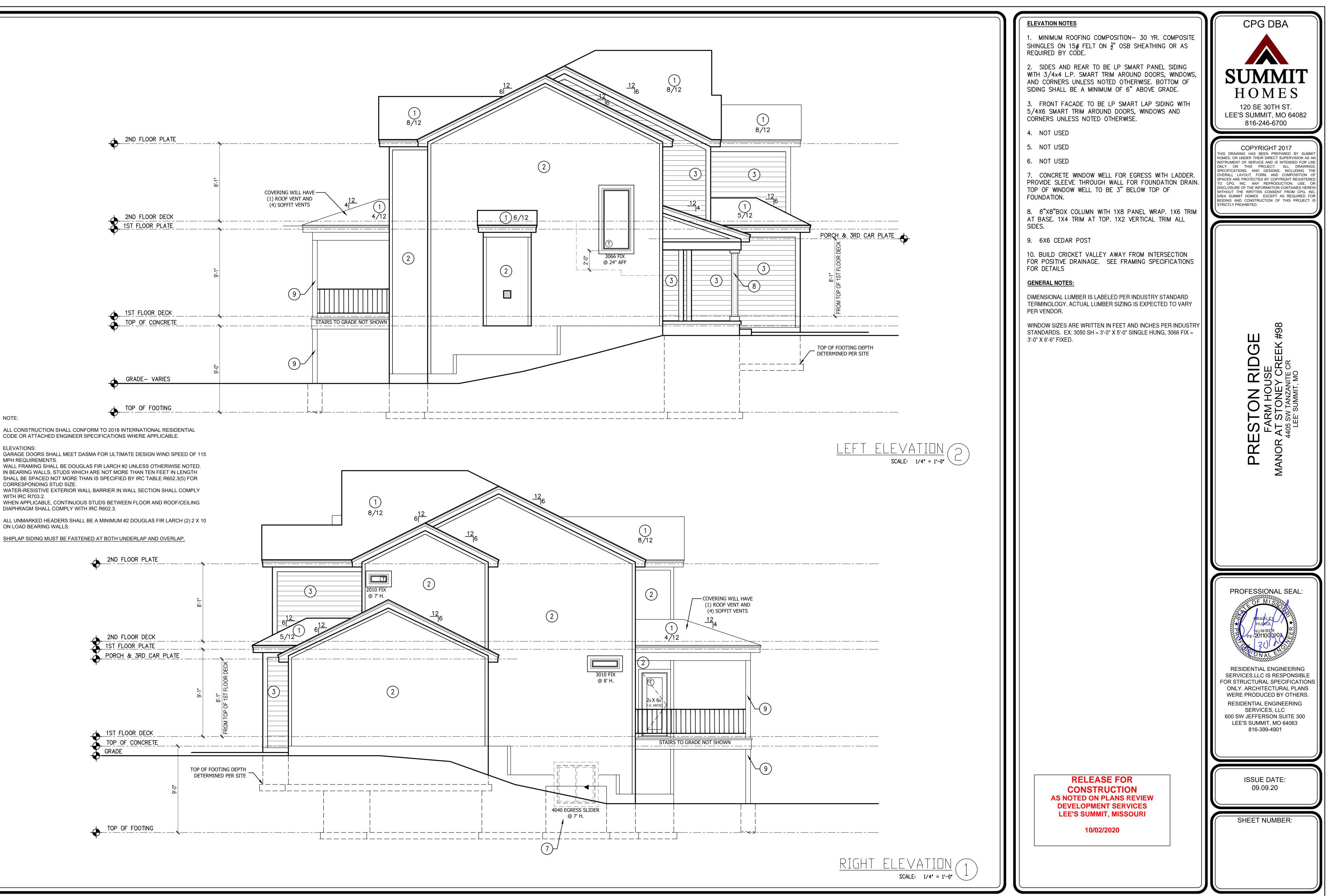


NOTE



NOTE:

ALL CONSTRUCTION SHALL CONFORM TO 2018 INTERNATIONAL RESIDENTIAL

ELEVATIONS:

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

ALL UNMARKED HEADERS SHALL BE A MINIMUM #2 DOUGLAS FIR LARCH (2) 2 X 10

NOTE

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 2000 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

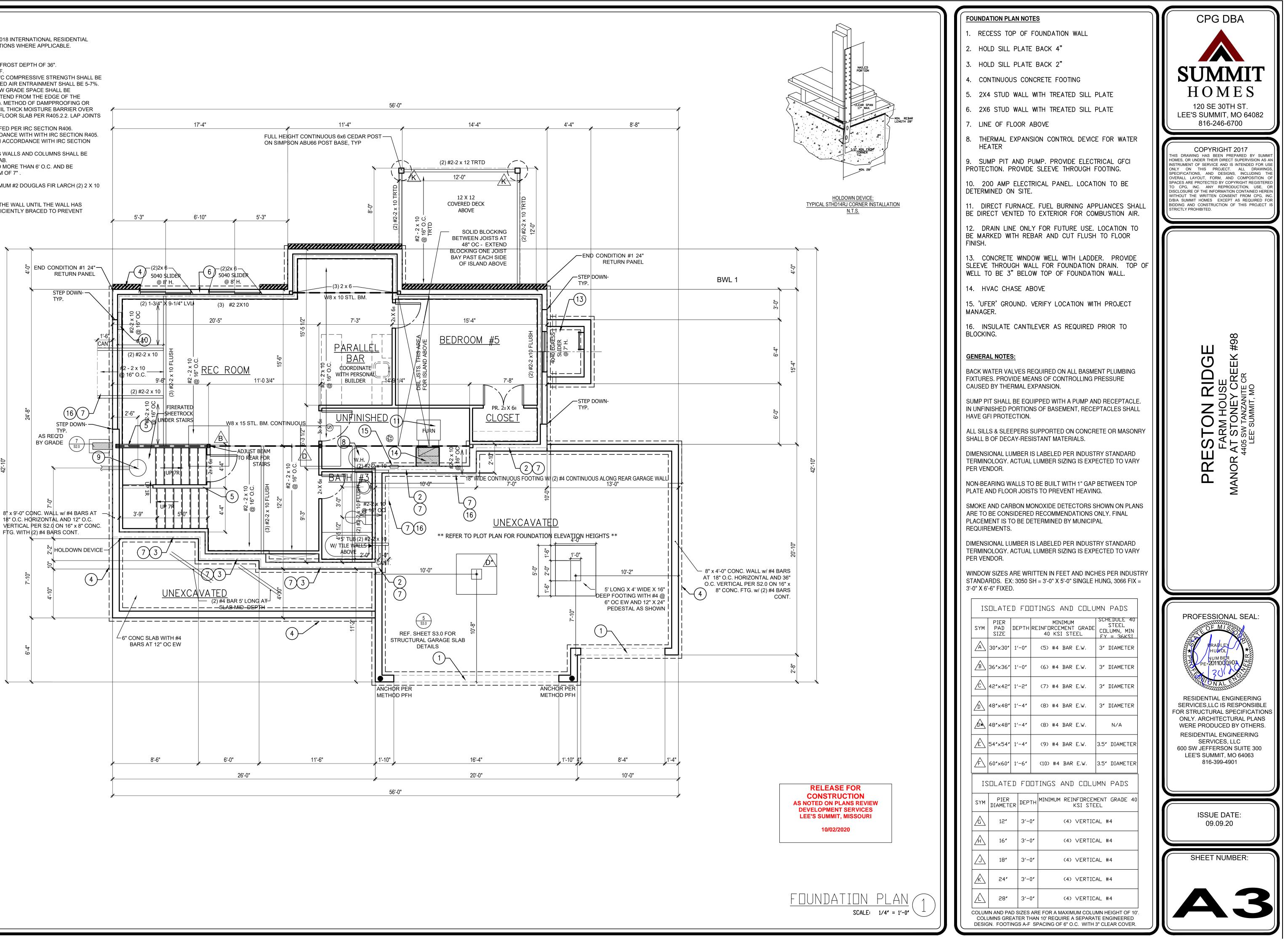
WATERPROOFING SHALL BE A MINIMUM 6-MIL THICK MOISTURE BARRIER OVER POROUS GRAVEL BASE UNDER BASEMENT FLOOR SLAB PER R405.2.2. LAP JOINTS SHALL BE A MINIMUM 6". FOUNDATION WALLS SHALL BE DAMPPROOFED PER IRC SECTION R406. FOUNDATION DRAINAGE WILL BE IN ACCORDANCE WITH WITH IRC SECTION R405.

