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Credential ID 24842

Ontario Association of Architects

5-year Degree of Architecture

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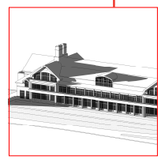
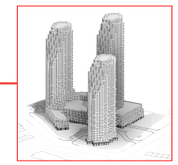
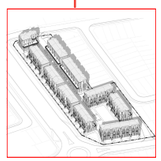
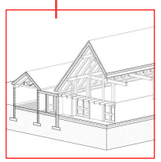
CENTENNIAL COLLEGE
ADVANCED DIPLOMA
ARCHITECTURAL TECHNOLOGY

THE UNIVERSITY OF NEWCASTLE
AUSTRALIA

Julian Smith & Associates
ARCHITECTS



Freelance Draftsman

dogwood design

DOGWOOD DESIGN


Freelance Architectural Designer

GEOFF HODGINGS ARCHITECT





01 WHAPMAGOOSTUI CULTURE CAMP

01 TIPI, COOKHOUSE & SWEATLODGE

02 GEORGE & MAIN MIXED USE

03 JOYNES & MOXLEY RESIDENCE

01 WHAPMAGOOSTUI CULTURE CAMP

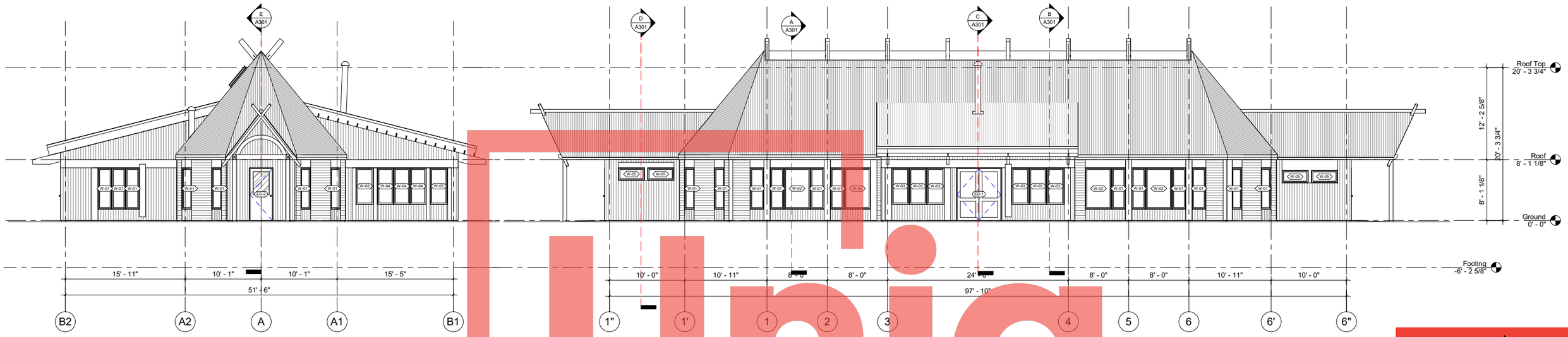
Project Type: Institutional
Project year: 2023
Area: 6, 525 sqft total building footprint
Location: Whapmagoostui, Quebec, Canada
Company: Geoff Hodgins Architects

The Cuture Camp is constructed in Whapmagoostui, a Cree village municipality in the territory of Eeyou Istchee in northern Quebec. It includes 4 buildings, a Sheptuan, Tipi, Sweatlodge and Cookhouse, which are inspired by the traditional buildings of the Cree community. Although, woods and local materials will be mostly used, the project aims to be more durable for long-term use in stead of originally seasonal needs. In this project, I helped the architect to prepare all CAD drawings from his hand sketches and instruction to have a review set for community meeting then a permit set using Revit

Traditional seasonal Shaptuan Smoke House reconstructed in another Cree community traditionally using wood poles for the structure and canvas for the finish

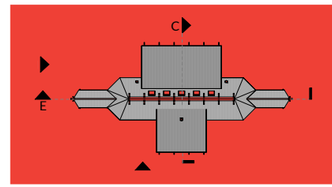
SHAPTUAN

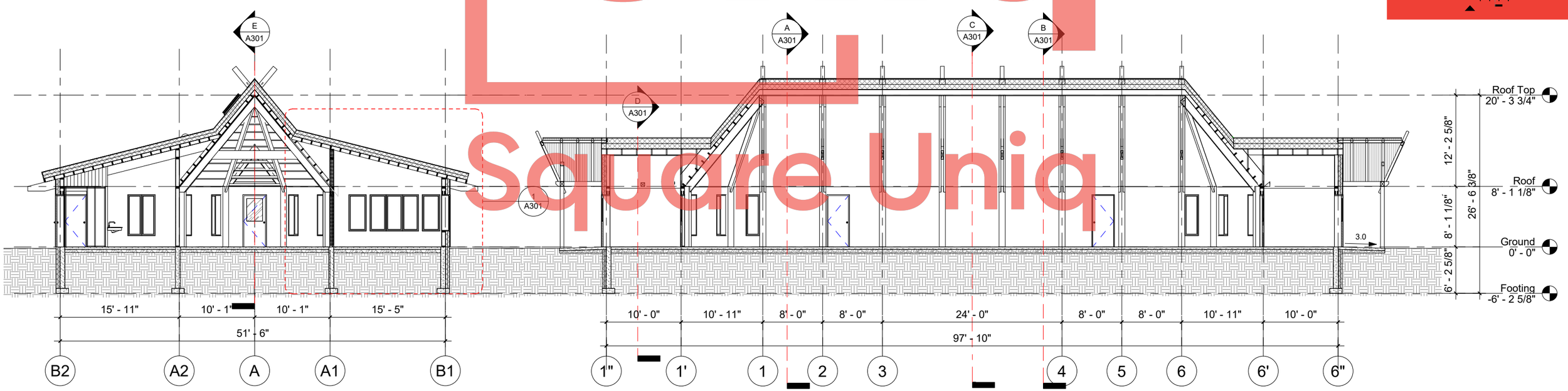
1688 sqft



West Elevation

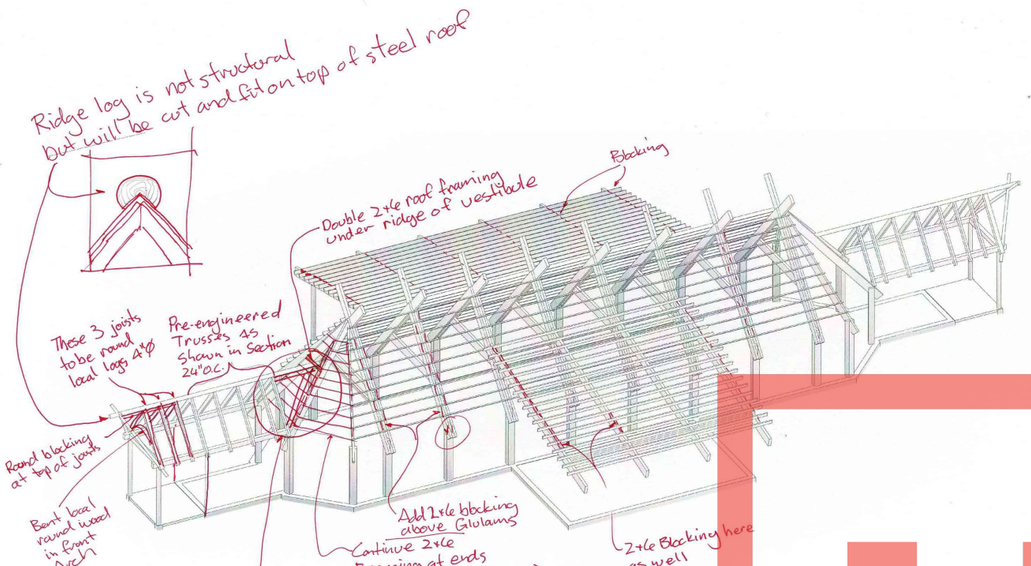
South Elevation

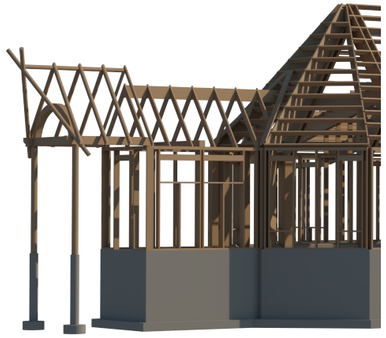


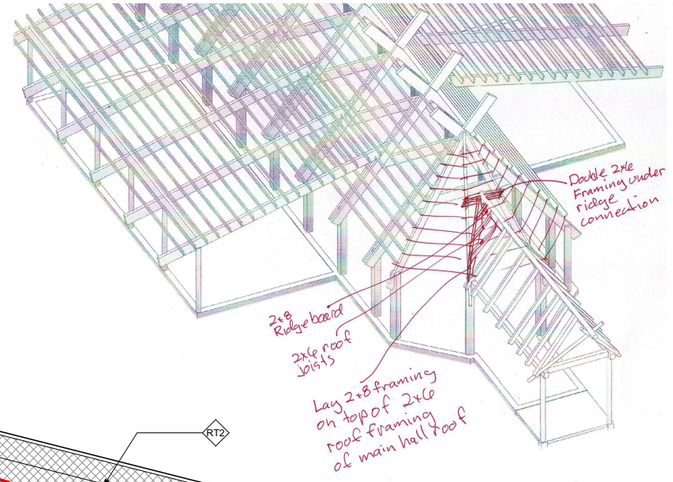


Section C

Section E



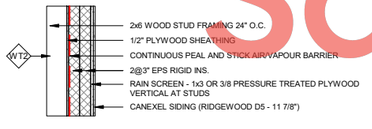




I was looking at the LVL extensions at the top of the roof. The architect wanted them to be fastened to the roof and not pierce it, so I have been coordinated with him and structural consultants more at this detail, which is shown on the hand markups. Later on, the rafter tails were eliminated and replaced with non-structural wooden figures.

