

ALL CONSTRUCTION SHALL CONFORM TO 2018 INTERNATIONAL RESIDENTIAL CODE OR ATTACHED ENGINEER SPECIFICATIONS WHERE APPLICABLE.

ELEVATIONS:

GARAGE DOORS SHALL MEET DASMA FOR ULTIMATE DESIGN WIND SPEED OF 115 MPH REQUIREMENTS. WALL FRAMING SHALL BE DOUGLAS FIR LARCH #2 UNLESS OTHERWISE NOTED. IN BEARING WALLS, STUDS WHICH ARE NOT MORE THAN TEN FEET IN LENGTH SHALL BE SPACED NOT MORE THAN IS SPECIFIED BY IRC TABLE R602.3(5) FOR

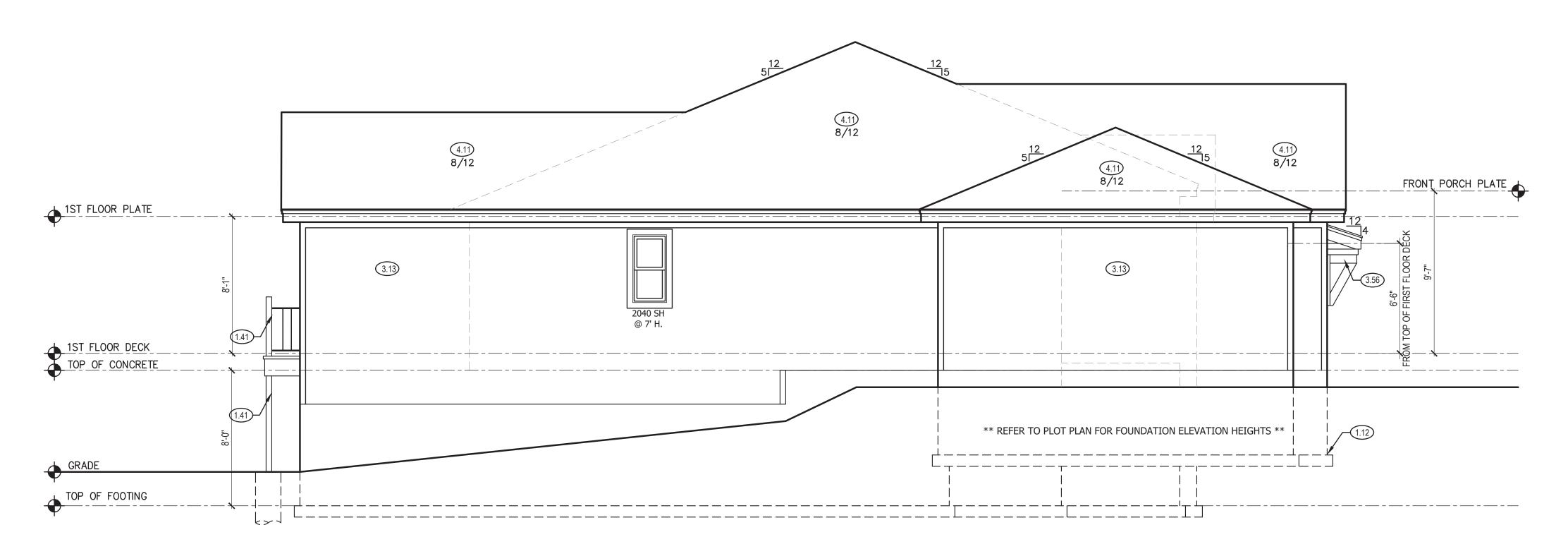
CORRESPONDING STUD SIZE. WATER-RESISTIVE EXTERIOR WALL BARRIER IN WALL SECTION SHALL COMPLY WITH IRC R703.2. WHEN APPLICABLE, CONTINUOUS STUDS BETWEEN FLOOR AND ROOF/CEILING DIAPHRAGM SHALL COMPLY WITH IRC R602.3.

ALL UNMARKED HEADERS SHALL BE A MINIMUM #2 DOUGLAS FIR LARCH (2) 2 X 10 ON LOAD BEARING WALLS.

SHIPLAP SIDING MUST BE FASTENED AT BOTH UNDERLAP AND OVERLAP.



	FRONT & REAR ELEVATION NOTES 1.12 TOP OF FOOTING DEPTH DETERMINED PER SITE.	CPG DBA
	<ol> <li>1.41 4X4 CEDAR POST</li> <li>2.61 5/4"X8" TRIM. 1 1/2" ARCH ON GARAGE DOOR TRIM UNLESS NOTED OTHERWISE ON ELEVATION.</li> <li>3.11 LAP SIDING WITH 5/4X6 TRIM AROUND DOORS, WINDOWS, AND CORNERS UNLESS NOTED OTHERWISE.</li> </ol>	clover
	<ul> <li>3.15 BOARD AND BATTEN.</li> <li>3.17 MANUFACTURED STONE VENEER.</li> <li>3.18 CAST STONE CAP</li> </ul>	<b>hive</b> 120 SE 30TH ST.
	<ul> <li>3.56 CUSTOM BRACKET, RE: DETAIL 3/A1</li> <li>3.57 26"X6" CEDAR BRACKET, RE: 4/A1</li> <li>3.62 CEDAR SHUTTERS. ALL SHUTTERS TO BE 18" WIDE USING (3) 2X6 BOARDS.TRIM TO BE INSTALLED</li> </ul>	LEE'S SUMMIT, MO 64082 816-246-6700
	<ul> <li>4.11 MINIMUM ROOFING COMPOSITION – 30 YR COMPOSITE SHINGLES ON 15# FELT ON 1/2" OSB SHEATHING OR AS REQUIRED BY CODE.</li> </ul>	COPYRIGHT 2020 THIS DRAWING HAS BEEN PREPARED BY CLOVER AND HIVE, OR UNDER THEIR DIRECT SUPERVISION AS AN INSTRUMENT OF SERVICE AND IS INTENDED FOR USE ONLY ON THIS PROJECT. ALL DRAWINGS, SPECIFICATIONS, AND DESIGNS, INCLUDING THE OVERALL LAYOUT, FORM, AND COMPOSITION OF
	4.13 STANDING SEAM METAL ROOF. INSTALL PER CODES AND MANUFACTURER'S RECOMMENDATION.	SPACES ARE PROTECTED BY COPYRIGHT REGISTERED TO CPG, INC. ANY REPRODUCTION, USE, OR DISCLOSURE OF THE INFORMATION CONTAINED HEREIN WITHOUT THE WRITTEN CONSENT FROM CPG, INC. D/B/A SUMMIT HOMES EXCEPT AS REQUIRED FOR BIDDING AND CONSTRUCTION OF THIS PROJECT IS STRICTLY PROHIBITED.
		ADDRESS: 3534 SE CORBIN DR LEE'S SUMMIT, MO
		LO USE EK #156
		TUPEI FARMHOU BEY CREE
$\frac{\text{FRONT ELEVATION}}{\text{SCALE: } 1/4' = 1'-0'}$		COBE
	<u>GENERAL NOTES</u> DIMENSIONAL LUMBER IS LABELED PER INDUSTRY STANDARD	
	TERMINOLOGY. ACTUAL LUMBER SIZING IS EXPECTED TO VARY PER VENDOR. WINDOW SIZES ARE WRITTEN IN FEET AND INCHES PER INDUSTRY STANDARDS. EX: 3050 SH = 3'-0" X 5'-0" SINGLE	
	HUNG, 3066 FIX = 3'-0" X 6'-6" FIXED.	PROFESSIONAL SEAL:
	A1. FRONT AND REAR ELEVATION A2. LEFT AND RIGHT ELEVATION	CHRISTOPHER ALEY PAUL
	A3. FOUNDATION FLOOR PLAN A4. MAIN LEVEL PLAN A5. UPPER LEVEL PLAN	DAVIS NUMBER PE-2015016986 01/05/2022 ONAL ENCIDENT
	A6. ROOF PLAN	Digitally signed by Chris Davis, PE Date: 2022.01.05 16:15:44 -06'00'
	FINISHEDMAIN FLOOR1361FINISHED STAIRS TO LOWER LEVEL33	
	TOTAL 1394	
	UNFINISHEDLOWER LEVEL - UNFINISHED1170DECK120	DRAWN BY: C.HOOPER
	GARAGE 660 ENGINEER TRUSS I-JOIST	ISSUE DATE:
RELEASE FOR CONSTRUCTION	EVERSTEAD BFS N/A	12.01.21
AS NOTED ON PLANS REVIEW Development Services LEE'S SUMMIT, MISSOURI	REVISIONS NO. DATE DESCRIPTION	SHEET NUMBER:
$\frac{\text{REAR ELEVATION}}{1}$		<b>A1.0</b>
SCALE: 1/4" = 1'-0"		



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ELEVATIONS:

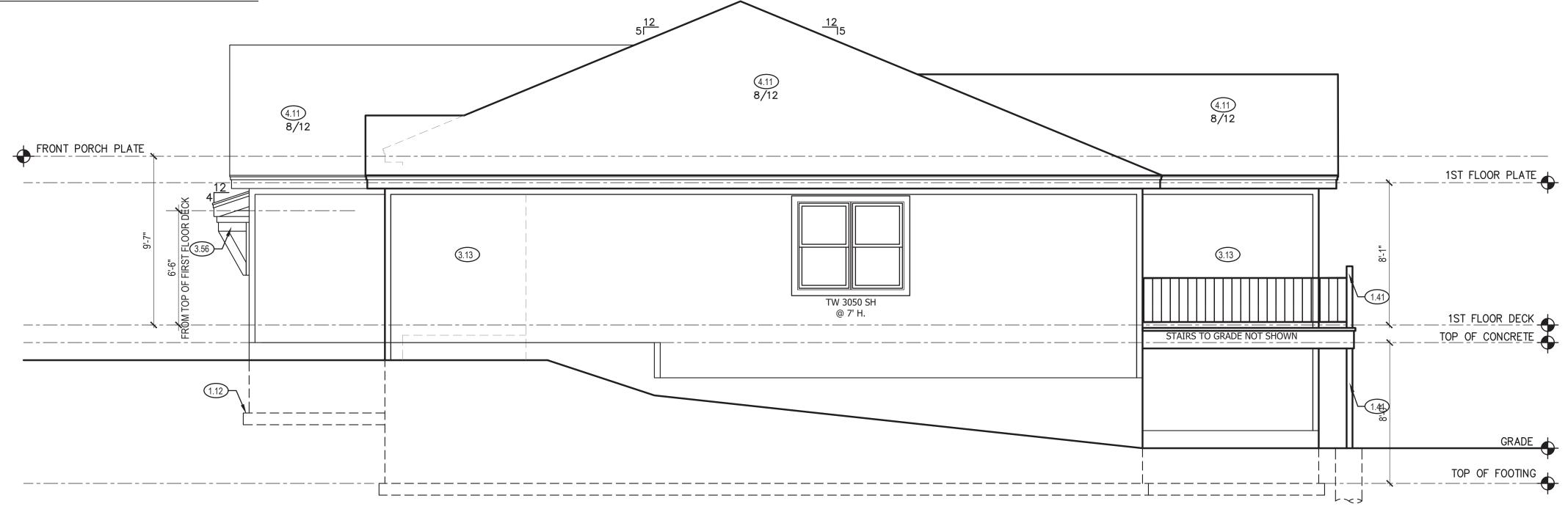
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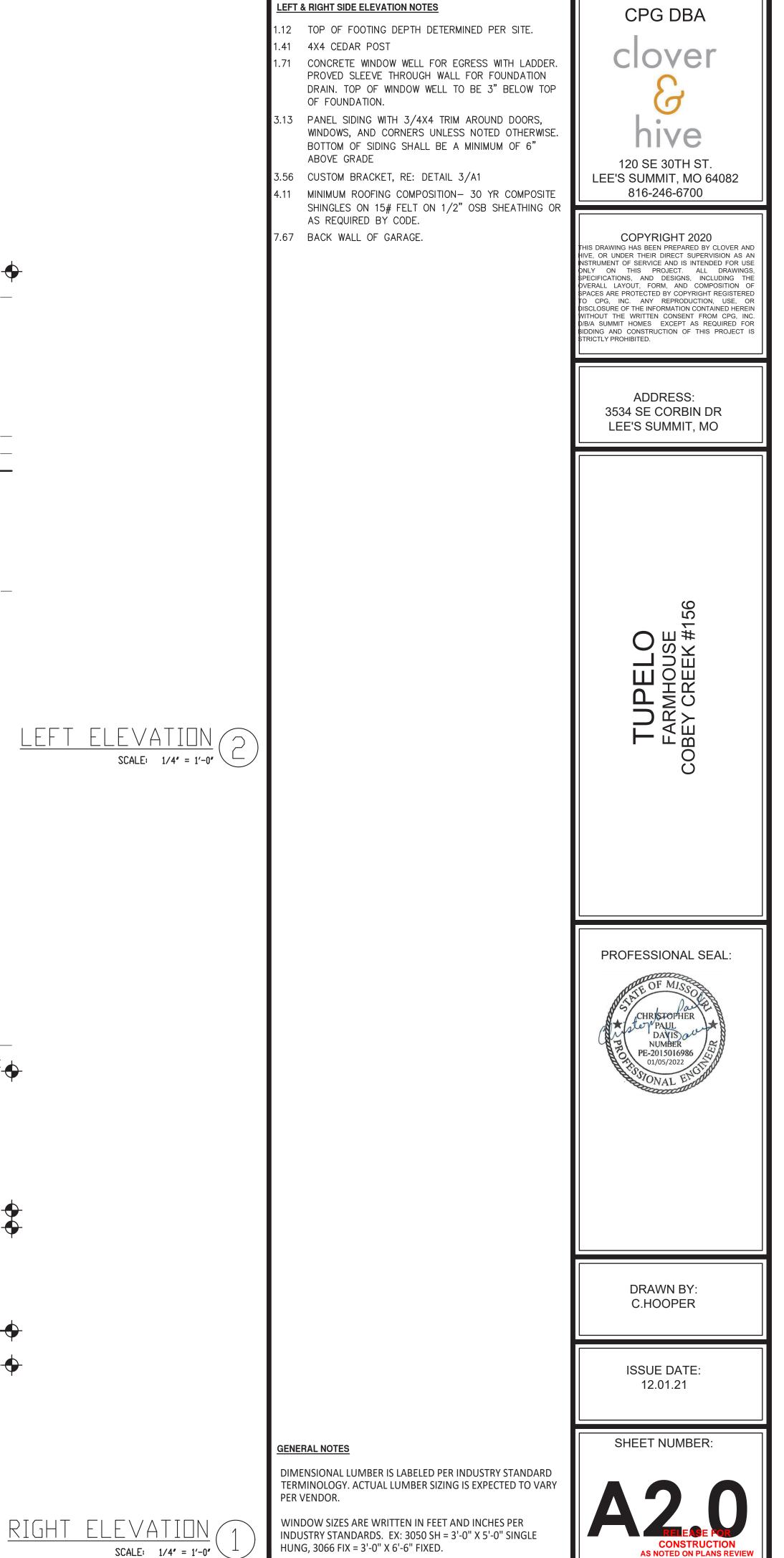
CORRESPONDING STUD SIZE. WATER-RESISTIVE EXTERIOR WALL BARRIER IN WALL SECTION SHALL COMPLY WITH IRC R703.2.

WHEN APPLICABLE, CONTINUOUS STUDS BETWEEN FLOOR AND ROOF/CEILING DIAPHRAGM SHALL COMPLY WITH IRC R602.3.

ALL UNMARKED HEADERS SHALL BE A MINIMUM #2 DOUGLAS FIR LARCH (2) 2 X 10 ON LOAD BEARING WALLS.

SHIPLAP SIDING MUST BE FASTENED AT BOTH UNDERLAP AND OVERLAP.





HUNG, 3066 FIX = 3'-0" X 6'-6" FIXED.

