



# 15 Lake Road

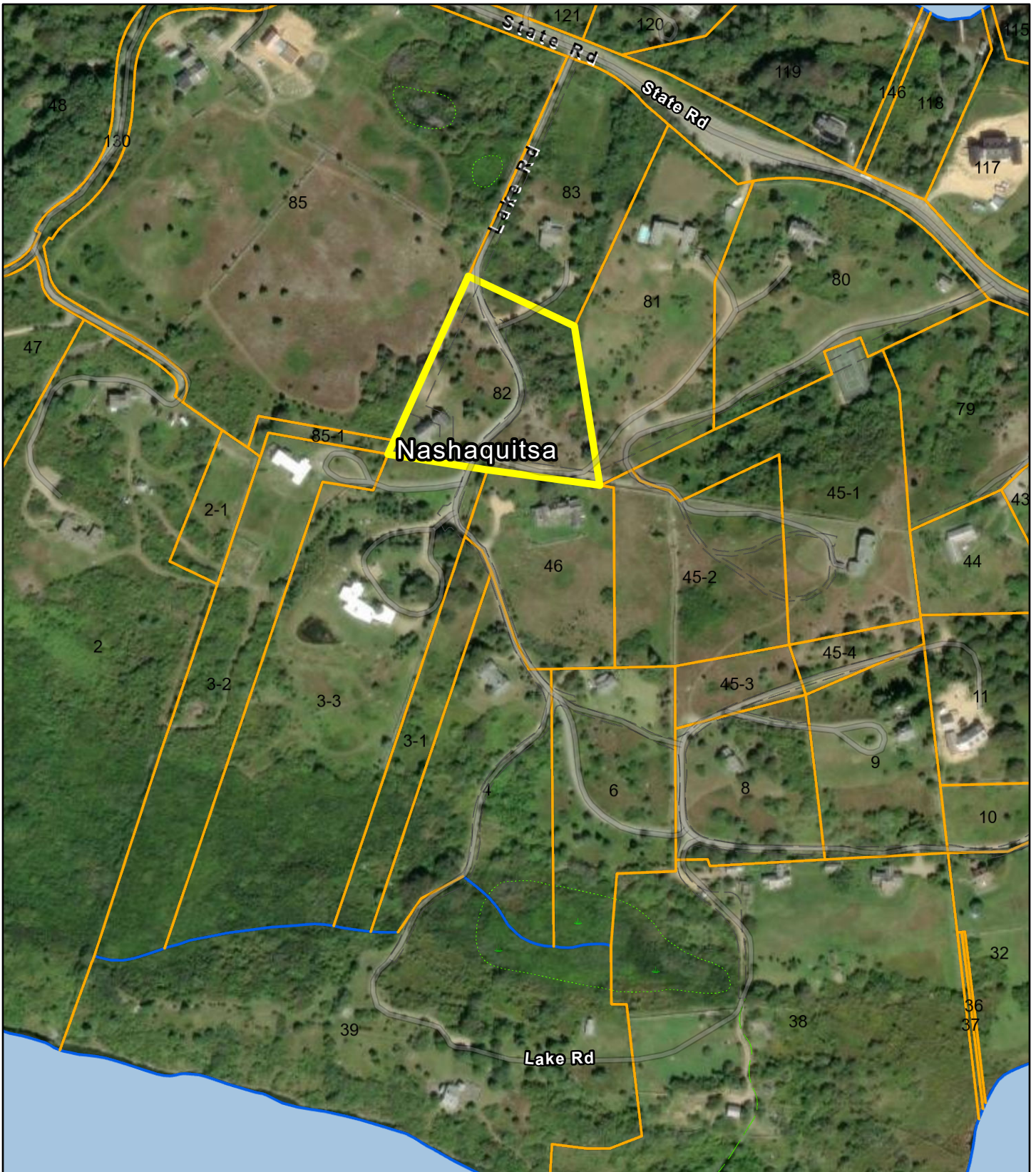
Town of Chilmark, MA

1 inch = 283 Feet



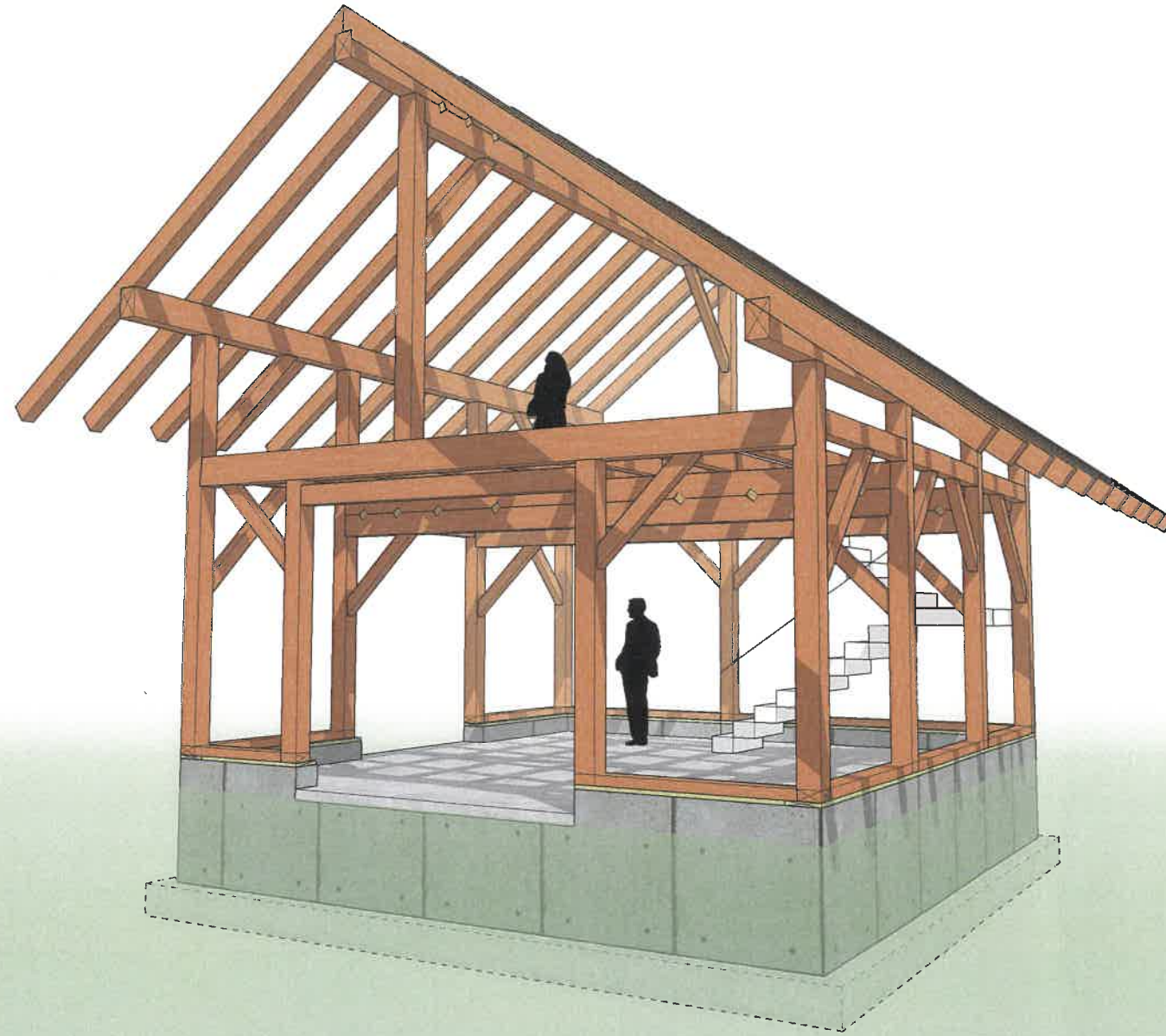
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March 6, 2024



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**PROPOSED PROJECT:**

LEE BARN

**CLIENT:**

LEE, BARBARA  
15 LAKE ROAD  
CHILMARK, MA

**SITE INFO:**

DEPINO / LEE  
CHILMARK / 15 LAKE ROAD

**FILE NAME:** HP&B BARBARALEE\_CDR\_05  
**DATE MODIFIED:** 11-20-23  
**DRAWN BY:** GM  
**CHECKED BY:** XXX  
**SCALE:** VARIES

ALL MATERIAL IS #1 OR BETTER.  
EASTERN WHITE PINE.



