

SAFERhome Standards & Universal Design



A better standard of living™

- Universal Design Pilot
- Inclusivity in a Strata-Title Market Housing Project
- A Study of Implementation Costs & Market Response

February 2015

Universal Design Pilot

Inclusivity in a Strata-Title Market Housing Project

partnership between

Government

Non Profit

Development



A better standard of living™



Universal Design Pilot

Inclusivity in a Strata-Title Market Housing Project

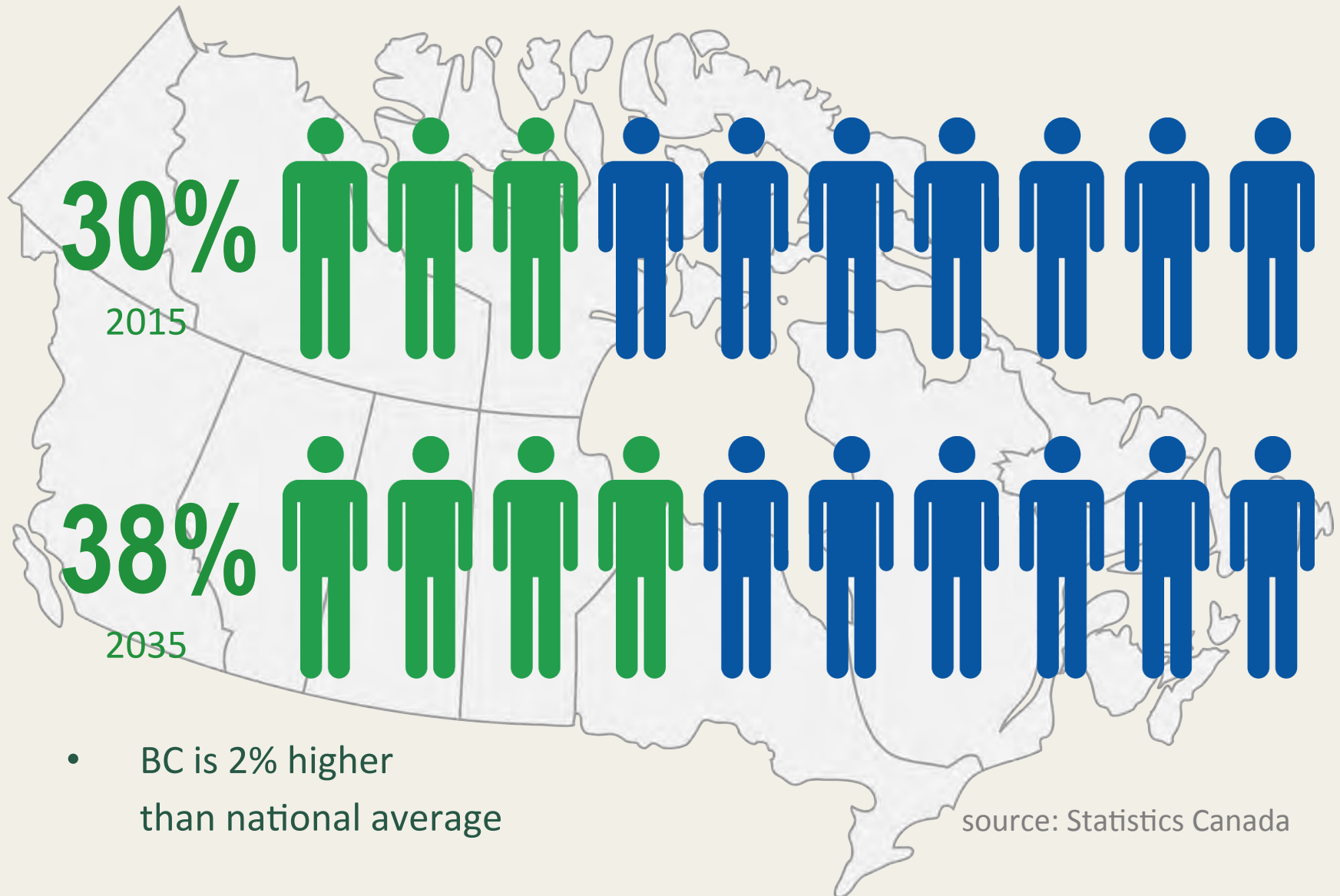
- What adopting the SAFERhome Standards do
- Inclusive housing design
- Featured universal design principles
- When widely adopted by developers will help:
- Meet the changing needs of homeowners in residential buildings
- Serve the general needs of families and seniors
- The pilot seeks to
- Establish the true costs of implementing inclusive housing design features
- Demonstrate the direct benefits of building a home with inclusive design features
- Develop marketing language to clarify the value of the end product
- Provide incentives for developer