ALL CONSTRUCTION SHALL CONFORM TO 2018 INTERNATIONAL RESIDENTIAL CODE OR ATTACHED ENGINEER SPECIFICATIONS WHERE APPLICABLE.

FOUNDATION NOTES: ALL FOOTINGS MEET OR EXCEED MINIMUM FROST DEPTH OF 36".

SOIL BEARING CAPACITY SHALL BE 1500 PSF. COMPRESSIVE STRENGTH OF CONCRETE F'C COMPRESSIVE STRENGTH SHALL BE AS SPECIFIED IN IRC TABLE R402.2. REQUIRED AIR ENTRAINMENT SHALL BE 5-7%. ALL FOUNDATION WALLS ENCLOSING BELOW GRADE SPACE SHALL BE DAMPPROOFED. DAMPPRROFING SHALL EXTEND FROM THE EDGE OF THE FOOTING TO THE FINISHED GRADE (R-406.1). METHOD OF DAMPPROOFING OR WATERPROOFING SHALL BE A MINIMUM 6-MIL THICK MOISTURE BARRIER OVER POROUS GRAVEL BASE UNDER BASEMENT FLOOR SLAB PER R405.2.2. LAP JOINTS SHALL BE A MINIMUM 6". FOUNDATION WALLS SHALL BE DAMPPROOFED PER IRC SECTION R406. FOUNDATION DRAINAGE WILL BE IN ACCORDANCE WITH WITH IRC SECTION R405.

BASEMENT EGRESS OPENINGS SHALL BE IN ACCORDANCE WITH IRC SECTION R310.1 ALL INTERIOR FOOTINGS OF LOAD BEARING WALLS AND COLUMNS SHALL BE

ISOLATED FROM THE BASEMENT FLOOR SLAB. ALL ANCHOR BOLTS SHALL NOT BE SPACED MORE THAN 3' O.C. AND BE EMBEDDED INTO THE CONCRETE A MINIMUM OF 7".

ALL UNMARKED HEADERS SHALL BE A MINIMUM #2 DOUGLAS FIR LARCH (2) 2 X 10 ON LOAD BEARING WALLS.

BACKFILL SHALL NOT BE PLACED AGAINST THE WALL UNTIL THE WALL HAS SUFFICIENT STRENGTH OR HAS BEEN SUFFICIENTLY BRACED TO PREVENT DAMAGE BY BACKFILL.

IF BASEMENT SLAB ELEVATION IS ABOVE GRADE CONSULT ENGINEER.

STEEL BEAM FLANGE WIDTH: W8 x 18- 5.25" W8X13 - 4"

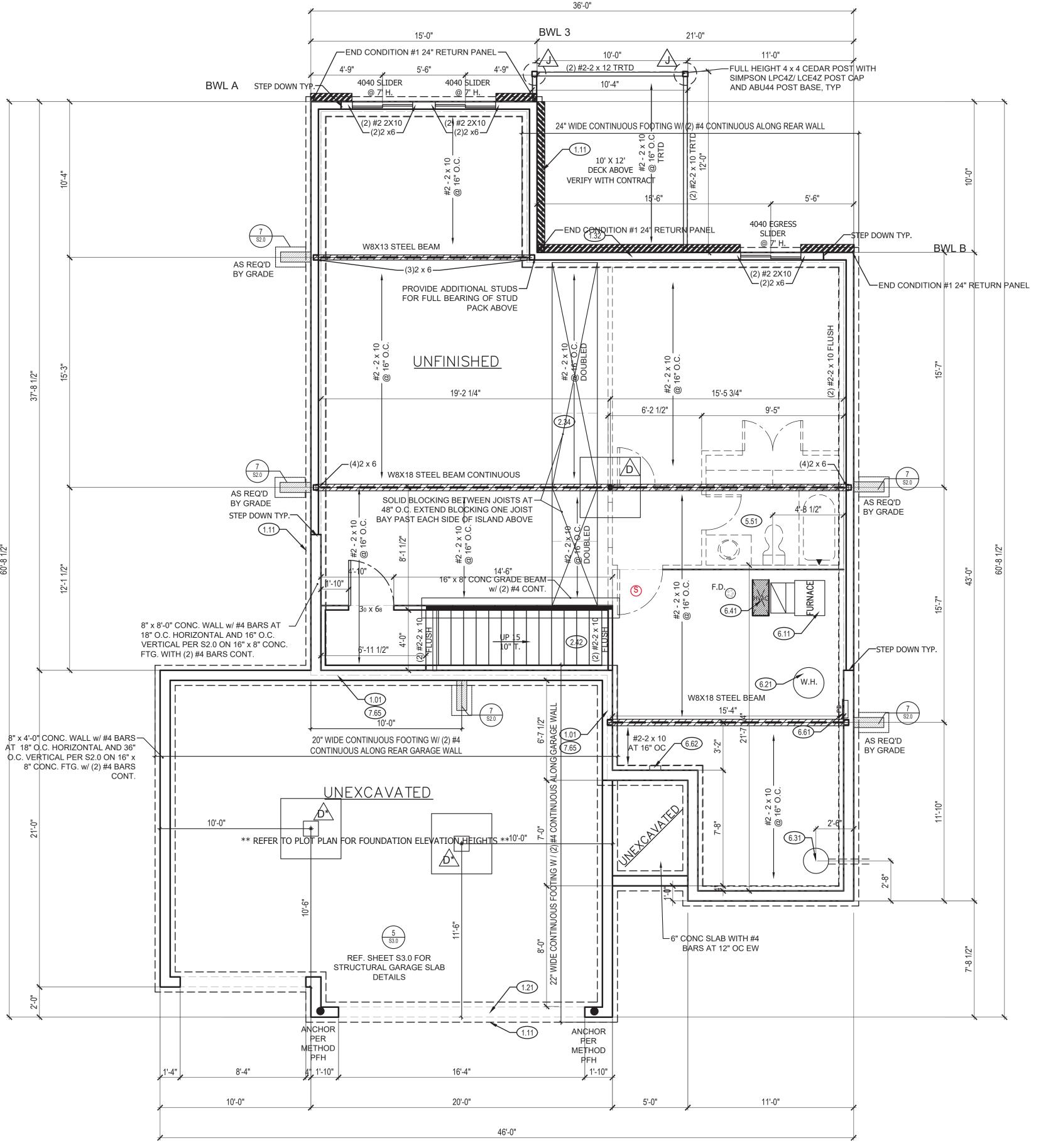
IS	ISOLATED FOOTINGS AND COLUMN PADS									
SYM	PIER PAD SIZE	DEPTH	MINIMUM REINFORCEMENT GRADE 60 KSI STEEL	SCHEDULE 40 STEEL COLUMN, MIN FY = 35 KSI						
	30″×30″	1'-0"	(5) #4 BAR E.W.	3″ DIAMETER						
B	36″×36″	1'-0"	(6) #4 BAR E.W.	3″ DIAMETER						
Â	42″×42″	1′-2″	(7) #4 BAR E.W.	3″ DIAMETER						
	48″×48″	1'-4″	(8) #4 BAR E.W.	3″ DIAMETER						
Æ	54″×54″	1'-4"	(9) #4 BAR E.W.	3″ DIAMETER						
F	60″×60″	1′-6″	(10) #4 BAR E.W.	3.5″ DIAMETER						
ANY	′SIZE FI	JOTING	WITH AN (*)	ND COLUMN NEEDED						

ISOLATED FOOTINGS AND COLUMN PADS

SYM PIER DEPTH MINIMUM REINFORCEMENT GRADE 40

	12″	3'-0"	(4) VERTICAL #4
	16″	3'-0"	(4) VERTICAL #4
	18″	3'-0"	(4) VERTICAL #4
k	24″	3'-0"	(4) VERTICAL #4
$\bigtriangleup$	28″	3'-0"	(4) VERTICAL #4

COLUMN AND PAD SIZES ARE FOR A MAXIMUM COLUMN HEIGHT OF 10'. COLUMNS GREATER THAN 10' REQUIRE A SEPARATE ENGINEERED DESIGN. FOOTINGS A-F SPACING OF 6" O.C. WITH 3" CLEAR COVER.



	.01 HOLD SILL PLATE BACK 4"	CPG DBA
1	.11 CONTINUOUS CONCRETE FOOTING	clover
	.21 RECESS TOP OF FOUNDATION WALL .32 2X6 STUD WALL WITH TREATED SILL PLATE	
1	.71 CONCRETE WINDOW WELL FOR EGRESS WITH LADDER. PROVED SLEEVE THROUGH WALL FOR FOUNDATION	G
	DRAIN. TOP OF WINDOW WELL TO BE 3" BELOW TOP OF FOUNDATION.	hive
	2.34 PROVIDE ADDITIONAL BRACING FOR ISLAND ABOVE. 2.42 FIRE RATED SHEETROCK UNDER STAIRS	120 SE 30TH ST.
5	5.51 DRAIN LINE ONLY FOR FUTURE USE. LOCATION TO BE MARKED WITH REBAR AND CUT FLUSH TO FLOOR	LEE'S SUMMIT, MO 64082 816-246-6700
6	FINISH. 5.11 DIRECT FURNACE. FUEL BURNING APPLIANCES SHALL	
Ŭ	BE DIRECT VENTED TO EXTERIOR FOR COMBUSTION AIR.	COPYRIGHT 2020 THIS DRAWING HAS BEEN PREPARED BY CLOVER AND HIVE, OR UNDER THEIR DIRECT SUPERVISION AS AN
6	5.21 HOT WATER HEATER WITH THERMAL EXPANSION CONTROL DEVICE	INSTRUMENT OF SERVICE AND IS INTENDED FOR USE ONLY ON THIS PROJECT. ALL DRAWINGS, SPECIFICATIONS, AND DESIGNS, INCLUDING THE OVERALL LAYOUT, FORM, AND COMPOSITION OF
6	5.31 SUMP PIT AND PUMP. PROVIDE ELECTRICAL GFCI PROTECTION. PROVIDE SLEEVE THROUGH FOOTING.	SPACES ARE PROTECTED BY COPYRIGHT REGISTERED TO CPG, INC. ANY REPRODUCTION, USE, OR DISCLOSURE OF THE INFORMATION CONTAINED HEREIN
	6.41 HVAC CHASE ABOVE	WITHOUT THE WRITTEN CONSENT FROM CPG, INC. D/B/A SUMMIT HOMES EXCEPT AS REQUIRED FOR BIDDING AND CONSTRUCTION OF THIS PROJECT IS STRICTLY PROHIBITED.
	5.61 200 AMP ELECTRICAL PANEL. LOCATION TO BE DETERMINED ON SITE.	
	5.62 UFER GROUND- VERIFY LOCATION WITH PROJECT MANAGER.	ADDRESS:
7	7.65 LINE OF FLOOR ABOVE	3534 SE CORBIN DR LEE'S SUMMIT, MO
		156
		Osn # #
		H H H H H H H H H H H H H H H H H H H
		TUPEL FARMHOU BBEY CREE
		O
		PROFESSIONAL SEAL:
		OF MISS
		CHRISTOPHER
		A Levy PAUL DAVIS auto NUMBER
		PE-2015016986
		ONAL EN
9	GENERAL NOTES	
	BACK WATER VALVES REQUIRED ON ALL BASEMENT PLUMBING FIXTURES. PROVIDE MEANS OF CONTROLLING PRESSURE	DRAWN BY:
	CAUSED BY THERMAL EXPANSION.	C.HOOPER
	ALL SILLS & SLEEPERS SUPPORTED ON CONCRETE OR MASONRY SHALL BE OF DECAY-RESISTANT MATERIALS.	
	DIMENSIONAL LUMBER IS LABELED PER INDUSTRY STANDARD TERMINOLOGY. ACTUAL LUMBER SIZING IS EXPECTED TO VARY PER VENDOR.	ISSUE DATE: 12.01.21
	ALL INTERIOR NON-LOAD BEARING, NON-BRACED, NON-CABINET WALLS ARE ALLOWED AT 24" O.C.	SHEET NUMBER:
	SMOKE AND CARBON MONOXIDE DETECTORS SHOW ON PLANS ARE TO BE CONSIDERED RECOMMENDATIONS ONLY. FINAL PLACEMENT IS TO BE DETERMINED BY MUNICIPAL REQUIREMENTS.	
PLAN(1)	WINDOW SIZES ARE WRITTEN IN FEET AND INCHES PER	A5U
	INDUSTRY STANDARDS. EX: 3050 SH = 3'-0" X 5'-0" SINGLE HUNG, 3066 FIX = 3'-0" X 6'-6" FIXED.	RELEASE FOR CONSTRUCTION AS NOTED ON PLANS REVIEW





R310.2

CHAPTER 11.

SECTION N1103.2.2)

OTHERWISE NOTED).

(UNLESS OTHERWISE NOTED).

<sup>7</sup>/<sub>16</sub>" THICK OSB FOR METHOD CS-PF.

FLOOR PLANS:

WITH IRC 507.

IS REQUIRED.

WALL PANELS.

SECTION R602.10.

GIRDER TRUSS BEARING:

FOUNDATION BELOW.

DETAILS AND NOTES:

WITH SECTION R612.2.

OF 10" (IRC 2018 R311.7.5.1).

DWELLING SEPARATION DOORS.

ALL CONSTRUCTION SHALL CONFORM TO 2018 INTERNATIONAL RESIDENTIAL CODE OR ATTACHED ENGINEER SPECIFICATIONS WHERE APPLICABLE.

FIR LARCH (2) 2 X 10 ON LOAD BEARING WALLS.

ALL UNMARKED HEADERS SHALL BE A MINIMUM #2 DOUGLAS

BASEMENT EGRESS WINDOWS ARE TO COMPLY WITH IRC

WINDOW FALL PROTECTION REQUIREMENTS TO COMPLY

STAIRS SHALL COMPLY WITH IRC R311.7. THE MAXIMUM

RISER HEIGHT OF STAIRWAYS SHALL NOT EXCEED 7-3/4"

SELF CLOSING DEVICES ARE REQUIRED FOR GARAGE TO

STEEL COLUMNS WILL BE A MINIMUM OF SCHEDULE 40.

ENERGY REQUIREMENTS SHALL CONFORM TO THE IRC

AN ACCESSIBLE CONNECTION POINT WILL BE PROVIDED TO

A 20 FOOT CONCRETE ENCASED ELECTRODE (FOOTING

CARBON MONOXIDE DETECTORS WILL BE PROVIDED IN

THE BUILDING THERMAL ENVELOPE IS REQUIRED TO BE

DUCTS, AIR HANDLERS, FILTER BOXES AND BUILDING

CAVITIES USED AS DUCTS SHALL BE SEALED (2018 IRC

SEALED(2018 IRC SECTION N1102.4.1 AND TABLE N1102.4.1.1).

LEDGERS(FLOOR AND CEILING) SHALL BE IN ACCORDANCE

ALL CANTILIEVERS SHALL HAVE AT LEAST A 3:1 BACK SPAN.

A MINIMUM OF DOUBLE JOIST UNDER EACH BEARING WALL

STUDS AT 16" O.C. FULL HEIGHT CONTINUOUS (UNLESS

ALL WALLS 12' AND OVER SHALL BE DOUGLAS FIR #2 (M-12)

UMBER 2x6 STUDS AT 16" O.C. FULL HEIGHT CONTINUOUS

EXTERIOR WALL SHEATHING SHALL BE AS FOLLOWS:

<sup>3</sup>/<sub>8</sub>" THICK OSB FOR METHODS: WSP, CS-WSP AND PFH

SPECIFIED THICKNESS OF OSB SHALL BE INSTALLED

UNDERNEATH LP LAP SIDING AND/OR ENGINEERED BRACED

LP PANEL SIDING - 7/16" GROOVED SHALL BE EQUIVALENT

TO  $\frac{3}{8}$ " THICK OSB. OSB MAY BE OMITTED UNDERNEATH 7/16" GROOVED PANEL SIDING IN AREAS REQUIRING  $\frac{3}{8}$ " THICK OSB.

