Universal Design in New Residential Construction

Creating an affordable, inclusive future for the City of Toronto

Presentation to the Disability, Access & Inclusion Committee
June 29, 2016
by OWN and ADPA
Universal Design in New Residential Construction

1. Who am I?
   a) Thea Kurdi, Architectural Accessibility and Universal Design Specialist
   b) Chair of ADPA
   c) Member of OWN Housing Committee
Understanding the Demographics

1. **Ontario**: Approx. **1.85** million people report having a disability, representing 15.5% of the population. 70% of disabilities are ‘invisible’

2. **Toronto**: Apply 15.5% to Toronto’s population 2.79 million people = **432,450** people with disabilities

3. By **2017**, for the first time, Ontarians aged 65 + will account for a larger share of the population than children aged 0-14
Understanding the Demographics

Toronto 2011

2011 - City of Toronto Population

- 57% 25-64
- 16% 15-24
- 12% 0-14
- 12% 65-84
- 2% 85+

2b
Understanding the Demographics

Toronto 2030

2030 - City of Toronto Population

- 0-14: 24%
- 15-24: 14%
- 25-64: 44%
- 65-84: 6%
- 85+: 6%

Legend:
- 0-14
- 15-24
- 25-64
- 65-84
- 85+
Understanding the Law

1982 – 2 laws passed
1. Canadian Charter of Rights and Freedoms
2. Ontario Human Rights Code amendments
Both laws ban discrimination because of disability
Exception:
National Building Code excludes housing (3.8.1.1)
Understanding the Law

Canadian Charter of Rights and Freedoms

15. (1) Every individual is equal before and under the law and has the right to the equal protection and equal benefit of the law without discrimination and, in particular, without discrimination based on race, national or ethnic origin, colour, religion, sex, age or mental or physical disability.

(2) Subsection (1) does not preclude any law, program or activity that has as its object the amelioration of conditions of disadvantaged individuals or groups including those that are disadvantaged because of race, national or ethnic origin, colour, religion, sex, age or mental or physical disability. (84)

Our National Building Code seems to condone disability discrimination in housing.

3.8.1.1. Application
(See Appendix A.)
1) The requirements of this Section apply to all buildings except a) detached houses, semi-detached houses, houses with a secondary suite, duplexes, triplexes, townhouses, row houses and boarding houses (see A-1.4.1.2.(1), Secondary Suite, in Appendix A of Division A), b) buildings of Group F, Division 1 major occupancy, and c) buildings that are not intended to be occupied on a daily or full-time basis, including automatic telephone exchanges, pumphouses and substations.

3-148 Division B National Building Code of Canada 2010 Volume 2

Image shows text from Charter of Rights on left and National Building Code on right

Action: Support Code Change Request 964:
Change is Afoot

BILL C-265
An Act to ensure secure, adequate, accessible and affordable housing for Canadians

FIRST READING, MAY 3, 2016

Image shows text from BILL C-265
Action: Support Bill C-265
Change is Afoot

• **Canada**
  Minister of Persons with Disabilities
  Carla Qualtrough
  Source: The Respectability Report

• **Ontario**
  Minister of Accessibility
  Tracy MacCharles
  Source: Toronto Star
Age in Place

Image shows a couple and a photo of women with the question Age in Place or Make a Move?

Image sources:
http://www.weselltoronto.com/Blog?Tag=senior%20living
Changing Abilities Over a Lifetime

Image shows the silhouettes of a woman at the different ages over her life span. Includes changing size and ability from a crawling infant to being in a wheelchair with an attendant.
The Waiting Trap

- Can’t afford to wait
- Today: Accessible housing crisis
- Future: Only going to get worse

- If policy changed today? Take 3 years to see in the marketplace
Image shows the 7 principals of Universal Design

Image source:
https://udlhcpss.files.wordpress.com/2011/11/principles_ud.png?__hstc=246535899.1289f84a362c41b80e5e8776d3502129.1435233910711.1437640065400.1437644375494.54&__hssc=246535899.3.1437644375494&__hsfp=3799412980
Visit-able and Adaptable Housing

## Accessibility Continuum Chart

<table>
<thead>
<tr>
<th>Minimum Features</th>
<th>VisitAble Design</th>
<th>Enhanced Visitability</th>
<th>Adaptable Housing</th>
<th>Accessible Housing</th>
<th>Universal Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>No-step entrance with accessible path to enhance</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Minimum door swing width 32” (81cm) with lever handles on all doors and minimum hallway width 36” (91cm)</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Accessible hallways with overhead rails &amp; support features, lower fixtures, maneuver space to access the side and front door for the elder space around the toilet</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Overhead space</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Hardwood floor coverings</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Audible door alarms</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Kitchens to allow wheelchair access/minimize front of stove appliances</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Lower faucets in kitchen</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Riser or bench perpendicular to sink and counter</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Raised electrical receptacles</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Lower controls light switches, thermometers, thermostats, door bells, security alarms</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Adequate widths or cross nets</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Adequate lighting at entrance area</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Adequate space for proper approach</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>At least one accessible bathroom</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Door scoop with housing in-sight</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Large parking spaces to accommodate wheelchair</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Wheelchair accessible in common area</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Movable spaces in all areas of the dwelling and including bathrooms, master area, kitchen, bedrooms</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Curtains close with closing penciled by caretaker</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Separation showers and need to bathe</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Accessibility of dwelling and accessible throughout in the residence or in the unit</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Adequate storage space</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
</tbody>
</table>