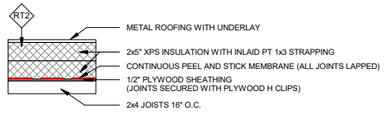
WT1 - EXTERIOR WALL

WT2 - EXTERIOR WALL

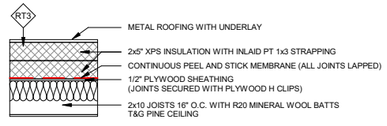


WT3 - FOUNDATION WALL

SIDE ROOF

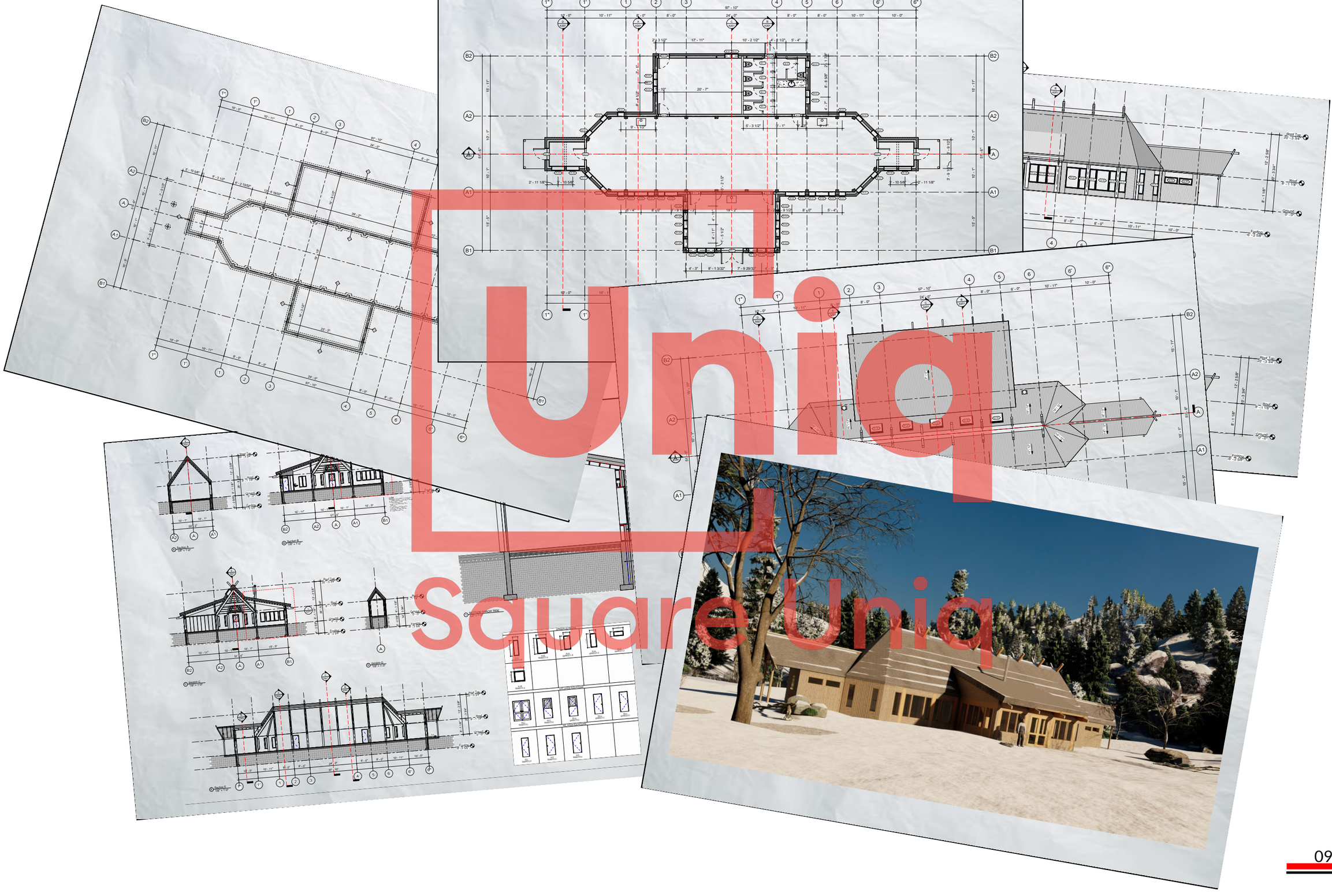


MAIN ROOF



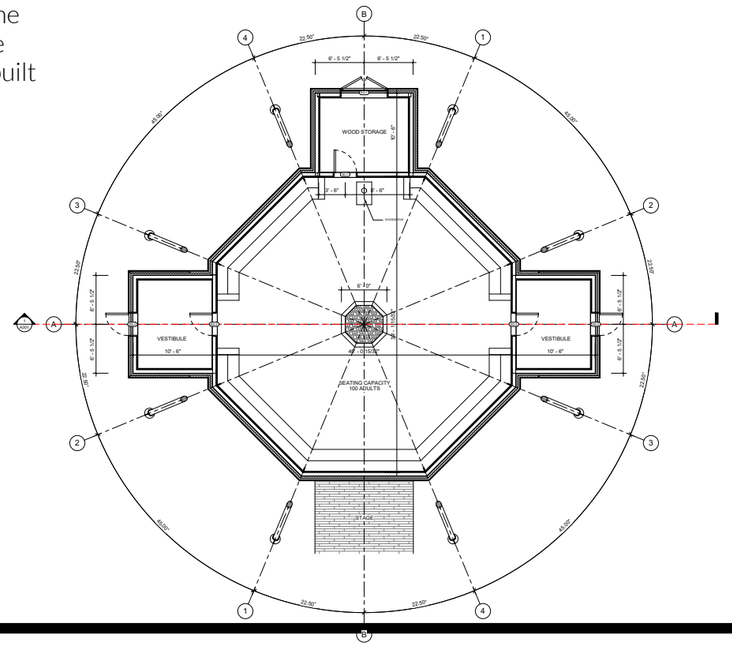
1 SECTION THROW SIDE

Because the project is located in a remote area, inaccessible by normal means of transport, mainly using airplanes or boats, each architectural and structural component needs to be carefully detailed and calculated. The requirement is to focus on developing BIM Modeling with wooden structures.

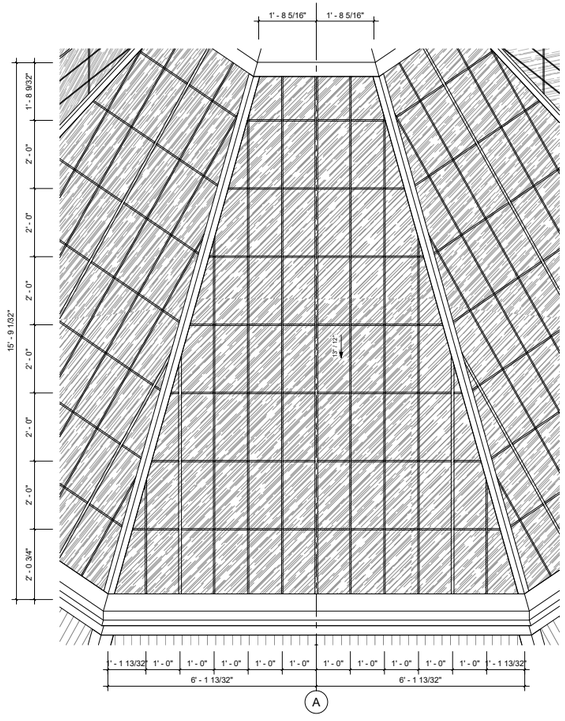


TIPI 1600 sqft

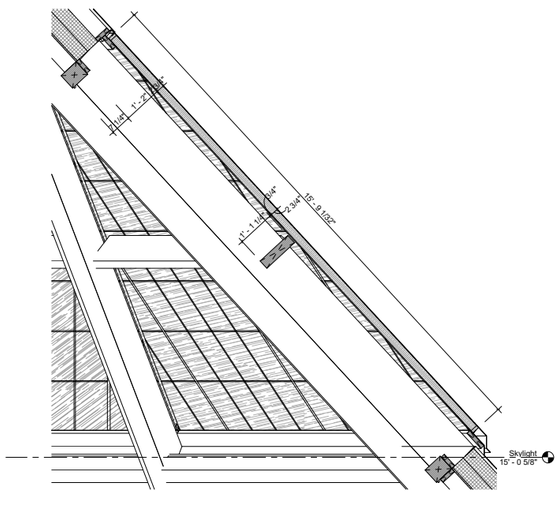
Temporary Tipi structure at the site where the camp will be built



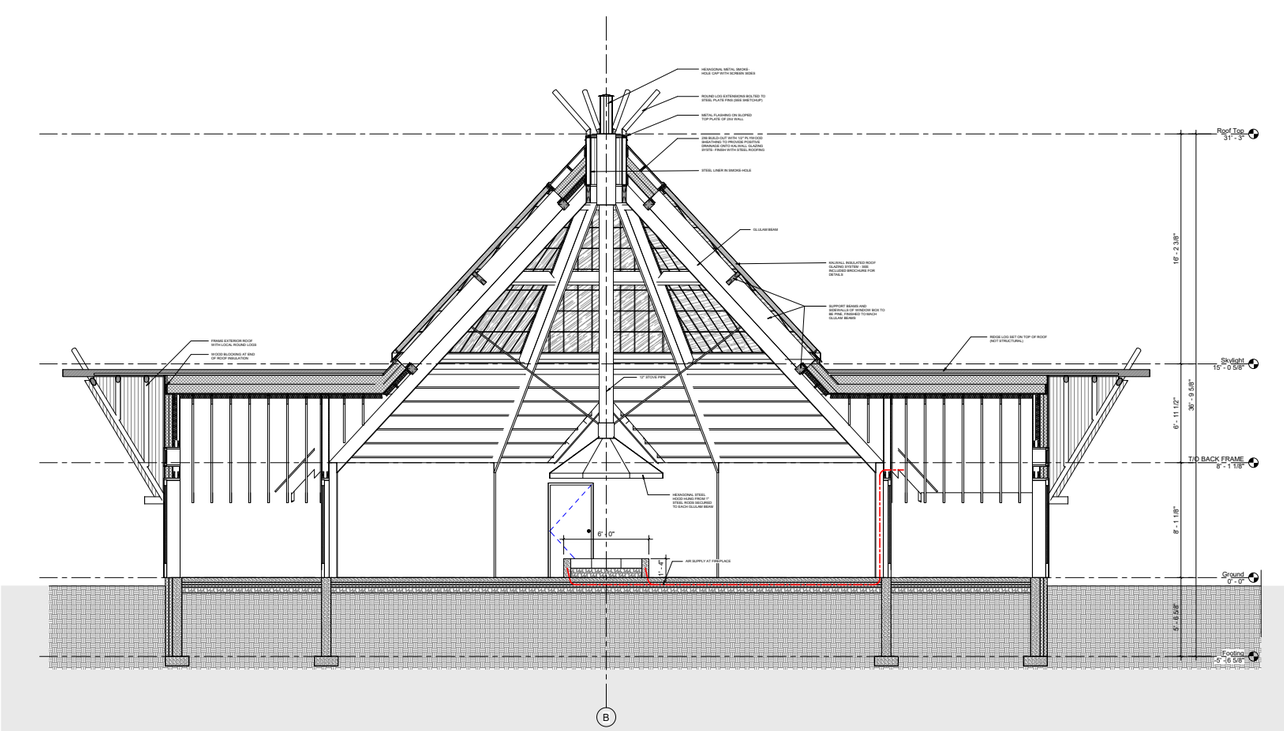
The biggest challenge of the Tipi is to apply glazing roof system into the traditional shape of it. There are support beams and sidewalls of window box to be pined, finished to match glulam beams. Also, the glazing panels needs to be well coordinated with Kalwall supplier.

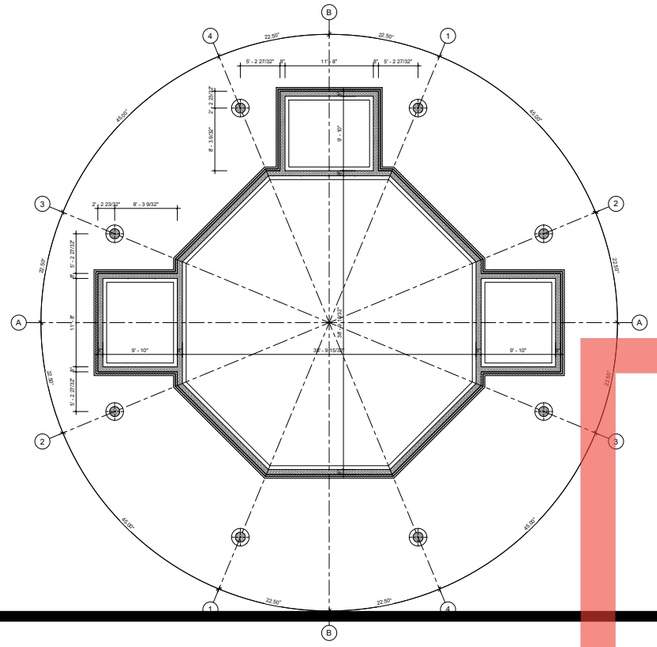


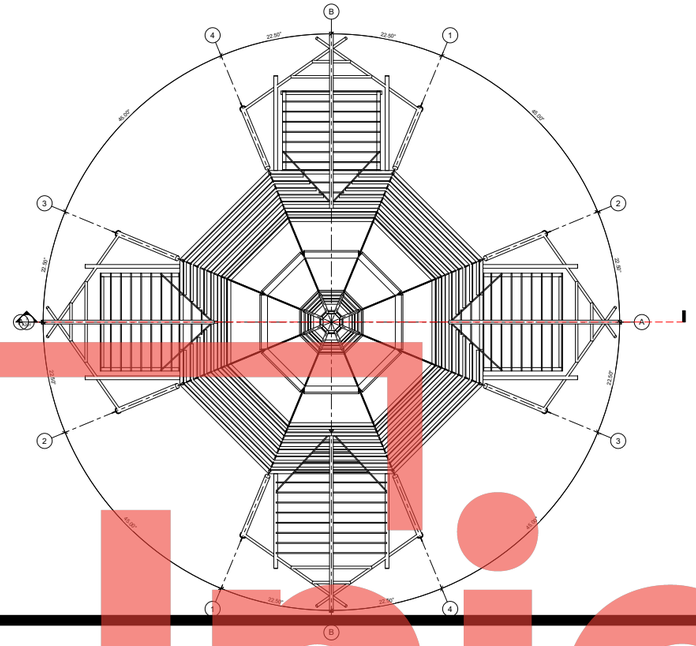
1 PANEL DETAIL
3/4" = 1'-0"

