

THE GENERAL CONTRACTOR SHALL BE AWARE OF AND RESPONSIBLE FOR, BUT NOT LIMITED TO, THE FOLLOWING:

RESPONSIBLE FOR ANY DAMAGES NECESSARY AS A RESULT OF CONDITIONAL OR DIMENSIONAL DIFFERENCES.

CODE, THE MOST RESTRICTIVE SHALL APPLY.

3. ALL DIMENSIONS SHALL BE READ OR CALCULATED AND NEVER SCALED.

BUILDING. CONSULT LOCAL ENGINEER FOR PROPER FOOTING AND REINFORCING SIZES.

I. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION AND BE SOLELY

2. WHERE DISCREPANCIES EXIST BETWEEN THE STANDARD COMMENTS, THE NOTES FROM THE DESIGN PROFESSIONAL, AND/OR THE

4. ALL FOOTINGS TO BE BELOW FROST LINE (PER LOCAL CODE) AND MUST REST ON UNDISTURBED SOIL CAPABLE OF HANDLING THE

ARCHITECTURAL CONCEPTS, INC. SHALL NEITHER HAVE CONTROL OVER OR CHARGE OF, NOR BE RESPONSIBLE FOR, THE

DOCUMENTS.

EMPLOYEES OF ANY OF

CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN

CONNECTION WITH THE WORK, SINCE THESE ARE SOLELY THE CONTRACTOR'S RIGHTS AND RESPONSIBILITIES UNDER THE CONTRACT

TO THE FULLEST EXTENT PERMITTED BY LAW AND TO THE EXTENT CLAIMS, DAMAGES, LOSSES OR EXPENSES ARE NOT COVERED BY

PROJECT MANAGEMENT PROTECTIVE LIABILITY INSURANCE PURCHASED BY THE CONTRACTOR IN ACCORDANCE WITH PARAGRAPH

II.3, THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER, ARCHITECTURAL CONCEPTS, INC., AND AGENTS AND

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Architect have performed our services with due care and diligence, we cannot During construction, the contractor may be required to adapt the "Builder's Plans" to the field conditions and make logical adjustments. In the event additional information is needed by the Contractor or Home Owner for construction of an aspect of the project, he shall immediately retain Architectural Concepts, Inc. Failure to notify Consultan / Architect of any discrepancies or ambiguities discovered by the use of these plans, or making changes to the plans without the consent of Consultant / Architectural Concepts, Inc. of any responsibilities or consequences.

drawn without full engineering and design services. Although the Consultant ,

Date: June 15, 2021 Rev. Issue: Rev. Date:

PROJECT NO.

NOTES

6-TYPICAL ARCHITECTURAL ELECTRICAL PLAN

7- JOHN KNOX VILLAGE GENERAL NOTES

9. THESE PLANS AND SPECIFICATIONS WERE DESIGNED FOR COMPLIANCE WITH STANDARD INTERPRETATION OF THE IRC 2018 AND

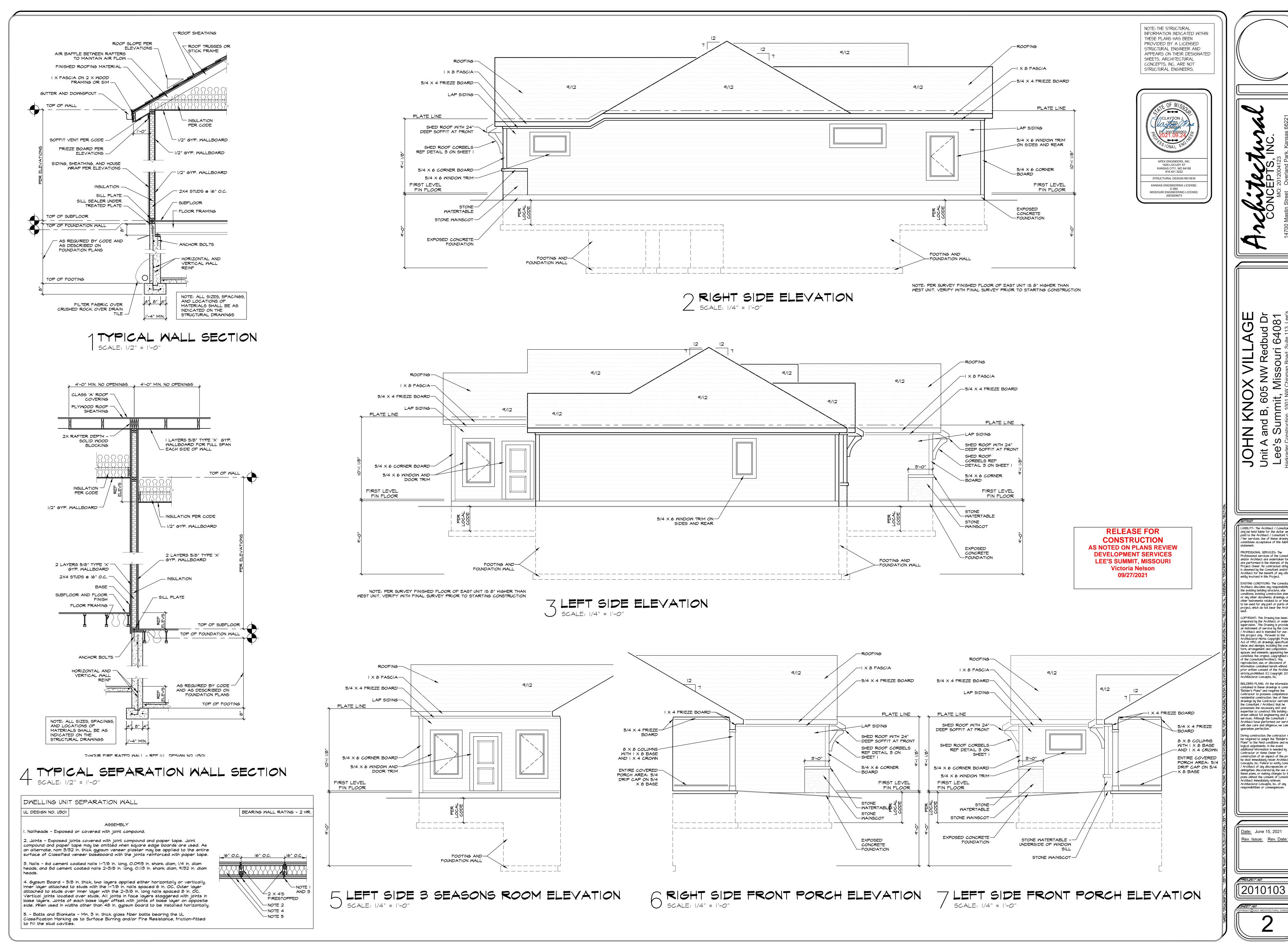
OTHER CODES HAVING JURISDICTION. PERMITS BY THE GOVERNING AGENCIES SHALL CONSTITUTE ACCEPTANCE OF COMPLIANCE BY

II. CONTRACTOR SHALL ENSURE THAT ALL INSPECTIONS AND REVIEWS BE MADE ON CONCRETE, SHOP WELD CONNECTIONS, AND MISC.

10. SPECIAL INSPECTIONS SHALL BE MADE ON CONCRETE, REINFORCEMENT, STRUCTURAL STEEL, AND FRAMING.

SUCH AUTHORITIES.

ATTACHMENT ITEMS.



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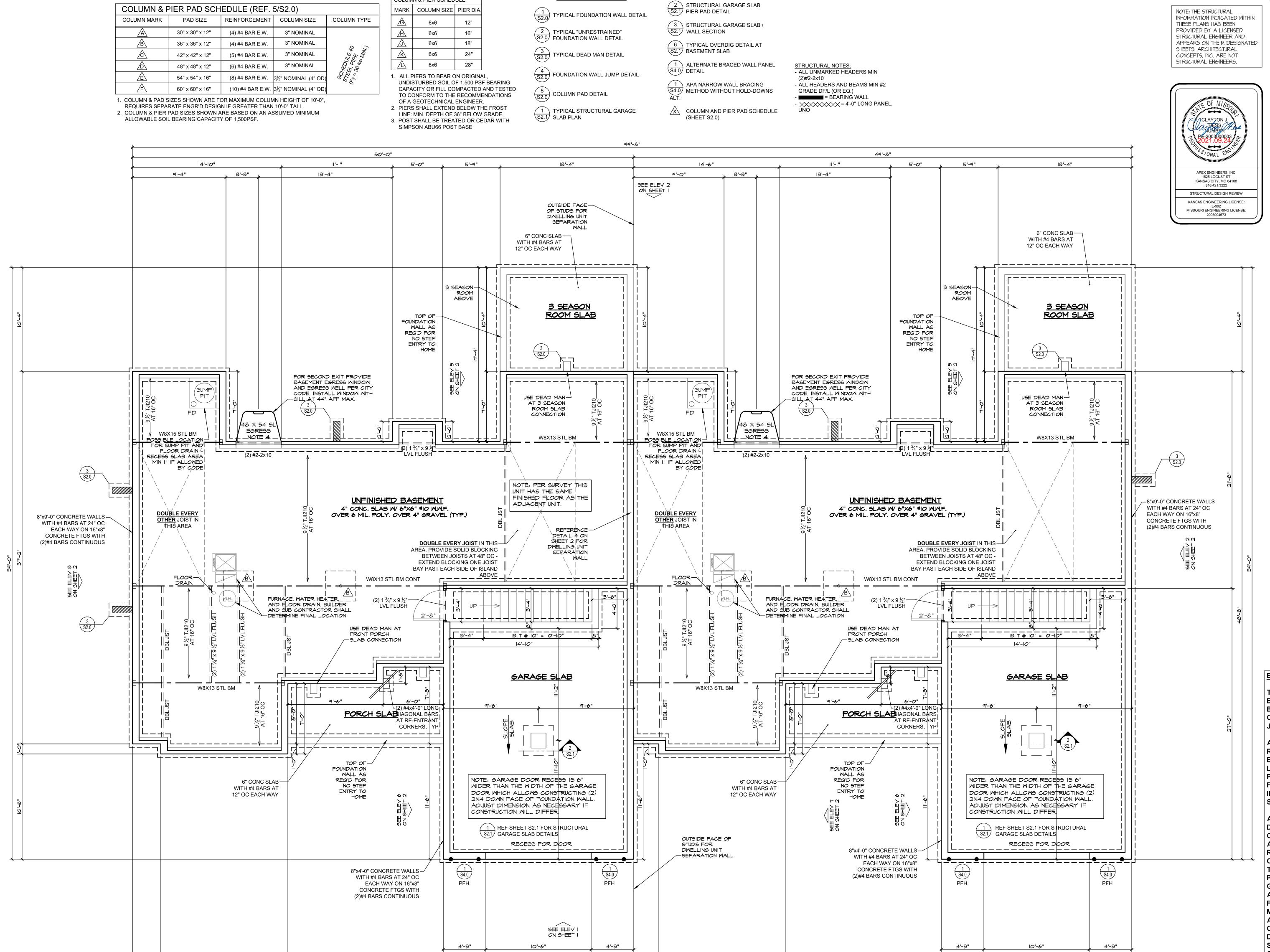
#### COLUMN & PIER PAD SCHEDULE (REF. 5/S2.0) NOTES: **COLUMN MARK** I) DIMENSIONS ARE TO FACE OF WOOD FRAMING AND FACE OF CONCRETE FOUNDATION WALLS. 30" x 30" x 12" (4) #4 BAR E.W. 36" x 36" x 12" (4) #4 BAR E.W. 2) DISCUSS AND LOCATE POSSIBLE FUTURE WALLS AND PLUMBING WITH OWNER PRIOR TO POURING BASEMENT (5) #4 BAR E.W. 42" x 42" x 12" FLOOR SLAB. 48" x 48" x 12" (6) #4 BAR E.W. 3) ALL EXTERIOR WALLS ARE 2X4 FRAMING. ALL INTERIOR WALLS ARE 2X4 FRAMING UNLESS NOTED 54" x 54" x 16" OTHERWISE. 60" x 60" x 16" FOUNDATION PLAN NOTES: ALLOWABLE SOIL BEARING CAPACITY OF 1,500PSF. I) LEVELS OF FOOTINGS AND FOUNDATION WALLS TO BE LOCATED TO PROVIDE FROST DEPTH AND ADEQUATE BEARING. WHERE PIERS ARE REQUIRED PROVIDE SIZES IN ACCORDANCE WITH BUILDING CODE. 2) DO NOT BACK FILL UNTIL FOUNDATIONS HAVE ADEQUATELY CURED. 3) LOCATE GRADE BEAMS UNDER ALL LOAD BEARING 4) PROVIDE SUPPORT FOR PORCH AND STEPS TO GRADE AS REQ'D. 5) LOCATION OF FURNACE, WATER HEATER, FLOOR DRAINS, AND SUMP PIT ARE INDICATED ON THE PLAN AS A POSSIBLE LOCATION AND SHALL BE LOCATED WITH THE BUILDER AND VERIFIED WITH THE APPROPRIATE SUBCONTRACTORS PRIOR TO STARTING EXCAVATION. 6) STEP FOOTING AND FOUNDATION WALL AS REQUIRED BY SITE. MINIMIZE EXPOSED FOUNDATION WALL. 7) DRAWINGS INDICATE EITHER A FULL BASEMENT. DAYLIGHT BASEMENT OR WALKOUT BASEMENT. REVIEW DRAWINGS WITH SURVEY TO DETERMINE ANY ADJUSTMENTS IN THE FOUNDATION WALLS AND STRUCTURE. 8) EGRESS WINDOWS AND WELLS ARE LOCATED ON THE DRAWINGS. REVIEW WITH SURVEY TO DETERMINE ACTUAL LOCATIONS AND REQUIREMENTS WITH CODE. 9) DRAWINGS MIGHT NOT INDICATE FUTURE SLEEPING ROOMS OR BATHROOMS IN BASEMENT, DISCUSS POSSIBLE LOCATIONS WITH OWNER PRIOR TO STARTING EXCAVATION AND INSTALL SCAPEWEL WINDOW SYSTEM OR SIMILAR FOR ANY FUTURE BEDROOMS AND PLUMBING STUB UPS FOR FUTURE BATHROOMS WHERE DIRECTED BY OWNER. 10) DRAWINGS MIGHT NOT INDICATE OTHER WINDOWS (BESIDE SCAPEWEL). DISCUSS POSSIBLE LOCATIONS

**RELEASE FOR CONSTRUCTION AS NOTED ON PLANS REVIEW DEVELOPMENT SERVICES** LEE'S SUMMIT, MISSOURI Victoria Nelson 09/27/2021

TRUE JOIST TIMBERSTRAND LSLS FLOOR JOISTS ARE BEING USED AND PER MANUFACTURER MEET IRC SECTION R302.13 FOR FIRE PROTECTION OF FLOORS IN UNFINISHED AREAS UNDER FLOOR TRUSSES

WITH OWNER PRIOR TO STARTING EXCAVATION AND

INSTALL AS DIRECTED BY OWNER.



49'-8"

DETAIL REFERENCES

COLUMN & PIER SCHEDULE

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

50'-0"

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Architect have performed our services with due care and diligence, we cannot During construction, the contractor may be required to adapt the "Builder's Plans" to the field conditions and make logical adjustments. In the event additional information is needed by the Contractor or Home Owner for construction of an aspect of the project, he shall immediately retain Architectural Concepts, Inc. Failure to notify Consultant / Architect of any discrepancies or ambiguities discovered by the use of these plans, or making changes to the plans without the consent of Consultant / Architectural Concepts, Inc. of any responsibilities or consequences.