**DESIGN CRITERIA:**

**BUILDING CODES:**  
IBC 2015 MASSACHUSETTS WITH AMENDMENTS  
ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS

**DESIGN LOADS:**  
DEAD - 15 PSF (assumed)  
GROUND SNOW LOAD = 35 PSF, Ct=1.2  
NOMINAL WIND SPEED = 101 MPH  
ULTIMATE WIND SPEED = 130 MPH  
SEISMIC DESIGN CATEGORY = B  
FROST DEPTH = 48"  
ALLOWABLE SOIL BEARING = 2000 PSF (ASSUMED)

SEE ARCHITECTURAL, MECHANICAL & ELECTRICAL DRAWINGS FOR DIMENSIONS AND DETAILS REQUIRED AS STRUCTURAL WORK, WHICH ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS. ANY DISCREPANCY THAT EXISTS BETWEEN WHAT IS SHOWN AND ACTUAL MUST BE BROUGHT TO THE ATTENTION OF HARDWICK POST & BEAM/ ENGINEER PRIOR TO THE START OF CONSTRUCTION. THE REPRODUCTION OF ANY CONTRACT DOCUMENTS, IN FULL OR IN PART, FOR THEIR USE AS SHOP DRAWINGS WILL NOT BE ACCEPTED AND WILL BE RETURNED AS REJECTED. SUBMITTALS VIA FACSIMILE ARE ALSO UNACCEPTABLE AND WILL NOT BE REVIEWED.

**GENERAL NOTES:**

- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR OTHER CONDITIONS WHICH DIFFER FROM WHAT IS INDICATED ON THE DRAWINGS.
- DIMENSIONS SHOWN ON STRUCTURAL DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR WITH THOSE SHOWN ON THE ARCHITECTURAL DRAWINGS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER AND ENGINEER PRIOR TO CONSTRUCTION.
- CONSTRUCTION MATERIALS SHALL NOT BE PLACED, STACKED OR OTHERWISE STORED UPON ANY STRUCTURAL ELEMENT IN A MANNER WHICH EXCEEDS THE LIVE LOAD CAPACITY OF THE ELEMENT. UNLESS OTHERWISE NOTED, THIS LIVE LOAD CAPACITY IS 40 PSF.
- NOTES, DETAILS AND DIMENSIONS ON INDIVIDUAL DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION BEFORE PROCEEDING WITH CONSTRUCTION.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, TEMPORARY BRACING/SHORING AGAINST WIND, SNOW, EQUIPMENT, MATERIAL STORAGE AND/OR OTHER LOADS WHICH MAY ARISE PRIOR TO THE COMPLETION OF CONSTRUCTION. PERIODIC INSPECTIONS BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THESE ITEMS NOR ANY OPINION REGARDING THE ADEQUACY OF SUCH MEASURES.
- TIMBER FRAME ELEMENTS HAVE BEEN DESIGNED TO RESIST GRAVITY LOAD ONLY. ALL LATERAL LOADS TO BE CARRIED IN BUILDING ENVELOPE BY OTHERS.

