From Mandate to Movement: Making Toronto Fully Accessible

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ABSTRACT

The Accessibility for Ontarians with Disabilities Act (AODA) sets out a legal mandate to achieve accessibility for Ontarians by the year 2025. As the AODA is rolled out across Ontario, large urban centres like Toronto may experience challenges in implementing its standards, particularly as monitoring of the legislation is sporadic and there is no concrete definition for 'full accessibility'. Consequently, urban planners, among other professionals, struggle to plan and design environments that are inclusive to users of all abilities. A content analysis of academic literature, policy, and best practices, as well as qualitative survey data among eight planning and planning related professionals has helped to address the following research questions: Is Toronto on track to becoming a fully accessible city by the year 2025, as set out in the Accessibility for Ontarians with Disabilities Act (2005)? And are planners adequately trained to design accessible built environments, beyond minimum provincial and municipal standards?

Key words:

An article on accessibility planning in theory and practice, used the key words: accessibility; built environments; urban planning; urban design; universal design; inclusive design; profession.

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1. INTRODUCTION

City life is often commended for its vibrancy, convenience, and opportunities for adventure. A dynamic mix of people, cultures, and services inspires hopefulness among city dwellers to choose a life they desire. Inclusive environments where people feel welcomed and safe are fundamental to successful urban development. When planning for the built environment, planners must consider and respond to the diverse needs of all its users. Typically, this user is assumed to be a younger adult who is capable of meeting their daily tasks independently. For users who do not fit this narrow definition, the built environment can impose countless barriers, putting their safety and wellbeing in jeopardy. The World Health Organization (WHO) defines disability as the interaction between individual impairments and the features of the society in which a person lives (2019). Accordingly, this study investigates how the planning and design of built environments can liberate or impede one's ability to access space. Specifically, it examines the obligation of urban planners and the planning profession to support the needs of a diverse public through accessible and inclusive planning and design.

A great deal of statistical evidence surrounding Canadian's living with disabilities emphasizes the need for planners to understand diverse abilities and subsequent accessibility requirements in their plans. In 2017, 22.3% of Canadians over the age of 15, and 24.1% of Ontarians over the age of 15 lived with at least one disability (Statistics Canada, 2017). In 2017, 16% of Toronto's population was 65 and older (Statistics Canada, 2017). This number is projected to increase to 22% in 2041 (City of Toronto, 2018). Statistics on disability and aging are significant to planners when considering the breadth of abilities present in the population, the impacts of living with age-related disabilities, and the ways the built environment can encourage or inhibit older adults' active engagement (Carr et. al.,2013). While the data presents information

on ‘disability’, this study aligns with progressive accessibility literature which emphasizes the unique abilities among users, and the disabling factors of the built environment.

This research has been prompted by the legal mandate of the Accessibility for Ontarians with Disabilities Act (AODA) to make Ontario fully accessible by the year 2025 (Government of Ontario, 2005).While there are many gaps in knowledge and experience with the AODA as it stands, this research studies its implications for the planning profession, and its application in the Toronto context in particular. As the capital of Ontario, Toronto is a leading figure in shaping how decisions are made across the province. This study’s analysis and recommendations applied to the planning profession in Toronto therefore seeks to inform how the mandate of the AODA can be achieved across Ontario. Professionally accredited planning degree programs in Ontario have been known to grant students with the knowledge and skills required to become a professional planner. However, this study critiques the professional planning education process for providing a lack of training and knowledge regarding accessibility and the AODA. Hence, this research investigates the ways accredited planning schools in Ontario have promulgated the objectives of the AODA into education. In addition to addressing these research objectives, this study has been designed to inspire planners to think more critically about the ways accessibility is supported through the planning process, beyond mere compliance with minimum legislated requirements. Achieving an accessible Ontario requires more than compliance with legislation, it takes a movement that begins with planners to create more empowering, inclusive, and freeing environments for all. This report will respond to the following research questions:

1) Is Toronto on track to becoming a fully accessible city by the year 2025, as set out in the Accessibility for Ontarians with Disabilities Act (2005)?

While the AODA identifies five barriers to access, including: physical, informational, attitudinal, technological, and political (Government of Ontario, 2005), this research focuses primarily on the physical barriers that exist within Toronto's built environment. This research question investigates whether the planning and design of Toronto's built environment supports the accessibility requirements of users living with disabilities. The study perceives disability as a problem with the built environment and not the user of the environment. It will uncover areas of the City that have made progress in accessible design and areas in need of improvement.

2) Are planners adequately trained to design accessible built environments, beyond minimum provincial and municipal standards?

This research question has motivated an in-depth examination of planning perspectives on the AODA, utilizing planning legislation, standards, information provided by professionals in Toronto, and an overview of planning education offered at some of Ontario's professionally accredited planning programs. It investigates the evolution of the AODA from universal design principles into practice to demonstrate how the planning profession in Toronto fares across the province and how it compares elsewhere with regard to accessibility. Second, it considers the relationship of such a regulation to an evolving planning profession, which is leaning to more effectively apply the AODA principles across the Toronto context. Finally, it explores how the learning process can be greatly improved for the planning sector, with advanced thinking about universal design and inclusive principles of planning, and more broadly with greater user-centred and experiential approaches. This question considers a lack of training for accessibility to be one of the many gaps clearly present in the role out of the AODA, and specifically for the planning profession in the Toronto context.

2. METHODOLOGY

To ensure the information obtained throughout this study enabled a productive response to the research questions and objectives, the methodology consisted of numerous qualitative data collection techniques. The study consisted of a comprehensive review of accessibility literature and policy that have informed planning practice in Toronto. It investigated the implications of accessibility legislation in Winnipeg, Richmond, Edmonton, Peterborough, and Montreal through a comparative case study approach to identify how the planning profession in Toronto compares with other jurisdictions. Some of the cities have been praised for their efforts made in accessible and inclusive planning, while others continue to face barriers to supporting accessibility in the built environment. In addition to these city examples, the comparative case study approach was extended to examine the ways the AODA and accessible design have been promulgated in education by reviewing at a high level the planning curricula at four of Ontario's professionally accredited planning schools, including: Queen's University, University of Waterloo, University of Toronto, and Ryerson University. The programs were selected based on their presentation of course-based curricula in urban planning.

Professional opinions were gathered through online survey responses. To grant permission for conducting qualitative online surveys with planning and planning-related professionals in Toronto, Ontario, this research project was reviewed and approved by the Ryerson Research Ethics Board in January, 2020. The recruitment process included cold emailing professionals who are currently practicing in Toronto's urban environment by means of their publicly available email addresses. A total of eight participants were recruited, each of which were provided with a digital consent form at the beginning of the survey, and

demonstrated their consent to participation by clicking the ‘submit’ button at the end of the survey. Responses were anonymous among participants and the researcher. Participants were given the opportunity to skip questions, with the exception of three required questions. In total, the survey consisted of thirteen structured and semi-structured questions, enabling participants to provide both succinct and elaborate responses. The responses contributed to a more holistic understanding of themes presented in the literature and highlighted potential research gaps.

The participants recruited have worked in the realm of planning from two to twenty-five years in a variety of public and private sector roles, including: transportation planning, consulting, public space, environmental planning, and engagement. These survey responses were essential for this project in order to gain a practical understanding of the role accessibility plays in the planning and development process, as well as the kinds of tools planners are currently equipped with to plan for accessible environments. The small sample size of eight participants is a limitation of this methodology, as survey responses are not generalizable to the broader population of planning professionals. However, survey responses were beneficial in furthering understanding of themes prevalent in the literature, and drawing attention to practical examples of accessibility planning in Toronto specifically.

The report analyzes common themes presented in both the secondary and primary data collection phases of this research. Utilizing this information, it attempts to address some of the barriers Toronto and the planning profession as a whole face in supporting the accessibility of all Ontarians through the planning and design of built environments.

3. LITERATURE REVIEW

The advancement of social movements surrounding the socio-spatial inequities of cities, and concepts such as Lefebvre's "right to the city" (1996) have informed contemporary discussions in accessibility and inclusion discourse. Scholarship in this realm has long acknowledged that the city has never been free and inclusive to all. It has commonly referenced the ways equity-seeking groups, such as individuals living with disabilities, have been left out of planning decisions. Presumably a result of their aging population and increasing rates of disability, Ontario and Toronto are progressively integrating the needs of person's with disabilities into planning policy, and growing academic research has thus contributed to this field.

3.1. BACKGROUND ON THE ACCESSIBILITY FOR ONTARIANS WITH DISABILITIES ACT (2005)

The Accessibility for Ontarians with Disabilities Act (AODA) was passed into law by the Province of Ontario in May, 2005. The Act provides accessibility compliance standards to remove barriers to essential services for persons living with disabilities. Applying to both public and private organizations, the Act's primary objective is to achieve full accessibility for all Ontarians by the year 2025. The Act encompasses five accessibility standards: information and communication, employment, transportation, customer service, and the built environment. Regulations within the Act provide accessibility standards for each area. The Customer Service Standard was enacted in January, 2008 and applies to all organizations that provide goods or services to the public or other third parties with at least one employee (O. Reg. 429/07). The Integrated Accessibility Standards Regulation (IASR) enacted in July, 2011 provides accessibility standards to all organizations with at least one employee within the sectors of

information and communication, employment, transportation and the built environment (O. Reg. 191/11). While each of these areas are of importance to planners and the profession, this research focuses predominantly on accessibility within the built environment.