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CEILING NOTES WINDOWS DOOR NOTES GENERAL FLOOR PLAN NOTES (APPLIES TO ALL PLANS): MINDOW SIZES AND DESIGNATIONS WINDOW SIZES INDICATED ON PLAN ARE GENERIC SPECIFIC WINDOW NOTES (SEE WINDOW ARE PROVIDED AS A GUIDE ONLY WITH GRILLES PER ELEVATIONS. WINDOWS CAN BE A) ALL CEILING JOISTS AND RAFTER BRACING TO BEAR ON DESIGNATIONS AT FLOOR PLANS) MODIFY WINDOW AND SHOULD NOT BE ORDERED CHANGED TO FIXED PANE WHERE CODE DOES NOT LOAD BEARING WALLS DESIGNED TO CARRY LOAD THRU ALL SIZES AS REQUIRED FOR GENERAL WINDOW NOTE A) BUILDER, FRAMER, AND TRUSS 48 X 48 SUGGESTED WIDTH (INCHES) GENERAL DOOR NOTES: LEVELS AND TERMINATE AT FOUNDATION AND BE SUPPORTED UNLESS THE WINDOW SUPPLIER HAS REQUIRE EXITING. WINDOW SUPPLIER SHALL DOOR SIZES AND DESIGNATIONS INDICATED ON MANUFACTURER (IF APPLICABLE) AND HEIGHT (INCHES) VERIFIED THAT THE SIZES AND DISCUSS SIZE AND TYPE OF ALL NEW WINDOWS BY THICKENED SLAB GRADE BEAM OR FOOTING DESIGNED I) INSTALL WINDOWS APPROX 7'-O" HEADER HEIGHT SHALL VERIFY THAT ALL CEILING THE FLOOR PLANS AND ELEVATIONS ARE DESIGNATIONS DESCRIBE EXACTLY WITH BUILDER PRIOR TO ORDERING. ALL WINDOWS TO CARRY LOAD. (ABOVE FINISHED FLOOR) PROVIDED AS A GUIDE ONLY AND SHOULD NOT BE RECESSES AND VAULTS ALLOW FOR SINGLE HUNG WHAT THE DRAWINGS INDICATE, WHAT MUST MEET OR EXCEED ALL REQUIRED CODES AND REQUIRED INSULATION PER IRC 2018 ORDERED UNLESS THE DOOR SUPPLIER HAS THE BUILDER REQUIRES, AND WHAT THE ORDINANCES. VERIFY SAFETY GLAZING LOCATIONS B) SILLS OF OPERABLE WINDOWS LOCATED MORE THAN 72" 2) INSTALL WINDOWS APPROX 8'-0" HEADER VERIFIED THAT THE SIZES AND DESIGNATIONS AND CITY REQUIREMENTS. CITY ALLOWS. FAILURE BY THE PRIOR TO ORDERING WINDOWS. ABOVE FINISHED GRADE OR SURFACE BELOW SHALL BE A HEIGHT (ABOVE FINISHED FLOOR) DESCRIBE EXACTLY WHAT THE DRAWINGS MINDOM SUPPLIER TO REVIEW EACH MINIMUM OF 24" ABOVE THE FINISHED FLOOR OF THE ROOM INDICATE, WHAT THE BUILDER REQUIRES, AND WHAT CASEMENT AND EVERY WINDOW WITH THE BUILDER GENERAL WINDOW NOTES: IN WHICH IT IS LOCATED. 3) MOUNT TOP OF TRANSOM WINDOW AT APPROX THE CITY ALLOWS. FAILURE BY THE DOOR WILL RESULT IN THE WINDOW SUPPLIER A) FRAMER SHALL REVIEW HEADER REQUIRED FOR 8'-4" HEADER HEIGHT (ABOVE FINISHED FLOOR). 2 SUPPLIER TO REVIEW EACH AND EVERY DOOR GLASS BLOCK OR OPAQUE PROVIDING THE CORRECT WINDOWS EACH WINDOW AND DISCUSS HEIGHTS OF WINDOWS C) ALL ANGLES ARE 45 DEGREES UNLESS NOTED OTHERWISE. WITH THE BUILDER WILL RESULT IN THE DOOR X 4 VERTICAL SPACER BETWEEN TRANSOM AND DISCUSS WITH BUILDER AT NO ADDITIONAL COST TO THE MITH BUILDER. LOWER MINDOM. SUPPLIER PROVIDING THE CORRECT DOORS AT NO D) CONSULT WITH BUILDER FOR NUMBERS AND LOCATIONS OF ADDITIONAL COST TO THE BUILDER. AMNING B) SILLS OF OPERABLE WINDOWS LOCATED MORE RODS AND SHELVES 4) INSTALL BASEMENT EGRESS WINDOWS APPROX THAN 72" ABOVE FINISHED GRADE OR SURFACE SPECIFIC DOOR NOTES: 7'-0" HEADER HEIGHT (ABOVE FINISHED FLOOR) SIDE SLIDING BELOW SHALL BE A MINIMUM OF 24" ABOVE THE E) WALLS, CEILINGS, AND FLOORS SHALL HAVE THE 1) 12" SIDELIGHTS WITH DOUBLE STUD BETWEEN FINISHED FLOOR OF THE ROOM IN WHICH IT IS FOLLOWING MINIMUM R VALUES: CEILING R-38, CATHEDRAL 5) HEIGHT OF TRANSOM TO BE DETERMINED BY SIDELIGHT AND DOOR LOCATED. CEILING R-30, FLOOR OVER UNHEATED SPACE R-19, FLOOR JOHN KNOX VILLAGE OVER OUTSIDE AIR R-30, EXTERIOR WALL R-13, CRAWL SPACE R-19, GLAZING U LESS THAN OR EQUAL TO 0.40 (DEFAULT U-FACTOR FOR DOUBLE PANE, ARGON FILLED LOW-E TREATMENT IS U = 0.40. FOR ALL SKYLIGHTS USE 50'-0" U-FACTOR = 0.60), BASEMENT WALL R-13 (INSULATE CONCRETE WALLS ADJACENT TO FINISHED SPACE), DUCTS OUTSIDE OF THE CONDITIONED SPACE THE SUPPLY AND 9'-0" 3'-3" 3'-3" <u>| 2'-6" | 2'-8" | 4'-0" | 4'-0" | 2'-8"</u> 3'-3" 3'-3" <u>| 2'-6" | 2'-8" | 4'-0" | 4'-0" | 2'-8"</u> RETURN R-8 AND IN FLOOR OR CEILING ASSEMBLY R-6. SEE ELEV 2 ON SHEET F) ALL EXTERIOR WALLS ARE 2 X 4 FRAMING UNLESS NOTED OTHERWISE. ALL INTERIOR WALLS ARE 2 X 4 FRAMING REFERENCE DETAIL 4 ON SHEET 2 FOR DWELLING UNIT SEPARATION UNLESS NOTED OTHERWISE. WALL THERE IS NO MECHANICAL OR PLUMBING WITHIN OR THROUGH THIS G) DIMENSIONS ARE TO FACE OF WOOD FRAMING AND FACE -MALL FIRE MALL IS CONTINUOUS. OF CONCRETE FOUNDATION WALLS. H) REFERENCE GENERAL NOTES FOR TYPICAL SAFETY GLAZING LOCATIONS. 36 × 60 CS 36 × 60 FX 36 × 60 CS 36 × 60 C5 36 × 60 FX 36 × 60 C5 I) ATTIC VENTILATION PER LOCAL CODES AND NOTE | NOTE | NOTE | NOTE | NOTE | NOTE I REQUIREMENTS. ╄┍══<del>═</del>═════╗ (2) #2-2x10, TYP (2) #2-2x10, TYP J) PROVIDE MIN 22 X 30 ATTIC ACCESS AS DETERMINED BY BUILDER AND HOMEOWNER 3 SEASON 3 SEASON K) INSTALL RAILINGS AROUND WINDOW WELLS AS REQUIRED <u>ROOM</u> POSSIBLE **POSSIBLE** ROOM BY CODE LOCATION LOCATION 10'-0" CLG 10'-0" CLG CONDENSING CONDENSING "MIN 27" CS-WSP¬ UNIT AND PANEL PER IRC PANEL PER IRC -PAD 602.10.5 \_ 602.10.5 PANEL PER IRC 6'-8" PANEL PER IRC 602.10.5 <u>PATIO</u> PATIO 1 6'-0' WIDE 30 × 48 C5 30 ×48 CS TRANSOM 17'-0" X 12'-0" 17'-0" X 12'-0" NOTE  $\mathfrak{w}$   $\alpha$ NOTE I v uNOTE 5 > (2) #2-2x10 → (2) #2-2x10 EGRESS SHELVES SHELVES | <u>DINING</u> REFERENCE REFERENCE 10'-0" CLG FOUNDATION FOUNDATION 9'-0" CLG 91-0" CLG XXXXXXXXX (2) 36 × 60 CS 36 X 18 FX (2) 36 × 60 C5 36 X 18 FX 36 X |8 FX EGRESS 36 × 66 CS 36 × 66 CS EGRESS 36 × 66 CS 36 × 66 CS NOTE I NOTE I NOTE 3 NOTE 3 NOTE 3 NOTE 3 B STUDS (2) #2-2x10, TYP (3) 1 <sup>3</sup>/<sub>4</sub>" x 9 <sup>1</sup>/<sub>4</sub>" LVL OR 3 STUDS - (2) #2-2x10, TYP (2) #2-2x10 (2) #2-2x10 `(2) 2x4~ (2) #2-2x10 (2) 1 <sup>3</sup>/<sub>4</sub>" x 11 <sup>7</sup>/<sub>8</sub>" LVL OR (2) 1 3/4" x 14" LVL OR W8x10 STL BM FLUSH 13'- 1/2" W8x13 STL BM FLUSH Ik-0 1/2" (2) #2-2x12 FLUSH (3) 1  $\frac{3}{4}$ " x 9  $\frac{1}{4}$ " LVL OR (2) 1  $\frac{3}{4}$ " x 11  $\frac{7}{8}$ " LVL (3) 1  $\frac{3}{4}$ " x 9  $\frac{1}{4}$ " LVL OR (2) 1  $\frac{3}{4}$ " x 11  $\frac{7}{8}$ " LVL $\sim$ (2) #2-2x12 FLUSH MED WALL 1-6" CABS 1(2) 1 34"x9 1/4" MED WALL OR W8x10 STL BM FLUSH OR W8x10 STL BM FLUSH -CABS MASTER 1-6" MASTER <u>BATH</u> <u>BATH</u> MASTER BED MASTER BED \_ \_ <del>\_ \_ \_ \_ \_ </del> - -<del>- - - - - +</del>-9'-0" LLG 9'-0" CLG BOX VAULT CLG BOX VAULT CLG LIVING ROOM LIVING ROOM NO ROOF 10'-0" CLG 10'-0" CLG LOAD ON LOAD ON TOILET TOILET BOX VAULT 🕏 BOX VAULT KITCHEN KITCHEN 9'-0" CLG 9'-0" CLG 10'-0" CLG 10'-0" (CLG (2) #2-2x12 FLUSH (2) #2-2x12 FLUSH (2) 1 ½" x 11 ½" LVL OR (2) 1  $\frac{3}{4}$ " x 11  $\frac{7}{8}$ " LVL OR √(4) 2x4 W10x12 STL BM FLUSH W10x12 STL BM FLUSH ENTRY ENTRY 10'-0" CLG 10'-0" CLG 6'-0" DOOR AND 6'-0" DOOR AND LNDRY LNDRY SIDELIGHTS SIDELIGHTS -REF NOTE | -REF NOTE | 9'-0" CLG 9'-0" CLG <u>BATH</u> MIN. 22 X 30-MIN. 22 X 30-9'-0" CLG HOOKS 9'-0" CLG ATTIC ACCESS ATTIC ACCESS IN CAB LIN CAB || 24 2/4 || NOTE I **FALSE** REFERENCE DETAIL 4 ON SHEET 2 FOR-VAULTED DWELLING UNIT SEPARATION WALL. THERE IS 6'-0" #2-2x6 NO MECHANICAL OR HLUMBING WITHIN OR W10x26 OR W12x22 COYERED COVERED AT 16" OC THROUGH THIS WALL. FIRE WALL IS STL BM DROPPED PORCH CONTINUOUS PORCH BEDROOM #2 BEDROOM #2 W10x26 OR W12x22 **RELEASE FOR** 9'-0" CLG 9/-0" CLG VAULT FROM 9'-0" CLG VAULT FROM 9'-0" CLE STL BM DROPPED (5) 2x4~ **CONSTRUCTION** (3) #2-2x10 OR (3) #2-2x10 OR **AS NOTED ON PLANS REVIEW** 2) 1 ¾" x 9 ¼" LVL  $(2) 1 \frac{3}{4}$ " x 9  $\frac{1}{4}$ " LVL (2) 36 × 60 CS (2) 36 × 60 CS **DEVELOPMENT SERVICES** EGRESS TRTD/CEDAR TRTD/CEDAR LEE'S SUMMIT, MISSOURI 8'-10" POST, TYP 8'-10" POST, TYP NOTE I NOTE I **Victoria Nelson** WAINSCOT MAINSCOT <u>GARAGE</u> <u>GARAGE</u> 09/27/2021 9'-0" CLG 9'-0" CLG MIN 27" CS-WSP MIN 27" CS-WSP PANEL PER IRC PANEL PER IRC 602.10.5 602.10.5 RETURN STONE MAINSCOT RETURN STONE-RETURN STONE--3'-0" ON SIDE 10'-0" × 7'-0" (3) 2x4\ 10'-0" × 7'-0" (3) 2x4 WAINSCOT WAINSCOT O.H. GARAGE DOOR O.H. GARAGE DOOR 3'-0" ON SIDE 3'-0" ON SIDE (2) 1 3/4" x 11 7/8" LVL CONT (2) 1 3/4" x 11 7/8" LVL CONT FROM CORNER-TO-CORNER FROM CORNER-TO-CORNER REFERENCE DETAIL 4 ON SHEET 2 STONE STONE-STONE-FOR DWELLING UNIT SEPARATION STRUCTURAL NOTES: MAINSCOT MAINSCOT -WAINSCOT WALL. THERE IS NO MECHANICAL OR ALL UNMARKED HEADERS MIN PLUMBING WITHIN OR THROUGH THIS (2)#2-2x10 -MALL. FIRE MALL IS ¢ONTINUOUS. - ALL HEADERS AND BEAMS MIN #2 GRADE DF/L (OR EQ.) = BEARING WALL SEE ELEV ON SHEET 6'-4" BRACED WALL METHODOLOGY CONTINUOUS EXTERIOR SHEATHING PER WSP METHOD (BELOW) UNLESS OTHERWISE NOTED ON THE PLAN XXXX EXTERIOR BRACED WALLS: WSP METHOD: WOOD STRUCTURAL PANEL SHEATHING WITH A THICKNESS NOT LESS THAN 3/8" WITH MINIMUM SPAN RATING OF 24/0 FOR 16" OC STUD SPACING WITH 6d COMMON NAILS AT 6" OC EDGES AND 12" OC FIELD OR SHEATHING THICKNESS NOT LESS THAN \( \frac{7}{6} \) WITH MINIMUM SPAN RATING OF \( \frac{24}{6} \) FOR 24" OC SPACING WITH 8d COMMON NAILS AT 6" OC EDGES AND 12" OC IN FIELD. (NOTE: FRAMING MEMBERS 16" OC MAX, UNBLOCKED, AND WITH SHEATHING APPLIED DIRECTLY TO FRAMING DWELLING AREA SUMMARY: LEFT SIDE UNIT DWELLING AREA SUMMARY: RIGHT SIDE UNIT ELEMENT FIRST FLOOR SF //// INTERIOR BRACED WALLS (REF 2-S4.0): 1278 SQ. FT. FIRST FLOOR SE GARAGE (# AUTOS) GARAGE (# AUTOS) TOTAL BSMT. SF 1170 SQ. FT. # BEDROOMS TOTAL BSMT. SF 1182 SQ. FT. # BEDROOMS GB METHOD: ½" MIN. GYPSUM BOARD OVER STUDS SPACED 24" MAX. FASTENED WITH BSMT. FIN. SF 0 SQ. FT. BSMT. FIN. SF 0 SQ. FT. # FULL BATHS # FULL BATHS No 6 - 1½" TYPE 'W' OR 'S' DRYWALL SCREWS AT 7" OC EDGES AND FIELD GARAGE SF GARAGE SF 511 SQ. FT. 511 SQ. FT. ( MIN. 4'-0" SECTION FOR BOTH SIDES.) FRONT PORCH 103 SQ. FT. FRONT PORCH 103 SQ. FT. 138 SQ. FT. 3 SEASON ROOM 3 SEASON ROOM 138 SQ. FT. TOTAL FIN SF 1278 SQ. FT. TOTAL FIN SF 1278 SQ. FT.

LIB METHOD: 1x4 WOOD FASTENED WITH (3) 8d COMMON NAILS OR SIMPSON / USP 16 GA.

O.C. STUD FASTENED PER MANUFACTURER'S SPECIFICATIONS.

TYPE WB (OR EQUAL) STL. X-BRACE(S) AT 45° TO 60° ANGLES, MAXIMUM 16"

THESE PLANS HAS BEEN PROVIDED BY A LICENSED STRUCTURAL ENGINEER AND APPEARS ON THEIR DESIGNATED SHEETS. ARCHITECTURAL CONCEPTS, INC. ARE NOT STRUCTURAL ENGINEERS. CLAYTON J APEX ENGINEERS, INC. KANSAS CITY, MO 64108 STRUCTURAL DESIGN REVIEW KANSAS ENGINEERING LICENSE: 2003004673

NOTE: THE STRUCTURAL

INFORMATION INDICATED WITHIN

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/ Architect of any discrepancies or

ambiguities discovered by the use of

Architectural Concepts, Inc. of any responsibilities or consequences.

plans without the consent of Consultant

RETURN STONE

-3'-0" ON SIDE

MAINSCOT

STONE

Date: June 15, 2021 Rev. Issue: Rev. Date:

GENERAL PLAN NOTES

WHERE DISCREPANCIES EXIST BETWEEN THE STANDARD COMMENTS, THE NOTES FROM THE DESIGN PROFESSIONAL, AND/OR THE CODE, THE MOST RESTRICTIVE SHALL APPLY. ALL CONSTRUCTION SHALL COMPLY WITH THE 2018 INTERNATIONAL RESIDENTIAL CODE (IRC)

#### PHYSICAL SECURITY

I. THIS HOME SHALL BE IN COMPLIANCE WITH ANY ORDINANCE, MUNICIPAL CODE, BUILDING CODE, OR ANY AUTHORITY HAVING JURISDICTION THAT HAS ESTABLISHED MINIMUM STANDARDS THAT INCORPORATE PHYSICAL SECURITY TO MAKE DWELLING UNITS RESISTANT TO UNLAWFUL ENTRY.

