



G·OLOGIC

DESIGN • CONSTRUCTION

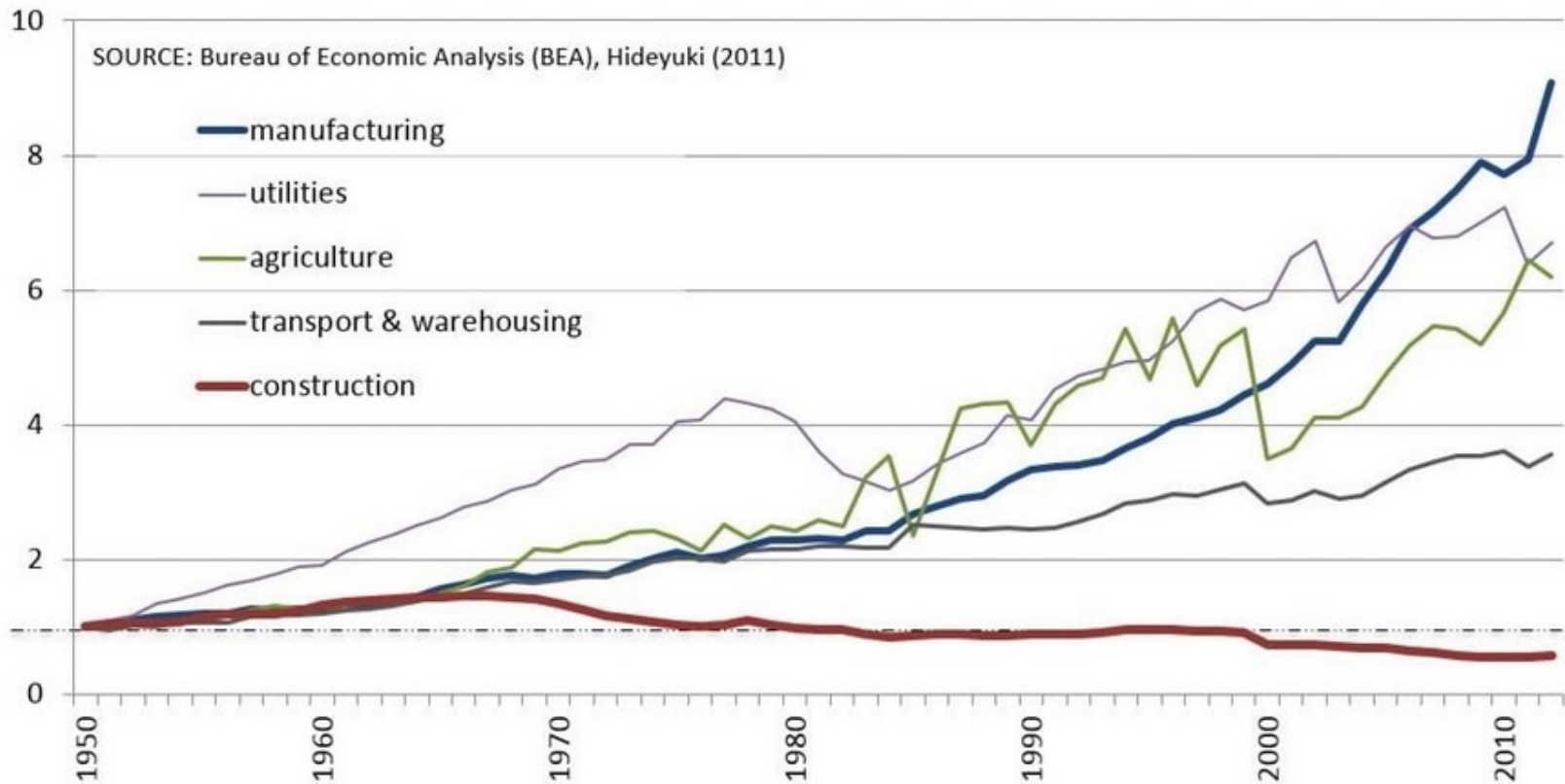
GO Logic LLC is a 30-person design and construction firm in Belfast and Scarborough, Maine, committed to designing and building passive structures throughout the Northeast. Founded in 2008 by builder Alan Gibson and Architect Matthew O'Malia.

Alan Gibson

Certified Passive House Builder

Construction productivity 1950-2012

Real productivity (GDP value-add per employee) by industry in the US
Indexed; 1950 = 1.0



SWEDISH INSPIRATION



SWEDISH PICK-OUT-A-HOUSE PARK



FACTORY PRODUCTION



GIVE ME THIS TRAILER, PLEASE



BOOKS OF HOUSE PLANS



Trym 4 rum och kök
Bostadsyta: 121,4 m²
Täcklutning: 27°



Floor plan for house Trym showing a layout with a living area (VÄRMSGÄRDEN 80,0), kitchen (KÖK 20,4), and four bedrooms (SOVRUM 12,8, 12,8, 12,8, 12,8). It also includes a bathroom (BAD 12), a hallway (HALL), and a staircase (TR). Dimensions are 18,00 x 19,10 x 18,00.



Tor 4 rum och kök
Bostadsyta: 121,4 m²
Täcklutning: 27°



Floor plan for house Tor showing a layout with a living area (VÄRMSGÄRDEN 21,4), kitchen (KÖK 20,4), and four bedrooms (SOVRUM 12,8, 12,8, 12,8, 12,8). It also includes a bathroom (BAD 12), a hallway (HALL), and a staircase (TR). Dimensions are 18,00 x 19,10 x 18,00.



Tyr 4 rum och kök
Bostadsyta: 121,4 m²
Täcklutning: 27°



Floor plan for house Tyr showing a layout with a living area (VÄRMSGÄRDEN 19,0), kitchen (KÖK 20,4), and four bedrooms (SOVRUM 12,8, 12,8, 12,8, 12,8). It also includes a bathroom (BAD 12), a hallway (HALL), and a staircase (TR). Dimensions are 18,00 x 19,10 x 18,00.