The IASR houses the Accessible Built Environment Standard, also known as the Design of Public Spaces Standard (DoPS). These standards were enacted in January, 2013 to provide technical requirements for all newly constructed and substantially renovated public spaces to improve accessibility. This standard however does not require existing public spaces to be retrofitted for accessibility.

In terms of building interiors, the AODA was the prime motivator behind the amendment to the Ontario Building Code made in 2013, which included updated accessibility requirements, in line with the objective of making Ontario fully accessible by the year 2025. Section 3.8 of the Ontario Building Code contains the new requirements. However, similar to the DoPS, these requirements do not have retroactive effect and therefore existing buildings do not require modification to meet the updated accessibility requirements.

While the AODA is an instrumental legislative document that pushes for inclusive environments, the legislation is not without flaw. Definitions for ‘full accessibility’ and even ‘accessibility’ are ambiguous. What is deemed to be accessible varies from one person to the next. As such, the lack of a concrete definition may in turn force designers to defer to the Ontario Building Code, therefore lowering the bar for accessible design to the minimum of effort and application. It remains uncertain as to what level of inclusiveness, such as including users in the

process, can a project be considered to have met the objectives of the AODA. Limited measures for monitoring and enforcement of AODA compliance in the built environment and a lack of retroactive effect of its regulations, as well as ambiguous definitions for accessibility are some areas in which the AODA may be deficient in ensuring Ontario is fully accessible by the year 2025.

3.2. ADDITIONAL POLICY AND DESIGN STANDARDS IN TORONTO'S PLANNING FRAMEWORK

Planning for accessibility concerns all three levels of government, as its general intent is to provide equal rights to persons with disabilities. The Accessible Canada Act (2019) is Canada's first federal accessibility legislation which aims to prohibit discrimination based on disability. The Act promotes national accessibility standards for sectors within federal jurisdiction. Discrimination regarding disability is protected by the Charter of Rights and Freedoms (1982) and the Ontario Human Rights Code (1990). The Charter guarantees equal benefits of law without discrimination based on mental or physical disability, and the Ontario Human Rights Code intends to provide all citizens' equal rights to essential services, without discrimination, based on various grounds including disability. Though the Human Rights Code takes primacy over the AODA in areas of conflict, the Code does not rigidly apply to the built environment. The AODA has strived to address this legislative gap through its implementation and enforcement of mandatory accessibility standards for the built environment. The AODA expands on a preceding Act known as Ontarians with Disabilities Act (ODA) which supports the rights of persons with disabilities by recognizing, eradicating, and restricting barriers to accessibility (2001). The ODA works in accordance with the Human Rights Code (1990). The

Ontario Building Code (O. Reg 332/12) is an important regulation under the Building Code Act (1992) as it details minimum standards for accessible design within buildings. It is worth noting that maintaining building code requirements does not prevent infraction of human rights, and therefore the Human Rights Code (1990) takes precedence (Ontario Human Rights Commission, 2002). The Planning Act (1990), considers accessibility to be a matter of provincial interest. Similarly, the Provincial Policy Statement (2014) is concerned with improving accessibility for persons with disabilities by identifying, preventing, and removing land use barriers.

Coherent guidelines at the municipal level are imperative to encouraging efficient and effective accessible design. The City of Toronto Accessibility Design Guidelines (2004) presents universal design principles to guide development within the city. These guidelines are also in keeping with the City of Toronto's Official Plan (2015) which affirms that all public assets should be open and accessible to the public. The Canadian Standards Association (2012) establishes standards to promote accessibility in buildings and other facilities for persons with a range of physical, cognitive, and sensory abilities. While these standards do not have the force of law, they do provide comprehensive information on designing for accessibility beyond provincial building code requirements (Canadian Standards Association, 2012). Though not explicitly stated, accessible and inclusive design is embedded within the Ontario Professional Planners Institute's Code of Practice as "The Planner's Responsibility to the Public Interest" conveys the practitioner's role in respecting the diverse needs of the public (OPPI, 2020). Planners in Ontario are thus expected to meet the demands of a highly diverse population with a range of abilities.

Several notable City design documents have been referenced by this study's research participants. For instance, the Toronto Complete Streets Guidelines (2014) outlines a forward-thinking approach to street design that encourages universal design to safely accommodate all users and abilities, in line with the AODA. The TTC's 2019-2023 Multi-Year Accessibility Plan informs system-wide accessibility improvements and covers 52 initiatives to improve the accessibility and availability of TTC services and facilities. The Active City: Designing for Health report demonstrates key design principles in the built environment that promote healthy, active environments (2014). The report makes an important assertion on the social gradient of health, citing the poorest individuals as having the worst health outcomes. This provides valuable insight into planning for accessibility as it demonstrates the ways inaccessible environments can impose even stronger impediments on populations that are health and income disadvantaged. Planners must use this information to give priority to the most disadvantaged groups to create an equitable planning process. The Parks and Recreation Facilities Master Plan recognizes the need for parks and recreation facilities to be inclusive and accessible (2017). However, it notes physical proximity to services does not guarantee improved accessibility, as complex transit routes have a considerable impact on facility utilization (2017). Therefore, a key determinant of an accessible environment may not only rely on close proximity, but also simple routes between points.

It is clear that accessibility is embedded within various planning contexts at the City of Toronto. Policy and accessibility design guidelines at the provincial and municipal level is comprehensive, however, there still lacks a conclusive definition for 'full accessibility'.

Much of the literature pertaining to accessibility planning outlines the individual and environmental factors that influence a person's functional limitations (Rantakokko, Mänty and Rantanen, 2013). Important to this research are the various environmental and social circumstances that impede a person's capability to access, navigate, and experience spaces in the built environment. It is important for planners and designers to develop empathy and understanding of the unique requirements users have for their environments.

Key themes presented in academic literature regarding planning for accessibility include: challenges in moving universal design from theory to practice and ambiguous standards for accessible design, a lack of education regarding universal design, the pressures of an aging population on accessible design, and designing the built environment with regard for unique wayfinding processes used by persons with disabilities.

3.3. UNIVERSAL DESIGN THEORY AND PRACTICE

Universal design (UD) has been instrumental to the advancement of accessibility literature and policy. UD was first conceptualized by Ron Mace, an architect from North Carolina State University, to illustrate the design of products and environments to be inclusive for all users, regardless of age and ability (Audirac, 2008). The concept has since influenced other fields including education, engineering, and information and communication technology (Audirac, 2008). It materialized at a time when civil rights movements across the United States were growing, and was developed in conjunction with the Americans with Disabilities Act (Borowczyk, 2018).

As a rather new school of thought, UD builds upon the following design perspectives: barrier-free design, accessible design, assistive technology, inclusive design, and transgenerational design (Audirac, 2008). A unique characteristic of UD is that it attempts to design spaces that are accessible to all, without the need for specialized design or adaptation. UD literature recognizes the various impediments the design of space can have on a person's accessibility. Therefore, UD strives not to make people fit in space, but to make space fit for people (Türk, 2013).

The seven principles of UD are commonly cited as an instructional tool to guide accessible design in a variety of academic and professional fields. They include:

- Equitable Use: design that is beneficial and understandable to people with differing abilities;
- Flexibility in Use: design that suits a range of individual requirements and abilities;
- Simple and Intuitive Use: design that is easy to make sense of, regardless of the user's knowledge, experience, linguistic capabilities or concentration level;
- Perceptible Information: design that sufficiently conveys useful information to the user, regardless of their surroundings or sensory abilities;
- Tolerance for Error: design that limits hazards and negative outcomes;
- Low Physical Effort: design that can be used correctly with a minimum level of exertion;
- Size and Space for Approach and Use: design that delivers the correct amount of size and space for approach, reach, manipulation and use, regardless of the user's body position, size, posture, or maneuverability (Audirac, 2008).

The increasing number of professions integrating UD principles into their work are continuing to drive the movement towards design for all (Iwarsson and Stahl 2003). UD is commonly regarded as the most ideal option for designing fully accessible cities, as it goes beyond the minimum standards that exist in provincial or municipal codes by designing spaces that address the needs of all users, without separation based on ability (Carr et al., 2013; Law et al., 2007; Weisman, 2000; Steinfeld and Maisel, 2012). However, it still remains more of a theory than a practice or standard (Carr et al. 2013). Challenges to implementing universal design into practice are prevalent in American literature, as Salmi (2009) references a lack of universal design emphasis within the Americans with Disabilities Act (ADA) (1990) which Ergenoglu (2015) also suggests stigmatizes and differentiates users by disability. A key aspect of UD is an understanding of the diverse accessibility requirements within a population. Bromley et al. (2007) conducted interviews with wheelchair users to investigate the challenges they faced in accessing an urban environment and note these challenges can differ between accessibility groups. These contrasting obstacles to accessibility have also been known to create conflict between individuals with differing accessibility requirements (De Montis, 2013; Gossett et al., 2009). UD guidelines seek to alleviate these conflicts by integrating design elements that equally benefit all users and abilities (Carr et al., 2013).

