

City of Seattle ADU Phase 1 Submission

February 17, 2020

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Project Description and Design Criteria

This small-footprint DADU is being proposed in response to a need for affordable housing that will enable an increase in urban density in Seattle while making every effort to blend into current residential neighborhoods. The target market for this house is as an auxiliary structure for a relative, a care giver, or for rental income competitive with a suite-style hotel room that can comfortably accommodate a small family. Ideally, this house would be mass produced as a kit in a factory and be available for purchase through local building supply stores. The house could be installed on a slab, a footing, on posts, or on a garage.

Low Cost

The conceptual basis is driven by use of twelve 4'x10' prefabricated roof panels and 18 prefabricated wall panels to create a 12' x 24', 288 sq. ft. house. Professionals and amateurs should be able to assemble the small cottage quickly from a kit once the site has been prepared, significantly reducing on-site labor costs and time.

The design is intended to be highly configurable, the simplest being lowest cost. Many buyers may wish to add additional features that can be purchased as kits, and even installed later as funding and time permits. In its simplest form, the structure can be built as a one-car garage.

Only one configuration is presented in the drawings, with reference made to additional roof overhangs. From the basic model, additional options such as dormers, porches, and a second floor are possible.

Green Building and Design

This small house embodies many principles necessary to address the current climate emergency. It has been designed to reduce material waste using conventional panel sizes. It will be highly efficient due to the high-quality insulation in the panels, reducing energy use. It will also be manufactured with sustainable materials, and, when available, could incorporate FSC certified wood in the panels. The use of an electric heat pump for A/C and a heat recovery ventilator in the mechanical system will reduce energy use. The proposed roof shows a metal roof with a 1" standing seam. This type of roof is ideal for solar panel mounting.

Privacy

Windows have been placed for privacy in a situation where the long wall is on the adjacent property line and the short wall is close to the rear property line. Ample light is admitted through upper windows in the gable ends

Context

High priority has been placed on a design that will fit well with existing residential neighborhoods.

Estimate of Construction costs

While the proposed design may reduce labor costs, the cost of materials and equipment will be comparable to existing residential construction. In Seattle, a medium quality cost would be approximately \$150/sq. ft., and for a high-quality house with extra details, the cost could be as high as \$250/sq. ft. On average, this house should cost approximately \$50,000 to \$60,000.

Plans Pricing and Additional Hourly Work

We propose a plan set to cost \$1000, and additional hourly work to cost \$105 per hour.

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NOTES:

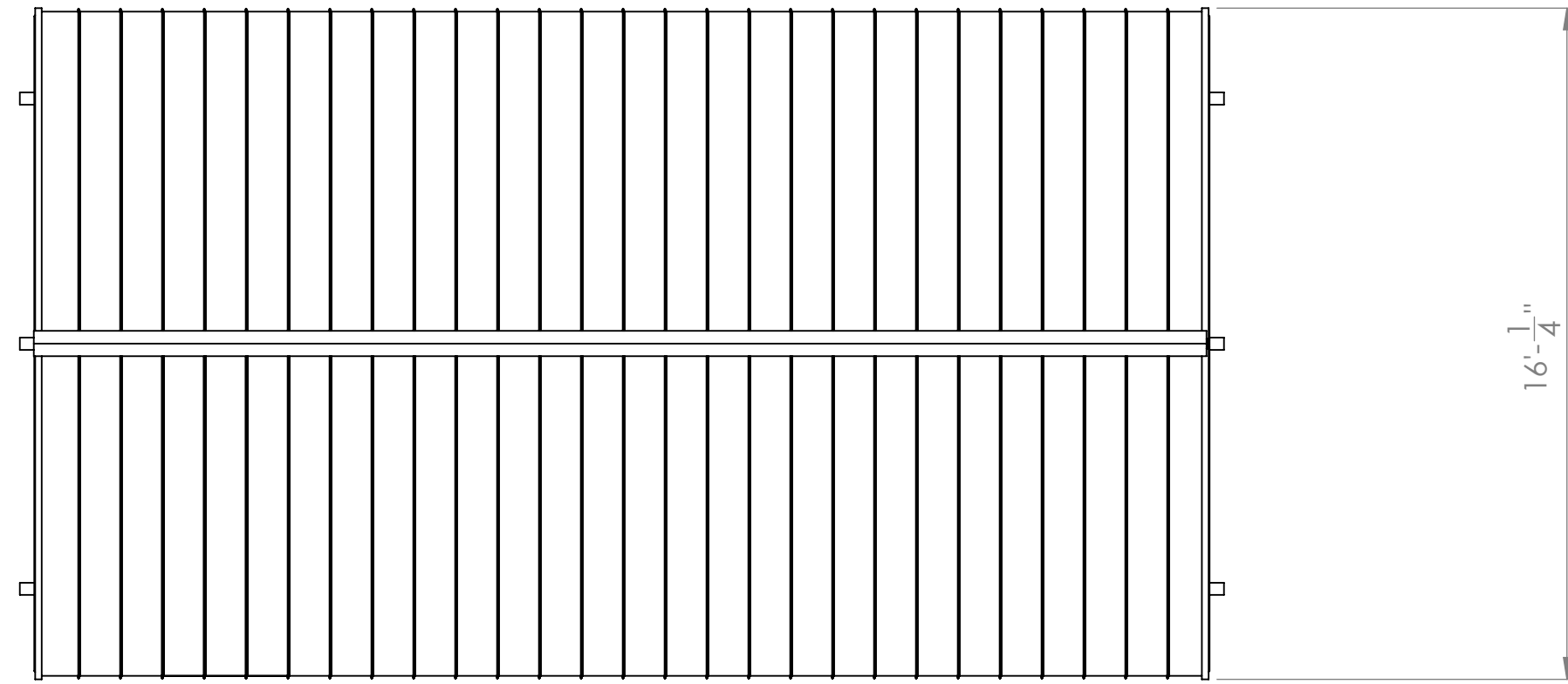
- 1. SMALL DADU CONCEPTUAL DESIGN FOR CITY OF SEATTLE PHASE 1 SUBMISSION, 17 FEBRUARY 2020
- 2. SUBMITTED BY DON ROBERTS, P.E., DA ROBERTS LLC & BRAGDON SHIELDS, SANDPOINT STUDIOS
- 3. FOOTPRINT: 288 SQ. FT.
- 4. SINGLE STORY WITH LOFT