Idun 4 rum och kök
Bostadsyta: 101,5 m²
Täcklutning: 27°



Floor plan for house Idun showing a layout with a living area (VÄRMSGÄRDEN 41,7), kitchen (KÖK 20,4), and four bedrooms (SOVRUM 11,8, 11,8, 11,8, 11,8). It also includes a bathroom (BAD 8,0), a hallway (HALL), and a staircase (TR). Dimensions are 13,50 x 19,10 x 13,50.

MODULAR MULTI-FAMILY



MODULAR SINGLE-FAMILY



MODULAR OR "SMALL BLOCK" PANELIZATION

Build SMART Panels

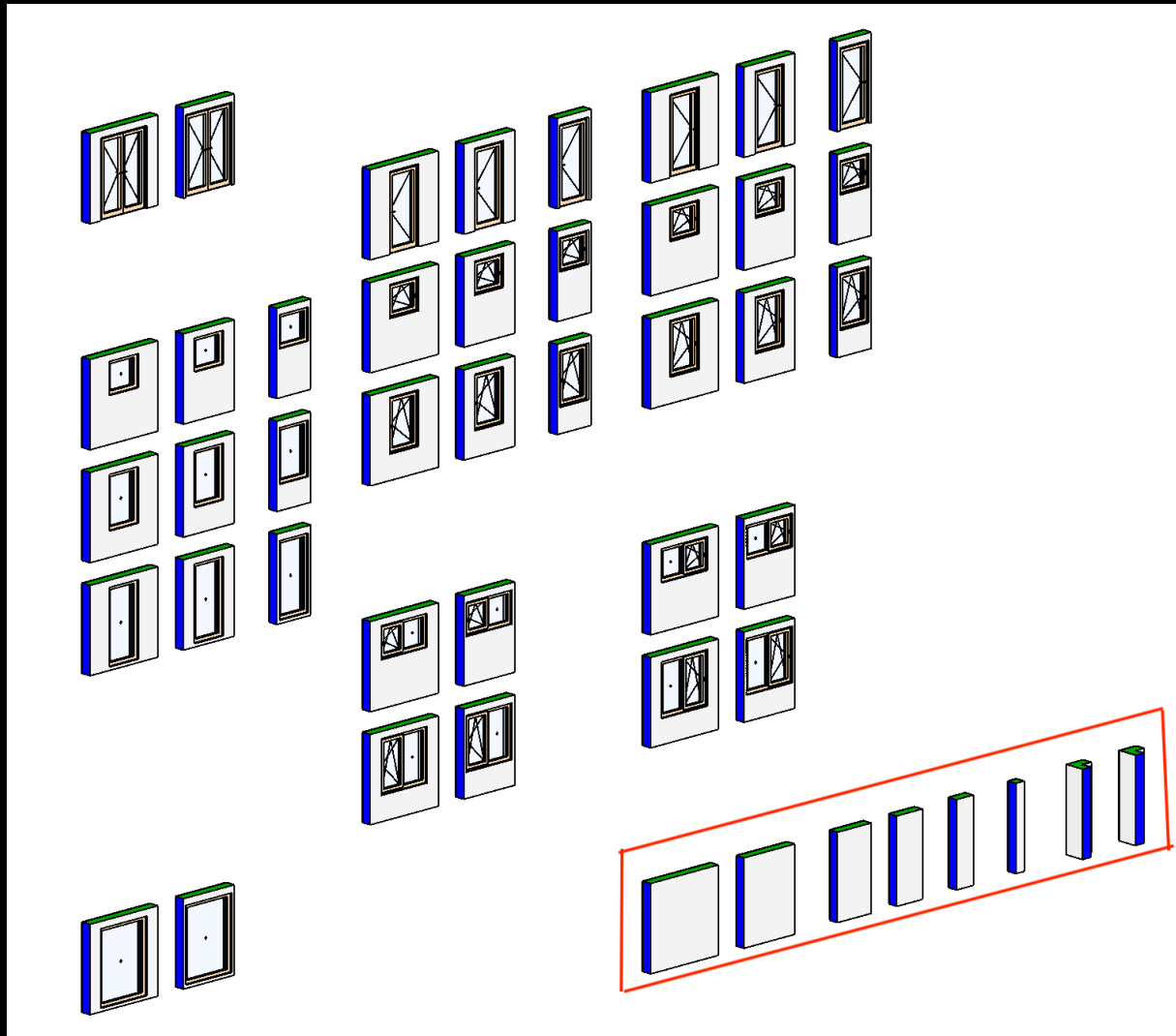


MODULAR OR "SMALL BLOCK" PANELIZATION

Build SMART Panels



MODULAR OR "SMALL BLOCK" PANELIZATION



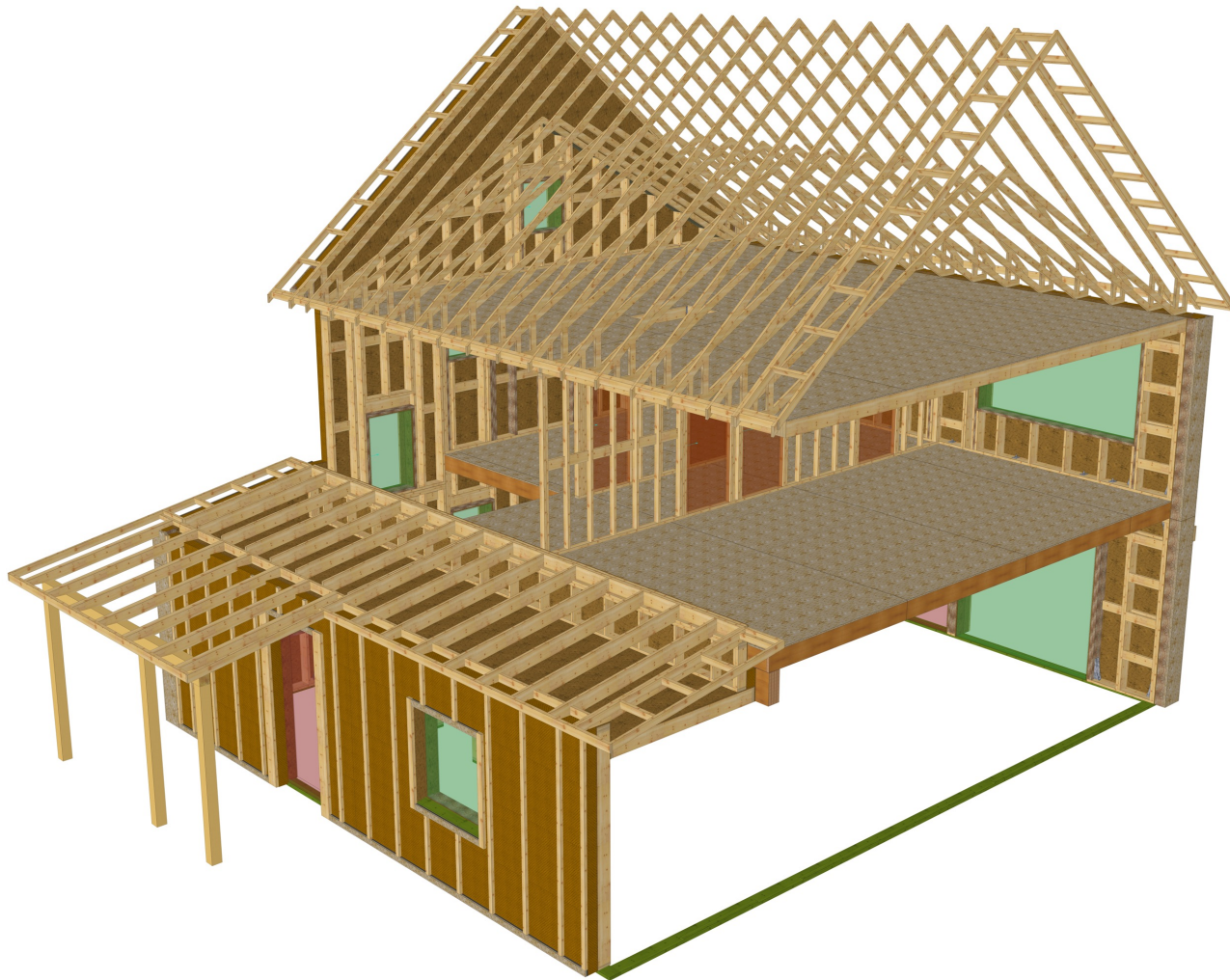
MODULAR OR "SMALL BLOCK" PANELIZATION



MODULAR OR "SMALL BLOCK" PANELIZATION



BUILDING INFORMATION MODELING



IT'S A PRODUCT. THIS IS A PARTS LIST.

11-30-2021

MH Residence

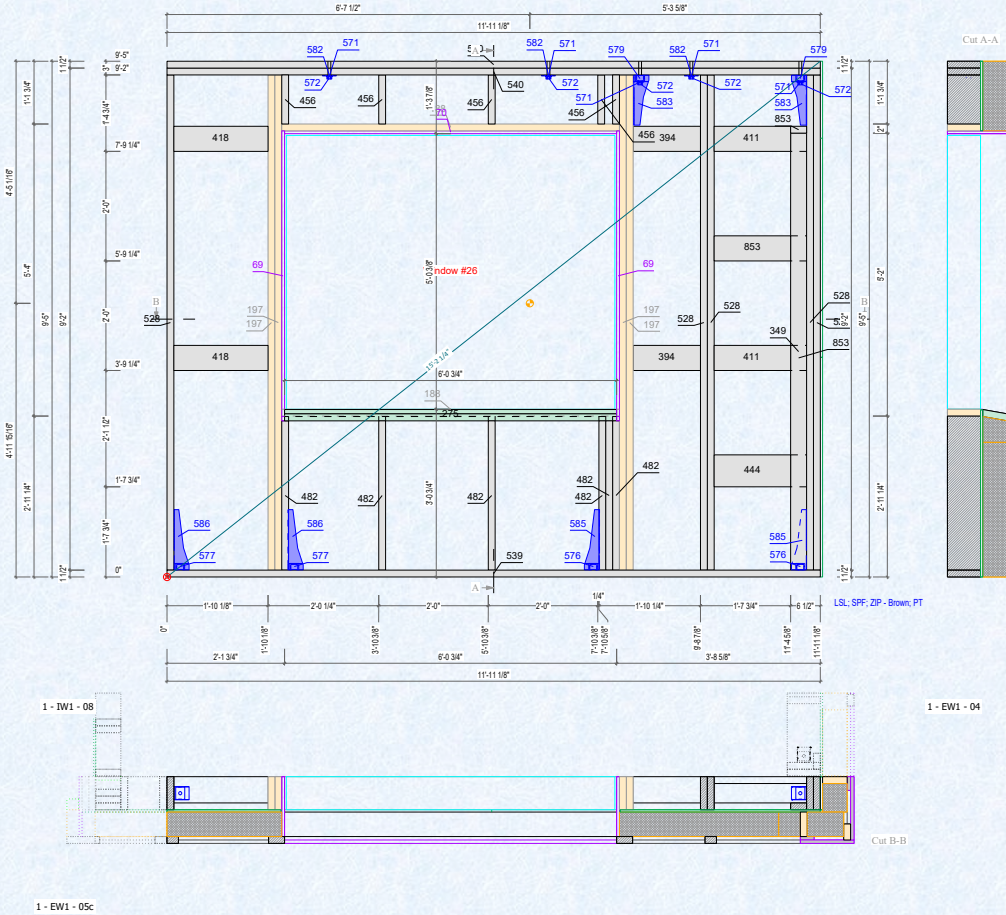
No.PL	Name	Material	Height [inch]	Width [inch]	Length [inch]	Quantity	Notes
Sub group:1 - First Level Walls							
Group:1 - EW1 - 05a							
13	Strapping	Advantech	3/4"	3"	1'-4 7/8"	2	