Universal Design Pilot

Inclusivity in a Strata-Title Market Housing Project

- Built to meet the SAFERhome Standards
- Aging in Place
- SAFERhome Standards' practical solutions
- Help to create homes that are built for changing lifestyle needs over time
- Wider doorframes with little to no thresholds
- Wider hallways and stairs
- Easy access to bath, shower controls and electrical outlets
- Smart-ready technology to connect phone lines, video, computer systems

Aging Population 55 Years +



SENIORS' FALLS IN CANADA

FALLS are the LEADING CAUSE OF INJURY among older Canadians

20-30% of seniors experience **1+** falls each year.

FALLS CAUSE:

85% of seniors' injury-related hospitalizations

95% of all hip fractures

\$2Billion a year in direct healthcare costs

over **1/3** of seniors are admitted to **LONG-TERM CARE** following hospitalization for a fall



The average Canadian senior stays in hospital **10 DAYS longer** for falls than for any other cause



Falls **can result** in chronic pain, reduced mobility, loss of independence and even death



50% of all falls causing hospitalization **HAPPEN AT HOME**

The Pilot Project - 40 Units



Inspection & Certification

- SAFERhome Standards Society works with
- ASTTBC (Applied Science Technologists & Technicians of BC)
- To inspect and certify homes built to the SAFERhome 19-points Standards