MECHANICAL SYSTEMS:

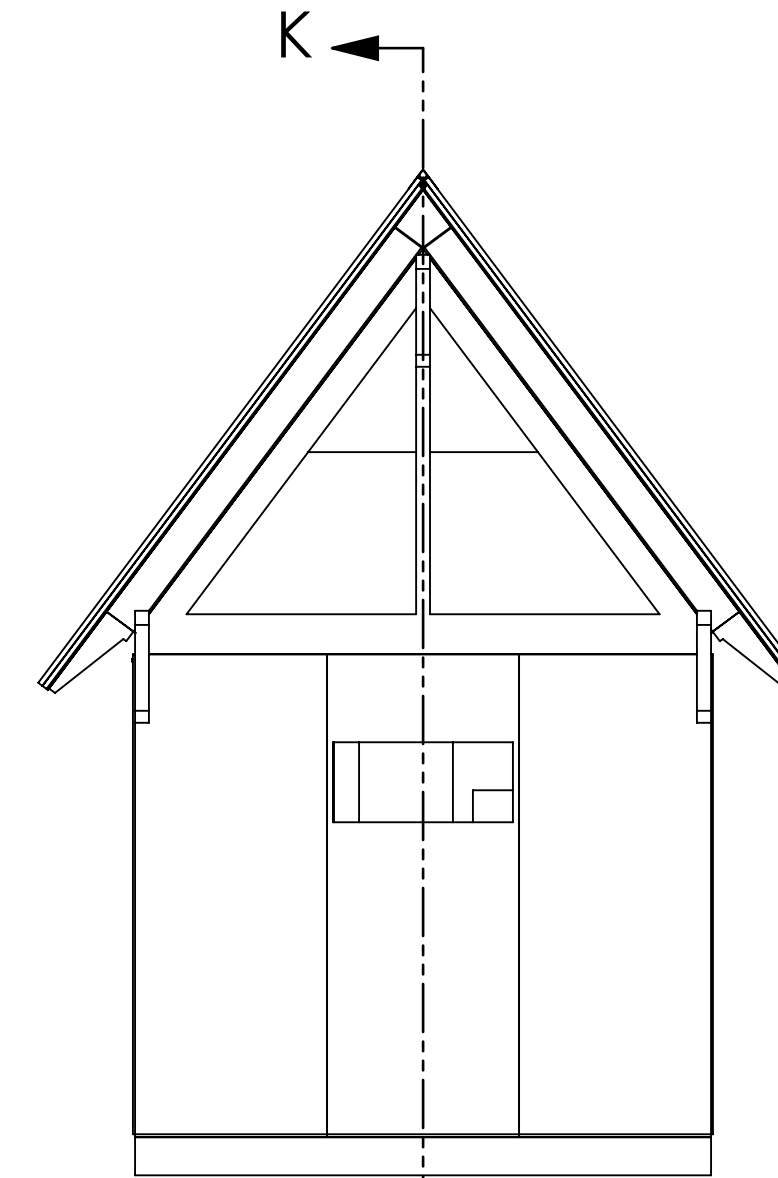
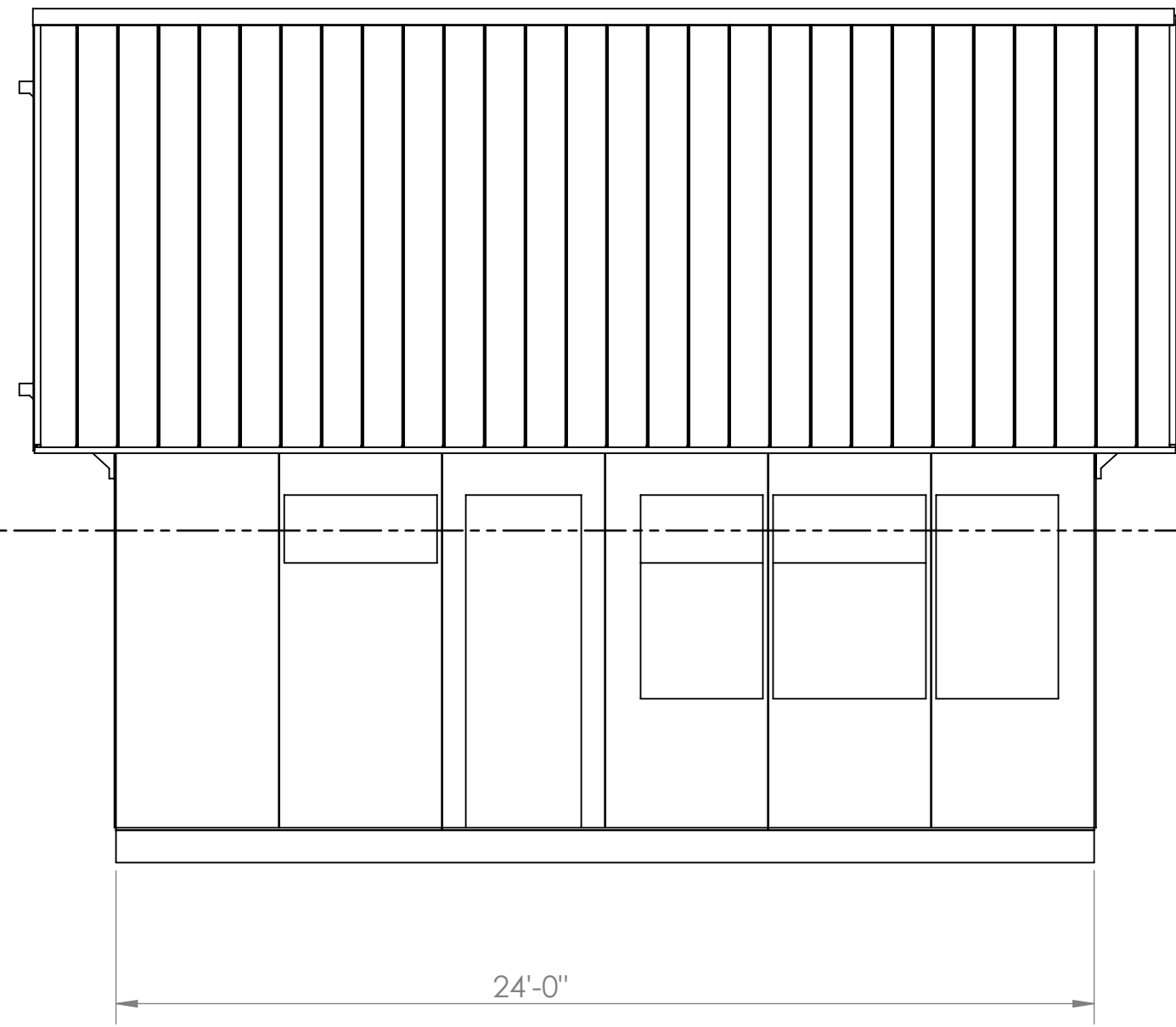
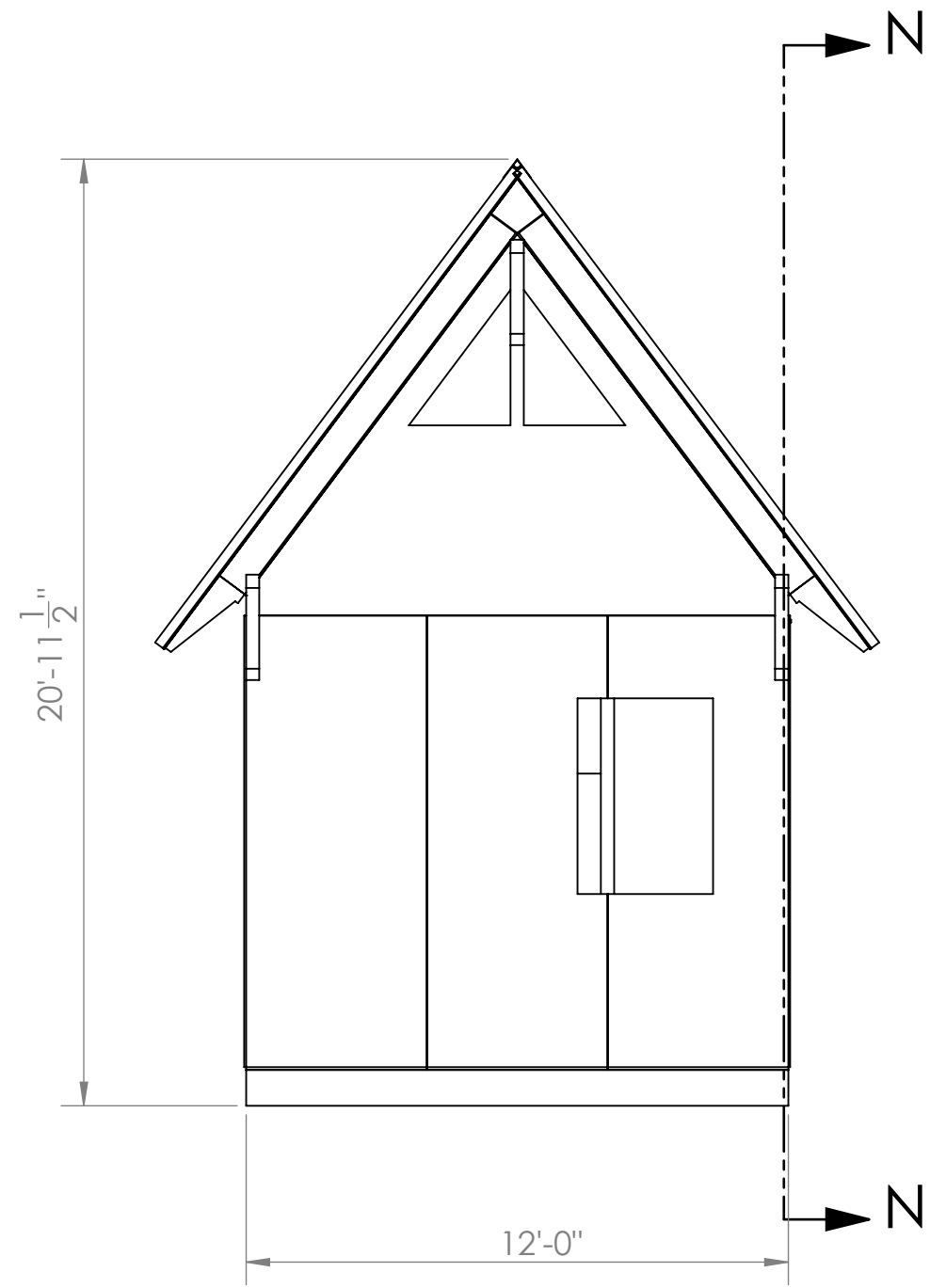
- 1. HEATING & COOLING: ELECTRIC HEAT PUMP
- 2. AIR QUALITY: ENERGY OR HEAT RECOVERY SYSTEM
- 3. BATHROOM: FAN EXHAUST TO OUTSIDE
- 4. KITCHEN: RANGE HOOD EXHAUST TO OUTSIDE

CONSTRUCTION:

