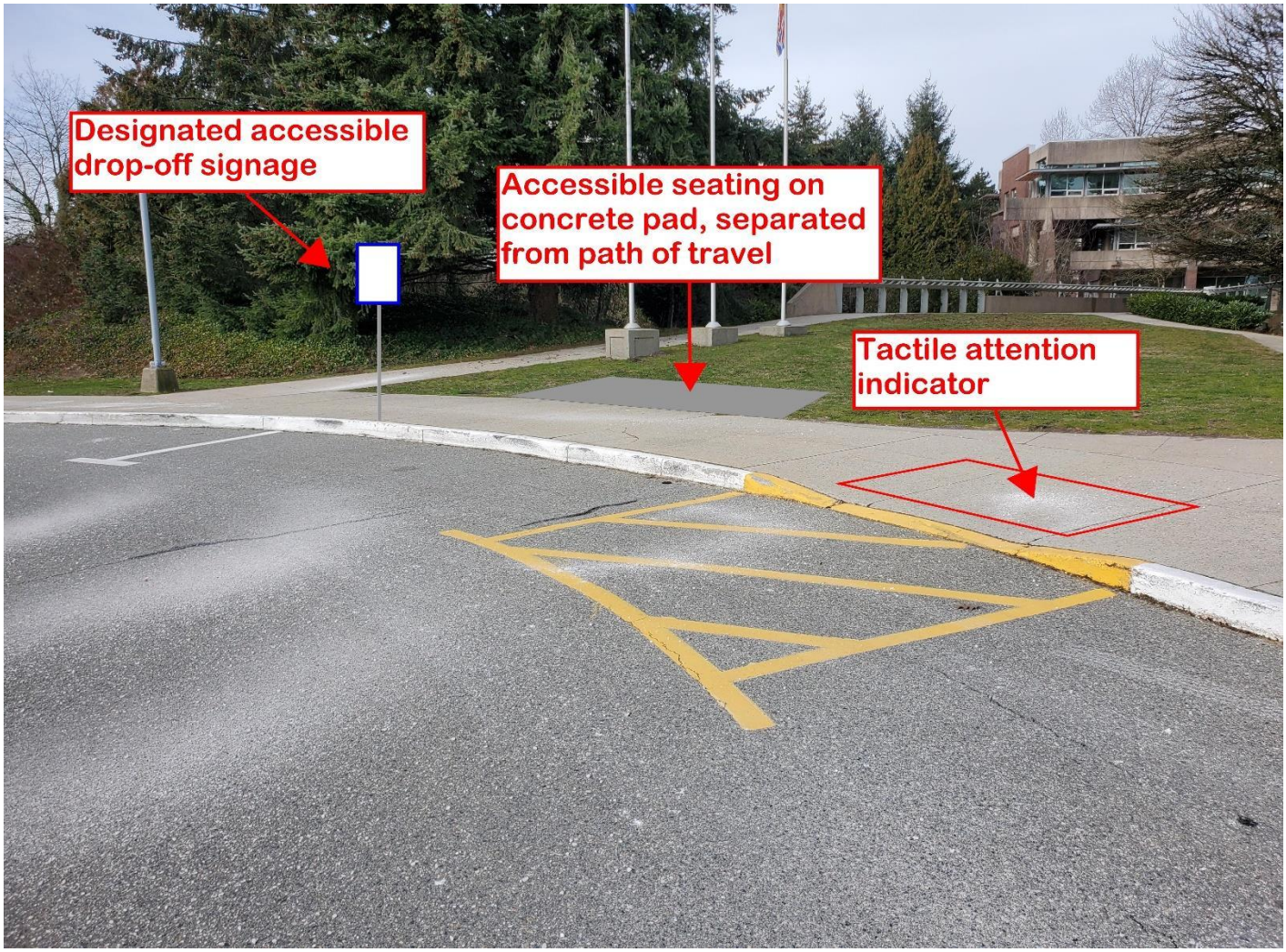


Figure 1.3 – Passenger drop-off location

2. Exterior Approach and Entrance

2.1 Pathways: Curb Ramps

Observations

Curb ramps lack tactile attention indicators where they lead into a pedestrian crossing or vehicular route.

Accessibility Considerations

Tactile attention indicators should be installed at all curb ramps leading into pedestrian crossings, vehicular routes, and passenger drop-off spaces **(Figure 2.1 & 2.4)**.

Additional Information

RHFAC: 2.1.6
CSA B651-18: 8.3.3
Figure: 2.1 & 2.4
Timeline: Short-Term

2.2 Pathways: Obstacles Along the Path of Travel

Observations

Some pathways include obstructions that encroach into the path of travel.

At the viewing deck for the pond, there is a concrete barrier that reduces clear pathway width and also lacks colour contrast with the surrounding surfaces **(Figure 2.2)**.

Along the inner circumference of the courtyard, multiple picnic tables reduce the pathway width to an inaccessible level, below 850mm **(Figure 2.3)**.

Accessibility Considerations

CSA B651-18 recommends providing a minimum pathway width of 1000mm, with reductions to 850mm allowable for short indentations up to 600mm in length.

Picnic tables should be arranged in a way that allows at least 850mm clear width of passage at pinch points. Allowing more space than that is ideal.

Consider replacing the concrete block with a standard bollard to increase the clear width of passage onto the deck. If not feasible to replace, adding colour contrast to the edges would be helpful to reduce the tripping risk for people with low vision.

Additional Information

RHFAC: 2.1.8
CSA B651-18: 8.2.2
Figure: 2.2 & 2.3
Timeline: Short-Term

2.3 Pathways: Pedestrian Crossings

Observations

The crossing across the main site entrance off of McBride Blvd does

Accessibility Considerations

The median should be shortened or extended, as deemed appropriate, to allow the curb ramps to align **(Figure 2.4).** This

not line up correctly and lacks key safety features required to ensure the safe passage of people with low vision, in particular.

helps to ensure that people with low vision are able to navigate the crossings without straying into traffic or tripping on a raised portion of the median.

Tactile attention indicators should be installed at each curb ramp to alert people with low vision that they are about to enter a crosswalk. Due to the general layout and poor visibility of the area, highly visible signage would also be helpful to warn drivers of the crossing.

Additional Information

- RHFAC: 2.1.10
- CSA B651-18: 8.3
- Figure: 2.1 & 2.4
- Timeline: Short-Term

2.4 Pathways: Accessible Seating Options

Observations

Pathways throughout the site and areas around the main entrance and passenger drop-off lack accessible seating.

Accessibility Considerations

Providing accessible seating options is recommended to accommodate users with limited endurance or balance, who are required to wait, or need rest after walking a significant distance.

While this can often apply to the elderly and people with limited mobility, accessible seating could also benefit a pregnant staff member, or a student with a temporary injury.

Seating should be situated off of the pathway on a ground surface that is firm, stable and slip-resistant. CSA B651-18 recommends providing an adjacent ground area of min. 800x1350mm to accommodate users of wheeled mobility devices, service animals, and strollers.

For more guidelines on accessible seating, see Appendix D.

Additional Information

- RHFAC: 2.1.13
- CSA B651-18: 8.6.3.1
- Timeline: Short-Term

2.5 Exterior Stairs: Handrails

Observations

Handrails on exterior stairs are incorrectly terminated.

Accessibility Considerations

Handrails should be returned to the wall, post, or ground to avoid catching on clothing or bags and causing a fall.

Additional Information

RHFAC: 2.3.4
CSA B651-18: 8.2.8
Timeline: Short-Term

2.6 Exterior Stairs: Tactile Attention Indicators

Observations

Exterior staircases lack tactile attention indicators installed across the top landing.

Mandatory Gold Certification Requirement

Accessibility Considerations

Tactile attention indicators should be installed to alert people with low vision that a level change is about to occur.

Though these staircases would typically only be accessed from emergency exits, they should still be equipped with the necessary safety features to alert people with low vision of an upcoming level change, particularly as egress during an emergency can be stressful, hasty, and awkward.

Additional Information

RHFAC: 2.3.5
CSA B651-18: 8.2.8
Timeline: Short-Term

2.7 Main Entrance(s): Accessible Entrance Easily Identified

Observations

One secondary entrance in particular does not clearly differentiate between accessible (sliding) and non-accessible doors (swinging) **(Figure 2.6).**

People with low vision may have difficulty identifying which entrance is which due to the lack of contrast and signage.

Accessibility Considerations

Adding signage to indicate the accessible entrance would be helpful for some people. Using colour contrast to highlight doorways in general is a low-cost practice that can be highly beneficial for users campus-wide.

Additional Information

RHFAC: 2.4.2
Figure: 2.6
Timeline: Short-Term

2.8 Main Entrance(s): Outward Opening Doors

Observations

At the NE-most entrance, there is some risk of people being impacted by the out-swinging door as they traverse across the face of the wall.

Accessibility Considerations

Although such situations would be rare due to the proximity of the automatic sliding door, creating a physical barrier to protect users from the door would be a low-cost solution that could have an impact.

Physical barriers can range from guardrails, to planters, to recycling bins, or other objects, provided they are stable, cane-detectable, and colour contrasted with the surroundings.

Additional Information

RHFAC: 2.4.13

CSA B651-18: 5.2.9

Figure: 2.6

Timeline: Short-Term

Additional Considerations for Best Practice

- When/where feasible, consider widening primary pathways to a minimum of 1800mm clear width. This allows users to pass one another with mobility devices, or when travelling with a companion or service animal. This feedback applies to both city-controlled sidewalks, and pathways within JIBC property.
- Consider paving certain gravel pathways on the property if their use can significantly reduce the time or effort required by a pedestrian to reach the building. The pathway nearest the bus stop is an example of such a situation.