INSTALL FASTENERS AND NAILING PATTERN PER 2018 IRC

MIN. STUD PACK OF (4) 2 x 4 OR (4) 2 x 6 DOUGLAS FIR

LARCH #2 (DEPENDING ON WALL THICKNESS) BELOW EACH

PROVIDE 2X SOLID BLOCKING SUPPORT BELOW ALL POINT LOADS CONTINUOUS TO BEARING STRUCTURE AND/OR

LVL'S SHALL BE: BOISE CASCADE VERSA-LAM 3100 FB

GLU-LAMS SHALL BE: DF 24F-V4 - WESTERN

PROVIDE FULL BEARING FOR OPTION SELECTED

BEARING POINT OF EACH GIRDER TRUSS, UNLESS OTHERWISE NOTED. STUD PACKS SHALL BE CARRIED DOWN TO FOUNDATION OR LOAD SUPPORTING MEMBER.

ALL WALLS UNDER 12' SHALL BE DOUGLAS FIR LARCH #2 2X4

REBAR) FOR THE ELECTRICAL SERVICE GROUNDING

SECURITY SHALL CONFORM TO IRC R326/KCBRC.

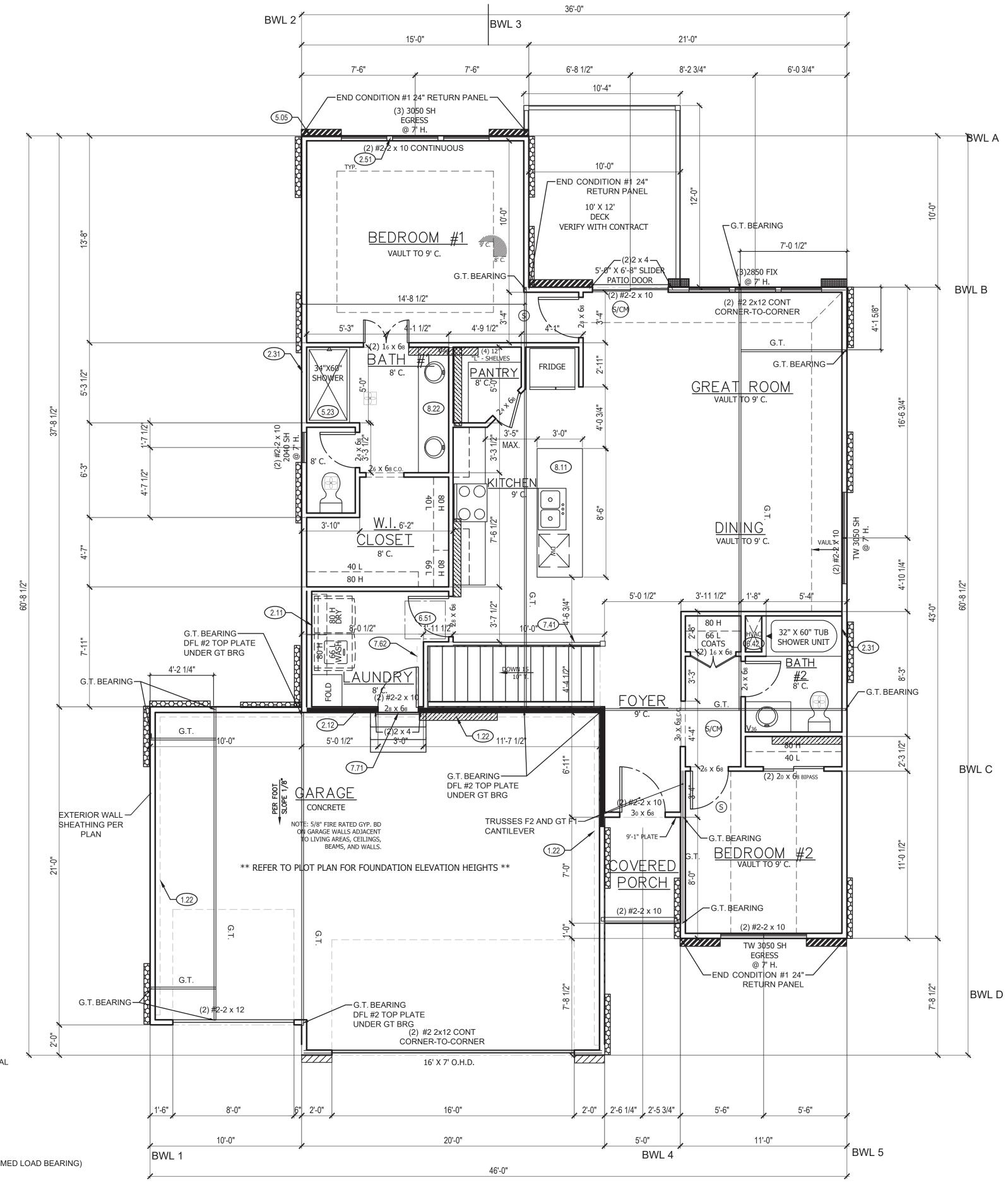
ELECTRODE CONDUCTOR (UFER GROUND).

ACCORDANCE WITH IRC SECTION R315.

AND THE TREADS SHALL PROVIDE A MINIMUM TREAD DEPTH

NO12

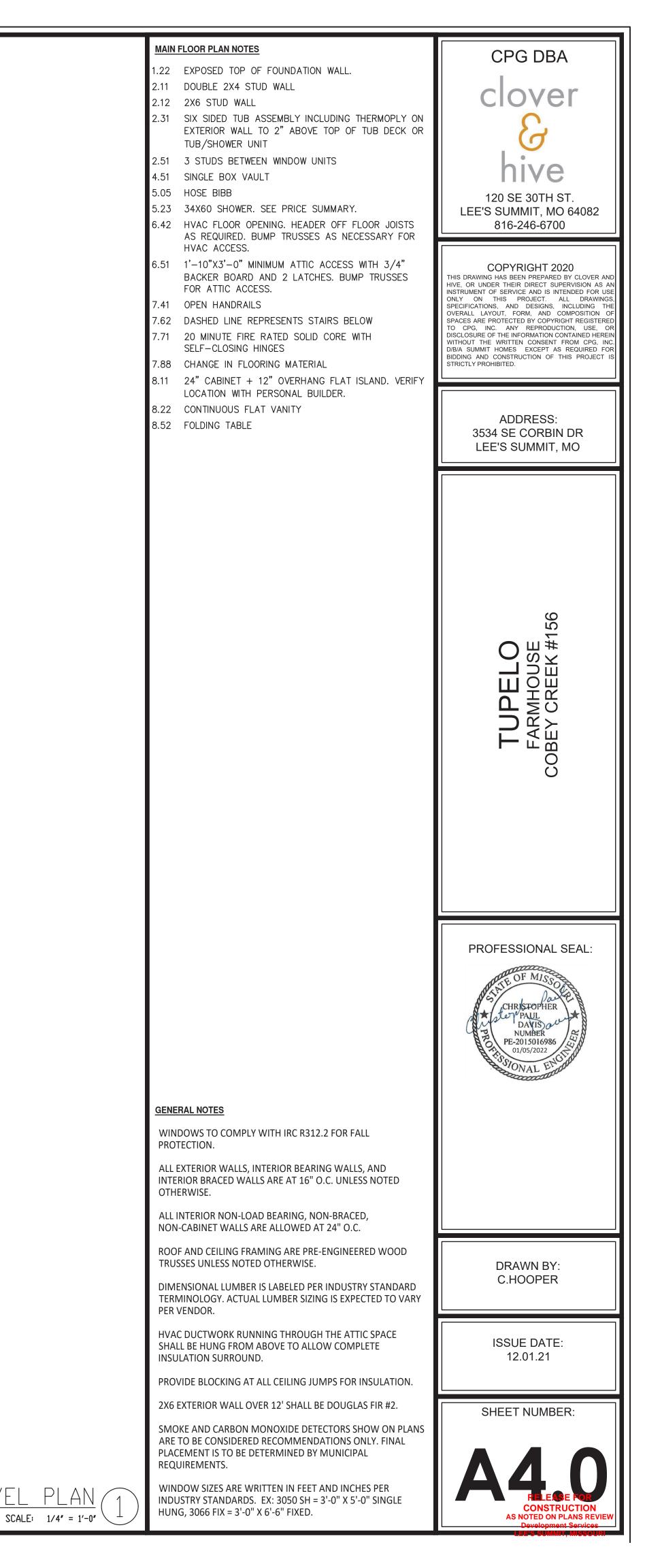
	IRC TABLE N1102.1.2 (R402.1.2) INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT (PARTIAL)										
CLIMATE ZONE	FENESTRATION U-FACTOR⁵	SKYLIGHT <sup>♭</sup> U-FACTOR	GLAZED FENESTRATION SHGC <sup>b,e</sup>	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUÉ	FLOOR R-VALUE	BASEMENT <sup>°</sup> WALL R-VALUE	SLAB R-VALUE	CRAWL SPAC⊾ WALL R−VALUE	
4 EXCEPT MARINE	,32	.55	.40	49	20 DR 13+5	8/13	19	10/13	10, 2 FT	10/13	

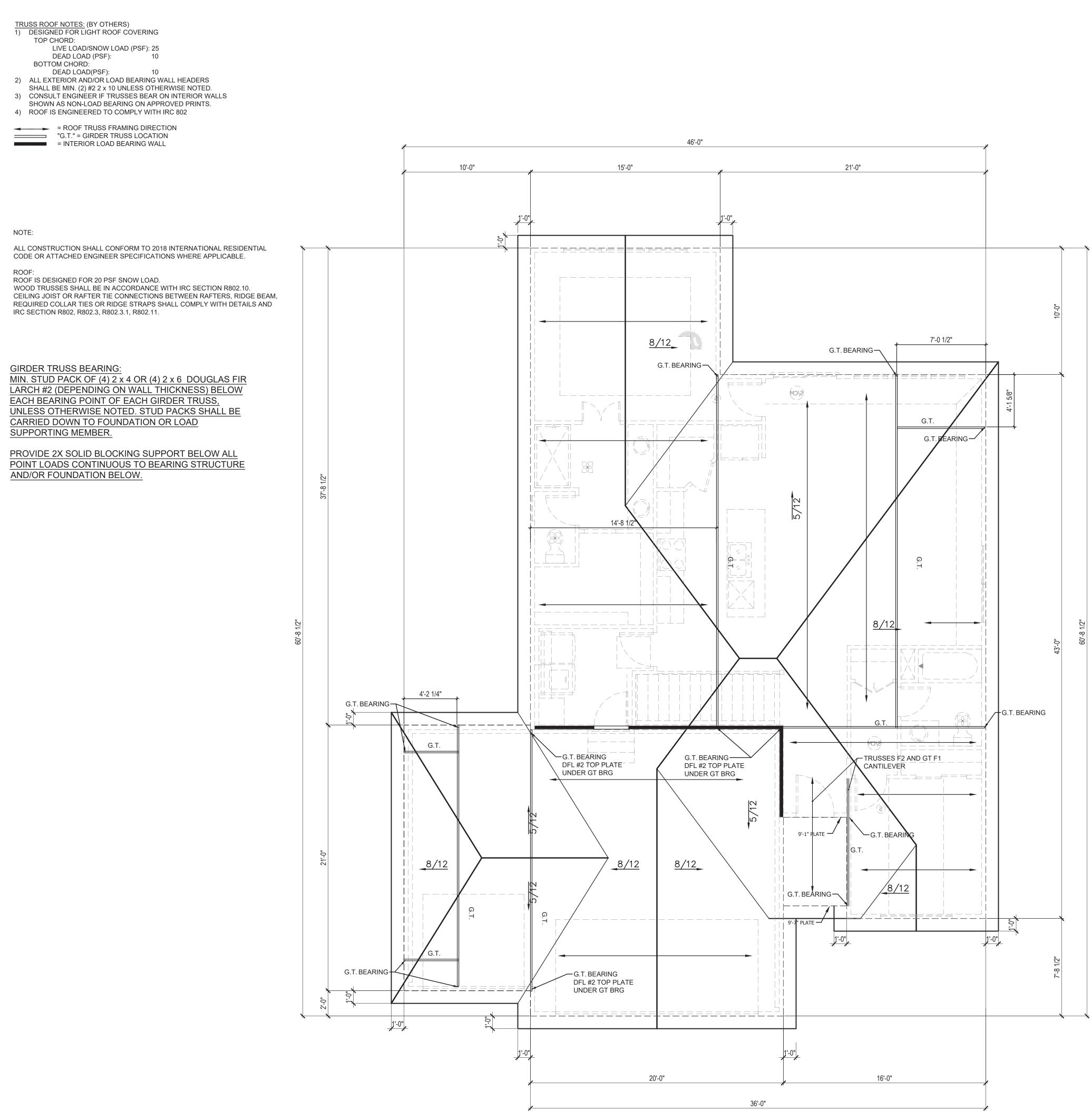


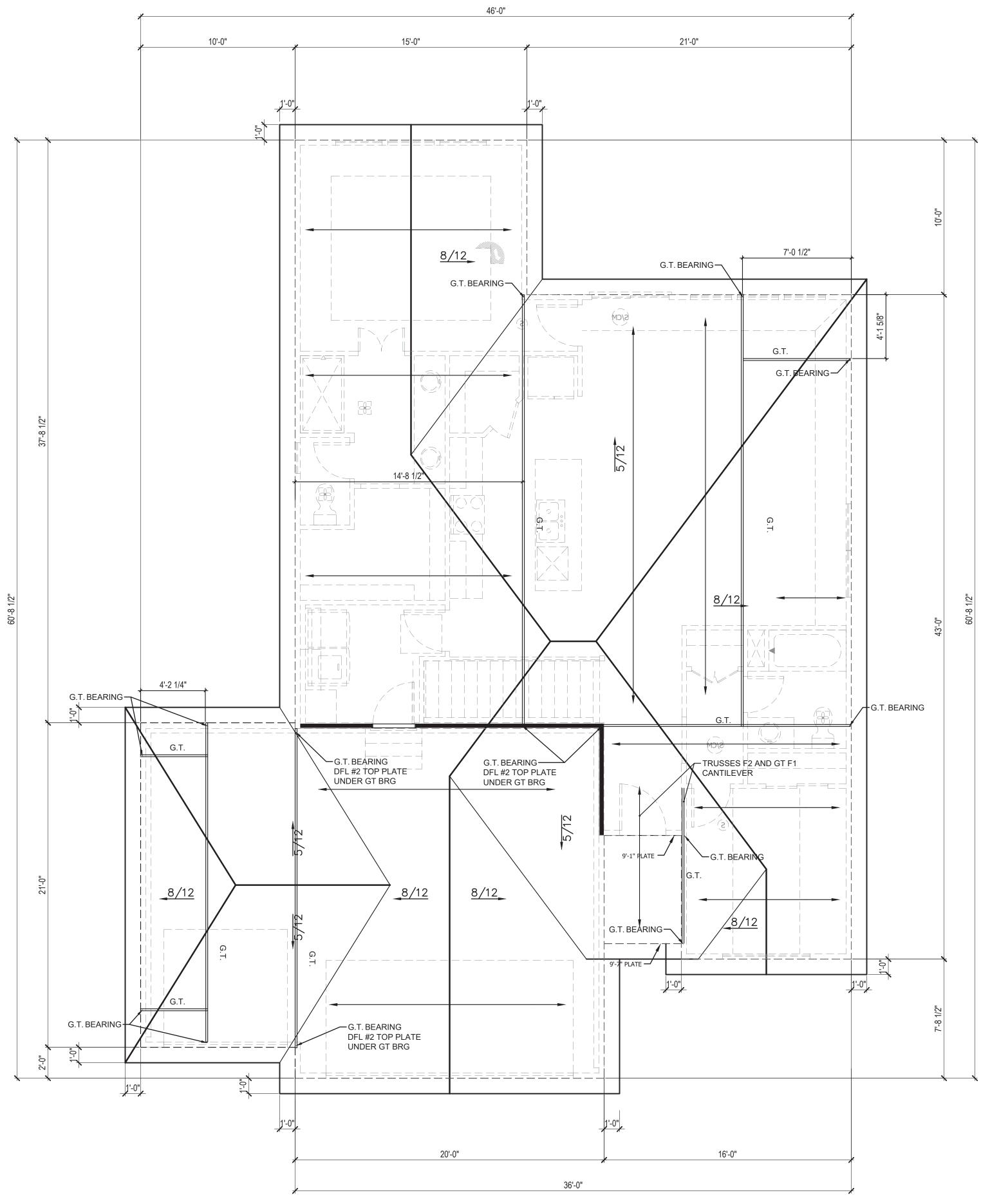
BRACING METHODS	
EXTERIOR BRACING CS-PF PER IRC R602.10 FOR CS-PF ABOVE: WOOD STRUCTURAL PANEL SHEATHING CONTINUOUS OVER BAND JOIST OR RIM JOIST WITH MINIMUM LAP OF 9-1/4". ATTACH SHEATHING WITH MINIMUM 8D COMMON NAILS AT 3" O.C. AT TOP AND BOTTOM OF BAND/RIM JOIST.	
EXTERIOR BRACING CS-WSP PER IRC R602.10	
EXTERIOR BRACING WSP PER IRC R602.10 (INCLUDES PARTIAL PANELS PER IRC R602.10.5.2) INTERIOR BRACING LIB PER IRC R602.10	*
MINIMUM LIB LENGTH PER 2018 IRC TABLE R602.10.5: 55" - 8' TALL WALL HEIGHT 62" - 9' TALL WALL HEIGHT 69" - 10' TALL WALL HEIGHT	
EXTERIOR BRACING PFH (SEE DETAILS) PER IRC R602.10.5	