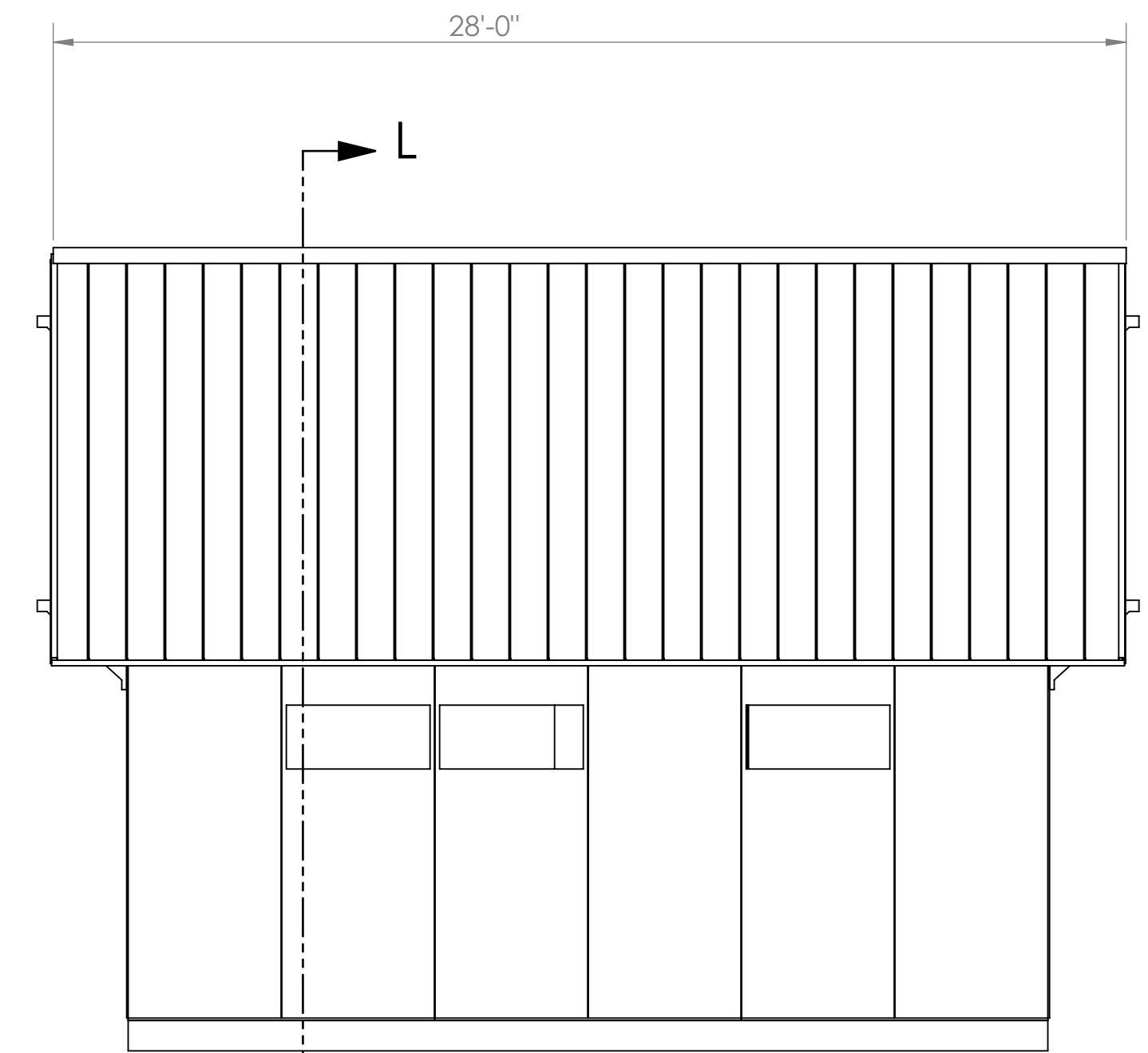
- 1. PRIMARY STRUCTURE IS WOOD FRAME
- 2. SECONDARY STRUCTURE IS PREFABRICATED SIP PANEL



