HERITAGE for ALL

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About this report

Design

This document follows Clear Print Accessibility Guidelines including the use of simple typefaces, 12pt or greater fonts, and high contrast text and graphics. Alt text is provided for all images and charts.

Note that the graphic PDF version of this report is intended to be viewed in a landscape orientation on a computer or tablet, or in print.

Navigation

The table of contents is interactive with items linked to their respective sections. Section heading pages include a “hamburger” ≡ (three horizontal line) menu icon which is linked back to the table of contents.

Images

All photos in this report were taken by members of the project team. Cover illustrations come from the BDP People Library, a resource for inclusive visualization.

Contact

If any aspects of this report are not accessible to you, please email contact@heritageforall.ca.

Acknowledgements

The project team thanks the heritage professionals, people with disabilities, and other members of the disability community who contributed their time and perspectives to Heritage for All. We are also grateful for the many custodians, building managers, architects, and others who greeted us with enthusiasm and made themselves available to provide insight into their projects.

Executive Summary

Heritage for All was a three-year research project with the goal of facilitating greater access to Canada's federal heritage buildings by providing guidance with which develop standards and implement solutions appropriate in heritage contexts. It was funded by Accessibility Standards Canada and led by Human Space, an inclusive design consultancy of BDP, in coordination with partners serving people with disabilities and representing heritage professionals across the country.

The project was organized in three phases: (1) investigation, (2) research solutions, and (3) evaluate solutions and finalize recommendations. The first phase comprised site visits to a range of federal heritage buildings to document existing conditions followed by public engagement though which perspectives and reactions to documented buildings were captured. The second phase comprised a literature review and site visits to heritage buildings considered "successful" by engagement participants and other sources to document their accessibility strategies. Interventions were analysed for common attributes and a range of solution types identified. The third phase comprised further engagement to present these attributes and evaluate their applicability to our recommendations. Recommendations were developed based on this input combined with best practices documented by the project team and other sources.

In line with the spirit of "nothing about us without us," engagement with people with disabilities and heritage professionals across Canada was central to the project. Specific opportunities included the surveys and workshops is phases one and three and a peer-review process at the conclusion of the project.

Phase one

The project began with visits by the project team to a range of federal heritage buildings. A total of 36 were visited and documented for use in engagement activities and case studies. A public survey of 113 people captured a range of perspectives, including dissatisfaction with the accessibility of public buildings, interest in heritage buildings, and balanced views of modification versus conservation on the part of the disability community, and an emphasis on achieving balance between conservation and accessibility on the part of heritage professionals.

Analysis of contributions from 39 workshop participants revealed seven themes associated with barriers and potential solutions from the disability community, including physical effort, lack of a continuous, equitable journey sequence, and lack of independence and choice. It also revealed perspectives shared with heritage professionals, on the importance of conserving and maintaining heritage buildings and the value of providing access in terms of functionality, education, and equality.

Phase two

In phase two, the project team completed 57 detailed site visits and documented interventions at another 36 sites. By analysing each project and discussing them with custodians and designers, a series of common attributes

were identified and described, and a range of solution types categorized. At the same time, a high-level literature review was conducted with a focus on jurisdictions in which site visits were completed. Illustrated case studies were developed for a range of sites.

Phase three

In the final phase, the project team brought findings back to people with disabilities and heritage professionals through a new survey and workshop series. Attributes from phase two were presented together with the concept of "success" in heritage contexts. Success was most frequently defined in terms of universal design, equitable access and full enjoyment, multi-sensory access to information, safety, and balance. Attributes were generally supported with specific input used to refine their meaning and application.

Recommendations and next steps

Recommendations were developed based on attributes identified in phase two of the project, informed by existing guidelines related to each attribute, and supported, developed, or amended based on feedback from engagement participants. Once drafted, the report and recommendations were provided to a group of reviewers, most of whom had participated in previous engagement. Their input was used to strengthen the final report.

The final recommendations are organized according to the attributes of successful projects with the addition of overarching, planning, alternative, documentation, and review considerations. Critical recommendations pertain to the process for determining the appropriate balance of alteration versus conservation, the importance of engaging with people with disabilities at all stages of the planning process, and the need to share solutions and lessons learned both within the federal government and beyond.

In addition to comments on the content of the report, the peer review process late in the project provided valuable insight into future directions for research and action. Many reviewers, for instance, were eager to see findings presented in practical formats and updated and expanded into the future. Some identified significant gaps, including the narrow range of contexts studied and the need for a broader approach to inclusion, from further consideration of sensory disabilities to the cultural inclusion of Indigenous people and practices. These remain as next steps.

The project team hopes the Heritage for All final report and its recommendations will serve as useful input for Accessibility Standards Canada's development of *CAN-ASC-2.7: Heritage Buildings and Sites-Accessibility for Federally Regulated Entities*. We further hope it will be more broadly useful to custodians of heritage buildings, practitioners, and consultants across Canada.

INTRODUCTION

The Heritage for All project aims to advance and inform research on accessibility barriers in federal heritage buildings in urban centres across Canada and to make recommendations to resolve tensions between accessibility and heritage policy.

Heritage for All was funded by Accessibility Standards Canada between October 2021 and March 2024. It was led by Human Space with partners serving people with disabilities and representing heritage professionals across Canada:

- KITE Research Institute, University Health Network
- Philip Goldsmith Architect
- Easter Seals Canada
- Canadian Association of Heritage Professionals
- Canadian Disability Foundation
- National Trust for Canada

This report describes the project and its findings. More specifically, it identifies current barriers to accessing federal heritage buildings and presents a set of recommendations and design solutions appropriate in heritage contexts. Recommendations were developed in consultation with heritage professionals and members of the public with lived experience navigating public buildings as people with disabilities, their caregivers, or advocates.

The research team hopes these recommendations will inform the development or revision of accessibility standards for heritage buildings under federal jurisdiction and spur further research and appropriate interventions in federally, provincially, municipally, and privately owned heritage buildings across Canada.

Heritage for All is funded by

Accessibility Standards Canada

Canada

Project team

Human Space

The Human Space team was headed by director Jesse Klimitz with project lead Daniel Luong and coordinator Michael Philpott.

Jesse Klimitz is an architect whose interest and expertise in inclusive design led him to oversee the creation of Human Space, an inclusive design practice of BDP. Jesse's project experience includes overseeing large accessibility real estate evaluations, municipal guideline development, participatory research projects, innovative concept studies, community engagement, and inclusive design consultation for major infrastructure, recreation, healthcare, and education projects from concept through to completion.

Daniel Luong is a Senior Accessibility Specialist with expertise in accessibility consulting, audits, and research. Experience as a surveyor, researcher, and analyst, and a background in urban planning, provide several perspectives from which to understand how the built environment affects how people of varying ability and perception have access to and navigate their surroundings. Daniel has led large-scale projects in post-secondary education, healthcare, public transportation, guideline development, and institutional projects.

Michael Philpott is an accessibility auditor, researcher, and former built heritage program manager based in Newfoundland and Labrador. Michael has administered provincial heritage conservation programs, led heritage building documentation and research projects, and served on heritage committees at the municipal, provincial, and national levels. With Human Space he contributes to accessibility review, audit, and framework development projects.

Philip Goldsmith Architect

Philip Goldsmith has forty-five years of professional experience in the stabilization, restoration, and adaptive reuse of historic structures and historic site master planning for new development. Philip offers a creative and knowledgeable sensitivity to heritage work, emphasizing an understanding of context and excellence in the integration of historic buildings and new development. His projects have included environmental assessments, urban design, housing, heritage districts, architectural guidelines, and landmark district studies which involve successful coordination with professional teams. He is a member of the Canadian Association of Heritage Professionals.

Philip advised on heritage considerations throughout the project, facilitated virtual workshops, completed site visits in Canada and abroad, and provided detail reports on his observations.

KITE Research Institute, University Health Network

Dr. Alison Novak is a scientist at KITE and an Assistant Professor in the Department of Occupational Science and Occupational Therapy and Faculty of Kinesiology and Physical Education, University of Toronto. Alison's primary research area focuses on understanding mobility in challenging environments (such as stairs, ramps, bathrooms) and the impact of aging and environmental factors to reduce the risk of falls and support aging-in-place strategies. Alison is actively involved with current changes to the National Building Code of Canada and Canadian accessibility standards to build an age-friendly and safe environment.

Alison advised on research methods, facilitated virtual workshops, and, with her team, analyzed the qualitative and quantitative data generated by the project.

Terms of Reference

Purpose

The purpose of Heritage for All is to facilitate greater access to Canada's federal heritage buildings by providing guidance with which to create new accessibility standards, update existing standards, and implement solutions appropriate in heritage contexts.

The objectives of achieving accessibility and conserving heritage should be considered a "both/and" rather than an "either/or." This means that objectives for both are important and achieving both should be the goal.

Scope

The study focuses on federal heritage buildings and their immediate surroundings in Canada's urban areas. It considers both architectural solutions to provide physical access as well as planning and operational considerations.

A federal heritage building is any building owned by a department of the Government of Canada that has been formally designated by the minister responsible (currently Minister of Environment and Climate Change). Federal heritage buildings represent a small proportion of heritage buildings in Canada, but ones which serve important public purposes and represent important national themes. There are more than 1240 federal heritage buildings in Parks Canada's Directory of Federal Heritage Designations as of March 2024.

> ...to create new accessibility standards, update existing standards, and implement solutions appropriate in heritage contexts.

Federal Heritage Buildings

Once a federally owned building reaches 50 years of age it must be submitted for review for heritage significance to the Federal Heritage Buildings Committee of the Federal Heritage Buildings Review Office under Parks Canada. The committee can make a recommendation to the Minister of Environment for designation as either a “recognized” or “classified” federal heritage building. Buildings and sites can also be designated on the recommendation of the Historic Sites and Monuments Board of Canada following nomination by the public. Federally owned buildings designated in this way are also under the Federal Heritage Buildings Review Office’s jurisdiction.

National Research Council Canada Laboratories (Classified Federal Heritage Building), Ottawa, Ontario

Objectives

1

Understand common accessibility barriers found in federal heritage buildings in Canada's urban centres from a cross-disabilities perspective.

2

Understand common heritage designations and building typologies.

3

Identify tension points between accessibility needs and heritage requirements.

4

Engage with the community and a wide range of user groups, including people with disabilities, partners in the disability field, community organizations with a focus on disability and heritage, and heritage professionals.

5

Identify local and international design solutions in comparable jurisdictions that can be applied within the Canadian context.

6

Propose recommendations and evaluate potential impacts from cross-disabilities and heritage perspectives.

7

Finalize the most effective recommendations for use by Accessibility Standards Canada to inform the creation of standards.

Research Questions

1

What barriers do Canadians face in the built environment while accessing federal heritage buildings?

2

What heritage features or policies created existing barriers commonly experienced?

3

What solutions exist to overcome identified barriers?

4

Which solutions are most appropriate from both a cross-disability and heritage practice perspectives?

Audience

The primary audience for the research is Accessibility Standards Canada who may use project findings to develop new or amend existing standards with respect to the accessibility of federal heritage buildings.

Research findings may also be of interest to federal agencies and federally regulated corporations tasked with reviewing or managing heritage properties. Lastly, the project team hopes the report and its recommendations will serve as a resource for all those tasked with managing and consulting on Canada's heritage buildings.

Museum of Natural History (Classified Federal Heritage Building), Banff, Alberta

Methodology

The project is divided into three phases, each with its own research requirements.

1

Phase One – Investigation

Phase one involved background research to determine an appropriate sample of federal heritage buildings to investigate, site visits to document existing conditions, and online consultation.

Background Research

To identify a representative sample of federal heritage buildings, the project team began with a broad review using the Federal Heritage Buildings Review Office's directory. This list was reduced by excluding buildings outside urban areas due to travel requirements, leaving 481 buildings for consideration. Remaining buildings were reviewed based on use, construction date, and building characteristics using Heritage Character Statements obtained from the Canada's Historic Places directory. Buildings with similar features were removed to improve the efficiency of the study, with consideration given to maintaining a distribution of buildings across Canada. After this process, 41 buildings were shortlisted for consideration. Several sites were later added based on feedback from engagement participants.

Site Visits

Of the shortlisted federal heritage buildings, 35 were visited by project team members who completed visual inspections and reported on accessibility-related barriers. Buildings were photographed with an eye toward developing virtual "walkthroughs" for use in workshops.

An informal review of the literature, including studies that have used photos for workshops or survey-based data collection methods, found little guidance regarding technical considerations for the presentation of photos to assess space usability or barriers. However, in documenting existing conditions the following guidelines were kept in mind:

- Consistency in photographic presentation should avoid bias. I.e. do not emphasize certain areas/perceived barriers for some sites, but not all.
- Photos should minimize lens distortion.
- A minimum of three images should be available per component of the journey sequence.
- An initial photo of the building exterior should be presented from a distance to provide context, including peripheral features. Include additional perspectives with consistency between building types.
- Photos should be taken at same approximate height between buildings.
- Photos of each space/component in the journey sequence (e.g. entrance, vertical circulation, washrooms) should be taken from a similar distance to ensure that consistent information is available.

R. V. Winch Building (Recognized Federal Heritage Building), Vancouver, British Columbia

| Building 1, Administration Building (Recognized Federal Heritage Building), Vancouver, British Columbia

Consultation

Consultation in phase one consisted of online surveys and workshops. Both methods were promoted by the project lead and project partners by email outreach, social media, and direct outreach.

A project website was launched at https://www.heritageforall.ca/ to provide updates and links to consultation opportunities. Surveys and workshops were tailored to both participants from the disability community and heritage professionals.

Online Survey

Questions for the disability community focused on experiences accessing historic buildings and perceptions of heritage. Questions for heritage professionals focused on perceptions of accessibility and experiences and/or professional opinions on implementing accessibility retrofits. Both versions attempted to probe attitudes toward the balance between conservation and access. Recognizing that "person with a disability" and "heritage professional" are not mutually exclusive, the survey collected disability-related and other demographic data on all participants.

Virtual Workshops

Workshops in phase one were organized around virtual "walkthroughs" of a sample of documented federal heritage buildings. This approach was grounded in the finding that people assess the usability of an environment similarly regardless of the presentation medium, i.e. static, simulated images of a built environment can be used for evaluation in place of the actual, physical space (Acemyan and Kortum 2018).

Site visit photos were organized to represent a journey through each building and accompanied by simplified building plans to help orient participants. Approximately three photos were presented for each space. Attendees typically "visited" two to three buildings per session, as time and discussion permitted.

2

Phase Two – Research Solutions

Phase two consisted of a literature review, documentation of projects considered successful from both access and conservation perspectives, and analysis of projects as case studies to identify common themes and intervention types.

Literature review

Governmental and academic publications from Canada, the United States, western Europe, and Australia were reviewed to understand existing guidance on heritage and accessibility, as well as to identify successful examples.

Site visits

Subject buildings were identified through a combination of input from research participants and a jurisdictional scan. Survey respondents in phase one were asked to provide examples of buildings they felt demonstrated a successful balance of conservation and access. Suggestions, primarily located in Canada, were each assessed and visited where possible. Additional research was completed to identify accessible heritage buildings in Canada and abroad. This research included a literature review, direct inquiry with individuals and organizations in the disability and heritage fields, a review of award recipients in fields of conservation and accessibility, and a review of public buildings likely to represent similar typologies to Canadian federal heritage buildings (e.g. legislatures, national galleries, libraries, municipal buildings, and museums or otherwise interpreted historic buildings).

The project team attempted to identify and document case studies in jurisdictions across Canada. In some cases, Canadian federal heritage buildings themselves constituted successful examples. International investigation focused on the northeastern United States, Ireland, and the United Kingdom due to their proximity and similar building contexts.

Site visits generally consisted of guided visits with relevant site staff or members of the project team. Guides were asked to describe the context of the project, options considered, the decision-making process, compromises made, and on-going experiences. Photos were taken of the overall building, specific accessibility interventions, and original building elements that illustrated the “before” condition. Site visits and interviews occurred separately in some cases.

Informal site visits, where guided site visits could not be arranged, consisted of photography of public areas supplemented by secondary research where possible. These visits provided additional examples of access features but without the context recorded for in-depth site visits.

Analysis

Analysis in phase two included synthesis of collected information to distill themes associated with successful projects and the development of a taxonomy of solutions. Analysis was completed by the project team.

3

Phase Three – Evaluate Solutions and Finalize Recommendations

Phase three consisted of online consultation via workshops and surveys, the development of recommendations, and a peer review process through which recommendations and this report were refined.

Consultation

Consultation in phase three consisted of online workshops and surveys. Both methods were promoted by Human Space and project partners by email outreach, social media, and direct outreach. The project website was again used to provide links to consultation opportunities. Surveys and workshops followed the same template for both the disability community and heritage professionals.

Virtual workshops

Following a brief presentation on completed research, workshops in phase three centred around the themes identified in phase two. Themes were presented individually with applicable case studies illustrated using photos and text. Participants were asked about their perspectives on each theme, how the theme was reflected or not reflected in the case study, and how the theme may be reflected in a recommendation. While themes were presented in series, open discussion was encouraged at any point.

Online survey

Questions for all participants focused on the themes identified in phase two and the concept of "success" in a heritage context. Participants were presented with the themes and asked to rate the importance of each using Likert scales to gauge agreement (strongly disagree to strongly agree). Open-ended questions asked participants to define "success," to identify gaps in the presented themes, and to provide any additional comments. In this phase all participants were presented with the same survey with additional demographic questions activated depending on one's self-identification as a person with a disability or heritage professional.

Recommendations

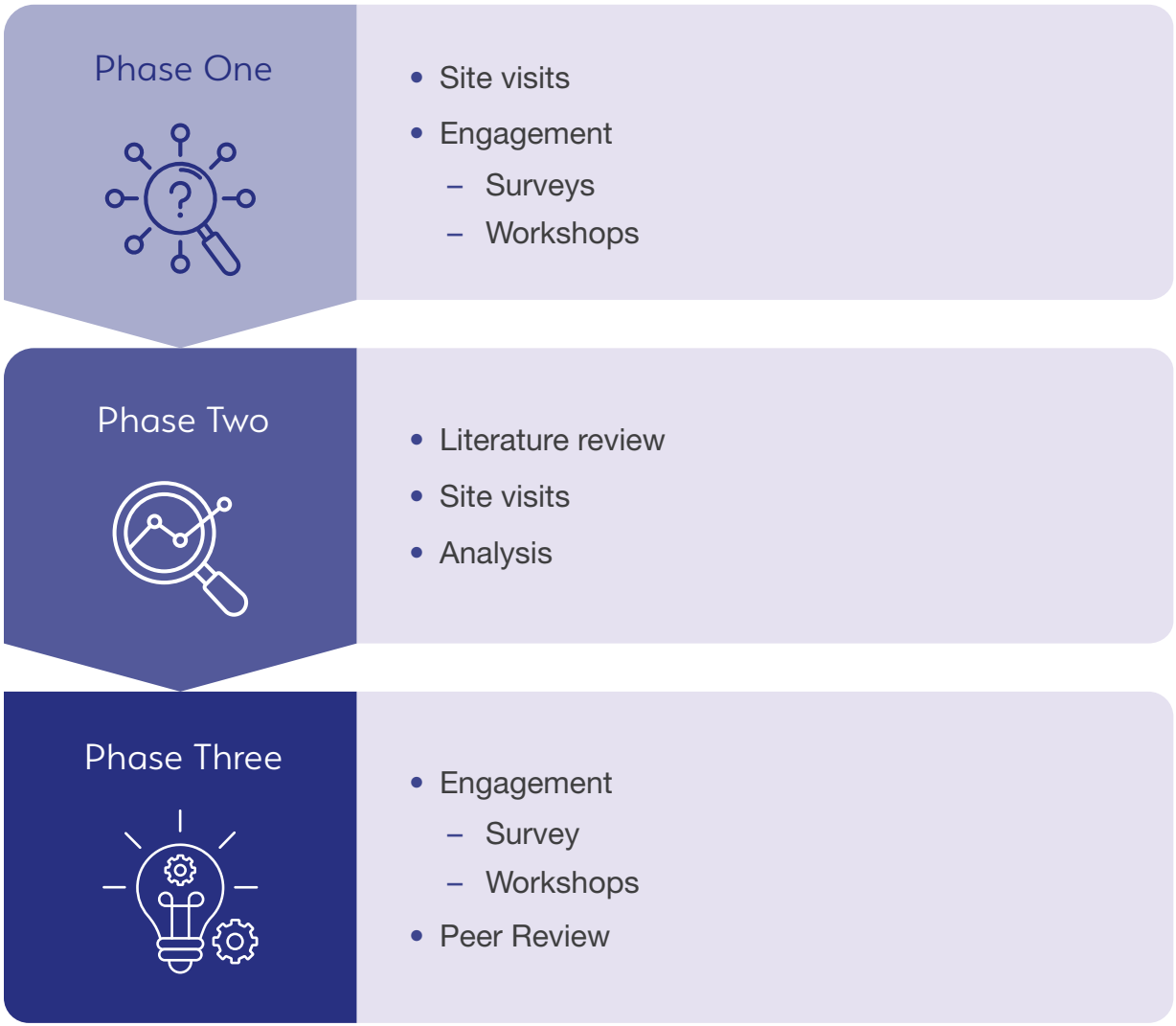
Using analysis from phase two and participant input from phase three consultation, the project team formulated a series of recommendations. The team endeavored to draft actionable recommendations which could be reflected in the types of standards developed by Accessibility Standards Canada.

Peer review

To strengthen the project team's recommendations, a group of peer reviewers from the disability and heritage professional communities were invited to provide feedback. Reviewers were largely drawn from active participants in previous phases with the addition of several individuals who were previously unfamiliar with the project. Input was collected through an online form using Likert scales to gauge perceptions (strongly disagree to strongly agree) of various sections and aspects of the report with prompts for specific feedback. Feedback was used to refine the report and recommendations.

Figure 1

Project organization and progression.



Dominion Public Building (Recognized Federal Heritage Building), Halifax, Nova Scotia

Limitations

The project team endeavored to analyze representative examples and broadly engage the disability and heritage communities, however several limitations remain:

- Historic buildings are diverse and, under the *Standards and Guidelines for the Conservation of Historic Places in Canada*, require individual attention and understanding prior to alteration. Identified solutions cannot be used “off the shelf” but must be selected and detailed to protect a site’s character-defining elements. Solutions in this report will not be applicable in all cases.The project team made efforts to engage a cross-section of the disability community through outreach and by working with project partners, however participants were self-selecting. For this reason, feedback and solutions may not reflect the full diversity of disability in Canada.
- Due to the wide range of uses, styles, and contexts among federal heritage buildings, a representative sample was selected for more detailed analysis and a subset of this sample was presented to engagement participants. As a result, feedback could not be gathered on all existing conditions.
- The project team made efforts to engage a wide cross-section of the disability community through outreach and by working with project partners, however participants were self-selecting. For this reason, feedback and solutions may not reflect the diversity of disability in Canada.
- Constraints on travel meant that case studies could only be documented in a small number of centres. Many successful solutions could not be examined by the project team and may employ approaches not contemplated here.
- Solutions and case studies identified by the research largely reflect strict regulations that promote conservation via a minimum intervention approach. They may not, therefore, reflect the full range of approaches that would be considered appropriate in the Canadian context.
- While people with a variety of sensory disabilities were engaged by the project team, the report focuses on physical access solutions as those most likely to cause tension through their impact on character-defining elements.

Glossary

The following definitions are used for the purposes of this report.

Accessible – a building, its facilities, and services can be easily and independently approached, entered, evacuated and/or used by all of the building's potential users with an assurance of individual health, safety and welfare during the course of those activities (adapted from *ISO/DIS 5727*).

Barrier-free – a building and its facilities can be approached, entered, and used by persons with physical or sensory disabilities (adapted from the *Ontario Building Code*).

Character-defining elements – the materials, forms, location, spatial configurations, uses and cultural associations or meanings that contribute to the heritage value of an historic place, which must be retained in order to preserve its heritage value (adapted from the *Standards and Guidelines for the Conservation of Historic Places in Canada*).

Conservation – all actions or processes that are aimed at safeguarding the character-defining elements of a heritage building to retain its heritage value and extend its physical life. This may involve "preservation," "rehabilitation," "restoration," or a combination of these (adapted from the *Standards and Guidelines for the Conservation of Historic Places in Canada)*.

Custodian – the federal department or agency responsible for managing changes to a federal heritage building. More generally, custodians may include lower levels of government, private enterprises, and non-profit organizations having responsibility for any heritage building.

Cross-disability – including all forms of disability, including but not limited to: acquired, congenital, intellectual, brain, neurologic, sensory, mobility, mental health, episodic, etc. (adapted from DAWN-RAFH Canada)

Disability community – individuals who identify as having one or more disabilities and experience barriers to accessibility or who are otherwise familiar with the needs of people with disabilities.

Federal heritage building – a building owned by the federal government or one of its departments or agencies and formally recognized by the Minister for Environment following review and recommendation by the Federal Heritage Buildings Review Office.

Heritage building – in this report, a building of 50 or more years in age significant for its architectural, historical, or cultural value (heritage value). A heritage building may or may not be formally designated by one or more levels of government.

Heritage professional – individuals with knowledge and experience in the field of heritage conservation.

Heritage value – the aesthetic, historic, scientific, cultural, social or spiritual importance or significance for past, present or future generations. The heritage value of an historic place is embodied in its character-defining elements and associated meanings (adapted from the *Standards and Guidelines for the Conservation of Historic Places in Canada*).

Journey sequence – the set of steps taken by the prospective user of a building in the process of planning to visit, traveling to, using, and exiting the building. Each step, including the use of discrete architectural elements, must be accessible for the building to be considered accessible. A similar concept is embodied by the concept of the "chain of accessibility."

Programmatic access – refers to access to the services provided in or by a heritage building which may or may not be related to the history or form of the building itself.

Statement of significance – a statement that identifies the description, heritage value, and character-defining elements of an historic place (adapted from the *Standards and Guidelines for the Conservation of Historic Places in Canada*).

Universal Design – the design and composition of an environment so that it can be accessed, understood, and used to the greatest extent possible by all people regardless of their age, size, ability or disability (adapted from the Centre for Excellence in Universal Design).

Context

Heritage Principles

With a wide range of building typologies, uses, ages, and period styles, federal heritage buildings exhibit a variety of conditions that must be considered when designing accessibility retrofits.

It is also imperative to understand when the design of a building is such that the impact of alterations may be considered minor versus when a design element constitutes a fundamental character-defining element that requires substantial care in alteration, or the consideration of alternatives.

Throughout history, the choice of building style served several objectives. In theory, buildings of the modern movement in the 1920s to 1980s were meant to be expressive of function, and the form of the building meant to reflect those functions. A building's appearance may therefore only hint at its internal use.

In earlier times, a building's "style" was meant to **philosophically** reflect more than function. Styles were symbolic indications of function/use, significance, ownership, city-building, aspiration, cultural tradition, and so on. The character-defining elements of a style are important to understanding the original design accomplishments of its architect(s), but also of these symbolic attributes of the design.

In addition to philosophical reflections, a building's design also had to include **practical** considerations. For example, if a basement level was an area of functional space and required lighting, a ground floor might be elevated sufficiently to permit substantial windows at the basement level. This would then require stairs to access the ground or principal floor, either at the exterior, interior, or both, depending on elevation.

Finally, a building design, had to include **technical** solutions for environmental or construction issues, many of which evolved into aspects of style. For example, a building's roof is traditionally sloped to shed water and has a roof overhang to protect the walls of the building; or at grade, a ground floor structure was elevated to lift the wooden floor above the level required to prevent infiltration of or exposure to water. While ensuring the long-term health of the structure, this resulted in steps between grade and the building's interior.

The following principles should form the context for any consideration of solutions to improve or enable access for people with disabilities. Considerations should take into account heritage building characteristics from all philosophical, practical, and technical perspectives. A study of the existing building should seek to understand:

- **Style** – Historic styles are interplays of philosophy, practicality, and technical characteristics and represent a variety of periods and purposes. The symmetrical placement of a doorway or the use of columns at an entrance may be fundamental character-defining elements.
- **Use** – In some buildings, design features that reflect use, including the plan or layout, may be key character-defining elements reflecting social relationships or work structures. In others, an open or already modified interior may present a flexible relationship to use and opportunity for reorganization of functions or paths of travel.
- **Entrances and Entrance Features** – A building entrance can range from a simple, perfunctory doorway to a grand entrance atop a broad flight of steps and may relate to the style or philosophical meaning of the building well beyond a technical or practical solution.
- **Existing Accessibility** – A study of the existing building relative to accessibility should be completed so that issues inherent in all areas of the existing building can be understood relative to heritage significance.
- **Flexibility** – Where impacts on minor heritage fabric are possible, as noted above, some flexibility for adjustments–the respectful "evolution"–of the building should be considered. Where significant heritage fabric is present, solutions should avoid major impacts and some flexibility in an appropriate accessibility solution should be considered.

After developing this understanding, the building's exterior and interior should be considered holistically to determine means to achieve dignified and direct access to the building. Where architectural features are not tied to the philosophical and social meaning of the building, modifications that permit accessibility may be relatively straightforward. Modifications could include removal of a minor stair or the widening of an entrance without a significant door surround. Where features are strongly aligned with philosophical and social meaning, modifications may require more careful detailing, analysis of alternatives, and/or extensive consultation to arrive at the right solution.

Use and perceptions of heritage places

The *Arts and Heritage Access and Availability Survey 2020-2021* found that 48% of all respondents visited at least one heritage building or historic site in the 12 months before the start of the COVID-19 pandemic. This decreased only slightly, to 46%, for respondents with disabilities, indicating strong interest in historic places despite the access challenges associated with them. During the COVID-19 pandemic, people with disabilities were more likely than others (34% vs. 22%) to access online heritage content, visit a local heritage site, or attend a local heritage event. Despite their interest in heritage places, 36% of people with disabilities reported feeling that they did not belong in arts and heritage facilities in their communities, suggesting a need for more inclusive buildings and programming.

Disability and human rights

Canada is a signatory to the United Nations (2006) Convention on the Rights of Persons with Disabilities (UNCRPD) which is intended "to promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities, and to promote respect for their inherent dignity." The UNCRPD adopts the social model of disability which states that it is society, including the built environment, that disables rather than the body. It is therefore society's responsibility to remove barriers to equal participation.

In Canada, the *Canadian Charter of Rights and Freedoms* states, under Section 15, that "every individual is equal before and under the law and has the right to the equal protection and equal benefit of the law without discrimination," with physical disability included as a ground for protection. At the federal level, the Canadian Human Rights Act (1985) prohibits discrimination on the same basis for federally regulated industries. All provinces and territories have enacted similar legislation applying to industries and organizations under their purview (Chun and Gallagher-Louisy 2018).

Having recognized the right to equal access at all levels of society, it is imperative to provide access to heritage buildings for the appreciation of all Canadians.

Heritage and disability justice

A groundswell of interest in the intersections of conservation and accessibility has emerged in recent years among people with disabilities, architects, conservationists, and historians, both in terms of physical access to heritage buildings and the recognition of the complex histories of disability and health embodied therein. This section provides a brief selection of examples.

At the University of Minnesota, *Future Anterior,* a journal of historic preservation history, theory, and criticism dedicated its summer 2019 edition to Disability and Preservation. The same institution launched a course on Disability Justice and Cultural Heritage in 2021 and hosts the Rethinking Equity in Place-based Activism, Interpretation, and Renewal (REPAIR) Disability Heritage Collective which delivers talks, publishes case studies, and contributes to course development. On October 29, 2020, the Society of Architectural Historians hosted a virtual panel on "Disability Studies and Historic Preservation" and the theme has recurred in sessions

on the architecture of health and the senses. Its upcoming 2024 conference includes a session on Histories of Disability and Deafness in Architecture. In 2023, Bonnie McDonald of Landmarks Illinois published *The Relevancy Guidebook: How we can transform the future of preservation which asserts that American preservation* is in a relevancy crisis due to lack of self-examination and action on issues of justice, equity, inclusion, and accessibility, and provides recommendations for changing course including accessibility as a key component.

The intersections of heritage and accessibility are also the subject of discussion on provincial and national levels in Canada. In 2021, the Ontario Business Improvement Area Association (OBIAA) organized the online *Accessing Our Heritage Conference* which brought together architects, accessibility specialists, and heritage professionals to discuss the topic of "main street" accessibility, and the intersections of heritage and accessibility have been sub-topics of sessions at the annual conference of the National Trust for Canada in recent years.

Recent publications pertaining to built heritage in particular are described in the phase two literature review.

Existing Guidelines and Standards

Several existing policies and standards apply to the management of federal heritage buildings. Others, which may apply to or affect federal heritage buildings in the future, are under development. The following were considered during the research:

1. *Directive on the Management of Real Property* effective May 13, 2021 – Treasury Board Secretariat
2. *CSA/ASC B651, Accessible design for the built environment*
3. *Standards and Guidelines for the Conservation of Historic Places in Canada (2nd edition)* – Parks Canada
4. *CAN-ASC-2.3: Model Standard for the Built Environment – Accessibility for federally regulated entities as defined in* the Accessible Canada Act (under development by Accessibility Standards Canada)
5. *CAN-ASC-2.6: Existing Built Environment – Accessibility for federally regulated entities as defined in the Accessible Canada Act* (under development by Accessibility Standards Canada)
6. *ISO/DIS 5727 Accessibility and usability of the built environment — Accessibility of immovable cultural heritage — Principles and methodology for interventions* (under development)
7. *ISO 21902 Tourism and related services — Accessible tourism for all*

While some federal departments have their own accessibility standards, these are typically not available to the public and were not analysed. The *National Building Code of Canada* is not included in the interest of pursuing "better practice" as opposed to minimum compliance.

Background

Canada's federal heritage buildings are currently governed by the Treasury Board Secretariat's *Directive on the Management of Real Property* (the *Directive*). Under section 4.2, federal "real property practitioners" are responsible for both "conserving the heritage value of federal heritage properties in Canada by following the procedures set out in Appendix A" and "providing barrier-free access to federal real property as prescribed in Appendix D."

"Appendix A: Mandatory Procedures for Heritage Assessment and Conservation" requires that real property practitioners:

- seek a heritage evaluation from the Federal Heritage Buildings Review Office for buildings 50 years of age or older,
- consult with Parks Canada before undertaking any work that may impact heritage value, and
- use best efforts to identify and facilitate alternative uses, including rehabilitation for adaptive reuse, before identifying heritage property as surplus.

Under "Appendix D, Standard on Barrier-Free Access to Real Property," federally owned buildings are required to adhere to *CSA/ASC B651*, Accessible design for the built environment. While Appendix D contemplates heritage under section D.2.3.3, it provides exception only for "some deviation" where "the accessibility requirements of this standard will significantly reduce the heritage quality of the real property." Appendix D does not define what constitutes a significant reduction in heritage quality or provide guidance for meeting or exceeding its requirements. Regardless of heritage quality, Appendix D requires access to at least the main level of the building and the provision of equivalent, accessible facilities where washrooms are inaccessible.

The pan-Canadian framework for decision-making with respect to historic places is the *Standards and Guidelines for the Conservation of Historic Places in Canada* (the *Standards and Guidelines*), developed and maintained by Parks Canada. While not referenced explicitly by the Directive, the Standards and Guidelines are applied by Parks Canada and the Federal Heritage Buildings Review Office in their roles under it.