31	Strapping	Advantech	3/4"	3"	5'-3 3/4"	1	
33	Strapping	Advantech	3/4"	3"	6'-0 3/4"	2	
34	Strapping	Advantech	3/4"	3"	6'-3"	1	
42	Strapping	Advantech	3/4"	3"	8'-0 1/8"	2	
52	Strapping	Advantech	3/4"	11 3/4"	1'-4 7/8"	1	
58	Strapping	Advantech	3/4"	11 3/4"	8'-0 1/8"	1	
80	Strapping	Advantech	3/4"	1'-1 7/8"	1'-4 7/8"	1	
86	Strapping	Advantech	3/4"	1'-1 7/8"	8'-0 1/8"	1	
121	WIN.0	Auxiliary Window	7 1/4"	5'	6'	1	Window #26
125	Strapping	Coravent	3/4"	3"	2 5/8"	1	
128	Strapping	Coravent	3/4"	3"	7 3/8"	1	
145	Strapping	Coravent	3/4"	3"	5'-3 3/4"	1	
148	Strapping	Coravent	3/4"	3"	6'-0 3/4"	2	
149	Strapping	Coravent	3/4"	3"	6'-3"	1	
165	Strapping	LSL	3 1/2"	1 1/2"	9'-5"	1	
176	Strapping Blocking	LSL	5 3/8"	1 1/2"	9'-5"	2	
188	Window sill Header Plate	LSL	7 1/4"	1 1/2"	6'-2"	2	
197	King Stud Jack Stud	LSL	7 1/4"	1 1/2"	9'-0 1/2"	4	
275	Window sill	PT	5 3/4"	1 1/2"	6'-0 3/4"	1	
287	Strapping	SPF	2 1/2"	1 1/2"	1'-0 5/8"	3	
301	Strapping	SPF	2 1/2"	1 1/2"	2'-4 7/8"	1	
302	Strapping	SPF	2 1/2"	1 1/2"	2'-5 1/4"	2	