#### EGRESS WINDOWS

THAT HAS A MINIMUM OPENABLE AREA OF 5.7 SQUARE FEET (5.0 FOR AT GRADE WINDOWS) WITH A MINIMUM OPENABLE HEIGHT OF 24 INCHES AND WIDTH OF 21 INCHES. IN BASEMENTS AN EXTERIOR DOOR CAN BE INSTALLED IN LIEU OF THE OPENABLE WINDOW.

. PROVIDE ONE WINDOW FROM EACH BEDROOM AND ONE FROM THE BASEMENT

2. THE WINDOW SILL HEIGHT SHALL NOT EXCEED 44 INCHES ABOVE THE FLOOR.

3. BASEMENT SECONDARY EGRESS - AN EXTERIOR DOOR OR WINDOW LEADING TO THE EXTERIOR SHALL BE PROVIDED FROM THE BASEMENT.

4. SILLS OF OPERABLE WINDOWS LOCATED MORE THAN 72" ABOVE FINISHED GRADE OR SURFACE BELOW SHALL BE A MINIMUM OF 24" ABOVE THE FINISHED FLOOR OF THE ROOM IN WHICH IT IS LOCATED.

### GARAGE

I. THE GARAGE FLOOR SHALL SLOPE TOWARDS THE GARAGE DOORWAYS OR SLOPE TO A TRENCH OR UN-TRAPPED DRAIN THAT DISCHARGES DIRECTLY TO THE EXTERIOR ABOVE GRADE.

2. DOORS BETWEEN THE GARAGE AND THE DWELLING - MINIMUM 1-3/8 INCH SOLID CORE OR HONEY COMBED STEEL DOOR OR 20-MINUTE FIRE RATED, EQUIPPED WITH A SELF-CLOSING DEVICE.

3. THE GARAGE SHALL BE SEPARATED FROM THE DWELLING AND ITS ATTIC AREAS BY A MINIMUM 1/2-INCH 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 1/2-INCH GYPSUM BOARD OR EQUIVALENT.

4. GARAGE VEHICLE DOORS AND FRAMES SHALL BE DESIGNED AND INSTALLED TO MEET THE 90 MPH WIND LOAD RESISTANCE REQUIREMENTS OF DASMA 108 AND ASTM E 330-96 PER 2018 IRC R301.2.1.

#### ENERGY CONSERVATION

I. THE BUILDING ENVELOPE IS REQUIRED TO BE SEALED PER IRC NIIO2.4.I.

2. RECESSED LIGHTING SHALL BE SEALED TO PREVENT LEAKAGE BETWEEN CONDITIONED AND UNCONDITIONED SPACE.

3. DUCTS, AIR HANDLERS, FILTER BOXES, AND BUILDING CAVITIES USED AS DUCTS SHALL BE SEALED PER 2018 IRC NIIO3.2.

#### 4. MINIMUM SEER RATING FOR THE AIR CONDITIONER IS 13.

5. MINIMUM EFFICIENCY RATING FOR FORCED AIR FURNACE IS 18%.

6. NOT LESS THAN 90 PERCENT OF THE PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL CONTAIN ONLY HIGH-EFFICANCY LAMPS.

7. THE ENERGY EFFICIENCY FOR THE DWELLING SHALL COMPLY WITH THE FOLLOWING TABLE (WHERE THERE ARE DISCREPANCIES BETWEEN THIS TABLE AND THE PLANS, THE MOST RESTRICTIVE SHALL APPLY)

#### STAIRWAYS

I. STAIRWAYS SHALL PROVIDE A MAXIMUM 7-3/4 INCH RISE AND MINIMUM 10-INCH

2. PROVIDE MINIMUM 36-INCH GUARDRAILS ON THE OPEN SIDES OF RAISED FLOORS, PORCHES AND BALCONIES; MINIMUM 34 INCH GUARDRAILS ON THE OPEN SIDES OF STAIRWAYS LOCATED MORE THAN 30 INCHES ABOVE THE FLOOR OR GRADE BELOW. GUARDRAIL ENCLOSURES SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL PATTERNS THAT DO NOT ALLOW PASSAGE OF A SPHERE 4 INCHES IN DIAMETER.

3. EACH STAIRWAY OF THREE OR MORE RISERS SHALL PROVIDE A CONTINUOUS HANDRAIL ON AT LEAST ONE SIDE BETWEEN 34 AND 38 INCHES ABOVE THE NOSING OF THE TREADS.

4. HANDRAILS SHALL HAVE A CIRCULAR CROSS SECTION OF 1-1/4 INCHES MINIMUM TO 2-5/8 INCHES MAXIMUM OR OTHER APPROVED GRASPABLE SHAPE PER IRC SECTION R311.7.8.3.

5. MAINTAIN A MINIMUM 6 FOOT, 8 INCHES OF HEADROOM CLEARANCE IN STAIRWAYS.

6. ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHALL HAVE WALLS, UNDER-STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2-INCH GYPSUM BOARD PER IRC SECTION R302.7.

7. WINDER TREADS SHALL PROVIDE A MINIMUM TREAD OF AT LEAST 10" AT A POINT NOT MORE THAN 12" FROM THE SIDE WHERE THE TREADS ARE NARROW PER IRC SECTION R311.7.5.2.1.

# GLAZING

I. GLAZING IN HAZARDOUS LOCATIONS AS IDENTIFIED IN IRC SECTION R308.4 SHALL BE OF APPROVED SAFETY GLAZING MATERIALS. GLAZING IN HAZARDOUS LOCATIONS MAY HAVE BEEN LOCATED ON THE PLANS AS A DESIGN GUIDE TO AID THE BUILDER IN THEIR WORK. BUT IN NO MEANS DOES IT RELIEVE THE BUILDER FROM REVIEWING THE CODE AND/OR ANY AUTHORITIES HAVING JURISDICTION REQUIRING ADDITIONAL GLAZING IN HAZARDOUS LOCATIONS.

SMOKE DETECTORS AND CARBON MONOXIDE ALARMS . SMOKE DETECTORS AND CARBON MONOXIDE ALARMS MIGHT BE SHOWN ON FLOOR PLANS, LOCATION ON PLANS IS PROVIDED AS A DESIGN GUIDE TO AID THE BUILDER IN THEIR WORK. BUT IN NO MEANS DOES IT RELIEVE THE BUILDER FROM REVIEWING THE IRC, NFPA, AND/OR ANY AUTHORITIES HAVING JURISDICTION THAT REQUIRES ADDITIONAL OR ALTERNATE LOCATIONS.

2. PROVIDE SMOKE ALARMS IN EACH SLEEPING ROOM, OUTSIDE OF EACH SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS, AND ON EACH ADDITIONAL STORY OF THE DWELLING INCLUDING BASEMENTS AND HABITABLE ATTICS. ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTUATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE DWELLING.

3. PROVIDE CARBON MONOXIDE ALARMS OUTSIDE OF EACH SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS IN DWELLINGS WITH FUEL-FIRED APPLIANCES AND DWELLING UNITS THAT HAVE ATTACHED GARAGES AND IN ACCORDANCE WITH IRC SECTION R315. ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTUATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE DWELLING.

#### **ROOF FRAMING NOTES**

INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT (ZONE 4) FENESTRATION | SKYLIGHT | GLAZED | CEILING | WOOD | MASS | FLOOR | BASEMENT & U-FACTOR | U-FACTOR | FENESTRATION | R-VALUE | FRAMED | WALL | R-VALUE | CRAWL SPACE MALL R-VALUE R-VALUE R-VALUE U </= 0.32 | U </= 0.55 | SHGC >/= 0.40 | 49\* | 13 | 8/13 | 19 SUNROOMS, WHICH ARE THERMALLY ISOLATED FROM THE CONDITIONED SPACE

U </= 0.45 | U </= 0.75 | SHGC </= 0.45 | 19 | 13 | 8/13 | 19 | 10/13 \* CEILING INSULATION CAN BE REDUCED TO R-38 WHERE THE UNCOMPRESSED INSULATION EXTENDS OVER THE WALL TOP PLATE AT THE EAVES - NIIO2.2.1

\* CEILING INSULATION CAN BE REDUCED TO R-30 IN CEILINGS WITHOUT ATTIC SPACES PROVIDED THE AREA DOES NOT EXCEED 500 SQUARE FEET OR 20% OF THE TOTAL CEILING AREA - NIIO2.2.3

2018 IRC Table N1102.1.1

DUCTS: R-8 IN ATTICS, R-6 IN OTHER LOCATIONS OUTSIDE OF THE BUILDING'S THERMAL ENVELOPE. AC REFRIGERANT PIPING - R-3. HOT WATER PIPING - R-3.

> THIS IS AN ENGINEERED ROOF STRUCTURE DESIGNED FOR **COMPLIANCE WITH IRC 802.3, BUILD** AS SHOWN WITH NO DEVIATIONS. ALL HIPS ARE DESIGNED TO BE

> > **CONTROLLED BY BENDING**

**DEPTH DOES NOT CONTROL** 

RAKE

= =  $\oplus$  = =

SHEAR AT BEARING WITH MIN 5½"

**DESIGN. FOR VALLEYS REF 4/S3.2** 

**RAFTERS** MAX HORIZONTAL CLEARSPAN SPACING #2-2x6 AT 24" OC 14'-2" #2-2x6 AT 16" OC #2-2x8 AT 24" OC 14'-8" 17'-11" #2-2x8 AT 16" OC 17'-10" #2-2x10 AT 24" OC #2-2x10 AT 16" OC 21'-11"

ROOF DESIGNED FOR LIGHT ROOF COVERING

ROOF SYSTEM IS DESIGNED TO MEET REQUIREMENTS

30psf TOTAL LOAD [10psf DL, 20psf LL (SL)]

\*RAFTERS (HEM-FIR, DOUG-FIR, OR EQUAL):

SEE SPAN CHARTS BELOW

CODE MINIMUM

#2-2x10

STRUCTURAL NOTES:
- ALL UNMARKED HEADERS MIN

= BEARING WALL

GRADE DF/L (OR EQ.)

PURLIN

RAKE

0 N

ALL HEADERS AND BEAMS MIN #2

(2)#2-2x10

10'-1 1/8" PLATE LINE

APEX ENGINEERS, INC. RECOMMENDED

DEFLECTION = L/360 LIVE LOAD, L/240 TOTAL LOAD

NOTE: CODE MINIMUM ALLOWS FOR A RAFTER DEFLECTION OF L/180 TOTAL LOAD

RAKE

HIGHER PERFORMANCE **RAFTERS** MAX HORIZONTAL CLEARSPAN SPACING AT 24" OC #2-2x6 AT 16" OC 9'-9" 11'-3" AT 24" OC #2-2x8 AT 16" OC 12'-9" #2-2x10 AT 24" OC

SEE ELEV 2 CENTERLINE OF DWELLING UNIT SEPARATION WALL - REFERENCE 14'-3" -DETAIL 4 ON SHEET 2 AT 16" OC 16'-3"

RAKE

RAKE

 $\longrightarrow$ 

SEE ELEV

ON SHEET

4'-0" FRT

PLYMOOD

4'-0" FRT

, PLYWOOD

CENTERLINE OF DWELLING UNIT

-DETAIL 4 ON SHEET 2

SEPARATION WALL - REFERENCE

PLYMOOD PLYMOOD

\*RIDGE BOARDS ARE (UNLESS OTHERWISE NOTED) #2-2x10 UP TO 9:12 PITCH

#2-2x12 OVER 9:12 PITCH \*ALL HIPS AND VALLEYS ARE (UNLESS OTHERWISE NOTED)

#2-2x10 UP TO 9:12 PITCH #2-2x12 OVER 9:12 PITCH

\*PURLINS ARE 2x6 MIN - PURLIN STRUTS ARE AT 4'-0" OC

- PURLIN STRUTS SHALL BE INSTALLED AT NOT LESS THAN A 45 DEGREE ANGLE WITH THE HORIZONTAL - ALL PURLIN STRUTS SHALL HAVE A MAX UNBRACED LENGTH OF 8'-0"

- PURLIN STRUTS SHALL BE CONSTRUCTED IN A "T" CONFIGURATION AND PER THE FOLLOWING CHART:

MAX PURLIN STRUT LENGTH **PURLIN STRUT** (2)2x412'-0" (1)2x4 AND (1)2x6 20'-0" (1)2x6 AND (1)2x8 30'-0" (2)2x6 AND (1)2x8 CONSULT ARCH ENGR

\*EACH END OF STRUT SHALL BE FASTENED WITH MIN (3)8d OR (2)16d NAILS

\*RIDGE BRACERS ARE SAME AS PURLIN BRACES-SPACING. SIZE, CONFIGURATION, AND INSTALLATION (SEE PURLIN

BRACE NOTES ABOVE) \*HIP AND VALLEY BRACES ARE THE SAME AS PURLINS SIZE, CONFIGURATION, AND INSTALLATION (SEE PURLIN BRACE

NOTES ABOVE) = ROOF BRACE/STRUT (PER CHART) -SLASH IS TOP END OF BRACE -CIRCLE IS BOTTOM END OF BRACE

= PURLIN STRUTS AT 48" OC (PER CHART) U.N.O. -SLASH IS TOP END OF BRACE -ARROW IS BEARING LOCATION — · — · — DENOTES PURLIN

DENOTES BEARING WALL ==== DENOTES BEARING STRUCTURE

/ 10'-1 1/8" PLATE LINE

/ 9'-1 1/8" PLATE LINE

RAKE

RAKE

EAVE

MINIMUM CLASS C ROOF-

COVERING OVER ENTIRE

 $\leftarrow$ RAKE

EAVE

OVERLAY OVERLAY RAKE III ш RAKE

SHED ROOF OVER -BEDROOM WINDOWS RAKE III J RAKE MINIMUM CLASS C ROOF-COVERING OVER ENTIRE EAVE

OVER GARAGE

ROOF PLAN

OVERLAY

Ш RAKE

/OVERLAY

SEE ATTACHED

ROOF TRUSS

LAYOUT AND SPECIFICATIONS

PER TRUSS

MANUFACTURER

I. WALLS, CEILINGS, AND FLOORS SHALL HAVE THE FOLLOWING MINIMUM R VALUES: CEILING R-38, CATHEDRAL CEILING R-30, FLOOR OVER UNHEATED SPACE R-19, FLOOR OVER OUTSIDE AIR R-30, EXTERIOR WALL R-13, CRAWL SPACE R-19, GLAZING U LESS THAN OR EQUAL TO 0.40 (DEFAULT U-FACTOR FOR DOUBLE PANE, ARGON FILLED LOW-E TREATMENT IS U = 0.40. FOR ALL SKYLIGHTS USE U-FACTOR = 0.60), BASEMENT WALL R-13 (INSULATE CONCRETE WALLS ADJACENT TO FINISHED SPACE), DUCTS OUTSIDE OF THE CONDITIONED SPACE THE SUPPLY AND RETURN R-8 AND IN FLOOR OR CEILING ASSEMBLY R-6.

RAKE

2. PROVIDE MINIMUM 22" X 30" ATTIC ACCESS TO NEW CONSTRUCTION AS REQUIRED BY CODE AND LOCATED IN GARAGE PER JOHN KNOX

3. ATTIC VENTILATION PER LOCAL CODES AND REQUIREMENTS.

4) ALL ROOF SLOPES PER ELEVATIONS.

5) ALL EXTERIOR WALLS ARE 2X4 STUD FRAMING AND INTERIOR WALLS ARE 2X4 STUD FRAMING UNLESS NOTED OTHERWISE.

6) DIMENSIONS ARE TO FACE OF WOOD FRAMING AND FACE OF CONCRETE FOUNDATION WALLS.

7) LOW ROOF SLOPES OF 4/12 AND LESS ARE SUSCEPTIBLE TO LEAKING. PROVIDE EXTRA ATTENTION AT THESE AREAS. ROOFING SUBCONTRACTOR AND BUILDER SHALL DISCUSS ALTERNATIVE ROOFING SOLUTIONS TO PREVENT SUCH LEAKING.