The Standards and Guidelines do not include rules or requirements, but recommendations which require interpretation and application by heritage or building professionals. The introduction to the Standards and Guidelines states:

> "Providing people of all ages, interests and abilities with access to historic places is highly desirable and a frequently mandated social goal. Generally, the solutions that best balance accessibility needs with heritage value are those that enhance the use and appreciation of an historic place for everyone. Work should be carefully planned and undertaken so that impact on an historic place's heritage value and character-defining elements is minimized: the objective is to provide the highest level of access with the lowest level of impact. To determine the most appropriate solutions, accessibility and conservation specialists, and users, should be consulted early in the planning process." (42)

Guidelines related to accessibility retrofits are included in several sections of the *Standards and Guidelines* and are compiled in Appendix B: Accessibility considerations in the of this report.

The Heritage for All project was designed to interrogate the intersection of "highest level of access" and "lowest level of impact," developing recommendations that meet or exceed accessibility standards without significantly reducing heritage quality. These recommendations may serve to complement the Standards and Guidelines as a resource for those tasked with conserving Canada's historic places.

Other federal standards are currently under development by Accessibility Standards Canada. These include *CAN-ASC-2.3 Model Standard for the Built Environment*, currently in draft, and *CAN-ASC-2.6*: *Existing Built Environment.* Both standards will apply to federally regulated entities with publication expected in 2027.

The November 2022 draft of *CAN-ASC-2.3*, under "3.1 Buildings required to be accessible", states that the Standard "shall apply to […] the alteration, major renovation, reconstruction, relocation and occupancy of all existing buildings" with no listed exception for federal heritage buildings. *CAN-ASC-2.3* notably requires access:

a. from the outdoors at sidewalk, roadway, street level or exterior parking facility to all building entrances,

b. from all building entrances, and interior parking facilities to all floor areas of a building,

c. from all exits to exterior exit doors, and

d. from all exterior exit doors to a public thoroughfare.

While heritage may not be covered by *CAN-ASC-2.6*, it is included here because its application to the existing built environment will necessarily impact buildings that become eligible for review by the Federal Heritage Buildings Review Office at 50 years of age. However, a draft was not available at the time of publication for consideration of these impacts.

The research will assess approaches to, or limitations on, achieving the level of access expected of federal heritage buildings in Canada.

Postal Station A (Recognized Federal Heritage Building), Saint John, New Brunswick

Organization

The remainder of this report is organized according to phases of research.

Sections describe findings in each of the three phases followed by a set of recommendations derived from the research. Case studies are distributed from the section on phase two onward.

Cavalier Building (Classified Federal Heritage Building), Halifax, Nova Scotia

PHASE ONE

Understanding experiences of and perspectives on accessibility in federal heritage buildings

Online Survey

An online survey was available for participants to complete from 23 September 2022 to 13 January 2023. The survey consisted of several questions with a focus on understanding perspectives about accessibility in heritage spaces and the balance between preserving heritage attributes and ensuring heritage buildings are accessible. Two different surveys were administered over the period targeting the disability community (survey 1) and heritage professionals (survey 2). Respondent demographics are summarized in Table 1.

Table 1

Summary of survey respondent demographics

Demographic category	Disability Community (n=51)	Heritage Professionals (n=62)
Gender (# of participants)		
Female	37	37
Male	12	17
Unknown/No response/Other	2	8
Identified disability type (# of participants)		
Mobility-related/Physical	40	2
Hearing-related	6	-
Vision-related	7	-
Cognitive/Development-related	3	-
Unknown/No response/Prefer not to answer	3	1
Does not identify as having a disability	-	59

For the survey administered to the disability community, Likert scales (strongly disagree to strongly agree) were used to better understand (a) one's overall satisfaction with the accessibility of public buildings (b) how strongly one considers the value of a heritage building, and (c) how one considers the balance between removal of barriers and heritage preservation. For the survey administered to the heritage professionals, Likert scales were similarly used to better understand (a) perspectives on the provision of accessibility and modifications to heritage buildings and (b) approaches to providing accessibility.

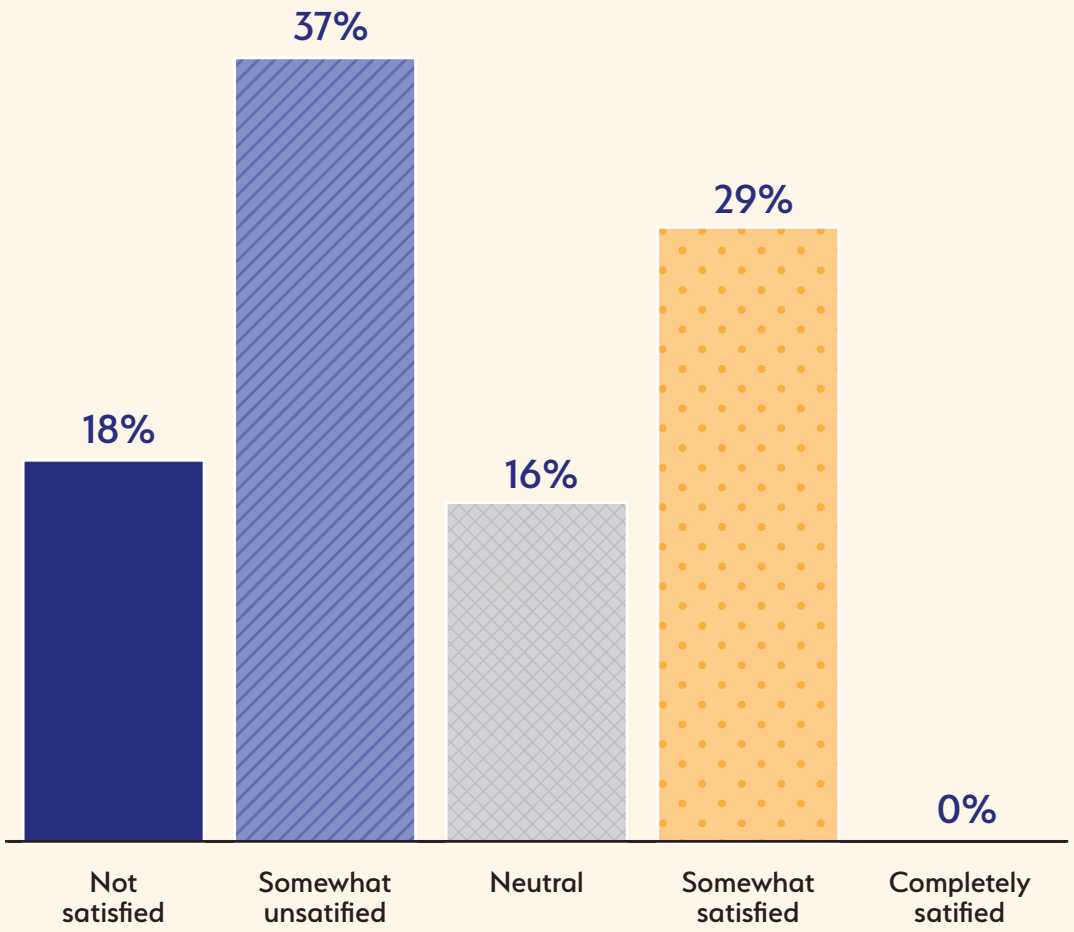
Disability Community Responses

When asked about their current satisfaction with the accessibility of public buildings in general, most of the disability community (71%) reported being less than somewhat satisfied. These questions were in regard to both the physical access of the building from the exterior and access within the building (Figure 2).

Most of the disability community (71%) reported being less than somewhat satisfied

Figure 2

Satisfaction with the physical access of and within public buildings among the disability community.



A building's heritage value was described to the participants as the meanings and values that individuals and/or communities place on a building or site. For example, heritage places may be valued for their historical associations or artistic or architectural importance. When asked how important they consider a building's heritage value, 77% of respondents indicated that the building's heritage value is at least "somewhat important" (Figure 3). However, 73% of respondents also said that at least moderate changes (on a scale from completely preserving to completely changing) should be made to character-defining elements to accommodate for accessibility (Figure 4).

77%

of respondents indicated that the building's heritage value is at least "somewhat important"

73%

of respondents said that at least moderate changes should be made to character-defining elements to accommodate for accessibility

Figure 3

Consideration of a building's heritage value when visiting a building among the disability community.

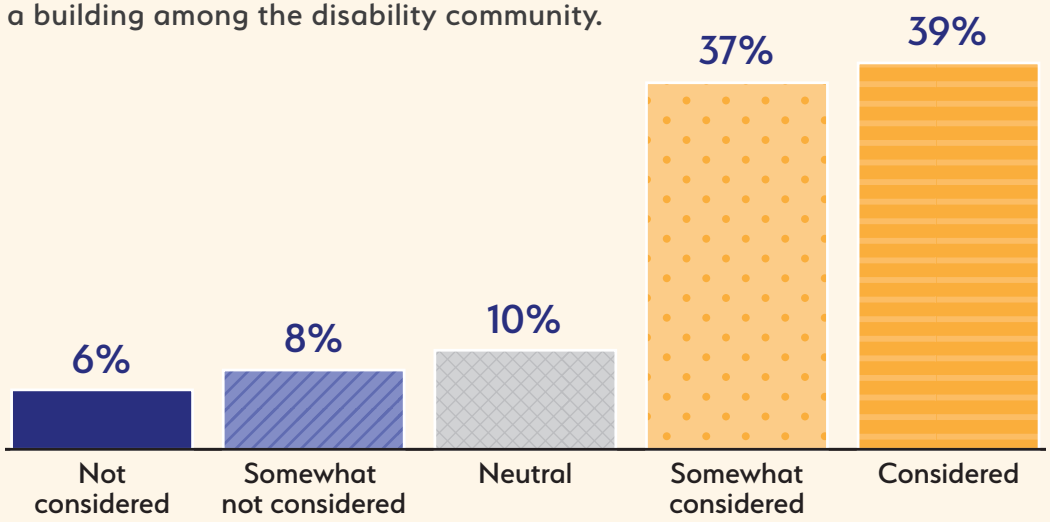
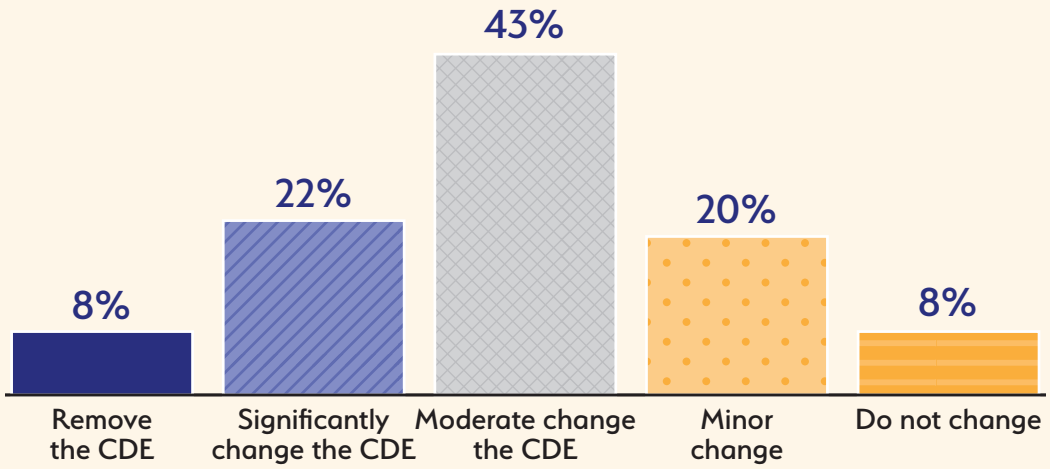


Figure 4

Perception of removing barriers at the expense of a building's character-defining elements (CDE) from the disability community.



Heritage Professional Responses

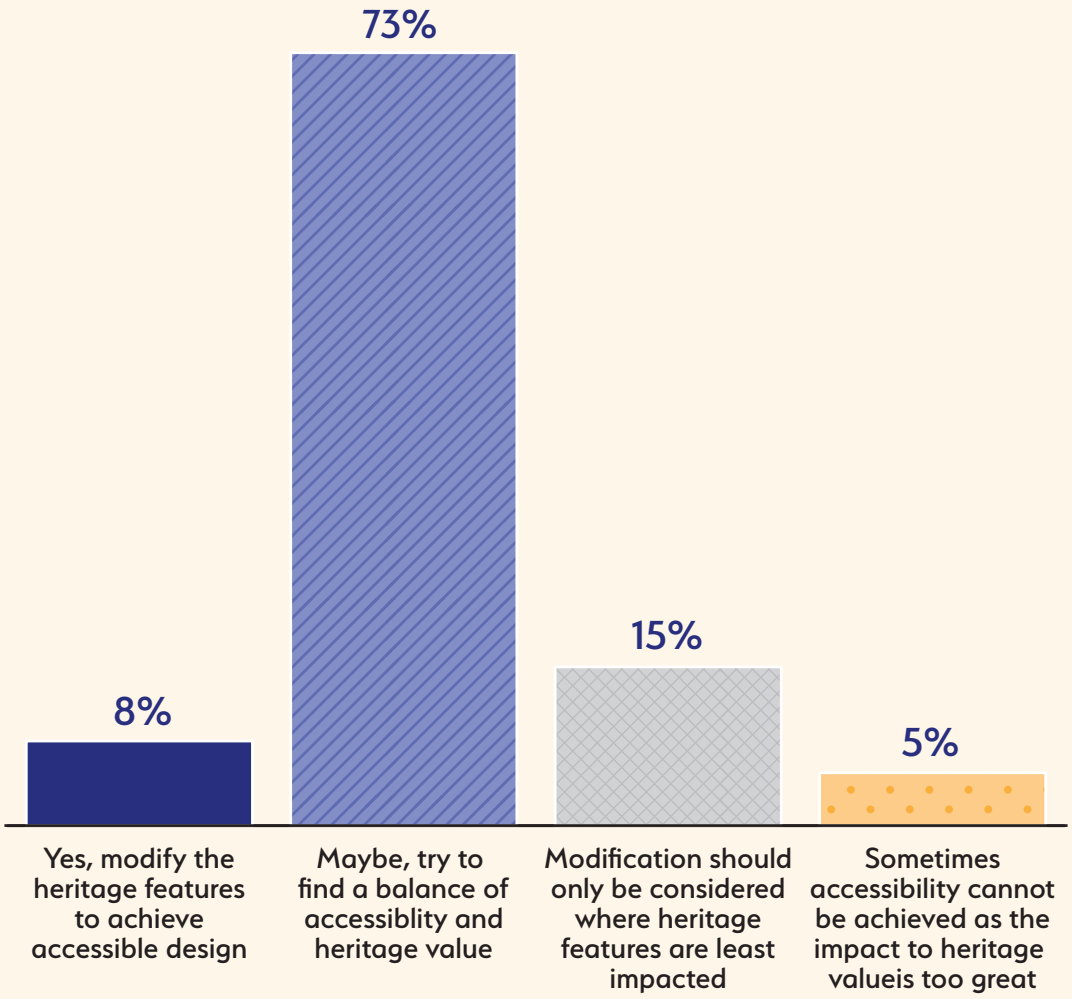
Overall, most heritage professionals (74%) felt it was important to provide accessibility in any renovation of a heritage building. Only 2% of respondents indicated “no” when asked if providing accessibility during a renovation was of importance. When probed about perceptions of specifically modifying character-defining elements of a heritage building, most respondents felt that providing access may exceed the value of preserving heritage attributes, however 20% of respondents reported otherwise (Figure 5).

74%

felt it was important to provide accessibility in any renovation of a heritage building.

Figure 5

Perceptions of heritage professionals on the modification of heritage features to achieve accessibility.



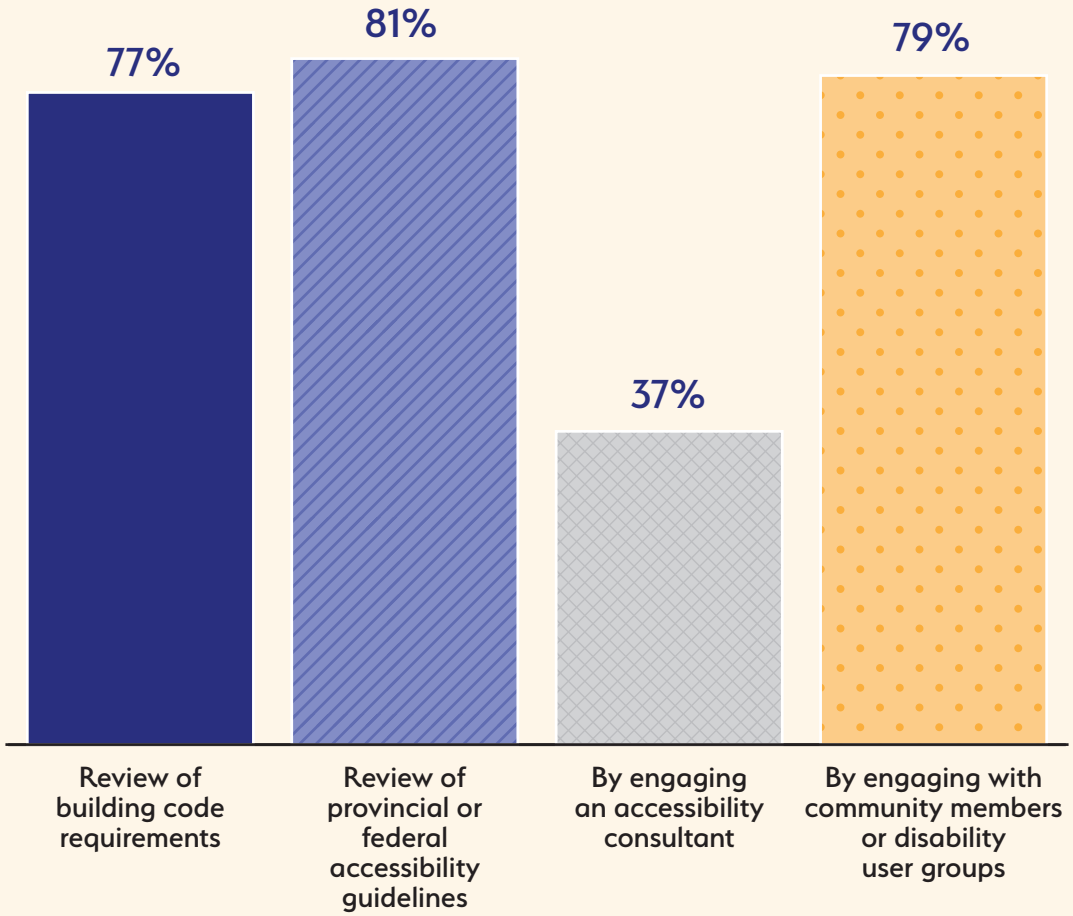
We also asked heritage professionals about their current approaches to assessing accessibility goals on projects. Less than 38% of respondents reported that they engage with accessibility consultants. A significant majority of the respondents reported that they only review the building code requirements and/or review the provincial and/or federal accessibility guidelines (Figure 6).

<38%

of respondents reported that they engage with accessibility consultants.

Figure 6

Current approaches that heritage professionals employ to assess accessibility goals and modifications.



Virtual Workshops

A total of seven virtual workshops were conducted from October 2022 to February 2023. Four workshops included heritage professionals and five workshops included the disability community:

October 31, 2022
- 11AM-1PM ET
- Disability community

November 2, 2022
- 2PM-4PM ET
- Disability community

November 8, 2022
- 11AM-1PM ET
- Disability community

November 16, 2022
- 2PM-4PM ET
- Heritage professionals

November 17, 2022
- 11AM-1PM ET
- Heritage professionals

February 7, 2023
- 11AM-1PM ET
- Concurrent sessions

February 15, 2023
- 1PM-3PM ET
- Concurrent sessions

Workshops were intentionally structured such that perspectives from each group of interest (disability community, heritage professionals) were gathered independent of each other.

Workshops included an introduction to the Heritage for All project and definition of heritage in Canada. Workshop participants were then guided through a series of federal heritage buildings using photographic images, highlighting character-defining elements of the spaces. Questions related to the design elements of each space guided participant discussion, although the overall intention of the virtual workshops was to provide open discussion about one's experiences with accessibility in Canadian heritage buildings.

The summary of the workshops serves as a baseline of public perceptions of accessibility within heritage buildings in Canada.

Workshop Participants

To better understand the experiences and perspectives of various stakeholders, two groups were invited to participate in the workshops: heritage professionals and the disability community. Participants from the disability community included people who were blind or had low vision, people with mobility disabilities (including wheeled mobility device users), and people with hearing disabilities. Demographics for each group of interest are summarized in Table 2. Note that demographic data was not provided by all participants.

Table 2

Summary of phase one workshop participant demographics.

Demographic category	Disability Community (n=17)	Heritage Professionals (n=22)
Age (# of participants)		
Under 30 years old	3	0
30-39 years old	2	6
40-49 years old	2	0
50-59 years old	0	4
60-69 years old	1	1
70+ years old	1	0
Unknown/No response	8	11
Gender (# of participants)		
Female	7	9
Male	1	5
Unknown/No response/other	9	8

Demographic category	Disability Community (n=17)	Heritage Professionals (n=22)
Identified disability type (# of participants)		
Mobility-related	2	0
Hearing-related	2	0
Vision-related	3	0
Cognitive/Development-related	0	1
Unknown/No response	10	0
Does not identify as having a disability	0	21

Victoria Museum (Classified Federal Heritage Building), Ottawa, Ontario

Analysis of Workshop Content

Following completion of the workshops, audio files were transcribed by a team member and reviewed for accuracy. Transcriptions were redacted to remove any identifying information of the participants. Content within the transcripts were then organized according to several guiding questions:

1

What are your experiences with barriers to accessibility and potential solutions? (disability community only)

2

How do you value access within heritage spaces/how do you perceive heritage value in Canada?

3

In your practice, how do you address/perceive competing objectives with heritage preservation and accessibility (heritage professionals only)

Participant comments were organized according to each of the guiding questions above. Several team members reviewed the comments individually and then collectively to identify common patterns, refine summarized data based on consensus, and develop themes. Team members represented diverse perspectives, including Occupational Sciences, Public Health, and Architecture. Relevant quotes that summarize discussion among participants are used to support the themes.

Workshop Results

The results were organized according to the three overarching questions, centred on:

1

Experiences with barriers and potential solutions,

2

The value placed on heritage space and perceptions of heritage value, and

3

Perceptions of competing objectives related to heritage conservation and accessibility.

The extracted themes and supportive quotes are presented in Figure 7, Figure 8, and Figure 9, respectively.

Pleasantville-Building 223 (Recognized Federal Heritage Building), St. John's, Newfoundland and Labrador

Overall experiences with barriers to accessibility and potential solutions, Disability Community

Disability community workshop participants discussed areas of heritage buildings that were generally associated with the most barriers to accessibility. The most frequently referenced barriers were subcategorized according to two broad areas: (a) Entrances/Exits and (b) Interior Space. Many of the heritage spaces within the workshop had undergone renovations for accessibility. These design solutions to address access barriers were also discussed by participants.

The most frequently referenced barriers were subcategorized according to two broad areas: (a) Entrances/Exits and (b) Interior Space.

Overall, the data yielded seven themes related to the sociological or physical impact of the barriers and/or potential solutions for people with disabilities when accessing heritage spaces:

1. Physical effort/physical demand;
2. Lack of end-to-end details;
3. Illusion of accessibility;
4. Non-equitable experiences;
5. Feelings of “otherness”;
6. Reliance on others;
7. Flexibility of choice.

Themes and the associated supportive quotes are presented in Figure 7.

1

Physical effort/physical demand

When viewing the heritage spaces presented in the workshop, participants with disabilities highlighted the potential physical effort required to move within the space. This was particularly evident for wheeled mobility device users who may encounter uneven terrain, long travel distances without rest, or steep ramps/grades. Acoustic challenges were also noted, resulting in physical effort to hear due to high ceilings and reflective surfaces shown within the spaces.

2

Lack of end-to-end details and illusion of accessibility

The heritage spaces shown often depicted what individuals discussed as an “illusion of inclusion” and/or lacking end-to-end details. People with disabilities discussed that while one element of the building may have been modified to provide access, consideration of one’s entire journey is important for ensuring accessibility needs are met.

3

Non-equitable experiences and feelings of “otherness”

Many accessibility solutions in the heritage spaces were designed without consideration of integration within the space. As highlighted by several participants, the visible nature of the solution (e.g. non-integrated lift in space) or alternative solution (e.g. rear entrance) created a feeling of “otherness” or non-equitable experience. Priorities to address accessibility should include appropriate integration within the space to better provide equitable access.

4

Reliance on others

Several accessibility solutions shown within the heritage spaces required trained staff to assist (e.g. lifts that require a key and operator). For people with disabilities, the reliance on others adds challenges to access.

5

Flexibility of choice

Alternative solutions such as virtual experiences were discussed by participants when access to a particular heritage space was challenging (e.g. when narrow door widths prevent users from accessing the space). In these cases, several individuals discussed alternative solutions as appropriate if no other means of access could be found, however they should not be considered a solution to providing access. Having flexibility in one’s choice to use an alternative experience is preferable.

Figure 7

Summary of themes related to barriers to accessibility in heritage spaces and perception of solutions for people with disabilities. Entrances/exits (a) and interior spaces (b) are presented separately.

a) Entrances /Exits

Physical Barriers

Physical Effort/Demand	"whether it's the **uneven ground or the gravel, or the style of the entrance, the distance to the parking lot** [...] it's just a series of 'OK, if I can get through step one, can I get through step two or three or four?'"
	"I find that narrow doors and steps and things like that are often things that I encounter disproportionately in heritage buildings"
Lack of End-to-End Details	"even if the inside is flat I can't get in the door and that's usually stairs or even one big step [...] and then **the width of doorways** [...] just getting in the door is the biggest thing for me and is often something that is not possible"
	"whatever ramp you put there is not going to make a difference because my device is not going through **that door**, so this is almost like what I call the illusion of accessibility"
Illusion of Accessibility	"often there is no landing, it's a ramp straight to the door [...] or you get to the door and there is a landing, but **the orientation of the door to the buttons** that open the door make it so you can't get away from the door as it opens"

a) Entrances /Exits

Accessibility Solutions

Temporary Access/Permanent Ramps

Feeling of Otherness	“you’re singled out, people are staring at you [...] to me it seems like an awful extra step or extrea few steps just to be treated as everybody else”
	“I tend to question why it is a temporary solution [...] it can kind of feel like they’re hiding the fact that they have disabled people that go there”
Reliance on Others	“I want to just be able to enter the space and not have to depend on anyone else [...] without modification or sort of being called out is to me true accessibility”

Alternative Entrances/Modified Front Entrance

Non-equitable Experiences	“often people are already made to fee less than by having to take the literal long way around”
Feeling of Otherness	“having the back door be the entrance for you often creates this weird pointing-out of the differences between you and others”
	“I prefer an alternate entrance to no entrance [...] if it’s possible to have the front entrance be accessible, that should always be the priority”

b) Interior Spaces

Physical Barriers

Physical Effort/Demand	"there's **not an accessible washroom** [...] either within the building or in close promiximty, somewhere else on the site in my mind is not good enough [...] it's not equitable at all"
	"**the grade on these [ramps] looks fairly steep** [...] also the sideways grade of those very tiny little ramps to get into the adjacent rooms [...] there's not a lot of depth between because there's handrails [...] so there's a barrier for someone who wants to turn"
Non-equitable Experiences	"**it's all hard surfaces** [...] so the acoustics likely it would be quite reflective and the ceilings are high [...] it can be quite difficult to follow what's being said when there's all kinds of sound bouncing off the walls and the ceiling"
	"even though I know **that counter** is lower, it's not accessible at all, it's got cabinets below it so somebody with a wheelchair couldn't even pull up to it [...] it's not usable"

b) Interior Spaces

Accessibility Solutions

Lifts/Elevators

Feeling of Otherness	“I’m very happy if there’s a lift at this stage [...] but sometimes a lift can feel like being singled out and [...] they also take so much longer to get in and out”
	“you have to basically be put in a box to get in and out and it’s very slow [...] elevators tend to move pretty quickly and not create this feeling of isolation that a lift often can, and also lifts are loud so more people are looking at you”
Reliance on Others	“I always need an able-bodied person and I don’t know where they put the keys, but no one ever knows where they are”

Alternative Measures (e.g. virtual experiences, media)/In-person Accessibility

Non-equitable Experiences	“the alternate measure thing is often put forward by a lot of buildings that could be accessible if they tried [...] with virtual tours and things like that, if I wanted to see photos of this building I could have done so from home”
Flexibility of Choice	“I don’t want alternative programming to always be the alternative to making something accessible, but I think there is value in creating choice with options”
	“there’s almost this silent way that we are treated in these spaces where we are basically told, not by mouth but with expression and the way that people act, that we should be lucky to be there at all and that we should take anything we are given”

Understanding one's value of heritage buildings in Canada and perspectives on providing access in heritage spaces

Participants in both workshops (disability community and heritage professionals) discussed the value they place on heritage building preservation and/or the impact of various design solutions to improve accessibility. The discussion was summarized according to several thematic areas. Each theme represents an area of consideration for heritage preservation and accessibility:

1. Conservation of heritage attributes;
2. Original intent of the building;
3. Maintenance of integrity of the building;
4. Functionality of the space;
5. Added value and educational opportunities; and
6. Equal experience and inclusivity.

Themes and the selected associated supportive quotes for heritage professional and the disability community are presented in Figure 8 and Figure 9, respectively.

Conserving heritage attributes, considering the original intent of the building, and maintaining the building's original integrity

Discussion for both heritage professionals and disability community participants highlighted the value of conserving character-defining elements, considering the original intent of the building, and maintaining the building's original integrity. As stated by the heritage professional participants, these important physical elements are those which make up the heritage asset and significance of the building. Heritage professionals noted that buildings were "artifacts" themselves and placed value on the original intent of the building. Several heritage professional participants noted that many heritage buildings were meant to be exclusionary (e.g. imposing buildings with grand entry stairs) or inaccessible (e.g. military buildings) when originally designed and, as such, full accessibility may not always be achievable. Others expressed greater acceptance of change in the interest of inclusion, even for challenging sites.

Participants in the disability community also acknowledged the value of preserving heritage buildings for present and future generations. For several disability community participants, maintaining the integrity of the original building when providing accessibility solutions allowed one to enjoy the historical aspects of the space. Considering the appropriateness of the accessibility solutions (e.g. material used, integration within the space, something that looks "historical") could enhance one's experience in heritage buildings as a person with a disability. However, as also stated by several disability community participants, the value of a heritage building should not be above the value of people. Many participants discussed how historical buildings were built in a time that did not value or consider accessibility as a priority. As noted by participants, inaccessible heritage buildings serve as a reminder of a lack of inclusion and segregation for the disability community at that time.

Figure 8

Summary of themes related to discussion about the value of heritage buildings and preservation of heritage buildings. Themes and example quotes from heritage professional (a) and disability community (b) participants are presented separately.

a) Heritage Professionals

Conserving Heritage Material/ Attributes	"I certainly wouldn't want to see the portico go [...] that would [...] maybe allow for a ramp, but no, definitely the portico is part of the heritage characteristic of the building"
	"you do want to keep some of those [...] features intact so you keep them as much as you can, you don't just remove them without a good reason"
	"if you change all this, then you're losing that part of the experience and then it's no longer the heritage asset it was [...] even though you made it accessible [...] you've dried up your visitor base because you don't want to come see something that's not as authentic as possible"
Original Intent of the Building	"the intent, the built design, it was very, very purpose built, it was never intended to be easily accessed [...] like by anyone"
	"you'd be doing a dissevice making a perfectly flat, beautiful, perfect floor because it was never like that, even for the original people that were there it was never easy"
	"they didn't care about accessibilty [...] the intent was to have design in part be be very exclusionary [...] it was never meant to be accessible in the first place so there are certain things that aren't going to be able to be made 100% equitably inclusive or accessible"

a) Heritage Professionals

Maintaining Integrity of the Building	“you’re back to an aspect of can you do it in a way that maintains the design and integrity of the building”
	“has there been a loss of the material [...] is this intervention reversible [...] what are the sort of permanent ramifications of this [...] it depends how closely you want to follow the Standards and Guidelines [for the Conservation of Historic Places in Canada]”
	“this [change] gets you inside the building, then you start circling around the rest of the building [...] part of that path has to be updated [...] then it’s a trickle-down effect where you have to keep changing things til [...] you no longer have that heritage asset that you were trying to preserve”

b) Disability Community

Conserving Heritage Material/ Attributes	“there’s almost this asumption that, oh, if it’s historical then that’s too bad, the building takes precedence [...] if historical buildings aren’t accessible, who were they really for?”
	“I think heritage buildings are very beautiful and [...] it’s important to maintain them, but I think that the value of the heritage building should never be abovet he value of us as people”
	“where I kind of land is emabling the maximum degree of accessibility with the minimum degree of alteration [...] I mean we have a right in 2023 to enjoy the facility, so do people in 2123 and whatever future you might want to pick”
Original Intent of the Building	“if we allow keeping the front entrances inaccessible [...] then historical buildings are always largely going to be a visual representation of how people that looked like us were treated [...] people like us were basically put away and not welcomed to be anywhere”
	“I fear that when we say like ‘oh, with heritage things don’t have to be or can’t be made accessible’ we’re normalizing the idea that exclusion is like a baked-in thing to like the human condition”
	“I don't feel welcome in this space, there's nothing about that that says that I can visit it, says my daughter can visit [...] this represents segregation [...] this is the way it was done, I don't want to cover it up but we can't continue to promote it as being the way”

b) Disability Community

Maintaining Integrity of the Building	“I feel like when I’m speaking to hte people that are in these positions of power of like running a building [...] they will act as if I’m asking them to put in like a giant lift with a giant wheelchair sticker on it [...] I even techincally would prever somethign that looks historical cause if I’m coming to a historical building I’m coming to enjoy it for its historical properties”
	“I think from an accessibilty perspective, we cal all agree that what we want is an appropriately accessible ramp or whatever other accommodations to be firstly accessible and then the [historically appropriate] material is second to enabling that authentic use by persons with disabilities”

Functionality of the space, new uses and educational opportunities, and equal experiences

Both heritage professionals and disability community participants discussed how providing and improving accessibility adds value to heritage buildings. Providing equitable experiences was important for all participants. As noted by both participant groups, with accessibility solutions more people can access spaces and enjoy/learn from the spaces. Both groups offered insight into how creative accessibility solutions may also offer educational opportunities to highlight heritage attributes/design choices made at the time. Several heritage professionals discussed a shift in values in the heritage industry from preservation of physical attributes only to consideration of the cultural value of the space. Improved access allows for cultural value of the space to be shared among more people. As noted by heritage professional participants, people with lived experiences should be included in the accessible design process.