In addition to a lack of emphasis on UD within accessibility legislation, some other notable challenges to implementing UD principles into practice are heightened construction costs, and the architect's obligation to meet the needs of their clients when designing buildings (Carr et al. 2013). Simply stated, if a client does not desire universal design and the building code does not require it, the architect would be unable to enforce it (Carr et al. 2013). Although, with increased

political support, it may be possible to integrate UD principles into mandatory accessible design standards. For instance, Imrie and Hall (2001) discuss the ways increased pressure for accessible building design has influenced policies and practices in the UK, Sweden, New Zealand, and the USA.

Another factor that has hindered the implementation of UD into practice is an outdated use of the medical model of disability when considering accessibility populations (Langan, 2001). This model considers an individual's body as the main cause in a lack of personal mobility, rather than discriminatory social attitudes and built environments (Langan, 2001). Literature on mobility and exclusion identifies several factors that can limit a person's mobility. Moreover, further research may consider the implications of social exclusion on the development of fully accessible environments.

The literature suggests there are three dimensions to physical accessibility (Iwarsson and Stahl, 2003). These dimensions can be divided into micro-accessibility which is related to the immediate environment, meso-accessibility which exists at the neighbourhood or city level, and macro-accessibility which considers metropolitan or regional levels of accessibility (Iwarsson and Stahl, 2003). While clear efforts have been made in architectural and planning practice to increase the accessibility of built environments, these advancements are typically made at the micro-level, such as at individual parts of a street or within new and renovated buildings (Borowczyk, 2018). Universally designed cities require comprehensive plans that recognize numerous social and environmental barriers that can impede an individual's safety and access. Through a holistic understanding of disparate user needs and spatial requirements, full

accessibility can be achieved when all individuals have the opportunity to use a space independently, regardless of ability levels (Borowczyk, 2018). In order to achieve this level of accessibility, welcoming and meaningful civic participation is needed.

3.4. UNIVERSAL DESIGN TRAINING

In addition to the obstacles discussed in the previous section, a lack of knowledge and training among planners regarding UD is a significant barrier to its implementation in planning practice (Carr et al., 2013). Research has contributed to UD education in architectural studies, as Ergenoglu (2015) has developed a training framework for UD in architecture courses. Relevant factors of this framework include promoting awareness of diverse accessibility needs and the practitioner's responsibility to accommodate them (Ergenoglu, 2015; Türk, 2013). However, little progress has been made to integrate such a model into planning education. Türk (2013) sought to uncover these insufficiencies and solutions in design training by discussing the need for UD in all departments that offer training in planning and design. A lack of exposure to UD conceptualizations prevents it from being recognized and adopted into planning practice (Türk, 2013). An understanding of UD creates better informed professionals, and can aid in students' achievements in a number of design and planning courses (Olguntürk and Demirkan, 2009). The literature references a need for the development of a UD framework in planning and design training (Türk, 2013). This study seeks to address this gap.

Some initiatives have been made to strengthen understandings of accessibility and UD, they are discussed in detail in the following section.

3.4.1. EXISTING TRAINING AND INFORMATION MODELS

The Rick Hansen Foundation has a mission to inspire a global movement to remove barriers to access and liberate the capabilities of individuals living with disabilities (Rick Hansen Foundation, 2020). In support of this, the Foundation has conveyed a number of innovative solutions, including its development of an Accessibility Certification Professional Designation and training program. The training course provides professionals with a certification and the necessary tools to conduct an accessibility assessment on buildings. Professionals in the training program are educated on the implications of social and physical environments on individuals living with disabilities, relevant accessibility legislation, UD principals, effective communication with clients, and how to conduct a compliance report (Rick Hansen Foundation, 2020). The benefits of this program are twofold as they provide necessary accessibility training to practitioners working in the built environment, and also allow buildings that have made progress in accessible design to showcase their accessibility, while potentially encouraging other buildings to attain the same level of accessibility, or higher.

The Canadian Urban Institute (CUI) created the AllAccess Toolkit as a resource to encourage understanding and application of the AODA's Design of Public Space Standard (DoPS) requirements (Canadian Urban Institute, 2019). The toolkit also identifies some of the pitfalls of DoPS including there not being an obligation to remediate existing spaces, no requirements for barrier-free housing, no AODA compliant signage within buildings, no AODA defined washrooms, and no certification for being AODA compliant (Canadian Urban Institute, 2019). The report states that the DoPS should be considered a minimum standard for accessible design in public spaces, rather than the ideal. Engagement with Accessibility Advisory

Committees (AAC) and individuals living with diverse accessibility requirements was deemed imperative to successful public space projects. Recommendations for meaningful engagement include: engagement at the beginning of a project that is ongoing throughout the project, consulting users living with disabilities, having a myriad of voices at the table, obtaining support from senior decision makers, and considering context so related strategies can be applied to areas not addressed by the standard (Canadian Urban Institute, 2019).

The Ontario College of Art and Design University (OCAD) offers a Master of Design in the Inclusive Design program, now in its seventh year of existence. It is the only program in Ontario that aims to improve necessary capabilities to address the AODA and is geared toward the development of inclusive design expertise in digital media as well as digital and information technologies and practice. The program challenges UD theory as the only approach for implementation of accessible environments, spaces, and products. The Inclusive Design Research Centre (IDRC) works collaboratively with a team of experts to ensure emerging information technology and practices are designed inclusively. The IDRC defines Inclusive Design as "design that considers the full range of human diversity with respect to ability, language, culture, gender, age and other forms of human difference" (Inclusive Design Research Centre, n.d.).

The IDRC is developing an Inclusive Cities project in partnership with Sidewalk Toronto to help create accessibility and inclusion standards that are flexible, adaptive, and creative. An important element of this work, is an awareness that inclusive design is never fully complete, and there are no generalized success criteria. Inclusive design must therefore constantly evolve

through meaningful partnership with individuals who have a range of abilities. The project makes a compelling argument for the need to co-design, as residents are typically excluded from the design of their environments. Through this exclusion, residents' needs are not considered, nor supported. Co-design may be instrumental in planning fully accessible environments as it attempts to mobilize equity-seeking groups in the planning process from the start, and lessens the requirement for isolated and costly modifications later. The IDRC provides a comprehensive template planners can use to guide meaningful engagement processes when planning for a highly diverse public (Co-designing Inclusive Cities, n.d.).

3.5. AGE-FRIENDLY DESIGN

As the prevalence of disability increases with age (Statistics Canada, 2012) a considerable understanding of the ways the built environment can encourage or inhibit older adults' active engagement is necessary in order to design fully accessible environments (Carr et. al.,2013). In 2017, 16% of Toronto's population was 65 and older (Statistics Canada, 2017). This number is projected to increase to 22% in 2041 (City of Toronto, 2018). Older adults are exposed to a number of health related challenges. In particular, from 2013 to 2014, the following percentages of Ontarians aged 65 and older self-reported having the following conditions: 18.4% diabetes, 7.3% Chronic Obstructive Pulmonary Disease (COPD), 7.4% asthma, 46.8% arthritis, 48.7% high blood pressure, and 7.2% mood disorder (Government of Ontario, 2017). The diversity of conditions experienced by older adults must be considered when planning inclusive environments that promote independence and dignity for every individual at all stages of life.

While much of the literature centers on aging in place, it also indicates a number of barriers seniors face to remaining safe and active in their communities, including inaccessible environments, objects, and communities (Fike, 2018). Aging in place is significantly challenging for many seniors over the age of 65 who require assistance with at least one activity of daily living (Fike, 2018). This highlights a need for products and services that support seniors' daily activities and their ability to engage with their chosen lifestyles (Fike, 2018).

The World Health Organization (WHO) developed a checklist for the necessary elements of age-friendly cities (2007). This initiative led to a series of recommendations for necessary features in the built environment to bolster inclusivity for older adults in cities (Norgate, 2012). The WHO sought to engage cities in creating more inclusive environments for all users, particularly older adults (Norgate, 2012). Models like this have the potential to inform accessibility standards and training due to their holistic account of the various accessibility requirements that exist within a diverse population. It is imperative for planners to understand that designing age-friendly environments is not designing for one homogenous group, but in fact designing for everyone.

3.5.1. DEAFSPACE

The above section highlighted scholarly work devoted to uncovering solutions for age-friendly cities that are inclusive to individuals with various abilities as they age in their communities. However, not all impairments commonly associated with aging have been given significant attention in UD theory. In particular, Edwards and Harold (2014) discuss a lack of consideration for 'deaf cultural identity' in UD literature. A central presumption of 'deaf culture'

is that of collectivity among members of the deaf community (Edwards and Harold, 2014). This understanding of collectivity has permeated itself into Deafspace design. The term Deafspace is based on the historical practice of Deaf people adapting their surroundings to reflect their unique lifestyles (Bauman, 2014). This model differentiates itself from UD by conveying a more user-centred design process, with principles built upon notions of deaf cultural identity (Edwards and Harold, 2014). Its main intent is to establish places Deaf individuals can call their own (Bauman, 2014). Bauman's Deafspace model offers architectural design principles to improve accessibility for individuals with hearing impairments using the following principles: sensory reach, space and proximity, mobility and proximity, light and colour and acoustics (Bauman, 2014). These principles create an important framework planners can use to understand the unique and often overlooked requirements Deaf individuals have from their environment. Co-designing with Deaf individuals will better inform planners and designers of these requirements and will better ensure Deaf individuals feel their needs were considered in the planning and development of the built environment.

