

PROJECT DATA	
PROJECT ADDRESS:	6805 SE 32ND ST MERCER ISLAND, WA 98040
PROPERTY TAX ID NUMBER:	935910-0325
SCOPE OF WORK:	CONVERTING EXISTING CONDITIONED UPPER FLOOR OF GARAGE INTO AN ADU WITH A NEW GABLE ROOF OVER THE KITCHEN AREA. NEW ROOF WILL NOT EXPAND NONCONFORMITY OF THE EXISTING STRUCTURE.
ZONING:	R-8.4
CONSTRUCTION TYPE:	TYPE V B
SEISMIC ZONE:	3
NUMBER OF STORIES:	2 STORY + DAYLIGHT BASEMENT
FIRE PROTECTION:	30 FT ABOVE AVERAGE BUILDING ELEVATION (FLAT ROOF) 35 FT ABOVE AVERAGE BUILDING ELEVATION (SLOPED ROOF)
LOT AREA:	22,759 SF
SETBACKS:	FRONT LOT LINE = 20 FT REAR LOT LINE = 25 FT SIDE LOT LINES = 20.1 FT (6.6 FT MIN)

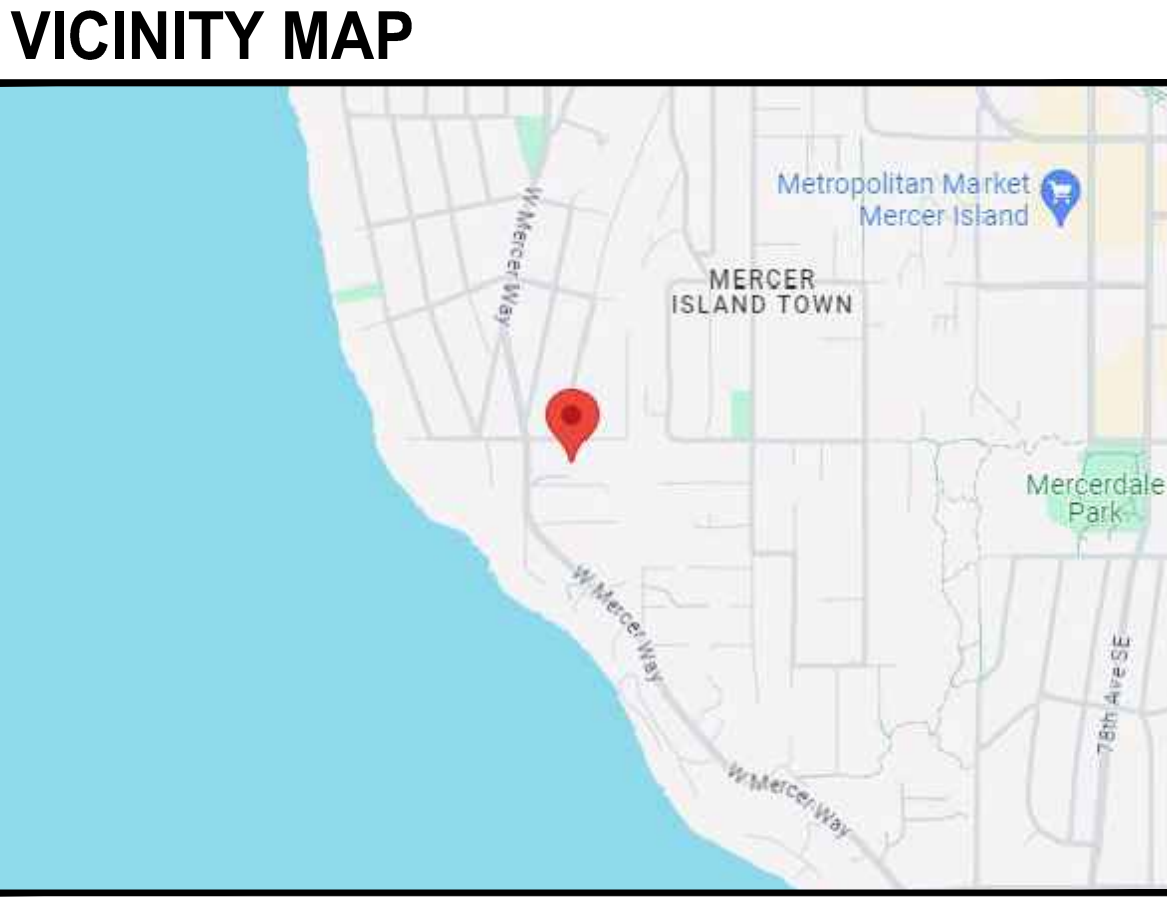
PROJECT TEAM	
OWNER:	TREEHAVEN LLC 6805 32ND ST MERCER ISLAND, WA 98040 PHONE: CONTACT:
ARCHITECT:	STURMAN ARCHITECTS, INC. 9 103RD AVE NE SUITE 203 BELLEVUE, WA 98004 PHONE: 425-451-7003 CONTACT: BRAD STURMAN
STRUCTURAL:	SWENSON SAY FAGET 2124 THIRD AVE, SUITE 100 SEATTLE, WA 98121 PHONE: 206-443-6212 CONTACT: BLAZE BRESKO
SURVEYOR:	TERRANE 10801 MAIN STREET SUITE 102 BELLEVUE, WA 98004 PHONE: 425-458-4489 CONTACT: JACOB MILLER

SHEET INDEX	
A1.0	GENERAL NOTES AND SITE PLAN
A2.0	GARAGE/ADU/ROOF PLAN, DOOR/WINDOW SCHEDULE, ROOF VENT CALCS
A3.0	BUILDING ELEVATIONS
A4.0	BUILDING SECTIONS AND DETAILS
S1.0	STRUCTURAL GENERAL NOTES, ADU FLOOR FRAMING AND ROOF FRAMING PLAN

GROSS FLOOR AREA (GFA)	
LOT SIZE	= 22,759 SF
GFA THRESHOLD	= 9,103.0 SF (40% LOT AREA) OR 5,000 SF (WHICHEVER IS SMALLER)
EXISTING GFA:	
GARAGE	= 757.5 SF
GARAGE - BONUS SPACE	= 778.4 SF
BASEMENT MAIN FLOOR	= 1,229.7 SF
UPPER FLOOR	= 2,055.3 SF
	= 548.6 SF
EXISTING TOTAL:	= 5,369.5 SF
EXISTING TOTAL IS 5,369.5 SF WHICH IS 23.5% BUT LARGER THAN THE 5,000 SF ALLOWED.	
PROPOSED GFA:	
GARAGE	= 757.5 SF
GARAGE - ADU	= 778.4 SF
BASEMENT MAIN FLOOR	= 1,229.7 SF
UPPER FLOOR	= 2,055.3 SF
	= 548.6 SF
PROPOSED TOTAL:	= 5,369.5 SF
PROPOSED TOTAL IS 5,369.5 SF WHICH IS 23.5% BUT LARGER THAN THE 5,000 SF ALLOWED.	
NOTE:	NO NEW GFA ADDED.

LEGAL DESCRIPTION

WHITE & NOBLES 1ST TO E SEATTLE PARCEL A MERCER ISLAND SHORT PLAT NO 82-06-11 REC NO 8207279004 SD PLAT DAF - LOTS 13 THRU 18 & LOTS 33 THRU 38 & E 6 FT OF LOTS 19 & 32 Plat Block: 2 Plat Lot: 13 THRU 18



ABE CALCULATION (GARAGE ONLY)

AVERAGE BUILDING ELEVATION			
	Wall Length	Elevation Pt.	Wall Length X Elev. Pt.
A	25.20	136.50	3439.80
B	30.10	141.50	4259.15
C	25.20	141.20	3558.24
D	30.10	132.80	3997.28
	110.60	552.00	15254.47
15254.47	137.92	Average Building Elevation	
110.60			

- GENERAL NOTES**
- CODE COMPLIANCE: ALL WORK SHALL COMPLY WITH THE 2021 IRC, 2021 WSEC, 2021 IMC, 2021 IFGC, 2021 IFC, 2021 UPC, 2021 IPMC, 2020 NEC, 2015 INTERNATIONAL ENERGY CONSERVATION CODE WITH WASHINGTON STATE AMENDMENTS, 2009 ICC A117.1, AND WITH ALL LOCAL CODES AND ORDINANCES.
 - DIMENSIONS: DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. NOTIFY THE ARCHITECT OF DISCREPANCIES. IF WORK IS STARTED PRIOR TO NOTIFICATION, THE GENERAL AND SUBCONTRACTOR PROCEED AT THEIR OWN RISK. UNLESS OTHERWISE NOTED, PLAN DIMENSIONS ARE TO FACE OF STUDS OR FACE OF CONCRETE WALLS. FACE OF STONE VENEER LIES 6" +/- OUTSIDE THE FACE OF FRAMING. INTERIOR PLAN DIMENSIONS ARE TO FACE OF STUDS UNLESS OTHERWISE NOTED.
 - VERIFY ALL ROUGH-IN DIMENSIONS FOR WINDOWS, DOORS, PLUMBING, ELECTRICAL FIXTURES AND APPLIANCES PRIOR TO COMMITMENT OF WORK. NOTIFY ARCHITECT OF ANY DISCREPANCIES OF DIMENSIONAL TOLERANCES REQUIRED.
 - DOCUMENT REVIEW/VERIFICATION: CONSULT WITH ARCHITECT REGARDING ANY SUSPECTED ERRORS, OMISSIONS, OR CHANGES ON PLANS BEFORE PROCEEDING WITH THE WORK.
 - ROUGH OPENINGS/BACKING: VERIFY SIZE AND LOCATION, AS WELL AS PROVIDE ALL OPENINGS THROUGH FLOORS AND WALLS, FURRING, CURBS, ANCHORS, INSERTS, EQUIPMENT BASES AND ROUGH BUCKS/BACKING FOR SURFACE-MOUNTED ITEMS.
 - FURRING: PROVIDE FURRING AS REQUIRED TO CONCEAL MECHANICAL AND/OR ELECTRICAL EQUIPMENT IN FINISHED AREAS. FURRING NOT SHOWN ON PLANS SHALL BE APPROVED BY ARCHITECT PRIOR TO CONSTRUCTION.
 - GRADES: VERIFY ALL GRADES AND THEIR RELATIONSHIP TO THE BUILDING(S).
 - FLOOR LINES: "FLOOR LINE" REFERS TO TOP OF CONCRETE SLAB OR TOP OF WOOD SUBFLOOR.
 - REPETITIVE FEATURES: OFTEN DRAWN ONLY ONCE AND SHALL BE PROVIDED AS IF FULLY DRAWN.
 - DOORS: DOORS NOT DIMENSIONALLY LOCATED SHALL BE 6" FROM STUD FACE TO EDGE OF DOOR, ROUGH OPENING OR CENTERED BETWEEN WALLS AS SHOWN.
 - WOOD MEMBERS IN CONTACT WITH CONCRETE, AND/OR EXPOSED TO WEATHER: TO BE PRESSURE TREATED, TYPICAL. PROVIDE PRESSURE TREATED SILL PLATE IF FINISH GRADE IS WITHIN 6", TYPICAL.
 - FRAMING: ALL NEW INTERIOR FRAME PARTITIONS TO BE 2X4 @ 16" O.C., & ALL NEW EXTERIOR FRAME PARTITIONS TO BE 2X6 @ 16" O.C., UNLESS OTHERWISE NOTED. VERIFY W/ STRUCTURAL DRAWINGS.
 - VENTILATION: VENT ALL BATHROOM FANS, LAUNDRY FANS, RANGE HOODS AND DRYERS TO OUTSIDE ATMOSPHERE. BATHROOM/UTILITY ROOM FANS SHALL BE CAPABLE OF 5 AIR CHANGES PER HOUR AND SHALL BE VENTED DIRECTLY TO THE OUTSIDE THROUGH SMOOTH, RIGID, NON-CORROSIVE METAL, 24 GA. DUCTWORK. FLEX DUCTING IS NOT ALLOWED. ALL EXHAUST FANS/VENT HOODS OVER 400CFM SHALL HAVE A MAKE-UP AIR DEVICE W/ DAMPER STARTING AUTOMATICALLY AND RUNNING CONTINUOUSLY WITH THE FAN CAPABLE OF SUPPLYING AN EQUIVALENT AMOUNT OF AIR.
 - FLUES: FLUES TO BE LOCATED MINIMUM 2" FROM ALL COMBUSTIBLE MATERIALS.
 - DOWNSPOUTS: LOCATE NEW DOWNSPOUTS AS SHOWN ON ROOF PLAN, FLOOR PLANS & ELEVATIONS.
 - OTHER DOCUMENTATION: REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, AND/OR LANDSCAPE DRAWINGS FOR ADDITIONAL DRAWINGS, NOTES, SCHEDULES, AND SYMBOLS.
 - PROTECTION: PROTECT ALL EXISTING FINISHES AND SURFACES. ANY DAMAGE WILL BE REPAIRED WITHOUT ADDITIONAL COST TO OWNER.
 - PERMITS: SEPARATE ELECTRICAL, MECHANICAL, AND PLUMBING PERMITS ARE REQUIRED IN ADDITION TO THE BASIC BUILDING PERMIT.
 - ROOFING: PROVIDE NEW ROOFING TO MATCH EXISTING.
 - EXHAUST DUCTS: PROVIDE BACKDRAFT DAMPERS AT ALL EXHAUST DUCTS.
 - PROVIDE COMBUSTION AIR OPENINGS INTO FURNACE ROOM PER UMC 703.
 - APPLIANCES: CLEARANCES OF UL LISTED APPLIANCES FROM COMBUSTIBLE MATERIALS SHALL BE AS SPECIFIED IN UL LISTING.
 - WATER FLOW: SHOWER SHALL BE EQUIPPED WITH FLOW CONTROL DEVICE TO LIMIT WATER FLOW TO 2.5 GALLONS PER MINUTE.
 - SMOKE DETECTORS: SMOKE & CARBON MONOXIDE DETECTORS THROUGHOUT NEW CONSTRUCTION.
 - NFPA 72 MONITORED FIRE ALARM SYSTEM.
 - A NFPA 72- CHAPTER 29 MONITORED FIRE ALARM SYSTEM IN COMPLIANCE WITH NFPA 72 AND COMI STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE. A SEPARATE FIRE PERMIT IS REQUIRED.
 - FIRE LOCKING: FIRELOCKING SHALL BE PROVIDED IN WOOD-FRAMED CONSTRUCTION PER 2018 IRC SECTION R302.11: 1) IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, SPECIFICALLY VERTICALLY @ CEILING AND FLOOR LEVELS; AND HORIZONTALLY @ INTERVALS NOT EXCEEDING 10 FEET. 2) AT INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES. 3) IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT T.O. & B.O. RUN, 4) AT OPENINGS AROUND VENTS, PIPES, ETC. AT CEILING AND FLOOR LEVEL.