SHED ROOF OVER

-BEDROOM WINDOWS

8) IF TRUSSES ARE NOT USED THEN ALL CEILING JOISTS TO BE SPACED @ 16" O.C. CEILING JOIST SIZES BASED ON STRUCTURAL DRAWINGS. 9) IF TRUSSES ARE NOT USED THEN ALL RIDGE BOARDS AND RIDGE BEAMS SHALL BE BRACED PER CODE AND AT LOCATIONS SHOWN ON PLAN. USE A COLLAR TIE OR RIDGE STRAP AT ALL RIDGE BEAMS AND RIDGE BOARDS PER CODE (RE: SECTION R802.3.1). ALL HIP/VALLEY RAFTERS SHALL BE BRACED PER CODE AND AT LOCATIONS SHOWN ON PLAN.

IO) RAFTERS ARE PITCHED FROM TOP OF WALLS. REFERENCE TYPICAL WALL SECTION IN THIS SET OF PLANS.

II) TRUSS MANUFACTURER SHALL REFERENCE FLOOR PLAN FOR CEILING HEIGHTS AND VAULTS.

RELEASE FOR CONSTRUCTION AS NOTED ON PLANS REVIEW **DEVELOPMENT SERVICES** LEE'S SUMMIT, MISSOURI Victoria Nelson 09/27/2021

ш RAKE

EAVE

SHED ROOF

OVER GARAGE

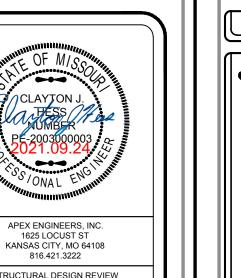
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KANSAS ENGINEERING LICENSE

2003004673

RAKE

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Date: June 15, 2021 Rev. Issue: Rev. Date:



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RELEASE FOR CONSTRUCTION **AS NOTED ON PLANS REVIEW** 

DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

Victoria Nelson

09/27/2021

<u>Date:</u> June 15, 2021 Rev. Issue: Rev. Date:

2010103



P DUPLEX RECEPTACLE GROUND-FAULT PROTECTED DUPLEX RECEPTACLE

MATER RESISTANT
GROUND-FAULT PROTECTED
DUPLEX RECEPTAGLE

SERVICE RECEPTACLE
OUTLET FOR CONDENSOR \$ LIGHT SMITCH

\$ LIGHT SMITCH 3-MAY

\$-\$- FIREPLACE AND BLOWER

TELEVISION ONLY (OVER FIREPLACE)

TELEPHONE/TELEVISION

DOOR BELL

PENDANT LIGHT FIXTURE

HORN/STROBE (INTERIOR)

SMOKE DETECTOR

CARBON MONOXIDE

O EXHAUST FAN CEILING FAN

o IX4 SURFACE MOUNTED FLUORESCENT FIXTURE A MALL SCONCE

SIREN/STROBE (EXTERIOR)

NOTE: ARCHITECTURAL CONCEPTS, INC. ARE NOT ELECTRICAL ENGINEERS. THIS DRAWING IS AN ARCHITECTURAL VERSION AND WAS COMPLETED BY COMPARING THIS DESIGN TO PREVIOUS DESIGNS FOR JOHN KNOX VILLAGE. THE APPROXIMATE LOCATION OF DEVICES AND SWITCHES MAY NOT BE COMPLETE. ANY AUTHORITY HAVING JURISDICTION MAY REQUIRE CHANGES TO THIS DRAWING.

1 TYPICAL ARCHITECTURAL ELECTRICAL PLAN SCALE: 1/4" = 1'-0"

6. ENTRY STORM DOORS: Columbia (King) full view glass storm door with screen inserts (Hutton Glass SOIL - BEARING CAPACITY = 2000 p.s.f. minimum 816-524-6350 is a JKV approved vendor) NOTE: Verify design loads w/local codes and site conditions. Check w/local building dept. officials 7. GARAGE EXTERIOR STORM DOOR: Columbia Self Storing for wind, seismic, snow of other special loading conditions. 8. OVERHEAD GARAGE DOOR: Clopay 4050 steel 2 sided insulated door w/ 1/2 hp Lift Master J. All wiring, conduit, piping, cables, etc., shall be independently supported and run parallel or opener to include 2 remotes and I keypad

perpendicular to framing. K. Prior to acceptance by the owner, the work must be cleaned, with walls wiped down, glass washed, fixtures cleaned, and floors mopped, vacuumed or swept as required.

ROOF - 20 p.s.f. LL

ROOF - 10 p.s.f. DL

L. John Knox Village will carry the testing and special inspection services. M. John Knox Village will complete all landscape plantings and sod. Contractor is responsible to grade

the units per the civil drawing and provide 3" of pulverized dirt to accept sod. N. ACTION SUBMITTALS- upon owner request

I. Data indicating compliance with specified standards and requirements. 2. Notation of coordination requirements. 3. For equipment, include rated capacities, dimensions, weights, required clearances, and furnished

specialties and accessories B. Shop Drawings: Submit Project-specific information drawn to scale. Do not base Shop Drawings on reproductions of the contract Documents or standard printed data. Submit three (3) opaque copies on sheets at least 8-1/2 by 11 inches but no larger than 24 by 36 inches. Architect will return two (2) copies. Include the following:

I. Dimensions, fabrication and installation drawings, roughing-in and setting diagrams, and relationship to adjoining construction 2. Identification of products and materials

3. Wiring diagrams showing field-installed wiring. 4. Notation of coordination requirements. 5. Notation of dimensions established by field measurement.

A. Product Data: Mark each copy to show applicable choices and options.

C. Samples: Submit Samples finished as specified and physically identical with material or product proposed for use. Where variations are inherent in the material, submit three (3) sets of paired units to show full range of variations. Include name of manufacturer and product name on label. DIVISION 2 - CONCRETE

A. FOUNDATIONS: SEE FOUNDATION DWGS FOR GENERAL NOTES AND SPECIFICATIONS. I. Spread footings and grade beams are designed to bear on suitable soil capable of safely sustaining 2,000psf. Refer to Geotechnical Engineering report for definition of suitable soil. Contractor is responsible for preparing site and subgrade per Geotechnical Engineering Report. Contractor responsible to assist in site sampling with excavation equipment.

2. Contractor shall provide dewatering at excavations from either surface water or seepage. 3. All foundation excavations shall be inspected by a qualified soil engineer and approved by owner prior to placement of steel or concrete. 4. All concrete in the structural portion retaining the backfill shall have attained its design strength

prior to being backfilled. 5. Moisture content in soils beneath building locations should not be allowed to change after footing excavations and after grading for slabs on grade are completed. If subgrade materials become desiccated or softened by water or other conditions re-compact materials to the density and water content specified for engineered fill. Do not place concrete on frozen ground.

B. CONCRETE AND REINFORCING STEEL: 1. Concrete flatwork will be a minimum of 4K psi mix with no fly ash. All steel to be 1/2" bars 2' on

Center tied. All concrete construction joints will be pinned minimum 4". Contractor to add (1) 4" PVC pipe under front sidewalk of each unit to connect to gutter drain and add (2) 4" PVC pipes under each unit driveway for future irrigation. (Owner to approve location)

DIVISION 3 - MASONRY A. MANUFACTURED STONE VENEER

recommendations.

FLOOR - 40 p.s.f. LL

FLOOR - 10 p.s.f. DL

Include the following:

I. DESIGN LOADS:

I. By Stone Mountain, Style "Ledge Stone", Color San Francisco. DIVISION 4 - STRUCTURAL STEEL

A. All structural steel shall conform w/ASTM Specification A992 or other local governing codes. B. Reference foundation dwgs. for all structural steel sizing.

A. FRAMING LUMBER: Unless otherwise noted, framing lumber shall be Douglas FIR #2 construction grade. Beams, headers and floor joists shall have an allowable bending stress of 1200 p.s.i. I. Unless otherwise noted provide: I. a. Double header joists and trimmers at all floor openings

1. b. Double joists under all parallel partitions and all other openings. I. c. Double 2x10 headers w/ 1/2" plywood between and 2x4 bottom plate at all door and window openings (U.N.O.)

I. d. Reference structural framing plan for long span joists and headers I. e. Bridging as required by I-joist mfr. based on joist type \$ span 2.Treated lumber shall be used in all locations where lumber is exposed to weather or moisture. Use stainless steel or hot dip galv. fasteners in direct contact with all treated lumber.

B. FLOOR SHEATHING: 3/4" Tongue and Groove OSB subfloor sheathing (Structure Wood Gold) nail and glue w/exterior construction grade glue on ea. joist. C. ROOF SHEATHING: 7/16" OSB or plywood sheathing (APA rated with exterior glue) and shall have a panel identification index of 24/16. Fasten w/8d nails @ 6" spacing at each sheet perimeter and @ 12" spacing at each sheet interior. Panels shall have long dimension run perpendicular to main framing

w/joints staggered from row to row. D. WALL SHEATHING: 1/2" OSB or plywood (APA rated w/exterior glue) Fasten w/10d nails @ 4" spacing at DIVISION 9 - SPECILATIES each sheet perimeter and @ 12" spacing at each sheet interior. Panels shall have long dimension run perpendicular to main framing w/joints staggered from row to row.

E. STUDS: Studs to be "stud-grade" spruce-pine fir or better. F. INTERIOR SHEATHING: All interior walls and ceilings are to be covered w/qyp. bd. w/metal corner reinf., tape, float and sand (3 coats). Garage walls and ceilings to be covered w/ 1/2" type "x" firecode qyp.

I. Use moisture resistant gypsum board for walls and ceilings in all bath and toilet areas. 2.Use cement backer board below all ceramic tile floor installations and behind all ceramic tile wall installations in bathrooms.

3.All soffits and dropped ceilings to be fire stopped. 4.Dwelling Unit separation walls shall be 2-HR F.R. construction w/(2) layers of 5/8" type 'x' fire code gyp. bd. on each side. G. METAL FRAMING FASTENERS- equal to Simpson strong-tie connectors in compliance with

ICBO No. 1258 H. WOOD TRUSSES: Wood trusses if utilized shall be designed by a pre-manufactured wood truss supplier. Drawings and calculations shall be submitted signed and sealed by a professional engineer registered in the state of Missouri.

E. CLOSET SHELF & ROD: Coated wire shelving closet kits by Schulte. Reference owner provided I. Hurricane tie down anchors shall be used at all roof truss bearing locations. 1. FLOOR JOISTS: Shall be 2"x10" Timberstrand Joists. Joist Mfr. shall provide design calculations, shop F. GARAGE SHELVING: Coated wire shelving by Schulte. Provide blocking as required. 24ft. of 20" drawings and erection drawings prior to construction. Contractor shall install all blocking, load transfer material located by owner. assemblies, hangers, accessories etc. as recommended by joist manufacturer. DIVISON IO - EQUIPMENT

1. 2x6's @ 16" o.c. - max. span 12' or provide 2x6 purlins w/2x4 post downs to interior walls (typ.) 2.2x|2's @ |6" o.c. - max. span |6' at all "cathedral" vaulted ceilings (or) 2x|0's w/2x bottom furring

strips to achieve min. || |/4" cavity depth at |0 |/4" insulation.

3.2XIO'S @ all hip, valley & ridge lines (typ.) DIVISION 6 - THERMAL & MOISTURE PROTECTION

A. INSULATION: I. R-13 batt insulation in all exterior walls and perimeter floor rim joists.

by owner. Contractor to balance flow rate for roof and soffit vents.

2.R-30 batt insulation in crawl space floors (if applicable) 3.R-38 @high density batt insulation in vaulted ceilings adjacent to the exterior or to unheated

4.R-49 blown insulation in attics (min. 18" depth) B. ROOFING: Composition shingles w/the classic wood shake look GAF Timberline "Natural Shadows", Color: Weathered Wood, TBD by owner, Provide roof leak barrier equal to GAF "WeatherWatch" mineral surfaced leak barrier at all valleys and at eave and rake edges. Provide GA roof deck underlayment

and starter strip shingles. Provide lifetime warranty. C. SIDING: lap siding (Louisiana Pacific "LP Smartside" 6"wx7/16" Textured Lap Siding (Natural Grain Cedar) DIVISION II - FURNISHINGS w/5" exposure and matching 5/4 trim (Ix), 5/4 Fascia (Ix), 24" "Smartside" textured soffit panel with intearal ventilation

D. VENTILATION: Provide attic ventilation per IRC 1202.2 and IBC 1202.2 w/soffit vents \$ area ridge vents correctly hand nailed per mfr. instructions.

B. VERTICAL BLINDS: All horizontal. Sliding doors - Furnish \$ install vertical blinds with standard valance and "One-Touch Control" by Graber with 5-1/2" Regal Valance (Color "TBD by owner") E. ROOF VENT: GAF "Masterflow" roof louvers, SSB (60A, color to match "Weathered Wood" shingles. TBD

5. SLIDING GLASS DOOR: ANDERSON, IOO series clad white casement unit with Low - E4 insulated

elevations for grille pattern.

B. INTERIOR DOORS:

primed and painted

b.At tubs and showers

1. Hinges: Satin nickel finish

c.ln railings and guardrails

A. EXTERIOR SIDING: Reference Division 6-C

Builders Solutions w/Flat Finish

Reference owner provided schedule

C. INTERIOR PAINT COLORS:

D. GLASS & GLAZING

E.DOOR HARDWARE:

DIVISON 8 - FINISHES

qlass \$ 4-9/16 jamb ext (qlass stop profile ogee) (standard) (pine) (white hardware) (no brickmold)

(TruScene insect screen) performance data to meet U.S. ENERGY STAR requirements. Reference

I. INTERIOR PASSAGE DOORS: Craftmaster Colonist, 6 Panel, smooth finish masonite passage door to

2. INTERIOR BIFOLD DOORS: Craftmaster Colonist, 6 Panel, smooth finish masonite bifold door to be

3. INTERIOR POCKET DOORS: Craftmaster Colonist, 6 Panel, smooth finish masonite pocket door to be

Jamb Ext (Glass Stop Profile Ogee (Standard) (Pine) (White Hardware) (No Brickmould) (TruScene Insect

C. WINDOWS: Anderson, IOO Series Clad White Casement Unit with Low-E4 INSULATED GLASS \$ 4-9/16

2.Latchsets and Locksets: Entry Function, Satin nickel finish (626) w/lever type operating trim.

3.Dead-bolt to be installed with standard passage lever handle on garage to house door.

B. PAINTING: Paint all exposed surfaces U.N.O. Do not paint prefinished items, finished metal surfaces,

operating parts, labels and materials obviously intended to be left exposed U.N.O. (Reference finish

4.Interior Walls "General": I coat latex primer/2 coats interior latex house paint; Sherwin Williams

5.Interior Walls Bathrooms/Kitchen: I coat latex primer/2 coats interior latex house paint: Sherwin

D. EXTERIOR PAINT COLORS: Reference exterior elevations and Finish Schedule for paint color

I. Base Trim: 5-1/2: standard colonial trim (U.N.O.- Ref. Finish Schedule)

2. Tile Type #2: 3x6 Subway Style "TBD Reference finish schedule"

Contractor shall provide and install 1/2" 6lb density rebond carpet pad.

J. SPECIALTY: All visible construction behind grills shall be painted flat black.

radius. (match corresponding color of backsplash tile per "UNIT" specified)

locations indicated on floor plan. (2) in master bath and (1) in hall bath.

Located 20" A.F.F. - Contractor shall provide blocking as reg'd.

D. SHOWER ROD: Moen #DN2I45BN curved shower rod w/brushed nickel finish.

I. Washer: Furnished and installed by contractor. Provide box and washer hookups

2.All cabinetry will be custom built to include soft close hinges \$ soft close drawer glides.

A.F.F. - Contractor shall provide blocking as required.

approved by owner (JKV) prior to sheetrock installation.

header, 3/16" clear glass and clamp - on single towel bar.

A. APPLIANCES (Ref. plans, elevations and Schedule Sheet)

1. Submittals: Product Data and Shop Drawings.

3.Countertops: Solid Surface. (See DIVISION 9-L)

Traditions with Classic Valance (Color "TBD by owner")

2.2. Pulls: See owner provided selection

2.1. Wood and finish type: TBD reference finish schedule.

locations and sizes. Provide blocking as required.

Appliance Schedule Sheet)

B. CABINETS

2.1. Locations: Kitchen backsplash (above counters/cabinets)

I.2. Bullnose trim: matching  $3" \times 24"$  bullnose border at all sidewalls and showers

6. HARDWOOD FLOORING: 3/4" Pre-Finished Oak Style "Reference finish schedule"

H. CARPET: MOHAWK, Alladin, "Stylish Story I", color TBD, provided and installed by contractor.

Soffits and horizontal surfaces below 8' shall have a smooth, flat painted finished surface.

3.Locations: Kitchen, Master Bath and Hall Bath countertops, Laundry were applicable.

A. FIREPLACE: 36" vertical direct vent gas fireplace HEAT-N-GLO DV3732 with GRK 160B blower.

3.Toilet Tissue Dispensers: Furnished by contractor to "Moen-Danbury #CSI DN6708 BN".