Figures

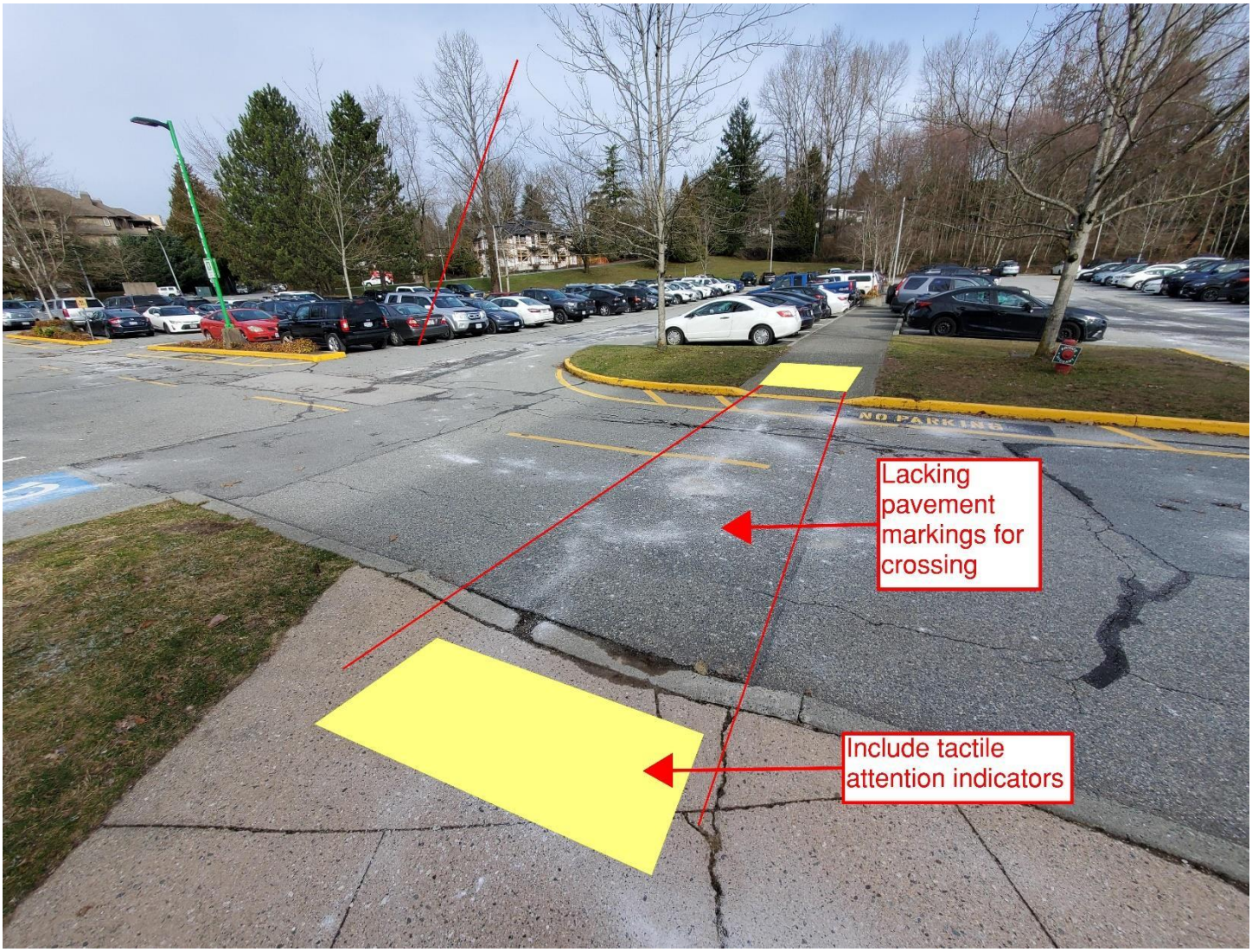


Figure 2.1 – Hazardous unmarked crossing

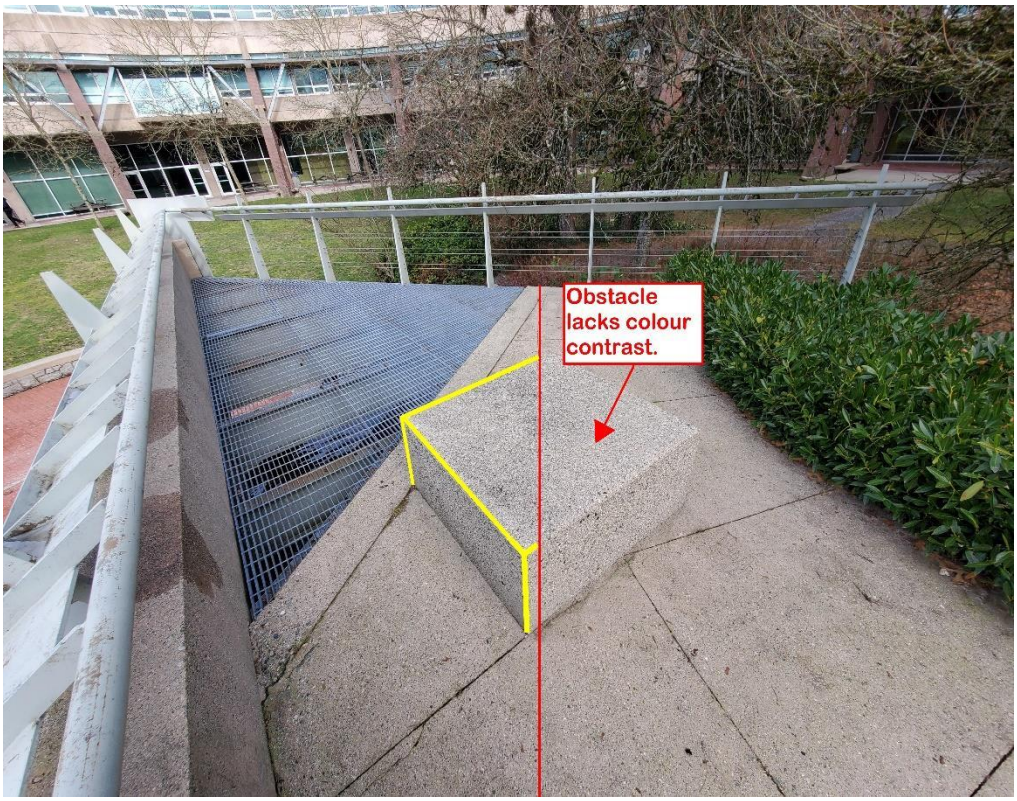


Figure 2.2 – Obstacle in the path of travel

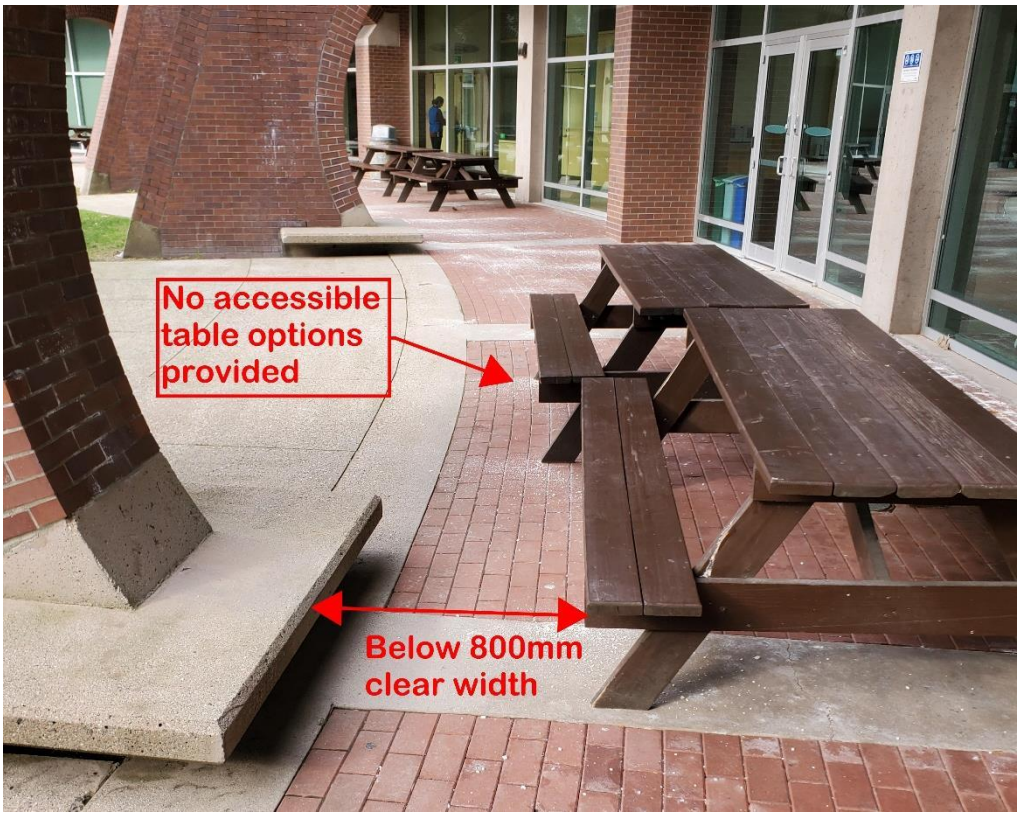


Figure 2.3 – Restricted pathway width

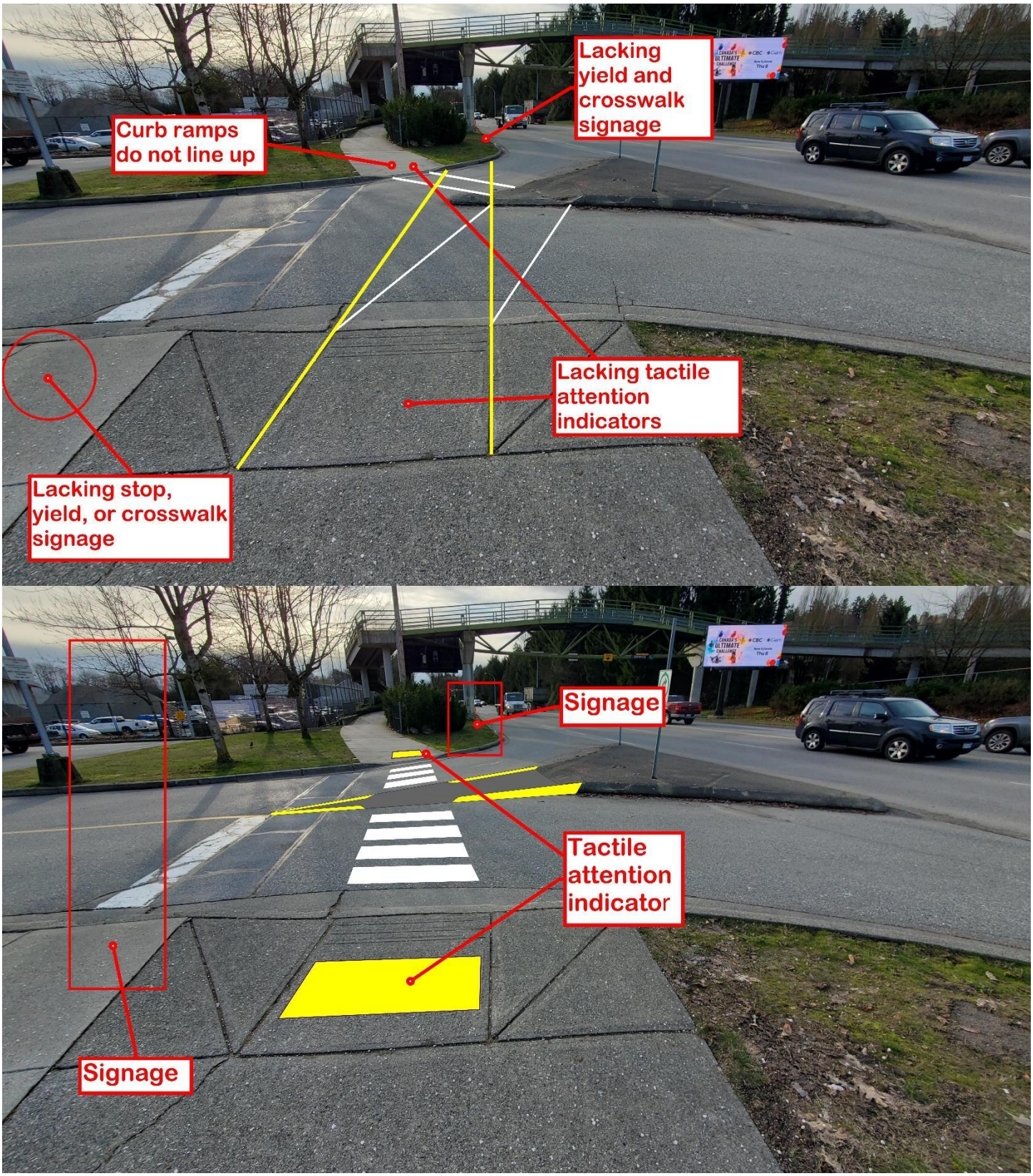


Figure 2.4 – Hazardous pedestrian crossing

Figure 2.5 – Glazed entrance door visibility

Figure 2.6 – Accessible entrance visibility

3. Interior Circulation

3.1 Interior Doors: Power Door Controls

Observations

A number of power door controls are small, and/or hard to locate.

At the transition between wings, there are small-sized buttons at a single height.

Leaving the library, the control button is difficult to locate and could be partially blocked by the turnstile bar when engaged.

Accessibility Considerations

Consider adding elongated bar style door controls where feasible to do so. These provide users additional flexibility of use in how they interact with door controls, allowing them to use a foot, knee, or part of their mobility device to operate.

Consider re-locating the button in the library to the other side of the turnstile. If not feasible to do so, a strategically placed motion sensor could be a potential solution for the exit door, though not ideal.

Additional Information

RHFAC: 3.1.3

CSA B651-18: 5.2.9

Figure: 3.1 & 3.2

Timeline: Long-Term

3.2 Interior Doors: Outward Opening Doors

Observations

The library doors open outwards into a potential path of travel.

People with low vision who use canes are particularly at risk of being impacted as they navigate (“shoreline”) along the wall.

Accessibility Considerations

Adding a physical barrier in the form of a guardrail, planter, or other stable object would be beneficial in lowering risk to site users.

Additional Information

RHFAC: 3.1.11

CSA B651-18: 5.2.9

Timeline: Short-Term

3.3 Interior Doors: Glazed Door Markings

Observations

Numerous glazed doors lack appropriate visibility markings. Site users with low vision are at risk of impacting glazed surfaces when not properly marked.

Accessibility Considerations

Glazed doors should include colour-contrasting strips that extend the full width of the door and sidelight(s)at eye level from a standing position, between 1350-1500mm AFF, per CSA B651-18.

Consider adding an additional strip at a height between 900-1100mm AFF to accommodate mobility device users and those who are short in stature.

Additional Information

- RHFAC: 3.1.14
- CSA B651-18: 5.2.10
- Figure: 3.3
- Timeline: Short-Term

3.4 Interior Doors: Clear Opening Width

Observations

Most interior doors allow a clear opening width of 830mm. Clear width is further reduced where panic hardware is installed.

Accessibility Considerations

CSA B651-18 recommends providing a clear opening width of at least 850mm, with 900mm or greater preferred as a best practice.

Additional Information

- RHFAC: 3.1.15
- CSA B651-18: 5.2.10
- Figure: 3.3
- Timeline: Short-Term

3.5 Interior Doors: Vision Panels

Observations

Numerous doors include vision panels that cannot be viewed effectively from a seated position.

Accessibility Considerations

CSA B651-18 recommends vision panels with a lower edge height not exceeding 900mm AFF to minimize risk for users of mobility devices.

Additional Information

- RHFAC: 3.1.15
- CSA B651-18: 5.2.10
- Figure: 3.3
- Timeline: Short-Term

3.6 Interior Doors: Accessible Gate

Observations

The bar-style barriers at the library entrance are not cane-detectable at their current height, nor are they highly visible.

Accessibility Considerations

Consider adding a lower segment of the bar at a height of 685mm AFF, or below, to help cane users with low vision locate the bar and navigate through the gates in the appropriate direction. Adding colour contrast to the black bars would be beneficial as well.

Additional Information

- RHFAC: 3.1.17
- CSA B651-18: 5.2.12
- Figure: 3.2
- Timeline: Short-Term

3.7 Path of Travel: Level Changes

Observations

The bleacher style seating in the main lobby could be hazardous to people with low vision.

Multiple landings lead to unprotected drop-offs with no barriers, or tactile attention indicators to warn users of the level change.

The lineup guides currently acting as a barrier are not cane detectable.

Accessibility Considerations

Permanent barriers should be added across the top of each seating section **(Figure 3.6)**. Tactile attention indicators should be applied across the top of the adjacent staircase.

In the immediate-term, the temporary barriers (lineup guides) should be replaced with a cane-detectable alternative, with a height not exceeding 685mm AFF.

Adding contrasting strips along the edge of each bleacher level would help users to identify the level change more easily from the top.

Additional Information

- RHFAC: 3.2.1
- CSA B651-18: 5.1.4
- Figure: 3.6
- Timeline: Short-Term

3.8 Interior Ramps: Slope

Observations

While the ramp leading to the stage in the lecture

Accessibility Considerations

For any future capital projects or retrofits, ramps or walkways should not have a slope exceeding 5%. In the interim, providing

theatre/auditorium has an accessible 5% grade, the sloped walkways to the front of the seating areas have significant slopes that could be dangerous to some users.

signage advising people of the slope would be beneficial.

Adding more designated accessible seating and/or offering an alternative route to seating at the front (i.e., in through the exit door) during events would be helpful for those with limited mobility.

Additional Information

- RHFAC: 3.4.1
- CSA B651-18: 5.5.1
- Figure: 3.4
- Timeline: Short/Long-Term

3.9 Interior Ramps: Edge Protection

Observations

The ramp leading to the stage in the lecture theatre includes a significant unprotected drop-off on the right side **(Figure 3.4)**.

Accessibility Considerations

A guardrail should be installed along the exposed side to reduce risk for ramp users with limited balance or endurance, and those seated below who would also be impacted by a fall.

Additional Information

- RHFAC: 3.4.7
- CSA B651-18: 5.5.6
- Figure: 3.4
- Timeline: Short-Term

3.10 Interior Ramps: Colour-Contrasted Strips

Observations

The walkway to the stage lacks colour-contrasted strips at the start and end of the sloped section.

Accessibility Considerations

Consider applying colour contrasting strips across the width of the ramp at the top and bottom landings, where the sloped section begins and ends.

This helps to inform users with low vision of an upcoming level change and can be particularly helpful for the elderly, who often encounter vision and mobility/balance limitations simultaneously.

Additional Information

- RHFAC: 3.4.5
- CSA B651-18: 5.5.4
- Figure: 3.4
- Timeline: Short-Term

3.11 Elevators: Mirror on Rear Wall

Observations

Elevators lack mirrors installed across the rear wall.