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 6' 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.



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

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

DETAILS AND NOTES: BASEMENT EGRESS WINDOWS ARE TO COMPLY WITH IRC R310.2. WINDOW FALL PROTECTION

REQUIREMENTS TO COMPLY WITH SECTION R612.2. STAIRS SHALL COMPLY WITH IRC R311.7. THE MAXIMUM RISER HEIGHT OF STAIRWAYS SHALL NOT EXCEED 7-3/4" AND THE TREADS SHALL PROVIDE A MINIMUM TREAD DEPTH OF 10" (IRC 2018 R311.7.5.1). SELF CLOSING DEVICES ARE

REQUIRED FOR GARAGE TO DWELLING SEPARATION DOORS. STEEL COLUMNS WILL BE A MINIMUM OF SCHEDULE 40.

ENERGY REQUIREMENTS SHALL CONFORM TO THE IRC CHAPTER 11. SECURITY SHALL CONFORM TO IRC R326/KCBRC.

AN ACCESSIBLE CONNECTION POINT WILL BE PROVIDED TO A 20 FOOT CONCRETE ENCASED ELECTRODE (FOOTING REBAR) FOR THE ELECTRICAL SERVICE GROUNDING ELECTRODE CONDUCTOR (UFER GROUND).

CARBON MONOXIDE DETECTORS WILL BE PROVIDED IN ACCORDANCE WITH IRC SECTION R315. THE BUILDING THERMAL ENVELOPE IS REQUIRED TO BE SEALED(2018 IRC SECTION N1102.4.1 AND TABLE N1102.4.1.1).

DUCTS, AIR HANDLERS, FILTER BOXES AND BUILDING CAVITIES USED AS DUCTS SHALL BE SEALED (2018 IRC SECTION N1103.2.2)

FLOOR PLANS:

LEDGERS(FLOOR AND CEILING) SHALL BE IN ACCORDANCE WITH IRC ALL CANTILIEVERS SHALL HAVE AT

LEAST A 3:1 BACK SPAN. A MINIMUM OF DOUBLE JOIST UNDER EACH BEARING WALL IS REQUIRED.

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

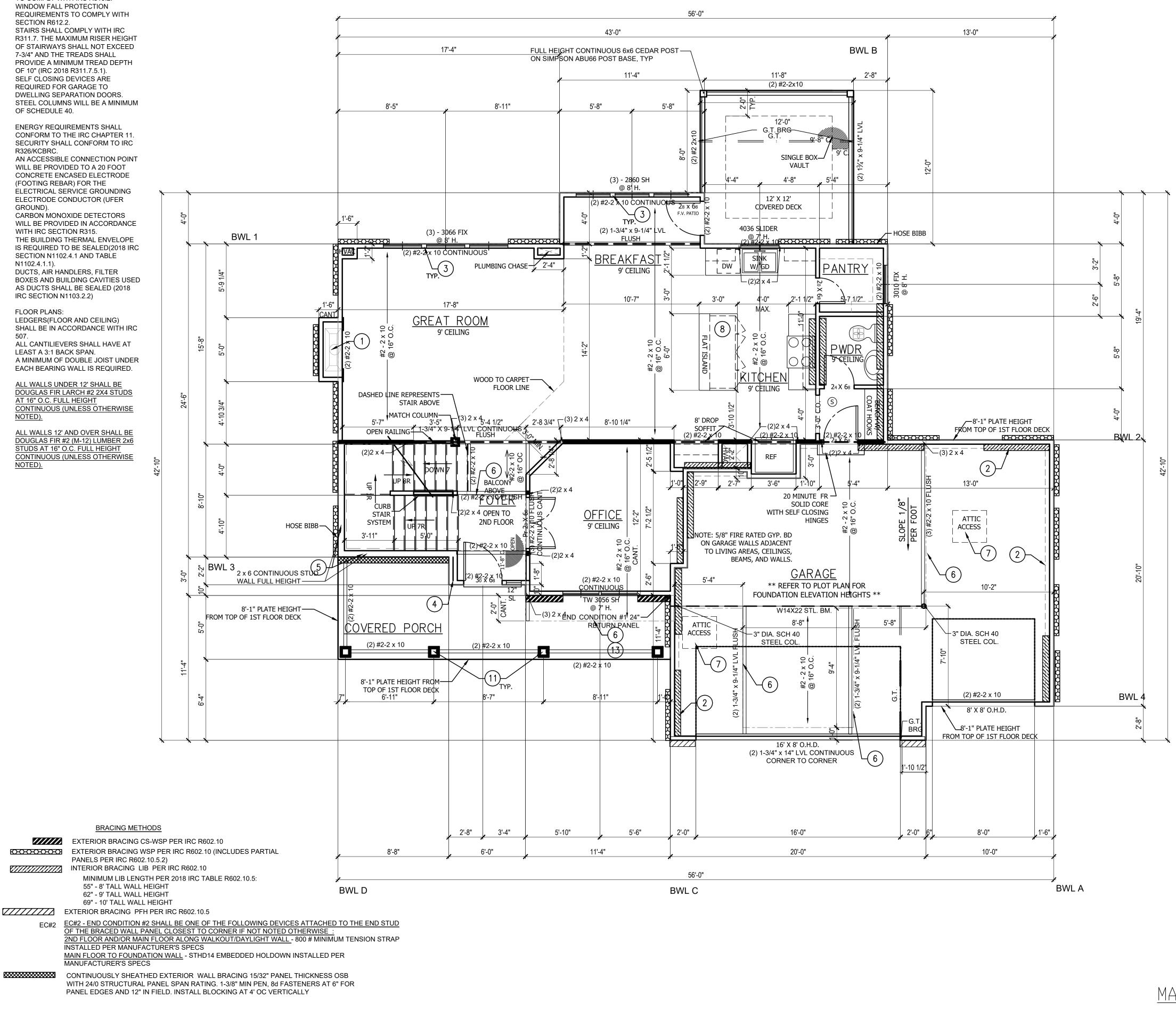
T 16" O.C. FULL HEIGHT CONTINUOUS (UNLESS OTHERWISE

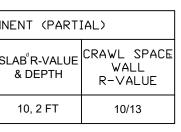
L WALLS 12' AND OVER SHALL BE DOUGLAS FIR #2 (M-12) LUMBER 2x6 STUDS AT 16" O.C. FULL HEIGHT CONTINUOUS (UNLESS OTHERWISE