INTERIOR LOAD BEARING WALL (EXTERIOR WALLS ARE ASSUMED LOAD BEARING)

MAIN







**ROOF PLAN NOTES** CPG DBA 4.11 MINIMUM ROOFING COMPOSITION- 30 YR COMPOSITE SHINGLES ON 15# FELT ON 1/2" OSB SHEATHING OR clover AS REQUIRED BY CODE. 4.13 STANDING SEAM METAL ROOF. INSTALL PER CODES AND MANUFACTURER'S RECOMMENDATION. 4.31 BUILD CRICKET VALLEY AWAY FROM INTERSECTION FOR POSITIVE DRAINAGE. hive 120 SE 30TH ST. LEE'S SUMMIT, MO 64082 816-246-6700 COPYRIGHT 2020 THIS DRAWING HAS BEEN PREPARED BY CLOVER AND HIVE, OR UNDER THEIR DIRECT SUPERVISION AS AN INSTRUMENT OF SERVICE AND IS INTENDED FOR USE ONLY ON THIS PROJECT. ALL DRAWINGS, SPECIFICATIONS, AND DESIGNS, INCLUDING THE OVERALL LAYOUT, FORM, AND COMPOSITION OF SPACES ARE PROTECTED BY COPYRIGHT REGISTERED TO CPG, INC. ANY REPRODUCTION, USE, OR DISCLOSURE OF THE INFORMATION CONTAINED HEREIN VITHOUT THE WRITTEN CONSENT FROM CPG. INC D/B/A SUMMIT HOMES EXCEPT AS REQUIRED FOR IDDING AND CONSTRUCTION OF THIS PROJECT IS RICTLY PROHIBITED. ADDRESS: 3534 SE CORBIN DR LEE'S SUMMIT, MO  $\mathbf{O}$ S TUPEI FARMHOU BEY CREE PROFESSIONAL SEAL: DAVIS PE-2015016986 GENERAL NOTES ROOF AND CEILING FRAMING ARE PRE-ENGINEERED ROOF TRUSSES. DRAWN BY: ASPHALT SHINGLES MIN 2/12. FLASH ALL PENETRATIONS AND INTERSECTIONS. C.HOOPER VENT EACH ENCLOSED ATTIC SPACE. NET AREA OPENING = 1/50TH OF VENTED AREA OR 1/300TH IF 580% OF VENTING NEAR TOP. ISSUE DATE: BUILD CRICKET VALLEY AWAY FROM INTERSECTION FOR 12.01.21 POSITIVE DRAINAGE. SEE FRAMING SPECIFICATIONS FOR DETAILS. DIMENSIONAL LUMBER IS LABELED PER INDUSTRY STANDARD TERMINOLOGY. ACTUAL LUMBER SIZING IS EXPECTED TO VARY SHEET NUMBER: PER VENDOR. HVAC DUCTWORK RUNNING THROUGH ATTIC SHALL BE HUNG FROM ABOVE TO ALLOW COMPLETE INSULATION SURROUND. PROVIDE BLOCKING AT ALL CEILING JUMPS FOR INSULATION. PROVIDE FOAM INSULATION AT EXTERIOR WHERE MAIN LEVEL ROOF LINE MEETS UPPER LEVEL WALLS. AS NOTED ON PLANS REVIEW

<u>Roof</u> Plan

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

### GENERAL NOTES

PLANS SHALL COMPLY WITH THE 2018 INTERNATIONAL RESIDENTIAL CODE (IRC) WITH AMENDMENTS AS ADOPTED BY THE APPROPRIATE GOVERNING JURISDICTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IF ANY CHANGES OR DEVIATIONS FROM THE PLAN ARE MADE DURING CONSTRUCTION. THE ENGINEER OF RECORD MAY REQUIRE REVISED DRAWING OR CALCULATIONS AT ITS DISCRETION.

IF DISCREPANCIES ARE IDENTIFIED THE MOST CONSERVATIVE SPECIFICATION SHALL APPLY.

LOADING

DEAD		
LIGHT ROOF	10 PSF	
HEAVY ROOF	+10 PSF	(CONCRETE, SLATE, TILE)
ROOF + CEILING (NO STORAGE)	15 PSF	
ROOF + CEILING (STORAGE)	20 PSF	
CEILING JOISTS (STORAGE)	10 PSF	
EXTERIOR BACONIES / DECK	10 PSF	
INTERIOR FLOOR (MAIN FLOOR)	15 PSF	
INTERIOR FLOOR (UPPER FLOORS)	10 PSF	
8" THICK MASONRY WALL	80 PSF	
6" THICK MASONRY WALL	85 PSF	
EXTERIOR LIGHT FRAMED WOOD WALLS	15 PSF	
INTERIOR LIGHT FRAMED WOOD WALLS	10 PSF*	
*(INTERIOR WALLS II	NCLUDED IN	15 PSF DEAD LOAD)
LIVE		

ROOF LIVE LOAD	15 PSF	
FLOOR LIVE LOAD	40 PSF	(HABITABLE)
GARAGE	50 PSF	
STORAGE	20 PSF	(UN-INHABITABLE)
GUARDRAIL		
CONTINUOUS LINEAR	50 PLD	
MAXIMUM POINTLOAD	200 LBS	
SNOW		
GROUND SNOW LOAD	20 PSF	
WIND		

ULTIMATE DESIGN WIND SPEED VELOCITY 115 MPH EXPOSURE CATEGORY

SOIL AND SITE ASSUMPTIONS:

- FOUNDATION DESIGN ASSUME A MINIMUM SOIL BEARING PRESSURE FOR THE SITE OF 1,500 PSF CONTRACTOR TO VISUALLY INSPECT SITE OR PROVIDE GEOTECHNICAL INVESTIGATION TO VERIFY MINIMUM ACCEPTABLE SOIL CONDITIONS SW, SP, SM, SC, GM, AND GX AS DEFINED PER IRC TABLE R301.5. THE CONTRACTOR IS RESPONSIBLE FOR ANY SOIL CONDITION THAT DOES NOT MEET THE MINIMUM REQUIREMENTS AND CONTACTING THE ENGINEER OF RECORD.
- 2. PROVIDE A MINIMUM SOIL COVER OF <u>36 INCHES</u> MEASURED FROM THE BOTTOM OF CONCRETE ON ALL FOUNDATIONS.
- ACCESSORY STRUCTURES WITH AN EAVE HEIGHT LESS THAN 10'-0" AND AN AREA LESS THAN 600 FT<sup>2</sup> MAT PROVIDE A MINIMUM SOIL COVER OF 12 INCHES MEASURED FROM THE BOTTOM OF CONCRETE.
- 4. SITE GRADING SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM THE STRUCTURE AT A MINIMUM OF 0.5%.
- 5. LATERAL SOIL PRESSURES
- ACTIVE 30 PSF AT-REST 60 PSF

PASSIVE 150 PSF

### FOUNDATION NOTES:

FOUNDATION ANCHORAGE (IRC 403.1.6)

SILL PLATES SHALL BE BOLTED TO THE FOUNDATION WALL WITH A MINIMUM 1/2" DIAMETER ANCHOR BOLTS EMBEDDER AT LEAST 7" INTO THE CONCRETE. BOLTS SHALL BE SPACED NO GREATER THAN 6' 0.C. THERE SHALL BE A MINIMUM OF TWO BOLTS PER PLATE SECTION, WITH A BOLT PLACED WITHIN 12" AND NOT CLOSER THAN 7 BOLT DIAMETERS, OF THE END OF EACH PLATE SECTION. A PROPERLY SIZED NUT AND WASHER SHALL BE TIGHTENED ON EACH BOLT TO THE PLATE, (NOTE: 7" EMBEDMENT + 1-1/2" SILL PLATE + 3/4" FOR NUT AND WASHER EXCEEDS A 9" LONG BOLT.)

WALL BRACING METHODS PER IRC R602 MAY REQUIRE ADDITIONAL ANCHORAGE.

CONCRETE SLABS PLACED ON FILL MATERIAL WHICH EXCEEDS 24" OF COMPACTED GRANULATED MATERIAL (SAND OR GRAVEL) OR 8" OF EARTH: THIS MAY OCCUR AT GARAGE FLOOR FILLS, OR OVER EXCAVATED AREAS UNDER FLOOR SLABS. THE DESIGN AND INSTALLATION DETAILS IN THIS DOCUMENT (WHERE APPLICABLE BASED ON SIZE AND SPACING LIMITATIONS) MAY BE USED IN LIEU OF PROVIDING A SEPARATE DESIGN. STRUCTURAL SLABS EXCEEDING THE SPANS AND CONDITIONS OF THE APPROVED DETAILS SHALL BE DESIGNED BY A

SLABS AT MAX 4' OVER-DIG ADJACENT TO FOUNDATION WALL: WHERE SOIL IS EXCAVATED FOR A MAXIMUM DIMENSION OF 4' HORIZONTALLY ADJACENT TO A FOUNDATION WALL, THE STANDARD OVER-DIG DETAIL MAY BE USED IN LIEU OF A COMPLETE STRUCTURAL SLAB. SEE "TYPICAL FOOTING/FOUNDATION WALL/STANDARD SLAB AT MAX 4' OVER-DIG DIAGRAM FOR DETAILS.

### VAPOR RETARDER / BARRIER (IRC R506.2.3)

PROFESSIONAL ENGINEER.

A 6 MIL POLYETHYLENE OR APPROVED VAPOR RETARDER WITH JOINTS LAPPED A MINIMUM OF 6" IS REQUIRED BETWEEN THE CONCRETE FLOOR SLAB AND THE BASE COURSE OR PREPARED SUBGRADE, (NOT REQUIRED FOR GARAGE SLABS OR DETACHED ACCESSORY BUILDINGS)

### FOUNDATION AND LOT GRADING (IRC R401.3)

GRADES SHALL BE SLOPED AWAY FROM THE FOUNDATION A MINIMUM OF 6" IN THE FIRST 10'. ALTERNATE APPROACHES MAY BE APPROVED IF THE ALTERNATE DESIGN IS EQUIVALENT IN EFFECTIVENESS AND PERFORMANCE, AND PROVIDES FOR POSITIVE SITE DRAINAGE.

IRC R403.1.4

- THE BOTTOM OF ALL FOOTINGS SHALL EXTEND NOT LESS THAN 36" BELOW GRADE FOR FROST
- PROTECTION. FOOTINGS FOR FREESTANDING ACCESSORY STRUCTURES WITH AN AREA OF 600 SF OR LESS AND AN EAVE HEIGHT OF 10' OR LESS SHALL EXTEND BELOW GRADE A MINIMUM OF 12".

### FOOTINGS:

MASONRY OR CONCRETE FOOTINGS, OR APPROVED STRUCTURAL SYSTEM TO SAFELY SUPPORT THE IMPOSED LOADS AND SHALL BE SIZED AND REINFORCED IN ACCORDANCE WITH THIS STANDARD OR THE STRUCTURE AND FROM ONE LEVEL TO THE NEXT. THE CONTINUOUS TRANSITIONS BETWEEN FOOTINGS AT DIFFERENT LEVELS ENCLOSING USABLE SPACE SHALL BE MADE BY APPROVED SOLID JUMPS OR SUPPORT SYSTEMS TO PROVIDE SAFE SUPPORT OF THE STRUCTURE. SEE "TYPICAL FOOTING/FOUNDATION WALLS/STANDARD SLAB AT MAXIMUM 4" OVER-DIG AND "FOOTING JUMP" DIAGRAMS FOR MORE DETAIL (PER KC, MO STANDARDS)

### <u>CONCRETE</u>

- 1. ALL CONCRETE CONSTRUCTION SHOULD CONFORM TO ACI 318-11 AND THE 2018 INTERNATIONAL RESIDENTIAL CODE.
- 2. THE MINIMUM CONCRETE 28 DAY COMPRESSIVE STRENGTH SHALL BE AS SPECIFIED IN IRC TABLE R402.2.
- 3. CONCRETE MIX TO UTILIZE A MAXIMUM WATER-CEMENT MATERIALS RATIO OF 0.45 FOR ALL APPLICATIONS. ALL CONCRETE TO HAVE MAXIMUM 0.10 PERCENT WATER SOLUBLE CHLORIDE CONTENT BY WEIGHT OF CEMENT. ADMIXTURES SHALL NOT CONTAIN ANY CHLORIDES.
- 4. CONCRETE POURED AGAINST AN EXISTING SURGACE SHOULD BE ROUGHENED TO A MINIMUM 1/4 INCH AMPLITUDE.
- 5. REBAR CLEAR DISTANCE SHALL BE AS FOLLOWS: -CAST AGAINST AND PERMANENT CONTACT WITH GROUND3 IN -EXPOSED TO WEATHER OR IN CONTACT WITH GROUND - NOT EXPOSED TO WEATHER OR GROUND
- 6. CONCRETE MIX DESIGN SHALL BE 6% (±1%) AIR-ENTRAINED FOR GARAGE SLABS, FOOTINGS, WALLS, OR FLATWORK EXPOSED TO WEATHER.
- 7. SHORING AND RESHORING: BEFORE CONCRETE STRENGTH REACHES 70% OF STRENGTH DETERMINED BY CYLINDERS OR 28

DAYS -SHORING MAY NOT BE REMOVED SOONER THAN RECOMMENDED BY ASTM 374-04 SECTION 3.7.2.3.

### MINIMUM STANDARDS

WALLS OR FLATWORK WHERE EXPOSED TO WEATHER. REBAR SHALL BE MINIMUM 60 KSI UNLESS NOTED OTHERWISE. REINFORCING BAR SHALL BE GRADE 60 MINIMUM.

