

DERCHER'S HOUSE ADDITION

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HOUSE ADDITION
4090 SW PRYOR ROAD
LEE'S SUMMIT, MISSOURI 64082
RACHEL AND DANIEL DERCHER

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1	9/12/2025	CLIENT REVISION

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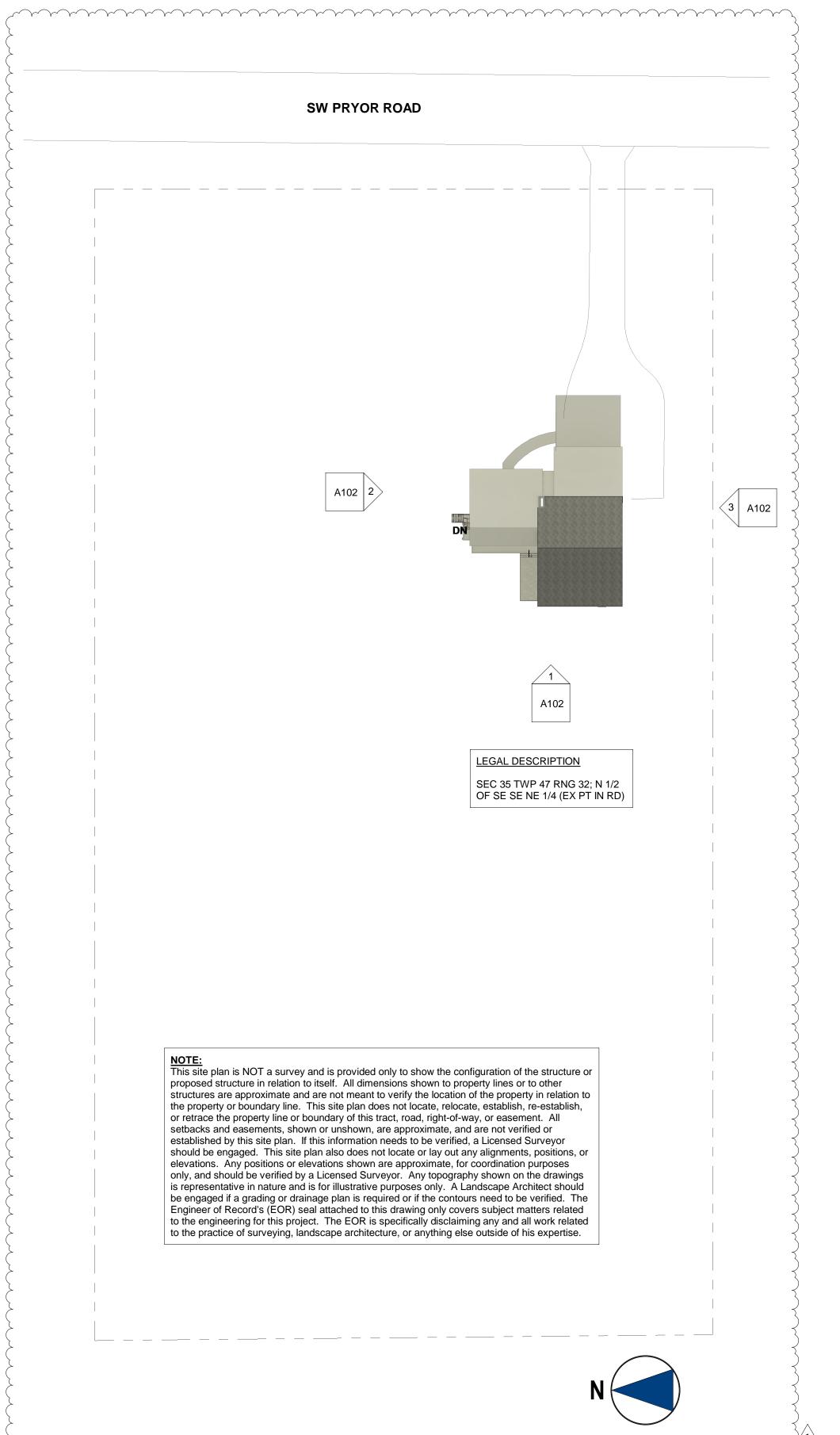
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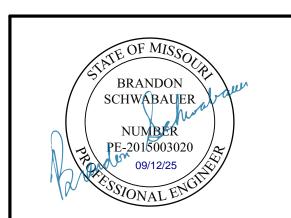








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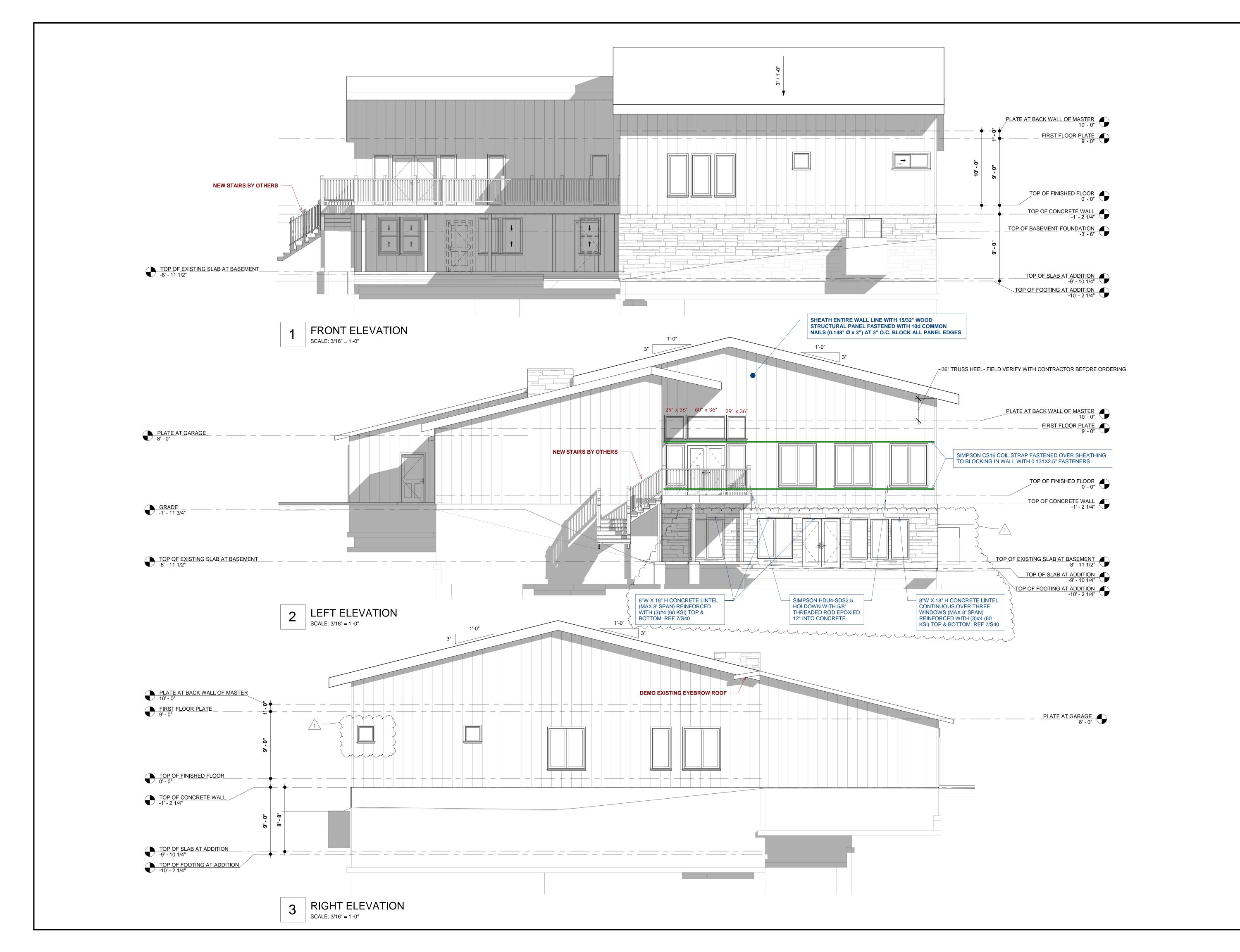
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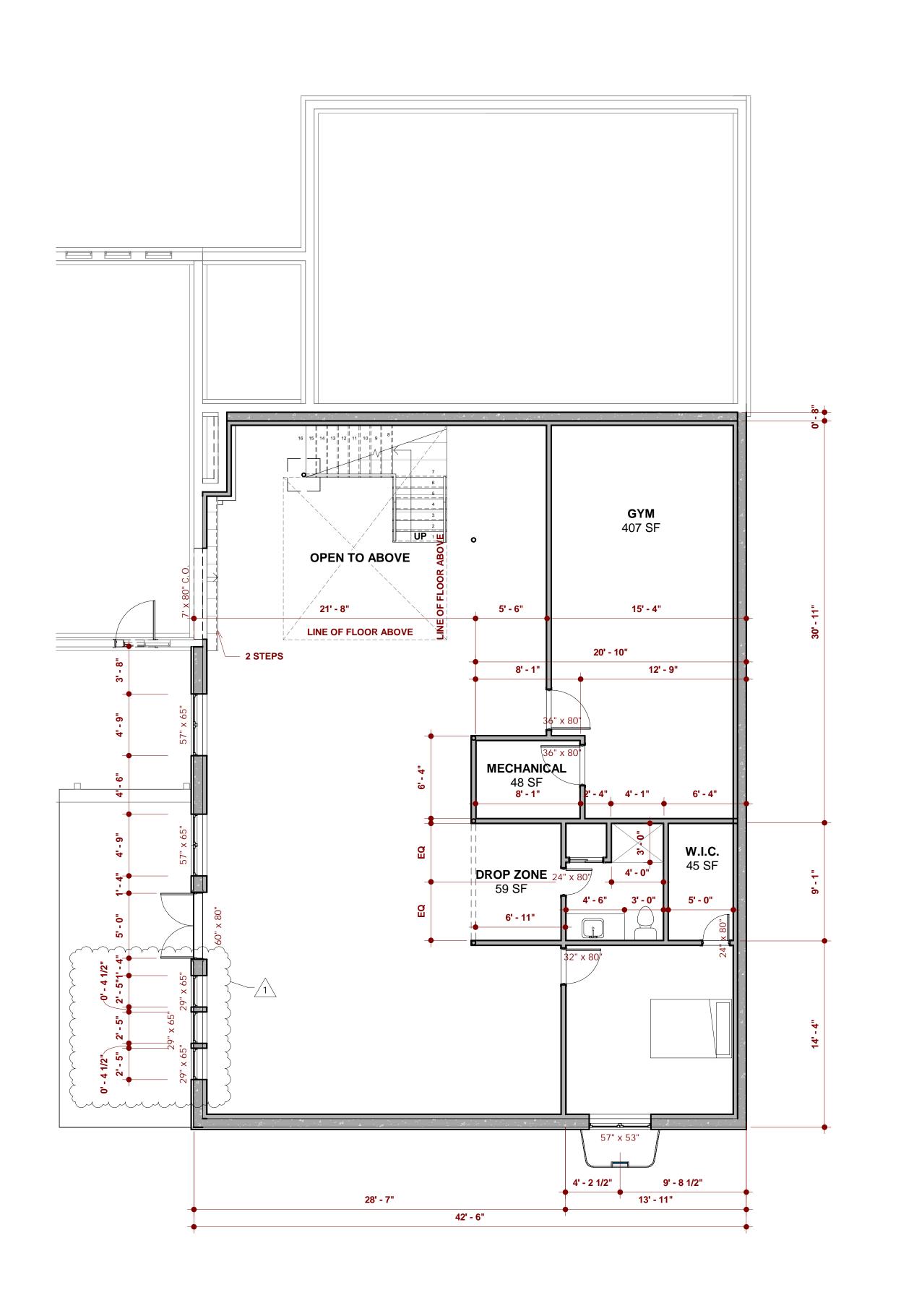
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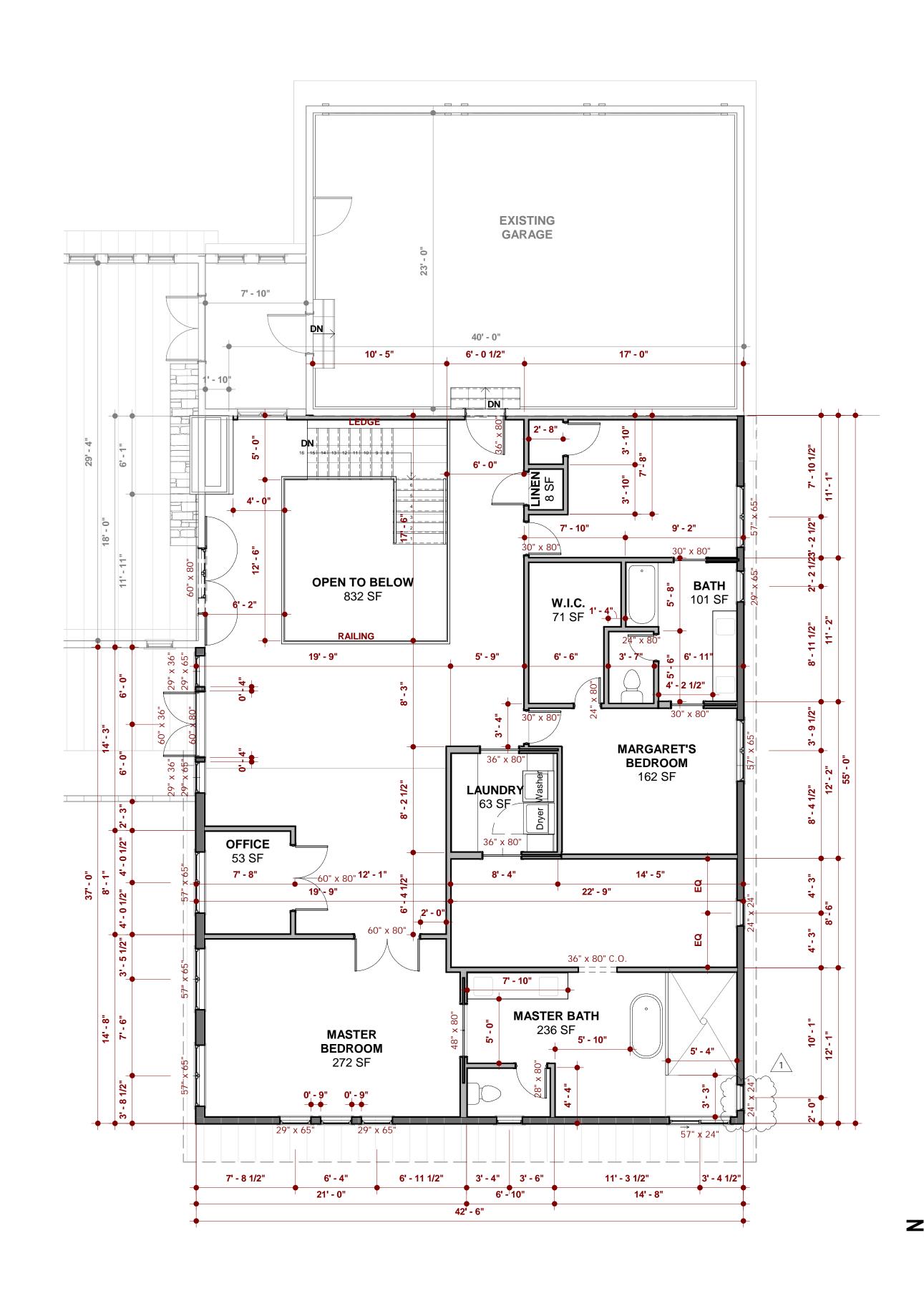
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FLOOR PLANS

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GENERAL NOTES

GOVERNING BUILDING CODE: 2018 INTERNATIONAL RESIDENTIAL CODE (IRC) AND ITS

APPROPRIATE SUPPLEMENTS **ROOF DEAD LOAD** 15 psf ROOF LIVE LOAD: 20 psf FLOOR DEAD LOAD: 10 psf FLOOR LIVE LOAD: BEDROOMS:

30 psf ALL OTHER LIVING AREAS: 40 psf WIND LOADS: Vult=115 MPH, EXPOSURE C

SEISMIC LOADS: SITE CLASS "B" ASSUMED ALLOWABLE SOIL BEARING PRESSURE

FURNISH ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO COMPLETE THE WORK SHOWN OR INFERRED BY THESE DRAWINGS.

- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE PLANS AND FOR COORDINATING ALL DIMENSIONS AND ELEVATIONS SHOWN WITH THE EXISTING CONDITIONS. IF ERRORS OR DISCREPANCIES IN THE DIMENSIONS OCCUR, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BRING ALL DISCREPANCIES TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE
- THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY BRACING AND SHORING AS REQUIRED DURING CONSTRUCTION TO ENSURE THE SAFETY OF ALL INDIVIDUALS INVOLVED. ALL MECHANICAL, ELECTRICAL, AND PLUMBING ELEMENTS SHALL BE INSTALLED PER THE REQUIREMENTS OF THE GOVERNING BUILDING CODE AND THE LOCAL MUNICIPALITY.
- NORTON & SCHMIDT CONSULTING ENGINEERS, L.L.C. HAS DESIGNED THE STRUCTURAL FLOOR FRAMING AND WALL BRACING SYSTEM OF THESE PLANS FOR THE CONSTRUCTION OF A RESIDENCE AT THE ADDRESS REFERENCED IN THE PLANS. NORTON & SCHMIDT CONSULTING ENGINEERS, L.L.C. WILL NOT TAKE RESPONSIBILITY FOR ANY RE-USE OF ANY PORTION OF THE DESIGN, PLANS OR SPECIFICATIONS AT ANY OTHER PROPERTY OR ADDRESS WITHOUT OUR PRIOR WRITTEN CONSENT.

THE TERM "BUILDER'S PLANS" REFERS TO A CERTAIN LEVEL OF DEVELOPMENT OF THE DRAWINGS. AS THE NAME IMPLIES, THESE PLANS REQUIRE THAT THE CONTRACTOR POSSESSES COMPETENCE IN RESIDENTIAL CONSTRUCTION AND A THOROUGH UNDERSTANDING OF THE INTERNATIONAL RESIDENTIAL CODE (IRC). THE CONTRACTOR WARRANTS TO NORTON & SCHMIDT CONSULTING ENGINEERS, L.L.C., THAT HE POSSESSES THE PARTICULAR COMPETENCE AND SKILL IN CONSTRUCTION NECESSARY TO BUILD THIS PROJECT WITHOUT FULL ENGINEERING AND DESIGN SERVICES, AND FOR THAT REASON THE CONTRACTOR OR HOME OWNER HAS RESTRICTED THE SCOPE OF PROFESSIONAL SERVICES. THE CONSTRUCTION DOCUMENTS PROVIDED BY THE LIMITED SERVICES SHALL BE TERMED "BUILDER'S PLANS" IN RECOGNITION OF THE CONTRACTOR'S SOPHISTICATION. ALTHOUGH NORTON & SCHMIDT CONSULTING ENGINEERS. L.L.C. AND OUR CONSULTANTS HAVE PERFORMED THEIR SERVICES WITH DUE CARE AND DILIGENCE, WE CANNOT GUARANTEE PERFECTION. ANY AMBIGUITY OR DISCREPANCY DISCOVERED BY THE USE OF THESE PLANS SHALL BE REPORTED IMMEDIATELY TO NORTON & SCHMIDT CONSULTING ENGINEERS, L.L.C. CONSTRUCTION MAY REQUIRE THAT THE CONTRACTOR ADAPT THE "BUILDER'S PLANS" TO THE FIELD CONDITIONS ENCOUNTERED AND MAKE LOGICAL ADJUSTMENTS IN FIT, FORM, DIMENSION AND QUANTITY. CHANGES MADE FROM THE PLANS WITHOUT THE CONSENT OF NORTON & SCHMIDT CONSULTING ENGINEERS, L.L.C. ARE UNAUTHORIZED. IT IS ALSO UNDERSTOOD THAT THE CONTRACTOR WILL BE RESPONSIBLE FOR MEETING ALL APPLICABLE BUILDING CODES INCLUDING BUT NOT LIMITED TO MECHANICAL, ELECTRICAL, AND PLUMBING CODE REQUIREMENTS (WHICH IS EXCLUDED FROM THESE PLANS). IN THE EVENT ADDITIONAL DETAIL OR GUIDANCE IS NEEDED BY THE CONTRACTOR OR HOMEOWNER FOR CONSTRUCTION OF ANY ASPECT OF THE PROJECT, NORTON & SCHMIDT CONSULTING ENGINEERS, L.L.C. OR A QUALIFIED ARCHITECT/ENGINEER SHALL IMMEDIATELY BE RETAINED. FAILURE TO NOTIFY US OF THESE NEEDS OR OF CHANGES TO THE PLANS SHALL RELIEVE NORTON & SCHMIDT CONSULTING ENGINEERS, L.L.C. OF ALL RESPONSIBILITIES OF THE CONSEQUENCES.

BUILDING SHALL COMPLY WITH THE PHYSICAL SECURITY ORDINANCE IN THE KANSAS CITY BUILDING AND REHABILITATION CODE SECTION 329. BUILDER SHALL COMPLY WITH THE DOOR SECURITY AND LIGHTING REQUIREMENTS IN

ACCORDANCE WITH THE KANSAS CITY BUILDING AND REHABILITATION CODE SECTION 329.

WATER RESISTIVE EXTERIOR WALL COVERING, FREE FROM HOLES AND BREAKS, SHALL BE APPLIED TO STUDS OR SHEATHING OF ALL EXTERIOR WALLS. WRAP SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND SHALL BE IN COMPLIANCE WITH SECTION

- BUILDING SHALL COMPLY WITH IRC SECTION R802.5.2 FOR RAFTER AND CEILING JOIST
- "UFER" GROUND SHALL BE PROVIDED PER IRC SECTION E3608.1
- GUTTERS, DOWNSPOUTS, AND SPLASH BLOCKS SHALL BE PROVIDED TO INSURE ALL ROOF DRAINAGE IS DIRECTED 5 FEET MINIMUM FROM HOUSE BEFORE TOUCHING SOIL.

MAXIMUM RISER AT STAIRWAYS IS 7 3/4" AND MINIMUM TREAD IS 10" WITH A MINIMUM 6'-8"

- HEADROOM, PER IRC SECTION R311.7. PLACE HANDRAILS ON ALL STAIRS AND/OR LEVELS THAT EXCEED 30" ABOVE THE FLOOR OR GRADE. RAILINGS TO BE MIN. 36" HIGH AND HAVE INTERMEDIATE RAILS THAT DO NOT ALLOW THE PASSAGE OF A 4" DIAMETER SPHERE AND SHALL COMPLY WITH IRC SECTIONS
- ENCLOSE ACCESSIBLE SPACE BENEATH STAIRS SHALL HAVE WALLS AND THE UNDERSIDE OF THE STAIR AND LANDING PROTECTED WITH 1/2" GYPSUM BOARD ON ENCLOSURE SIDE
- STAIRWAYS CONSISTING OF 3 OR MORE RISERS SHALL HAVE A CONTINUOUS HANDRAIL ON AT LEAST ONE SIDE BETWEEN 34" AND 38" ABOVE THE STAIR NOSINGS.
- HANDRAILS SHALL HAVE A CIRCULAR CROSS SECTION OF 1 1/4" MINIMUM TO 2" MAXIMUM
- OR OTHER APPROVED GRASPABLE SHAPER PER SECTION R311.7.8.5. SPIRAL STAIRS SHALL BE CONSTRUCTED PER SECTION R311.7.10.1.

WINDOWS AND SAFETY GLAZING NOTES

GLAZING IN HAZARDOUS LOCATIONS AS IDENTIFIED IN IRC SECTION R308.4 SHALL BE OF APPROVED SAFETY GLAZING MATERIALS: GLASS IN STORM DOORS; INDIVIDUAL FIXED OR OPERABLE PANELS ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE IS WITHIN A 24" ARCH OF THE DOOR IN A CLOSED POSITION AND WHOSE BOTTOM EDGE IS WITHIN 60" OF THE FLOOR; WALLS ENCLOSING STAIRWAYS AND LANDINGS WHERE THE GLAZING IS WITHIN 60" OF THE TOP OR BOTTOM OF THE STAIR, ENCLOSURES FOR SPAS, TUBS, SHOWERS AND WHIRLPOOLS; GLAZING IN FIXED OR OPERABLE PANELS EXCEEDING 9 SQ. FT. AND WHOSE BOTTOM EDGE IS LESS THAN 18" ABOVE THE FLOOR OR WALKING

SURFACE WITHIN 36". ALL WINDOWS SHALL MEET THE FALL PROTECTION REQUIREMENTS OF SECTION R312.2.

ALL SLEEPING ROOMS AND BASEMENT SHALL BE PROVIDED WITH PROPER EMERGENCY ESCAPE AND RESCUE OPENINGS PER IRC SECTION R310. PROVIDE (1) WINDOW IN EACH BEDROOM THAT HAS A MINIMUM OPERABLE AREA OF 5.7 SQ. FT. WITH A MINIMUM OPERABLE HEIGHT OF 24" AND WIDTH OF 21".

PROVIDE SMOKE ALARMS IN EACH SLEEPING ROOM, OUTSIDE OF EACH SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS AND ON EACH ADDITIONAL FLOOR, INCLUDING BASEMENTS AND STAIRWAYS. ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTUATION OF ONE ALARM ACTIVATES ALL OTHERS AND BE HARD WIRED WITH A

BATTERY BACKUP, PER IRC SECTION R314 AND NFPA 72. CARBON MONOXIDE DETECTORS SHALL BE PROVIDED PER R315.

GARAGE FLOORS SHALL SLOPE TOWARDS THE GARAGE DOORWAYS. DOORS BETWEEN THE GARAGE AND THE DWELLING SHALL BE A MINIMUM 1 3/8" SOLID

- CORE OR HONEY COMBED STEEL DOOR OR A 20 MINUTE FIRE RATED DOOR. THE GARAGE SHALL BE SEPARATED FROM THE DWELLING AND ITS UNFINISHED ATTIC AREAS BY A MINIMUM 1/2" GYPSUM BOARD APPLIED TO THE GARAGE SIDE. WHERE UNFINISHED ATTIC AREAS ARE PROVIDED ABOVE THE GARAGE, THE SUPPORTING COLUMNS AND BEAMS SHALL ALSO BE PROTECTED WITH 1/2"GYPSUM BOARD OR EQUIVALENT. WHERE HABITABLE SPACE OCCURS ABOVE THE GARAGE THE
- BOARD ON THE GARAGE CEILING, SHALL COMPLY WITH IRC SECTION R309. GARAGE DOOR AND FRAME (H-FRAME) FOR THE ATTACHMENT OF THE TRACK AND COUNTER BALANCE SHALL CONSIST OF THE FOLLOWING: 2x6 VERTICAL JAMBS RUNNING FROM THE FLOOR TO CEILING ATTACHED WITH 1 3/4"x0.12" NAILS @ 7"oc STAGGERED WITH (7) 3 1/4"x0.102" NAILS THRU THE JAMB INTO THE HEADER, MINIMUM 2x8 HEADER FOR ATTACHMENT FOR COUNTER BALANCE SYSTEM.

FLOOR/CEILING ASSEMBLY SHALL BE PROTECTED WITH A MINIMUM 5/8" TYPE X GYPSUM

- BUILDING SHALL COMPLY WITH THE REQUIREMENTS FOR A SELF CLOSING DOOR BETWEEN RESIDENCE AND GARAGE.
- GARAGE DOORS SHALL MEET THE REQUIREMENTS OF DASMA 115 MPH.

ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:

STRUCTURAL STEEL ASTM A992, Fy = 50 KSI MISCELLANEOUS STEEL ASTM A36 ASTM A500, GRADE B HOLLOW STRUCTURAL STEEL (HSS) STEEL PIPE ASTM A53, GRADE B (SCHED 40 MIN)

ALL BEAM CONNECTIONS SHALL BE DESIGNED BY THE STEEL FABRICATOR UNDER THE DIRECTION OF A REGISTERED PROFESSIONAL ENGINEER UNLESS SPECIFIC CONNECTIONS ARE SHOWN ON THE DRAWINGS. CONNECTIONS SHALL BE DESIGNED TO 50% U.D.L. OR THE REACTION PROVIDED ON THE DRAWINGS, WHICH EVER IS GREATER. CONNECTIONS SHALL BE WELDED OR BOLTED PER AISC STEEL CONSTRUCTION MANUAL 13TH EDITION. BOLTS SHALL BE ASTM A325N.

ALL COLUMN ANCHOR BOLTS SHALL BE ASTM F1554 GRADE 36. WELDING SHALL CONFORM TO THE LATEST PUBLICATION OF APPLICABLE CODES SET FORTH BY THE AMERICAN WELDING SOCIETY. NO UNAUTHORIZED WELDS WILL BE

ACCEPTED PROVIDE 30# FELT BOND BREAK AROUND ALL STEEL COLUMNS WHERE IN CONTACT WITH

ALL EXTERIOR STEEL EXPOSED TO THE ELEMENTS SHALL BE HOT DIPPED GALVANIZED UNLESS NOTED OTHERWISE ALL STRUCTURAL STEEL SHALL HAVE ONE COAT OF RUST INHIBITIVE PRIMER CONFORMING

TO SPECIFICATIONS. FIELD TOUCHUP ALL UNPAINTED AREAS AND WELD AREAS.