VisitAble Housing Canada: Accessibility Continuum Chart shows the different elements for accessibility in housing

Visit-able and Adaptable Housing

Only 5 of the many elements:

1. An accessible path to the residence from the sidewalk and parking
2. A zero step entry
3. All doors on the main floor and to bedrooms to be 40" wide
4. 4’ wide hallways, and
5. Entry level washroom sized to residential accessibility standards.
OHBA

“Visitable” Features

2. Zero Step Entry
Easier Than You Think

Zero Step Entry

Typical Cost of Lowered Floor/Notched Foundation Method above the cost of regular flooring system:

$250

- Source:
  www.concretechange.org
Easier Than You Think

Zero Step Entry

Bridgewater Neighbourhood, Winnipeg, MB
Easier Than You Think

Zero Step Entry
Easier Than You Think

Wider Doors

- Image shows wood framing of a door that allows for widening later
Source: renovation-headquarters.com
Easier Than You Think
Stacked Closets -> Residential Elevators

• Image on left: Stacked Closets
  Source: https://www.cmhc-schl.gc.ca/en/co/acho/acho_008.cfm
• Image on Right: Residential elevator
  Source: canadacustomelevator.com
Easier Than You Think

Laundry

- Source: bsu.edu/wellcomehome/friendly_house.html
Easier Than You Think

No Lip Exterior Wooden Ramp

- Source: Figure 12
Easier Than You Think

Gardens

- correctly sized raised planters
- good space between planters
- allows for knee space beneath planters
- solid surface walkway around the planters

Source: renovation-headquarters.com
4. Calculating the benefits

These are wide-ranging and include:

- the avoidable cost of residential care
- avoidable additional levels of social care
- negative impacts on independent living, employment and social life all of which have human, social and economic significance
- falls and other accidents and the health and care costs triggered
- mental health impacts and impacts on general health
- avoidable hospital admissions
- increased stays in hospital due to lack of accessible housing to return to.

Just one night in hospital costs the NHS around £273⁹ whilst one week’s residential care averages £550¹⁰. These costs outstrip the cost of building a home to an accessible standard by a massive scale: each week that residential care can be avoided (an option that is often forced upon disabled and/or older people) would more than cover the government’s estimated additional build cost¹¹.

The cost-benefit case for all new housing to be built to Lifetime Homes standard or equivalent plus a proportion as wheelchair accessible is compelling. Awareness of this case is a large part of why accessible housing has been required by policy in London for more than a decade and why accessible standards have been adopted in a growing number of other areas.

• Image shows “Calculating the benefits”
Source: http://www.habinteg.org.uk/7pointsaboutthenew
Sample universal design residential projects from Canadian students
In November 2003, Saanich Council passed an amendment to the Zoning Bylaw that requires most newly-constructed apartment buildings and seniors' congregate care facilities be built to include Basic Adaptable Housing standards. Building permits issued for apartment buildings with an elevator and common corridor must comply with the new regulations.

Those applying for rezoning, subdivision and development permit applications are also encouraged to incorporate features from the voluntary design guidelines for apartment buildings, townhouses, and single-family homes.

Image shows Adaptable Housing in Saanich, BC
Image source: http://www.sabmagazine.com/blog/2015/10/01/the-salus-clementine-project/
Image shows Salus Clementine project, Ottawa - 42 single-occupancy units
LEED for Homes Platinum
Image source: http://www.sabmagazine.com/blog/2015/10/01/the-salus-clementine-project/
Happening Everywhere

Image shows Ottawa developments with 100% visitable units

Image source: Roger P. Gervais, Age in Place Specialist, Ottawa
What if...?

Image shows a decision point in the road with the dates 1982, 2005 and 2007 above the road on the left and the date 2016 with a question mark over the road on the right.

Image source: http://d.stockcharts.com/img/articles/2015/08/14401831385681449884081.jpg
Visit-able and Adaptable Housing

“We need to make every single thing accessible to every single person with a disability.”

-Stevie Wonder

Image shows Stevie Wonder at the 2016 Grammys. Text reads, “We need to make every single thing accessible to every single person with a disability.”
Image source: Huffington Post, February, 2016
Thank You

KEEP CALM

and

MAKE IT ACCESSIBLE

Image shows text, “Keep calm and make it accessible” braille and ASL letters spelling out “accessible”