ASTTBC
TECHNOLOGY
PROFESSIONALS

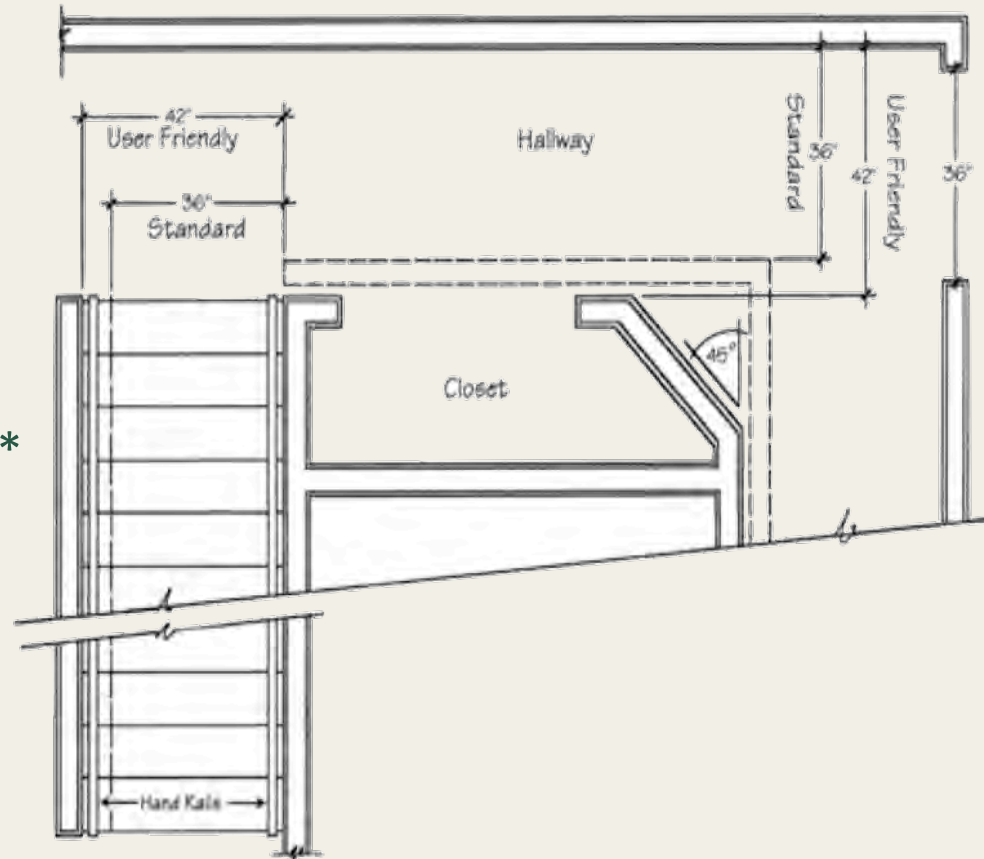


Universal Design Pilot

Examples of Implementation Costs Per Strata Unit

- Doors & Pinch Points
minimum 34" ideally 36" wide
- Hallways
minimum 40" ideally 42" wide
- Additional Material \$2.50/door
- Additional Labour \$0.00/door
- Total Additional Cost \$2.50/door*

* The need for future expensive retrofits has been avoided

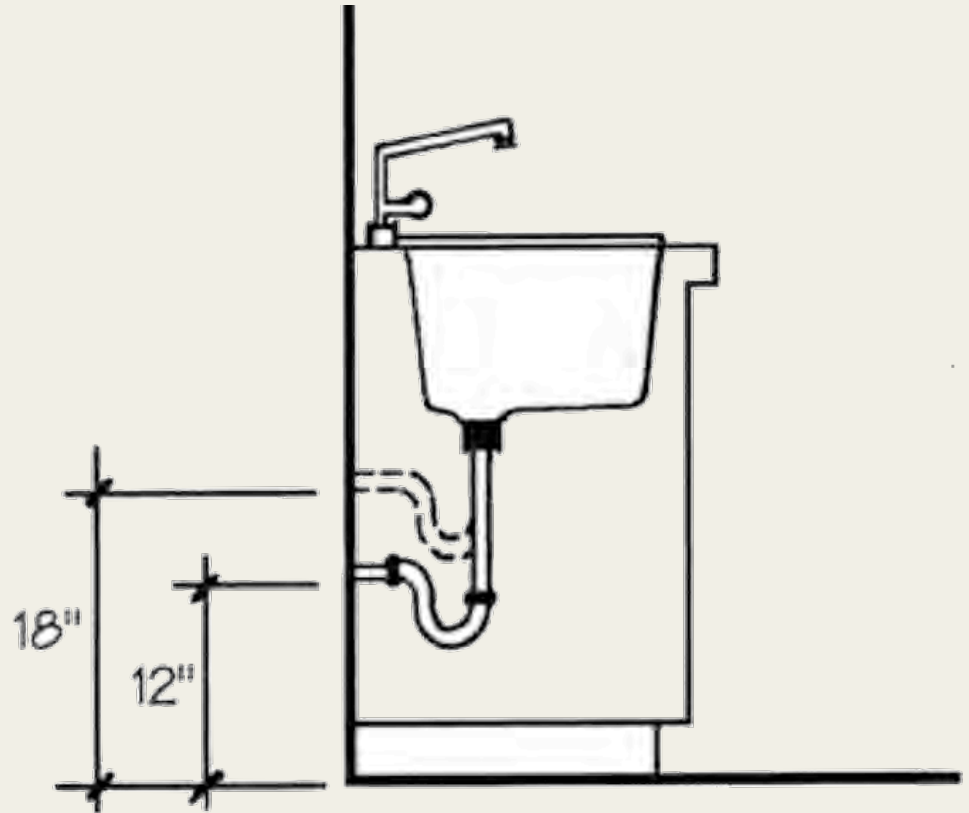


Universal Design Pilot

Examples of Implementation Costs Per Strata Unit

- Waste Pipes
- All waste pipes are brought in no higher than 14" to the centre of the pipe from floor level
- Additional Time 0 minutes
- Additional Material \$0
- Additional Labour \$0
- Total Additional Cost \$0 *

** The need for future expensive retrofits has been avoided*



Universal Design Pilot

Examples of Implementation Costs Per Strata Unit

- Washroom Wall Reinforcements
- Reinforced with 2"x12" solid lumber in all washroom bathtub, shower, and toilet locations
- Additional Time 30 minutes
- Additional Material \$15
- Additional Labour \$25
- Total Additional Cost \$40 *