4.Towel Bars: Furnished by contractor eq. to "Moen-Danbury #DN6724 BN". Located 40"

. Medicine Cabinets: Furnish and install recessed cabinets to match adjacent vanity base cabinet per

2.Mirrors: Framed mirrors- Decorative wood framed mirror (24"x42"), painted to match trim color (Ref.

5.6 rab Bars:  $40^{\circ} \times 20^{\circ} \times 11/2^{\circ}$  stainless steel in both showers. Furnished by contractor. Contractor shall

provide blocking at all water closets, shower and bath tub(s) for future installation. Locations to be

C. SHOWER DOOR: Cardinal shower enclosure, LESE 60-70 brushed nickel, Light Euro Series with light euro

2.Dryer: Furnished and installed by contractor. Provide dryer vent (Ref. Appliance Schedule Sheet)

3.Refrigerator: Furnished and installed by contractor. Provide box and hookups for ice maker. (Ref.

4.Range, Microwave/Oven, Dishwasher: Furnished and installed by contractor. (Ref. Appliance Schedule

4.Contractor to coordinate clear openings for all casework and appliance prior to start of millwork

A. HORIZONTAL BLINDS: All windows-Furnish \$ install 2" composite horizontal blinds by Graber, Style

6.Interior Woodwork and Trim: Flat I coat oil base primer/2 coats interior oil base house paint: Sherwin

selections. All exterior paint to be Sherwin Williams "Super Satin". Final colors to be approved by JKV.

E. INTERIOR TRIM: Provide paint grade spruce/pine/fir for all interior door, window, base and misc. running

I.l. Locations: bathroom showers and floors, laundry floor, entry floor, fireplace surround and hearth

2.2. Bullnose trim: matching 3" wide bullnose border at all sidewalls and top of backsplash where upper

I. CEILING: All gyp. bd. ceilings shall have a light "knock-down" textured surface with flat painted finish.

K. SOLID SURFACE COUNTERTOPS: Surfaces w/bullnose edge profile. All outside corners to have I"

I. Exterior Siding: Flat I coat latex primer/2 coats exterior latex house paint; Sherwin Williams "Super

Reference schedule. Keyed locksets on exterior doors - Schlage "AL53PD JUP" with restricted

14/68 keyway. Key to JKV master system on file at the Schlage factory. (JKV to furnish and install

Screen) (No Window Grilles) Performance Data to meet U.S. ENERGY STAR requirements.

d.In windows greater than 9 SF that have a sill that is less than 18" a.f.f.

schedule, plans and elevations for color selections and paint finishes,

2.Exterior Wood: Flat I coat Alkyd primer/2 coats exterior latex house paint.

3.Galvanized Metal: Satin I coat galvanized metal primer/2 coats latex house paint

Satin" (note: primer not required w/pre-primed siding)

Williams Builders Solutions w/Semi-Gloss Finish

7.Interior ceilings: 2 coats flat pure white paint

Williams ProMar 200w/Semi-Gloss Finish.

2.Running Trim: 2-1/4 standard colonial trim

F.TILE: (Reference Finish Schedule)

cabinets are not present

I. Option 'I' Finish: TBD

2.0ption '2' Finish: TBD

B. TOILET ACCESSORIES

3. Window Sills: Full wrap to match jambs and head.

I. Tile Type #1 :  $12 \times 24$  "TBD reference finish schedule"

I. Insulated double glazing at all exterior glass areas.

2.Glass shall be tempered in the following locations:

a.ln all doors and within 24" of doors.

Part I - General 1.1Submittals: Contractor must submit shop drawings, product data (with capacities), and installation drawings

1.2 Scope: The work included in this contract consists of the contractor providing all labor, materials,

DIVISION 12A - PLUMBING

tools, transportation, services, etc. Necessary to complete the installation of the plumbina system(s), and other items herein listed, as described in these specifications, or as directed by the owner. Plumbing work is comprised of but not limited to the following principal items: cold water service and distribution system, domestic hot water service and distribution system, system(s) of drain, waste, and vent, natural gas piping service and distribution systems, and all components associated with the above systems(s). 1.3 Intent: Work indicated in this portion of the drawings is shown to document the intent of the architect and/or where minimum standards shall be exceeded. These systems shall be designed, documented and submitted for building permit and constructed by the general contractor or his agent. This work must meet or exceed the applicable codes, ordinances and regulations, the International Plumbing Code, and meet with approval of the authority having jurisdiction. 1.4 Marranties: Submit written warranties executed by the manufacturers of all plumbing products and

devices installed agreeing to repair or replace the materials that fail in materials or workmanship within the period recognized by the manufacturer. The plumbing contractor shall guarantee his labor and workmanship for one (1) year after construction project is turned over to the owner for occupancy 1.5 Conflicts: The contractor shall coordinate with other trades to avoid conflicts with piping, wiring, and ductwork etc. to minimize construction time. Part II - Execution 2.1 General:

A. All design, construction, and workmanship, shall be in conformity with accepted engineering practices and shall be under the scrutiny of the authority having jurisdiction. B. Plumbing equipment shall be installed according to all applicable codes and manufacturers' installation C. All plumbing equipment shall be installed in such a manner to allow for the service, repair, and complete

replacement of such equipment. D. All piping and related equipment shall have sufficient supports. E.All drain; waste, and vent systems shall have cleanouts.

F.All units shall have cleanouts exterior to the structure extended to grade to allow for servicing. 6. There shall be a valve and union between the water service and any equipment it serves to allow for the isolation and removal of such equipment.

A. Review all fixture locations with JKV project coordinator prior to installation. B. Comply with requirements of Public Law 102-486, "Energy Policy Act", regarding water flow rate and water consumption of plumbing fixtures. C. Install fixtures with flanges and gasket seals

D. Secure piping supplies to structure within space behind fixture. E.Furnish and install water supply stop valves for all fixtures/equipment in accessible locations. F.Furnish and Install escutcheons at wall, floor, and ceiling penetrations in exposed finish locations and

6. Use deep pattern escutcheons where required to conceal protruding pipe fittings. H.Seal joints between fixtures and walls, floors, and counters using sanitary type one-part mildew resistant silicone sealant. I. Ground all equipment and tighten all electrical connectors and terminals according to UL 486A and UL

J.There shall be a minimum requirement of two (2) sill cocks per living unit. Prier Brass frost proof with vacuum breaker #C-144D08, #C144D10 or #C144D12

K. There shall be a minimum of one (1) sump pump installed in basement (or crawl space). Pump to be installed in a plastic pit. Pit location and discharge location to be approved by owner. Part III - Equipment

B. All drains shall be schedule 40 PVC. C. All natural gas piping shall be schedule 40 black iron pipe or Gastite flexible gas pipe. D. Typical 5/8 inch  $\times$  3/8 inch stops to be of the 1/4 turn type.

A. Water piping that is not PEX shall be type @MA hard copper, or equivalent, with exception of ice-maker

E.All fixture supply lines shall be flexible steel braided. F.All piping in crawl spaces or basements shall be securely fastened to underside of floor construction. 6. Quarter turn stops on all fixtures or per manufacturer's recommendation.

H.Provide separate sewer house drain and cleanout on the exterior of each unit. (Establish cleanout below grade inside a sprinkler drain box)

A. Water closet shall be Gerber bowl and tank as shown on the drawing: 21-528 White Elongated - 17"

Ergoheight bowl w/Church closed-end toilet seat and 28-590 tank with 12" rough-in (or) approved equal as manufactured by Crane, Kohler or American Standard. B. Lavatory shall be Stone H1613 Syrma undermount bathroom sink, white enameled cast iron.

C. Lavatory faucet: Reference finish schedule. D. Shower basin shall be Kohler Tresham 60"x32" single threshold shower base with integral seat. E. Shower valve shall be Moen, scald quard, pressure balanced single lever, model 3189 with drain, overflow control and trap F. Bathtub shall be Americast with slip resistant bathing surface, or approved equal.

G. Tub faucet to be Moen, pressure balanced single lever 3189 with drain, overflow control and trap. H. Provide handheld showerhead mounted on sliding chrome bar

1. Kitchen sink: Blanco Diamond undermount granite composite double bowl sink. Color: "Reference Finish J. Kitchen faucet: Reference finish schedule.

J.A. Provide soap dispenser to match faucet. K. Disposal to be Evergrind Model E202, 1/2 hp motor. L. Water heater to be 40-gallon natural gas fired.

M. Laundry catch-a-drip to be OB-205-2 valve of the plastic fully recessed type with single handle lever for cold/hot water

N. Sump pump shall be Zoeller #53D with check valve. O. Floor Drains shall be KC Pattern 2" PVC 800-A P. Install ice maker wall box with valve assembly 78-WV-46.

Q. Plumbing System Manifolds shall be "Manabloc PEX system" with remote manifolds system design, with all necessary mounting brackets, fittings, escutcheons, supply adapters and caps. Remote manifolds shall be located in the crawlspace and/or basement, and shall be placed as close as possible to each seat of fixtures served. The connection between each manifold and the recirculation loop shall not exceed 4'-0". Provide hot/cold labeling on the manifold for each fixture. Use red colored piping for hot water and blue colored piping for cold water. All piping that is part of a water distribution system must be

able to withstand 180 degree water at 100 pounds of pressure. R. Provide matching soap dispenser at Kitchen Faucet. Part IV - Commissioning A. After installation, remove all aerators from faucets, flush cold and hot water piping systems to rid

B. After flushing system(s), check for debris, reinstall all aerators. C. Check all water supply piping for leakage and repair if necessary. D. Light and start water heater and allow water to come up to temperature. Check temperatures at all

E. Run water through all drain systems, check for any sign of leakage and repair if necessary. F. Check operation of disposal, repair or replace if necessary.

G. Check operation of sump pump and repair or replace if necessary.

H. Check operation of ice maker. DIVISION 12B - MECHANICAL

Part I - General I.ISubmittals: Contractor must submit shop drawings, product data (with capacities), and installation drawings for owners approval U.N. O. 1.2 Scope: The work included in this contract consists of the contractor providing all labor, materials,

tools, transportation, services, etc. necessary to complete the installation of the heating, ventilating, and air condition system(s) and other items herein listed, as described in these specifications, or as directed by the owner. HVAC work is comprised of but not limited to the following principal items: air conditioning equipment (including condensing unit, evaporator coil, line set, etc.), heating equipment (furnace), humidification device (humidifier), system of supply and return ductwork, grilles, registers, including all necessary insulation, temperature control, bathroom exhaust fans, and any miscellaneous equipment/material necessary for the complete working installation of a residential heating and air conditioning system. 1.3 Intent: Work indicated in this portion of the drawings is shown to document the intent of the architect and/or where minimum standards shall be exceeded. These systems shall be designed, documented and submitted for building permit and constructed by the general contractor or his agent. This work must meet

or exceed the applicable codes, ordinances and requiations, the International Mechanical Code, and meet with approval of the authority having jurisdiction. 1.4 Marranties: Submit a written warranty executed by the manufacturer agreeing to repair or replace furnaces that fail in materials or workmanship within ten (10) years of substantial completion.

1.5 Conflicts: The contractor shall coordinate with other trades to avoid conflicts with duct, piping, wiring etc. to minimize construction time. 1.6 Criteria:

The HVAC system shall:

piping of debris.

A. Be properly sized to provide correct airflow, and meet room-by-room calculated heating and cooling B. Be installed so that the static air pressure drop across the air handler (furnace) is within manufacturer

C. Have sealed supply ductwork that will provide proper airflow, D. Be installed with a return system sized to provide proper correct return airflow, E. Have sealed return ductwork that will provide proper airflow to the fan, and avoid air entering the HVAC system from polluted sources (e.g., fumes from autos and stored chemicals, attics, and

and design specifications to have the capacity to meet calculated loads,

F.Have balanced airflows between supply and return systems to maintain a neutral pressure in living areas, 6. Minimize duct air temperature gain/loss between the air handler (furnace) and room registers and between return grilles and the air handler (furnace) by insulation requirements listed in this specification, H.Be properly charged with refrigerant,

1. Have proper burner operation and proper draft.

Part II - Execution

D. Calculate heat loss/gain for each room.

2.1 Loads and CFM Calculation: A. ACCA Manual "J" or Manual "N" Load Calculation, or one of the procedures listed in the 2001 ASHRAE Handbook of Fundamentals to be used.

B. Outdoor design temperatures to be based from the 2001 ASHRAE Handbook of Fundaments (Chapter 27) with the .4% values used for cooling and the 99.6% values used for heating. C. Indoor design temperatures based on a 75 degree dry bulb temperature with a relative humidity of 50% to 60% for summer, and a 70 degree dry bulb temperature with a relative humidity of 30% for winter.

E.Determine summation of room-by-room loads plus ventilation requirements to acquire total system

F.Size duct system according to ACCA Manual D calculation procedures (or substantially equivalent). G. Calculate correct CFM for reach room and total for building for both supply and return air.

2.2 Air Distribution System: A. Layout duct system on floor plan drawing accounting for the direction of joists, roof hips, firewalls, and other potential obstructions. Determine register and grille locations, duct lengths, and connections required to produce layout give construction constraints

B. Duct paths to provide minimal length and turns in direction to provide optimal airflow. C. Flex duct paths must be planned to avoid sharp turns that may kink duct. D. Provide a copy of the duct layout drawing to owner for approval prior to installation. Review proposed duct, register and grille locations with JKV project coordinator.

E.Registers and grilles to be sized and located to optimize air distribution and static pressure F.Seal all metal duct joints and seams with mastic or pressure sensitive tape approved for use by the duct manufacturer and meeting UL 181 specifications ("approved tape"), this includes around junctions or collars to distribution boxes, boots and plenums.

G. All sealants to be used in strict accordance with manufacturer's installation instructions and within sealants moisture and temperature limitations. H.All tapes or mastics used to seal ducts should be applied to clean dry surfaces. 1. Upon installation all floor registers shall be covered by contractor to protect from debris during

J.Flexible ducts shall be joined by a metal sleeve, collar, coupling, or coupling system. At least two inches of the beaded sleeve, collar, or coupling must extend into the inner core while allowing a one inch attachment area on the sleeve, collar, or coupling for the application of a worm drive hose clamp or U.V.-resistant nylon duct tie. The inner core shall be fastened to all fitting by use of draw-bands or nylon ties.

K. Flexible duct suitable for attic installations only. L. All metal round pipes up to 12" in diameter shall be secured using 3 equally spaced #8 screws. All metal pipes with a diameter of 12" and above should have five equally spaced screws. M. All duct supports and hangers to meet requirements of the IMC.

N. All duct systems to meet installation requirements set forth by the IMC (International Mechanical Code), and SMACNA (Sheet Metal Air Conditioning Contractors Association). O. Install all vents, and piping terminating outdoors to protect against birds and insects.

P. All ducts in attics, crawlspaces, and unconditioned areas, shall be externally wrapped with an insulation type mentioned in this specification. 2.3 Equipment Installation:

installation instructions B. Install split system air conditioning systems according to the manufacturer's installation instructions and all applicable codes C. Evacuate refrigerant system to within 500 microns to ensure no non-condensable reside in the system.

the IMC, International Fuel Gas Code, all applicable codes and regulations, and manufacturers written

A. Install and connect gas-fired furnaces and associated fuel and vent features and systems according to

D. Provide <u>level</u> base for condensing unit. E. Secure all base mounted units to substrate. F. Provide and connect PVC condensate piping for all condensate drainage. Extend to nearest equipment

6. Thermostats and humidistats to be mounted at a height of 48" AFF. Review location with JKV project

H. Seal all penetrations to the exterior of the structure with mastic or caulking. Provide for adequate access for the replacement of the furnace filter. Furnace filter to be located in return air drop - NOT in furnace. J. Contractor required to replace dirty filters during construction as directed by JKV project

coordinator. Contractor required to clean all ductwork at completion to include new pleated filter at time of turnover.

Part III - Equipment and Materials 3.1 Equipment:

A. The HVAC equipment shall consist of a natural gas fired furnace with electric split system condensing B. Minimum efficiencies shall be 92% AFUE for the natural gas fire furnace, and 16 S.E.E.R. for the

condensing unit/evaporator coil combination. C. The condensing unit/evaporator coil system shall utilize R-410A (Puron) refrigerant. D. HVAC equipment shall be RUUD and shall be furnished by the HVAC contractor. E. From load calculations mentioned in this specification, and ACCA Manual "D" CFM, determine appropriate

F. At bid, provide owner with submittal data including model numbers and BTUH capacities. 6. At completion of installation and after all system commissioning, provide owner with I set of operation

and maintenance (O&M) manual per unit. H.Furnish and install a bypass type humidifier by RUUD, April-Air, General, or approved equal.