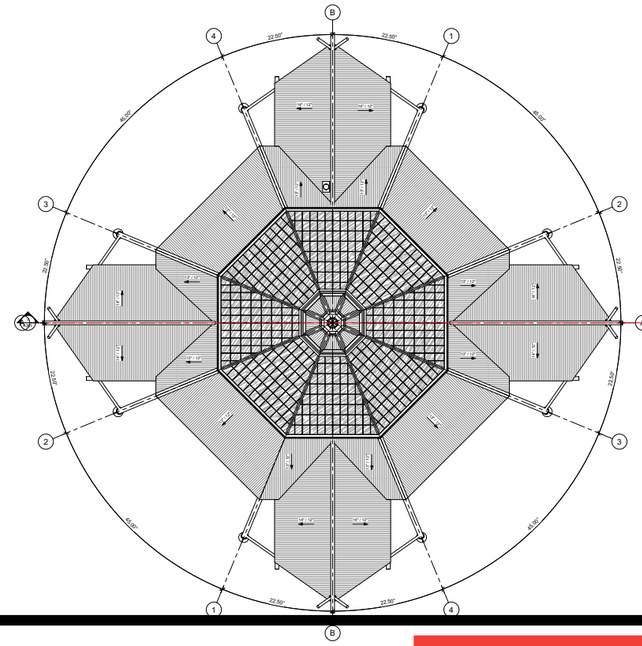


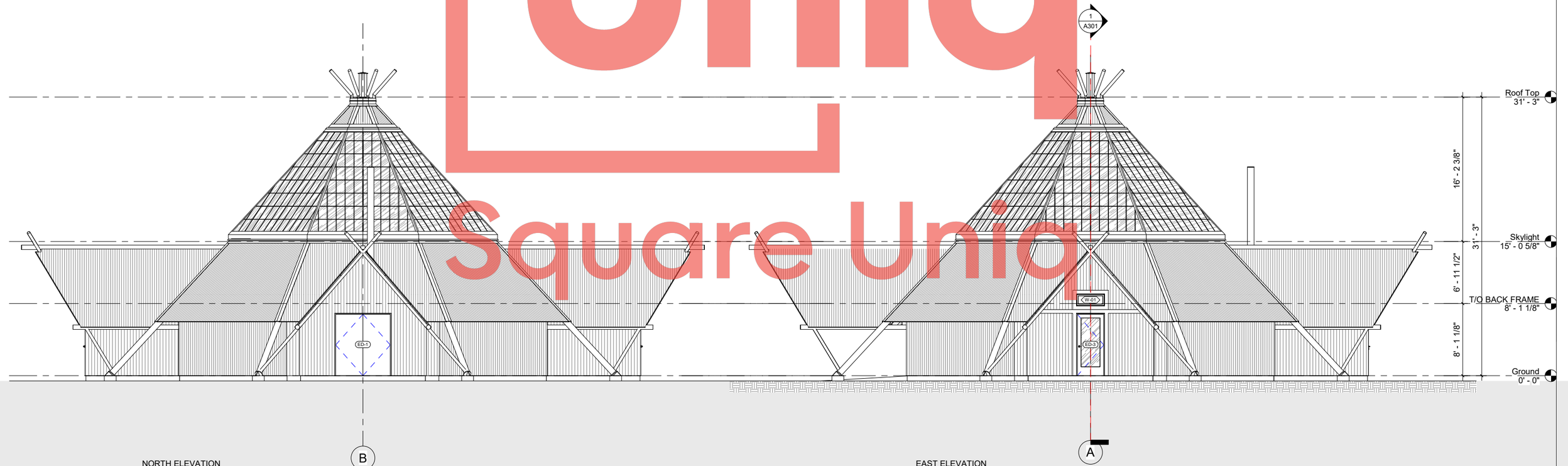
2 PANEL DETAIL
3/4" = 1'-0"









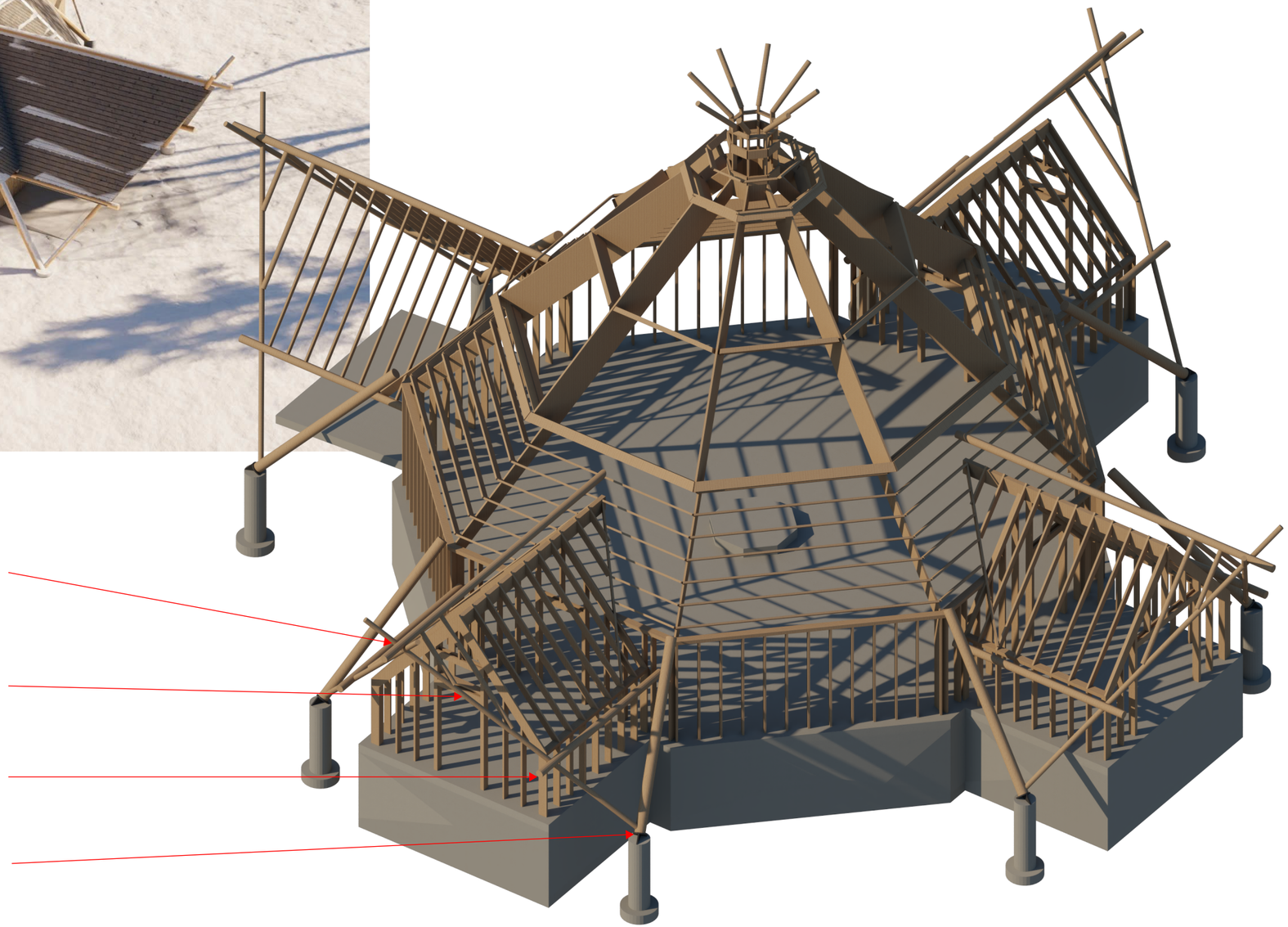


NORTH ELEVATION

EAST ELEVATION

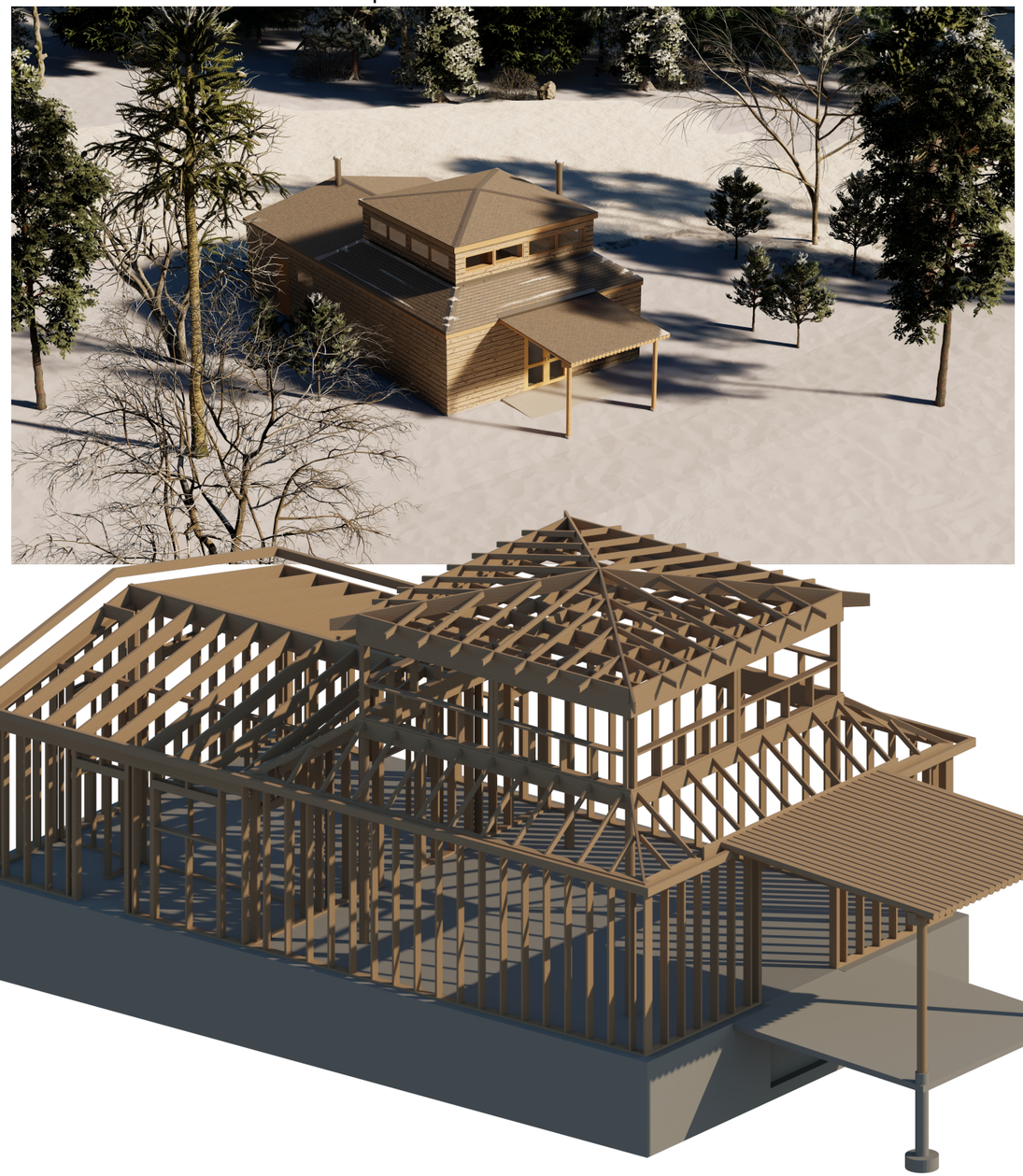
This is one of my most favourite project as we can go beyond 3-dimensional space to bring the sense of light, sound and smell to architecture. The traditional shape are customized with skylight panels for enhancing natural lighting, accompanying with the sound and smell of fireplace. The building will drive people to the vibe they are seeking in this area.

The entry roof canopies over the entrances and out-side stage are supported by round poles. To create the pole-base structure, I followed these steps to work out the angles for the intersecting round poles.