** The need for future expensive retrofits has been avoided*



Universal Design Pilot

Examples of Implementation Costs Per Strata Unit

- Positioning of Bath and Shower Controls
- All controls are offset from centre, roughly halfway between the centre and the outside edge of the shower or bathtub enclosure
- Additional Time 10 minutes
- Additional Material \$5
- Additional Labour \$15
- Total Additional Cost \$20 *

** The need for future expensive retrofits has been avoided*



Universal Design Pilot

Examples of Implementation Costs Per Strata Unit

- Low-Voltage Runs
- All other low-voltage homeruns (e.g. door bells, security systems, etc.) return to one central area. (Node Zero)
- Additional Time < 50 minutes
- Additional Material < \$100
- Additional Labour < \$75
- Total Additional Cost < \$175 *

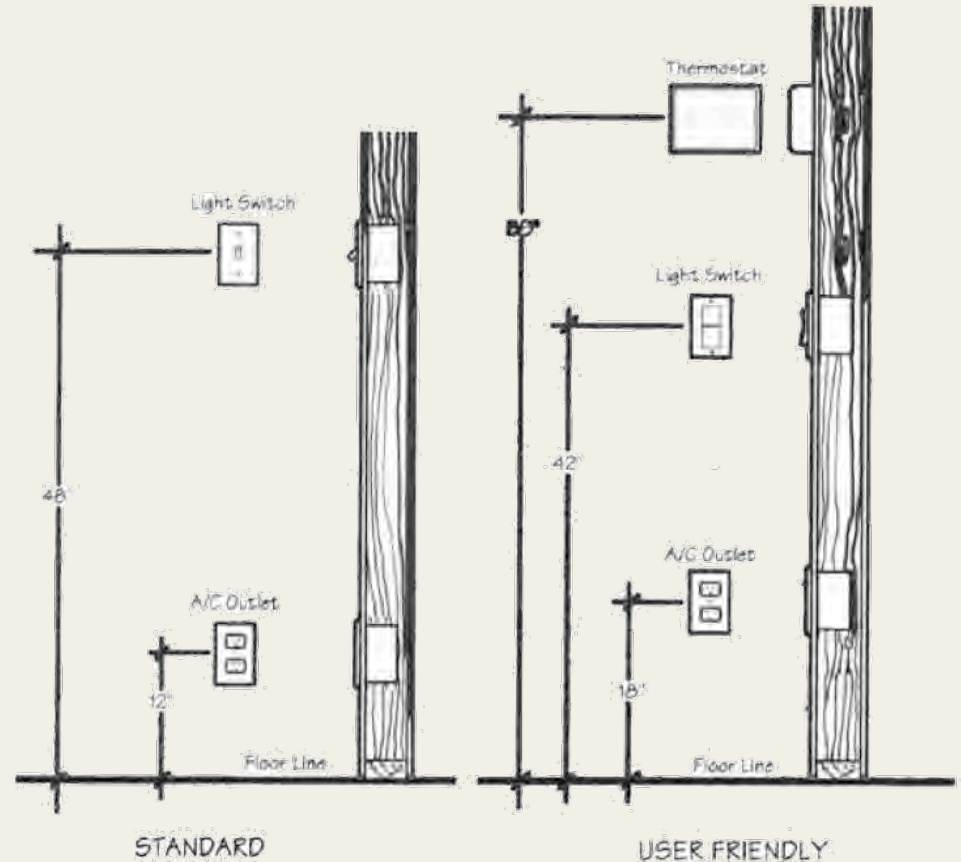
** The need for future expensive wiring has been avoided and the option for technology for independence is now in place*



Universal Design Pilot

Examples of Implementation Costs Per Strata Unit

- Positioning of Light Switches & Electrical Outlets
- All switches positioned at 42" to the centre of the electrical box from the finished floor
- All outlets positioned at 18" to the centre of the electrical box from the finished floor.
- Additional Time 0 minutes
- Additional Material \$0
- Additional Labour \$0
- Total Additional Cost \$0*



** The need for future expensive wiring has been avoided*

Universal Design Pilot

Examples of Implementation Costs Per Strata Unit

- Placement Locations of Electrical Outlets
- Beside windows, especially where draperies may be installed;
- At Node Zero Location where all the house wiring meets in one place; Beside the toilet
- Above external doors (outside and inside); Easily reachable from front or sides of the kitchen counter
- Additional Material \$10/outlet
- Additional Labour \$25/outlet
- Total Additional Cost
see next slide



