



Massachusetts ADU Design Challenge | Project Cover Sheet

1. Design Team

Lead Applicant: Yiren Weng

Additional Applicants:

Design Firm Name (If Applicable):

Contact Info: yiren.weng@gmail.com

2. Design Information

EntryID (randomly assigned by HLC for tracking purposes): 3280

Design Name: Sunlit Haven

ADU Gross Floor Area (square footage): 785

Unit Layout: One-Bedroom

ADU Height (feet): 16

Window/Wall Ratio: 13.8%

Foundation Type: Concrete Frost Wall

3. Project Narrative

"SUNLIT HAVEN" is a 1-Bedroom with Den detached ADU designed for a typical Massachusetts backyard. Maximizing natural light and connecting indoor spaces with the garden, it feels open and inviting despite its compact footprint. The home is adaptable to a variety of lifestyles—perfect for a young professional seeking a bright, functional retreat, a family with a baby needing a flexible layout, or a senior couple desiring comfort and ease of use. It balances comfort, flexibility, and efficiency. The home emphasizes cost-effective construction and energy-efficient systems, creating a practical yet serene retreat that combines affordability, sustainability, and a sense of spaciousness in a small, adaptable home.

Please note that the information contained in this file was submitted to the Executive Office of Housing and Livable Communities (HLC) by ADU Design Challenge participants and has not been independently verified by HLC or the Commonwealth of Massachusetts. Please direct questions to the designers.

SUNLIT HAVEN

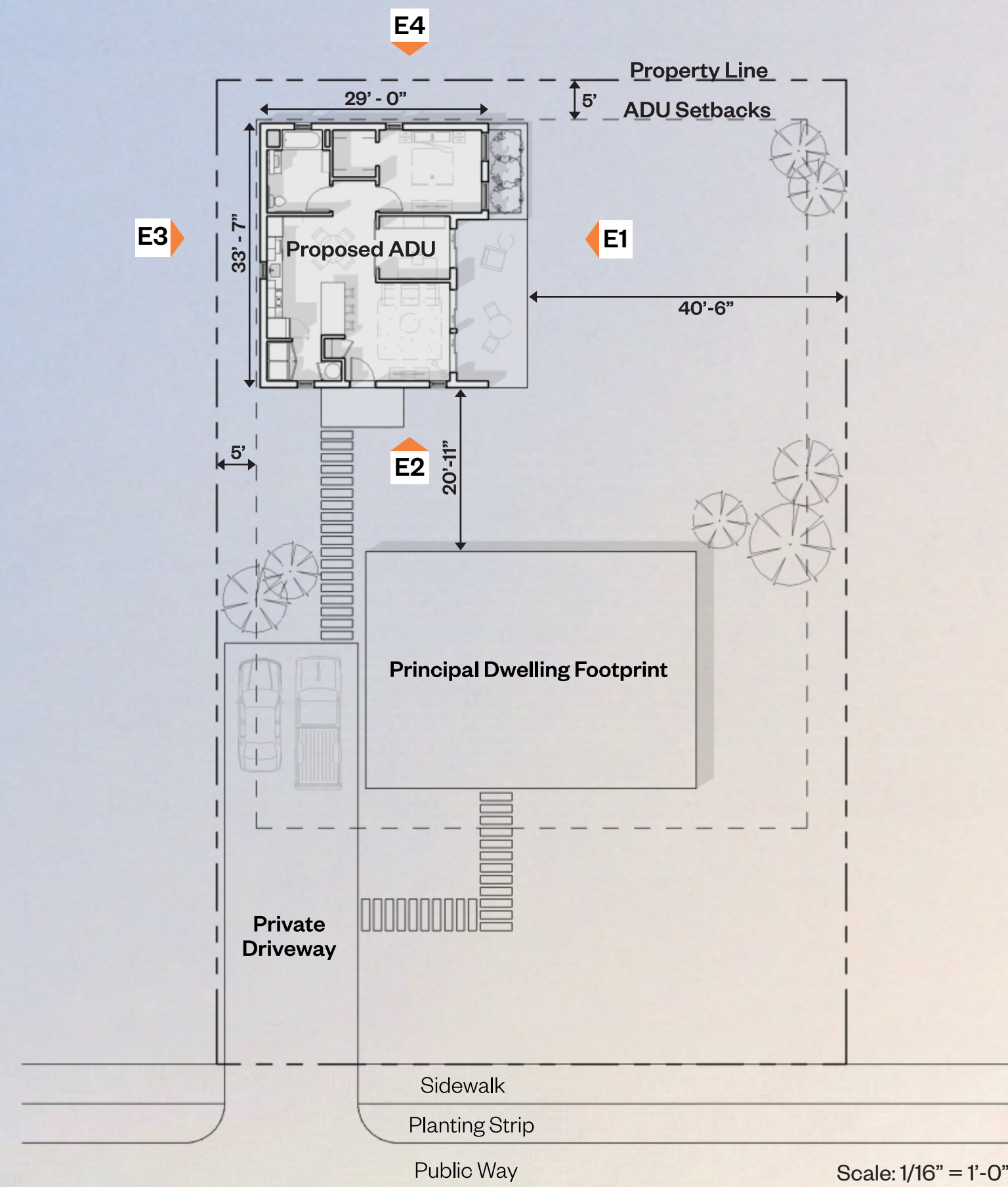
"SUNLIT HAVEN" is a 1 Bedroom with Den, detached Accessory Dwelling Unit (ADU) designed for a typical Massachusetts backyard. The goal is to create a home that feels spacious and relaxing, even in a small space. By bringing in lots of natural light and connecting the inside with the garden, this design creates a comfortable and relaxing home for its residents.

Key Features:

Seamless Indoor-Outdoor Living: The house features large glass sliding doors facing yard. These doors let in plenty of sunlight and make the living room feel like it is part of the garden. The doors open to a large wooden deck, creating a private outdoor living area where the family can relax.

Smart Layout: Even though the house is small, the open Living, Dining, and Kitchen area makes it feel spacious. The drawings show how this unit fits perfectly into a backyard. It shares the driveway with the main house but still has its own privacy.

Universal Design & Accessibility: This house is designed for people of all ages. There are no steps inside, so it is easy to move around. The kitchen is specifically designed for accessibility, featuring a cooktop and wall oven configuration rather than a standard range, ensuring ease of use for residents with mobility challenges after adaptation. The bathroom is future-ready, with walls adjacent to and behind the toilet and bathtub structurally reinforced to support grab bars, and a full turning radius that allows a wheelchair to maneuver comfortably.