ENERGY NOTES

CODE:	2021 W.S.E.C. & 2021 IRC, WAC 51-11R
CLIMATIC ZONE:	ZONE #4C
SPACE HEAT TYPE:	NEW HEAT PUMP W/
INSULATION VALUES: PER TABLE R4021.1	
PRESCRIPTIVE METHOD	WALLS: R-20+5 OR 13-10 FLAT ATTIC/CEILINGS: R-38 VAULTED CEILINGS: R-30 FLOORS (OVER UNHEATED SPACES): R-10 SLAB-ON-GRADE: R-10/15/21+5TB BELOW GRADE WALLS: R-10/15/21+5TB FENESTRATION U FACTOR: .30 SKYLIGHT U FACTOR: .50
THERMAL STANDARDS FOR OPENINGS:	UNLIMITED OPTION
AIR INFILTRATION:	MANUFACTURED DOORS/WINDOWS, CONFORM TO SECTION R402.4.3 OF THE WASHINGTON STATE ENERGY CODE
MOISTURE CONTROL:	EXTERIOR JOINTS/OPENINGS: SEAL, CAULK, GASKET OR WEATHERSTRIP TO LIMIT AIR LEAKAGE AT EXTERIOR JOINTS AROUND WINDOW AND DOOR FRAMES. OPENINGS BETWEEN WALLS AND FOUNDATION, BETWEEN WALLS AND ROOF, OPENINGS AT PENETRATIONS OF UTILITY SERVICES AND ALL OTHER SUCH OPENINGS IN THE BUILDING ENVELOPE WALLS: VAPOR RETARDER BONDED TO BATT INSULATION; INSTALL WITH STAPLES NOT MORE THAN 8 INCHES ON CENTER AND WITH A GAP BETWEEN AND OVER FRAMING NOT GREATER THAN 1/16 OF AN INCH. OR, VAPOR RETARDER OF ONE PERM CUP RATING (4 MIL POLYETHYLENE) ATTIC/CEILINGS: VAPOR RETARDER OF ONE PERM CUP RATING (4 MIL POLYETHYLENE). INSTALL CONTINUOUSLY CRACK SPACE: 6 MIL POLYETHYLENE
VENTILATION:	ATTICS WITH LOOSE FILL: N/A. BAFFLE VENT OPENINGS TO DEFLECT AIR ABOVE INSULATION SURFACE. ENCLOSED, JUST OR RAFTER SPACES: PROVIDE MINIMUM 4" OF CLOSED CELL SPRAY FOAM AGAINST EXTERIOR SHEATHING FOR INSULATION AND AIR SEALING. FILL REMAINING CAVITY WITH BATT INSULATION TO MINIMUM R-38.
HEATING & COOLING:	NEW ELECTRIC HEAT PUMP WITH MIN. HSPF OF 9.5
TEMP. CONTROL:	FOR HEATING AND COOLING, THERMOSTAT SHALL BE CAPABLE OF BEING SET FROM 55-85 DEGREES FAHRENHEIT AND OF OPERATING THE HEATING/COOLING SYSTEM IN SEQUENCE. THERMOSTAT TO BE AUTOMATIC DAY/NIGHT SETBACK TYPE AND 7 DAY PROGRAMMABLE (MINIMUM 5+2).
DUCT INSULATION:	THERMALLY INSULATE ALL PLENUMS, DUCTS AND ENCLOSURES IN ACCORDANCE WITH SECTION 403.3 OF THE 2021 WASHINGTON STATE ENERGY CODE. a. ALL HEATING DUCTS OUTSIDE THE BUILDING THERMAL ENVELOPE SHALL BE INSULATED WITH A MIN. OF R-8. ALL SEAM JOINTS SHALL BE MASTICED OR TAPED, SEALED AND FASTENED WITH THE MINIMUM OF FASTENERS PER WSEC. b. DUCTS WITHIN A CONCRETE SLAB OR IN THE GROUND SHALL BE INSULATED TO R-10, WITH INSULATION DESIGNED TO BE USED BELOW GRADE.
LIGHTING:	RECESSED LIGHTING FIXTURES INSTALLED IN BUILDING ENVELOPE SHALL COMPLY WITH WSEC PROVISIONS AND SHALL BE IC LISTED.
PIPE INSULATION:	NON RECIRCULATING HOT AND COLD WATER PIPES LOCATED IN UNCONDITIONED SPACE SHALL BE INSULATED TO R-8 MIN. PLUMBING OR MECHANICAL CANNOT DISPLACE THE REQUIRED INSULATION.
WHOLE HOUSE VENTILATION:	WHOLE HOUSE VENTILATION SYSTEM: a. WHOLE HOUSE VENTILATION SHALL BE PROVIDED BY EXHAUST FAN PROVIDING 105 CFM RUNNING CONTINUOUSLY PER 2018 IRC TABLE M1505.4.3 (1&2). FAN SHALL BE CONNECTED TO A 24 HOUR CLOCK TIMER AND HAVE A SONE RATING OF LESS THAN 1.0. VENTILATION SHALL BE ABLE TO OPERATE INDEPENDENTLY OF HEATING SYSTEM OR BE PROVIDED WITH INTERLOCKED SYSTEM. b. SYSTEM SHALL HAVE A 9"Ø SMOOTH FRESH AIR DUCT W/ LOUVER & SCREEN CONNECTED TO THE RETURN AIR STREAM 4' UPSTREAM OF THE AIR HANDLER AND INSULATED W/ R-4 MIN IN HEATED AREAS. c. SHALL HAVE A FILTER WITH A MERV OF AT LEAST 6 INSTALLED IN AN EASILY ACCESSIBLE LOCATION. d. FRESH AIR VENT SHALL BE LOCATED AWAY FROM SOURCES OF ODORS OR FUMES, MIN 10' FROM PLUMBING OR APPLIANCE VENTS, AWAY FROM ROOMS W/ FUEL BURNING APPLIANCES, AND OUT OF ATTICS, CRAWL SPACES, AND GARAGES. e. AIRFLOW FOR WHOLE HOUSE EXHAUST FAN SHALL BE PROVIDED BY UNDERCUTTING INTERIOR DOORS 1/2" ABOVE FINISHED FLOOR, TYP.

LOT COVERAGE & HARDSCAPE

GROSS LOT AREA IS 22,759 SF

LOT COVERAGE	MAIN STRUCT. & ROOF S.F.		TOTAL LOT COVERAGE	% LOT COVERAGE	HIGHEST EL: +150.5' LOWEST EL: +111.0' ELEVATION DIFFERENCE= 39.5'
EXISTING LOT COVERAGE	2,613.8 SF	959.2 SF	1,108.3 SF	4,882.3 SF	20.6%
PROPOSED LOT COVERAGE	2,613.8 SF	959.2 SF	1,108.3 SF	4,882.3 SF	20.6%
CHANGE	0 SF	0 SF	0 SF	0 SF	0%
% ALLOWED LOT COVERAGE				7,865.7 SF ALLOWABLE	35%

HARDSCAPE	PATHWAY (PATIO)	DECKS	STAIRS	ROCKERIES	RETAINING WALLS	TOTAL HARDSCAPE	% HARDSCAPE
EXISTING HARDSCAPE	636.1 SF	63.8 SF	271.8 SF	385.0 SF	493.5 SF	1,850.3 SF	8.1%
PROPOSED HARDSCAPE	636.1 SF	63.8 SF	271.8 SF	385.0 SF	493.5 SF	1,850.3 SF	8.1%
CHANGE	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0.0%
% ALLOWED HARDSCAPE						2,048.3 SF ALLOWABLE	9%

DUTY OF COOPERATION

RELEASE AND ACCEPTANCE OF THESE DOCUMENTS INDICATES COOPERATION AMONG THE OWNER, CONTRACTOR, AND STURMAN ARCHITECTS. ANY ERRORS, OMISSIONS, OR DISCREPANCIES DISCOVERED IN THE USE OF THESE DOCUMENTS SHALL BE REPORTED IMMEDIATELY TO STURMAN ARCHITECTS. FAILURE TO DO SO SHALL RELIEVE STURMAN ARCHITECTS FROM ANY RESPONSIBILITY FOR THE CONSEQUENCES.

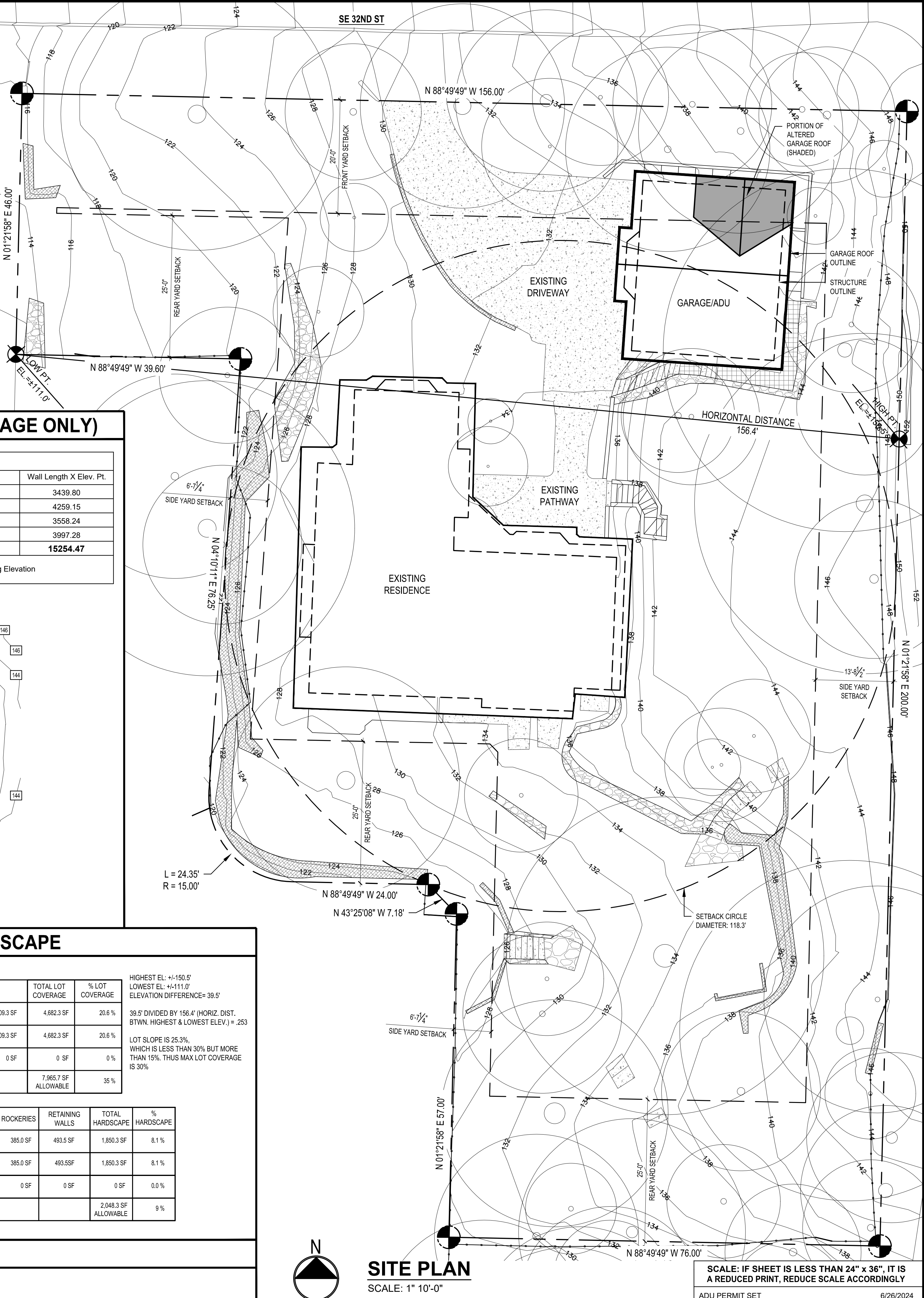
ANY DEVIATIONS FROM THESE DOCUMENTS WITHOUT THE CONSENT OF STURMAN ARCHITECTS ARE UNAUTHORIZED. FAILURE TO OBSERVE THESE PROCEDURES SHALL RELIEVE STURMAN ARCHITECTS OF RESPONSIBILITY FOR ALL CONSEQUENCES ARISING FROM SUCH ACTIONS.