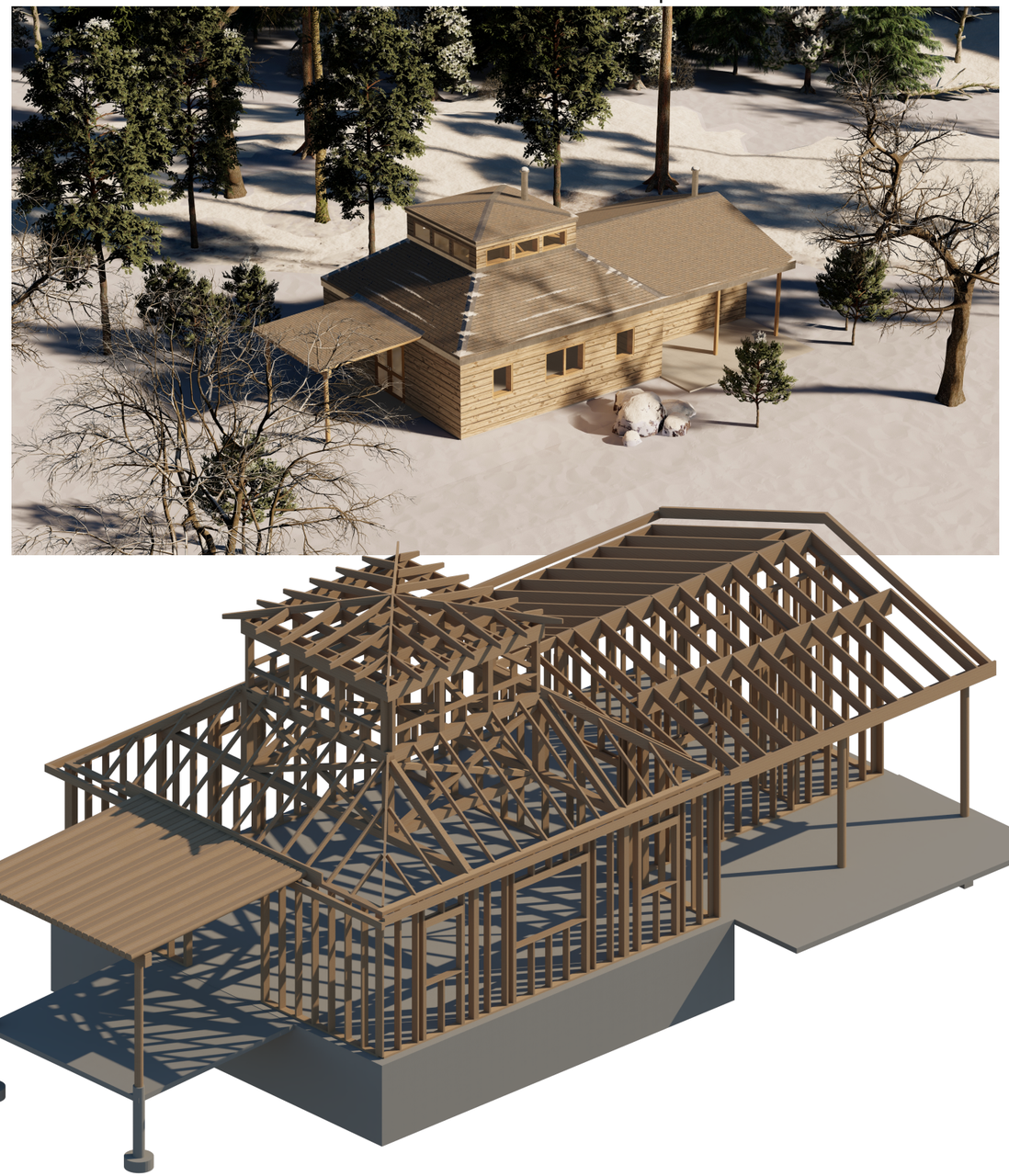
SWEATLODGE

1037 sqft



COOKHOUSE

1037 sqft



The two small buildings have similar size and shape but different functions. They were designed with log walls initially but requested to change to similar envelope as Shaptuan with a few modifications including the elimination of the batt insulation and interior sheathing. They required minimum R25 rigid insulation for wall and R50 for roof.

02

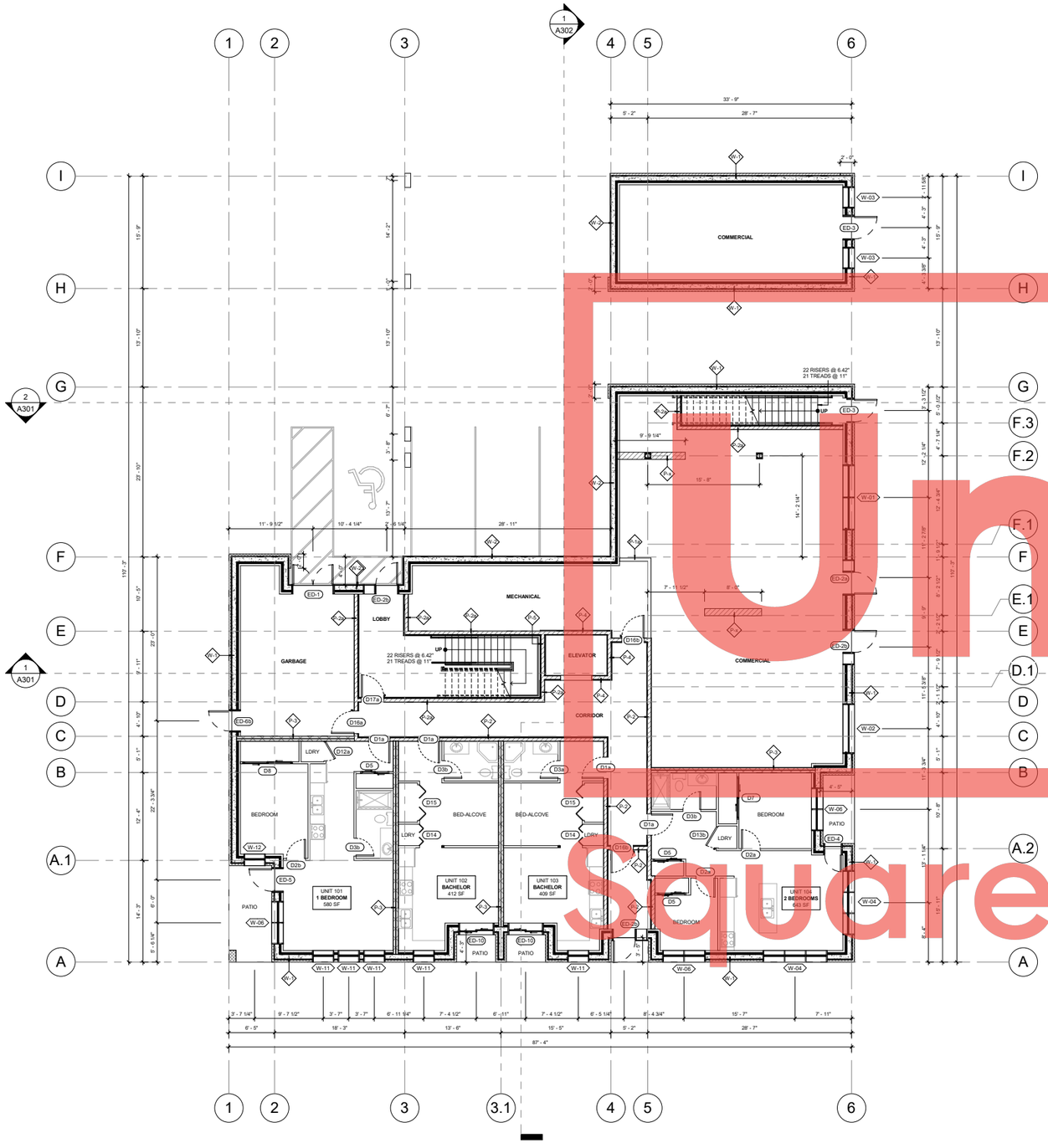
GEORGE AND MAIN MIXED USE

GEORGE AND MAIN MIXED USE
GEOFF HODGINS ARCHITECT, PERTH, ON

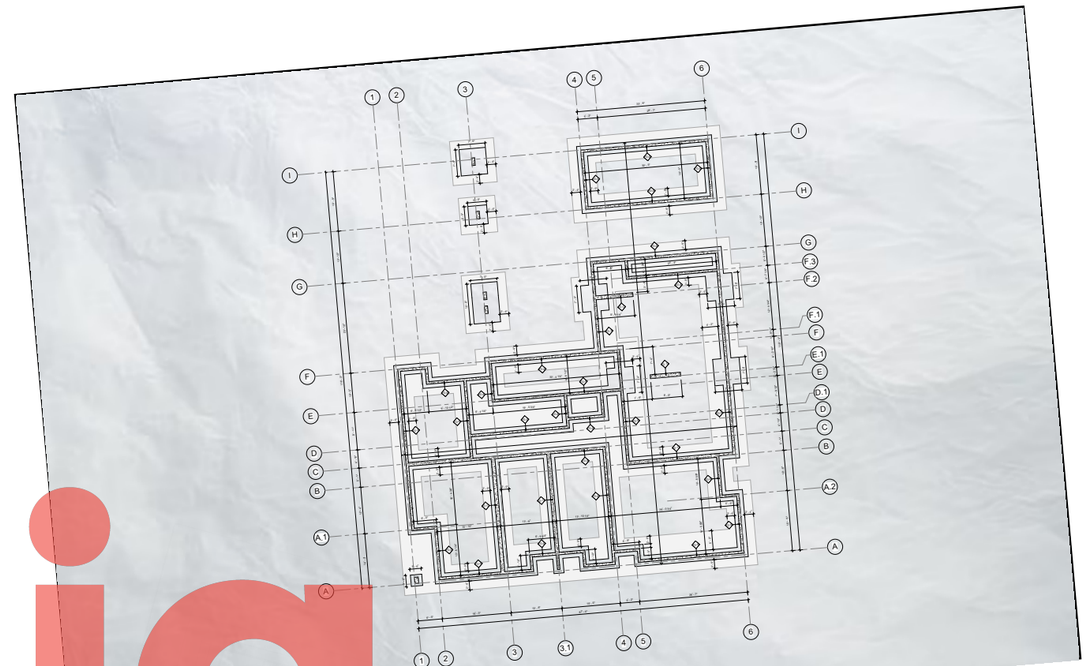
Item	Ontario Building Code Data Matrix Part 3 & 9				O.B.C. Reference			
1	Project Description:	☐ Change of Use ☐ Addition ■ New ☐ Alteration	☐ Part 11	■ Part 3				
2	Major Occupancy(s):	Group C & E						
3	Building Area - ft² (m²)	Total: 8,595 (798)						
4	Gross Area - ft² (m²)	Total: 39,843 (3, 701)						
5	Number of Storeys	Above Grade: 5	Below Grade: 0					
6	Height of Building ft (m):	34'-5" (10.5)						
7	Number of Streets/Access Routers:							
8	Building Classification:							
9	Sprinkler System Proposed	☐ Entire Building ☐ Basement Only ☐ in lieu of roof rating ■ Not Required						
10	Standpipe Required	☐ Yes	■ No					
11	Fire Alarm Required	■ Yes	☐ No					
13	High Building	☐ Yes	■ No					
14	Permitted Construction	■ Combustible	■ Non-combustible					
	Actual Construction	■ Combustible	☐ Non-combustible					
15	Mezzanine(s) Area (sq. m.)	N/A						
16	Occupant load based on:	☐ sq. m/person	■ design of building					
	1st Floor	Group E	3.7 sq.m/person	Occupancy Load 145	persons			
	2nd Floor	Group C		Occupancy Load 56	persons			
	3rd Floor	Group C		Occupancy Load 56	persons			
	4th Floor	Group C		Occupancy Load 56	persons			
	5th Floor	Group C		Occupancy Load 32	persons			
17	Barrier-free	■ Yes	☐ No	(As Required)				
18	Hazardous Substances	☐ Yes	■ No					
19	Required Fire Resistance Rating (FRR)	FRR Horizontal Assemblies		Listed Design or SG-2				
		Floor	1 Hour	See Assemblies				
		Roof	1 Hour	See Assemblies				
		Mezzanine	N/A					
		FRR of Support. Member		Listed Design or SG-2				
		Floor	1 Hour	See Assemblies				
		Roof	1 Hour	See Assemblies				
		Mezzanine	N/A					
20	Spatial Separation - Construction of Exterior Walls							