I. Furnish and install in every bathroom an exhaust fan by Broan or approved equal.

A. All materials shall have minimum performance temperature ratings per ULIBI and have a flame spread rating of no more than 25 and a maximum smoke developed rating of 50 (ASTM E 84). B. All pressure sensitive tapes and mastics used in the manufacture of flexible ducts shall be ULISIB (tape)

or ULIBI BM (mastic) listed. C. Sealants for exterior applications shall pass ASTM tests C731, C732 (artificial weathering test), and D. Draw bands used to attach flexible ducts to collars and sleeves shall be either stainless-steel worm-drive hose clamps or UV-resistant nylon duct ties. E. Draw-bands to have a minimum performance

temperature rating of 165 degrees F. (continuous, per ULIBIA-type test) and a minimum tensile strength rating of 50 pounds and shall be tightened with an adjustable tensioning tool. E.Duct insulation shall be a minimum of I" foil-backed flexible fiberglass blanket duct wrap meeting ASTM C 553 Types I, II, and III, and ASTM C 1290, and have a maximum service temperature of 250 degrees F. F.Duct insulation shall have a minimum "K" value (based on ASTM C177) of .29 @ 75 degrees F. The

Part IV - System Commissioning A. Ensure room-by-room airflows are correct and total supply. B. Each register airflow should be within 10% of Manual @D^ design airflow and the entire supply for the system should be within 5% of Manual "D" design airflow.

vapor-retarding jacket shall conform to ASTM C 1136 Type 11.

C. Total return air to equal total supply air. D. Ensure tightness in ducts, plenum, and air-handling equipment. E. Measure air-handler (furnace) airflow and static pressure across fan; ensure that total is within 5% of design and manufacturers specifications at a static pressure within O.I" w.g. of design.

F. Test static pressure drop across blower to ensure that it is within O.I" w.g. of design and manufacturers

G. After proper airflows are determined, check air conditioning charge and furnace operation. H. Charge air conditioning systems with fixed metering devices, use evaporator superheat method, and for systems with a thermostatic expansion valve, use sub-cooling method of charging.

1. Set furnace manifold natural gas pressure to manufacturers specifications. J. Check furnace for correct flame at each burner chamber and check vent for proper draft.

DIVISION IS - ELECTRICAL

1.1 Submittals: Contractor to provide shop drawings upon request, product data (with capacities), and installation drawings for owner's approval.

1.2 Scope: The work included in this contract consists of the contractor providing all labor, materials, tools, transportation, services, etc. necessary to complete the installation of the electrical system(s), and other items herein listed, as shown on the drawings, described in these specifications, or as directed by the owner. Electrical work is comprised of but not limited to the following principal items: electrical system power for service to include I meter with 3 disconnects, load-centers, panel-boards, etc. System of conductors, boxes, receptacles, switches and light fixtures. Telephone, CATV, data outlets and wiring. Fire alarm system with related components and doorbell system with related components.

1.3 Intent: Work indicated in this portion of the drawings is shown to document the intent of the architect

and/or where minimum standards shall be exceeded. These systems shall be designed, documented and

submitted for building permit and constructed by the general contractor or his agent. This work must meet or exceed the applicable codes, ordinances and regulations, the National Electric Code, and meet with approval of the authority having jurisdiction. 1.4 Marranties: Submit written warranties executed by the manufacturers of all electrical products and

devices installed agreeing to repair or replace the materials that fail in materials or workmanship within the period recognized by the manufacturer.

1.5 Conflicts: The contractor shall coordinate with other trades to avoid conflicts with wiring, box locations, piping, and ductwork etc. to minimize construction time.

Part II - Execution

fifteen (15)-amp.

2.1 General: A. Review actual box and device locations with JKV project coordinator prior to installation.

B. Electrical panel will have (I) one and one half inch (I-I/2") conduit to the attic for future use. C. Each attic space shall have two (2) one and one half inch (1-1/2") conduit from attic to basement for future use. Location to be approved by owner. D. Use new materials only for construction. E.Exposed wiring and conductors is unacceptable. Conceal and protect all wiring and conductors.

F.All I20-volt circuits to be a minimum of twenty (20)-amp circuits with exception of lighting, which may be

INFORMATION INDICATED WITHIN THESE PLANS HAS BEEN PROVIDED BY A LICENSED STRUCTURAL ENGINEER AND APPEARS ON THEIR DESIGNATED SHEETS. ARCHITECTURAL CONCEPTS, INC. ARE NOT STRUCTURAL ENGINEERS.

G. Where wire is installed in bored holes, they should be placed at the approximate center of the wood member so that the edge of the hole is no closer than 1-1/4 inches from the edge. If the wire is required to be closer than I-1/4 inches to the edge, the cable must be protected by a steel plate.

(Verify with Truss Joist Mfr. regarding allowable penetrations). H.All circuit breakers to be clearly labeled to identify purpose.

A. Receptacles must be no more than 12 feet apart and no more than 6 feet from a door or entry-way, plugs located behind a stationary appliance do not count when considering plug spacing.

B. Any wall space, which is 2 feet or more in width, must have a receptacle.

C. Every basement, crawlspace, attic, and garage must have one receptacle that is GFCI protected. D. Every hallway ten (10) feet or more in length must have at least one receptacle E.There shall be at least one GFCI receptacle located outdoors near every exterior door at a height of

eighteen (18) inches AFF. F.There shall be at least two (2) dedicated twenty (20)-amp circuits for kitchen counter top receptacles with not more than four openings per local ordinance.

G. All kitchen counter top receptacles to be GFCI protected.

H.All outlets must be pigtailed. No back "stabbed" wiring. I. Provide a dedicated twenty (20)-amp circuit for the garage receptacles. Reference electrical drawing for locations.

equipment

A. There shall be a dedicated twenty (20)-amp circuit for each of the following appliances: refrigerator, microwave, and dishwasher/disposal. B. All 240-volt appliances must be on their own dedicated circuit. C. Cooktops and oven units shall be four (4)-wire with a four (4)-wire plug as per the NEC and AHJ, or as

J.Provide service outlet for the a/c condensing unit and furnace within 6 ft. of previous mentioned

specified by manufacturer's recommendations. D. There shall be a dedicated twenty (20)-amp circuit for a sump pump.

D. All switched ceiling boxes to be double switched.

A. Review proposed ceiling fan, lighting, and switch locations with JKV project coordinator. B. Center fixtures in middle of ceiling, soffit, or wall, as shown on the drawings or unless otherwise instructed by owner. Switches shall be "Decora" design and outlets shall be standard non-Decora

C. Gang mount multiple switches as much as possible. Align adjacent devices, outlets, etc. at same elevations. Switches, controls etc. typically at 40" AFF, unless located above countertops.

E. Switches to be pigtailed. No back "stabbed" wiring. F. There shall be a minimum of two (2) lights in attics and crawl space switched at the entrance and (6) lights in basements switched at the entrance.

6. Every room, hallway, stairway, attached garage and outdoor entrance shall have at least one light H. Hallways greater than four feet in length shall have three way switches at both points of entry controlling

I. Every closet shall have a light fixture (LED) controlled by a wall switch J. Exterior cans located by front entry and above overhead garage door shall be controlled by photo

K. All celling fans shall have a wall mounted fan speed selector switch and a separate switch for lighting. (Cut off exposed fan chains except on 3-season room) L. All bulbs to be LED (2700K) and manufacturers are restricted to GE, Phillips, Sylvania, and Cree U.N.O.

2.5 Telephone and Cable TV:

A. There shall be one connection point inside garage (adjacent to fire alarm control panel) with one cable TV feed and one telephone feed from cable and telephone company. B. All internal telephone and cable TV "home runs" shall be brought to the central connection box.

C. There shall be one and one half inch (1-1/2) PVC conduit to be installed to attic from the connection box (multimedia panel) for future use. D. Multimedia panel to be mounted at a height of forty-eight (48) inches to the bottom of panel from finish

E. Ground "multimedia" panel to the electrical system ground F. Provide one dedicated twenty (20)-amp, 120 volt circuit to a duplex receptacle for multimedia panel and fire alarm panel components power supply 6. Receptacle shall be mounted within twelve (12) inches of panel.

H. Run single CAT-5 cable from telephone interface to multimedia panel. All interior telephone and cable home runs to terminate in multimedia panel with 30" of wire inside panel. I. There shall be at least two (2) combination telephone/CATV jacks in each bedroom, living room, and

within two (2) feet of an electrical outlet. J.There shall be one (1) telephone/CATV jack in kitchen area. K. There shall be one (1) CATV "home run" to each bedroom, living room, dining room, and kitchen area.

Secondary CATV jacks in same room to be looped to jack containing "home run". L.There shall be one (1) telephone "home run" to bedroom jacks and one to living room, dining room/kitchen jacks with the first two pairs linked to all jacks. 2.6 Fire Alarm/Security System: A. Install owner furnished "dial up" fire alarm/security system/notification devices.

B. Contact JKV fire alarm service personnel for specific details pertaining to installation. C. Alarm components from dial-up alarm system to be mounted in multimedia panel. D. Smoke detectors shall be installed in every bedroom and in the hall outside of every bedroom. E. Every basement shall have a smoke detector. F. All sump pumps to be alarmed with water level sensor.

6. Audio/visual devices (horn/strobes) shall be installed in every bedroom, hall adjacent to living room, and H.Specify on product technical literature where the physical location of end-of-line resisters are located and address of panel and leave in multimedia panel with alarm system.

Part III - Equipment and Materials A. One meter per structure with individual disconnects, load centers, etc. per unit. B. Breaker panel shall be steel, enamel finish inside and out with continuous hinged cover as manufactured by General Electric, model #TM4020CCU with main breaker, 40 circuit spaces, and copper bus.

C. Circuit breakers shall be sized as required for circuit; breakers shall be manufactured by General Electric for panel listed above. D. One meter with 3 disconnects load-centers, panel-boards, etc. per structure.

2.2 Wire, Boxes, and Devices:

(basement) provide gasket covers.

A. Outlet boxes, junction boxes, and device boxes unless otherwise noted can be nonmetallic as permitted by the NEC and the AHJ B. For boxes mounted in exterior walls intended for outdoor use, and for boxes mounted in damp locations

C. All ceiling mounted boxes shall be fan rated. D. Coordinate with JKV project coordinator on the color and type of cover plates. Wire shall have a minimum insulating rating of 600 volts, except wire used for 50 volts or less applications, which shall be 300 volt minimum insulation rating

H.Multimedia panel to be Leviton, cat. no. 47605-28W, SAN IO2 with a box dimension of 28"  $\times$  14 3/8"  $\times$  3

CONSTRUCTION

AS NOTED ON PLANS REVIEW

DEVELOPMENT SERVICES

LEE'S SUMMIT, MISSOURI

Victoria Nelson

09/27/2021

standards. Minimum size-#12 for branch circuits ad #14 for lighting circuits. F. All phone wiring to be CAT5 cable. G. All receptacles to be Leviton or approved equal.

E. All conductors to be electrical grade annealed copper and fabricated in accordance with ASTM

I. Phone punch down block to be manufactured by Leviton, cat. no. 47689-B. J.TV splitter(s) to be Leviton cat. No. 47690-8C.

2.3 Lighting: A. Provide light fixtures per specifications.

B. All fixtures shall be LED (2700K).

Part IV - Commissioning A. Ensure all circuits are clearly labeled at each end

B. Ensure all breakers are labeled C. Test all receptacles for proper voltage and polarity. D. Ensure all light fixtures work and are controlled properly via correct switching.

E. Ensure all ceiling fans work and multi-speed switching is correct for fan speeds

F. Test all Phone/TV jacks for continuity. G. Perform a test of the fire alarm system by testing each device. H. Ensure during fire alarm test that all audio-visual devices (horns/strobes) activate.

NOTE: THE STRUCTURAL

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contained in these drawings is considered "Builder's Plans" and requires the Contractor to possess competence residential construction. Use of these drawings by the Contractor warrants to the Consultant / Architect that he possesses the necessary skill and expertise to construct this building as drawn without full engineering and design services. Although the Consultant / Architect have performed our services with due care and diligence, we cannot guarantee perfection. During construction, the contractor mau be required to adapt the "Builder's Plans" to the field conditions and mak logical adjustments. In the event additional information is needed by the

Contractor or Home Owner for

construction of an aspect of the project

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ambiquities discovered by the use of

these plans, or making changes to the

plans without the consent of Consultant /

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Architectural Concepts, Inc. of any responsibilities or consequences.

Date: June 15, 2021

Rev. Issue: Rev. Date:





KANSAS ENGINEERING LICENSE: MISSOURI ENGINEERING LICENSE: 2003004673 **GENERAL** 

MIN LIVE LOAD

40 PSF

10 PSF

10 PSF

| BIIII BING GG  |   |   |
|--|---|---|
| BUILDING COMPONENT   | MATERIAL  | FASTENING  16 GA x 1-3/4" STAPLES AT 3"   |
| ROOF SHEATHING <sup>1</sup>  | 7/16" PLYWOOD   | OC EDGES AND 6" OC IN FIELD   |
| 7.007 57127.77711.70   | 1x4 #3 FURRING  | 1/2" CROWN STAPLES  |
| FLOOR SHEATHING <sup>1</sup>   | 3/4" T&G YELLOW PINE PLYWOOD<br>APPLIED PERPENDICULAR TO<br>JOISTS AND ENDS STAGGERED   | 8d COMMON NAILS AT 6" OC EDGES  AND 12" OC IN THE FIELD  14 GA x 2" STAPLES AT 4" OC  EDGES AND 8" OC IN THE FIELD  12.5 GA x 1-1/2" RING OR SCREW  SHANK NAILS AT 6" OC EDGES  AND 8" OC IN THE FIELD  |
| CEILING COVERING <sup>1</sup>  | 1/2" GYPSUM SHEATHING   | 7" OC NAILED / 12" OC SCREWED WITH 13 GA, 1-3/8" LONG, 19/64" HEAD; 0.098 DIA, 1-1/4" LONG, ANGRINGED; 5d COOLER NAIL, 0.086 DIA, 1-5/8" LONG, 15/64" HEAD; OR GYP BD NAIL, 0.086 DIA, 1-5/8" LONG, 9/32" HEAD  |
| INTERIOR WALL<br>COVERING <sup>1</sup>   | 1/2" GYPSUM SHEATHING   | 6d COMMON NAILS; 1-5/8"<br>GALVANIZED STAPLES; 1-1/4"<br>SCREWS, TYPE W OR S- AT 4" OC<br>EDGES AND 8" OC IN THE FIELD  |
| EXTERIOR WALL<br>SHEATHING   | MIN 3/8" APA RATED SHEATHING  | 8d COMMON NAILS AT 6" OC EDGES<br>AND 12" OC IN THE FIELD   |
| CONVENTIONAL WOOD<br>FRAMED WALLS  | *SUPPORTING 2 FLOORS, ROOF,<br>AND CEILING OR LESS.<br>*HEIGHT: 10'-0" OR LESS<br>SIZE: NOM 2x4 (NOM 2x6 WHEN<br>SUPPORTING 2 FLOORS, CEILING,<br>AND ROOF)<br>*SPECIES: DOUG-FIR, HEM-FIR,<br>SOUTH PINE, SPRUCE-PINE-FIR<br>*MAXIMUM SPACING 16" OC<br>*GRADE: #3, STANDARD, OR STUD<br>GRADE | *TOE NAIL STUD TO TOP AND SOLE PLATE:  *END NAIL TOP AND SOLE PLATE TO STUD:  *FACE NAIL BUILT-UP CORNER STUDS:  (AT BRACED WALL PANELS):  *FACE NAIL JACK STUDS/TRIMMERS  SUPPORTING HEADERS WITH:  *FACE NAIL DBL TOP PLATE:  *DIBL TOP PLATES WITH MIN 48" OFFSET  OF EACH. FACE NAIL LAPPED AREA WITH:  *FACE NAIL DBL TOP PLATES AT LAPPED  CORNERS AND INTERSECTIONS WITH:  *FACE NAIL SOLE PLATE TO FRAMING  SYSTEM WITH:  *FACE NAIL BRIDGING TO JOIST, EACH END:  *FACE NAIL LEDGER STRIPS SUPPORTING  JOISTS OR RAFTERS WITH:   *TOE NAIL HEADERS TO WALL STUDS WITH (4) 8d |
| CONVENTIONAL WOOD<br>HEADER FRAMING  | PER PLAN  | NAILS AT EACH END.  *FACE NAIL DOUBLE PIECE HEADERS WITH 16d NAILS AT 16" CENTERS ALONG EACH EDGE.  |
| RAFTER TIES <sup>2</sup>   | MIN 2x4 MEMBERS AT EACH RAFTER  | REF TABLE R802.5.2  |
| COLLAR TIES  | MIN 1x4 MEMBERS AT 48" OC   | FACENAIL TO RAFTERS IN UPPER 1/3 OF<br>ATTIC SPACE WITH (3) 10d NAILS AT EACH   |
| RAFTER TIES SHALL NOT B  | TERIALS TO BE APPLIED PERPENDICULA<br>E REQUIRED WHEN A STRUCTURAL RIE<br>ULTED ROOM). SUCH SHALL BE NOTED  | DGE HAS BEEN PROVIDED AND ADEQUATELY  |
| BUILDING COMPONENT   | FASTEN TO   | FASTEN WITH   |
| DACTEDO  | TO RIDGE/VALLEY/HIP RAFTERS   | TOENAIL WITH (4) 16d<br>ENDNAIL WITH (3) 16d  |
| RAFTERS  | TO PLATE  | TOENAIL WITH (2) 16d  |
|  | TO TOP PLATE  | TOENAIL WITH (3) 8d AT EACH END   |
| CEILING JOISTS   |   | L DISTS RUN PARALLEL TO RAFTERS D RAFTERS WITH (3) 10d MIN  |
|  | TO SILL OR GIRDER   | TOENAL WITH: (3) 8d COMMON; (3) 3"x0.131"; (4) 3"x0.128"  |
| FLOOR JOISTS   | TO RIM JOIST  | ENDNAIL WITH: (3) 16d COMMON; (4) 3"x0.131"; (4) 3"x0.128   |
| RACED WALL PANELS  | TO FRAMING MEMBER   | SOLE PL, 16" OC WITH: (3) 16d COMMON; (4) 3"x0.131"   |
| ERP TO FRAMING<br>IEMBERS ABOVE/BELOW:<br>ARALLEL TO FRAMING<br>IEMBERS ABOVE/BELOW: | TO FRAMING AND<br>BLOCKING AT 16" OC  | TOP PL, 6" OC WITH: 8d COMMON; 3"x0.131"  SOLE PL, 16" OC WITH: (3) 16d COMMON; (4) 3"x0.131"  AND AT EACH BLOCK: (3) 16d COMMON; (4) 3"x0.131"  TOP PL, 6" OC WITH: 8d COMMON; 3"x0.131"  AND AT EACH BLOCK: (3) 8d COMMON; 3"x0.131"  |

