

AREA= 1,154 SF

SCALE: 1/4"=1'-0"

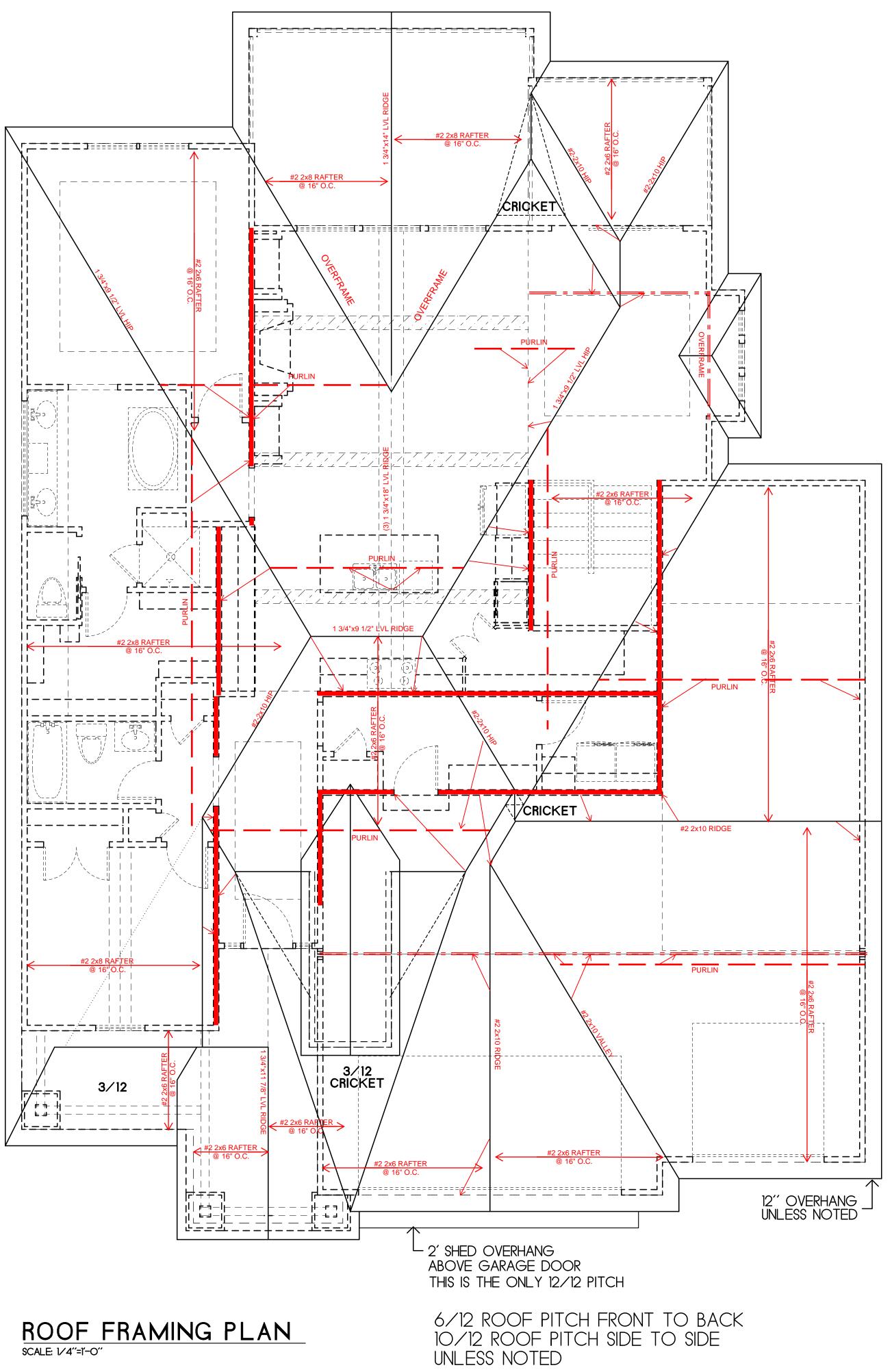


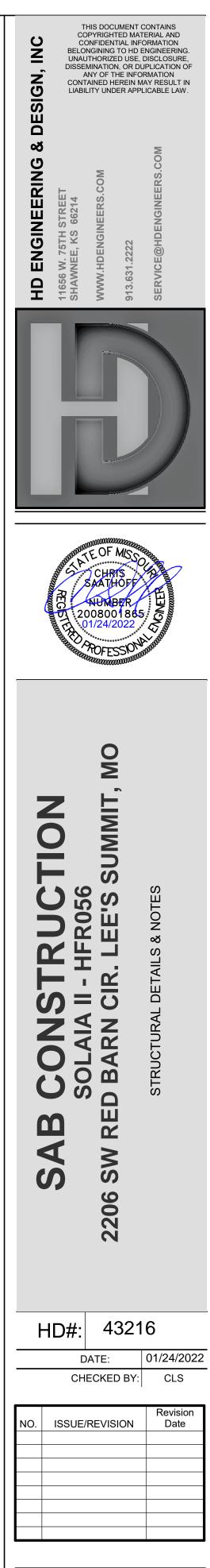












PLANS DRAWN BY OTHERS

S-0.4

ALLOWABLE LOADS FOR PNEUMATIC OR MECHANICALLY DRIVEN NAILS AND STAPLES

	NAIL GUN		PENETRATION	AL	LOWABLE LO	ADS (IN POUN	DS)	BUILDING COMPONENT	FASTEN TO	FASTEN WITH
FASTENER DESCRIPTION	NAILS/	WIRE GA.	REQUIRED INTO MAIN MEMBER FOR LATERAL	LATERAL	STRENGTH	WITHDRAW	AL STRENGTH		RIDGE / VALLEY / HIP	TOENAIL W/ (4) 16D, FACENAIL W/ (3) 16D
	WIRE DIA.	0/1	STRENGTH (IN.)	SP	DF/L	SP	DF/L		PLATE	TOENAIL W/ (3) 10D
16 GA. STAPLE	.063	16	1	51		36	32	RAFTERS	LEDGER STRIPS SUPPORTING JOISTS OR RAFTERS	FACENAIL W/ (3) 16D
15 GA. STAPLE	.072	15	1	64		42	37		COLLAR TIE TO RAFTERS	FACENAIL W/ (3) 10D
14 GA. STAPLE	.080	14	1	75		46	41		TOP PLATE	TOENAIL W/ (3) 8D @ EACH END
6d COOLER NAIL									WHERE CLG JST RUN PARALLEL TO RAFTERS FAC	
6d SINKER NAIL	.092	13	1	46		27	23	CEILING JOISTS	LAPS OVER PARTITIONS	FACENAIL W/ (3) 10D
6d BOX NAIL									BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE	TOENAIL W/ (3) 8D
6d CASING NAIL	.099	12-1/2	1-1/8	61	55	31	24			
7d COOLER NAIL									BUILT-UP BEAMS, 2" LUMBER LAYERS, FACENAIL OPPOSITE SIDES, (2) @ EACH END PLUS	10D @ 32" OC STAGGERED, TOP & BOTTOM, OPPOSITE SIDES
6d COMMON NAIL										
8d COOLER NAIL								BEAMS	BUILT-UP BEAMS OF ENGINEERED LUMBER, FACE NAIL OPPOSITE SIDES	(2) ROWS @ 12" OC
8d SINKER NAIL	.113	11-1/2	1-1/4	79	72	35	28		BUILT-UP HEADER, TWO PIECES W/ 1/2" SPACER	16D @16" OC ALONG EDGES
8d BOX NAIL									BUILT-UP HEADER, TWO PIECES, NO 1/2" SPACER	3" x 0.131" NAILS @ 12" OC ALONG EDGE
8d CASING NAIL										
6d RING SHANK NAIL									BEARING	TOENAIL W/ (2) 18D @ EACH END
d SCREW SHANK NAIL									RIM JOIST TO SILL OR TOP PLATE	TOENAIL W/ 8D COMMON OR 10D BO> NAILS @ 6" OC
8d RING SHANK NAIL	.120	11	1-3/8	89	81	41	32		JOIST TO SILL OR GIRDER	TOENAIL W/ (3) 8D
d SCREW SHANK NAIL								FLOOR JOISTS		
10d Cooler Nail									JOIST TO RIM JOIST BRIDGING TO JOIST	FACENAIL W/ (3) 16D
10d Sinker Nail	.128	10-1/2	1-1/2	89	81	36	31			TOENAIL W/ (2) 8D
12d Short									I-JOIST TO BEARING PLATE	TOENAIL W/ (2) 8D - ONE INTO EACH SIDE LEAST 1 1/2" FROM THE END
10d Box Nails 12d Box Nails	.128	10-1/2	1-1/2	101	93	40	31		RIM JOIST TO I-JOIST	FACENAIL W/ (2) 10D BOX NAILS - ONE IN EACH FLANGE
10d Casing Nails									SOLE PLATE TO LSL RIM BOARD	16D BOX NAILS @ 12" OC
8d Common Nails	.131	10-1/4	1-1/2	106	97	41	32		SINGLE JOIST HANGERS *	10D FACENAILS AND TOENAILS
16d Short			1 1/2	100			02		DOUBLE JOIST HANGERS *	16D FACENAILS AND TOENAILS
12d Sinkers	.135	10	1-1/2	113	103	42	33		TOP & SOLE PLATE TO STUD	END NAIL W/ (2) 16D
16d Box Nails	.100	10	1-1/2	115	100	72			STUD TO SOLE AND TOP PLATE	TOENAIL W/ (4) 8D
10d Ring Shank Nails									DOUBLE TOP PLATES	FACENAIL W/ 16D @ 16" OC
10d Screw Shank Nails	.135	10	1-5/8	113	103	46	36		DOUBLE TOP PLATE LAP SPLICE	FACENAIL W/ (8) 16D
12d Ring Shank Nails									TOP PLATE LAPS & INTERSECTIONS	FACENAIL W/ (2) 16D
12d Screw Shank Nails									DOUBLE STUDS	FACENAIL W/ 16D @ 24" OC
10d Common Nails									BUILT-UP CORNER STUDS	FACENAIL W/ 16D - 2 ROWS @ 24" OC
12d Common Nails 16d Sinker Nails	.148	9	1-5/8	128	118	46	36		STEEL "X" BRACING	FACENAIL W/ (2) 16D IN EACH TOP & BOTTOM PLATE & (1) 8D PER STUD
20d Box Nails	. 140	9	1-0/0	120	110	40	30	WALLS	SOLE PLATE TO JOIST OR BLOCKING	FACENAIL W/ 16D @ 16" OC
30d Box Nails										
16d Ring Shank Nails		- -							SOLE PLATES TO JOIST OR BLOCKING AT BRACED WALL LINES, PERPENDICULAR TO FRAMING	FACENAIL W/ (3) 16D @ 16" OC ALONG BRACED WALL PANEL
16d Screw Shank Nails	.148	9	1-3/4	128	118	50	40			
16d Common Nails		_		. – .					TOP PLATE TO JOIST OR BLOCKING AT BW LINES, PERPENDICULAR TO FRAMING	TOENAIL W/ 8D @ 6" OC ALONG BRACED WALL PANEL
40d Box Nails	.162	8	1-3/4	154	141	50	40			
20d Ring Shank Nails		_							SOLE PLATES TO JOIST OR BLOCKING AT BW LINES PARALLEL TO FRAMING, BLOCKING @ 16" OC	FACENAIL W/ (3) 16D @ 16" OC ALONG E PANEL & AT EACH BLOCK
20d Screw Shank Nails	.177	7	2-1/8	178	163	59	47			
20d Sinker Nails	.177	7	2-1/8	178	163	54	43		TOP PLATE TO JOIST OR BLOCKING AT BW LINES, PARALLEL TO FRAMING, BLOCKING @ 16" OC	TOENAIL W/ 8D @ 6" OC ALONG BW PANEL & AT EACH BLOCK
20d Common Nails	.148	9	2-1/8	170	166	59	47		NON-STRUCT. SIDING OVER STRUCT. SHEATHING	(1) 6D BOX NAIL IN EACH STUD
30d Sinker Nails	. 140	9	2-1/0	170	100	29	47		FIBER CEMENT PLANK SIDING	(1) 6D GALVANIZED NAIL IN EACH STU
		•	I		•		· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·

SHEATHING SCHEDULE

ALL SHEATHING MATERIALS TO BE APPLIED PERPENDICULAR TO JOISTS AND ENDS STAGGERED

BUILDING COMPONENT	MATERIAL	FASTENING			
ROOF SHEATHING	7/16" PLYWOOD	16 GA X 1 3/4" STAPLES @ 6" OC EDGES & 12" OC IN FIELD			
NOOF OHEATTING	1x 4 #3 FURRING	1/2" CROWN STAPLES			
	3/4" T&G YELLOW	14 GA X 1 3/4" STAPLES @ 6" OC EDGES & 12" OC IN FIELD			
FLOOR SHEATHING	PINE PLYWOOD	12.5 GA X 1 1/2" RING OR SCREW SHANK NAILS @ 6" OC EDGES & 12" OC IN FIELD			
WALL COVERING	1/2" GYPSUM SHEATHING	6D COMMON NAILS: 1 5/8" GALVANIZED STAPLES; 1 1/4" SCREWS, TYPE W OR S @ 4" OC EDGES & 8" OC IN FIELD			
CEILING COVERING	1/2" GYPSUM SHEATHING	7" OC NAILED / 12" OC SCREWED W/ 13GA, 1 3/8" LONG, 19/64" HEAD; 0.098 Ø, 1 1/4" LONG, ANG-RINGED; 5D COOLER NAIL, 0.086 Ø, 1 5/8" LONG, 15/64" HEAD; OR GYP BD NAIL, 0.086 Ø, 1 5/8" LONG, 19/64" HEAD			
EXTERIOR WALL	7/16" APA RATED SHEATHING	8D COMMON NAILS @ 6" OC EDGES & 12" OC IN THE FIELD			
SHEATHING	RATED PANEL SIDING, RATED 16" O.C. 7/16" THICK	8D BOX OR SINKER NAILS @ 6" OC EDGES & 12" OC IN THE FIELD			

SEALS.

FRAME FASTENING SCHEDULE

* JOIST HANGER NOTES: 1) NO JOIST HANGER NAILS ALLOWED FOR TOENAILS, 2) NO GUN NAILS OR SCREWS ALLOWED IN CONNECTORS, 3) TOENAILS SHALL ALWAYS BE A FULL 3" OR 3.5" NAIL

COLUMN CONNECTION TO STEEL BEAMS SHALL BE WITH A CLIP POST CAP WITH ALL FOUR TAB EARS BENT AROUND THE BOTTOM FLANGE OF THE BEAM. FOR A BEARING PLATE, FOUR HOLES SHALL BE DRILLED IN THE BOTTOM FLANGE OF THE STEEL BEAM TO MATCH THE HOLE PATTERN OF THE PLATE. 1/2"x2" BOLTS SHOULD THEN BE INSTALLED WITH A FLAT WASHER, LOCK WASHER, AND A NUT IN EACH OF THE HOLES. THE POST CAP MAY BE WELDED TO THE STEEL BEAM IN ACCORDANCE WITH AWS D1.1-92 AS AN ALTERNATIVE, AND WOULD NEED TO BE INSPECTED BY AN AWS-CERTIFIED INSPECTOR.

DUCT SEALING METHOD, PER IRC2018 W1103.3.2

N1103.2.2 (R403.2.2) SEALING (MANDATORY) DUCTS, AIR HANDLERS, AND FILTER BOXES SHALL BE SEALED. JOINTS AND SEAMS SHALL COMPLY WITH SECTION M1601.4.1 OF THIS CODE.

EXCEPTIONS: 1. AIR-IMPERMEABLE SPRAY FOAM PRODUCTS SHALL BE PERMITTED TO BE APPLIED WITHOUT ADDITIONAL JOINT

2. WHERE A DUCT CONNECTION IS MADE THAT IS PARTIALLY INACCESSIBLE, THREE SCREWS OR RIVETS SHALL BE EQUALLY SPACED ON THE EXPOSED PORTION OF THE JOINT SO AS TO PREVENT A HINGE EFFECT. 3. CONTINUOUSLY WELDED AND LOCKING-TYPE LONGITUDINAL JOINTS AND SEAMS IN DUCTS OPERATING AT STATIC PRESSURE LESS THAN 2 INCHES OF WATER COLUMN (500 Pa) PRESSURE CLASSIFICATION SHALL NOT REQUIRE ADDITIONAL CLOSURE SYSTEMS.

DUCT TIGHTNESS SHALL BE VERIFIED BY EITHER OF THE FOLLOWING:

1. POST CONSTRUCTION TEST: TOTAL LEAKAGE SHALL NOT BE LESS THAN OR EQUAL TO 4 CFM (113.3 L/MIN) PER 100FT² (9.29m²) OF CONDITIONED FLOOR AREA WHEN TESTED AT A PRESSURE DIFFERENTIAL OF 0.1 INCHES W.G. (25 Pa) ACROSS THE ENTIRE SYSTEM, INCLUDING THE MANUFACTURER'S AIR HANDLER ENCLOSURE. ALL REGISTER BOOTS SHALL BE TAPED OR OTHERWISE SEALED DURING THE TEST.

2. ROUGH-IN TEST: TOTAL AIR LEAKAGE SHALL BE LESS THAN OR EQUAL TO 4 CFM (113.3 L/MIN) PER 100FT² (9.29m²) OF CONDITIONED FLOOR AREA WHEN TESTED AT A PRESSURE DIFFERENTIAL OF 0.1 INCHES W.G. (25 Pa) ACROSS THE ENTIRE SYSTEM, INCLUDING THE MANUFACTURER'S AIR HANDLER ENCLOSURE. ALL REGISTERS SHALL BE TAPED OR OTHERWISE SEALED DURING THE TEST. IF THE AIR HANDLER IS NOT INSTALLED AT THE TIME OF THE TEST, TOTAL AIR LEAKAGE SHALL BE LESS THAN OR EQUAL TO 3 CFM (85 L/MIN) PER 100FT² (9.29m²) OF CONDITIONED FLOOR AREA. EXCEPTION: THE TOTAL LEAKAGE IS NOT REQUIRED FOR DUCTS AND AIR HANDLERS LOCATED ENTIRELY WITHIN THE BUILDING THERMAL ENVELOPE.

GENERAL NOTES

OR DEVIATIONS ARE MADE FROM THESE PLANS THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE AUTHORITY AND THE ENGINEER TO EVALUATE THE CHANGES AND MAKE ANY APPROPRIATE MODIFICATIONS TO THE PLANS. 2. WHERE DISCREPANCIES EXIST BETWEEN THE STANDARD COMMENTS, NOTES FOR THE DESIGN PROFESSIONAL OR THE CODE, THE MOST RESTRICTIVE SHALL APPLY. 3. THE CONTRACTUAL OBLIGATION OF THESE PLANS IS TO PROVIDE THE OWNER/BUILDER AND THE AHJ WITH A SET OF PLANS THAT MEET AHJ AND CODE REQUIREMENTS FOR A SINGLE SITE CONSTRUCTION PROJECT. UNLESS REQUESTED BY OUR CLIENT, CODE/AHJ MINIMUM DESIGNS WILL BE UTILIZED. ALSO, UNLESS REQUESTED BY THE OWNER, OUR FIRM CAN NOT AND WILL NOT BE AUTHORIZED TO VISIT THE SITE TO EVALUATE THE SITE OR ANY CONSTRUCTION FOR THIS PROJECT. IMPLEMENTATION OF ALTERNATES TO THE DESIGNS INCLUDING BUT NOT LIMITED TO PIER DESIGNS, FOUNDATION ALTERATIONS, OR ANY STRUCTURAL CHANGES NOT PROVIDED BY HD ENGINEERING OR A PROFESSIONAL REFERRED BY HD ENGINEERING SHALL RELEASE HD ENGINEERING FROM ALL LIABILITY ASSOCIATED WITH THIS DESIGN. 4. OUR FIRM HIGHLY RECOMMENDS THAT ANY SITE WITH GREATER THAN A 15% GRADE, ANY SITE WHERE A PREVIOUS STRUCTURE WAS LOCATED, OR ANY SITE WITH POTENTIAL FILL MATERIAL OR A POTENTIAL SOIL BEARING CAPACITY BELOW 1500 PSF SHOULD BE EVALUATED BY OUR FIRM OR AN HD ENGINEERING REFERRED GEOTECHNICAL FIRM PRIOR TO PLACING FOOTINGS. THE ATTACHED PLANS HAVE BEEN DESIGNED WITH THE UNDERSTANDING THAT OUR FIRM HAS NOT AND CAN NOT VISIT OR INSPECT THE SITE WITHOUT WRITTEN CONSENT/REQUEST OF THE OWNER/BUILDER. DUE TO THIS FACT OUR FIRM CAN ONLY DESIGN THE ATTACHED PLANS TO CERTAIN CODE REQUIREMENTS WHICH ARE DETAILED THROUGHOUT THE PLAN AND ATTACHED DETAIL SHEETS, IF THE OWNER DESIRES GREATER THAN CODE DESIGNS THAT REQUEST MUST BE MADE CLEARLY AND IN WRITING PRIOR TO ENGINEERING OF THE PLAN. 5. DUE TO THE WIDE VARIETY OF SOIL CONDITIONS IN OUR AREA AND THE WIDE VARIETY OF PLASTICITY INDEX AND SOIL BEARING CAPACITIES OUR FIRM RECOMMENDS ALL SITES BE EVALUATED BY HD ENGINEERING OR AN HD ENGINEERING REFERRED GEOTECHNICAL FIRM PRIOR TO PLACEMENT OF ANY "STANDARD" FOUNDATIONS .