A large proportion of older adults experience some form of hearing loss. It has been found that approximately 50% of adults over the age of 70 have high frequency hearing loss, which typically advances to low and middle frequency hearing loss (Stothart and Kazanina, 2016). Understanding speech has also been noted as a challenge many older adults face, both those with and without hearing loss (Roque et al., 2019). Planners are therefore tasked to broaden their understanding of potential users of space, beyond individuals who have the ability to hear.

3.5.2. DEMENTIA-FRIENDLY DESIGN

The prevalence of more acute impairments associated with old age, such as Alzheimer's disease has encouraged specific research on the ways cognitive disorders impact users' accessibility in the built environment (Brorsson et al., 2011). Dementia is characterized by a deterioration of an individual's memory and cognition (Konis, 2018). A large body of literature has contributed to knowledge surrounding the negative and positive effects of space design on older adults living with dementia. In particular, Konis (2018) finds poor exposure to high intensity light in the morning can be detrimental to the health and wellbeing of residents in dementia care facilities. While something such as lighting could likely be a relatively inexpensive and simple design consideration, understanding these particular requirements would presumably only come from co-designing with individuals who have an array of accessibility needs.

In older adults, Alzheimer's disease is the most common cause of dementia, but it can also be caused by other cerebrovascular, neurological, or neurodegenerative conditions, such as Parkinson's or Huntington's disease (Konis, 2018; Mosimann et al, 2004). Considering the ways individuals may live with more than one chronic condition is an important step planners must take to create fully accessible environments, and further reiterates that the built environment should not segregate users based on their abilities. Planning decisions for accessibility must pay attention to the more visible accessibility requirements, as well as the less visible ones in order to ensure all users feel safe, included, and accounted for.

3.5.3. MOBILITY DECLINE IN OLDER ADULTS

Within accessibility literature, mobility refers to a person's ability to move themselves independently and safely from one place to another (Rantakokko, Mänty and Rantanen, 2013). Mobility loss is common among older adults, and typically arises from a combination of nerve or muscle related impairment (Ferrucci et al., 2016). For example, osteoporosis is a prevalent condition among older adults and is the most prominent cause of hip fractures, which ultimately hampers mobility (Brawley & Taylor, 2003). While mobility is thought to be an important factor to one's independence in their community, it can be significantly comprised by increasing age, physical, cognitive, and sensory impairments along with various environmental barriers (Rantakokko, Mänty and Rantanen, 2013).

Environmental gerontology examines the ways health, functioning, and quality of life in old age are informed by the relationship of aging people and their physical and social environments (Rantakokko, Mänty and Rantanen, 2013). While certain environmental conditions may disadvantage a number of older adults, it is also important to consider the numerous hidden barriers that may also exist, as every individual's experiences with the built environment is unique (Rantakokko, Mänty and Rantanen, 2013). While it may not be possible to design environments for every independent accessibility requirement, incorporating simple design interventions such as resting places and adequate lighting, may have innumerable benefits and invite individuals of all ages and abilities to achieve the lifestyle they desire.

3.6. INCLUSIVE WAYFINDING

Wayfinding, first termed by Lynch (1960) is the process used to navigate through

unfamiliar settings (Salmi, 2009). The wayfinding process is particularly challenging for users in unfamiliar and complex urban environments (Kamal et al., 2010). Insufficient wayfinding information can present a hidden barrier to accessibility, since the process can become increasingly challenging for individuals with disabilities, specifically individuals with cognitive and/or sensory impairments (Salmi, 2009). Recent studies have therefore been devoted to understanding the unique senses individuals use for wayfinding when other sensory abilities are impaired (Bauman, 2014; Koutsoklenis and Papadopoulos, 2011; Spiers and Maguire, 2008; Kamal et al., 2010; Schwering et al., 2017). Bauman (2014) considers the use of touch and vision for spatial awareness in the hearing impaired, while Koutsoklenis and Papadopoulos (2011) investigate the use of olfactory and auditory cues used by individuals with visual impairment. Inadequate wayfinding information and difficult to navigate environments pose a significant challenge on the ways users with disabilities engage with a space (Spiers and Maguire, 2008; Salmi, 2009). This indicates a need for planners and designers to incorporate accessible wayfinding principles throughout the design process of the built environment (Hunter, 2010).

Pedestrians typically have different and fewer wayfinding options than drivers (Tajgardoon and Karimi, 2015). This may be in part due to the automobile dependency of many urban environments. Nonetheless, it makes pedestrian navigation challenging, and even more difficult when pedestrians have unique accessibility requirements (Tajgardoon and Karimi, 2015). While a growing body of literature has contributed wayfinding solutions for pedestrians, fewer efforts have been made to improve wayfinding for individuals living with disabilities. Additionally, current accessible wayfinding literature is primarily a continuation of wayfinding for the general public and typically provides ‘one-size-fits-all’ solutions (Karimi and Hashemi,

2015). Treating individuals with accessibility requirements as one homogenous group in accessible wayfinding discourse fails to acknowledge the diverse wayfinding requirements of individuals with differing abilities. For instance, Karimi and Hashemi (2015) reference the specific requirements for wayfinding of wheelchair users that are unique from users who are visually impaired.

The literature indicates that when developing wayfinding solutions for diverse accessibility groups, it is important to consider the ways individuals living with disabilities develop their own navigation skills in their environments and to consider these strategies when developing plans. Rainville et al. (2000) sought to develop design criteria to encourage and aid in wayfinding for advanced Alzheimer's patients, where they found that even patients with severe cognitive deterioration are able to reach certain destinations. From building materials to floor finishes, there are a myriad of barriers the built environment can impose on an individual living with cognitive impairments, such as Alzheimer's disease. An important finding from Rainville et al. (2000) was that decorative design elements should be pretested as it was difficult to foresee the emotional reactions of a user living with Alzheimer's disease.

An encouraging finding in wayfinding research is that digital, virtual, and artificial intelligence (AI) technologies are shifting their capacities in the areas of multi-sensory and multi-modal navigation. In that regard, advanced technology may provide additional support and guidance for individuals with differing sensory capabilities as they navigate through environments. Supporting individuals with differing abilities means designers must tailor

navigation information specific to each user and environment (Chang, Peng, Wang, et al., 2010). This is a process that better reflects inclusive and universal design principles.

4. JURISDICTIONAL SCAN: ACCESSIBILITY PLANNING IN CANADIAN MUNICIPALITIES

This jurisdictional scan is separated into two areas to outline the progress and challenges faced in the implementation of accessibility and universal design theory into practice. This comparative case study approach first outlines accessibility planning in Winnipeg, Richmond, Edmonton, Peterborough, and Montreal to identify how the planning profession and practice in Toronto fares in comparison with other Canadian jurisdictions. It then provides an overview of how the AODA is promulgated in Ontario's planning profession, including education, to identify existing training models surrounding accessibility in the following professionally accredited planning programs: Queen's University, University of Waterloo, University of Toronto, and Ryerson University.

4.1. WHAT ARE CITIES DOING?

This section discusses the municipal policies and design guidelines surrounding accessibility which have informed planning practice and project implementation in Winnipeg, Richmond, Edmonton, Peterborough, and Montreal. While some of these cities are notable award winners recognized for their progress made in universal accessibility and inclusion, some of them also demonstrate a lack of success in this domain. It is important to highlight both successful and less successful examples in order to demonstrate the methods Toronto may consider or consider against when planning for accessibility and inclusion. The successful examples were chosen based on their forward-thinking approaches to accessibility policy and standards, their efforts made to take on large scale accessibility improvements in their communities, and their inclusion of different accessibility groups throughout the engagement,

planning, design, and project implementation process. While this report deems these projects successful based on their ability to meet the aforementioned criteria, it is crucial to understand that the 'success' of these projects is subjective to the individual users' lived experiences, specifically individuals with disabilities. Nevertheless, this section provides a high level overview of what has been done with regard to accessibility planning in several Canadian jurisdictions.

4.1.1. WINNIPEG

The City of Winnipeg has gained recognition for its leadership in promoting universal accessibility as a recipient of the Rick Hansen Foundation Accessible Cities Award in 2017. The City has demonstrated initiatives to bolster inclusivity through the creation of accessibility committees, specific policies and standards, and developing creditable examples for accessible design in the built environment (Rick Hansen Foundation, 2017). A dynamic range of policies, standards, and projects demonstrate Winnipeg's commitment to supporting individuals living with disabilities.

Our Winnipeg (2011) is the City's municipal development plan, and the City's highest level of planning policy. It designates three Direction Strategies, two of which have universal design embedded within them. The City's Universal Design Office developed a revised Accessibility Design Standard in 2015, which applies to all newly constructed and/or renovated facilities. The Standards demonstrate the City's commitment to inclusion of all users through the prevention and removal of barriers to access. The Standard considers a diverse range of user requirements at all stages of life and is consistent with provincial and municipal legislation. The

City's Transportation Master Plan (2011) demonstrates a commitment to ensuring transportation projects reflect accessibility and UD principles. In 2001, the City adopted its Universal Design Policy which requires all new and extensively renovated public buildings and infrastructure to follow UD principles. The City's zoning by-law provides requirements for accessible vehicle parking numbers, size, and spaces in addition to requirements for accessible routes from the public sidewalk to the main entrance of a building.