EXISTING WALL INSULATION

EXISTING CEILING, WALL OR FLOOR CAVITIES EXPOSED DURING CONSTRUCTION PROVIDED THAT THESE CAVITIES ARE FILLED WITH INSULATION WHILE MAINTAINING CODE REQUIRED VENTILATION CLEARANCES. 2X4 FRAMED WALLS SHALL BE INSULATED TO A MINIMUM OF R-15 AND 2X6 FRAMED WALLS SHALL BE INSULATED TO A MINIMUM OF R-21.

2021 ENERGY CREDITS

NO NEW CONDITIONED SPACE. NO ENERGY CREDITS REQUIRED.



STURMAN ARCHITECTS

REGISTERED ARCHITECT
BRADLEY STURMAN
STATE OF WASHINGTON

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TEL: 425.451.7003

FORD ADU

6805 SE 32ND ST
MERCER ISLAND, WA 98040

SITE PLAN
PROJECT DATA

REVISIONS:

PLOT DATE: 6/26/2024

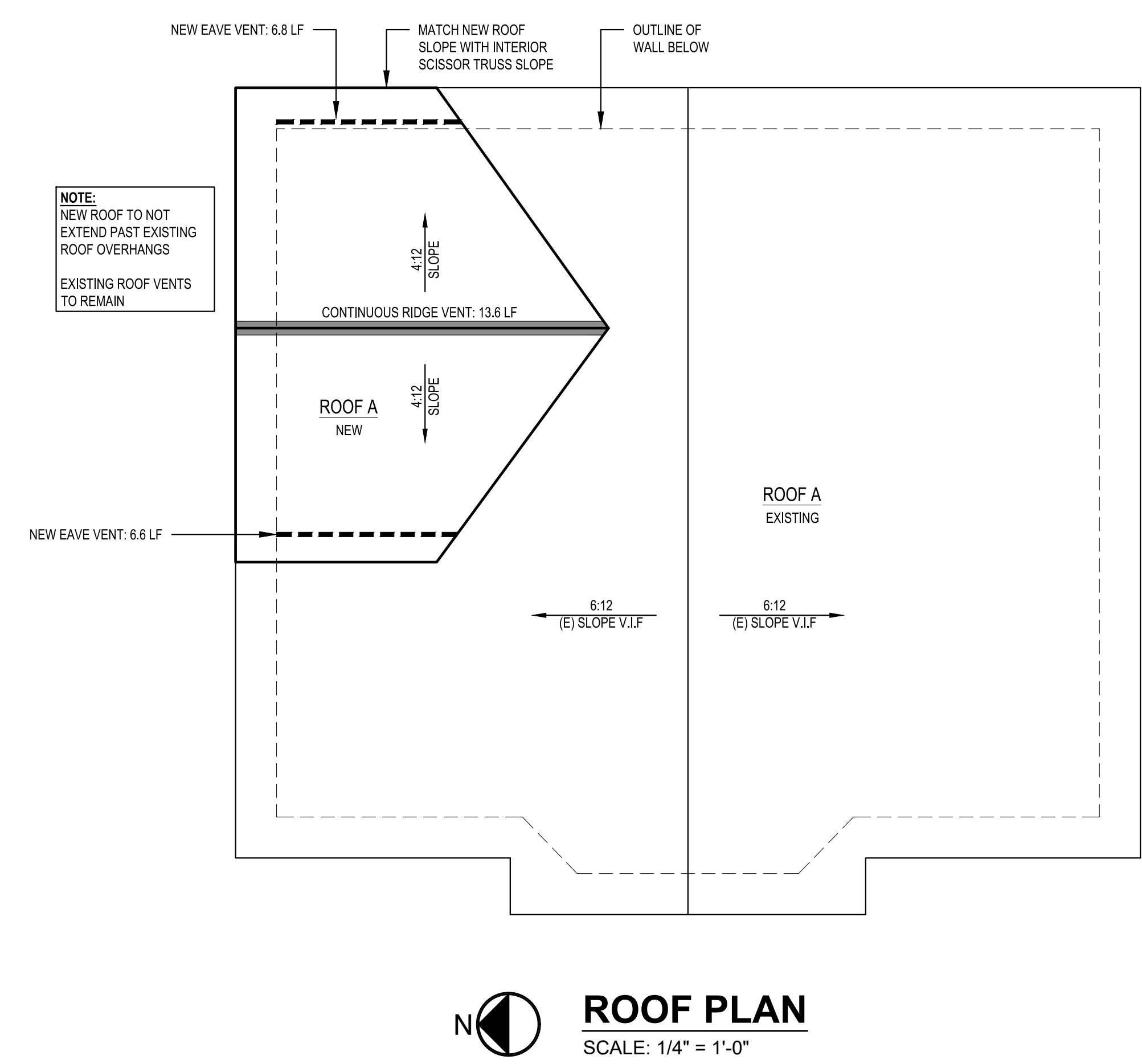
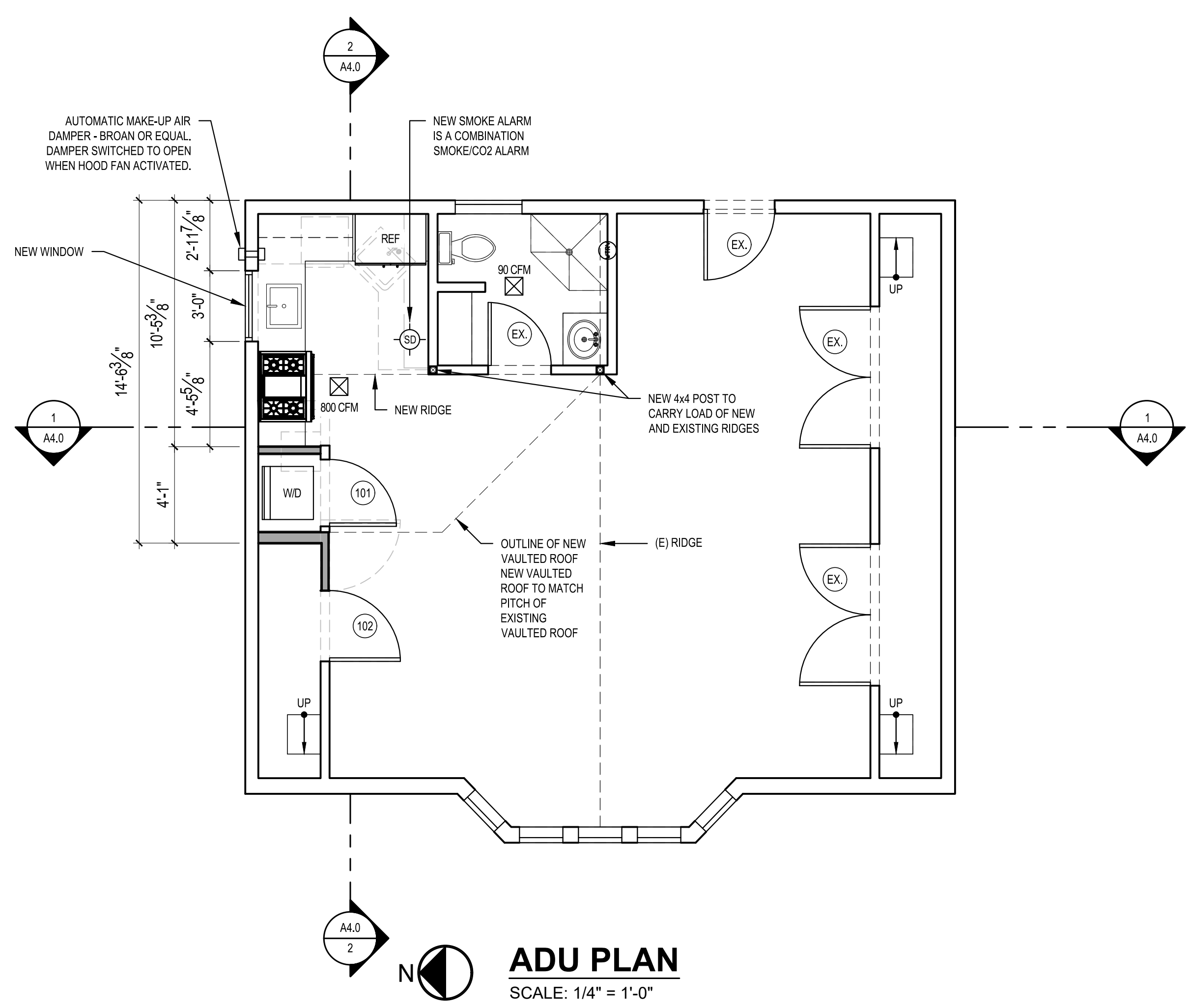
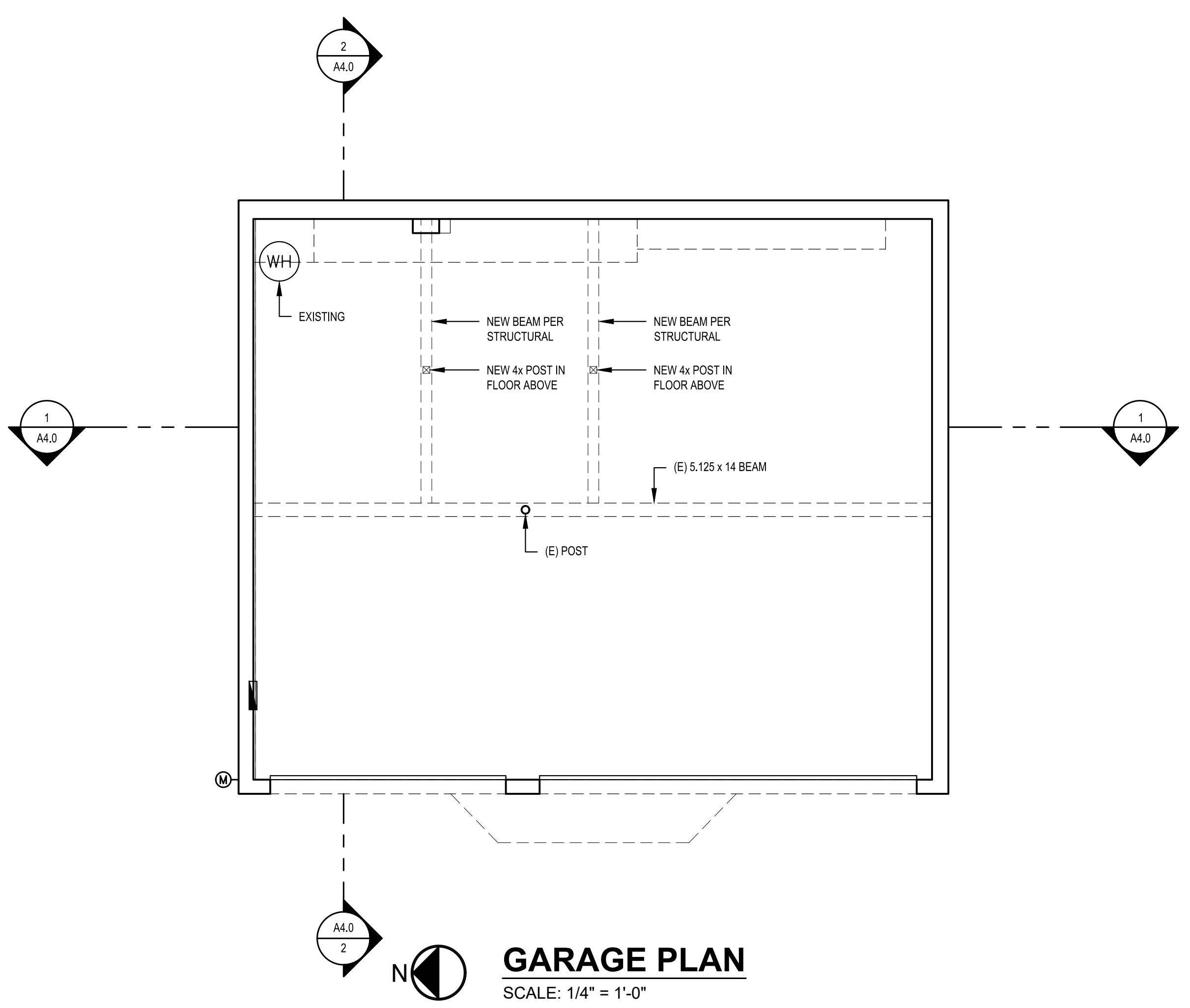
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CHECKED BY: BJS