FOUNDATION NOTES

REQUIREMENTS BASED ON ACTUAL SITE CONDITIONS 2. FOUNDATION WALLS SHALL BE DAMP-PROOFED PER IRC SECTION R406. 3. PROVIDE A MINIMUM 4" PERFORATED DRAIN AROUND USABLE SPACE BELOW GRADE OR OTHER EQUIVALENT MATERIALS PER IRC SECTION 405.1. THE PIPE SHALL BE COVERED WITH NOT LESS THAN 6" OF WASHED GRAVEL OR CRUSHED ROCK. THE DRAIN SHALL DAYLIGHT TO THE EXTERIOR BELOW THE FLOOR LEVEL OR TERMINATE IN A MINIMUM 20 GALLON SUMP PIT.

4. FOUNDATION DESIGN SHALL BE BASED ON A MINIMUM SOIL BEARING CAPACITY OF 1500 PSF. 5. FOOTINGS SHALL BE A MIN. OF 16" WIDE AND 8" DEEP W/ (2) #4 BARS CONTINUOUS, LOCATED A MIN. OF 3" CLEAR FROM BOTTOM. FOOTINGS SHALL BE A MINIMUM OF 36" BELOW GRADE FOR FROST PROTECTION.

6. COLUMN PADS SHALL BE A MINIMUM OF 24"X24"X8" WITH (3) #4 BARS EACH WAY. 7. FOUNDATION WALLS SHALL BE A MINIMUM 8" THICK W/ MINIMUM #4 BARS @ 24" O.C. HORIZONTAL AND VERTICAL W/ THE TOP BAR WITHIN 8" OF THE TOP OF THE WALL UNLESS NOTED OTHERWISE ON PLAN.

8. REINFORCEMENT SHALL LAP A MINIMUM OF 24"

9. INTERIOR BEARING WALLS AND COLUMNS SHALL BE ISOLATED FROM THE BASEMENT FLOOR SLAB. 10. INTERIOR NON-BEARING WALLS, OTHER THAN THOSE RESTING DIRECTLY ON THE FOOTING, SHALL BE ISOLATED FROM THE FLOOR FRAMING ABOVE BY A SEPARATION OF 1/2" 11. CONCRETE FLOOR SLABS ON GRADE, SHALL BE A MINIMUM 4" THICK OVER A MINIMUM 4" BASE OF SAND, GRAVEL, OR CRUSHED STONE. BASEMENT SLABS SHALL HAVE

A MIN. 6 MIL POLYETHYLENE OR APPROVED VAPOR RETARDER WITH JOINTS LAPPED NOT LESS THAN 6" SHALL BE PLACED BETWEEN THE FLOOR SLAB AND THE BASE COURSE

DESIGN.

SPACED NOT MORE THAN 3' ON CENTER AND WITHIN 12" OF EACH END PIECE PER IRC SECTION R403.1.6. 14. FOUNDATION WINDOW WELLS FOR SECONDARY MEANS OF EGRESS SHALL PROVIDE A MINIMUM 3'X3' HORIZONTAL AREA. 15. THE BASE OF ALL FOOTING EXCAVATIONS SHOULD BE FREE OF ALL WATER AND LOOSE MATERIAL PRIOR TO PLACING CONCRETE. CONCRETE SHOULD BE PLACED AS SOON AS POSSIBLE AFTER EXCAVATING SO THAT EXCESSIVE DRYING OR DISTURBANCE OF BEARING MATERIALS DOES NOT OCCUR. SHOULD THE MATERIALS AT BEARING LEVEL BECOME EXCESSIVELY DRY OR SATURATED. WE RECOMMEND THAT THE AFFECTED MATERIAL BE REMOVED PRIOR TO PLACING CONCRETE 16. IT IS RECOMMENDED THAT ALL FOOTING EXCAVATIONS BE EVALUATED AND TESTED BY A GEOTECHNICAL ENGINEER IMMEDIATELY PRIOR TO PLACEMENT OF FOUNDATION CONCRETE. UNSUITABLE AREAS IDENTIFIED AT THIS TIME SHOULD BE CORRECTED. CORRECTIVE PROCEDURES WOULD BE DEPENDENT UPON CONDITIONS ENCOUNTERED AND MAY INCLUDE DEEPENING OF FOUNDATION ELEMENTS, OR UNDERCUTTING OF UNSUITABLE MATERIALS AND REPLACEMENT WITH ENGINEERED FILL.

STAIRWAY NOTES:

1. STAIRWAYS SHALL PROVIDE A MAXIMUM 7 3/4" RISE AND MIN. 10" RUN. 2. PROVIDE MINIMUM 36" GUARDRAILS ON THE OPEN SIDES OF RAISED FLOORS, PORCHES AND BALCONIES. MINIMUM 34" GUARDRAILS ON THE OPEN SIDES OF STAIRWAYS LOCATED MORE THAN 30" ABOVE THE FLOOR OR GRADE BELOW. GUARDRAIL ENCLOSURES SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL PATTERNS THAT DO NOT ALLOW PASSAGE OF A SPHERE 4" IN DIAMETER

3. EACH STAIRWAY OF 3 OR MORE RISERS SHALL PROVIDE A CONTINUOUS HANDRAIL ON AT LEAST ONE SIDE BETWEEN 34" AND 38" ABOVE THE NOSING OF THE THREADS. 4. HANDRAILS SHALL HAVE A CIRCULAR CROSS-SECTION OF 1 1/4" MINIMUM TO 2" MAXIMUM OR OTHER APPROVED GRASPABLE SHAPE PER IRC SECTION R311.7.8.5

5. PROVIDE A MINIMUM 6'-8" OF HEADROOM CLEARANCE IN STAIRWAYS. 6. ENCLOSED ACCESSIBLE SPACE UNDER STAIRWAYS SHALL HAVE WALLS AND THE UNDERSIDE OF THE STAIR AND LANDING PROTECTED WITH 1/2" GYPSUM BOARD ON ENCLOSURE SIDE 7. WINDERS SHALL PROVIDE A MINIMUM TREAD OF AT LEAST 6" AT ANY POINT WITHIN CLEAR WIDTH OF STAIRS. WINDER TREAD PROPORTION TO COMPLY WITH IRCR311.7.5.2.1. <u>GLAZING NOTES:</u> 1. 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 S.F. AND WHOSE BOTTOM EDGE IS LESS THAN 18" ABOVE THE FLOOR OR WALKING SURFACE WITHIN 36" 2. IN DWELLING UNITS, WHERE THE OPENING OF AN OPERABLE WINDOW IS LOCATED MORE THAN 72 INCHES ABOVE THE FINISHED GRADE OR SURFACE BELOW, THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW SHALL BE A MINIMUM OF 24 INCHES ABOVE THE FINISHED FLOOR OF THE ROOM IN WHICH THE WINDOW IS LOCATED. OPERABLE SECTIONS OF WINDOWS SHALL NOT PERMIT OPENINGS THAT ALLOW PASSAGE OF A 4 INCH DIAMETER SPHERE WHERE SUCH OPENINGS ARE LOCATED WITHIN 24 INCHES OF THE FINISHED FLOOR.

FRAMING NOTES:

1. ALL LUMBER SIZES ARE FOR DOUGLAS FIR-LARCH UNLESS OTHERWISE NOTED. 2. ALL HEADERS TO BE A MINIMUM OF (2) #2-2X10'S UNLESS OTHERWISE NOTED.

3. BLOCK CANTILEVERS, DOOR JAMBS, AND OVER BEAMS. 4. ALL HEADERS/BEAMS TO BEAR ON A MINIMUM OF (1) 2X4 POSTS UNLESS NOTED OTHERWISE. 5. INTERIOR NON-BEARING WALLS, OTHER THAN THOSE RESTING DIRECTLY ON THE FOOTING SHALL BE ISOLATED FROM THE FLOOR FRAMING ABOVE 6. WHERE JOISTS RUN PARALLEL TO FOUNDATION WALLS, SOLID BLOCKING FOR A MINIMUM OF (2) JOIST SPACES SHALL BE PROVIDED AT A MAXIMUM OF 4' CENTERS TO TRANSFER LATERAL LOADS ON THE WALL TO THE FLOOR DIAPHRAGM. THE BLOCKING SHALL BE SECURELY NAILED TO THE JOISTS AND FLOORING. NAIL JOISTS AND

BLOCKING TO SILL PLATE WITH (4) 10D NAILS. 7. IF DUCTS ARE INSTALLED IN THE FIRST JOIST SPACE(S), NAIL 2X4'S FLAT AT 4' CENTERS WITHIN THE JOIST SPACE(S) AND THEN PROVIDE SOLID BLOCKING, INSTALLED UPRIGHT, IN THE NEXT TWO JOIST SPACES. SECURE THE 2X4'S TO THE SILL PLATE WITH (4) 10D NAILS. 8. ALL SILLS AND SLEEPERS SUPPORTED ON CONCRETE OR MASONRY AND FURRING ATTACHED TO CONCRETE OR MASONRY SHALL BE OF DECAY RESISTANT MATERIALS.

9. JOISTS UNDER BEARING PARTITIONS SHALL BE SIZED TO CARRY THE DESIGN LOAD IN ACCORDANCE WITH IRC SECTION R502.4. 10. JOISTS FRAMING FROM OPPOSITE SIDES OVER BEARING SUPPORTS SHALL LAP A MINIMUM OF 3" AND SHALL BE NAILED TOGETHER WITH A MINIMUM 10D FACE NAILS. 11. JOISTS FRAMING INTO A WOOD GIRDER OR BEAM SHALL BE SUPPORTED BY APPROVED FRAMING ANCHORS OR ON MINIMUM 2"X2" LEDGER STRIPS. 12. HEADER AND TRIMMERS SHALL BE OF SUFFICIENT CROSS SECTION TO SUPPORT THE FLOOR FRAMING. TRIMMER JOISTS SHALL BE DOUBLED WHEN THE HEADER IS

SUPPORTED MORE THAN 3' FROM THE TRIMMER JOIST BEARING. WHEN THE HEADER SPAN EXCEEDS 4', THE HEADER AND TRIMMER SHALL BE DOUBLED. 13. JOISTS AT SUPPORTS SHALL BE SUPPORTED LATERALLY AT THE ENDS BY FULL-DEPTH SOLID BLOCKING NOT LESS THAN 2" NOMINAL THICKNESS OR BY ATTACHMENT TO A HEADER, BAND OR RIM JOIST OR TO AN ADJOINING STUD OR OTHERWISE PROVIDED WITH LATERAL SUPPORT TO PREVENT ROTATION.

14. ALL WALL COVERINGS TO COMPLY WITH IRC SECTION 702 AND 703 15. ALL RAFTER / COLLAR TIES TO COMPLY WITH IRC SECTIONS 804

16. ALL RAFTERS TO HAVE 2x4 COLLAR TIES @ 48" OC IN UPPER 1/3 OF DISTANCE BETWEEN CEILING AND ROOF

17. BLOCKING BETWEEN JOISTS UNDER A PERPENDICULAR LOAD-BEARING WALL IS NOT REQUIRED 18. BOTTOM OF ALL FLOOR ASSEMBLIES SHALL BE PROVIDED WITH A 1/2" GYPSUM WALLBOARD MEMBRANE (IF REQUIRED BY LOCAL CODE)

19. I-JOIST AND FLOOR TRUSS SYSTEMS SHALL BE FIRE PROTECTED PER IRC AS ADOPTED BY AHJ 20. STUDS SHALL BE CONTINUOUS FROM THE FLOOR TO THE ROOF/ CEILING DIAPHRAGM PER IRC 602.3

CONCRETE NOTES:

. CONCRETE SHALL BE AIR-ENTRAINED (5%-7%) WITH A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 2500 PSI FOR BASEMENT AND INTERIOR FLOOR SLABS, 3000 PSI FOR BASEMENT AND FOUNDATION WALLS AND 3500 PSI FOR PORCHES, CARPORTS AND GARAGE FLOOR SLABS.

EMERGENCY EGRESS AND RESCUE NOTES

1. PROVIDE ONE WINDOW FOR EACH BEDROOM THAT HAS A MINIMUM OPENABLE AREA OF 5.7 S.F. WITH A MINIMUM OPENABLE HEIGHT OF 24" AND WIDTH OF 21". IN ADDITION, THE OPENABLE PORTION OF EGRESS WINDOWS SHALL NOT EXCEED 44" ABOVE THE ADJOINING FLOOR OR PERMANENT STEP. 2. PROVIDE SMOKE ALARMS IN EACH SLEEPING ROOM, OUTSIDE OF EACH SLEEPING AREA AND ON EACH FLOOR INCLUDING BASEMENTS. ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE DWELLING. 3. PROVIDE CARBON MONOXIDE ALARMS AS REQUIRED PER IRC. CARBON MONOXIDE ALARMS SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA. WHERE FUEL-BURNING APPLIANCES ARE LOCATED WITHIN A BEDROOM OR ITS ATTACHED BATHROOM, A CARBON MONOXIDE ALARM SHALL BE INSTALLED IN THE BEDROOM.

GARAGE NOTES:

1. THE GARAGE FLOOR SHALL SLOPE TOWARDS THE GARAGE DOORWAYS OR SLOPE TO A TRENCH OR UNTRAPPED DRAIN THAT DISCHARGES DIRECTLY TO THE EXTERIOR ABOVE GRADE. 2. DOORS BETWEEN THE GARAGE AND DWELLING - MINIMUM 1 3/8" SOLID WOOD, SOLID OR HONEY-COMBED CORE STEEL DOOR NOT LESS THAN 1 3/8" THICK, OR 20 -

MINUTE FIRE - RATED EQUIPPED WITH SELF CLOSING DEVICE PER IRC2018 R302.5.1. 3. GARAGE VEHICLE DOORS AND FRAMES SHALL BE DESIGNED AND INSTALLED TO MEET THE 115-MPH 3-SECOND GUST LOADING PER DASMA 108 AND ASTM E 330-96 PER IRC2018 R301.2.1

4. THE GARAGE SHALL BE SEPARATED FROM THE DWELLING AND ITS ATTIC AREAS BY MINIMUM 5/8" GYPSUM BOARD APPLIED TO THE GARAGE SIDE. WHERE HABITABLE SPACE OCCURS ABOVE THE GARAGE, THE FLOOR CEILING ASSEMBLY SHALL BE PROTECTED WITH MINIMUM 5/8" TYPE X GYPSUM BOARD ON THE GARAGE CEILING. WHERE A FLOOR/CEILING SPACE IS PROVIDED ABOVE THE GARAGE COLUMNS AND BEAMS SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED WITH 5/8" GYPSUM BOARD OR EQUIVALENT.

5. GARAGE DOOR H-FRAME FOR THE ATTACHMENT OF THE TRACK AND COUNTER BALANCE SHALL CONSIST OF THE FOLLOWING: 2x6 VERTICAL JAMBS RUNNING FROM FLOOR TO CEILING ATTACHED WITH 1 3/4"X.120" NAILS AT 7" CENTERS STAGGERED WITH (7) 3 1/4"X.120" NAILS THRU THE JAMB INTO THE HEADER, MINIMUM 2X8 HEADER

FOR ATTACHMENT OF COUNTER BALANCE SYSTEM. 6. ANY ATTACHED GARAGE TO THE MAIN HOUSE SHALL BE PROVIDED WITH A SINGLE HEAT DETECTOR. HEAT DETECTOR SHALL BE HARDWIRED AND INTERCONNECTED WITH THE HOUSEHOLD SMOKE ALARM SYSTEM. HEAT DETECTOR SHALL BE LISTED FOR THE AMBIENT ENVIRONMENT AND INSTALLED PER MANF. INSTRUCTIONS.

MECHANICAL/INSULATION: 1. BUILDING ENVELOPE INSULATION SHALL COMPLY WITH IRC TABLE N1102.1.1 OR THE 2018 IECC.

2. BUILDING THERMAL ENVELOPE IS REQUIRED TO BE SEALED PER 2018 IRC N1102.4.1 & TABLE N1102.4.1.1.

VENTILATION 1. ENCLOSED ATTICS SHALL HAVE CROSS VENTILATION FOR EACH SEPARATE SPACE BY VENTILATING OPENINGS PROTECTED AGAINST THE ENTRANCE OF RAIN OR SNOW. VENTILATING OPENINGS SHALL BE PROVIDED WITH CORROSION-RESISTANT WIRE MESH. WITH 1/8" TO 1/4" OPENINGS. THE TOTAL FREE VENTILATING AREA SHALL NOT BE LESS THAN 1/150 OF THE AREA OF SPACE VENTILATED, EXCEPT WHERE THE VENTILATORS AREA LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED THE REQUIRED AREA MAY BE REDUCED TO 1/300.