SLAB-ON-GRADE

ALL STRUCTURAL LUMBER (RAFTERS, CEILING JOISTS, PURLINS AND HEADERS) SHALL BE DOUGLAS FIR LARCH #2 OR BETTER UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL LOAD BEARING WALL STUDS AND PURLIN STRUTS SHALL BE DOUGLAS FIR STUD GRADE OR

- GLUE LAMINATED MEMBERS MARKED "LVL" (LAMINATED VENEER LUMBER) SHALL HAVE A MINIMUM ALLOWABLE BENDING STRESS (FB) OF 2950 PSI, A MINIMUM ALLOWABLE SHEAR STRESS (FV) OF 285 PSI, AND A MINIMUM MODULUS OF ELASTICITY (E) OF 2,000 KSI. ALL MANUFACTURER'S RECOMMENDATIONS FOR NAILING AND CONNECTIONS SHALL BE FOLLOWED.
- FLOOR JOISTS: SEE IRC TABLE R502.3.1(1) AND R502.3.1(2) FOR SPAN, SIZE, SPACING, AND GRADE OF FLOOR JOISTS.
- FLOOR JOISTS BELOW PARTITION WALLS RUNNING PARALLEL TO THE JOIST SPAN SHALL BE DOUBLED. ALL DOUBLED MEMBERS SHALL BE NAILED TOGETHER WITH 16d NAILS 16" ON CENTER IN TWO ROWS STAGGERED OR PER MANUFACTURER SPECS. SOLID BLOCKING BETWEEN FLOOR JOISTS SHALL BE INSTALLED WHERE JOISTS BEAR ON
- TOP OF BEAMS OR HEADERS AND BELOW POINT LOADS. ALL SOLID BLOCKING AND RIM JOIST MATERIAL SHALL BE THE SAME SIZE AND GRADE AS THE JOISTS ALL FLOOR AND CEILING JOISTS THAT BUTT INTO THE SIDE OF A HEADER OR STEEL BEAM
- SHALL BE ANCHORED TO THE HEADER OR STEEL BEAM WITH STANDARD JOIST HANGERS ALL SUPPORTS FOR WOOD TRUSSES, RAFTERS AND PURLINS, UNLESS SHOWN OTHERWISE ON THE DRAWINGS, SHALL BEAR ON LOAD BEARING WALLS (WALLS LOCATED DIRECTLY ABOVE A BEAM LINE OR CONTINUOUS FOOTING)! ALL CONCENTRATED LOADS SHALL BE CARRIED THROUGH THE FLOOR SYSTEM THICKNESS WITH SOLID BLOCKING OR WITH 2x4 STUB COLUMNS (SQUASH BLOCKS) THAT TRANSFER THE LOAD DOWN TO THE SUPPORT WALL OR BEAM BELOW.
- ALL NAILING NOT INDICATED ON THE DRAWINGS SHALL CONFORM TO THE NAILING SCHEDULE OF THE GOVERNING BUILDING CODE. SPACING, END DISTANCES AND EDGE DISTANCES OF NAILS AND SPIKES SHALL BE SUCH AS TO AVOID THE UNUSUAL SPLITTING OF THE WOOD
- ALL NON-LOADBEARING STUD WALLS IN THE BASEMENT SHALL BE PROVIDED WITH A 1" MINIMUM VERTICAL EXPANSION JOINT TO ALLOW FOR HEAVE IN THE FLOOR SLAB.
- WALLS SHALL NOT BE TIGHT BETWEEN THE SLAB AND THE FRAMING ABOVE! SHEATHING FOR HORIZONTAL DIAPHRAGMS SHALL BE EXTERIOR GRADE, C/D STRUCTURAL GROUP II OR BETTER. ROOF AND WALL FRAMING SHALL BE OF DOUGLAS FIR-LARCH OR SOUTHERN PINE. PROVIDE SOLID BLOCKING AT ALL PANEL EDGES UNLESS OTHERWISE NOTED. WHERE PANELS ARE APPLIED ON BOTH FACES OF A WALL, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS.
- ALL WOOD STRUCTURAL PANELS SHALL BE IDENTIFIED WITH THE APPROPRIATE GRADE TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION (APA) AND SHALL MEET THE
- REQUIREMENTS OF PRODUCT STANDARD PS-1. WOOD STRUCTURAL PANELS SHALL BE SET WITH FACE GRAIN PERPENDICULAR TO
- SUPPORTING MEMBERS AND STAGGER END JOINTS 4'-0". STANDARD WASHERS SHALL BE USED WITH ALL BOLTS FASTENING WOOD MEMBERS. ALL SAWN LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE OR
- MASONRY SHALL BE PRESSURE TREATED ROOF FRAMING - RIDGE BEAMS, VALLEY AND HIP RAFTERS SHALL HAVE A MINIMUM NOMINAL THICKNESS OF 2" AND MINIMUM DEPTH NOT LESS THAN THE END CUT OF THE RAFTERS. HIP AND VALLEY RAFTERS SHALL BE SUPPORTED AT THE RIDGE BY A 2x6 "TEE" BRACE TO A BEARING PARTITION. WHERE ROOF BRACING IS USED TO PERMIT LONGER RAFTERS SPAN, USE 2x6 "TEE" BRACES AT 4'-0" O.C. WITH CONTINUOUS 2x6 PURLIN UNDER
- THE RAFTERS. BRACE RAFTERS TO BEARING PARTITIONS. PROVIDE CONTINUOUS STRONG BACKS FOR CEILING JOIST SPANS 12'-0" OR GREATER. CEILING JOISTS: SEE IRC TABLE R802.5(1) AND R805.5(2) FOR SPAN, SIZE, SPACING, AND
- GRADE OF CEILING JOISTS. ROOF RAFTERS: SEE IRC TABLE R805.4.1(1) THRU R802.4.1(8) FOR SPAN, SIZE, SPACING, AND GRADE OF ROOF RAFTERS.
- BRACE THE COMPRESSION FLANGE OF ALL BEAMS UNLESS NOTED OTHERWISE. ALL BEAMS OR HEADERS THAT BEAR ON WOOD FRAMING SHALL BE SUPPORTED BY ANOTHER BEAM OR HEADER OR A BUILT-UP STUD COLUMN THE FULL WIDTH OF THE BEAM CONTINUOUS TO THE FOUNDATION OR OTHER STRUCTURAL FRAMING MEMBER, U.N.O.

ALL LIGHT GAGE METAL FRAMING ACCESSORIES NOTED SHALL BE AS MANUFACTURED BY

- "SIMPSON STRONG TIE" OR APPROVED EQUAL, ATTACH FRAMING ACCESSORIES TO WOOD FRAMING IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. PROVIDE HEADERS AS SHOWN ON PLAN, FOR HEADERS NOT MARKED REFERENCE
- TYPICAL BEARING WALL HEADER SCHEDULE. FLOOR SHEATHING SHALL BE 3/4" TONGUE & GROOVE WOOD STRUCTURAL PANEL. GLUE & NAIL TO FLOOR JOISTS WITH 8d NAILS AT 6" O.C. AT ALL PANEL EDGES AND AT 12" O.C. AT
- INTERMEDIATE SUPPORTS. ALL EXTERIOR WOOD WALL FRAMING SHALL BE 2x6 DOUG-FIR NO. 2 AT 16"oc, UNO.
- ALL INTERIOR BEARING WALL FRAMING SHALL BE 2x4 DOUG-FIR NO. 2 AT 16"oc, UNO. WOOD TRUSSES AND THEIR CONNECTIONS SHALL BE DESIGNED BY THE TRUSS MANUFACTURER FOR THE LOADS STIPULATED ON THE DRAWINGS. SHOP DRAWINGS AND CALCULATIONS WITH AN ENGINEER'S SEAL FOR THE STATE OF MISSOURI SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION. CONNECTION PLATES SHALL MEET THE REQUIREMENTS OF THE GOVERNING BUILDING CODE.
- TEMPORARY STABILITY OF WOOD TRUSSES DURING ERECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IN CONJUNCTION WITH ALL RECOMMENDATIONS OF THE MANUFACTURER.
- WOOD TRUSSES SHALL NOT BE FIELD CUT. MULTIPLE STUD MEMBERS CALLED OUT FOR SUPPORT OF LVL BEAMS AND HEADERS SHALL BE CARRIED DOWN TO TOP OF FOUNDATIONS OR SUPPORT BEAM(S).

CONCRETE & REINFORCING NOTES:

CONCRETE STRENGTH SHALL MEET THE FOLLOWING MINIMUM 28 DAY STRENGTH REQUIREMENTS (IRC R402.2):

- 2,500 PSI FOR BASEMENT FLOOR SLABS ON UNDISTURBED GRADE. 3,000 PSI FOR FOOTINGS, FOUNDATION WALLS, AND OTHER VERTICAL CONCRETE. 3,500 PSI FOR CARPORT AND GARAGE FLOOR SLABS ON UNDISTURBED GRADE.
- 3,500 PSI FOR STRUCTURAL FLOOR SLABS. CONCRETE SHALL BE 6%±1% AIR ENTRAINED FOR GARAGE SLABS AND FOR ALL LOCATIONS (FOOTINGS, WALLS, FLATWORK, ETC.) EXPOSED TO WEATHER.
- CONCRETE SHALL HAVE A SLUMP OF 4" ± 1". THE SLUMP CAN BE INCREASED THROUGH THE USE OF APPROVED ADDITIVES (NOT WATER). THE REINFORCING STEEL SHALL BE ASTM A615, GRADE 40 MINIMUM UNLESS NOTED

OTHERWISE ON THE DRAWINGS. ALL BARS SHALL BE LAPPED A MINIMUM OF 48 BAR

- DIAMETERS AND/OR CORNER BARS SHALL BE PROVIDED AT ALL FOOTING AND WALL CORNERS, AND FOOTING STEPS.
- MINIMUM CONCRETE COVER SHALL BE AS FOLLOWS (ACI 318): EARTH FORMED - 3"
- EXPOSED TO WEATHER 1 1/2" FOR #5 BARS & SMALLER NOT EXPOSED TO WEATHER - 3/4" FOR SLABS.
- NO WATER SHALL BE ADDED TO THE CONCRETE MIX AT THE SITE. ADDITION OF CALCIUM CHLORIDE TO CONCRETE IS NOT PERMITTED.
- NO ALUMINUM SHALL BE EMBEDDED/PLACED IN CONCRETE. CONCRETE PLACED IN COLD WEATHER SHALL COMPLY WITH ACI 306. CONCRETE PLACED IN HOT WEATHER SHALL COMPLY WITH ACI 305.

WOOD DECK FRAMING NOTES: ALL WOOD DECK FRAMING SHALL COMPLY WITH THE LATEST EDITION OF THE "RESIDENTIAL DECKS - PERMIT AND CONSTRUCTION GUIDELINES" AS PUBLISHED BY THE JOHNSON COUNTY CONTRACTOR LICENSING PROGRAM.

WOOD FRAMING FOR EXTERIOR DECKS SHALL BE TREATED SOUTHERN PINE #2 OR

FOUNDATION NOTES: ALL FOUNDATIONS SHALL BEAR ON NATIVE, UNDISTURBED SOIL CAPABLE OF SUPPORTING 2,000 PSF UNLESS NOTED OTHERWISE, WITHOUT UNDUE SETTLEMENT OR HEAVING. THE CONTRACTOR SHALL RETAIN A QUALIFIED TESTING LAB (APPROVED BY THE OWNER) TO

- FIELD VERIFY THE ACTUAL SOIL BEARING CAPACITY. ALL EXTERIOR FOOTINGS SHALL BEAR A MIN. OF 36" BELOW FINISHED GRADE. IF THE EXISTING SITE TOPOGRAPHY OR SOIL CONDITIONS VARY FROM THE CONDITIONS SHOWN ON THE DRAWINGS, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ARCHITECT/ENGINEER SO THAT A DESIGN THAT IS APPROPRIATE FOR THE SITE CAN BE GENERATED.
- FOOTINGS SHALL BE POURED CONTINUOUS AT FOOTING STEPS (SOLID JUMPS). ANY FILL THAT IS INSTALLED UNDER THE BASEMENT OR GARAGE FLOOR SLABS SHALL BE PROPERLY COMPACTED TO PREVENT SETTLEMENT OF THE FILL MATERIAL. PROPER COMPACTION IS WHERE THE SOIL IS PLACED IN 6" LIFTS AND EACH LIFT IS COMPACTED PRIOR TO INSTALLING MORE SOIL. THIS COMPACTED FILL SHALL THEN BE VERIFIED BY A QUALIFIED GEOTECHNICAL ENGINEER. AT THE CONTRACTOR'S OPTION, A PROPERLY DESIGNED STRUCTURAL SLAB MAY BE INSTALLED OVER ANY FILL THAT HAS NOT BEEN PROPERLY COMPACTED. ALL EXTERIOR SLABS INSTALLED ADJACENT TO THE FOUNDATION SHALL BE DOWELED INTO THE FOUNDATION WITH #4 BARS AT 12" ON CENTER
- (GRADE 60 STEEL) DRILLED IN 6" MINIMUM AND EPOXIED. CONTROL JOINTS IN THE FLOOR SLABS SHALL BE INSTALLED AS TO MINIMIZE THE AMOUNT OF RANDOM CRACKING (12' INTERVALS MAXIMUM). THESE JOINTS SHALL BE SAWCUT 1-1/4" DEEP WITHIN 8 HOURS OF POURING THE SLAB OR MAY BE TOOLED INTO THE SLAB WHEN POURED. SAWCUTS SHALL BE IN APPROXIMATE SQUARE PATTERN WITH MAXIMUM ASPECT RATIO OF 1-1/2 TO 1.
- THE BUILDER SHALL BE RESPONSIBLE FOR TAKING THE APPROPRIATE STEPS TO MINIMIZE THE EFFECTS OF EXPANSIVE SOIL ON THE FOUNDATION, SLABS, AND WOOD FRAMED PORTIONS OF THE HOUSE. THIS INCLUDES ISOLATING THE FLOOR SLAB AT ALL COLUMNS. INTERIOR BEARING WALLS, AND AT THE FOUNDATION WALLS WITH TWO LAYERS OF 15# FELT. PARTITION WALLS IN THE BASEMENT SHALL NOT BE CONSTRUCTED TIGHT AGAINST THE FRAMING ABOVE.
- INSTALL CONTINUOUS DRAIN TILE (4" DIAMETER MINIMUM) AROUND THE PERIMETER OF THE ENTIRE LOWER LEVEL AND COVER THE TILE WITH FILTER FABRIC AND COURSE, CLEAN ROCK. INSTALL VERTICAL DRAINS TO PERIMETER DRAIN TILE AT ALL WINDOW WELLS. THE DRAIN TILE SHALL BE CONNECTED TO A 40 GALLON (MINIMUM) SUMP PIT WITH SUFFICIENT DEPTH FOR PROPER SUMP PUMP OPERATION, OR SHALL BE DRAINED BY GRAVITY TO DAYLIGHT AT LEAST 10' FROM THE FOUNDATION. FOUNDATION DRAINAGE SHALL ALSO BE IN ACCORDANCE WITH IRC SECTION R-405.1.
- 3/4" CLEAN, GRADED ROCK, U.N.O. OR IF SITE CONDITIONS REQUIRE OTHERWISE. MIN REINFORCING SHALL BE #4'S AT 24"oc OR EQUIVALENT PROVIDE A MIN. 6-MIL POLYETHYLENE MOISTURE BARRIER OVER GRAVEL BASE UNDER

CONCRETE BASEMENT SLABS SHALL BE A MIN. OF 4" THICK OVER A MIN. OF 4" OF 1/2" TO

- BASEMENT FLOOR SLABS (NOT REQUIRED FOR GARAGE SLABS) PER SECTION R405.2.2. LAP JOINTS A MIN. OF 6". 11. ALL FOOTING AND SLAB REINFORCEMENT SHALL BE BLOCKED OFF SUBGRADE WITH
- CHAIRS OR CONCRETE BRICKS.

RESIDENTIAL BASEMENT WALL NOTES

VERTICAL REBAR SPACING FOR CONCRETE FOUNDATION WALLS SHALL BE PER THE TABLE

		60 KSI REII	NFORCING	40 KSI REINFORCING		
WALL THICKNESS		8"	10"	8"	10"	
∟ 6' OR LESS		#4 @ 36" O.C.	#4 @ 36" O.C.	#4 @ 36" O.C.	#4 @ 36" O.C.	
HEIGHT	7'	#4 @ 32" O.C.	#4 @ 36" O.C.	#4 @ 21" O.C.	#4 @ 36" O.C.	
	8'	#4 @ 24" O.C.	#4 @ 36" O.C.	#4 @ 16" O.C.	#4 @ 36" O.C.	
WALL	9'	#4 @ 16" O.C.	#4 @ 20" O.C.	#4 @ 12" O.C.	#4 @ 16" O.C.	
>	10'	#4 @ 12" O.C.	#4 @ 16" O.C.	#4 @ 8" O.C.	#4 @ 12" O.C.	