REQUIREMENTS NOTED WITHIN THE STRUCTURAL OR ARCHITECTURAL DRAWINGS, IF REQUIRED BY APEX ENGINEERS DESIGN

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

NEEDING TO BE MORE STRINGENT, SHALL BE FOLLOWED

#### **ENERGY REQUIREMENTS**

1. LIGHTING FIXTURES PENETRATING THE THERMAL ENVELOPE SHALL BE IC-RATED, LEAKAGE RATED, AND SEALED TO THE GYPSUM WALLBOARD AS REQUIRED PER N1102.4.5. 2. PROGRAMMABLE THERMOSTATS SHALL BE INSTALLED AS REQUIRED PER 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

PLENUMBS PER N1103.3.5 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 M1501.1. 7. MAKEUP AIR SYSTEMS SHALL BE INSTALLED FOR KITCHEN EXHAUST HOODS THAT EXCEED 400 CFM AS REQUIRED PER M1503.6. 8. AN AIR HANDLING SYSTEM SHALL NOT SERVE BOTH THE LIVING SPACE AND THE GARAGE PER M1601.6.

#### **ENERGY CONSERVATION**

| LILITO I CONS  | LIVATION   |
|--|--|
| THE ENERGY EFFICIENCY OF THE DWELLING FOLLOWING TABLES (WHERE THERE ARE DIS AND THE PLANS, THE MOST RESTRICTIVE SH COMPLETED AND ACCOMPANIED BY RESCHE SHALL BE APPLIED. | SCREPANCIES BETWEEN THIS TABLE<br>IALL APPLY). IF TABLE 1 IS NOT |
| TABLE 1 - ResCheck COMPLIANCE SOFTWARE   | E (FILL IN APPLICABLE  |
| VALUES FROM ResCheck CALCS.)   | `<br>  |
| BUILDING ELEMENT   | MIN VALUE  |
| WALLS - FRAMED   | R-   |
| WALLS - BASEMENT   | R-   |
| FLOORS - UNCONDITIONED SPACE   | R-   |
| FLOORS - OVER OUTSIDE AIR  | R-   |
| FLOORS - CRAWL SPACE   | R-   |
| SLAB - PERIMETER   | R-   |
| CEILING - FLAT   | R-   |
| CEILING - CATHEDRAL  | R-   |
| DOORS - GLASS  | U-   |
| DOORS - SOLID  | U-   |
| WINDOWS - OPERABLE   | U-   |
| WINDOWS - FIXED  | U-   |
| WINDOWS - OTHER  | U-   |
| FURNACE  | AFUE-  |
| AIR CONDITIONER  | SEER-  |
| NOTE: FOR USE OF TABLE 1 A ResCheck COM<br>SUBMITTED WITH PLANS.<br>TABLE 2 -PRESCRIPTIVE ENVELOPE (MIN PRE<br>ACCEPTABLE FOR ANY DWELLING.)                             | ESCRIPTIVE APPROACH  |
| BUILDING ELEMENT   | MIN VALUE  |
| CEILING - FLAT   | R-49   |
| CEILING - CATHEDRAL**  | R-30   |
| CEILING - CATHEDRAL  | R-38   |
| FLOORS - UNCONDITIONED SPACED  | R-19   |
| FLOORS - OVER OUTSIDE AIR  | R-30   |
| WALLS - BASEMENT   | R-10 (CONT) OR R-13 (CAVITY)                                     |
| CONCRETE SLAB ON GRADE   | R-10 (FOR 2FT)   |
| SKYLIGHTS  | U=0.55   |
| WALLS - EXTERIOR (2x4)   | R-13 (CAVITY) + R-5 (CONT)                                       |
| 11/11/10 = 11/11/10 = (0.0)  |  |

# **DEFERRED SUBMITTALS**

\*DEFAULT U-FACTOR FOR DOUBLE PANE, ARGON FILLED LOW-E

\*\*LIMITED TO AREAS LESS THAN 500 SQ-FT OR 20% OF CEILING AREA.

SHGF<=0.40

1. THE ARCHITECT OR ENGINEER OF RECORD SHALL LIST THE DEFERRED SUBMITTALS ON THE PLANS FOR REVIEW BY THE BUILDING OFFICIAL. DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER OF RECORD WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND FOUND TO BE IN THE GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL. DEFERRED SUBMITTALS ARE DEFINED AS THOSE PORTIONS OF THE DESIGN THAT ARE NOT SUBMITTED AT THE TIME OF THE APPLICATION AND THAT ARE TO BE SUBMITTED TO THE BUILDING OFFICIAL WITH A SPECIFIED PERIOD. DEFERRAL OF ANY SUBMITTAL ITEMS SHALL HAVE THE PRIOR APPROVAL OF THE BUILDING OFFICIAL.

- 2. DEFERRED SUBMITTAL ITEMS (WHEN APPLICABLE): A. TRUSSES
- B. I-JOISTS C. GUARDRAILS AND HANDRAILS

WALLS - EXTERIOR (2x6

TREATMENT IS U=0.35

NALLS - CRAWL SPACE

TABLE 2 PER IRC TABLE N1102.1.2

- D. STEEL FABRICATED STAIRS E. PRE-MANUFACTURED CANOPIES AND AWNINGS
- F. PRECAST HOLLOW CORE SLABS G. GROUND IMPROVEMENT AND/OR STRUCTURAL FOUNDATION SOLUTIONS (SUCH AS DRILLED PIERS)

PORCHES, CARPORTS, AND GARAGE FLOOR SLABS.

CONCRETE SHALL BE AIR ENTRAINED WITH A MINIMUM COMPRESSIVE STRENGTH OF 28 DAYS OF 2,500 PSI FOR BASEMENT AND INTERIOR FLOOR

SLABS, 3,000 PSI FOR BASEMENT AND FOUNDATION WALLS, AND 3,500 FOR

CONCRETE

# **GLAZING**

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 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 9 SQUARE FEET AND WHOSE BOTTOM EDGE IS LESS THAN 18" ABOVE THE FLOOR OR WALKING SURFACE WITHIN 36".

# **EMERGENCY EGRESS AND RESCUE**

1. PROVIDE ONE WINDOW FROM EACH BEDROOM THAT HAS A MINIMUM OPENABLE AREA OF 5.7 SQUARE FEET WITH A MINIMUM OPENABLE HEIGHT OF 24 INCHES AND WIDTH OF 20 INCHES. 2. BASEMENT EGRESS TO MEET THE REQUIREMENTS OF IRC SECTION 310. 3. SMOKE ALARMS SHALL BE INSTALLED AS REQUIRED PER IRC 2018 SECTION R314. 4. PROVIDE SMOKE ALARMS IN EACH SLEEPING ROOM, OUTSIDE OF EACH SLEEPING AREA. ON EACH FLOOR INCLUDING BASEMENTS AND HABITABLE ATTICS, AND NOT LESS THAN 3'-0" HORIZONTALLY FROM DOOR OR OPENING OF A BATHROOM THAT CONTAINS A BATHTUB OR SHOWER. ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTUATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE DWELLING. 5. CARBON MONOXIDE ALARMS SHALL BE INSTALLED AS REQUIRED PER IRC 2018 SECTION R315. 6. CARBON MONOXIDE ALARMS SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA. WHERE A FUEL-BURNING APPLIANCE IS LOCATED WITHIN A BEDROOM OR ITS ATTACHED BATHROOM, A CARBON MONOXIDE

#### FRAMING GENERAL

ALARM SHALL BE INSTALLED WITHIN THE BEDROOM.

1. ALL LUMBER SIZES ARE FOR DOUGLAS FIR-LARCH UNLESS NOTED OTHERWISE. 2. ALL HEADERS TO BE MIN (2) #2-2x10 UNLESS NOTED OTHERWISE. 3. BLOCK CANTILEVERS, DOORJAMBS, AND OVER BEAMS. 4. ALL HEADERS TO BEAR ON A MINIMUM OF (2) 2x4 STUD 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 BE PROVIDED TO A MAXIMUM OF 2'-0" 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 (3) 10d NAILS (IRC SECTION R602.3.(1)). 7. IF DUCTS ARE INSTALLED IN THE FIRST JOIST SPACE(S), NAIL 2x4s FLAT AT 2'-O" CENTERS WITHIN THE JOIST SPACE(S) AND THEN PROVIDE SOLID BLOCKING, INSTALLED UPRIGHT, IN THE NEXT TWO JOIST SPACES. SECURE THE 2x4s TO THE

THE PLANS THAT THE DESIGN IS FOR HEAVY ROOF COVERINGS 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 DOUBLED AND COMPLY WITH

IRC SECTION R502.4. 10. JOISTS FRAMING FROM OPPOSITE SIDES OVER BEARING SUPPORTS SHALL LAP A MINIMUM 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 MINIMUM 2"x2" LEDGER STRIPS. 12. FRAMING OF OPENINGS - HEADERS 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'-0" FROM THE TRIMMER JOIST BEARING. WHEN THE HEADER SPAN EXCEEDS 4'-0", 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. WATER-RESISTIVE BARRIER SHALL BE PROVIDED OVER ALL EXTERIOR WALLS. ONE LAYER OF No 15 ASPHALT FELT OR ANY OTHER BARRIER THAT MEETS ASTM D226 TYPE 1 FELT. (R703.2) 15. WHERE CEILING JOISTS ARE NOT INSTALLED CONNECTED TO THE RAFTERS AT THE TOP PLATE AND/OR WHERE CEILING JOISTS ARE NOT INSTALLED PARALLEL TO THE RAFTERS, RAFTER TIES SHALL BE INSTALLED IN THE LOWER 1/3 OF THE ATTIC SPACE AND IN ACCORDANCE WITH TABLE 1-S1.0. 16. COLLAR TIES SHALL BE PROVIDED IN THE UPPER 1/3 OF THE ATTIC SPACE IN

ACCORDANCE WITH TABLE 1-S1.0.

CEILING JOISTS/ATTICS WITH STORAGE - DOOR/PULL DOWN ADDER ACCESS ROOMS - NON-SLEEPING **ROOMS - SLEEPING** ROOF - LIGHT ROOF COVERING **ROOF - HEAVY ROOF COVERING** 20 PSF CONCRETE/TILE/SLATE

1. PLANS SHALL COMPLY WITH THE 2018 INTERNATIONAL RESIDENTIAL CODE WITH AMENDMENTS AS ADOPTED BY THE GOVERNING JURISDICTION. IF ANY CHANGES OR

DEVIATIONS FROM THE PLANS ARE MADE DURING CONSTRUCTION, CONTRACTOR

SHALL NOTIFY THE APPROPRIATE AUTHORITY AND ENGINEER OF RECORD, EITHER

(OR BOTH) OF WHOM MAY REQUIRE REVISED DRAWINGS OR CALCULATIONS AT ITS

WRITTEN PERMISSION FROM APEX ENGINEERS, INC IS STRICTLY PROHIBITED. THE

ARE AND SHALL REMAIN THE PROPERTY OF APEX ENGINEERS, INC. AN UNSEALED

DRAWINGS AND DETAILS OF THIS SHEET SET, BEING INSTRUMENTS OF SERVICE,

VERSION, OR A VERSION VOID OF APEX ENGINEERS LOGO AND/OR TITLE BLOCK,

3. WHERE DISCREPENCIES EXIST BETWEEN THE STANDARD COMMENTS, NOTES

APPLY. THE DWELLING SHALL COMPLY WITH THE FOLLOWING LOAD CONDITIONS

FROM THE DESIGN PROFESSIONAL OR THE CODE, THE MOST RESTRICTIVE SHALL

MIN DEAD LOAD

2. REPRODUCTION, ALTERATION, OR RE-USE BY ANY METHOD OF ALL OR

SHALL BE CONSIDERED AN UNAUTHORIZED REPRODUCTION.

EXTERIOR BALCONIES

CEILING JOISTS/ATTICS NO

STORAGE - SCUTTLE ACCESS ONLY ROOF SLOPE 3:12 OR LESS

CEILING JOISTS/ATTICS WITHOUT

ROOF SLOPE OVER 3:12 OR LESS

STORAGE - SCUTTLE ACCESS ONLY

PORTIONS OF THESE STRUCTURAL PLANS OR VARIATIONS THEREOF WITHOUT

NOTE: HEAVY ROOF COVERING WILL NOT BE INSTALLED OR USED IN THE DESIGN CALCULATIONS UNLESS IT IS SPECIFICALLY NOTED ON

#### **FOUNDATIONS**

1. THE FOUNDATION DESIGN SHALL BE BASED ON A MINIMUM SOIL BEARING CAPACITY OF 2000 PSF, UNLESS OTHERWISE INDICATED ON THE PLANS OR IF MODIFIED BY AN ENGINEERING REPORT BASED ON ACTUAL SITE CONDITIONS. 2. CONCRETE SHALL MEET THE FOLLOWING SPECIFIED DESIGN STRENGTH

- 2500 PSI FOR BASEMENT FLOOR SLABS ON UNDISTURBED SOIL - 3000 PSI FOR FOOTINGS AND FOUNDATION WALLS - 3500 PSI FOR GARAGE FLOOR SLABS

EXCEEDING 20'-0" IN LENGTH (REF 3-S2.0)

3. FOOTINGS SHALL EXTEND BELOW THE FROST LINE; MINIMUM DEPTH 36 INCHES BELOW GRADE. 4. UNLESS OTHERWISE NOTED ON THE PLANS OR IF SITE CONDITIONS REQUIRE OTHERWISE, FOOTINGS SHALL BE A MINIMUM OF 16" WIDE AND 8" DEEP WITH (2) #4 BARS CONTINUOUS. 5. COLUMN PADS SHALL BE A MINIMUM 30"x30"x12" WITH (4) #4 BARS EACH WAY UNLESS NOTED OTHERWISE. 6. UNLESS NOTED OTHERWISE ON THE PLANS, FOUNDATION WALLS SHALL BE MINIMUM 8" THICK x 8'-0" (OR 9'-0") TALL AND REINFORCED PER DETAIL 1-S2.0 (AND 2-S2.0 WHERE APPLICABLE). FOUNDATION WALLS GREATER THAN 10'-0" TALL REQUIRE A SEPERATE ENGINEERED DESIGN. PROVIDE A 2'-0" LONG INTERIOR OR EXTERIOR DEAD-MAN FOR ANY STRAIGHT WALL PANELS

