Universal Design in New Residential Construction

Creating an affordable, inclusive future for the City of Toronto

Presentation to the Affordable Housing Committee
June 20, 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

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

Legend:
- Blue: 0-14
- Red: 15-24
- Green: 25-64
- Purple: 65-84
- Orange: 85+
Understanding the Demographics

Toronto 2030

2030 - City of Toronto Population

- 0-14: 14%
- 15-24: 12%
- 25-64: 44%
- 65-84: 6%
- 85+: 24%

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)
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
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
http://www.aiphc.com/sites/default/files/styles/medium/public(field/image/Age%20In%20Place%20Home%20Care_51.jpg?itok=ewjHDEca
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.
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

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.
Visit-able and Adaptable Housing

### Accessibility Continuum Chart

<table>
<thead>
<tr>
<th>Minimum Features</th>
<th>VisitAble Design</th>
<th>Enhanced Visitable</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 36” (915mm) with lever handles on all doors and minimum hallway width 48” (1219mm)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Acceptable handshower with non-slippery walk &amp; support features, lower faucets, medicine space to access the sink and toilet; room for the toilet space towards the end</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>Storage for wheelchairs</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Audio visual alarms</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Windows to allow unobstructed views from stair windows</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Lower outlets for light fixtures</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Kitchen or bath sensor switches and outlets</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 for switches, thermostats, doorbell, security alarms</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Adequate weights or shelf nets</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Adequate lighting at dressing area</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Adequate light space for proper approach</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>At least one accessible bedroom</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Drift acoustic floor runners or ramps</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Large parking spaces to be connected to garage</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Washable or removable wash basin shells</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Movable spaces in all areas of the dwelling including bathrooms, laundry areas, kitchen, bedrooms</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Covered all大洋 with door responsible by tenant</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Separation showers and need for two</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Altitude of dwelling unit accessible through use of residential elevator or stairlift</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Adequate storage heights</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Off-set controls for bathtubs and showers</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Automatic door closures</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Bedside light vs. window detectors</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Audible signals</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Glass surfaces or clear segments</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Built-in to bathroom fixtures</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Off-courses logic controls</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Usability balanced with aesthetics</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Meets the needs of a broad range of persons without adaptation or specialized design</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Increases safety, convenience, and control for all</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Image shows VisitAgle Housing Canada’s chart of the different elements for accessibility in housing

Happening Everywhere

Bridgewater Neighbourhood in Winnipeg
Happening Everywhere

Sample universal design residential projects from Canadian students
Happening Everywhere

ADAPTABLE HOUSING—MANDATORY AND VOLUNTARY

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/
Happening Everywhere

Image shows Salus Clementine project
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
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, braille and ASL letters, “Keep calm and make it accessible”