SHEET

A1.0

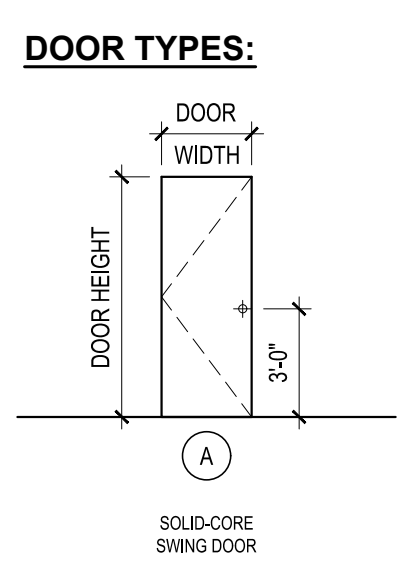
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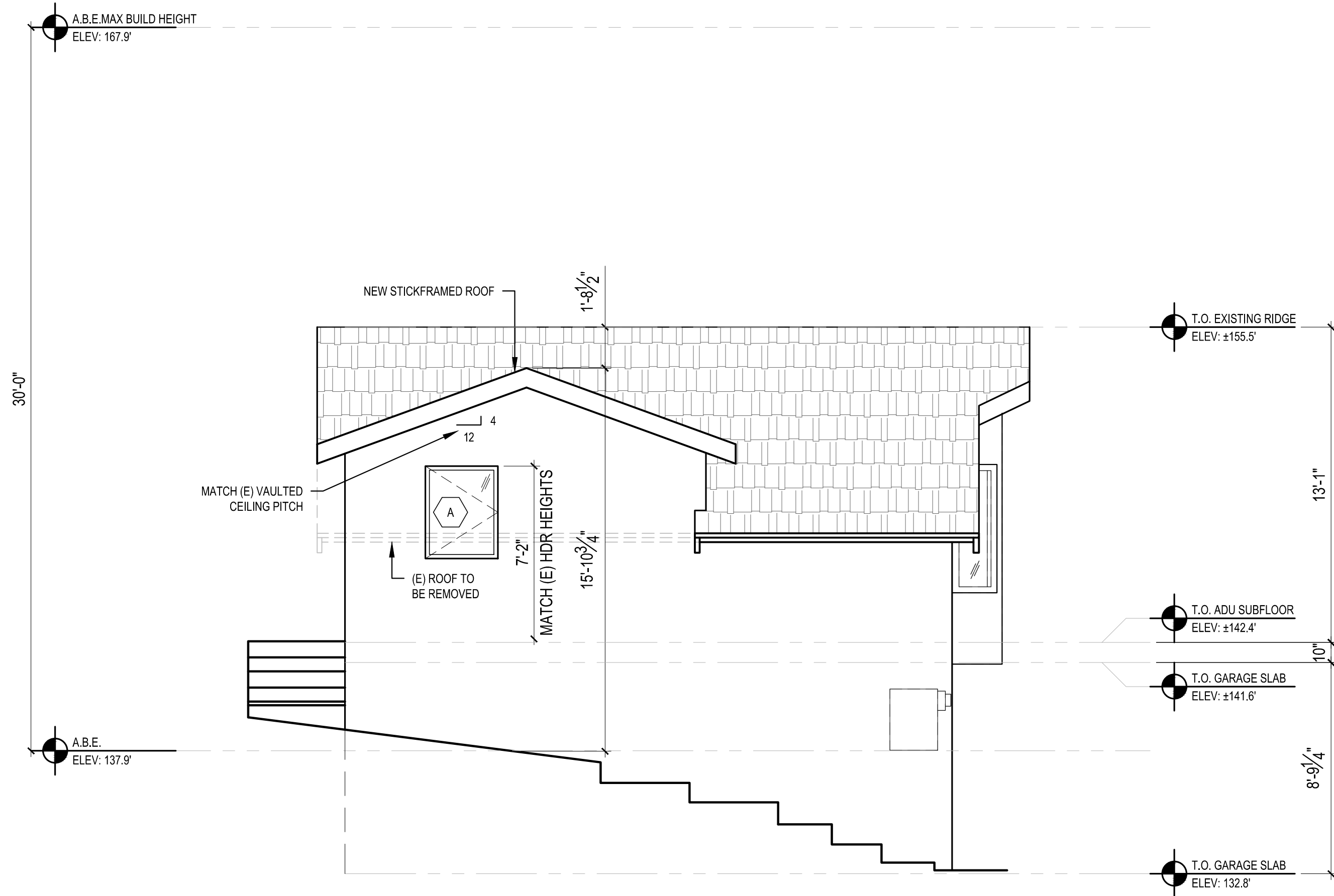


ROOF VENT CALCULATIONS											
CODE REQUIREMENT			CALCULATIONS				ACTUAL				
DESCRIPTION	SF AREA	REQ. VENTING		VENT TYPE		VENT L.F.	TOTAL VENT AREA SQ. IN.	SF CONVERT. 1/144	80% EFF		
		PER SF AREA							FACTOR	TOTAL	
ROOF A NEW	182	1.21	150	300	RIDGE						
					EAVE	18 SQ. IN./FT.	13.4	241.2	1.68	1.34	2.25
						1.5x1.0" VENT					
						12 SQ. IN./FT.	13.6	163.2	1.13	0.91	
					CONTINUOUS		0	0.00	0.00		

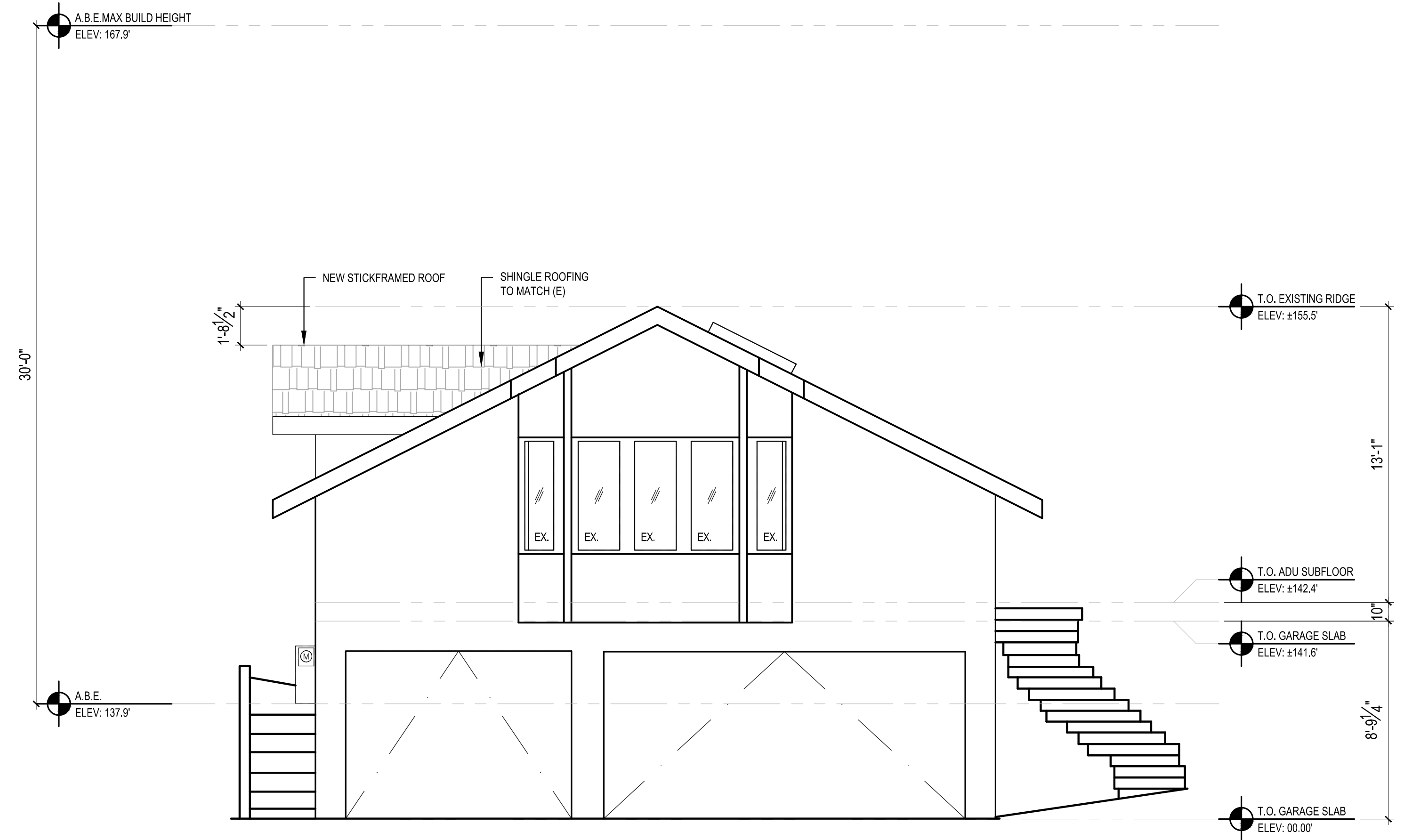
WINDOW SCHEDULE									
TAG.	DESCRIPTION	WINDOW SIZE		TEMP.	QTY.	AREA (SF)	U-VAL (MIN.)	GLAZING	REMARKS & NOTES
		WIDTH	HEIGHT						
A	CASEMENT	3'-0"	3'-10"	Y	1	11.5	0.28	LOW E / CLEAR	

DOOR SCHEDULE								
DOOR NO.	LOCATION	SIZE WIDTH	SIZE HEIGHT	DOOR TYPE	TEMP. GLASS	DOOR THK.	U-VAL (MIN.)	REMARKS
ADU								
101	ADU LAUNDRY CLOSET	2' - 10"	6' - 8"	A		1-3/4"		
102	CLOSET	3' - 0"	6' - 8"	A		1-3/4"		

