

A group of people, including men and women of various ethnicities, are standing in a line and holding up large signs. The signs are for the UN Sustainable Development Goals. In the foreground, a large sign displays the number '7000000'. Other signs in the background show various symbols and text, including '1 of 7 x 10^8' and '7,000,000'. The background is a blurred indoor setting with a large banner.

**STAIRWAY TO HEALTHY:
Designing Active, Accessible, and
Resilient Housing**

**UNIVERSAL DESIGN &
AGING IN PLACE**

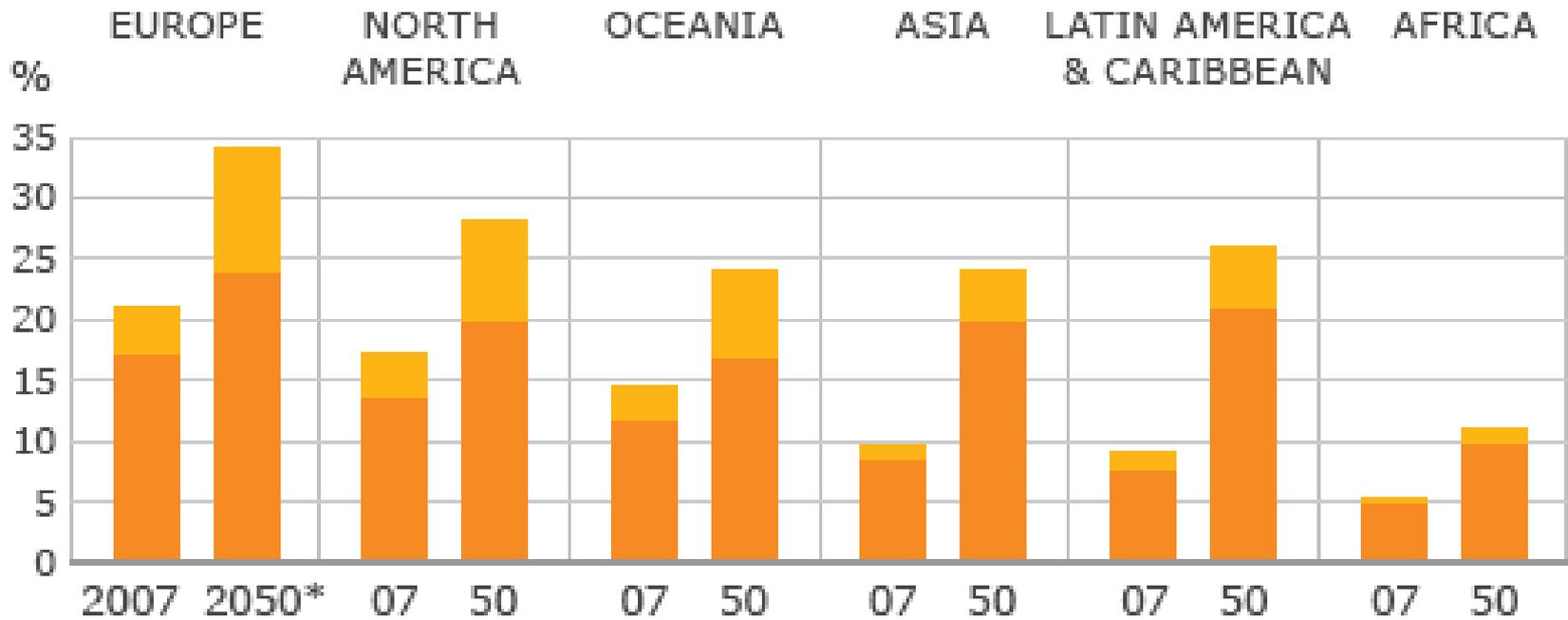
Josh Safdie, AIA
Kessler McGuinness & Associates, LLC
Housing Opportunity 2016



<http://www.un.org/apps/news/story.asp?NewsID=40257>

Global population is living longer

■ 60-80 year olds
 ■ Over 80s (as % of total population)



*2050 (prediction)

Source: UN

<http://www.rollingalpha.com/2014/04/30/the-crisis-of-ageing-populations/>



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The New American Demographics

100M Americans are over the age of 50

77M Are baby boomers

10,000 boomers will turn 65 every day for the next 15 years

57M Identify as disabled

27M Have trouble walking

Only 3.6M Americans use wheelchairs

2010 United States Census

ARTHRITIS
BACK PROBLEMS
HEART TROUBLE
RESPIRATORY PROBLEMS
DIABETES



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Housing an Aging Population

Are We Prepared?





