MARTHA'S BARN | EXTERIOR VIEW

BUILDING ENCLOSURE & SYSTEMS*

BUILDING SQUARE FOOTAGES AND VOLUMES:

GROSS SQUARE FOOTAGE		
FIRST FLOOR		2,004 GSF
SECOND FLOOR		1,119 GSF
	TOTAL	**3,123 GSF**
PORCHES		100 GSF
CONDITIONED SQUARE FOOTAGE		
FIRST FLOOR		1,789 SF
SECOND FLOOR		906 SF
	TOTAL	**2,695 SF**

R30 to R31 - WALL ENCLOSURE
- 1/2" Drywall, taped and painted
- 3/4" Wood furring strips
- Semi-permeable vapour retarder/air barrier
- Mesh barrier for cellulose installation
- 5-1/2" Wood studs with advanced framing layout 24" O.C.,
- install R22 dense-pack cellulose fibre insulation at 3.5 lbs per cu ft. at R4/inch, or alternatively R23 - 5-1/2" RockWool Comfort Batt semi-rigid blankets at R4.18/In.
- 7/16" Drainage plane - Huber Zip Sheathing and tape, or equivalent.
- R8.4 - 2" R4.2/inch Mineral wood Insulation board, RockWool Comfort Board 80 or equivalent.
- 3/4 Wood furring strips
- Exterior cladding (Wood board and batten, Clapboard, and or metal siding as shown on drawings).

R60 - ROOF ENCLOSURE (VENTED)
- 5/8" Drywall, taped and painted to take weight of loose-fill cellulose insulation.
- 3/4" Wood furring strips
- R58 - 16" loose-fill cellulose (3.7 R/In.) in engineered scissors truss, 18" min. tall seat ends for continuous thermal envelope, cross-brace trusses as required by engineering by others.
- R10 - 1-1/2" Closed-cell (low GWP R7 per inch) spray-foam insulation to underside of 5/8" composite board roof sheathing to create air-barrier. Tape joints per requirements.
- 1-1/2" Continous venting gap above sheathing with WD 2X3 laid flat.
- 5/8" Draingage Plane - Huber Zip-sheathing and tape, or equivalent
- 24 GA Standing seam metal roofing system with Kynar 500 paint finish (2:12 slope min.) and or exposed fastener 24 GA metal roofing system with Kynar 500 paint finish (≥ 2:12 slope min.)
- Fully-vented roof with minimum 12" overhang with continuous soffit and with ridge vent (as-applicable w/gables)

R20 - SLAB ON GRADE
- 4" CIP Concrete slab with integral color, w/rebar reinforcing designed by others.
- 4" R23 - R3.85 / inch EPS Insulation
- 12" Capillary break and gravel drainage pad, no fines.

R15 - FOUNDATION WALL AND INSULATION
- 4" R15 - EPS insulation on inside of 8" CIP conc foundation wall with rebar.
- Top of concrete footing below frost line depth.
- Supply foundatiog, footing and rebar design by others

R10 - SLAB EDGE INSULATION BREAK
- 3" R10 min. - EPS insulation break, as bond break to foundation wall
- Protective membran over top of foundation wall and slab edge bond break
- Sill gasket.

WINDOWS
- **Base:** Supply combination dual-glazed fixed, casement, awning, and double-hung windows as shown on drawings. Whole window performance values, U-0.21 to U-0.28 or less.
- **Alternate:** Supply triple-glazed windows re: the above types. Whole window performance values, U-0.21 to U-0.28 or less.
- Low-e argon filled, clear, adjust glazing to orientation as required.
- Provide fiberglass exterior and pre-finished wood interior as base. Provide a deduct alternative all fiberglass option.
- Install with Tyvex flex-wrap or Grace ice and water shield at sill first under window. Install same then sides, then top with positive water-drainage.
- Provide blocking, backing rod, and sealant as per installation requirements. Provide exterior trim and jamb-extensions as required to work with siding.

EXTERIOR DOORS
- Provide insulated exterior doors with double-glazed insulated glass lites complying with VT RBES.
- Provide weatherstripping at head and jamb with neoprene or vinyl bulb type. At sill, provide a semi-rigic polymeric material on aluminum, anodized:
- Provide thermally broken thresholds. Coordinate installation with slab and edge of foundation detailing by others.