Accessibility Considerations

Elevators should include a mirrored surface across the full width of the rear wall with the bottom edge not exceeding 900mm in height, per CSA B651-18.

This measure can increase user safety while also reducing the difficulty of backing out with a wheeled mobility device. Full-height mirrors should be avoided to prevent a possible “corridor effect” for users with low vision.

Additional Information

RHFAC: 3.5.18

Timeline: Short-Term

3.12 Interior Stairs: Tactile Attention Indicators

Observations

Tactile attention indicators were applied inconsistently across interior staircases **(Figure 3.7)**.

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Accessibility Considerations

While some staircases include parallel bar indicators, other staircases lack tactile features completely. It is important that tactile attention indicators are applied consistently throughout a building to ensure that people with low vision know what to expect as they encounter a level change.

CSA B651-18 recommends truncated-dome style indicators applied across the full width of the stair with a depth of 600mm. Using a highly colour contrasting colour such as yellow is a best practice for increasing visibility.

Additional Information

RHFAC: 3.6.5

CSA B651-18: 5.4.3

Figure: 3.7

Timeline: Short-Term

3.13 Interior Stairs: Handrails

Observations

Some handrails on interior stairs are incorrectly terminated.

Accessibility Considerations

Handrails should be returned to the wall, post, or floor to avoid catching on clothing or bags and causing a fall.

Additional Information

RHFAC: 3.6.4

CSA B651-18: 5.4.4

Timeline: Short-Term

3.14 Interior Stairs: Height Clearance

Observations

As shown in **Figure 3.5**, a portion of the staircase underside is situated at a height below the 2050mm AFF recommended by CSA B651-18, creating a hazard for some taller individuals.

Accessibility Considerations

As there are alternative routes to the seating areas affected, consider closing off this stairway to prevent potential head injuries.

At a minimum, highly visible signage should be used to warn people of the potential risk. Padding the exposed section would also be beneficial.

Additional Information

RHFAC: 3.6.11

CSA B651-18: 4.4.1

Figure: 3.5

Timeline: Short/Long-Term

Additional Considerations for Best Practice

- Adding kickplates to doors can help to prevent damage arising from the use of wheelchair footplates to open doors.
- Adding tactile directional indicators can help users with low vision navigate between key features within the main lobby, such as the security desk, elevator, and library or bookstore.
- Ensure that corridors within library stacks are kept clear of obstacles to permit passage by a person with a mobility device.