- MINIMUM REQUIREMENT FOR VERTICAL REBAR IN PLAIN CONCRETE WALLS IS #4 BARS @ 36" O.C. (ACI 332).
- VERTICAL BARS SHALL BE CONTINUED TO WITHIN 4" OF THE TOP OF THE WALL. REBAR SHALL BE POSITIONED AT THE TENSION FACE OF THE WALL (2" FROM THE INSIDE FACE.
- REINFORCEMENT SHALL LAP A MINIMUM OF 24" AT ENDS, SPLICES, AND AROUND
- DESIGN BY A PROFESSIONAL ENGINEER IS REQUIRED FOR WALLS OVER 10' IN
- HORIZONTAL REINFORCING SHALL MATCH THE SIZE OF THE VERTICAL REINFORCING. PROVIDE 1 - BAR WITHIN 12" OF THE TOP OF THE WALL WITH
- BARS SHALL LAP A MINIMUM OF 48 BAR DIAMETERS AT ENDS, SPLICES AND AROUND CORNERS. UNLESS OTHERWISE NOTED ON THESE DRAWINGS. CONTINUOUS WALL FOOTINGS SHALL BE A MINIMUM OF 16" WIDE AND 8" DEEP WITH (2) #4 BARS CONTINUOUS FOR 8" THICK WALLS, U.N.O. CONTINUOUS WALL FOOTINGS SHALL BE

A MINIMUM OF 24" WIDE AND 12" DEEP WITH (2) #4 BARS CONTINUOUS FOR 12" THICK

- INSTALL 1/2"Ø x 1'-2" LONG ANCHOR BOLTS (7" EMBEDMENT) AT 2'-0" O.C. AND WITHIN 12" OF THE END OF EACH SILL MEMBER (2-BOLTS MIN PER PLATE SECTION). MINIMUM SILL
- PLATE TO BE 2x6 PRESSURE TREATED. THE TOPS OF ALL BASEMENT (LOWER LEVEL) FOUNDATION WALLS SHALL BE CONNECTED TO THE FLOOR JOISTS. NAIL EACH FLOOR JOIST END AND END WALL BLOCKING TO THE WOOD SILL PLATE PER THE IRC NAILING SCHEDULE. WHERE FLOOR JOISTS RUN PARALLEL TO THE FOUNDATION WALLS, PROVIDE BLOCKING IN THE FIRST THREE JOIST SPACES AT
- 2'-0" O.C. OVER THE ENTIRE LENGTH OF THE FLOOR JOISTS. WALLS SHALL BE FULL HEIGHT FROM FOOTING TO FLOOR FRAMING. NO WOOD FRAMED CRIPPLE WALLS EXCEPT AS SPECIFICALLY NOTED ON THE ARCHITECTURAL AND
- STRUCTURAL DRAWINGS. FOUNDATION WALLS SHALL BE DESIGNED FOR AN EQUIVALENT FLUID PRESSURE (EFP) 60

PROVIDE STEEL SHIMS IN BEAM POCKETS TO LEVEL BEAMS. BEAM POCKETS SHALL BE

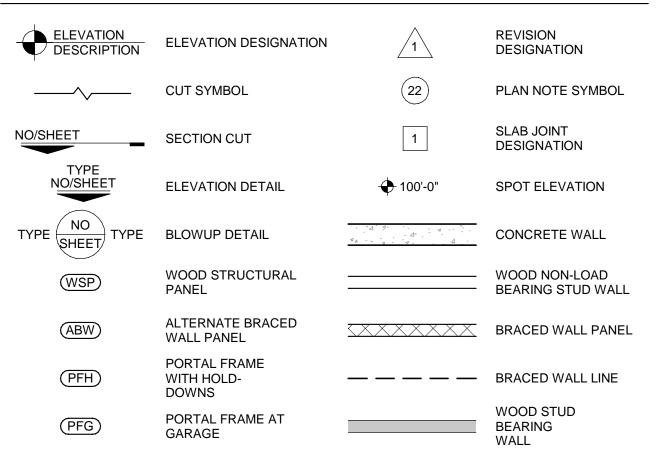
- GROUTED SOLID WITH 4,000 PSI NON-SHRINK GROUT AFTER BEAMS ARE LOADED WITH FRAMING MEMBERS. REINFORCE AROUND BEAM POCKETS BY BENDING TOP CONTINUOUS HORIZONTAL BAR
- BELOW BEAM POCKET OR INSTALL SEPARATE BENT BAR LAPPED AND TIED MINIMUM 24" PROVIDE TWO #4 X 4'-0" LONG DIAGONAL BARS AT THE CORNERS OF ALL OPENINGS IN CONCRETE WALLS AND AT FOOTING STEPS. ALSO PROVIDE 2 ADDITIONAL #4 ON ALL SIDES
- OF WALL OPENINGS. BARS SHALL BE 3'-0" LONGER THAN OPEN VERTICAL OR HORIZONTAL 11. FOUNDATION WALLS THAT RETAIN EARTH AND ENCLOSE INTERIOR SPACES AND FLOORS BELOW GRADE SHALL BE DAMP PROOFED FROM THE TOP OF THE FOOTING TO THE
- FINISHED GRADE WITH A BITUMINOUS COATING IN ACCORDANCE WITH SECTION R406.1. 12. INSULATION SHALL BE INSTALLED FOR ALL BASEMENT WALLS AS REQUIRED PER SECTION N1102 1
- 13. ALL SITE RETAINING WALLS GREATER THAN 4'-0" IN HEIGHT SHALL REQUIRE A DESIGN BY A PROFESSIONAL ENGINEER A CONCRETE ENCASED GROUNDING ELECTRODE CONNECTION SHALL BE PROVIDED TO THE ELECTRICAL SERVICE PER SECTION E3608.1.

ABBREVIATIONS LEGEND

AB	ANCHOR BOLT	LBS	POUNDS
ACI	AMERICAN CONCRETE INSTITUTE	LONG	LONGITUDINAL
AFF	ABOVE FINISH FLOOR	MAX	MAXIMUM
AISC	AMERICAN INSTITUTE OF STEEL	MECH	MECHANICAL
	CONSTRUCTION	MFR	MANUFACTURER
AISI	AMERICAN IRON AND STEEL INSTITUTE	MIN	MINIMUM
ARCH	ARCHITECTURAL	MISC	MISCELLANEOUS
ASTM	AMERICAN SOCIETY FOR TESTING AND	MTL	METAL
	MATERIALS	NO	NUMBER
AWS	AMERICAN WELDING SOCIETY	NS	NEAR SIDE
BFF	BELOW FINISH FLOOR	NIS	NOT TO SCALE
BFS	BOTTOM OF FOOTING STEP	OC	ON CENTER
ВО	BOTTOM OF	ОН	OPPOSITE HAND
BOS	BOTTOM OF STEEL	PAF	POWDER ACTUATED FASTENERS
BRG	BEARING	PAF PCF	POUNDS PER CUBIC FEET
BWP	BOTTOM OF BOTTOM OF STEEL BEARING BRACED WALL PANEL CAST-IN-PLACE CONCRETE	PL	PLATE
CIP	CAST-IN-PLACE CONCRETE	PLF	POUNDS PER LINEAR FOOT
CJ	CONTROL JOINT (WALL)	PSF	POUNDS PER SQUARE FOOT
CL	CENTER LINE	PSI	POUNDS PER SQUARE INCH
CLR	CLEAR	PSF PSI QTY	QUANTITY
COL	COLUMN	REF	REFERENCE
CONC	CONCRETE	REINF	
CONST	CONSTRUCTION	REQD	REQUIRED
CONT	CONTINUOUS	REV	REVERSE
DIA	DIAMETER	RO	ROUGH OPENING
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM	SIM	
EL	ELEVATION	T&B	TOP AND BOTTOM
ELEC	ELECTRICAL	T&B TFS	TOP OF FOOTING STEP
EQ	EQUAL	THK	THICK
EW	EACH WAY	TO	TOP OF
FDN	FOUNDATION	TOC	TOP OF CONCRETE
FF FS	FINISH FLOOR	TOF	TOP OF FOOTING
FS	FAR SIDE	TOF TOP	TOP OF PAVING
FTG	FOOTING	TOS	TOP OF STEEL
GA	GAGE	TRANS	TRANSVERSE
GC	GENERAL CONTRACTOR	TYP	TYPICAL
GYP BD	GYPSUM BOARD	UNO	UNLESS NOTED OTHERWISE
HORIZ	HORIZONTAL	VERT	VERTICAL
HSA	HEADED STUD ANCHOR	W	WIDTH
INFO	INFORMATION	WBM	WALL BRACE METHOD
JST	JOIST	WP	WORK POINT
JT	JOINT	WS	WALL STEP
			····

SYMBOLS LEGEND

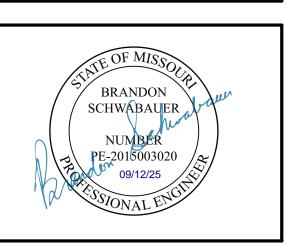
KIPS PER SQUARE INCH



WWF WELDED WIRE FABRIC



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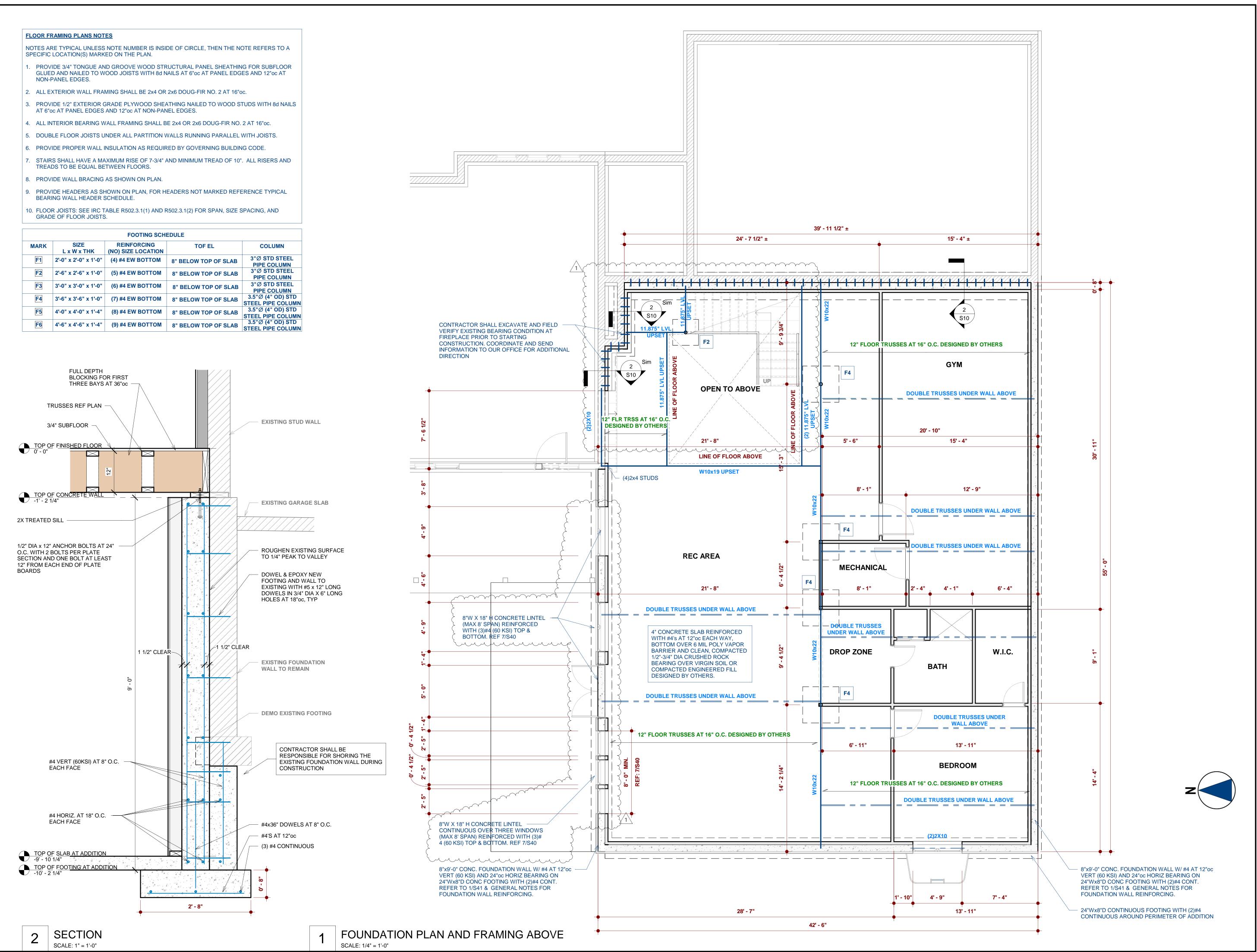
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HOUSE ADDITION
4090 SW PRYOR ROAD
LEE'S SUMMIT, MISSOURI 64082
RACHEL AND DANIEL DERCHER

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FOUNDATION PLAN AND FRAMING ABOVE

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TYPICAL BRACED WALL METHOD

WSP - WOOD STRUCTURAL PANEL; WOOD STRUCTURAL PANEL SHEATHING WITH A THICKNESS NOT LESS THAN 3/8" FOR 16" STUD SPACING, FASTEN WITH 6d COMMON NAILS (0.131" DIA x 2" LONG) AT 6"oc ALONG EDGES AND 12"oc AT INTERMEDIATE SUPPORTS, WHERE SHOWN ON PLANS. UNLESS OTHERWISE NOTED, PANEL WIDTH = 4'-0".

CS-WSP - CONTINOUSLY SHEATHED WOOD STRUCTURAL PANEL; WOOD STRUCTURAL PANEL SHEATHING WITH A THICKNESS NOT LESS THAN 3/8" FOR 16" STUD SPACING, FASTEN WITH 6d COMMON NAILS (0.131" DIA x 2" LONG) AT 6"oc ALONG EDGES AND 12"oc AT INTERMEDIATE SUPPORTS, PLACED ON ALL SHEATHABLE SURFACES ON ONE SIDE OF THE BRACED WALL LINE INCLUDING AREAS ABOVE AND BELOW OPENINGS AND GABLE END WALLS.

GB - GYPSUM BOARD; 1/2" GYPSUM BOARD WITH 13 GAGE, 1 3/8" LONG, 19/64" HEAD; 0.098" DIA, 1 3/8" LONG, ANNULAR-RINGED; 6d COOLER NAIL, 0.092" DIA, 1 7/8" LONG, 1/4" HEAD; OR GYPSUM BOARD NAIL, 0.0915" DIA, 1 7/8" LONG, 19/64' HEAD; TYPE W OR TYPE S SCREWS; AT 7"oc EDGES & 7"oc FIELD

PFH - PORTAL FRAME WITH HOLD-DOWNS; REF PORTAL FRAME WITH HOLD-DOWNS DETAIL

ABW - ALTERNATE BRACED WALL; REF ALTERNATE BRACED WALL DETAIL

PFG - PORTAL FRAME AT GARAGE; REF PORTAL FRAME AT GARAGE DETAIL

LIB - LET-IN BRACE; REF LET-IN BRACE DETAIL.

HPS - HARDBOARD PANEL SIDING; HARDBOARD PANEL SIDING WITH A 7/16" THICKNESS. FASTEN WITH 0.092" DIA, 0.225" DIA HEAD NAILS WITH LENGTH TO ACCOMMODATE 1 1/2" PENETRATION INTO STUDS AT 4"oc ALONG EDGES AND 8" AT INTERMEDIATE SUPPORTS.