A notable project which highlights Winnipeg's progress towards inclusive design is the Canadian Museum for Human Rights (CMHR) (Rick Hansen Foundation, 2017). The museum received the International Association for Universal Design Award in 2016 in the public space category, in addition to its recognition by the Rick Hansen Foundation in 2017. Physical design elements including accessible drop off entrances, ramps connecting galleries, and barrier-free washrooms have helped create a more welcoming environment for users with a range of mobility needs. Accessible service elements, including fully accessible guided tours, and free admission for persons accompanying a guest with accessibility needs are also notable examples of the museum's commitment to inclusion (CMHR, 2020).

4.1.2. RICHMOND

The City of Richmond was also a recipient of the Rick Hansen Foundation Accessible Cities Award in 2017, and was recognized for its holistic approach to accessibility (Rick Hansen Foundation, 2017). Access, with regard to the physical and non-physical elements tied to accessibility, are themes embedded widespread throughout the City's planning documents.

The City's Official Community Plan provides numerous references to social inclusion, accessibility and the need to consult with groups representing individuals living with disabilities throughout the planning process (City of Richmond, 2012). The Enhanced Accessibility Design Guidelines and Technical Specifications (City of Richmond, 2018) incorporate accessibility features in City-owned or City-leased properties, which go beyond the minimum requirements for accessibility in public buildings laid out in the BC Building Code. The Guidelines advise that the development permit process for City-owned buildings be adjusted to include expectations for enhanced accessibility within development applications and design drawings (City of Richmond, 2018). Definitions for accessibility provided in the Guidelines are comprehensive as they speak to a number of accessibility matters that promote the free mobility of users with physical and/or sensory limitations (City of Richmond, 2018).

The Richmond Olympic Oval was inducted into the Rick Hansen Accessible Cities Award's Circle of Excellence for its attention to detail paid to barrier-free design (Rick Hansen Foundation, 2017). The design of the Oval demonstrates a commitment to universal access as it goes beyond minimum accessibility standards (City of Richmond, 2019). The Oval's accessible design features are integrated in the facility's interior and exterior. For example, the landscape surrounding the facility is made of a wheelchair-friendly surface material, numerous rest stops and seating areas are provided inside and outside the facility, elevators are at extra-large capacity, and washrooms include door-less entry, lowered countertops and easy to enter stalls (City of Richmond, 2019). As part of the project's vision to address quality of life through sport and wellness, the Oval's design team and the City sought to establish new opportunities in sport and wellness for equity-seeking groups, including individuals living with disabilities.

Considering diverse accessibility requirements at the start of this project was central to its success in accessible design excellence.

4.1.3. EDMONTON

The City of Edmonton was the third recipient of the Rick Hansen Accessible Cities Award in 2017 (Rick Hansen Foundation, 2017). Edmonton has been a notable advocate for accessibility, as it has prioritized it in all areas of the City's growth and development (Rick Hansen Foundation, 2017).

The City's Municipal Development Plan "The Way We Grow" recognizes Access and Mobility as one of its strategic goals (2006). The Plan recognizes the importance of accessible facilities, services and amenities for community health and wellbeing. The City's Transportation Master Plan, titled "The Way We Move" strives to address transportation needs of all users, regardless of ability (2009). The Plan recognizes the diverse challenges individuals living with disabilities and older adults face in their communities and emphasizes the role of the transportation system in supporting aging in place (2009). The Accessibility for People with Disabilities Policy (2019) demonstrates the City's commitment to UD as it guides the development and implementation of City policies, civic engagement, programs and services, communication and technology, employee services and infrastructure in ways that respect individual needs and abilities. The City's Accessibility Advisory Committee developed a Checklist for Accessibility and Universal Design to promote UD and offers solutions for ways spaces can be better designed and developed to meet the needs of all users. The Checklist seeks to go beyond minimum standards for accessibility provided in the City's Barrier-Free Design

Guide (2017). The purpose of the Barrier-Free Design Guide is to explain the objectives of the Alberta Building Code (2014), recommend best practices, and provide illustrations as examples for the requirements of barrier-free design. The City's Access Design Guide (2018) is intended to be used in conjunction with the Barrier-Free Design Guide and exceeds the 2014 Alberta Building Code requirements. It is composed of three parts: exterior, interior, and maintenance. The Guide addresses accessible design with regard to neighbourhood design, park master planning, amenity spaces, wayfinding/signage, lighting, and construction sites (2018).

The Walterdale Theatre in Edmonton is an interesting and important best practice example for accessibility, as it is a designated provincial and municipal historic resource (Walterdale Theatre, 2020). As it was constructed in 1910, the theatre faces some limitations to providing full accessibility, which may be similar to the challenges much of Toronto's heritage sites will face. While some areas of the theatre may not be accessible to all users, it has demonstrated its commitment to accommodating users of all abilities where possible. For instance, the theatre has provided for wheelchair accessibility at its main entrance and along the skirt of the stage. The theatre is also a leading public performing venue in North America as one of the first of its kind to install a permanent T-Coil hearing loop to accommodate patrons with hearing loss (Walterdale Theatre, 2020). Continuous efforts made by volunteers and members of the theatre demonstrate its ongoing commitment to providing equitable opportunities for all.

4.1.4. PETERBOROUGH

Peterborough is a city that is commonly applauded for its progress made, and commitment towards accessibility in the community. In line with principles of dignity, respect,

inclusion and independence, the City is an ambitious figure in providing accessible environments, systems, and services.

The municipality's 2018 to 2022 Accessibility Plan is the City's central resource geared toward making Peterborough accessible by the year 2025, as mandated by the AODA. The plan provides strategies to ensure new and updated policies, plans, programs, services, and facilities are developed through a holistic accessibility lens. The Plan demonstrates the City's due diligence in complying with AODA requirements, such as annual updates on courses of action taken to improve accessibility for all. The City's Comprehensive Transportation Master Plan (2012) references a number of actions and initiatives that must be taken to ensure transit services are accessible to all users, especially those who are older in age and require a mobility device. Peterborough transit has made a number of upgrades with respect to accessibility, some of which include: the implementation of a 100 per cent accessible fleet, improving the volume of audible stop announcements on transit vehicles, and upgrading 111 transit stops to provide concrete pads and a connection to the adjoining sidewalk (City of Peterborough, 2018). The City has demonstrated a commitment to meaningful partnerships and engagement with residents of all abilities to assist in the development of route options serving different areas of the city (City of Peterborough, 2018). The City's Accessibility Advisory Committee established a sub-committee known as the Built Environment Sub-Committee to provide recommendations for how projects and site plans can be made more accessible. As part of the City's obligation to accommodate accessibility, it has developed an online training module to inform staff and volunteers of the requirements of the AODA. This training offered by the City demonstrates its commitment to

increasing knowledge and understanding among the public on the need to account for all accessibility requirements.

The main branch of the Peterborough Public Library completed a $12 million renovation with a primary focus on enhancing accessibility. Accessible features located at the main branch include: street level access from the main entrance, ramp access from the side entrance, two elevators, furniture and shelving that provides adequate space for wheelchair clearance and walkers access, angled bottom shelves, power door openers, and accessible washrooms with safety alarms (Peterborough Public Library, 2019). The City's Accessibility Advisory Committee contributed to this renovation through an Access Fund included in the annual Capital Budget (City of Peterborough, 2018). The Access Fund is used to fund accessibility projects on City-owned or operated facilities, where measures should be put in place to enhance minimum legislated requirements (City of Peterborough, 2018).

4.1.5. MONTREAL

Montreal is known to have faced challenges in supporting accessibility. Similar to certain areas of Toronto, many of the challenges impeding accessibility in Montreal are due to dense populations and aging infrastructure that was built prior to accessibility being a known consideration. Treating accessibility as an afterthought is a common challenge among old and dense cities, including Montreal. The city has as such, taken an initiative to implement new accessibility policies and some areas of the city, including parks and tourist amenities have made strides in inclusive and accessible design.

In 2018, the City launched the Municipal Action Plan for Seniors targeted at addressing mobility, accessibility, and affordable housing for senior citizens. The Action Plan was developed in response to the WHO Global Age-friendly Cities project and provides policy and action items aimed at offering services and infrastructure better suited to the needs of seniors. It also compliments the city's other sectoral plans covering issues that may be of concern to seniors including the Action Plan on Universal Accessibility (2015-2018), Montreal Master Plan, and the Sustainable Development Plan (2016-2020). The City is taking a progressive approach to accessibility by relating universal accessibility not only to functional and motor limitations, but also forms of accessibility that are geographic, financial, or communication based. The City's Action Plan on Universal Accessibility seeks to offer barrier-free environments for all citizens, specifically those who are living with disabilities. This document demonstrates Montreal's commitment to becoming a universally accessible city. The Montreal Master Plan has been built on principles of sustainable development and social equity. It incorporates the principles of universal accessibility to ensure residents have access to all of the City's public and private facilities. Universal access is therefore an objective that has permeated itself into multiple sectors of city development in Montreal. The Sustainable Development Plan (2016-2020) puts measures forward to promote equitable access to municipal services and facilities through an action item to make buildings universally accessible. While accessibility legislation in Quebec may not be as advanced as the AODA, the city is demonstrating initiatives that are driving more inclusive policy surrounding accessibility at all areas of municipal planning.