**CONCRETE NOTES:**

- CONCRETE SHALL COMPLY WITH THE PROVISIONS OF THE AMERICAN CONCRETE INSTITUTE (ACI) 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", REINFORCING STEEL SHALL COMPLY WITH THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICE" EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE INDICATED.
- CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, AND A MAXIMUM WATER-CEMENT RATIO OF 0.46. CONCRETE EXPOSED TO DE-ICING SALTS SHALL FORMULATED USING AIR ENTRAINING ADMIXTURES PROVIDING NOT LESS THAN 4.5 PERCENT NOR MORE THAN 7.0 PERCENT ENTRAINING AIR. AIR ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C260.
- CONCRETE DESIGN MIX SHALL BE PROPORTIONED SUCH THAT CONCRETE SLUMP, AT THE POINT OF PLACEMENT, SHALL BE NO LESS THAN 1 INCH NOR MORE THAN 3 INCHES FOR REINFORCED STRUCTURAL CONCRETE, 4 INCHES FOR ALL OTHER CONCRETE. WATER SHALL NOT BE ADDED TO THE CONCRETE BEFORE PLACEMENT UNLESS PRIOR APPROVAL IS RECEIVED IN WRITING FROM THE STRUCTURAL ENGINEER.
- CONCRETE SLABS ON GRADE SHALL BE PLACED OVER A VAPOR BARRIER LAPPED A MINIMUM OF SIX INCHES AND SEALED.
- CONCRETE SHALL BE CONSOLIDATED USING VIBRATORY EQUIPMENT AND/OR HAND RODDING AND TAMPING UNTIL CONCRETE IS UNIFORMLY DISTRIBUTED AROUND REINFORCEMENT AND OTHER EMBEDDED ITEMS.
- CONTRACTOR SHALL PROTECT CONCRETE FROM PHYSICAL DAMAGE OR REDUCED STRENGTH DURING MIXING, PLACEMENT AND CURING. COLD WEATHER CONCRETE PLACEMENT SHALL COMPLY WITH ACI 306.
- CONCRETE REINFORCEMENT SHALL BE GRADE 60 STEEL MEETING THE REQUIREMENTS OF ASTM A615 EXCEPT FOR STIRRUPS AND TIES WHICH MAY BE GRADE 40 STEEL.
- REINFORCEMENT SHALL NOT BE SPLICED NOR WELDED EXCEPT AS DETAILED OR AS AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER. LAP SPLICES SHALL BE A MINIMUM OF 40 BAR DIAMETERS UNLESS OTHERWISE NOTED ON THE DRAWINGS. HORIZONTAL REINFORCEMENT IN WALLS SHALL BE SPLICED USING CORNER BARS OF EQUAL SIZE AND SPACING AROUND ALL CORNERS AND AT ALL INTERSECTIONS.
- VERTICAL REINFORCEMENT SHALL BE DOWELLED INTO FOUNDATION. DOWELS SHALL TERMINATE WITH A STANDARD HOOK NOT LESS THAN SIX INCHES OR 12 BAR DIAMETERS, WHICHEVER IS GREATER.
- WELDED WIRE FABRIC SHALL CONFORM TO THE REQUIREMENTS OF ASTM A185. LAP WIRE FABRIC A MINIMUM OF ONE FULL MESH PLUS 2 INCHES AT SIDES AND ENDS AND TIE TOGETHER.
- PROVIDE CLEAR CONCRETE COVER OVER REINFORCEMENT AS FOLLOWS:  
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH .....3"  
CONCRETE EXPOSED TO EARTH OR WEATHER - #6 AND LARGER .....2"  
#5 AND SMALLER, WWF .....1-1/2"
- CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND .....1-1/2"
- ANCHOR BOLTS SHALL CONFORM TO ASTM A307. EXPANSION BOLTS SHALL BE HILTI KWIK BOLTS OR APPROVED EQUIVALENT. EXPANSION BOLTS SHALL BE INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS. WHERE EMBEDMENT LENGTH, EDGE DISTANCE(S) AND/OR SPACING REQUIREMENTS OF THE MANUFACTURER CANNOT BE MET, EPOXY ANCHORS SHALL BE USED.
- NON SHRINK GROUT SHALL BE 5000 PSI FIVE STAR GROUT OR APPROVED EQUAL, INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
- ANCHOR BOLTS SHALL BE 1/2" DIA. WITH A MINIMUM EMBEDMENT LENGTH OF 8 INCHES. ANCHOR BOLTS SHALL BE INSTALLED AT 48" O.C. AND WITHIN 12 INCHES OF EACH END OF FOUNDATION SILL PLATES. SILL PLATES SHALL BE SECURED TO FOUNDATION WITH NUT & WASHERS.
- CONCRETE SLABS ON GRADE SHALL HAVE W2.9xW2.9 6x6 WWF REINFORCEMENT CENTERED IN SLAB OR #4 @ 16" EA. WAY, CENTERED.

**TIMBERFRAME SPECIFICATIONS:**

- These drawings depict an exposed, heavy timber framed structure.
- The timbers are EASTERN WHITE PINE, unless noted otherwise. The timbers meet the NEMLA standards for #2 (or better). Their moisture content, at fabrication, is approximately 20%. Some warping, twisting, and checking of timbers is anticipated as they reach equilibrium moisture content.
- The timber sizes shown are NOMINAL. The timber sizes are subject to slight revision; but only under the direct supervision of the ENGINEER OF RECORD for the frame.
- The timber connections are based on traditional methods - using mortises, tenons, splines, pegs, and keys. The connections are designed and detailed under the direct supervision of ENGINEER OF RECORD for the frame.
- All timber joinery must be approved by ENGINEER OF RECORD for the frame.
- \* All metal connectors (at post feet, for example) are to be Simpson or equal.