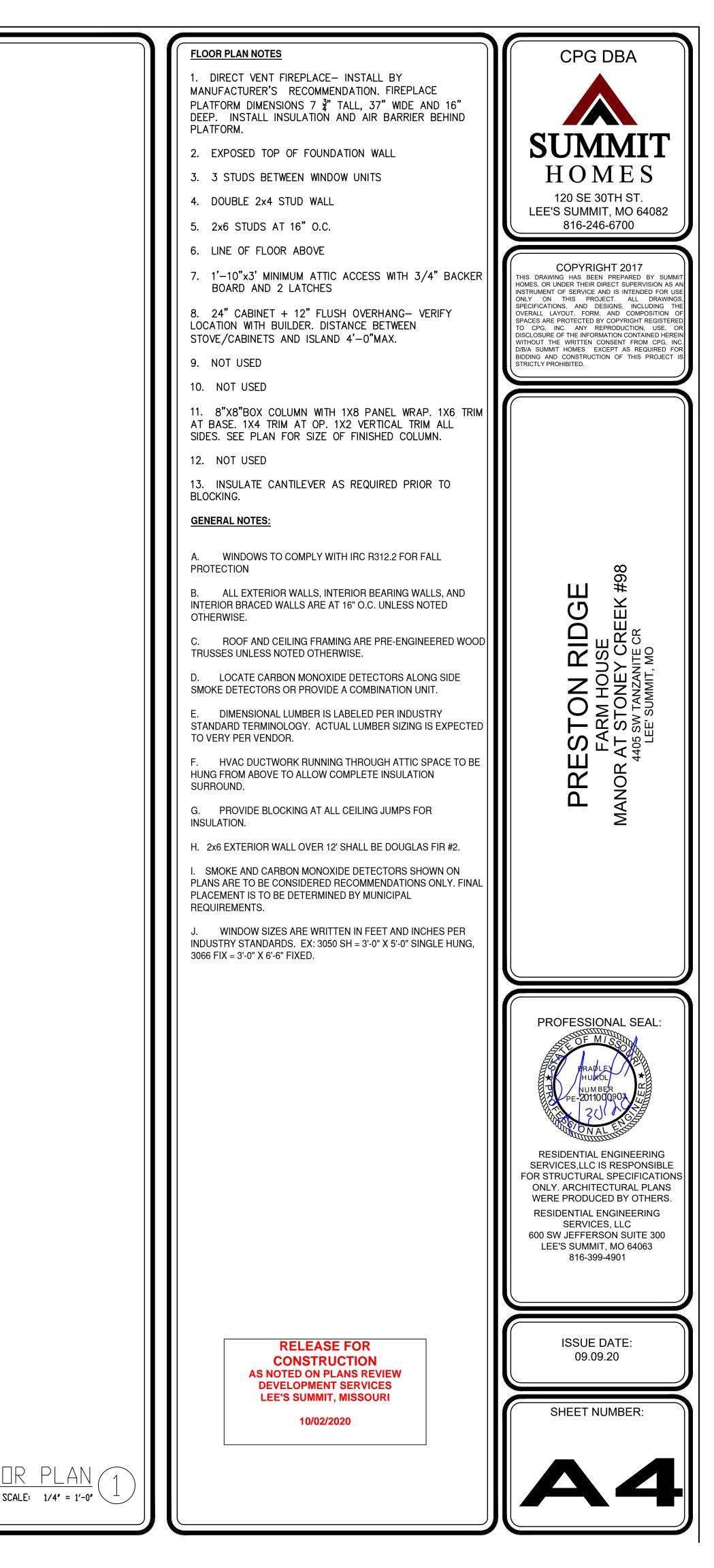
EC#2

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

| IRC TABLE N1102.1.2 (R402.1.2) INSULATION AND FENESTRATION REQUI | | | | | | EQUIREME | INTS BY COMPI | | |
|--|---------------------------------------|-----------------------------------|--|--------------------|----------------------------|-------------------------|------------------|-------|----------|
| CLIMATE ZONE | FENESTRATION U-FACTOR [♭] | SKYLIGHT [♭] U-FACTOR | GLAZED FENESTRATION SHGC ^{D, e} | CEILING R-∨ALUE | WOOD FRAME WALL R-VALUE | MASS WALL R-VALUÉ | FLOOR R-VALUE | | SLA 8 |
| 4 EXCEPT MARINE | ,32 | .55 | .40 | 49 | 20 DR 13+5 | 8/13 | 19 | 10/13 | , |







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

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

DETAILS AND NOTES:

BASEMENT EGRESS WINDOWS ARE TO COMPLY WITH IRC R310.2. WINDOW FALL PROTECTION REQUIREMENTS TO

COMPLY WITH SECTION R612.2. STAIRS SHALL COMPLY WITH IRC R311.7. THE MAXIMUM RISER HEIGHT OF STAIRWAYS SHALL NOT EXCEED 7-3/4" AND THE TREADS SHALL PROVIDE A MINIMUM TREAD DEPTH OF 10" (IRC

2018 R311.7.5.1). SELF CLOSING DEVICES ARE REQUIRED FOR GARAGE TO DWELLING SEPARATION DOORS. STEEL COLUMNS WILL BE A MINIMUM OF SCHEDULE 40.

ENERGY REQUIREMENTS SHALL CONFORM TO

THE IRC CHAPTER 11. SECURITY SHALL CONFORM TO IRC R326/KCBRC. AN ACCESSIBLE CONNECTION POINT WILL BE PROVIDED TO A 20 FOOT CONCRETE ENCASED ELECTRODE (FOOTING REBAR) FOR THE ELECTRICAL SERVICE GROUNDING ELECTRODE CONDUCTOR (UFER GROUND).

CARBON MONOXIDE DETECTORS WILL BE PROVIDED IN ACCORDANCE WITH IRC SECTION R315

THE BUILDING THERMAL ENVELOPE IS REQUIRED TO BE SEALED(2018 IRC SECTION N1102.4.1 AND TABLE N1102.4.1.1).

DUCTS, AIR HANDLERS, FILTER BOXES AND BUILDING CAVITIES USED AS DUCTS SHALL BE SEALED (2018 IRC SECTION N1103.2.2)

FLOOR PLANS:

LEDGERS(FLOOR AND CEILING) SHALL BE IN ACCORDANCE WITH IRC 507.

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

A MINIMUM OF DOUBLE JOIST UNDER EACH BEARING WALL IS REQUIRED.

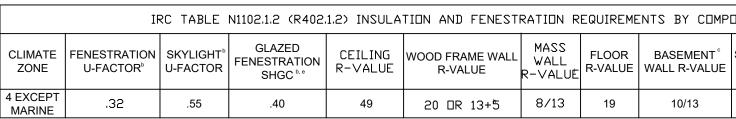
ALL WALLS UNDER 12' SHALL BE DOUGLAS FIR

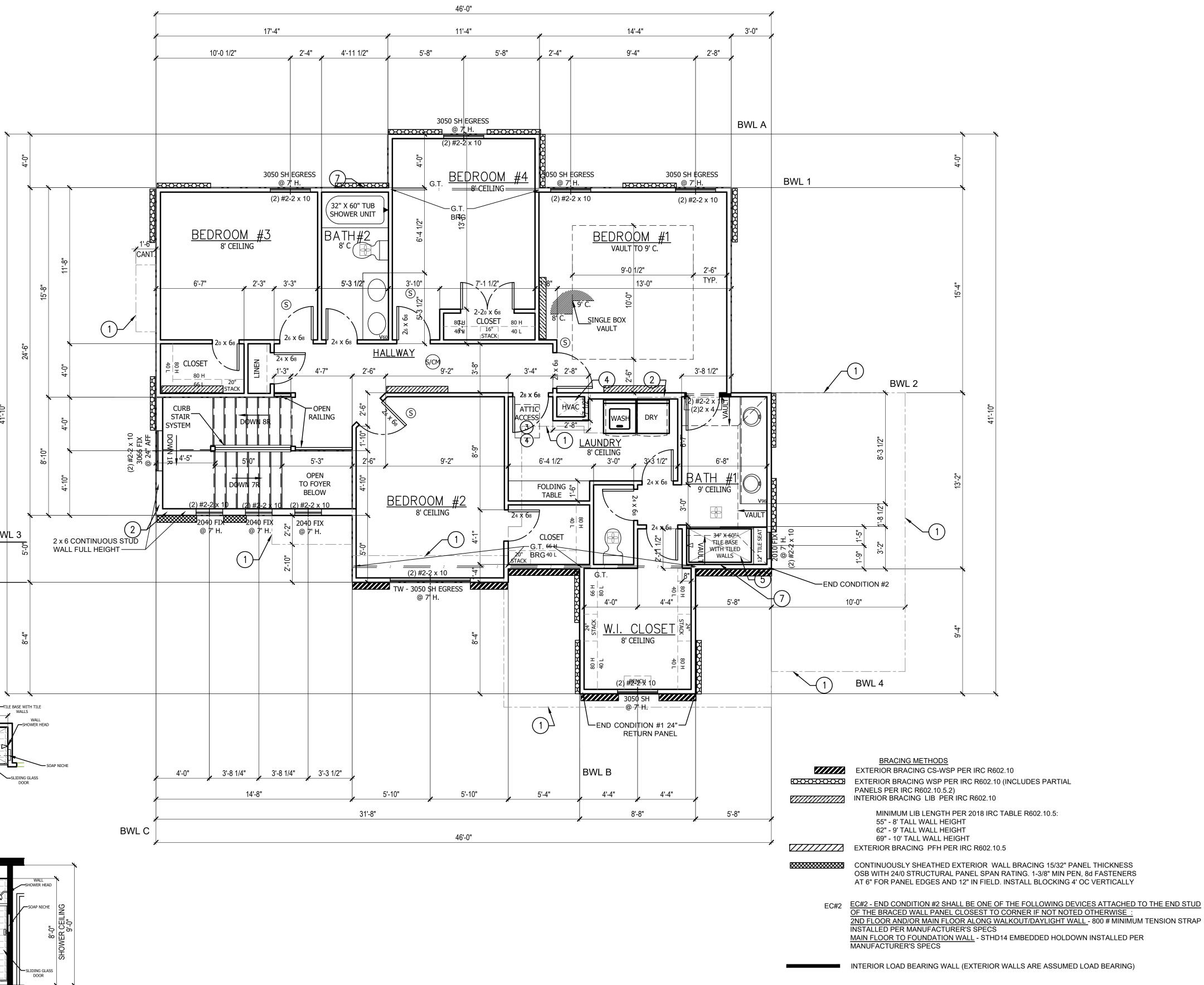
LARCH #2 2X4 STUDS AT 16" O.C. FULL HEIGHT CONTINUOUS (UNLESS OTHERWISE NOTED).