Figure 9

Summary of themes related to discussion about the value of accessibility within heritage buildings. Themes and example quotes for heritage professional (a) and disability community (b) participants are presented separately.

a) Heritage Professionals

Functionality of the Space	"we want things to be usable [...] our first concern is not 'don't touch the building' [...] the users are the priority"
	"preserving a bunch of old buildlings exactly the way they are, and then people can't use them, that's not very purposeful and it's not very realistic, so you have to make concessions sometimes to functionality"
	"use value is not really considered in statements of significance in assessing heritage buildings, but really if it's not accessible, why are we guiding people to this buildilng?"

a) Heritage Professionals

New Users and Educational Opportunities	"I like to honour the existing buildling but also acknowledge that buildings change, uses change, and adding a layer of new use is something that can be done well with minimal impact and can be easily distinguishable from the existing [building]"
	"when you get creative [...] maybe you can actually come up with something that amplifies the goal of this space [...] if we broaden the door withs then more people could navigate the museum [...] the widening itself could add to education [...] highlight how narrow the doors were and why those narrow doors were important when it was first built"
	"it's still a learning space, it's created a new life [...] the value now is it's a tool [...] it's still a buildling people can experience [...] I think that's a huge part of the significance moving forward"
Equal Experience and Inclusivity	"our heritage values are [...] being able to make sure that everybody is able to interface with the building in an equal way [... but historically] they're thinking about heritage balue [...] like the character in itself"
	"that just comments on the [...] importance of characterizing people as first-class citizens [...] creating the idea that people are actually equal and have the right to access the space the same way as anybody else"
	"you can think about it as 'how do we create a space or this museum for everyone and be inclusive' rather than saying 'well how do we meet AODA requirements,' and so those are kind of two different lenses in which you can approach a project"

b) Disability Community

Functionality of the Space	"I think a lot of heritage professionals should remember the fact that we think these things are beautiful too and that we are asking to be in this space because we appreciate it"
	"I feel like the reason that these spaces exist is because people really enjoy and value the experience of physically being in them, touching things [...] but like having that as a shared experience with others and it's talking to people who work there, seeing things with your own eyes"
	"I would go to Casa Loma or I would love to do more of these things so it's a dismissal through negative experiences, not from a desire"
New Users and Educational Opportunities	"I think that's really important for us to not be so consumed with it as it exists at this moment [...] have the understanding that tese are things [...] tjhat have changes to enable people to experience this today [...] it becomes a part of the heritage of that space, enabling it to actually be a part of the world"
	"I think there's an opportunity to actually [...] make that entrance accessible to all [...] and do it in a way that demonstrates the change [...] there's real opportunity here to teach, to learn, but we all have to get in the same room in order to do that"
	"if the sacrifice that we're talking about is we're going to blow out a little bit of stone and replace it with concrete, that says we did this so that everybody can know the stone"

b) Disability Community

Equal Experience and Inclusivity	“I feel like when I’m speaking to hte people that are in these positions of power of running a building [...] they will act as if I’m asking them to put in a giant lift with a giant wheelchair sticker on it [...] I even techincally would prever somethign that looks historical cause if I’m coming to a historical building I’m coming to enjoy it for its historical properties”
	“I think from an accessibilty perspective, we cal all agree that what we want is an appropriately accessible ramp or whatever other accommodations to be firstly accessible and then the [historically appropriate] material is second to enabling that authentic use by persons with disabilities”

Conclusions

It was clear from consultation in phase one that most participants from the disability community value heritage buildings for their aesthetic and other qualities, but that existing access provisions are inadequate for their full enjoyment. It was equally clear that heritage professionals value accessibility and support the adaptation of buildings even where character-defining elements must be altered (to greater or lesser extents) to provide access. These results confirmed the need to uncover the appropriate balance, or the appropriate process for achieving balance, for the Canadian context.

Themes from the workshops served to inform the criteria for evaluating case studies and approaches in subsequent phases, such as ease-of-use, complete journey sequences, universal design, independence, and choice. The shared value placed on the conservation of specific heritage features, design intent, and integrity helped inform recommendations on approaches to accessibility retrofits. Findings related to the added functionality and value of accessible heritage buildings for all visitors served to underline the imperative for high quality interventions.

These results confirm the need to uncover the appropriate balance, or the appropriate process for achieving balance, for the Canadian context.

Monument Lefebvre (Classified Federal Heritage Building), Memramcook, New Brunswick

PHASE TWO

Researching solutions and best-practice examples of accessibility interventions in heritage contexts

Literature review

A review of literature was completed focusing on Canada and comparable international jurisdictions. Key sources are described below with a focus on those issued by national-level institutions. Due to differences in legislation, publications tend to focus on the specific contexts in which they are written and are therefore organized by jurisdiction.

Canadian sources

Perhaps the first organized discussions on accessibility and heritage in Canada were organized by University of Waterloo's Heritage Resources Centre. The Centre held a series of workshops in the mid-1980s, presenting and publishing their results, before organizing the Access Heritage Forum in 1987. The Access Heritage Forum brought together heritage professionals and members of the disability community to discuss the legal aspects, physical challenges, and landscape implications of providing or not providing access to heritage sites and workshop recommendations for better outcomes. Several next steps were identified as part of an "Access Heritage Action Program" (Gilbert, A. et al. 1989), however it is unclear if organizing continued.

The *Standards and Guidelines for the Conservation of Historic Places in Canada* was first published in 2003 and is in its second edition as of 2010. It includes accessibility criteria for heritage buildings in the form of "recommended" and "not recommended" approaches rather than specific strategies. The first edition of the *Standards and Guidelines* grouped accessibility considerations under an "other considerations" heading while the second edition distributes them in the sections to which they relate, representing a trend toward the integration of accessibility in all facets of a project. The Standards and Guidelines are described in greater detail above.

In 2008, in the wake of the passing of the Accessibility for Ontarians with Disabilities Act (2005), the Ontario Historical Society published *Accessible Heritage: An Accessibility Toolkit for Ontario's Heritage Organizations and Institutions. Accessible Heritage* is divided into eight modules covering legislation, theory, accommodations, communications, and accessibility planning. While it describes common barriers found in heritage buildings, and architectural barriers as concepts, it does not provide specific guidance for overcoming them. General good practice in terms of physical facilities and programs is provided in the form of checklists.

In 2020, Heritage BC published *Accessibility for Historic Places* and the supplement *Access Basics*, intended to provide "the tools to enhance the accessibility of historic places for persons with disabilities without affecting the heritage values and character-defining elements." It is

divided into three sections on: the legal and social context for accessibility, the planning process, and tips for eliminating common barriers.

The guide emphasizes the importance of planning and lays out three parts of the planning process: the prerequisite development of a Statement of Significance and conservation plan for the building; an access audit to determine current accessibility from a cross-disability perspective; and the development of an access plan that describes necessary changes, impacts, timelines, budgets, and design considerations. It is recommended that people with disabilities be involved in both the audit and access-planning stages.

The guide goes on to describe approaches to addressing accessibility barriers, beginning with those that do not physically impact the building, such as staff training, pre-visit information (websites), and the placement of accessible parking. Building interventions described in the guide are the addition of ramps and lifts, stair and door modifications, and accessible washrooms.

International sources

The United States of America and the United Kingdom each saw a flurry of interest in the accessibility of historic sites following the passing of legislation: the former's Rehabilitation Act (1973) and the Americans with Disabilities Act (1990) and the latter's Disability Discrimination Act (1995), superseded by the Equality Act (2010). Both also have recent book-length publications on the topic. While other jurisdictions offer additional guidance based on their distinct legislative contexts, the following review focuses on jurisdictions visited by members of the project team.

United States

In 1980, the US Department of the Interior's Technical Preservation Services office published *Access to Historic Buildings for the Disabled: Suggestions for Planning and Implementation*. It describes a planning process beginning with an assessment of existing conditions and needs. Using this background information, a custodian must then select an appropriate mode of implementation: program or activity changes, portable devices, and/or architectural changes (reversible or non-reversible). The first means avoiding barriers by providing services in an accessible area or through other means and comprises simulated experiences where the building itself is the service. The second refers to movable ramps and mechanical solutions, the latter being generally inappropriate today. The last comprises changes to the site, alterations to the heritage building, or the addition of access elements like ramps. While the report provides a good range of solutions, it is a product of its time and prioritises the preservation of architectural elements in its assessments.

In 1993, the National Park Service's (NPS) Heritage Preservation Services office published the oft-cited *Preservation Brief 32: Making Historic Properties Accessible*, providing guidance and examples "to show that independent physical accessibility at historic properties can be achieved with careful planning, consultation, and sensitive design" (Jester 1993, 1). It recommends a three-step approach: a review of significance and character-defining features, an assessment of existing and required accessibility, and an evaluation of options in a preservation context. Like its predecessor, the

| Postal Station A (Recognized Federal Heritage Building), Saint John, New Brunswick

brief describes a series of barriers and potential solutions with photo illustrations. Descriptions are necessarily brief given its short length. The NPS published other pamphlets and articles both before and after Preservation Brief 32, however without the same depth of consideration or widespread use.

The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings (2017) is the American counterpart to the Canadian Standards and Guidelines. It considers accessibility under each of the titular treatments for historic buildings in a subsection on code compliance. Like Canada's document, it states that "the goal should be to provide the highest level of access with the least impact to the historic building" (Grimmer 2017, 22) and includes photos illustrating concepts and successful examples.

The American document also follows a format of "recommended" and "not recommended" approaches. Recommended approaches include understanding the heritage building, minimizing impact, working with specialists, and using code alternatives when necessary. Several more specific interventions are contemplated by recommendations to screen ramps or supply them on secondary elevations, to use gradual grade changes over ramps where possible, and to locate lifts as inconspicuously as possible on primary elevations or in less important interior spaces.

Most recently, museum professional Heather Pressman edited *An Accessible Past: Making Historic Sites Accessible* (2023), a collection of essays exploring approaches to accessibility at a wide range of US sites. Her introduction summarizes requirements for heritage buildings under the ADA and describes a three-stage planning process comprising a site review for heritage value, an accessibility audit, and the development of a transition plan. In contrast to earlier publications, *An Accessible Past* focuses almost exclusively on programmatic access to museums where physical, sensory, or cognitive access to buildings, tours, or exhibits is

limited. Its detailed case studies provide valuable considerations for interpreting heritage buildings and their collections, particularly in the wake of COVID-19. Conversely, it gives little attention to physical access, particularly to heritage buildings without heritage programs.

UK

England, Scotland, and Wales are each subject to the Equality Act (2010), though each retains certain separate provisions for accessibility and issues its own guidance on accessibility in historic contexts. The Equality Act prohibits discrimination in the provision of services to people with disabilities, however it does not require that listed buildings be altered if services can be provided through other means. Nevertheless, universal access remains a priority and several sets of guidance have been published to this end.

England

England's national guidance on accessibility in heritage contexts has gone through several iterations. Historic England currently maintains two documents specific to the topic, *Easy Access to Historic Buildings* and *Easy Access to Historic Landscape*s.

Easy Access to Historic Buildings was published in 2015 and builds on previous editions from 2004 and 2010 (and an earlier 1995 guidance note). It opens by outlining the legislative context for both non-discrimination and conservation before describing the planning process for improving access: articulation of an access strategy, completion of an access audit and conservation assessment, drafting of an access plan, consultation with stakeholders including people with disabilities, development of proposals, and creation of an access plan that considers options, identifies needs and impacts, and looks at what is "reasonable." The core of the document provides practical advice and illustrated examples pertaining to horizontal and vertical movement, lighting, signage and information, landscaping, and seating. It describes considerations, limitations, and alternatives associated with each measure.

> "Removing the barriers to access can allow many more people to use and benefit from the historic environment, and if done sensitively need not compromise the ability of future generations to do the same."
>
> (Sawyer 2015, 2)

Easy Access to Historic Buildings is not a standard but references the UK's existing accessibility standards, *Approved Document M* and *BS 8300*. It recommends meeting standards to the extent possible, in order to prevent discrimination under the Equality Act, but notes that failing to meet them does not necessarily result in discrimination. Alternate measures may, in practice, provide equivalent access while conserving heritage value.

Easy Access to Historic Landscapes was likewise reissued in 2015 and follows a similar format but goes into greater detail on consultation with people with disabilities. It describes effective consultation as being based on clear understandings of the significance of a site, the historically significant features that cannot be changed, less significant features that may be easily altered, and resource and budget

details. Consultees must likewise be given adequate information with which to make decisions, sufficient time to respond, and meaningful input in final decisions (Whimster et al. 2015, 17). While landscapes are not a focus of the present project, landscape elements are inseparable from access to some federal heritage buildings.

Perhaps the first book-length publication on the topic of accessibility in heritage contexts was Foster's *Access to the Historic Environment: Meeting the Needs of Disabled People* in 1997. Published just two years after the UK's Disability Discrimination Act (1995), it would remain the most comprehensive analysis for more than 25 years. The book is divided into sections with illustrated case studies interspersed with the main text. The first section provides context, describing the need to provide access along with conservation challenges. The second discusses criteria for developing an access strategy and, while it does not describe a linear process as later sources do, it does describe constituent parts including the access audit, conservation assessment, and consultation with disabled users.

From there, the book devotes several sections to specific strategies and considerations. A section on circulation provides options for providing access to heritage buildings and services in categories including front entrance solutions and complementary entrances. A section on design considerations provides specific strategies for integrating ramps and other solutions. A section on vertical circulation largely relates to mechanical access, including passenger lifts (elevators) and platform lifts. Finally, a section on cultural monuments describes approaches to those sites without economic value which are conserved for their intrinsic value and therefore demand greater compromise in terms of accessibility, including ruins and gardens. Text in each of these sections is cross-referenced to applicable case studies richly illustrated with photos and drawings.

Several publications have focused on specific types of venues but include broadly applicable concepts and approaches. *Widening the Eye of the Needle: Access to Church Buildings for People with Disabilities* (Penton 1999), now in its third edition, largely relates existing guidance to churches, though it also provides uniquely detailed recommendations, down to specific construction details, arranged according to the journey sequence. *Access for Disabled People to Arts Premises* (Noble and Lord 2003) presents a series of case studies of accessible theatres, galleries, museums, and libraries. It is organized as a series of case studies following the journey sequence, from arriving at a site to availing of services or staff facilities. Examples are primarily drawn from award-winning projects, with a focus on complete accessible journey sequences and cross-disability considerations, though not all are heritage buildings. *Making Existing Buildings Accessible: Museums and Art Galleries* (Cave 2007) looks specifically at arts uses in heritage buildings. Organized around a series of case studies, it provides multiple first-person accounts for most case studies, including perspectives of the author, clients, architects, and access consultants. Cave states as a hypothesis that there are ways other than those described by published standards to make existing buildings accessible with the caveat that innovative solutions should be developed in consultation with people with disabilities and monitored to determine their ultimate success (2007, 4).

The most recent UK publication is Bonnett and Nee's (2023) *Inclusive Design for Historic Buildings: Architectural Approaches to*

Accessibility. It first lays out the context in terms of access and building legislation, as well as the place of heritage buildings, before describing a methodology for change and the elements of the "visitor journey," analogous to the journey sequence. The core of the book is a collection of more than 25 case studies of successful projects, described in detail and arranged under five category headings: modification, addition/extension, insertion, reorientation, and mechanization. They end with chapters on consultation and trends, including the development of disability networks, the business case for accessibility, professional skills, and the use of new technology into the future.

Scotland

In 1996, Historic Environment Scotland (then Historic Scotland) published *Access to the Built Heritage* (Technical Advice Note 7). Focusing on mobility disabilities, the document provides specific guidance for overcoming a variety of architectural barriers as well as recommendations related to training, information, and maintenance (Young and Urquhart 1996). It begins with a summary of restrictions observed during site visits and a description of decision-making considerations before discussing each restriction in detail. Unlike many such publications, *Access to the Built Heritage* includes practical tools including drawings, decision trees, and dimensions for access features. It ends with the presentation of a site assessment methodology following a journey sequence beginning with site access and recommends engaging people with disabilities in movement studies.

In 2010, the same agency released *Managing Change in the Historic Environment: Accessibility* as part of a series providing advice based on the Scottish Government's planning policies. Though only 12 pages in length, it provides a succinct introduction to planning for and approaching accessibility in heritage contexts with a focus on unassisted and dignified access for all (Historic Scotland 2010). It begins with the need to understand the needs of users and the character of the building and briefly discusses the process for assessing options.

> "Where physical alterations are required, it is usually possible to achieve access improvements that are sensitive to the historic character of the building or place through high-quality design, management and maintenance."
>
> (Historic Scotland 2010, 2)

A third of the document is dedicated to "high-quality design and materials" in general, but also in reference to specific elements comprising approaches, steps, doors, staircases, extensions/additions, lighting, and signage (Historic Scotland 2010, 6-10). It outlines the importance of maintenance of access features and periodic review before ending with several sections particular to the planning and consents system in Scotland.

Ireland

In Ireland, the Disability Act (2005) requires that heritage buildings open to the public be accessible to people with disabilities as far as practicable,

however it is explicit in not requiring physical changes where they would have a significant adverse effect or compromise the characteristics of the heritage building. In 2011 the National Disability Authority, Ireland's state agency for disability policy and practice, published the *Code of Practice on Accessible Heritage Sites* under Section 30 of the Act. Under law, compliance with the Code is deemed to constitute compliance with the Act.

The National Disability Authority (2011) suggests that effective access can be facilitated by a "proactive and consultative approach to design and service delivery" (8). Guidance is laid out following the journey sequence and for each element includes rationale, a succinct goal, and supportive examples. Steps include planning, pre-visit information, approach and entry, wayfinding, interior circulation, and facilities. Examples are wide ranging, including suggestions for alternate formats, specific features or technologies, and architectural elements.

The same year, the National Disability Authority and the government department for heritage published a broader non-statutory document entitled *Access: Improving the Accessibility of Historic Buildings and Places* (Shaffrey et al. 2015). This manual describes principles, the Irish legislative context, the planning process, implementation, and the accessibility of information. It emphasizes that there are situations where only partial or no improved physical access will be possible and where the appropriate balance will centre on management solutions (17).

Shaffrey et al. (2015) devote significant attention to both the planning process and approaches to improving access, the latter divided into sections on the external environment and heritage buildings. External environment refers to landscapes and streetscapes and deals with individual elements including wayfinding, curbs, and street furniture. The section on heritage buildings is organized around the journey sequence and covers elements in turn, from arrival to exit. Advice is detailed, specific, and illustrated with photos. While Access necessarily reflects Ireland's prioritisation of strict conservation, this constraint necessitates thorough consideration of the various solutions presented and management approaches in particular.

["In making decisions about intervention and change, owners or custodians should respond to the needs of today while being mindful of their role as temporary custodians of a heritage passed down from previous generations, which should be passed on to future generations with its special qualities intact." (Shaffrey et al. 2011, 11-2)]

Other sources

As of January 2024, the International Standards Organization (ISO) is developing *ISO/DIS 5727 – Accessibility and usability of the built environment – Accessibility of immovable cultural heritage – Principles and methodologies for interventions* based on Spanish standard *UNE 41531:2018 IN*. It states as a general principle:

> "Accessible immovable cultural heritage enables all people to fully and effectively access, use and enjoy it, along with its values. Additionally, providing accessibility to cultural objects contributes to their conservation by enhancing recognition, valuing, and understanding of their significance and importance for the local community and society in general" (5).

It includes strategic, technical, and operational principles as well as

a methodology for planning and implementing improvements. The methodology is formatted according to steps and their outputs. It begins with the determination of objectives and the adoption of strategies, for which detailed considerations are laid out. The next step comprises analysis of the heritage building in terms of both heritage value and accessibility, resulting in a Statement of Significance, access study, and analysis of the two. In this step the draft standard recommends ranking heritage values. Next, specific accessibility objectives are determined based on the results of the previous step. These objectives should be defined in terms of the nature of the intervention (physical, operational, informative), level of permanence, known future changes, and other considerations, and articulated in an Access Concept. In the next step, proposals for action are drafted and evaluated. Finally, an Intervention Plan is developed documenting objectives, the process, details on implementation, and provisions for evaluation, monitoring, and maintenance.

A significant amount of additional information is provided in the form of supplementary material to the draft standard, including annexes on types of accessibility needs, additional considerations for determining objectives, types of heritage value, public information, and examples of good practice.

While they will not be discussed in detail, several other national-level guidance documents were reviewed in part or whole by the project team. These include Martin's (1999) *Improving Access to Heritage Buildings* for the Australian Heritage Commission and National Trust of Australia and later *Access to Heritage Places Guidelines* (Eric Martin and Associates 2018) developed for New South Wales and Victoria; McClean's (2011) *Providing for Physical Access to Historic Places for the New Zealand Historic Places Trust Pouhere Taonga*; and Cadw's (2022) *Managing easy access to listed buildings in Wales*. Each provides additional perspectives and examples for consideration.

Site visits

Primary research in phase two consisted of site visits and informal interviews to document and record the details of successful retrofits in heritage contexts. More than 30 in-depth site visits were conducted in Canada, the United States, Ireland, and the United Kingdom. An additional selection of sites was visited informally. Analysis of site visits in phase two yielded themes and a set of common solution types described below.

A list of site visits is included in Appendix C: Site visits completed for phase two.

Case studies

A selection of case studies of buildings visited by the team is distributed throughout the remainder of this report. Case studies are intended to highlight a range of innovative solutions from across Canada and comparable jurisdictions internationally.

Several sources acknowledge the importance of precedent as a basis for new interventions. The draft standard *ISO/DIS 5727* (2023) states that "accessibility interventions at comparable cultural objects and the knowledge drawn from them can serve as references for the development of proposals for action" (10) and Design for All (2023), in a report funded by Accessibility Standards Canada, includes a recommendation for the creation of an open-source repository of alternative accessibility solutions, writing that "the ability to establish free sharing of the knowledge of how to resolve unique barriers to accessibility in heritage buildings will create a resource for all professional designers and the custodians of heritage buildings" (65). It is in this spirit that case studies are provided.

For each case study, information (e.g. architect or year completed) is provided for the most recent accessibility retrofits observed, though in many cases buildings had gone through several generations of improvement. Key takeaways are also provided, in most cases including limitations or trade-offs. This is not to critique specific approaches but to highlight the balancing act undertaken by project teams. Their ultimate success will be up to users with disabilities and heritage professionals.

A directory of case studies is provided at the end of the report.

1

Colonial Building

Location: **St. John's, NL, Canada**

Architects/consultants: **EVOQ Architecture, Stantec, Department of Transportation and Infrastructure**

Year completed: **2022**

Ownership: **Provincial government**

The Colonial Building's original entrance is at the top of a set of wide steps which are themselves at the top of a slope. The portico and grand pediment above were conserved with the public entrance relocated to the lower level, around the corner to the right.

The Colonial Building is a Neoclassical stone building with a T-shaped floorplan, built between 1847 and 1850 in St. John's, Newfoundland and Labrador. It served as the colonial and (later) provincial legislature until 1959.

From 2009-22 the province undertook a $22 million project to restore the building for presentation of its political history. It is a case where the building itself is an artefact for interpretation, with a high level of conservation of interior and exterior detail.

The building is characterised by a monumental portico with wide steps leading to the front door. The main floor sits on a lower level that is fully above ground at the sides and rear. On the interior, the front of the building is divided into offices and the rear into two large chambers with galleries. A split staircase originally provided the only means of reaching the left and right sides.

A relatively small, symmetrical floorplan precluded the insertion of an elevator, and it was decided early on that vertical access would be provided via a lift added in a corner of the "T." Adaptation of the front stairs would have had a significant visual impact on the building, so a decision was made to make a lower side door adjacent to the parking lot the main

An existing side door is now the primary entrance for all visitors. It is level with the ground and located near an existing parking lot, enabling step-free entry.

entrance. Programming was oriented to the new entrance, with tours progressing to the lift and a nearby staircase where everyone proceeds to the main floor. A new passage was opened between the left and right galleries to provide step-free access to the entire top floor.

The exterior lift shaft is clad in stone that closely matches the heritage building. Visitors to the adjacent park would be unlikely to recognize it as a new addition while a professional would notice subtle modern details.

Key takeaways

- An alternate entrance is now the main entrance for all visitors. New interior services align with the new entrance.
- A new wall opening provides level access between two sides of the upper level for the first time.
- Interventions were detailed to reference or match historic details while remaining identifiable to the trained eye.
- While the lift was meant to be independently operable, it sometimes requires staff intervention due to tight clearances and sensitive safety sensors.

The new lift shaft adopts the materials and details of the existing building. It is differentiated subtly by modern details, most evident at the base of the walls.

Attributes from site visits

After visiting more than 90 case study sites, several common attributes began to emerge. These themes are described below under headings used by the project team. Due to the unique nature of most heritage buildings, attributes are largely related to processes as opposed to specific approaches. The latter are described in subsequent sections.

Based on the results of feedback in phase one, analysis focused on sites that were most successful in terms of providing easy access, complete accessible journey sequences, equitable experiences, independence, and choice.

1. Creativity

Most successful case studies exhibited creativity in their approach to overcoming architectural obstacles, though the kind of creativity observed is different from the individualistic creativity often seen in new work. It is an inclusive creativity that builds upon and respects heritage context, typically deferring to it, and one that requires a high level of knowledge about historic period design, materials, and construction. Creativity in a heritage context seeks to find solutions that are elegant, quiet, contextual, and that feel appropriate. Bolder moves may be appropriate as part of a comprehensive scheme even if they would be inappropriate if applied in a piecemeal approach.

2. Balance

All successful approaches exhibited a “right” balance between accessibility and the conservation of heritage value. This balance does not cry out compromise, although there is some element of compromise in every balancing act. The sensitivity of some heritage sites does suggest that accessibility may require a special path, however with the right approach, creative thinking, good design, and an appropriate material palette, accessible interventions can find a “natural” fit with the original design.

3. Quality

Many heritage buildings are examples of great design from the period of their construction, typically designed by highly educated and “creative” architects working with period or revival styles that are no longer part of a contemporary architectural language. Many such buildings include fine materials that may be rare and difficult or impossible to replace and are examples of period craftsmanship or industrial accomplishment uncommon in today’s world. Far from being simple technological solutions, accessibility interventions should reflect this original quality of thought, design, materiality, and craftsmanship. Achieving a continuity of quality may mean that the right solution is not the least expensive or most expedient.

4. Tools

Tools refer to the elements used to overcome architectural barriers. Many of the tools observed by the project team were familiar ones: grade changes, ramps, platform lifts, elevators, door openers, signage, specialty washroom equipment, etc. Of note in heritage contexts were how these tools were detailed and the use of specialty tools.

None of the case study examples employed “off-the-shelf” ramps or lifts, for example. In some cases, ramps were integrated with steps and in all cases, they exhibited high quality detailing as described above. The most successful lifts used materials, such as flooring and framing, compatible with historic flooring and metalwork. Some were not enclosed and exhibited unique shapes or configurations, suggesting custom designs.

The other type of specialty lift seen in more than one location was the retracting or convertible stairlift, where a set of stairs transforms into a lift when needed but otherwise works as a set of historic stairs. The stairs concealing these lifts can retract horizontally, as in a chest of drawers, or vertically.

5. Redundancy

Redundancy refers to the ability to navigate a site or building when the primary accessible route is interrupted (e.g. by routine work, an out-of-service elevator, or absence of trained staff). Redundancy is required to maintain access during maintenance, and regular maintenance reduces the need to use redundant access.

Not all case study sites provided redundant access and several sites were visited while mechanical systems were out of service. This experience served to highlight the need for redundant access and those sites that successfully achieved it. It should be noted, however, that redundancy often lacks even in modern construction.

6. Maintenance

Maintenance refers to the need to maintain mechanical systems, built features, and even staffing levels to ensure they continue to provide reliable, equitable access. With or without redundancy, when accessibility is dependent upon mechanical equipment, maintenance is required to keep the system running and available. Scheduled, preventative maintenance of systems can help prevent unanticipated breakdowns and unplanned access interruptions. Preventative maintenance and redundancy combined should result in a more reliable access system.

7. Information

Information refers to information on the access system provided to prospective visitors or employees. Sites with robust access strategies tended to provide information on these strategies, including contact information for staff members responsible for access, on their websites. This pre-visit information was provided in several formats but generally covered site access points, step-free entrances, the presence or absence of lifts/elevators, areas that are not accessible, and accessible services, performances, or equipment available on site.

Once on site, information includes navigational aids (signage and wayfinding), alternate formats for exhibit material or other documents, and adapted performances or experiences (e.g. open-captioned plays or signed tours).

8. Training

Where a system is in place for accessibility there should always be someone on site, particularly in public buildings, who has been trained in the use of any accessibility equipment, features, paths or other aspects of the “system,” such as universal washrooms. As much as possible, accessibility to a property or building should be well signed, intuitive, and not be dependent, or have a very limited, dependence on staff.

9. Codes and standards

Code provisions for accessibility in Canada tend to be prescriptive and strictly defined while other aspects of the same codes establish principles and performance objectives, leaving flexibility for the development of creative responses that meet them. By contrast, many international sites exhibited solutions that provided practical access without adherence to strict, standard design requirements. Often these solutions were arrived at iteratively by consulting with heritage and access officials. Some jurisdictions offer adapted requirements for heritage buildings where it can be demonstrated that providing access equivalent to new construction is not feasible.

10. Alternate considerations

In cases where the defining features of a heritage building were some of the very features that prevented its full, equitable use, alternate paths and experiences were provided that added value to their use. For example, one house museum, defined by its restrictive, period interior, came to a solution employing a hidden elevator, custom wheelchair, and personal tour by a trained staff member. Alternate solutions may also include different paths and virtual access, however it must be noted that these cases were and should be rare.

11. Consultation

In discussing solutions with their designers, it was made clear that part of their success is due to a rigorous public consultation process. Users with disabilities, operators, volunteers, and the public can each contribute to a better understanding of what is possible and appropriate in a given circumstance. This input can then contribute not only to a solution based on standards and guidelines, codes, and other requirements, but to a site-specific approach for the people who are impacted by the solution in their use of the facility.

2

Huntington Theatre

Location: **Boston, USA**

Architects/consultants: **Bruner/Cott Architects**

Year completed: **2022**

Ownership: **Private**

The Huntington Theatre's historic main entrance consists of a central staircase from the sidewalk that splits to reach doors to the left and right. An existing side entrance and void space above enabled the current solution.

Originally known as the "Repertory Theatre of Boston," the Huntington Theatre (the Huntington) first opened in 1925 as America's first non-profit civic playhouse. Though the original company was short-lived, the building remained in use as a theatre or movie house for most of its life.

From 2021-22 the Huntington underwent a massive restoration and retrofit with the principle of universal access at its core. This first phase saw the redevelopment of a historic side entrance, where a void above was filled to provide accessible vertical and horizontal circulation. Inside, a new elevator, ramps, wide doorways, and chair lift were installed to provide access to amenities and a selection of vantage points in the theatre itself.

While accessibility for staff is often an afterthought, back-of-house accessibility was integral to work at the Huntington. Nearly all staff areas are now level, served by ramps, or accessible via a large elevator, including under-stage areas and the orchestra pit.

A future phase of work will see a new reception area, lobby, and programming space added to the opposite side of the building as part of a larger residential development. This new build will

Accessible seating (pictured with removeable chairs in place) is available at several vantage points on different levels of the theatre.

The universal entrance is at sidewalk level with interior ramps leading to a landing at the elevator lobby and further up to the box office and main theatre doors.

serve as the Huntington's main, public entrance once complete, connecting to the historic structure through the current bar area.

The Huntington's physical access strategy is complemented by accessible signage with high-contrast lettering and braille, as well as accessible programming. Detailed access information is available on the Theatre's website, staff receive disability-specific training, and adapted performance offerings include audio description and open captioning.

Key takeaways

- A phased approach to work enables equitable use of the building while long-term plans are implemented. The interim solution is well-considered in its own right and will provide redundant access in the future.
- Retrofits provide access for both the public and staff.
- Access to a range of levels and seating options provides choice and redundancy.
- Physical strategies are complimented by programmatic strategies, including pre-visit information, staff training, and adapted performances.

Solutions for physical access

Architectural barriers can be approached in several ways. The UK's Equality Act (2010) describes four overarching approaches in descending priority: removal of the feature, alterations to the feature, providing a reasonable means of avoiding the feature, or providing the service by a reasonable alternative method.

The access solutions in this report focus on the first three approaches, however it should be noted that "additive change is more likely to be appropriate than destructive change" and best practice in heritage contexts favours alteration or avoidance over removal of character-defining elements (Sawyer 2015, 19). Some "reasonable alternatives" are discussed below.

Physical access solutions fall under several types, and several schemes are found in the literature. Milley (2000), looking at entrances, describes three categories: passive solutions, including ramps, grade changes, window-to-door alterations, and lowering existing doors; mechanical solutions, including folding ramps and lifts; and additional solutions, including extensions providing access. Bonnett and Nee (2021) provide a more comprehensive system: modification of building features; addition/extension of elevator shafts, bridges, or amenity buildings; insertion of new elevators and/or stairs; reorientation of entrances or services; and mechanization.

Building on these schemes, the project team organized solutions into a taxonomy of categories and subcategories. To align with results from phase one, solutions are grouped under the headings Entrances/Exits and Interior Spaces. Information is included as a separate heading due to its universal applicability. For each solution, typical use cases and considerations are described. Solutions are referenced to case studies in this report, where possible, or in publications described above.

Entrances/Exits

Entrance/exit solutions pertain to gaining access to the heritage building and are largely exterior interventions, though some approaches require interior changes. Considerations related to ramps and mechanical solutions can also be applied to interior conditions where appropriate.

Grade change

This category encompasses changes to the ground plane outside a heritage building to overcome steps. Grade may be either raised or lowered to meet the level of the entrance. This approach typically involves little to no loss of historic material.

Raise grade to entrance level

Building up the ground surface to provide low-slope, step-free access to an entrance.

Use cases:

- Where an existing entrance is 1-3 steps above grade.
- Where there is sufficient space in front of the entrance to provide a gentle slope.
- Where a heritage building is moved or its foundation replaced, the level of the entrance in relation to the ground may be adjusted as a variation on this approach.

Considerations:

- The ground surface may employ repurposed historic materials, however their characteristics should be evaluated in terms of accessibility.
- Historic stairs should be covered rather than removed to preserve building fabric and ensure the reversibility of changes. If removed, stairs should be stored for future use.
- When raising grade, consider and mitigate the impacts of soil, salt, and rising damp on the heritage building.

Examples:

- Canadian Museum of Nature, Ottawa, ON (refer to case study)
- Art Gallery of Nova Scotia, Halifax, NS (refer to case study)

Lower grade to entrance level

Excavating the ground surface to provide a low-slope, step-free access to an entrance.

Use cases:

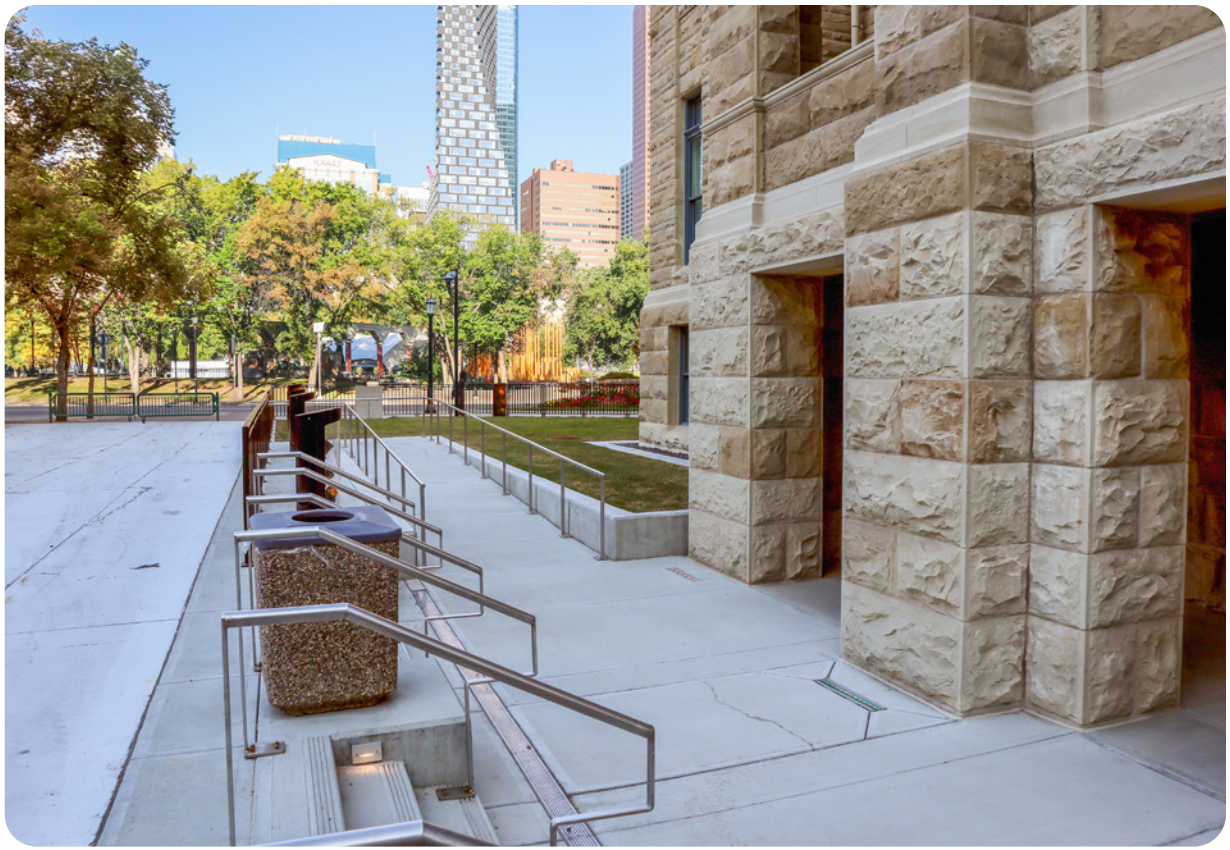
- Where an existing entrance is 1-3 steps below grade.
- Where there is sufficient space in front of the entrance to provide a gentle slope.