### CONCRETE REINFORCEMENT STEEL

- 1. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60.
- 2. SMOOTH BARS OR WELDED WIRE FABRIC SHALL CONFORM TO ASTM 185.
- 3. ALL REBAR LAP SPLICES SHALL BE CLASS B LAP SPLICES AS SHOWN ON THE LAP SPLICE SCHEDULE.
- 4. DEVELOPMENT LENGTH NOTED IS EQUAL TO 80% OF THE LENGTH NOTED IN THE LAP SPLICE SCHEDULE.
- 5. 90% HOOK SHOWN IN DRAWINGS SHALL BE STANDARD PER ACI 318-14 -STRAIGHT EXTENSION LENGTH =  $12xØ_{BAR}$ -BEND DIAMETER =  $12XØ_{BAR}$
- 6. LAP SPLICE SCHEDULE (SEE TABLE 1.1)
- 7. HOOKED DOWELS:
- REINFORCING AND EXTENDED TO 3" CLEAR FROM BOTTOM OF FOUNDATION

- HOOK
- 10. TOP AND BOTTOM HORIZONTAL REINFORCING SHALL BE PLACED 1-1/2" TO 2" FROM THE TOP AND BOTTOM OF THE WALL

### FOOTNOTES:

- 1. WALL HEIGHT IS MEASURED FROM THE TOP OF THE WALL TO THE TOP OF THE FLOOR SLAB.
- 2. VERTICAL REINFORCEMENT FOR CONCRETE WALLS THAT ARE NOT FULL HEIGHT AND FOR SHALL HAVE VERTICAL REINFORCEMENT PLACE AS FOLLOWS:
- A. 8" WALL MINIMUM 5" FROM THE OUTSIDE FACE. B. 10" WALL - MINIMUM 6-3/4" FROM THE OUTSIDE FACE. C. EXTEND BARS TO WITHIN 8" OF THE TOP OF THE WALL.
- 3. HORIZONTAL REINFORCEMENT:
- A. ONE BAR SHALL BE PLACED WITHIN 12" OF THE TOP OF THE WALL. B. OTHER BARS SHALL BE EQUALLY SPACED WITH SPACING NOT TO EXCEED 24" O.C.

- CORNERS.

- BRACED RETURN WALLS. WALL LENGTH SHALL BE MEASURED USING INSIDE THE SHORTEST DIMENSION BETWEEN INTERSECTING WALLS (SEE TYPICAL DEAD MAN SECTION). TABLE 1.1

NORMAL WEIGHT CONCRETE LAP SPLICE SCHEDULE, IN										
BAR	BAR TOP BARS OTHER BARS									
SIZE	CASE 1	CASE 2	CASE 1	CASE 2						
#3	28	42	22	32						
#4	37	56	29	43						
#5	47	70	36	54						
#6	56	84	43	64						

# EXTERIOR WALLS, BEARING WALLS, COLUMN AND PIERS SHALL BE SUPPORTED ON CONTINUOUS SOLID SHALL BE ENGINEERED DESIGN. FOOTINGS UNDER FOUNDATION WALLS SHALL BE CONTINUOUS AROUND

2 IN 1.5 IN

-SHORING AND SUPPORTING FORMWORK SHALL NOT BE REMOVED FROM HORIZONTAL MEMBERS

## CONCRETE SHALL BE 6% (± 1%) AIR-ENTRAINED FOR GARAGE SLABS AND FOR ALL LOCATION'S FOOTINGS,

7.1. HOOKED DOWELS FROM FOUNDATIONS TO WALL SHALL BE PROVIDED TO MATCH VERTICAL WALL 7.2. HOOKED DOWELS MATCH SLAB REINFORCING FROM SLAB TO WALLS OR SLAB TO FOUNDATION

8. PROVIDE 2 - #5 BARS AROUND PERIMETER OF ALL SUSPENDED SLABS

9. HORIZONTAL WALL REINFORCING SHALL TERMINATE AT THE END OF THE WALL WITH A STANDARD

REINFORCEMENT SPACED 24" O.C. MAY BE PLACED IN THE MIDDLE OF THE WALL. OTHER WALLS

C. HORIZONTAL BARS SHOULD BE AS CLOSE TO THE TENSION FACE AS POSSIBLE (INTERIOR); AND BEHIND THE VERTICAL REINFORCEMENT (I.E. 2" TOWARD THE INSIDE). D. SUPPLEMENTAL REINFORCEMENT AT CORNERS - PLACE 1 #4 REBAR 48" LONG AT 45 DEGREE ANGLE AT CORNERS OF OPENINGS. PLACE REINFORCEMENT WITHIN 6" OF THE EDGE OF INSIDE

4. REINFORCEMENT SHALL BE LAPPED A MINIMUM 24" AT ENDS, SPLICES, AND AROUND CORNERS.

5. AT MASONRY LEDGES THE MINIMUM WALL THICKNESS SHALL BE 3-1/2". LEDGES SHALL NOT EXCEED A DEPTH OF MORE THAN 24" BELOW THE TOP OF THE WALL FOR WALL THICKNESS LESS THAN 4" PROVIDE #4 BARS AT MAXIMUM 24" O.C. TO WITHIN 8" OF THE TOP OF THE WALL.

6. STRAIGHT WALLS MORE THAN 5' TALL AND MORE THAN 16' LONG SHALL BE PROVIDED WITH EXTERIOR

### STEEL DECK - SUSPENDED SLABS

### 1. STEEL DECK QUALITY, FABRICATION, DELIVERY, INSTALLATION AND ATTACHMENT SHALL COMPLY WITH THE PROVISIONS OF THE STEEL DECK INSTITUTE, SDI.

STEEL ROOF DECK SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE ON CONSTRUCTION DRAWINGS:

- WIDE RIB CONFIGURATION
- 1.5" DEPTH 24GA DESIGN THICKNESS
- MAXIMUM SINGLE SPAN OF 4'-8" OR CONTINUOUS SPAN OF 5'-10"
- GALVANIZE PER ASTM A653 OR SHOP PRIME PER ASTM A1008
- ATTACH STEEL ROOF DECK TO SUPPORTS WITH #12 TEK AT 18" O.C. ATTACH STEEL ROOF DECK SIDELAPS WITH #10 TEK OR CRIMP/BUTTON PUNCH AT 36" O.C. OR
- MID-SPAN, WHICHEVER IS SMALLER
- 3. CONTRACTOR AND/OR DECK MANUFACTURER SHALL FURNISH ALL NECESSARY DECK CLOSURE ACCESSORIES TO PROVIDE A FINISHED SURFACE FOR THE APPLICATION OF ROOF INSULATION AND ROOF COVERING.
- 4. STEEL FLOOR DECK SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE ON CONSTRUCTION DRAWINGS:

STEEL DECK - SUSPENDED SLABS STEEL DECK QUALITY, FABRICATION, DELIVERY, INSTALLATION AND ATTACHMENT SHALL COMPLY WITH THE PROVISIONS OF THE STEEL DECK INSTITUTE, SDI.

CONTRACTOR AND/OR DECK MANUFACTURER SHALL FURNISH ALL NECESSARY DECK CLOSURE ACCESSORIES TO PROVIDE A FINISHED SURFACE FOR THE APPLICATION OF ROOF INSULATION AND ROOF COVERING STEEL FLOOR DECK SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE ON CONSTRUCTION DRAWINGS:

- 2" COMPOSITE DECK WITH 6" TOTAL SLAB THICKNESS 19GA DESIGN THICKNESS
- MAXIMUM SINGLE SPAN DURING CONSTRUCTION OF 8', 2 SPAN OF 10'-1", OR 3 SPAN OF 10'-5".
- MAXIMUM SPAN SHALL NOT EXCEED 12.5'. PROVIDE W2.1xW2.1 WELDED WIRE MESH OR #4 @ 12" O.C. EACH WAY. PROVIDE 2" REBAR
- COVER MEASURED FROM TOP OF THE SLAB GALVANIZE PER ASTM A653
- MINIMUM BEARING LENGTH AT EDGE SUPPORTS IS 2"
- MINIMUM BEARING LENGTH AT INTERIOR SUPPORTS IS 4" • ATTACH STEEL COMPOSITE FLOOR DECK TO SUPPORTS WITH 5/8" ARC PUDDLE WELDS AT 12" O.C. MECHANICAL FASTENERS EITHER POWDER ACTUATED, PNEUMATICALLY DRIVEN, OR SCREWS MAY BE USED IN LIEU OF WELDING PROVIDED THEY ARE APPROVED.
- ATTACH STEEL ROOF DECK SIDELAPS WITH #10 TEK OR CRIMP/BUTTON PUNCH AT 36" O.C. OR MID-SPAN, WHICHEVER IS SMALLER. CONTRACTOR AND/OR DECK MANUFACTURER SHALL FURNISH ALL NECESSARY POUR STOPS, COLUMN CLOSURES, END PLATES, AND COVER PLATES AS NEEDED.

STRUCTURAL STEEL

1. STEEL DESIGN, FABRICATION, AND ERECTION SHALL CONFORM WITH AMERICAN INSTITUTE OF STEEL CONSTRUCTION.

STEEL GRADE AND SPECIFICATION SHALL BE AS FOLLOWS:	
HOLLOW STRUCTURAL SECTIONS:	ASTM A500 (Fy = 46 KSI)
CHANNELS, PLATES AND ANGLES:	ASTM A36 (Fy = 36 KSI)
WIDE FLANGES:	ASTM A992 (Fy = 50 KSI)
COLUMNS:	ASTM A53 GR. B (Fy= 35 KSI)
ANCHOR RODS:	ASTM F1554 (Fy = 36 KSI)

3. BOLTS SHALL CONFORM TO ASTM A307

- WELDING SHALL CONFORM TO THE AWS CODES FOR BUILDING CONSTRUCTION. WELDING SHALL BE PERFORMED IN ACCORDANCE TO WELDING PROCEDURE SPECIFICATION (WPS) AS REQUIRED IN AWS D1.1 THE WPS VARIABLES SHALL BE WITHIN THE PARAMETERS ESTABLISHED BY THE FILLER-METAL MANUFACTURER.
- WELDS SHALL USE E70XX ELECTRODES AND A MINIMUM OR 3/16" SIZE UNLESS NOTED OTHERWISE
- 6. ALL WELDS SPECIFIED AS FIELD WELDS MAY BE SHOP WELDED AT THE CONTRACTOR'S OPTION IF ERECTION CAN STILL BE EXECUTED.

### ENERGY REQUIREMENTS:

- 1. LIGHTING FIXTURES PENETRATING THE THERMAL ENVELOPE SHALL BE IC-RATED, LEAKAGE RATED, AND SEALED TO THE GYPSUM WALLBOARD AS REQUIRED PER IRC N1102.4.4.
- 2. PROGRAMMABLE THERMOSTATS SHALL BE INSTALLED AS REQUIRED PER N1103.1.1.
- 3. AIR HANDLERS SHALL BE RATED FOR MAXIMUM 2% AIR LEAKAGE RATE PER N1103.3.2.1.
- 4. BUILDING FRAMING CAVITIES SHALL NOT BE USED AS DUCTS OR PLENUMS.
- AS REQUIRED PER M1503.6.

### GARAGES:

- 2. DOORS BETWEEN THE GARAGE AND THE DWELLING MINIMUM 1-3/8" SOLID CORE OR HONEY COMBED STEEL DOOR OR 20 MINUTE FIRE RATED.
- 3. THE GARAGE SHALL BE SEPARATED FROM THE DWELLING AND IT'S ATTIC AREAS BY A MINIMUM 5/8" GYPSUM BOARD APPLIED TO THE GARAGE SIDE WHERE A FLOOR/CEILING SPACE IS PROVIDED ABOVE.
- 4. THE GARAGE COLUMNS AND BEAMS SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED WITH 5/8" GYPSUM BOARD OR EQUIVALENT. WHERE HABITABLE SPACE OCCURS ABOVE THE GARAGE THE FLOOR CEILING ASSEMBLY SHALL BE PROTECTED WITH A MINIMUM PS TYPE "X" GYPSUM BOARD ON THE GARAGE CEILING.
- 5. GARAGE DOOR AND FRAME THE "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"x0.120" NAILS AT 7" O.C. STAGGERED WITH (7) 3-1/4"x0.120" NAILS THROUGH THE JAMB INTO THE HEADER. A MINIMUM OF 2x8 HEADER FOR ATTACHMENT OF COUNTER BALANCE SYSTEM.
- 6. SELF CLOSING DEVICES SHALL BE INSTALLED FOR GARAGE AND/OR DWELLING SEPARATION DOORS PER R302.5.1.

## STAIRWAYS:

- 2. PROVIDE GUARD RAILS BETWEEN 36" GUARD RAILS ON THE OPEN SIDES OF RAISED FLOORS, PORCHES AND BALCONIES; MINIMUM 34" GUARD RAILS ON THE OPEN SIDES OF STAIRWAYS LOCATED MORE THAN 30" ABOVE THE FLOOR OR GRADE BELOW.
- 3. GUARD RAIL ENCLOSURES SHALL HAVE INTERMEDIATE RAILS OF ORNAMENTAL PATTERNS THAT DO NOT ALLOW PASSAGE OF A SPHERE 4" IN DIAMETER.
- 4. EACH STAIRWAY OF THREE OR MORE RISERS SHALL PROVIDE A CONTINUOUS HANDRAIL ON AT LEAST ONE SIDE BETWEEN 34" AND 38" ABOVE THE NOSING OF THE TREADS.
- 5. HANDRAILS SHALL HAVE A CIRCULAR CROSS SECTION OF 1-1/4" TO 2-5/8" OR OTHER APPROVED GRASPABLE SHAPE PER IRC R311.5.6.

### GLAZING

- 1. PROVIDE ONE WINDOW FROM EACH BEDROOM THAT HAS A MINIMUM OPENABLE AREA OF 5.7 SF WITH A MINIMUM OPENABLE HEIGHT OF 24" AND WIDTH OF 21"
- 3. 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 ACTUATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE DWELLING.

- FRAMING NOTES:
- 2. ALL UNMARKED HEADERS SHALL BE A MINIMUM #2 DOUGLAS FIR LARCH (2) 2x10 ON LOAD BEARING
- WALLS.
- 3. ALL HEADER/BEAMS TO BEAR ON A MINIMUM OF (2) 2x4 POSTS UNLESS NOTED OTHERWISE.
- 4. DOUBLE JOIST UNDER INTERIOR NON-LOAD BEARING WALLS.
- 5. CANTILEVERS, OVER BEAMS, AND DOOR JAMBS SHALL BE BLOCKED
- 6. ANY WOOD MEMBERS IN CONTACT WITH CONCRETE OR MASONRY (OR THE FURRING THEY ARE ATTACHED TO) SHALL BE OF DECAY RESISTANT MATERIAL.
- 7. INTERIOR NON LOAD BEARING WALLS SHALL BE ISOLATED FROM THE FLOOR FRAMING ABOVE UNLESS THE INTERIOR NON LOAD BEARING WALL RESTS DIRECTLY ON A FOOTING.
- 8. LVL STRENGTH SHALL BE VERSA-LAM 3100 Fb UNLESS NOTED OTHERWISE.

- 5. HOT WATER PIPES SHALL BE INSULATED AS REQUIRED PER N1103.4.
- 6. ALL EXHAUST FANS SHALL TERMINATE TO THE BUILDING EXTERIOR AS REQUIRED PER IRC M1504.3. 7. MAKEUP AIR SYSTEMS SHALL BE INSTALLED FOR KITCHEN EXHAUST HOODS THAT EXCEED 400 CFM
- 8. AN AIR HANDLING SYSTEM SHALL NOT SERVE BOTH THE LIVING SPACE AND THE GARAGE PER M1601.6 ENERGY CONSERVATION.
- 1. THE GARAGE FLOOR SHALL SLOPE TOWARDS THE GARAGE DOORWAYS.

- 7. GARAGE VEHICLE DOORS AND FRAMES SHALL BE DESIGNED AND INSTALLED TO MEET THE 90 MPH WIND LOAD REQUIREMENTS OF DASMA 108 AND ASTM E330-96 (IRC 301.2.1).
- 1. STAIRWAYS SHALL PROVIDE A MAXIMUM 7-3/4" RISE AND A MINIMUM 10" RUN.
- 6. MINIMUM 6'-8" OF HEADROOM CLEARANCE IS REQUIRED IN STAIRWAYS.
- 7. 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 PER IRC R311.2.2.
- 1. GLAZING IN HAZARDOUS LOCATIONS AS IDENTIFIED IN IRC R308.4 SHALL BE OF APPROVED SAFETY GLAZING MATERIALS; GLASS IN STORM DOORS; INDIVIDUAL FIXED OR OPENABLE 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 OPENABLE PANELS EXCEEDING 8 SF AND WHOSE BOTTOM EDGE IS LESS THAN 18" ABOVE THE FLOOR OR WALKING SURFACE WITHIN 36".
- 2. WINDOW FALL PROTECTION SHALL BE PROVIDED IN ACCORDANCE WITH R312.2.