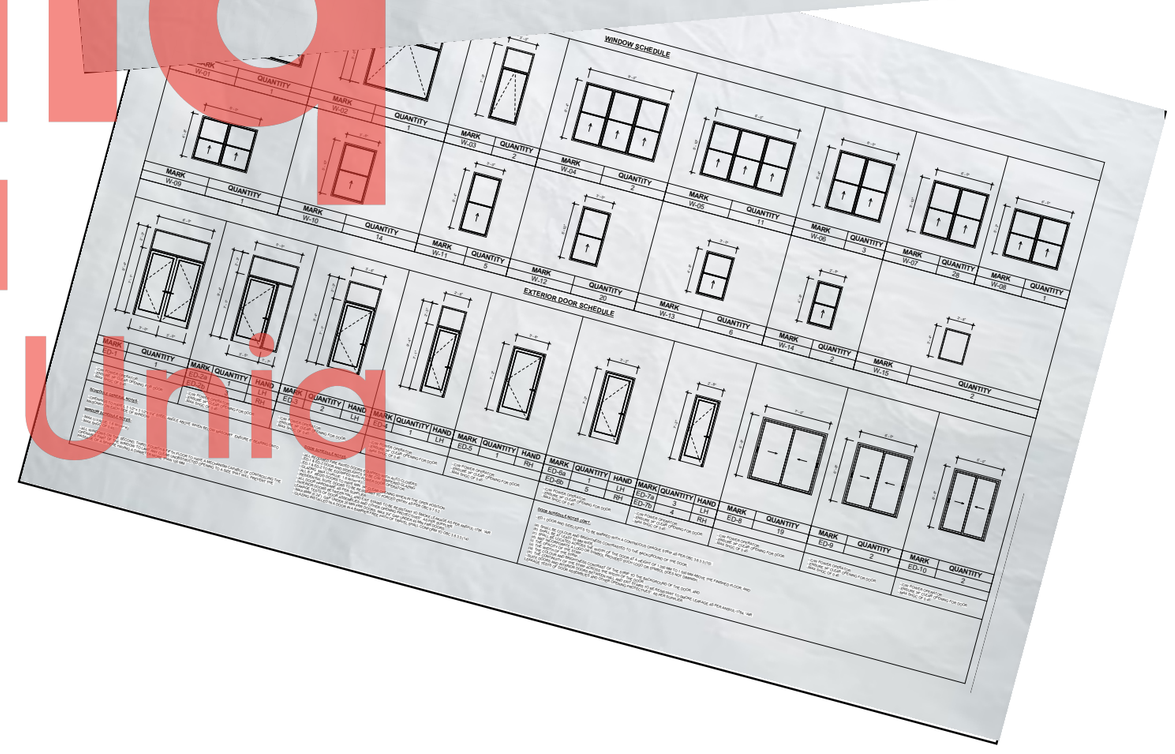
Wall / Fire Compartment	Area of EBF (sq. m.)	L.D. (m)	Permitted Max. % of Openings	Proposed % of Openings	FRR (Hrs)	Listed Design or Description	Comb. Both	Combi. Constr. Norm. Dwelling	Non-comb. Both
---									

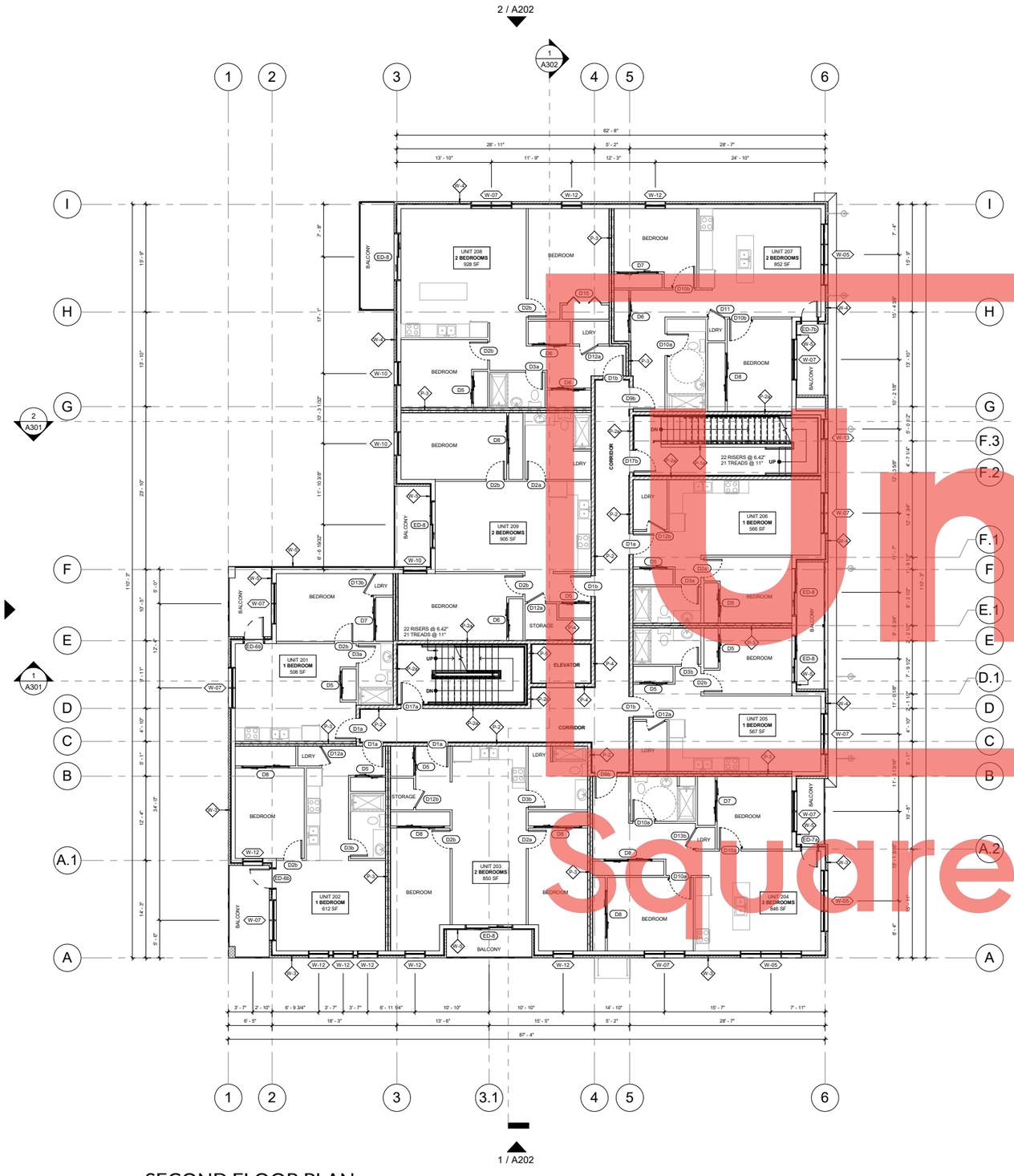
The 5-story mixed project located at the corner of George Street North and Main Street West in the Town of Smith Falls, Ontario. In 2024, I supported the architect from the concept stage to construction drawings. I started building conceptual 3D model from hand sketches, CAD site plan, Google Street to have the shadow study submission for Planning Department. After that, beside developing the drawings and models, I also prepared the Ontario Building Code Data Matrix for building permit.