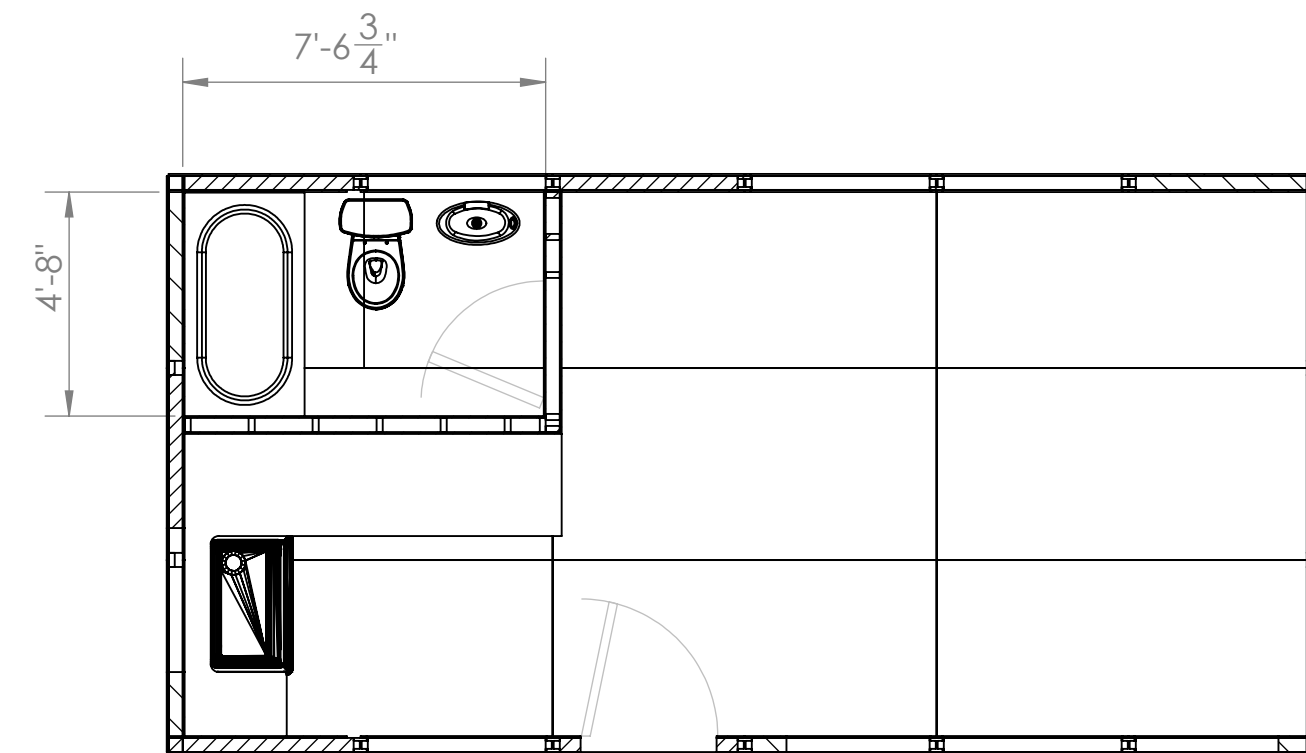
VIEW G



VIEW B



VIEW C



SECTION J-J

| | NAME | DATE |
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| DRAWN | D. ROBERTS | 1/17/2020 |
| CHECKED | | |
| ENG APPR. | | |
| MFG APPR. | | |
| O.A. | | |
| COMMENTS: | | |