1. PLANS SHALL COMPLY WITH THE 2018 INTERNATIONAL RESIDENTIAL CODE, IECC AS ADOPTED BY AHJ, AND ALL AMENDMENTS AS ADOPTED BY THE AHJ, IF ANY CHANGES

1. THE FOUNDATION DESIGN SHALL COMPLY WITH THE ENFORCING JURISDICTION RESIDENTIAL FOUNDATION STANDARD IN LIEU OF ENGINEERING REPORT

12. FLOOR SLABS SUPPORTED BY FILL CONSISTING OF MORE THAN 24" OF GRANULAR FILL OR 8" OF EARTH SHALL BE REINFORCED PER A SEPARATE ENGINEERING

13. BASEMENT FOUNDATION SILL PLATES SHALL BE BOLTED TO THE FOUNDATION W/ A MINIMUM OF 1/2" ANCHOR BOLTS EMBEDDED AT LEAST 7" INTO THE CONCRETE AND

ONTAINED HEREIN MAY RESULT IN ILITY UNDER APPLICABLE LAW. ENGINEERI Ī

THIS DOCUMENT CONTAINS

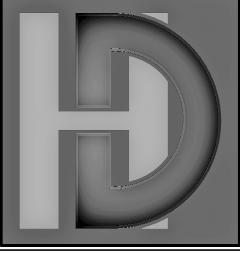
COPYRIGHTED MATERIAL AND

CONFIDENTIAL INFORMATION

ELONGINING TO HD ENGINEERIN THORIZED USE, DISCLOSUR

ANY OF THE INFORMATION

SEMINATION, OR DUPLICATION OF





MIT

MN

 $\mathbf{\Omega}$

R

C

R

m

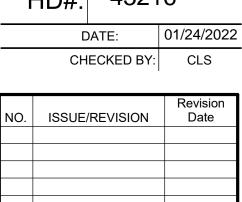
Z Z

C S S

U ² ² ² ² ² ² ²

O

 \mathbf{m} R 3 S S (0 0 N 43216 HD#:|



GENERAL NOTES

TABLE R602.3(1) FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

									THE DWELLING SHALL COMPLY WITH THE FOLLOW	ING LOAD CONDITIONS
ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF ^{a,b,c} FASTENER	SPACING OF FASTENERS	ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF a,b,c FASTENER	SI EDGES (II	NCHES)h SUPPORTS (INCHES)	AREA	MIN MIN DEAD LIVE LOAD LOAD
					WOOD STRUCTURAL PANELS, SUBFLOOR, ROOF AND INTERIOR				EXTERIOR BALCONIES	10 60
1	BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOE NAIL	4-8D BOX (2 1/2" X 0.113") 3-8D (2 1/2" X 0.113")	TOE NAIL		[SEE TABLE ROU2.3(3) FOR WOOD STRUC	CTURAL PANEL EXTERIOR WALL SHEATHING TO W			DECKS, STAIRS	10 40
2	CEILING JOISTS TO PLATE, TOE NAIL	3-10D (3"X0.128") 3-3"X 0.131" NAILS	PER JOIST, TOE NAIL	30	3/8"- 1/2"	6D COMMON (2"X 0.113" NAIL (SUBFLOOR, WA 8D COMMON (2 1/2" X 0.131 NAIL (ROOF); or RSR		12 f	CEILING JOISTS / ATTICS NO STORAGE - SCUTTLE ACCESS ONLY ROOF SLOPE 3:12 OR LESS	10 10
3	CEILING JOISTS NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITIONS (SEE SECTION R802.5.2 AND TABLE R802.52	4-10D BOX (3"X 0.128") 3-16D COMMON (3 1/2"X 0.162") 4-3"X 0.131"NAILS	FACE NAIL	31	19/32" - 1"	3/8" X 0.113" NAIL (ROOF) ; 8D COMMON NAIL (2 1/2" X 0.131; or RSRS-01; 2	3/8" X 6	12 f	CEILING JOISTS / ATTICS NO STORAGE - SCUTTLE ACCESS ONLY ROOF SLOPE OVER 3:12 CEILING JOISTS / ATTICS WITH STORAGE - DOOR	
4	CEILING JOIST ATTACHED TO PARALLEL RAFTER (HEEL JOINT) SEE SECTION R802.5.2 AND TABLE R802.5.2)	TABLE R802.5.2	FACE NAIL	32	1 1/8" - 1 1/4"	0.113) NAIL ROOF 1 10D COMMON NAIL (3" X 0.148) NAIL; or 8D (2 1	1/2" X 6	12	PULL DOWN LADDER ACCESS ROOMS: NON-SLEEPING	10 20 10 40
5	COLLAR TIE TO RAFTER, FACE NAIL OR 1 1/4" X 20GA. RIDGE STRAP TO RAFTER	4-10D BOX (3" X 0.128") 3-10D COMMON (3" X 0.148") 4-3" X 0.131" NAILS	FACE NAILS EACH RAFTER			0.131") DEFORMED NAIL			ROOMS: SLEEPING ROOF: LIGHT ROOF COVERING	10 30 10 20
6	RAFTER OR ROOF TRUSS TO PLATE	3-16D BOX NAILS (3 1/2" X0.135") 3-10D COMMON NAILS (3" X 0.148" 4-10D BOX (3" X 0.128" 4-3" X0.131" NAILS	2 TOE NAILS ON ONE SIDE AND 1 TOE NAIL ON OPPOSITE SIDE OF EACH RAFTER OR TRUSS ¹	33	1/2" STRUCTURAL CELLULOSE FIBERBOARD SHEATHING	1 1/2" GALVANIZED ROOF NAIL, 7/16" HEAD DIAN OR 1 1/4" LONG 16GA. STAPLE WITH 7/16" OI CROWN	R 1" 3	6	ROOF: HEAVY ROOF COVERING / CONCRETE / TILE / SLATE GUARDRAILS, HANDRAILS	20 20 200# LL NORMAL
	ROOF RAFTERS TO RIDGE, VALLEY OR HIP RAFTERS OR ROOF	4-16D(3 1/2" X 0.135"); OR 3-10D COMMON (3" X 0.148") 4-10D BOX (3" X 0.128"); OR 4-3" X 0.131" NAILS		34	25/32" STRUCTURAL CELLULOSE FIBERBOARD SHEATHING	1 3/4" GALVANIZED ROOF NAIL, 7/16" HEAD DIAN OR 1 1/2" LONG 16GA. STAPLE WITH 7/16" OR 1" CF	3	6	HEAVY ROOF COVERING MATERIAL (TILE, CONCRETE BE USED UNLESS 20 PSF DEAD LOAD AND HEAVY RO ROOF PLAN. IF HEAVY ROOFING IS TO BE USED AND	OF IS NOTED ON THE NOT NOTED ON THE ROC
7	RAFTER TO MINIMUM 2" RIDGE BEAM	3-16D(3 1/2" X0.135"); OR 2-16D COMMON (3 1/2" X0.162") 3-10D BOX (3" X 0.128"); OR 3-3" X 0.131" NAILS	TOE NAIL	35	1/2" GYPSUM SHEATHING d	1 1/2" GALVANIZED ROOF NAIL, STAPLE GALVA 11/2" LONG; 1 1/4" SCREWS, TYPE W or S		7	PLAN NOTIFY ENGINEER PRIOR TO ANY CONSTRUCTI FOUNDATION AND SITE WORK. IF THE PLAN HAS BEE ROOF LOADS IT WILL BE NOTED IN THE ROOF NOTES	N DESIGNED FOR HEAVY
		WALL 40D (2.4/01) X 0.40010		36	5/8" GYPSUM SHEATHING d	1 3/4" GALVANIZED ROOF NAIL; STAPLE GALVA 1 5/8" LONG; 1 5/8" SCREWS, TYPE W or S		7		
8	STUD TO STUD (NOT BRACED WALL PANELS)	16D (3 1/2" X 0.162")			WOOD STRUCTURAL PANELS, C	COMBINATION SUBFLOOR UNDERLAYMENT TO FRA	AMING			
	STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL	10D BOX (3" X 0.128"); OR 3" X 0.131" NAILS	16" OC FACE NAIL 12" OC FACE NAIL	37		6D DEFORMED (2" X 0.120") NAIL OR		40	<u>COLUMN SCH</u>	EDULE
9	CORNERS (AT BRACED WALL PANELS)	16D BOX (3 1/2" X 0.135"); OR 3" X 0.131" NAILS	12" OC FACE NAIL	37	3/4" AND LESS	8D COMMON (2 1/2" X 0.131") NAIL	6	12	BASED ON FOOTING SIZE (ASSUM	E 1500 PSF SOIL)
10	BUILT-UP HEADER (2" TO 2" HEADER WITH 1/2" SPACER)	16D COMMON (3 1/2" X 0.162") 16D COMMON (3 1/2" X 0.162")	16" OC EACH EDGE FACE NAIL	38	7/8" - 1"	8D COMMON (2 1/2" X 0.131") NAIL OR 8D DEFORMED (2 1/2" X 0.120") NAIL	6	12	PAD SIZE REINFORCEMENT CO	
		16D BOX (3 1/2" X 0.135")	12" OC EACH EDGE FACE NAIL			10D COMMON (3" X 0.148") NAIL OR			24x24x12 (4) #4 BARS E/W 3"	SCH40 6K
11	CONTINUOUS HEADER TO STUD	5-8D BOX (2 1/2" X 0.113") or 4-8D COMMON (2 1/2" X 0.131") 4-10D BOX (3" X 0.128")	TOE NAIL	39	1 1/8" - 1 1/4"	8D DEFORMED (2 1/2" X 0.120") NAIL	6	12	30x30x12 (5) #4 BARS E/W 3"	SCH40 9.4K
			16" OC FACE NAIL	For SI: 1 inc	ch = 25.4mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s; 1 ksi = 6.89	95 MPa.			36x36x12 (6) #4 BARS E/W 3"	SCH40 13.5K
12	TOP PLATE TO TOP PLATE	16D COMMON (3 1/2" X 0.162")	16" OC FACE NAIL						42x42x14 (7) #4 BARS E/W 3 1/	2" SCH40 18.4K
13	DOUBLE TOP PLATE SPLICE	10D BOX (3" X 0.128") OR 3" X 0.131" NAILS 8-16D COMMON (3 1/2" X 0.162"); or 12-16D BOX (3 1/2" X 0.135"); or 12-10D BOX (3" X 0.128"); or 12-3" X	FACE NAIL ON EACH SIDE OF END JOINT (MINIMUM 24" LAP SPLICE LENGTH		TABLE R 602.3(5) SIZE, H	EIGHT, AND SPACIN	NG OF V	VOOD STUDS	48x48x16 (8) #4 BARS E/W 3 1/ 54x54x16 (9) #4 BARS E/W 3 1/	2" SCH40 24.0K 2" SCH40 30.4K
		0.131" NAILS	EACH SIDE OF END JOINT)		BEARING WALLS		N0	DN-BEARING WALLS	60x60x18 (10) #4 BARS E/W 3 1/	
14	BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS	16D COMMON (3 1/2" X 0.162")	16" OC FACE NAIL		LATERALLY MAXIMUM SPACING MAXIMUM UNSUPPORTED WHERE SUPPORTING A WHERE SU		M SPACING SUPPORTING UN	LATERALLY LATERALL SUPPORTED STUD UNSUPPORTED	_Y	I
	<u> </u>	16D BOX (3 1/2" X 0.135"); OR 3" X 0.131" NAILS	12" OC FACE NAIL	STUD SI	ZE STUD HEIGHT a ROOF-CEILING ONE FLO	OOR, PLUS A TWO FLOORS, PLUS A ONE FLO	OOR HEIGHT a	HEIGHT a HEIGHT	COLUMN CONNECTION TO STEEL BEAMS SH	
15	BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS	3-16D BOX (3 1/2" X 0.135"); or 2-16D COMMON (3 1/2" X0.162"); or 4-3" X 0.131" NAILS	3, 2, OR 4 EACH 16" OC FACE NAIL	(IN)	HABITABLE ATTIC ASSEM ASSEMBLY, ONLY HABITAB	C-CEILING ROOF-CEILING (in 1BLY OR A ASSEMBLY OR A (in BLE ATTIC HABITABLE ATTIC (inches) BLY (inches) ASSEMBLY (inches) (inches)	nches)	(feet) (feet)	ALL FOUR TAB EARS BENT AROUND THE BOT BEARING PLATE, FOUR HOLES SHALL BE DRI STEEL BEAM TO MATCH THE HOLE PATTERN SHOULD THEN BE INSTALLED WITH A FLAT W	LLED IN THE BOTTOM FLA OF THE PLATE. 1/2" X 2" I 'ASHER, LOCK WASHER, A
16	TOP OR BOTTOM PLATE TO STUD	4-8D BOX (2 1/2" X 0.113"); or 3-16D BOX (3 1/2" X0.135"); or 4-8D COMMON (2 1/2" X0.131");or 4-10D BOX (3" X0.128"); or 3-3" X 0.131" NAILS	TOE NAIL						EACH OF THE HOLES. THE POST CAP MAY B ACCORDANCE WITH AWS D1.1-92 AS AN ALTE INSPECTED BY AN AWS-CERTIFIED INSPECTO	E WELDED TO THE STEEL ERNATIVE, AND WOULD N
		3-16D BOX (3 1/2" X 0.135"); or 2-16D COMMON (3 1/2" X0.162"); or 3-10D BOX (3" X0.128");or 3-3" X 0.131" NAILS	END NAIL			\dashv \models \vdash	-			
17	TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	3-10D BOX (3" X 0.128"); or 2-16D COMMON (3 1/2" X0.162"); or 3-3" X 0.131" NAILS	FACE NAIL	2x3 ^b				10 16		
18	1" BRAVE TO EACH STUD AND PLATE	3-8D BOX (2 1/2" X 0.113"); or 2-8D COMMON (2 1/2" X0.131") or 2-10D BOX (3" X 0.128"); or 2 STAPLES 1 3/4"	FACE NAIL	2x4 3x4	10 24	24 16	24 24	14 24 14 24 14 24		JMBER
19	1" X 6" SHEATHING TO EACH BEARING	3-8D BOX (2 1/2" X 0.113"); or 2-8D COMMON (2 1/2" X0.131") or 2-10D BOX (3" X 0.128"); or 2 STAPLES 1" CROWN, 16GA., 1 3/4" LONG	FACE NAIL	2x5 2x6	10 24	24 24 16	24 24	16 24 20 24	MIN. DESIGN REQUIREMEN	TS
20	1" X 8" AND WIDER SHEATHING TO EACH BEARING	3-8D BOX (2 1/2" X 0.113"); or 3-8D COMMON (2 1/2" X0.131") or 3-10D BOX (3" X 0.128"); or 3 STAPLES, 1" CROWN, 16GA., 1 3/4" LONG	FACE NAIL	a. LISTED I ON NOT LES	ICH = 25.4mm, 1 FOOT = 304.8mm HEIGHTS ARE DISTANCES BETWEEN POINTS OF LATERAL SUPPOI SS THAN ONE SIDE OR BRIDGING SHALL BE INSTALLED NOT GREA RTED HEIGHT ARE PERMITTED WHERE IN COMPLIANCE WITH EXCE	ATER THAN 4 FEET APART MEASURED VERTICALLY	FROM EITHER END	O OF THE STUD. INCREASES IN	F _b (psi) E (psi) LVL 2600 1.8x10	F _v (psi) 285
		WIDER THAN 1" X 8" 4-8D BOX (2 1/2" X 0.113"); or 3-8D COMMON (2 1/2" X0.131") or 3-10D BOX (3" X 0.128"); or 4 STAPLES, 1" CROWN, 16GA., 1 3/4" LONG		PRACTICES b. SHALL I					GLULAM 2400 1.8x10	190
		FLOOR			TO 2X6 OR THE STUDS SHALL BE DESIGNED IN ACCORDANCE W				PARALAM 2600 2.0x10	290
21	JOIST TO SILL, TOP PLATE OR GIRDER	4-8D BOX (2 1/2" X 0.113"); or 3-8D COMMON (2 1/2" X0.131") or 3-10D BOX (3" X 0.128"); or 3-3" X 0.131: NAILS	TOE NAIL	<u>MIN</u>	IMUM MECHANICAL EQUI	PMENT EFFICIENCY	<u>(</u>	CATHEDRA	AL / VAULTED CEILING	
22	RIM JOIST, BAND JOIST OR BLOCKING TO SILL OR TOP PLATE (ROOF APPLICATIONS ALSO)	8D BOX (2 1/2" X 0.113") 8D COMMON (2 1/2" X 0.131"); or 10D BOX(3" X0.128") or 3-3" X 0.131" NAILS	4" OC TOE NAIL 6" OC TOE NAIL	VAL	UES BY COMPONENT, PE	R IRC2018 N1103.6.	<u>1</u>		G AND INSULATION NSULATION REQUIRED, SEE DETAIL 14/S-1.2	
23	1" X 6" SUBFLOOR OR LESS TO EACH JOIST	3-8D BOX (2 1/2" X 0.113"); or 2-8D COMMON (2 1/2" X0.131") or 3-10D BOX (3" X 0.128"); or 2 STAPLES, 1" CROWN, 16GA., 1 3/4" LONG	FACE NAIL			I EFFICACY AIR FLOW RATE I/WATT MAXIMUM (CFM)	BETW	E THE CEILING IS APPLIED DIRECTLY T EEN THE TOP OF THE INSULATION AND	TO THE BOTTOM OF THE RAFTERS, A MINIMUM 1" AIR SPA D THE SHEATHING FOR VENTILATION (R806.3) ARE THE MINIMUM REQUIRED FOR STRUCTURAL PURPOS	
24	2" SUBFLOOR TO JOIST OR GIRDER	3-16D BOX (3 1/2" X 0.135"); or 2-16D COMMON (3 1/2" X0.162")	BLIND AND FACE NAIL			M/WATT ANY M/WATT ANY	BUILDI IF FUL OR AD	ER TO VERIFY: L RAFTER DEPTH IS NOT ADEQUATE F EQUATE FURRING SHALL BE USED TC	OR MINIMUM INSULATION VALUE, RAFTER SIZES WILL NE	ED TO BE INCREASED, INSULATION. IN
25	2" PLANKS (PLANK & BEAM-FLOOR AND ROOF)	3-16D BOX (3 1/2" X 0.135"); or 2-16D COMMON (3 1/2" X0.162")	AT EACH BEARING, FACE NAIL			FM/WATT ANY FM/WATT <90	LARGE	ON, IF THE RAFTER SIZE IS INCREASE R THAN THE RAFTERS BEING RECEIV XIMUM INSULATION VALUE		DF ONE NOMINAL SIZE
26	BAND OR RIM JOIST TO JOIST	3-16D COMMON (3 1/2" X 0.162"); or 4-10D BOX (3" X0.128") or 4-3" X 0.131" NAILS; or 4-3" X 14GA. STAPLES, 7/16" CROWN	END NAIL		BATHROOM UTILITY FAN 90 2.8 CF	M/WATT ANY		AIR SPACE (FIBERGLASS) R-13, 3		R-38, 10 1/4"
		20D COMMON (4" X 0.192"); or	NAIL EACH LAYER AS FOLLOWS: 32" OC	MI	NIMUM INSULATION & FE	NSTRATION VALUE	S BY CO		ER IRC2018 N1102.1.2	
27	BUILT-UP GIRDERS AND BEAMS, 2-INCH LUMBER LAYERS	10D BOX (3" X 0.128"); or 3" X 0.131" NAILS	AT TIP AND BOTTOM AND STAGGERED 24" OC FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES	VALUES	BELOW ARE PER 2018 IECC, ACTUAL VALUES MAY VARY BASED ON ALTERNATE ENERGY COMP	PLIANCE PATH CHOSEN (IN JURISDITIONS WHERE ALTERNATIVE PATHS AR				
		AND: 2-20D COMMON (4" X 0.192"); or 3-10D BOX (3" X 0.128; or 3-3" X 0.131" NAILS	FACE NAIL AT END AND AT EACH SPLICE		ONE FENSTRATION SKYLIGHT GLAZED SHGC		FRAMED FLOOP		CRAWL SPACE DUCTWORK OVER DUCTWORK (A	
28	LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	4-16D BOX (3 "X 0.128; or 3-3" X 0.131" NAILS 4-16D BOX (3 1/2" X 0.135"): or 3-26D COMMON (3 1/2" X 0.162"); or 4-10D BOX (3" X 0.128"); or 4-3" X 0.131" NAILS	AT EACH JOIST OR RAFTER, FACE NAIL	4 EXCEPT M	U-FACTOR U-FACTOR FENSIRATION DOOR U-V	VALUE DOOR U-VALUE R-VALUE WALL R		IE WALL R-VALUE & DEPTH	WALL R-VALUE OUTSIDE R-VALUE OTHER) R-VALUE 10 CONTINUOUS OR 13 CAVITY 8 6	
29	BRIDGING OR BLOCKING TO JOIST	2-10D BOX (3" X 0.128"): or 2-8D COMMON (2 1/2" X 0.131" or 2-3" X 0.131") NAILS	EACH END, TOE NAIL	NOTES: 1) BI 2) RE	UILDING THERMAL ENVELOPE IS REQUIRED TO BE SEALED WITH ECESSED LIGHTING SHALL BE SEALED TO PREVENT LEAKAGE BET L DUCTS, AIR HANDLERS, FILTER BOXES, AND BUILDING CAVITIES	AN AIR BARRIER AS PER N1102.4.1 OF THE 2018 IR TWEEN THE CONDITIONED SPACE AND UNCONDITI	C IONED SPACE			
		· · · · · · · · · · · · · · · · · · ·		<i>3)</i> AL	LE DOUTO, MILLIMOLEINO, FILTEN DUAEO, AND DUILDING CAVITIES	U UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU	0.2 OF THE 2010 IRU	<i>,</i>		

a. ALL 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 OF 0.192 INCH (20D COMMON), NAILS FOR SHANK DIAMETERS LARGER THANK 0.142 INCH BUT NOT LARGER THANK 0.177 INCH, AND 100 KSI FOR SHANK DIAMETER OF 0.142 INCH OR LESS. b. STAPLES ARE 16 GAGE WIRE AND HAVE A MINIMUM 7/16 - INCH ON DIAMETER CROWN WIDTH.

b. STAFLES ARE 10 GAGE WIRE AND TAVE A MINIMUM // 10 - INCITION DAME TER CROWN WITHET RECOVERY WHETE COMMENTER OF COMMENTE

HEIGHT IS MORE THAN 25 FEET, UP TO 35 FEET MAXIMUM. g. FOR REGIONS HAVING BASIC WIND SPEED OF 100 MPH OR LESS, NAILS FOR ATTACHING WOOD STRUCTURAL PANEL ROOF SHEATHING TO GABLE END WALL FRAMING SHALL BE SPACED 6 INCHES ON CENTER. WHEN BASIC WIND SPEED IS GREATER THAN 100 MPH, NAILS FOR ATTACHING PANEL ROOF Generating of intermediate supports shall be speed in other for an intermediate best intermediate best intermediate supports shall be speed in other for an intermediate support shall be speed in other for an intermediate best intermediate supports shall be speed in other for an intermediate best intermediate supports shall be speed in other for an intermediate best intermediate supports shall be speed in other for an intermediate best intermediate best intermediate best intermediate supports shall be speed in other for an intermediate best intermediat J. WHERE A RAFTER IS FASTENED TO AN ADJACENT PARALLEL CEILING JOIST IN ACCORDANCE WITH THIS SCHEDULE, PROVIDE TWO TOE NAILS ON ONE SIDE OF THE RAFTER AND TOE NAILS FROM CEILING JOIST TO TOP PLATE IN ACCORDANCE WITH THIS SCHEDULE. THE TOE NAIL ON THE OPPOSITE SIDE OF THE RAFTER SHALL NOT BE REQUIRED.