### EMERGENCY EGRESS AND RESCUE

- 2. BASEMENT EGRESS TO MEET THE REQUIREMENTS OF IRC R310.
- 4. CARBON MONOXIDE DETECTORS SHALL BE INSTALLED AS REQUIRED PER R315.
- 1. ALL LUMBER SIZES ARE DOUGLAS FIR-LARCH #2 UNLESS OTHERWISE NOTED.



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TEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION		1	FLOOR	I	
		ROOF 4-8D BOX (2-1/2"x0.113") OR		21	JOST TO SILL, TOP PLATE OR GIRDER	4-8D BOX (2-1/2" X 0.113"); OR 3-8D COMMON (2-1/2" X 0.131"); OR 3-10D BOX (3" X 0.128"); OR	TOE	NAIL
1	BLOCKING BETWEEN CEILING JOISTS OR RAFTERS TO TOP PLATE		TOE NAIL		RIM JOIST, BAND JOIST OR	3-3" X 0.131" NAILS 8d BOX (2-1/2"x0.113")	4" O.C. T	OE NAIL
2	CEILING JOSTS TO TOP PLATE	3-3" x 0.131" NAILS 4-8D BOX (2-1/2"x0.113") OR 3-8D COMMON (2-1/2" x 0.131"); OR 3-10D BOX (3" x 0.128"); OR	PER JOIST, TOE NAIL	22	BLOCKING TO SILL OR TOP PLATE (ROOF APPLICATIONS ALSO)	8D COMMON (2-1/2" X 0.131"); OR 10D BOX (3" X 0.128"); OR 3" X 0.131" NAILS	6" O.C. T	DE NAIL
3	CEILING JOISTS NOT ATTACHED TO PARALLEL RAFTER LAPS OVER	3-3" x 0.131" NAILS 4-10D BOX (3" X 0.128"); OR 3-16D COMMON (3-1/2" X 0.162"); OR	FACE NAIL	23	1"x6" SUBFLOOR OR LESS TO EACH JOIST	3-8D BOX (2-1/2" X 0.113"); OR 2-8D COMMON (2-1/2" X 0.131"); OR 3-10D BOX (3" X 0.128"); OR 2 STAPLES, 1" CROWN, 16 GA, 1-3/4" LONG	FACE	NAIL
4	PARTITIONS CEILING JOIST ATTACHED TO	4-3" X 0.131" NAILS TABLE R802.5.2	FACE NAIL			FLOOR		
	PARALLEL RAFTER (HEEL JOINT) COLLAR TIE TO RAFTER, FACE NAIL	4-10D BOX (3" X 0.128"); OR		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
5	OR 1-1/4"x20 GAGE RIDGE STRAP TO RAFTER	3-10D COMMON (3" X 0.148"); OR 4-3" X 0.131" NAILS	FACE NAIL EACH RAFTER	25	2" PLANKS (PLANK & BEAM - FLOOR & ROOF)	3-16D BOX (3-1/2" X 0.135"); OR 2-16D COMMON (3-1/2"x0.162")	AT EACH BEARI	NG, FACE NAIL
6	RAFTER OR ROOF TRUSS TO PLATE	3-16d BOX NAILS (3-1/2"x0.135") OR 3-10d COMMON NAILS (3"x0.148"); OR 4-10D BOX (3" X .128"); OR 4-3" X 0.131" NAILS	2 TOE NAILS ON ONE SIDE AND 1 TOE NAIL ON OPPOSITE SIDE OF EACH RAFTER OR TRUSS	26	,	3-16D COMMON (3-1/2" X 0.162"); OR 4-10 BOX (3" X 0.128"); OR 4-3" X 0.131" NAILS ; OR 4-3" X 14 GA. STAPLES, <sup>7</sup> / <sub>16</sub> " CROWN	END	NAIL
	ROOF RAFTERS TO RIDGE, VALLEY	4-16D (3-1/2"x0.135") ; OR 3-10D COMMON (3" X 0.148"); OR 4-10D BOX (3" X 0.128"); OR 4-3" X0.131" NAILS	TOE NAIL			20D COMMON (4" X 0.192"); OR	NAIL EACH LAYER AS FO	
7	OR HIP RAFTERS OR ROOF RAFTER TO MINIMUM 2" RIDGE BEAM	3-16d BOX NAILS (3-1/2"x0.135") OR 2-16D COMMON NAILS (3-1/2"x0.162"); OR 3-10D BOX (3" X .128"); OR 3-3" X 0.131" NAILS	END NAIL	27	BUILT-UP GIRDERS AND BEAMS, 2" LUMBER LAYERS	10D BOX (3" X 0.128"); OR 3" X 0.131" NAILS AND: 2-20D COMMON (4" X 0.192"); OR 3-10D BOX (3" X 0.128"); OR 3-3" X 0.131" NAILS	24" O.C. FACE NAIL AT T STAGGERED ON OPPOS FACE NAIL AT ENDS AN	SITE SIDES
8	STUD TO STUD (NOT AT BRACED WALL PANELS)	WALL 16D COMMON (3-1/2" X 0.162") 10d BOX (3"x0.128"); OR 3" X 0.131" NAILS	24" O.C. FACE NAIL 16" O.C. FACE NAIL	28	LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	4-16D BOX (3-1/2" X 0.135"); OR 3-16D 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 NA	
9	STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS (AT BRACED WALL PANELS)	16D BOX (3-1/2"x0.135"); OR 3" X 0.131" NAILS 16D COMMON (3-1/2" X 0.162")	12" O.C. FACE NAIL 16" O.C. FACE NAIL	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	
10	BUILT-UP HEADER (2" TO 2" HEADER WITH <sup>1</sup> / <sub>2</sub> " SPACER)	16D COMMON (3-1/2"x0.162") 16D BOX (3-1/2" X 0.135)	16" O.C. ALONG EACH EDGE FACE NAIL 12" ALONG EACH EDGE FACE NAIL		DESCRIPTION OF BUILDING		SPACING OF	FASTENERS
11	CONTINUOUS HEADER TO STUD	5-8D BOX (2-1/2" X 0.113"); OR 4-8D COMMON (2-1/2" X 0.131"); OR 4-10D BOX (3" X 0.128")	TOENAIL	ITEM	ELEMENTS	NUMBER AND TYPE OF FASTENER	EDGES (IN)	INTERMEDIA SUPPORTS (
12	TOP PLATE TO TOP PLATE	16D COMMON (3-1/2" X 0.162")	16" O.C. FACE NAIL	30	3/8" - 1/2"	6d COMMON (2"x0.113") NAILS (SUBFLOOR, WALL)	6	12
12	TOP PLATE TO TOP PLATE	10d BOX (3"x0.128"); OR 3" X 0.131" NAILS	12" O.C. FACE NAIL	50	5/6 - 1/2	8d COMMON (2-1/2"x0.131") NAIL (ROOF); OR RSRS-01 (2-38" X 0.113") NAIL (ROOF)	0	12
13	DOUBLE TOP PLATE SPLICE	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 0.131" NAILS	FACE NAIL ON EACH SIDE OF END JOINT (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT)	31	19/32"-1"	8d COMMON NAIL (2-1/2"x0.131"); OR RSRS-01 (2-3/8" X 0.113") NAIL (ROOF) 10d COMMON (3"x0.148") NAIL OR	6	12
	BOTTOM PLATE TO JOIST, RIM	16D COMMON (3-1/2" X 0.162")	16" O.C. FACE NAIL	32	1-1/8" - 1-1.4"	8D (2-1/2"x0.131") DEFORMED NAIL	6	12
14	JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS)	16D BOX (3-1/2"x0.135"); OR 3" X 0.131" NAILS	12" O.C. FACE NAIL			OTHER WALL SHEATHING 1-1/2" GALVANIZED ROOFING NAIL, 7/16"		
15	BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST BLOCKING (AT BRACED WALL PANELS)	3-16d BOX NAILS (3-1/2"x0.135") OR 2-16D COMMON (3-1/2"x0.162"); OR 4-3" X 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	1/2" STRUCTURAL CELLULOSIC FIBERBOARD SHEATHING	HEAD DIAMETER, OR 1-1/4" LONG 16 GA. STAPLE WITH <sup>7</sup> / <sub>16</sub> " OR 1" CROWN 1-3/4" GALVANIZED ROOFING NAIL, 7/16"	3	6
		4-8D BOX (2-1/2"x0.113") OR 3-16D BOX (3-1/2" x 0.135"); OR 4-8D COMMON (2-1/2" X 0.131"); OR	TOE NAIL	34	25/32" STRUCTURAL CELLULOSTIC FIBERBOARD SHEATHING	HEAD DIAMETER, OR 1-1/2" LONG 16 GA STAPLE WITH <sup>7</sup> / <sub>16</sub> " OR 1" CROWN	3	6
16	TOP OR BOTTOM PLATE TO STUD	4-10D BOX (3" x 0.128"); OR 4-3" x 0.131" NAILS 3-16D BOX (3-1/2" x 0.135"); OR		35	1/2" GYPSUM SHEATHING	1-1/2" GALVANIZED ROOFING NAIL; STAPLE GALVANIZED, 1-1/2" LONG; 1-1/4" SCREWS, TYPE "W" OR "S"	7	7
		2-16D COMMON (3-1/2" X 0.162"); OR 3-10D BOX (3" x 0.128"); OR 3-3" x 0.131" NAILS	END NAIL	36	5/8" GYPSUM SHEATHING	1-3/4" GALVANIZED ROOFING NAIL; STAPLE GALVANIZED, 1-5/8" LONG; 1-5/8" SCREWS, TYPE "W" OR "S"	7	7
17	TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	3-10D BOX (3" X 0.128"); OR 2-16D COMMON (3-1/2" X 0.162"); OR	FACE NAIL	37		L PANELS, COMBINATION SUBFLOOR UN 6D DEFORMED (2"x0.120") NAIL OR		AMING 12
		3-3" X 0.131" NAILS 3-8D BOX (2-1/2" X 0.113"); OR		37		8D COMMON (2-1/2"x0.131") NAIL 8D COMMON (2-1/2"x0.131") NAIL OR	6	12
18	1" BRACE TO EACH STUD AND PLATE	2-8D COMMON (2-1/2" X 0.131"); OR 2-10D BOX (3" X 0.128"); OR 2 STAPLES 1-3/4"	FACE NAIL			8D DEFORMED (2-1/2"x0.120") NAIL 10D COMMON (3"x0.148") NAIL OR	0	
19	1"x6" SHEATHING TO EACH BEARING	3-8D BOX (2-1/2" X 0.113"); OR 2-8D COMMON (2-1/2" X 0.131"); OR 2-10D BOX (3" X 0.128"); OR 2 STAPLES, 1" CROWN, 16 GA, 1-3/4" LONG	FACE NAIL	39	1-1/8" - 1-1/4"	8D DEFORMED (2-1/2"x0.120") NAIL	6	12
20	1"x8" AND WIDER SHEATHING TO	3-8D BOX (2-1/2" X 0.113"); OR 3-8D COMMON (2-1/2" X 0.131"); OR 3-10D BOX (3" X 0.128"); OR 3 STAPLES, 1" CROWN, 16 GA, 1-3/4" LONG WIDER THAN 1" X 8"	FACE NAIL		F			
	EACH BEARING	WIDER THAN 1" X 8" 4-8D BOX (2-1/2" X 0.113"); OR 3-8D COMMON (2-1/2" X 0.131"); OR 3-10D BOX (3" X 0.128"); OR				TABLE R507.2.1 PLACEMENT OF LAG SCR LEDGERS AND BAND		K

TABLE R507/2 FASTENER SPACING FOR A SOUTHERN PINE OR HEM-FIR DECK LEDGER 2" NOMINAL SOLID SAWN SPRUCE-PINE-FIR BAND JOIST (DECK LIVE LOAD = 40PSF, DECK DEAD LOAD = 10 PSF)										
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										
1/2" DIAMETER LAG SCREW WITH 15/32" MAX SHEATHING	30	23	18	15	13	11	10			
1/2" DIAMETER BOLT WITH 15/32" MAX SHEATHING	36	36	34	29	24	21	19			
1/2" DIAMETER BOLT WITH 15/32" MAX SHEATHING AND 1/2" STACKED WASHERS	36	36	29	24	21	18	16			

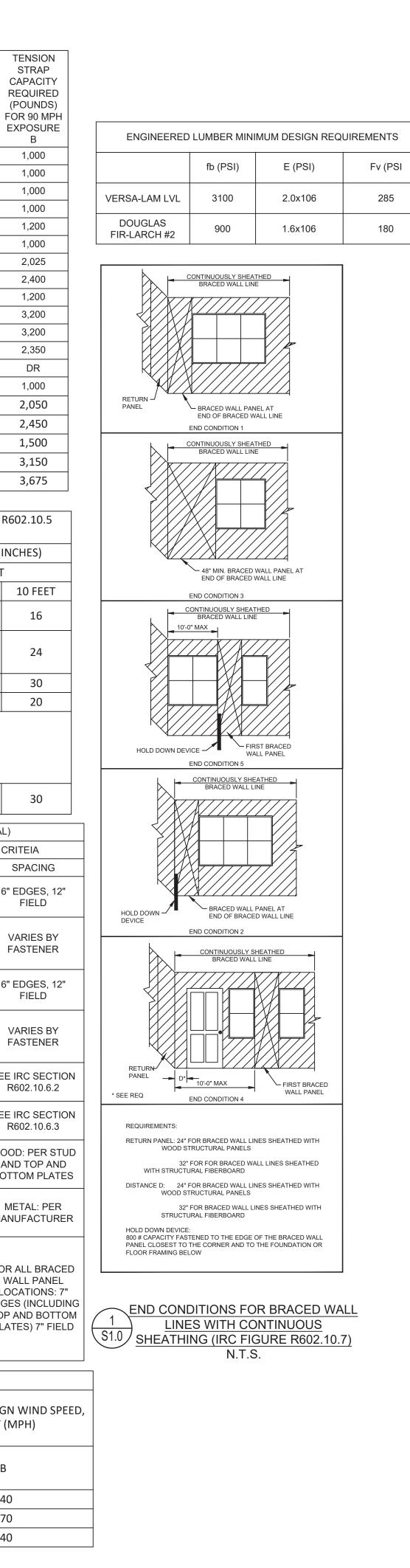
MINIMUM WALL STUD FRAMING NOMINAL SIZE AND GRADE	MAXIMUM PONY WALL HEIGHT (FEET)	MAXIMUM TOTAL WALL HEIGHT (FEET)	MAXIMUM OPENING WIDTH (FEET)	( F ( E
	0	10	18	
			9	
	1	10	16	
			18	
			9	
2x4 NO 2 GRADE	2	10	16	
			18	
		12	9	
	2		16	
			18	
			9	
	4	12	16	
			18	
			9	
2x6 STUD GRADE	2	12	16	
			18	
			9	
	4	12	16	
			18	