Montreal's parks were found to have adopted innovative solutions to promote inclusion and accessibility. Parc Wilson underwent significant repairs in 2017 making it the most

accessible park in Montreal (City of Montreal, 2017). The park includes a play structure with a ramp, swings adapted for children with disabilities, as well as a tandem swing for a child and an adult to swing together, and other interactive play features at ground level. However, residents have expressed concerns over the majority of Montreal's parks failing to support users with mobility, sensory, or functional limitations (Tomkinson, 2017). While several parks are adding new features to improve accessibility, these improvements are piecemeal and the result can be nonsensical or create further barriers for users with disabilities (Tomkinson, 2017).

4.2. WHAT IS THE PROFESSION DOING?

The planning profession in Ontario is led by two bodies, the Canadian Institute of Planners (CIP) and the Ontario Professional Planners Institute (OPPI). The CIP is the leading voice of the planning profession in Canada. It is a membership based program that advocates for planners at the national and international scale and provides services aimed at advancing professional development for planners (Canadian Institute of Planners, 2017). The OPPI is the provincial affiliate of the CIP in Ontario. It grants professional members with a Registered Professional Planner (RPP) designation, regulates the rights and responsibilities of its members, and establishes academic, experiential, and examination prerequisites for membership (Ontario Professional Planners Institute, 2020). OPPI members must adhere to the OPPI Professional Code of Practice and Standards of Practice which set the standard for members' conduct and obligations to their communities, employers, profession, and other members. Members are required to respect diversity, maintain the interests of communities and individuals, advance public participation by all individuals, specifically those who are less represented, and understand the consequences planning decisions have on individuals, natural and built

environments, and the public interest (Ontario Professional Planners Institute, 2020). Neither the code or standard make explicit reference to the planner's responsibility to support the needs of individuals with disabilities through the design of space. However, under the AODA's Accessibility Standards for Customer Service, the OPPI is responsible for establishing policies and practices with regard to persons with disabilities.

This report challenges the OPPI's Professional Code and Standard of Practice to offer more strict language of the planner's obligation to support the diverse needs of individuals living with disabilities throughout the entirety of the planning process, including post-planning monitoring and evaluation.

There are several steps involved in receiving the MCIP/RPP designation, which commonly begins with obtaining a degree from one of the six accredited planning programs in Ontario. This section will provide a high level overview of the curricula of four accredited programs to determine where and how accessibility and AODA principles are incorporated into their education. The following programs were chosen due to their presentation of core courses related to planning in the urban environment.

1. Queen's University's School of Urban and Regional Planning

The Master of Urban and Regional Planning accredited program consists of seven compulsory core courses, two elective courses in a designated area of concentration, and other unconstrained electives. While students have the option of choosing a directed report or thesis on a topic of interest, which may include accessibility, the objectives of core courses do not

explicitly cite planning for accessibility. Accessibility training could potentially be included within courses of the Health and Social Planning Areas of Concentration, which largely focus on the relationship of the built environment and public health. These courses also strive to uncover the impediments that values, interests, and institutions can pose to planning, designing, and maintaining healthy communities (Queen's University Department of Geography and Planning, 2020). The implications of accessibility on public health could certainly be an area of focus in these courses.

2. University of Waterloo's School of Planning

The University of Waterloo offers one accredited program at the bachelors level and two accredited programs at the masters level. Core courses provide a dynamic array of planning competencies, but do not specifically deal with accessibility planning, based on course descriptions. However, an elective seminar course titled 'Social Concepts in Planning' is offered to both undergraduate and graduate students in planning and provides an advanced examination of planners in their environment considering the relationship between social and land use planning, with accessibility being one of the social concepts outlined. Graduate research fields may also deal with the human and built environment, as graduate students may pursue research in AODA independently (University of Waterloo School of Planning, 2020).

3. University of Toronto's Department of Geography and Planning

The Master of Science program in Planning is the accredited program offered at the University of Toronto. The program's curriculum consists of a required set of core courses deemed essential to the education of a planner, covering history, theory, criticism, methods, and

skills. While there are no core courses dedicated strictly to accessibility planning, the program offers several courses that are heavily related to theory and should be encouraged to incorporate theories of universal design into teaching as a philosophy used to address the planner's responsibility to a diverse public, and bridge the gap between universal design theory and practice (Geography and Planning University of Toronto, 2020).

4. Ryerson University's School of Urban and Regional Planning

Ryerson University's School of Urban and Regional Planning offers a number of fully accredited planning programs at the bachelor, post-bachelor, post-diploma, and masters levels. Each program provides a range of core courses deemed appropriate for the planning profession, however there lacks an integration of accessibility as a lecture topic or course topic in any of the programs. Courses on diversity, ethics, design, and sustainability should be modified to include a broader discussion of the planner's obligation to support the needs of individuals with differing abilities as well as compliance with AODA legislation (School of Urban and Regional Planning - Ryerson University, 2020).

This section undertook a critical review of the ways UD and accessibility discourse has informed and evolved into planning practice in municipalities and in education. The study conducted an assessment of progress made in accessibility at various municipal jurisdictions to determine how Toronto fares in comparison. The examples chosen seek to inform future planning decisions regarding accessible design in the built environment in Toronto. The review of municipalities demonstrates progress has been made with accessibility at the policy level, as many municipalities have begun to harmonize UD principles and ideologies with various municipal policies and sectors. Additionally, this section conducted a high level overview of

several professionally accredited planning programs in Ontario to determine where and how the AODA and accessibility discourse has been integrated into planning education. The review found that while these programs cover a broad range of theory, history, legislation, and methods that have informed planning, there are no apparent mandatory courses dedicated to accessibility planning. However, this overview was high level and therefore future research should provide a more in-depth analysis of where training for accessibility lies at the individual program level.

5. RESULTS AND DISCUSSION

Accessibility has influenced the planning profession in a diverse way. A total of eight planning and planning-related professionals who participated in the online-survey for this research work in both the private and public sectors. Each participant currently practices in Toronto within a variety of planning and planning related fields that inform policy and outcomes of the built environment, such as consulting, transportation, strategic planning, landscape architecture, public space, engagement, and environmental planning. While this research makes several references to Ontario's planning profession, the survey was not exclusive to Registered Professional Planners (RPP) as it was important to gain a broad range of professional insights. An even distribution of participants indicated they were either an RPP, in the process of becoming an RPP, or are not an RPP. Participants were asked to indicate how significant accessibility was to their jobs, to which it was found that each sector of planning has approached accessibility in a variety of ways. However, there was a general consensus that accessibility is growing in significance in various aspects of the planning and development process. In an effort to address one of the study's primary research questions, participants were asked whether they believed Toronto is on track to meeting the AODA's 2025 deadline for full accessibility. The responses strongly expressed that Toronto is not on track, and cited a number of barriers that may be impeding Toronto's ability to reach this deadline, including: difficulty adapting existing private buildings to new accessibility standards as the AODA has no retroactive effect, a lack of training, understanding, and knowledge of what it means to be fully accessible among planners in particular, and ambiguous definitions for 'full accessibility' at the municipal and provincial levels. Participants were asked to identify areas of the city they believed to have made progress with regard to accessibility. Responses referenced newer public buildings, transit infrastructure, and parks and public space as areas of success in accessible design. In an attempt to address the

second research question of this study, participants were asked to indicate whether they had received any formal training in planning for accessibility. While most participants indicated they had received some form of training regarding accessibility, it was found that most participants received this training on the job, and not through formal education. However, all participants indicated they were familiar with the concept of universal design, which they learned about in a variety of settings, including through education, professional workshops, in their jobs, and within municipal design standards. This may demonstrate an evolution of universal design from theory into a widely accepted practical approach to planning for accessibility.

The following sections provide a more detailed analysis of the major themes identified in the survey responses. These sections were referenced as important areas of consideration by the study participants.

5.1. SUCCESSFUL PROJECTS IN TORONTO

Despite the apprehension most participants demonstrated to Toronto meeting the AODA's 2025 deadline, several areas in the city were recognized for their success in achieving enhanced accessibility. Participants indicated geographic areas of the city, including parks and public space, as well as infrastructure and systems such as sidewalks, Toronto Public Library, TTC, and GO as areas of success.

Parks and trails have been recognized for their progress made in accessible design. Two examples include Earl Bales Park and Corktown Commons. One participant referenced Earl Bales Park as a key example of accessible play where children of all ages can feel comfortable

exploring their environment. Notable elements of the park include brail signage, large ramps for people in mobility devices to explore the entirety of the playscape, and tall back rests and chest harnesses on swings to assist those who lack upper-body strength. The design of Earl Bales Park has therefore demonstrated a push for accessibility beyond minimum standards. A participant cited Corktown Common for its support of diverse play experiences for a wide range of ages and abilities.

Reference to these playgrounds has highlighted several themes provided in the literature about inclusive play environments for children, particularly children living with disabilities. Burke (2013) notes the process of inclusion involves ensuring the environment fits the child, regardless of their abilities, rather than expecting the child to fit into the environment. This statement coincides with the UD theory, which Türk (2013) states makes spaces fit for people, not people fit for space. Empirical evidence suggests placing children of all ability levels together in inclusive play environments promotes acceptance of children living with disabilities by their able-bodied peers over time (Burke, 2013). This finding may demonstrate that universally designed play environments that do not segregate users based on ability can contribute to greater levels of understanding and acceptance among all individuals. This is supported by Berry (2001) who affirms that inclusive playground elements are not restricted to use by children living with disabilities, rather they should be enjoyed by all individuals throughout the life course. Advocacy organizations for parks and public space, such as Park People highlight the need for holistically designed accessible environments which consider the needs of users with both permanent and temporary limitations (Marcastel, 2019). They commend the subtleties of UD because it does not separate users or draw significant attention to accessible

features, and strive to benefit all users (Marcastel, 2019). They also recommend urban parks receive an audit from an accessibility organization, such as the Rick Hansen Foundation's Accessibility Certification Program, to demonstrate their commitment to providing inclusive environments to all (Marcastel, 2019).