TITLE: **SMALL DADU**

SIZE DWG. NO. REV
D COTTAGE 1A
 SCALE: 1:48 WEIGHT: SHEET 1 OF 2

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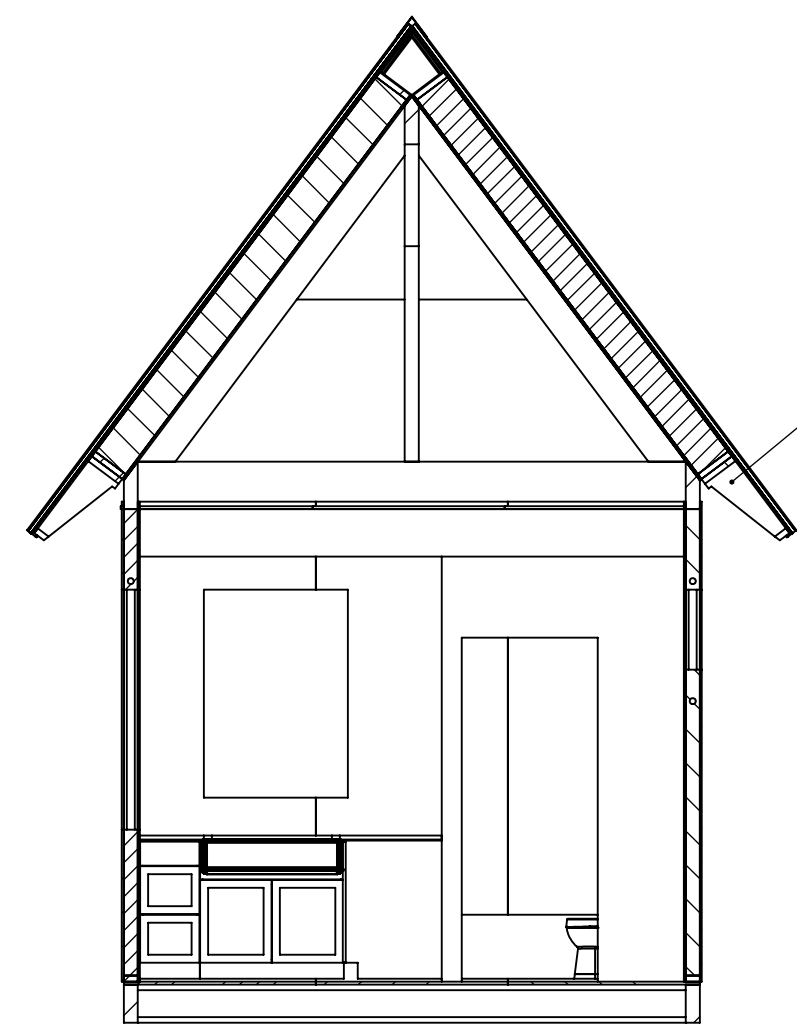
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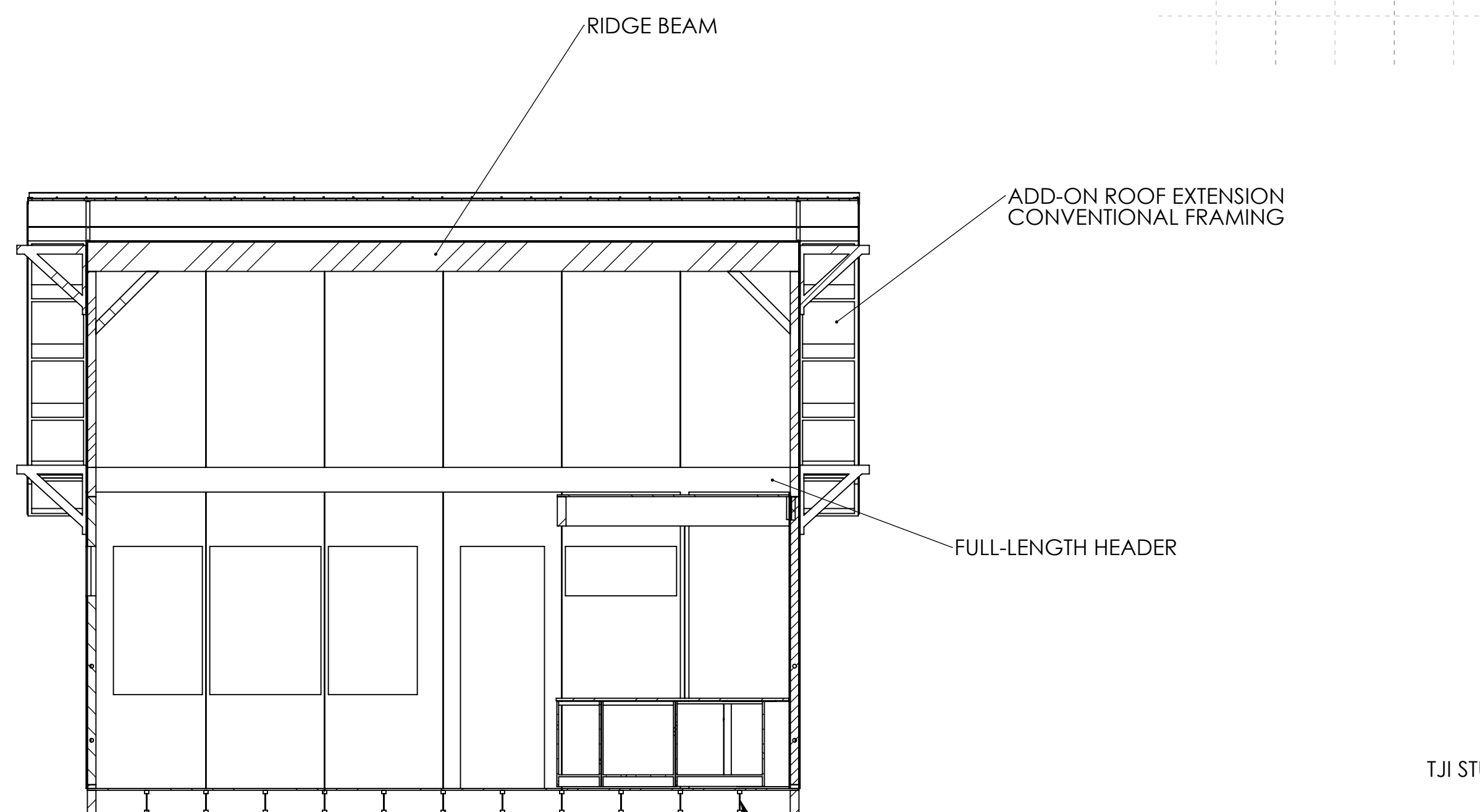
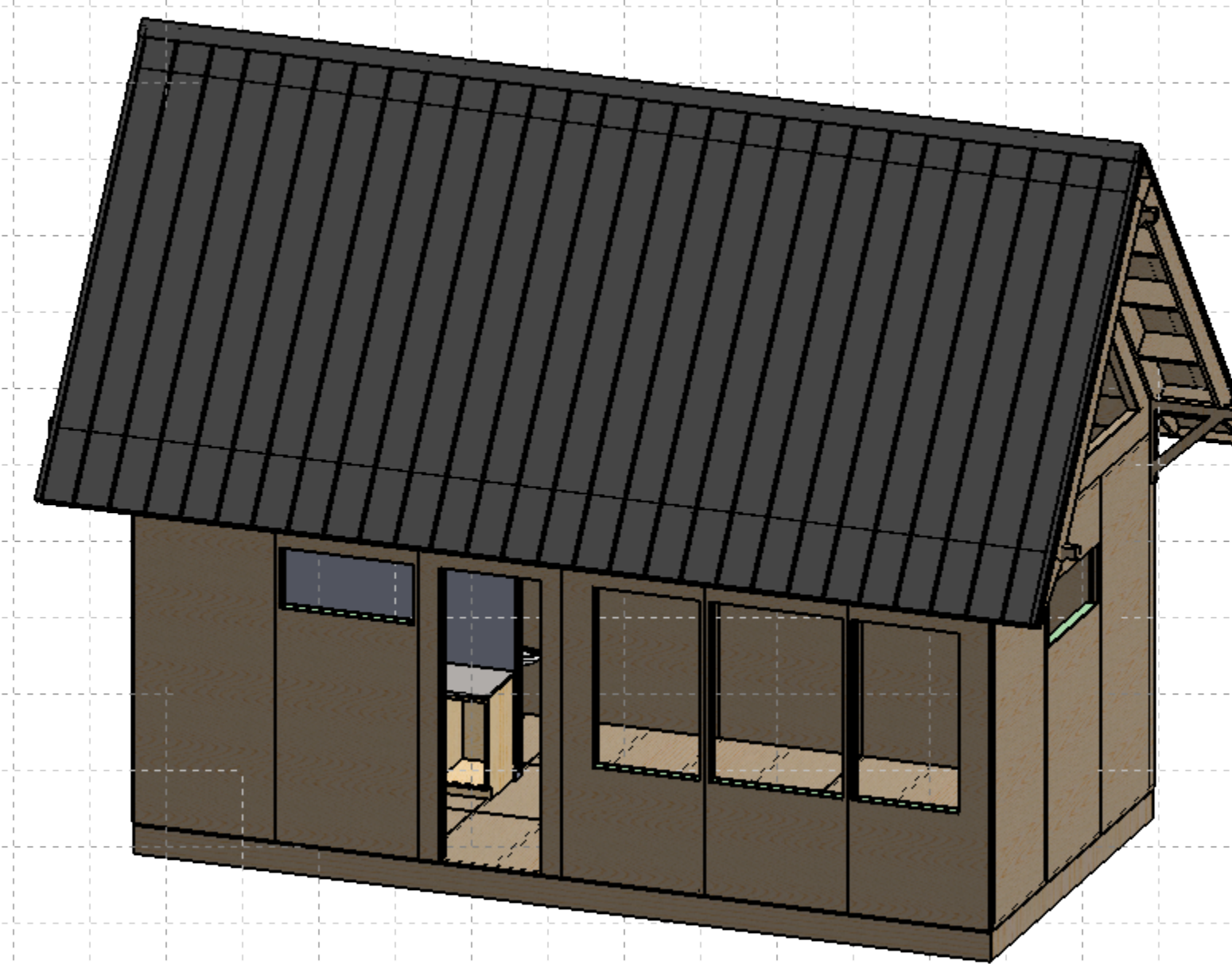