Considerations:

- Below-grade entrances are often secondary entrances, however this approach will be most successful where it can become the primary entrance for all users.
- Adjacent features, such as stairs, may need to be extended in an appropriate way to account for the new ground plane.
- The ground surface may reuse historic materials, however their characteristics should be evaluated in terms of accessibility.
- Historic stairs should be covered rather than removed to preserve building fabric and ensure the reversibility of changes. If removed, stairs should be stored for future use.
- When lowering grade, consider and mitigate the impacts of water movement on the heritage building.

Examples:

- National Assembly of Quebec, Quebec City, QC (new entrance, refer to case study)
- The Queen's House, National Maritime Museum, London, UK (Cave, Bonnett and Nee)



A new ramp and stairs provide access to a lower level of the Old City Hall, Calgary, Alberta

3

Art Gallery of Nova Scotia

Location: **Halifax, NS, Canada**

Architects/consultants: **Lydon Lynch Architects**

Year completed: **1998**

Ownership: **Provincial government**

The modern courtyard addition is at the basement level of the heritage buildings to either side.

The Art Gallery of Nova Scotia (AGNS) is a complex of two heritage buildings with a modern addition linking them at a basement level.

To the north, the Dominion Building is a three-and-a-half-storey stone building completed in 1867 and home to the AGNS since 1988. It is characterized by brown, Nova Scotia sandstone and Italianate details including round-arched openings, grouped windows, and decorative stonework. To the south, the Provincial Building is a seven-storey steel and stone structure built in 1935. It is characterized by a sandstone exterior and Art Deco details including geometric patterns, abstracted columns, and a large, arched door to the street. A reconfiguration and expansion were completed in 1998 after the government dedicated two floors of the latter building for use by the AGNS.

The major intervention consisted of a partially below-ground addition between the two heritage buildings. At the top, the addition's roof is landscaped to provide level access to both buildings, though only the south entrance is open to the public. At the bottom, a one-storey glass and stone façade presents a modern face for the AGNS and potential for access, though it is currently an exit and staff entrance. The addition houses a large gallery and lecture theatre below the level of the lower street.

The courtyard, on the roof of the addition, is flush with the entrances of the heritage buildings on either side.

The modern addition connects the two heritage buildings by an arrangement of ramps, sloped paths, and steps.

Other improvements to the interior include the addition of elevators, one behind the stairs in the south building and one at the entrance to the north building. All-gender washrooms were incorporated in both buildings.

It should be noted that the AGNS is pursuing a new facility to improve gallery space, environmental conditions, and accessibility.

Key takeaways

- Example of the integration of two heritage buildings using a modern addition.
- A sloped site enabled the insertion of a full storey below the upper level with rooftop access above and ground-level access below.
- The single elevator in each heritage building does not provide redundant access to upper floors, however step-free access is possible to ground floors and the lower level from the exterior.

Modified entrance

This category encompasses changes to the location of an entrance door or modifications to the door itself.

Move the door

Moving the door vertically to eliminate steps, e.g. by bringing it down to ground level.

Use cases:

- Where a lack of exterior space prevents the addition of a ramp or other solution.
- Where interior space permits the addition of ramps, lifts, or elevators to navigate the change in level.

Considerations:

- This approach requires navigating the change in level on the interior using stairs and ramps, lifts, or elevators.
- The impact of moving the door must be mitigated by a design that conserves the character and proportions of the façade.
- Removed steps should be stored or may be used in an interpretive manner to reflect the change to the building.

Examples:

- Postal Station A, Saint John, NB (refer to case study)

Modify the door

Adding secondary doors where existing doors are too large/heavy, joining a double-leaf door to create a wide single door, widening a door assembly, modifying a door frame, changing hardware, adding door-openers, changing the door swing, etc.

Use cases:

- Where an existing door provides insufficient clear width but is otherwise accessible.
- Where an existing door provides sufficient clear width but requires operating more than one leaf.
- Where an existing door is too large/ heavy to be universally operable.

Considerations:

- When changing a door frame, or the size of a door assembly, significant details should be conserved and its relationship to the façade considered.
- If the door is an important attribute of the building design, alternate access should be considered.

Examples:

- Wellcome Collection, London, UK (refer to case study)

4

14 Henrietta Street

Location: **Dublin, Ireland**

Architects/consultants: **Shaffrey Architects**

Year completed: **2017**

Ownership: **Municipal government**

14 Henrietta Street is a fully attached building with a shallow setback from a city sidewalk. The front entrance has a substantial door with a raised stone threshold at the top of two stone steps.

14 Henrietta Street was built in the 1740s as a townhouse for wealthy residents of Dublin, Ireland. For over 300 years, it bore witness to urban social, political, and economic change, eventually serving as tenement housing for over 100 residents by the 1910s.

Today, 14 Henrietta Street is a social history museum interpreting urban life on the most intact Georgian street in Dublin, where it is a protected structure. From 2006-17, Dublin City Council restored and adapted the building, incorporating several accessibility improvements.

A subtle ramp was added in the house's front setback, taking advantage of a slope in the street to provide a gentle rise from the right side of the steps. The ramp has a stone surface with a black metal handrail which recall the iron fence and low stone wall through which it passes. Landing space is constrained by the lot boundary so visitors using larger mobility devices are required to use a temporary ramp with staff assistance or an accessible rear entrance.

At the rear, a new, three-storey structure was added in the footprint of a historic "return" to provide entrance, vertical circulation, and washroom facilities. Former window openings were used to connect the addition to the house proper. While modern in detail, the addition makes use of materials that match but remain distinct from the heritage building.

The rear entrance was intended to become the primary entrance for visitors

with disabilities, however staff have prioritized the front as the more equitable entrance.

The museum's website provides pre-visit information covering entrances, circulation, washrooms, parking, and adapted tours. Staff are trained in universal access.

Key takeaways

- 14 Henrietta Street represents a case where the building itself is part of the museum, calling for a high level of conservation.
- Redundant access is provided to the ground level and elevator by a front ramp and rear entrance.
- Accessible vertical circulation and services are provided outside the historic house.
- This addition is visibly distinct but incorporates the materials of the existing building.
- Mechanical access was deemed necessary for public floors only. Two staff levels can only be accessed by stairs.

A historic iron fence and low stone wall were cut to provide access to the front door via a narrow ramp.

A rear addition provides elevator access to three public levels of the house museum, but does not reach the top two, staff-only levels. Windows are used to day-light and visually separate the addition from the existing structure.

Ramped approach

This category encompasses the addition of ramps or slopes to existing entrances or the redevelopment of stairs to incorporate ramps/slopes.

Above-grade ramp

Adding a ramp up to an entrance employing period materials and details or compatible modern materials and details. A ramp in this context represents a new architectural element and its long-term impact on the heritage building must be considered.

Use cases:

- Where exterior space permits the addition of a ramp with an appropriate slope.
- Where the ramp will not overwhelm the visual appearance of the heritage building.

Considerations:

- Where a heritage building is characterised by symmetry, two symmetrical ramps are often more appropriate than a single ramp.
- Large buildings can generally accommodate larger ramps, overcoming a greater rise to the entrance, compared to small buildings. The diagonal appearance of a ramp can be mitigated using horizontal walls or railings.
- The design of the ramp should derive from an understanding of the heritage building to be an appropriate evolutionary feature within a period design context.

Examples:

- St. Paul's Cathedral, London, UK (refer to case study)
- Osgoode Hall, Toronto, ON (refer to case study)
- Manitoba Legislative Building, Winnipeg, MB (refer to case study)
- National Museum of Natural History, Washington, DC, USA (refer to case study)

Below-grade ramp

Adding a ramp down to a lower new or existing entrance employing period materials and details or compatible modern materials and details. While a below-grade ramp must also be compatible, it will necessarily have less visual impact than an above-grade ramp. A ramp in this context represents a new architectural element and its long-term impact on the heritage building must be considered.

Use cases:

- Where a lightwell or similar space along the façade permits the addition of a ramp with an appropriate slope.
- Where a raised lower level with window or door openings minimizes the rise of the ramp and required changes to the heritage building.

Considerations:

- Excavation will reveal hidden and perhaps unfinished or unexpected design elements. Above-grade features may need to be extended, different material or finish qualities addressed, or discoveries contended with.
- Existing lower entrances tend to be service, staff, or basement doors,

however this approach will be most successful where it can become the primary entrance for all users. Refer to “accessible secondary entrance” below where it will not be the primary entrance for all users.

Examples:

- National Assembly of Quebec, Quebec City, QC (refer to case study)
- Tate Britain, London, UK
- Saskatchewan Legislative Building, Regina, SK
- Renwick Gallery, Washington, D.C., USA

Low-profile/screened slopes/ramps

Adding a slope/ramp to an entrance with minimal visual impact.

Use cases:

- Where an existing entrance is 1-3 steps above grade.
- Where exterior space permits the addition of a slope or low-slope ramp.
- Where the slope or ramp can be inconspicuously screened by landscaping or a low wall.

Considerations:

- This approach will be most successful where the rise can be navigated by a low slope without the need for the conspicuous features of a ramp.
- Elements such as handrails should be compatible with the heritage building in style, material, and detail.
- While a goal of this approach is minimizing visual impact, the existence and location of the ramp must be clear to those who would benefit from its use.

Examples:

- 14 Henrietta Street, Dublin, Ireland (refer to case study)

Integrated ramp/slopes

Redeveloping stairs to incorporate ramps or sloped walks as part of a unified element.

Use cases:

- Where the rise and exterior space enables the provision of an appropriate slope in the area of the stairs.
- Where existing stairs are not a significant character-defining element or the value of access to an entrance is high.

Considerations:

- This approach may require moving existing stairs away from the heritage building to provide a larger landing and sufficient run for the ramp/sloped walk.
- Integrated ramps/slopes may be to the side of or at a midpoint within the staircase but should not cut across stairs such that they create a “stramp.”

Examples:

- Usher Hall, Edinburgh, UK (variation, refer to case study)
- The Treasury, London, UK (Bonnett and Nee)
- Royal Institute of British Architects, London, UK (Bonnett and Nee)

5

Postal Station A

Location: **Saint John, NB, Canada**

Architects/consultants: **MMC Architects**

Year completed: **1991**

Ownership: **Federal government**

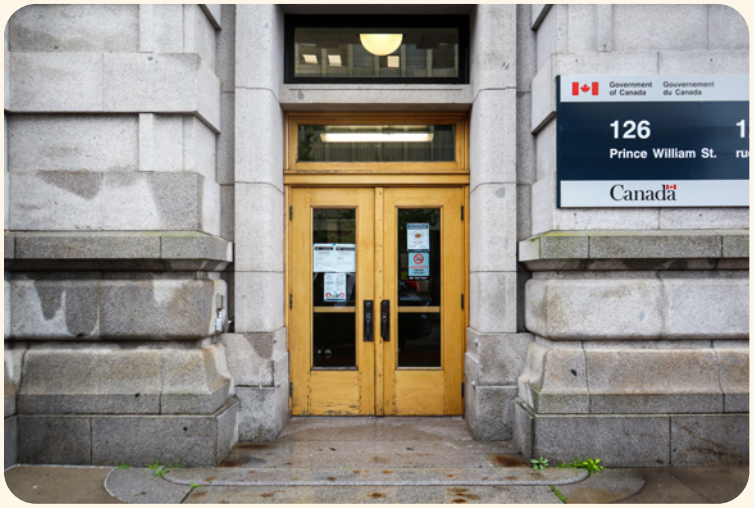
Postal Station A is a Beaux-Arts building with symmetrical door openings connecting to a city sidewalk. The left (north) door was modified to provide step-free access.

Postal Station A is a Beaux-Arts stone building built between 1913-15 in downtown Saint John, NB. It is representative of the expansion of federal services in the provinces and their consolidation in large, formal buildings in urban centres. The building is characterised by a symmetrical façade with an impressive, elevated ground level.

Access to the public post office was originally provided through two entrances on the left (north) and right (south) sides, each at the top of a set of stone steps from the sidewalk. With no street setback, and neighboring buildings abutting it on either side, there was no space with which to implement exterior solutions.

To provide step-free access from the street, the north door was modified to bring it to ground level with a level threshold. Original stairs were removed and likely used to form the ground surface below which still reveals the outline of the steps. A new, wood-framed transom window was installed between the door and an existing transom above. Automatic door openers were installed.

Changing the level of the door on the exterior required negotiating the change in height to the main floor on the interior. Part of the lobby was lowered and a ramp, wrapping the exterior wall, and a curved staircase were added which arrive at the same point.



Doors were lowered to sidewalk level and a new transom window inserted above. The ground surface bears traces of the former stone steps.

The lowered door leads into a vestibule and lower landing which provides access to a curved stair on one side and a ramp on the other.

The interior was largely renovated from its original appearance, though in a cohesive manner, and a pair of elevators were incorporated. The south door, which retains its stairs, is closed and used for egress only.

Key takeaways

- Provides level access to the primary entrance.
- Relatively minor visual impact given the scale of the façade. Retained stone in the ground surface hints at its previous form.
- Responds to a lack of space in front of the building and takes advantage of the availability of space inside the door.
- The need to negotiate the change in level on the interior results in a somewhat complex configuration of ramps and stairs.

Alternative entrance

This category encompasses the creation of new common entrances and secondary, accessible entrances, with the former being preferable in terms of equity. Alternative entrances allow historic entrances to remain unaltered. They may take the form of an existing historic entrance, a new, modern entrance, or the conversion of a nearby window to an entrance.

New primary entrance

Using an existing, alternative historic entrance or adding a new entrance to provide step-free access for all users.

Use cases:

- Where the significance of a primary historic entrance or the scale of barrier preclude its adaptation.
- Where interior services can be reoriented or added to serve the new entrance.
- Where heritage buildings are being expanded with modern additions.
- Where existing window openings may be converted to door openings.

Considerations:

- New primary entrances will be most successful where interior services can be reoriented to serve the new point of entry and/or where value can be added, e.g. by the location a café or gift shop.
- New primary entrances should be located on convenient, accessible paths of travel from site entry points.
- Newly created entrances should be visually compatible with the heritage building. When converting a window, for instance, trim details may be reused and proportions maintained.

Examples:

- Huntington Theatre, Boston, USA (refer to case study)
- Colonial Building, St. John's, NL (refer to case study)
- Leighton House Museum, London, UK (refer to case study)
- National Assembly of Quebec, Quebec City, QC (refer to case study)
- Hollytrees Museum, Colchester, UK (Cave)

Accessible secondary entrance

Adding or adapting an accessible non-primary entrance.

Use cases:

- Where the significance of a primary historic entrance or the scale of barrier preclude its adaptation.
- Where multiple common entrances serve different site amenities or paths of travel.

Considerations:

- Creating a new primary entrance should be considered before relying on an accessible secondary entrance.
- This approach will be most successful where the secondary entrance is adjacent to the primary entrance or aligned with a significant amenity like accessible parking.

- Where an accessible secondary entrance is provided adjacent to the primary entrance, the path for those using both should begin and end at the same point and should not involve a significant detour.
- An accessible secondary entrance should not be a service entrance with inferior finishes.
- An accessible secondary entrance can serve as an interim measure while the primary entrance is made accessible, at which time the secondary entrance can provide redundancy.
- An accessible secondary entrance may be used to provide access to an area of a heritage building that cannot be connected via a complete interior accessible path of travel.

Examples:

- 14 Henrietta Street, Dublin, Ireland (refer to case study)
- Monique Corriveau Library, Quebec City, QC (refer to case study)
- The Painted Hall, Old Royal Naval College, London, UK (refer to case study)
- National Portrait Gallery, London, UK (Cave)

A ramp is provided to a lower adjacent entrance at the Saskatchewan Legislative Building, Regina, Saskatchewan

6

Leighton House Museum

Location: **London, UK**

Architects/consultants: **BDP**

Year completed: **2022**

Ownership: **Municipal government**

The original townhouse and Perrin Wing of the Leighton House Museum face a city street. A new, level entrance was added on the far right. The townhouse entrance retains its steps.

Leighton House Museum is a Grade II*-listed building constructed in phases between 1865 and 1895 as the home and studio of artist Frederic Leighton. It was further expanded in the early-to-mid 1900s.

The Museum is characterised by an eclectic mix of forms and styles, including a Victorian townhouse with a large rear wing, the domed “Arab Hall,” a raised solarium known as the “Winter Studio,” and the industrially styled “Perrin Wing.”

A new retrofit and expansion were completed in 2022 to improve access, provide new visitor amenities, create facilities for collections care and archives, and upgrade building servicing, among other goals. The project included the removal of an exit stair, the addition of a stair tower and lift, and the redevelopment of space beneath the Winter Studio.

Building on the eclectic nature of the museum complex, the new stair tower is cylindrical in shape with a helical stair and an artistic mural wall treatment on the interior. A new elevator is located immediately adjacent to the stair. At the front of the house, a new level entrance was provided through the Perrin Wing on the right side of the façade. The stone and tile door surround exhibits high quality materials with details inspired by the collections of the museum itself.

A stair tower was added to the northeast corner of the complex, its round form referencing similar forms on the west end. Space beneath the Winter Studio was redeveloped as a café.

The new circulation tower incorporates a helical stair and elevator which connect two above-ground floors and a basement level.

Other access measures include level entry to a café facing the rear garden and a platform lift navigating a change in level between interior spaces. The Museum offers reduced admission for visitors with disabilities, large print program materials, magnifiers, and subtitles for audio-visual content.

Key takeaways

- A new vertical circulation structure employs a round form and details inspired by the eclectic architecture of the house and its original owner.
- A new, level entrance through a 1922 addition uses materials and details inspired by the museum's collections.
- Modifications read as a new layer on the historic building, conceived through understanding and interpretation of its features.
- An online access guide describes accessibility features and limits. It notes the facility is generally accessible to those with mobility devices less than 80cm wide.

Mechanical access (exterior)

This category encompasses lifts that raise and lower to navigate changes in level. They may be fully or partially enclosed with walls or guards/wheel stops, respectively. Due to their moving parts, mechanical solutions are prone to breakdown and simpler, non-mechanical solutions should generally be prioritized. Lifts should be independently usable and weather-protected where possible.

Low-profile exterior lifts

Use cases:

- Where entrances cannot be reoriented or access is required through primary historic entrances for programmatic reasons.
- Where insufficient space exists for the addition of ramps or other passive solutions.

Considerations:

- Lifts tend to be modern or industrial in appearance and care is required to select appropriate finishes or conceal incongruous elements. Glass guards that permit views to the heritage building tend to be more suitable than solid.
- All mechanical access solutions require maintenance. A maintenance plan must be developed and redundant access should be provided where possible.
- Lifts tend to be slow and their use conspicuous, contributing to a feeling of otherness.
- The Canadian climate, including snow and ice in particular, may have implications for the reliable operation of mechanical solutions.

Examples:

- Reserved.

Retractable stairlift

Adding a concealed lift to overcome historic stairs. Retractable stairlifts operate and appear as stairs when not in use but transform and operate as lifts when needed. Sophisticated systems are available that reuse the material of existing stairs to closely match the original appearance.

Use cases:

- Where entrances cannot be reoriented or access is required through primary historic entrances for programmatic reasons.
- Where insufficient space exists for the addition of ramps or other solutions.
- Where budget permits.

Considerations:

- Retractable stairlifts are costlier than standard lifts, with fewer manufacturers and technicians, but may be appropriate for important primary or ceremonial entrances.
- All mechanical access solutions require maintenance. A maintenance plan must be developed, and redundant access should be provided where possible.
- Retractable stairlifts should be independently usable, if possible. Where not possible, staff trained in their operation must be available.
- The Canadian climate, and snow and ice conditions in particular, may have implications for the reliable operation of mechanical solutions.

Examples:

- Institution of Civil Engineers, London, UK (refer to case study)

7

National Assembly of Quebec

Location: **Quebec City, QC, Canada**

Architects/consultants: **Provencher Roy, GLCM Architectes**

Year completed: **2019**

Ownership: **Provincial government**

The National Assembly of Quebec is a Second Empire Gothic stone public building with a central courtyard and pavilion built between 1877 and 1886. It is characterised by a massive, symmetrical façade with mansard roofs and a central tower.

New visitor facilities are inserted beneath historic stairs in front of the building. The exterior ramp circles a skylight to achieve the desired slope. The impact from afar is minimal.

In the landscape, a pair of symmetrical, curved stairs connect a front approach to the raised historic entrance.

A significant project to increase accessibility and expand visitor facilities was completed in 2019 with nearly all new work being concealed below ground. A courtyard between the existing, curved stairs was lowered and additional levels were inserted below the raised base of the building and courtyard. On the surface, a small set of steps on one side and a curved ramp on the other descend around a circular skylight to the new main visitor entrance.

On the interior, ramps and elevators descend further into the site while connecting to new amenity spaces, including a cloakroom, restaurant, and gift shop, as well as to a tunnel to the heritage building. Interior treatments for new space are decidedly modern with bold colours and geometric forms, in contrast to the more organic existing building.

A spiral ramp, following the curve of the stairs above, descends below ground to visitor amenities.

A modern, rectilinear stair and elevator tower was inserted in the heritage building's central courtyard. The elevator is out of frame, behind the viewer.

A vertical circulation tower inserted in the central courtyard provides vertical circulation within the heritage building except for mid-levels at the front of the building and rear of a middle block which are only accessible by stairs or a service elevator.

Key takeaways

- A new, accessible common entrance serves all visitors. Paired ramps and stairs provide equitable access to most facilities.
- Burying new facilities beneath an existing landscape minimizes their impact on the heritage building.
- A long, curved ramp provides a level of redundancy with a nearby elevator but lacks landings and ramp features like handrails.
- Mid-levels at the front and rear contain important amenities, including the main legislative restaurant, are not accessible via the primary elevator.

Access through external structure

This category encompasses the addition of stair/elevator towers, new amenity structures, or the use of connected buildings.

Access through addition

Providing access through an accessible extension to the heritage building. The extension may be limited to a vertical circulation or amenity tower or include significant new programmatic space.

Use cases:

- Where the significance of a primary historic entrance or the scale of barrier preclude its adaptation.
- Where the heritage building's program is expanding and requires additional space.
- Where vertical circulation cannot be accommodated inside the heritage building.

Considerations:

- Accessible entrances through additions should become the primary entrance for all users, where possible, but may constitute accessible secondary entrances. Refer to "alternative entrances" above for other considerations.
- Extensions may closely match the heritage building in materials and style or be distinguishable in one or more ways. Guidance for extending heritage buildings is available elsewhere.

Examples:

- Usher Hall, Edinburgh, UK (refer to case study)
- cSPACE Marda Loop, Calgary, AB (refer to case study)
- Darke Hall, Regina, SK (refer to case study)
- Towneley Hall Museum, Burnley, UK (Cave)
- Idea Exchange, Cambridge, ON

Access through adjacent building

Providing access through a separate new or existing building.

Use cases:

- Where the heritage building's program is expanding and requires additional space.
- Where space exists for the construction of a new building or where neighbouring buildings can be acquired.
- Where direct connection is possible between the heritage building and a neighbouring building.

Considerations:

- When providing access through an existing building, differences in floor levels must be accounted for and navigated using other solutions.

Examples:

- Paul Revere House, Boston, USA (refer to case study)
- Whitechapel Art Gallery, London, UK (Bonnett and Nee)

Landscapes

This category encompasses landscape changes to enable access to a heritage building. While approaches may be applicable to heritage landscapes in themselves, their analysis was outside the scope of the project.

Consolidation of ground surfaces

Unit ground surfaces may be re-set on a solid base. Granular ground surfaces can be consolidated or replaced with harder wearing variants.

Use cases:

- Where granular ground or unit (brick or stone) surfaces are a character-defining element of a historic landscape.

Considerations:

- Consolidating ground surfaces can impact permeability and water movement.

Examples:

- Reserved.

Access paths

In contrast to the above solution, which affects the entire ground surface, this approach refers to the provision of dedicated paths with more accessible surface characteristics within a larger path or landscape. For example, laying larger stone slabs or appropriately specified concrete through an area of cobblestones or gravel.

Use cases:

- Where users are expected to cross an expanse of uneven, slippery, or otherwise inaccessible ground.
- Where there are intuitive routes between destinations, such as site access points, building entrances, or interpretive areas.

Considerations:

- Accessible paths should generally follow “desire paths”—routes of least resistance people tend to take across a landscape—or, in the case of designed landscapes, paths following intended approaches and providing intended views of the heritage building or landscape.

Examples:

- Trinity College, Dublin, Ireland

8

Usher Hall

Location: **Edinburgh, UK**

Architects/consultants: **LDN Architects, Will Rudd Davidson**

Year completed: **2010**

Ownership: **Municipal government**

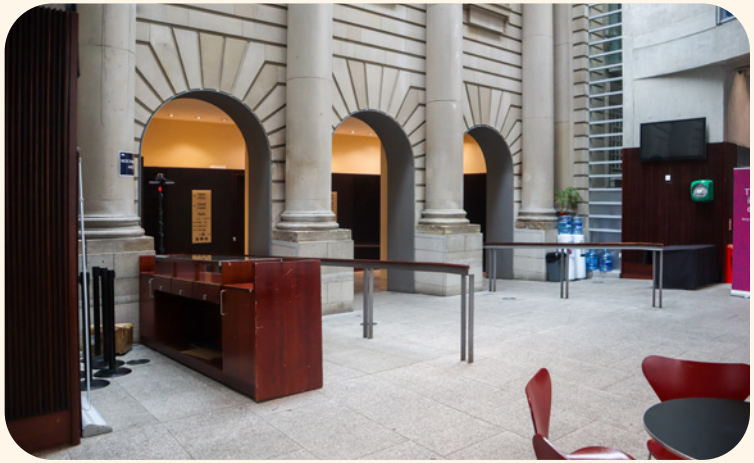
Usher Hall's multi-faceted façade with three, grand historic entrances and modern annex to the right.

Usher Hall is a Grade A-listed, Beaux-Arts performing arts centre which first opened in 1914. It is characterised by a domed roof and a semi-octagonal façade with a series of grand entrances with suspended awnings, large, round-arched openings, and pairs of columns. As part of a major renewal project, an entrance "podium" and a three-storey annex were added to simultaneously address space and access constraints.

The podium enables level access to Usher Hall's historic entrances while providing interior space for accessible washrooms beneath. Where originally there were three discrete sets of steps leading to three entrances, the raised level of the podium now provides access all three. Due to a grade change across the site, level access to the podium was possible from the south, adjacent to the annex entrance, while stairs provide access from the north.

The annex is a totally modern construction that references the form and detail of the historic building in both obvious and subtle ways. For example, a pattern of window mullions aligns with joints in the historic stone at the point of connection, and curved mid-level floor plate references the grand round arches of the theatre. The annex wraps the southern, street-facing façade and uses a cladding system of transparent and semi-transparent glazing panels overlaid on a layer of clear and opaque panels,

A vertical strip of glazing separates the annex from the historic structure, with mullions referencing the horizontal joints in the stone. The raised podium meets the adjacent plaza flush outside the annex entrance.



Level access is provided to the ground level of the theatre through the new lobby. The space is daylit by a strip of glazing continuing to the roof, along the intersection between new and old.

providing select views to original stone features through the ground floor.

The annex provides new lobby, office, and event space while facilitating level access to three floors of Usher Hall via modern elevators.

Key takeaways

- The downtown site abuts streets or other buildings on all “rear” sides.
- A raised podium provides level access to multiple entrances while creating space for interior services below.
- The new addition is distinctly modern but clearly responds to the historic building.
- A slope across the site enables step-free access on one end from a pedestrian plaza.
- The addition obscures the historic building from vantage points to the south while providing select views through.

Interior spaces

Vertical circulation outside the historic envelope

This category encompasses the addition of stair/elevator towers or new amenity structures.

Use cases:

- Where there is insufficient interior space to insert an elevator or code-compliant stairs in the heritage building.
- Where there is space adjacent to the heritage building in which to add a vertical circulation tower.

Considerations:

- Additions for vertical circulation should align with major interior paths of travel.
- Elevator towers should be located near interior staircases where possible so that all users can travel up or down at the same point.

Examples:

- Colonial Building, St. John's, NL (refer to case study)
- Paul Revere House, Boston, USA (refer to case study)
- Kew Palace, Richmond, UK (Bonnett and Nee)

Inserted vertical circulation

This category encompasses the insertion of stairs meeting modern accessibility requirements, ramps, and elevators or lifts within the historic envelope.

Use cases:

- Where sufficient space adjacent to accessible paths of travel aligns between floors (for elevators).
- Where the scale of an interior space reduces the visual impact of the insertion.

Considerations:

- Elevators or lifts may be inserted in a former service area (e.g. closets that align between floors), in the void of an open staircase, or within larger volumes where the impact of the elevator/lift can be mitigated.
- Inserted elements should align with major interior paths of travel.
- Conspicuous elements such as opaque elevator shafts that obscure architectural details or interrupt the symmetry of significant spaces should be avoided.

Examples:

- The Painted Hall, Old Royal Naval College, London, UK (refer to case study)
- Whitechapel Gallery, London, UK (Bonnett and Nee)
- The Queen's House, National Maritime Museum, London, UK (Cave, Bonnett and Nee)

- Pôle Culturel du Monastère des Ursulines, Quebec City, QC
- Hollytrees Museum, Colchester, UK (Cave)

Sloping floors

Like exterior grade changes, this category encompasses the modification of floors to eliminate interior steps.

Use cases:

- Where sets of 1-3 interior steps separate rooms or spaces.
- Where changes in level can be overcome using a gentle slope.

Considerations:

- This approach may represent a significant change to an interior character-defining element, however it may be beneficial in cases where floor features are not significant or where high volumes of users are expected.
- As a passive solution, a sloped floor may be preferable to a mechanical lift.

Examples:

- Towneley Hall Museum, Burnley, UK (Cave)

Cut-through horizontal circulation

- This category encompasses the creation of new, accessible horizontal circulation routes through interior walls. Openings may be used to create corridors or to join adjacent rooms and create larger spaces.

Use cases:

- Where providing accessible paths through existing openings would result in a substantial loss of character-defining features.
- Where interior spaces on the same level were not formerly connected by step-free paths.

Considerations:

- New openings may be detailed in a distinguishable period or modern style.
- Larger openings may be used to join adjacent interior spaces.

Examples:

- Colonial Building, St. John's, NL (refer to case study)
- Oriel Centra Dundalk Gaol, Dundalk, Ireland (ICOMOS France)

9

Monique Corriveau Library

Location: **Quebec City, QC, Canada**

Architects/consultants: **Dan Hanganu, Côté Leahy Cardas Architects.**

Year completed: **2013**

Ownership: **Municipal government**

The Monique Corriveau Library is housed in the former Saint-Denys-du-Plateau, a modernist church finished in 1964 in suburban Québec, QC.

It is characterised by a large, sail-like roof that descends almost to the ground, an angular bell tower, and clear windows both in its end walls and beneath its low eaves.

A side entrance faces the parking lot, providing the shortest possible route from accessible parking spaces.

While it represents a period and style of increasing attention, it is not a designated heritage building.

Accessibility improvements were made to the now-secular building as part of a much larger project to expand it for reuse as a library. New levels, containing book stacks and reading areas, were added to the interior volume. A rectilinear community centre was built onto to one end on the footprint of the former presbytery at the rear. A smaller addition on the front end contains an egress stair and acts as signal of the new activity inside. These additions contrast the more organic form of the church but reference it with the use of clear glass.

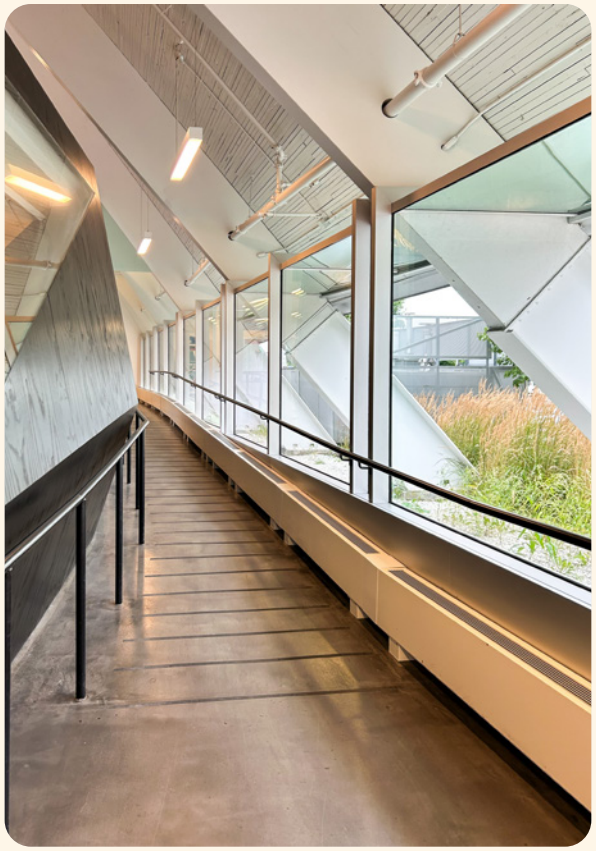
Key accessibility features include three level entrances, an interior ramp negotiating a change in level between the front and rear of the ground floor, and an elevator reaching all levels. The

elevator is inserted in a full-height space as a free-standing structure, adjacent the primary stair, with a light steel frame recalling the roof structure.

Despite being filled with new spaces and functions, the space retains a sense of openness that supports navigation. The placement and design of the stair and elevator celebrate their functions while remaining deferent to the soaring roof.

Key takeaways

- Vertical circulation is incorporated as a centrepiece in the heritage building in a dramatic full-height atrium.
- Multiple level entry points provide choice and redundant access to the ground floor.
- New additions contrast the form of the original building. Their visual impact is reduced by simple details and reduced volumes at connection points.
- The open volume of the interior served as a blank slate with which to create new spaces. The project conserves the overall form and structure without its interior arrangements.



A ramp ascends from the entrance to the base of the main stairs and elevator.

The thin steel frames of the elevator and staircase reference the steel structure of the church while remaining unobtrusive in the full-height atrium.

Information

This category encompasses strategies for providing information to enable independent navigation of heritage buildings.

Access guide

An access guide is a type of pre-visit information, generally provided online, describing the accessibility of a heritage building. Access guides may follow a journey sequence, provide measurements for specific access features, describe limits to access, and/or be available in multiple formats.

Use cases:

- Online access guides are appropriate for all publicly visitable heritage buildings.

Considerations:

- Access guides should be provided in a predictable online location. Staff should be aware of all information to answer direct inquiries.
- Information should be provided on all elements of the journey sequence, including on-site amenities and equipment.
- Information must be provided in accessible formats.