CONTINUED TABLE R602.3(1) FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

BUILDER'S PLANS: 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 HD ENGINEERING & DESIGN 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 HD ENGINEERING & DESIGN 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 HD ENGINEERING. 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 HD ENGINEERING & DESIGN 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, HD ENGINEERING & DESIGN OR A QUALIFIED ENGINEER SHALL IMMEDIATELY BE RETAINED. FAILURE TO NOTIFY US OF THESE NEEDS OR OF CHANGES TO THE PLANS SHALL RELIEVE HD ENGINEERING & DESIGN OF ALL RESPONSIBILITIES OF THE CONSEQUENCES.

AREA	MIN DEAD LOAD	MIN LIVE LOAD
EXTERIOR BALCONIES	10	60
DECKS, STAIRS	10	40
CEILING JOISTS / ATTICS NO STORAGE - SCUTTLE ACCESS ONLY ROOF SLOPE 3:12 OR LESS	10	10
CEILING JOISTS / ATTICS NO STORAGE - SCUTTLE ACCESS ONLY ROOF SLOPE OVER 3:12	10	10
CEILING JOISTS / ATTICS WITH STORAGE - DOOR PULL DOWN LADDER ACCESS	10	20
ROOMS: NON-SLEEPING	10	40
ROOMS: SLEEPING	10	30
ROOF: LIGHT ROOF COVERING	10	20
ROOF: HEAVY ROOF COVERING / CONCRETE / TILE / SLATE	20	20
GUARDRAILS, HANDRAILS	200# LL	NORMAL

PAD SIZE	REINFORCEMENT	COL. MIN.	COL. TYPE	MAX. LOAD
24x24x12	(4) #4 BARS E/W	3"	SCH40	6K
30x30x12	(5) #4 BARS E/W	3"	SCH40	9.4K
36x36x12	(6) #4 BARS E/W	3"	SCH40	13.5K
42x42x14	(7) #4 BARS E/W	3 1/2"	SCH40	18.4K
48x48x16	(8) #4 BARS E/W	3 1/2"	SCH40	24.0K
54x54x16	(9) #4 BARS E/W	3 1/2"	SCH40	30.4K
60x60x18	(10) #4 BARS E/W	3 1/2"	SCH40	37.5K

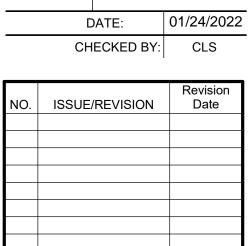
POST CAP WITH E BEAM. FOR A M FLANGE OF THE " X 2" BOLTS HER, AND A NUT IN STEEL BEAM IN JLD NEED TO BE

	F _b (psi)	E (psi)	F _∨ (psi)
LVL	2600	1.8x10	285
GLULAM	2400	1.8x10	190
PARALAM	2600	2.0x10	290



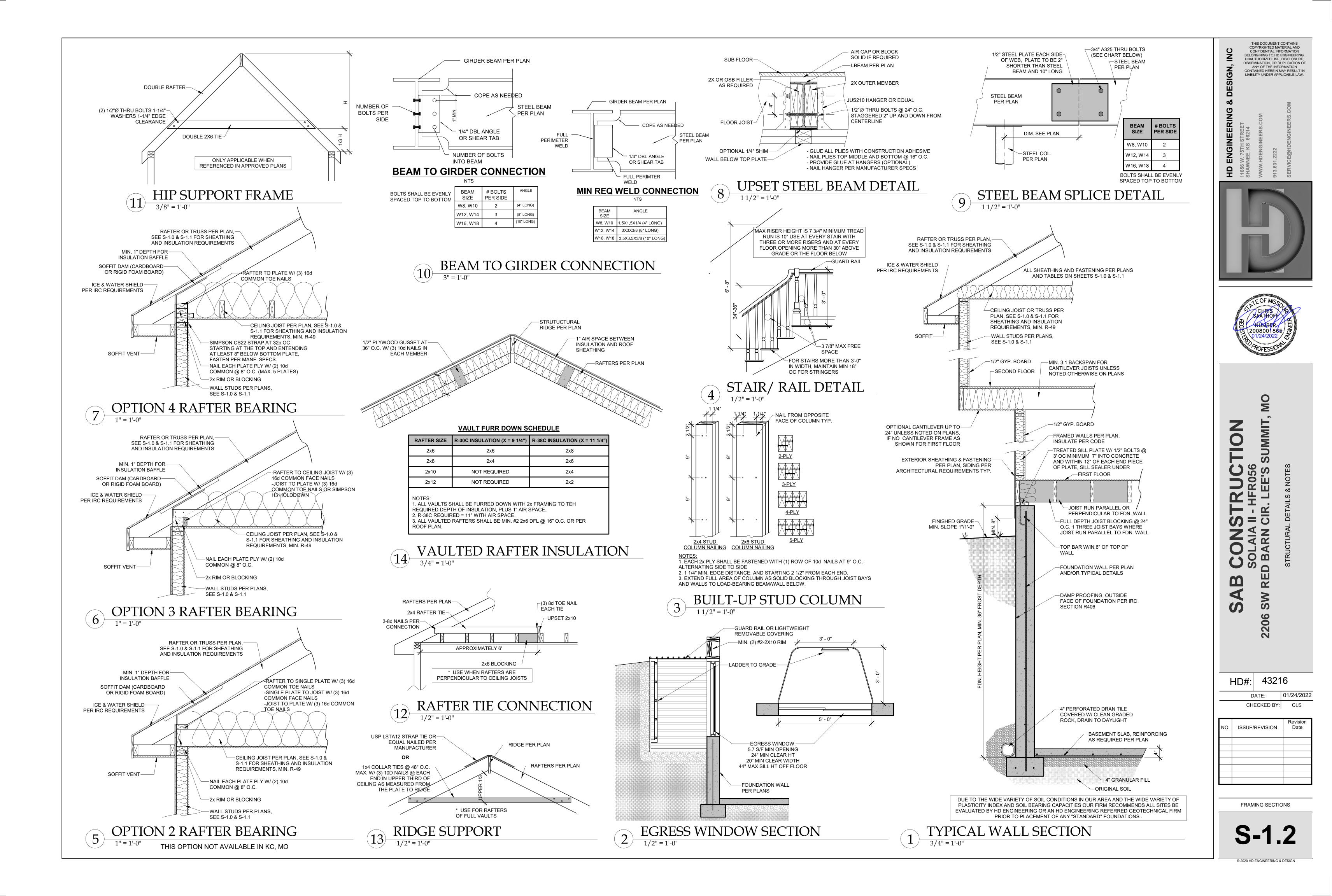


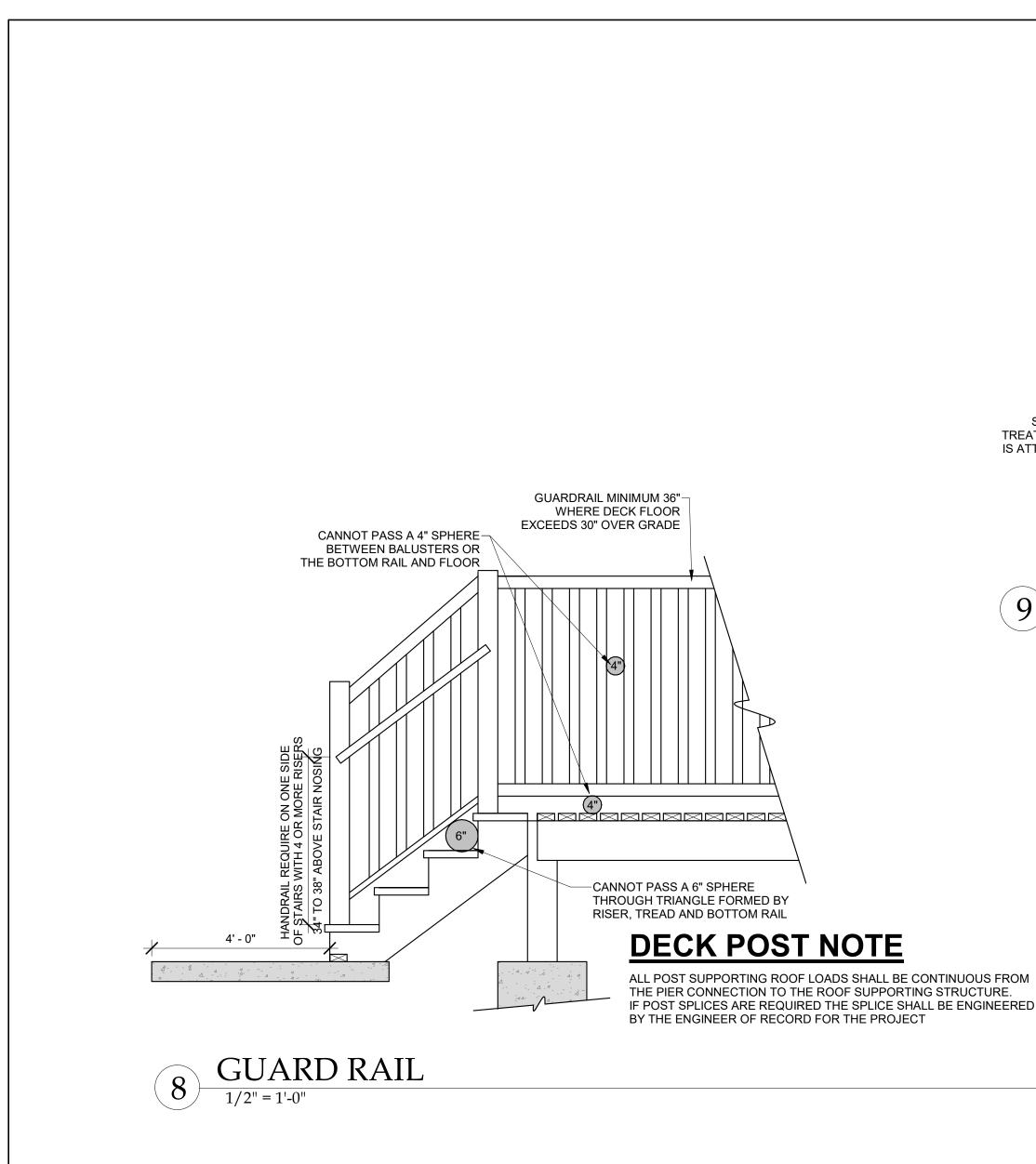
MO SUMMIT Ζ Ο F LOC R056 EE'S Ш R . CIR. S ARN ZO O M REI \mathbf{m} 4 \mathbf{i} S S 2206 43216 HD#:

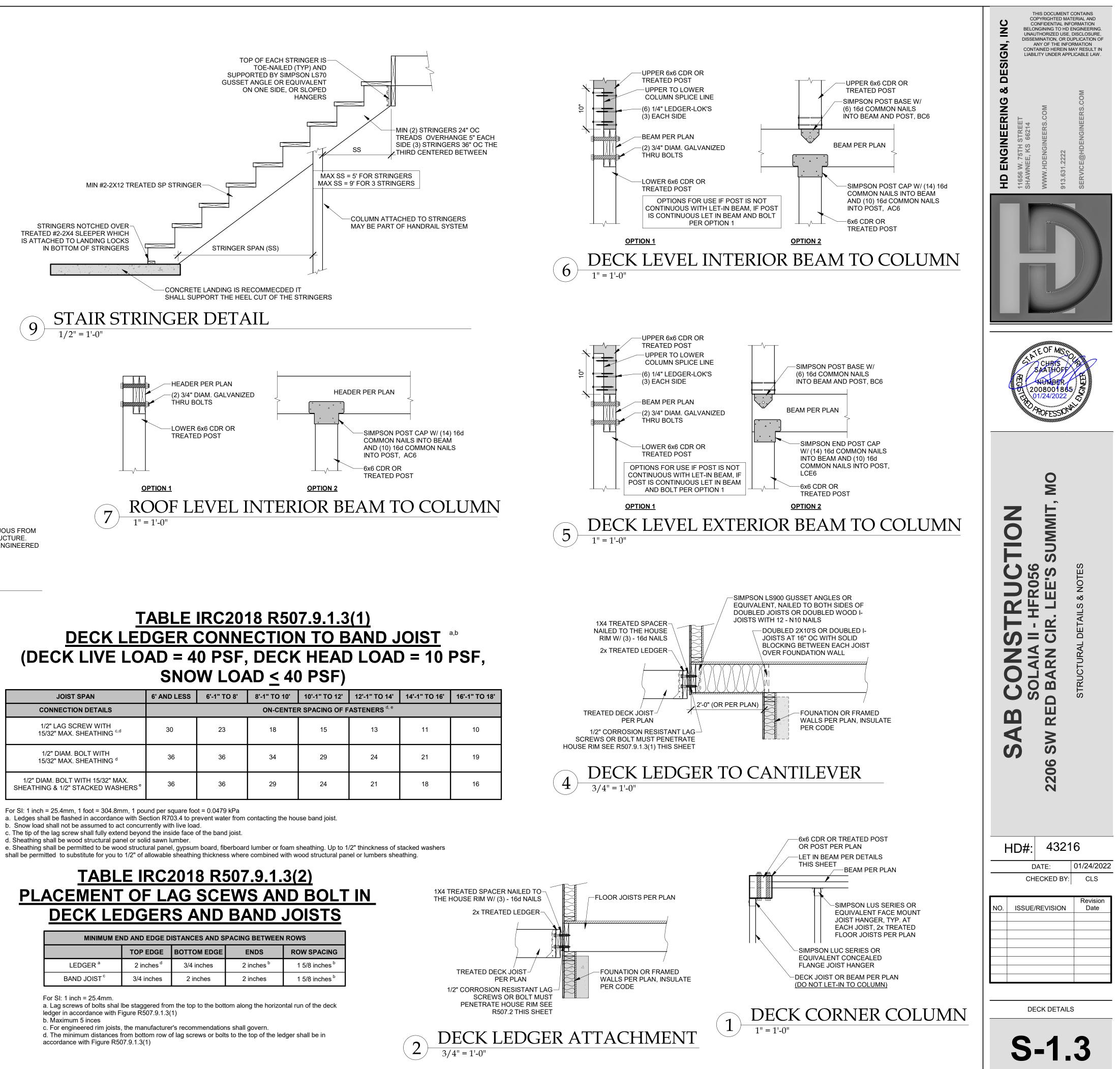


GENERAL NOTES

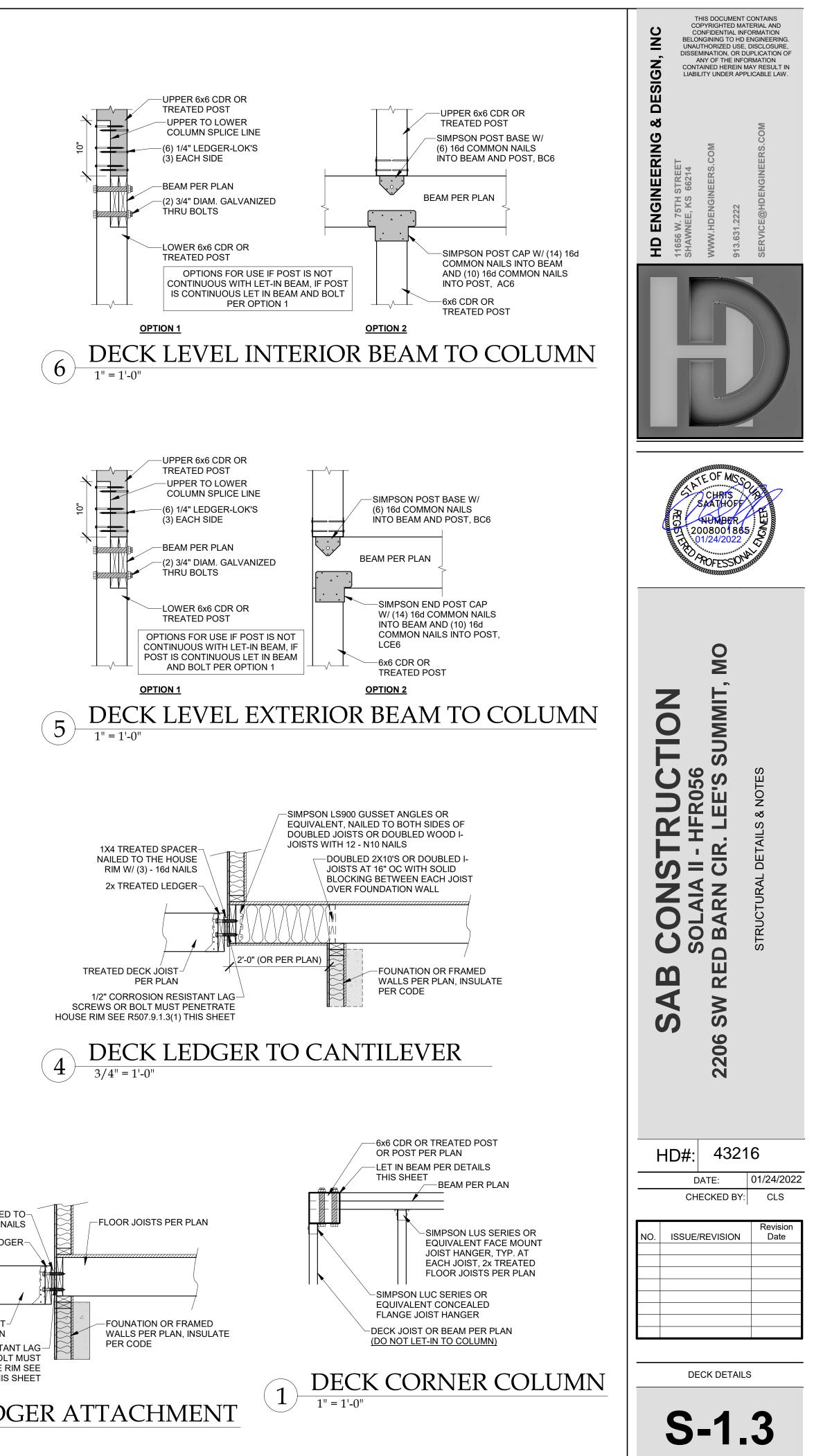








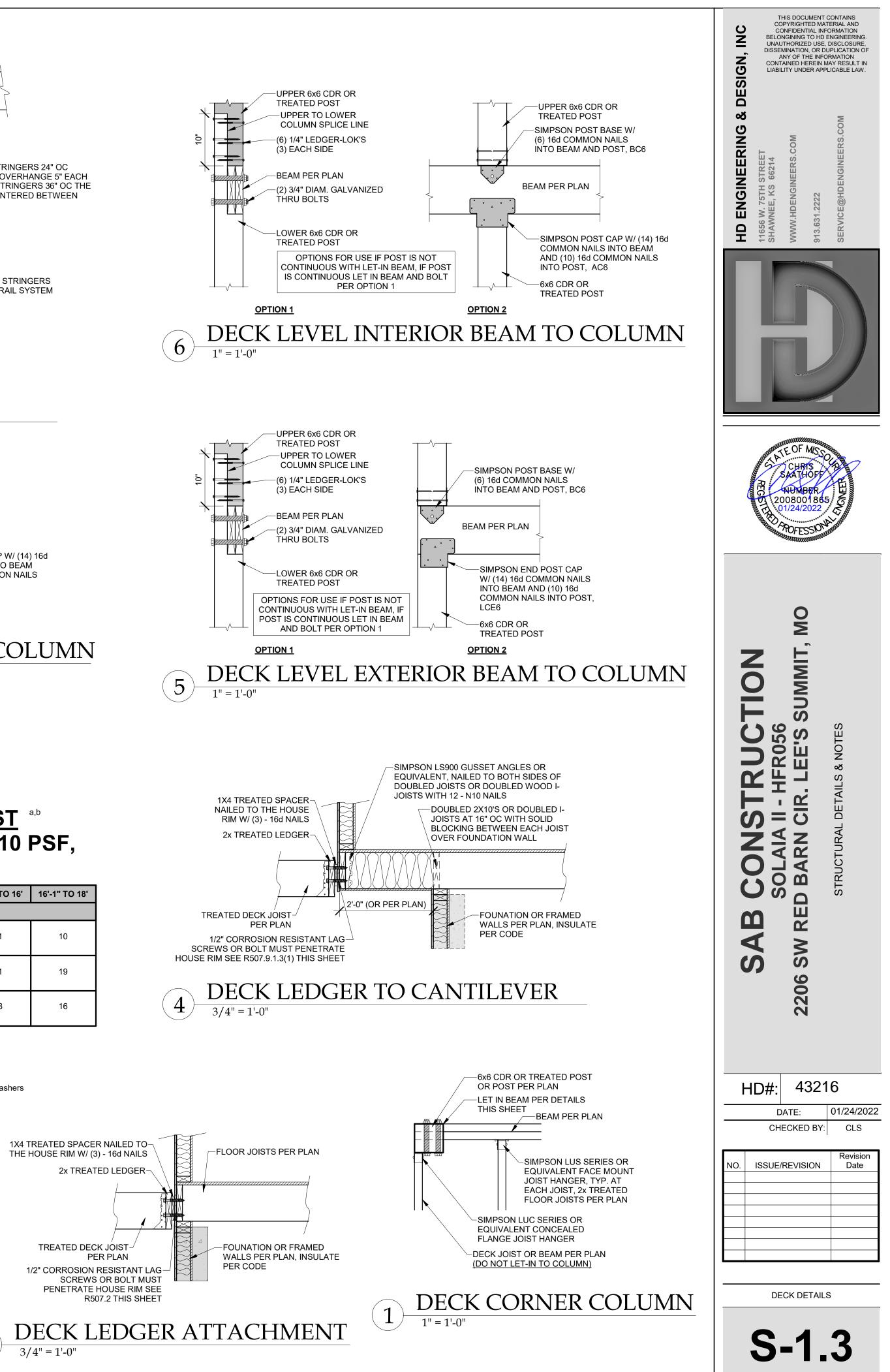
JOIST SPAN	6' AND LESS	6'-1" TO 8'	8'-1" TO 10'	10'-1" TO 12'	12'-1" TO 14'	14'-1" TO 16'	16'-1" TO 18'		
CONNECTION DETAILS	ON-CENTER SPACING OF FASTENERS ^{d, e}								
1/2" LAG SCREW WITH 15/32" MAX. SHEATHING ^{c,d}	30	23	18	15	13	11	10		
1/2" DIAM. BOLT WITH 15/32" MAX. SHEATHING ^d	36	36	34	29	24	21	19		
1/2" DIAM. BOLT WITH 15/32" MAX. SHEATHING & 1/2" STACKED WASHERS [®]	36	36	29	24	21	18	16		



© 2020 HD ENGINEERING & DESIGN

d. Sheathing shall be wood structural panel or solid sawn lumber.