Type: 1 Bedroom with Den

GFA: 785 SF (measured from the interior faces of exterior walls)

Building Code:

780 CMR

Accessibility Code:

ADA, MAAB 620 CMR

Energy Code:

IECC, Residential Stretch Code

Scale: 1/16" = 1'-0"

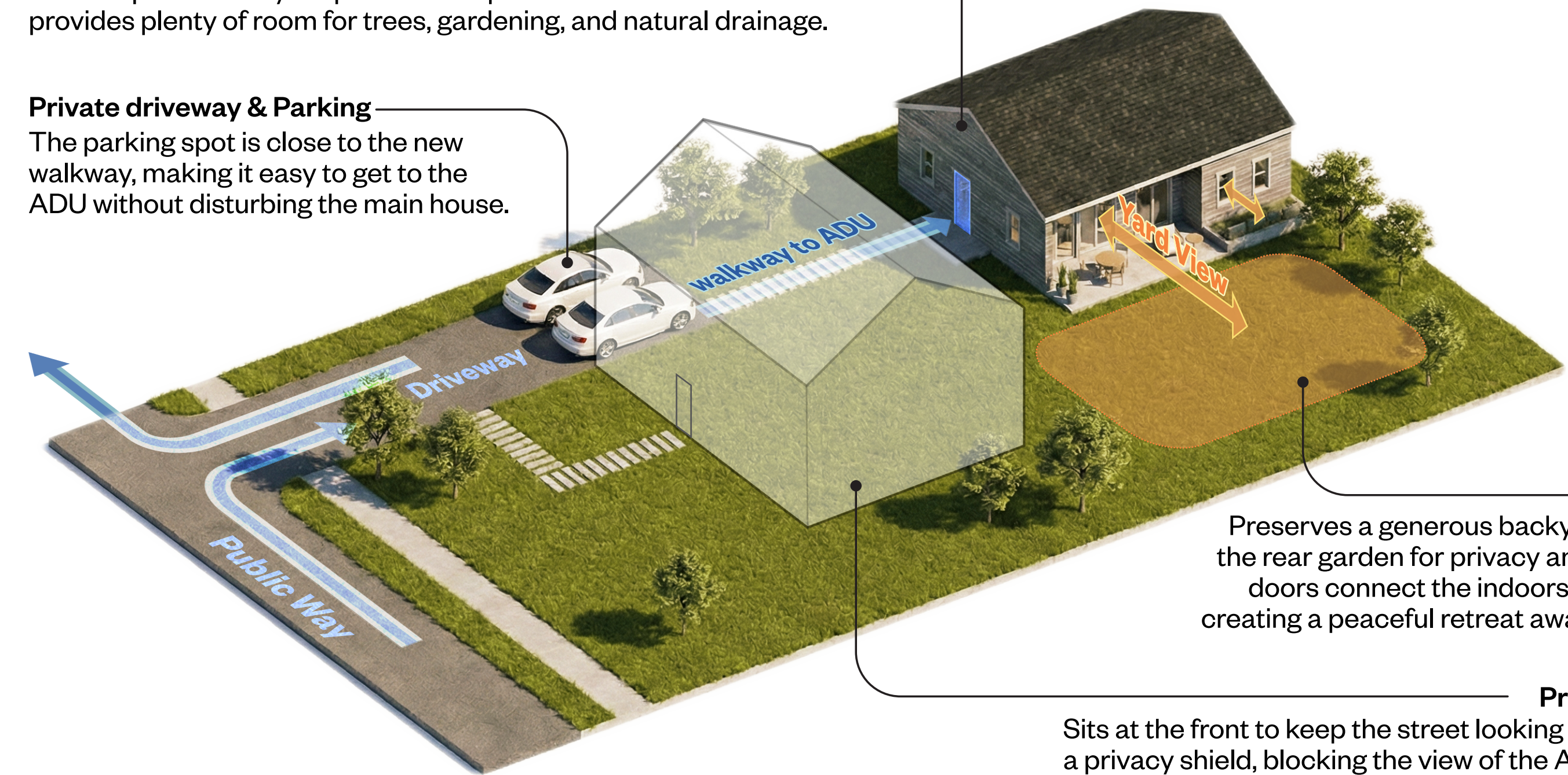


ADU

Instead of putting the ADU in the middle of the yard, this "side-loading" design leaves the rest of the property as a large, open green space. This keeps the backyard private and quiet for the main house and provides plenty of room for trees, gardening, and natural drainage.

Private driveway & Parking

The parking spot is close to the new walkway, making it easy to get to the ADU without disturbing the main house.

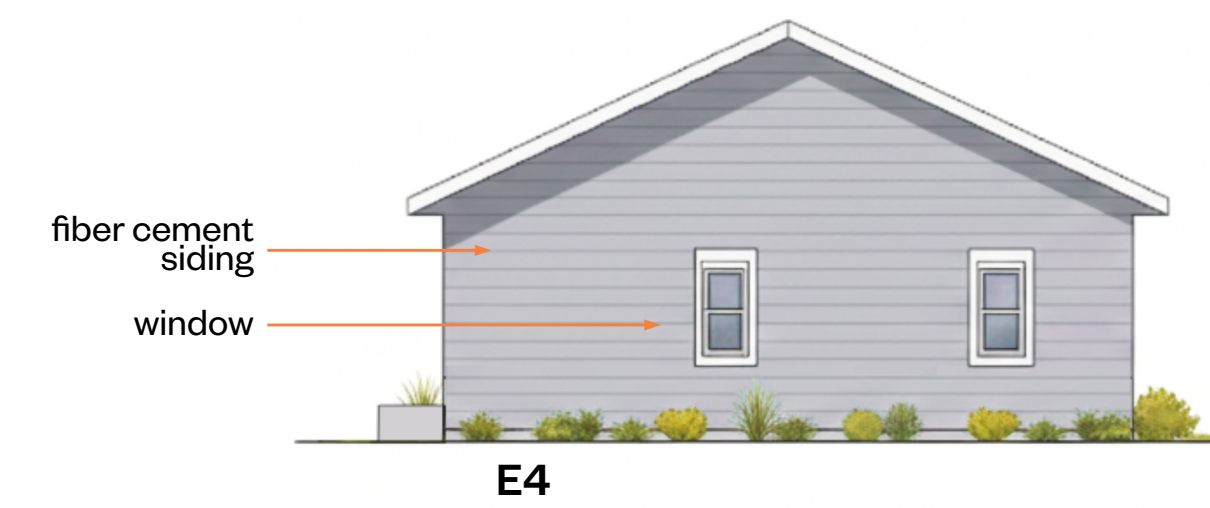


Backyard

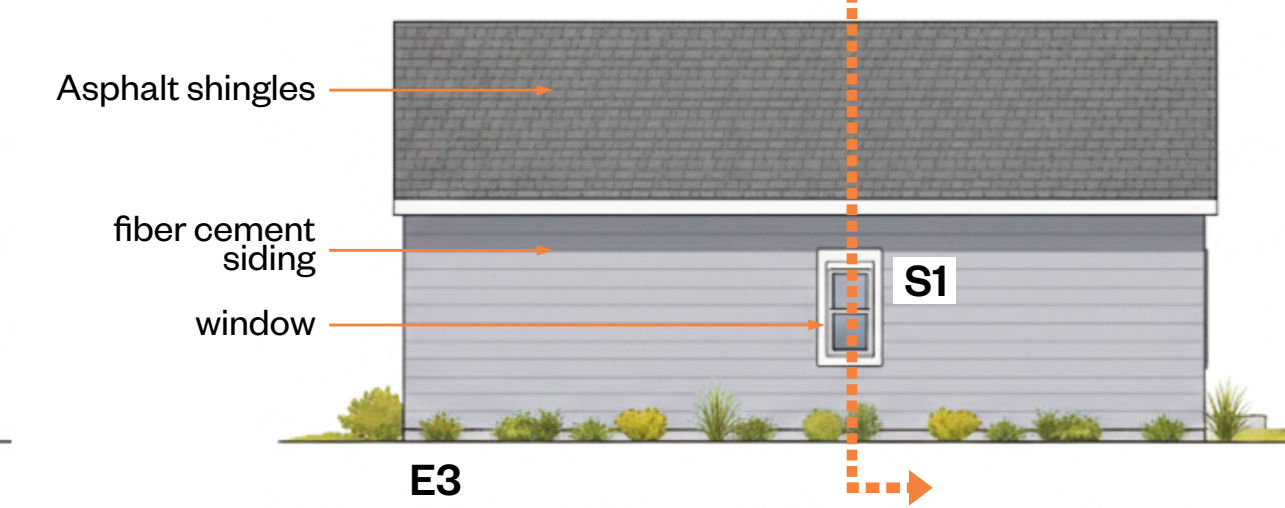
Preserves a generous backyard. The ADU faces the rear garden for privacy and quiet. Large glass doors connect the indoors to this green space, creating a peaceful retreat away from street noise.