AIR-SEALING LEVELS
- <1 to <2 or equal Air Changes per Hour (ACH)

VENTILATION SYSTEMS
- If woodstove, supply direct side wall ventilation to outside.
- Provide vented kitchen stove hood to outside. (through wall or roof vent)
- Whisperlite or similar bathroom ventilation, could be integral LED lighting fixture.
- Possible 1-2 ceiling fans in living space (Confirm with owner, if desired, provide ceiliing power covers.)
- Undercut bedroom and bathroom doors or through door grill

HEATING & COOLING SYSTEM (OPTIONS)
- Radiant Floor heating system on first floor, design by others, coordinate with utility room layout
- High-efficiency fresh air-systems such as:
  1. Air to air source heat pump, or ductless mini-splits with up to 4 zones.
  2. Central Heat Recovery Ventilation unit with up 4 zones, or mini-ducts.
  3. TBD final system selection, design and integration by others.
  4. Coordinate final floor and wall equipment layout with other services in utility room.

HOT-WATER
- Supply on-demand hot-water heater (propane fed or all-electric). Coordinate final location in utility room with other systems.

RENEWABLE ENERGY SOURCE(S)
- XX KW roof-mounted, or ground mounted Photovoltaic system, or rough-in for future PV system to be added later. By others. Provide wall layout in utility room. Coordinate with HVAC systems. Design by others.

POWER SOURCES
- (3) 80 gallon propane tank (backup heat yes/no, also for gas dryer, stove, on-deman hot water service.

LIGHTING SOURCES
- At least 95% Energy Star LED bulbs and fixtures

APPLIANCES
- All Energy Star certified (includes refrigerator, dishwasher, and clothes washer)
- (optional garbage disposal, clothes dryer)

WATER USE
- Code compliant min. low-flow shower head and sink-faucets,
- Use waterclosets at < or equal to 1.6 gallons per flush (GPF), or low-water usage dual-flush toilets optional.

WOOD AND DECKING
- Forest Stewardship Council (FSC) certified wood for framing lumber, softwood and hardwood trim. (primed on backsides for exterior applications, 1-polyurethane or acrylic coat on backside for interior applications.) **or**,
- Locally sourced and milled soft and hardwood, **or**
- FSC certified and or locally sourced *where possible cedar shake and* clapboard siding (primed on backsides) as indicated on drawings.
- Exterior wood flooring: Provide Ipe or similar wood decking with environmentally preferred materials.
- For ground borne exterior applications, use non-CCA pressure treated wood such as wood treated with ACQ or Copper Azole or similar.
- For panel products such as MDF, plywood, or particle board - use FSC certified and non-added urea formaldehyde free treated materials.

FLOOR AND WALL TILE
- Select tile manufactured with recycled post-consumer waste
- For flooring surfaces, supply slip-resistant finishes with abrasive admixtures.
- Provide 1/2" cementious or fiber-cement backer board behind wall and floor tile complying with ANSI A118.9 or ASTM C 1325, Type A. or ASTM C 1288.
- Provide waterproof membrane.
- For adhesives and thinset mortar, supply materials with a VOC content of 65 g/L or less. Use Portland Cement Mortar (Thickset) Installation Materials: ANSI A108.02 or Dry-Set Portland Cement Mortar (Thinset): ANSI A118.1.

PAINTS AND COATINGS
- Use low or no-VOC high-perfromance paint coatings.
- Use non-toxic Vermont Natural Coatings or equivalent for wood interior, exterior, and flooring applications.
- supply materials compatible with ANSI A118.3 with a VOC content of 65 g/L or less.

WINDOW COVERINGS AND CONTROLS
- Provide an allowance for manual solar shades and window controls as follows:
  1. For two-high windows, supply manually operated upper solar shades and separate lower solar shades.
  2. For one-high windows, supply a manually operated solar shade.
  3. Provide optional power to window head locations for future electric solar shade controls (as desired, coordinate with owner and electrician in advance if so).
  4. Supply shade cloth of dark color for interior (best for visibility, dual color if desired with lighter color on exterior side).
  5. 3-10% weave open area.
  6. Or alternatives as proposed by the owner and their representatives.