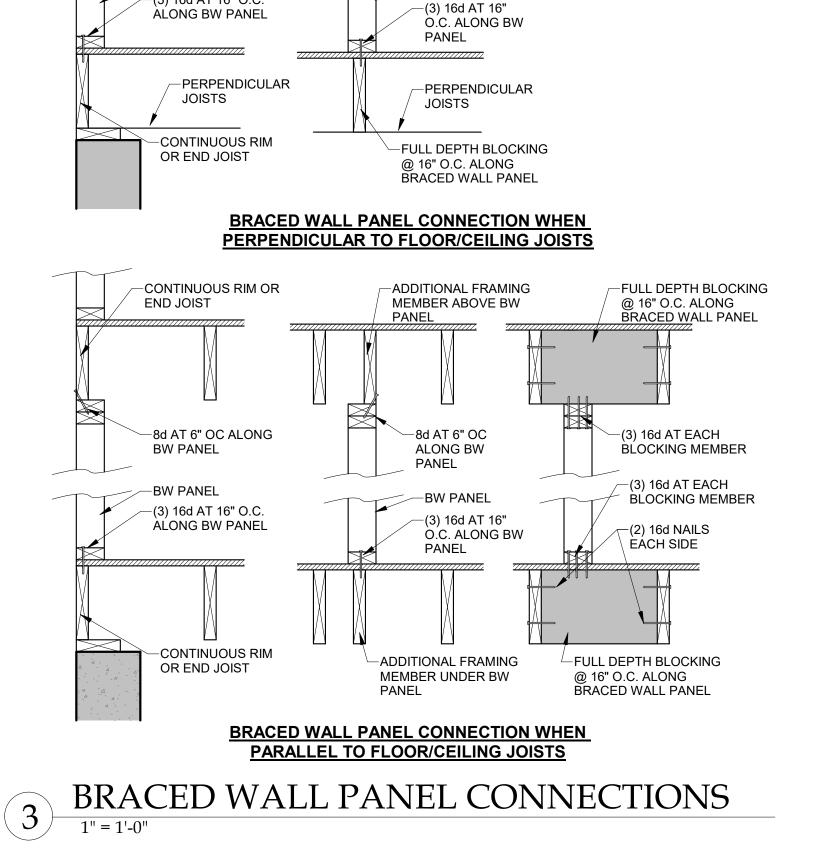
MINIMUM END AND EDGE DISTANCES AND SPACING BETWEEN ROWS										
TOP EDGE BOTTOM EDGE ENDS ROW SPACING										
LEDGER ^a	2 inches ^d	3/4 inches	2 inches ^b	1 5/8 inches ^b						
BAND JOIST [°]	3/4 inches	2 inches	2 inches	1 5/8 inches ^b						



							INPUT	
TERMINE WEIGH	T OF HOUSE:							1
OF					DEAD LOAD (psf)	AREA (ft ²) 3464	WEIGHT (lbs.) 34640	
ILING					10	3200	32000	
RST FLOOR				WALL LENGTH (ft)	10 WALL HEIGHT (ft)	1717 WALL UNIT WT. (psf)	17170 WEIGHT (lbs)	-
RST FLOOR EXT.	WALL DL			256	10	10	25600	
RST FLOOR INT P	PARTITION WALL DL				DEAD LOAD (psf) 6	AREA (ft2) 1717	WEIGHT (lbs) 10302	-
							10302	1
		D <u>JECTED AREAS (WIND I</u> I-TO-BACK	DESIGN PER 115 MPH	3-SECOND GUST, EXPOS	URE C AND MEAN ROOF HEIGHT <= 3 SIDE-TO-S			1
	AREA	LOAD			AREA	LOAD		1
SLOPED ROOF VERT. ROOF	345 252	1519 3514	CUMULATIVE	SLOPED ROOF VERT. ROOF	809 0	<u>3323</u> 0	CUMULATIVE	-
1ST	438	6107	11270	1ST	593	7857	11309	
	SLOPED ROOF	ZONE B		F) - PER ASCE CH. 6 5.9	ZONE C	11.6	2a (FIG. 28.6-1, ASCE7)	1
	WALL/VERT. ROOF MEAN ROOF HT., h	ZONE A		17.4	ZONE D	3.4	10.2	
		etermine tributary wind are ressure)	a and enter here. If no v		I) analysis under ASCE7-10 and IRC/IBC	2018)		1
T FLOOR TRIBUT, SITE GROUND M from ASCE7 Table ((= 2/3 * S _S * F _a) from ASCE7 Table	1OTION - %g - FROM AS e 11.4-1)	SCE7 SEISMIC MAP)					79440 12.0% 1.6 0.128 6.5	
CATION				<u>SEISMIC</u>		m ASCE7 (Eq. 12.8-1):	V (= 1.2 * S _{DS} * W /	/ R) (lbs.)
T FLOOR							1877	
Sheathir	ng Location	Min. Sheathi	ng Schedule	Fas	stening Schedule	Allowal	ole Shear (#/LF)	Code Reference
Exterior	7/16" APA Rated Plywoo Exterior <u>(Option #4)</u> sheathing, or 3/8" shipla tighter nai		ap panel sheathing with	Field for 7/16" APA-rated p	penetration @ 6" O.C. Edges, 12" O.C. /wood/OSB or shiplap panel sheathing 2" O.C. Field for 3/8" shiplap panel sheathing		220	AF&PA SDPWS Table 4.3A
	ING OPTION FOR FIRS		4]	WIDTH OF 1ST STORY (FT.) DEPTH OF 1ST STORY (FT.)	51 73		1
	ING OPTION FOR FIRS				WIDTH OF 1ST STORY (FT.) DEPTH OF 1ST STORY (FT.) BACK WALL OF GARAGE (FT.) GAR. WALL: 1=F-B, 2=S-S			
	ING OPTION FOR FIRS	T FLOOR			WIDTH OF 1ST STORY (FT.) DEPTH OF 1ST STORY (FT.) BACK WALL OF GARAGE (FT.)	73 19		
	ING OPTION FOR FIRS	T FLOOR	EXTER	RIOR STRUCTURAL WALL RESISTANCE (lbs.)	WIDTH OF 1ST STORY (FT.) DEPTH OF 1ST STORY (FT.) BACK WALL OF GARAGE (FT.) GAR. WALL: 1=F-B, 2=S-S	73 19 2	SIDE-TO-SIDE	RESISTANCE (Ibs
TERIOR SHEATH		T FLOOR SE			WIDTH OF 1ST STORY (FT.) DEPTH OF 1ST STORY (FT.) BACK WALL OF GARAGE (FT.) GAR. WALL: 1=F-B, 2=S-S LENGTHS (ft.) & RESISTANCES	73 19 2 WIND	SIDE-TO-SIDE 76	RESISTANCE (lbs 29792
(TERIOR SHEATH	FRONT-TO-BACK	T FLOOR SE RESISTANCE (lbs.) 37240	EXTER ISMIC SIDE-TO-SIDE 76	RESISTANCE (lbs.)	WIDTH OF 1ST STORY (FT.) DEPTH OF 1ST STORY (FT.) BACK WALL OF GARAGE (FT.) GAR. WALL: 1=F-B, 2=S-S LENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 133	73 19 2 WIND RESISTANCE (lbs.) 52136	76	29792
TERIOR SHEATH	FRONT-TO-BACK	T FLOOR SE RESISTANCE (lbs.) 37240 ADDITIONAL RESIS	EXTER ISMIC SIDE-TO-SIDE 76 TANCE REQUIRED	RESISTANCE (lbs.)	WIDTH OF 1ST STORY (FT.) DEPTH OF 1ST STORY (FT.) BACK WALL OF GARAGE (FT.) GAR. WALL: 1=F-B, 2=S-S LENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 133 Anchor Bolt Spacing	73 19 2 WIND RESISTANCE (lbs.) 52136 (in.)	76 16d Nail Spacing req'd at	29792 bottom plate (in.)
T FLOOR FRONT-	FRONT-TO-BACK 133 -TO-BACK	T FLOOR SE RESISTANCE (lbs.) 37240	EXTER ISMIC SIDE-TO-SIDE 76	RESISTANCE (lbs.)	WIDTH OF 1ST STORY (FT.) DEPTH OF 1ST STORY (FT.) BACK WALL OF GARAGE (FT.) GAR. WALL: 1=F-B, 2=S-S LENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 133	73 19 2 WIND RESISTANCE (lbs.) 52136	76	29792
	FRONT-TO-BACK 133 -TO-BACK	T FLOOR SE RESISTANCE (lbs.) 37240 ADDITIONAL RESIS SEISMIC 0	EXTER ISMIC SIDE-TO-SIDE 76 TANCE REQUIRED WIND 0 0	RESISTANCE (lbs.) 21280	WIDTH OF 1ST STORY (FT.) DEPTH OF 1ST STORY (FT.) BACK WALL OF GARAGE (FT.) GAR. WALL: 1=F-B, 2=S-S LENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 133 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches)	73 19 2 WIND RESISTANCE (lbs.) 52136 (in.) 0.5 944 234.8 163.5	76 16d Nail Spacing req'd at 1st Floor F-B	29792 bottom plate (in.)
TERIOR SHEATH	FRONT-TO-BACK 133 -TO-BACK	T FLOOR SE RESISTANCE (lbs.) 37240 ADDITIONAL RESIS SEISMIC 0 0	EXTER ISMIC SIDE-TO-SIDE 76 TANCE REQUIRED WIND 0 0 0 RESISTANCE REQUI	RESISTANCE (lbs.) 21280 RED IN ADDITION TO RES	WIDTH OF 1ST STORY (FT.) DEPTH OF 1ST STORY (FT.) BACK WALL OF GARAGE (FT.) GAR. WALL: 1=F-B, 2=S-S LENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 133 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches)	73 19 2 WIND RESISTANCE (lbs.) 52136 (in.) 0.5 944 234.8 163.5 VALLS**	76 16d Nail Spacing req'd at 1st Floor F-B 1st Floor S-S	29792 bottom plate (in.)
T FLOOR FRONT-	FRONT-TO-BACK 133 -TO-BACK	T FLOOR SE RESISTANCE (lbs.) 37240 ADDITIONAL RESIS SEISMIC 0	EXTER SIDE-TO-SIDE 76 TANCE REQUIRED WIND 0 0 0 RESISTANCE REQUI PORTAL FRAMES OR PERF. SHEAR WALL	RESISTANCE (lbs.) 21280 RED IN ADDITION TO RES	WIDTH OF 1ST STORY (FT.) DEPTH OF 1ST STORY (FT.) BACK WALL OF GARAGE (FT.) GAR. WALL: 1=F-B, 2=S-S LENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 133 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches)	73 19 2 WIND RESISTANCE (lbs.) 52136 (in.) 0.5 944 234.8 163.5 VALLS** INT. WALL LENGTH SHEATHED W/ OSB (TOTAL LENGTH, ONE	76 16d Nail Spacing req'd at 1st Floor F-B	29792 bottom plate (in.)
T FLOOR FRONT- T FLOOR SIDE-TO	FRONT-TO-BACK 133 TO-BACK D-SIDE	T FLOOR SE RESISTANCE (lbs.) 37240 ADDITIONAL RESIS SEISMIC 0 0 0 0 0	EXTER SIDE-TO-SIDE 76 TANCE REQUIRED WIND 0 0 0 RESISTANCE REQUI PORTAL FRAMES OR PERF. SHEAR WALL	RESISTANCE (lbs.) 21280 RED IN ADDITION TO RES	WIDTH OF 1ST STORY (FT.) DEPTH OF 1ST STORY (FT.) BACK WALL OF GARAGE (FT.) GAR. WALL: 1=F-B, 2=S-S LENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 133 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches) Statement of the system	73 19 2 WIND RESISTANCE (lbs.) 52136 (in.) 0.5 944 234.8 163.5 VALLS** INT. WALL LENGTH SHEATHED W/ OSB	76 16d Nail Spacing req'd at 1st Floor F-B 1st Floor S-S RESISTANCE PROVIDED BY ADDITIONAL METHODS (POUNDS) 0	29792 bottom plate (in.) OK? YES
T FLOOR SHEATH	TO-BACK D-SIDE	T FLOOR SE RESISTANCE (lbs.) 37240 ADDITIONAL RESIS SEISMIC 0 0 0 0 0	EXTER ISMIC SIDE-TO-SIDE 76 TANCE REQUIRED WIND 0 0 0 RESISTANCE REQUI PORTAL FRAMES OR PERF. SHEAR WALL RESISTANCE	RESISTANCE (lbs.) 21280 RED IN ADDITION TO RES INTERIOR X-BRACES (325#/BRACE)	WIDTH OF 1ST STORY (FT.) DEPTH OF 1ST STORY (FT.) BACK WALL OF GARAGE (FT.) GAR. WALL: 1=F-B, 2=S-S LENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 133 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches) Spacing S-S (inches) STANCE PROVIDED BY EXTERIOR V INTERIOR WALL LENGTH W/ 1/2" GYPSUM BOARD PER TABLE (FT.)	73 19 2 WIND RESISTANCE (lbs.) 52136 (in.) 0.5 944 234.8 163.5 VALLS** INT. WALL LENGTH SHEATHED W/ OSB (TOTAL LENGTH, ONE	76 16d Nail Spacing req'd at 1st Floor F-B 1st Floor S-S RESISTANCE PROVIDED BY ADDITIONAL METHODS (POUNDS)	29792 bottom plate (in.) OK?
TERIOR SHEATH	TO-BACK D-SIDE TO-BACK D-SIDE TACHED CALCULATIOI DR INTERIOR STEEL X-	T FLOOR SE RESISTANCE (lbs.) 37240 ADDITIONAL RESIS SEISMIC 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EXTER SIDE-TO-SIDE 76 TANCE REQUIRED WIND 0 0 RESISTANCE REQUI PORTAL FRAMES OR PERF. SHEAR WALL RESISTANCE	RESISTANCE (lbs.) 21280 RED IN ADDITION TO RES INTERIOR X-BRACES (325#/BRACE) EAR WALL RESISTANCE (HEATHED WITH OSB SHA	WIDTH OF 1ST STORY (FT.) DEPTH OF 1ST STORY (FT.) BACK WALL OF GARAGE (FT.) GAR. WALL: 1=F-B, 2=S-S LENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 133 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches) Statement of the system	73 19 2 WIND RESISTANCE (lbs.) 52136 (in.) 0.5 944 234.8 163.5 VALLS** INT. WALL LENGTH SHEATHED W/ OSB (TOTAL LENGTH, ONE SIDE, FT.)	76 16d Nail Spacing req'd at 1st Floor F-B 1st Floor S-S RESISTANCE PROVIDED BY ADDITIONAL METHODS (POUNDS) 0	29792 bottom plate (in.) OK? YES
TERIOR SHEATH	TO-BACK D-SIDE TO-BACK D-SIDE TACHED CALCULATION DR INTERIOR STEEL X- RIOR OSB ON SAME FL	T FLOOR SE RESISTANCE (lbs.) 37240 ADDITIONAL RESIS SEISMIC 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EXTER SIDE-TO-SIDE 76 TANCE REQUIRED WIND 0 0 RESISTANCE REQUI PORTAL FRAMES OR PERF. SHEAR WALL RESISTANCE	RESISTANCE (lbs.) 21280 RED IN ADDITION TO RES INTERIOR X-BRACES (325#/BRACE) EAR WALL RESISTANCE (HEATHED WITH OSB SHA	WIDTH OF 1ST STORY (FT.) DEPTH OF 1ST STORY (FT.) BACK WALL OF GARAGE (FT.) GAR. WALL: 1=F-B, 2=S-S LENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 133 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches) Spacing S-S (inches) State PROVIDED BY EXTERIOR V INTERIOR WALL LENGTH W/ 1/2" GYPSUM BOARD PER TABLE (FT.) CAPACITIES (IF APPLICABLE), LL BE ATTACHED WITH SAME STAPLI HT SECTIONS OF 2'-8" OR LONGER	73 19 2 WIND RESISTANCE (lbs.) 52136 (in.) 0.5 944 234.8 163.5 VALLS** INT. WALL LENGTH SHEATHED W/ OSB (TOTAL LENGTH, ONE SIDE, FT.)	76 16d Nail Spacing req'd at 1st Floor F-B 1st Floor S-S RESISTANCE PROVIDED BY ADDITIONAL METHODS (POUNDS) 0	29792 bottom plate (in.) OK? YES
TERIOR SHEATH	TO-BACK D-SIDE TO-BACK D-SIDE TACHED CALCULATIOI DR INTERIOR STEEL X- RIOR OSB ON SAME FL	T FLOOR SE RESISTANCE (lbs.) 37240 ADDITIONAL RESIS SEISMIC 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EXTER ISMIC SIDE-TO-SIDE 76 TANCE REQUIRED WIND 0 0 0 RESISTANCE REQUI PORTAL FRAMES OR PERF. SHEAR WALL RESISTANCE OR PERFORATED SH 3) INTERIOR WALLS SI E) AND ARE ONLY APF	RESISTANCE (lbs.) 21280 RED IN ADDITION TO RES INTERIOR X-BRACES (325#/BRACE) EAR WALL RESISTANCE (HEATHED WITH OSB SHAP PLICABLE FOR FULL-HEIG	WIDTH OF 1ST STORY (FT.) DEPTH OF 1ST STORY (FT.) BACK WALL OF GARAGE (FT.) GAR. WALL: 1=F-B, 2=S-S LENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 133 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches) Spacing S-S (inches) State PROVIDED BY EXTERIOR V INTERIOR WALL LENGTH W/ 1/2" GYPSUM BOARD PER TABLE (FT.) CAPACITIES (IF APPLICABLE), LL BE ATTACHED WITH SAME STAPLI HT SECTIONS OF 2'-8" OR LONGER	73 19 2 WIND RESISTANCE (lbs.) 52136 (in.) 0.5 944 234.8 163.5 VALLS** INT. WALL LENGTH SHEATHED W/ OSB (TOTAL LENGTH, ONE SIDE, FT.)	76 16d Nail Spacing req'd at 1st Floor F-B 1st Floor S-S RESISTANCE PROVIDED BY ADDITIONAL METHODS (POUNDS) 0	29792 bottom plate (in.) OK? YES
T FLOOR SHEATH	TO-BACK D-SIDE TO-BACK D-SIDE TACHED CALCULATIOI DR INTERIOR STEEL X- RIOR OSB ON SAME FL	T FLOOR SE RESISTANCE (lbs.) 37240 ADDITIONAL RESIS SEISMIC 0 0 0 0 0 NS FOR PORTAL FRAME BRACE INSTALLATION, OOR (SEE TABLE ABOV DEGREES 26.6 ASCE 7 PRESSURE (PSF)	EXTER ISMIC SIDE-TO-SIDE 76 TANCE REQUIRED WIND 0 0 0 RESISTANCE REQUI PORTAL FRAMES OR PERF. SHEAR WALL RESISTANCE OR PERFORATED SH 3) INTERIOR WALLS SI E) AND ARE ONLY APF PITCH OF 6 OR LESS: LINEAL FT. OF OH	RESISTANCE (lbs.) 21280 RED IN ADDITION TO RES INTERIOR X-BRACES (325#/BRACE) EAR WALL RESISTANCE (HEATHED WITH OSB SHAP PLICABLE FOR FULL-HEIG WIND UPLIFT EOH -13.3, E -7.2, G -5.2 UPLIFT PER FT* (LBS)	WIDTH OF 1ST STORY (FT.) DEPTH OF 1ST STORY (FT.) BACK WALL OF GARAGE (FT.) GAR. WALL: 1=F-B, 2=S-S LENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 133 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches) Spacing S-S (inches) State PROVIDED BY EXTERIOR V INTERIOR WALL LENGTH W/ 1/2" GYPSUM BOARD PER TABLE (FT.) CAPACITIES (IF APPLICABLE), LL BE ATTACHED WITH SAME STAPLI HT SECTIONS OF 2'-8" OR LONGER	73 19 2 WIND RESISTANCE (lbs.) 52136 (in.) 0.5 944 234.8 163.5 VALLS** INT. WALL LENGTH SHEATHED W/ OSB (TOTAL LENGTH, ONE SIDE, FT.)	76 16d Nail Spacing req'd at 1st Floor F-B 1st Floor S-S RESISTANCE PROVIDED BY ADDITIONAL METHODS (POUNDS) 0	29792 bottom plate (in.) OK? YES
T FLOOR FRONT- T FLOOR FRONT- T FLOOR SIDE-TC OTES: 1) SEE AT SEE SHEET S1 FC .TTERN AS EXTEP	TO-BACK D-SIDE TO-BACK D-SIDE TACHED CALCULATION DR INTERIOR STEEL X- RIOR OSB ON SAME FL X/12) 6	T FLOOR SE RESISTANCE (lbs.) 37240 ADDITIONAL RESIS SEISMIC 0 0 0 0 0 0 NS FOR PORTAL FRAME BRACE INSTALLATION, OOR (SEE TABLE ABOV DEGREES 26.6 ASCE 7	EXTER ISMIC SIDE-TO-SIDE 76 TANCE REQUIRED WIND 0 0 0 RESISTANCE REQUI PORTAL FRAMES OR PERF. SHEAR WALL RESISTANCE OR PERFORATED SH 3) INTERIOR WALLS SI E) AND ARE ONLY APF PITCH OF 6 OR LESS: LINEAL FT. OF OH 250	RESISTANCE (lbs.) 21280 RED IN ADDITION TO RES INTERIOR X-BRACES (325#/BRACE) EAR WALL RESISTANCE (HEATHED WITH OSB SHAP PLICABLE FOR FULL-HEIG WIND UPLIFT EOH -13.3, E -7.2, G -5.2	WIDTH OF 1ST STORY (FT.) DEPTH OF 1ST STORY (FT.) BACK WALL OF GARAGE (FT.) GAR. WALL: 1=F-B, 2=S-S LENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 133 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches) Spacing S-S (inches) State PROVIDED BY EXTERIOR V INTERIOR WALL LENGTH W/ 1/2" GYPSUM BOARD PER TABLE (FT.) CAPACITIES (IF APPLICABLE), LL BE ATTACHED WITH SAME STAPLI HT SECTIONS OF 2'-8" OR LONGER	73 19 2 WIND RESISTANCE (lbs.) 52136 (in.) 0.5 944 234.8 163.5 VALLS** INT. WALL LENGTH SHEATHED W/ OSB (TOTAL LENGTH, ONE SIDE, FT.)	76 16d Nail Spacing req'd at 1st Floor F-B 1st Floor S-S RESISTANCE PROVIDED BY ADDITIONAL METHODS (POUNDS) 0	29792 bottom plate (in.) OK? YES YES
T FLOOR FRONT- T FLOOR FRONT- T FLOOR SIDE-TC T FLOOR SIDE-TC OOF SIDE-TC NOTES: 1) SEE AT SEE SHEET S1 FC NTTERN AS EXTER OOF PITCH (MAX) OVERHANG MAIN ROOF**	TO-BACK D-SIDE TO-BACK D-SIDE TACHED CALCULATION DR INTERIOR STEEL X- RIOR OSB ON SAME FL X/12) 6 LENGTH (FT.) 1 TOTAL AREA (FT ²) 3723	T FLOOR SE RESISTANCE (lbs.) 37240 ADDITIONAL RESIS SEISMIC 0 0 0 0 0 NS FOR PORTAL FRAME BRACE INSTALLATION, OOR (SEE TABLE ABOV DEGREES 26.6 ASCE 7 PRESSURE (PSF) 16.56	EXTER ISMIC SIDE-TO-SIDE 76 TANCE REQUIRED WIND 0 0 0 RESISTANCE REQUI PORTAL FRAMES OR PERF. SHEAR WALL RESISTANCE OR PERFORATED SH 3) INTERIOR WALLS SI E) AND ARE ONLY APF PITCH OF 6 OR LESS: LINEAL FT. OF OH 250	RESISTANCE (lbs.) 21280 RED IN ADDITION TO RES INTERIOR X-BRACES (325#/BRACE) EAR WALL RESISTANCE (HEATHED WITH OSB SHAP PLICABLE FOR FULL-HEIG WIND UPLIFT EOH -13.3, E -7.2, G -5.2 UPLIFT PER FT* (LBS) 16.56	WIDTH OF 1ST STORY (FT.) DEPTH OF 1ST STORY (FT.) BACK WALL OF GARAGE (FT.) GAR. WALL: 1=F-B, 2=S-S LENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 133 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches) Spacing S-S (inches) STANCE PROVIDED BY EXTERIOR V INTERIOR WALL LENGTH W/ 1/2" GYPSUM BOARD PER TABLE (FT.) CAPACITIES (IF APPLICABLE), LL BE ATTACHED WITH SAME STAPLI HT SECTIONS OF 2'-8" OR LONGER	73 19 2 WIND RESISTANCE (lbs.) 52136 (in.) 0.5 944 234.8 163.5 VALLS** INT. WALL LENGTH SHEATHED W/ OSB (TOTAL LENGTH, ONE SIDE, FT.) E/NAILING	76 16d Nail Spacing req'd at 1 1st Floor F-B 1st Floor S-S RESISTANCE PROVIDED BY ADDITIONAL METHODS (POUNDS) 0 0	OK? YES YES
AT FLOOR SHEATH	TO-BACK D-SIDE TO-BACK D-SIDE TACHED CALCULATION DR INTERIOR STEEL X- RIOR OSB ON SAME FL X/12) 6 LENGTH (FT.) 1 TOTAL AREA (FT ²) 3723 R	T FLOOR SE RESISTANCE (lbs.) 37240 ADDITIONAL RESIS SEISMIC 0 0 0 0 0 NS FOR PORTAL FRAME BRACE INSTALLATION, OOR (SEE TABLE ABOV DEGREES 26.6 ASCE 7 PRESSURE (PSF) 16.56 ZONE E AREA (FT ²)	EXTER ISMIC SIDE-TO-SIDE 76 TANCE REQUIRED WIND 0 0 RESISTANCE REQUI PORTAL FRAMES OR PERF. SHEAR WALL RESISTANCE OR PERFORATED SH 3) INTERIOR WALLS SI E) AND ARE ONLY APF PITCH OF 6 OR LESS: LINEAL FT. OF OH 250 ZONE G AREA (FT ²) 4098.36 FOOT ALONG EXTERIOR (PC	RESISTANCE (lbs.) 21280 21280 RED IN ADDITION TO RES INTERIOR X-BRACES (325#/BRACE) EAR WALL RESISTANCE (HEATHED WITH OSB SHAP PLICABLE FOR FULL-HEIG WIND UPLIFT EOH -13.3, E -7.2, G -5.2 UPLIFT PER FT* (LBS) 16.56 PRESSURE ZN. E (PSF) 15.12 DUNDS)	WIDTH OF 1ST STORY (FT.) DEPTH OF 1ST STORY (FT.) BACK WALL OF GARAGE (FT.) GAR. WALL: 1=F-B, 2=S-S LENGTHS (ft.) & RESISTANCES FRONT-TO-BACK 133 Anchor Bolt Spacing diameter (in.) Shear value (per NDS) Spacing F-B (inches) spacing S-S (inches) Spacing S-S (inches) STANCE PROVIDED BY EXTERIOR V INTERIOR WALL LENGTH W/ 1/2" GYPSUM BOARD PER TABLE (FT.) NITERIOR WALL LENGTH W/ 1/2" GYPSUM BOARD PER TABLE (FT.) APACITIES (IF APPLICABLE), LL BE ATTACHED WITH SAME STAPLI HT SECTIONS OF 2'-8" OR LONGER TANALYSIS PRESSURE ZN. G (PSF)	73 19 2 WIND RESISTANCE (lbs.) 52136 (in.) 0.5 944 234.8 163.5 VALLS** INT. WALL LENGTH SHEATHED W/ OSB (TOTAL LENGTH, ONE SIDE, FT.) E/NAILING	76 16d Nail Spacing req'd at 1 1st Floor F-B 1st Floor S-S RESISTANCE PROVIDED BY ADDITIONAL METHODS (POUNDS) 0 0 0 0 0	29792 bottom plate (in.) OK? YES YES