2002 Madrid International Plan of Action on Ageing

Priority Area 1:

Older persons and development

Priority Area 2:

Advancing health and well being into old age

Priority Area 3:

*Ensuring enabling and **supportive environments***

<http://undesadspd.org/Ageing/Resources/MadridInternationalPlanofActiononAgeing.aspx>

Universal Design

“...the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.”



- Ronald L. Mace, FAIA

Universal Design Principles

- **Equitable Use.**

The design is useful and marketable to people with diverse abilities.

- **Flexibility in Use.**

The design accommodates a wide range of individual preferences and abilities.

- **Simple, Intuitive Use.**

Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

- **Perceptible Information.**

The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

Copyright 1997 NC State University, The Center for Universal Design

Universal Design Principles

- **Tolerance of Error.**

The design minimizes hazards and the adverse consequences of accidental or unintended actions.

- **Low Physical Effort.**

The design can be used efficiently and comfortably, and with a minimum of fatigue.

- **Size and Space for Approach & Use.**

Appropriate size and space is provided for approach, reach, manipulation, and use, regardless of the user's body size, posture, or mobility.

Universal Design ≠ Accessible Design.

Accessible Design is a compliance-based approach to design, driven by minimum dimensional standards, established with a limited group of users in mind, and applied in only limited situations.

Universal Design is an *attitude* toward design which acknowledges the diversity of human ability, age, and culture in every aspect of our physical, information, and communication environments.



<https://www.facebook.com/Wheelchairrampsandaccessfromhell>

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Universal Design = Good Design.

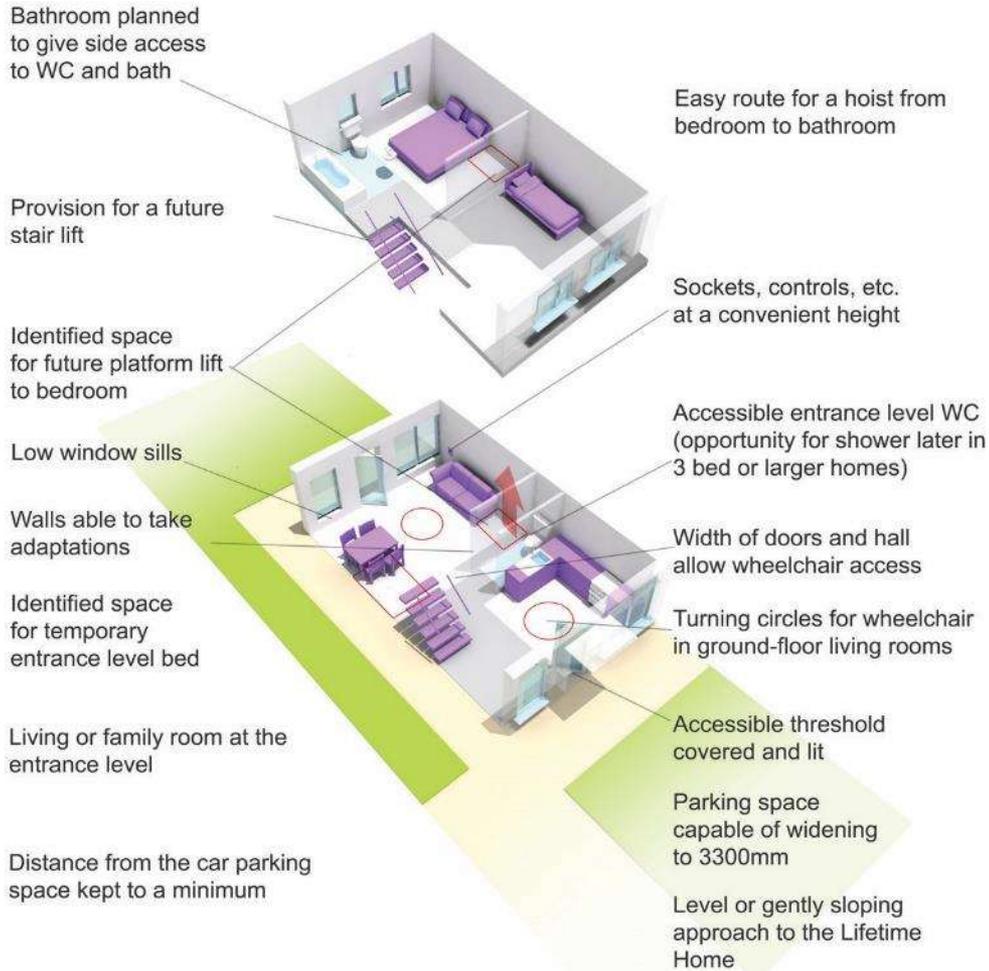
Universal Design in housing for seniors can promote independence and self-sufficiency by providing environments which accommodate the *predictable* changes in ability that accompany old age, allowing residents to age-in-community with joy and dignity.