Several participants illustrated that while many of Toronto's newer and/or redeveloped parks are demonstrating progress with regard to accessible design, the challenge that existing public spaces are not required to be modified to increase accessibility, as regulated under DoPS remains. Parks are an essential component to the health and wellbeing of individuals and communities as a whole. As Toronto continues to intensify and diversify, the need for quality and accessible public spaces is stronger than ever before. Through the park development process, the City must continue to meaningfully engage with individuals with a diverse range of abilities to create vibrant and efficient public spaces that reflect the needs of Toronto's diverse population. Other public space infrastructure, such as sidewalks, were referenced by participants for demonstrating added consideration for accessibility. Participants noted improvements including accessible signals and tactile walking surface indicators. These improvements coincide with the City of Toronto's Complete Streets Guidelines which upholds accessible and UD principles in its guidelines for sidewalks.

Participants suggested newer public buildings have made progress with regard to accessibility. In particular, responses indicated Toronto's Public Library System and community centres have made great strides at improving accessibility holistically. Toronto Public Library has 100 branches, with the majority of these buildings approximately 40 years of age or older.

These buildings will require significant and continuous investment to ensure added accessibility measures are maintained in a state of good repair. The Library incorporates accessibility criteria and features into building projects in accordance with the City's Accessible Design Guidelines (2004). Beyond their legal obligations, the Toronto Public Library has taken advanced measures to remove barriers to access, including providing materials in diverse formats and reading levels (Toronto Public Library, 2013).

Several participants referenced Toronto's public transit system for its progressive approach to accessibility. The TTC considers its bus and subway fleet to be accessible. However, one participant indicated that even once every subway station is accessible with elevators, there will still be station entrances that are stair access only, making it a challenge to become "fully accessible." Metrolinx has provided a GO Design Requirements Manual which outlines the standard requirements and technical specifications to design and develop accessible GO stations, terminals, and facilities (Metrolinx, 2019). However, there is secondary data that suggests the newly implemented design solutions, which adhere to AODA and OBC guidelines in theory, continue to disadvantage many users, including seniors and those who are blind or deaf. Not all barriers to accessibility in transit are design related, however. Issues with crowding at Union Station have been noted to prevent a smooth flow of traffic, creating additional obstacles for users with various disabilities. This barrier may be addressed through better communication among transit users and transit staff, as well as a greater availability of staff to assist individuals with accessibility challenges.

5.2. ACCESSIBILITY PLANNING TRAINING AND EDUCATION

A vast majority of participants indicated they had received some form of training in accessibility. However, levels and types of training acquired were varied among each participant. Participants who work in the design sector indicated the training they had received was predominantly surrounding building code requirements. Other professionals indicated they were provided with mandatory training courses in AODA by their employers. However, it is not clear what parts of the AODA this training was geared toward. One participant indicated they had enrolled in an AODA course on creating accessible documents, on their own time. Some participants noted they had participated in universal accessibility workshops that were centred on lived experience. Fortunately, all of the participants were familiar with UD, which they had been introduced to in various educational and professional settings.

While it may be encouraging to know that a majority of participants have received some form of training in accessibility and UD, it does not appear that there is a standard formal training process in place for accessibility. Additionally, none of the participants indicated having received any formal training for accessibility in their academic education. A lack of education among planners regarding accessibility and UD may hinder their ability to help create environments that are accessible to all, and instead work only within the constraints of minimum, legally mandated standards. While a formal training process for accessibility is less apparent, participants indicated that accessibility plays an important role in their jobs and throughout the planning and development process. The disconnect between training offered to planners on accessibility, and the level of knowledge that is required of planners to design accessible

environments, demonstrates a need for an integrated accessibility training model that can be implemented into professional planning curriculums.

6. GETTING TORONTO ON TRACK

As planners become more aware of their role in improving quality of life for all individuals, there has been a shift in thinking that planners and designers are no longer accommodating the needs of users, but instead working in partnership with communities to co-design environments best suited to their needs and wants. Planners should no longer assume the role of the "expert" by simply complying with minimum codes and standards for accessibility in an effort to address the needs of users with disabilities. Rather, they must continuously be reminded of their obligation to plan for the public interest. This shift in thinking has informed planning policy and practice in Toronto, however the city still has a ways to go to become 'fully accessible'. Applying to the Toronto context, this section analyzes some of the major barriers Toronto faces to becoming 'fully accessible', as identified through secondary and primary research, in an effort to provide a comprehensive list of recommendations to get Toronto's built environment on track to becoming more inclusive to all users. The most commonly cited barriers identified through primary and secondary research include: ambiguous definitions for 'full accessibility', a lack of power among designers and architects to enforce accessible design beyond minimum standards into their plans, and limited training offered to planners and designers to establish universally accessible environments.

6.1. DEFINING ACCESSIBILITY AND THE ISSUE WITH COMPLIANCE

Accessibility legislation, such as the AODA, frequently references 'full accessibility' to describe environments that are accessible to all users and abilities. Compliance with this definition would require numerous accommodating features in the built environment that are suitable for use by all individuals. However, it is unclear to what extent full accessibility can ever be achieved. Marcastel (2019) noted that often in public space design, implementing one

wheelchair ramp is considered “accessible” but introducing two is considered “fully accessible.” As the literature demonstrates, the built environment can impose numerous barriers that are sometimes more obvious, and sometimes more hidden. What makes an environment accessible is therefore subjective to the user’s lived experience, and will be perceived differently from one user to the next (Gossett et al., 2009).

While planners must continue to work in partnership with diverse communities and diligently engage users with a range of abilities, they should also be cognisant that an environment cannot truly be deemed “fully accessible” until all individual abilities and needs are supported. As stated by the IDRC’s ‘co-design’ framework, planning for accessibility is a continuous and adaptive process. Therefore, planners should be consistently aiming to ensure environments are inclusive to all individuals before labelling it as “fully accessible.” Co-designing with users should exist right from the initial stage of project planning, all the way through a project’s development, implementation, and operation. Moreover, accessibility legislation should consider modifying references of ‘full accessibility’ to a phrase that is less definitive to allow for ongoing improvements and understandings of the additional social barriers facing individuals living with disabilities in their environments.

6.2. INCENTIVIZING ACCESSIBILITY

Several survey participants indicated hostile design elements, which exclude the needs of users with diverse abilities, in private developments as a significant barrier to Toronto becoming fully accessible. As discussed by Carr et al. (2013), heightened construction costs and the designer’s obligation to their client often hinders accessible design elements that go beyond

minimum building code requirements from being implemented. If a private developer is not interested in including universally accessible design principles in their plans, design professionals and architects do not have the ability to enforce these principles. Additionally, there are still no requirements for existing buildings and public spaces to be upgraded for additional accessibility. Survey responses indicated numerous business in basements or second floors with no elevators, as well as main street businesses with steps to the front door. While it may be difficult to amend the current accessibility legislation and standards to be retroactive, public and private developers should be encouraged and informed of the economic benefits of incorporating universal design (UD) at the beginning stages of their plans, especially as it relates to AODA compliance. Additionally, when dealing with aging infrastructure in the built environment in need of accessibility upgrades, planners should be informed of the innovative and cost effective tools they may use to help accelerate accessible design upgrades.

There are cost efficiencies associated with incorporating UD at the beginning stages of a project's development (Government of Ontario, 2005). Creating more inclusive physical environments may have numerous positive spillover effects. For instance, establishing more accessible employment options for people living with disabilities would expand the labour pool and increase incomes (The Conference Board of Canada, 2018). Greater representation of persons living with disabilities in the labour force, combined with increased spending powers among accessibility groups will encourage local spending in communities (The Conference Board of Canada, 2018). Additionally, creating more accessible businesses for consumers living with disabilities will allow companies to capitalize on the productivity and consumer spending powers of this unique market (The Conference Board of Canada, 2018).

If the built environment requires significant retrofits to enable accessibility, building owners and municipalities should be aware of potential project funding tools. Intergovernmental transfers, which are provided in the form of grants by senior levels of government, is a potential funding tool (Kitchen, 2002). Conditional grants, which must be allocated towards specific services or facilities in which the province has an interest, could be a valuable financial resource given that accessibility is a matter of provincial interest. Accessibility retrofit projects may benefit from having influence from senior levels of government due to greater efficiencies, service deliveries and higher accountability standards for how the money is spent (Chen, Mulaki, and Williamson, 2014). Some existing federal and provincial grant programs are listed below:

1) Enabling Accessibility Fund

This federal grant option supports community-based projects across Canada targeted at improving accessibility and safety in public spaces and workplaces (Government of Canada, 2018). This grant can be provided to not-for-profit organizations, for profit organizations, municipalities, Indigenous organizations, and territorial governments (Government of Canada, 2018). Potential recipients can identify among three program components to help determine their eligibility; including 'small projects' which provides grant funding up to $100,000 per project to support small scale construction, renovation, and retrofit to increase accessibility; mid-sized projects which can receive contributions up to $3 million to support larger retrofits and construction; and the new youth innovation component which can receive up to $10,000 per project, and empowers youth to recognize barriers to accessibility within their communities to develop solutions that improve accessibility (Government of Canada, 2018).