Principal Main House

Sits at the front to keep the street looking the same. It acts as a privacy shield, blocking the view of the ADU from the street.



E4



E3



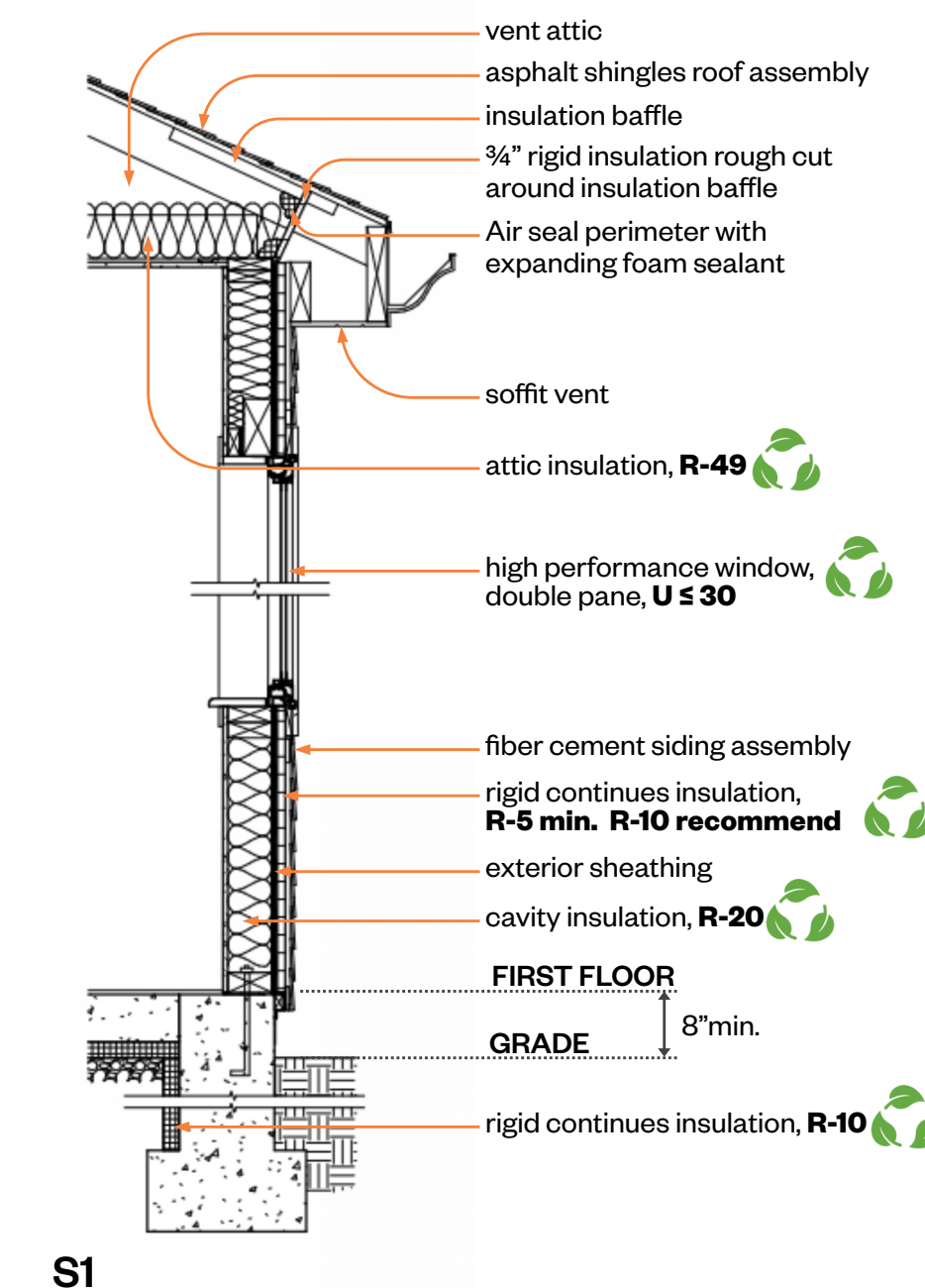
E2



E1

Building Elevations

Scale: 1/8" = 1'-0"



S1

Section Detail

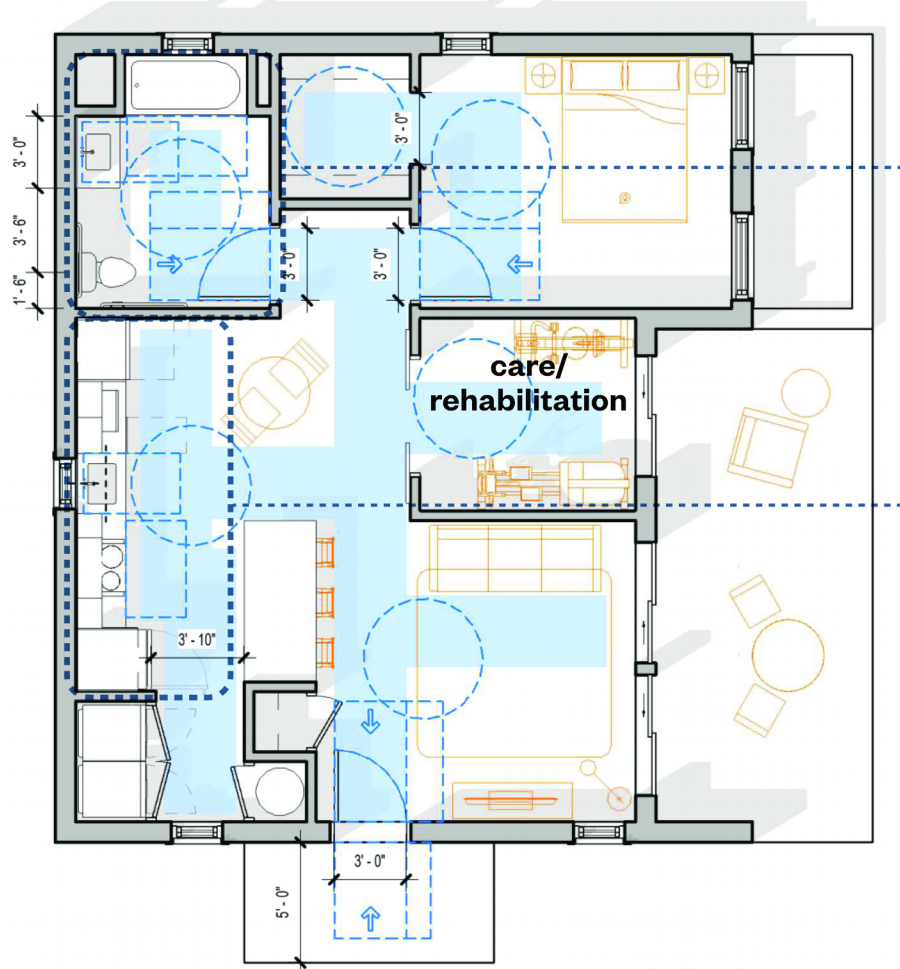
Scale: 1/2" = 1'-0"