Figures

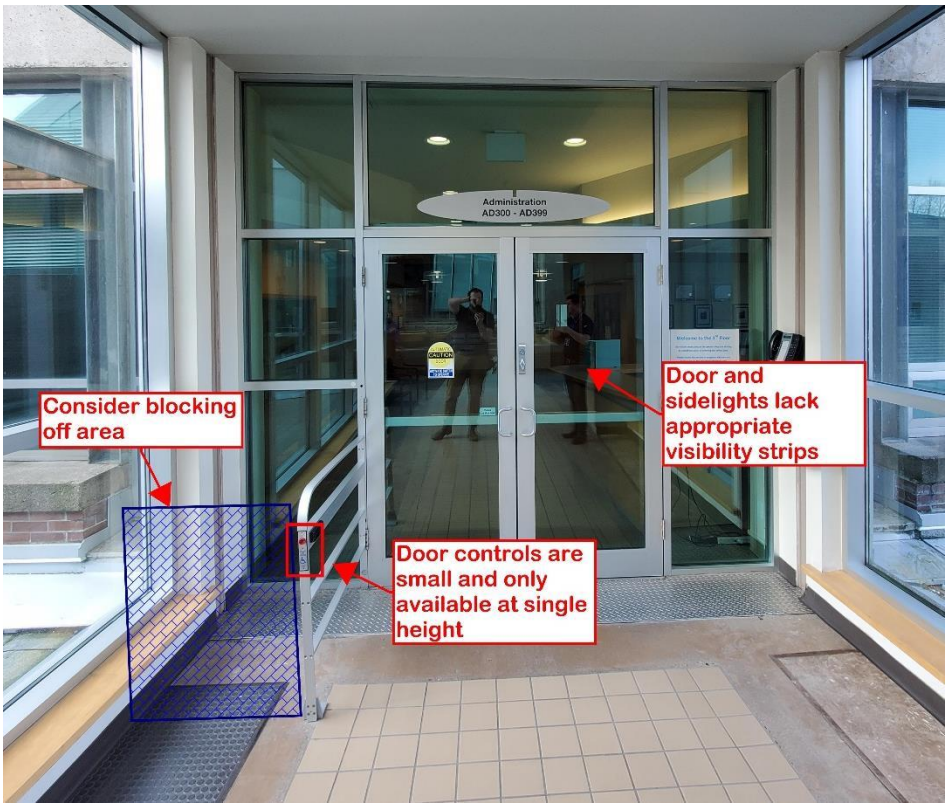

Figure 3.1 – Door control location

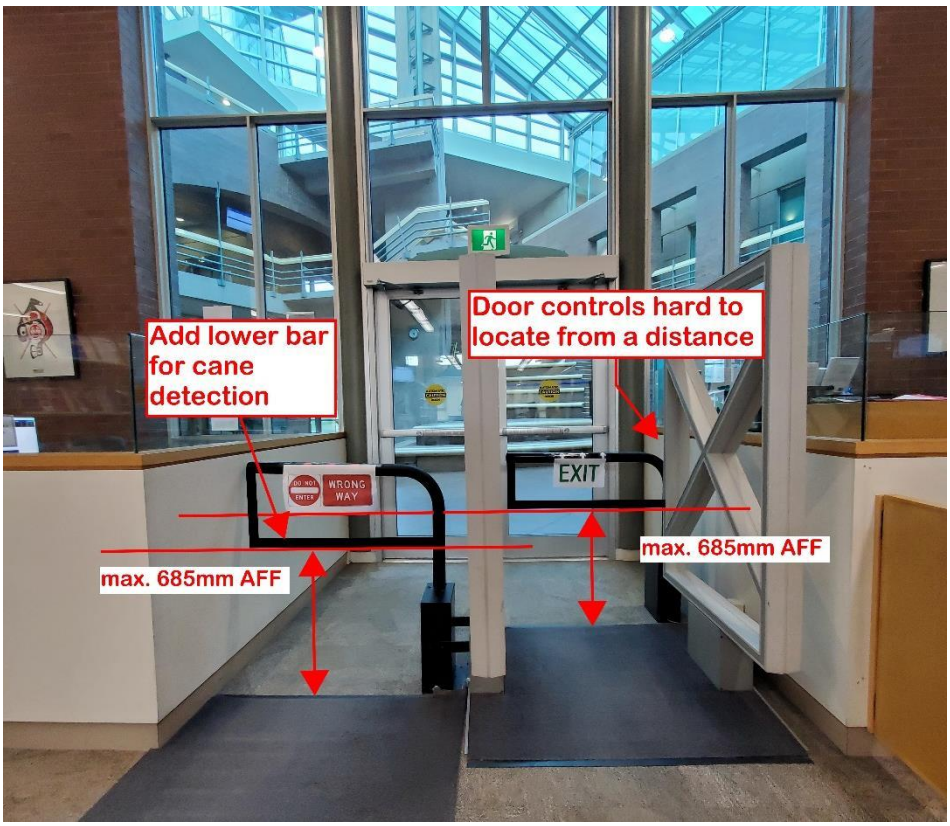

Figure 3.2 – Inaccessible turnstiles

Figure 3.3 – Inaccessible glazed door panels

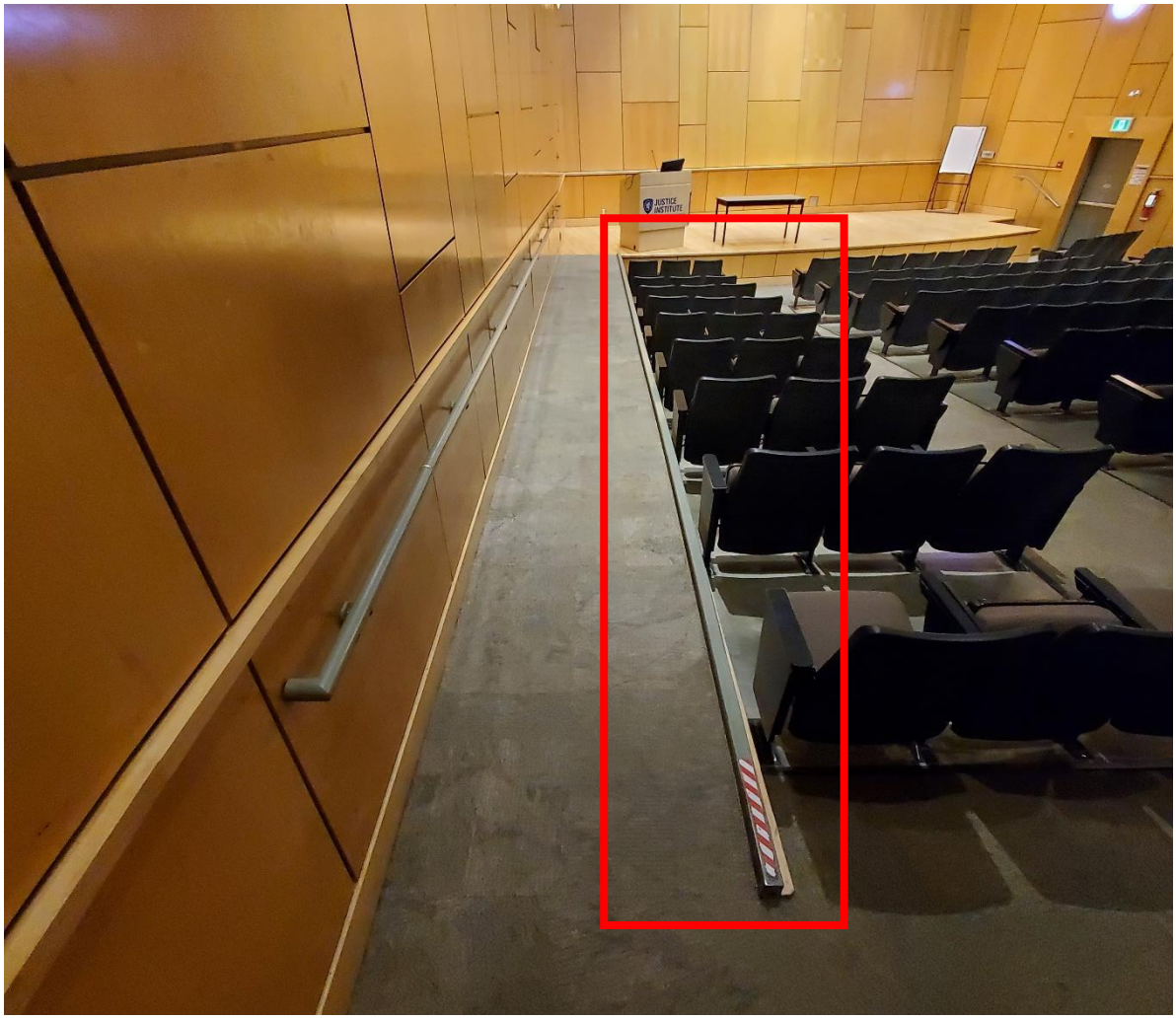

Figure 3.4 – Ramp lacking appropriate edge protection

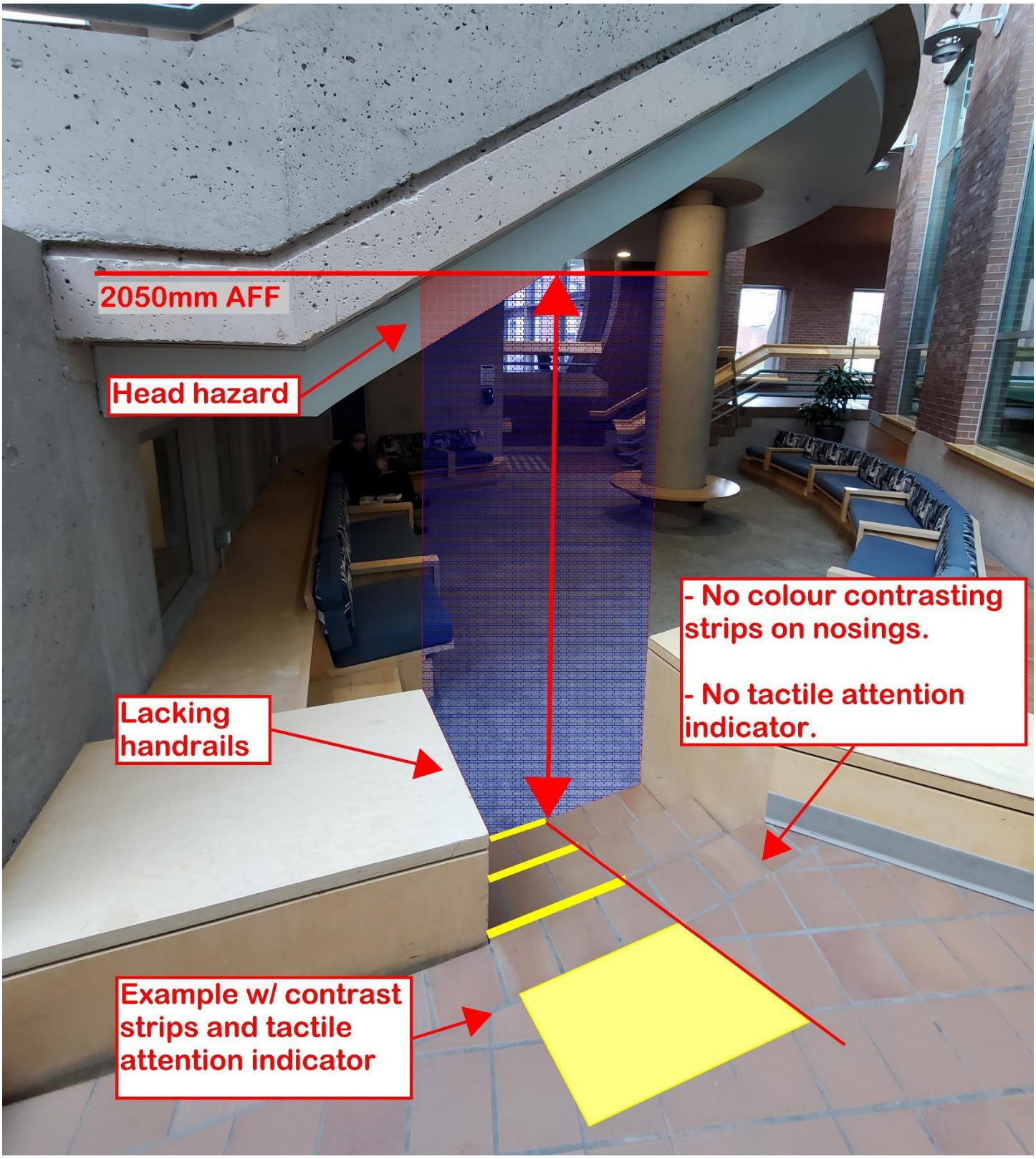

Figure 3.5 – Overhead hazard at stairs

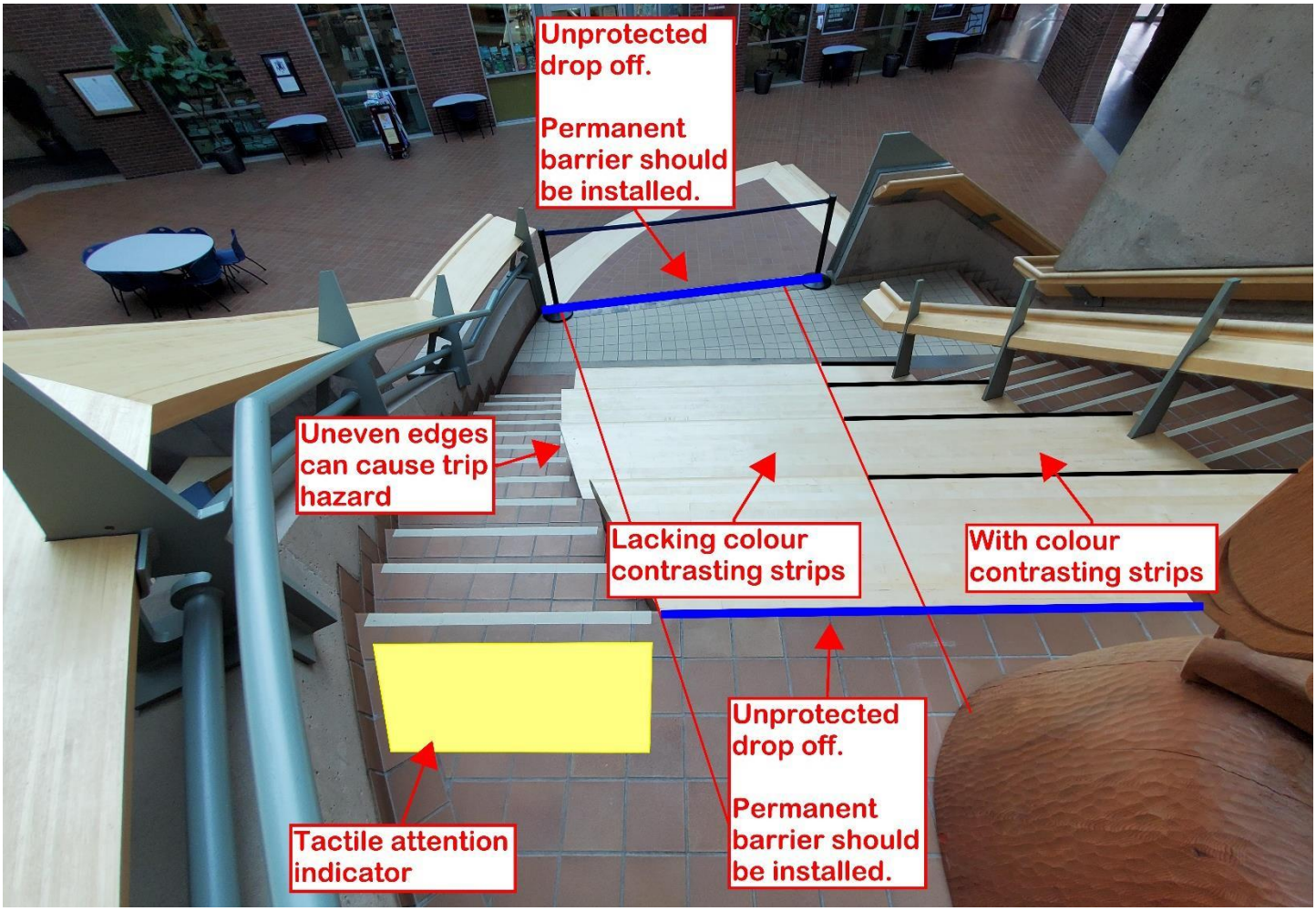

Figure 3.6 – Hazardous level change with no warnings

Figure 3.7 – Inconsistent application of tactile attention indicators

4. Interior Services and Environment

4.1 Lobby and Reception Areas: Seating

Observations

The main lobby lacks accessible seating options for users to rest or wait.

Accessibility Considerations

Accessible seating should include backrests, and a variety of styles with and without armrests.

Seating materials should be matte and non-slip, and should colour contrast with the surrounding area.

More information pertaining to accessible seating can be found in Appendix D

Additional Information

RHFAC: 4.1.4

CSA B651-18: 6.7.2

Timeline: Short-Term

4.2 Reception Desks: Counter Surface Heights

Observations

A number of reception or service desks had surfaces above the recommended height.

Accessibility Considerations

Per CSA B651-18, reception desks should have counter surface at a height between 730-860mm AFF

The accessible height portion of the counter should be located at the principal point of contact with staff. Segregated cut-outs or add-ons to counters can serve to isolate, rather than include, people with disabilities.

Additional Information

RHFAC: 4.2.1

CSA B651-18: 6.7.1

Figure: 4.1

Timeline: Long-Term

4.3 Reception Desks: Knee Clearance

Observations

Most reception or service desks lacked knee clearance below.

Accessibility Considerations

CSA B651-18 recommends providing knee clearance underneath measuring at least 800mm (w) x 480mm (d) x 685mm (h).

Additional Information

RHFAC: 4.2.2
CSA B651-18: 6.7.1
Figure: 4.1
Timeline: Long-Term

4.4 Reception Desks: Assistive Listening Technologies

Observations

Reception desks, meeting rooms, classrooms, and the lecture theatre are not equipped with assistive listening technologies.

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Accessibility Considerations

Assistive listening technologies should be employed in these areas to accommodate people who are deaf or hard of hearing.

While T-coil hearing loops are the most common solution, they can also be expensive to retrofit. A variety of options are available on the market (FM, Infrared, Bluetooth/Wi-Fi, etc), each with their own benefits and limitations.

Additional Information

RHFAC: 4.2.7, 4.3.7, 8.2.7
CSA B651-18: 6.6.1
Timeline: Short-Term

4.5 Classrooms and Meeting Rooms: Arrangement of Seating

Observations

Some classrooms lack sufficient clear space to navigate around tables, chairs, and other obstacles.

Accessibility Considerations

Though seating and tables are non-fixed and can be moved with relative ease, consider making it part of the organizational policy to leave a minimum of 1000mm of clear width around the perimeter of each space, with an additional clear turning area of 1700x1700mm located within a reasonable distance

Additional Information

RHFAC: 4.3.2
CSA B651-18: 5.1.1
Timeline: Short-Term/Ongoing

4.6 Kitchens: Counter/Sink Height & Knee Clearance

Observations

Kitchen counter heights in the staff break room and various coffee areas were above the recommended accessible height.

Accessibility Considerations

Per CSA B651-18, counter surfaces and the rim height of sinks should fall within a height range of 730-860mm AFF. Knee clearance below sinks should measure 800mm (w) x 685mm (h) x 200mm (d), with additional toe clearance of 800mm (w) x 230mm (h) x 230mm (d).

While it is not necessary to sacrifice all of the under-counter storage for knee clearance, providing at least one space with knee clearance for someone to work at the counter is ideal.

Additional Information

RHFAC: 4.4.3, 4.4.4 & 4.4.6

CSA B651-18: 7.4.4

Figure: 4.2

Timeline: Long-Term

4.7 Kitchens: Microwave Location

Observations

While the cafeteria has an excellent setup for accessible microwaves, staff areas still include inaccessible microwave locations.

Accessibility Considerations

Microwaves should be located at counter height with knee clearance below and clear counter space in front. Where providing knee clearance is not feasible, the installation of a pull-out shelf below the microwave could be a suitable alternative.

Additional Information

RHFAC: 4.4.7

Figure: 4.2

Timeline: Long-Term

Additional Considerations for Best Practice

- Providing signage in the main building lobby directing users to the nearest accessible washroom would be beneficial for a variety of user groups.
- Consider providing additional task lighting in work areas, including office spaces, kitchens, library workspaces, and classrooms.

Figures

Figure 4.1 – Reception desk height and knee clearance

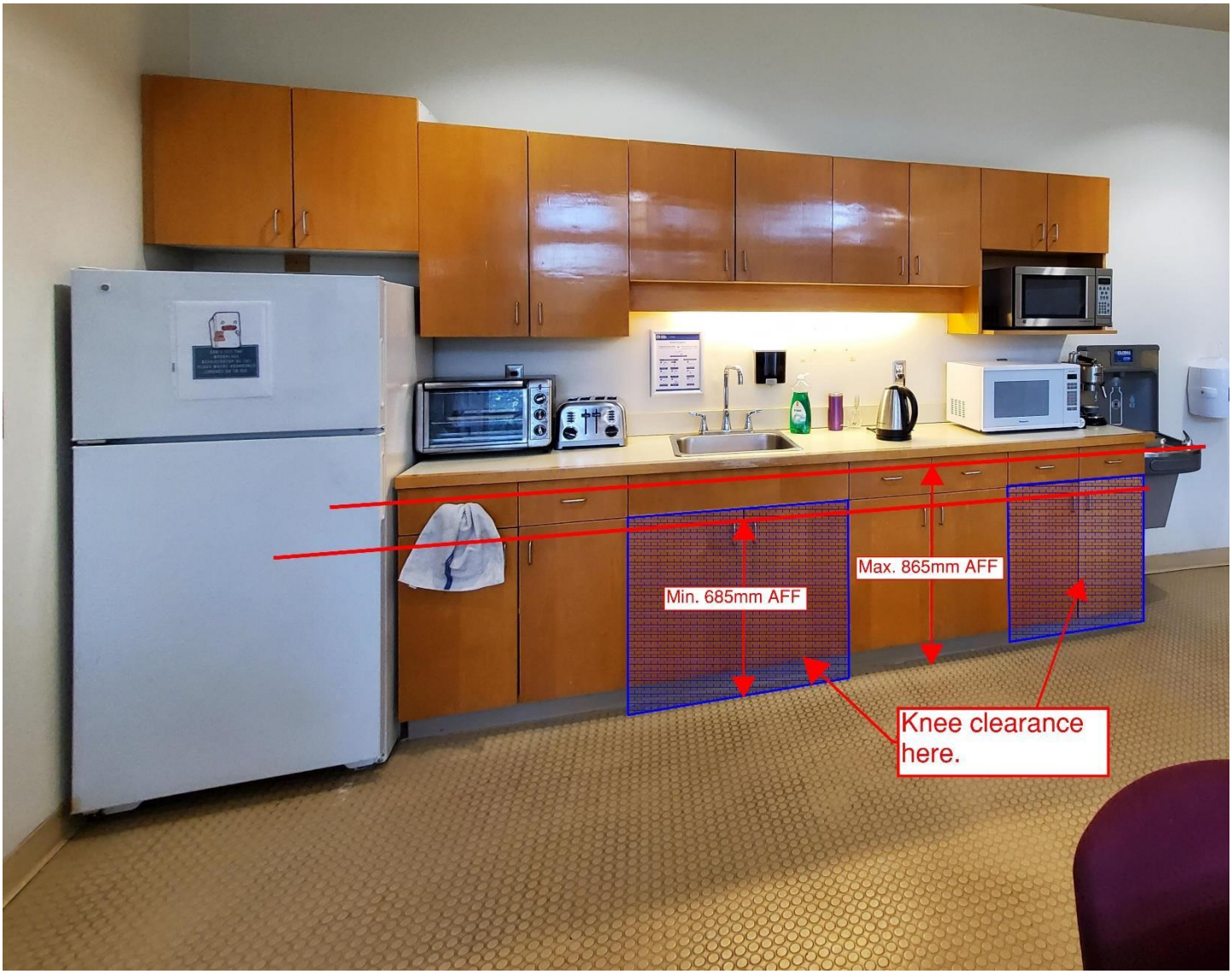

Figure 4.2 – Counter height and knee clearance

5. Sanitary Facilities

5.1 Washrooms: Room Signage

Observations

Most washrooms have room signage mounted directly on the door.

Signage lacks raised lettering and braille.

Accessibility Considerations

Per CSA B651-18. washroom identification signage should be posted at a height of 1500mm AFF, and located on the wall to the latch side of the door, rather than the door itself.

Ensure that washroom signage includes the international symbol of access and tactile information (raised lettering and braille) to accommodate users with low vision.

Additional Information

RHFAC: 5.1.3

CSA B651-18: 6.2.1

Timeline: Short-Term

5.2 Washrooms: Power Operated Doors

Observations

Universal washrooms are not equipped with power operated doors.

Accessibility Considerations

Universal washrooms should be equipped with power operated doors that take at least 3 seconds to move from a closed to open position.

Controls should be mounted at an accessible height and location, clear of the door swing. Elongated bar-style controls are recommended to provide additional flexibility in use for individuals with limited upper body dexterity.

Additional Information

RHFAC: 5.1.4

CSA B651-18: 6.3.2

Timeline: Short-Term

5.3 Washrooms: Clear Space to Maneuver and Transfer

Observations

Most transfer spaces measure between 750-850mm in width.

Accessibility Considerations

An accessible toilet should include a clear transfer space of at least 900mm (w) x 1500mm (l) on its open side, per CSA B651-18.

Most universal washrooms do not allow sufficient clear floor area to turn and maneuver with a mobility device.

Universal washrooms should include at least 1700x1700mm of clear floor area, allowing users to turn and maneuver comfortably with a mobility device.

Additional Information

- RHFAC: 5.1.9
- CSA B651-18: 6.2.2 & 6.2.6
- Timeline: Long-Term

5.4 Washrooms: Grab Bars

Observations

Flat 180-degree side grab bars in universal washrooms are inaccessible.