VisitAbility Guidelines (US)

- One zero-step, or *at-grade*, entrance, at the front, back, or side of the house
- All doors on main floor, including bathrooms, with at least 32" of clear passage space when open
- At least a half bath, and preferably a full bath, on the main floor



Lifetime Homes (UK)



Produced by PRP © Crown copyright 2008
Diagram indicative only

Sekisui House (JAP)



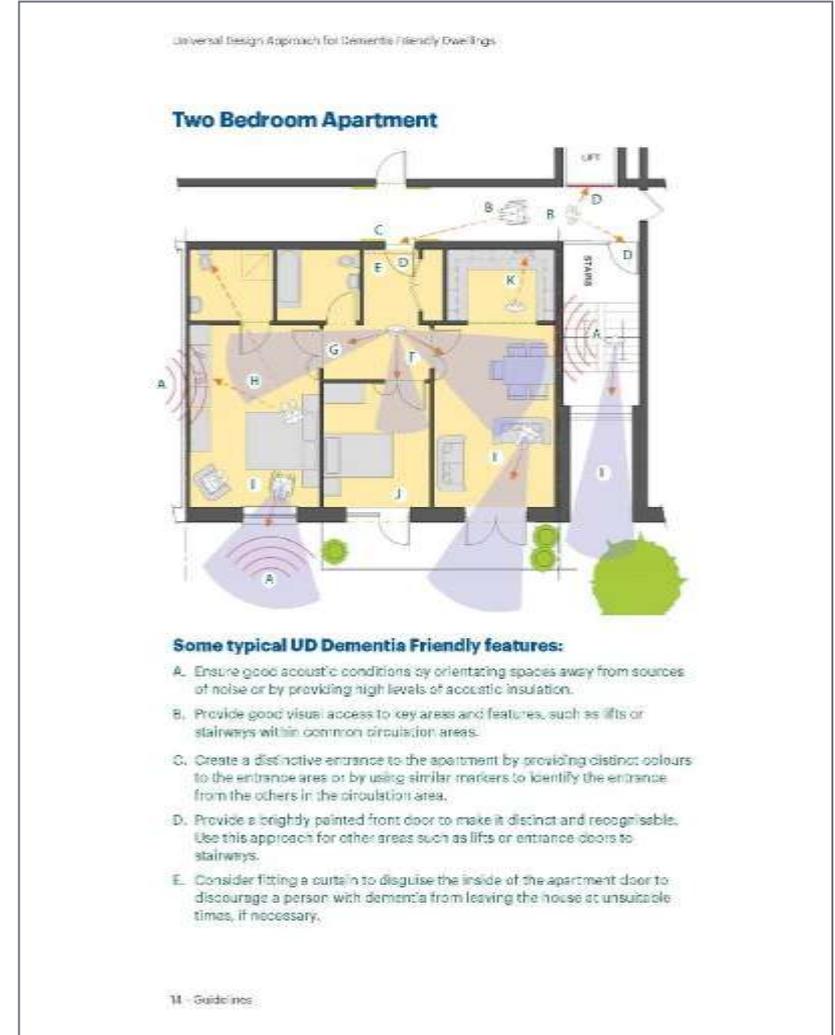
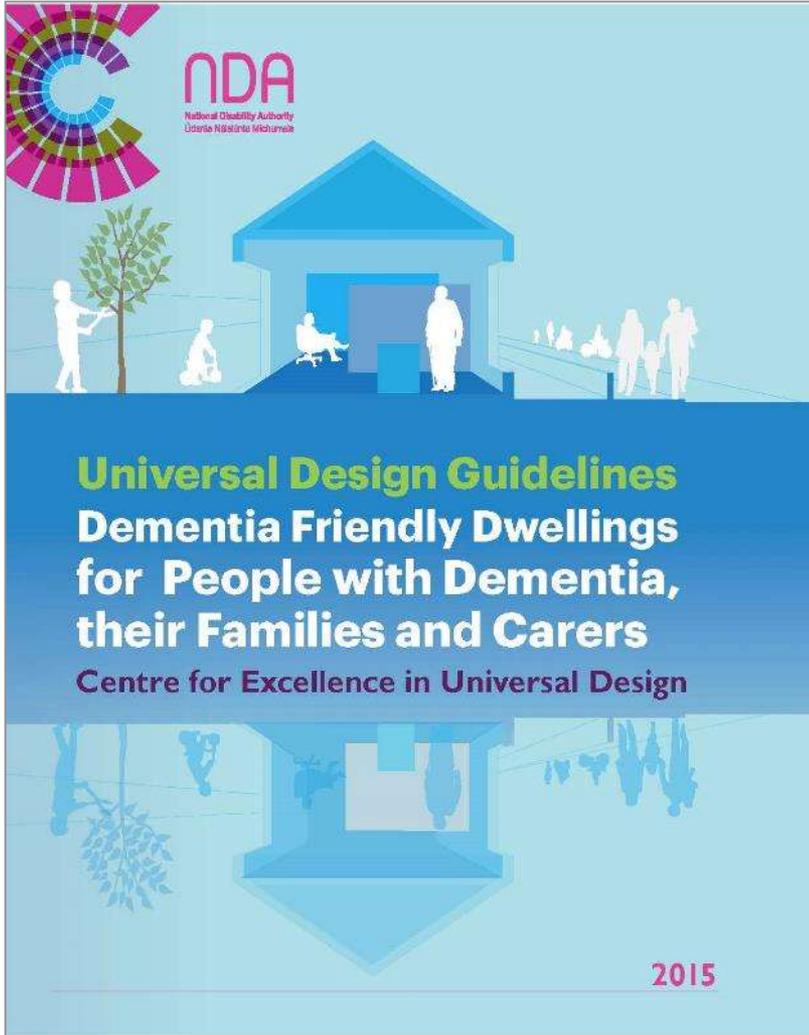
Sekisui House (JAP)