INCREASED BY 40% FOR WIND LOADS, PER VALUES IN 2018 IBC SECTION 2306 AND AF&PA SDPWS TABLE 4.3A. FOR EXAMPLE, 7/16" APA-RATED SHEATHING WITH 8d @ 6" & 12" HAS A SEISMIC SHEAR VALUE OF 220 A WIND SHEAR VALUE OF 335#/FT - 40% GREATER THAN THAT OF SEISMIC)

NOTE: SOIL SITE CLASS ASSUMED TO BE CLASS D. IF SITE CONDITIONS ARE DETERMINED TO BE CLASS E OR F, CONSULT ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION



-PERPENDICULAR

-FULL DEPTH BLOCKING

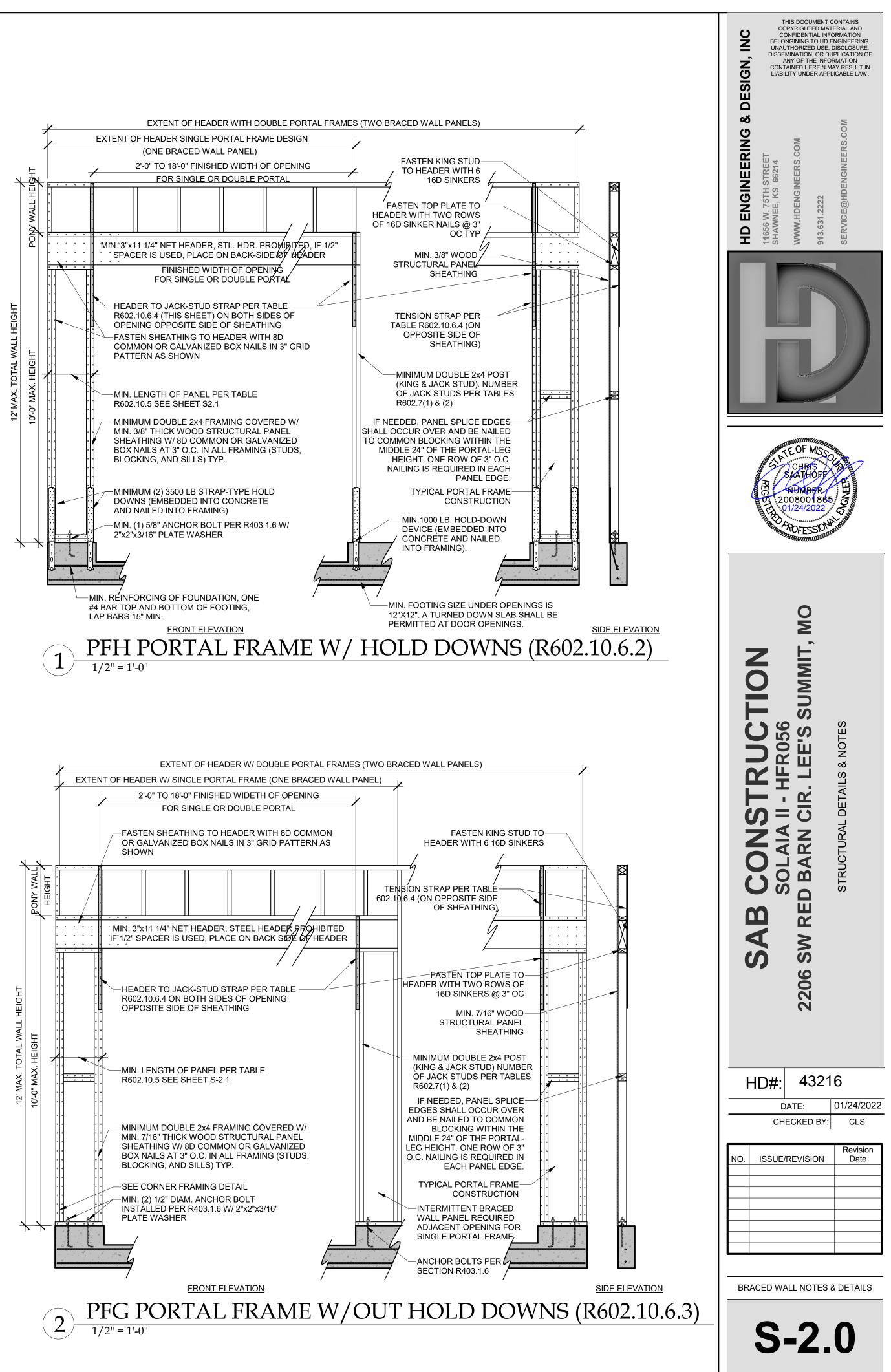
@ 16" O.C. ALONG BRACED WALL PANEL

-8d AT 6" OC

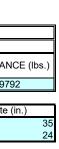
ALONG BW PANEL

-BW PANEL

JOISTS



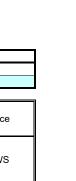














-CONTINUOUS RIM OR

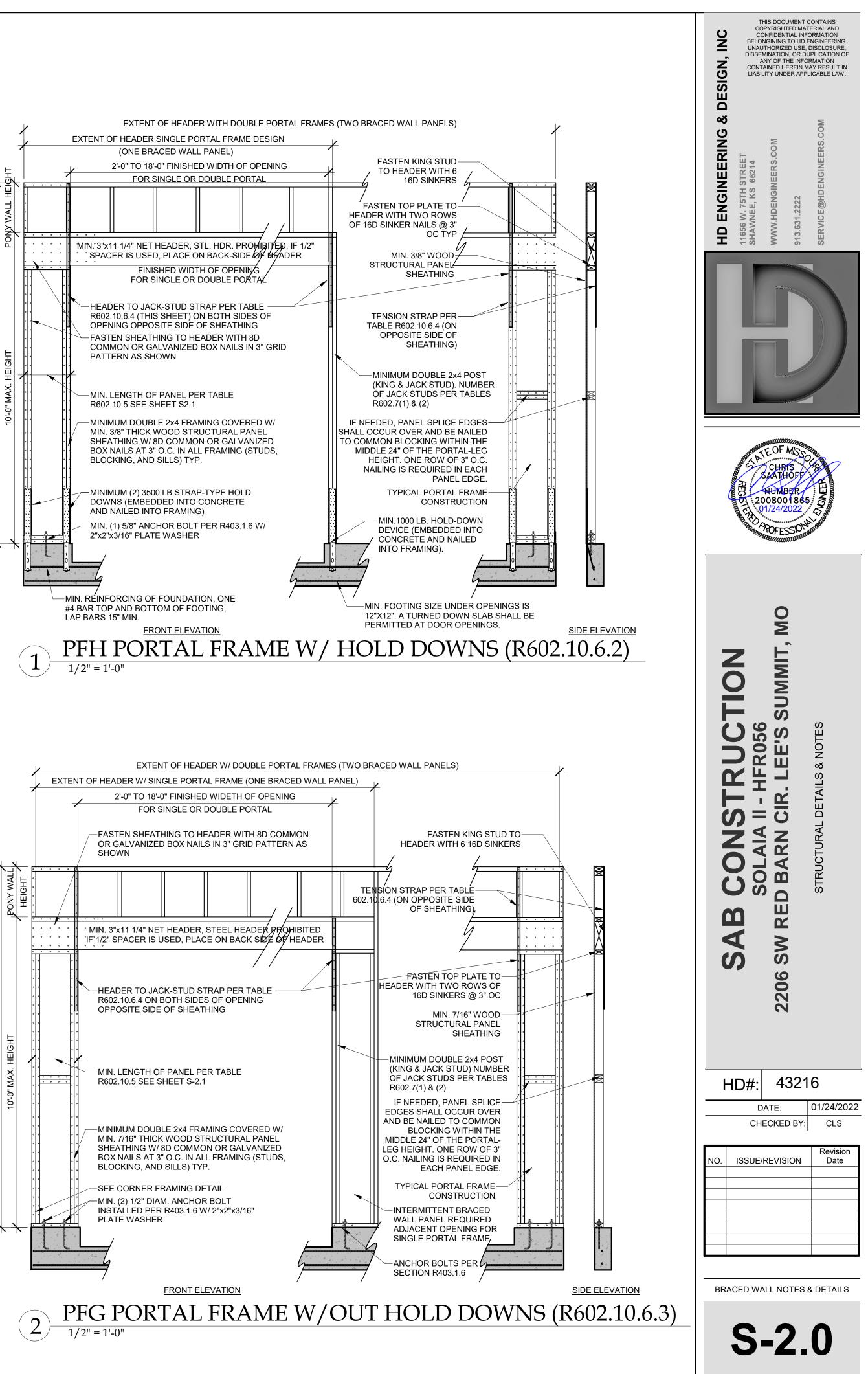
-8d AT 6" OC ALONG

-(3) 16d AT 16" O.C.

BW PANEL

-BW PANEL

END JOIST



LIB BRACING 3/8" = 1'-0"			H D		<u>N 2</u>	10'-0" 5'-9" 10' 11'-0" NP 12'-0" NP
		CODE PR				
TABLE R602.10.5	<u>MIN</u> WAL				БТН	OF BRACED
-					a	
METHOD (SEE TABLE R602.10.4)			ALL HEIGI			CONTRIBUTING LENGTH (INCHES)
	8 FEET	9 FEET		11 FEET		
DWB,WSP,SFB,PBS,PCP,HPS,BV-WSP	48	48	48	53	58	ACTUAL ^b DOUBLE SIDED = ACTUAL
GB	48	48	48	53	58	SINGLE SIDED=.5xACTUAL
LIB SDC A, B, AND C ULTIMATE DESIGN	55 28	62 32	69 34	NP 38	NP 42	ACTUAL ^b
ABW WIND SPEED<140 SDC D ₀ ,D ₁ ,D ₂ ULTIMATE DESIGN	32	32	34 34	38 NP	42 NP	48
WIND SPEED<140 SUPPORTING ROOF ONLY	16	16	16	NOTE C		48
PFH SPTNG. ONE STORY & ROOF	24	24	24	NOTE C	NOTE C	48
PFG	24	27	30	NOTE D	NOTE D	1.5 x ACTUAL ^b
CS-G	24	27	30	33	36	
	16	18	20	NOTE E	NOTE E	ACTUAL ^b
ADJACENT CLEAR OPENING HEIGHT (INCHES)						
≤64	24	27	30	33	36	
68	26	27	30	33	36	
72	27	27	30	33	36	
76 80	30 32	29 30	30 30	33 33	36 36	
80	32	30	30 32	33	30	
88	38	35	33	33	36	
92	43	37	35	35	36	
	48	41	38	36	36	ACTUAL ^b
S-WSP, 96		44	40	38	38	, (0 + 0 / L
S-WSP, 96 S-SFB 100	-					
I00	-	49	43	40	39	
100 104 108	-	54	46	43	41	
S-SFB 100 104 108 112 112	- - -		46 50	43 45	41 43	
100 104 108	-	54	46	43	41	
S-SFB 100 104 104 108 112 116 116	- - - -	54 - -	46 50 55	43 45 48	41 43 45	
Image: S-SFB 100 104 108 112 116 120	- - - - -	54 - - -	46 50 55 60	43 45 48 52	41 43 45 48	
Image: S-SFB 100 104 104 108 112 116 120 124	- - - - - - -	54 - - - -	46 50 55 60 -	43 45 48 52 56	41 43 45 48 51	
Image: S-SFB 100 104 108 112 116 120 124 128	- - - - - - - - - - -	54 - - - -	46 50 55 60 - -	43 45 48 52 56 61	41 43 45 48 51 54	
Image: S-SFB 100 104 108 112 116 120 124 128 132	- - - - - - - - - - - - - -	54 - - - -	46 50 55 60 - -	43 45 48 52 56 61 66	41 43 45 48 51 54 58	

RATING OF 24/0 FOR 16" O.C. STUD SPACING WITH 6d NAILS COMMON NAILS @ 6" O.C. EDGES AND 12" O.C. FIELD OR SHEATHING THICKNESS NOT LESS THANK 7/16" WITH MINIMUM SPAN RATING OF 24/16 FOR 24" O.C. SPACING WITH 8d COMMON NAILS @ 6" O.C. EDGES AND 12" O.C. IN FIELD (NOTE: FRAMING MEMBERS 16" O.C. MAX, UNBLOCKED, AND W/ SHEATHING APPLIED DIRECTLY TO FRAMING MEMBERS).