***IMPORTANT NOTE:**
Cut-sheets and Shop Drawings: For all equipment, products and materials; supply Adobe .pdf format product cut-sheets and installation instructions, and warranties to the owner.
- Supply shop drawings and installation diagrams as required to the owner for review, comment, and/or approval to the owner prior to ordering.
- Allow a min. of 10 business days before approval is required to be received in writing by email or text. Revise and resubmit to the owner as required to review again to respond to any comments with the same timeline.
- Supply a project binder in .pdf form to the owner at the end of the job.

GENERAL NOTES

1. **PROJECT COORDINATION:** CONTRACTOR / OWNER TO PROVIDE APPROPRIATE QUANTITIES, FIELD MEASUREMENTS, DIMENSIONAL STABILITY, INSTALLATION, ANCHORAGE AND COORDINATION WITH OTHER TRADES.
2. **FIELD VERIFICATION & PRE-PLANNING:** OWNER / CONTRACTOR TO FIELD VERIFY ALL EXISTING DIMENSIONS, HEIGHTS, AND CONDITIONS BEFORE STARTING WORK, PROCEEDING FROM STAGE TO STAGE OF CONSTRUCTION. CONTACT ARCHITECT IF CONDITIONS ARE DIFFERENT THAN INDICATED.
3. **BASIS OF DESIGN CIVIL AND STRUCTURAL ENGINEERING:** GENERALIZED ASSUMPTIONS MADE BY ARCHITECT. NO ENGINEERING PROVIDED. ALL STRUCTURAL WOOD, CONCRETE, SLAB AND REINFORCEMENT SYSTEM AND SHEAR WALL DESIGN BY OTHERS. CONNECTION DETAILS MUST COMPLY WITH ALL STATE AND LOCAL CODES. OWNER / CONTRACTOR TO VERIFY IN FIELD, EXISTING CONDITIONS, DIGGING HOLES DOWN TO 6' OR POINT OF REFUSAL DUE TO LEDGE, FOR PROPOSED CORNERS OF BUILDINGS. INFORM ARCHITECT OF ANY UNKNOWN CONDITIONS REQUIRING RE-EVALUATING AND POSSIBLE REDESIGN DUE TO SUB-SURFACE/UNKNOWN CONDITIONS.
4. **FIRE BLOCKING:** PROVIDE FIRE BLOCKING ON ALL WALLS OVER 10' IN HEIGHT.
5. **MECHANICAL / PLUMBING / ELECTRICAL SYSTEMS:** CONTRACTOR / OWNER IS RESPONSIBLE FOR ALL DESIGN REQUIRED TO OBTAIN APPROVALS AND PERMITS FOR COMPLETE INSTALLATION OF MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS COMPLYING WITH STATE AND LOCAL CODES.
6. **LEVEL CHANGES:** NO CHANGE IN LEVELS GREATER THAN 1/2" WITH 1/4" CHAMFERED RELIER PER ADA 2010 FIG.303.3. COORDINATE FINAL FLOOR FINISHES, ROUGH SLAB HEIGHTS, THRESHOLDS, AND FLOOR TRANSITION STRIPS TO COMPLY WITH THIS REQUIREMENT.
7. **WALL LAYOUT DIMENSIONS:** ALL DIMENSIONS TO ARE TO FINISH FACE OF ONE SIDE OF WALLS AS INDICATED.
8. **WINDOW & DOOR LAYOUT DIMENSIONS:** ALL DIMENSIONS ARE FROM CENTERLINE OF OPENING TO NEARBY FINISH FACE OF WALL.
9. **SOLID-FUEL BURNING APPLIANCES:** COMPLY STATE OF VT DIVISION OF FIRE SAFETY AND NFPA 211 - STANDARD FOR CHIMNEYS, FIREPLACES, VENTS, AND SOLID-FUEL BURNING APPLIANCES, 2019 EDITION. FOLLOW REQUIREMENTS FOR INSTALLATION OF WOOD STOVES.
10. **PERMITS:** OWNER / CONTRACTOR RESPONSIBLE FOR OBTAINING ALL LOCAL AND STATE PERMITS.
11. **ENERGY EFFICIENCY REQUIREMENTS:** MEET 2020 VERMONT RESIDENTIAL BUILDING ENERGY STANDARDS (VBRES) AVAILABLE AT http://publicservice.vermont.gov/energy_efficiency/rbes. PROJECT IS DESIGNED TO MEET OR EXCEED PACKAGE #2 RE: TABLE R402.1.2 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT. OWNER / CONTRACTOR SHALL CERTIFY CONSTRUCTION COMPLYS WITH THE 2020 VRBES.
12. **WET WALL AREAS:** AT WET AREA WALL FACES, INSTALL COMPLYING CEMENT BACKING BOARD TO ASTM C 840 AND GYP BD. MANUFACTURERES RECOMMENDATIONS.
13. **WALL TILE SUBSTRATES:** FOR SUBSTRATES INDICATED TO RECEIVE THIN-SET CERAMIC WALL TILE OR SIMILAR APPLIED WALL FINISHES, INSTALL CEMENTIOUS BACKER UNITS TO COMPLY WITH ANSI A108.11 AT LOCATIONS TO RECIEVE WALL TILE.
14. **WOOD BLOCKING REQUIRMENTS:** PROVIDE WOOD BLOCKING AS REQUIRED FOR ATTACHMENT OF MISC. EQUIPMENT, HAND-RAILS, CASEWORK, AND BUILT-INS AS REQUIRED. 16GA GALVANIZED SHEET METAL CAN BE USED FOR BLOCKING. PROVIDE WALL BLOCKING BEHIND THE KITCHEN CABINET UPPERS, BEHIND TOWEL BARS AND TOILET WALLS FOR POSSIBLE ADA GRAB BARS. AT TOILET, PROVIDE BLOCKING AT 34" HEIGHT. PROVIDE 36" MIN. BEHIND TOILET AND 60" AT SIDE OF TOILET. CONFIRM WITH OWNER IF TO PROVIDE BLOCKING AT BATHTUB WALL AT 33" AFF.
15. **DOOR JAMB DIMENSIONAL LOCATION:** ALL NEW DOOR FRAMES SHALL BE 5" FROM ADJACENT FINISHED WALL SURFACES AT DOOR HINGE UNLESS NOTED OTHERWISE.
16. **SOUND CONTROL:** PROVIDE 3-1/2 " SOUND INSULATION BATTS IN BATHROOM WALLS ADJACENT TO BEDROOM AND OTHER ROOMS. DISCUSS WITH OWNER THE OPTION TO ADD IN THE WALLS BETWEEN THE LIVING AREA AND BEDROOM AND STUDY, CLASSROOM AND OTHER ROOMS AS REQUIRED.