Parts are cut out by this machine, or similar.



Parts are assembled like this.

STRUCTURE FROM REFERENCE SIDE



Scale @ LEDGER

1 - EW1 - 05a

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● Centre of gravity
● Panel reference point

● LS: SFF; ZP - Brown; PT

Panel weight: 1260.510 lb

Project: MH Residence

Sheet

1 OF 4

GO Logic LLC
PO box 567
137 High Street
Bellevue, Maine 04915
207.338.5556
www.gologic.ca

Date

21-11-30

Panel:

1 - EW1 - 05a

Group:

1 - First Level Walls

And it looks something like this.



PROCESS: WINDOW PRE-ASSEMBLY



PROCESS: WINDOW INSTALLATION



Training: an essential part of the process!



PROCESS: FRAME AND SHEATHE



PROCESS: SHEATHING AS AIR BARRIER



PROCESS: EXTERIOR INSULATION



PROCESS: WEATHER-RESISTIVE BARRIER



PROCESS: RACK AND WRAP



PROCESS: THIS IS SCARY



PROCESS: READY FOR TRANSPORT



ON-SITE ASSEMBLY



ON-SITE ASSEMBLY



ON-SITE ASSEMBLY



Panelization Advantages

Higher Quality

- Built indoors
- Higher precision
- Better control of air-tight details
- Lower risk of wet material issues (mold, mildew)