Accessibility Considerations

90-degree (L-shaped) grab bars are considered best practice and are preferred over 120-degree and 180-degree bars.

The placement of the toilet paper dispenser, sanitary disposal, or other wall-mounted accessories should not impede the use of the grab bar.

Additional Information

- RHFAC: 5.1.10
- CSA B651-18: 6.2.5
- Figure: 5.1 & 5.2
- Timeline: Short-Term

5.5 Washrooms: Toilet Paper Dispensers

Observations

Toilet paper dispensers are of the closed-roll variety, which can be difficult to operate for some users.

Accessibility Considerations

Toilet paper dispensers should be 'open-roll' style, mounted below the horizontal member of the side grab bar at a height between 600-800mm AFF.

Open roll style dispensers allow users with limited wrist or hand dexterity to procure toilet paper more easily with a closed fist.

Additional Information

- RHFAC: 5.1.13
- CSA B651-18: 6.2.6.5
- Figure: 5.1 & 5.2
- Timeline: Short-Term

5.6 Washrooms: Emergency Call Button

Observations

Universal washrooms in the facility are not equipped with an emergency call system.

Accessibility Considerations

An emergency call system should be provided in every single-occupancy washroom to alert others in the event of a fall or other emergency. The system should consist of audible and visual signals both inside and outside of the space.

Per CSA B651-18. the call button should be mounted on an open wall within 600mm of the toilet, at a height not exceeding 450mm AFF. This allows activation by an individual laying in a prone position beside the toilet. Controls should be operable with a closed fist, without requiring a pinching, grasping, or twisting motion.

Additional Information

RHFAC: 5.1.22

CSA B651-18: 6.3.1.2

Timeline: Short-Term

5.7 Washrooms: Accessory Height and Location

Observations

Some paper towel dispensers, mirrors, coat hooks, and other accessories were mounted above the accessible height range (**Figure 5.2)**

Accessibility Considerations

CSA B651-18 recommends washroom accessories to be installed with their operating controls and dispensing areas at an accessible height not exceeding 1200mm AFF.

Mirrors should have a bottom edge height not exceeding 1000mm AFF, ensuring that they can be used effectively from both seated and standing positions. Sufficient mirror coverage eliminates the need for tilted mirrors, which do not work well for some users.

At least one hand dryer or paper towel dispenser should be mounted within reach of an accessible sink. This reduces the safety risk and inconvenience of having to push a wheelchair with wet hands.

Additional Information

RHFAC: 5.1.18

CSA B651-18: 6.2.4

Figure 5.2

Timeline: Short-Term

5.8 Showers: Accessible Showers

Observations

The facility lacks accessible shower facilities.

Accessibility Considerations

Design for any future capital improvements or retrofits should include planning for an accessible shower facility in each change room.

Per B651-18, accessible showers should include the following:

- Interior space of at least 900x1500mm, with a space of the same size on the exterior of the shower for transferring.
- Roll-in access with a threshold not exceeding 13mm AFF.
- Grab bars installed on side and rear walls in accordance with building code and CSA B651-18 standards.
- A self-draining fold-down seat installed opposite the control wall.
- A handheld shower wand with a minimum hose length of 1800mm, mounted within reach of the seat.
- As a best practice, an adult change table should be included in the change room for users who require assistance with toileting or changing.

In the short-term, consider allocating a small area in the existing shower facilities to be used as a temporary accessible shower. A temporary accessible shower space can include the following:

- Handheld wand with accessible hose length.
- A shower wheelchair to provide seating while showering, and for navigate to/from the area.
- Modified faucet hardware that reduces the difficulty of operating controls.
- Retractable shower curtain to provide privacy from other shower users.

Additional Information

RHFAC: 5.2

CSA B651-18: 6.5

Timeline: Short/Long-Term

Additional Considerations for Best Practice

- Consider providing power outlets within reach of accessible toilets. This ensures that site users are able to use a variety of electronic hygiene or personal care products.

Figures

Figure 5.1 – Washroom layout, grab bars, and toilet paper dispenser

Figure 5.2 – Washroom accessory heights

6. Wayfinding and Signage

6.1 General Wayfinding: Sign Layout

Observations

Some signage includes clusters of text separated by commas, showcasing the general location of key facilities.

Accessibility Considerations

Text clusters can be difficult to decipher for people with low vision. Arranging the text in vertical bullets can make it easier to follow.

Additional Information

RHFAC: 6.1.1 & 6.1.5

Figure: 6.1

Timeline: Long-Term

6.2 Room Signage: Tactile Information

Observations

The majority of room identification signage includes text and numerals that are not sufficiently raised for effective use by a person with low vision.

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Accessibility Considerations

Both raised lettering and braille should be included on all room identification signage.

Per CSA B651-18, raised lettering should be raised between 0.8 and 1.5mm above the surface of the sign.

Additional Information

RHFAC: 6.2.2

CSA B651-18: 4.5.6

Timeline: Short/Long-Term

6.3 Room Signage: Location

Observations

The mounting locations of room signage are inconsistent throughout the facility.

Accessibility Considerations

Room signage should be mounted with the horizonal centreline at a height of 1500mm AFF, per CSA B651-18. Signage should be mounted on the wall to the latch side of the door rather than the door itself, to reduce the risk of collisions.

Additional Information

RHFAC: 6.2.3 & 6.2.4

CSA B651-18: 4.5.6.4

Figure: 6.2

Timeline: Short-Term

Additional Considerations for Best Practice

- Using blade signage in strategic locations can be helpful for users trying to identify key amenities such as elevators, fire extinguishers, exits, student services and other amenities.
- Consider offering building directory signage in alternative formats by offering tactile information and/or an online version that is compatible with screen reader technology.

Figures

Figure 6.1 – Crowded text on directional signage

Figure 6.2 Good (top) vs. bad (bottom) application of room signage

7. Emergency Systems

7.1 Emergency Exits: Areas of Refuge

Observations

Some areas of refuge have identifying signage painted in white text on a grey wall, resulting in poor visibility **(Figure 7.1)**.

Areas of refuge do not include an accessible two-way communication system.

Accessibility Considerations

Text on wayfinding signage should be painted with highly contrasting colours to increase visibility on the grey wall surface. Providing additional signage in common corridors for accessible egress and areas of refuge would be beneficial.

CSA B651-18 recommends the inclusion of a two-way, hands-free communication device at each area of refuge.

Additional Information

RHFAC: 7.1.1
CSA B651-18: 5.7.2
Figure: 7.1
Timeline: Short/Long-Term

7.2 Fire Alarm Systems: Visual Fire Alarms

Observations

The facility lacks visual fire alarm strobes in key areas, including places where users may find themselves alone.

Mandatory Gold Certification Requirement

Accessibility Considerations

Visual fire alarm strobes should be installed in all common areas and areas where a site user could find themselves alone, such as the universal washrooms.

Visual strobes are not required in building service areas (e.g., mechanical, electrical, storage, elevator rooms).

Additional Information

RHFAC: 7.2.1
CSA B651-18: 5.7.1
Timeline: Short-Term

7.3 Fire Alarm Systems: Fire Alarm Pulls

Observations

Fire alarm pulls are consistently installed above the recommended

Accessibility Considerations

Per CSA B651-18, operating controls should be installed with an operable height not exceeding 1200mm AFF.

accessible height, with some blocked by obstacles.

Ensure that alarm pulls have sufficient clear floor area in front and are not blocked by furnishings or other obstacles.

Additional Information

- RHFAC: 7.2.3
- CSA B651-18: 4.2.3
- Figure: 7.2 & 7.3
- Timeline: Short-Term

7.4 Fire Alarm Systems: First Aid Equipment

Observations

AEDs and the key to the first aid room are mounted at a height that cannot be easily reached from a seated position.

Accessibility Considerations

All emergency features should be mounted within reach from a seated position, at a height not exceeding 1200mm AFF.

Ensure that emergency features have sufficient clear floor area in front and are not blocked by furnishings or other obstacles.

Additional Information

- RHFAC: 7.2.4
- CSA B651-18: 4.2.3
- Figure: 7.2-7.5
- Timeline: Short-Term

7.5 Evacuation Instructions: Accessible Height and Location

Observations

Evacuation plans are consistently mounted too high, some with obstacles in front.

Accessibility Considerations

Per CSA B651-18, signage should be mounted with its horizontal centreline not exceeding 1500mm in height.

Ensure that evacuation plans have sufficient clear floor area in front and are not blocked by furnishings or other obstacles.

Additional Information

- RHFAC: 7.3.4
- CSA B651-18: 5.7.3
- Timeline: Short-Term

Additional Considerations for Best Practice

- Consider purchasing specialized emergency evacuation equipment to assist users with limited mobility in an emergency situation. While an area of refuge may be temporarily safe in a fire, there are other situations that could require an immediate exit for someone who uses a mobility device or can otherwise not traverse stairs.

Figures

Figure 7.1 – Poor colour contrast on signage

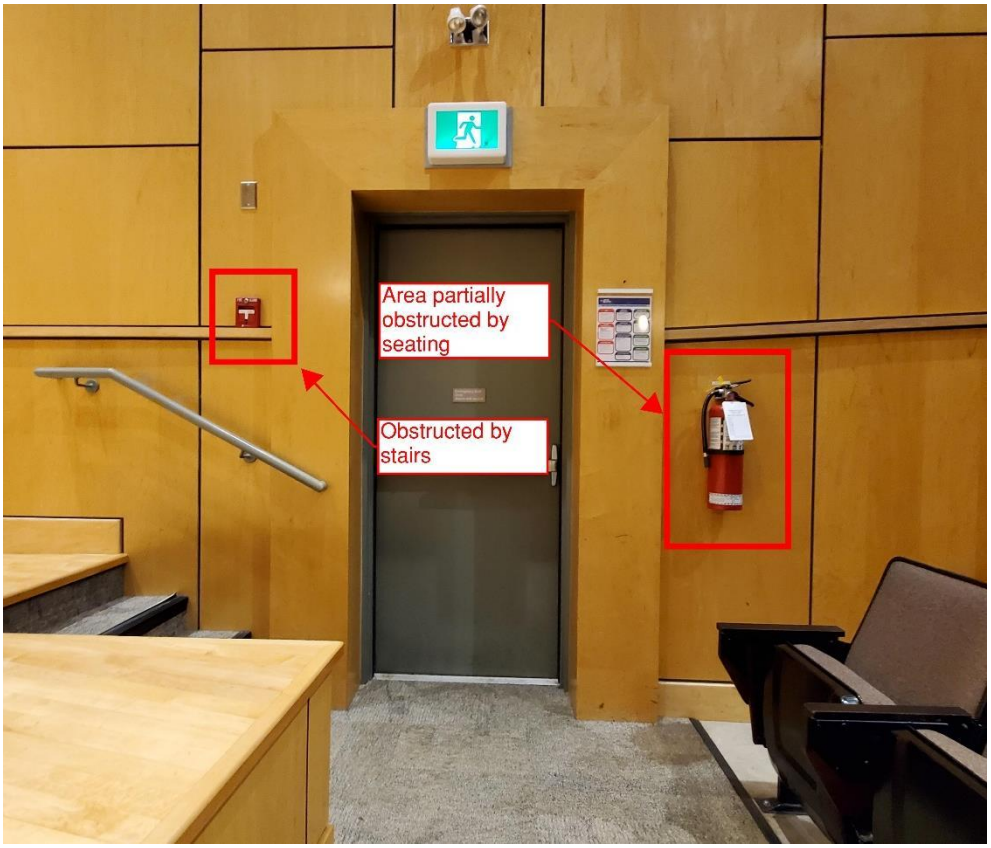

Figure 7.2 – Obstructed emergency features

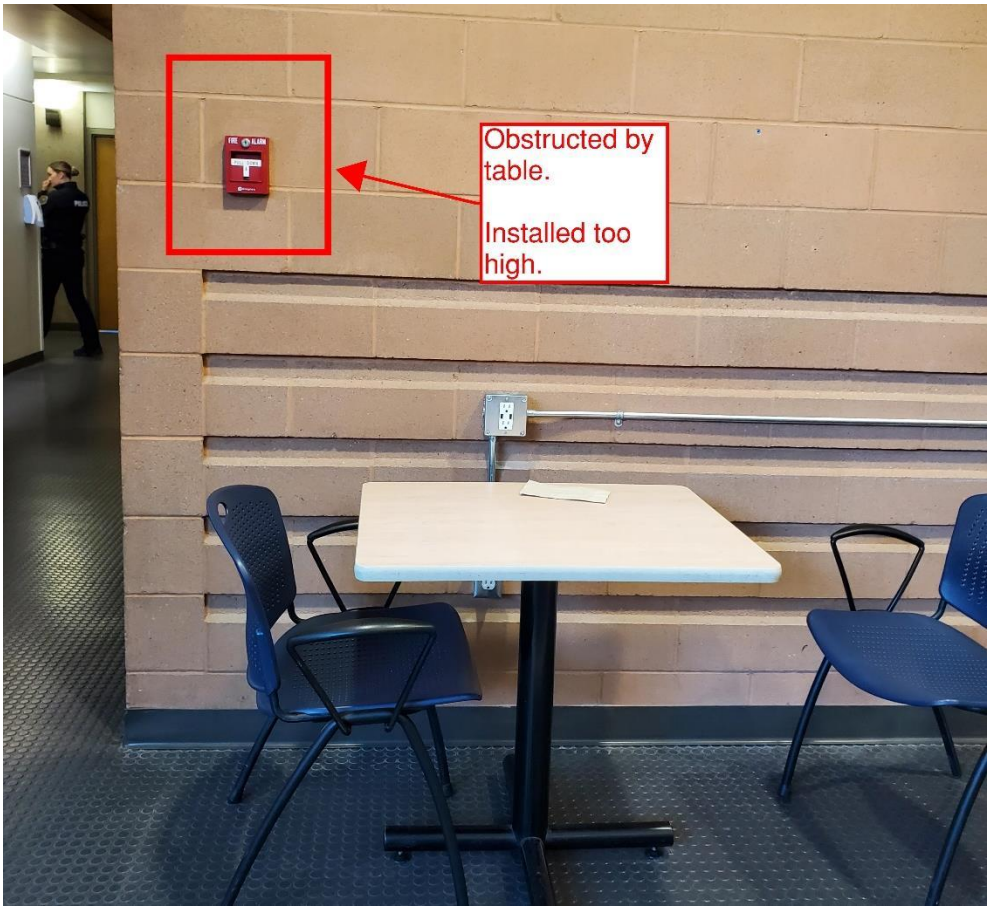

Figure 7.3 – Obstructed fire pull

Figure 7.4 – AED location obstructed and too high

Figure 7.5 – Inaccessible first aid key location

8. Additional Uses of Space

8.1 Workstations: Adjustable Desk Height

Observations

Few offices in the facility are equipped with adjustable height desks.