REFERENCE BASIS OF DESIGN

DESIGN IN ACCORDANCE WITH IBC 2015

DESIGN DEAD LOADS
1. ROOF –18 PSF (10 PSF TOP CHORD AND 8 PSF BOTTOM CHORD)
2. FLOOR –15 PSF

DESIGN LIVE LOADS
1. SLAB-ON-GRADE – 100 PSF
2. ALLOWABLE LIVE LOAD DEFLECTION L/480

ROOF AND SNOW LOAD:
1. GROUND SNOW LOAD Pg = 60 PSF
2. SNOW EXPOSURE FACTOR Ct = 1.0
3. SNOW IMPORTANCE FACTOR Is= 1.0
4. THERMAL FACTOR Ct = 1.0
5. FLAT ROOF SNOW LOAD Pf = 40 PSF
6. ALLOWABLE SNOW/LIVE LOAD DEFLECTION L/240 – MAX 3/4"
7. HORIZONTAL DEFLECTION AT SUPPORTS SHALL BE LIMITED TO ¼"

WIND LOADS:
1. ULTIMATE DESIGN WIND SPEED Vult = 115 MPH
2. NOMINAL DESIGN WIND SPEED Vasd = 90 MPH
3. BUILDING RISK CATEGORY - II
4. WIND EXPOSURE CATEGORY - C
5. INTERNAL PRESSURE COEFFICIENTS +0.18/-0.18

not for construction

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Martha Kourebanas

Martha's Barn

10 Weed Road, Essex VT

No.	Description	Date

North Arrow

General Notes & Cover Sheet

Project number	202103
Date	04.20.21
Drawn by	SMF
Checked by	SMF
Scale	1/4" = 1'-0"