People like the idea

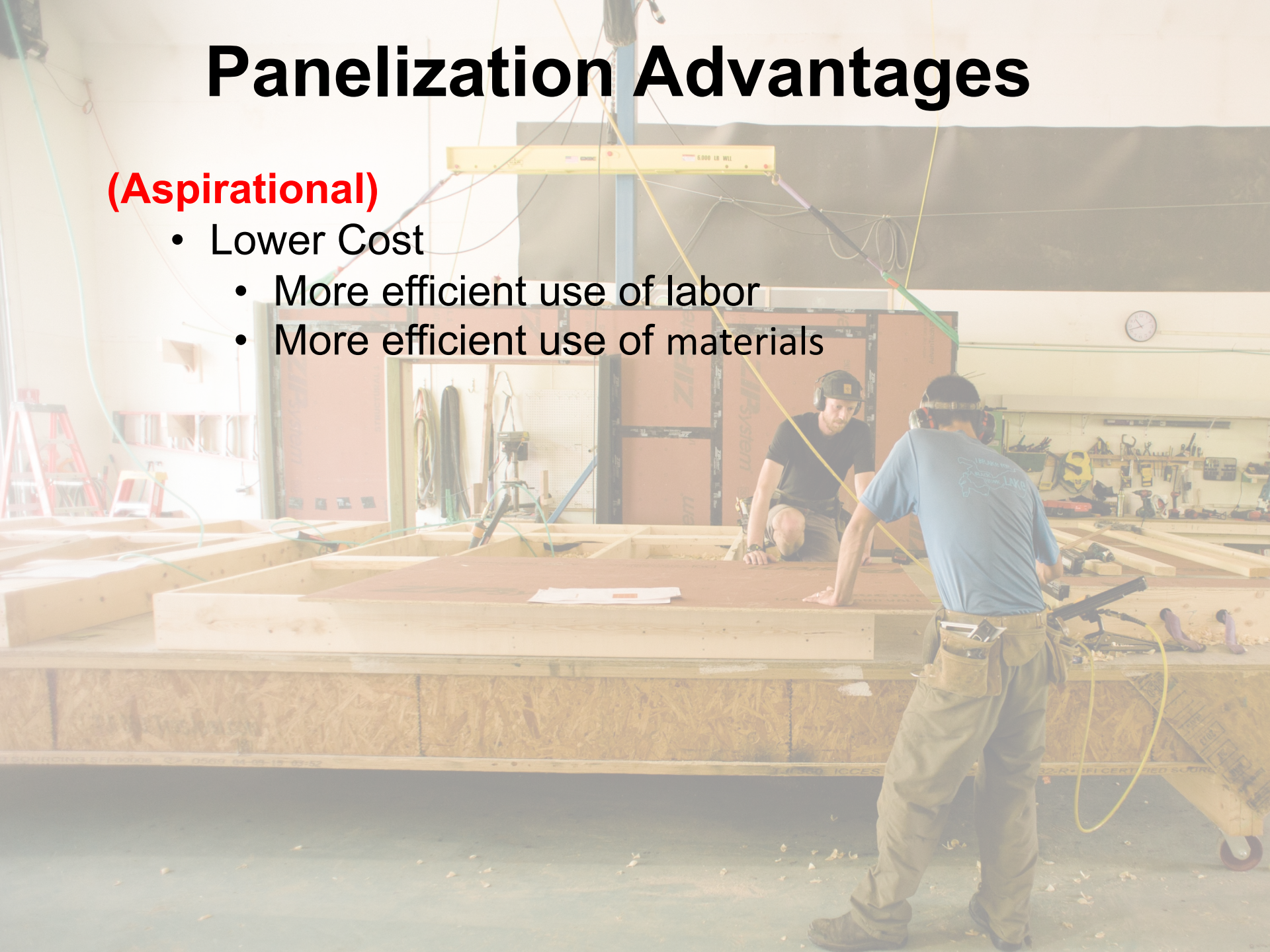
- Less time on site
- Neater, cleaner



Panelization Advantages

(Aspirational)

- Lower Cost
 - More efficient use of labor
 - More efficient use of materials



Panelization Disadvantages

Additional Costs

- Training for new means and methods
- Heavy equipment (crane, lull)
- Travel and Lodging, per diem, overtime pay (doubles the labor rate)
- Additional engineering costs
- Shop drawing costs, and time



Panelization Timeline

Typical Timeline

- Windows (6 months)
- Panel build (4-6 weeks)
- Installation time (6-9 days)
- Total: 36 weeks

Improved Timeline (Aspirational)

- Windows in inventory (0 months)
- Panel build (2 weeks)
- Installation time (1 week)
- Total: 3 weeks

Typical Scope of Work Division

Panel Manufacturer

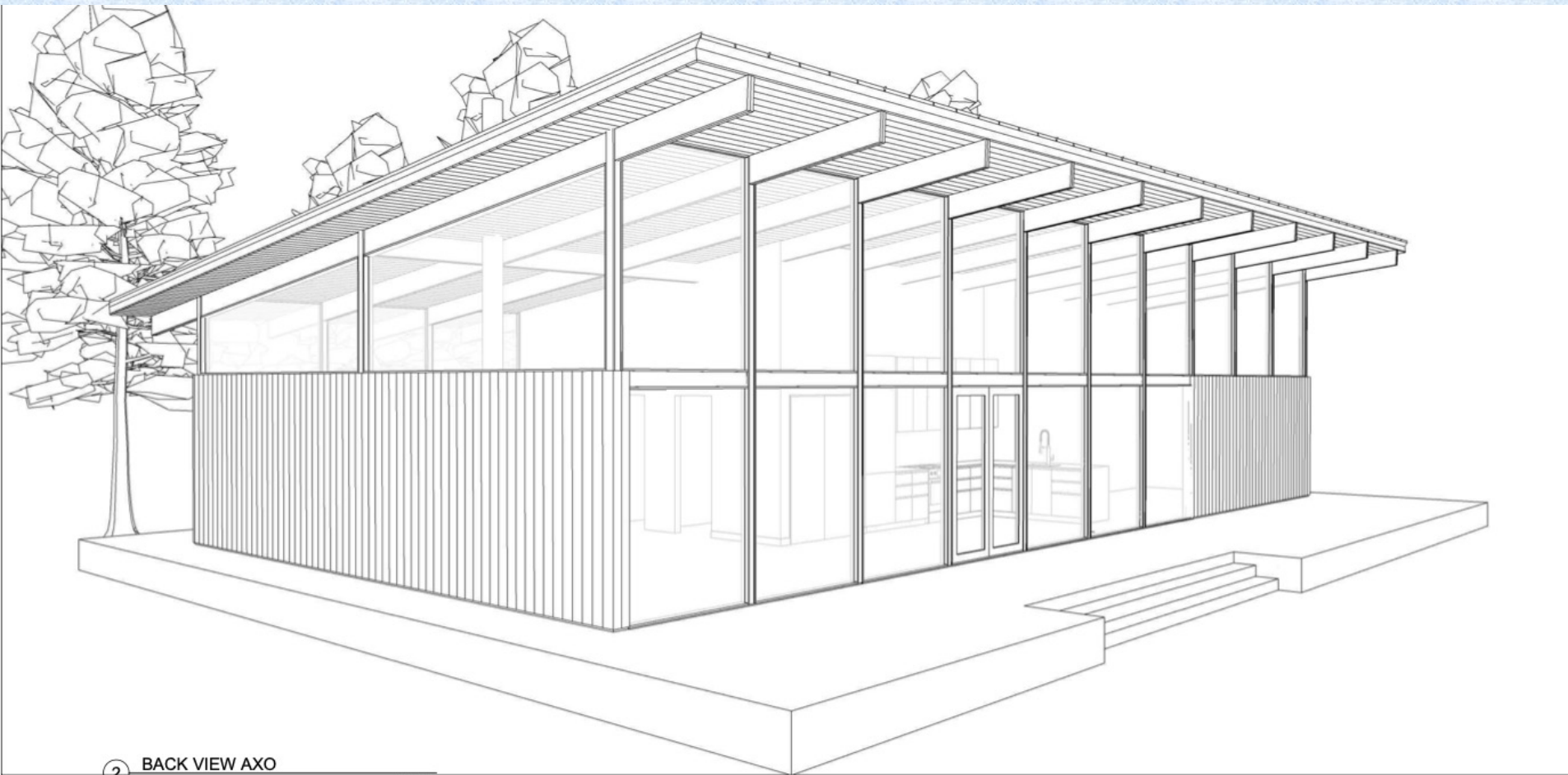
- Walls, floors, roof structure
- Windows and doors installed
- Assembly of shell