Accessibility Considerations

In addition to being a key health consideration for all staff, users of variable height wheelchairs and scooters can benefit from the availability of adjustable height desks.

Additional Information

RHFAC: 8.1.3

Timeline: Long-Term

8.2 Public Assembly Areas: Accessible Seating

Observations

The lecture theatre/auditorium lacks designated accessible seating areas for people who use mobility devices.

Accessibility Considerations

One space adjacent to seating on the top level is suitable and should be designated as priority accessibility seating. Consider exploring options to add an additional designated space on the top level.

Due to the grade of the ramp leading to the front of the seating area, it is not recommended to provide accessible seating options at the front of the room, unless the user can enter through the exit door at the front of the room.

Additional Information

RHFAC: 8.2.2

CSA B651-18: 6.7.3

Figure: 8.1

Timeline: Short-Term

8.3 Cafeterias: Refrigerator Door Orientation

Observations

Coolers and refrigerators in the cafeteria are equipped with sliding doors.

Accessibility Considerations

Sliding doors are not recommended for users with limited mobility, as they can be difficult to open and hold while retrieving food or beverages. Swinging doors should be used instead.

Additional Information

RHFAC: 8.6.8

Timeline: Short/Long-Term

8.4 Change Rooms: Accessible Lockers

Observations

Change rooms lack designated accessible lockers.

Accessibility Considerations

Consider designating a number of lockers for accessible use. An accessible locker has suitable seating with clear space in front, accessible height locking mechanisms, and lowered shelving and coat hooks.

Additional Information

RHFAC: 8.11.4

Timeline: Short-Term

Additional Considerations for Best Practice

- The cafeteria menu is poorly organized and could be difficult for some users with low vision or perception difficulties to read. Consider providing an additional handheld menu format.
- While the bookstore was not available to be rated at the time of the site visit, its small and cramped nature could be difficult to navigate for some users. Consider increasing online shopping offerings, with streamlined pickup options that can be requested by those who are more likely to experience barriers.
- When organizing products and merchandise in the bookstore and cafeteria, keep accessibility in mind by arranging items in a vertical manner where possible, allowing more items to be located within reach from a seated position.
- Providing an adult change table within a change room or universal washroom is recommended to minimize barriers experienced by those who require assistance changing, showering, toileting.

Figures

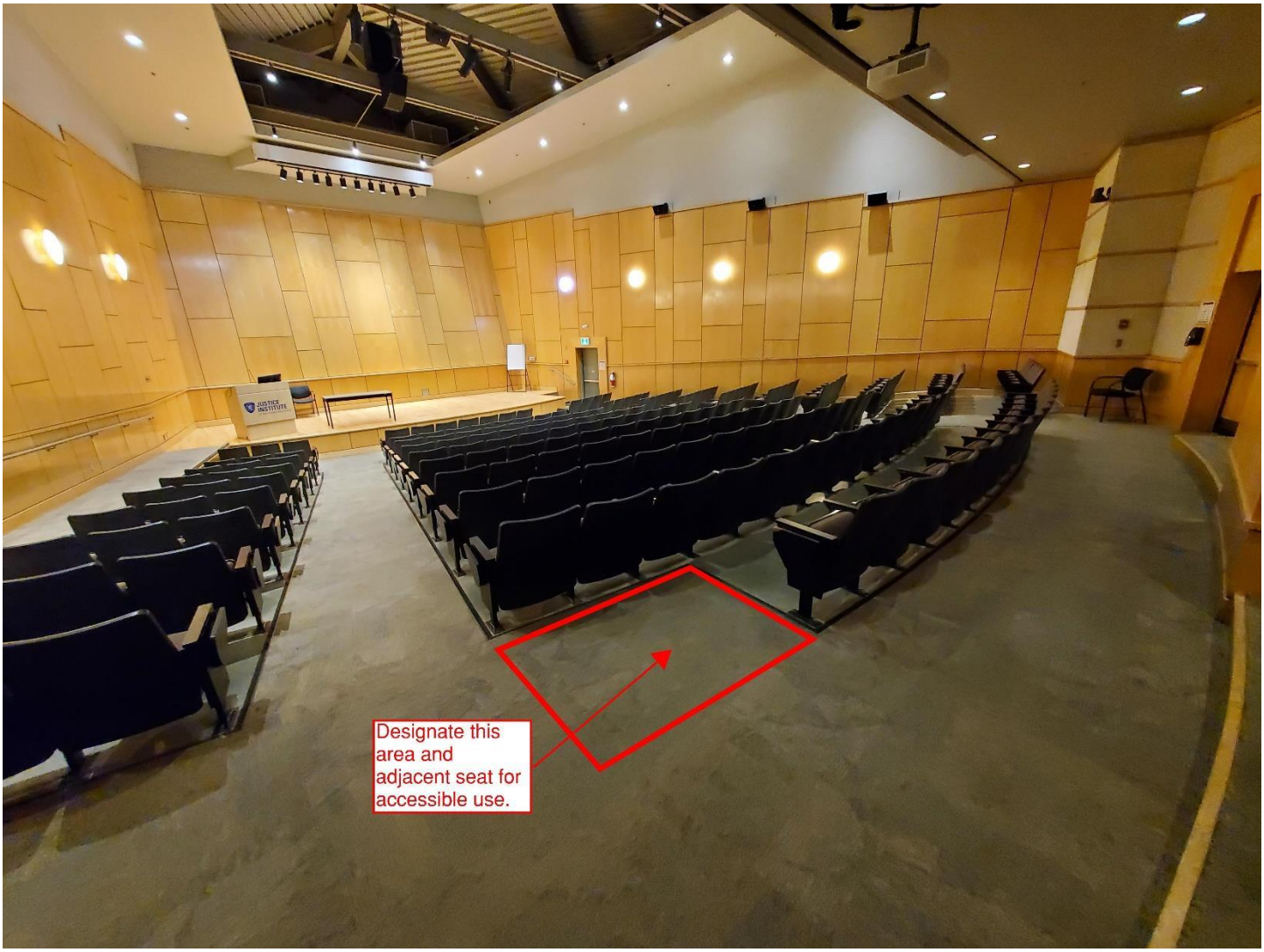

Figure 8.1 – Accessible viewing location

Appendices

Appendix A – Glossary of Terms

Developing a vocabulary of relevant technical terms to accurately describe the built environment as it relates to accessibility is critical. The terms and definitions provided in the table below were obtained from recognized sources, including the Rick Hansen Foundation, Canadian Standards Association (CSA) B651-18, the Centre for Excellence in Universal Design (CEUD), the Canadian Human Rights Commission (CHRC), Global alliance on Accessible Technologies and Environments (GAATES), CNIB's Clearing Our Path (CNIB), and BC Housing Design Guidelines and Construction Standards, 2019 (BCH).

Term	Definition	Source
AFF	"Above the Finished Floor". Refers to the point where items are measured from when assessing operable heights.	RHF
Access Aisle	Clear, level area parallel to a parking space for people with mobility disabilities to get in and out of a car or van.	CHRC
Accessible Route	A pedestrian path of travel within the interior or exterior environment that is without barriers, as defined in the CSA Standard, and usable by all persons, including those with physical, sensory, or cognitive disabilities.	CSA B651
Adaptable	Easily renovated to create a barrier-free environment. Adaptable units are designed and constructed to facilitate future modification to provide access for persons with disabilities.	CHRC BCH
Alternate Format	Information presented in Braille, in large print, electronically (e.g., on removable or portable media), or online in an accessible format.	CSA B651
Area of Refuge	An area separate from the general floor area by a fire separation having a fire-resistance rating at least equal to that required for an exit, that is smoke protected and served by an exit or a firefighters elevator.	CHRC
Assistive Listening Technologies	A range of products that exist to help users with limited hearing communicate and interact with their surroundings. While hearing loops are the most common type, there are also FM, infrared, Wi-Fi, and Bluetooth based options that exist.	RHF
Barrier	A condition that prevents someone's full participation in the activities of daily living. Different types of barriers can be classified as attitudinal, awareness, educational, employment, health, and physical.	
Braille	A system where raised dots are used to represent letters and words. Unified English Braille (UEB) is the braille standard for Canada. Note: In the CSA Standard, unless stated otherwise, "braille" indicates uncontracted braille.	CSA B651 CNIB
Building User, or "User"	A person regardless of age, size, ability, or disability using facilities in a site or associated external environment.	CEUD
Cane-Detectable	Any object or a change in surface texture that falls within the detection range of a long white cane, typically within 685mm above the ground.	CSA B651

Colour Contrast	A significant contrast in colour between the foreground and the background of an element, e.g., light on dark background or dark on a light background.	CSA B651
Deaf or Hard of Hearing	Describes a range of users with hearing loss; from those with some hearing who may require hearing aids, to those who are completely deaf.	RHF
Disability	A broad term that describes a physical condition that may require consideration to ensure their full participation in the activities of daily living and community involvement.	RHF
Glare	An excessive reflection of light from a surface.	CSA B651
Illumination	The intensity of light, as measured in lux (symbol: lx).	CSA B651
Inclusion	The practice of eliminating the labelling of people by ability and instead ensuring everyone has an equal opportunity to fully participate in all aspects of community life and services.	RHF
Limited Mobility	Encompasses a range of mobility limitations and their severities, including, but not limited to: people with para/quad/hemi-plegia, people with amputations, people with arthritis, people with temporary injuries.	RHF
Operable Height	The height at which the user is able to use operating controls, switches, shelving, appliances, etc…	RHF
Passenger Pickup Area	An area where pedestrians board and disembark road vehicles.	CSA B651
Person First Language	A way of speaking and writing that focuses on the individual as a person first and foremost, rather than reducing them to their disability. Ex. “Person with low vision” rather than “Blind person”	RHF
Platform Lift	An elevating device that is installed at a permanent location in a building structure and is used to transport persons with disabilities on a platform that moves between permanent levels. **Enclosed stair lift** — an inclined lift where the platform runway is separate from the stair circulation space. **Enclosed vertical lift** — a vertical lift with an enclosed platform runway. **Unenclosed stair lift** — an inclined lift where the platform or chair runway is within the stair circulation space. **Unenclosed vertical lift** — a vertical lift with a partially enclosed or unenclosed platform runway.	CSA B651
Raised Crossing	A crossing where the crosswalk is elevated between 80 mm and 150 mm above the adjacent road surface, with ramps on the approaches. It is designed to reduce speeds and draw attention to the crosswalk and the pedestrians, so that pedestrians can traverse the road safely.	CSA B651
Roll-In Shower	A shower stall with minimal-to-no threshold that can be used while staying in a wheelchair, standing or sitting (by adding a seat to the shower stall)	CHRC

Site	A public, commercial, or multi-unit residential building, or trails/pathways. A Site can be either existing or in the pre-construction phase.	RHF
Slope	The ratio of rise to run on an inclined surface **Running slope** — the slope that is parallel to the direction of travel. **Cross slope** — the slope that is perpendicular to the direction of travel. **Gutter slope** — the crossfall of the drainage area at the edge of the street directly in front of a curb ramp. **Counter slope** — the combined sum of the running slope of a curb ramp and of the gutter slope, in percentages.	CSA B651
Stair Nosing	An edge part of the tread that protrudes over the riser beneath.	CEUD
Tactile Markings	Lettering or graphics that are slightly raised above the surface.	
Tactile Walking Surface Indicator	A standardized surface, detectable underfoot or by a long white cane, to assist persons with low vision or blindness by alerting or guiding them. **Tactile Attention Indicator (TAI)**: a TWSI comprising truncated domes that signals a need for caution at a change in elevation, a vehicular route, train tracks, or other potential hazard. **Tactile Direction Indicator (TDI)**: a TWSI that uses flat-topped elongated bars to facilitate wayfinding in open areas. They are designed to guide a person on a designated path of travel.	CSA B651 CNIB
Text Telephone or Teletypewriter (TT/TTY)	Incorporates a keyboard that is connected to the telephone to allow communication through typed messages.	CHRC
Transfer Space	An unobstructed area allowing the positioning of a wheelchair to enable a person to transfer to another adjacent seated position.	CSA B651
Universal Design	The design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. Universal Design = Usable Design = Understandable Design (understanding the user). For example, an older person may require many resting places due to discomfort when walking for long distances.	RHF
Wayfinding	A spatial problem-solving process based upon consistent use and organization of definite sensory cues in the environment that individuals use to understand where they are, know where their desired location is, and know how to get to that destination from their present location.	CSA B651
Wheeled Mobility Device	A collective term to describe a range of wheeled personal transportation devices, including manual wheelchairs, powered wheelchairs, and scooters.	CSA B651

Appendix B – Wayfinding and Signage

Wayfinding is how people navigate the built environment to get from one place to another. Good wayfinding ensures people can move independently within a Site by providing multiple cues and engaging the senses.

It allows people to (1) determine their **location** within a setting; (2) determine their **destination**; (3) develop a **plan** to take them from their location to their destination; and (4) execute the plan and **navigate** any required changes.

Wayfinding is particularly important in complex environments. Without it, people can become disoriented and frustrated. All strategies for wayfinding should communicate effectively to the broadest group possible, including people with a wide range of sensory abilities, intellectual abilities, literacy levels, languages, and physical statures.

Wayfinding relies on both **architectural** and **informational** cues that help people to construct a mental map of the area.

Architectural wayfinding helps people to establish a pattern in the environment and includes spatial planning, architectural forms, and circulation systems.

Figure A1: Examples of Architectural and Information Cues for Wayfinding

Examples of architectural wayfinding include:

- Clearly defined paths and hallways and well-defined edges, such as walls, screens or columns.

