

Pennsylvania Housing Research Center

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- Educational programs and publications by the PHRC address a wide range
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 diverse audience: builders, code officials, remodelers, architects,
 developers, engineers, planners, landscape architects, local government
 officials, educators, etc. to provide professional development and
 continuing education.



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2

PA Building Contractor Outreach Survey Take the survey today! Your input is valuable and appreciated. The purpose is to assess building contractors' knowledge or & experience with weatherization; identify stakeholders; identify worker recruitment opportunities & challenges; and more. bit.ly/PAContractorSurvey

Description

Tune into this session to learn about open concept floor plans in residential construction. You will gain an understanding in how to effectively assess if an open concept floor plan is a good choice for a home and its occupants. We will begin with an overview of the history on the concept and when it rose to popularity in the United States. Next, the session will address common uses and overarching goals for an open concept floor plan in the overall function of a home. Finally, we will discuss opportunities and challenges for the builder and occupant that should be considered when designing an open concept floor plan.





9

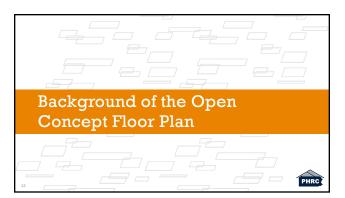
Learning Objectives

- Understand the history of the open concept floor plan for residential construction in the United States as compared to traditional floor plan design.
- 2. Recognize common uses and overarching goals for an open concept when designing a home for the occupant.
- Highlight the opportunities in an open concept including flexibility in spaces, increased natural lighting, greater social interaction, and more for the end user versus a traditional floor plan.
- Discuss potential challenges for this concept such as the functionality, MEP systems, acoustics, and structure of the space, which may add increased installation and construction costs.





10



Background of the Open Concept Floor Plan

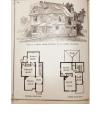
- · History of the Floor Plan in Homes
- History of the Open Concept Floor Plan
- What is an Open Concept Floor Plan?
- Growth in Use of the Open Concept Floor Plan



13

History of the Floor Plan in Homes

- Before the 20th century, floor plans were typically closed-off spaces
 - Rooms branched off of hallway
 Entertaining and dining spaces
 near the front entrance
 - Kitchen towards the rear for deliveries, heat, & cooking
- House design was pragmatic



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14

History of the Open Concept Floor Plan

- Frank Lloyd Wright's "Prairie" design
 - The semi-open interior of Frank Lloyd Wright's 1901 "Prairie" design
 - Open fireplace unites the separate areas







Image Source: University of Michigan Library / Ladies Home Journal, 191

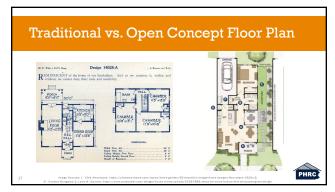
History of the Open Concept Floor Plan

- Grew in popularity during the post-WWII years with the baby boom
- By the 1990s, became the norm in new construction



Image Source: Click Americana, https://clickamericana.com/topics/home-garden/start-living-in-a-thrift-home-1950

16



17

What Is an Open Concept Floor Plan?

- •2 or more rooms with related uses are combined into one space
- Examples:
 - Kitchen & dining room
 - Dining room & living room
 - Kitchen, dining room, & living room



image Source: TK Design & Associates, https://www.probulider.com/design







Why Is the Open Concept Used?

- · Visually connected spaces for:
 - Promoting spaciousness & ease of movement
 - Enhancing natural & shared light

 - Increasing flexibility in design & space use
 Fostering a sense of community & togetherness
 - Socializing & entertainment
 - Connecting with outdoor spaces (less common in PA)
- Potential for higher real estate value



22

How Are Spaces Defined in an Open Concept?

- Placement of furniture like couches or tables, fixtures, & area rugs
- · Kitchen islands or peninsulas
- Changes in flooring type or ceiling heights



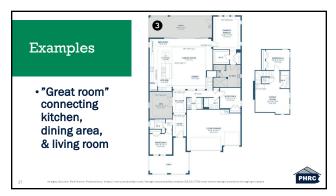
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Examples

• Kitchen & dining area are joined by a common island or peninsula









Challenges for Open Concept

- Physical Considerations

 - MEP SystemsStructure of the Space
- Energy Costs for Heating & Cooling
- Functionality
 - Visual Privacy
 - Acoustics
- Odor Control
- Design & Furnishings