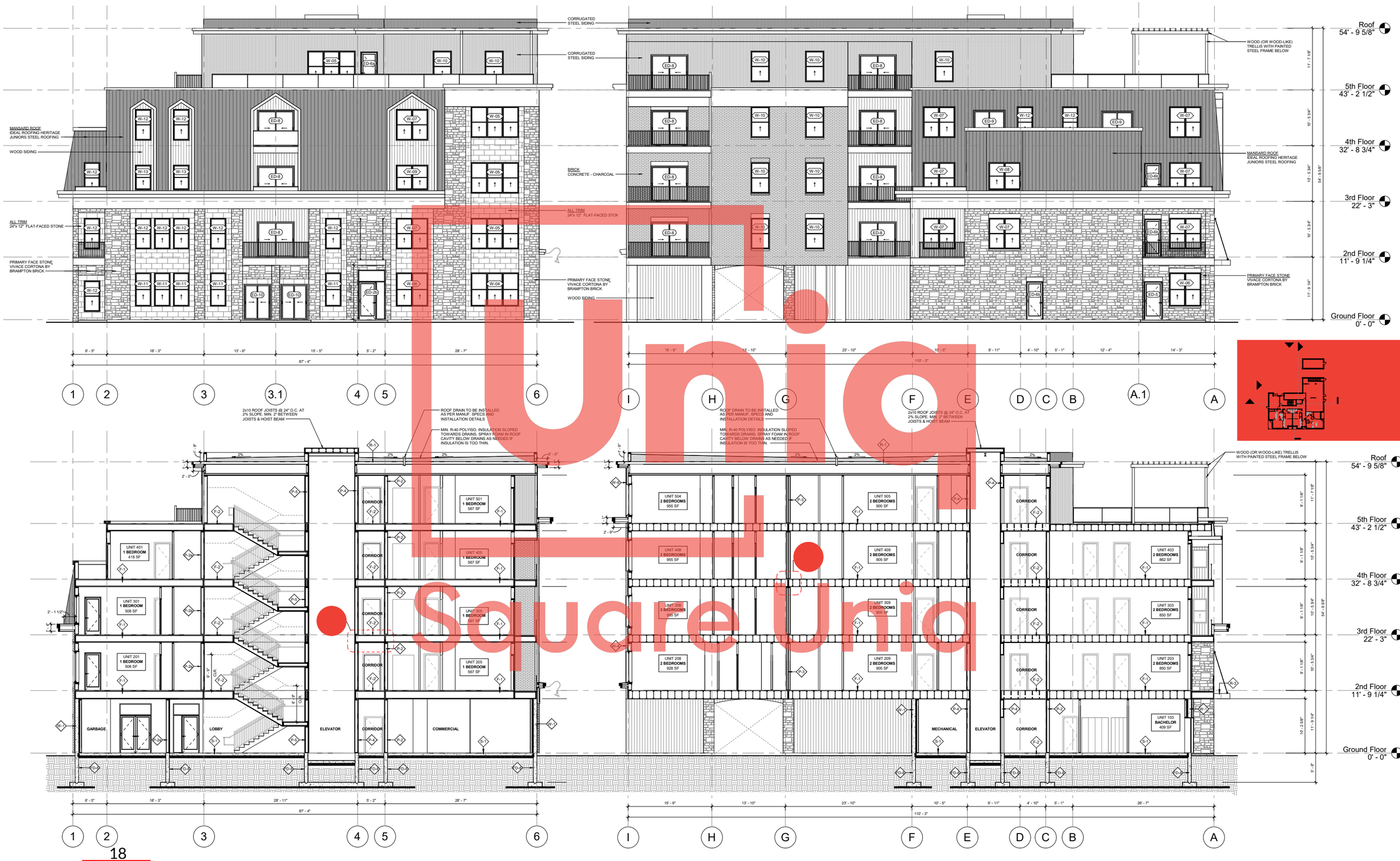
GROUND FLOOR PLAN

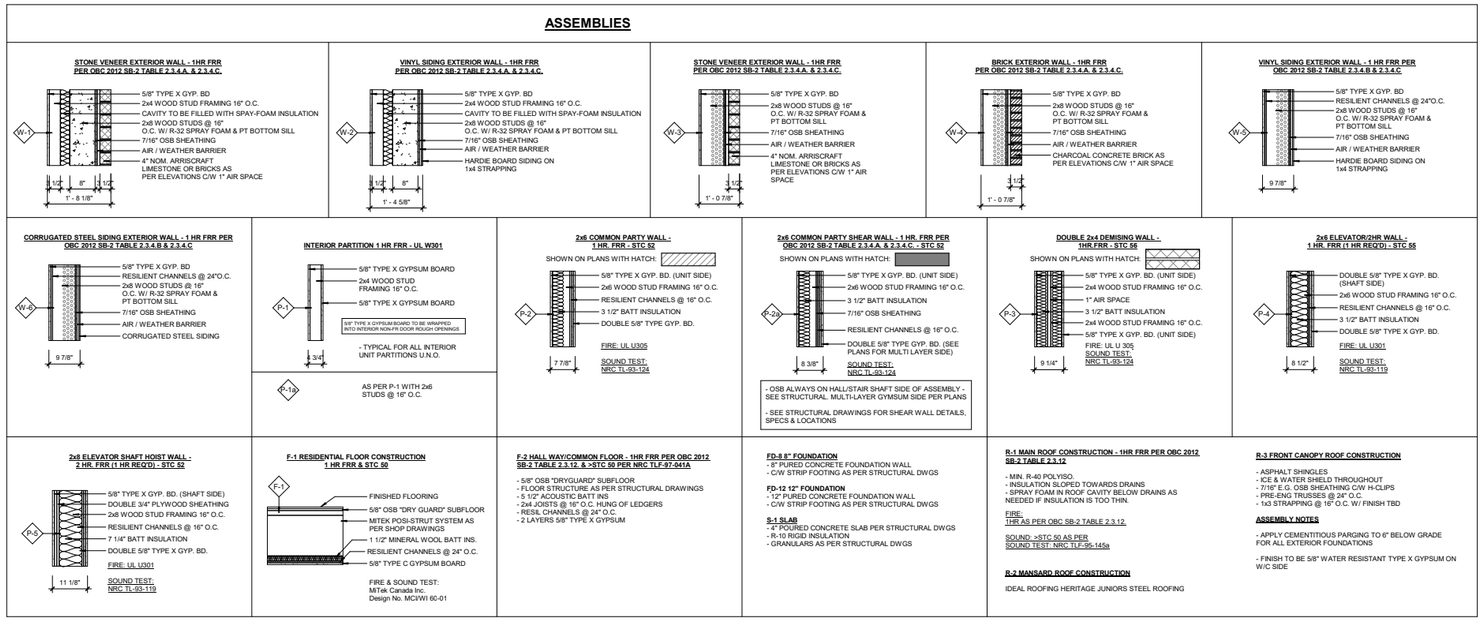




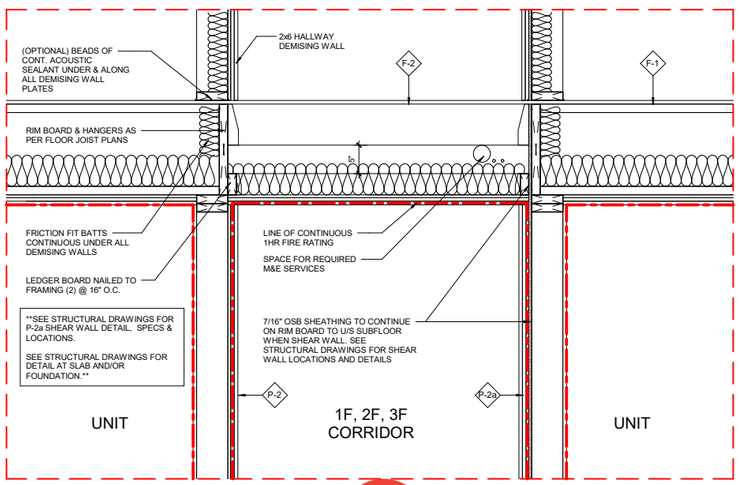


SECOND FLOOR PLAN

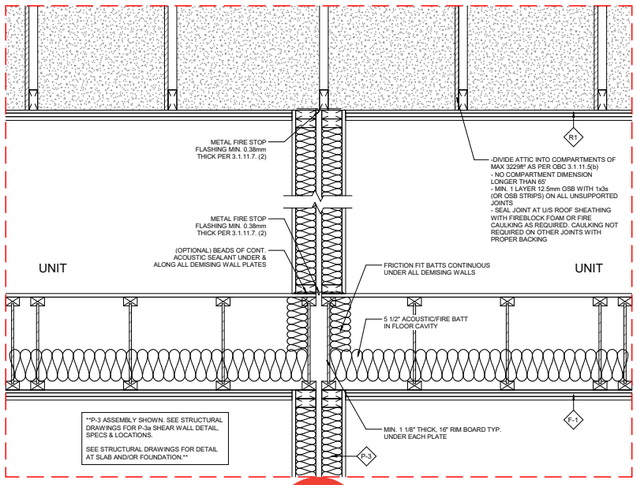

MANSARD ROOF
IDEAL ROOFING HERITAGE
JUNIORS STEEL ROOFING
WOOD SIDING
ALL TRIM
24"x 12" FLAT-FACED STONE
PRIMARY FACE STONE
VIVACE CORTONA BY
BRAMPTON BRICK
CORRUGATED
STEEL SIDING
BRICK
CONCRETE - CHARCOAL
WOOD (OR WOOD-LIKE)
TRELLIS WITH PAINTED
STEEL FRAME BELOW
Roof
54' - 9 5/8"
5th Floor
43' - 2 1/2"
4th Floor
32' - 8 3/4"
3rd Floor
22' - 3"
2nd Floor
11' - 9 1/4"
Ground Floor
0' - 0"
87' - 4"
110' - 3"
1
2
3
3.1
4
5
6
I
H
G
F
E
D
C
B
A.1
A
2x10 ROOF JOISTS @ 24" O.C. AT
2% SLOPE, MIN. 2" BETWEEN
JOISTS & HOIST BEAM
ROOF DRAIN TO BE INSTALLED
AS PER MANUF. SPECS AND
INSTALLATION DETAILS
MIN. R-40 POLYISO. INSULATION SLOPED
TOWARDS DRAINS. SPRAY FOAM IN ROOF
CAVITY BELOW DRAINS AS NEEDED IF
INSULATION IS TOO THIN.
UNIT 401
1 BEDROOM
418 SF
UNIT 301
1 BEDROOM
508 SF
UNIT 201
1 BEDROOM
508 SF
UNIT 501
1 BEDROOM
567 SF
UNIT 405
1 BEDROOM
567 SF
UNIT 305
1 BEDROOM
567 SF
UNIT 205
1 BEDROOM
567 SF
UNIT 504
2 BEDROOMS
955 SF
UNIT 408
2 BEDROOMS
955 SF
UNIT 308
2 BEDROOMS
955 SF
UNIT 208
2 BEDROOMS
928 SF
UNIT 505
2 BEDROOMS
900 SF
UNIT 409
2 BEDROOMS
905 SF
UNIT 309
2 BEDROOMS
905 SF
UNIT 209
2 BEDROOMS
905 SF
UNIT 403
2 BEDROOMS
862 SF
UNIT 303
2 BEDROOMS
850 SF
UNIT 203
2 BEDROOMS
850 SF
UNIT 103
BACHELOR
409 SF
CORRIDOR
GARBAGE
LOBBY
ELEVATOR
COMMERCIAL
MECHANICAL
CLR



The detail section of hallway joists and unit demissing walls clearly shows how they are connected, wall assemblies (different between party wall P-2 and party shear wall P-2a, which is added OSB sheathing) and especially fire rated.

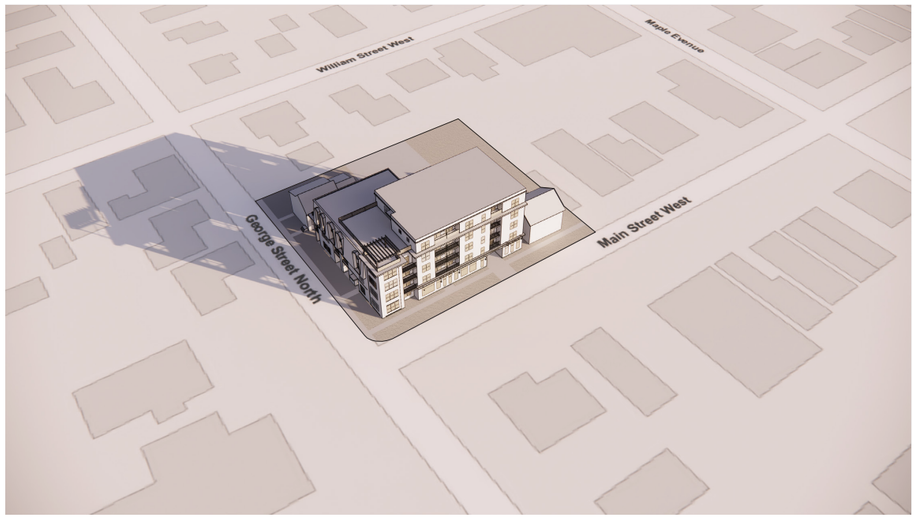


The detail section of residential floor and demissing wal P-3 shows the metal fire stop to prevent the fire from floor to floor, and the devide attic into compartments of max 3229 sqft



I produced a Shadow Study to show how this project would affect the neighbouring properties. To create the Shadow Study, we need to orient and locate the model correctly so that we can create accurate shadow predictions for this location in Smiths Falls. The model illustrates the shadow that will be cast by the proposed structures on June 21, September 21 and December 21 at 9:00 am., 12:00 pm. and 3:00 pm