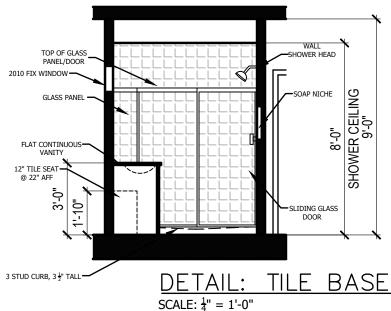
ALL WALLS 12' AND OVER SHALL BE DOUGLAS FIR #2 (M-12) LUMBER 2x6 STUDS AT 16" O.C. FULL HEIGHT CONTINUOUS (UNLESS OTHERWISE

@ 22" AFF

CONTINUOUS

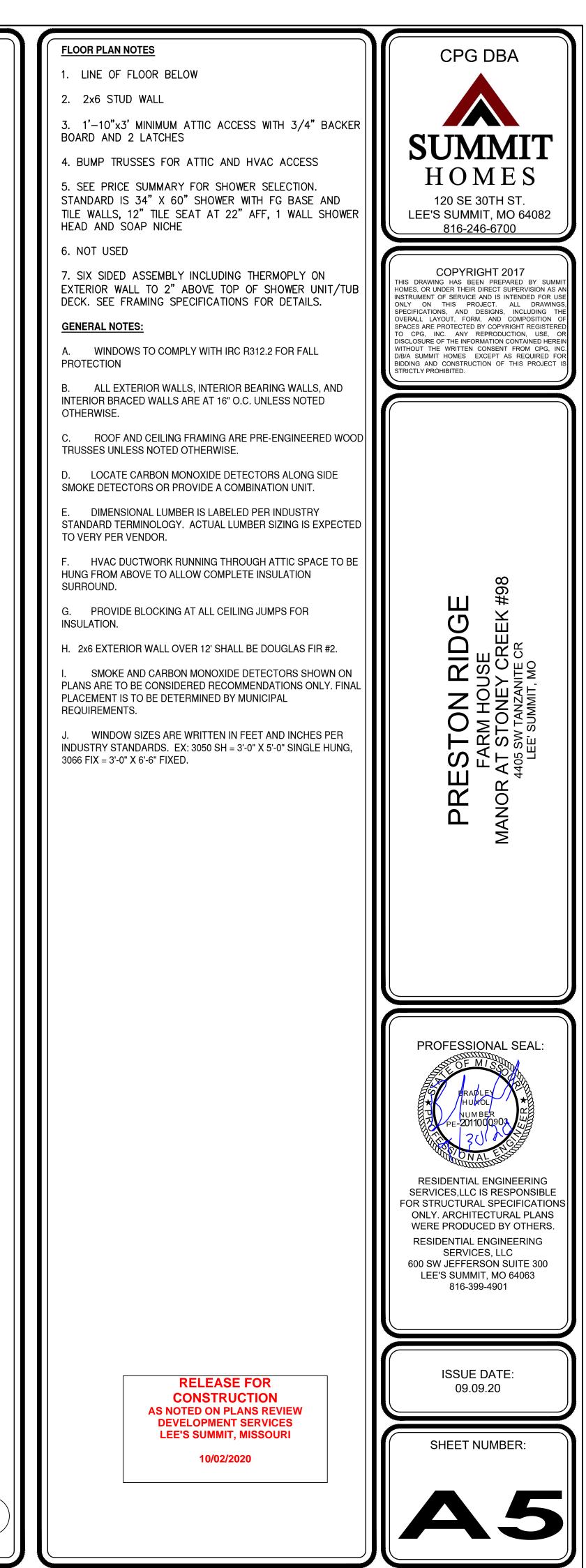




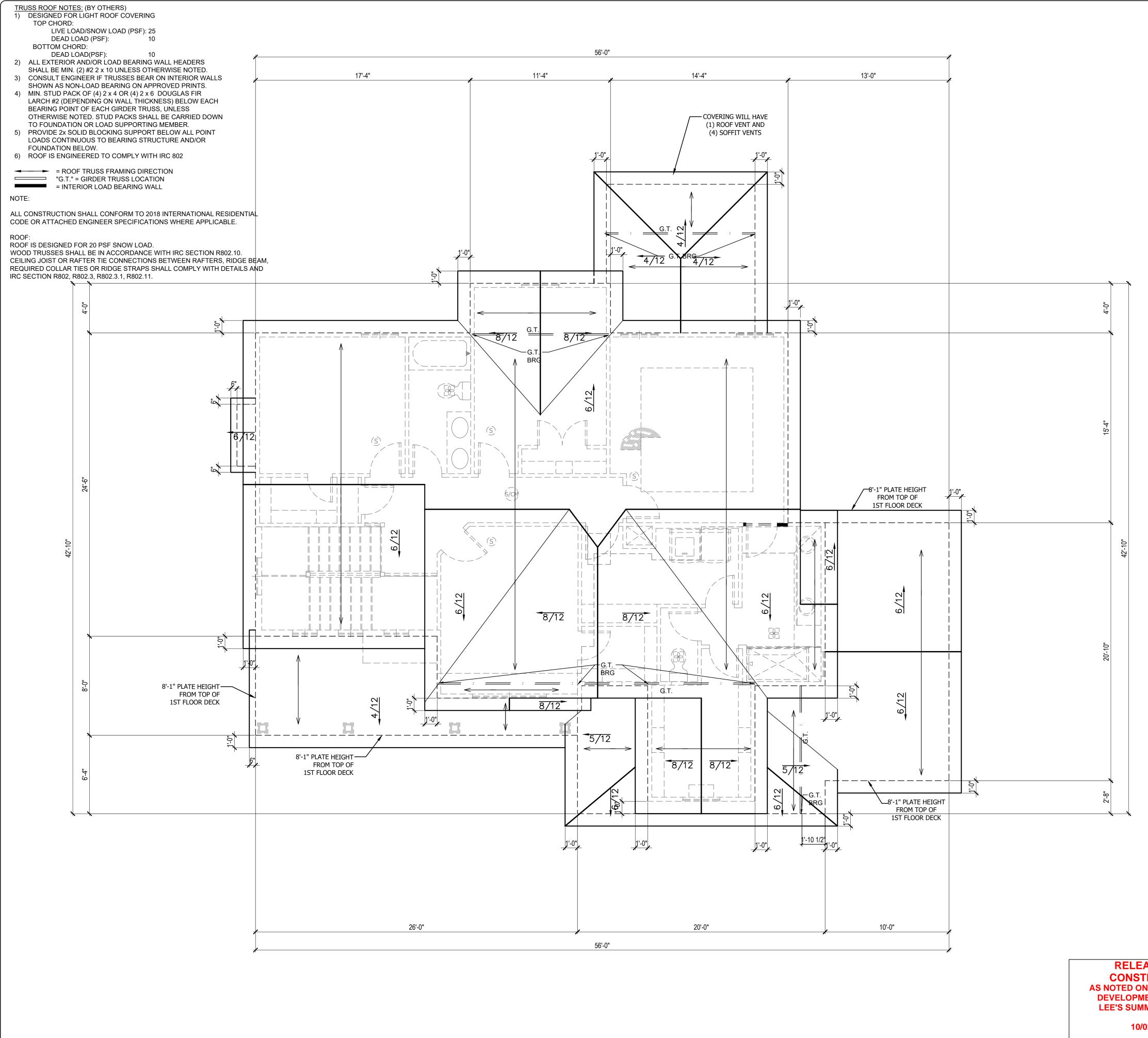


BWL 3

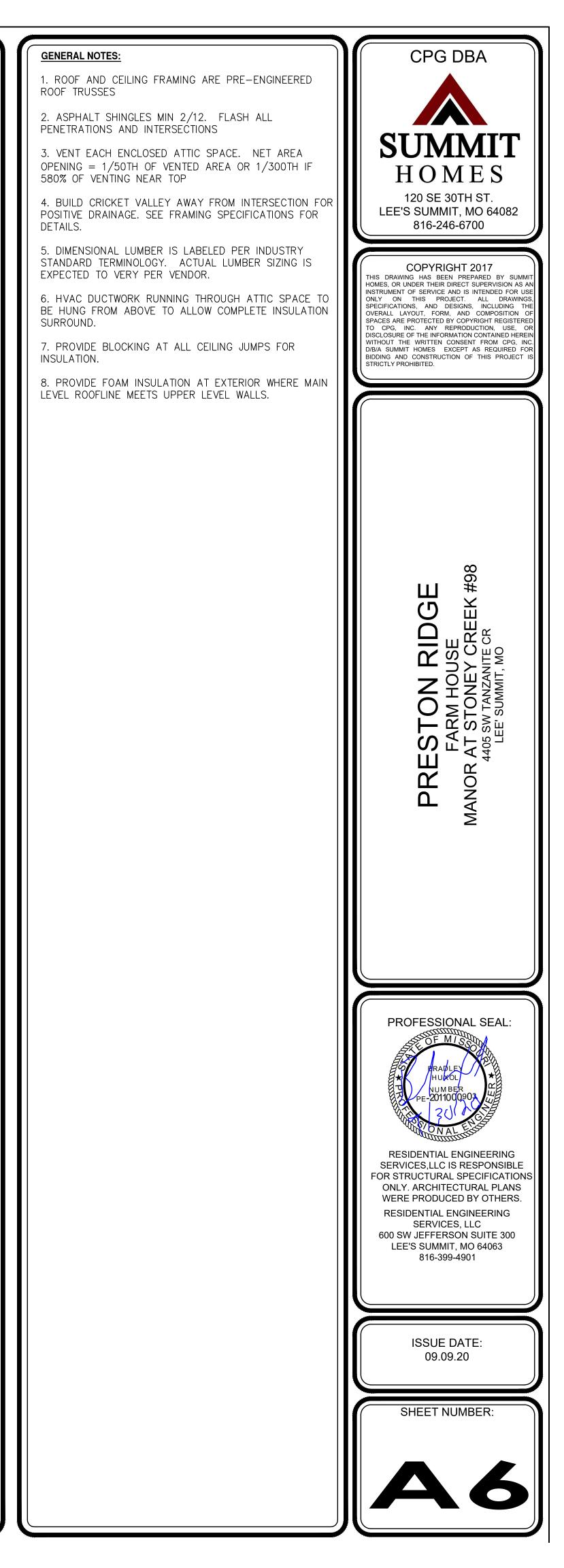
| Į | DNENT (PARTIAL) | | | | |
|---|--------------------------------------|--------------------------------|--|--|--|
| | SLAB [®] R-VALUE & DEPTH | CRAWL SPAC⊾ WALL R−VALUE | | | |
| | 10, 2 FT | 10/13 | | | |



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



RELEASE FOR CONSTRUCTION AS NOTED ON PLANS R DEVELOPMENT SERVIC LEE'S SUMMIT, MISSO 10/02/2020



| N EVIEW ICES DURI | |
|----------------------------|-----------------------------|
| Cale: | <u>PLAN</u> 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 I | 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 2,000 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.
- PROVIDE A MINIMUM SOIL COVER OF <u>36 INCHES MEASURED FROM THE BOTTOM OF CONCRETE ON</u> ALL FOUNDATIONS.
- ACCESSORY STRUCTURES WITH AN EAVE HEIGHT LESS THAN 10'-0" AND AN AREA LESS THAN 600 FT² 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:
- 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 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.
- BEHIND THE VERTICAL REINFORCEMENT (I.E. 2" TOWARD THE INSIDE). D. SUPPLEMENTAL REINFORCEMENT AT CORNERS - PLACE 1 #4 REBAR 48" LONG AT 45 DEGREE
- CORNERS
- 5. AT MASONRY LEDGES THE MINIMUM WALL THICKNESS SHALL BE 3-1/2". LEDGES SHALL NOT EXCEED
- 6. STRAIGHT WALLS MORE THAN 5' TALL AND MORE THAN 16' LONG SHALL BE PROVIDED WITH EXTERIOR 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 | TOP | BARS | OTHEF | RBARS | |