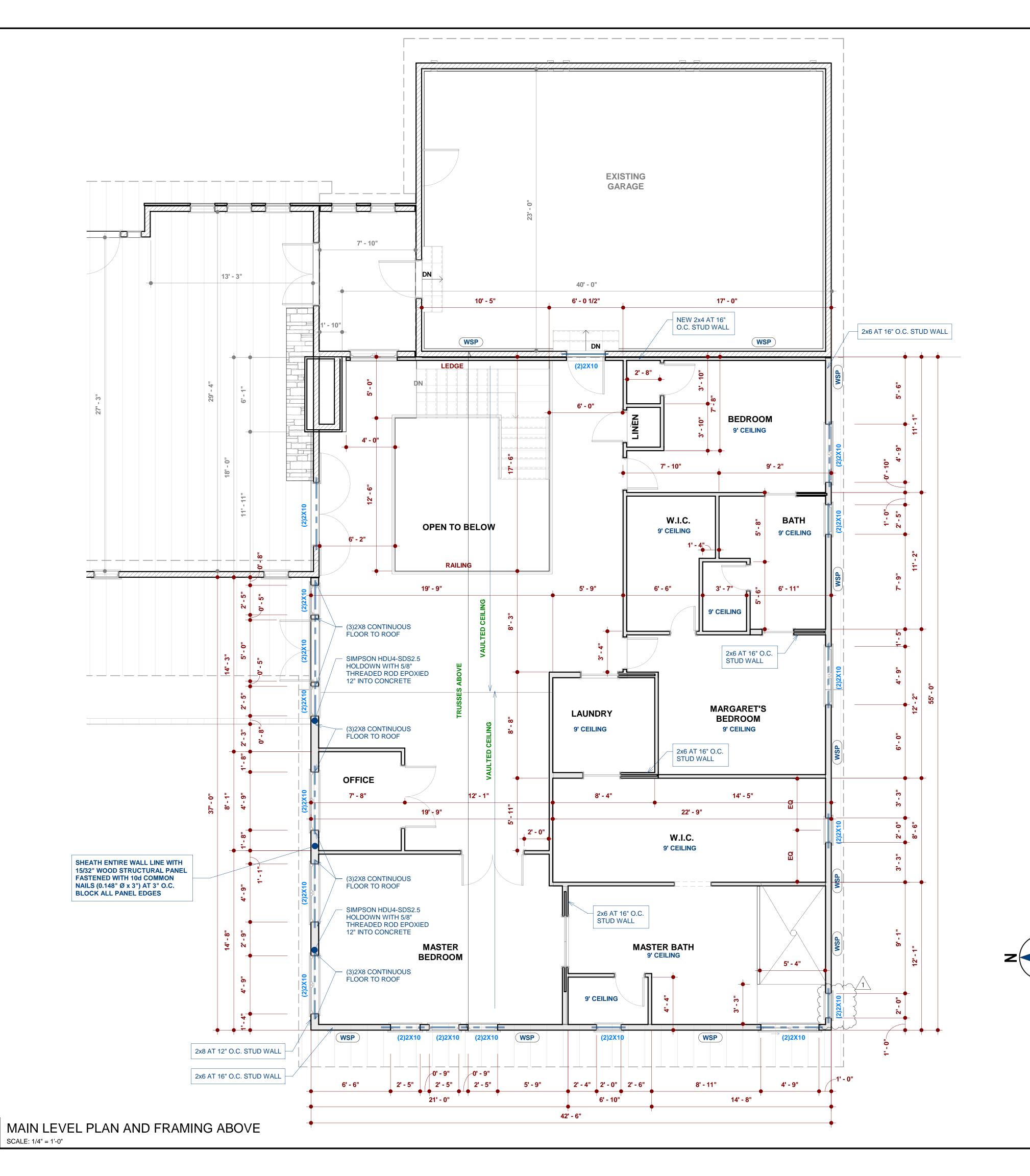
FLOOR FRAMING PLANS NOTES

NOTES ARE TYPICAL UNLESS NOTE NUMBER IS INSIDE OF CIRCLE, THEN THE NOTE REFERS TO A SPECIFIC LOCATION(S) MARKED ON THE PLAN.

- 1. PROVIDE 3/4" TONGUE AND GROOVE WOOD STRUCTURAL PANEL SHEATHING FOR SUBFLOOR GLUED AND NAILED TO WOOD JOISTS WITH 8d NAILS AT 6" O.C. AT PANEL EDGES AND 12" O.C. AT NON-PANEL EDGES.
- 2. ALL EXTERIOR WALL FRAMING SHALL BE 2x4 OR 2x6 DOUG-FIR NO. 2 AT 16" O.C.
- 3. PROVIDE 1/2" EXTERIOR GRADE PLYWOOD SHEATHING NAILED TO WOOD STUDS WITH 8d NAILS AT 6" O.C. AT PANEL EDGES AND 12" O.C. AT NON-PANEL EDGES.
- 4. ALL INTERIOR BEARING WALL FRAMING SHALL BE 2x4 OR 2x6 DOUG-FIR NO. 2 AT 16" O.C.
- 5. DOUBLE FLOOR JOISTS UNDER ALL PARTITION WALLS RUNNING PARALLEL WITH JOISTS.
- 6. PROVIDE PROPER WALL INSULATION AS REQUIRED BY GOVERNING BUILDING CODE.
- 7. STAIRS SHALL HAVE A MAXIMUM RISE OF 7-3/4" AND MINIMUM TREAD OF 10". ALL RISERS AND
- TREADS TO BE EQUAL BETWEEN FLOORS.

8. PROVIDE WALL BRACING AS SHOWN ON PLAN.

- 9. PROVIDE HEADERS AS SHOWN ON PLAN, FOR HEADERS NOT MARKED REFERENCE TYPICAL BEARING WALL HEADER SCHEDULE.
- 10. FLOOR JOISTS: SEE IRC TABLE R502.3.1(1) AND R502.3.1(2) FOR SPAN, SIZE SPACING, AND GRADE OF FLOOR JOISTS.

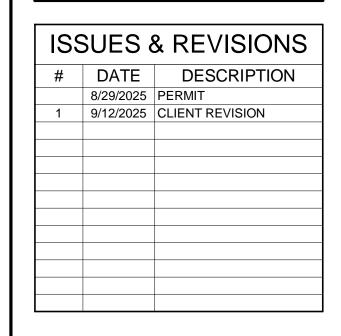




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MAIN LEVEL FLOOR PLAN AND FRAMING ABOVE

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ROOF FRAMING PLAN NOTES

NOTES ARE TYPICAL UNLESS NOTE NUMBER IS INSIDE OF CIRCLE, THEN THE NOTE REFERS TO A SPECIFIC LOCATION(S) MARKED ON THE PLAN.

- PROVIDE 1/2" EXTERIOR GRADE PLYWOOD SHEATHING NAILED TO ROOF RAFTERS WITH 8d
- NAILS AT 6"oc AT PANEL EDGES AND 12"oc AT NON-PANEL EDGES.
- CONDENSATION PLUS 12" INSULATION TO PROVIDE R-38 INSULATION VALUE TO VAULTED CEILING AREA WHERE SHOWN ON PLAN WITH CROSS HATCH.

2. PROVIDE ADDITIONAL DEPTH TO JOISTS AS REQUIRED TO PROVIDE 1" AIR GAP TO PREVENT

- 3. ALL RIDGE MEMBERS SHALL BE 1" NOMINAL THICKNESS AND NOT LESS IN DEPTH THAN THE CUT END OF THE RAFTER. ALL VALLEY AND HIP MEMBERS SHALL BE 2" NOMINAL THICKNESS AND NOT LESS IN DEPTH THAN THE CUT END OF THE RAFTER.
- 4. HIP AND VALLEY MEMBERS SHALL BE SUPPORTED AT THE RIDGE WITH A 2x6 T-BRACE TO A BEARING WALL BELOW.
- 5. PROVIDE SOFFIT, RIDGE, AND GABLE END VENTS AS REQUIRED TO PROVIDE ADEQUATE VENTILATION FOR ROOF.
- 6. PROVIDE PROPER FLASHING AND BUILDING PAPER UNDER SHINGLES AS REQUIRED TO PROVIDE WATER TIGHT SEAL AT ALL ROOF PENETRATIONS, RIDGES, VALLEYS, HIPS AND/OR OTHER SLOPE CHANGES.
- 7. GUTTERS, DOWNSPOUTS, AND SPLASH BLOCKS SHALL BE PROVIDED TO INSURE ALL ROOF DRAINAGE IS DIRECTED 5 FEET MINIMUM FROM HOUSE BEFORE TOUCHING SOIL.
- 8. ALL GABLE END WALL FRAMING SHALL BE 2x6 DOUG-FIR NO. 2 AT 16"oc.
- 9. PROVIDE PROPER CEILING INSULATION AS REQUIRED BY GOVERNING BUILDING CODE.
- 10. ALL ROOF FRAMING SHALL BE PRE-ENGINEERED WOOD TRUSSES SPACED AT 24"oc. ALL TRUSSES AND TRUSS GIRDERS SHALL BEAR ON EXTERIOR WALLS AND THE INTERIOR BEARING WALLS INDICATED ON THE PLAN. SHOULD THE TRUSS MANUFACTURER NEED TO MODIFY THE PROPOSED LAYOUT, THEY SHALL NOTIFY THE ENGINEER OF RECORD TO ENSURE ADEQUATE SUPPORT OF TRUSS FRAMING IS PROVIDED.
- 11. PROVIDE OVER-BUILD FRAMING AS REQUIRED TO ACHIEVE THE DESIRED SLOPES/PROFILES.
- 12. ROOF TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING LOADS:

TOP CHORD DEAD LOAD = 10 PSF

TOP CHORD LIVE LOAD = 20 PSF BOTTOM CHORD DEAD LOAD = 10 PSF

BOTTOM CHORD LIVE LOAD = 20 PSF (NON CONCURRENT WITH TOP CHORD LIVE LOAD)

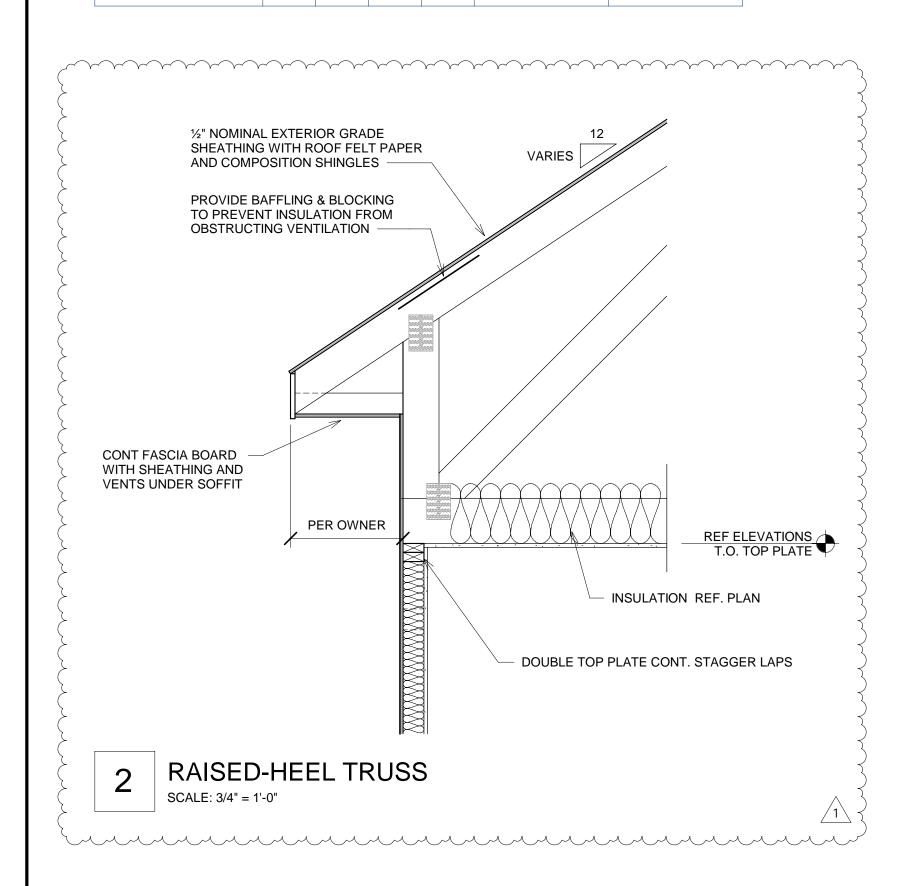
NOTE: ROOF HAS BEEN DESIGNED WITH STRUCTURAL HIPS & VALLEYS. ALL HIPS & VALLEYS TO BE BRACED PER HIP/VALLEY RAFTER TABLE. ALL HIPS & VALLEYS TO BE 2X10 MIN UNO.

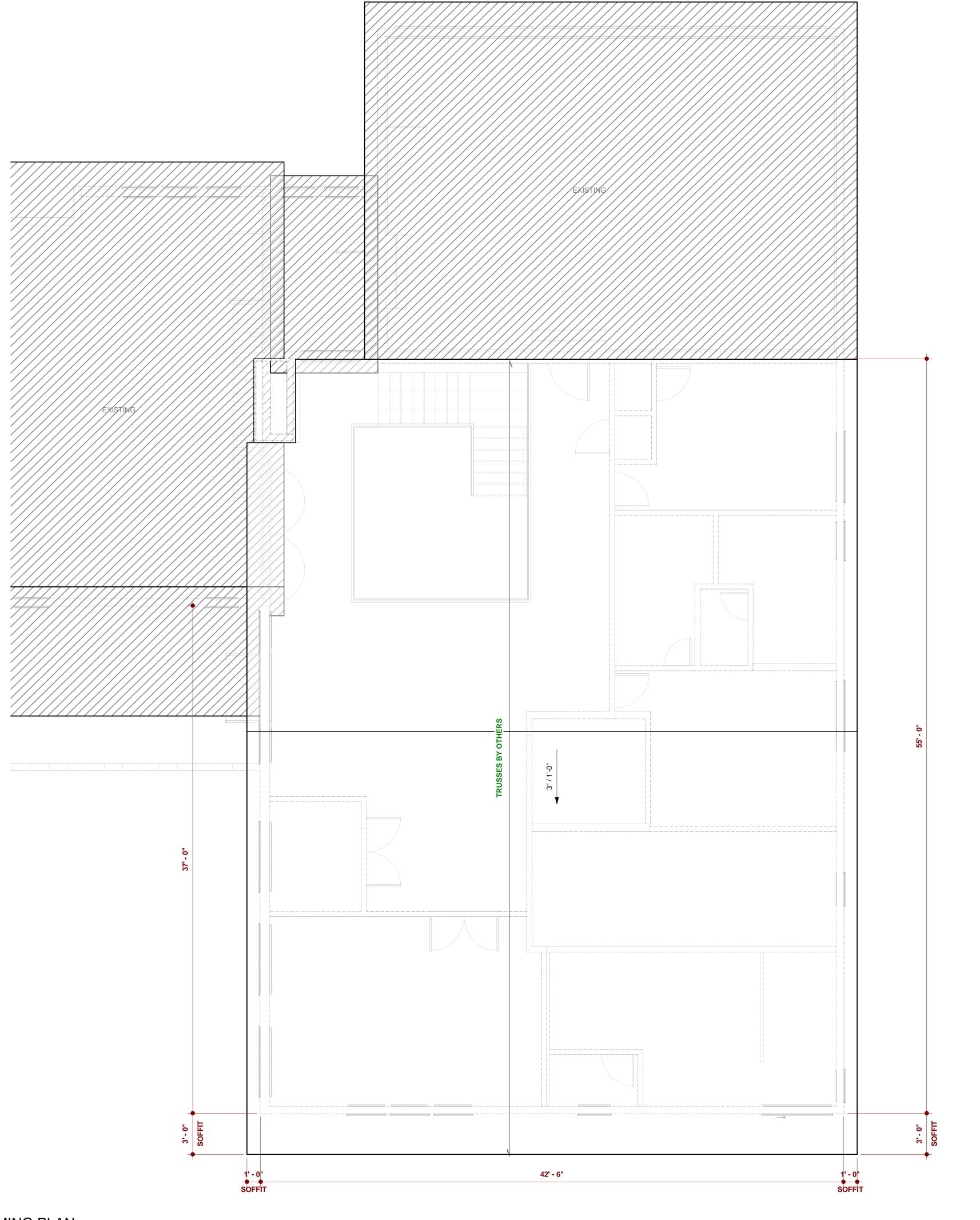
NOTE: ALL HIPS, VALLEYS, RIDGES, AND ROOF BEAMS SHALL COMPLY WITH IRC R802.3 & R802.4.3 & HAVE (1) SIMPSON H2.5A AT EACH END TO RESIST UPLIFT. WHERE THE ROOF MEMBER IS SUPPORTED BY A STRUT, IN ADDITION TO THE ROOF MEMBER TO STRUT UPLIFT CONNECTION, THE STRUT SHALL ALSO BE CONNECTED TO A BEARING WALL OR BEAM BELOW WITH A SIMPSON H2.5A.