**TIMBER SCREWS:**

- UNLESS NOTED OTHERWISE, ALL SCREWS SHALL BE BY GRK RSS, ROTHBLAAS TBS, SIMPSON OR OTHER APPROVED SCREW, WITH A SHANK DIAMETER OF AT LEAST 0.2", AND A THREAD DIAMETER OF AT LEAST 0.30".
- SCREWS HOLES SHALL NOT BE PRE-DRILLED UNLESS OTHERWISE NOTED, AND HAVE AT LEAST 3" OF THREAD PENETRATION INTO THE CONNECTING MEMBER.

**TIMBER FRAME JOINERY:**

- UNLESS OTHERWISE CALLED OUT IN JOINERY DETAILS ON THE STRUCTURAL AND TIMBER FRAME DRAWINGS, THE JOINERY SHOULD MEET THE FOLLOWING REQUIREMENTS, AND BE DETAILED IN ACCORDANCE WITH TFEC 1-19.
- ALL PEGS SHALL BE 1" IN DIAMETER, AND MEET THE REQUIREMENTS OF TFEC 1-19.
- ALL BRACES SHALL BE HELD BY ONE PEG PER JOINT UNLESS NOTED OTHERWISE.
- ALL NON BRACE TENONS SHALL BE HELD WITH (2) PEGS UNLESS NOTED OTHERWISE.
- TENONS CONNECTING MEMBERS IN 8X MATERIAL AND LARGER (SMALLEST DIRECTION), SHALL BE 2" THICK AND 5" IN LENGTH, WITH 3" OF RELISH. IN 6X MATERIAL, 1 1/2" THICK, 4" LONG TENONS WITH 2 1/2" RELISH SHALL BE USED. 4X AND SMALLER MATERIAL, INCLUDING BRACES (UNLESS OTHERWISE CALLED OUT) AND STRUTS, SHALL HAVE A 1 1/2" THICK TENON, AT LEAST 3 1/2" IN LENGTH, AND 2 1/2" OF RELISH.
- WHERE TENON INTERFERENCE OCCURS, TENONS SHALL BE AS LONG AS POSSIBLE, AND OFFSET (HIGH/LOW) WHERE POSSIBLE. IN THREE-WAY AND FOUR-WAY CONNECTIONS, 1 1/2" THICK HARDWOOD (SPECIFIC GRAVITY EQUAL TO OR GREATER THAN THE CONNECTING TIMBERS) OR 1 3/4" LVL SPLINES ARE STRONGLY ENCOURAGED.
- HOUSINGS FOR 6X AND LARGER STOCK SHALL BE 1", UNLESS SPECIFIED OTHERWISE. WHERE 6X FRAMING IS NOT DIRECTLY SUPPORTING ROOF OR FLOOR LOADS, 1/2" STUB TENONS MAY BE USED IN PLACE OF FULL 1" HOUSINGS. 4X MATERIAL, INCLUDING BRACES, SHALL BE HOUSED 1/2". BIRDSMOUTHS, REDUCTIONS, AND COPES NOT SUPPORTED BY A BEARING SURFACE SHALL NOT EXCEED MORE THAN 1/4 THE MEMBER DEPTH WITHOUT REQUIRING FURTHER REINFORCEMENT.
- UNLESS OTHERWISE SPECIFIED, RAFTERS AND PURLINS SHALL BE SECURED INTO THEIR HOUSINGS AND SUPPORTS WITH LOG SCREWS, (1) SCREW AT EACH END FOR 6X AND SMALLER MATERIAL, (2) SCREWS AT EACH END FOR 8X AND LARGER MATERIAL.