| 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 REINFORCING AND EXTENDED TO 3" CLEAR FROM BOTTOM OF FOUNDATION

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

B. OTHER BARS SHALL BE EQUALLY SPACED WITH SPACING NOT TO EXCEED 24" O.C. C. HORIZONTAL BARS SHOULD BE AS CLOSE TO THE TENSION FACE AS POSSIBLE (INTERIOR); AND

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.

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.

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 KS |
| CHANNELS, PLATES AND ANGLES: | ASTM A36 (Fy = 36 KS |
| WIDE FLANGES: | ASTM A992 (Fy = 50 K |
| COLUMNS: | ASTM A53 GR. B (Fy= 3 |
| ANCHOR RODS: | ASTM F1554 (Fy = 36 KS |

- 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:

- AS REQUIRED PER M1503.6.

GARAGES:

- ABOVE.

- PER R302.5.1.

STAIRWAYS:

GLAZING

FRAMING NOTES:

- WALLS.

KSI) KSI) 35 KSI) KSI)

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.

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.

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

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

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.

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.

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

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"

2. BASEMENT EGRESS TO MEET THE REQUIREMENTS OF IRC R310.

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.

4. CARBON MONOXIDE DETECTORS SHALL BE INSTALLED AS REQUIRED PER R315.

1. ALL LUMBER SIZES ARE DOUGLAS FIR-LARCH #2 UNLESS OTHERWISE NOTED.

2. ALL UNMARKED HEADERS SHALL BE A MINIMUM #2 DOUGLAS FIR LARCH (2) 2x10 ON LOAD BEARING

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.