PURLIN SPAN TABLE						
DUDUN (DE #2) *	MAX SPAN					
PURLIN (DF #2) *	2x6	2x8	2x10	2x12		
2x6 RAFTERS AT 24" O.C.	4'-3"	5'-4"	6'-4"	7'-1"		
2x6 RAFTERS AT 16" O.C.	3'-11"	4'-10"	5'-10"	6'-6"		

* BRACE PURLINS WITH 2x6 "T" BRACES.
ALTERNATIVELY, FOR BRACE LENGTHS LESS THAN 6'-0",
2x4 "T" BRACES MAY BE USED.

HIP/VALLEY RAFTER TABLE											
TYPE			MAX UN	BRACED	SPAN						
TTPE	2x6	2x8	2x10	2x12	1 3/4"x9 1/4" LVL	1 3/4"x11 1/4" LVL					
HIP RAFTERS	9'-4"	11'-3"	13'-3"	15'-2"	15'-8"	18'-2"					
VALLEY RAFTERS	VALLEY RAFTERS 7'-5" 8'-11" 10'-6" 12'-0" 13'-2" 15'-3"										



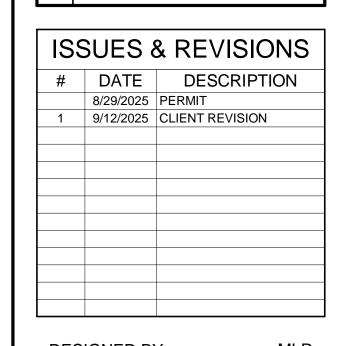




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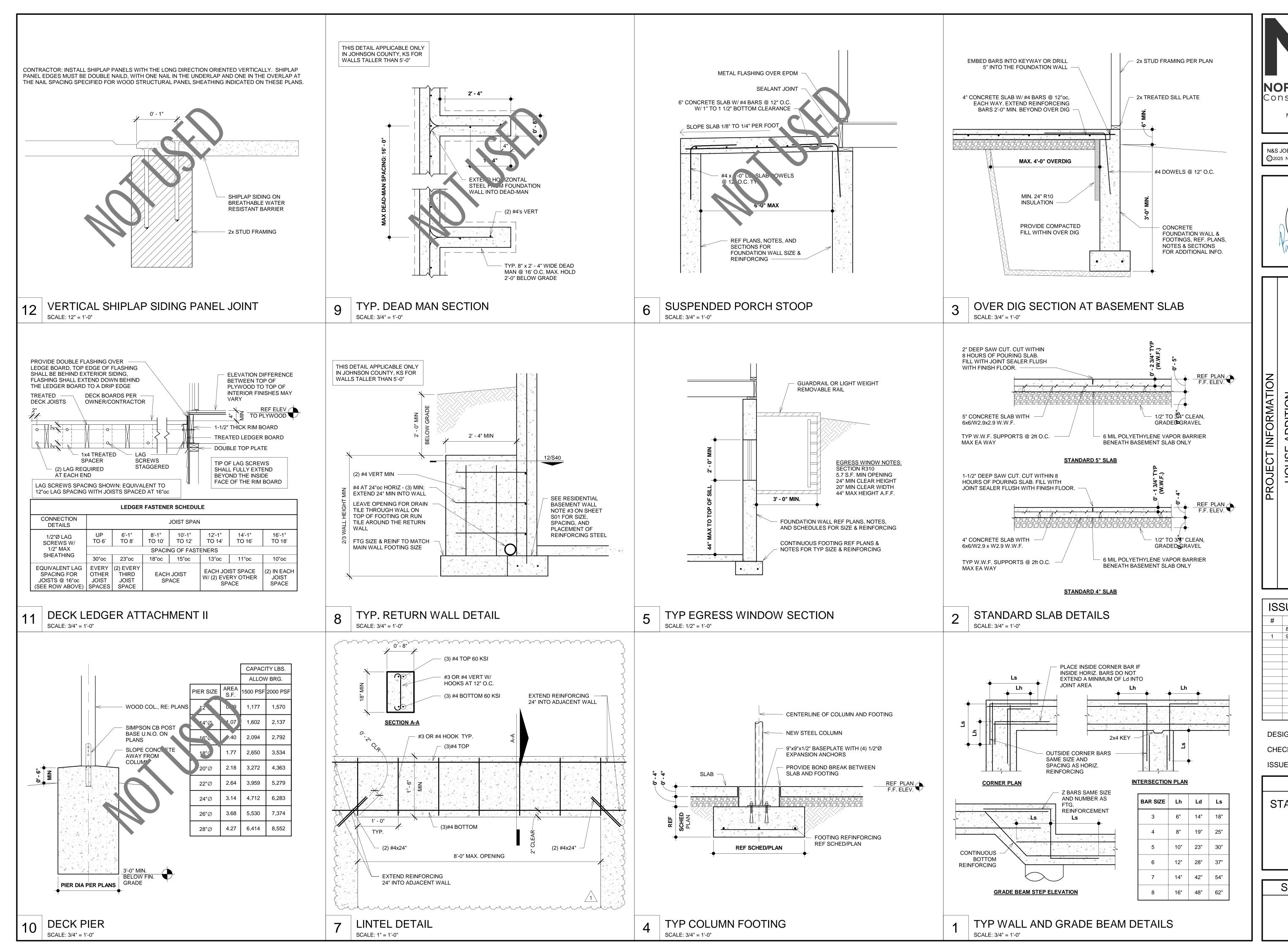
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ROOF FRAMING
PLAN

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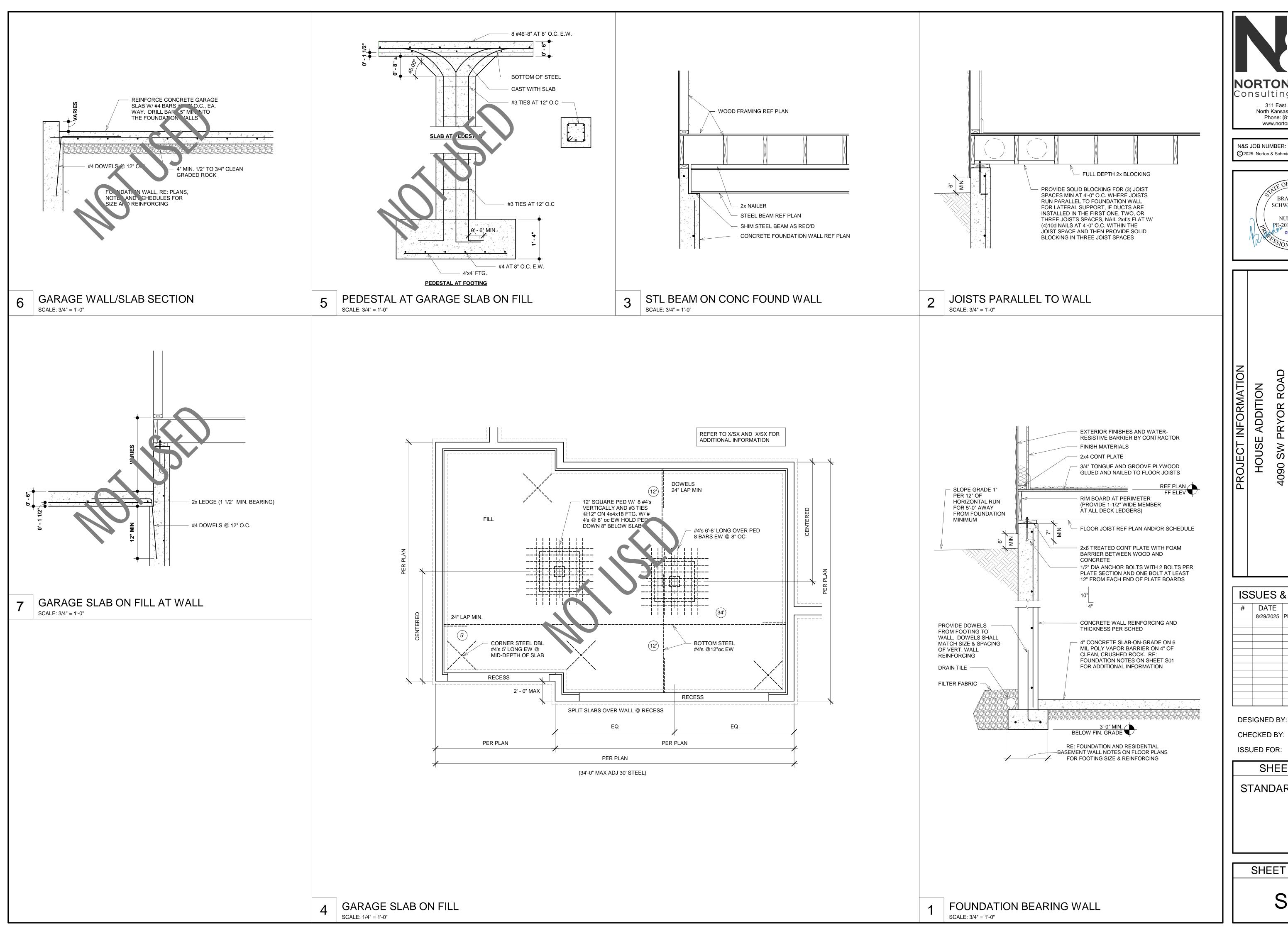
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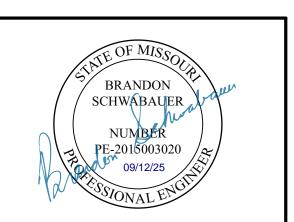
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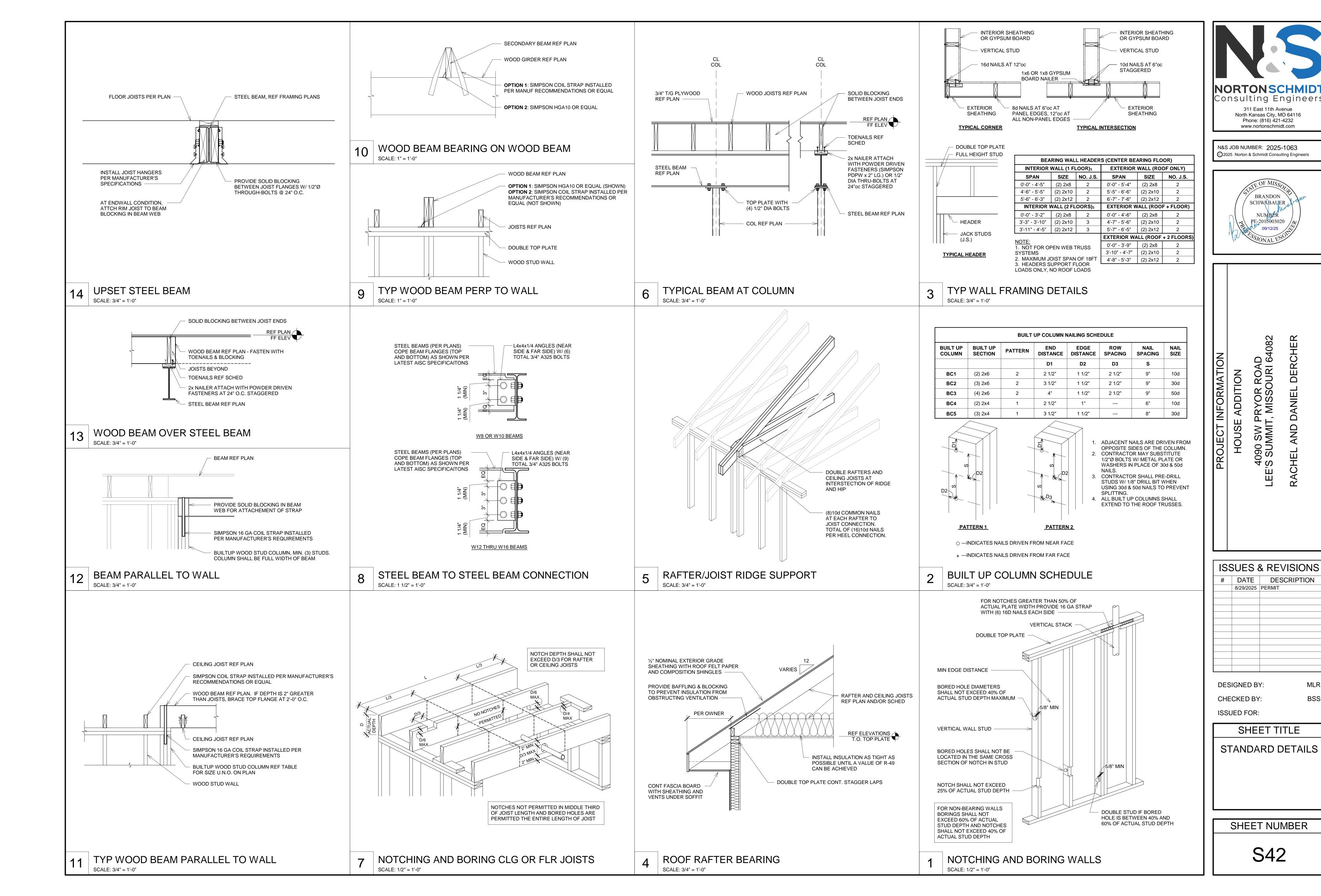
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<u> </u>	<u>ASTENING SCHE</u>	DULE IRC 2018 TABLE R6	02.3(1)	III EM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER (a)(b)(c) Floor	SPACING A	ND LOCATION
EM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER (a)(b)(c) Roof	SPACING AND LOCATION	21	Joist to sill, top plate or girder	4-8d box (2-1/2" × 0.113"); or 3-8d common (2-1/2" × 0.131"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	To	oe nail
4	Blocking between ceiling joists	4-8d box (2-1/2" × 0.113") or 3-8d common (2-1/2" × 0.131"); or	Tannail		8d box (2-1/2" × 0.113")		4" o.c. toe nail	
	or rafters to top plate	3-10d box (3" × 0.128"); or 3-3" × 0.131" nails 4-8d box (2-1/2" × 0.113"); or	Toe nail	22	Rim joist, band joist or blocking to sill or top plate (roof applications also)	8d common (2-1/2" × 0.131"); or 10d box (3" × 0.128"); or 3" × 0.131" nails	6" o.c. toe nail	
2	Ceiling joists to top plate Ceiling joist not attached to parallel rafter,	3-8d common (2-1/2" × 0.131"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails 4-10d box (3" × 0.128"); or	Per joist, toe nail	23	1" x 6" subfloor or less to each joist	3-8d box (2-1/2" × 0.113"); or 2-8d common (2-1/2" × 0.131"); or 3-10d box (3" × 0.128"); or 2 staples, 1" crown, 16 ga., 1-3/4" long	Fa	ce nail
3	laps over partitions (see Section R802.5.2 and Table R802.5.2)	3-16d common (3-1/2" × 0.162"); or 4-3" × 0.131" nails	Face nail	24	2" subfloor to joist or girder	3-16d box (3-1/2" × 0.135"); or 2-16d common (3-1/2" × 0.162")	Blind a	nd face nail
	Ceiling joist attached to parallel rafter (heel joint) (see Section R802.5.2 and Table R802.5.2)	Table R802.5.2	Face nail	25	2" planks (plank & beam—floor & roof)	3-16d box (3-1/2" × 0.135"); or 2-16d common (3-1/2" × 0.162") 3-16d common (3-1/2" × 0.162")	At each be	earing, face nail
5	Collar tie to rafter, face nail or 11/4" × 20 ga. ridge strap to rafter	4-10d box (3" × 0.128"); or 3-10d common (3" × 0.148"); or 4-3" × 0.131" nails	Face nail each rafter	26	Band or rim joist to joist	4-10 box (3" × 0.128"), or 4-3" × 0.131" nails; or 4-3" × 14 ga. staples, 7/16" crown	Eı	nd nail
5	Rafter or roof truss to plate	3-16d box nails (3-1/2" × 0.135"); or 3-10d common nails (3" × 0.148"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails	2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss(i)			20d common (4" × 0.192"); or	32" o.c. at to bottom and	staggered.
	Roof rafters to ridge, valley	4-16d (3-1/2" × 0.135"); or 3-10d common (3" × 0.148"); or 4-10d box (3" × 0.128"); or	Toe nail	27	Built-up girders and beams, 2-inch lumber layers	10d box (3" × 0.128"); or 3" × 0.131" nails And:	24" o.c. face and bottom opposite sic	staggered on
7	or hip rafters or roof rafter to minimum 2" ridge beam	4-3" × 0.131" nails 3-16d box (3-1/2" × 0.135"); or 2-16d common (3-1/2" × 0.162"); or 3-10d box (3" × 0.128"); or	End nail			2-20d common (4" × 0.192"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	Face nail at ends and at each splice	
	Object to a track for a track	3-10d box (3 x 0.126), of 3-3" x 0.131" nails Wall 16d common (3-1/2" x 0.162")	24" o.c. face nail	28	Ledger strip supporting joists or rafters	4-16d box (3-1/2" × 0.135"); or 3-16d common (3-1/2" × 0.162"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails		oist or rafter, ce nail
,	Stud to stud (not at braced wall panels)	10d box (3" × 0.128"); or 3" × 0.131" nails	16" o.c. face nail	29	Bridging or blocking to joint	2-10d box (3" × 0.128"), or 2-8d common (2-1/2" ×	Foot and the "	
	Stud to stud and abutting studs at	16d box (3-1/2" × 0.135"); or	12" o.c. face nail	29	Bridging or blocking to joist 2-8d common (2-1/2" × 0.131"); or 2-3" × 0.131") nails		Each end, toe nail	
	intersecting wall corners (at braced wall panels)	3" x 0.131" nails 16d common (3-1/2" x 0.162")	16" o.c. face nail	ITEM	NUMBER AND TYPE I DESCRIPTION OF BUILDING ELEMENTS OF FASTENER (a)(b)			F FASTENER Intermediate
	Built-up header (2" to 2" header with 1/2" spacer)	16d common (3-1/2" × 0.162") 16d box (3-1/2" × 0.135")	16" o.c. each edge face nail		(c)		Edges (inches)(h) supports(c)(e (inches)	
	Continuous header to stud	5-8d box (2-1/2" × 0.113"); or 4-8d common (2-1/2" × 0.131"); or 4-10d box (3" × 0.128")	Toe nail	Woo	Wood structural panels, subfloor, roof and interior wall sheathing to framing and particleboard wall sheath [see Table R602.3(3) for wood structural panel exterior wall sheathing to wall framing]			
2	Top plate to top plate	16d common (3-1/2" × 0.162") 10d box (3" × 0.128"); or 3" × 0.131" nails	16" o.c. face nail	30	3/8" – 1/2"	6d common (2" × 0.113") nail (subfloor, wall)(i) 8d common (2-1/2" × 0.131") nail (roof); or RSRS-01 (2-3/8" × 0.113") nail (roof)(j)	6	12(f)
3	Double top plate splice	8-16d common (3-1/2" × 0.162"); or 12-16d box (3-1/2" × 0.135"); or 12-10d box (3" × 0.128"); or	Face nail on each side of end joint (minimum 24" lap splice length each	31	19/32" – 1"	8d common nail (21/2" × 0.131"); or RSRS-01; (2-3/8" × 0.113") nail (roof)(j)	6	12(f)
	Dettern plate to injet wine injet hand injet	12-3" × 0.131" nails 16d common (3-1/2" × 0.162")	side of end joint) 16" o.c. face nail	32	1-1/8" — 1-1/4"	10d common (3" × 0.148") nail; or 8d (21/2" × 0.131") deformed nail	6	12
1	Bottom plate to joist, rim joist, band joist or blocking (not at braced wall panels)	16d box (3-1/2" × 0.135"); or 3" × 0.131" nails	12" o.c. face nail			ner wall sheathing(g) 1-1/2" galvanized roofing nail, 7/16"		
5	Bottom plate to joist, rim joist, band joist or blocking (at braced wall panel)	3-16d box (3-1/2" × 0.135"); or 2-16d common (3-1/2" × 0.162"); or 4-3" × 0.131" nails	3 each 16" o.c. face nail 2 each 16" o.c. face nail 4 each 16" o.c. face nail	33	fiberboard sheathing head diameter, or 1-1/4" lor staple with 7/16" or 1" crow		3	6
		4-8d box (2-1/2" × 0.113"); or 3-16d box (3-1/2" × 0.135"); or 4-8d common (2-1/2" × 0.131"); or	Toe nail	34	25/32" structural cellulosic fiberboard sheathing	1-3/4" galvanized roofing nail, 7/16" head diameter, or 1-1/2" long 16 ga. staple with 7/16" or 1" crown 1-1/2" galvanized roofing nail;	3	6
6	Top or bottom plate to stud	4-10d box (3" × 0.128"); or 4-3" × 0.131" nails		35	1/2" gypsum sheathing(d)	staple galvanized, 1-1/2" long; 1-1/4" screws, Type W or S	7	7
		3-16d box (3-1/2" × 0.135"); or 2-16d common (3-1/2" × 0.162"); or 3-10d box (3" × 0.128"); or	End nail	36	5/8" gypsum sheathing(d)	1-3/4" galvanized roofing nail; staple galvanized, 1-5/8" long; 1-5/8" screws, Type W or S	7	7
		3-3" × 0.131" nails 3-10d box (3" × 0.128"); or		37	Wood structural panels, co	mbination subfloor underlayment to fram 6d deformed (2" × 0.120") nail; or	ing 6	12
7	Top plates, laps at corners and intersections	2-16d common (3-1/2" × 0.162"); or 3-3" × 0.131" nails	Face nail	-		8d common (2-1/2" × 0.131") nail 8d common (2-1/2" × 0.131") nail; or		
3	1" brace to each stud and plate	3-8d box (2-1/2" × 0.113"); or 2-8d common (2-1/2" × 0.131"); or 2-10d box (3" × 0.128"); or	Face nail	38	7/8" – 1" 1-1/8" – 1-1/4"	8d deformed (2-1/2" × 0.120") nail 10d common (3" × 0.148") nail; or 8d deformed (2-1/2" × 0.120") nail	6	12
9	1" × 6" sheathing to each bearing	2 staples 1-3/4" 3-8d box (2-1/2" × 0.113"); or 2-8d common (2-1/2" × 0.131"); or 2-10d box (3" × 0.128"); or 2 staples, 1" crown, 16 ga., 1-3/4" long	Face nail	b.	a. Nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi for shank diameter 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, a 100 ksi for shank diameters of 0.142 inch or less.			
3-8d box (2-1/2" × 0.113"); or 3-8d common (2-1/2" × 0.131"); or 3-10d box (3" × 0.128"); or 3 staples, 1" crown, 16 ga., 1-3/4" long Wider than 1" × 8" 4-8d box (2-1/2" × 0.113"); or 3-8d common (2-1/2" × 0.131"); or 3-8d common (2-1/2" × 0.131"); or 3-10d box (3" × 0.128"); or 4 staples, 1" crown, 16 ga., 1-3/4" long			Face nail	d. e. f. g.	Nails shall be spaced at not more than 6 inches Four-foot by 8-foot or 4-foot by 9-foot panels sh Spacing of fasteners not included in this table s For wood structural panel roof sheathing attach inches of roof edges and ridges, nails shall be sless than 130 mph and shall be spaced 4 inche greater but less than 140 mph. Gypsum sheathing shall conform to ASTM C13 sheathing shall conform to ASTM C208. Spacing of fasteners on floor sheathing panel e	all be applied vertically. hall be based on Table R602.3(2). ed to gable end roof framing and to interior spaced at 6 inches on center where the use on center where the ultimate design with the same shall be installed in accordance volumes applies to panel edges supported by	mediate supp Itimate desig nd speed is 1 vith GA 253. y framing me	oorts within 48 n wind speed i 30 mph or Fiberboard
		(continued)		i.	required blocking and at floor perimeters only. Sedges supported by framing members and requestream representation of the framing members need not be requestream on the opposite side of the rafter shall not be representation.	uired blocking. Blocking of roof or floor she to be provided except as required by other nembers or solid blocking. Belicelling joist in accordance with this schedling joist to top plate in accordance with the sechelling joist to top plate in accordance with the sechelling joist to top plate in accordance with the sechelling joist to top plate in accordance with the sechelling joist to top plate in accordance with the sechelling joist to top plate in accordance with the sechelling joist to top plate in accordance with the sechelling joist to top plate in accordance with the sechelling joist to top plate in accordance with the sechelling joist to top plate in accordance with the sechelling joist to top plate in accordance with the sechelling joist joist in accordance with the sechelling joist	eathing pane provisions c edule, provide this schedu	el edges of this code. de two toe nails