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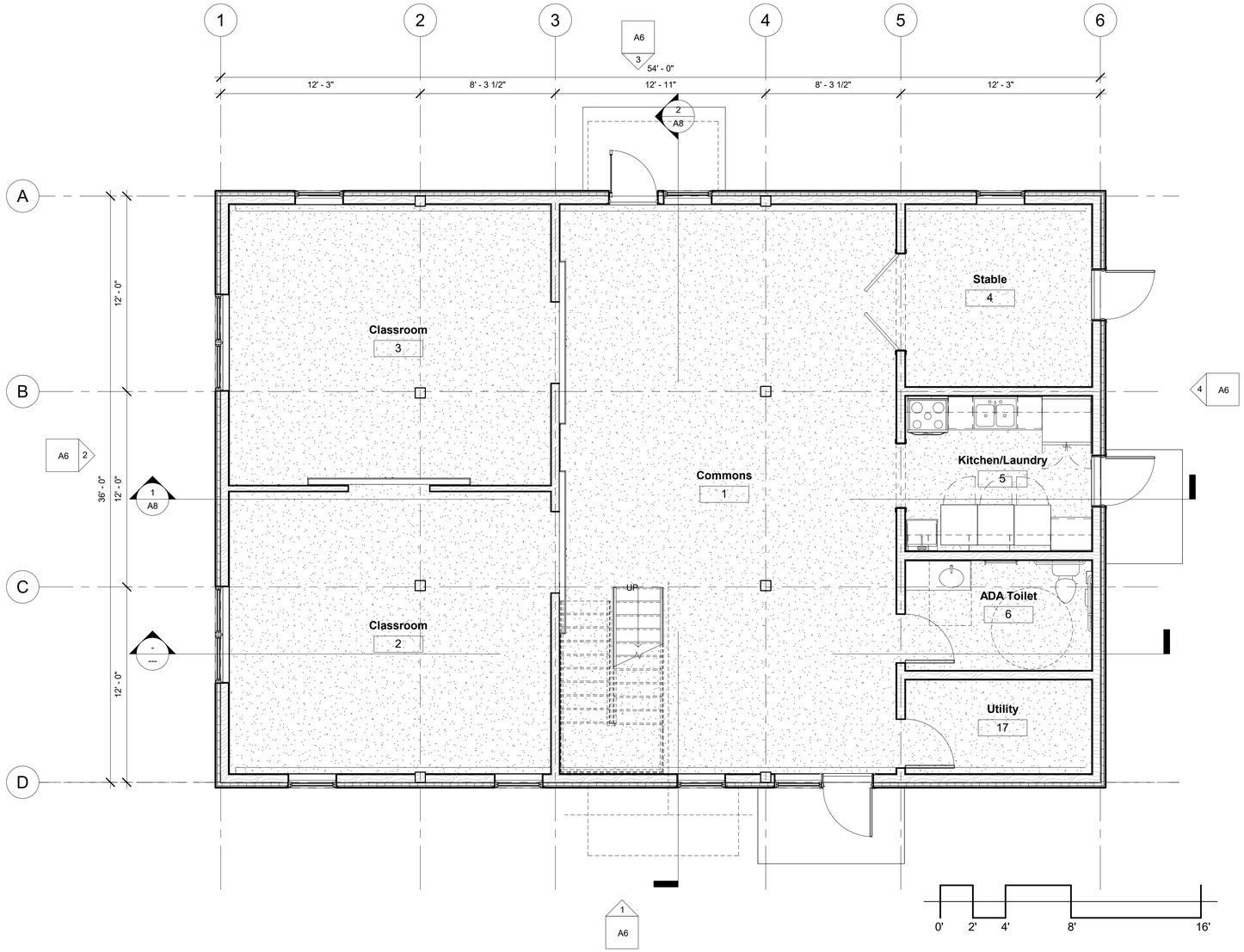

1 First Floor
1/4" = 1'-0"

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Martha Kourebanas
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No.	Description	Date

North Arrow

First Floor Plan

Project number	202103
Date	04.20.21
Drawn by	Steve Frey
Checked by	Steve Frey
Scale	1/4" = 1'-0"

