

**Green Building and Aging in Place:
Building Homes to Meet the Needs of
the 21st Century**

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Overview

- Definition of each trend
- Why are they important?
- What do you need to know?
- What do you need to do?
- Discussion

My Professional Goal

*to enable seniors to
successfully age in place*

My Challenge to You

Harness the power of the built environment to enable our elders to thrive

What is Aging in Place?

A societal trend to provide supports to enable people to remain in their own homes till the end of their life.

What is Aging in Place?

- Home of choice
- Independence

Haven't people always aged in place?

Aren't people Aging in Place now?

Obstacles to Aging in Place

- Assistance with basic daily activities
- Demographic trends
- Funding
- Transportation
- Services & Amenities
- The built environment

How is Aging in Place currently supported?

- Independent or Assisted Living Facilities
- CCRCs
- Community-based agencies and companies
- Families, neighbors, friends

Why promote Aging in Place?

- 83% of respondents in the AARP *“Fixing to Stay”* (2000) study reported that they wanted to stay in their homes as long as possible

Why promote Aging in Place?

- Environmental Fit :
- Good Fit = independence
 - Poor Fit = exacerbate decline of remaining abilities

What do We Need to DO?

- As a society, and as an industry, we need to:
 - Promote home modifications
 - Build accessible houses from Day 1
 - Building starts with planning

Why promote Aging in Place?

Injury Prevention: FALLS

- Treated in ER: 1.85 million over 65
- Hospitalized: 433,000 of the above
- Deaths: 14,900

Source: *Progress Report on the Falls Free National Action Plan, NCOA*

Why promote Aging in Place?

Economics

- 25 % in Nursing Homes after one year
(*Nyberg, 1996; Magaziner, 2000*)
- total direct cost for falls \$19 billion
- \$43.8 billion by 2020 (*Englander, et al. 1996*)

Why promote Aging in Place?

Cost of SNF stay vs. home modifications

- \$73,000 average cost of one year at a SNF
- accessible, first-floor MBR suite
- New construction: \$75-\$1000/home

(Source: ConcreteChange.org)

Home Modifications

Home Modifications

- *Universal:* Universal Design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized need

Home Modifications

- *Adaptable*: Adaptable design addresses problems of individual differences and changes in capability over time

Home Modifications

- *Accessible*: Accessible design addresses the needs of the individual who has a disability, but doesn't carry with it the obligation for market appeal.

Home Modifications

- *Visitable*: Visitable refers to a minimum level of accessibility that will allow a person using a wheelchair basic access to the ground floor of a home.

(from NAHB's CAPS II: Design/Build Solutions for Aging and Accessibility 10/8/07)

What Services and Programs exist to support AIP?

- CAPS
- Easy Living Home
- Others: Area Agencies on Aging, private foundations, university programs

What constitutes “Accessible” in an Easy Living Home?

- *Easy Access*: a step-free entrance into the main floor.
- *Easy Use*: a bedroom, kitchen, wheelchair-friendly bathroom and entertaining area all on the main floor.
- *Easy Passage*: every interior door on the main floor provides a minimum of 32 inches of clear passage.

Other Services

- Meals on Wheels
- Grocery delivery or nearby
- Transportation programs (ITN America)
- Home Health Care Workers

What is CAPS?

Certified Aging-in-Place Specialist (CAPS)

- AARP landmark study *“Fixing to Stay”* (2000)
- overwhelming majority of AARP members want to age in place
- distrustful of contractors
- created by AARP and NAHB

Who pursues this designation?

- Builders & Remodelors
- Interior Designers
- OTs & PTs
- bankers (especially reverse mortgage specialists)
- YOU!