INTERIOR BRACED WALL SCHEDULE							
SIMPSON	STRAP	WALL DIM'S	ANGLE	FASTENERS			
MODEL No.	LENGHT	HEIGHT x WIDTH	FROM HORIZONTAL	PLATES	EA STUD		
WB106	9'-5 5/8"	8'-0" x 5'-0"	60°	(2) 16d	(1) 8d		
WB126	11'-4 3/8"	8'-0" x 8'-0"	45°	(2) 16d	(1) 8d		
WB106C	9'-6"	8'-0" x 5'-0"	60°	(2) 16d	(1) 8d		
WB126C	11'-4 13/16"	8'-0" x 8'-0"	45°	(2) 16d	(1) 8d		
WB143C	14'-3"	10'-0" x 10'-0"	45°	(2) 16d	(1) 8d		

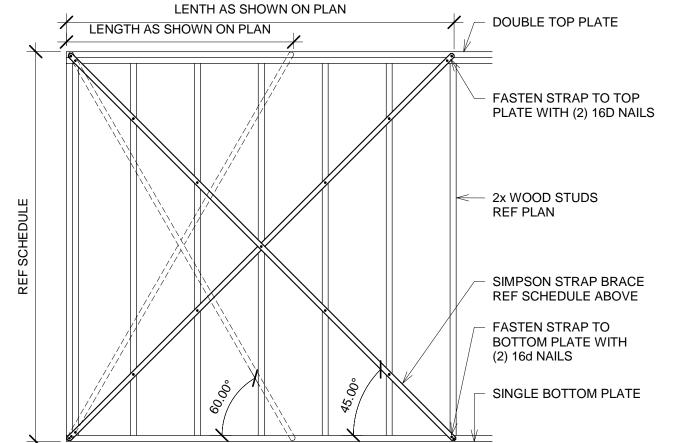
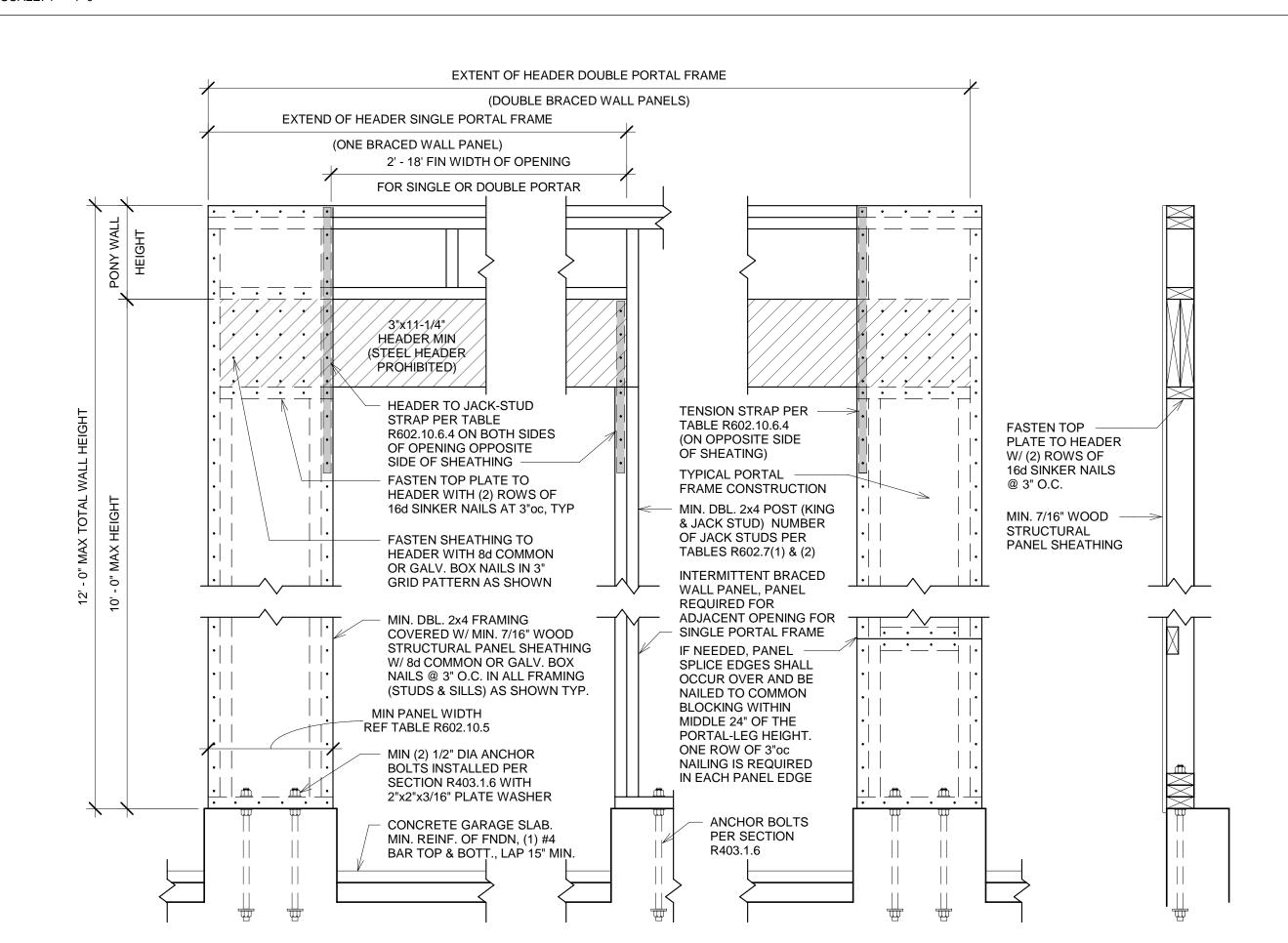


TABLE R602.10.5 - MINIMUM LENGTH OF BRACED WALL PANELS												
		WALL LENGTH PER PORTAL HEADER HEIGHT										
	METHOD	8 FEET	9 FEET	10 FEET	11 FEET	12 FEET						
DELL	SUPPORTING ROOF ONLY	16"	16"	16"	(c)	(c)						
SUPPOR	SUPPORTING ONE STORY AND ROOF	24"	24"	24"	(c)	(c)						
PFG		24"	27"	30"	(d)	(d)						
CC DE	SEISMIC DESIGN CATEGORY A,B,C	16"	16"	16"	(c)	(c)						
CS-PF	SEISMIC DESIGN CATEGORY D ₀ , D ₁ , D ₂	24"	24"	24"	(c)	(c)						
		-										

- (c) MAXIMUM HEADER HEIGHT FOR PFH IS 10 FEET IN ACCORDANCE WITH FIGURE R602.10.6.2, BUT WALL HEIGHT MAY BE INCREASED TO 12 FEET WITH PONY WALL.
- (d) MAXIMUM HEADER HEIGHT FOR PFG IS 10 FEET IN ACCORDANCE WITH FIGURE R602.10.6.3, BUT WALL HEIGHT MAY BE INCREASED TO 12 FEET WITH PONY WALL.
- (e) MAXIMUM HEADER HEIGHT FOR CS-PF IS 10 FEET IN ACCORDANCE WITH FIGURE R602.10.6.4, BUT WALL HEIGHT MAY BE INCREASED TO 12 FEET WITH PONY WALL.