December 21



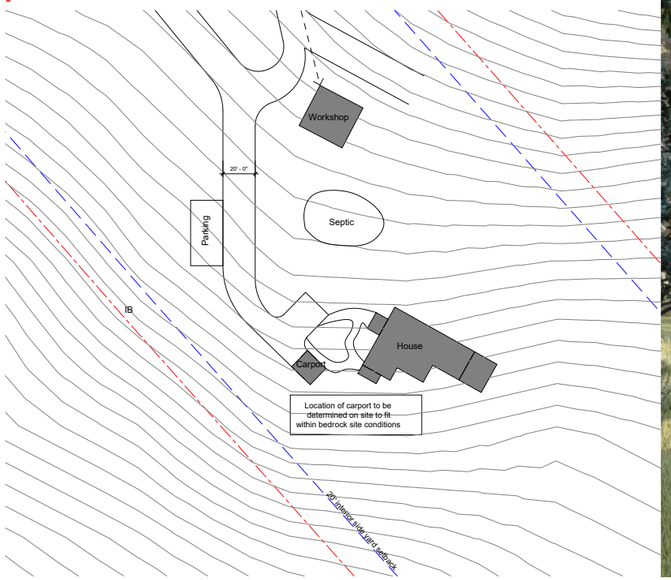
9 AM

12 PM

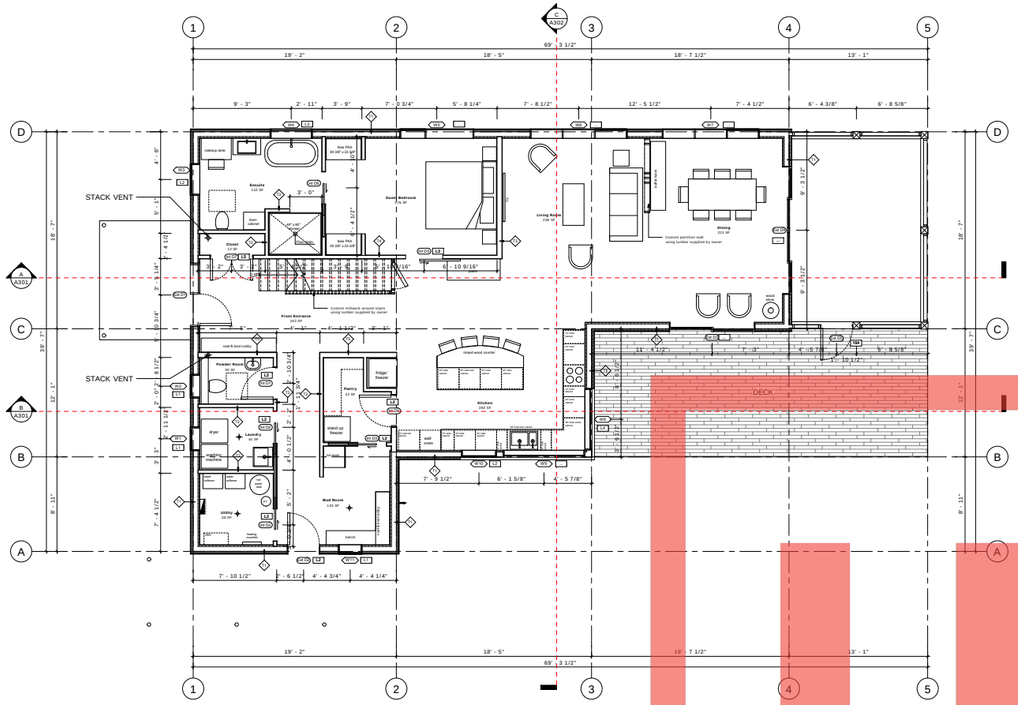
03 JOYNES AND MOXLEY RESIDENCE

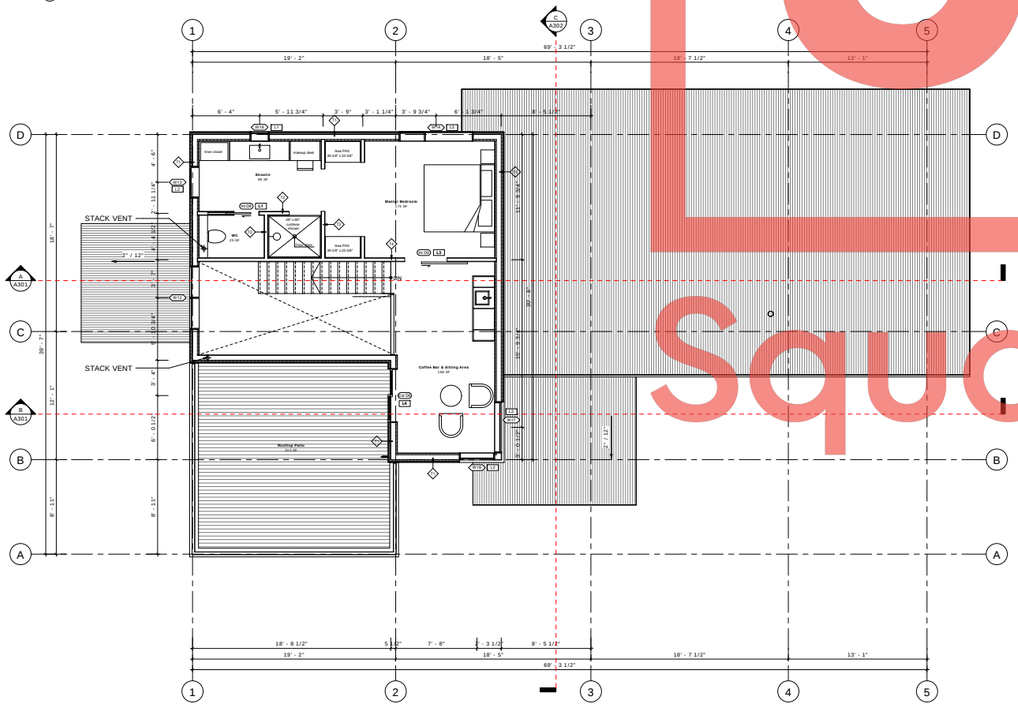
Project Type: Residential
Project year: 2024
Area: 1155 sqft
Location: Mississippi Mills, Ontario, Canada
Company: Dogwood Design

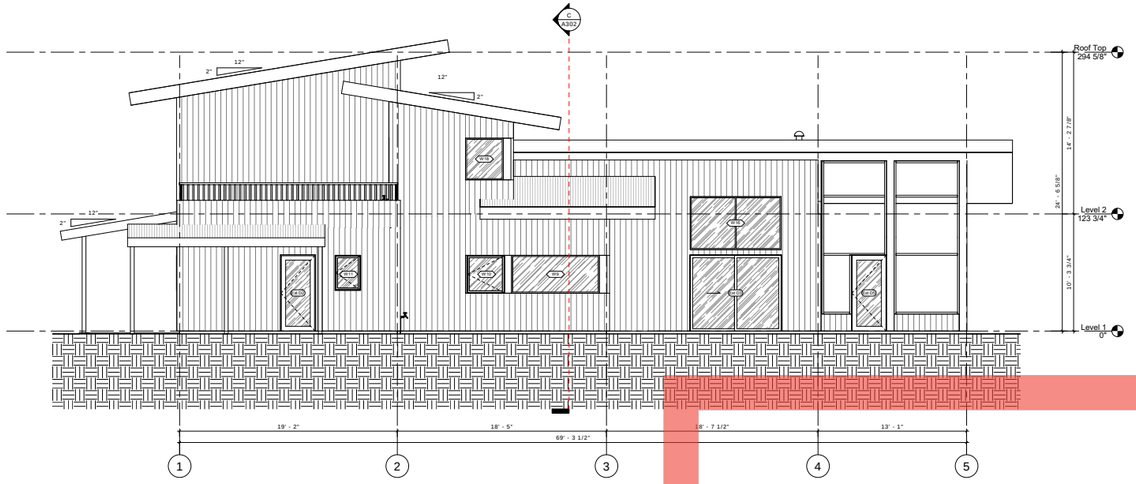
The project in the rural area includes a house and a workshop. They are built from wood with typical Canadian elements including wall studs, roof joists and trusses. The project has three revisions with different roof options and two foundation solutions. Each option has pros and cons in aesthetic and structural means



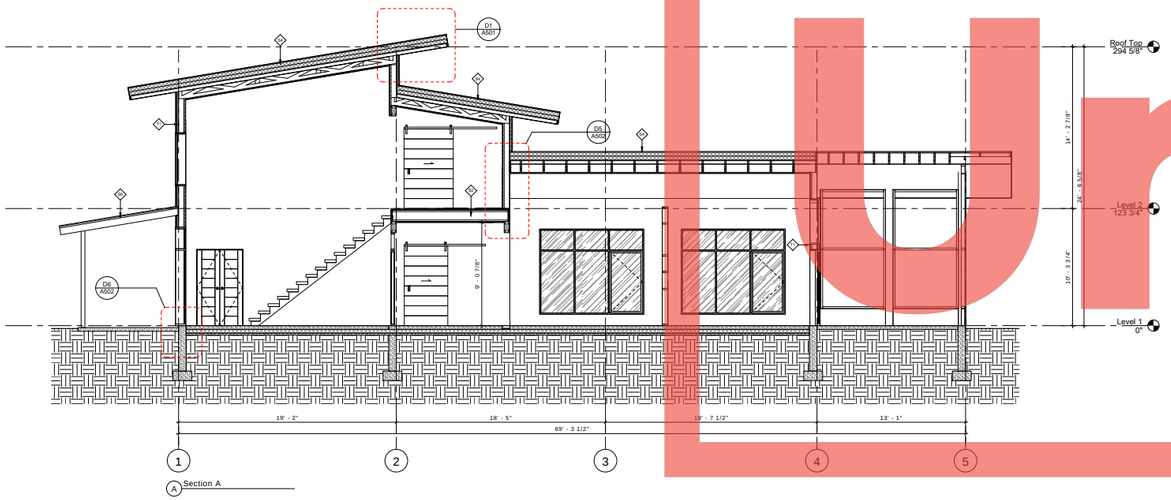

Square Uniq



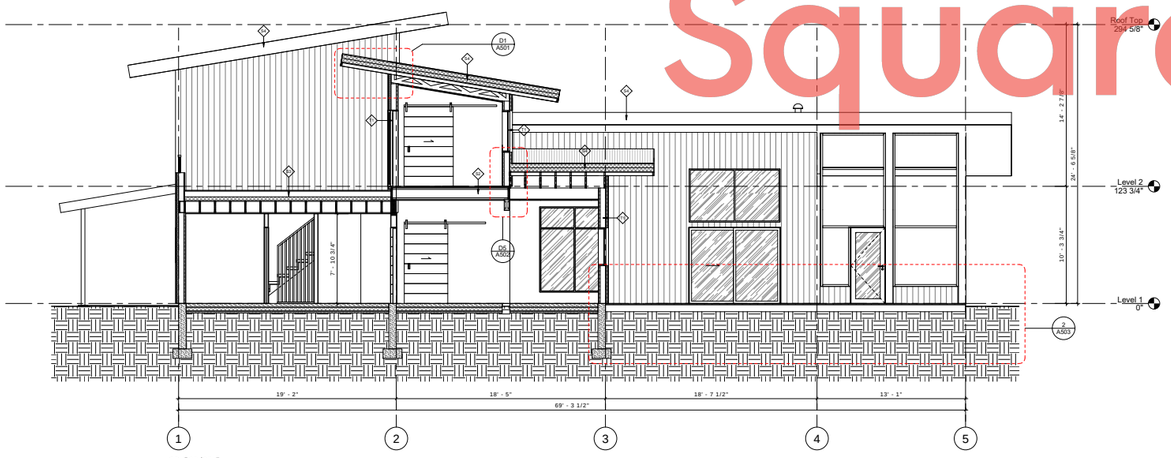




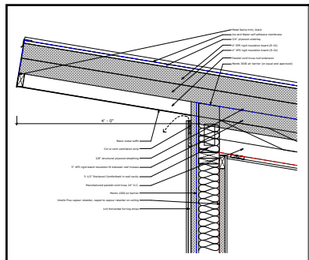
1 South West Elevation



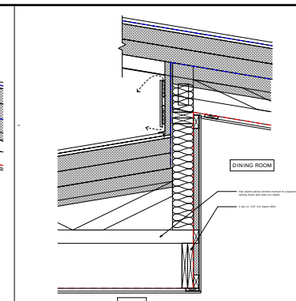
A Section A



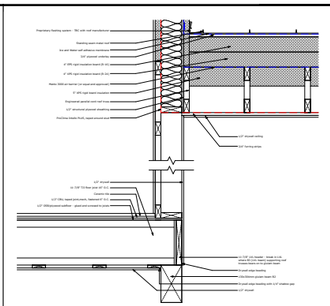
B Section B



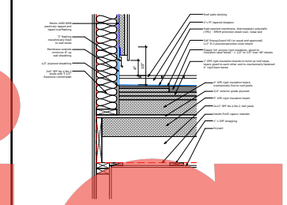
EAVE/RIDGE DETAIL
SCALE: 1 1/2" = 1'-0"



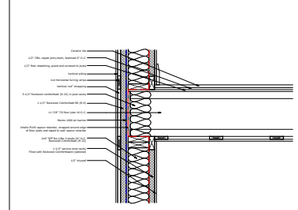
Clerestory roof detail
SCALE: 1 1/2" = 1'-0"



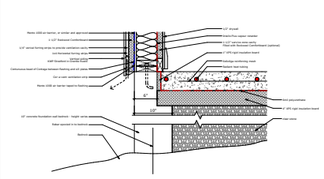
SIDE WALL & BEAM DETAIL
SCALE: 1 1/2" = 1'-0"



ROOF PATIO DECK TO EXTERIOR WALL DETAIL
SCALE: 1 1/2" = 1'-0"

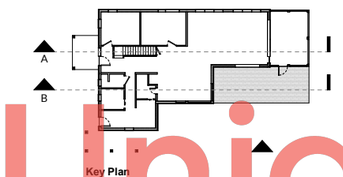


ROOF PATIO DECK TO INTERMEDIATE FLOOR DETAIL
SCALE: 1 1/2" = 1'-0"

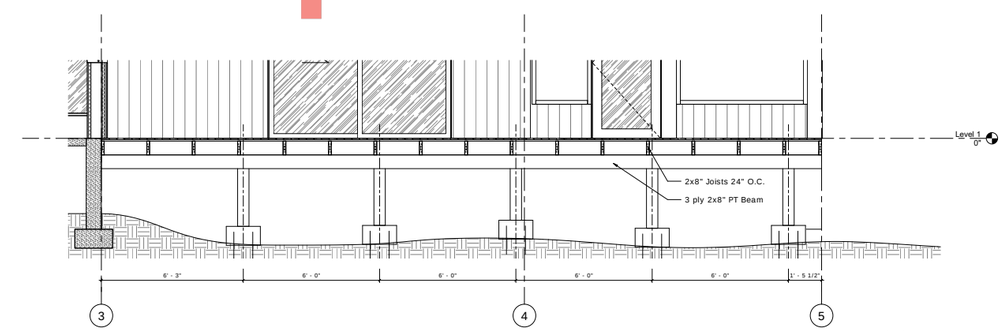


FOUNDATION/WALL DETAIL
SCALE: 1 1/2" = 1'-0"

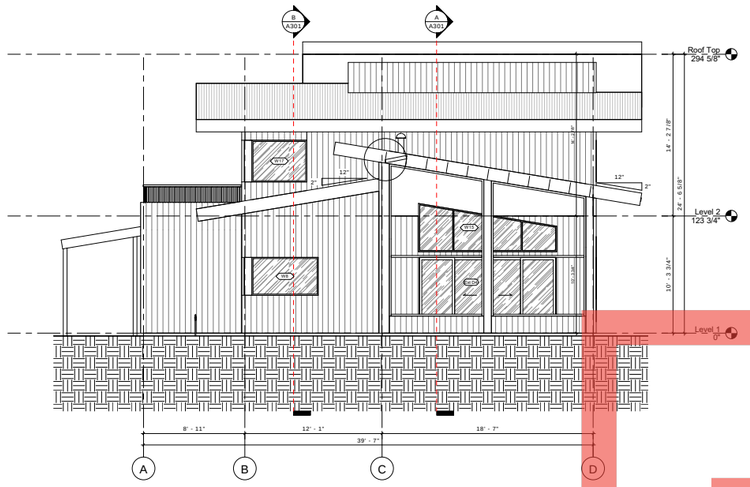
We decided to go with skillion and lean-to roofs with foundation walls. All section details indicate the joints between slabs, roofs and walls. The key thing is continuous vapour barriers and insulation running around the building envelope. There is a radiant heat tubing system embedded in the ground floor in order to heat the floor more evenly.