Examples:

- Huntington Theatre, Boston, USA (refer to case study)
- 14 Henrietta Street, Dublin, Ireland (refer to case study)
- Wellcome Collection, London, UK (refer to case study)

Programmatic access solutions

From a cross-disability perspective, getting visitors and staff in the door or to the floor is only part of the challenge. Services and other programming offered in the heritage building must also be accessible.

In some cases, programming includes interpretation of the heritage building itself. In others the heritage building will host an unrelated contemporary use. While many aspects of universal design and accessible programming apply equally to non-heritage buildings, their implementation in heritage contexts often demands additional consideration.

Because buildings with heritage programming constitute a small subset of federal heritage buildings, this section only touches briefly on programmatic access solutions and does not detail individual approaches. Custodians offering programming are encouraged to review other sources including:

- Smithsonian Guidelines for Accessible Exhibition Design
- Ingenium Accessibility Standards for Exhibitions
- An Accessible Past: Making Historic Sites Accessible to All

Contemporary services should be provided according to general best practice for accessible service delivery.

10

Institution of Civil Engineers

Location: **London, UK**

Architects/consultants: **Feilden+Mawson**

Year completed: **2016**

Ownership: **Private**

The Institution of Civil Engineers is on an urban street with a short staircase separating it from the sidewalk.

The Institution of Civil Engineers (ICE) is a steel-framed building with a stone façade completed in 1919. It is characterised by a central, Classical portico, large arched windows on the rusticated main floor, and tall rectangular windows separated by columns above.

It remains in use by ICE for organizational offices and as a conference facility.

The ICE building is located on a street corner in a dense urban area with little space between it and the sidewalk. Altering the significant portico and covering adjacent basement windows was therefore quickly ruled out in favour of mechanical access. The width of the steps and the project budget enabled the consideration of a custom lift.

The solution, a convertible stair lift built by Sesame Lifts, is hidden beneath a set of retracting steps on one side of a centre handrail, its presence indicated only by twin seams in the steps and a call button to the side. Once pressed, an attendant prepares the lift for use. The steps retract, an upper landing guard and platform controls emerge, and a wheel stop rises around the edge of the platform. This process takes approximately 30 seconds.

A call button on the right side of the stair alerts attendants in the building who then prepare the lift.

One side of the steps recede as if a chest of drawers and a hydraulic platform lift rises from below to provide access.

Inside, the same approach is taken where second set of steps leads to the main level. Once on the main level, the building is largely accessible due to the generous proportions of the original building and previous modifications, including the installation of elevators. The “back door” entrance formerly used by people with mobility disabilities may provide redundancy should the front lift require maintenance, but at the cost of an equitable experience.

Key takeaways

- Limited space at the front and significant entrance features precluded the addition of a ramp on the façade.
- The width of the existing stairs permitted the installation of a convertible stair lift while maintaining functional use of the adjacent steps.
- Attentive staff with knowledge of the lifts enable access with minimum delay.
- Stone from the original steps is used to face the mechanical steps so impact on the appearance of the heritage building is minimal.
- The subtle call button may mean front-door access goes unnoticed by first-time visitors, while the need for staff assistance reduces the equity of the solution.

Multi-sensory access

This category encompasses measures to incorporate features serving a range of senses to enable the use and appreciation of a heritage building.

Integrated sensory elements

Refers to semi-permanent interventions in a heritage building to enhance multi-sensory access. Integrated sensory elements may include touch models to provide an understanding of the form of the heritage building or larger site, tactile maps to aid in wayfinding, and the use of tactile directional indicators.

Use cases:

- Integrated sensory elements are appropriate for all heritage buildings.

Considerations:

- While keeping the conservation principle of reversibility in mind, integrated sensory elements should be designed for permanence.
- Integrated sensory elements can enhance understanding of the heritage building for all people.

Examples:

- Reserved.

Adapted experiences

Refers to experiences tailored to the needs of people with a range of disabilities. The nature of an adapted experience will depend on the service or interpretation being offered. A performance, for instance, may be offered with open captioning or described action, while a museum exhibit may schedule tours with trained docents or “touch tours” during which visitors are encouraged to physically engage with artefacts.

Use cases:

- Where programming relies on a limited number of senses to tell the story of the heritage building.
- Adapted experiences are appropriate for all programmed heritage buildings.

Considerations:

- Adapted experiences can contribute to “feelings of otherness” as described in phase one. Separating people with disabilities from their companions or other users should be avoided.
- Multi-sensory elements should be integrated into regular programming where possible to promote equity, inclusion, and avoid adaptation after the fact.

Examples:

- Huntington Theatre, Boston, USA (refer to case study)

Assistive technologies

This category comprises a range of technologies that may be provided on site using borrowable or personal devices.

Built-in systems

Refers to systems that are provided by the custodian and require the installation of hardware on site. Built-in systems include induction loops, audio beacons, and audio-visual displays.

Use cases:

- Systems like induction loops are widely used and appropriate at all points of service. Use of other systems may depend on the nature of the service provided.

Considerations:

- Due to the rapid evolution of most technologies, systems should be installed in a non-destructive way to reduce the impact of replacement over time.

Examples:

- Wellcome Collection, London, UK (refer to case study)

App-based systems

Refers to software provided on smartphones or tablets. Apps may be available on visitors' personal devices but should also be provided on borrowable devices on site.

Use cases:

- App-based systems can support access to programs in most heritage buildings.

Considerations:

- A range of app-based systems are available and others will be developed. Custodians should evaluate available systems and consider supporting one or more for use by visitors. Supported apps may benefit from the input of accurate information by the custodian.
- Access to personal devices capable of running third-party apps should never be assumed.
- Third-party apps should support other access measures rather than constituting required elements of the journey sequence.

Examples:

- Wellcome Collection, London, UK (refer to case study)

Alternative access

- This category includes measures to provide access to architectural features, spaces, or interpretive material as a stand-in for physical access. Alternative access may be virtual or operational in nature. Virtual access may mean the provision of a virtual tour of an inaccessible space which can be viewed online or in a dedicated viewing space in an accessible part of the heritage building. Operational access may mean bringing services to the individual through a process that relies on staff involvement.

Virtual access

- Refers to the provision of audio-visual access to a heritage building or space using information and communication technology. Virtual access may be provided online or on site.

Use cases:

- Where physical alteration would substantially reduce the heritage value of the building or a space within it for all visitors.
- Where the scale of a building or space would result in access measures having an inordinate impact on its function or heritage value.

Considerations:

- Virtual access should always be provided in addition to best efforts to make the heritage building accessible. It should be considered a temporary measure and new approaches to physical access should be periodically assessed.
- Virtual access should be provided in an accessible venue on site where possible.
- Virtual access should follow best practice for audio-visual accessibility including the provision of accessible formats for content.

Examples:

- Canadian Museum of Nature, Ottawa, ON (refer to case study)
- Painted Hall, London, UK (refer to case study)

Operational access

- Refers to the provision of access to the program of a heritage building or a space within it in an alternative, accessible venue. Operational access may include mobile physical exhibits or interpretation provided by trained staff.

Use cases:

- Where physical alteration would substantially reduce the heritage value of the building or a space within it for all visitors.
- Where the scale of a building or space would result in access measures having an inordinate impact on its function or heritage value.

Considerations:

- Operational access should always be provided in addition to best efforts to make the heritage building accessible. It should be considered a temporary measure and new approaches to physical access should be periodically assessed.
- Operational access should be provided in an accessible venue on site where possible.

Examples:

- Reserved.

11

Osgoode Hall

Location: **Toronto, ON, Canada**

Architects/consultants: **Taylor Hazell Architects**

Year completed: **2009**

Ownership: **Taylor Hazell Architects**

The centre block of Osgoode Hall is rigorously symmetrical, and its sloped paths were given a similar treatment. Their lack of handrails preserves views to the heritage building.

Osgoode Hall is complex of stone and brick buildings built in phases in 1829-32, 1844-6, 1857, and 1865. It originally served as home to the law society of Upper Canada (Ontario), later incorporating a law school and provincial courts.

It remains an active court. Its principal façade is characterised by a grand Palladian style with tall, round-arched windows, a central portico with columns and a triangular pediment above, and a high degree of symmetry.

In 1995, a 15-year project began to stabilize, restore, and rehabilitate the complex. Accessibility improvements included sloped access to the main (south) entrance and the addition of elevators, ramps, and lifts to negotiate interior level changes.

On the exterior, the entrance landing was raised and expanded to accommodate a pair of symmetrical sloped paths connecting on the left and right and provide step-free access to the doors.

The two paths have low slopes with curb edges and no handrails to limit the visual impact on the building. Dark grey stone/tile used for the expanded landing and ramps references the quality of the original stone yet is markedly different in appearance. Thick glass, flush with the landing surface, covers a trench at the building that reveals the change in height.

On the interior, level access is provided to several courtrooms as well as a

The landing extension and sloped paths are surfaced with dark stone/tile that contrasts with the original sandstone. The paths are offset from the building and connect to sidewalks at the lower ends.

The raised landing meets flush with the entrance. Glass ground panels on each side reveal the former height of the landing.

modern elevator call near the centre of the building. A semi-permanent ramp provides access to one courtroom while an inclined platform lift negotiates a greater rise to a men's washroom. StopGap ramps provide access to an interior courtyard.

Key takeaways

- Twin sloped paths provide a level of redundancy at the main entrance.
- High quality, contrasting materials clearly differentiate new exterior elements. The level change of the original landing surface is more subtle.
- A series of interior level changes requires a piecemeal approach. The raised security area can only be reached via stairs or through the attached Law Society building, necessitating an alternate route for visitors who cannot use stairs.

12

National Museum of Natural History

Location: **Washington, D.C., USA**

Architects/consultants: **Quinn Evans**

Year completed: **2021**

Ownership: **Federal government**

The National Museum of Natural History, operated by the Smithsonian Institution, was built in 1903-11 with east and west wings added in 1964.

It is characterised by white stone construction, tall bands of windows, a monumental southern entrance portico with stairs and columns, and a high degree of symmetry.

The grand staircase to the principal entrance facing the National Mall posed a substantial barrier to visitors with mobility disabilities.

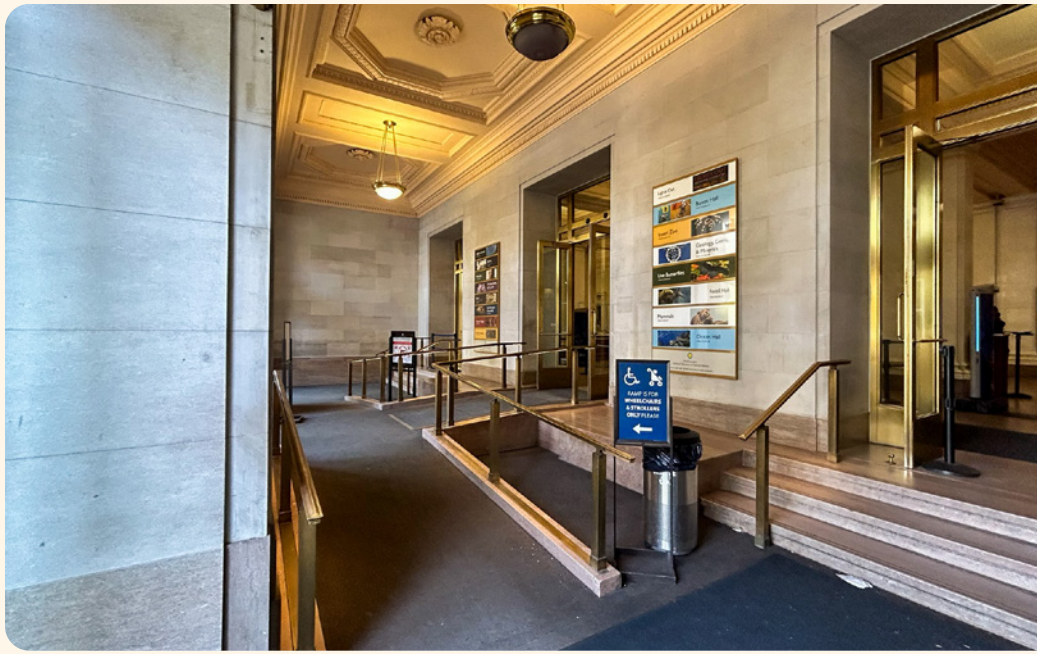
The most recent retrofit provided step-free access to the main (south) entrance, formerly accessible via a grand staircase. The large rise of approximately four metres necessitated a significant length, accomplished with symmetrical sloped paths, each with a single switchback, spanning most of the façade.

The new sloped paths begin at either side of the central staircase, beginning the entrance sequence at the same point for all visitors. They are constructed of stone similar in appearance to that of the heritage building with high-quality modern details, including bronze handrails mounted on curved, stem-like posts, developed by interpreting existing elements. The wide path surfaces enable two-way traffic while expansive landings at the switchbacks provide space for seating and rest.

Wide sloped paths on either side of the entrance run for approximately 30 metres before switching back.

On the interior, the centre of three doors was fitted with a double-sided ramp for access from either approach. This ramp is also fitted with high-quality bronze handrails, though of a geometric design matching those at adjacent stairs. These handrails are fitted with integrated lighting, increasing contrast and aiding in navigation. All floors, exhibitions, theatres, food service areas, and washrooms are wheelchair-accessible.

These features are paired with a robust program including open captioning for videos, induction loops, assistive listening devices, tactile objects, described tours, app compatibility, and detailed pre-visit information on the museum's website. Ramps previously added to a rear door now provided redundant access.



Steeper ramps negotiate additional steps inside the main doors. A mirrored design enables approach from either side. High-quality details include bronze handrails with integrated lighting that recall historic metal features.

Key takeaways

- All visitors begin and end the entrance sequence at the same point.
- Generous proportions and high-quality details provide a dignified approach that encourages use by all.
- Redundant access is provided by a secondary entrance previously retrofitted with ramps.
- Physical access is complimented by programmatic solutions including measures for visitors with hearing and vision disabilities. Institutional guidelines for accessible exhibition design support engagement by visitors with cognitive disabilities and others.

13

Canadian Museum of Nature

Location: **Ottawa, ON, Canada**

Architects/consultants: **Barry Padolsky Associates Inc. Architects, KPMB Architects, GLCRM Architectes**

Year completed: **2010**

Ownership: **Federal government**

The Canadian Museum of Nature (CMN) occupies the Victoria Memorial Museum Building, a massive stone building completed in 1910 as Canada's first purpose-built federal museum. It is characterized by a Tudor Gothic style, central, truncated tower, three sets of entry doors, and castle-like crenellations at the roof.

The Victoria Memorial Museum Building was rehabilitated between 2001-10, including the addition of a prism-like lantern above the entrance.

The CMN was built with three steps to its front entrance in the centre of a large, landscaped site which was regraded to provide step-free access. A larger barrier remained in the vestibule where a full-width staircase rises nearly a storey to the main floor. Lack of space demanded a mechanical solution, so a segment of stairs was removed to insert an elevator. The elevator extends the depth of the stairs but stops short of the vaulted stone ceiling. It is clad in stone panels on the ground floor and frosted glass above. Lighting in a gap between the elevator and adjacent stone wall visually separates it from the heritage building.

Once inside, the museum is broadly accessible with new floor surfaces and large elevators. Two ramps negotiate changes in level, a short 1:20 slope between the entrance and reception and a longer 1:12 slope to an exhibit outside the historic envelope. All washrooms were made accessible with universal washrooms on most floors.

Space in front of the museum enabled the entrance steps to be eliminated by regrading the site.

Inside, a section of stairs was removed, and a single-storey elevator inserted to provide step-free access to the main level.

For those unable to make the trip in person, the CMN offers a virtual tour of the building and its galleries at https://nature.ca/en/visit-us/plan-your-visit/virtual-visit/.

It should be noted that, as of 2023, the CMN is exploring options to improve physical and programmatic accessibility. Concepts to provide redundant or non-mechanical access at the front and step-free access at staff/group entrances are being developed, an accessible exhibit design guideline has been developed and is in testing, sensory tours are being considered, and wayfinding is under review.

Key takeaways

- A small rise enabled the elimination of entrance steps via landscaping. A paver surface now rises imperceptibly to the level of the doors.
- A “feature” elevator in the lobby negotiates the change in level to the main floor. Recessed lighting visually separates it from the historic fabric.
- While redundant access may be possible using a stairlift in the vestibule, its utility is limited and the accessibility strategy otherwise lacks redundancy.

14

Paul Revere House

Location: **Boston, USA**

Architects/consultants: **Mills Whitaker Architects, Building Conservation Associates**

Year completed: **2016**

Ownership: **Private**

The Paul Revere House not only abuts a city sidewalk but overhangs it. A courtyard through a wall represents the only exterior space.

Paul Revere House was built circa 1680 and is known as the home of the silversmith and patriot during the American Revolution. The wood-framed house was substantially altered over time but restored to its period of significance in 1907-8. Today it is a museum/ interpretive space.

In 2015-6 a neighbouring building was renovated to serve a visitor center with programming space, a gift shop, amenities, and an accessible path to the second floor of the house. The courtyard between the two was simultaneously redeveloped to enable step-free access to both buildings.

The courtyard is the main entry point to the multi-building site, from which a series of ramps and stairs provide access to the lower floor of the house and visitor center. The slope of the ramps is such that no handrails were required. Low brick walls serve as bench seating and house down-cast light fixtures. The ground surface is gapless brick recalling the brick-lined laneways outside.

The visitor centre is a historic wood duplex but is not “landmarked” or otherwise protected, enabling flexibility in redeveloping the interior. A passenger lift and universal washrooms were incorporated, along with a second-floor door leading to the bridge to the house.

The side/rear courtyard provides access to the visitor centre (middle) and house (out of frame, right). The second-floor bridge is visible on the right.

The elevated bridge is decidedly modern with steel supports and guards, stainless-steel handrails, and a masonry panel surface.

The bridge is a modern intervention in the courtyard space, clearly set apart from the early structures around it. It ends just short of the house with a transition strip covering the gap. The door at the house was installed previously for egress so no new openings were necessary.

Key takeaways

- Use of an adjacent structure enabled vertical access outside the heritage building in a tight urban context. In this case foresight prompted the purchase of the house years before it was decided to provide access through it.
- The passenger lift, chosen due to space constraints, may not accommodate larger mobility devices. A raised threshold remains at the ground level entrance and a cased-in chimney restricts the path inside the upper door of the house. These limitations were deemed necessary for conservation reasons.
- The Paul Revere House demonstrates a strict conservation approach with regard to the heritage building while liberties are taken in the landscape and treatment of the visitor centre.

Case Study

15

Manitoba Legislative Building

Location: **Winnipeg, MB, Canada**

Architects/consultants: **Bridgman Collaborative**

Year completed: **2007**

Ownership: **Provincial government**

The Manitoba Legislative Building is a large stone structure in expansive, landscaped grounds.

The Manitoba Legislative Building is a grand, classically inspired stone structure completed in 1920. It is characterized by a monumental central portico with columns and a triangular pediment, a wide, three-sided set of steps to the doors, a domed tower, the use of Tyndall limestone, and a high degree of symmetry.

It has consistently served as Manitoba's centre of government.

In 2007 a $1.8 million project was undertaken to provide step-free access to the front entrance which was previously provided only via side doors to the lower level. The new ramp is physically separate from the heritage building but visually tied to it by the use of Tyndall limestone and black metal guardrails similar to those on a period balcony above. While there is a ramp on only one side of the façade, the massive scale of the heritage building and the ramp's material similarities both limit its visual impact.

Despite the use of period materials for outward-facing surfaces, the ramp itself is distinctly modern with a cantilevered, geometric form, generous dimensions, modern handrails, and a spacious landing with decorative elements. These elements add a new layer of interpretation to the existing building

The ramp extends over the historic stairs without touching them. Use of matching stone and guardrails visually blend it with the existing building. The journey for all visitors begins and ends in the same place.

A large landing at the switchback provides a place to rest while becoming a destination in its own right due to architectural details.

and the experience of accessing it while providing space for rest along the way.

Subsequent phases saw the floor and fixtures of the legislative chamber modified to enable step-free use of the upper and lower levels, though the narrow width and curve of the middle row meant the same could not be provided. Washrooms were additionally reconfigured to provide gender-neutral and universal options.

Key takeaways

- Expansive grounds enabled the addition of a substantial ramp. Meanwhile, the size of the overall building reduces its visual impact.
- The choice of matching stone and metal guardrails blend the modern addition with the existing building.
- A gap between the ramp and stairs it traverses visually and physically separates the two, minimizing the physical impact on the heritage building.
- While the ramp visually recedes from a distance, it is not a subtle intervention up close. It represents a distinct layer on the existing building and celebrates the act of approaching it.

16

The Painted Hall

Location: **London, UK**

Architects/consultants: **Hugh Broughton Architects**

Year completed: **2019**

Ownership: **Private**

The main halls are open spaces without built-in features. A lift was carefully integrated in the west corner of the Lower Hall and stairs in the south corner.

The Painted Hall is a Classically inspired stone and brick building completed in 1705, forming part of the Old Royal Naval College UNESCO World Heritage Site. It is significant largely for its interior, the surfaces of which are covered in Baroque paintings such that it is referred to as the "Sistine Chapel of the UK."

Beginning in 2014, a major project was undertaken to restore and conserve the painted interiors while redeveloping the circulation scheme to add amenities and increase accessibility. A simple ramp was added within a portico to provide step-free access to the historic entrance, however a significant stair to the open spaces of the Lower and Upper Halls remained.

To avoid these stairs, a new accessible entrance was opened off College Way into the lower-level King William Undercroft where a new café, gift shop, interpretative space, and accessible washrooms were added to improve use of the building for all visitors. A simple platform lift with glass guards negotiates a grade change down into these spaces from the entrance level.

Around the corner, a second lift ascends into the Lower Hall. With no interior partitions or features in which to conceal a lift, this solution required careful detailing to harmonise with the space. To this end, the pattern of floor tile was continued onto the lift surface and structural elements were rendered in

Glass guards reduce the lift's impact and provide views through to a matched floor and the walls behind. Bronze hardware is period-appropriate and blends with the dominant paint colour.

A simple, modern platform lift provides access from the lower accessible entrance to a lower-still interpretive and amenity space.

bronze. Low glass guards further reduce its impact in one corner of the hall. A similarly detailed modern egress stair was added opposite.

For those unable to make the trip in person, The Painted Hall offers a virtual tour in English and British Sign Language at https://virtualtour.ornc.org/.

Key takeaways

- Redevelopment of a lower level greatly expanded programming and amenity space while enabling step-free access to it and the principal room above.
- The valuable interior of the Lower Hall demanded a custom, finely detailed lift and stair while the exterior ramp to the historic main entrance required less attention.
- A linear journey sequence was ruled out due to the sensitivity of the entrance stairs. The entrance and Lower Hall are therefore accessed separately.
- Step-free access has not yet been provided to the Upper Hall. An online virtual tour is available of the vestibule, Lower Hall, and Upper Hall.

17

Darke Hall

Location: **Regina, SK, Canada**

Architects/consultants: **P3A, Donald Luxton**

Year completed: **2022**

Ownership: **Public institution**

Darke Hall's three doors lead to a small heritage lobby and are no longer in use. A new shared entrance and lobby attach through a lower level to the side of the heritage building.

Darke Hall is a stone and brick building erected in 1929 with further addition in 1962. It is characterised by its symmetrical façade, three central doors with arched transom windows, raised entrance, stone door and window surrounds, and simple triangular pediment above the entrance. Darke Hall has been a provincially significant venue for most of its history but had fallen into disuse by 2015.

In 2019 a $18.5 million project was undertaken to rehabilitate the building to serve as a modern performing arts space. Improvements to accessibility included the addition of an elevator to all levels, accessible washrooms, and the redevelopment of the ground (basement) level as a hospitality space that connects to a modern lobby shared with an adjacent building.

While a step-free approach to the main doors may have been possible, additional interior stairs and a small lobby space precluded their use as the entrance. The development of a neighbouring lot by a credit union presented the opportunity for an expanded footprint in the form of a shared, accessible entrance and lobby. Under the theatre, a bar and hospitality area connect to accessible washrooms, a new staircase to the theatre level, and the patron elevator.

In the theatre itself, a ramp provides access at the point of entry to the gently sloped floor, enabling step-free access

A new, shared entrance and lobby provides step-free access through the lower hospitality space to the new stairs and elevator.

The auditorium was built with a sloped floor which continues to provide step-free access to seating.

to front and back space for patrons using mobility devices. The elevator continues up to the balcony level with additional clear floor space and seats at the upper level, a lounge, and a universal washroom.

Key takeaways

- The main entrance for all visitors was reoriented to a side door on a lower floor. Development of the shared lobby and bar area adds value to the “basement” entry.
- An elevator was provided within an existing tower. A modern stair was inserted alongside the elevator in a historic style.
- Patrons with mobility disabilities have choice of seating with access to both the main hall and balcony.
- Partnership with a neighbouring institution enabled the creation of an accessible, shared entrance and lobby space outside the heritage building.

18

St. Paul's Cathedral

Location: **London, UK**

Architects/consultants: **Caroe Architecture, Connolly Wellingham Architects (interior)**

Year completed: **2022**

Ownership: **Private**

St. Paul's is a massive stone church building with multiple points of entry. The north transept provided the least rise to an entrance and proved most amenable to upgrade.

St. Paul's Cathedral was built between 1675 and 1710 as the seat of the Bishop of London and is one of the city's most recognisable landmarks. It is characterized by an English Baroque style, projecting transepts, and a massive dome.

The north transept, discussed below, features a semi-circular portico and stairs and tall, fluted (vertically grooved) columns.

In the early 2000s, the Equal Access Project was conceived to improve the Cathedral's accessibility. Detailed analyses and consultation with church, municipal, heritage, and access groups were completed over two decades. Prior to implementation, a temporary metal ramp was installed at the north transept.

Outside the north transept, mirrored, curving ramps were installed on either side of a staircase from the level of the sidewalk to the entrance doors. Vertical surfaces are finished in Portland stone, like that of the Cathedral, while ground surfaces are finished in grey granite. Modern aluminum-bronze handrails with fin-like balusters follow the curves of the ramps. These elements were built on top of the historic stairs, rendering the changes entirely reversible.

An "inner portico" and memorial to victims of COVID-19 in the UK was installed inside the doors, serving as a thermal and acoustic buffer between the inside and outside. The portico is timber-framed and cased in English oak

A new, fanning central stair is flanked by mirrored ramps that flow back and forth to the level of the doors. High quality Portland stone, granite, and aluminum bronze make up the material palette of the intervention.

On the interior, a wood portico provides a distinctly modern interpretation of Baroque details. It acts as an environmental and acoustic buffer between the church and outside world.

with modern details recalling Baroque elements of the heritage building.

Step-free access was previously provided to the crypt via an elevator and the quire via a small stair lift. St. Paul's offers audio description and BSL signed multimedia guides, touch tours, large print and braille printed materials, and hearing induction loops.

Key takeaways

- The sculptural forms of the ramps and stairs, developed through interpretation of the heritage building, represents a new architectural layer.
- High quality materials match those of the original building in durability and repairability.
- Though intended to be permanent features, the new ramps and stairs are built atop a historic staircase and are therefore fully reversible.
- A small elevator and stair lift provide step-free access to the crypt and quire on the interior, though the galleries and triforum remain inaccessible, each with more than 100.

19

cSPACE Marda Loop

Location: **Calgary, AB, Canada**

Architects/consultants: **Nyhoff Architecture, FWBA Architects**

Year completed: **2017**

Ownership: **Private**

The former King Edward School is set back from the road on a landscaped site. A modern addition is situated on the footprint of a former west wing, opposite a historic east wing. Modern elements contrast sharply in form and materiality.

cSPACE Marda Loop is a four-storey sandstone building constructed in 1912-3 as the King Edward School. It is characterised by a sandstone exterior common to many contemporary public buildings in Calgary and Classical details including a raised entrance portico with an arched opening and columns.

In 2012 the building was purchased by cSPACE and underwent a $34.5 million rehabilitation to establish a creative hub and incubator focused on the arts. Work included the restoration of the core school, the addition of a modern, four-storey amenity building on the west side, and limited adaptation of the period east wing.

High stairs leading to a character-defining portico, and additional stairs inside the front doors, precluded an accessible front approach to the heritage building. Step-free entrances were therefore provided through new building elements.

On the front, a low-slope ramp descends to a café entrance at a slightly sunken lower level in the east wing. On the rear, a black-clad modern addition projects from the space between the east wing and core school, providing level entry from the parking lot.

On the interior, an elevator provides access to all floors of the complex and spacious washrooms are accessible via

The rear entrance is through a modern addition/stair tower between the east wing and core school which negotiates the connection to existing floor levels.

A large, central elevator provides vertical circulation to all floors.

cut-throughs in the original brick-and-stone walls.

New elements are distinctly modern, with black metal cladding and long strips of glazing, and contrast sharply with the rough sandstone school, however care was taken to align floor levels and visually separate new elements. The large west addition uses the footprint of a former west wing that was previously removed due to structural concerns.

Key takeaways

- The core heritage building was left largely unaltered while the later east wing was selectively modified. A substantial addition fills the space of a former west wing.
- New elements use a similar design language, including materials and colours, in stark contrast to the existing building.
- A new level entrance and stair tower were added to the rear façade, adjacent a parking lot with accessible parking spaces.
- Lack of formal designation at the time of completion enabled substantial changes to the site which may not have been permitted otherwise.

20

Wellcome Collection

Location: **London, UK**

Architects/consultants: **Wilkinson Eyre Architects**

Year completed: **2019**

Ownership: **Private**

The Wellcome Collection is a museum and library of the Wellcome Trust housed in a five-storey stone building erected in 1931-32. The building is characterized by its Portland stone exterior, tall columns along atop the plinth of the ground floor, and central, projecting portico.

With a focus on medicine and health, accessibility was a central tenet of the building's rehabilitation since 2007.

The Wellcome Collection is located on a street corner with entrance directly off a sidewalk under a pedimented portico.

The principal entrance to the Wellcome Collection has never had stairs but features tall, double-leaf doors. The original doors, which remain in place, are held open during opening hours with fully glazed, power-operated doors installed behind. Additional, glass revolving doors were installed on either side by extending an existing raincap.

Inside the doors, a modern staircase leads to the main level. To the left of the stairs, an open platform lift provides step-free access. The lift has a stainless-steel frame with glass guards and a floor surface matching that of the lobby. Three elevators provide access to upper floors with larger freight elevators connecting to interior accessible parking.

Physical access is complimented by strong programmatic access. Live tour options include audio description, sign language, and speech to text. Other access measures include the use of tactile walking surface indicators (TWSI), large print, braille titles and tactile elements, screen-reading software in

An open platform lift is collocated with the entrance stair inside the front doors.

A kiosk near the entrance and reception are provides auditory, visual, and sensory aids. TWSI are also provided.

the library, and a variety of borrowable aids including tinted glasses and ear defenders. A Changing Places washroom, part of network of universal washrooms with adult change tables, is provided on the ground floor.

The Wellcome Collection provides a detailed accessibility guide on its website and people with disabilities are regularly formally consulted in an effort to improve offerings.

Key takeaways

- A sidewalk-level door relieved the need for exterior changes. Heavy doors are held open with power-operated doors installed behind.
- Stairs and a lift at the entrance are collocated and connect to a tour path indicated by tactile walking surface indicators.
- A large Changing Places washroom serves visitors and others nearby requiring accessible facilities.
- A suite of programmatic access measures is provided and described on the organization's website. Visitors are encouraged to inquire about others. Curators follow an internal accessible exhibition design guide.
- Consultation with people with disabilities was integral to developing the program.

PHASE THREE

Understanding perspectives and collecting input on the features of accessibility solutions in heritage spaces

Phase three of the project sought to gather feedback on the themes uncovered in phase one and the attributes observed in phase two that may be applied to achieve accessibility in heritage buildings.

Like phase one, phase three incorporated (a) an online survey and (b) a series of virtual workshops. The attributes presented in the phase three survey and workshops as defined in phase two were:

- Creativity
- Balance
- Quality
- Tools
- Redundancy and maintenance
- Information and training
- Codes and standards
- Public consultation

Both the survey and workshops included heritage professionals and people from the disability community. Results from the survey and workshops were used to inform recommendations for achieving success when implementing accessibility solutions in heritage buildings in Canada.

Online survey

From 30 October 2023 to 15 December 2023, an online survey was available for participants to complete. Briefly, the survey consisted of two questions: (1) to understand what defines successful accessibility in heritage buildings for the user, and (2) to gauge the importance of various attributes when implementing successful accessibility solutions in heritage buildings.

Both groups (heritage professionals, disability community) completed the same survey. Respondent demographics are summarized in Table 3 below.

Table 3

Summary of phase three survey respondent demographics.

Gender (# of participants)	**Disability Community** (n=49)	**Heritage Professionals** (n=48)
Female	35	33
Male	11	13
Unknown/No response/Other	3	2
Identified disability type (# of participants)		
Mobility-related/Physical	54	12
Hearing-related	4	3
Vision-related	11	0
Cognitive/Development-related	3	3
Unknown/No response/Prefer not to answer	5	1
Does not identify as having a disability	0	35

Survey results

Participants were asked to define what accessibility success means to them in heritage buildings. The open-ended responses were summarized according to common themes, with 68 individual responses noted across the disability community group and 51 individual responses noted from heritage professionals. The responses were summarized according to six themes outlined below, with example responses from participants. Note responses may relate to more than one thematic area:

1. Prioritize accessibility through universal/barrier-free design practices

a. "Being able to have barrier-free access to heritage sites and buildings for community events. This is more than a ramp and access that accommodates diverse needs and ability levels."

b. "Success for me is being able to access a heritage building and move around in it if it is more than one level."

c. "Physical accessibility is the most important (and most challenging for historic buildings), but I am also an advocate to make our heritage more "accessible" for a wider audience, including BIPOC [Black, Indigenous, and other people of colour] and newcomers."

2. Inclusivity, equal experience, and equitable access

a. "Ensuring equitable access to built heritage. Equitable can only be defined by the disability community. But ensuring that those who are disabled don't feel intimidated or excluded from built heritage on a physical or intellectual level any more than someone without a disability (some places will always have limited access)."

b. "Having an equivalent experience in visiting a heritage site as my sighted peers. This means equal access both to physical spaces, and to information."

c. "An accessibility success in a heritage context is an idea/project/program/mindset which respectfully transforms a heritage site or heritage programming so that those typically/previously excluded by their access needs can fully experience it."

3. Ability to participate fully, with enjoyment of the heritage site

a. "Being able to independently enter and participate in heritage buildings/sites. Not having to call ahead to request special access, not having to call a staff for an elevator key. It means children with disabilities on field trips aren't segregated from their class or left out."

b. "The ability to be as fully immersed as possible in heritage experiences, no matter the ability - disability."

4. Access to information for people with disabilities other than physical/mobility-related

a. "...The educational materials should be in different formats, events are welcoming to all, exhibits that cater to a diverse audience and reaching out to audience members for diverse groups."

b. "Success could also be measured by how well heritage sites accommodate individuals with sensory impairments. This might involve providing audio descriptions for visually impaired visitors, creating tactile exhibits, or minimizing auditory distractions for those with hearing impairments. Ensuring that heritage information is accessible online is also important. This includes websites and digital resources being designed with accessibility features, such as screen reader compatibility and captioned multimedia content."

5. Following codes and best practices, ensuring safety

a. "Incorporating historical components/concepts while making accessibility for all persons with disabilities of various kinds and other cultural diversity along with environmental and sustainability best practises included to be inclusive for the short and long-run."

b. "... What is most important is safety and following best practices. Just because it's beautiful, but is missing a handrail or safety precautions, it essentially doesn't count for anything..."

c. "That people with disabilities are able to access heritage sites to the same extent as people without disabilities, safely"

6. Achieving balance between accessibility and preservation of heritage sites/buildings

a. "Allowing for universal accessibility with the least amount of intervention possible."

b. "Allowing a greater range of people to understand and interact with the heritage values of a place, while still maintaining the heritage values."

c. "Integration of accessibility measures without sacrificing heritage attributes."