Common ADU Exterior Wall and Roof Material Combinations

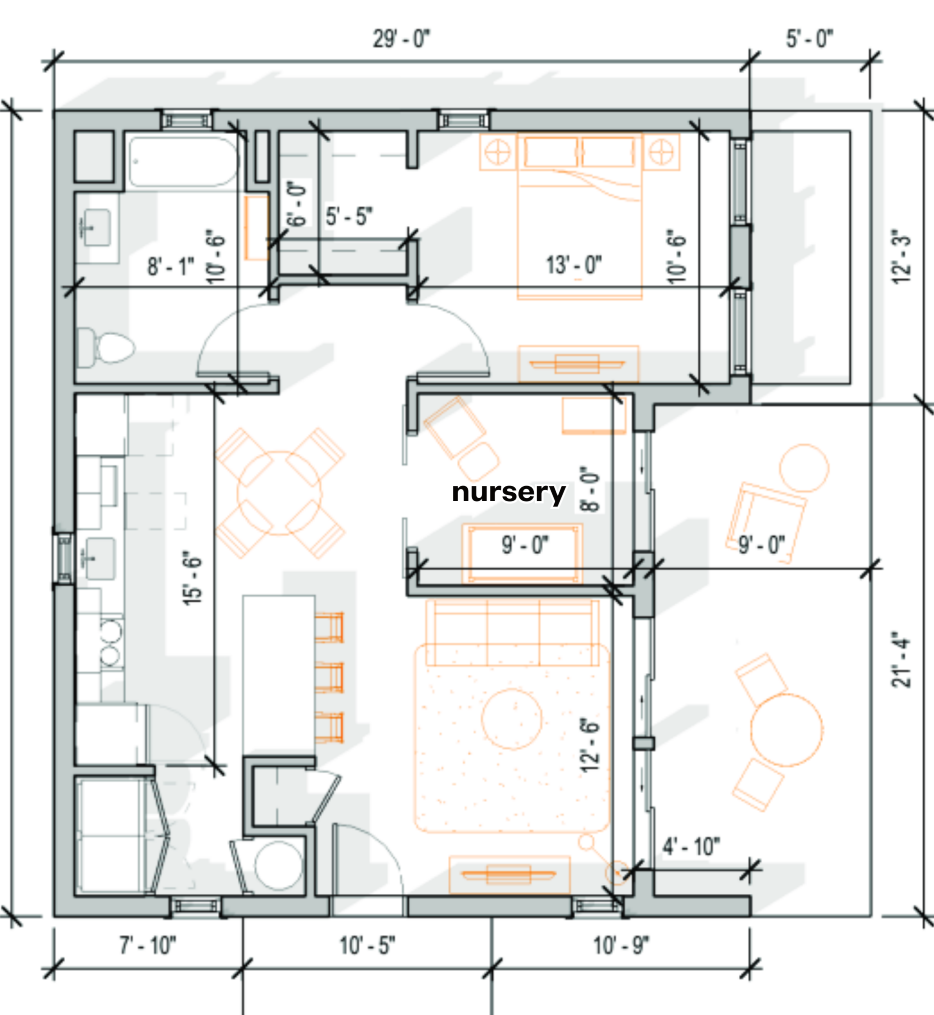
	option 1	option 2	option 3	option 4
Wall	Fiber cement siding	Vinyl siding	Wood Siding	Metal Panel Siding
Roof	Asphalt shingles	Asphalt shingles	Standing Seam Metal Roof	Standing Seam Metal Roof
Key Character	common in New England, weather-resistant, fire-resistant, moderate cost	common in New England, cost-effective; easy installation; low maintenance	New England barn typology, warm, natural appearance, reflective metal roofing	modern or industrial aesthetic, works well in contemporary contexts, ultra-durable, fire-resistant
Sustainability	long lifespan, low maintenance, reduced replacement waste	lightweight, recyclable vinyl options available	renewable materials, Longevity	recyclable materials, reflective surfaces reduce heat gain



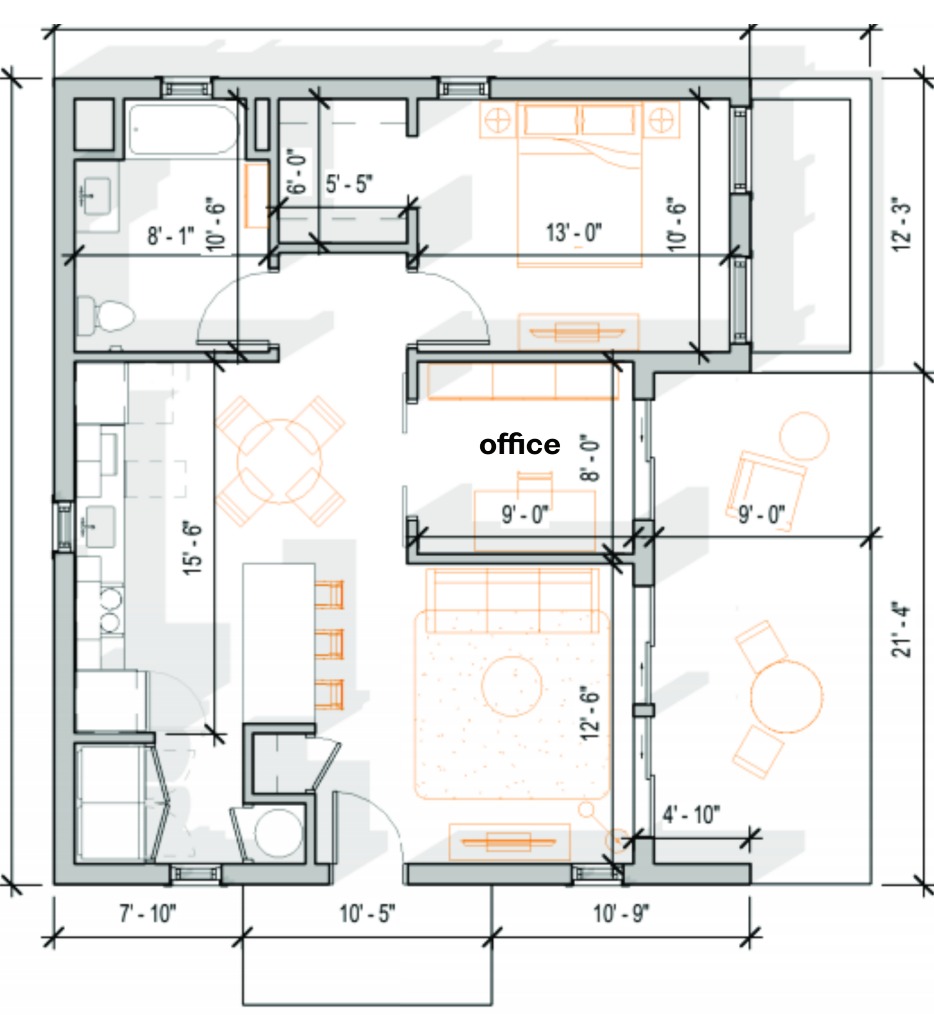
Senior Couple
 #accessibility
 #barrier-free circulation
 #care-ready flexibility
 #rehabilitation-ready space
 #proximity to bathroom
 #quiet living environment



Young Couple with a Baby
 #flexible nursery space
 #Nighttime access
 #short care-giving distance
 #family-oriented layout
 #quiet sleeping zones
 #acoustic buffering
 #safety and visibility



Young Professionals
 #dedicate home office
 #acoustic separation
 #privacy
 #technology-ready
 #adaptable use



Adaptable Bathroom

The bathroom is designed with future-proofing in mind. It features a spacious layout with a full wheelchair turning radius. The walls adjacent to and behind the water closet and shower are reinforced to support grab bars, allowing the space to be adapted into a fully accessible bathroom if mobility needs change over time.