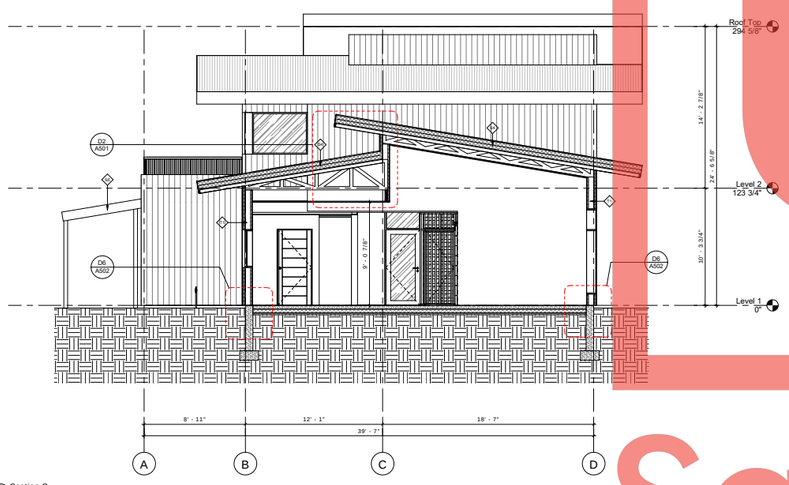
Key Plan



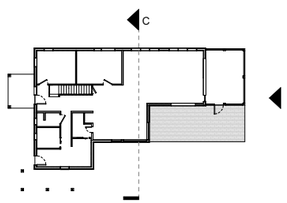
2 Deck Section Detail
1/2" = 1'-0"



2 South East Elevation

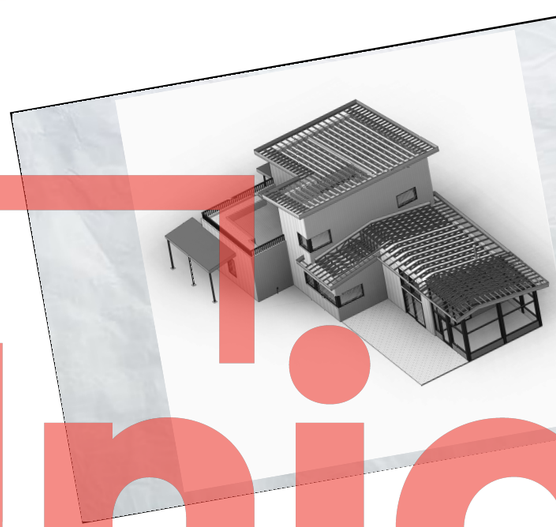


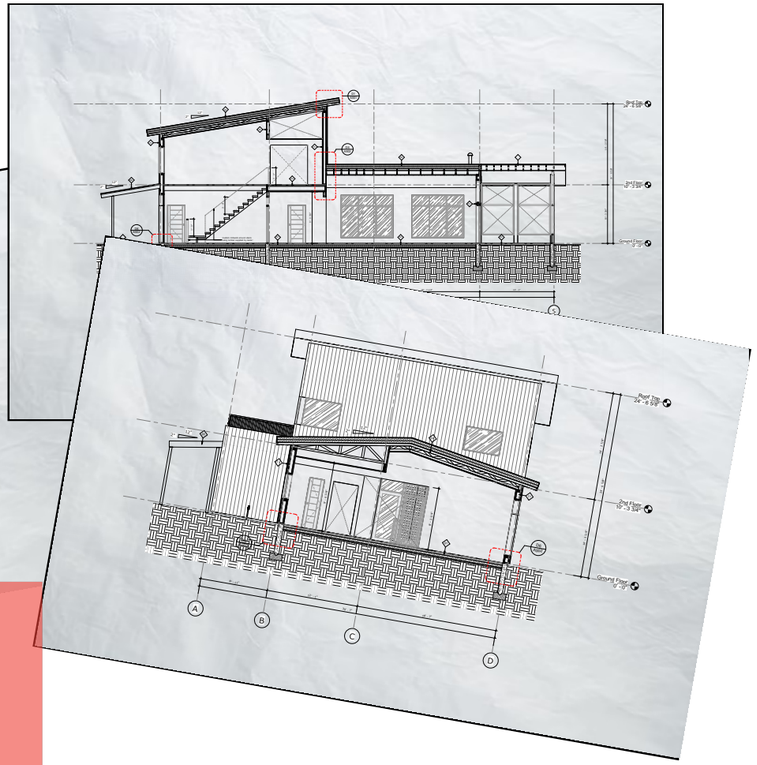
C Section C



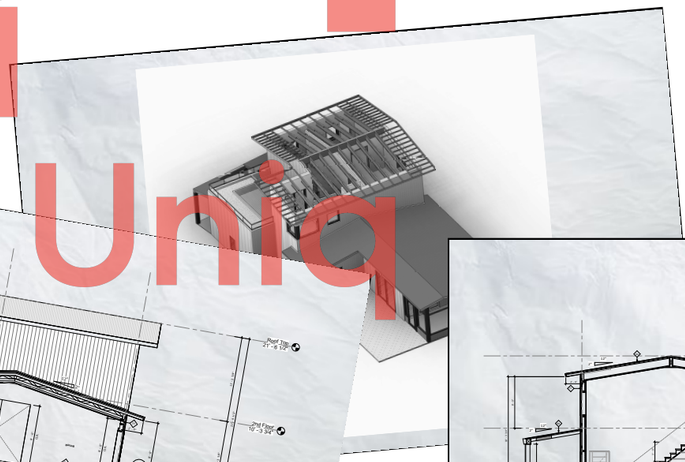
Key Plan

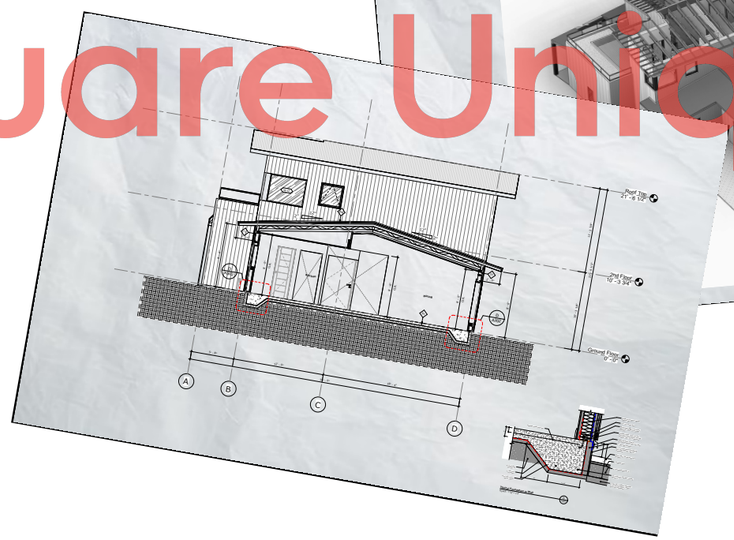
Unchosen option: Shed roof with foundtion wall

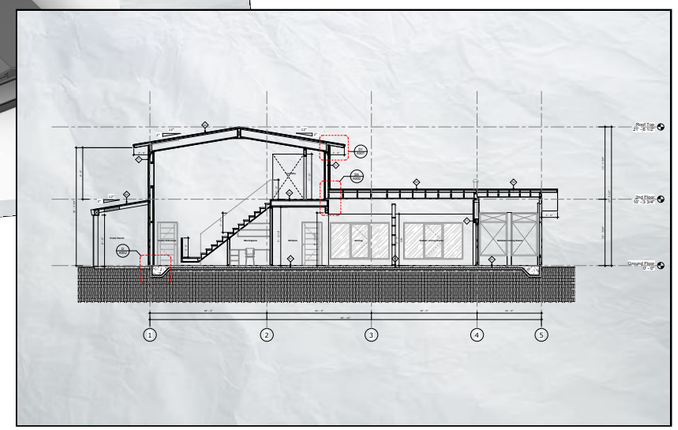


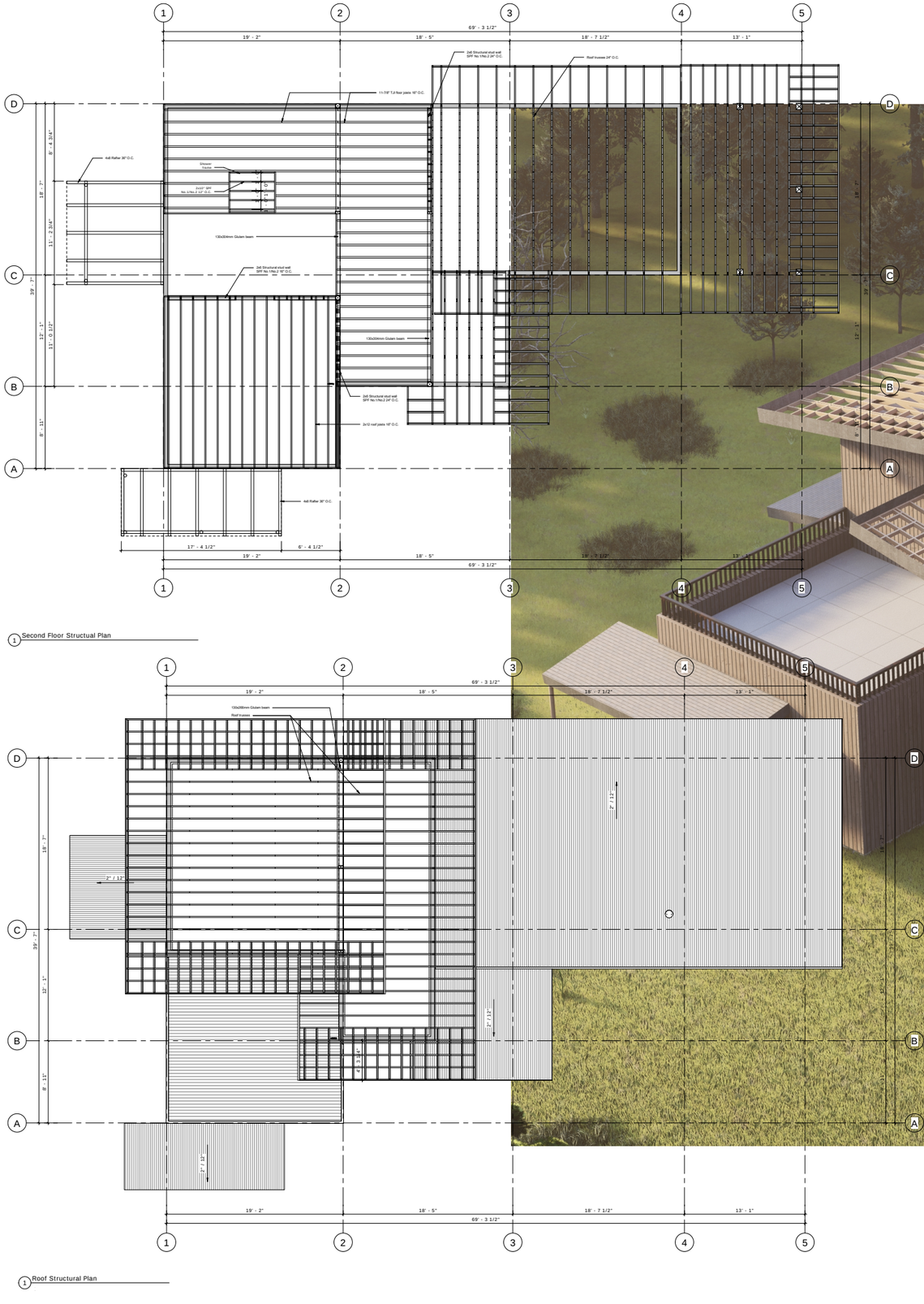


Unchosen option: Open gable roof with thickened edge slab on grade on compart granular fill.









1 Second Floor Structual Plan

1 Roof Structural Plan