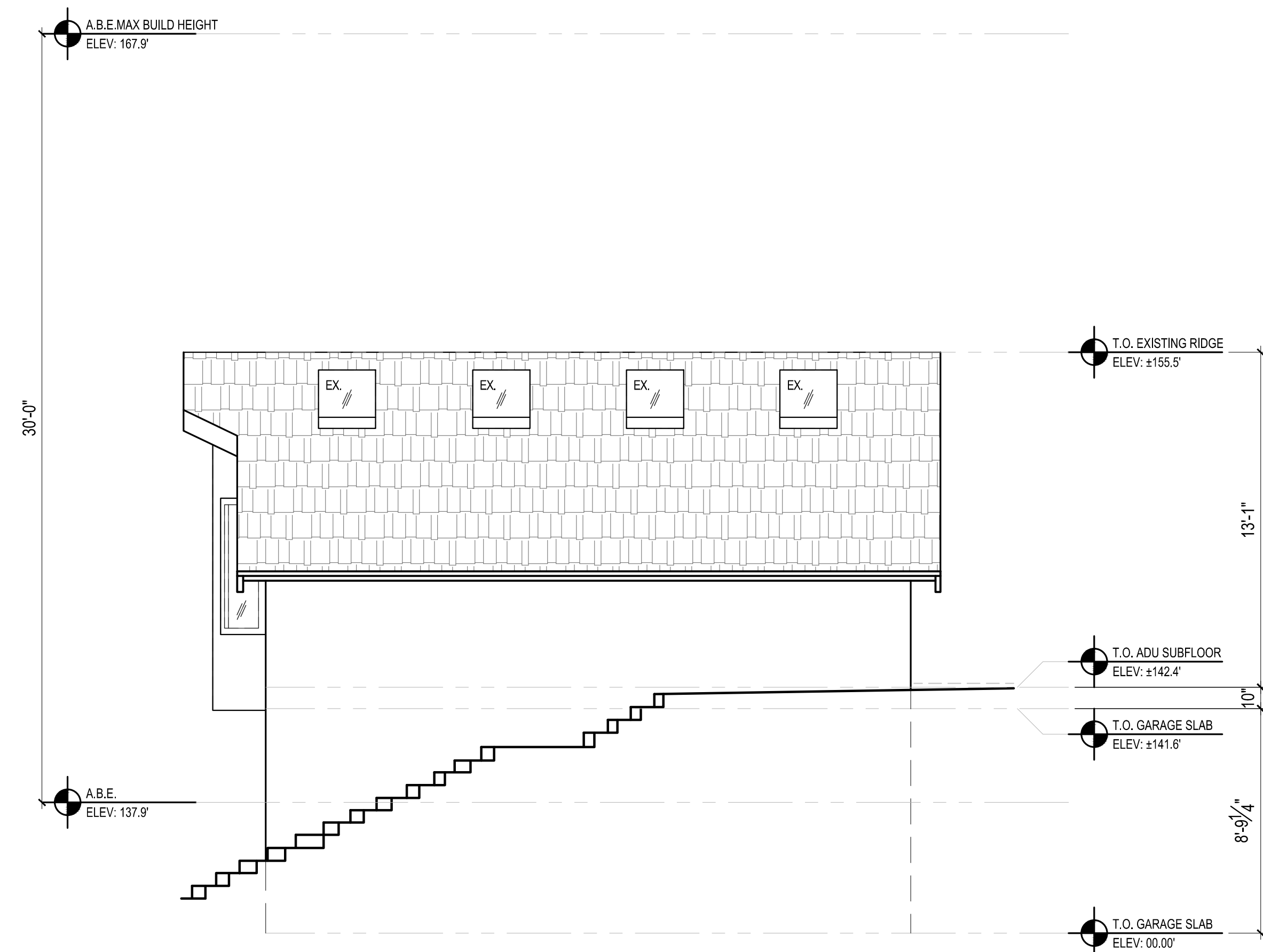




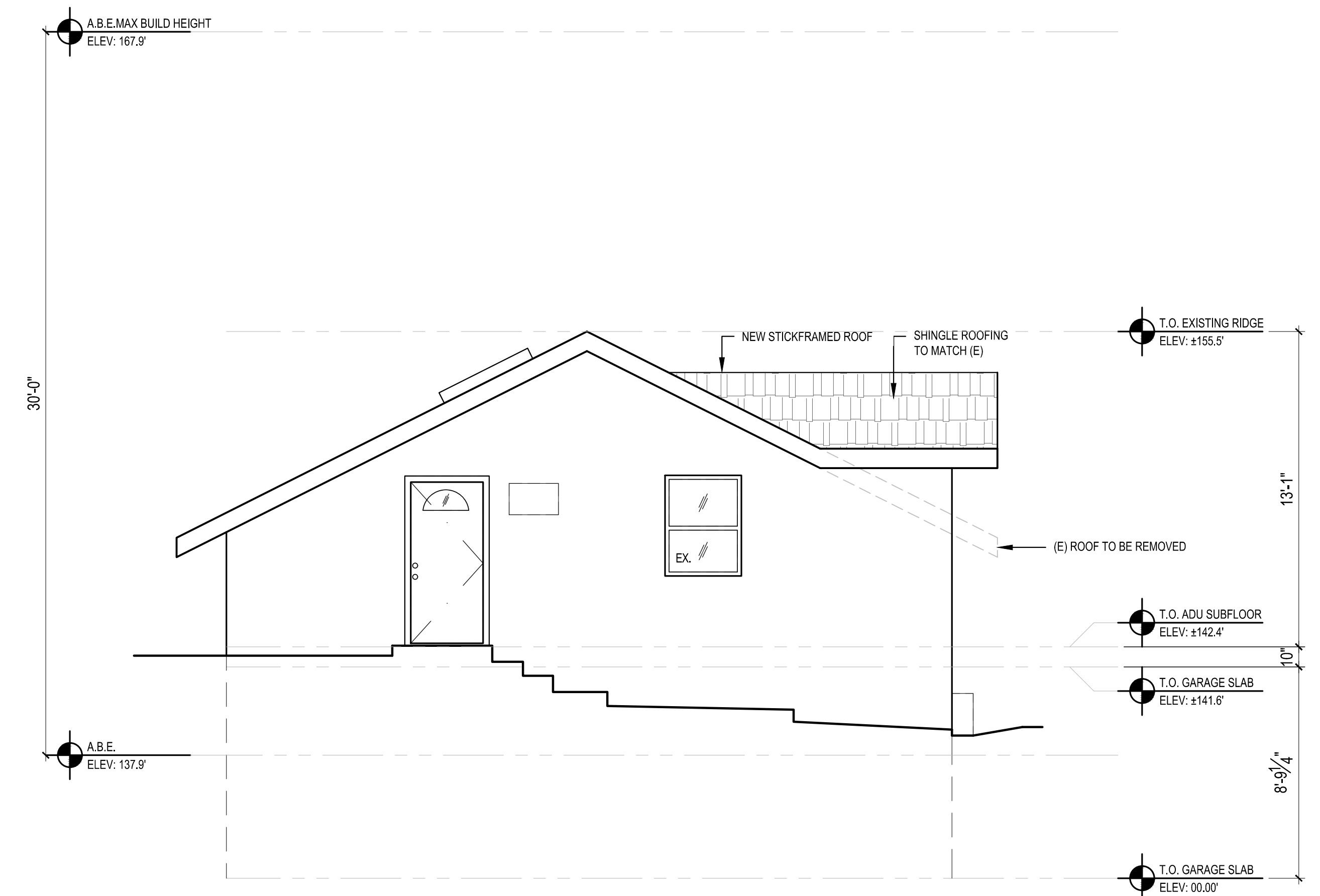
1 NORTH ELEVATION
SCALE: 1/4" = 1'



2 WEST ELEVATION
SCALE: 1/4" = 1'



3 SOUTH ELEVATION
SCALE: 1/4" = 1'

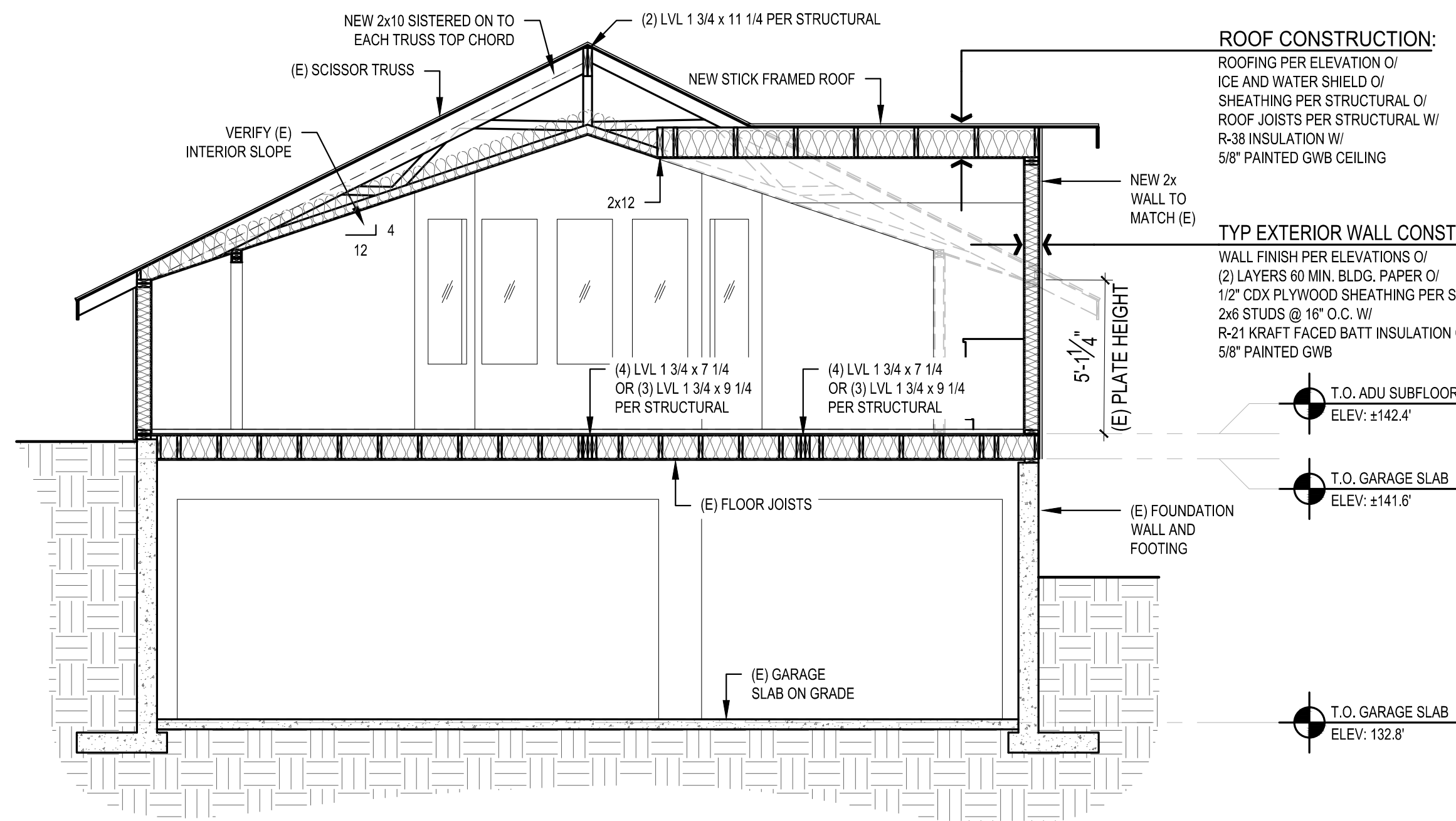


4 EAST ELEVATION
SCALE: 1/4" = 1'

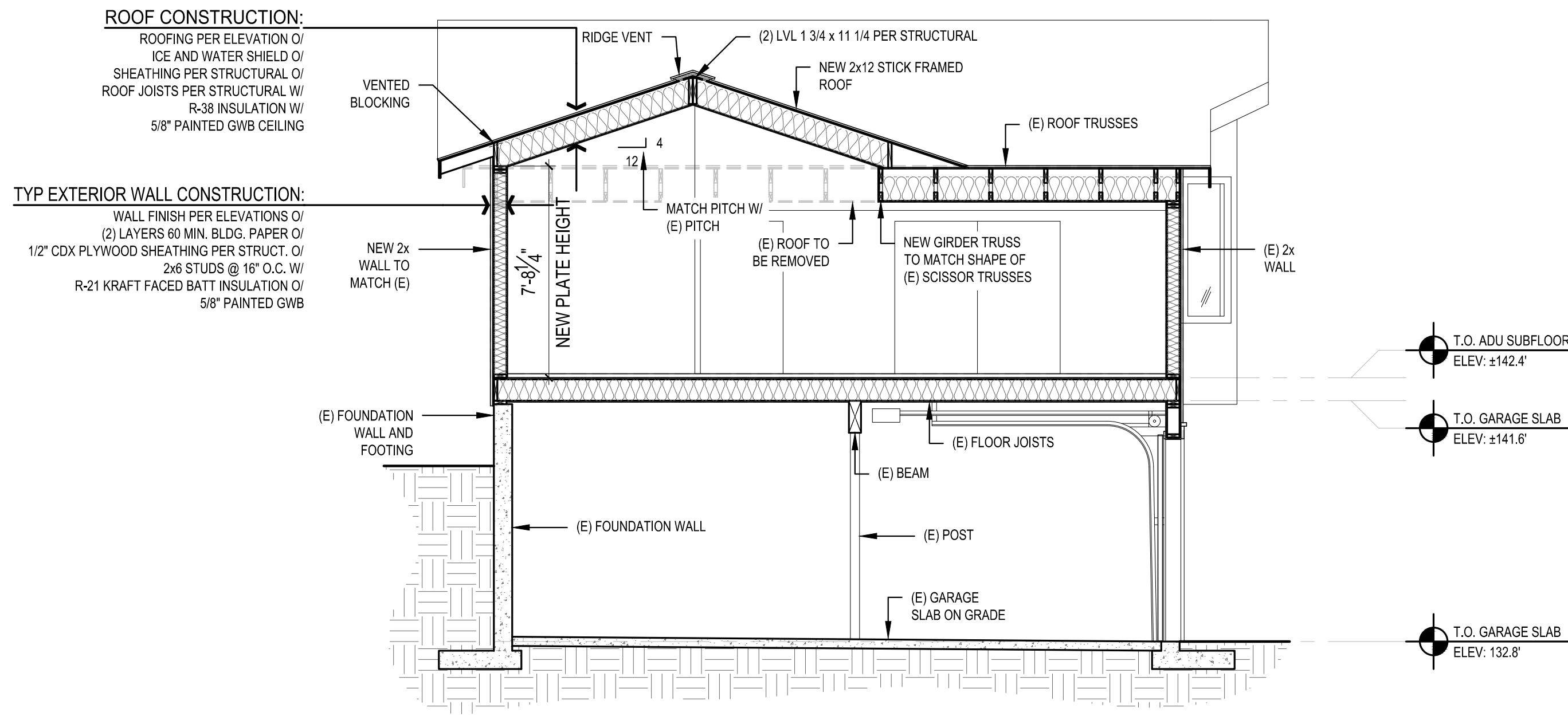
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REVISIONS:	DATE	BY