Bathroom Fixtures

Water-efficient bathroom fixtures, including low-flow faucets, showerheads, and dual-flush toilets, reduce potable water consumption and associated energy use while maintaining comfort and accessibility.

Kitchen Appliance

The kitchen incorporates water-efficient fixtures, ENERGY STAR-rated compact appliances, and an induction cooktop to reduce energy and water use while supporting an all-electric ADU strategy.

Island with Seating

A central kitchen island functions as the social hub.

Adaptable Kitchen

The kitchen features cooktop (instead of range) and wall oven configuration. While stylish and functional for current use, this layout is easily adaptable to accommodate seated cooking or wheelchair access in the future without major renovation.



Laundry

The design features a side-by-side washer and dryer configuration, rather than a stacked layout, to ensure controls are easily reachable for users of all ages and abilities. High-efficiency, ENERGY STAR-rated appliances are selected to reduce water and energy consumption. The laundry closet is strategically located near the entry, away from the bedroom, to minimize noise disturbance during sleep and support long-term residential comfort.

Entry Coat Closet

Located immediately next to the entry door, providing convenient storage for coats, shoes, and outdoor gear.

Walk-In Bedroom Closet

A spacious walk-in closet in the bedroom offers ample storage, a premium feature for a compact ADU

Private Bedroom

Tucked away from the living area for privacy, this room is spacious enough to comfortably fit a Queen or King-sized bed with two night stands. The layout also features a dedicated wall directly across from the bed for a TV screen.

Greenery

Integrated planters provide privacy and a calming view from the bedroom and living area.

High-Performance Glazing

The design utilizes high-performance, double-glazed windows with Low-E coatings. This advanced glazing acts as a robust thermal barrier, minimizing heat loss in the winter while preventing overheating in the summer, ensuring year-round energy efficiency.

Flexible Multi-Purpose Den

A bonus room designed to function as a home office, personal gym, or nursery. Its adaptable layout ensures the ADU meets the dynamic needs of modern living.



Furnished Deck

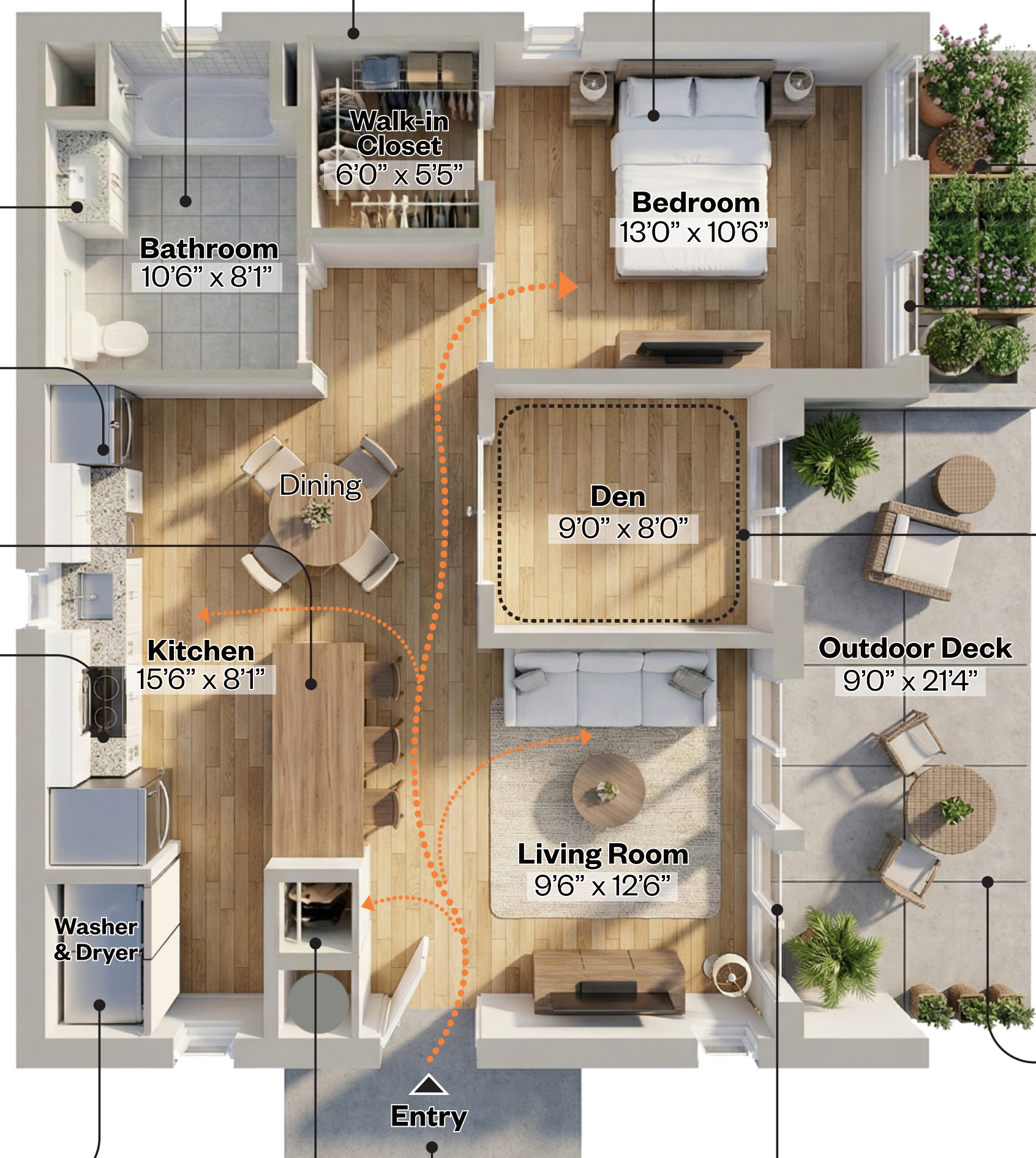
The deck is designed as a private retreat. With ample space for comfortable furniture and outdoor dining, it allows residents to enjoy the garden in comfort.

Sliding Door @ Living Room

A large bank of sliding glass doors opens the living area directly onto the private deck, expanding the usable living space during good weather.