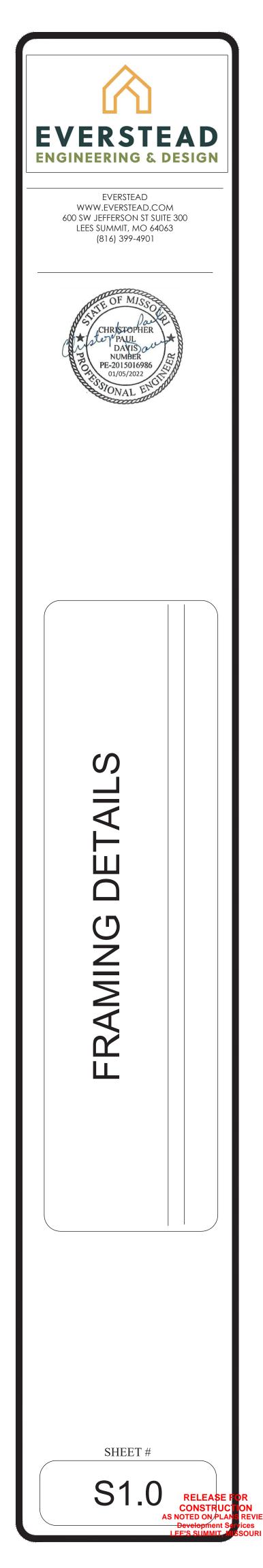
MINIMU	MINIMUM LENGTH OF BRACED WALL PANELS TABLE R6 (PARTIAL)				
		MINIM	1UM LENGTH (	IN	
M	ETHOD	WALL HEIGHT			
		8 FEET	9 FEET		
	SUPPORTING ROOF ONLY	16	16		
PFH	SUPPORTING ONE STORY AND ROOF	24	24		
	PFG		27		
	CS-PF		18		
CS-WSP	ADJACENT CLEAR OPENING HEIGHT (INCHES)				
	LESS THAN OR EQUAL TO 64	24	27		
	BRACING METHO	DS TABLE R6	02.10.4 (PARTIA	L)	

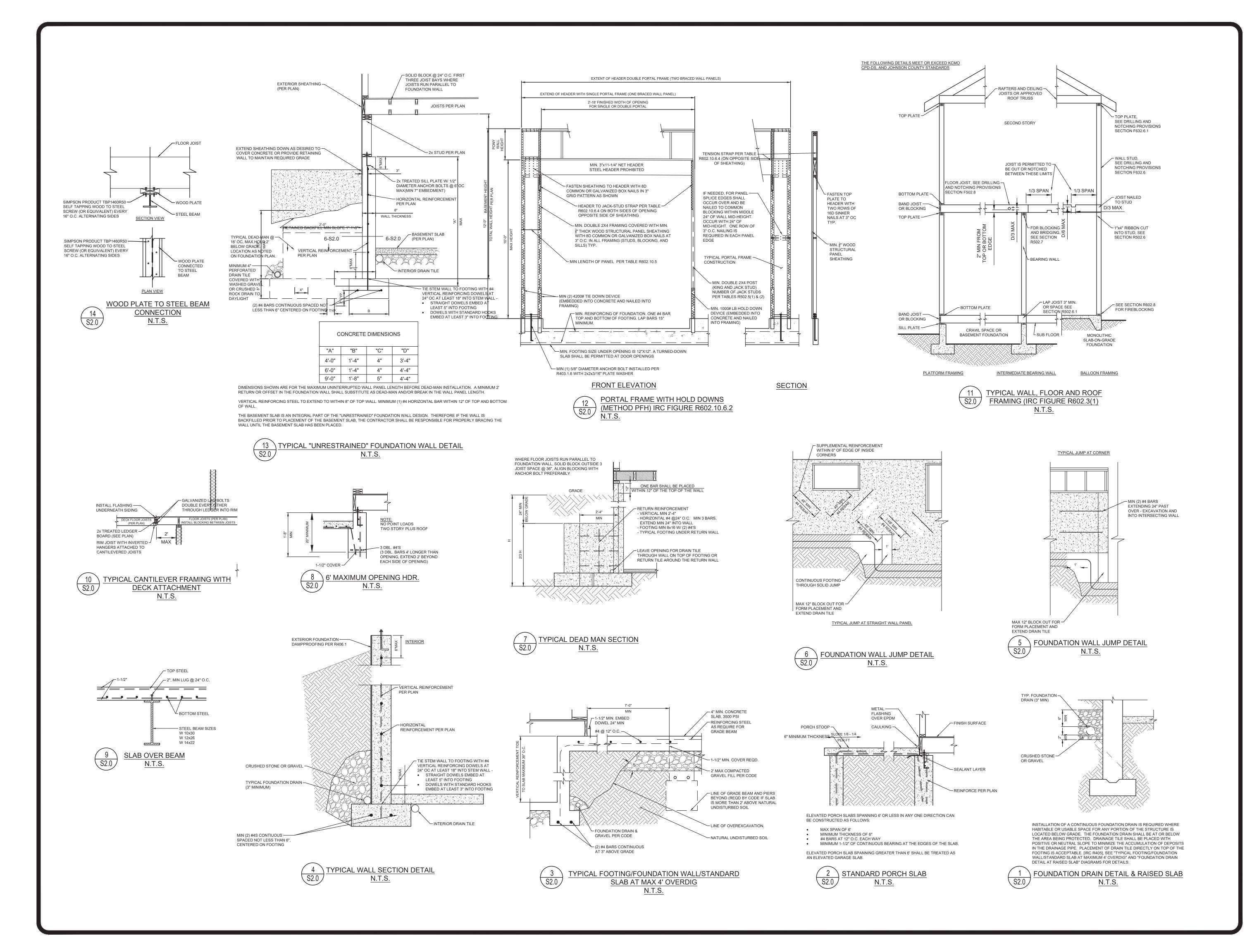
BRACING METHODS TABLE R602.10.4 (PARTIAL)						
METHODS,	MINIMUM	CONNECTION CF				
MATERIAL	THICKNESS	FASTENERS				
WSP - WOOD		EXTERIOR SHEATHING PER TABLE R602.3(3)	6"			
STRUCTURAL PANEL	3/8	INTERIOR SHEATHING PER TABLE R602.3(1) OR R602.3(2)	V F			
CS-WSP CONTINUOUSLY		EXERIOR SHEATHING PER TABLE R602.3(3)				
SHEATHED WOOD STRUCTURAL PANEL	3/8	INTERIOR SHEATHING PER TABLE R602.3(1) OR R602.3(2)	۷ F			
PFH - PORTAL FRAME WITH HOLD DOWNS	3/8	SEE IRC SECTION R602.10.6.2	SEE R			
PFG - PORTAL FRAME AT GARAGE	3/8	SEE IRC SECTION R602.10.6.3	SEE R			
LIB	1x4 WOOD OR APPROVED METAL STRAPS AT 45 TO 60	WOOD: 2-8d COMMON NAILS OR 3-8d NAILS	WOC AN BOT			
LET-IN-BRACING	DEGREE ANGLES FOR MAX 16" STUD SPACING	METAL STRAP: PER MANUFACTURER	M MAN			
GB-GYPSUM	1 1/2	NAILS OR SCREWS PER TABLE R602.3(1) FOR EXTERIOR LOCATIONS	FOR W LO			
BOARD	172	NAILS OR SCREWS PER TABLE R702.3.5 FOR INTERIOR LOCATIONS	EDGE TOP PLA			

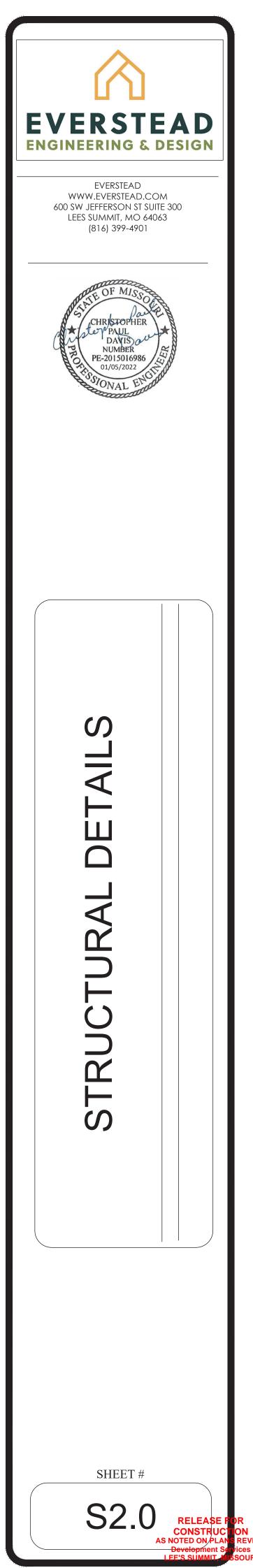
TABLE R507.	TABLE R507.2.1 PLACEMENT OF LAG SCREWS AND BOLTS IN DECK LEDGERS AND BAND JOISTS					
MINIMUM END	MINIMUM END AND EDGE DISTANCES AND SPACING BETWEEN ROWS (INCHES)					
TOP EDGE BOTTOM EDGE ENDS ROW SPA						
LEDGER	2	1/4	2	1-5/8		
BAND JOIST	3/4	2	2	1-5/8		

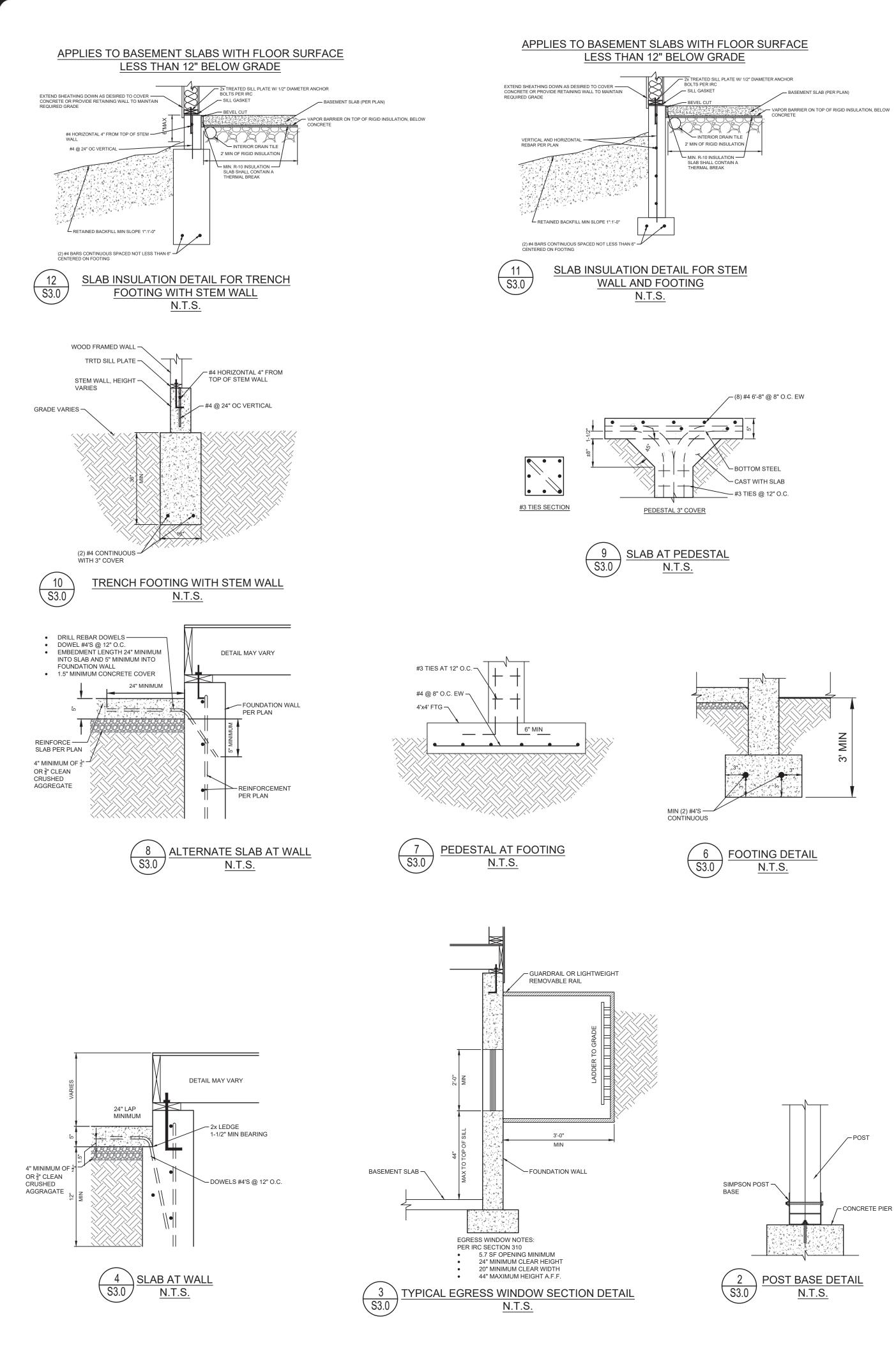
REQUIREMENTS FOR WOOD STRUCTURAL PANEL WALL SHEATHING USED TO RESIST WIND PRESSURES IRC TABLE 602.3(3) (PARTIAL)								
MINIMUM NAIL		STRUCTURAL NO	MINIMUM NOMINAL PANEL	MAX WALL STUD	PANEL NAIL SPACING		ULTIMATE DESIGN V V ULT (MP	
SIZE	PENETRATION (IN)	PANEL SPAN RATING	THICKNESS (IN)	SPACING	EDGES (IN O.C.)	FIELD (IN O.C.)	В	
6d COMMON	1.5	24/0	3/8	16	6	12	140	
8d COMMON	1.75	1 75 24/16	7/16	16	6	12	170	
			d COMMON 1.75 24/16	7/16	24	6	12	140