- Elevators, ramps, and stairs in obvious and consistent locations.
- Recurring elements, such as washrooms, elevators, and emergency exits, are in the same place on each floor of a multi-storey Site.
- Markers or unique features that people associate with different parts of a Site; they can be multi-sensory and may include a special lighting fixture, art piece, window, or water feature—something that people can use to easily identify a particular area or location.
- Interior design features, such as distinctive wall and floor treatments or colours, that define different zones in a Site.
  Note: *This is an inexpensive, low-tech way of guiding people through a venue, and it is helpful for people with low vision and for those who are unable to read the language on conventional signage.*

Information wayfinding delivers information directly with visual, tactile, and audible formats.

Examples of information wayfinding include:

- Visual and tactile signs (e.g., raised characters/symbols or pictograms and braille).
- Audible information, such as public address systems that provides both visual and audible information.
- Mobile apps that Site users can access from their mobile devices; some facilities, provide custom apps that guide users as they navigate a building.

Signage should be simple, clear, consistent, and unambiguous. There are four basic types of signs used in wayfinding:

- **Information or descriptive signs**: These provide overall orientation to a Site and include maps, plans, diagrams, and directory signs; tactile maps and models which include Braille, raised characters, or symbols, provide orientation for people with a vision disability
- **Directional signs**: These include arrows providing directional guidance within any size of Site, and they are located where most visible, generally overhead and perpendicular to the path of travel; exterior route information should include approximate distance and gradient information where appropriate
- **Identification signs**: These identify specific locations, such as a particular Site or facility, or an individual room, and they include Site name signs and facility/room name or number signs
- **Mandatory safety signs**: These are required by regulation for the safety of all Site users and include fire safety signs and notices and emergency exit signs

Signs incorporating pictorial symbols along with text are helpful for people with learning disabilities or for those who are unfamiliar with the language used on the signage.

Signs need to be mounted so that people using wheelchairs as well as people with low vision can see them easily. Consistent placement of all signs throughout a building is a significant help for all visitors, including persons new to a building or those with a vision disability. Overhead signage is ineffective for most people who have low vision.

Images: Additional Wayfinding Examples

Figure A2 – Braille and tactile lettering

Figure A3 – Braille and tactile lettering

Figure A4 – Tactile lettering

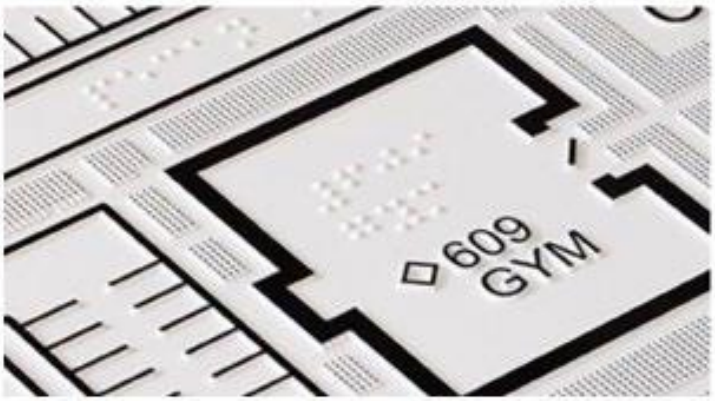

Figure A5 – Tactile floorplan

Figure A6 – Tactile evacuation instructions

General Wayfinding and Directional Signage

Directional Signage is Comprehensive and Clearly Visible

- Ensures signage is located where it is clearly visible, which is generally overhead and perpendicular to the path of travel
- Ensures size of characters and/or symbols allows sign to be read from a reasonable viewing distance
- Ensures signs are mounted at consistent location throughout the building
- Ensures signage is uncluttered

Ideas for Innovation:

- Directional signs are in tactile formats (e.g., raised characters/pictograms or symbols and braille)
- "Talking signs" or a similar beacon or signal-based system for audio navigation
- Maps and route descriptions that are compatible with a text-to speech application, are available on the organization's website
- Mobile apps that Site users can access from their mobile devices; some facilities, such as hospitals, provide custom apps that guide users as they navigate a building
- Free and strong wireless internet is available to Site users so that they can use mobile applications such as "Be My Eyes" and "AIRA", which provide them with verbal instructions to navigate throughout the Site.

Blade Signage is Used to Supplement Overhead Signage

- Provides projecting blade signage to ensure people can easily identify key rooms and amenities
- Ensures blade signage is visible and clear of obstruction
- Ensures size of characters and/or symbols allows sign to be read from a reasonable viewing distance

Wayfinding Includes a Variety of Techniques.

- Ensures design features, such as distinctive wall and surface treatments or colours, are used to define different zones either inside or outside a Site
- Ensures elevators, ramps, and stairs are in obvious and consistent locations
- Ensures different areas at the Site are identified using unique multi-sensory features, such as a fountain, scented plants, a piece of art, etc.
- Ensures recurring elements, such as washrooms, elevators, and emergency exits, are in the same place on each floor of a multi-storey building.

Signage Uses Arabic Numerals and/or Sans-Serif Lettering

- Uses easy-to-read sans-serif fonts, which are clear, uncomplicated, and which incorporate adequate spacing, and avoids decorative or italicized fonts, which people with low vision have difficulty reading
- Uses only Arabic numerals (1, 2, 3, etc.) and avoids Roman numerals, which are not universally recognized
- Uses a consistent font for all signage throughout the building

Lettering, Numerals and Symbols are Clearly Visible

- Ensures lettering, numerals, and symbols on all signage are suitable size and clearly visible from a distance
- Uses raised characters (e.g., lettering and numerals) and Braille directly below the text, which can be easily read by touch, and not engraved characters, if tactile signage is useful

  Note*: Characters and/or symbols are raised up 1 mm from the background.*
- Avoids vertical wording and electronic scrolling signage

Signs Have Glare-Free Surface

- Ensures surface finish of signs is matte or satin, as shiny or reflective surfaces are a potential source of glare or reflections and may be difficult to read

  Note*: Signs mounted on reflective backgrounds or Plexiglas are ineffective for people with low vision.*

High-Contrast Characters/Symbols on Single-Coloured Backgrounds

- Ensures high colour contrast is provided between letters/symbols and the background surface of sign
- Ensures background surface of sign is single-coloured
- Ensures sign contrasts visually with the mounting surface (e.g., wall or other mounting surfaces, etc.)

Signs with Text are Efficiently Worded

- Provides simple and brief wording
- Ensures words and short sentences begin with a capital letter and continue in lower case; using wholly capitalized words should be avoided
- Displays information logically
- Aligns wording to the left
- Avoids abbreviations

Use of International Symbols/Pictograms on Signage Where Useful

- Uses standard, internationally recognized symbols in place of, or to supplement, text, which is helpful to people with learning disabilities, to children, or to people who do not understand the language used on the sign
- Ensures symbols that are not universally recognized are accompanied by text

Signs are Well Illuminated

- Ensures signs, including maps and directories, are evenly illuminated with an appropriate level of lighting for the room conditions and use
- Ensures any additional lighting does not create glare

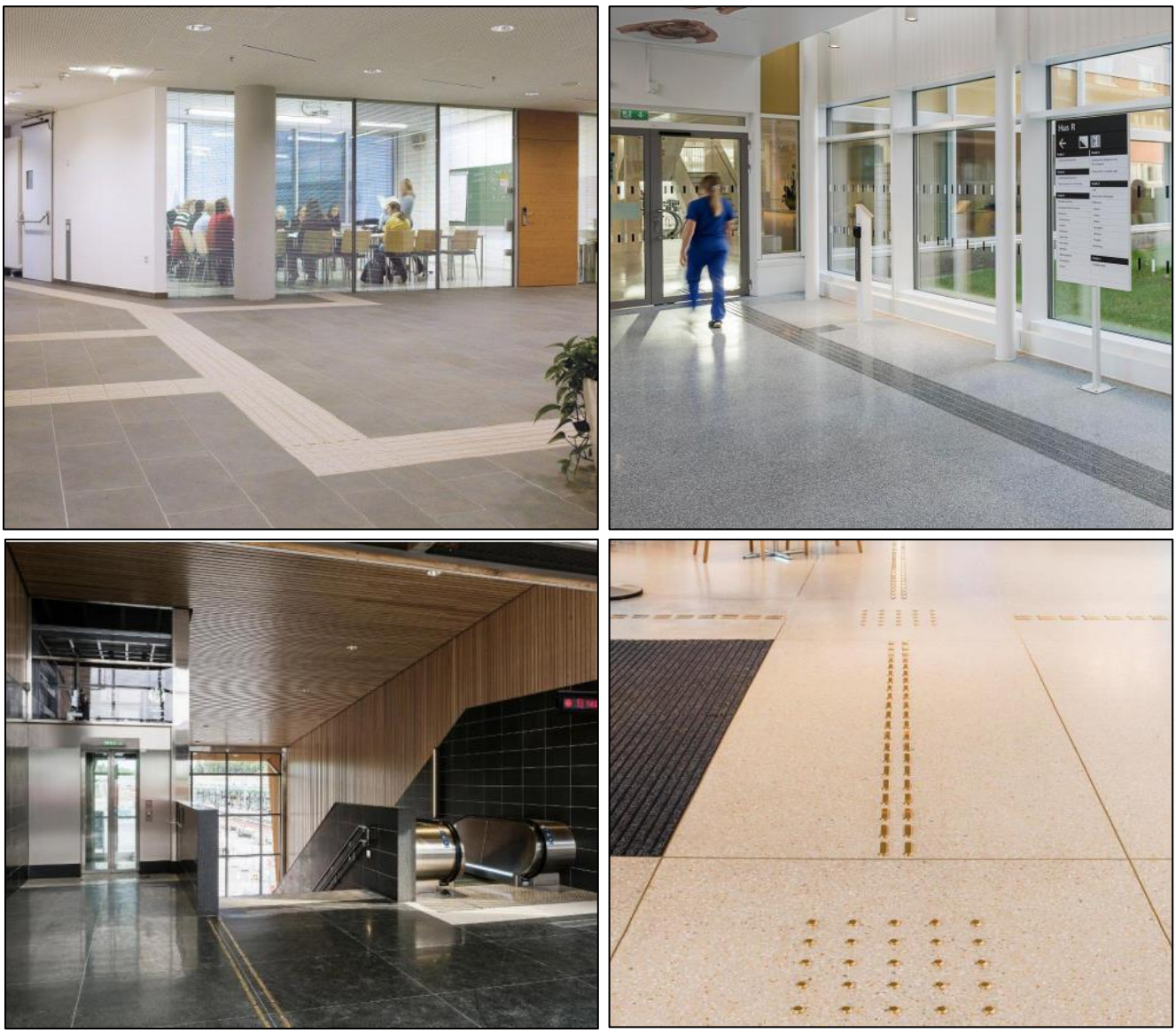

Figure A7: Use of Colour-Contrast and Tactile Direction Indicators on Flooring

Room Identification Signage

Room Identification Signage is Used to Identify Spaces Where Useful

- Provides room identification signage to ensure people can easily identify principal rooms and doors

  Note*: Smaller rooms contained within main areas may not require room identification signage, unless these rooms are considered feature areas.*

Sign Includes Braille and Characters/Symbols that are Raised

- Uses raised lettering, which can be easily read by touch, and not engraved lettering; lettering and/or symbols are raised up 1 mm from the background
- Ensures Braille is located directly below the text
- Ensures edges of characters are gently rounded
- Ensures room signage has the minimum number of characters possible, to assist people reading by touch

  Note*: Where signs are read by touch only, use all uppercase tactile characters as they are easier to read by touch than combination of uppercase and lowercase.*

Ideas for Innovation:

- Braille signs are easier to read by touch if they are mounted on an inclined surface that is between 45° and 60° above the horizontal in the direction of the user

  Note*: Braille mounted vertically can be challenging to read.*

- Having a marker or notch on the left edge to indicate the presence of braille on signs

Sign at Recommended Height

- Ensures signs can be viewed from a comfortable viewing distance
- Ensure Braille and tactile features are within easy reach

Tactile Sign at Recommended Location

- Ensures tactile signage is located on the wall on the latch side of doors or openings to ensure people who are blind or have low vision can read tactile signage safely

  Note*: It is recommended that tactile signs are within 150 mm of door jamb.*

- Ensures tactile signage is not mounted on the door itself to ensure people reduce collision hazard by being out of the direct path of travel
- If no door, ensures tactile signage is installed at consistent location on both sides of the entrance
- Ensures signs are mounted at consistent location throughout the building

Logical Numbering

- Ensures rooms are easy to locate and in numerical or other logical order

Figure A8: Room identification signage with tactile markings and braille

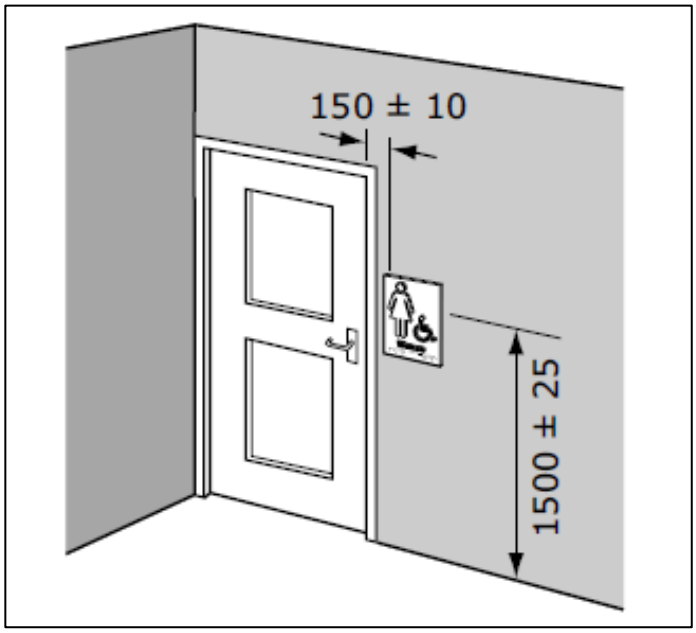

Figure A9: Recommended location for room identification signage.