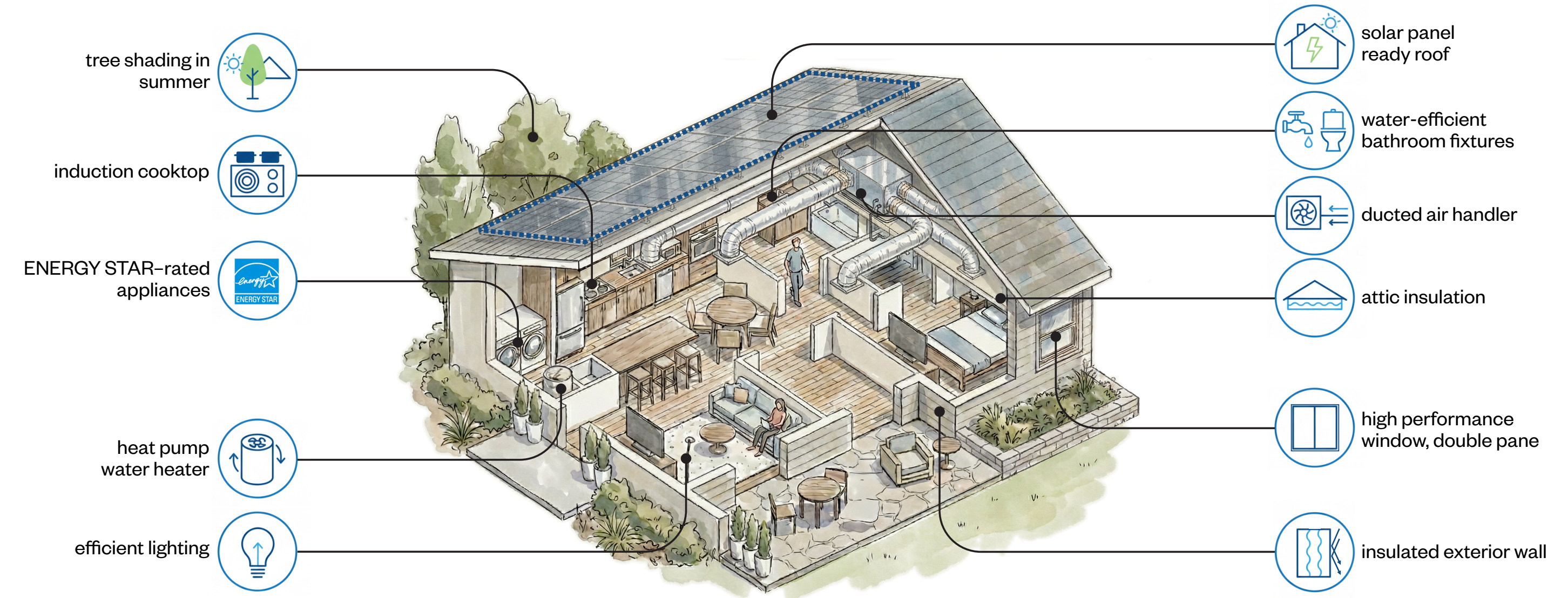
ADU Entry

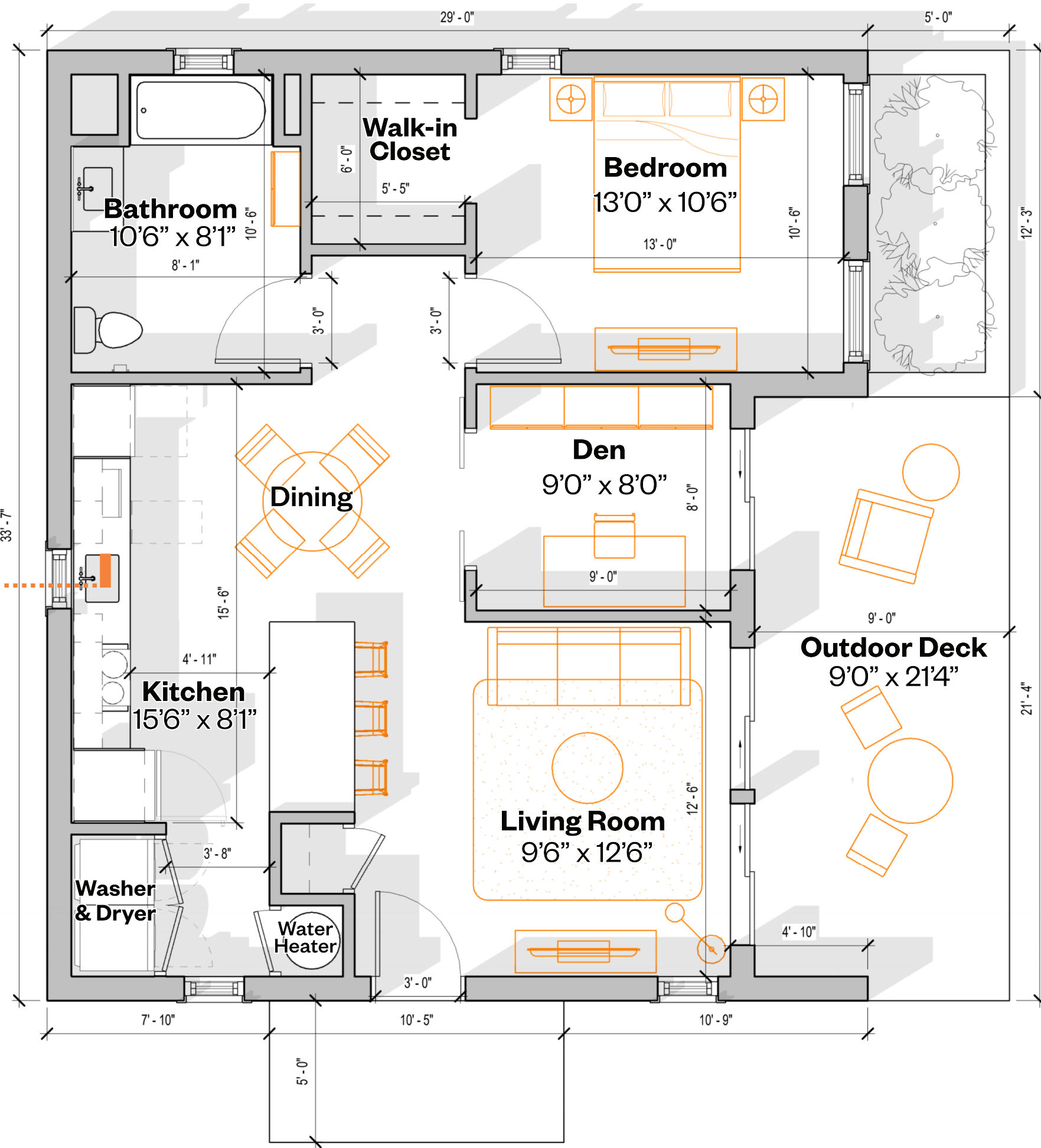
Located on the side to separate it from the backyard. A dedicated stepping-stone path leads visitors from the driveway straight to the door.



Floor Plan

Scale: 1/4" = 1'-0"





WALL SECTION
Refer to attachment E

Key Features:

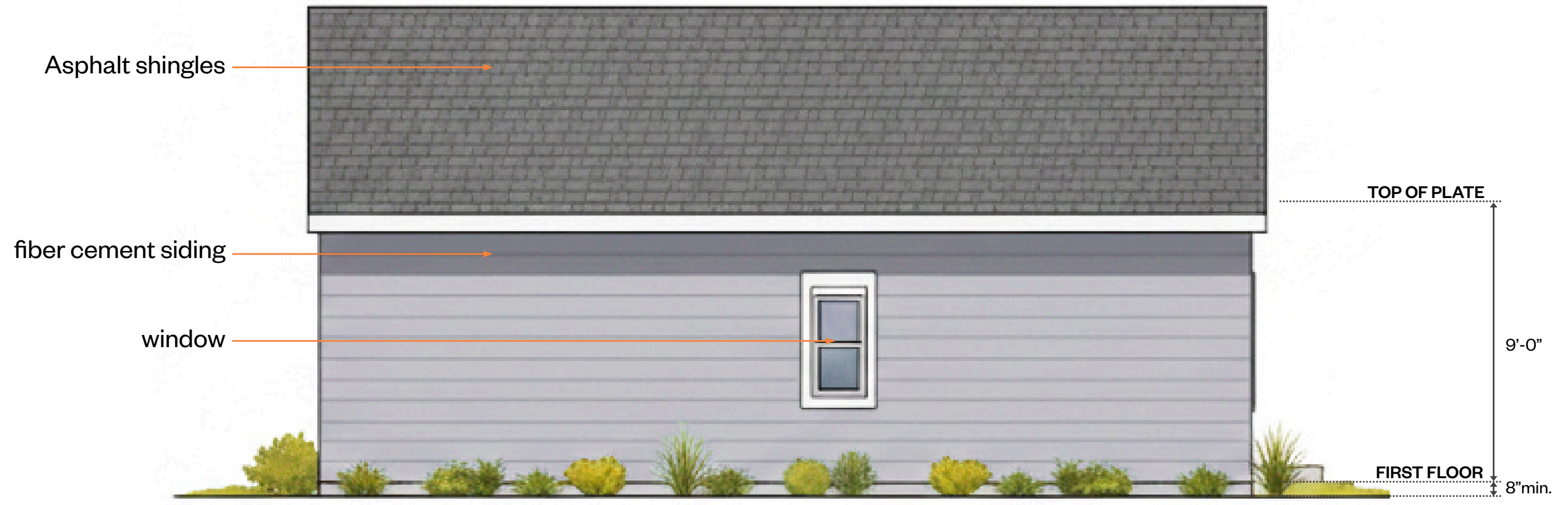
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Universal Design & Accessibility: This house is designed for people of all ages. There are no steps inside, so it is easy to move around. The kitchen is specifically designed for accessibility, featuring a cooktop and wall oven configuration rather than a standard range, ensuring ease of use for residents with mobility challenges after adaptation. The bathroom is future-ready, with walls adjacent to and behind the toilet and bathtub structurally reinforced to support grab bars, and a full turning radius that allows a wheelchair to maneuver comfortably. Every detail is designed to make daily living safe, convenient, and enjoyable for everyone.