RELEASE FOR CONSTRUCTION **AS NOTED ON PLANS REVIEW** DEVELOPMENT SERVICES LEE'S SUMMIT, MISSOURI

10/02/2020



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SHEET #

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| | 2018 IF | C TABLE R602.3(1) (SEE IRC FOR FOOTN | IOTES) | | 2018 IF | RC TABLE R602.3(1) (SEE IRC FOR FOOT | NOTES) | |
|------|---|---|--|------|---|---|---|--------------|
| ITEM | DESCRIPTION OF BUILDING | NUMBER AND TYPE OF FASTENER | SPACING AND LOCATION | | | FLOOR | | |
| | ELEMENTS BLOCKING BETWEEN CEILING | ROOF 4-8D BOX (2-1/2"x0.113") OR 3-8D COMMON (2-1/2" x 0.131"); 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 3-3" X 0.131" NAILS | TOE NAIL | |
| 1 | JOISTS OR RAFTERS TO TOP PLATE | 3-10D BOX (3" x 0.128"); OR | TOE NAIL | | RIM JOIST, BAND JOIST OR | 8d BOX (2-1/2"x0.113") | 4" O.C. TOE NA | IL |
| 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. TOE NA | IL |
| 3 | CEILING JOISTS NOT ATTACHED TO PARALLEL RAFTER LAPS OVER PARTITIONS | 3-3" x 0.131" NAILS 4-10D BOX (3" X 0.128"); OR 3-16D COMMON (3-1/2" X 0.162"); OR 4-3" X 0.131" NAILS | 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 | CEILING JOIST ATTACHED TO PARALLEL RAFTER (HEEL JOINT) | TABLE R802.5.2 | FACE NAIL | | | FLOOR | | |
| 5 | COLLAR TIE TO RAFTER, FACE NAIL OR 1-1/4"x20 GAGE RIDGE STRAP | 4-10D BOX (3" X 0.128"); OR 3-10D COMMON (3" X 0.148"); OR | FACE NAIL EACH RAFTER | 24 | 2" SUBFLOOR TO JOIST OR GIRDER 2" PLANKS (PLANK & BEAM - FLOOR | 3-16D BOX (3-1/2" X 0.135"); OR 2-16D COMMON (3-1/2"x0.162") 3-16D BOX (3-1/2" X 0.135"); OR | BLIND AND FACE | |
| | TO RAFTER | 4-3" X 0.131" NAILS 3-16d BOX NAILS (3-1/2"x0.135") OR | | 25 | & ROOF) | 2-16D COMMON (3-1/2"x0.162") | AT EACH BEARING, FA | ACE NAIL |
| 6 | RAFTER OR ROOF TRUSS TO PLATE | 3-10d COMMON NAILS (3"x0.148"); OR 4-10D BOX (3" X .128"); OR 4-3" X 0.131" NAILS 4-16D (3-1/2"x0.135") ; OR | 2 TOE NAILS ON ONE SIDE AND 1 TOE NAIL ON OPPOSITE SIDE OF EACH RAFTER OR TRUSS | 26 | BAND OR RIM JOIST TO JOIST | 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, ⁷ / ₁₆ " CROWN | END NAIL | |
| | ROOF RAFTERS TO RIDGE, VALLEY | 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 FOLLOV TOP END AND BOTTOM AND S | |
| 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 | | 27 | BUILT-UP GIRDERS AND BEAMS, 2" LUMBER LAYERS | 10D BOX (3" X 0.128"); OR 3" X 0.131" NAILS | 24" O.C. FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES | |
| | | 3-10D BOX (3" X .128"); OR 3-3" X 0.131" NAILS WALL | END NAIL | | | 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 ENDS AND AT EACH SPLIC | |
| 8 | STUD TO STUD (NOT AT BRACED WALL PANELS) | 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 RAFTE | R, FACE NAIL |
| 9 | STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS (AT BRACED WALL | 16D BOX (3-1/2"x0.135"); OR 3" X 0.131" NAILS | 12" O.C. FACE NAIL | 29 | BRIDGING OR BLOCKING TO | 2-10D BOX (3" X 0.128"); OR 2-8D COMMON (2-1/2" X 0.131"; OR 2-3" X | EACH END, TOE | NAIL |
| | PANELS) | 16D COMMON (3-1/2" X 0.162") | 16" O.C. FACE NAIL | | JOIST | 0.131") NAILS | | |
| 10 | BUILT-UP HEADER (2" TO 2" HEADER WITH ¹ / ₂ " SPACER) | 16D COMMON (3-1/2"x0.162") | 16" O.C. ALONG EACH EDGE FACE NAIL | | | | SPACING OF FAST | ENERS |
| 11 | CONTINUOUS HEADER TO STUD | 16D BOX (3-1/2" X 0.135) 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") | 12" ALONG EACH EDGE FACE NAIL TOENAIL | ITEM | DESCRIPTION OF BUILDING ELEMENTS | NUMBER AND TYPE OF FASTENER | | FERMEDIAT |
| | | 16D COMMON (3-1/2" X 0.162") | 16" O.C. FACE NAIL | | | 6d COMMON (2"x0.113") NAILS (SUBFLOOR, WALL) | | |
| 12 | TOP PLATE TO TOP PLATE | 10d BOX (3"x0.128"); OR 3" X 0.131" NAILS | 12" O.C. FACE NAIL | 30 | 3/8" - 1/2" | 8d COMMON (2-1/2"x0.131") NAIL (ROOF); OR RSRS-01 (2-38" X 0.113") NAIL (ROOF) | 6 | 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" 1-1/8" - 1-1.4" | 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 | 1-1/0 - 1-1.4 | 8D (2-1/2"x0.131") DEFORMED NAIL | 0 | 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 $\frac{7}{16}$ " 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 $\frac{7}{16}$ " 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 | 3-10D BOX (3" X 0.128"); OR | | | WOOD STRUCTURA | L PANELS, COMBINATION SUBFLOOR UN | NDERLAYMENT TO FRAMIN | G |
| 17 | AND INTERSECTIONS | 2-16D COMMON (3-1/2" X 0.162"); OR 3-3" X 0.131" NAILS 3-8D BOX (2-1/2" X 0.113"); OR | FACE NAIL | 37 | 3/4" AND LESS | 6D DEFORMED (2"x0.120") NAIL OR 8D COMMON (2-1/2"x0.131") NAIL | 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 | FACE NAIL | 38 | 7/8" - 1" | 8D COMMON (2-1/2"x0.131") NAIL OR 8D DEFORMED (2-1/2"x0.120") NAIL 10D COMMON (3"x0.148") NAIL OR | 6 | 12 |
| 19 | 1"x6" SHEATHING TO EACH BEARING | 2 STAPLES 1-3/4" 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 | FACE NAIL | | F | | | 7 |
| 20 | 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 SCREWS AND BOLTS IN DECK LEDGERS AND BAND JOISTS | | |
| | | 3-10D BOX (3" X 0.128"); OR 4 STAPLES, 1" CROWN, 16 GA, 1-3/4" LONG | | | MINIMUM END AND EDGE DISTANCES AND (INCHES) | SPACING BETWEEN ROWS | | |

| 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 |

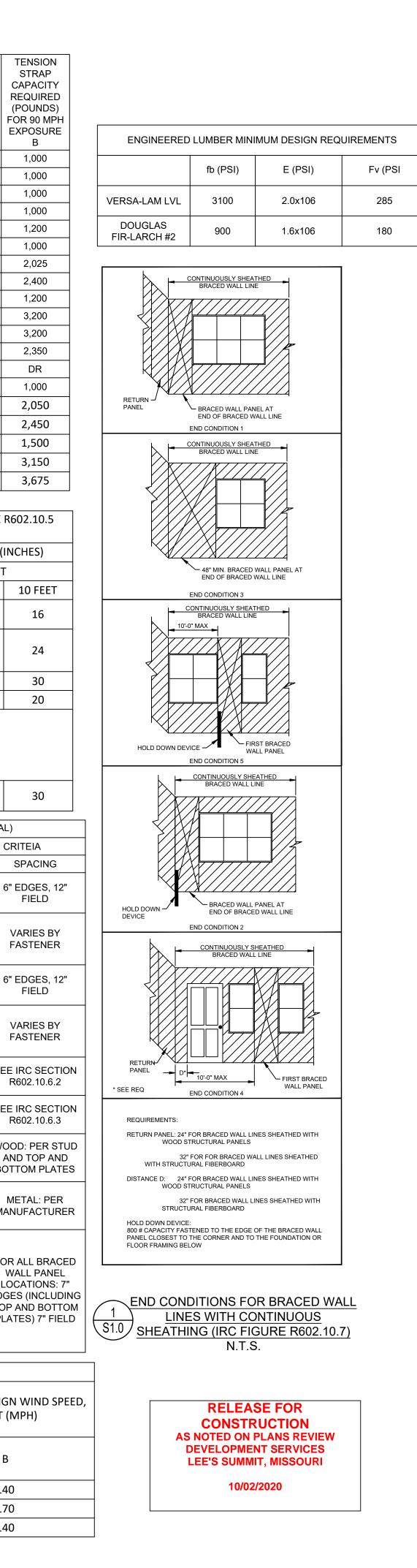
| MINIMUM WALL STUD FRAMING NOMINAL SIZE AND GRADE | MAXIMUM PONY WALL HEIGHT (FEET) | MAXIMUM TOTAL WALL HEIGHT (FEET) | MAXIMUM OPENING WIDTH (FEET) | (F (E |
|--|---------------------------------------|--|---------------------------------------|------------------|
| | 0 | 10 | 18 | |
| | | | 9 | |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