Themes derived from the various definitions of success and corresponding percent of participant responses are summarized in Table 4 below.

Table 4

Summary of themes related to one's definition of what accessibility success means in a heritage building. Numbers reflect participant responses for each theme as a percent of total responses, separated by participant group

Theme	Disability community	Heritage professional
Prioritize accessibility by employing a universal/barrier-free design	39.7%	28.6%
Inclusivity, equitable experiences and access	19.1%	22.2%
Ability to fully participate and enjoy the heritage site	14.7%	9.5%
Access to information for people with invisible disabilities	8.8%	4.8%
Following accessibility codes and best practices and ensuring safety	8.8%	6.4%
Balance between accessibility features and preservation of heritage characteristics	8.8%	28.6%

In addition to providing insight into one's definition of accessibility success in heritage buildings, participants were asked to provide a rating of the importance of various attributes when implementing successful accessibility solutions within heritage buildings from "not important" to "very important", on a five-point Likert scale. Likert scale ratings for each attribute are summarized in Figure 10 below.

Figure 10

Likert scale ratings indicating perceived importance of attributes applied to accessibility in heritage spaces, for the disability community (left) and heritage professionals (right).

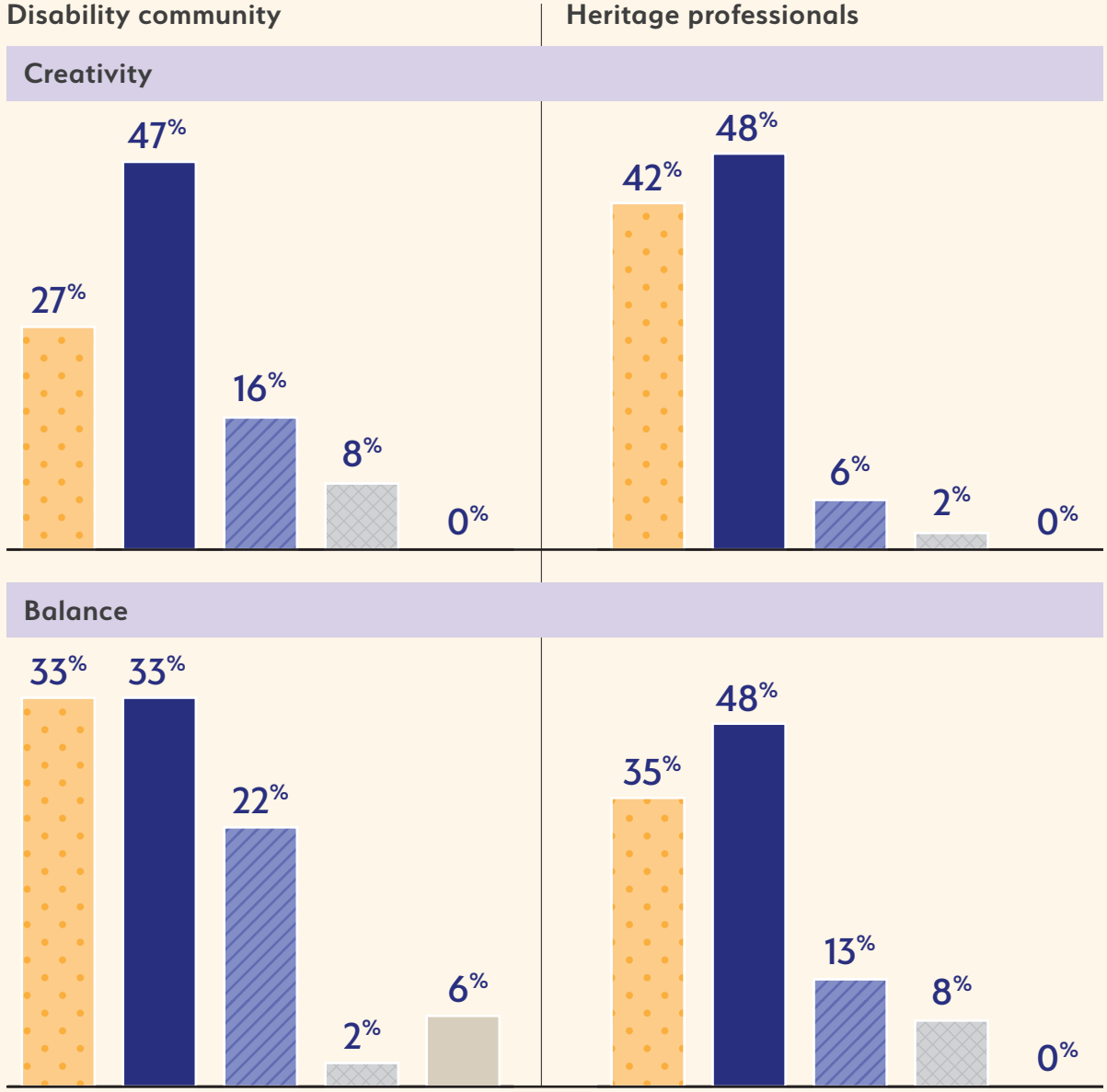


Figure 10

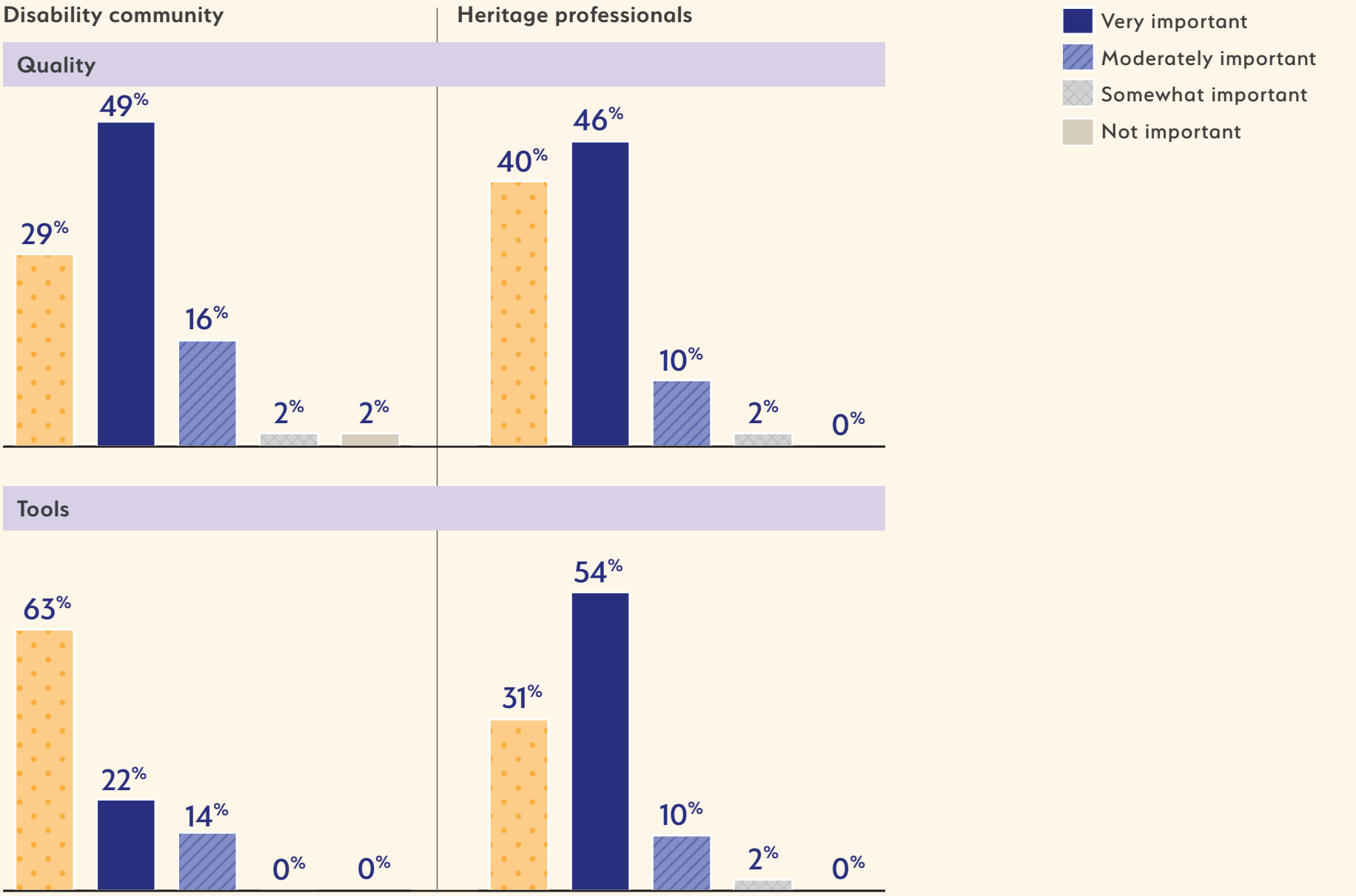

Disability community
Heritage professionals
Quality
29%
49%
16%
2%
2%
40%
46%
10%
2%
0%
Tools
63%
22%
14%
0%
0%
31%
54%
10%
2%
0%
Legend
Extremely important
Very important
Moderately important
Somewhat important
Not important

Figure 10

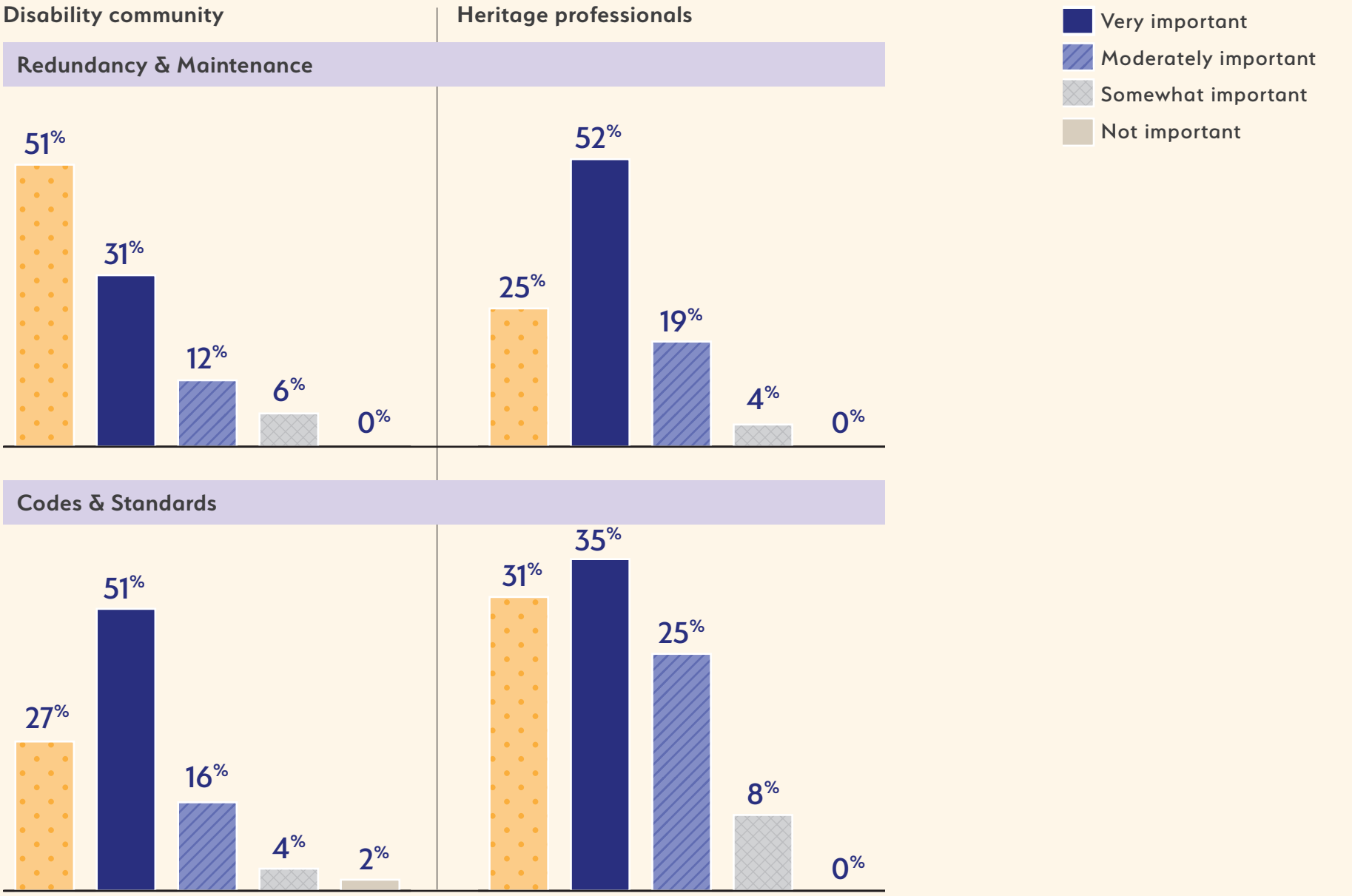
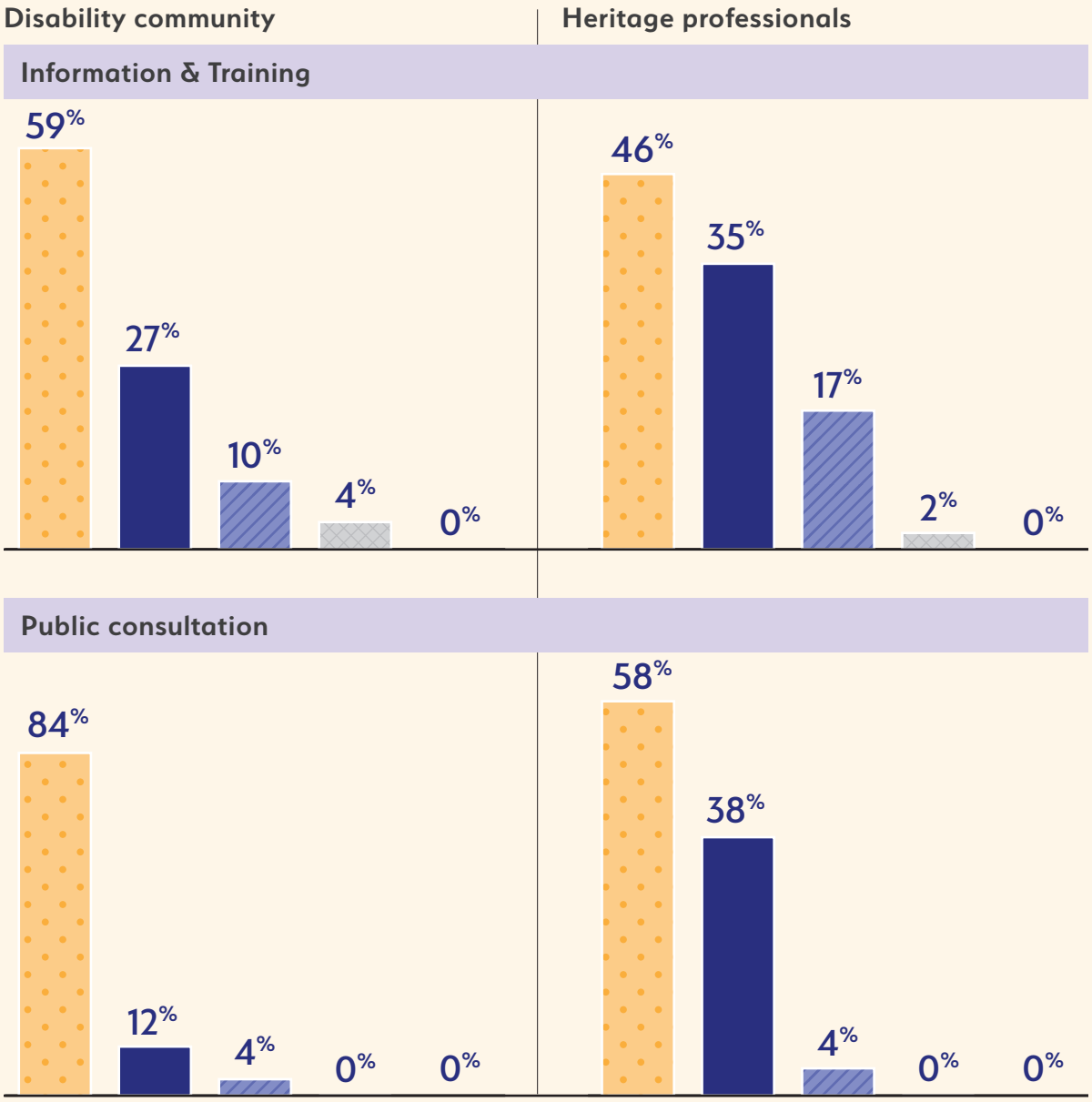

Disability community
Heritage professionals
Redundancy & Maintenance
51%
31%
12%
6%
0%
25%
52%
19%
4%
0%
Codes & Standards
27%
51%
16%
4%
2%
31%
35%
25%
8%
0%
Legend
Extremely important
Very important
Moderately important
Somewhat important
Not important

Figure 10



Overall, both groups rated the importance of the various attributes in a similar way, with a majority of participants indicating each attribute was extremely important or very important. Subtler and somewhat expected trends are evident within this. Heritage professionals generally ascribed slightly more importance than the disability community to creativity, balance, and quality, while most respondents from the disability community ascribed greater importance to public consultation, redundancy and maintenance, and information and training than did heritage professionals.

Virtual workshops

Eight virtual workshops were conducted in September 2023. Like those conducted in phase one, four workshops included heritage professionals and four workshops included people from the disability community. Like phase one, the structure was such that perspectives from each group were gathered independent of each other. Workshops were conducted concurrently on:

Tuesday, September 12, 2023

- 11AM-1PM ET

Thursday, September 14, 2023

- 1PM-3PM ET

Monday, September 18, 2023

- 1PM-3PM ET

Thursday, September 21, 2023

- 11AM-1PM ET

Phase three workshops included a summary of project findings to date, including a summary of the perspectives of barriers and challenges to making heritage buildings accessible generated through phase one. Workshop participants were then guided through the above-described attributes that may be applied to achieve accessibility in heritage contexts. The attributes were presented in sequence to participants and described using photographic images of national and international heritage buildings. Perspectives related to the application of each attribute to achieving accessibility success were gathered and are summarized according to themes below.

Workshop participants

Workshop participant demographics are summarized in Table 5.

Table 5

Summary of phase three workshop participant demographics.

Demographic category	Disability community (n=20)	Heritage professionals (n=14)
Age (# of participants)		
Under 30 years old	5	1
30-39 years old	5	3
40-49 years old	5	4
50-59 years old	0	4
60-69 years old	1	0
70+ years old	1	0
Unknown/No response	3	2
Gender (# of participants)		
Female	12	7
Male	4	3
Unknown/No response/other	4	4

Demographic category	Disability community (n=20)	Heritage professionals (n=14)
Identified disability type (# of participants)		
Mobility-related	9	0
Hearing-related	2	0
Vision-related	4	0
Cognitive/Development-related	0	0
Unknown/No response	5	5
Does not identify as having a disability	0	9
Unknown/No response	3	2
Does not identify as having a disability	0	9

Analysis of workshop content

Phase three workshops were analyzed in a similar manner to those conducted in phase one. Content was organized according to the various attributes applied to accessibility solutions. Themes were then generated that summarized participant discussions across attributes, with associated exemplar quotes provided to support the themes.

Workshop results

Four main themes emerged from participant discussions: (1) inclusive and intuitive implementation, (2) communication, (3) engagement of people with lived experience, and (4) consideration of codes, standards, and design objectives. Three of the four themes were common between participant groups, with various attributes aligning with each thematic area. Themes are described in detail below with exemplar quotes provided.

Inclusive and intuitive implementation

Inclusive and intuitive implementation should be considered when applying the following attributes: creativity, balance, quality, and tools. This theme is summarized in Figure 11.

Figure 11

Summary of interpretation of participant discussion related to inclusivity and intuitive implementation.

Inclusivity and intuitive implementation		
Disability community	• Participants emphasized the importance of clear and intuitive solutions. Solutions that are “hidden” and unintuitive are not accessible. • Creative solutions are only considered successful if they are usable and inclusive, otherwise they may act as barriers. • Shared sentiment against feeling singled out or reliant on others for assistance through special entrances. • Solutions should be well integrated within the space to facilitate equitable access and inclusive experiences for all.	• Creativity • Balance • Quality • Tools

Inclusivity and intuitive implementation

Heritage professionals	• Shared goal to achieve inclusive and intuitive design that ensures access for all. • Design solutions should seamlessly integrate with the heritage building, with materials being complimentary. • Approach to accessibility should be celebratory rather than a forced addition, fostering a more positive experience.	• Creativity • Balance • Quality • Tools

A ramp in a compatible style leads to an entrance at the Smithsonian Institution (The Castle), Washington, D.C., USA

There was discussion amongst both groups to achieve a shared goal of inclusive and equitable design for all.

> "My challenge is the inability to use it independently. I am not comfortable gaining access to a space that I had to ask to access when somebody else just opens the door. That feels like segregation to me; I don't like that. If everybody has to knock on a door to enter, well that's fine. But you're telling me because I need to use a lift, then I don't have equal access […] so that comes to the equality piece. And this is not even giving me equity because it's still treating me differently. It's providing access, but modified access to a point where I have to ask permission to actually use their services. And I don't like that feeling […] it is not appropriate to me." – disability community workshop participant

> "I think the point on simplification is the best point, because any sort of accessibility intervention that requires somebody else to intervene on the person's behalf isn't a successful intervention. I think it removes a lot of autonomy" – heritage professional workshop participant

Disability community participants discussed the importance of clear, intuitive solutions that were usable.

> "I'm just wondering, because if they don't advertise that, then they've wasted the money. It would have to be on the website, it would have to be in every single brochure […] if someone in a wheelchair comes there, they're going to look at the steps and, if they don't know, they're just going to turn around and leave." – disability community workshop participant

> "I wouldn't know walking up there that I needed to call an operator. The hidden stairs that turn into a lift, I wouldn't know by looking that that was the case. So if I had mobility issues […] and I walked up there and it didn't appear to be accessible in any way, I would likely just leave. I wouldn't necessarily look for a button to push to call somebody." – disability community workshop participant

Heritage professionals further emphasized that creativity can be applied to achieve intuitive accessible solutions. For both groups, accessible solutions should integrate within the space although remain intuitive for use.

> “I think the idea, making it that it’s not just a utilitarian way, in fact rather it’s an experience, I think that really helps set that aside and really inject a lot of creativity into it.” – heritage professional workshop participant

> “I think […] if everyone can use it and no one notices that seems like a great solution […] if this is just so easy, no one even thinks about it too much, that is ideal.” – heritage professional workshop participant

Interior spaces were redeveloped to provide step-free access at the National Army Museum, London, UK

Communication

Communication should be considered when applying the following attributes: information, staff training, redundancy, and maintenance. This theme is summarized in Figure 12.

Figure 12

Summary of interpretation of participant discussion related to inclusivity and intuitive implementation.

Communication		
Disability community	• Lack of communication stood out as a prominent concern. • People with disabilities heavily rely on pre-visit information through calling in advance or websites. Accessibility options should be communicated or available prior to arrival. • Emphasized the need for intuitiveness and clear visibility, either in the design itself or prior communication. • Open communication is highly valued, allows for increased convenience and comfort, and alleviates the sense of uncertainty associated with the visit.	• Information • Staff training • Redundancy • Maintenance

For disability community participants, lack of communication was a prominent concern related to accessible spaces, including wayfinding throughout the space. Communication about accessibility solutions could be apparent through the design itself, but also importantly through pre-visit information creating redundancies in availability of information for the user. While heritage professional participants did not focus discussion on elements of communication, there was acknowledgement throughout discussion that elements such as pre-visit information, digital tools, effective wayfinding, and well-trained staff can ensure users have a positive experience when visiting heritage buildings.

> "I've been in buildings where to be able to access it and get in the building […] it takes you another half hour of wandering around the building to get in and that often can present a huge issue for somebody with mobility issues." – disability community workshop participant

> "Something that I really want to include in this conversation is the importance of communication. So that when an individual calls or inquires at a space […] people are receiving consistent messaging no matter who they call or who answers the phone or the door or whatever it is. We run into that as a barrier very often." – disability community workshop participant

> "We make it a ramp and then we don't address the whole journey, and then not only in the site but from home to the site. And I think there's a lot of space for tools like landscaping, and lighting, and digital solutions like explicit accessibility information on a website. So people can plan long before they get to the button, knowing that there is a button long before they get to the button." – heritage professional workshop participant

Engagement of people with lived experience

Engagement of people with lived experience should be considered when applying the following attributes: consultation. This theme is summarized in Figure 13.

Figure 13

Summary of interpretation of participant discussion related to engagement of people with lived experience.

Engagement of people with lived experience		
Disability community	• Feedback from community is crucial and allows for relevant and effective solutions in heritage contexts. • Importance of moving beyond consultation to building a relationship to encourage long-term engagement. • Consultation is seen as the initial step. Moving past that would involve a two-way conversation allowing for meaningful and ongoing engagement.	• Consultation

Engagement of people with lived experience

Heritage professionals	• Receiving feedback from a variety of stakeholders is considered helpful and is always encouraged. • Value in knowing the opinions and perspectives of people with disabilities when implementing creative solutions. • In agreement that consultation should take a long-term approach and move instead to a focus on relationship building.	• Consultation

A short ramp takes advantage of a slope across the site at the Rayburn Building, Washington, D.C., USA

Both disability community participants and heritage professional participants recognized and discussed the value in seeking perspectives from those with lived experience when implementing accessibility solutions in heritage buildings. There was agreement that consultation should be approached and considered as long-term relationship building with ongoing engagement.

> ”To me, consultation is telling people, engagement is asking, so if you are informing of an update with perhaps even some engagement, it generally would be consultation. Public engagement is […] more of a long-term relationship, a form of empowerment, as opposed to a ‘We’ve done a thing. Do you like it?’” – disability community workshop participant

> “Consultation is often step one. It’s legally or ethically required to do. […] My definition is ‘I am required to talk to you’ is consultation. So it doesn’t mean I’m required to listen to what you have to say or incorporate your ideas in any way, I’m just required to talk to you. The step past that for me is engagement. So engagement is a two-way conversation. What you have to say through consultation now informs the way that I’m going to work and I’m going to do my best to incorporate the ideas that make sense and will result in the best outcome. The step past that is relationship. So it means that your opinion is important to me. I value it, I know it. You provide perspective and expertise that I don’t have and I seek it out. I respect it. And even when I don’t need something from you, I am seeking a relationship with you because it’s important to me. And so consultation is like the bare minimum. I’m required to talk to you. That doesn’t mean that it gets the best results.” – disability community workshop participant

> "I think if there's an opportunity to have public consultation on changes to buildings that have cultural significance to the community and particularly the active users of the building, it can only benefit in informing the design choices and evolution of design and coming to an accessible solution. It could be, for example, that very visible intervention which might not be quite appropriate from a very hard heritage point of view, in consulting with the public who also value the building, will say, yeah, that makes sense, go for the modern insertion that's pretty visible to fully give accessibility to the building." – heritage professional workshop participant

> "I don't know how we design a user experience without actually engaging with the user. I don't know how we answer questions of accessibility without specifically addressing the people who are being disabled by the environment or running into these barriers. I think there's only so much problem-solving that we can do in a vacuum with ideas bouncing around our heads, especially if it's a community or an environment or a situation that we are limitedly familiar with. So not only do I think public consultation is key, I'm not sure how we've avoided it and I'm not sure how it's ever considered anything but absolutely necessary." – heritage professional workshop participant

> "I recall one project that I did where [having the input of people with disabilities] helped us to steer the location of where an elevator was proposed. [Looking] at the options […] we recommended a certain one as the preferred approach. [People with disabilities] supported that approach, so having that, as reaffirming creative design options and then coming to a common agreement, helped facilitate a recommendation to go forward." – heritage professional workshop participant

Consideration of codes, standards, and design objectives

Codes, standards, and design objectives should be considered when applying the following attributes: codes and standards, creativity, balance, and quality. This theme is summarized in Figure 14.

Figure 14

Summary of interpretation of participant discussion related to consideration of codes, standards, and design objectives.

Consideration of codes, standards, and design objectives		
Disability community	• Safety is an important consideration when designing solutions. • Open to more flexible codes and standards, provided that solutions remain safe and contribute to increased accessibility. • Innovative solutions may fit within existing codes and standards in Canada.	• Codes and standards • Creativity • Balance • Quality
Heritage professionals	• Discussed the idea of improving or moving beyond minimum codes and minimum standards for accessibility. • Concerns about certain solutions exceeding the distinguishability objective and taking away from the heritage building. • Creativity can be applied within the constraints of current codes/standards, but flexibility in heritage contexts may achieve greater accessibility outcomes.	

The discussion amongst disability community participants focused on safety as an important consideration when implementing accessibility solutions in heritage contexts; innovative solutions could fit within existing codes and standards. If codes and standards are flexible in heritage buildings, they must remain safe and contribute to increased accessibility.

> "It depends if it's a new construction, they're building a new building, then you definitely put in everything that you can do but when you're refitting a heritage building there's other considerations. I'm not saying you skip on safety, but you try to make it as safe as you possibly can and then try to also keep with the aesthetics of the building." – disability community workshop participant

> "I have seen that [the retractable stairlift's] not approved here in Canada. And the reason is because there's some safety issues with it. It's size-restricted, so you couldn't take a scooter up there. It accommodates smaller mobility devices and probably many power-assisted chairs, but it will not accommodate a large scooter. It's too narrow and not having a grab bar or something to hang on to is an issue for many people, so if you were using a walker, you might feel unsteady going up there." – disability community workshop participant

Heritage professional participants similarly discussed how flexibility in heritage contexts may allow for greater innovation/creativity, although innovation could still exist within current safety codes and standards.

> "You have to be able to think outside the box sometimes for how do you want to reinterpret the basic code requirements. The basic code requirements are safe to apply, but behind it there's the real reason they're put in place and if you can meet the real reason with your design, take responsibility for and demonstrate it, then sometimes you can come up with creative designs." – heritage professional workshop participant

> "I think flexibility, as you've all mentioned, is key. Flexibility to change over time, flexibility to iterate. Not only is prescription so poorly [suited to] case-by-case heritage buildings, but it feels as though it's often misapplied and applied top-down with little consideration to the user experience. So now we're forcing poorly considered, rigid interventions, unempathetic rigid interventions that don't actually equate to accessibility." – heritage professional workshop participant

Conclusions

Engagement in phase three helped to support and add significant nuance to the attributes described in phase two. Despite some differences in weighting described above, respondents generally considered all attributes important to the success of accessibility interventions. However, more divergence arose in qualitative definitions of “success.” While roughly equal numbers of each respondent type defined it in terms of equitable access and experiences, the disability community was much less likely to refer to balance as a key criterion and instead stated priorities including universal access, access to information, and the ability to participate fully.

This divergence developed further in the workshops where participants from the disability community in particular helped to clarify the roles of communication, intuitive design, and engagement. For their part, heritage professionals expressed support for intuitive design, the inclusion of people with disabilities in the planning process, and an equitable approach that celebrates rather than shies away from access improvements.

It should be noted that while priorities diverged, they did not often contradict. This suggests these perspectives are compatible and speaks to the need for collaboration and cross-pollination of ideas to improve outcomes for all.

A sloped walk concealed by landscaping at the Berklee College of Music, Boston, USA

RECOMMENDATIONS

Recommendations

The following recommendations were developed by the project team through a review of best practices in comparable jurisdictions, observation during site visits, interviews with custodians and designers, and engagement carried out with people with disabilities and heritage professionals in phases one and three. They are supported by rationale based in these references.

> "There are only rare occasions when nothing can be done to improve or facilitate access. By undertaking a careful process of research, brief-taking, consultation and creative exploration of alternatives, good quality solutions that add a new layer of history to our historic buildings are usually possible."
>
> (Sawyer 2015, 4)

General approach and planning

Rationale

General guidance on interventions in heritage contexts, including that provided by the Standards and Guidelines, is widely available and will not be discussed here. There are, however, general considerations specific to accessibility.

Above all, accessibility interventions in heritage contexts should be informed by an inclusive planning process that centres people with disabilities as experts in their own experience. On this process, Historic Scotland (2010) writes that "with careful thought and planning, improved physical access to most elements of the historic environment can usually be achieved through reasonable adjustments without harming the character and appearance of the historic building or place" (3).

Sources that discuss planning describe similar sequences, generally beginning with goal setting followed by information gathering, engagement and proposal development, and the formalization of an access plan for the heritage building.

Flowcharts illustrating these processes often depict a feedback loop for revising and improving proposals.

Under the draft standard *ISO/DIS 5727* (2023), all accessibility interventions in heritage contexts are subject to a set of strategic, technical, and operational principles (5-6). Shaffrey et al. (2011) summarize this multifaceted approach, writing that "planning should take place in a holistic way, formulating an overall plan which addresses all necessary works to conserve the distinctive qualities of the place but which also allows for change" (19).

Recommendations

1. The following principles shall guide the planning and implementation of all accessibility interventions in heritage contexts:
   - **a.** The appropriate balance between accessibility and conservation shall be determined through an inclusive process involving people with disabilities.
   - **b.** Projects shall begin with the goal of universal access and full compliance with best practice standards, such as CSA B651, which shall apply to the heritage building to the greatest extent possible.
   - **c.** Interventions shall endeavor to enable use and understanding of the heritage building by all people.
   - **d.** Accessibility planning shall take a person-centric, cross-disability approach, considering the diversity of potential users of a heritage building including all types of physical, sensory, and cognitive disabilities and their intersections.
   - **e.** Accessibility planning shall consider the entire journey sequence, from planning a trip to arriving, entering, using, and exiting a heritage building.
   - **f.** Project teams shall be multidisciplinary and inclusive of people with disabilities or their direct engagement.
   - **g.** Accessibility shall be continually reviewed and improved.
   - **h.** New accessibility interventions shall not negatively impact the utility of previous accessibility interventions for any groups of users.
   - **i.** Interim solutions shall provide equal or greater accessibility and safety compared to permanent solutions.
   - **j.** Interpretation of heritage buildings shall incorporate disability histories where possible.
   - **k.** Original design features shall be documented such that they can be studied or reinstated where they are concealed or removed.

2. In addition to physical changes identified through the planning process below, a range of low-impact solutions shall be implemented to provide access to the services offered in or by a heritage building, including but not limited to:
   a. Induction loops at service areas;
   b. Video relay services;
   c. Furnished rest areas;
   d. Accessible signage and wayfinding; and
   e. Elements to reduce echo/ reverberation in interior spaces.

3. Custodians shall develop an access plan specific to the heritage building that describes physical, management, and operational changes addressing all parts of the journey sequence. The access plan may be implemented in phases based on a clearly articulated timeline and shall include a schedule for review.