Elevation
Scale: 1/4" = 1'-0"





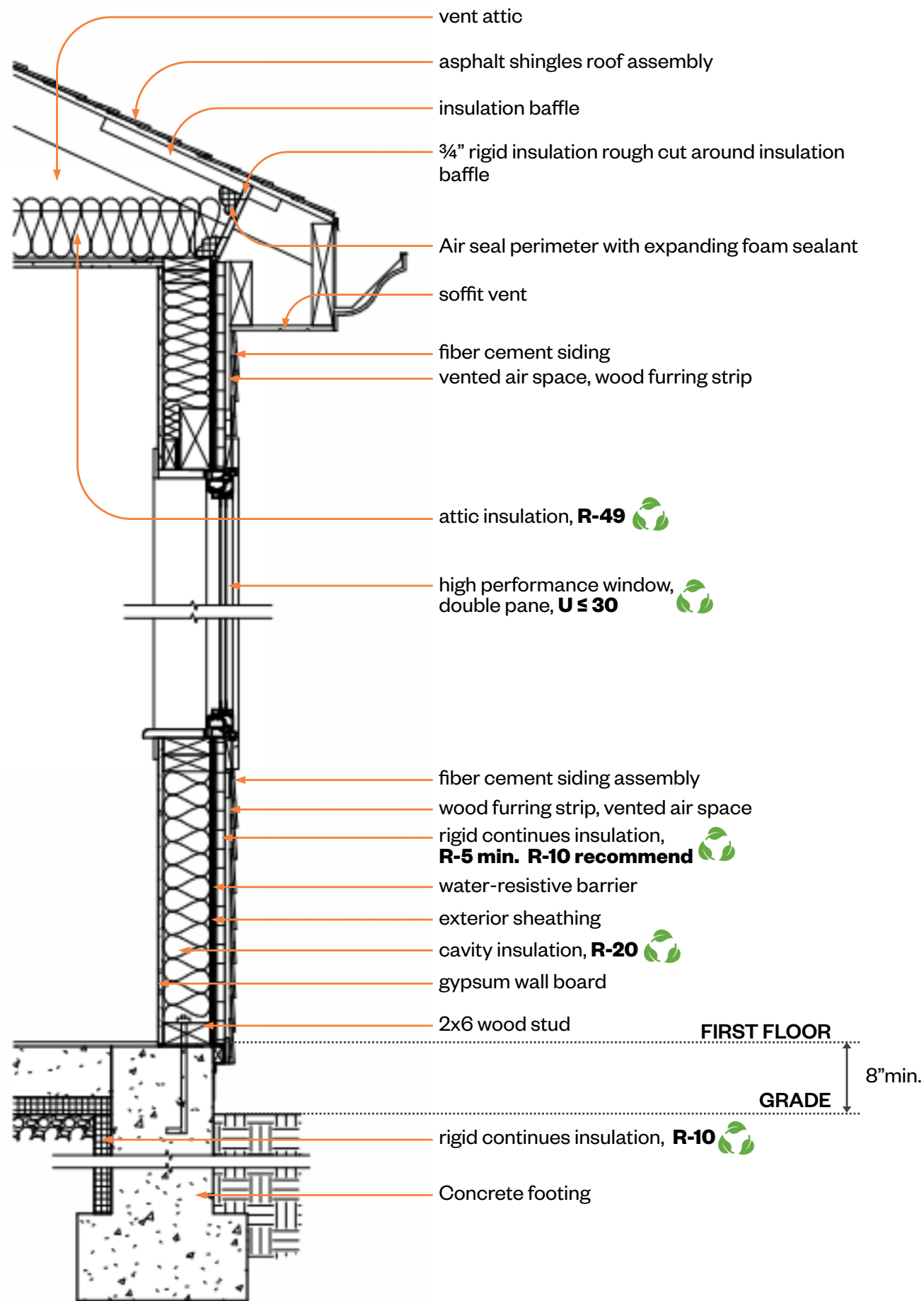
Elevation

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Elevation

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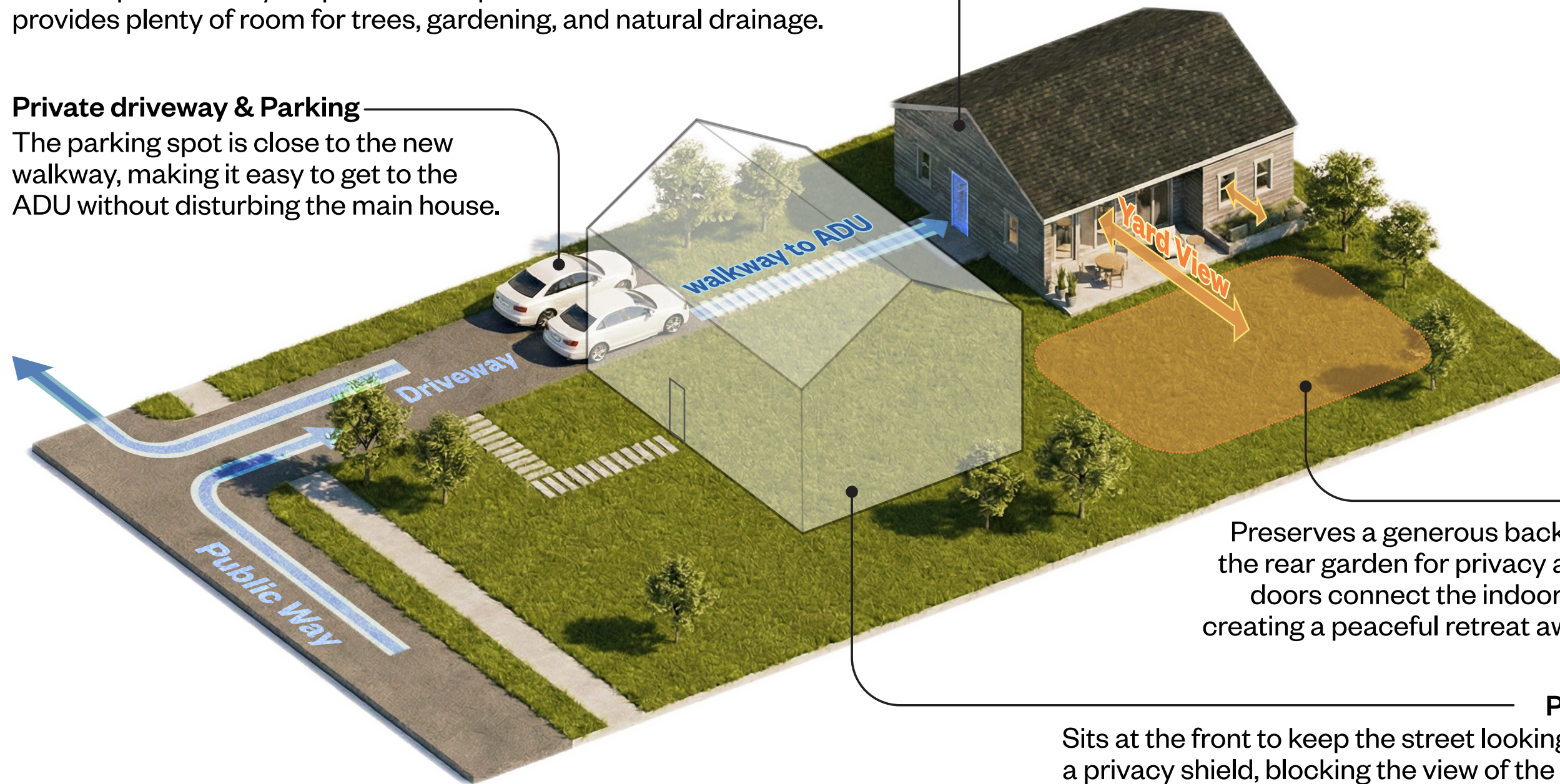
Wall Section
 Scale: 3/4" = 1'-0"