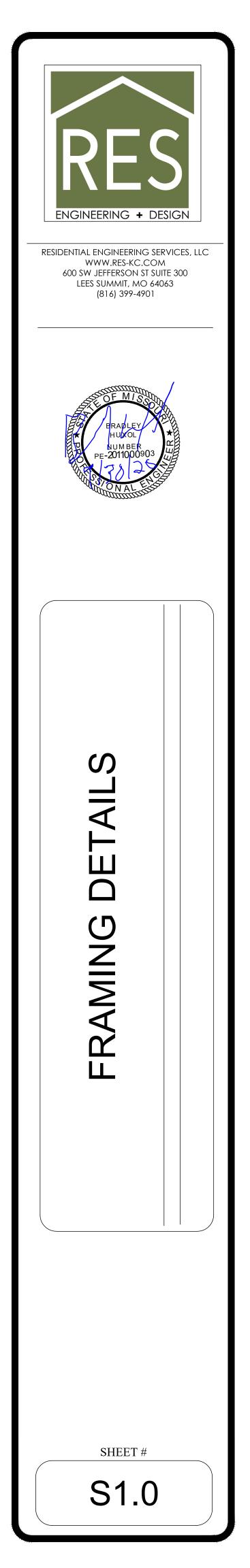
| MINIMUN | MINIMUM LENGTH OF BRACED WALL PANELS TABLE RE (PARTIAL) | | | | | |
|---------|--|--------|--------------------|---|--|--|
| | | MININ | MINIMUM LENGTH (IN | | | |
| M | ETHOD | | WALL HEIGHT | - | | |
| | | 8 FEET | 9 FEET | | | |
| | SUPPORTING ROOF ONLY | 16 | 16 | | | |
| PFH | SUPPORTING ONE STORY AND ROOF | 24 | 24 | | | |
| | PFG | | 27 | | | |
| 0 | CS-PF | 16 | 18 | | | |
| CS-WSP | ADJACENT CLEAR OPENING HEIGHT (INCHES) | | | | | |
| | LESS THAN OR EQUAL TO 64 | 24 | 27 | | | |
| | BRACING METHODS TABLE R602.10.4 (PARTIAL) | | | | | |

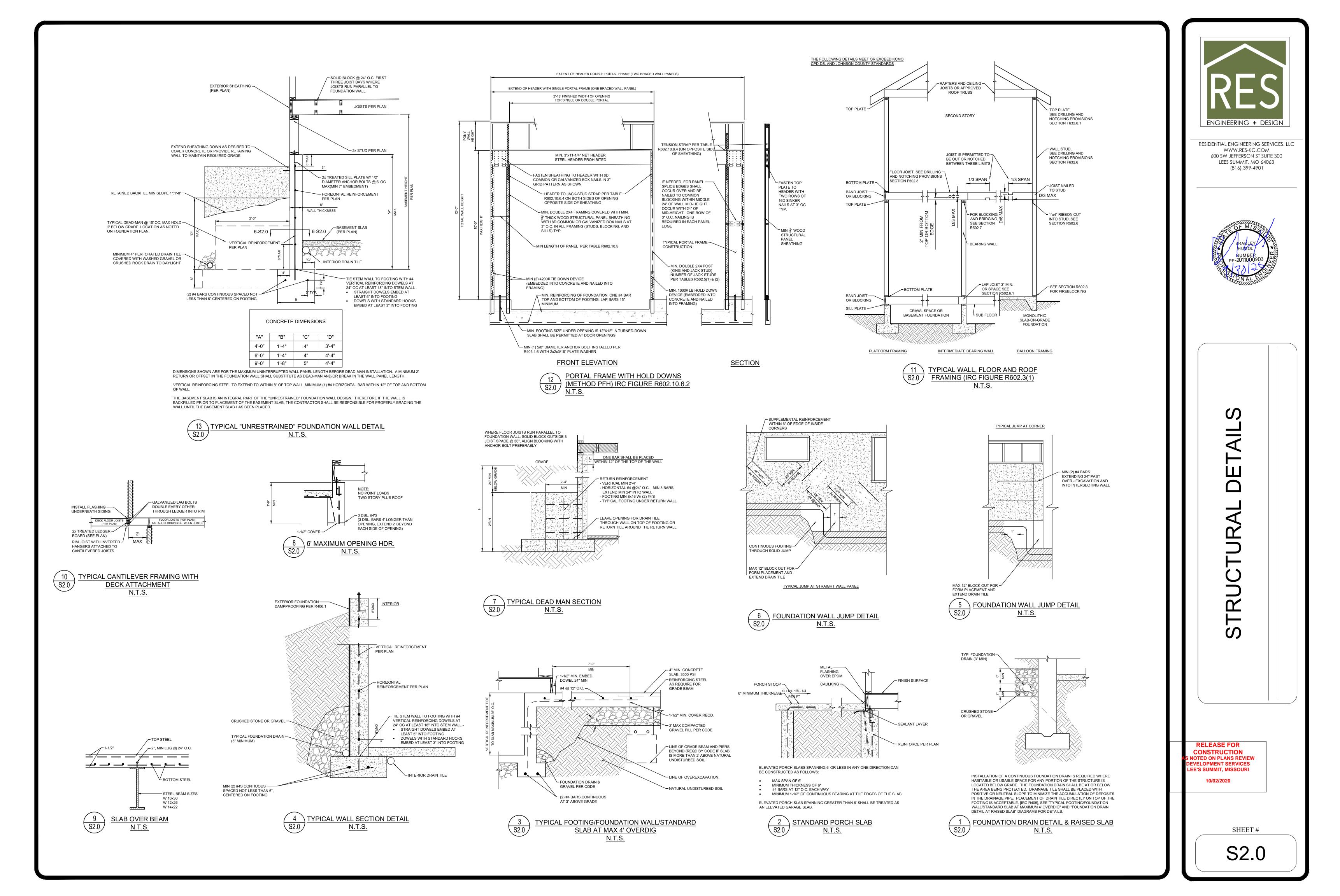
| BRA | ACING METHODS T | ABLE R602.10.4 (PAI | RTIAL) |
|--|--|--|-----------------------|
| METHODS, | MINIMUM | CONNECT | ION CR |
| MATERIAL | THICKNESS | FASTENERS | |
| WSP - WOOD | | EXTERIOR SHEATHING PER TABLE R602.3(3) | 6" |
| STRUCTURAL PANEL | 3/8 | INTERIOR SHEATHING PER TABLE R602.3(1) OR R602.3(2) | V F |
| CS-WSP CONTINUOUSLY | | EXERIOR SHEATHING PER TABLE R602.3(3) | 6" |
| SHEATHED WOOD STRUCTURAL PANEL | 3/8 | INTERIOR SHEATHING PER TABLE R602.3(1) OR R602.3(2) | V 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 | WOO AN BOT |
| LET-IN-BRACING | DEGREE ANGLES FOR MAX 16" STUD SPACING | METAL STRAP: PER MANUFACTURER | M MAN |
| GB-GYPSUM | 1/2 | NAILS OR SCREWS PER TABLE R602.3(1) FOR EXTERIOR LOCATIONS | FOR W/ LOC |
| BOARD | 172 | NAILS OR SCREWS PER TABLE R702.3.5 FOR INTERIOR LOCATIONS | EDGE TOP / PLAT |