2) EnAbling Change Partnership Program

The EnAbling Change Partnership Program is offered through the Ontario Ministry of Community and Social Services (Government of Ontario, 2019). It strives to help organizations comply with accessibility standards to improve accessibility for persons living with disabilities (Government of Ontario, 2019). Through this program, the Government of Ontario will cost-share up to 75 per cent of the project, and contribute expertise, while partners must contribute a minimum of 25 per cent of the total project cost, either financially or in-kind (Government of Ontario, 2019).

6.3. POST PLANNING: MONITORING AND ENFORCEMENT

It was widely observed in the literature and survey responses that several elements of the built environment provide for accessibility by complying with minimum legislated requirements. Accessibility is therefore often considered a standard that must be met, rather than the forefront of good design. It was noted that most projects in Toronto do not strive to achieve greater accessibility, but rather work around standards that define ‘accessible’ or ‘not accessible’. Particularly for public and private buildings, there lacks a formal audit system to monitor their accessibility. It is too commonly accepted that so long as a project has met minimum requirements, they are deemed ‘accessible’. Not only should projects that go beyond minimum standards be incentivized, but projects that do not meet these requirements should be held accountable. This may take shape through a Human Rights complaint, however before this occurs, an independent body should be employed to monitor and enforce the AODA.

6.4. CREATING A FRAMEWORK FOR ACCESSIBILITY TRAINING IN PLANNING SCHOOLS

Formal education in planning is where students are introduced to complex urban issues, and acquire the necessary knowledge and skills required of a planner. The jurisdictional scan of several professionally accredited planning programs in Ontario, as well as survey responses from professionals, indicated a lack of formal training on accessibility planning. Without a clear understanding of their role in planning for inclusion and accessibility, planners may be left to defer to minimum standards for accessibility and fail to achieve many of their duties to the public. A formal training structure or course centered on universal accessibility may help present a clearer definition and understanding of accessibility from a planning perspective. Planning students must understand accessibility beyond the minimum standards found in planning legislation. Future planning professionals will be better equipped not only to plan for accessibility, but to consider the broader ways the planning and development process has the power to mobilize or totally exclude equity-seeking groups. In this regard, training for accessibility in the built environment should provide a holistic understanding of the planner's responsibility to remove barriers to access.

Planning degree programs receive accreditation through the Professional Standards Board (PSB). The PSB reviews the program's status to assess whether it should continue to be accredited. The PSB identifies a number of functional and enabling competencies to ensure students enter the planning profession with a comprehensive understanding of their role as a planner. A key recommendation from this study is that the PSB develop a competency directly related to accessibility that will serve as a requirement for a university's accreditation.

Ergenoglu (2014) provides an educational framework for UD in architectural studies. A similar framework should be introduced to planning education as empathy and the role of the planner to accommodate diverse accessibility needs are qualities that can be developed through an effective educational process. Ergenoglu (2014) also suggests UD should be taught in all places where future professionals influencing the built environment are educated.

Several elements of the recommended accessibility training model in this study have been informed by the work completed by Ergenoglu (2014). However, the model has been adapted to fit the specific requirements of the Canadian Institute of Planners (CIP) and Ontario Professional Planners Institute (OPPI) for an accredited planning degree in Canada. The following section demonstrates the ways the proposed accessibility training model adheres to these specific accreditation standards:

Professional Planning Accreditation Requirements	**How it will be addressed**
(i) Functional Competencies:	
Human Settlements	Understanding of factors that have influenced change in human settlements, including migration, quality of life, or employment and their influence on creating diverse populations
History and Principles of Planning	Understanding of planning theories, practices, and principles surrounding accessibility and inclusivity Recognizing the ethical obligation of planners to accommodate a diversity of users
Government and Law	Understanding of planning law surrounding accessibility

Issues in Planning and Policy-Making	Understanding the strengths, limitations, and uncertainties associated with environmental, social and economic sustainability as it relates to accessibility Understanding planning for accessibility as it relates to equity, diversity, and inclusion Understanding of accessible design elements in the built environment
Processes of Planning and Policy Making	Understanding the planner's obligation to partner with communities and engage equity seeking groups in planning deliberations
Plan and Policy Implementation	Understanding of the standards, rules, and regulatory tools supporting accessibility and the financial tools available to fund accessibility projects Understanding of accessibility standards, rules, regulations and design problems.
(ii) Enabling Competencies	
Critical and Creative Thinking	Understanding how to develop plans with respect to a diversity of needs from the public, and under unique circumstances such as within designated heritage buildings Considering the varied challenges that exist at different geographic scales, such as urban versus suburban or rural accessibility factors
Social Interaction and Leadership	Developing effective skills in mediation, facilitation, negotiation, and conflict resolution when engaging with a variety of individuals with differing abilities Understanding the need for meaningful engagement and partnerships with diverse people and values Appreciating the importance of teamwork and team-building among professionals and community members

Communication	Understanding how to effectively communicate verbally, graphically, technologically, and in writing with a variety of individuals of different abilities and levels of understanding
Professionalism	Managing complexities, learning from past experiences, and managing ethical dilemmas when dealing with sensitive issues including health and disability

Table 1.

It is hoped that the following framework will be an integrated part of entire planning programs, rather than a course that is added on as a result of legal obligation. While knowledge of the regulatory environment surrounding accessibility will be part of the framework, a greater emphasis will focus on the human factors of planning and design. Students will be encouraged to understand that while it is important to comply with standards, it is the people who they are planning for (Ergenoglu, 2014). The proposed UD training model for professional planning schools has been divided into four parts. These recommendations are high level with the understanding they will be adjusted to fit different contexts.

Part 1: Creating Awareness and Establishing Understanding

The first part of the course will provide a brief introduction to accessibility and universal design discourse, in addition to related legislation and guidelines. Part 1 will strive to promote awareness and generate a common understanding of the diverse accessibility needs that exist within a population. Students will engage with experiential learning techniques, such as navigating through an environment using a wheelchair or blindfolded, to gain a basic understanding of the challenges the built environment can impose on users of differing abilities. Guest lecturers who identify with different accessibility needs will provide insight to their own

lived experiences in terms of accessing the city. Students will gain an understanding of the impacts discriminatory social and physical environments can have on individuals living with disabilities.

Part 2: Engagement and Facilitation

Groups of students will be assigned to a planning project. Through a simulated facilitation exercise, students will engage with actors who identify with different accessibility needs. Students will learn to respectfully communicate, mediate, and build partnerships with diverse community members. Through class discussions, students will also learn innovative and effective facilitation techniques. Students will reflect on the challenges faced, how individuals were engaged, and the ways equity-seeking groups could have been further included in the process.

Part 3: Case Study – Applying UD to a Planning Task

Utilizing the information gained through the facilitation simulation, students will develop and apply social, political, and design recommendations to their assigned planning task. Through this, students will learn to comply with provincial and municipal accessibility standards at a minimum, while putting the unique needs of community members at the centre of their recommendations.

Part 4: Sharing and Discussion

In a larger class discussion, students will report their findings, key learnings, and challenges faced. They will engage in discussions on the social responsibility of planners, and conceptualize innovative ideas to plan for accessibility in the future.

7. FUTURE DIRECTIONS

Barriers in the built environment are discriminatory as they separate users based on ability, and convey the message to users with disabilities that they do not belong in that space. Unfortunately, many areas of the built environment continue to exclude users living with disabilities. This report sought to engage with the role of the individual planner, and the planning profession as a whole to support the needs of users living with disabilities. Applying this to the Toronto context, it sought to understand whether Toronto would be on track to meeting the AODA's 2025 deadline for full accessibility, in addition to uncovering the ways the built environment can more effectively support the needs of users with diverse abilities.

Findings from this report convey there is much that needs to be done to get Toronto on track to becoming fully accessible. While this research investigated accessibility of the built environment as it relates to individuals living with disabilities, future research should consider a broader array of intersectional identities and their relationships to accessibility in the built environment. For instance, planners should also consider the ways persons of colour and members of the LGBTQ2S community who also identify with having a disability experience the built environment. Future research may also focus on the ways new technology, such as virtual reality can be integrated into planning education as well as the planning and development process to inform planners of potential barriers in the built environment through experiential learning. Finally, when assessing the accessibility of the built environment, planners must continue to question which individuals are not represented in the space to begin to develop strategies that will help make the space inclusive to all.

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GLOSSARY

Accessibility An umbrella term for all aspects which influence a person's ability to function within an environment (Iwarsson and Stahl, 2003).

Barrier-Free Design Design of built form that removes and prevents an individual from accessing a space, generally through the provision of alternate means to access.

Deafspace Architectural design principles used to improve accessibility for individuals with hearing impairments.

Inclusive Design Design that considers the full range of human diversity with respect to ability, language, culture, gender, age and other forms of human difference (Inclusive Design Research Centre, n.d.).

Universal Design The design of products and environments to be inclusive for all users, regardless of age and ability, without the need for adaptation or specialized design (Audirac, 2008).

Wayfinding The process an individual uses to navigate through space, typically used in unfamiliar settings.