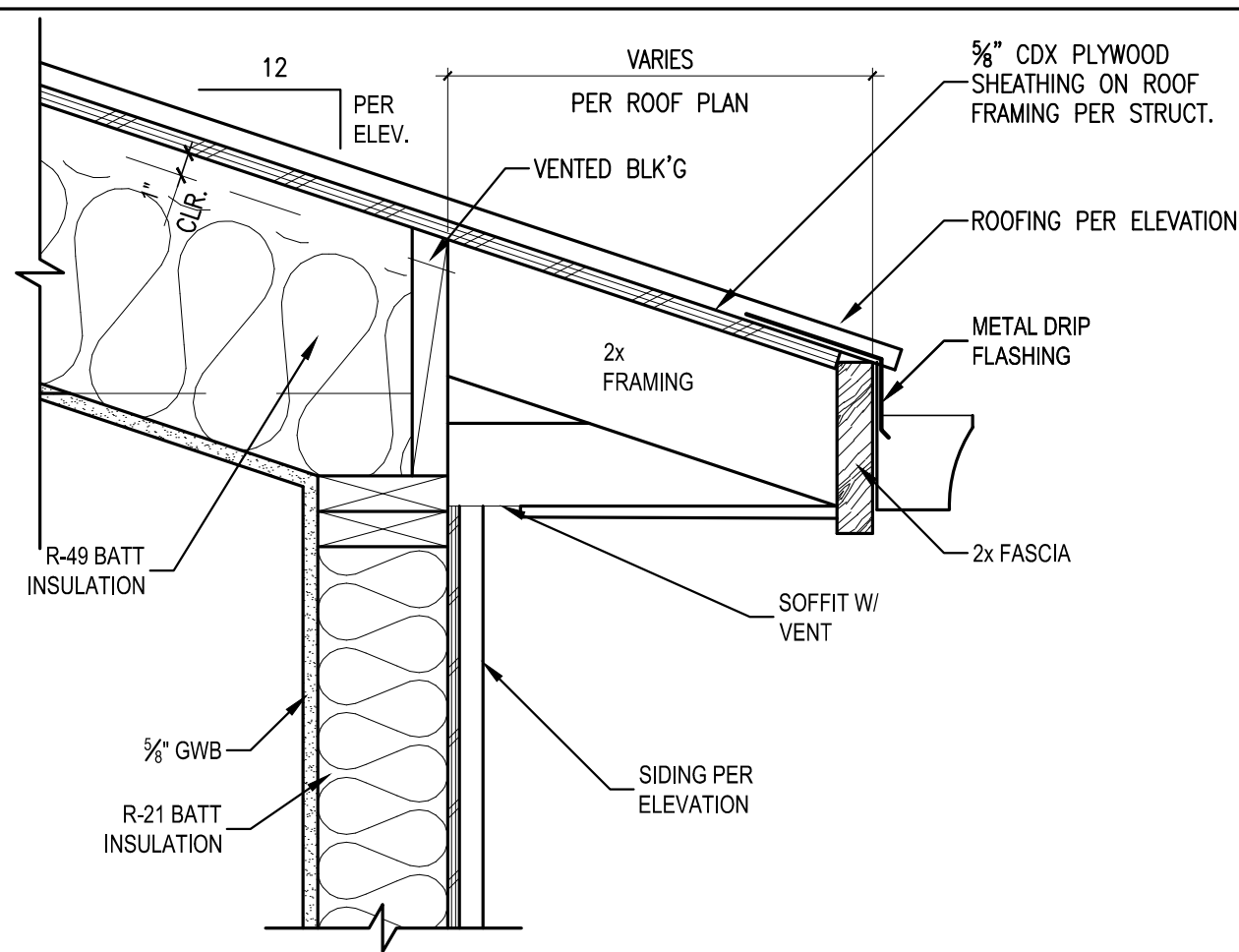
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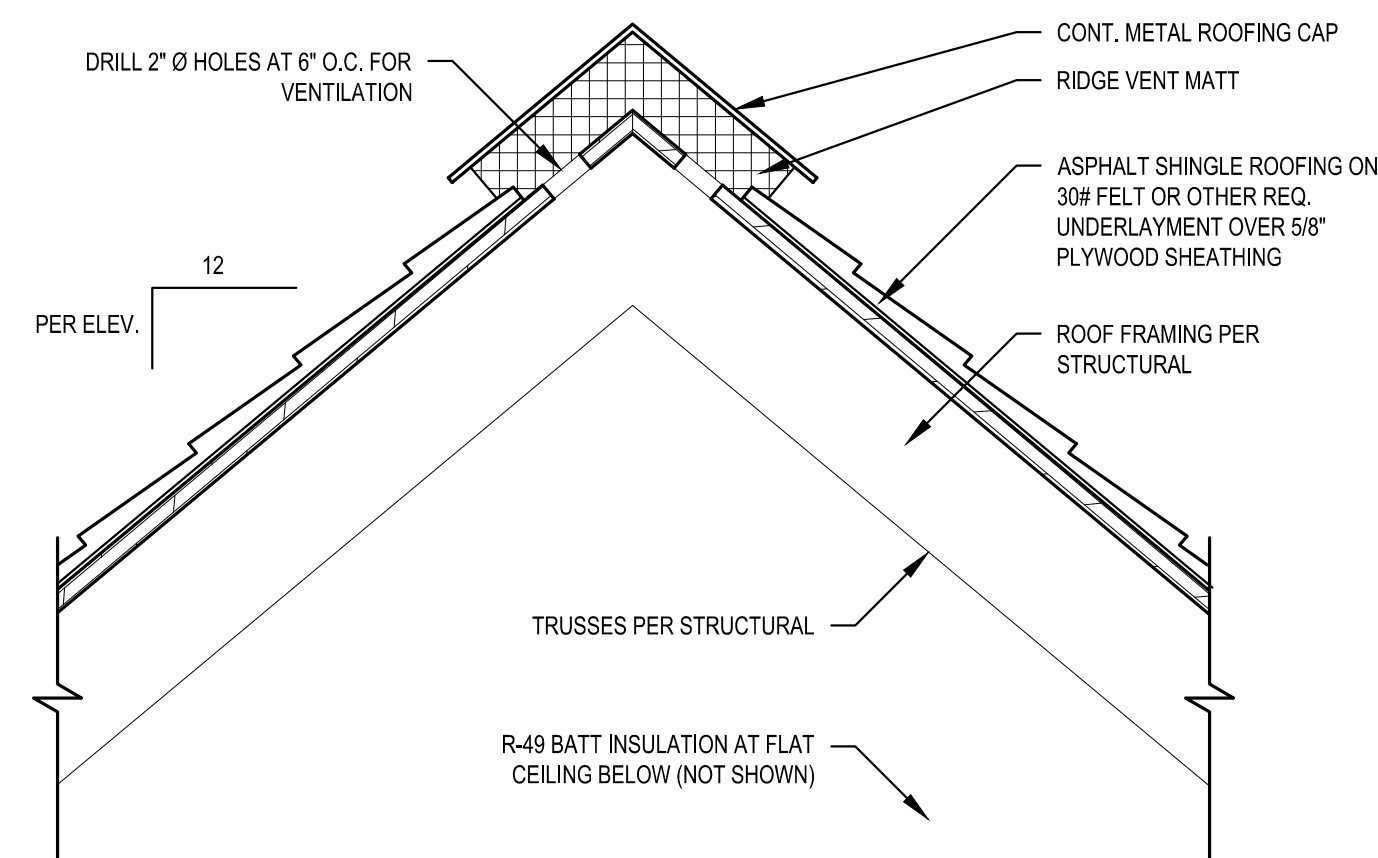
1 GARAGE/ADU BUILDING SECTION
SCALE: 1/4" = 1'-0"



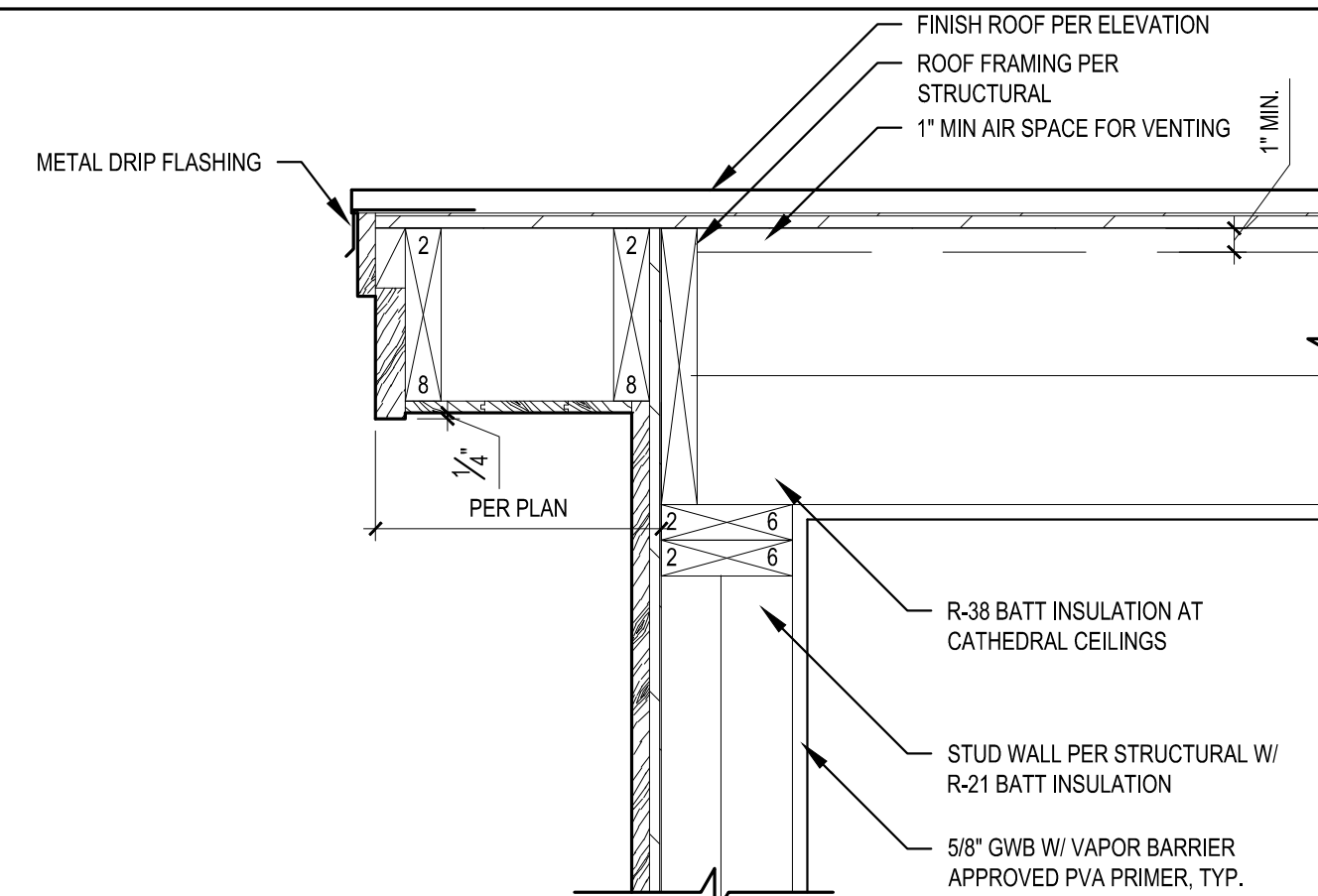
2 GARAGE/ADU BUILDING SECTION
SCALE: 1/4" = 1'-0"