4. The access planning process shall generally follow the following sequence:
   a. Formulation of an organizational access strategy to address current and future user needs. An access strategy should set priorities, identify those responsible for implementing and managing the strategy, establish budgets and timelines, identify relevant legislation and standards, and provide for ongoing review and improvement. The access strategy may be completed preemptively, independent of the following process.
   b. Collection of background information and completion of a conservation assessment (e.g. a Cultural Heritage Evaluation Report in Ontario) and access audit (based on better practice standards such as CSA B651) where they do not exist. These may be undertaken simultaneously and collaboratively.
   c. Development of options and assessment of the feasibility and priority of each option based on access, heritage conservation, and technical requirements. Engagement with people with disabilities and officers for access and heritage at this stage is crucial.
   d. Adoption of an access plan setting out site-specific actions, interventions, timelines, budgets and other resources, and responsibilities for implementation. The access plan may identify short- and long-term goals as well as interim measures.
   e. Detailed design of interventions with iterative review as the design progresses.
   f. Implementation of measures described in the access plan in a comprehensive or phased approach.
   g. Monitoring, maintenance, and review of individual measures and the access plan as a whole. Post-occupancy and ongoing

engagement with people with disabilities is crucial to ensuring measures are performing as expected and improved where possible.

5. The schedule and budget for the planning process shall reflect the scale and complexity of the intervention.

6. Custodians shall enable and encourage the employment of people with disabilities through hiring practices and the implementation of an access plan. Given their valuable perspective, staff with disabilities shall be included in ongoing accessibility planning to the greatest extend possible.

Creativity

Rationale

Successful interventions documented by the project team each exhibited a degree of creativity as described in phase two. The concept of creativity also comes up repeatedly in the literature: Young (1996) wrote that "in order to achieve the greatest level of accessibility, imaginative solutions must be sought which incorporate an integrated review of access and which do not diminish the value of the monument" (1); Ladenheim (2002), in an analysis of the impact of the Americans with Disabilities Act on heritage buildings wrote that "ADA requirements may be approached with creativity to minimize their impact on the historic fabric" (34); and Whimster et al. (2015) wrote that an inclusive environment "results from a creative approach to design and management that embraces diversity and seeks solutions that will benefit as many people as possible (13).

> "... when alterations [are] deemed necessary, they should emanate from a thorough understanding of the historic and architectural significance of the facility in question."
>
> (Bonnett and Nee 2021, 16)

While creativity cannot be mandated, certain measures can lay the groundwork for the type of creativity required for success in a heritage context. Proposals should be based in a thorough understanding of the values and attributes of the heritage building, design teams should include diverse perspectives, and many alternatives should be evaluated to arrive at an appropriate solution. Refer to Engagement for more on incorporating diverse perspectives.

> "I think the idea […] that it's not just a utilitarian way, in fact rather it's an experience, I think that really helps set that aside and really inject a lot of creativity into it." – heritage workshop participant

> "An innovative approach can be of particular value when working with historic buildings. The most successful solutions are frequently the result of heritage advisors engaging creatively with access groups, designers and others in exploring options for ensuring full access."
>
> (Bonnett and Nee 2021, 16)

Recommendations

1. Project teams shall be multidisciplinary and may include, depending on the scale of the project:
   a. Accessibility specialists;
   b. Internal accessibility staff;
   c. Architects and/or conservation architects;
   d. Building conservation specialists;
   e. Architectural historians;
   f. Wayfinding or exhibit designers; and
   g. Landscape architects.

2. Custodians are encouraged to engage professionals and other consultants with disabilities who can provide an intersectional perspective.

3. Refer to Engagement for recommendations on engaging people with disabilities in the planning process.

4. Solutions shall be based on a thorough understanding of the design, style, values, and attributes of the heritage building and objectives for accessibility.

Balance

Rationale

An appropriate balance is implied almost universally and often comes up explicitly in the literature: Historic Scotland's guidance document (2010) states that "the aim is to achieve the best practical balance between the access requirements of all users and the reasonable conservation needs of the building or place" (5); the National Disability Authority (2011) aims "to strike a reasonable balance between the different policy priorities of providing disability access and conserving, preserving and protecting heritage sites" (11); Whimster et al. (2012) suggest that "the point is to create a balance so that every visitor is able to enjoy the experience" (14); and ISO's draft standard (2023) requires that "when establishing accessibility to immovable cultural heritage, a balance shall be ensured between the conservation of its values and the achievement of specific social goals" (5).

The question for custodians and project teams therefore becomes: what is the right balance? While the current draft of *ISO/DIS 5727* (2023) ascribes equal importance to heritage and accessibility (5), in practice most projects will strike a different balance depending on the significance of the building, the feasibility of adaptations, and the nature of services provided. Engagement for this project uncovered a distinct preference for accessibility even where character-defining elements may be altered or removed. While this perspective cannot be extrapolated, it is in line with Canadian legislation which places human rights above conservation in contrast to other jurisdictions studied.

> "if there's an opportunity to provide access in a more sensitive way or a more celebratory way for the building and for the beauty or for the uniqueness of that particular heritage building or [in a] complimentary way, then we should prioritize, you know, that kind of way of thinking about access, but […] people should be able to get into buildings to renew their passport, so if the opportunity for sensitivity is not there, then we have to look at the next best thing which might be more utilitarian" – disability community workshop participant

> "History is really important to all of us. But I think the long and short of it is, is that we would probably all benefit from enjoying the same spaces that everybody else does without having to make a spectacle of yourself." – disability community workshop participant

Recommendations

1. The value of conservation of character-defining elements must be balanced against the value of improved access for all and the right to access public services and cultural resources.

2. Balance must be evaluated through an inclusive process that involves the perspectives of people with disabilities.

3. The appropriate balance for a heritage building may depend on:
   a. Whether the heritage building has a contemporary use or is interpreted as an artifact in and of itself;
   b. The nature of services provided in or by the heritage building;
   c. The demographics of visitors to or users of the heritage building;
   d. The heritage value and attributes of the heritage building;
   e. The design, size, and layout of the heritage building; and/or
   f. The feasibility of options in terms of scope, cost, and timelines.

4. Balance may best be achieved through a collaborative process between custodians, enforcement officials (authorities having jurisdiction), designers, people with disabilities, and heritage professionals. Refer to Engagement.

5. The appropriate balance is context dependent and may change over time as uses and priorities evolve.

Quality

Rationale

The importance of quality is an important refrain in the literature. Historic Scotland (2010), which devotes an entire section of its pamphlet to high quality design and materials, states that “use of high-quality design and materials benefits all users and the long-term functioning of the building/place” (6). Sawyer (2015) explains that “good quality access can enhance our understanding of the historic environment and ensure its sustainability” (ii) and Cadw (2022) suggests that “good-quality access to listed buildings can enhance understanding and appreciation of the historic environment” (6). However, less is published on the meaning of high-quality design or how to recognize it.

Shaffrey et al. (2011) provide some of the most specific suggestions for achieving quality, including bespoke solutions, integrated design solutions, combined management and physical solutions, and consultation in the planning process (48-50). Bespoke solutions refer to custom interventions suited to the heritage building:

> While standard solutions may sometimes be applicable, more often a bespoke solution, one specifically tailored to a particular situation, is required for historic places. [...] Durability and performance over time as well as functionality and appropriateness for the specific context should be considered.
>
> (48)

Integrated design solutions refer to the potential to achieve improvements to accessibility as part of a larger project, thereby opening up a greater budget and scope of intervention (49). Combined management and physical solutions refer to the possibility of coordinating interventions with changes to a heritage building’s program or interior arrangement (50). The relationship of consultation to quality is described further in Engagement.

Shaffrey et al. (2011) also speak to the common sentiment that high quality modern interventions are often preferable to poorly rendered period detail, writing “care should be taken to ensure high quality detailing and specification, as poor quality pastiche versions [of historic styles] would detract from the original” (19).

While it may be desirable to achieve quality using materials like those of the heritage building, their rareness or uniqueness, the complexity of manufacturing or working with them, or a lack of skilled trades may preclude their use. In such cases, selecting high-quality substitute or alternative modern materials will be required.

Lastly, quality must be assured through an appropriate budget that recognizes the cultural value of the heritage building and the life-cycle costs of conservation and continued use. Appropriately maintained, heritage buildings have indefinite service lives with the potential to enduringly represent important national themes while adapting to modern needs.

Recommendations

1. Interventions shall be based on a thorough understanding of the heritage building, including:
   a. Its story and evolution over time;
   b. Its original design intent;
   c. Its scale or size;
   d. Methods of its construction;
   e. Its materials, including their availability for repair or potential for reuse;
   f. Its symmetry or asymmetry;
   g. Critical views to or from it; and
   h. Its relationship to the landscape.

2. Quality of design and materials shall be enabled by the creation of appropriate budgets and schedules. Coordinating accessibility improvements with larger projects and aligning accessibility requirements with broader user and conservation needs can reduce incremental costs and help justify necessary budgets.

3. Proposals shall be grounded in a thorough understanding of the heritage building. While they may be based on precedent, details of the proposal shall always respond to the specific character of a specific heritage building.

4. Solutions shall be designed for permanence. Custodians shall therefore strive to provide the highest quality of construction and finish possible.

5. In general, the quality of interventions will be highest when they align with management changes and overall priorities.

6. Quality may be improved through a process of negotiation between custodians, designers, heritage and accessibility professionals, and users, including people with disabilities.

7. Materials shall be specified that are durable and repairable and that weather or wear in a manner consistent with the heritage building.

Tools

Rationale

The tools available to provide access to heritage buildings are constantly evolving and their potential should be evaluated, both in the project planning phase and on a periodic basis thereafter. As explained by Historic Environment Scotland (2010, 10), "the provision of access should be continually monitored as […] technology may offer solutions to previously insurmountable obstacles." When implementing new tools, information and visibility is critical. Users should be informed of the tool before visiting the heritage building, where possible, and information must be available on site about use of the tool. The tool, particularly if it is unfamiliar and before awareness increases, and any end-user controls must be identifiable on site and generally follow universal design principles.

The appropriateness of a tool in any given context can best be evaluated by engaging people with disabilities.

> "If someone in a wheelchair comes there, they're going to look at the steps and if they don't know, they're just going to turn around and leave." – disability community workshop participant

> "My challenge is the inability to use it independently. I am not comfortable gaining access to a space that I had to ask access to when somebody else just opens the door." – disability community workshop participant

Recommendations

1. Custodians and project teams shall consider new tools, such as convertible stairlifts or information and communication technology, to provide physical, sensory, or alternative access.

2. Non-mechanical solutions should generally be prioritized over mechanical solutions for their reliability and lower operating costs.

3. All tools should be evaluated prior to implementation by end users, including people with disabilities, who may recommend provisions to improve accessibility or rejection of the tool.

4. In general, tools shall be:
   a. aesthetically appropriate;
   b. intuitive to use;
   c. easy to locate with easily distinguishable controls;
   d. independently operable by the end user;
   e. described, in terms of operation and limitations, in an access guide in accessible formats (refer to Information);
   f. included in staff training programs;
   g. routinely monitored, maintained, and reviewed after implementation; and
   h. compatible with the Canadian climate and resilient with respect to snow and ice.

5. New tools shall be paired with redundant access measures where possible (refer to Redundancy).

Redundancy

Rationale

Redundant access provides multiple means of accessing a heritage building or service and serves two important purposes: providing back-up access should one accessible route be interrupted (e.g. by equipment breakdown, maintenance, or for operational reasons) and providing choice.

It was commonly observed that accessibility features like lifts, elevators, or automatic door openers were out of service. In some cases, alternative means of access were available, while in others this would have meant the abrupt end of a journey sequence for many people with disabilities. Where an accessible route is interrupted, other accessible routes should be provided.

A second benefit of redundancy is choice. For example, if a heritage building has multiple public entrances serving different exterior routes, ensuring each is accessible provides the choice to arrive by any mode without having to take “the long way around.” Choice supports equity and independence, enabling people with disabilities to use the same routes as their peers.

Redundant access can take many forms, including providing multiple elevators or adaptive devices and providing print options in addition to digital material.

Recommendations

1. Redundant access measures must be easily identifiable.
2. Multiple accessible routes shall be provided where possible.
3. Redundant routes shall be public routes where possible.
4. Information on and wayfinding to all accessible entrances or routes shall be provided both on site and in advance via pre-visit information (refer to Information).
5. Wayfinding to redundant accessible routes must be provided when primary accessible routes are interrupted.

Maintenance

Rationale

The breakdown of accessible elements as described above, which may equally apply to informational or operational elements of an accessibility strategy, can render the strategy obsolete, particularly in the absence of redundancy measures. The draft standard *ISO/DIS 5727* (2023) describes the "accessibility chain" or "chain of accessibility" which "reflects the idea that if one link of the chain fails, then, the accessibility of the system fails as a whole" (3). Historic Scotland (2010) includes maintenance alongside high-quality design and management as a determinant of success in the provision of sensitive access improvements (2).

Recommendations

1. Where existing equipment maintenance processes are not prescribed, custodians shall establish an ongoing formal maintenance program that includes:
   - **a.** Regular inspection and testing;
   - **b.** Scheduled maintenance of mechanical systems (outside of operating times where redundant access is not provided);
   - **c.** A reporting process for maintenance issues;
   - **d.** A mechanism to recommend improvement to the accessibility strategy or element;
   - **e.** Planning, decision-making, and implementation processes;
   - **f.** Training and implementation of maintenance requirements specific to alternative solutions; and
   - **g.** Documentation of maintenance activities.

Information

Rationale

Accurate information on the accessibility of a heritage building enables people with disabilities to make informed decisions about the buildings they visit and the routes they take. In fact, Whimster et al. (2015) describe lack of information as "one of the most significant barriers to access" (31) to historic sites.

Pre-visit information in particular can prevent what was described in phase one as the "illusion of accessibility," or the experience of encountering an unexpected barrier despite the outward appearance of accessibility. Pre-visit information is typically provided in the form of an "access guide" describing accessible site access points, entrances, services, facilities, technologies, and accommodations. The draft standard *ISO/DIS 5727* (2023) provides the following definition:

> The Access Guide should provide information about the accessibility conditions and characteristics of the cultural object. It describes the level of accessibility provided, as related to all users' specific access requirements and it is based on a detailed accessibility assessment of all the elements of the venue, building or site. (22)

Such access guides were provided for many case study buildings. Most hosted an access guide on their website, linked from a section titled "visit us" or similar, though some UK sites made use of accessibilityguides.org, a repository supported by national tourism authorities. It should be noted that this service is being retired and replaced in March 2024, raising the issue of reliability and the appropriate "home" for an access guide.

Similar information should be available on site at points of arrival and/or near accessible entrances (e.g. at a reception desk). In addition to descriptions of accessible routes and services, on-site information should include accessible formats for wayfinding information and program/service materials, and tactile maps or models indicating the location of accessible routes and facilities.

> "Above all, pre-visit information should let disabled people know they are welcome and will be able to enjoy their visit."
>
> (Whimster et al., 2015, 33)

> "Access to a building commences when someone decides to visit and enquires about access provision, maybe by looking at the website or phoning for advice."
>
> (Bonnett and Nee 2021, 17)

> "If they don't advertise that, then they've wasted the money" – disability community workshop participant

Recommendations

1. Custodians shall publish access plans on their website. Where an access plan describes a phased approach, progress shall be updated annually or shortly after alteration is completed.

Pre-visit information

1. The purpose of pre-visit information is to allow people with disabilities to make informed decisions about visiting a heritage building and to plan a journey that minimizes their effort and maximizes their independence. Pre-visit information should consider the journey sequence and include:
   a. Arrival to the site including parking, transit, or drop-off facilities;
   b. Paths to entrances;
   c. Entrance conditions;
   d. Horizontal and vertical routes through the building;
   e. Locations of facilities such as washrooms;
   f. Locations of services or features of historical interest;
   g. Notable sensory stimuli (e.g. loud noises, strong smells);
   h. Instructions for the use of non-standard mechanical devices (refer to Tools);
   i. Compatibility with smartphone-based apps;
   j. Availability of on-site mobility or technological aids;
   k. Provisions for guide dogs, support persons, and groups;
   l. Details on adapted tours, performances, or services;
   m. Emergency provisions;
   n. Limits to access to any parts of the heritage building; and
   o. Contact information for knowledgeable staff for additional information or to arrange accommodations.

2. Pre-visit information shall provide sufficient information to enable informed decision making.

3. Pre-visit information shall be written objectively and not make presumptions about the abilities of the user. Custodians are encouraged to provide measurements and slopes (as applicable), particularly for doors, ramps, and any features not meeting specified standards such as CSA B651.

4. Pre-visit information shall be clear, concise, and provided in accessible formats, including plain text on an accessible website usable by a screen reader and meeting Web Content Accessibility Guidelines (WCAG) AA or higher. Formats may also include:
   a. A plain-language version;
   b. Illustrations in the form of photos, plans, or diagrams with image descriptions.

5. Pre-visit information shall be provided in a predictable, intuitive location.
   a. For public-facing heritage buildings (e.g. museums), access guides should be provided online and collocated with general information on visiting the heritage building.
   b. For staff-only or intermittent-use heritage buildings, access guides should be collocated with address information.
   c. Accessibility information for all federal heritage buildings visitable by the public should be included in or linked from the Canadian Register of Historic Places.
   d. Links to website accessibility information should be clearly

differentiated from accessibility information pertaining to the heritage building.

On-site information

1. On-site accessibility information shall be provided including, at minimum, maps with visual and tactile features indicating accessible entrances and routes to facilities and services.

2. All information provided for wayfinding and access to services should be available in multiple formats including large-print text, braille, audio recording, and/or multiple languages.

3. Detailed tactile models or plans are encouraged, particularly where the heritage building is part of the service and is interpreted through other means.

A new ramp and stairs were installed at the Calgary Public Building, Calgary, Alberta

Staff training

Rationale

The role of staff may range from minor to essential depending on the overall accessibility strategy, however staff must be available to answer questions or assist users with disabilities regardless of their place in the journey sequence. Staff must also be aware of the accessibility strategy to ensure accessible routes and facilities are not inadvertently encroached. For these reasons, staff should receive training in interacting with people with disabilities, the overall accessibility strategy, using accessible equipment or facilities, and all applicable emergency procedures or equipment. As explained by Young and Urquhart (1996), "where staff are properly trained and informed they will be able to confidently, sensitively and effectively provide the required type of assistance and information" (2).

The importance of staff training is reiterated by Sawyer (2015):

> No access plan will be truly successful unless it is underpinned by a commitment from the very top of the organisation to meet or exceed currently agreed standards of good practice. It also needs the backing of universal staff awareness brought about through a combination of training and ongoing management support. (14)

In Canada, Heritage BC (2020) suggests that "all staff should be trained on accessibility issues related to the historic place and appropriate ways to interact with guests with disabilities" which should be "renewed on an ongoing basis" (10).

In general, people with disabilities should not be required to seek the assistance of staff where other users can proceed unassisted.

Recommendations

1. All staff occupying heritage buildings should receive training in:
   a. Objectives underpinning the custodian's accessibility strategy;
   b. The access strategy as a whole, including accessible routes and measures for sensory or cognitive access to the heritage building and its services;
   c. The operation of individual elements of the journey sequence, including mechanical systems and information and communication technology;
   d. Interaction with people with disabilities, including the recognition of visible and non-visible disabilities; and
   e. Processes for escalating accessibility concerns or requests.

2. Staff training must be provided to new employees and regularly renewed for existing employees.

3. In heritage buildings providing services such as interpretation or performance, the concept of staff training should be extended to the provision of adapted tours or performances.

4. Custodians shall consider developing and providing to staff an access manual addressing management and maintenance considerations in support of the access plan.

Codes and standards

Rationale

In general, all interventions in and around heritage buildings should meet or exceed better practice standards such as *CSA B651*. It is obvious, however, that providing all the clearances, dimensions, and facilities required by such standards will not be possible or desirable in all heritage buildings. Certain minimum standards must therefore be set out. Such base levels of accessibility were observed in practice and should be achievable for all but the most sensitive heritage buildings.

Internationally, many standards for the accessibility of heritage buildings are performance-based rather than prescriptive and, in the US and UK for example, focus on the accessibility of programs or services rather than buildings themselves. These jurisdictions also offer carve-outs where alterations would impair the historic significance of a building or where compliant alterations are technically unfeasible. In the case of the latter, alternate forms of access, such as audio-visual presentations, may be permitted.

In the US, the ADA Accessibility Standards provide the following alternative requirements where full compliance would threaten or destroy historic significance:

a. At least one accessible route complying with 4.3 from a site access point to an accessible entrance shall be provided.

EXCEPTION: A ramp with a slope no greater than 1:6 for a run not to exceed 2 ft (610 mm) may be used as part of an accessible route to an entrance.

b. At least one accessible entrance complying with 4.14 which is used by the public shall be provided.

EXCEPTION: If it is determined that no entrance used by the public can comply with 4.14, then access at any entrance not used by the general public but open (unlocked) with directional signage at the primary entrance may be used. The accessible entrance shall also have a notification system. Where security is a problem, remote monitoring may be used.

c. If toilets are provided, then at least one toilet facility complying with 4.22 and 4.1.6 shall be provided along an accessible route that complies with 4.3. Such toilet facility may be unisex in design.

d. Accessible routes from an accessible entrance to all publicly used spaces on at least the level of the accessible entrance shall be provided. Access shall be provided to all levels of a building or facility in compliance with 4.1 whenever practical.

e. Displays and written information, documents, etc., should be located where they can be seen by a seated person. Exhibits and signage displayed horizontally (e.g., open books), should be no higher than 44 in (1120 mm) above the floor surface.

> "As a minimum, [governments] should meet current legislative requirements and preferably demonstrate best practice."
>
> (Bonnett and Nee 2021, 20)

This is in line with guidance in the draft standard *ISO/DIS 5727* "functional requirements of general accessibility standards for the built environment shall be applied where possible" (5). Historic Scotland (2010) likewise recognizes that "it may not be possible to meet the current Building Standards guidance in all cases, but usually a reasonable compromise can be achieved that will satisfy safety requirements, access improvements, and conservation needs" (6).

> "[…] there's got to be a balance to our codes and our policies and procedures to kind of thinking okay what solution is going to allow everybody to safely get up to the building but not start to have an adverse effect on the overall heritage characteristics of the building." – disability community workshop participant
>
> "[if] they're building a new building, then you definitely put in everything that you can do but when you're refitting a heritage building there's other considerations." – disability community workshop participant

Recommendations

1. Custodians shall apply better practice standards for accessibility of the built environment, such as CSA B651, to the greatest extent possible.

2. Where full application is not presently feasible, the following minimum standards shall be applied:
   - a. At least one accessible route connecting an accessible site access point to an accessible entrance shall be provided. Accessible site access points include accessible parking spaces, barrier-free pick-up and drop-off areas, and accessible transit infrastructure.
   - b. At least one common entrance and exit, including the primary public entrance, shall be accessible. Where feasible, the primary historic entrance shall be an accessible entrance.
   - c. Emergency measures shall be implemented consistent with CAN-ASC-5.1 Standard on Emergency Measures (currently in development).
   - d. At least one staff entrance, where provided, shall be accessible.
   - e. An accessible common route shall be provided to all services provided in the heritage building.
   - f. Vertical circulation, namely stairs and ramps, lifts, or elevators, shall be collocated.
   - g. At least one washroom meeting the requirements of the applied standard shall be provided on an accessible route.
   - h. Alternative access solutions shall be provided for parts of the heritage building that remain inaccessible.
   - i. An accessible wayfinding strategy shall be implemented including accessible visual and tactile elements identifying accessible paths of travel, features, and amenities.

3. The preceding minimum standards shall be applied only to those elements of the journey sequence where full application is not presently feasible.

4. Interventions will be considered not presently feasible where it is

determined, through a thorough planning process including the input of people with disabilities, that application of such standards would have an outsized negative effect on the heritage value or conservation of the heritage building and its appreciation by all users.

5. Where full application is not presently feasible, alternative solutions shall be implemented and temporary solutions for physical access shall be considered.

6. Rigid application of codes and standards can stifle creativity and reduce outcomes for all users. Flexibility is therefore required on the part of custodians and authorities having jurisdiction when evaluating solutions developed through thorough planning processes including the input of people with disabilities.

A brick ground surface was removed and re-laid on concrete slabs with minimal gaps to provide a better rolling surface at the Boston City Hall Plaza, Boston, USA

Engagement

Rationale

It is commonly understood today that people with disabilities are experts in their own needs and their input should be valued together with that of technical experts. The importance of early and long-term engagement with people with disabilities is discussed at length by several sources and was reiterated by project participants.

In Canada, the Standards and Guidelines state that "to determine the most appropriate solutions, accessibility and conservation specialists, and users, should be consulted early in the planning process" (Parks Canada 2010, 42). Heritage BC (2020) emphasises that engagement should not be a one-off:

> "Persons with disabilities should also be consulted on a recurring basis. They can provide feedback as measures are implemented"(7).

In their report, also funded by Accessibility Standards Canada, *Design For All* (2023) concludes that "there is substantial documentation to support having more perspectives participating in projects involving heritage buildings" (37).

> "a thorough process of consultation with disabled people during the planning and design stages of a project to improve accessibility can make a major contribution to the success of the project"
>
> (Cave 2007, 4)

The duty to engage is enshrined by several codes and standards internationally. The *International Existing Building Code* states that "interested persons shall be invited to participate in the consultation process, including state or local accessibility officials, individuals with disabilities, and organizations representing individuals with disabilities." (International Code Council 2018, B101.4.1). The draft standard *ISO/DIS 5727* includes as a priority that "an evaluation on the needs and possibility of participation of different reference groups shall be applied" (ISO 2023, 5). This language may yet be strengthened.

Whimster et al. (2015) provide several suggestions for effective engagement including early involvement, the need to provide context (heritage value, conservation measures, interpretation) for the site, the inclusion of people who have not visited the heritage building, and ongoing contact to show appreciation and results (16-7). Historic Scotland (2010) likewise refers to engagement of "users or potential users" (2). Bonnett and Nee (2017) describe three typical benefits: insight which allows the project team "to understand and appreciate issues they might never otherwise have thought of;" interrogation of the proposal as it progresses through design phases "to keep the initial access ambition and commitments on the agenda;" and continuity throughout a long-term project that may see changes in the project team (121).

Workshop participants emphasised the need to move beyond consulting, informing, or talking, to long-term engagement and involvement in the

decision-making process. The heading for this theme has been changed to "engagement" to reflect this feedback.

Engagement will be particularly important for input on the use of new tools, limits to accessibility, and the evaluation of alternative considerations.

> "If they want to make it accessible, they need to include us in in the entire process. Otherwise, they're just guessing."– disability community workshop participant

> "To me, consultation is telling people, engagement is asking. […] Public engagement is […] more of a long-term relationship, a form of empowerment, as opposed to a 'We've done a thing. Do you like it?'"– disability community workshop participant

> "I think public consultation feels extractive maybe, and if it could be working towards relationship building where it's not a one-off process but it's a conversation that's going back and forth, that continues to be ongoing." – heritage workshop participant

Recommendations

1. An advisory group shall be established prior to project planning consisting of users of the heritage building, people with disabilities (including people who do not use the heritage building), and representatives of disability-serving organizations able to speak to the needs of their constituents.

2. Custodians, project teams, and advisory groups shall determine additional engagement requirements based on the specific needs of the project.

3. The size, makeup, and timeline for engagement shall be proportionate to the scale of the project and engagement requirements set above. A process soliciting diverse public input, for example, will take longer than one focusing on internal staff perspectives.

4. Engagement participants should be identified through public engagement and direct outreach.

5. Time contributed by people with disabilities is valuable and shall be compensated.

6. Engagement participants must be provided opportunities for meaningful involvement and informed of changes made in response to their input.

7. People with disabilities shall be involved in the decision-making process, particularly regarding the:
   a. Use of new tools or technologies;
   b. Decision not to make parts of the heritage building accessible; and
   c. Implementation alternative solutions, such as virtual experiences.

8. Custodians shall strive to build long-term relationships with engagement participants to contribute to review and ongoing improvement of the accessibility strategy.

Alternative considerations

Rationale

Advances in information and communication technology and virtual reality have prompted custodians in the public and private sectors alike to consider providing virtual access to their heritage buildings. While this prospect is alluring in that it requires no physical change, alternative access must never be considered to the exclusion of physical access options.

Alternative solutions are most appropriate when provided in addition to physical access. When provided in addition, alternative solutions provide choice, a level of redundancy, and a crucial mode of access for people unable to make the physical journey. Where made available online they represent a convenient opportunity for enjoyment and research by all people.

In some cases, alternative access may be the only option deemed feasible, by both heritage professionals and people with disabilities, in consideration of the unique conservation needs or character of a heritage building. In these cases, the quality of alternative solutions, the number of formats provided, and the extent of testing, take on additional importance.

Alternative solutions are enshrined in the US by ADA regulations which identify provisions for existing facilities with historic preservation programs (i.e. where interpretation of the heritage building comprises part of the service). While the ADA prioritizes physical access, several alternatives are suggested where conservation concerns warrant: using audio-visual materials to depict inaccessible areas, assigning personal staff guides for inaccessible areas, or adopting "other innovative methods" (§ 35.150). An Accessible Past provides vivid description of several such methods including moveable exhibits, online audio-visual experiences, and adapted tours. Several included articles describe the benefits of developing accessible experiences through community partnerships.

> "I don't want alternative programming to always be the alternative to making something accessible, but I think there is value in creating choice with options" – disability community workshop participant

> "The alternative measure thing is often put forward by a lot of buildings that could be accessible if they tried … with virtual tours and things like that. It's like if I wanted to see photos of this building, I could have done so from home." – disability community workshop participant

Recommendations

1. Custodians are encouraged to provide alternative methods for experiencing heritage buildings:
   a. in addition to on-site measures and physical access solutions; and
   b. as interim measures while physical access solutions are implemented.

2. Where physical access to a heritage building or parts thereof is determined to be unfeasible through engagement with heritage professionals and people with disabilities, custodians must provide alternative access measures in accessible formats.

3. Where partial physical access is provided to a heritage building, alternative access measures for inaccessible spaces must be provided in an accessible space within or near the heritage building.

4. Where no physical access is provided to a heritage building, alternative access measures must be provided in an accessible facility on site, where available.

5. Where staff are required to facilitate access to otherwise inaccessible or partially accessible heritage buildings, trained staff must be available during operating hours. Multiple staff should be trained to provide redundancy during busy periods or in the case of unavailability.

6. Staff assistance must not be required where independent access can be provided.

7. Alternative access measures shall be made available online.

8. Like physical access solutions, alternative access measures must be developed from a cross-disability perspective and evaluated by people with disabilities.

9. Alternative access measures making use of information and communication technology must follow best practice standards such as WCAG Level AA or higher.

Documentation and review

Rationale

Accessibility planning for heritage buildings does not end with implementation. In fact, many case study buildings visited by the project team exhibited several generations of solutions evincing an ongoing process, whether formal or informal, of review and improvement. To ensure accessibility does improve over time, two processes are recommended: documentation of the planning process and selected solutions, and planned reviews which may lead to new planning exercises.

In their discussion paper, *Recommended Documentation Requirements for Projects using Alternative Solution in the Context of Objective-Based Codes*, Frye et al. (1998) discuss the documentation of alternative solutions in the fire and life safety fields, enumerating the many benefits of documentation as a record of special maintenance requirements, limitations on use, and the decision-making process used to arrive at the implemented solution (2-3). Design For All (2023) make the case that similar documentation should be provided for accessibility solutions and takes it further, recommending that alternative solutions employed at federal heritage buildings form part of an open-source repository, facilitating the time-saving "reuse of proven concepts and innovations" (64-66). The draft standard *ISO/DIS 5727* (2023) includes a requirement that custodians document "the prepared proposals for actions, their evaluation and the selected proposals for action" (11).

The importance of ongoing maintenance of accessible elements is described above, however it is similarly important that the accessibility strategy itself should be periodically reviewed and updated.

It was noted during several site visits that elements of access strategies were not performing as intended and required additional work. While the draft *ISO/DIS 5257* (2023) states merely that "accessibility levels shall be reviewed and improved where required" (5), proactive review can prevent the escalation or compounding of shortcomings.

Recommendations

1. The decision-making process used to arrive at accessibility solutions or sets of solutions shall be formally documented, including:
   a. Standards applied and other inputs;
   b. Alternatives considered;
   c. People or organizations involved;
   d. The use of new tools/technologies; and
   e. Any decision not to improve access to a part or parts of the heritage building.

2. Solutions shall be documented and shared, at minimum, within the federal government and, ideally, more broadly to serve as a template for other heritage buildings and a benchmark for other governments and the private sector.

3. Custodians shall establish a review process for the accessibility strategy and conduct periodic reviews to evaluate its performance against objectives, current standards, and user expectations.

4. Reviews shall engage people with disabilities, including people who do not use the building. Refer to Engagement.

5. Through its review, custodians shall identify:
   a. Any additional staff training required;
   b. Additional operational measures related to maintenance and staffing; and
   c. Elements of the journey sequence that no longer meet current best practice.

6. Reviews, decisions made as a result of review, and the decision-making process shall be documented.

A ramp in a compatible style was added to the Sun Life Building, Toronto, Ontario

CONCLUSION

Conclusion

With the passing of the Accessible Canada Act (2019) and the creation of Accessibility Standards Canada, the Government of Canada committed to making its services and facilities, and those of industries under its purview, accessible to all Canadians.

In line with these commitments, Heritage for All endeavoured to provide ambitious recommendations that address the particular challenges of making heritage buildings accessible. While in the past some heritage buildings have been exempted from rising to these challenges, due in part to the perception that sensitive adaptation was impossible, our research has found that, in the words of Noble and Lord (2003), "the impossible is nearly always possible given goodwill, good sense and good design" (xv).

Heritage for All began with a broad review of federal heritage buildings and the selection of a representative sample for study. This sample was visited, documented, and presented to members of the disability community and heritage professionals across Canada who identified barriers and opportunities to overcome them. Their input identified critical issues to be addressed through the research. With new perspective, the project team identified and visited case study buildings in Canada and abroad, each of which exhibited some degree of "success." A literature review of publications in each jurisdiction uncovered the guidance underpinning our observations. By considering the case study buildings as a group, several common attributes emerged which were brought back to the disability community and heritage professionals for consideration and discussion. All this combined to inform the recommendations in this report.

Engagement throughout the project made it clear that there is widespread interest in the federal heritage buildings that tell the story of Canada, and significant potential for inclusion and education in making them accessible. Beyond the basic right to access services and cultural spaces, this interest and potential should serve to justify the costs and processes associated with implementing high-quality accessibility solutions in heritage contexts. These solutions should be designed for a permanence that matches the indefinite service life of heritage buildings and their costs spread over a similar time scale.

As the project concluded, a draft report was circulated to a group of "peer reviewers" drawn from project participants and complimented by perspectives from several people unfamiliar with the project. This process provided valuable feedback on the content and form of the report and, importantly, identified gaps and directions for future research.

Gaps identified by reviewers were largely outside the scope of the project: while we engaged people with a range of sensory disabilities, for instance, the report emphasizes physical access interventions as those most likely to impact the form or "fabric" of a heritage building; rural and northern buildings were excluded due to limits to travel; landscapes were only considered tangentially to related heritage buildings; and the broader concept of inclusion in the built environment was only touched on. This focus also extended to case studies which were limited to

> accessibility is a necessary evolution for heritage buildings which should be embraced, through good design, and celebrated

a small number of Western, colonial contexts. Therefore, while the project was titled "Heritage for All," the project team acknowledges that other work is required to achieve this ideal.

In terms of next steps, reviewers proposed a wide range of additional formats and new directions for research. Several suggested the creation of accessible tactile, audio-visual, HTML, and multiple-language formats. There was also significant desire for practical versions or tools, including a checklist, a toolkit, and/or a "live" version of the document that could be updated over time. Such a format could incorporate additional case studies, more detail, ongoing experiences with solutions, and the ability to filter by building or solution type.