UD Guidelines for Homes (IRL)

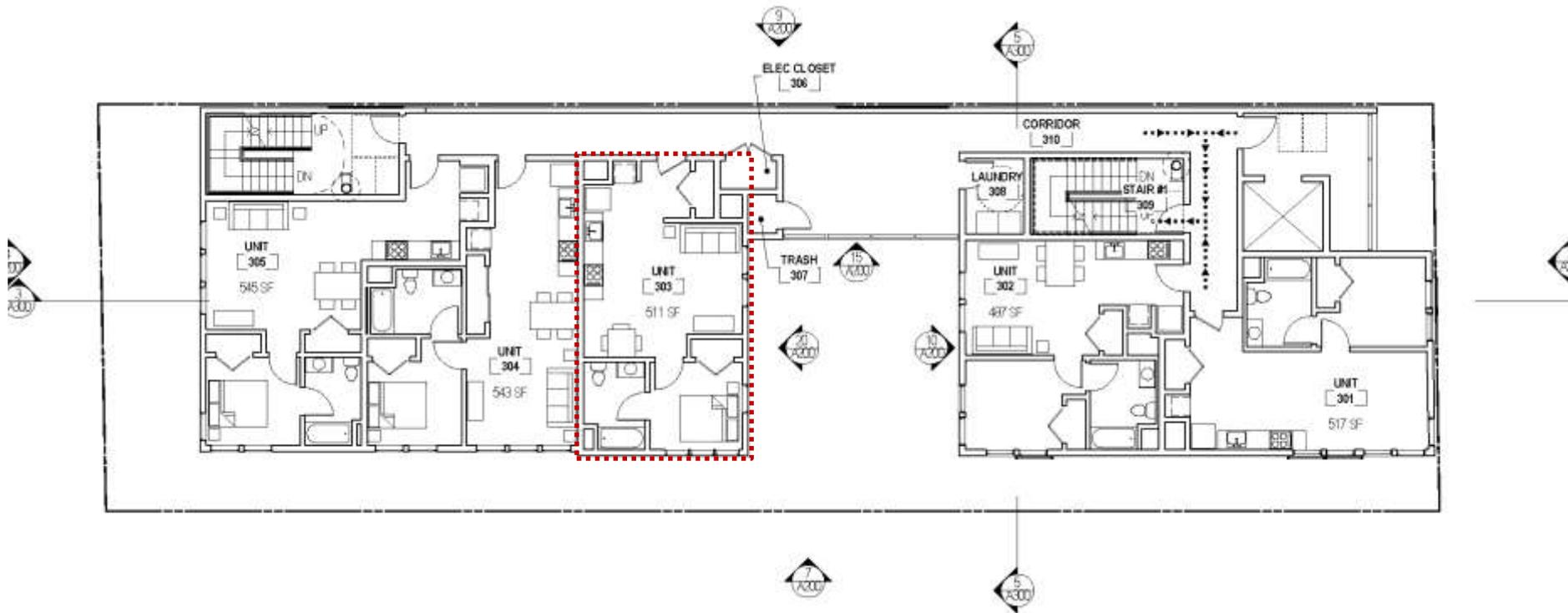