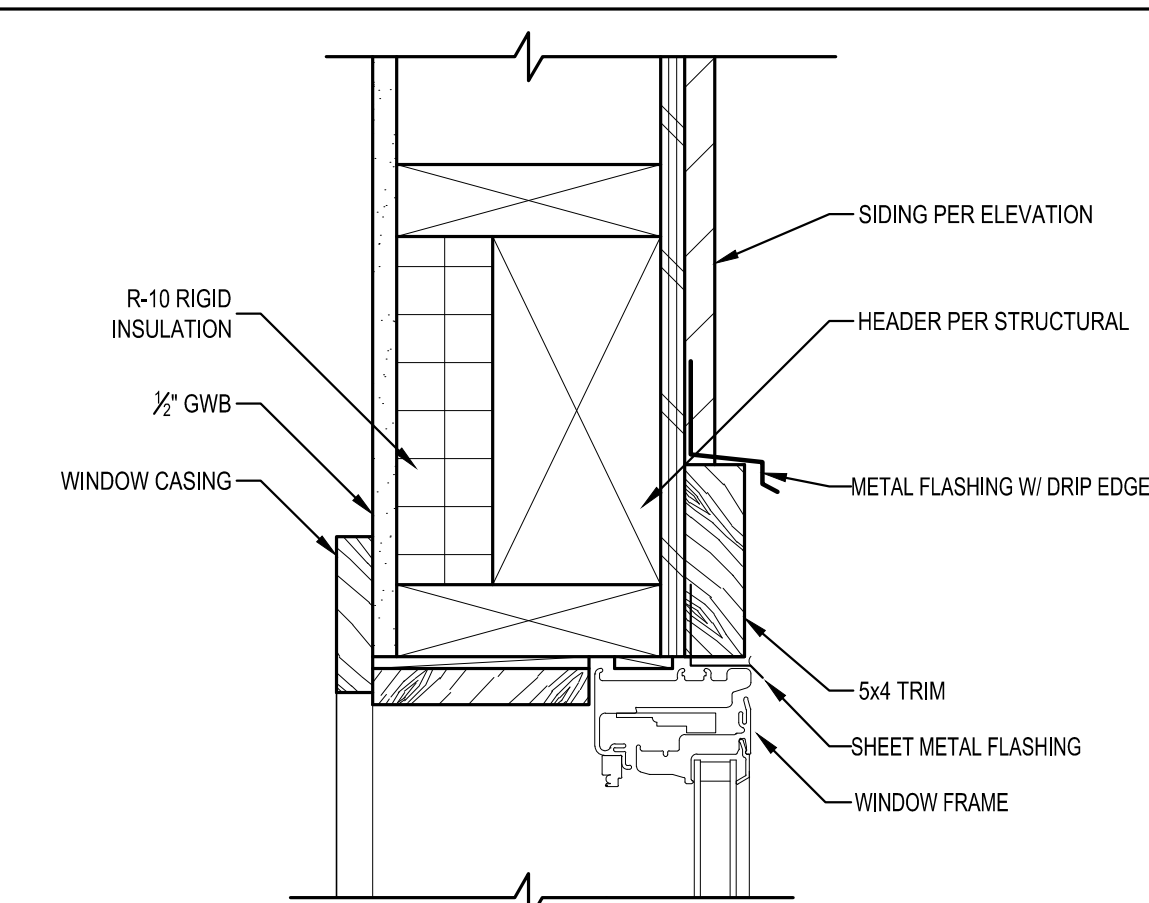
3 TYPICAL ROOF EAVE DETAIL
SCALE: 1 1/2" = 1'-0"



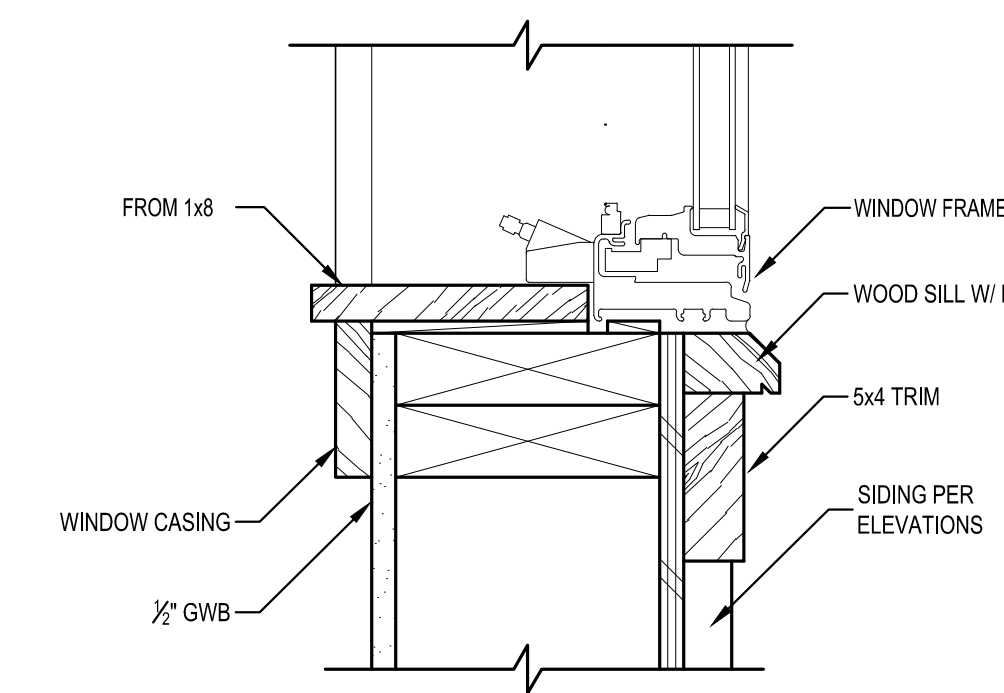
4 TYPICAL ROOF RIDGE VENT DETAIL
SCALE: 1 1/2" = 1'-0"



5 TYPICAL ROOF EAVE RAKE DETAIL
SCALE: 1 1/2" = 1'-0"



6 TYPICAL WINDOW HEAD DETAIL
SCALE: 3" = 1'-0"



7 TYPICAL WINDOW SILL DETAIL
SCALE: 3" = 1'-0"

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ADU PERMIT SET 6/26/2024

REVISIONS:

PLOT DATE: 6/26/2024
DRAWN BY: JM
CHECKED BY: BJS

CRITERIA

- ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE 2021 INTERNATIONAL BUILDING CODE.
- DESIGN LOADING CRITERIA:
RESIDENTIAL - ONE AND TWO-FAMILY DWELLINGS
FLOOR LIVE LOAD 40 PSF
ROOF ROOF DEAD LOAD 15 PSF
DEFLECTION CRITERIA
LIVE LOAD DEFLECTION L/360
TOTAL LOAD DEFLECTION L/240
ENVIRONMENTAL LOADS
SNOW 25 PSF
WIND $Kzt=1.0$, $Gcpi=0.18$, 98 MPH, RISK CATEGORY II, EXPOSURE "C"
EARTHQUAKE ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
LATERAL SYSTEM: LIGHT FRAMED SHEAR WALLS
SITE CLASS=D, $Ss=1.4$, $Sd=1.0$, $SI=.49$, $SD1=.89$, $Cs=0.154$
SDC D, $Ie=1.0$, $R=6.5$
- STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, THESE GENERAL NOTES AND THE SITE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE GENERAL CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE GENERAL CONTRACTOR'S RISK.
- PRIMARY STRUCTURAL ELEMENTS NOT DIMENSIONED ON THE STRUCTURAL PLANS AND DETAILS SHALL BE LOCATED BY THE ARCHITECTURAL PLANS AND DETAILS. VERTICAL DIMENSION CONTROL IS DEFINED BY THE ARCHITECTURAL WALL SECTIONS, BUILDING SECTION, AND PLANS. DETAILING AND SHOP DRAWING PRODUCTION FOR STRUCTURAL ELEMENTS WILL REQUIRE DIMENSIONAL INFORMATION CONTAINED IN BOTH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTORS WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES TO THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.
- CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. CONFORM TO ASCE 37-14 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION".
- CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
- DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER. ALL TYPICAL NOTES AND DETAILS SHOWN ON DRAWINGS SHALL APPLY, UNLESS NOTED OTHERWISE. WHERE NO TYPICAL DETAIL IS NOTED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REQUEST ADDITIONAL INFORMATION.
- ALL STRUCTURAL SYSTEMS, WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERRECTED, SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.

WOOD

- FRAMING LUMBER SHALL BE S-DRY, KD, OR MC-19, AND GRADED AND MARKED IN CONFORMANCE WITH WCLIB STANDARD, GRADING RULES FOR WEST COAST LUMBER NO. 17, OR NWPA STANDARD, WESTERN LUMBER GRADING RULES 2011. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

JSTs-BMS (2X & 3X MEMBERS)	HEM-FIR NO. 2 MINIMUM BASE VALUE, $F_b=850$ PSI
(4X MEMBERS)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, $F_b=1000$ PSI
BEAMS (INCL. 6X AND LARGER)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, $F_b=1350$ PSI
POSTS (4X MEMBERS)	DOUGLAS FIR-LARCH NO. 2 MINIMUM BASE VALUE, $F_c=1350$ PSI
(6X AND LARGER)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, $F_c=1000$ PSI
STUDS, PLATES & MISC. FRAMING:	DOUGLAS-FIR-LARCH OR HEM-FIR NO. 2 MINIMUM BASE VALUE, $F_c=1000$ PSI
- GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH ASTM AND ANSI/AITC STANDARDS. EACH MEMBER SHALL BEAR AN AITC OR APA-EWS IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN AITC OR APA-EWS CERTIFICATE OF PERFORMANCE. ALL BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V4, $F_b=2,400$ PSI, $F_v=265$ PSI.
- MANUFACTURED LUMBER, LVL, SHOWN ON PLAN ARE BASED PRODUCTS MANUFACTURED BY THE WEYERHAEUSER CORPORATION IN ACCORDANCE WITH ICC-ES REPORT ESR-1387. MEMBERS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

LVL (2.0E)	$F_b=2600$ PSI, $E=2000$ KSI, $F_v=285$ PSI
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- PLYWOOD SHEATHING SHALL BE GRADE C-D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH DOC PS 1 OR PS 2. ORIENTED STRAND BOARD OF EQUIVALENT THICKNESS, EXPOSURE RATING AND PANEL INDEX MAY BE USED IN LIEU OF PLYWOOD.

ROOF SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 32/16.
 FLOOR SHEATHING SHALL BE 3/4" (NOMINAL) WITH SPAN RATING 48/24.
 WALL SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 24/0.

PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING.

REFER TO WOOD FRAMING NOTES BELOW FOR TYPICAL NAILING REQUIREMENTS.
- TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED THEIR CATALOG NUMBER C-C-2024 AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

ALL 2X JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LUS" SERIES JOIST HANGERS. ALL BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH "HU/HUCQ" SERIES JOIST HANGERS, UNO.

- WOOD FASTENERS
 - NAIL SIZES SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

SIZE	LENGTH	DIAMETER
8d	2-1/2"	0.131"
16d	3-1/4"	0.131"

NAILS - PLYWOOD (APA RATED SHEATHING) FASTENERS TO FRAMING SHALL BE DRIVEN FLUSH TO FACE OF SHEATHING WITH NO COUNTERSINKING PERMITTED. TOE-NAILS SHALL BE DRIVEN AT AN ANGLE OF 30 DEGREES WITH THE MEMBER AND STARTED 1/3 THE LENGTH OF THE NAIL FROM THE MEMBER END.
 - ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG BOLTS BEARING ON WOOD. INSTALLATION OF LAG BOLTS SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION WITH A LEAD BORE HOLE OF 60 TO 70 PERCENT OF THE SHANK DIAMETER. LEAD HOLES ARE NOT REQUIRED FOR 3/8" AND SMALLER LAG SCREWS.

- NOTCHES AND HOLES IN WOOD FRAMING:
 - NOTCHES ON THE ENDS OF SOLID SAWN JOISTS AND RAFTERS SHALL NOT EXCEED ONE-FOURTH THE JOIST DEPTH. NOTCHES IN THE TOP OR BOTTOM OF SOLID SAWN JOISTS SHALL NOT EXCEED ONE-SIXTH THE DEPTH AND SHALL NOT BE LOCATED IN THE MIDDLE THIRD OF THE SPAN. HOLES BORED IN SOLID SAWN JOISTS AND RAFTERS SHALL NOT BE WITHIN 2 INCHES OF THE TOP OR BOTTOM OF THE JOIST, AND THE DIAMETER OF ANY SUCH HOLE SHALL NOT EXCEED ONE-THIRD THE DEPTH OF THE JOIST.
 - IN EXTERIOR WALLS AND BEARING PARTITIONS, ANY WOOD STUD IS PERMITTED TO BE CUT OR NOTCHED TO A DEPTH NOT EXCEEDING 25 PERCENT OF ITS WIDTH. A HOLE NOT GREATER IN DIAMETER THAN 40 PERCENT OF THE STUD WIDTH IS PERMITTED TO BE BORED IN ANY WOOD STUD. IN NO CASE SHALL THE EDGE OF THE BORED HOLE BE NEARER THAN 5/8 INCH TO THE EDGE OF THE STUD. BORED HOLES SHALL NOT BE LOCATED AT SAME SECTION OF STUD AS A CUT OR NOTCH.