Several suggestions were also provided for future research, including:

- Analysis of case studies in a wider range of contexts, including rural and under-resourced sites, and jurisdictions, like France, which adopted an ambitious approach to the accessibility of heritage buildings beginning in 2005.
- Additional consideration of inclusivity beyond physical accessibility, including social, cultural, and economic inclusion.
- Specific consideration of Indigenous perspectives, including Indigenous ways of knowing and approaches to accessing, using, and stewarding heritage buildings and sites.
- Further interrogation of the concept of "balance" and the decision-making process, including how decisions should be made when tensions cannot be reconciled, the threshold for conservation versus retrofit, where conservation should take precedence, and, conversely, when it is appropriate to move beyond minimum impact.

We have been fortunate to have had the support and input of passionate members of the disability community

and heritage professionals from the beginning of Heritage for All. Through their involvement, we uncovered significant interest in heritage buildings and their sensitive adaptation on the part of the disability community, and significant support for the concepts of universal design and equity on the part of heritage professionals. Our findings reinforce the right of people with disabilities to access and enjoy heritage buildings and capture the common view among Canadian heritage professionals that accessibility is a necessary evolution for heritage buildings which should be embraced, through good design, and celebrated.

Our recommendations cover a wide range of considerations, from planning and design to operations, maintenance, and review. They include the need for diversity in the project team and planning process, including a range of disciplines and the perspectives of people with disabilities. They describe the need to document, review, and share solutions to contribute to an evolving body of knowledge and better practice. They consider the need for new mechanical and technological tools for providing access while ensuring they compliment rather than replace passive or time-tested measures. And they recommend operational change, including the provision of pre-visit information as a fundamental step in planning for accessibility and the need both to develop staff awareness of disability and to employ people with disabilities in heritage buildings.

In September 2023, ASC published a “notice of intent” to develop CAN-ASC-2.7: Heritage Buildings and Sites-Accessibility for Federally Regulated Entities. It is our hope this report will be useful in the development of this standard, which will directly impact the accessibility of federally regulated heritage buildings. Improving access through ambitious standards is critical not only to meeting federal commitments to the rights of people with disabilities, but because “in aspiring to achieve the highest standards, the government sets a benchmark for others” (Bonnett and Nee 2021, 20). Ultimately we hope this report will support better processes and equitable access for people with disabilities to the many heritage buildings that tell the story of Canada.

Ultimately we hope this report will support better processes and equitable access for people with disabilities to the many heritage buildings that tell the story of Canada.

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Tables

Figures

Case Studies

APPENDICES

Appendix A: Site visits completed for phase one

List of federal heritage buildings visited by the project team by province and city.

Province	City	Building
BC	Vancouver	1. Customs Examining Warehouse 2. Former Main Post Office 3. R.V. Winch Building
AB	Banff	4. Museum of Natural History
SK	Regina	5. Queen Building 6. Regina Armoury
ON	Kingston	7. Customs House 8. Post Office (Old)
ON	Ottawa	9. Chemical Radioactive Ores Building 10. Connaught Building 11. National Research Council Canada Laboratories 12. Rideau Hall: Complex as a whole 13. Rideau Hall, Gasometer* 14. Victoria Museum*
ON	Toronto	15. Fort York Armoury 16. Postal Station D
QC	Gatineau	17. Place du Portage

Province	City	Building
QC	Montreal	18. Armoury
		19. Cathcart Armoury
		20. Customs House*
		21. Edmonstone Allan and Company Building
		22. Federal Building
		23. Papineau House
		24. Postal Station H
		25. Sir Georges Cartier House
		26. Votigeurs de Quebec Drill Hall
NB	Memramcook	27. Monument Lefebvre*
NB	Moncton	28. Dominion Public Building
		29. Gulf Fisheries Centre
NB	Saint John	30. Postal Station A*
		31. Postal Station A Annex
NS	Halifax	32. Admiralty House
		33. Cavalier Building
		34. Dominion Public Building
		35. Halifax Armoury
NL	St. John's	36. Pleasantville Building 223

*Also considered as a case study in phase two.

Appendix B: Accessibility considerations in the Standards and Guidelines for the Conservation of Historic Places in Canada

Compiled guidelines pertaining to accessibility.

Guideline	Recommended	Not recommended
4.1.6.15 Circulation	**Complying** with accessibility requirements in a manner that conserves character-defining circulation systems or features.	Damaging character-defining circulation systems or features while making modifications to comply with accessibility requirements.
4.1.9.14 Landforms	**Respecting** the landform when locating new accessibility-related features. For example, introducing a gently sloped walkway instead of a constructed ramp with handrails.	
4.1.11.17 Built features	**Finding** solutions to meet accessibility requirements that are compatible with the built feature. For example, introducing a gently sloped walkway instead of a constructed ramp with handrails in a manner that does not detract from the built feature	
4.3.1.18 Exterior form	**Finding** solutions to meet accessibility requirements that are compatible with the exterior form of the historic building. For example, introducing a gently sloped walkway instead of a constructed ramp with handrails in front of an historic building.	Radically altering the building's exterior form to comply with accessibility requirements. Relocating primary entrances when undertaking interventions to accommodate accessibility-related features
4.3.1.19 Exterior form	**Working** with accessibility and conservation specialists and users to determine the most appropriate solution to accessibility issues with the least impact on the character-defining elements and overall heritage value of the historic building.	Altering character-defining elements, without consulting the appropriate specialists and users.

Guideline	Recommended	Not recommended
4.3.2.19 Interior arrangement	**Respecting** the interior arrangement of the building when locating new accessibility-related features, such as ramps and lifts.	Radically altering the building's interior arrangement or circulation patterns to comply with accessibility requirements.
4.3.2.20 Interior arrangement	**Working** with accessibility and conservation specialists and users to determine the most appropriate solution to accessibility issues with the least impact on the character-defining elements and overall heritage value of the historic building	Altering character-defining elements, without consulting the appropriate specialists and users.
4.3.2.21 Interior arrangement	**Locating** public functions strategically to limit changes to the building. For example, providing new functions for the public on the ground floor or in areas already served by exits.	Relocating primary entrances or stairways when undertaking intervention to accommodate accessibility related features.
4.3.5.26 Windows, doors and storefronts	**Complying** with accessibility requirements in a manner that conserves, where possible, character-defining doors and storefronts, including their decorative and operating hardware. This can include using an automatic door opener instead of providing the required manoeuvring space for wheelchairs at doors.	Installing new hardware that damages character-defining doors and mouldings without considering alternate means of meeting accessibility requirements.
4.3.5.27 Windows, doors and storefronts	**Working** with accessibility and conservation specialists and users to determine the most appropriate solution to accessibility issues with the least impact on the character-defining elements and overall heritage value of the historic building	Altering character-defining windows, doors and storefronts without consulting the appropriate specialists and users.

Guideline	Recommended	Not recommended
4.3.6.23 Entrances, porches and balconies	**Respecting** the location of existing entrances, and porches when providing new accessibility-related features, such as ramps and lifts. For example, providing new functions for the public on the ground floor, or in areas already served by exits.	Relocating a main entrance when undertaking interventions to accommodate accessibility-related features.
4.3.6.24 Entrances, porches and balconies	**Exploring** all options for modifications to existing entrances, porches and balconies to meet accessibility requirements prior to considering removal or replacement.	Removing an entrance, porch or balcony that does not meet accessibility requirements, and not replacing it with a compatible new assembly
4.3.6.25 Entrances, porches and balconies	**Working** with accessibility and conservation specialists and users to determine the most appropriate solution to accessibility issues with the least impact on the character-defining elements and overall heritage value of the historic building.	Altering character-defining entrances, porches and balconies without consulting the appropriate specialists and users.
4.3.7.27 Interior features	**Finding** solutions to meet accessibility requirements that minimize impact on interior features, such as locating public functions strategically to limit changes to the interior.	
4.3.7.28 Interior features	**Working** with accessibility and conservation specialists and users to determine the most appropriate solution to accessibility issues with the least impact on the character-defining elements and overall heritage value of the historic building.	Altering character-defining interior features, without consulting the appropriate specialists and users.
4.3.7.29 Interior features	**Respecting** the location of existing staircases when providing new accessibility-related features, such as ramps and lifts.	Locating accessibility-related features in secondary or service areas, when making compatible modifications to primary vertical circulation areas is possible.

Guideline	Recommended	Not recommended
4.3.7.30 Interior features	Exploring all options for modifications to existing interior features, prior to considering removal or replacement.	
4.4.1.45 Constructed elements	Introducing a new feature to meet accessibility requirements in a manner that conserves the constructed element and respects the overall heritage value of the engineering work.	
4.4.1.46 Constructed elements	Working with accessibility and conservation specialists and users to determine the most appropriate solution to accessibility issues with the least impact on the character-defining elements and overall heritage value of the engineering work.	Altering character-defining constructed elements without consulting the appropriate specialists and users.
4.4.2.16 Functional arrangement	Introducing a new feature to meet accessibility requirements in a manner that conserves the functional arrangement and respects the overall heritage value of the engineering work.	
4.4.2.17 Functional arrangement	Working with accessibility and conservation specialists and users to determine the most appropriate solution to accessibility issues with the least impact on the character-defining elements and overall heritage value of the engineering work.	Altering character-defining elements without consulting the appropriate specialists and users.

Appendix C: Site visits completed for phase two

The following sites were visited and informed findings in phase two. Note that additional sites were recommended to the project team or identified through research, however budget and schedule limitations prevented their inclusion.

List of case study heritage buildings visited by the project team by country and city.

Country	In-depth site visits	Informal site visits
Canada	**Calgary, AB** • Calgary Public Building • cSpace (former King Edward School) • Old City Hall **Cambridge, ON** • Idea Exchange (former Post Office) • University of Waterloo School of Architecture **Guelph, ON** • F.M. Woods Waterworks • Provincial Offences Court (former City Hall) **Montreal, QC** • Maisonneuve Library • Musée des beaux-arts de Montréal **Ottawa, ON** • Canadian Museum of Nature • Dome Building (Rideau Hall)	**Halifax, NS** • Art Gallery of Nova Scotia • St. George's Round Church Memramcook, NB • Monument Lefebvre **Montreal, QC** • Bank of Montreal • Bonsecours Market • Court of Appeal (Ernest Cormier Building) • Dominique-Ducharmes Building (Montreal Customs Building) • Hotel de ville (Lucien-Saulnier Building) • McCord Stewart Museum • MUMAQ • Sun Life Building • Windsor Station

Country	In-depth site visits	Informal site visits
Canada	**Quebec City, QC** • Le Monastère des Augustines • Pôle Culturel du Monastère des Ursulines • Quebec Legislative Assembly • Voltigeur de Quebec Armoury **Regina, SK** • College Building • Darke Hall • Government House **St. John's, NL** • Colonial Building **Winnipeg, MB** • Dalnavert Museum • Manitoba Legislative Building	**Quebec City, QC** • Monique Corriveau Library **Regina, SK** • Saskatchewan Legislative Building **Toronto, ON** • Canada Life Building • Osgoode Hall • Royal Ontario Museum
United States	**Boston, MA** • Boston City Hall Plaza • Faneuil Hall • Huntington Theatre • Old North Church • Paul Revere House	**Boston, MA** • Berklee College of Music • Boston Athenaeum • First Church of Christ, Scientist • John Adams Courthouse

Country	In-depth site visits	Informal site visits
United States		• Massachusetts Historical Society • Museum of Fine Arts • North Bennett Street School **Washington, DC** • National Academy of Sciences • National Archives • National Gallery of Art • National Museum of Natural History • Rayburn Building • Renwick Gallery • Smithsonian Institution Building
United Kingdom	**Edinburgh** • Usher Hall **London** • Almeida Theatre • British Museum • Camden Art Centre • Courtauld Institute for Art • Institution of Civil Engineers • King's College – Somerset House East Wing • Leighton House Museum	**Edinburgh** • Edinburgh Castle • Edinburgh Climate Change Institute (Old High School Building) • National Records of Scotland • St. Giles' Cathedral

Country	In-depth site visits	Informal site visits
United Kingdom	• Museum of the Home • National Army Museum • National Maritime Museum • Natural History Museum • Royal Academy of Arts • Sir John Soane Museum • Southbank Centre • St. John's Smith Square • St. Paul's Cathedral • Tate Britain • The Cutty Sark • The Painted Hall • The Treasury • Theatre Royal Drury Lane • Victoria and Albert Museum • Wellcome Collection • Whitechapel Art Gallery	

Country	In-depth site visits	Informal site visits
Ireland	Dublin • 14 Henrietta Street • Custom House • Hugh Lane Gallery • Museum of Literature Ireland • National Gallery of Ireland • Trinity College (various buildings)	
Count	57	36

Appendix D: Phase one survey

Survey questions are presented below. An asterisk (*) denotes a required question.

Introduction

About this Survey:

Canada's Heritage Buildings are an integral part of our cultural identity, including over 35 Federal Heritage Buildings that we are currently studying. We are interested in learning about your views on accessibility of heritage buildings, from the perspectives of individuals with disabilities and heritage professionals. This survey will take approximately 5-7 minutes to complete.

Who we are:

This research is being conducted by Human Space, as part of a project funded by Accessibility Standards Canada.

Who can participate:

We are interested in learning from people with disabilities and heritage professionals, who are 18 years old or older, and live in Canada. If you are interested in taking part in this survey, you will be asked to verify your eligibility for participation.

eGift Card:

At the end of the survey, you have the opportunity to receive an eGift card for your participation in this survey. Participants may only complete the survey one time to receive an eGift card. Multiple survey entries will not be eligible for compensation. Contact Information: For more information about this survey, or to request alternative survey formats, please contact: contact@heritageforall.ca.

Confidentiality and Risks:

Your participation in this survey is voluntary. You may decide to withdraw from the study at any time before the survey is submitted. After you have submitted the survey, it is not possible to withdraw from the study. The questions in this survey have been designed so that the likelihood that the information can be linked to you and your identity is minimal. You will not be named in any reports, publications, or presentations that may come from this study. However, because this study is being delivered primarily online, data security cannot be completely guaranteed.

Demographic Questions

***1.** Please select the group(s) that you identify with or represent (select as many that apply):

- Visible minorities (defined by the Employment Equity Act as “persons, other than Aboriginal peoples, who are non-white in colour”)
- Indigenous peoples
- Newcomers to Canada (first generation)
- Seniors (65 and older)
- Youth (29 and younger)
- LGBTQI2S+
- Gender-diverse individuals
- People in official language minority communities
- Prefer not to answer
- I do not identify as part of any of these groups

***2.** What is your current gender identity?

- Male
- Female
- Prefer not to answer

- Other (please specify)

---

3. If you are a person with a disability, what type(s) of disability do you have? (select as many that apply):

- Blind or low vision (not correctable by glasses or contact lenses)
- Developmental or cognitive disability (ex: down syndrome)
- Mental health disability (ex: addictions, bipolar disorder, depression)
- Physical, coordination, manual dexterity or strength (ex: handling objects)
- Speech and language disability (not caused by hearing loss)
- Deaf, deafened or hard of hearing Learning disability (ex: dyslexia)
- Mobility disability (ex: cane, wheelchair)
- Physical illness or pain (ex: diabetes, epilepsy, heart condition, kidney disease, lung disease)
- Prefer not to answer
- I do not identify as part of any of these groups
- Other (please specify)

***4.** Do you use any assistive devices when moving within public spaces? Please select all that apply:

- Wheeled mobility device (ex. Manual wheelchair, powered wheelchair, scooter)
- White cane or probing cane
- Walking cane (ex: single tip cane, quad cane)
- Walker Guide dog or sighted guide
- Prefer not to answer
- I do not identify as part of any of these groups
- Other (please specify)

***5.** Which job sector(s) do you primarily identify with? Please select all that apply:

- Agriculture, forestry, fishing and hunting, natural resource extraction
- Utilities
- Architect and design
- Construction
- Real estate
- Manufacturing
- Wholesale and retail trade
- Transportation and warehousing
- Information and cultural industries, arts, and entertainment and recreation
- Finance and insurance, real estate and rental and leasing
- Professional, scientific and technical services
- Management of companies and enterprises
- Administrative and support, waste management and remediation services
- Education services
- Health care and social assistance
- Public administration
- Other services (except public administration)
- Other (please specify)

***6.** Please provide the province you live in:

---

7. Please provide the city/town you live in: (optional fill in the blank)

---

8. Please provide the first three characters of your postal code

Questions for Heritage Professionals

Objective:

To determine Heritage Professional's approach to balancing the preservation of heritage attributes while ensuring

heritage buildings are accessible for all. We recognize that each Heritage building represents a unique challenge and requires unique responses, however, there may be commonalties. Please consider the following questions.

*** 9.** Many heritage buildings were not designed with accessibility in mind. Some Provincial building codes permit existing buildings to not provide accessibility. In any renovation, do you feel it is important to provide accessibility?

- Yes
- No
- Maybe

*** 10.** How important do you feel it is to provide accessibility through the principal public entrance of heritage buildings (where 1 is not important and 5 is very important)?

- 1
- 2
- 3
- 4
- 5

*** 11.** Do you feel that the value of providing accessibility exceeds the value of not impacting Heritage attributes and character defining elements?

- Yes
- No
- Maybe

*** 12.** When engaging in a project, how do you typically assess accessibility goals and modifications that users would like to see implemented? Select all that apply

- Review of building code requirements.
- Review of provincial or federal accessibility guidelines.
- By engaging an accessibility consultant.
- By engaging with community members or disability user groups.

*** 13.** Buildings of different periods reflect different social values toward accessibility. Which period do you feel is generally the most challenging when considering accessibility?

- before 1850
- 1850 to 1900
- 1900 to 1925
- 1925 to 1950
- 1950 to 1975

*** 14.** Buildings through history reflect different styles and can symbolize purpose, or cultural intent. Features such as windows, doors, porticos, stairs, and landscape approaches are fundamental features of many styles. Would you consider modification of these features to achieve accessibility?

- Yes, modify the heritage features to achieve accessible design.
- Maybe, try to find a balance of accessibility and heritage value.
- No, heritage features have more value and should be maintained.
- Modification should only be considered where heritage features are least impacted.
- Sometimes accessibility cannot be achieved as the impact to heritage value is too great.

15. When considering an accessibility retrofit of a heritage building, in your experience, what typically would be your preferred approach to the site or setting:

- Modify the landscape to accommodate equal parking and drop off with new walkways leading to entrances.

- Modify the landscape for a drop-off and accessible parking with linking paths to heritage walkways.
- Arrive and/or park off-site and provide linking pathways to the historic landscape.
- Other (please specify)

*** 16.** When considering an accessibility retrofit of a heritage building, in your experience, what typically would be your preferred approach to the principal entrance when not accessible:

- Provide a ramp as required in addition to the heritage stairs for equal access to the front door.
- Modify the entrance by removing the stairs and lowering the entrance door threshold.
- Modify an existing window and the interior to allow for an adjacent accessible entrance to a common lobby.
- Create a new door opening and the interior to allow for an adjacent accessible entrance to a common lobby.
- Provide a separate accessible entrance elsewhere with a new internal path of travel.
- Other (please specify)

*** 17.** When considering an accessibility retrofit of a heritage building, in your experience, what typically would be your preferred approach to doors and doorways in the path of travel when not accessible:

- Modify the doorway(s) as sympathetically as possible for accessibility, accept impact to heritage attributes.
- Modify only critical doors to allow for accessibility to key areas accept limited impact.
- Preserve doorways that are heritage attributes and create alternate path of travel to key interior areas.
- Other (please specify)

*** 18.** When considering an accessibility retrofit of a heritage building, in your experience, what typically would be your preferred approach to the interior principal lobby area when not accessible:

- Modify the lobby as required for equal access.
- Modify the lobby minimally for accessibility only as required to pass through.
- Preserve the heritage lobby and create an alternate path of travel for accessibility.
- Other (please specify)

*** 19.** When considering an accessibility retrofit of a heritage building, in your experience, what typically would be your preferred approach to vertical circulation when not accessible:

- Modify the entrance area as required to include an elevating device adjacent or near to the stair for equal access.
- Locate an elevating device, where possible, nearby to avoid impacts to heritage features in the entrance area, creating different path of travel.
- Modify the interior use layout or locations of vertical circulation.
- Review a, b, and c but accept that not all heritage buildings can be made accessible.
- Other (please specify)

*** 20.** When considering an accessibility retrofit of a heritage building, in your experience, what typically would be your preferred approach to internal circulation when not accessible:

- Modify interior corridors, as required, to ensure equal access to all areas.

- Modify corridor pinch points and create isolated locations for turning, as required.
- Do not modify historic corridors overall, relocate uses and/or users to accessible areas
- Review a, b, and c but accept that not all heritage buildings can be made accessible.
- Other (please specify)

*** 21.** In a few words, please explain what you feel are the most important issues when considering the renovation or retrofit of an existing heritage building, considering potential trade-offs and impacts on heritage attributes.

---

22. In your experience, is there a heritage building that achieves the right balance between conservation and accessibility? Please describe the approach and/or identify the building(s) (name and city) and design team if known. Provide as many examples as desired.

Questions for the Disability Community

Objective:

To understand perceived accessibility barriers encountered in the built environment based on individual user experiences. To understand the perception of accessibility barriers relating to buildings with heritage value. To understand the relationship between physical barriers, accessible spaces and important heritage features of the building.

*** 9.** In your experience, how satisfied are you with the physical access of, and within, public buildings you visit in your city?

- 1 – not satisfied at all
- 2 – somewhat unsatisfied
- 3 – neutral
- 4 – somewhat satisfied
- 5 – completely satisfied

This survey is about heritage buildings in Canada. The heritage value of a building refers to meanings and values that individuals and/or communities place on a building or site. Heritage places may be valued for historical associations, artistic importance, architectural importance, or other reasons. Heritage value seeks to answer the question 'Why is the building important or significant enough to be preserved?'

*** 10.** When visiting a building, how important do you consider a building's heritage value?

- 1 – is not considered
- 2 – is somewhat not considered
- 3 – neutral
- 4 – is somewhat considered
- 5 – is considered

---

11. In a few words, please describe your perceptions and thoughts on a building when it has been designated as a heritage building. This may be in terms of expectations, satisfaction, or past experiences.

*** 12.** If you knew a building had significant heritage value, would your perception of existing accessibility barriers change?

- Yes
- No

Please elaborate (optional):

*** 13.** What is/are the greatest barrier(s) that you encounter when accessing and moving within public buildings, regardless of heritage value?

*** 14.** Thinking about barrier(s) you encounter, and described in the last question, when accessing public buildings, if removing the barrier(s) to access also removed or significantly changed a heritage character-defining element, in your opinion, please select the sentence that best identifies your position:

- 1 – remove the heritage character-defining element to make the heritage building fully accessible and inclusive.
- 2 – significantly change the heritage character-defining element to make the heritage building fully accessible.
- 3 – moderately change the heritage character-defining element to accommodate accessibility within the heritage building.
- 4 – minor changes as to not significantly change the heritage character-defining element to accommodate accessibility, which may not be fully inclusive, within the heritage building.
- 5 – keep and not change the heritage character-defining element and provide accessibility accommodation elsewhere in the heritage building which does not affect the heritage character-defining element, which will likely not be fully inclusive.

15. Can the preservation of heritage attributes ever justify a lack of accessibility accommodations?

- Yes
- No

Please elaborate (optional): *

16. In your opinion, is there a heritage building that achieves the right balance between universal access and conservation? Please describe and/or identify the building (name and city).

Appendix E: Phase three survey

Survey questions are presented below. An asterisk (*) denotes a required question. Due to issues with automated and/or inauthentic submissions in phase one, questions 5 and 23 were added to aid in data validation.

Introduction

About this Survey:

Heritage for All is a research project investigating and making recommendations on the accessibility of federal heritage buildings in Canada. In phase one, a questionnaire and workshops asked people with disabilities and heritage professionals to identify the unique challenges associated with making heritage buildings accessible. In phase three we are interested in gathering feedback on the themes observed in the research thus far and the recommendations currently under development. This survey will take approximately 5-7 minutes to complete.

Who we are:

This research is being conducted by Human Space as part of a project funded by Accessibility Standards Canada.

Who can participate:

We are interested in learning from people with disabilities and heritage professionals, who are 18 years old or older, and live in Canada. If you are interested in taking part in this survey, you will be asked to verify your eligibility for participation.

eGift Card:

At the end of the survey, you have the opportunity to receive an eGift card for your participation in this survey. Participants may only complete the survey one time to receive an eGift card. Multiple survey entries will not be eligible for compensation.

Contact Information:

For more information about this survey, or to request alternative survey formats, please contact: contact@heritageforall.ca.

Confidentiality and Risks:

Your participation in this survey is voluntary. You may decide to withdraw from the study at any time before the survey is submitted. After you have submitted the survey, it is not possible to withdraw from the study. The questions in this survey have been designed so that the likelihood that the information can be linked to you and your identity is minimal. You will not be named in any reports, publications, or presentations that may come from this study. However, because this study is being delivered primarily online, data security cannot be completely guaranteed.

---

1. Please provide the first half of your postal code.

Demographic Questions

*** 2.** Please select the group(s) that you identify with or represent (select as many that apply):

- Visible minorities (defined by the Employment Equity Act as “persons,

other than Aboriginal peoples, who are non-white in colour")
- Indigenous peoples
- Newcomers to Canada (first generation)
- Seniors (65 and older)
- Youth (29 and younger)
- LGBTQI2S+
- Gender-diverse individuals
- People in official language minority communities
- Prefer not to answer
- I do not identify as part of any of these groups

*** 3.** What is your current gender identity?

- Male
- Female
- Prefer not to answer
- Other (please specify)

*** 4.** Which job sector(s) do you primarily identify with? Please select all that apply:

- Agriculture, forestry, fishing and hunting, natural resource extraction
- Utilities
- Architect and design
- Construction
- Real estate
- Manufacturing
- Wholesale and retail trade
- Transportation and warehousing
- Information and cultural industries, arts, and entertainment and recreation
- Finance and insurance, real estate and rental and leasing
- Professional, scientific and technical services
- Management of companies and enterprises
- Administrative and support, waste management and remediation services
- Education services
- Health care and social assistance
- Public administration
- Other services (except public administration)
- Other (please specify)

---

5. A To ensure we are capturing your answers correctly, please select the largest number below. (50%) / B To ensure we are capturing your answers correctly, please select the smallest number below. (50%)

- 17
- 3
- 45
- 112

*** 6.** Please provide the name of your province:

*** 7.** Do you identify as a person with a disability?

- Yes
- No
- Prefer not to answer

*** 10.** Do you identify as a heritage professional?

- Yes
- No

Additional demographic questions for people with disabilities

*** 8.** What type(s) of disability do you have? (select as many that apply):

- Blind or low vision (not correctable by glasses or contact lenses)
- Developmental or cognitive disability (ex: down syndrome)
- Mental health disability (ex: addictions, bipolar disorder, depression)

- Physical, coordination, manual dexterity or strength (ex: handling objects)
- Speech and language disability (not caused by hearing loss)
- Deaf, deafened or hard of hearing Learning disability (ex: dyslexia)
- Mobility disability (ex: cane, wheelchair)
- Physical illness or pain (ex: diabetes, epilepsy, heart condition, kidney disease, lung disease)
- Prefer not to answer
- I do not identify as part of any of these groups
- Other (please specify)

*** 9.** Do you use any assistive devices when moving within public spaces? Please select all that apply:

- Wheeled mobility device (ex. Manual wheelchair, powered wheelchair, scooter)
- White cane or probing cane
- Walking cane (ex: single tip cane, quad cane)
- Walker Guide dog or sighted guide
- Prefer not to answer
- I do not identify as part of any of these groups
- Other (please specify)

Additional demographic questions for heritage professionals

11. How long have you worked as a heritage professional?

---

12. What is the nature of your work as a heritage professional? (e.g. architect, planner)

Survey questions

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13. What does “success” mean to you in terms of accessibility in a heritage context?

The following eight questions deal with common attributes of successful projects. In analyzing examples of interventions considered successful by heritage professionals and people with disabilities, the following attributes were identified. Based on your experience, please indicate the importance of each attribute.

---

14. Creativity, referring to a type of creativity required to work within the constraints of a heritage context. I.e. being able to think “outside the box” while working in a “quiet” or deferential way.

- Not important
- Somewhat important
- Moderately important
- Very important
- Extremely important

---

15. Balance between conserving heritage attributes and providing public buildings that can used by all, without appearing as a compromise to either priority.

- Not important
- Somewhat important
- Moderately important
- Very important
- Extremely important

---

16. Quality of design, as reflected in designer’s interpretation of a building’s heritage value and its expression in the solution, and materials, in terms of durability, repairability, etc.

- Not important
- Somewhat important
- Moderately important
- Very important
- Extremely important

17. The range of tools available to overcome architectural obstacles, including lifts and elevators, ramp configurations, and accessible technologies.

- Not important
- Somewhat important
- Moderately important
- Very important
- Extremely important

18. Redundancy and maintenance, referring to the ability to navigate a building when the primary accessible route is interrupted and the need to maintain features and systems to ensure they continue to provide reliable access.

- Not important
- Somewhat important
- Moderately important
- Very important
- Extremely important

19. Information and training, referring to pre-visit information for the public and staff training in accessibility systems and procedures. This theme may also include alternative modes of providing a service or experience.

- Not important
- Somewhat important
- Moderately important
- Very important
- Extremely important

20. Flexibility in the codes and standards that govern the accessibility of buildings and modifications to heritage buildings. Accessibility standards in Canada are typically prescriptive rather than performance-based with exemptions for existing buildings.

- Not important
- Somewhat important
- Moderately important
- Very important
- Extremely important

21. Public consultation, particularly with people with disabilities, during the design and implementation of access solutions.

- Not important
- Somewhat important
- Moderately important
- Very important
- Extremely important

22. In your experience, are there attributes of successful accessibility interventions in heritage contexts not captured by the above? If yes, please describe.

*** 23.** A To ensure we are capturing your answers correctly, please select all the fruit below. (50%) / B To ensure we are capturing your answers correctly, please select all the vegetables below. (50%)

- Apple
- Banana
- Tree
- Potato
- Broccoli

24. Use this space to provide any feedback not covered by other questions.

Appendix F: Peer review process

Process

Following phase three, the project team initiated a peer review process to solicit feedback on the report and its recommendations. A total of 25 people provided input, including 13 heritage professionals and 14 people from the disability community. Four participants identified as contributing from both perspectives. Reviewers identified with the following disability categories from the Canadian Survey on Disability:

Summary of peer reviewer disability demographics.

Disability type	Count
Vision	6
Hearing	1
Mobility	6
Flexibility	3
Dexterity	3
Pain-related	7
Learning	4
Developmental	2
Mental health-related	0
Memory	1
Prefer not to answer	0

Some reviewers had contributed to one or more previous engagement activities while others were new to the project.

Reviewers were provided approximately two weeks during which to devote 3-4 hours to review and feedback. Feedback was collected using a standard feedback form with the option to provide other formats via file upload or email. All feedback was considered, and most suggestions resulted in constructive changes to the report. All participants opted to review the English version of the report.

Feedback form

Instructions

Thank you for agreeing to review and provide feedback on the final report for Heritage for All. Please review the draft report provided to you by email prior to completing this form. Marked-up PDFs may be uploaded below or sent to contact@heritageforall.ca, if desired, however completion of this form is required to qualify for reimbursement.

Questions below are divided into six sections:

1. Design and organization
2. Introduction
3. Findings
4. Case studies
5. Recommendations
6. Final thoughts

Sections 1 and 6 consider the report as a whole while sections 2 to 5 consider specific aspects of the report and its contents. All questions after the first page are optional. Please answer as many as possible while skipping questions related to sections you did not or could not review.

*** 1.** Please enter your name:

*** 2.** Please enter your email address:

Design and organization

3. The report's organization is easy to follow.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

---

4. Please provide any feedback on the accessibility of the sample graphic layout, including visual contrast, choice of typefaces, and/or compatibility with screen readers.

---

5. Use this space to provide other feedback related to the design or organization of the draft report.

Introduction

6. The terms of the reference, including purpose and methodology for the project, are clear.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

---

7. Use this space to provide any other feedback on the introductory material in the draft report.

Findings

8. Project findings are clearly described.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

---

9. Themes expressed in workshop(s) I participated in are represented in the findings.

- Strongly agree
- Agree
- Neither agree nor disagree

- Disagree
- Strongly disagree
- Not applicable

---

10. Use this space to provide any other feedback on the findings described in the draft report.

Case Studies

11. Case studies provide a good range of solutions in terms of types, scales, and locations.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

---

12. Case studies support my understanding of the topic(s).

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

---

13. Use this space to provide any other feedback on the presentation or content of the case studies in the draft report.

Recommendations

14. Recommendations respond clearly to the research findings.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

---

15. Recommendations are likely to be actionable or usable by the report's audience(s).

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

---

16. Recommendations are likely to have a positive impact on the accessibility of heritage buildings or the success of accessibility retrofits.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

---

17. Use this space to provide any other feedback on the recommendations in the draft report.

Final thoughts

18. Are there other design considerations or formats that would make the final report more accessible to you?

---

19. Is there anything that would make the final report or project findings more useful for practitioners in the fields of heritage or accessibility?

---

20. Please use this feature to upload any additional written notes or marked-up drafts.

Results

Overall, most reviewers agreed or strongly agreed with the statements presented. The statement “recommendations are likely to be actionable or usable by the report's audience(s)” saw the lowest support (73%). This may be due to the perceived difficulty of influencing federal decision-making processes. Note percentages in the table below may not total 100% due to rounding.

Summary peer reviewers’ agreement or disagreement with a series of statements on the draft report.

Question	n	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
The report's organization is easy to follow.	22	35%	61%	4%	0%	0%
The terms of the reference, including purpose and methodology for the project, are clear.	21	45%	41%	9%	5%	0%
Project findings are clearly described.	22	43%	48%	4%	9%	0%
Themes expressed in workshop(s) I participated in are represented in the findings.	22	39%	48%	4%	9%	0%
Case studies provide a good range of solutions in terms of types, scales, and locations.	22	22%	65%	4%	4%	4%
Case studies support my understanding of the topic(s).	21	45%	41%	5%	9%	0%
Recommendations respond clearly to the research findings.	22	26%	65%	4%	4%	0%

Question	n	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Recommendations are likely to be actionable or usable by the report's audience(s).	21	32%	41%	23%	5%	0%
Recommendations are likely to have a positive impact on the accessibility of heritage buildings or the success of accessibility retrofits.	21	32%	55%	9%	5%	0%

The feedback form received 147 written comments which were sorted into three categories: actionable (comments that could be implemented immediately), noted (valuable but not immediately actionable comments, some of which are discussed in the report), and no action (comments which were generally supportive or lacked a recommendation). A total of 52 comments resulted in action, 48 were noted, and 47 resulted in no action. Additional comments were submitted by several participants in the form of marked-up documents.

Examples of actionable comments included:

- Adjustments to layout or design to improve readability.
- Changes to the wording of the report and recommendations.
- The identification of additional limitations, resources, considerations, etc.

Examples of noted comments included:

- Suggestions for alternative versions of the report.
- Suggestions for new lines of inquiry which are outside the scope of the project.

Several recurring themes merit specific mention. These were addressed to the extent possible, however some remain as next steps. Several reviewers:

- Recommended breaking the report into smaller, more digestible pieces due to the volume of information presented. The project team intends to publish a condensed version with a focus on recommendations and case studies.
- Expressed interest in the development of a practical toolkit or checklist, condensed information sheets for quick reference, and/or a live online document which could be updated in the future.
- Recommended more graphic presentation of report content, including charts and diagrams illustrating concepts and/or marked-up photos in relation to case studies. The project team developed graphics to further illustrate the report.
- Identified the limited geographic and cultural scope of research. An additional limitation was added to the report and discussed further in the conclusion.
- Identified limitations in terms of inclusion, e.g. in terms of Indigenous perspectives, non-mobility disabilities, and the employment of people with disabilities. A recommendation on hiring was added and limitations were addressed in the conclusion.