Building Directories and Interactive Kiosks

Comprehensive Relevant Information

- Provides information enabling people to clearly understand the layout and function of a space or environment and to navigate independently
- Includes a floor plan layout on each level for easy navigation and identification of amenities, where appropriate

Ideas for Innovation:

- Descriptions and directions of a Site are provided online for orientation and navigation
- Route information on a directory or kiosk including approximate distance or travel time, audio and video, for larger Sites

Location of Amenities Where Provided

- Ensures directory and/or info kiosk clearly displays locations of washrooms and key spaces (e.g., fitness rooms, cafeterias/restaurants, pool etc.), if useful depending on Site

Raised Characters and Symbols, and Braille Where Appropriate

- Uses raised characters (e.g., lettering and numerals), which can be easily read by touch, and not engraved lettering
- Provides Braille directly below the text

Ideas for Innovation:

- Tactile map, including 3D maps, readable by sight and touch illustrating the layout of the floor and the path of travel to key features
- “Talking signs” or a similar beacon or signal-based system for audio navigation
- Mobile apps that Site users can access from their mobile devices; some facilities, such as hospitals, provide custom apps that guide users as they navigate a building

Accessible Height and Approach

- Ensures height of directory boards and display screens of interactive information kiosks can be viewed from a seated position
- Provides adequate clear space for approach in front of directory boards and/or interactive information kiosks
- Provides knee clearance depending on design of directory boards/information kiosks

Ideas for Innovation:

- Display panels or screens of interactive information kiosks automatically adjust to the height of its users
- Tactile directional indicators leading to tactile directory board or interactive information kiosks from building entrance

Accessible Interactive Information Kiosks

- Ensures operating controls are mounted at an accessible heights and location
- Ensures operating controls are operable without tight grasping or twisting of the wrist
- Ensures display panels/screens of interactive information kiosks are positioned to minimize glare and reflections
- Ensures alternate ways of obtaining information are provided (e.g. tactile keyboard and audio instructions, if touch-screen technology is used)

Ideas for Innovation:

- An accompanying video using signed language or equivalent offering an orientation of a Site’s features

Audio Information and Instructions

- Ensures any information displayed on screen is also conveyed in spoken form
- Ensures kiosks are equipped with headset jacks with adjustable volume controls or other assistive listening & communication enhancement technologies

Evacuation Instructions

Evacuation Instructions on Non-Reflective Surface

- Ensures instructions are positioned to avoid glare and reflections
- Ensures instructions are mounted on a matte surface

Evacuation Instructions in Large Print and High Contrast

- Ensures all instructions are in high colour/brightness contrast with background surface
- Uses easy-to-read sans-serif fonts, which are clear, uncomplicated, and which incorporate adequate spacing, and avoids decorative or italicized fonts, which people with low vision have difficulty reading
- Uses only Arabic numerals (1, 2, 3, etc.) and avoids Roman numerals, which are not universally recognized
- Ensures evacuation instructions are in large print (minimum of 14 point)
- Ensures evacuation instruction signs are high contrast with mounting surfaces

Evacuation Instructions Include a Floor Plan Diagram and Alternate Formats

- Provides clear map or graphic showing clearly marked evacuation routes, exit points and areas of refuge
- Ensures accessible exit routes and exit points are clearly identified on all instructions, if not all exits are accessible
- Provides emergency evacuation instructions on evacuation routes and exit points in alternative formats (e.g., raised characters/symbols and Braille)
- Provides tactile map readable by sight and touch, illustrating the layout of the floor and the path of travel to exits points and areas of refuge

Evacuation Instructions at Accessible Height and Location

- Provides clear map or graphic showing clearly marked evacuation routes, exit points and areas of refuge
- Ensures accessible exit routes and exit points are clearly identified on all instructions, if not all exits are accessible
- Provides emergency evacuation instructions on evacuation routes and exit points in alternative formats (e.g., raised characters/symbols and Braille)
- Provides tactile map readable by sight and touch, illustrating the layout of the floor and the path of travel to exits points and areas of refuge

Appendix C – Elevators

Easy to Find

- Ensures elevator locations are easy to find and clearly indicated by directional signage located throughout the building—from the entrance(s) or other key areas within the building on each floor level
- Provides a sign at the elevator location using the appropriate international symbols
- Ensures elevator is at an obvious location from the entrance(s) and along a main circulation route
- Provides a tactile sign mounted at accessible height on the left side of the elevator door
- Uses blade-type signage to assist in wayfinding, where required
- Uses an audible location indicator (e.g., locating tones)

Ideas for Innovation:

- Installation of tactile direction indicators (TDI) from building entrances to elevators

Easy to Use

- Ensures elevator system is easy to use and intuitive regardless of user's experience and knowledge
- Provides different alternative operating features to ensure users with vision and hearing disabilities can use elevators

  Note: *New elevator technologies can be challenging to use by everyone. The use of touchscreen panel only is not accessible to people who are blind or with low vision as they would not be able to identify the buttons. Destination dispatch elevators can also be hard to use especially for users who are blind or with low vision if suitable wayfinding cues and operating mechanism features are not in place.*

Clear Space in Front of Hall Call Buttons in Elevator Lobbies

- Allows all users to approach and reach hall call buttons with ease
- Ensures suitable clear space is provided in front of call buttons in the elevator lobbies to accommodate people using wheeled mobility devices

Hall Call Buttons are Accessible and At Accessible Height

- Ensures call buttons are at an accessible height and position for all users

  Note*: The highest controls should be mounted no higher than accessible as many people in wheelchairs do not have full use of their arms.*

- Ensures call buttons are raised so they can be operated with minimal force; flush or recessed buttons are not recommended because they are generally not usable for people with little or no use of their fingers
- Supplements control buttons with tactile characters and/or symbols that can be read by touch with an ideal combination of large, embossed, raised characters and Braille text

- Note: Many people who are blind or have low vision cannot read Braille but can readily identify raised markings.
- Ensures tactile characters and call buttons visually contrast with the adjacent surfaces

Ideas for Innovation:

- Elongated hall call controls that allows people to operate at multiple heights

Clear Opening Width of Door

- Provides sufficient clear width to access elevator for people using wheelchairs or electric scooters, and/or people with strollers, accompanied by companions or service dogs

Sufficient Opening, Hold-Open, and Closing Time

- Ensures doors remain fully open for a sufficient length of time (at least five or six seconds), allowing users to enter and exit the elevator without interruption; door-opening or door closing buttons can be used to alter the time for each
- Ensures sufficient length of time is provided to allow users to travel to elevator

  Note: *Length of time should be adjusted according to the size of elevator lobbies, number of elevators, the distance from the call button control panel to furthest elevator.*

Door Reopening Device

- Provides an automatic, non-contact door reopener preventing the door from closing on a person or object

  Note: *There should be no physical contact between the door and the person or object.*

- Ensures the device causes the door to stay open or to reopen automatically
- Ensures safety sensors are responsive to all users, including young children

Self-Levelling and Level Threshold

- Ensures the elevator has a two-way automatic floor levelling device, which brings the elevator to a stop so the elevator floor is flush with the finished floor level of each landing

Interior Dimensions and Floor Surfaces

- Ensures size and capacity is appropriate for site type and occupancy
- Note: There should be as much available floor space in the elevator as possible, as elevator use is expected to steadily increase as the population ages.
- Provides adequate manoeuvring and turning space for people using wheelchairs or scooters, people with strollers or luggage, or those with service dogs; people should not have to reverse out of the elevator
- Ensures floor surfaces are firm and slip resistant, permitting wheelchairs and scooters to move easily

Note: *A soft under-cushion in combination with a thick or long-pile carpet makes manoeuvring difficult for people using wheelchairs or scooters. If carpeting is used, it should be low pile and high density.*

- Provides flow-through design with doors on opposite sides of the elevator car allowing one-way travel (i.e., no need to turn around or reverse in the elevator)

  Note: *Elevators designed with front and back doors (flow-through design) are helpful, as they eliminate the need for users to turn around to exit. This is particularly useful during crowded conditions for people with mobility and vision disabilities.*

  ### Ideas for Innovation:
  A fire-resistant elevator.

Controls Inside Elevator Cab at Accessible Height and Location

- Ensures all floor designation and emergency communication controls are accessible
- Ensures all controls are at an accessible height and position for all users

  Note: *Many people in wheelchairs do not have full use of their arms therefore it is recommended that every effort is made to keep all the controls at accessible height.*

- Ensures control panel is placed as far as possible from the side wall, or it will be difficult to reach, if mounted on the front wall (return panel)
- Provides a convenient side-wall-mounted control panel, allowing people using wheelchairs or walking aids to access the controls without turning around, leaning forward, or twisting around backwards, risking a fall
- Arranges buttons vertically to give a direct functional correlation to the direction of travel
- Where two control panels are installed, the most appropriate configuration is to have one placed on the front return panel and the other on the wall located on the opposite side of the elevator
- Elongated cab controls mounted on the walls allowing use of all controls at consistent and accessible height, depending on size and use of elevator

Cab Controls Include Braille and Tactile Characters, and Are Easy to Use

- Ensures cab control buttons are raised so they can be operated with minimal force; flush or recessed buttons are not recommended because they are generally not usable for people with little or no use of their fingers
- Supplements cab control buttons with tactile characters (numbers or symbols) that can be read by touch, with an ideal combination of large, embossed, raised characters and Braille text; many people who are blind or have low vision cannot read Braille but can readily identify raised markings
- Positions tactile characters adjacent to and on the left of the controls
- Ensures tactile characters and cab control buttons contrast visually with the adjacent surfaces

Emergency Communication Systems

- Ensures communication system can be operated with one hand and not require tight pinching, grasping, or twisting of the wrist
- Provides accessible communication systems compatible with assistive listening and communication enhancement technologies (e.g., hearing loop, telephone interface jacks compatible with both digital and analog signal use)
- Ensures text to text communication system is available for people who are deaf to communicate in case of emergency

  Note: *This can include a jack to support teletypewriter (TTY) for the communication systems.*

Audible Elevator Components

- Ensure an audible verbal announcement inside the elevator that announces the direction the elevator is going and the floor level when the elevator stops at a landing.

  Note*: Synthesized voice floor callers announcing the direction and destination of the elevator are extremely useful to all users, particularly seniors and people who are blind or have low vision.*
- Provide audible indicators when the elevator is answering a call, has arrived, or has stopped, the doors are opening or closing and any other important information for elevator use.
- Ensure buttons emit an audible signal when pressed to confirm button was activated.

Handrails

- Ensure handrails are installed at an accessible height on all interior walls, except on the door side, to provide support to people who are unsteady on their feet or who are anxious about riding an elevator.
- Ensure handrails stop where they meet the control panel.
- Ensure the handrail size (diameter) facilitates grip, with a smooth and round design (real handrails, not just bumpers).
- Ensure sufficient clearance exists between handrail and wall, free of any sharp and abrasive elements.
- Handrails should be securely attached and support enough weight for its intended use.

Cab Controls Include Braille and Tactile Characters, and Are Easy to Use

- Ensure cab control buttons are raised so they can be operated with minimal force; flush or recessed buttons are not recommended because they are generally not usable for people with little or no use of their fingers.
- Supplement cab control buttons with tactile characters (numbers or symbols) that can be read by touch, with an ideal combination of large, embossed, raised characters and Braille text; many people who are blind or have low vision cannot read Braille but can readily identify raised markings.
- Position tactile characters adjacent to and on the left of the controls.
- Ensure tactile characters and cab control buttons contrast visually with the adjacent surfaces.

Emergency Communication Systems

- Ensure communication system can be operated with one hand and not require tight pinching, grasping, or twisting of the wrist.
- Provide accessible communication systems compatible with assistive listening and communication enhancement technologies.
- Ensure text to text communication system is available for people who are deaf to communicate in case of emergency.

  Note*: This can include a jack to support teletypewriter (TTY) for the communication systems.*

Visual Elevator Components

- Provide visual indicators when the elevator is answering a call, has arrived, or has stopped, the current floor position, and the direction of travel.
- Ensure hall call and cab controls illuminate when pressed.
- Ensure high-contrast colours are used for the visual floor indicator inside the elevator.

Colour Contrast Between Interior Cab Floor and Wall, with No Glare

- Ensure the interior cab floor and walls are colour contrasted to help people with low vision assess the size and shape of the elevator's interior.
- Ensure the elevator sill at each door entrance is colour-contrasted with the opposite floor finish.
- Ensure wall and floor surfaces have a matte finish to minimize potential glare and reflection.
- Ensure interior cab floor is a light colour and walls are dark.

  Note*: Dark floors in an elevator can be confusing for people with low vision, as they may think they are stepping into an open shaft.*

Doors are Colour Contrasted with Surroundings.

- Ensure doors contrast visually with adjacent wall surfaces.
- Ensure any areas of glass incorporate permanent markings at two levels that visually contrast to the background surfaces.

  Note*: Markings should be apparent to people from a range of different eye levels.*

Mirror in Rear of Elevator Cab (If Not Flow-Through Type)

- Provides mirror on the rear wall on the upper half.

  Note*: This allows people to see what is behind them if they need to reverse out of the elevator, like a rear-view mirror in a car, and protects their personal safety. It should extend from 900 mm above the finished floor to ceiling level. Full height mirrors should be avoided, as they can make the wall appear as a corridor, causing people to walk into it.*

- Ensures mirror is constructed of safety glass

Appendix D – Seating and Tables

Variety of Seating Types

- Provides seating with back support and at least one armrest
- Ensures seats are comfortable, with firm padding and rounded edges
- Ensures seating is located on a level, firm and stable area, and does not obstruct circulation routes
- Offers a variety of seating options to suit different people (e.g., seats with and without armrests, different seat height and width, fixed and movable seats)
- Provides adequate heel space to allow people to stand up easily
- Provides tables for placing objects so people are not required to bend to the floor
- Ensures seats positioned in a row are of the same style (e.g., all with armrests or all without)

Note*: A mixture of seat styles in a single row can cause confusion for persons with low vision.*

Arrangement of Seating with Clear Space

- Ensures access to seating is direct and unobstructed from main circulation route
- Incorporates clear space for people using wheelchairs, scooters, or strollers so they can sit alongside one another and with their companions
- Provides a clear space at the end of the seating for a service dog to rest
- Provides flexible seating that allows seating arrangements to be easily altered to accommodate individual situations

Upholstery is Matte, Non-Slip, and Contrasts with Environment

- Ensures upholstery is plain coloured or has a simple pattern

  Note*: Strong patterns can create confusion for people with low vision.*
- Contrasts visually with surrounding surfaces
- Ensures upholstery is matte and non-slip

Tables are Stable with Rounded Corners

- Ensures tables are stable
- Ensures tables have no sharp corners or edges

Tables at Accessible Height with Knee Clearance

- Ensures tables or work surfaces are at an accessible height for all users
- Ensures any tables or work surfaces provide suitable knee clearance
- Provides clear space in front of tables or work surfaces for people using wheeled mobility devices

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