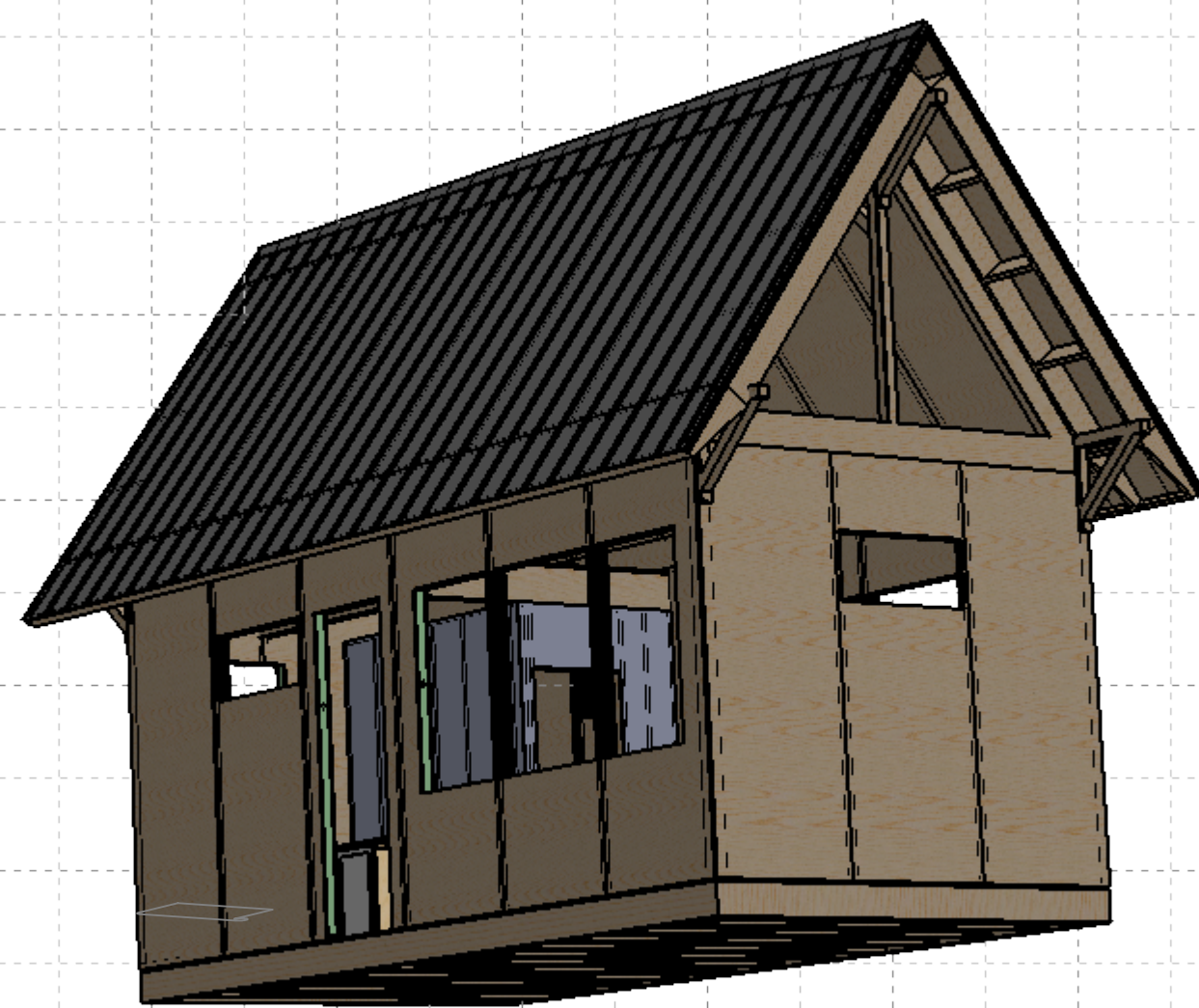
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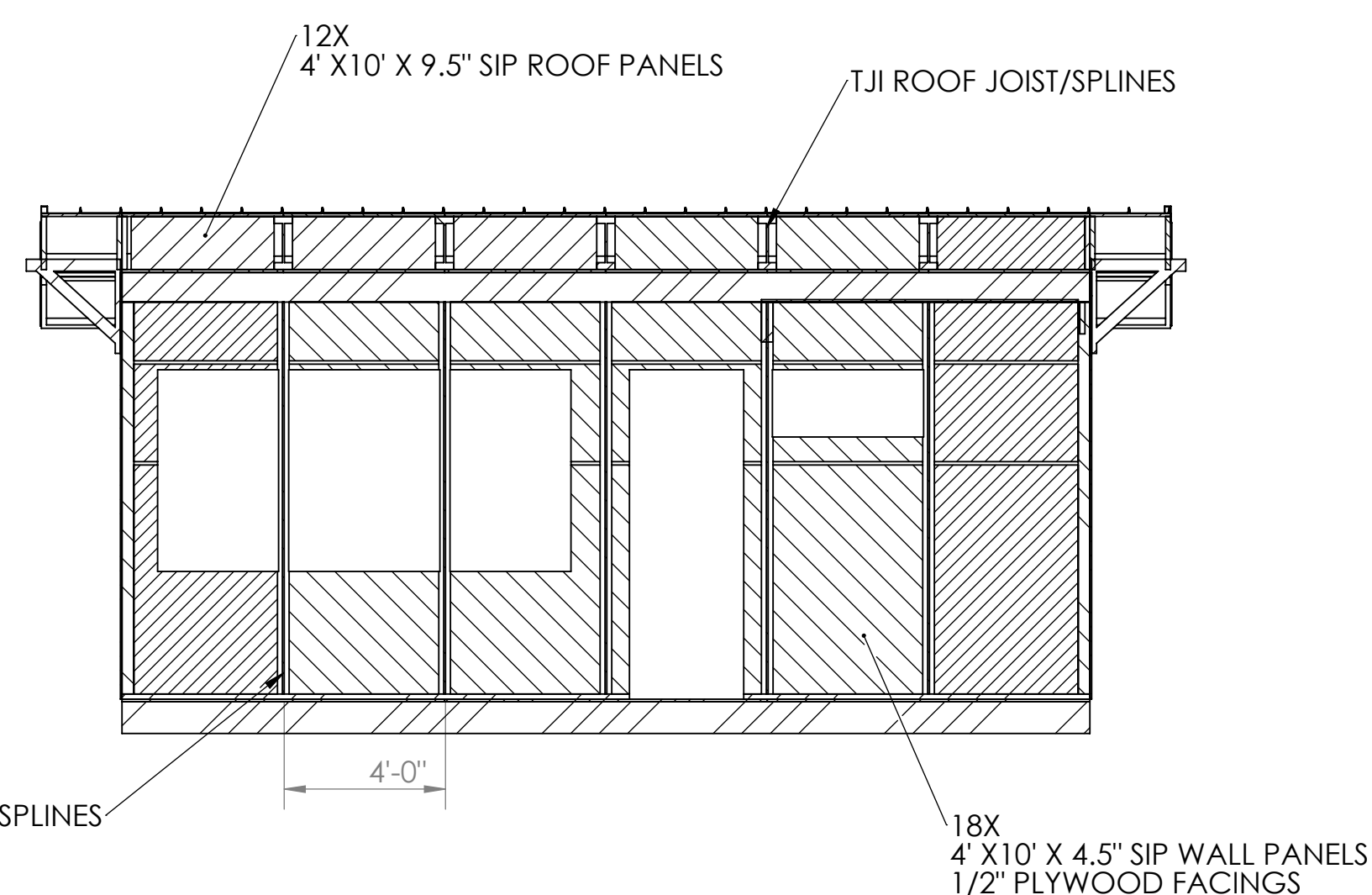