**ABBREVIATIONS**

AT AND ABOVE FINISH FLOOR	EXP. EXPOSED	REF. REFRIGERATOR
ALUM. ALUMINUM	FD FIXED	R.O. ROUGH OPENING
BB BLUEBOARD	FFE FINISH FLOOR ELEVATION	SD SMOKE DETECTOR
CAB. CABINET	FT FULLY THREADED	SECT. SECTION
CF CUBIC FEET	GFI GROUND FAULT INTERRUPTER	SHT. SHEET
CMU CONCRETE MASONRY UNIT	GL GLASS	SH. SIMILAR
COL. COLUMN	GLB. GLUED LAMINATED BEAM	SPP. SPRUCE, PINE, OR FIR
CONC. CONCRETE	GWB GYPSUM WALL BOARD	SQ. SQUARE
DF DOUGLAS FIR	ICF INSULATED CONCRETE FORM	SQFT SQUARE FEET
DIA. DIAMETER	INS. INSULATION	STL. STEEL
DN DOWN	LVL LAMINATED VENEER LUMBER	SYP. SOUTHERN YELLOW PINE
DW DISHWASHER	O.C. ON CENTER	T&G TONGUE & GROOVED
EA. EACH	PLY PLYWOOD	TBD TO BE DETERMINED
EL. ELEVATION	PVC POLY VINYL CHLORIDE	TYP. TYPICAL
	PT. PARTIALLY THREADED	VB VAPOR BARRIER
	P.T. PRESSURE TREATED	VF VERIFY IN FIELD
		WD WOOD

**SHEET INDEX**

ARCHITECTURAL DRAWINGS	
G0	COVER PAGE
TF1	EXTERIOR ELEVATIONS
TF2	FOUNDATION PLANS
TF3	PLANVIEW
TF4	ROOF PLAN
TF5	LOFT FRAMING PLAN
TF6	ELEVATION A
TF7	ELEVATION C
TF8	ELEVATION E
TF9	BENT 1
TF10	BENT 2
TF11	BENT 3
TF12	BENT 4

NO.	REVISIONS	DATE
1	CONCEPT	07-18-23
2	DAMROTH COMMENTS	08-08-23
3	KEYED BEAMS	09-27-23
4		

COVER PAGE

PAGE NUMBER  
**GO**



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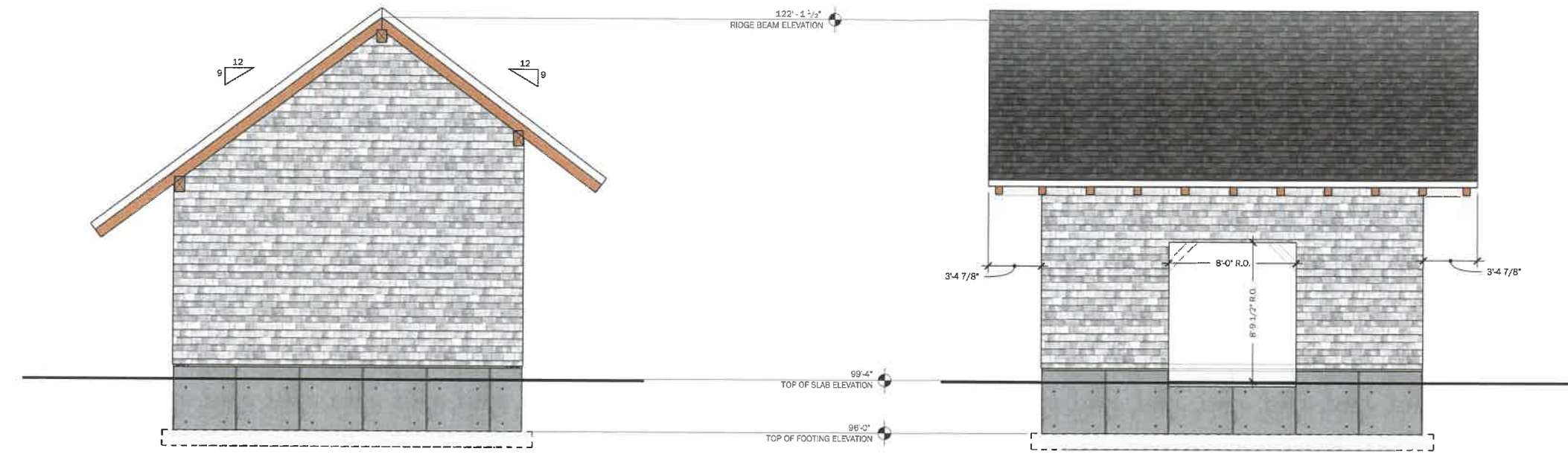
**PROPOSED PROJECT:**  
LEE BARN