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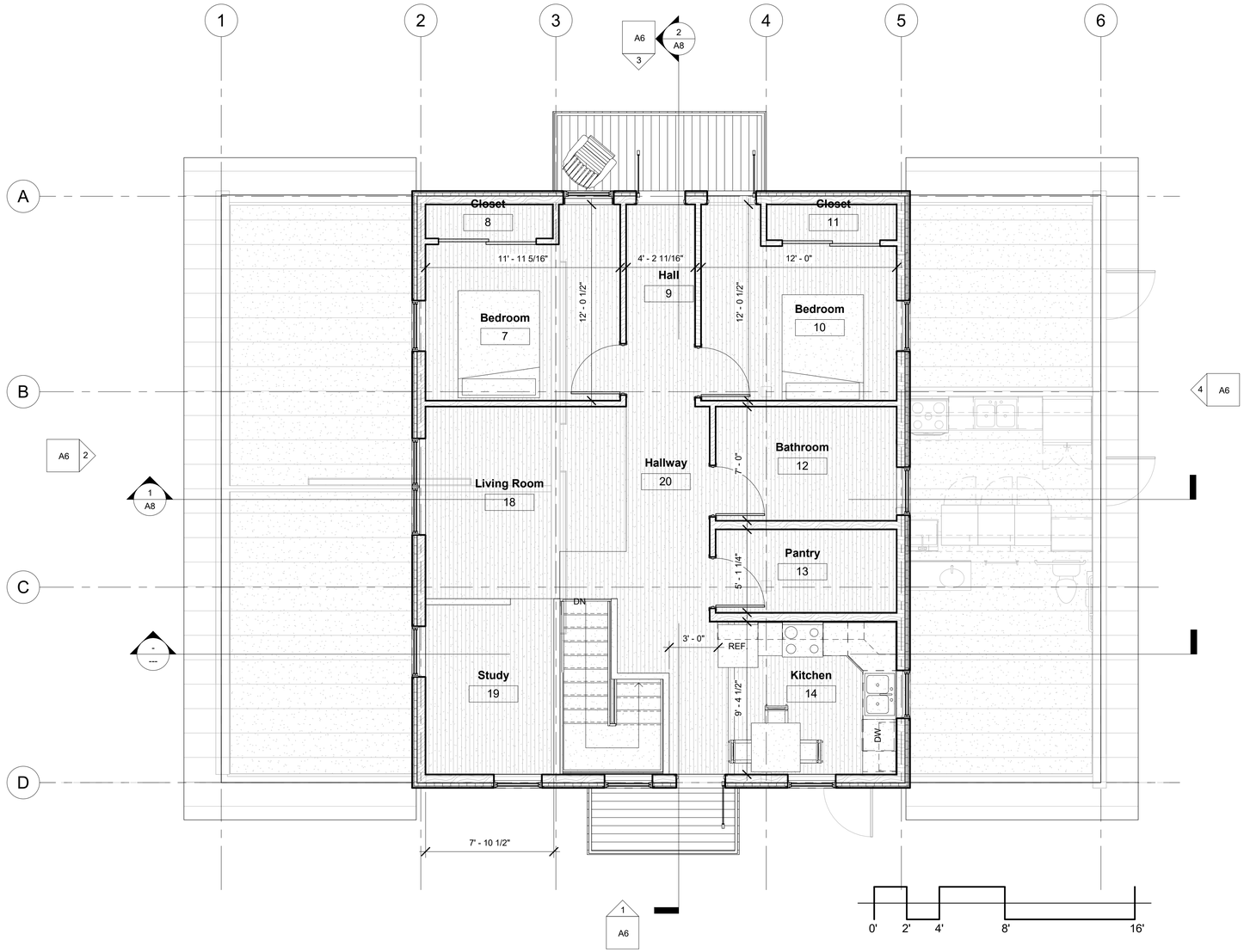

1 Second Floor
1/4" = 1'-0"

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Second Floor Plan

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No.	Description	Date

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Elevations

Project number	202103
Date	04.20.21
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Scale	1/4" = 1'-0"