ADD-ON ROOF EXTENSION
CONVENTIONAL FRAMING

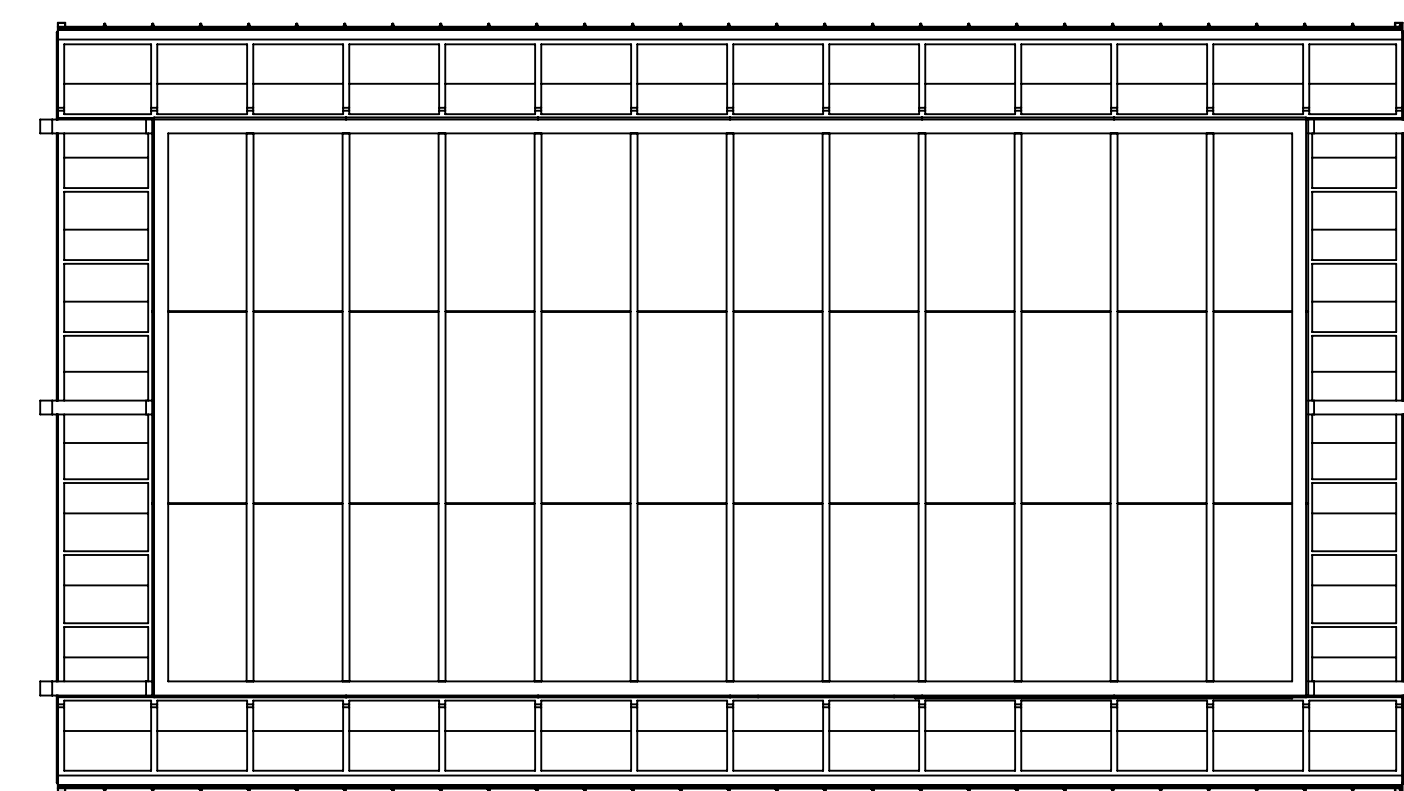
SECTION L-L



SECTION K-K



SECTION N-N



VIEW H

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| THREE PLACE DECIMAL ± | | Q.A. | |
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SIZE DWG. NO. REV
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