INTERIOR BRACED WALLS (SEE ON THIS SHEET)

GB METHOD: 1/2" MINIMUM GYPSUM BOARD OVER STUDS SPACED @ 24" MAXIMUM FASTENED W/ #6- 1 1/4" TYPE "W" OR "S" DRYWALL SCREWS @ 7" O.C. EDGES AND FIELD (MIN. 4'-0" SECTION FOR BOTH SIDES) OR

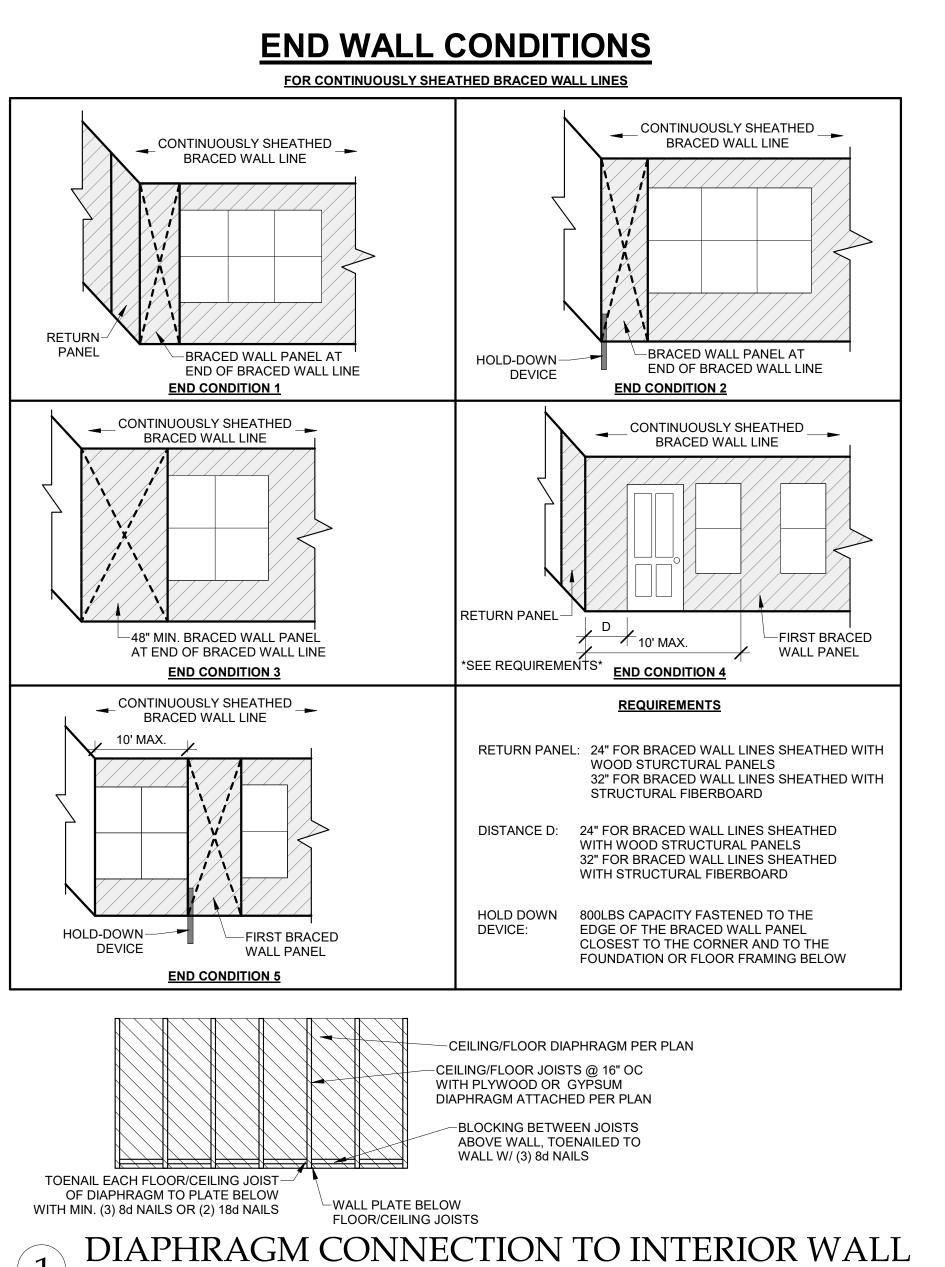
. <u>LIB METHOD:</u> 1X4 WOOD FASTENED W/ (3) 8d COMMON NAILS OR SIMPSON / USP 16 GA. TYPE WB (OR EQUIVALENT) STL. X-BRACE(S) @ 45° TO 60° ANGLES, MAXIMUM 16" O.C. STUDS FASTENED PER MANUF. SPECS.

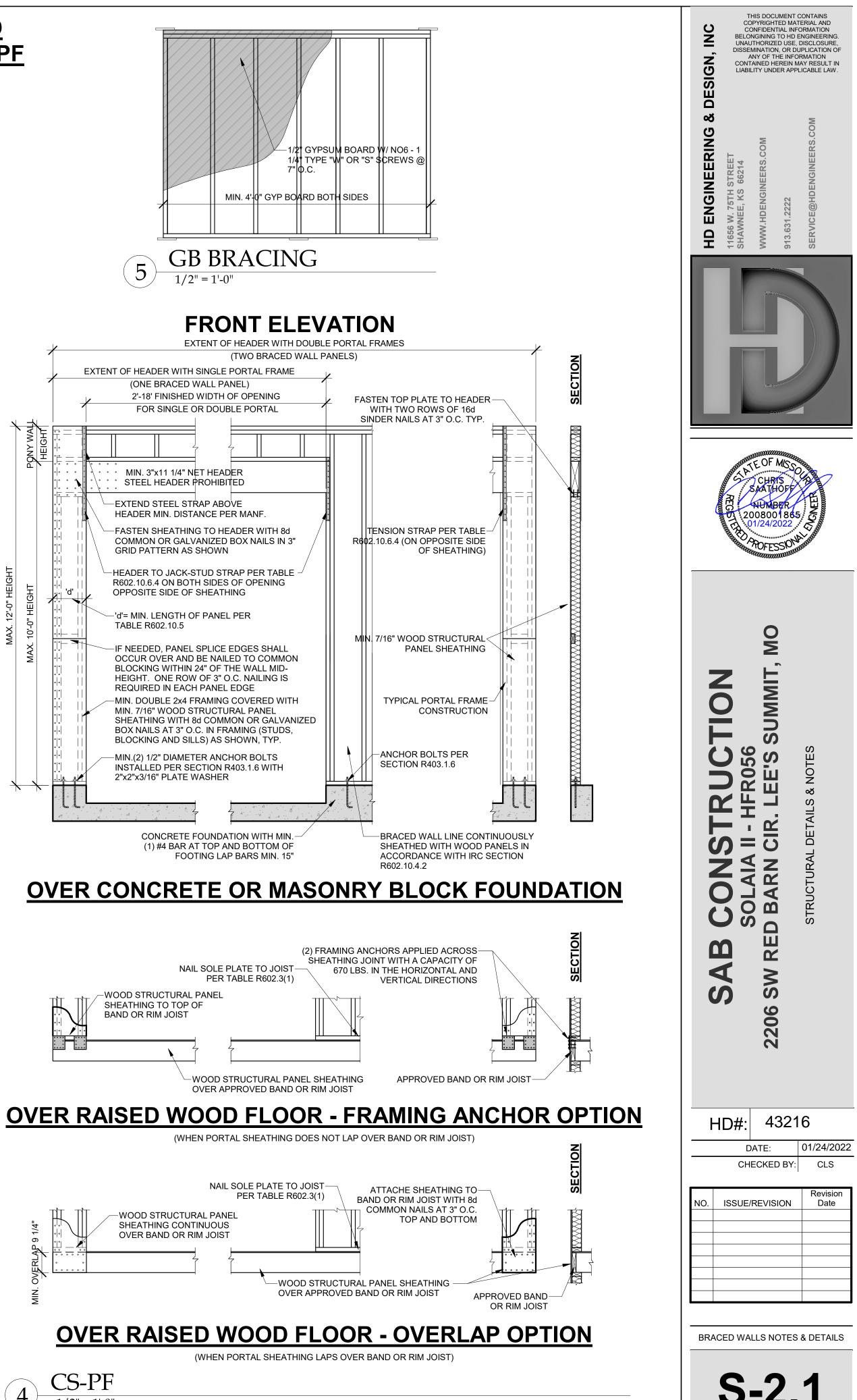


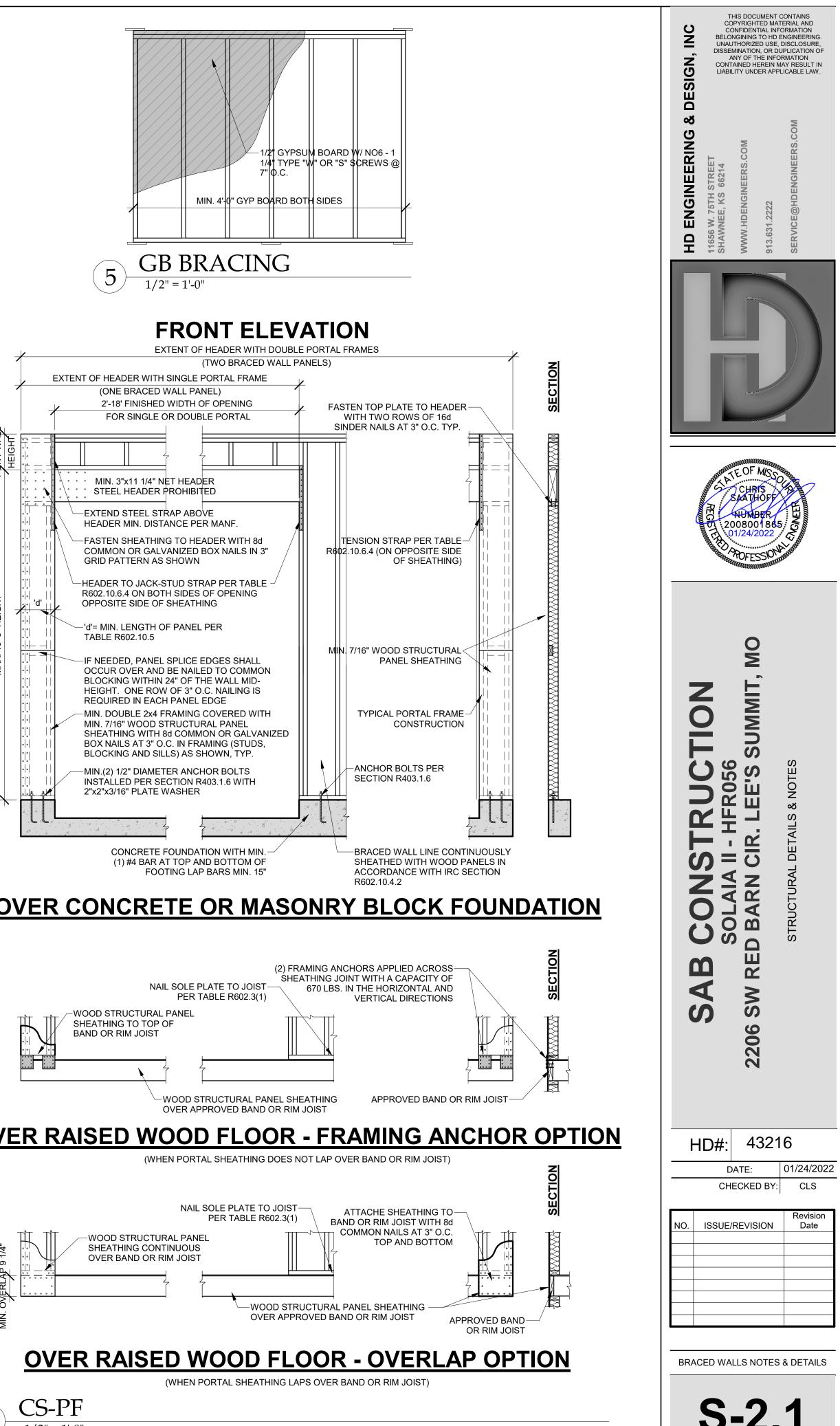
				TENSION STRAP CAPACI	TY REQUIRED (POUNDS) ^a
MINIMUM WALL STUD FRAMING	MAX. PONY	MAX. TOTAL WALL HEIGHT	MAX. OPENING	ULTIMATE DESIGN W	/IND SPEED V (MPH)
NOMINAL SIZE & GRADE	WALL HEIGHT (FEET)	(FEET)	WIDTH (FEET)	115	115
				EXPOSURE B	EXPOSURE C
	0	10	18	1,000	1,000
			9	1,000	1,000
	1	10	16	1,025	2,500
			18	1,275	2,850
			9	1,000	1,875
2X4 NO. 2 GRADE	2	10	16	2,175	4,125
			18	2,500	DR
			9	1,500	3,175
	2	12	16	3,375	DR
			18	3,975	DR
	4	10	9	2,750	DR
	4	12	12	3,775	DR
			9	1,000	2,025
	2	12	16	2,150	3,675
			18	2,550	DR
2X6 STUD GRADE			9	1,750	3,125
	4	12	16	2,400	DR
			18	3,800	DR

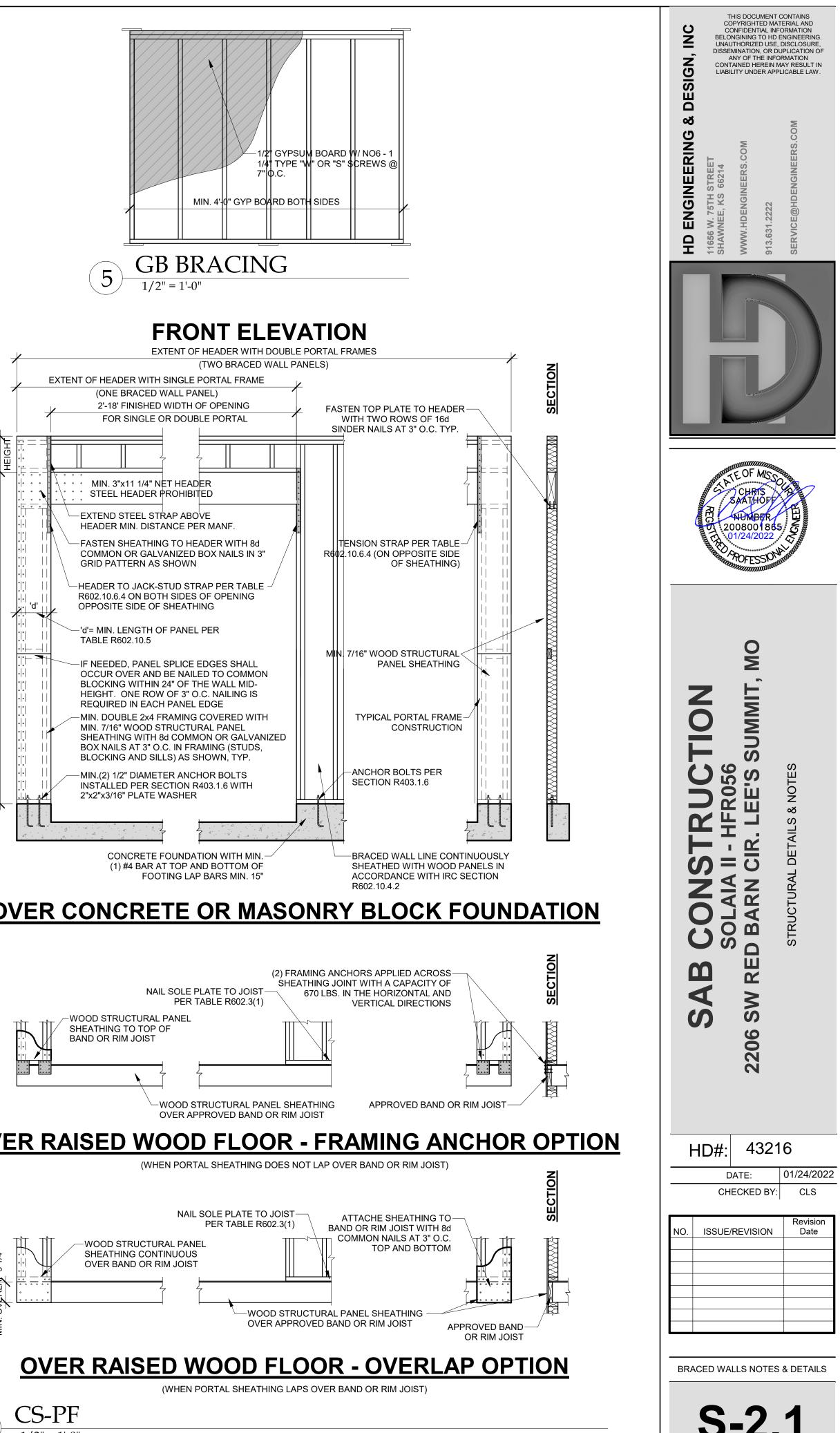
a. DR = DESIGN REQUIRED b. STRAP SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