**CLIENT:**  
LEE, BARBARA  
15 LAKE ROAD  
CHILMARK, MA

**SITE INFO:**  
DEPINO / LEE  
CHILMARK / 15 LAKE ROAD

**FILE NAME:** HP&B BARBARALEE\_CD5\_C5  
**DATE MODIFIED:** 11-20-23  
**DRAWN BY:** GM  
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**SCALE:** VARIES

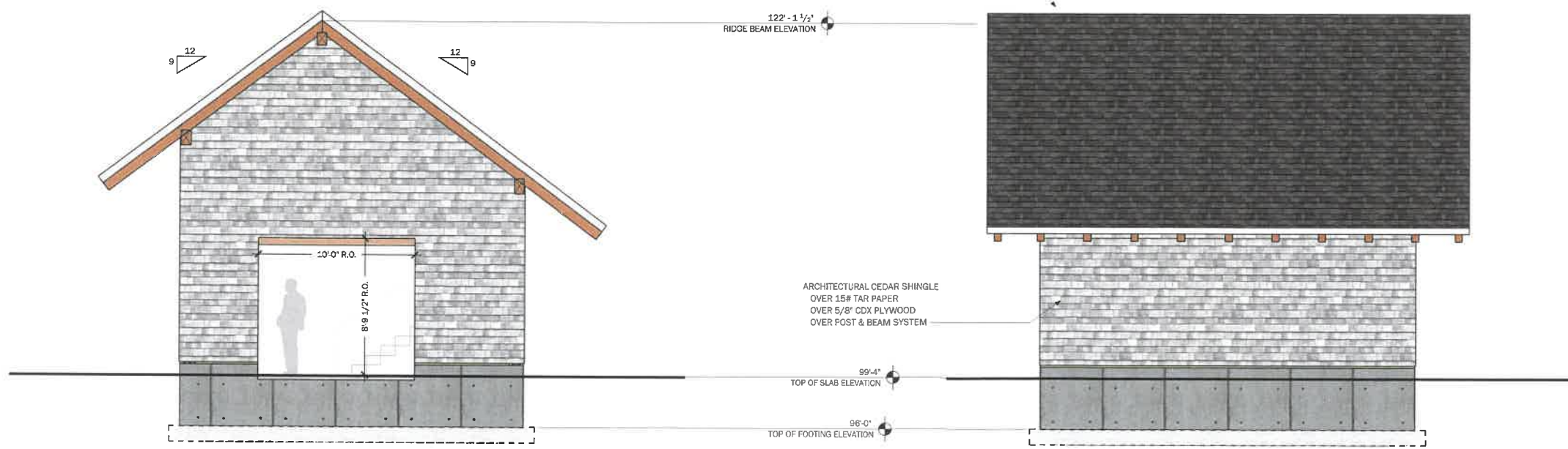
ALL MATERIAL IS #1 OR BETTER.  
EASTERN WHITE PINE.



**EAST ELEVATION**  
SCALE: 1/4" = 1' 0"

**NORTH ELEVATION**  
SCALE: 1/4" = 1' 0"

ARCHITECTURAL ROOF SHINGLE  
OVER ICE & WATER SHIELD & 15# FELT PAPER  
OVER 1.5" VENTED ROOF  
OVER 15# FELT PAPER  
OVER 8" SIP ROOF PANEL R-30  
OVER 1x8 T&G PINE  
OVER POST & BEAM SYSTEM