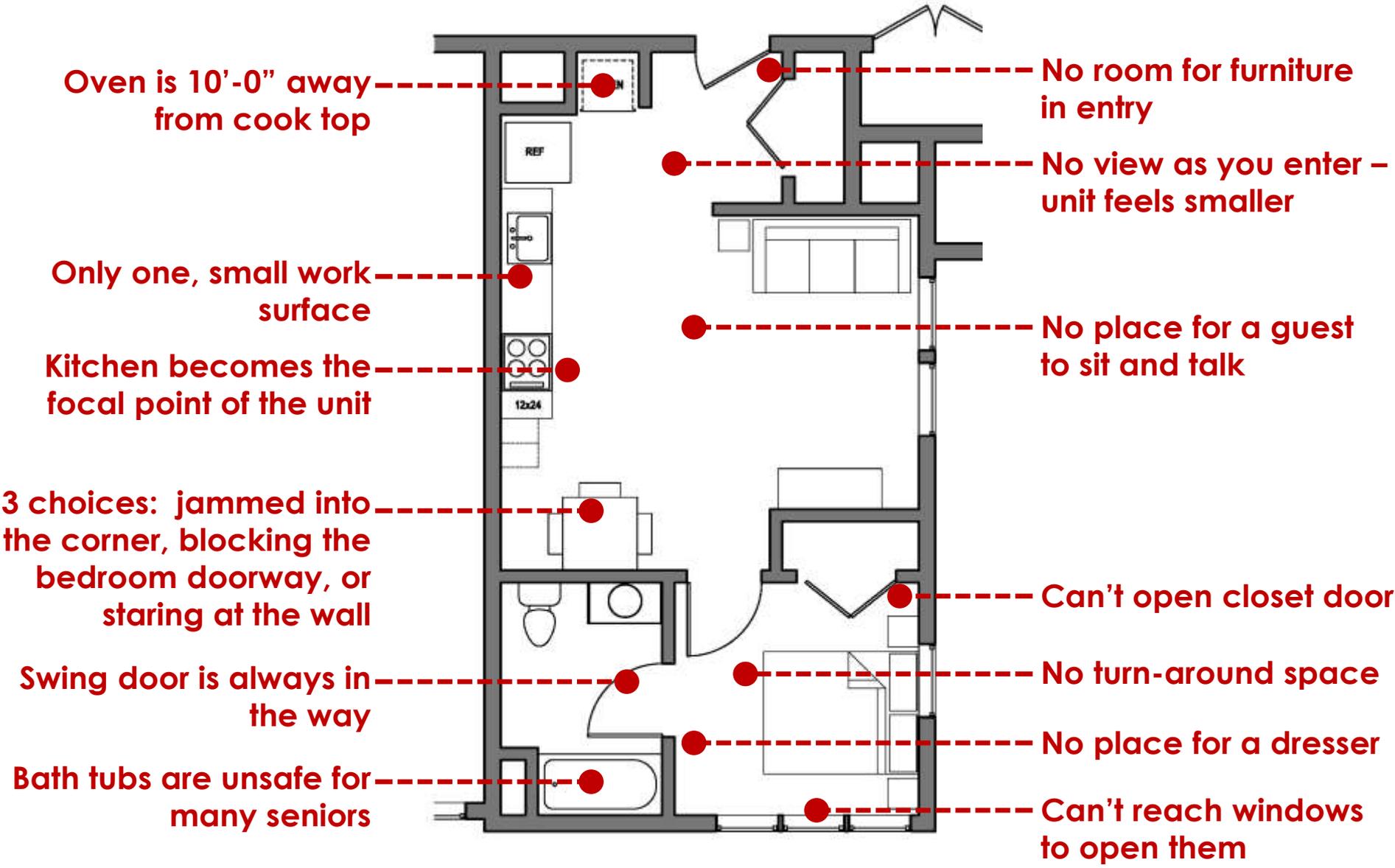
Dementia Friendly Dwellings (IRL)