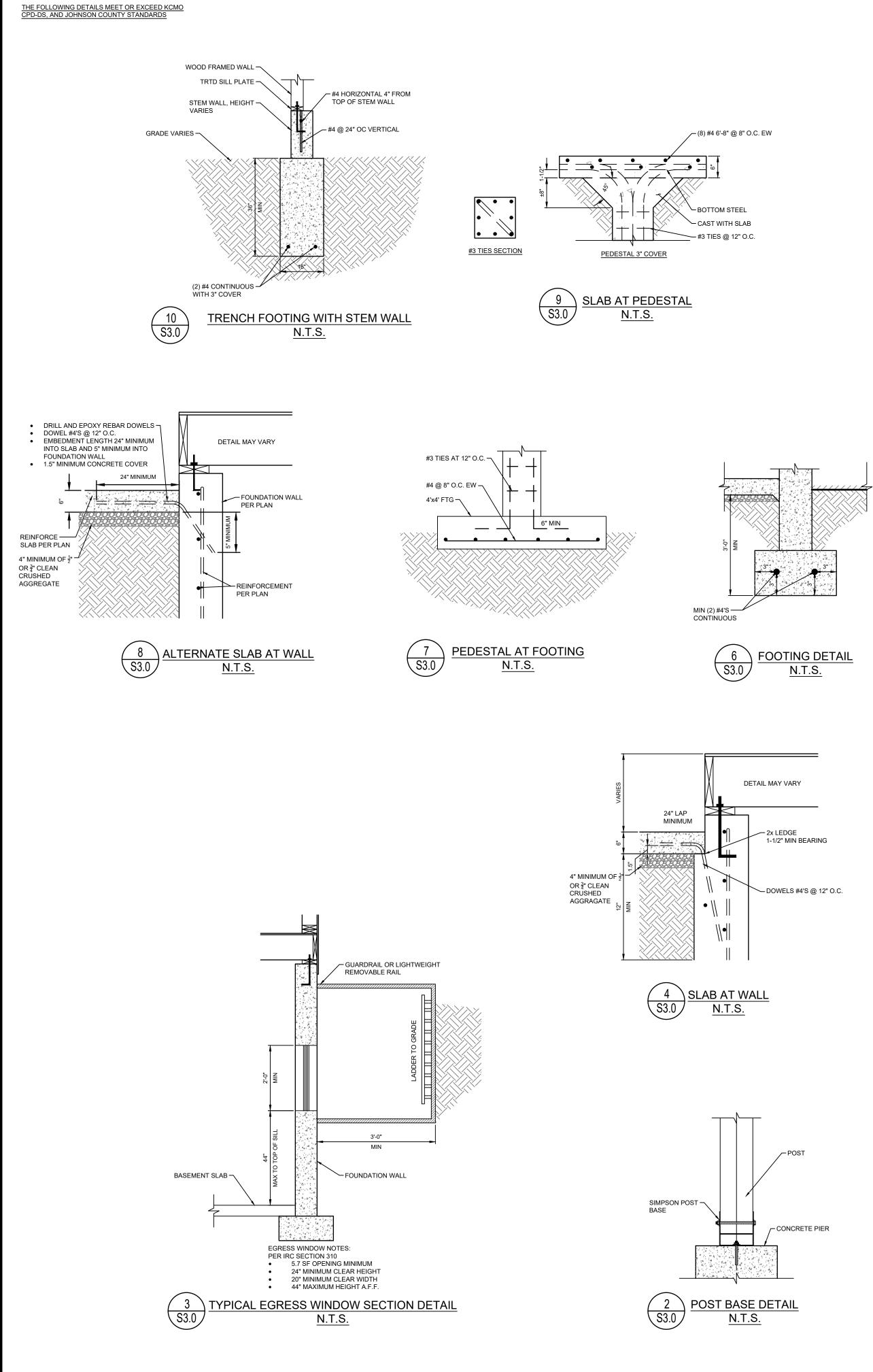
| TABLE R507. | TABLE R507.2.1 PLACEMENT OF LAG SCREWS AND BOLTS IN DECK LEDGERS AND BAND JOISTS | | | | | | | | |
|-------------|---|-------------|------|-------------|--|--|--|--|--|
| MINIMUM END | MINIMUM END AND EDGE DISTANCES AND SPACING BETWEEN ROWS (INCHES) | | | | | | | | |
| | TOP EDGE | BOTTOM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

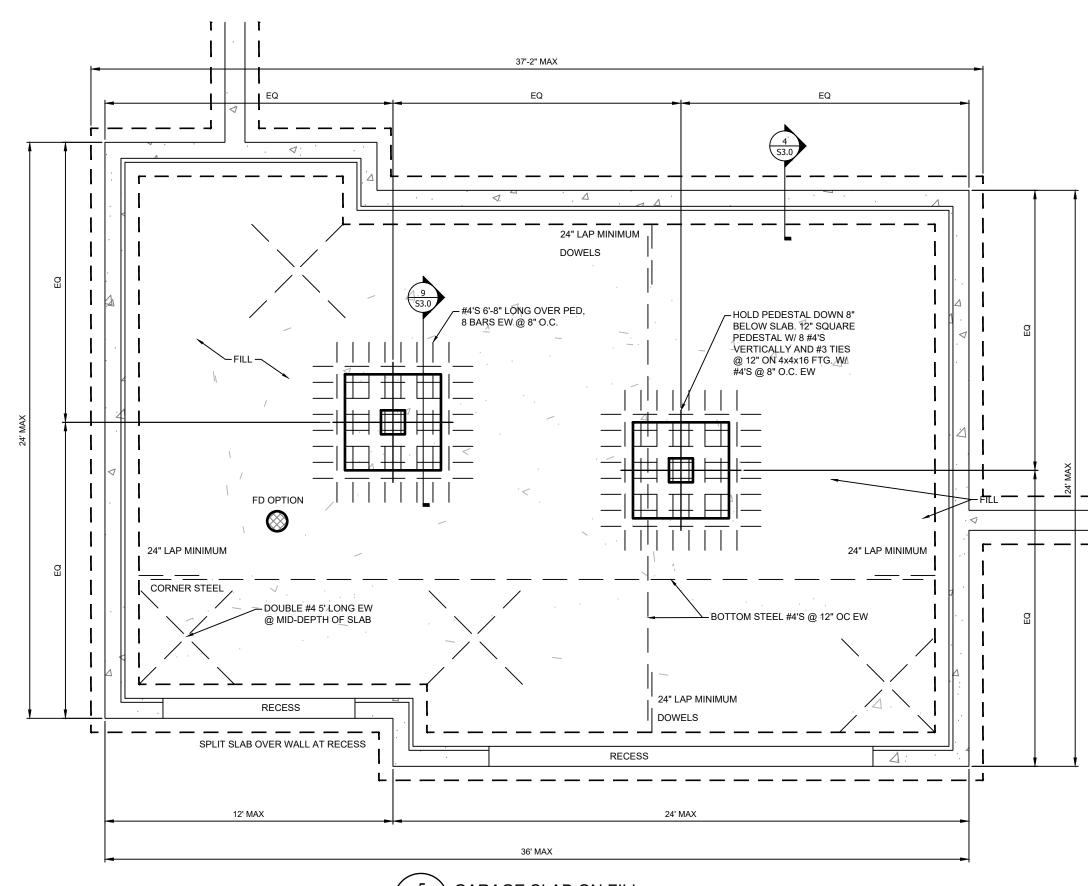
| REQUIREMENTS FOR WOOD STRUCTURAL PANEL WALL SHEATHING USED TO RESIST WIND PRESSURES IRC TABLE 602.3(3) (PARTIA | | | | | | | | | | |
|--|-----------|----------------------------|--------------------------|----------------|--------------------|--------------------|--------------------------------|-----|--|--|
| MINIMUM NAIL | | MINIMUM WOOD STRUCTURAL | 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 | 24/16 | 7/16 | 16 | 6 | 12 | 170 | | |
| | | | | | 24 | 6 | 12 | 140 | | |



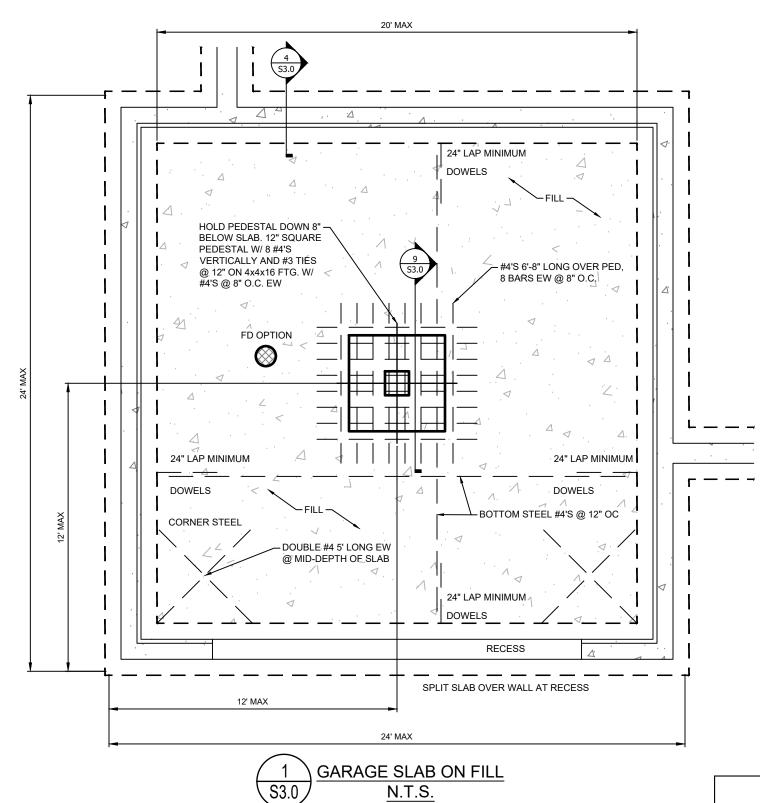








GARAGE SLAB ON FILL S3.0 N.T.S.



RELEASE FOR CONSTRUCTION **AS NOTED ON PLANS REVIEW DEVELOPMENT SERVICES** LEE'S SUMMIT, MISSOURI

10/02/2020