GC

- Site work
- Foundation
- Roofing, siding
- MEP
- All finishes



Design Guidelines

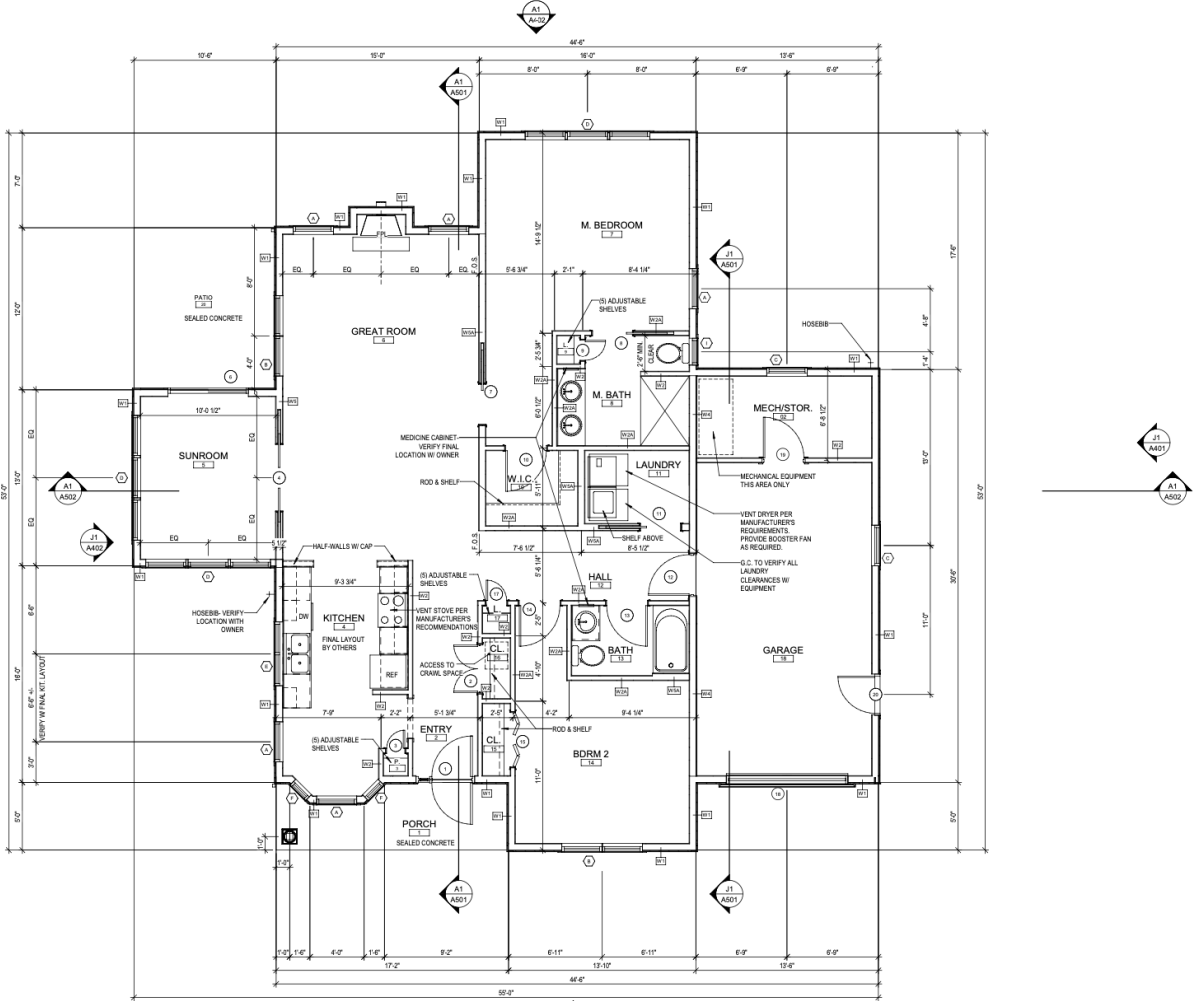


Design Guidelines



Design Guidelines

24 corners
13 roof planes

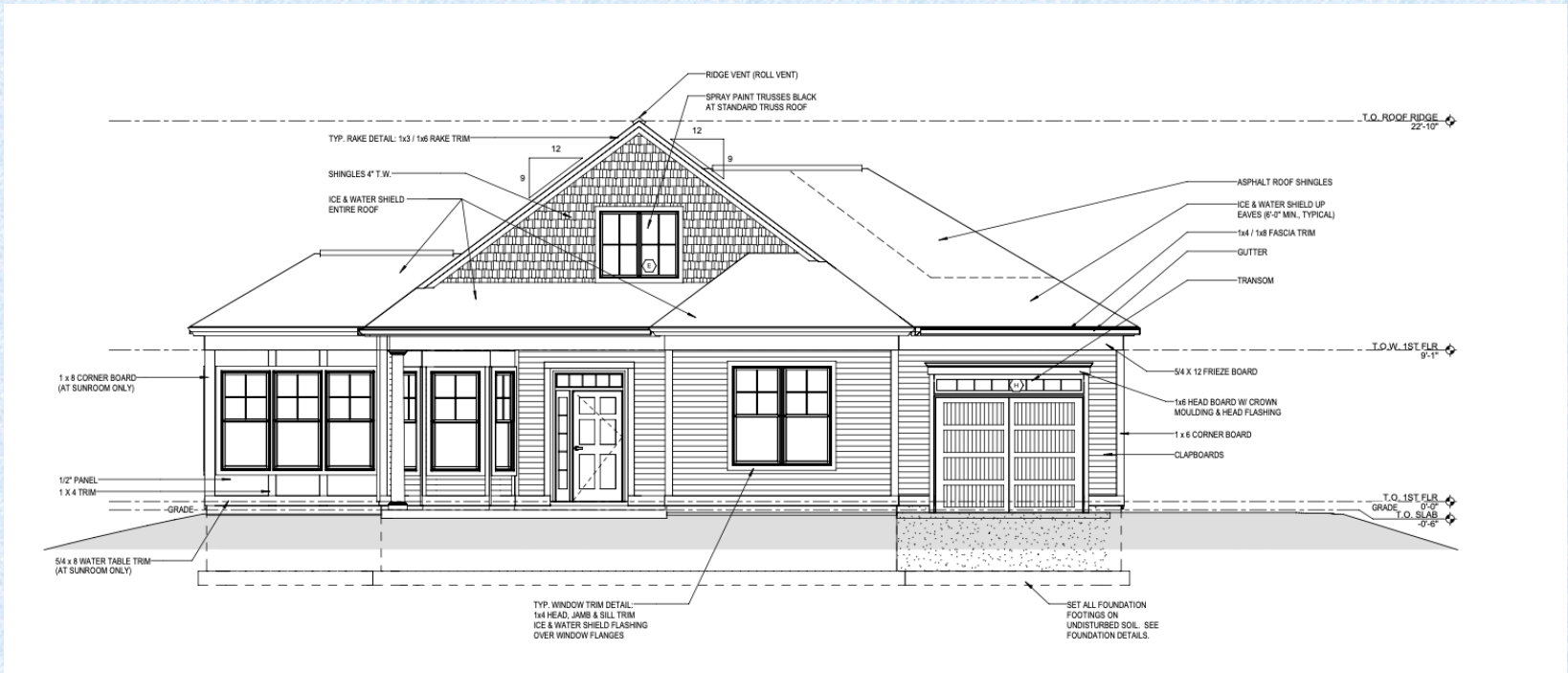


- NOTES:
1. GENERAL CONTRACTOR TO COORDINATE ALL UTILITIES.
 2. AT THE CRANK SPACE PROVIDE 1/4" LUAN AT ALL CERAMIC TILE & SHEET VINYL AREAS OVER FLOOR JOISTS AND SUBFLOOR.
 3. DO NOT VENT BATHROOMS AND LAUNDRY EQUIPMENT THROUGH EAVES.
 4. F.O.S. = FACE OF STUD
 5. REVIEW ALL LOCATIONS OF ROOF & WALL VENT PENETRATIONS W/ OWNER PRIOR TO INSTALLATION. VENTS TO BE LOCATED AWAY FROM THE FRONT OF THE BUILDING. ALL VENT CAPS TO BE LOW-PROFILE AND PAINTABLE.