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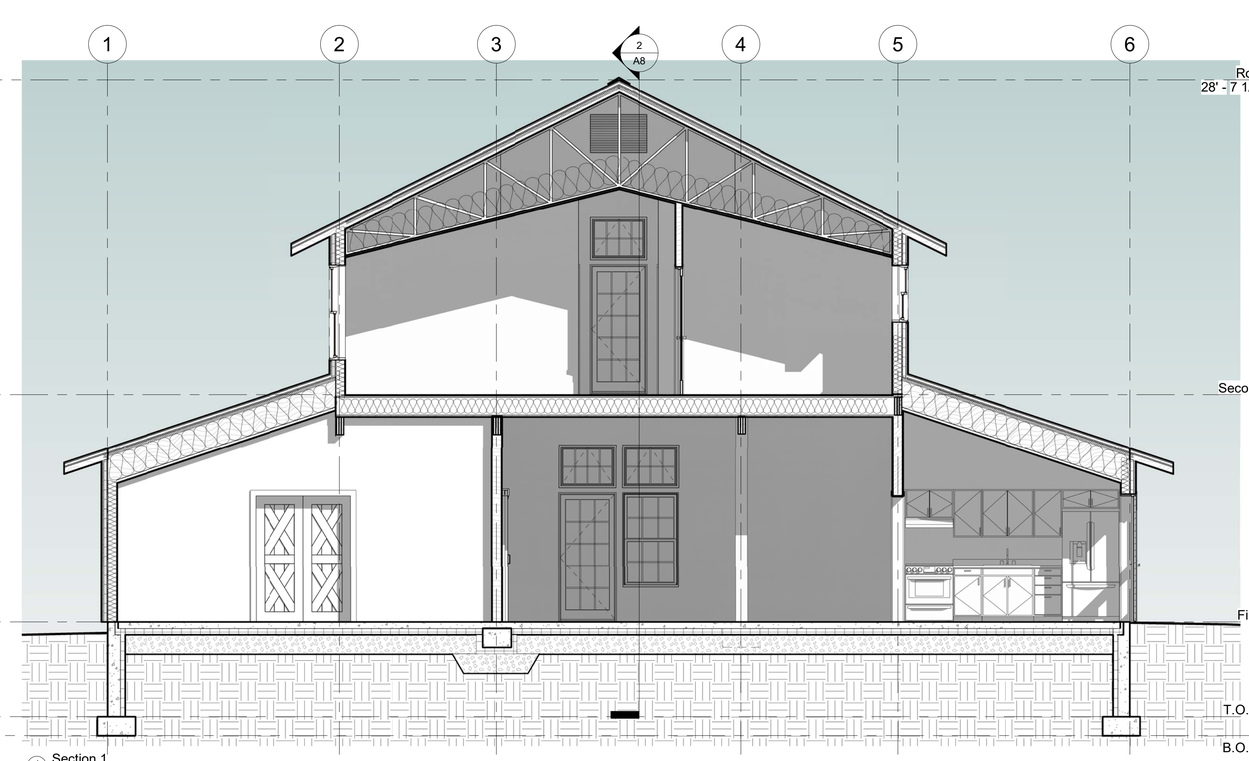

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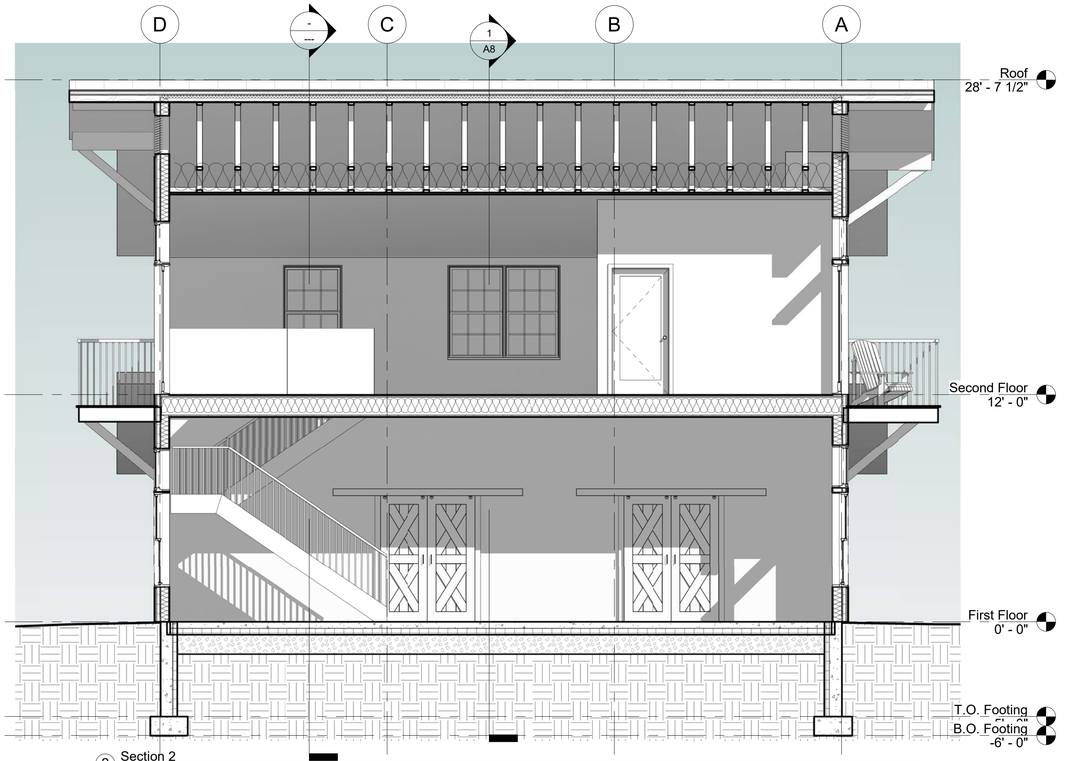
1/4" = 1'-0"