ADU

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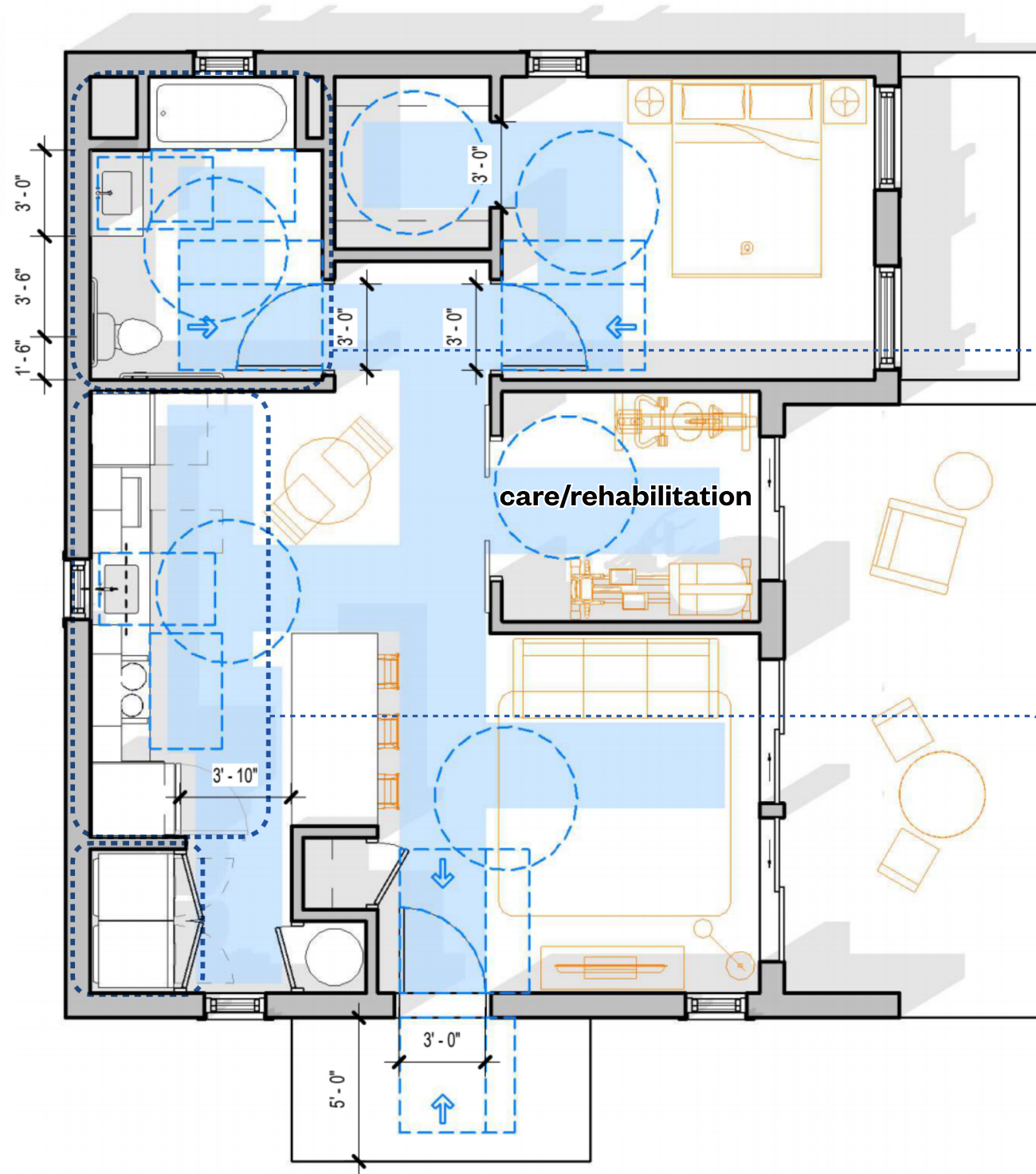


Senior Couple

- #accessibility
- #barrier-free circulation
- #care-ready flexibility
- #rehabilitation-ready space
- #proximity to bathroom
- #quiet living environment

Universal Design & Accessibility:

This house is designed for people of all ages. The design intentionally references the ADA, MAAB (521 CMR), and the Fair Housing Act to promote the principles of universal design. There are no steps inside, allowing for easy movement throughout the home. The kitchen is specifically designed for future accessibility adaptation, featuring a cooktop and wall oven configuration rather than a standard range to support ease of use for residents with mobility challenges. The bathroom is future-ready, with walls adjacent to and behind the water closet structurally reinforced to support grab bars, and sufficient clear floor space to provide a full wheelchair turning radius. Every detail is designed to make daily living safe, convenient, and enjoyable for all.



Doors & Route

Min. 36" clear width and provide required maneuvering clearances at doors located along the accessible route. Accessible route at least 36" wide to all rooms.

Washer & Dryer

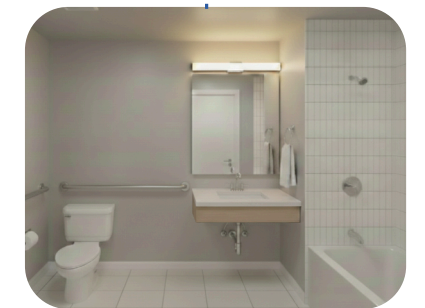
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before adaptations



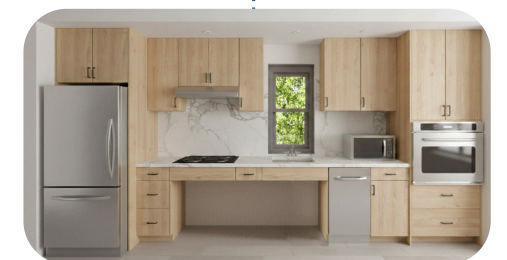
 after adaptations


Adaptable Kitchen

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before adaptations



 after adaptations

Energy Efficient House