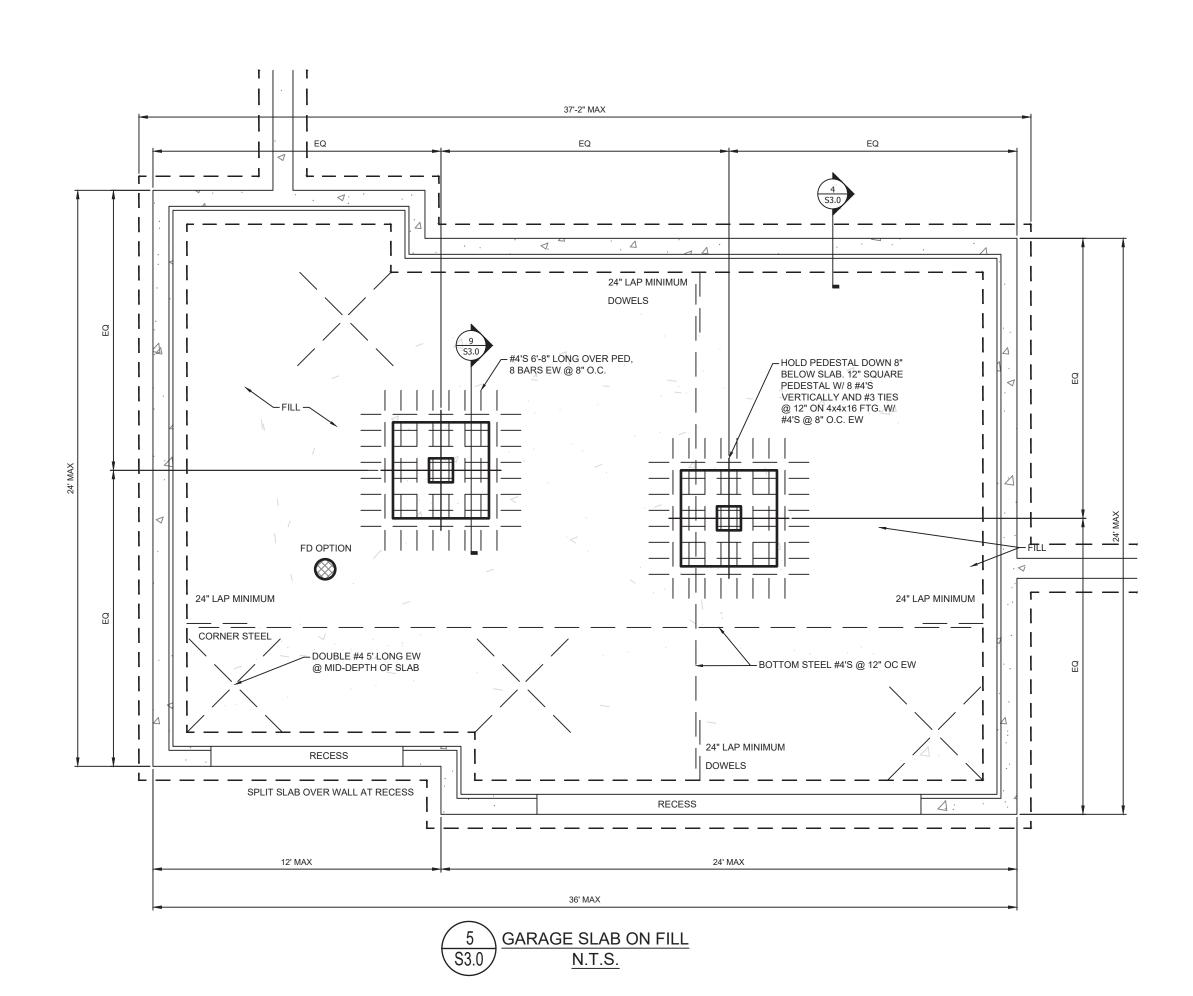




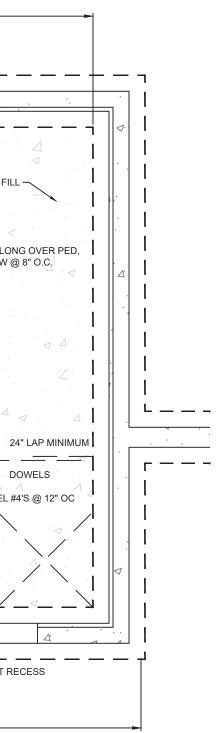


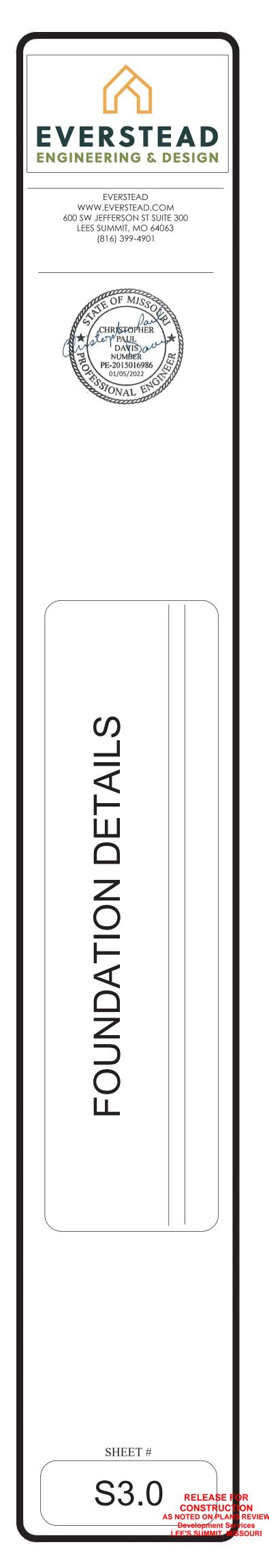






20' MAX (4 (S3.0) \_\_\_\_ L 24" LAP MINIMUM DOWELS HOLD PEDESTAL DOWN 8" -BELOW SLAB. 12" SQUARE PEDESTAL W/ 8 #4'S VERTICALLY AND #3 TIÉS #4'S 6'-8" LONG OVER PED, 8 BARS EW @ 8" O.C. @ 12" ON 4x4x16 FTG. W/ #4'S @ 8" O.C. EW FD OPTION  $\otimes$ 24" LAP MINIMUM DOWELS DOWELS ∽ FII I -BOTTOM STEEL #4'S @ 12" OC CORNER STEEL - DOUBLE #4 5' LONG EW @ MID-DEPTH OE SLAB 24" LAP MINIMUM DOWELS RECESS \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_\_\_\_\_ SPLIT SLAB OVER WALL AT RECESS 12' MAX 24' MAX GARAGE SLAB ON FILL <u>N.T.S.</u> S3.0





### HELIX REQUIREMENTS:

- FOUNDATION WALL SHALL NOT EXCEED 9' HEIGHT.
- DEAD MAN SHALL BE A MAXIMUM 3'8" FROM TOP OF FOUNDATION WALL ELSE HELIX NOT PERMITTED.

ALL CONCRETE SHALL BE REINFORCED WITH HELIX MICRO REBAR ALONG WITH ANY ADDITIONAL REBAR AS NOTED:

- 9.0 LB/CUBIC YARD DOSAGE OF HELIX 5-25.
- VERIFY DOSAGE AT FORM INSPECTION.
- SEE MIXING REQUIREMENTS ON THIS PAGE. MINIMUM 3000 PSI FOOTING COMPRESSIVE STRENGTH
- MINIMUM 3000 PSI WALL COMPRESSIVE CONCRETE STRENGTH.
- AIR ENTRAINED BETWEEN 5-7% OF CONCRETE VOLUME. GRADE 60 REINFORCING STEEL UNLESS OTHERWISE NOTED.
- LAP SPLICES 24" MINIMUM.
- ASSUMED 1500 PSF SOIL BEARING.
- WALL SHALL BE BACK-FILLED WITH CLEAN, LEAN CLAY, OR BETTER, LOW VOLUME CHANGE MATERIAL. ON-SITE MATERIAL MAY BE USED IF DEEMED ACCEPTABLE BY THE GEOTECHNICAL ENGINEER.

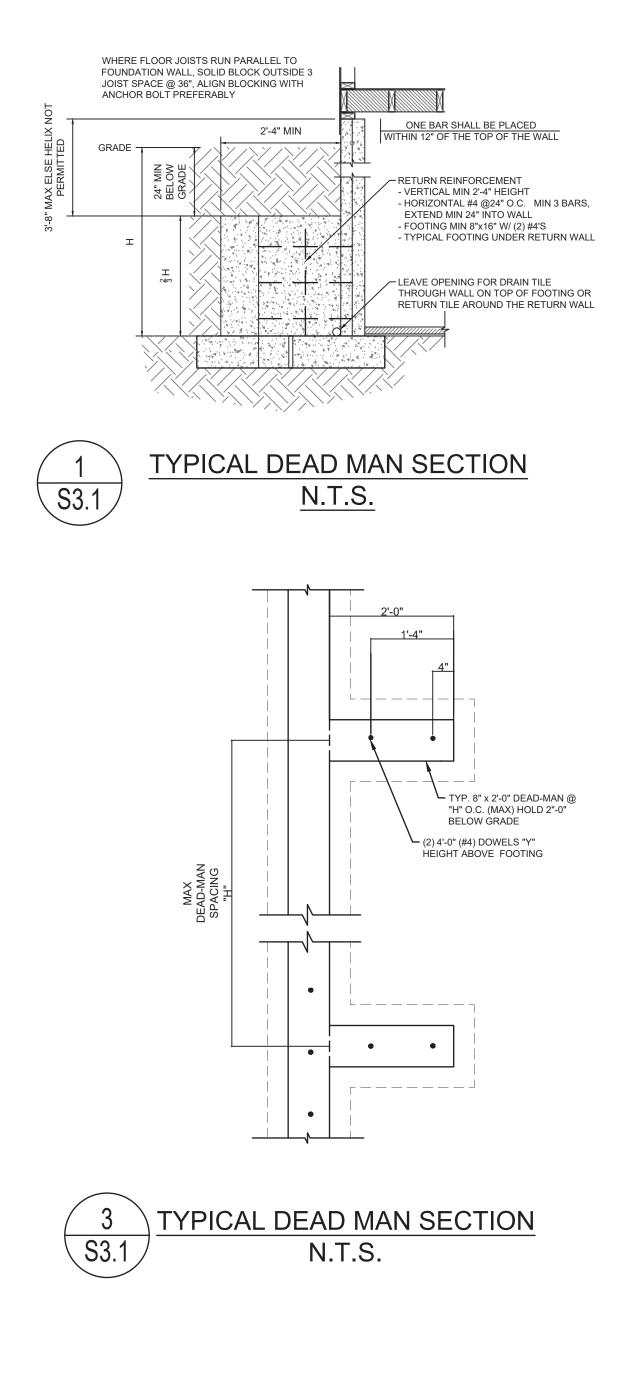
HELIX ALTERNATE DESIGN NOT VALID IF ANY ONE OF THE FOLLOWING CONDITIONS ARE MET:

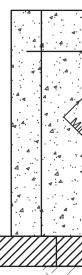
 NON-UNIFORM FOOTING SUPPORT (IE. CAST IN PLACE PIERS, PUSH PILES). • DAYLIGHT WALLS EXCEEDING 6' TALL FOR A LENGTH GREATER THAN 6'.

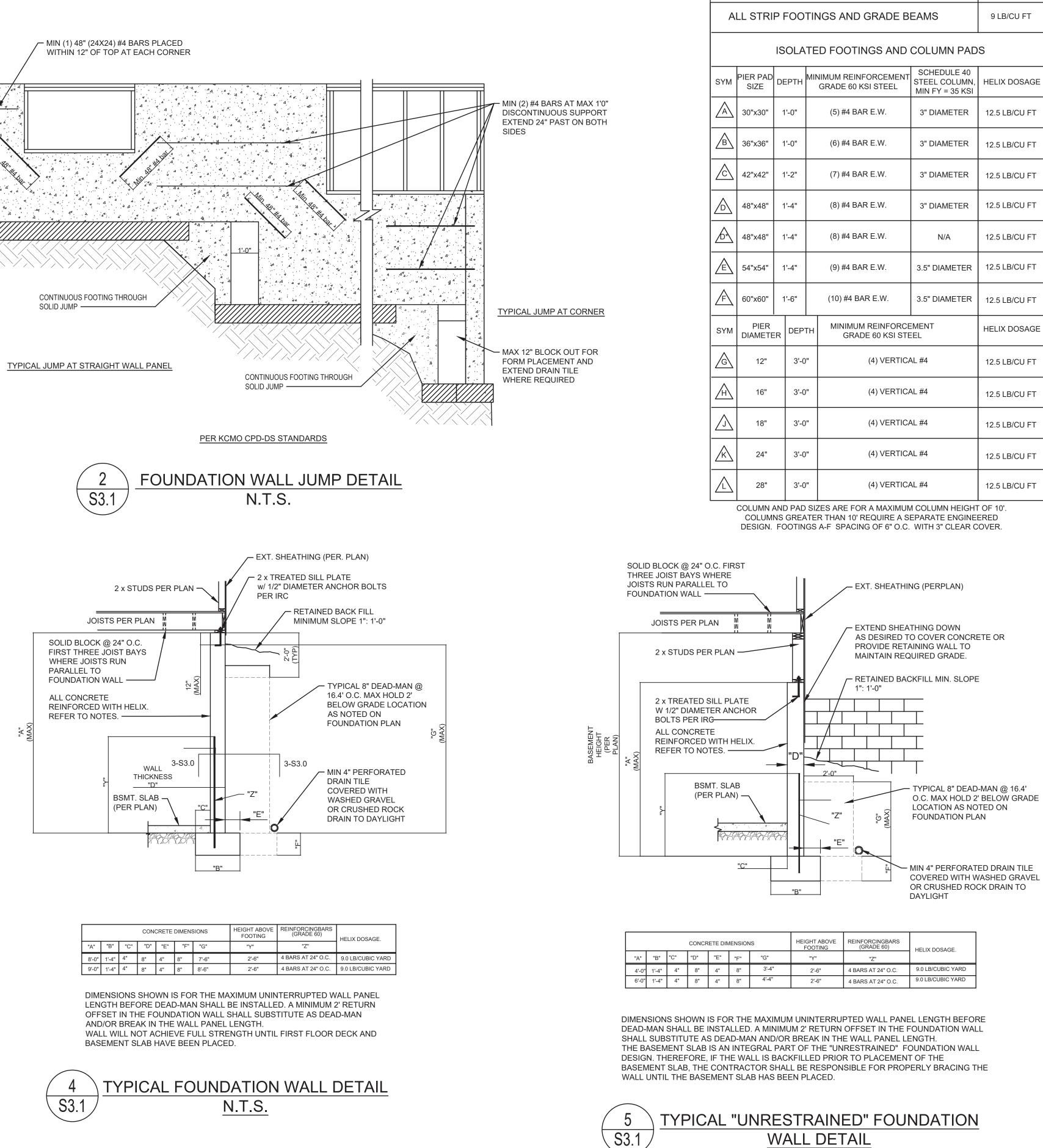
### HELIX DOSING INSTRUCTIONS:

MIXING SHOULD BE DONE ACCORDANCE WITH ASTM C94 AND THE MIXING INSTRUCTIONS BELOW. THE DOSAGES OF HELIX ADDED TO THE MIX SHOULD BE NOTED ON THE BATCH DOCUMENTATION IN ACCORDANCE WITH UNIFORM EVALUATION SERVICE ER 279 SECTION 5.15. VERIFIED USING PROCEDURE IN ER 279 APPENDIX A.

A SLUMP OF 125 MM OR 5" OR HIGHER WILL FACILITATE STRIKE OFF. A SLUMP OF LESS THAN 4" IS NOT RECOMMENDED AS THIS WILL PREVENT SURFACE SEGREGATION OF THE CEMENT AND FINES FROM THE AGGREGATE AND HELIX. SLUMP SHOULD BE MEASURED ON THE INITIAL LOAD AND ADJUSTMENTS MADE WITH A WATER REDUCER OR PLASTICIZER (NOT WATER).







	I	HE	ELIX	FO	OTING TABLE		HELIX DOSAGE				
1	LL STRI	9 LB/CU FT									
		IS	OLA	TE	D FOOTINGS AND	COLUMN PAD	S				
	PIER PAD SIZE	DE	EPTH		NIMUM REINFORCEMENT GRADE 60 KSI STEEL	SCHEDULE 40 STEEL COLUMN, MIN FY = 35 KSI	HELIX DOSAGE				
	30"x30"	1	'-0"		(5) #4 BAR E.W.	3" DIAMETER	12.5 LB/CU FT				
	36"x36"	1	'-0"		(6) #4 BAR E.W.	3" DIAMETER	12.5 LB/CU FT				
	42"x42"	1	1'-2"		(7) #4 BAR E.W.	3" DIAMETER	12.5 LB/CU FT				
	48"x48"	1	'-4"		(8) #4 BAR E.W.	3" DIAMETER	12.5 LB/CU FT				
	48"x48"	1	'-4"	(8) #4 BAR E.W.		N/A	12.5 LB/CU FT				
	54"x54"	1	'-4"		(9) #4 BAR E.W.	3.5" DIAMETER	12.5 LB/CU FT				
	60"x60"	1	'-6"		(10) #4 BAR E.W.	3.5" DIAMETER	12.5 LB/CU FT				
	PIER DIAMETE	R	DEP <sup>-</sup>	тн	MINIMUM REINFORCE GRADE 60 KSI STE		HELIX DOSAGE				
	12"		3'-0	"	(4) VERTICAL #4		12.5 LB/CU FT				
	16"		3'-0	,"	(4) VERTICAL #4		12.5 LB/CU FT				
	18"		3'-0	,"	(4) VERTICAL #4		(4) VERTICAL #4		(4) VERTICAL #4		12.5 LB/CU FT
	24"		3'-0"		'-0" (4) VERTICAL #4		12.5 LB/CU FT				
	28"	28" 3'-0" (4) VERTICAL #4		12.5 LB/CU FT							

NSIONS		S HEIGHT ABOVE REINFORCINGBARS FOOTING (GRADE 60)		HELIX DOSAGE.	
"F"	"G"	"Y"	"Z"	HEEK BOOMOE.	
8"	3'-4"	2'-6"	4 BARS AT 24" O.C.	9.0 LB/CUBIC YARD	
8"	4'-4"	2'-6"	4 BARS AT 24" O.C.	9.0 LB/CUBIC YARD	

WALL DETAIL N.T.S

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