Whatcom Housing Alliance ADU Design Competition

Dunne ADU Narrative

This ADU was designed for a family with young kids and aging parents, who needed a space that served multiple functions. At different times, it will be a guest house, home office, workshop, entertainment space, quiet oasis, and occasional living space for family and friends. The bottom floor has a bathroom, bedroom/living room, stairs to the second floor, and carport with two parking spaces. The top floor has a kitchen, bedroom, and large, partially covered deck.

The ADU is designed for function, resilience, and long term maintenance. Seven steel columns, some sunk in 6 feet of concrete, support the steel beams under the concrete deck. The concrete slab of the first floor living area is lifted a foot above the surrounding ground to reduce the risk of flooding. The potable water pipe is sleeved where it goes through the foundation, to make it easier to replace if needed in the future. The washer, dryer, and water heater are on the first floor, in a direct line with the exterior door, for easy replacement when these devices need to be replaced in a decade. The plumbing is concentrated in an accessible, interior wall for freeze protection and ease of repair. The windows are common sized, for easy replacement if needed. The roof is at a moderate angle to allow for eventual repairs. The siding is hardiboard over zip sheathing, products that are easy to maintain and repair.

Scoring criteria

Universal Design and Aging in Place:
There is a bedroom and bathroom on the first floor, two steps up from the carport. The stairway to the second floor has two landings, to make it easier to rest when going up or down.

Affordability and cost effectiveness:
This ADU was designed for a family, not an investor. By any financial metric, this building fails abjectly - there will be no ROI for decades. However, there are fairly simple ways to redesign this ADU to make it more cost effective. The most significant change would be to cut off the uncovered deck, and change the supports to wood posts and beams instead of steel and concrete. By eliminating the mandoor and garage door on the backside, you could still fit a car beneath the upper floor bedroom and covered deck. Other cost savings could come from using a fiberglass shower surround instead of tile, laminate countertop instead of stone, and electric baseboards instead of a heat pump.

Sustainability and Resilience:
This all electric home is insulated with 6 inches of rigid foam under the floor, 6 inches of rockwool in the walls, and almost 2 feet of rockwool plus several inches of sprayfoam in the ceiling. The home is heated with a minisplit heat pump, which provides efficient heating and cooling. There are two junction boxes in the carport pre-wired for EV chargers, and the power supply to the home is being upgraded to 320 amps to accommodate any future needs.

Innovation and Creativity/Aesthetics:
The family that designed this ADU is fairly utilitarian. However, the space that is the most compelling is the 400 square foot deck, with a privacy fence, and space for eating, lounging, and working.