**WEST ELEVATION**  
SCALE: 1/4" = 1' 0"

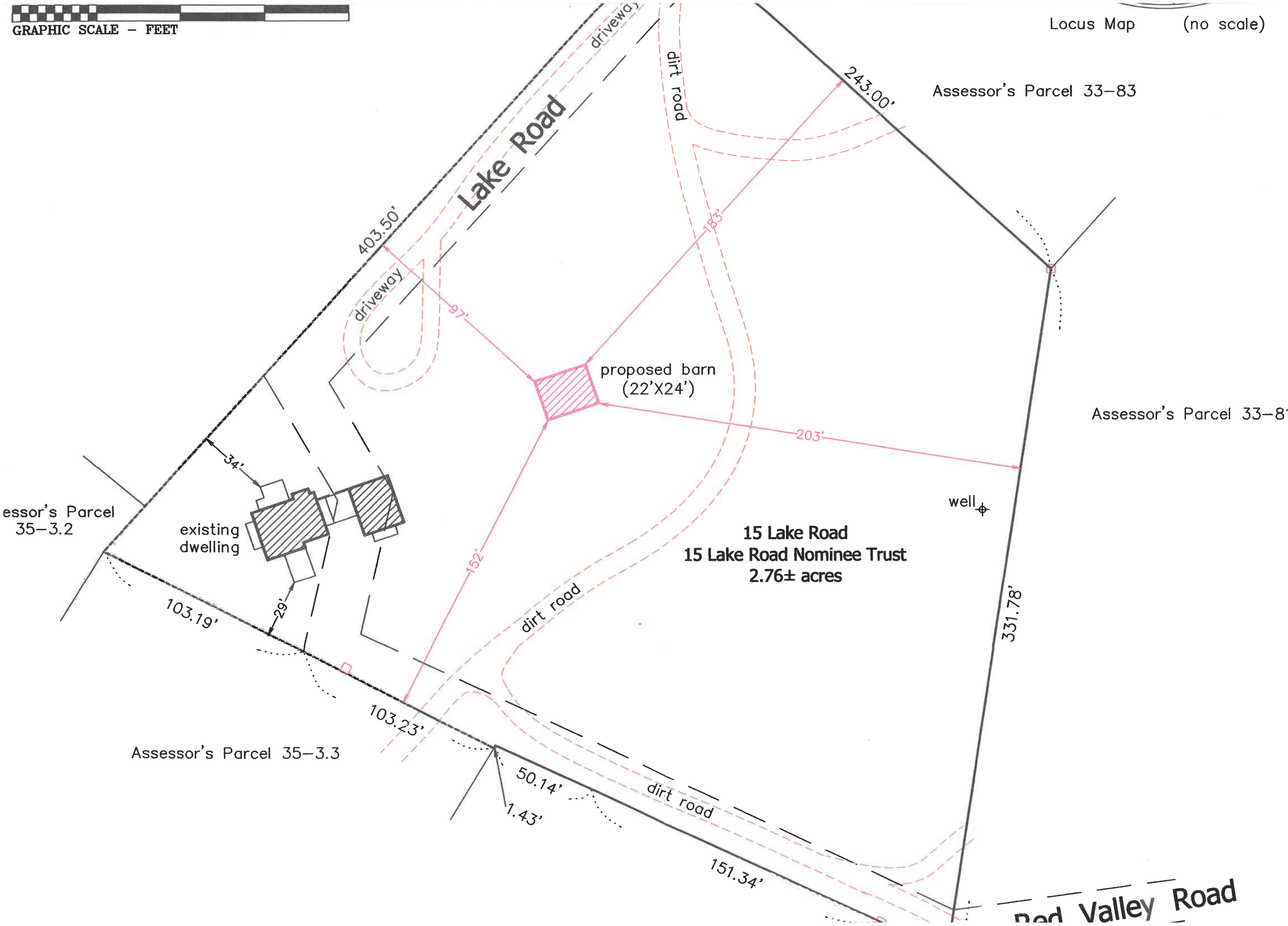
**SOUTH ELEVATION**  
SCALE: 1/4" = 1' 0"

ARCHITECTURAL CEDAR SHINGLE  
OVER 15# TAR PAPER  
OVER 5/8" CDX PLYWOOD  
OVER POST & BEAM SYSTEM

ELEVATION GRADES AND FOUNDATION DROPS  
SHOWN ARE CONCEPTUAL. FOUNDATION DROPS  
AND GRADE WILL BE DETERMINED  
ON SITE BY CONTRACTOR.

NO.	REVISIONS	DATE
1	CONCEPT	07-18-23
2	DAMROTH COMMENTS	08-08-23
3	KEYED BEAMS	09-27-23
4		

EXTERIOR ELEVATIONS  
PAGE NUMBER  
**TF1 of 12**



Assessor's Parcel 33-83

Assessor's Parcel 33-81

Assessor's Parcel 35-3.2

existing dwelling

proposed barn (22'x24')

15 Lake Road  
15 Lake Road Nominee Trust  
2.76± acres

well

Assessor's Parcel 35-3.3

Red Valley Road

403.50'

243.00'

driveway

dirt road

Lake Road

97'

83'

34'

29'

103.19'

203'

152'

dirt road

331.78'

103.23'

50.14'

1.43'

dirt road

151.34'