Why YOU should be CAPS

- 10,000 turn 50 every day
- 85+ fastest growing segment of the population
- Boomers own 48% of all homes
- Have the highest median income
- 36% of housing stock owned by 50+, built before 1960

(CAPS 1, NAHB University of Housing, 2007)

Why YOU should be CAPS:

The WAVE of need =
A wave of business

The Wave of Need

N4As Key Challenges for Livable Communities:

- Housing
- Transportation
- Health and Supportive Services
- Public Safety
- Civic Engagement and Volunteer Opportunities

The Wave of Need

- WHO: urban design for aging tourists
- Harley-Davidson

The Wave of Need

- 2.9 million disabled Vets
- Returning Iraq War vets
- much of housing stock is pre-1960

“Universal Design has found a home in NY state.”
*Kathryn Cappella-Hankins, Executive Director, NYSDAAN
Co-owner, Hankins Development Corp.*

Components of CAPS Designation

Classes

- CAPS I: *Marketing and Communication Strategies for Aging and Accessibility*
- CAPS II: *Design/Build Solutions for Aging and Accessibility*
- *Business Management for Building Professionals*

Components of CAPS Designation

- CEUs
 - Additional classes
 - trade shows
 - volunteer experience
- CAPS Connection
- AARP link to CAPS Locator

How to attain CAPS

- Pick up information here
- Register for upcoming classes:
 - Capitol Region: Oct. 28 & 29
 - Southern Tier: Nov. 13 & 14

Research & Future Trends

- Policy revisions
- Funding for low-income elders
- Appropriate urban planning
- Services (home health aides, transportation)
- Assistive Technology
- Understanding the importance of Accessible Design across the Lifespan

AIP Resources

- Countless websites
- Books and other publications
- Email me: esg10@cornell.edu

Benefits to Aging in Place

- Better quality of life
- Decreased risk of injuries
- Delay or avoidance of long-term care stays
- Lower long-term care costs
- It's Green!

AIP is Green

- Build it right from the outset
- Incorporate Best Practices of Construction
- Incorporate healthier indoor environment.
- Incorporate Best Practices for Energy and Water conservation.
- Everyone Benefits!

What are the major components of Green Building?

- Site design and planning
- Resource Efficiency
- Energy Efficiency
- Water Conservation
- Indoor Air Quality

Green Site Design and Planning

- Compact Development
- Cluster Development
- Transit Oriented Locations
- Solar Orientation

Green Site Design with AIP

- Locate housing closer to services – Stores, medical facilities, transportation
- Cluster Development - Smaller units, closer together
- Neighborhood qualities desired... and emphasized

Green Resource Efficiency

- Build for Durability
- Efficient Use of Space
- Efficient Use of Materials (Natural Resources)
- Build for "Suitability"

Green Resources and AIP

- Construction best practices lead to less maintenance,
- Construction best practices lead to more durable product (again less maintenance).
- Construction best practices lead to better structure,
- Design for Universal applications – Universal Design.

Green and Energy Efficiency

- Building Envelope – Air Seal and Insulation
- Higher efficiency heating equipment.
- Duct located inside envelope.
- Solar applications.
- Water heating applications.
- Lighting applications.
- Verification and testing

Energy Efficiency and AIP

- Lower operating cost.
- Greater comfort.
- Better lighting.
- Operational controls in the hand of the user.
- Solar = Sunlight = Attitude and Health
- Feeling of contributing.

Green and Water Efficiency

- Low Flow fixtures
- Water delivery systems for hot water.
- Waste water recovery
- Irrigations techniques
- Capture rain water

Green Water Efficiency and AIP

- Lower operating cost.
- Controls in hands of the user.
- Anti-scald.
- Feeling of contribution.

Green and Indoor Air Quality

- Moisture control
- Pollution control
- Low/no VOC products
- Fresh air exchange
- Filtering

Green Indoor Air and AIP

- Healthier indoor environment
- Less toxic to those with potential health reactions.
- Greater long term effect on health.

Green and AIP

- Fixed incomes and lower operating costs.
- Less maintenance.
- More durable products and structure.
- Universal Design is more resource friendly.
- Closer to services as needs change.
- Neighborhood characteristics

Green and AIP

- Both are strong market opportunities.
- Both are growing markets.
- Both have low entry barriers.
- Both depend on education and training to distinguish oneself.
- Both are mutually supportive.

Green and AIP

- See you at CAPS and Green Building classes
- Thank you!
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