2 Section 2
1/4" = 1'-0"

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No.	Description	Date

North Arrow

Building Sections

Project number	202103
Date	04.20.21
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Scale	1/4" = 1'-0"

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Door Schedule

Door Number	Door Type	Door Size	Manufacturer	Model	Frame Type	Fire Rating	Details			Description	Finish		Comments
							Head	Jamb	Sill		Door	Frame	
1	61	36" x 80"											
2	61	36" x 80"											
3	57	Double_Barn_Door_2211											
4	57	Double_Barn_Door_2211											
5	61	36" x 80"											
7	57	Double_Barn_Door_2211											
8	58	ELIFD3068	Marvin Windows and Doors	ELIFD3068						3682 FR DOOR			
9	34	36" x 84"											
11	58	ELIFD3068	Marvin Windows and Doors	ELIFD3068						3682 FR DOOR			
12	58	ELIFD3068	Marvin Windows and Doors	ELIFD3068						3682 FR DOOR			
13	58	ELIFD3068	Marvin Windows and Doors	ELIFD3068						3682 FR DOOR			
14	51	72" x 80"											
15	51	72" x 80"											
16	60	36" x 80"											
17	60	36" x 80"											
20	34	36" x 84"											
21	60	36" x 80"											
22	60	36" x 80"											

Window Schedule

Type Mark	Rough Opening		Type	Manufacturer	Model	Material	Finish	Detail			Glazing		Head Height	Comments
	Width	Height						Head	Jamb	Sill	Thickness	Type		
58	5' - 11 1/4"	4' - 11 7/8"	Window-Double_Hung-Integrity-Wood_Ultrex-Multiple_Units	Integrity Windows and Doors	ITDH3660								6' - 10"	
60	6' - 0"	2' - 7 1/8"	Window-Casement-Integrity-Wood_Ultrex-Multiple_Stationary_Operating_Units	Integrity Windows and Doors	ICA3731								9' - 5 9/16"	
63	3' - 1 1/2"	4' - 11 3/4"	Window-Double_Hung-Integrity-Wood_Ultrex	Integrity Windows and Doors	ITDH3860								6' - 10"	
65	3' - 0"	2' - 3 1/8"	Window-Awning-Integrity-Wood_Ultrex	Integrity Windows and Doors	IAWN3727									
67	4' - 0"	2' - 3 1/8"	Window-Awning-Integrity-Wood_Ultrex	Integrity Windows and Doors	IAWN4927								6' - 10"	
72	2' - 11 1/2"	4' - 11 3/4"	Window-Double_Hung-Integrity-Wood_Ultrex	Integrity Windows and Doors	ITDH3660									
74	2' - 11 1/2"	2' - 11 3/4"	Window-Double_Hung-Integrity-Wood_Ultrex	Integrity Windows and Doors	ITDH3636								6' - 10"	
76	2' - 11 1/2"	3' - 11 3/4"	Window-Double_Hung-Integrity-Wood_Ultrex	Integrity Windows and Doors	ITDH3648								6' - 10"	
77	2' - 11 1/2"	4' - 3 3/4"	Window-Double_Hung-Integrity-Wood_Ultrex	Integrity Windows and Doors	ITDH3652									

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No.	Description	Date

North Arrow

Schedules

Project number	202103
Date	04.20.21
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Scale	

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