View through entire unit from entry

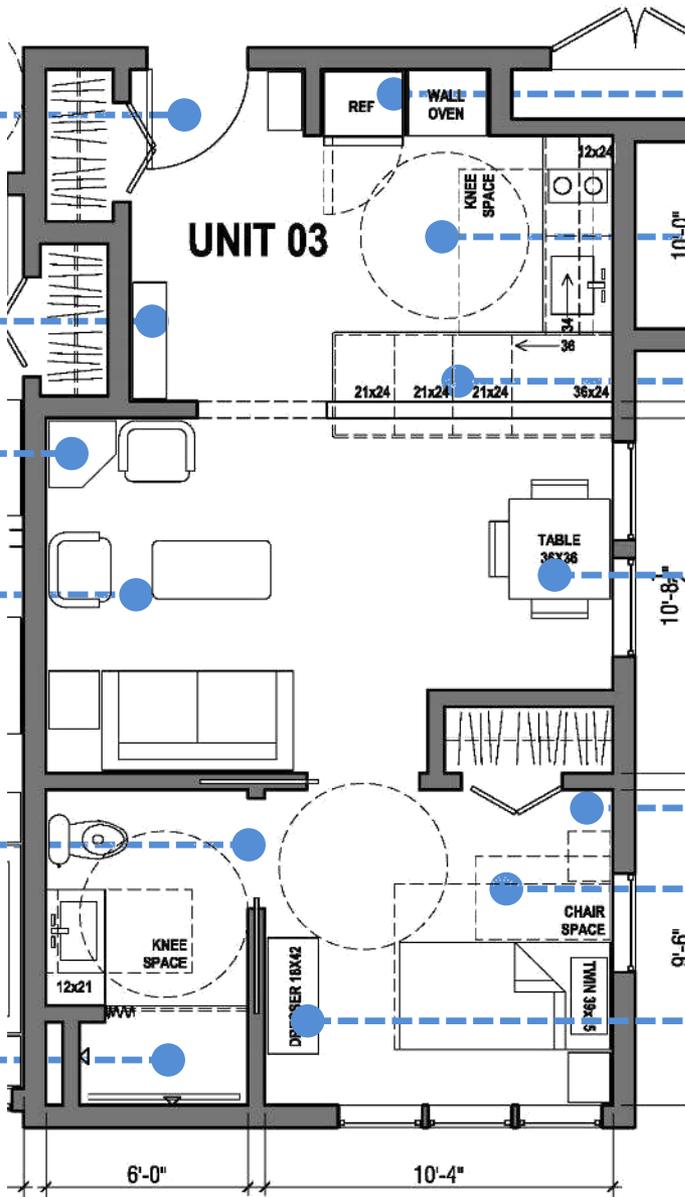
Space for additional storage near entry

Room for extra tables for lamps or display

Living room allows for conversation and can be re-arranged

Door is usually open anyway, so why not make it disappear?

Roll-in shower with two shower heads – seated and standing



Built-in elements all at back wall

Generous turn-around space & knee space

Countertop with book shelves separates 'zones' of unit

Natural light & views at dining table

Furnishable corner

Layout anticipates changes in mobility

Dresser at foot of bed

Conclusions

1. Access regulations are only a minimum standard, and they won't solve your problems. Get them right, and then get on with the actual work of *design*.
2. In the end, how it *looks* is rarely as critical as how it *works*. Keep the user at the center of the design process.
3. If it seems like good design, it just might be Universal Design. Universal Design is an *attitude*, not a checklist. Embed it in your culture, and demand it of your architects.