2 INTERIOR BRACED WALL (LIB)
SCALE: 1" = 1'-0"



PORTAL FRAME GARAGE (PFG - R602.10.6.3) CONTINUOUS SHEATHED PORTAL FRAME PANEL (R602.10.6.4)



N&S JOB NUMBER: 2025-1063
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4090 SW PRYOR ROAD LEE'S SUMMIT, MISSOURI 64082

ISSUES & REVISIONS								
#	DATE	DESCRIPTION						
	8/29/2025	PERMIT						

DESIGNED BY:

CHECKED BY:

ISSUED FOR:

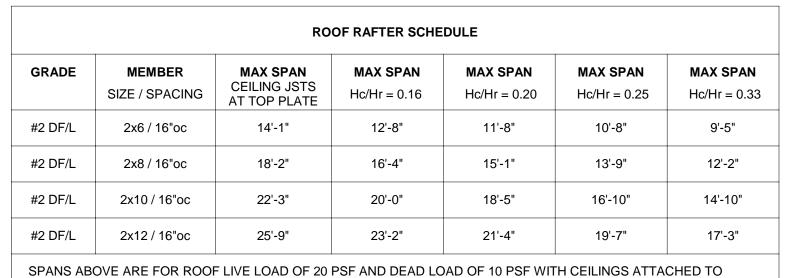
SHEET TITLE

STANDARD DETAILS,

SCHEDULES &

NOTES

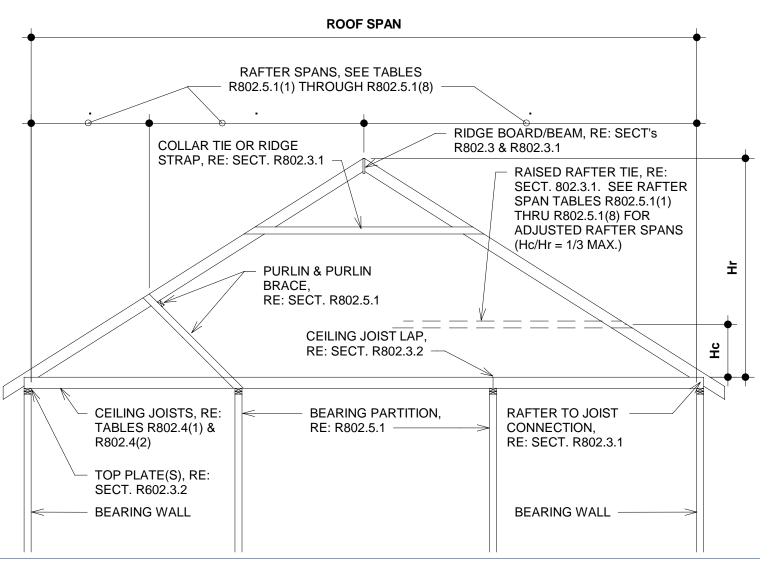
SHEET NUMBER



RAFTERS. RE: TABLES R802.5.1(1) THROUGH R802.5.1(8) FOR ADDITIONAL RAFTER SPAN INFORMATION.

THE ROOF FRAMING ON THIS HOME UTILIZES RAFTERS SPACED AT 16" ON CENTER IN EXPOSURE B WITH A ROOF SPAN LESS THAN 42' ON IN 90 MPH WIND ZONE. THEREFORE THE UPLIFT FORCE ON THE RAFTER IS LESS THAN 200 LBS. AND CAN BE CONNECTED PER TO THE WALL FRAMING PER TABLE 602.3(1) (ON SHEET 6.0).

SCALE: 1" = 1'-0"



		GROUND SNOW LOAD (PSF)															
			20(f)			30			50			70					
		ROOF SPAN (FEET)															
RAFTER SLOPE	RAFTER SPACING	12	20	28	36	12	20	28	36	12	20	28	36	12	20	28	3
		REQUIRED NUMBER OF 16d COMMON NAILS(a,b) PER HEEL JOINT SPLICES (c,d,e)															
3:12	12 16 24	4 5 7	6 8 11	8 10 15	10 13 19	4 5 7	6 8 11	8 11 16	11 14 21	5 6 9	8 11 16	12 15 23	15 20 30	6 8 12	11 14 21	15 20 30	20
4:12	12 16 24	3 4 5	5 6 8	6 8 12	8 10 15	3 4 5	5 6 9	6 8 12	8 11 16	4 5 7	6 8 12	9 12 17	11 15 22	5 6 9	8 11 16	12 15 23	1: 2: 2:
5:12	12 16 24	3 3 4	4 5 7	5 6 9	6 8 12	3 3 4	4 5 7	5 7 10	7 9 13	3 4 6	5 7 10	7 9 14	9 12 18	4 5 7	7 9 13	9 12 18	1: 1: 2:
7:12	12 16 24	3 3 3	4 4 5	4 5 7	5 6 9	3 3 3	3 4 5	4 5 7	5 6 9	3 3 4	4 5 7	5 7 10	7 9 13	3 4 5	5 6 9	7 9 13	1 1
9:12	12 16 24	3 3 3	3 4 4	4 4 6	4 5 7	3 3 3	3 3 4	3 4 6	4 5 7	3 3 3	3 4 6	4 5 8	5 7 10	3 3 4	4 5 7	5 7 10	7 9 1:
12:12	12 16 24	3 3 3	3 3 4	3 4 4	3 4 5	3 3 3	3 3	3 3 4	3 4 6	3 3 3	3 3 4	3 4 6	4 5 8	3 3 3	3 4 6	4 5 8	5 7

- a. 40d BOX NAILS SHALL BE PERMITTED TO BE SUBSTITUTED FOR 16D COMMON NAILS.
- b. NAILING REQUIREMENTS SHALL BE PERMITTED TO BE REDUCED 25%
 IF NAILS ARE CLINCHED
- IF NAILS ARE CLINCHED.

 c. HEEL JOINT CONNECTIONS ARE NOT REQUIRED WHEN THE RIDGE IS SUPPORTED BY A LOAD-BEARING WALL, HEADER, OR RIDGE BEAM.
- SUPPORTED BY A LOAD-BEARING WALL, HEADER, OR RIDGE BEAM.

 d. WHEN INTERMEDIATE SUPPORT OF THE RAFTER IS PROVIDED BY VERTICAL STRUTS OR PURLINS TO A LOAD-BEARING WALL, THE TABULATED HEEL JOINT CONNECTION REQUIREMENTS SHALL BE PERMITTED TO BE REDUCED PROPORTIONALLY TO THE REDUCTION IN SPAN.
- e. EQUIVALENT NAILING PATTERNS ARE REQUIRED FOR CEILING JOIST TO CEILING JOIST LAP SPLICES.
- APPLIES TO ROOF LIVE LOAD OF 20 PSF OR LESS.
 TABULATED HEEL JOINT CONNECTION REQUIREMENTS ASSUME THAT
 CEILING JOISTS OR RAFTER TIES ARE LOCATED AT THE BOTTOM OF
 THE ATTIC SPACE. WHEN CEILING JOISTS OR RAFTER TIES ARE
 LOCATED HIGHER IN THE ATTIC, HEEL JOINT CONNECTION

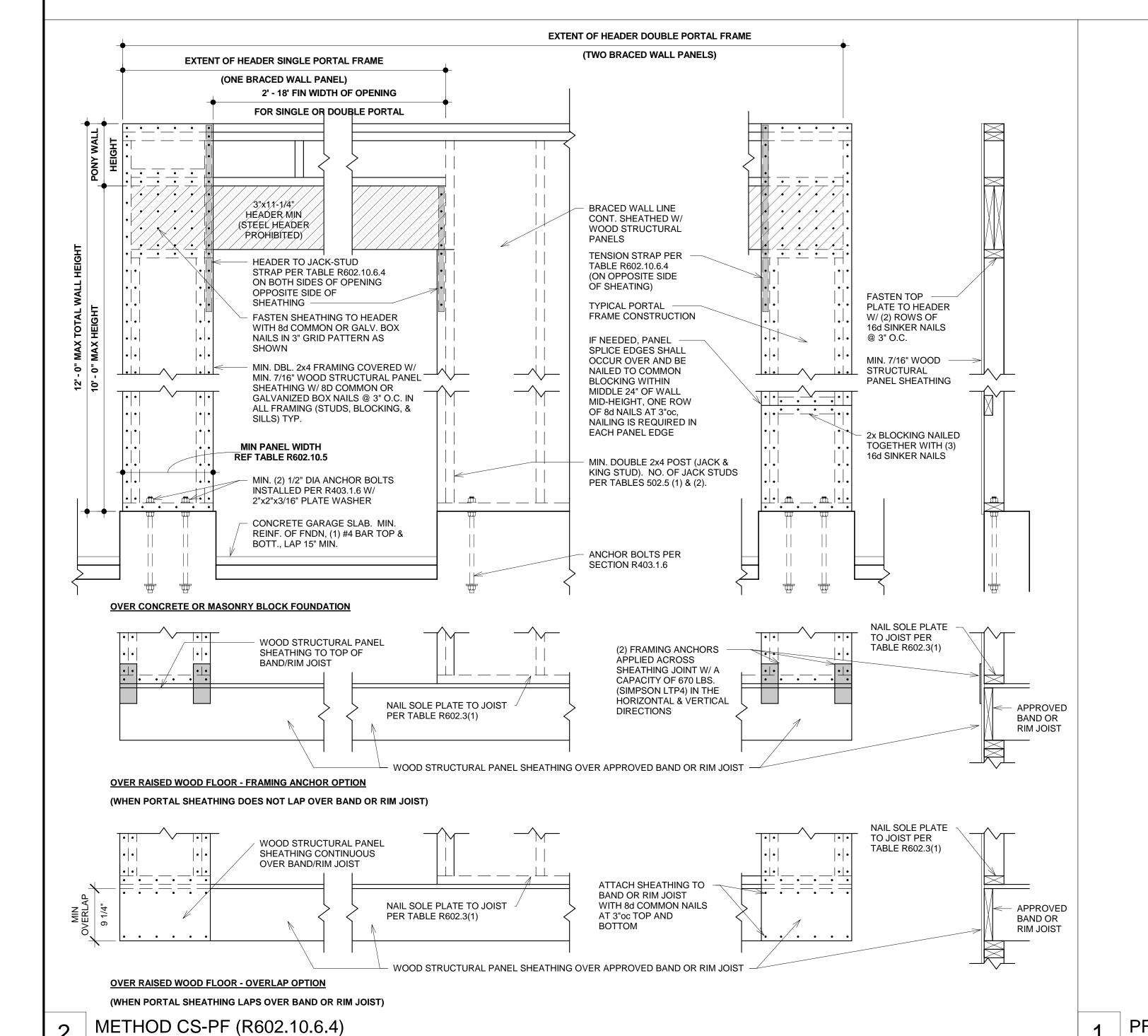
REQUIREMENTS SHALL BE INCREASED BY THE FOLLOWING FACTORS:

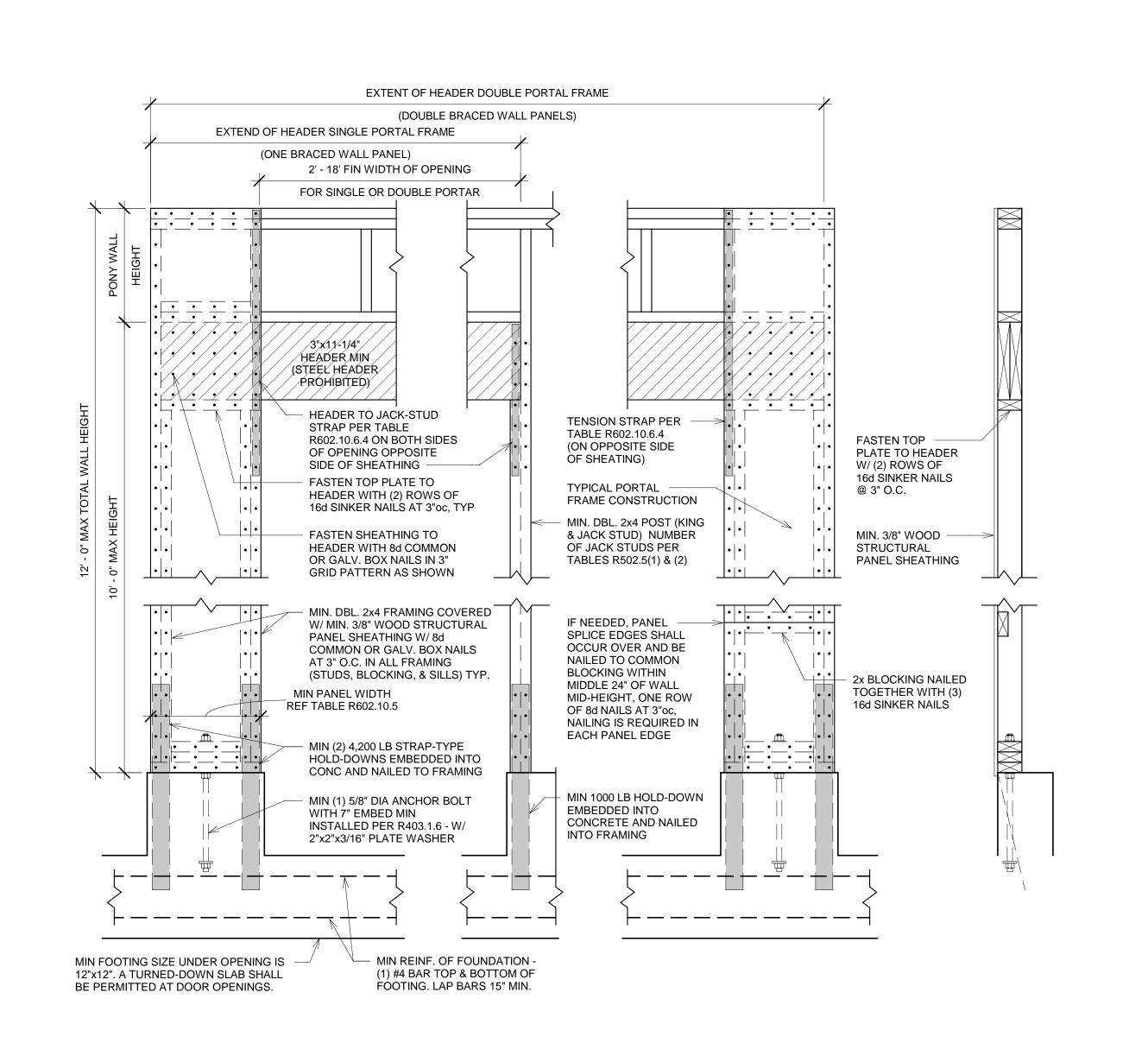
Hc/Hr	HEEL JOINT CONNECTION ADJUSTMENT FACTOR
1/3	1.5
1/4	1.33
1/5	1.25
1/6	1.2
1/10 OR LESS	1.11

WHERE:

Hc= HEIGHT OF CEILING JOISTS OR RAFTER TIES MEASURED VERTICALLY ABOVE THE TOP OF THE RAFTER SUPPORT WALLS.

Hr=HEIGHT OF ROOF RIDGE MEASURED VERTICALLY ABOVE THE TOP OF THE RAFTER SUPPORT WALLS.







N&S JOB NUMBER: 2025-1063
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HOUSE ADDITION
4090 SW PRYOR ROAD
LEE'S SUMMIT, MISSOURI 64082
RACHEL AND DANIEL DERCHER

ISSUES & REVISIONS							
#	DATE	DESCRIPTION					
	8/29/2025	PERMIT					

DESIGNED BY:

CHECKED BY:

ISSUED FOR:

SHEET TITLE

STANDARD DETAILS,

SCHEDULES &

NOTES

SHEET NUMBER

S44

PFH-Portal Frame with Hold-Downs (R602.10.6.2)

SCALE: 1" = 1'-0"