Universal Design Pilot

Examples of Implementation Costs Per Strata Unit

- Placement Locations of Electrical Outlets - Four-Plex Outlets
- Master bedroom, home office
- Garage, recreation room
- Additional Material \$10/outlet
- Additional Labour \$25/outlet
- For all additional outlets
- Total Additional Cost \$175 - \$210 per unit *

** The need for future expensive wiring has been avoided*



Universal Design Pilot

Total Implementation Costs Per Strata Unit

One Bedroom Unit	Costs
Positioning Bath Control	\$ 20
Positioning Switches & Outlets	0
Waste Pipes	0
Doors & Hallways	10
Wall Reinforcement	40
Placement Electrical Outlets	175
Low Voltage	175
Subtotal	\$ 420
Pre Registration & Certification	199
Total	\$ 619

SAFERhome *19-point* Standards

- 1. Exterior Thresholds** - All exterior thresholds are flush.
- 2. Interior Thresholds** - All interior thresholds meet minimal code constraints (eg. shower entrance).
- 3. Bath and Shower Control Positioning** - All controls are offset from centre, roughly 1/2 way between the historic centre location and the outside edge of the shower or tub enclosure.
- 4. Pressure/Temperature Control Valves** - Control valves are installed on all shower faucets.
- 5. Washroom Wall Reinforcements** - Reinforced with 2"x12" block lumber in all washroom tub, shower, and toilet locations.
- 6. Waste Pipes** - All pipes are brought in at 12-14" to the centre of the pipe from floor level.
- 7. Sink Cabinets** - Cabinets underneath each sink are easily removed.
- 8. Doors** - All doors are a minimum of 34" but ideally 36" wide.

SAFERhome *19-point* Standards

- 9. Hallways** (passage ways and pinch points) - All hallways are a minimum of 40" but ideally 42" wide. (Passage ways and pinch points like doors are a minimum of 36".)
- 10. Light Switch Positioning** - All switches positioned at 42" to the centre of the electrical box from the finished floor.
- 11. Electric Receptacle Positioning** - All receptacles positioned at 18" to the centre of the electrical box from the finished floor.
- 12. Electrical Receptacle Placement**
Locations - Beside windows, especially where draperies may be installed; - Bottom of stairways; - Beside the toilet; - Above external doors (outside and inside); - On front face of kitchen counter; - At Node Zero Location where all the house wiring meets in one place.
- 13. Electrical Boxes** - All light switches and A/C receptacles use larger electrical boxes

SAFERhome *19-point* Standards

- 14. Four-Plex Receptacles** - Placed in master bedroom, home office, garage, and recreation room
- 15. Telephone Pre-Wiring** - Level 5 (4 pair) to all areas return to one central area. (Node Zero).
- 16. RG-6 Coaxial Cables Runs** - All runs return to one central area. (Node Zero)
- 17. Low-Voltage Runs** - All runs return to one central area. (Node Zero)
- 18. Wall Reinforcements** (Top of the Stairs) - At the top of all stairs walls are reinforced with 2"x12" at 36" to centre.
- 19. Multistory Connection Provision** - Either an allowance for an elevator options in stacked closets or all staircase(s) with a minimum width of 42".

Preliminary Market Response

- Englewood Courtyard
Phase 1 of 3
- 60% pre-sold at drywall stage
- SAFERhome certified
development
- Fastest selling ever in Chilliwack
- SAFERhome Standards Awareness
& Benefits



SAFERhome Standard Benefits

- SAFERhome helps builders sell to 100% of the population
- If main market builders are building to the SAFERhome Standards
- Their developments can be sold to 100% of the population
- Not just the able bodied
- Helping and encouraging builders understand that
- They can build to this standard will assist in keeping older people in their own homes longer
- Reduce accidents in their developments

Thank You



A better standard of living™

- Questions
- Gordon Porter
Executive Director
SAFERhome Standards Society
- gporter@SAFERhomeSociety.com
- 778.255.2207
- **SAFERhomeSociety.com**