30

Physical Challenges: MEP Systems

- · Lack of walls can add challenges for locating:
 - Water supply and drainage
 - Kitchen
 Bar area (additional sinks)

 - Bathrooms
 - Wiring

 Consider how floor plans are stacked



31

Physical Challenges: Structure of Space

- · Relies upon steel or laminated beams instead of interior load-bearing walls
 - Can be simpler for new construction vs. remodel
- Can increase upfront costs of construction
- Potential for less storage
 - Less cabinets in kitchen
- · Added risk of fire & smoke spread



Energy Costs for Heating & Cooling

- Open Concept floor plans are typically heating / cooling a larger space
 Adding challenges to temperature regulation
 Traditional floor plans can allow for separation of spaces and the ability to split home into different HVAC zones
 Increased windows means less insulation



33

Functionality: Visual Privacy

- Doesn't allow for spaces of privacy
- Minimized ability for concurrent, different uses of space
- Risk of clutter & visual noise



34

Functionality: Acoustics

- Sound travels across open space
 - Appliances
 - Conversations
- Noise reduction is lessened due to lack of walls
- Potentia

Image Source: Francis D.	C. Ching, A Visual Dictional	y of Architecture, Nac	hdr., A VNR Book (New	York, NY Weinheim: Wile	y, 1995), 23:

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Functionality: Odor Control

- Odors from kitchen easily spread throughout the house
- Odors across mixed uses like food cooking in the kitchen & a candle burning in the living area



36

Design & Furnishings

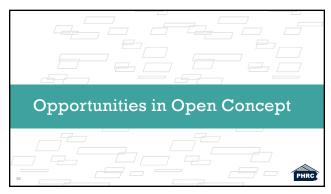
- Open Concept Floor Plan necessitates a cohesive design across all spaces - Less wall space for art/decor

37



• Traditional Floor Plan allows for unique styles, finishes, & color palettes in different rooms





Opportunities in Open Concept

- Physical Characteristics
 - Increased natural lighting, shared light
 - Increased sense of spaciousness & airiness

Functionality

- Flexibility in Spaces
 Improved traffic flow
 Visitability or accessibility may be easier

Social Use

- Increased visual connection
- Ease of communication



40

Physical Characteristics: Light

- Increased natural light
 - Natural light spreads across all spaces versus walls as barriers
 - Can allow for additional windows due to lack of walls
- Reduce need for artificial light



Physical Characteristics: Spaciousness

- Eliminating barriers like walls and doors opens up the space
- Can feel more inviting
- · Can feel larger than sectioned rooms using less square footage



42

Functionality: Flexibility in Spaces

- Furniture or movable pieces can be used to divide spaces
- Use of spaces can easily change as needed
- Remodeling can be easier



43

Functionality: Improved Traffic Flow

- Sense of spaciousness due to open layout
- · People can move freely without walls or doors to open
- Ideal for gatherings or households with lots of movement between spaces



Functionality: Visitability & Accessibility

- Increase in flexibility allows for additional freedom of movement
- Easier connection throughout plan with minimal effort to navigate door and hallways
- Helpful for aging in place



45

Social Use: Increased Visual Connection

- Allows for people to gather in groups while still feeling connected to everyone
- Keep an eye on people like children or aging parents while in a different space



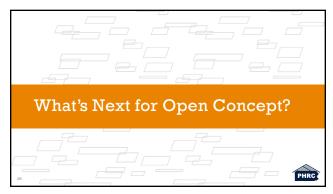
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46

Social Use: Ease of Communication

- Allows for people to talk across spaces as needed
- Visual sightlines aid in communication for those who speak ASL





Evolution to Open-Ish/Hybrid Concept

- Closed off to office space, children's play areas, utility rooms, etc.
- Maintain open connection between kitchen and living space
- Visually divide without completing blocking sight line between spaces with the use of:

 Half/pony/knee walls

 French, pocket, or barn doors

 Oversized doorways



49



Summary

- Open Concept Floor Plans come in a variety of shapes and forms
- Like homes, there is no one design fits all
 For custom builders While designing, consider how home will ultimately be used by residents
- For production builders Do you have an open concept floor plan? If not, what design best suits those seeking the concept?



52



53

Thank you for attending! Check out the special webinar on:

TBA in 2025

Using the 2025 Pennsylvania Alternative Residential Energy Provisions





Open Concept Floor Plan
Considerations

by Rachel Fawcett on May 13, 2025

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