A1 FIRST FLOOR PLAN

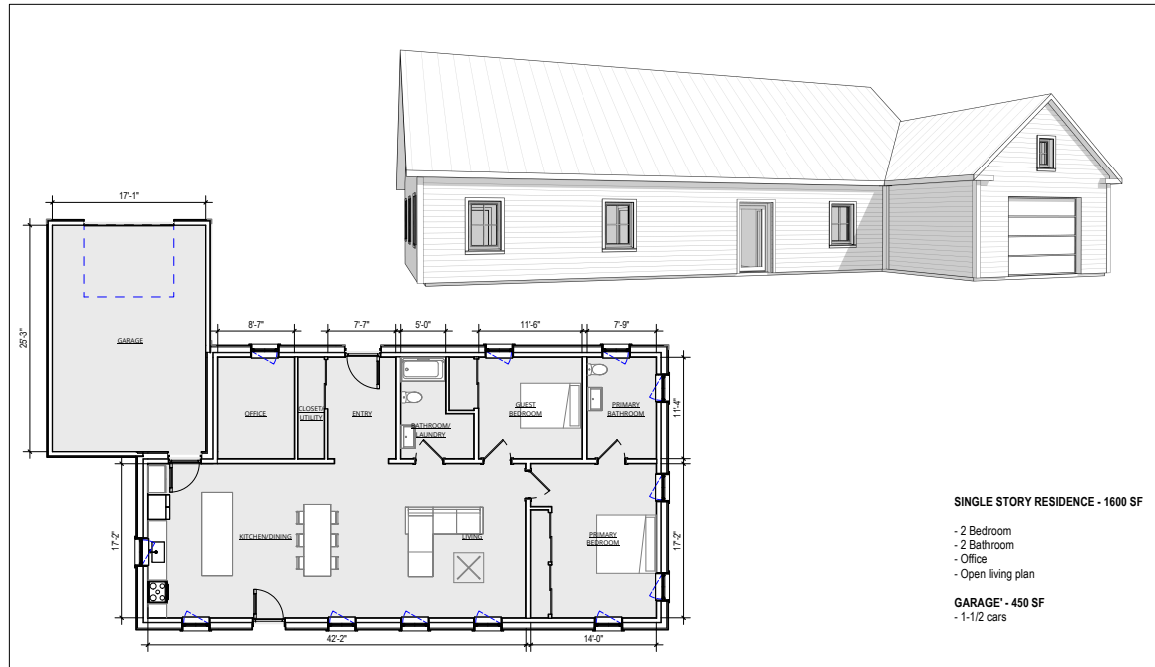
1/4" = 1'-0"

Design Guidelines



Design Guidelines

New/Improved?
8 corners
4 roof planes



2 Bedroom 2 Bath Prototype
Highland Green

Floor Plan and View
09/16/22

Design Guidelines

- Simple forms
- Walls under 9'-6" height
- No windows to the floor
- Not so many giant windows
- No moment frames, steel, or other additional structure if you can help it
- Repetition/reuse of the same design



Design Guidelines



Business Case

- More control over the process
 - Better use of labor
- *Must be thought of in terms of manufacturing*