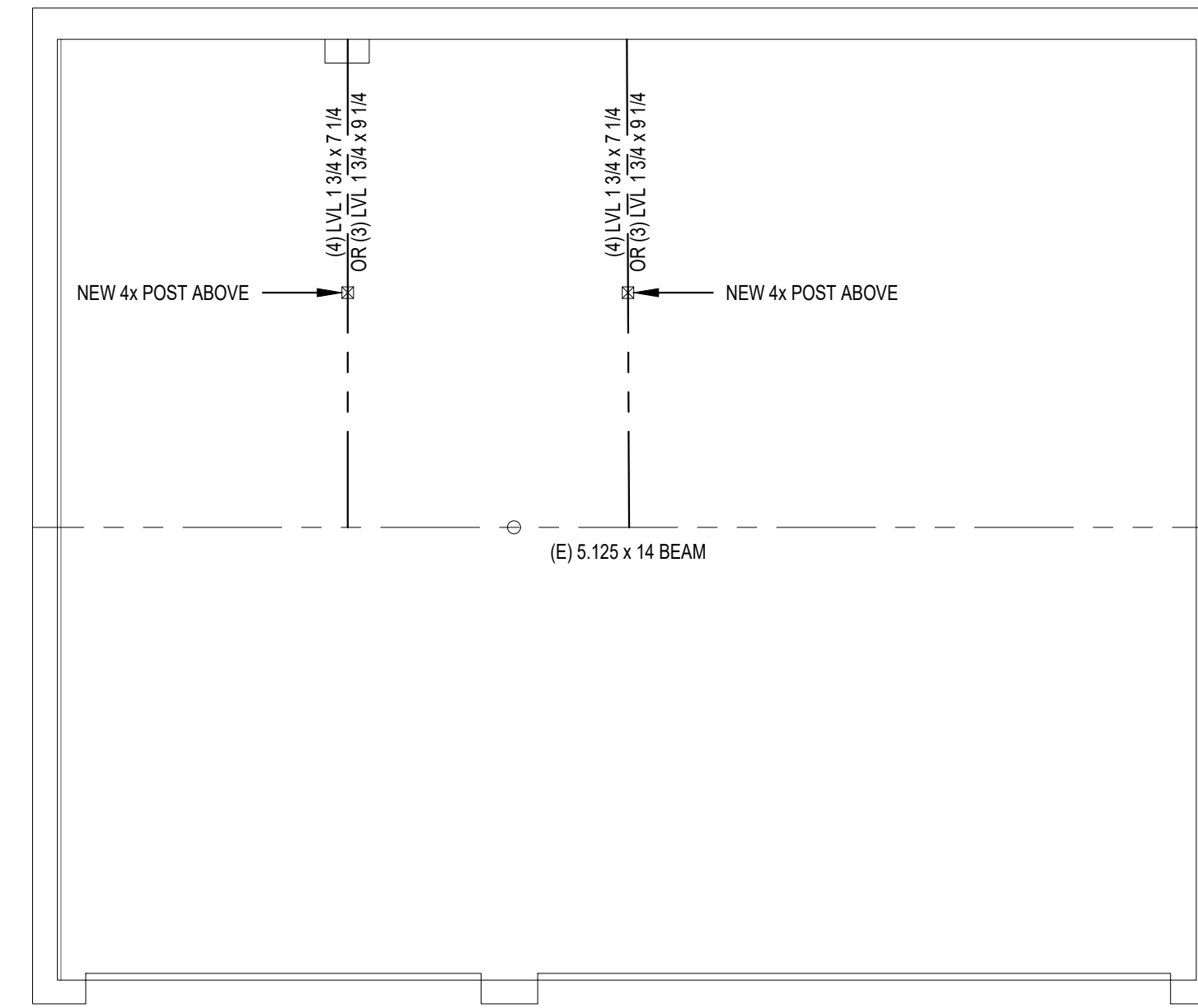
- WOOD FRAMING NOTES--THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN ON THE PLANS:
 - ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE INTERNATIONAL BUILDING CODE, THE AITC "TIMBER CONSTRUCTION MANUAL" AND THE AF&PA "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION". MINIMUM NAILING, UNLESS OTHERWISE NOTED, SHALL CONFORM TO IBC TABLE 2304.10.1. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH ARCHITECTURAL DRAWINGS.
 - WALL FRAMING: REFER ARCHITECTURAL DRAWINGS FOR THE SIZE OF ALL WALLS. ALL STUDS SHALL BE SPACED AT 16" O.C. UNO. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS, AND AT BEAM OR HEADER BEARING LOCATIONS. TWO 2x8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS NOT OTHERWISE NOTED. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW.

ALL WALLS SHALL HAVE A SINGLE BOTTOM PLATE AND A DOUBLE TOP PLATE. END NAIL TOP PLATE TO EACH STUD WITH TWO 16d NAILS, AND TOENAIL OR END NAIL EACH STUD TO BOTTOM PLATE WITH TWO 16d NAILS. FACE NAIL DOUBLE TOP PLATE WITH 16d @ 12" O.C. AND LAP MINIMUM 4'-0" AT JOINTS AND PROVIDE EIGHT 16d NAILS @ 4" O.C. EACH SIDE JOINT.

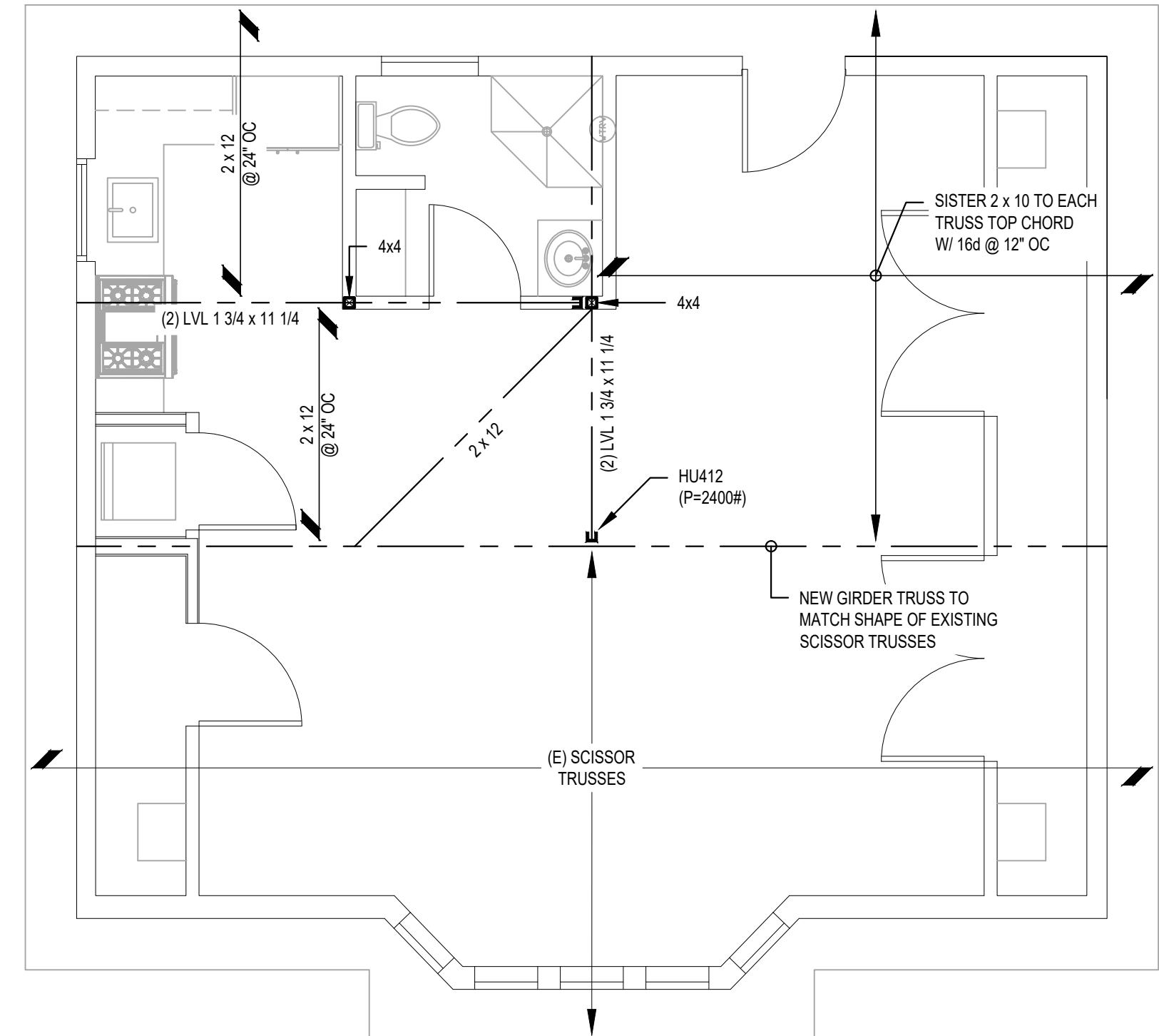
ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH TWO ROWS OF 16d NAILS @ 12" ON-CENTER, OR ATTACHED TO CONCRETE BELOW WITH 5/8" DIAMETER ANCHOR BOLTS @ 4'-0" ON-CENTER EMBEDDED 7" MINIMUM, UNLESS INDICATED OTHERWISE. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH TWO ROWS OF 16d 812" ON-CENTER. UNLESS INDICATED OTHERWISE, 1/2" (NOMINAL) APA RATED SHEATHING (SPAN RATING 24/0) SHALL BE NAILED TO ALL EXTERIOR SURFACES WITH 8d NAILS @ 6" ON-CENTER AT PANEL EDGES AND TOP AND BOTTOM PLATES (BLOCK UN-SUPPORTED EDGES) AND TO ALL INTERMEDIATE STUDS AND BLOCKING WITH 8d NAILS @ 12" ON-CENTER ALLOW 1/8" SPACING AT ALL PANEL EDGES AND PANEL ENDS.
 - FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS UNLESS OTHERWISE NOTED. PROVIDE SOLID BLOCKING AT ALL BEARING POINTS. TOE-NAIL JOISTS TO SUPPORTS WITH TWO 16d NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI JOIST BEAMS TOGETHER WITH TWO ROWS 16d @ 12" ON-CENTER.

UNLESS OTHERWISE NOTED ON THE PLANS, PLYWOOD ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH GRAIN PERPENDICULAR TO SUPPORTS AND NAILED AT 6" ON-CENTER WITH 8d NAILS TO FRAMED PANEL EDGES, STRUTS AND OVER STUD WALLS AS SHOWN ON PLANS AND @ 12" ON-CENTER TO INTERMEDIATE SUPPORTS. PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH 16d @ 12" ON-CENTER UNO.

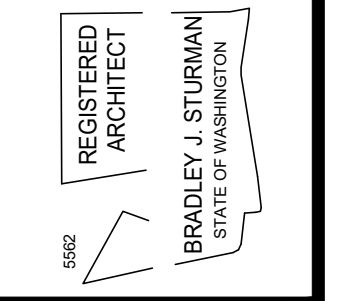
- PLAN NOTES:
- DO NOT SCALE DRAWINGS. REFER ARCHITECTURAL DRAWINGS.
 - TYPICAL ROOF FRAMING CONSISTS OF ROOFING PER STRUCTURAL DRAWINGS OVER 1/2" CDX PLYWOOD. FACE GRAIN PERPENDICULAR TO SUPPORTS OVER TRUSSES PER PLAN. NAIL SHEATHING WITH 8d AT 6" OC OVER EDGES, STRUTS AND SHEAR WALLS, 12" OC FIELD.
 - ALL HEADERS SHALL BE (2) 2x8'S UNO. CONTRACTOR MAY SUBSTITUTE A 6x6 AT HIS OPTION.
 - PROVIDE (1) BEARING STUD AN (1) FULL HEIGHT JAMB STUD EACH END OF ALL HEADERS AND BEAMS LESS THAN 8 FEET, UNO. ATTACH JAMB TO HEADER WITH (4) 16d EACH END AND ATTACH JAMB TOP AND BOTTOM WITH A35.
 - PROVIDE (2) BEARING STUDS AND (1) FULL HEIGHT JAMB STUD EACH END OF ALL HEADERS AND BEAMS GREATER THAN 8 FEET, UNO. ATTACH JAMB TO HEADER WITH (6) 16d EACH END AND ATTACH JAMB TOP AND BOTTOM WITH A35.
 - ALL NEW EXTERIOR WALLS SHALL BE SHEATHED WITH 1/2" PLYWOOD IN ACCORDANCE WITH THE GENERAL NOTES. BLOCK EDGES WITH 2x FLAT AND NAIL WITH 6" OC EDGES, 12" OC FIELD.
 - PROVIDE H1 TIES AT ALL ROOF JOISTS TO BEARING SUPPORTS.
 - PROVIDE LRUZ HANGERS AT ALL SLOPED ROOF JOISTS TO BEAMS.
 - PROVIDE PC, AC, LPC, A35, OR EQUAL AS POST CAP AT ALL BEAMS TO ISOLATED POSTS, UNO.
 - REFER GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.



ADU FLOOR FRAMING
SCALE: 1/4" = 1'-0"



ADU ROOF FRAMING
SCALE: 1/4" = 1'-0"



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FORD ADU
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MERCER ISLAND, WA 98040

GENERAL STRUCTURAL NOTES
ADU FLR/ROOF FRAMING

REVISIONS:	
PLOT DATE:	6/7/2024
DRAWN BY:	JM
CHECKED BY:	BJS
SHEET	

S1.0

SCALE: IF SHEET IS LESS THAN 24" x 36" IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY
SCHEMATIC SET 5/15/2024