

DWELLING DUO - ADU Design proposal for Catherine - Marlborough, NH

Design Approach:

This ADU is designed as an addition to the primary residence, with a seamless yet private connection through a breezeway. The design prioritizes the homeowner's goal of minimizing demolition while allowing an easy connection that allows her to remain in the primary residence, and the proposed ADU will serve as space for adult children, caregivers, or workers to stay as needed. The shared wall where these living spaces connect through a locked door has been carefully adjusted to prevent obstructing daylight on existing windows of the primary residence—avoiding the need for window modification. The ADU is designed to meet ADA requirements, featuring wide doorways, ample turning space, and a layout that ensures easy movement through simple cross-circulation.

Sustainability and Natural Comfort:

Following passive house principles, the ADU is oriented to take advantage of northeast exposure. The living room and bedroom windows are oriented on the north-east facade to optimize natural light, providing gentle morning sunlight while staying shaded after midday, reducing overheating without requiring additional shading or overhangs. Additionally, the southern exposure helps passively heat the space, reducing energy costs and improving overall efficiency. This direction also offers the most scenic views, overlooking a wooded landscape that enhances the sense of being one with nature.

Site Considerations:

To accommodate construction, existing tree will be carefully relocated and replanted as needed, preserving the site's natural character. The existing road that circles around the primary home will now end at the front of the main house, while the southeast path will serve as the driveway for the proposed ADU, providing two additional parking spaces as requested by the owner. To enhance comfort and aesthetics, the parking spots can be shaded with a pergola or by planting a tree for natural coverage.

Structure, Envelope & Finishes

Structure consists vertical studs spaced 16 inches apart, extending continuously to the roof for structural integrity. The exterior envelope includes sheathing or plywood, followed by a waterproofing layer to protect against moisture and harsh weather conditions. The final exterior is finished with durable wood siding. Inside, the walls are finished with a layer of gypsum board, which is then coated with plaster and paint for a clean, polished interior. Toilets, faucets, and showerheads have low-flow fixtures to minimize water use.

General Cost Range:

Stud framing (16" OC): \$10,766

Sheathing/plywood: \$6,280

Waterproofing layer: \$4,486

Wood siding: \$14,355

Gypsum board (GWB): \$4,935

Air-tight sealing: \$24,000

Total Estimated Cost: \$120,000