Model Homes



2300 SF

Bedrooms: **4**
Bathrooms: **2.5**
Floors: **2**



1800 SF

Bedrooms: **3**
Bathrooms: **2.5**
Floors: **2**



1700 SF

Bedrooms: **3**
Bathrooms: **2**
Floors: **1**



1600 SF contemporary

Bedrooms: **4**
Bathrooms: **2**
Floors: **2**



1600 SF traditional

Bedrooms: **4**
Bathrooms: **2**
Floors: **2**



1500 SF

Bedrooms: **3**
Bathrooms: **1.5**
Floors: **2**

Design Guidelines



Design Guidelines



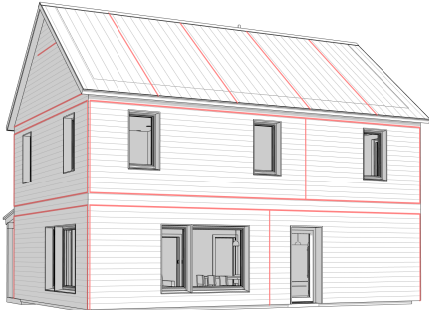
Design Guidelines



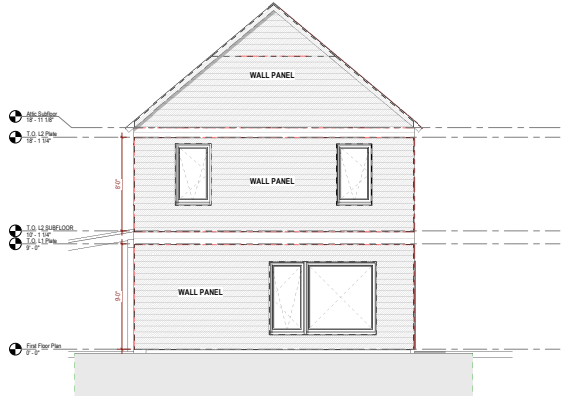
Design Guidelines



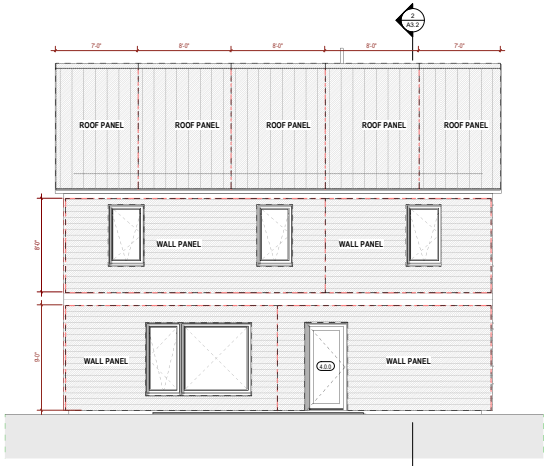
Design Guidelines



3 3D View



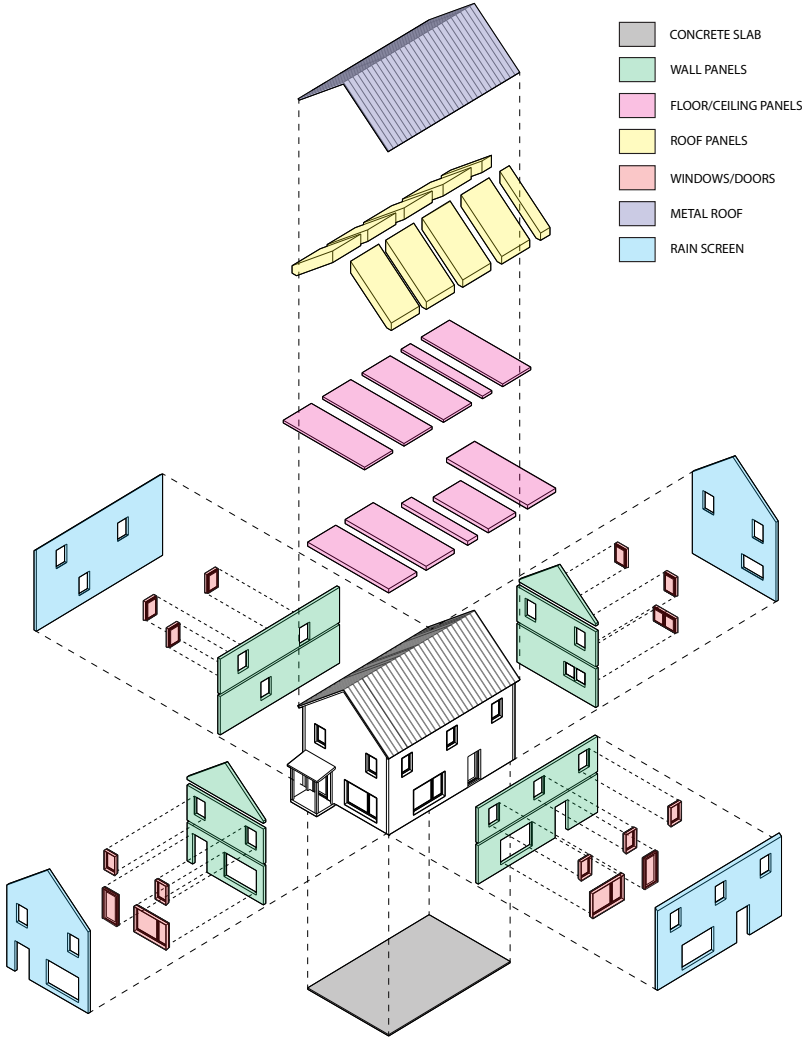
1 Elevation 3 Panelized



2 Elevation 4 Panelized



Optimized Design and Assembly



Savings of Replication

- Design: \$30,000
- Structural Engineering: \$6,000
- Shop Drawings: \$10,000
- Construction: \$40,000

- Estimated Savings: \$86,000
- Savings /SF : \$54