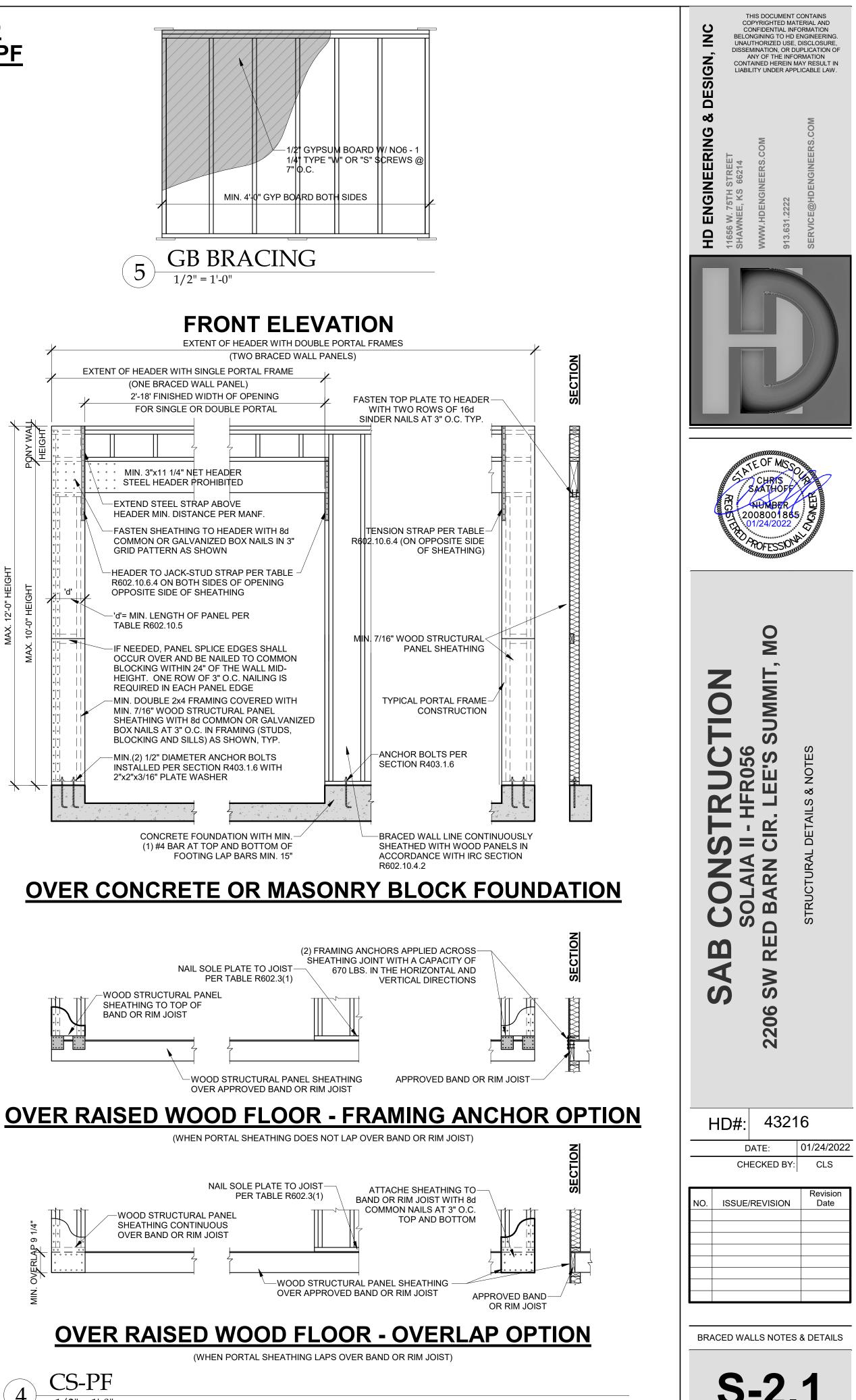
3/8" = 1'-0"

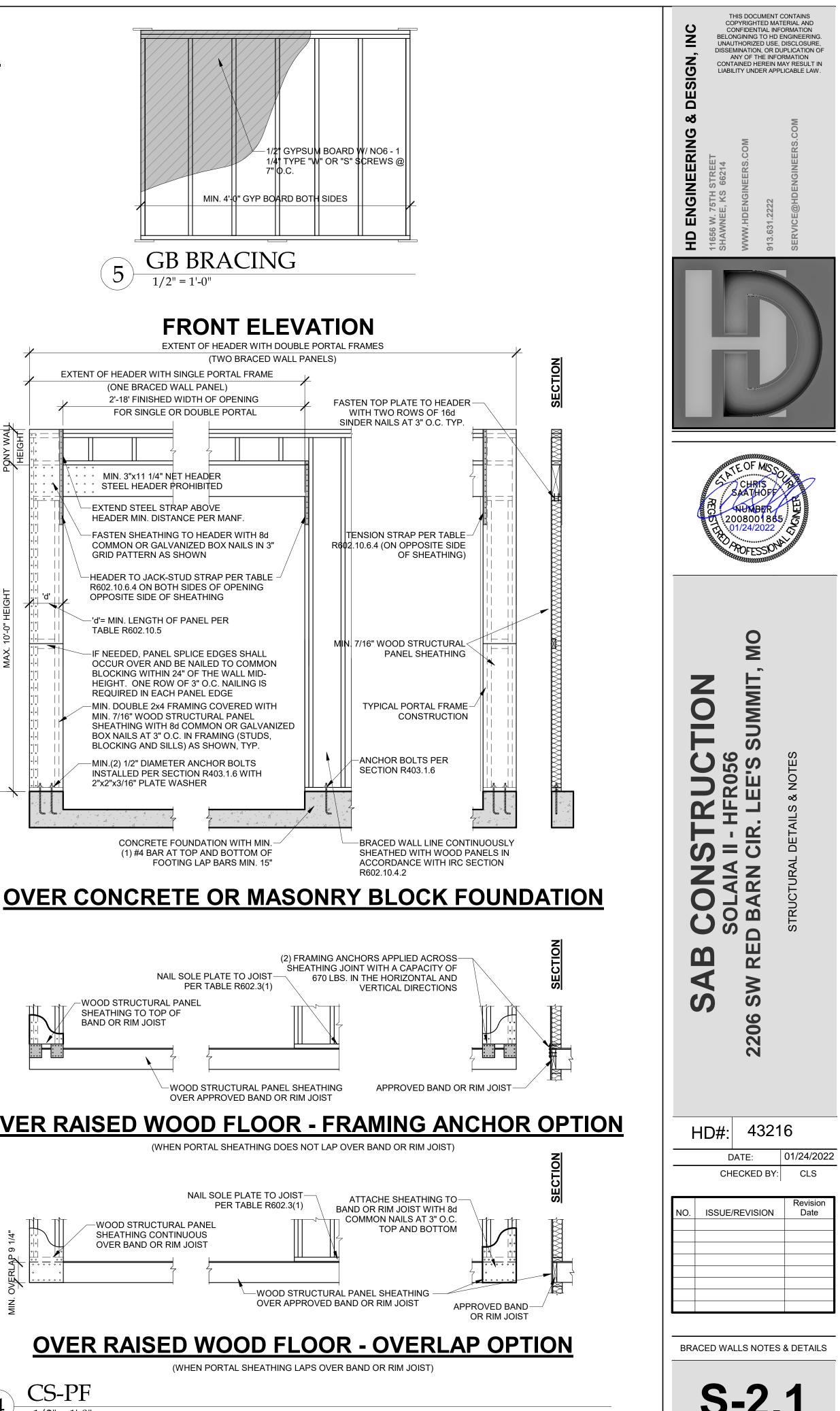


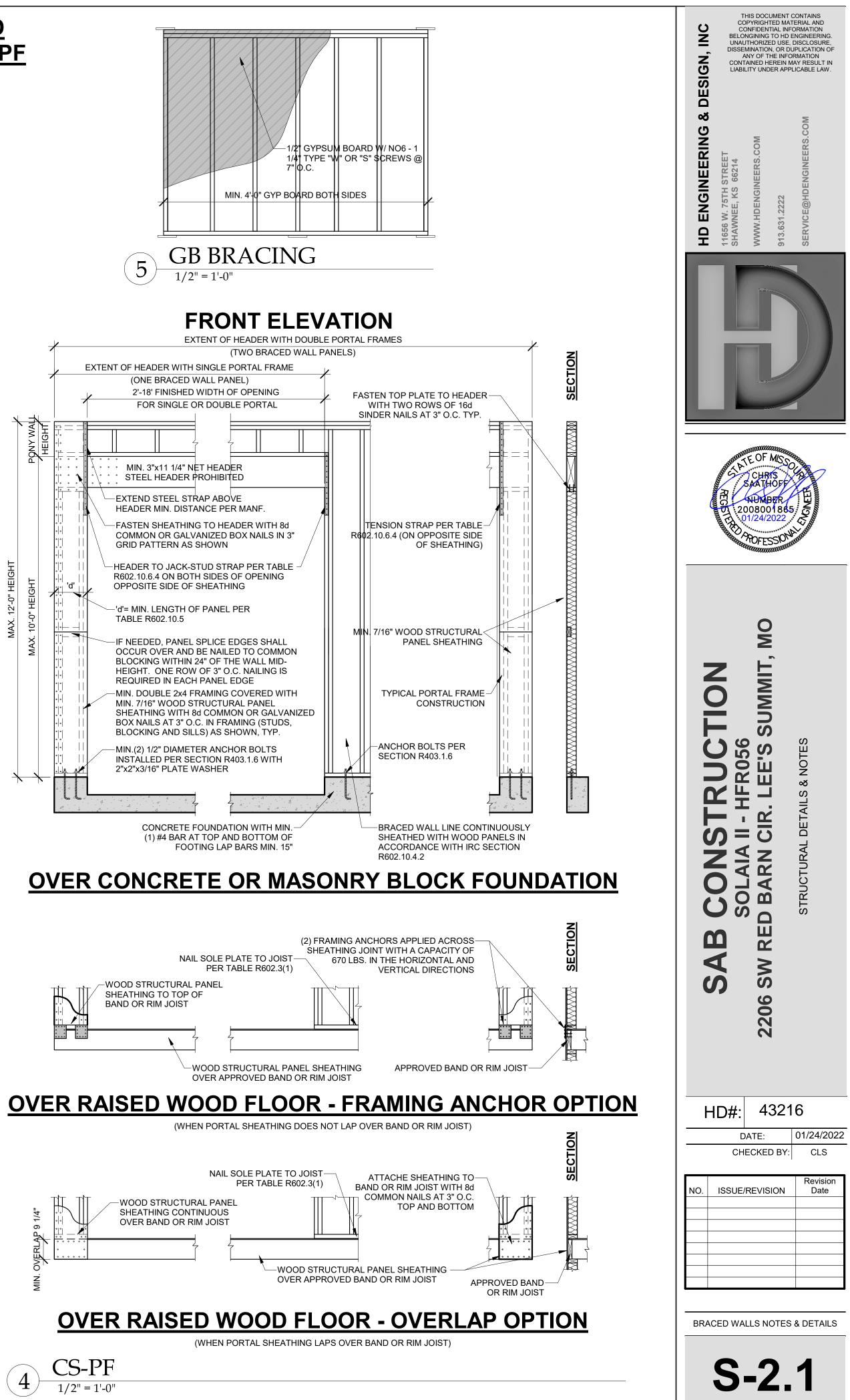


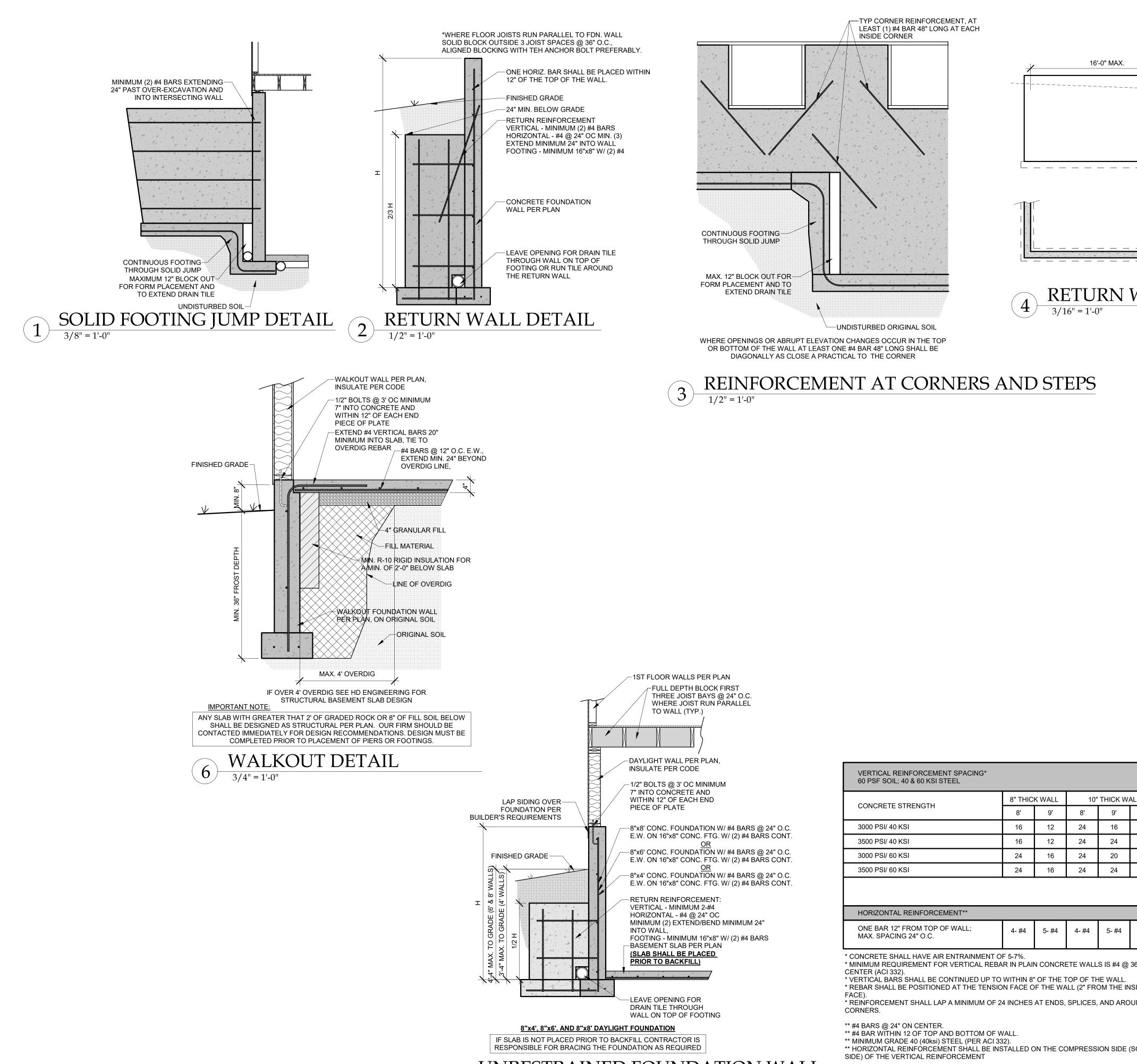












UNRESTRAINED FOUNDATION WALL 1/2" = 1'-0"

5

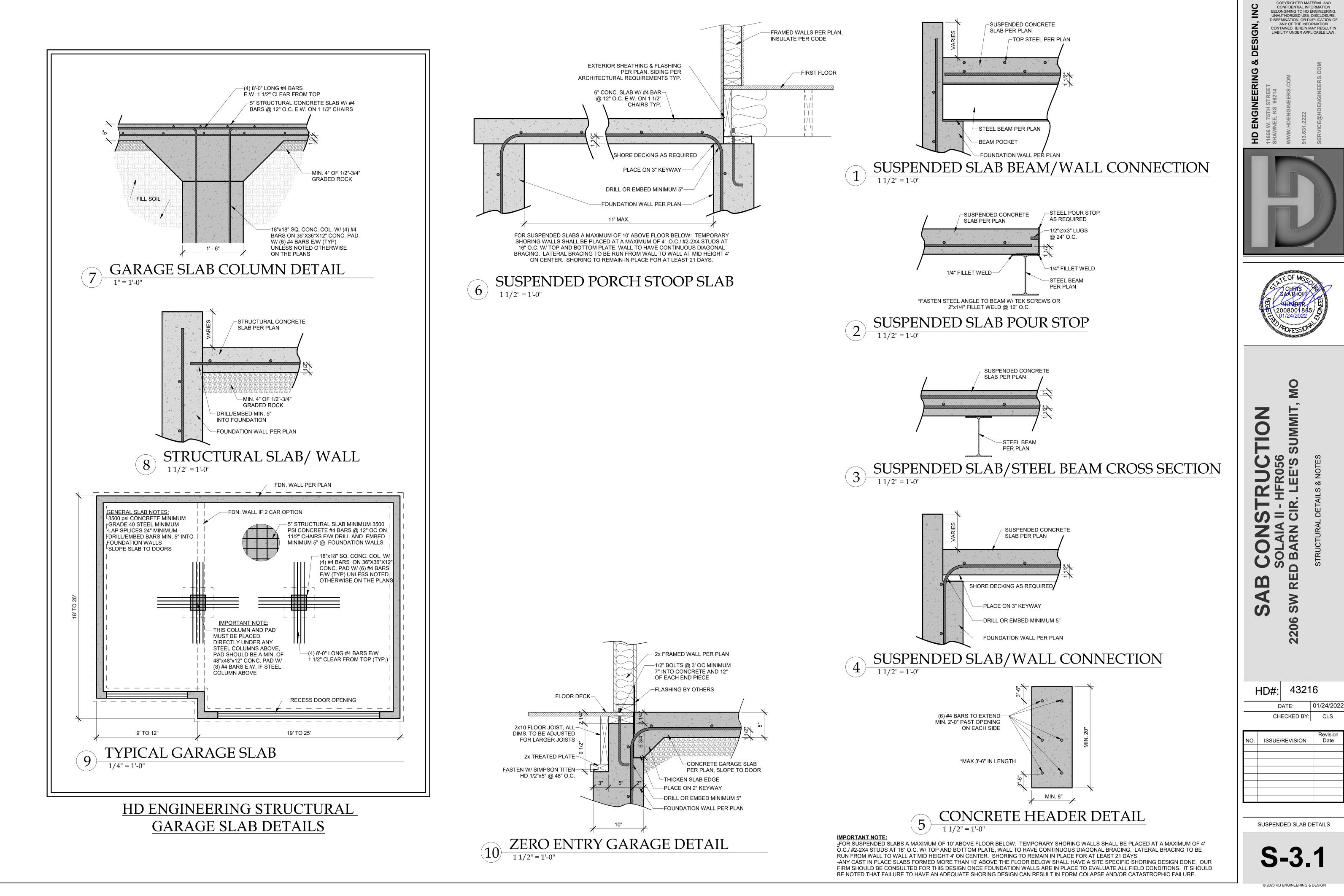
CONCRETE STRENGTH	8" THICK WALL		10" THICK WAL		
	8'	9'	8'	9'	
3000 PSI/ 40 KSI	16	12	24	16	
3500 PSI/ 40 KSI	16	12	24	24	
3000 PSI/ 60 KSI	24	16	24	20	
3500 PSI/ 60 KSI	24	16	24	24	

COPYRIGHTED MATERIAL AND CONFIDENTIAL INFORMATION BELONGINING TO HD ENGINEERIN INAUTHORIZED USE, DISCLOSURE ISSEMINATION. OR DUPLICATION OF ANY OF THE INFORMATION CONTAINED HEREIN MAY RESULT IN IABILITY UNDER APPLICABLE LAW. 16'-0" MAX. 8'-0" MAX. $+\!\!\!/$ -RETURN WALL NOT ----ŏ **REQUIRED FOR 5'** TALL OR LESS C `<u>`</u> GINEERI ЙШ HD -IF THE WALL IS NOT SUPPORTED AT THE TOP, PLACE THE FIRST RETURN NOT MORE THAN 8' FROM THE LOW END OF THE STEP. **RETURN WALL PLACEMENT** -<u>MIN.</u> FOOTING SIZE: -16"x8" STANDARD FOOTING -20"x10" FOOTING WALL SUPPORTING CONCRETE BASEMENT WALL PLUS BRICK OR STONE EXCEEDING 5' IN HEIGHT -OVERLAP JOINT AT LEAST 6" AT SEAM AND EDGES. BLATTER LAYER BETWEEN BARRIER AND SLAB NOT PERMITTED -SEAL/BOND BREAK FILTER FABRIC--TO MINIMIZE CURING TIME AND CONTROL BLEED WATER USE APPROVED ADDITIVES O TO REDUCE SLUMP INSTEAD OF ADDING Σ WATER DURING POURS. SUMMIT -MIN. 4" WASH CRUSHED STONE BASE 0 OR CLEAN GRAVEL 6 MIL VAPOR RETARDER DIRECTLY F UNDER SLAB — MIN. (2) #4 BARS CONTINUOUS UNIFORMLY SPACED WITH 3" CLEAR AT THE BOTTOM PERFORATED DRAIN PIPE FOUNDATION FOOTINGS ш R R Ö **ARN** Ζ Ο OB C RE \mathbf{m} L 8 S S 2206 ALL 10' 12 12 16 16 43216 HD#: 01/24/2022 DATE: CHECKED BY: CLS 6- #4 Revisio **ISSUE/REVISION** Date CONCRETE DETAILS **S-3.0** DETAILS PROVIDED ARE DERIVED FROM JOHNSON COUNTY RESIDENTIAL FOUNDATION GUIDELINE

* MINIMUM REQUIREMENT FOR VERTICAL REBAR IN PLAIN CONCRETE WALLS IS #4 @ 36" ON * VERTICÀL BARS SHALL BE CONTINUED UP TO WITHIN 8" OF THE TOP OF THE WALL. * REBAR SHALL BE POSITIONED AT THE TENSION FACE OF THE WALL (2" FROM THE INSIDE * REINFORCEMENT SHALL LAP A MINIMUM OF 24 INCHES AT ENDS, SPLICES, AND AROUND ** HORIZONTAL REINFORCEMENT SHALL BE INSTALLED ON THE COMPRESSION SIDE (SOIL

© 2020 HD ENGINEERING & DESIGN

THIS DOCUMENT CONTAINS



THIS DOCUMENT CONTAINS