7. REINFORCEMENT SHALL BE MINIMUM GRADE 40 UNLESS NOTED OTHERWISE.

REINFORCEMENT SHALL LAP A MINIMUM OF 24" AT ENDS, SPLICES, AND AROUND 8. FOUNDATION WALLS SHALL BE BACKFILLED WITH A CLEAN LEAN CLAY (OR BETTER) LOW VOLUME CHANGE MATERIAL. ON-SITE MATERIAL MAY BE USED IF DEEMED ACCEPTABLE BY THE GEOTECHNICAL ENGINEER OF RECORD 9. FOUNDATION WALLS WILL NOT ACHIEVE FULL STRENGTH UNTIL THE BASEMENT SLAB AND THE FIRST FLOOR DECK HAVE BEEN PROPERLY PLACED. IF BACKFILLING THE INTERIOR OF THE FOUNDATION WALL WITH GREATER THAN 8" OF EARTHEN FILL OR 24" OF GRANULAR FILL, A STRUCTURAL BASEMENT SLAB (TO BE DESIGNED OR DESIGN REVIEWED BY APEX ENGINEERS), OR ALTERNATE ENGINEERED SOLUTION (i.e. ENGINEERED FILL) WILL BE REQUIRED. 10. WHERE JUMPS OR STEPS IN ELEVATION OCCUR FOUNDATION WALLS AND FOOTINGS SHALL BE FORMED CONTINUOUS AND POURED PER DETAIL 4-S2.0. 11. CONCRETE FLOOR SLABS SHALL BE A MINIMUM 4" THICK OVER A MINIMUM 4" BASE OF 1/2" OR 3/4" CLEAN GRADED ROCK, UNLESS NOTED OTHERWISE OR IF SITE CONDITIONS REQUIRE OTHERWISE. 12. PROVIDE A MIN 6 MIL THICK POLYETHYLENE MOISTURE BARRIER OVER POURUS GRAVEL BASE UNDER BASEMENT FLOOR SLAB PER R406.2. LAP JOINTS

MINIMUM 6" (NOT REQUIRED FOR GARAGE SLABS OR DETACHED ACCESSORY 13. FOR A STRUCTURAL REINFORCED CONCRETE FLOOR OVER A USABLE AREA. SUCH AS A GARGE FLOOR LOCATED OVER A STORAGE AREA, SUBMIT SEALED ENGINEERED DETAILS AND CALCULATIONS. 14. GARAGE SLABS AND BASEMENT OVERDIGS SUPPORTED BY FILL CONSISTING OF MORE THAN 24" OF GRANULAR FILL OR 8" OF EARTH SHALL BE REINFORCED PER DETAILS 1-S2.1 AND 6-S2.1 RESPECTIVELY. WHERE THE LIMITATIONS OF DETAILS 1-S2.1 AND 6-S2.1 ARE NOTE MET, A SEPERATE ENGINEERED DESIGN SHALL BE REQUIRED. 15. BASEMENT FOUNDATION SILL PLATES SHALL BE BOLTED TO THE FOUNDATION WITH A MINIMUM OF 1/2" ANCHOR BOLTS EMBEDDED AT LEAST 7" INTO THE CONCRETE AND SPACED NOT MORE THAN 3'-0" ON CENTER AND WITHIN 12" OF EACH END PIECE. 16. FOUNDATION WALLS SHALL BE DAMP-PROOFED PER IRC SECTION R406. 17. PROVIDE A MINIMUM 4" PERFORATED DRAIN AROUND USABLE SPACE BELOW GRADE OR OTHER EQUIVALENT MATERIALS PER IRC SECTION 405.1. THE PIPE SHALL BE PLACED ON A MINIMUM OF 2" OF WASHED GRAVEL OR CRUSHED ROCK AND COVERED WITH NOT LESS THAN 6". THE DRAIN SHALL DAYLIGHT TO THE EXTERIOR BELOW THE FLOOR LEVEL OR TERMINATE IN A MINIMUM 20 GALLON 18. INTERIOR BEARING WALLS AND COLUMNS SHALL BE ISOLATED FROM THE BASEMENT FLOOR SLAB.

19. INTERIOR NON-BEARING WALLS. OTHER THAN THOSE RESTING DIRECTLY ON

THE FOOTING, SHALL BE ISOLATED FROM THE FLOOR FRAMING ABOVE.

20. ALL EARTH RETAINING STRUCTURES ON SITE GREATER THAN 4'-0" TALL

(EXCLUDING CONCRETE FOUNDATION WALLS RESTRAINED AT BOTH THEIR

TOP AND BOTTOM) SHALL REQUIRE A SEPARATE ENGINEERED DESIGN AS

REQUIRED BY THE CODE AUTHORITY. 21. ANY GEOTECHNICAL IMPROVEMENT METHODS AND/OR STRUCTURAL SOLUTIONS (SUCH AS DRILLED PIERS) EMPLOYED TO ADDRESS UNACCEPTABLE SUBGRADE CONDITIONS SHALL BE SUBMITTED TO EOR AS ENGINEERED SHOP DRAWINGS FOR REVIEW AND APPROVAL.

# **GARAGE**

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 RESIDENCE AND ITS ATTIC AREA BY 5/8", TYPE X GYPSUM BOARD, OR EQUIVALENT MATERIALS APPROVED FOR ONE-HOUR FIRE-RESISTIVE CONSTRUCTION, APPLIED TO GARAGE SIDE. WHERE THE SEPARATION IS A FLOOR-CEILING ASSEMBLY, THE STRUCTURE SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED BY 5/8", TYPE X GYPSUM BOARD, OR MATERIALS APPROVED FOR ONE-HOUR FIRE-RESISTIVE CONSTRUCTION OR EQUIVALENT, APPLIED TO THE GARAGE SIDE. PULL DOWN STAIRS LOCATED WITHIN GARAGE SHALL BE RATED TO BE ADEQUATELY PROTECTED WITH MATERIALS APPROVED FOR ONE-HOUR FIRE-RESISTIVE CONSTRUCTION. ATTIC ACESS PANELS LOCATED WITHIN GARAGE SHALL BE OF 5/8", TYPE X GYPSUM BOARD, OR MATERIALS FOR ONE-HOUR FIRE-RESISTIVE CONSTRUCTION.
4. 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" x 0.120" NAILS AT 7" OC STAGGERED WITH (7) 3-1/4" x 0.120" NAILS THRU THE JAMB INTO THE HEADER, MINIMUM 2x8 HEADER FOR ATTACHMENT OF COUNTER BALANCE SYSTEM.

# **STAIRWAYS**

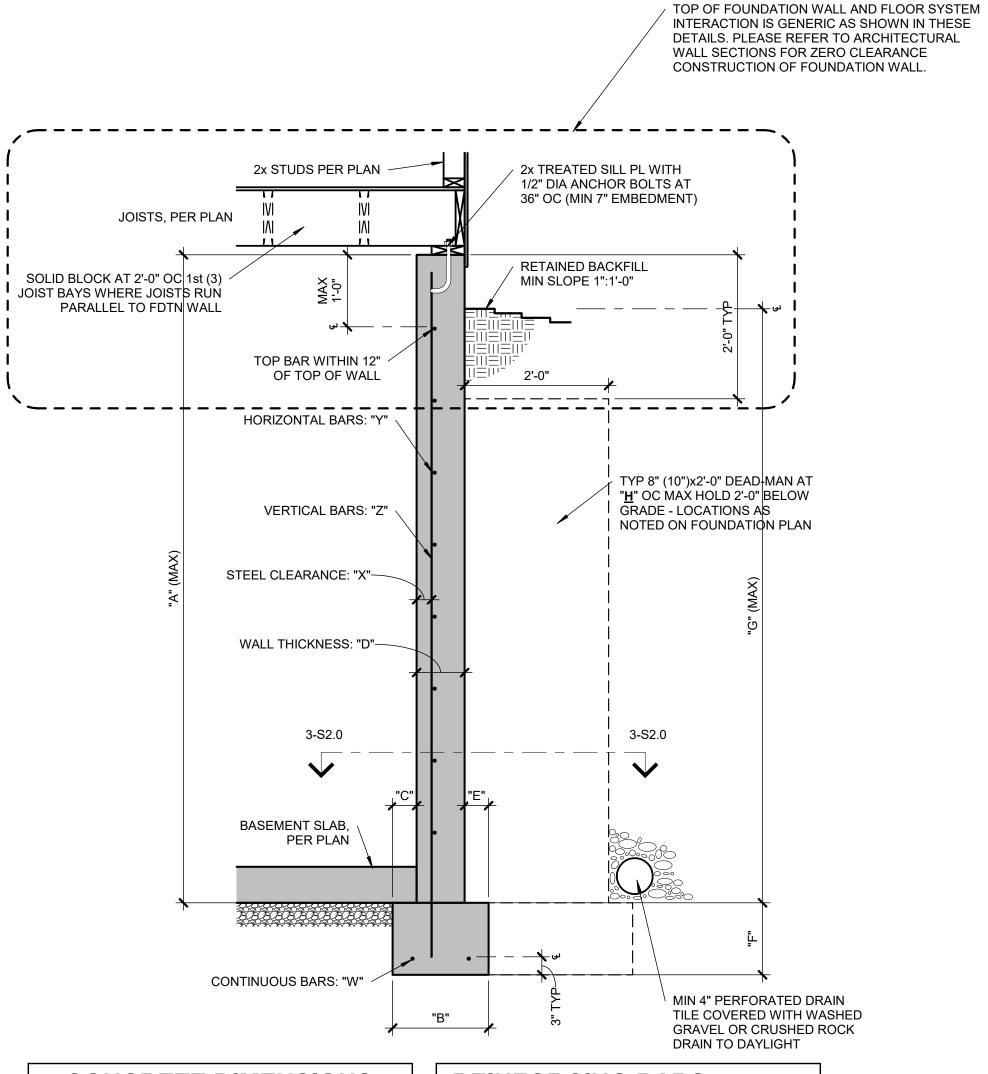
1. STAIRWAYS SHALL PROVIDE A MAXIMUM 7-3/4" RISE AND MINIMUM 10" RUN 2. PROVIDE MINIMUM 36" GUARDRAILS ON THE OPEN SIDES OF RAISED FLOORS, PORCHES, AND BALCONIES; MINIMUM 34" GUARDRAILS ON THE OPEN SIDES OF STAIRWAYS LOCATED MORE THAN 30" ABOVE THE FLOOR OR GRADE BELOW. GUARDRAIL ENCLOSURES SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL PATTERNS THAT DO NOT ALLOW PASSAGE OF A SPHERE 4" IN DIAMETER. 3. EACH STAIRWAY OF THREE OR MORE RISERS SHALL PROVIDE A CONTINUOUS HANDRAIL ON AT LEAST ONE SIDE BETWEEN 34" AND 38" ABOVE THE NOSING OF THE TREADS.

2" MAXIMUM OR OTHER APPROVED GRASPABLE SHAPER PER IRC SECTION 311.7.8.5. 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 PER IRC SECTION 302.7. 7. SPIRAL STAIRS TO BE CONSTRUCTED PER IRC SECTION 311.7.10.1. 8. SPACE STRINGERS AT 16" OC MAX.

4. HANDRAILS SHALL HAVE A CIRCULAR CROSS SECTION OF 1-1/4" MINIMUM TO

| PROJECT #: 40919 DRAWN BY: APEX CHECKED BY: BDC SUBMITTAL DATE: 5/8/2020  SUBMITTAL DATE: 5/8/2020  ## | / |             |      |     |      |    |    |     |        |     |
|--|---|-------------|------|-----|------|----|----|-----|--------|-----|
| CHECKED BY: BDC SUBMITTAL DATE: 5/8/2020   | ( | PR          | OJE  | СТ  | #:   |    | 40 | 919 | 9      |     |
| DATE: 5/8/2020  2021.09.21   |   | DR          | ΑW   | N B | Y:   |    |    | Α   | PΕ     | <   |
| DATE COMMENTS<br>2021.09.21  |   | СН          | ECŁ  | ΚED | BY:  |    |    |     | Bl     | DC  |
| DATE (2021.09.21   |   | SUE         | BMIT | TAL | DATE | Ξ: |    | 5   | 5/8/20 | )20 |
|  |   |             | 9.21 |     |      |    |    |     |        |     |
| #  |   | DA          | 2021 |     |      |    |    |     |        |     |
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|  |   | $\subseteq$ |      |     |      |    |    |     |        |     |

**GENERAL NOTES** 



CONCRETE DIMENSIONS

"A" "B" "C" "D" "E" "F" "G" "H"

8'-0" 1'-4" 4" 8" 4" 8" 7'-6" 20'-0"

9'-0" 1'-4" 4" 8" 4" 8" 8'-6" 20'-0

10'-0" 1'-8" 5" 10" 5" 10" 9'-6" 20"-0"

\*\*Temporarian\*\*

REINFORCING BARS(GRADE 40 BARS)

"W" "X" "Y" "Z"

(2) #4 2 1/2" #4 BARS AT 24" OC #4 BARS AT 24" OC

(2) #4 2 1/2" #4 BARS AT 24" OC #4 BARS AT 24" OC

(2) #4 2 1/2" #4 BARS AT 18" OC #4 BARS AT 18" OC

1. DIMENSION SHOWN IS FOR MAXIMUM UNINTERRUPTED WALL PANEL LENGTH BEFORE A DEAD-MAN SHALL BE INSTALLED. NOTE, A MINIMUM 2'-0" RETURN OR OFFSET IN THE FOUNDATION WALL SHALL SUBSTITUTE AS A DEAD-MAN AND/OR BREAK IN THE WALL PANEL LENGTH.

2. VERTICAL REINFORCING STEEL TO EXTEND TO WITHIN 8" OF TOP WALL. MINIMUM (1) #4 HORIZONTAL BAR WITHIN 12" OF TOP AND BOTTOM OF WALL.

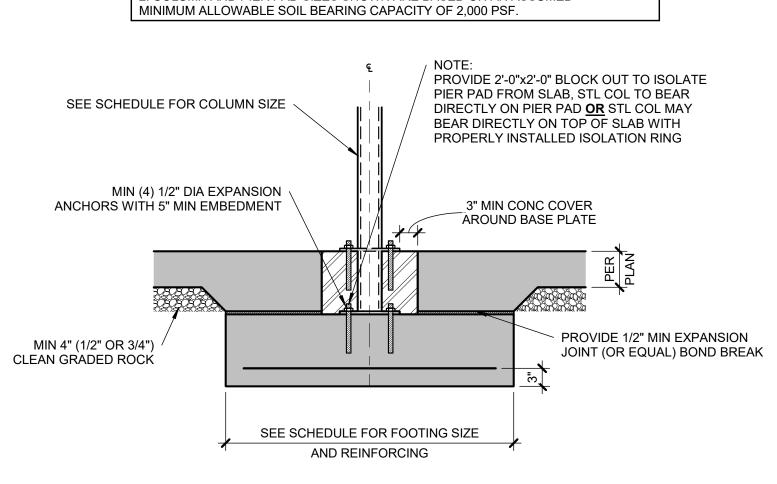
3. BURIED CONCRETE FOUNDATION WALLS UP TO 9'-0" TALL MAY BE 8" NOMINAL THICKNESS WITH #4 BARS AT 24" OC BOTH WAYS OVER 16"x8" CONCRETE FOOTINGS WITH (2) #4 BARS CONTINUOUS, UNLESS OTHERWISE REQUIRED BY ENGINEERING REPORT BASED ON ACTUAL SITE CONDITIONS.

4. WALL WILL NOT ACHIEVE FULL STRENGTH UNTIL FIRST FLOOR DECK AND BASEMENT SLAB HAVE BEEN PLACED.

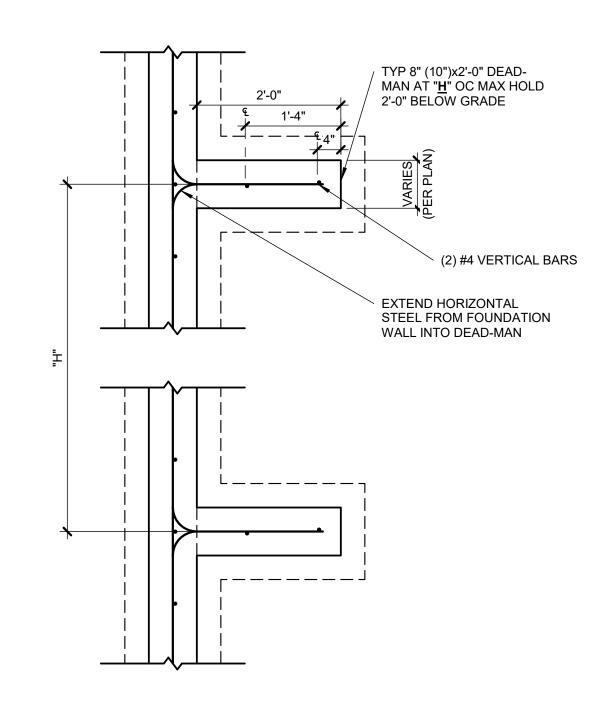
# TYPICAL FOUNDATION WALL 1 DETAIL 82 0 3/4" = 1'-0"

| COLUMN MARK | PAD SIZE    | REINFORCING      | COL SIZE                  | COL TYP     |
|-------------|-------------|------------------|---------------------------|-------------|
| À           | 30"x30"x12" | (4) #4 BARS E-W  | 3" NOMINAL                |             |
| Ê           | 36"x36"x12" | (4) #4 BARS E-W  | 3" NOMINAL                | STEP STEP   |
| À           | 42"x42"x12" | (5) #4 BARS E-W  | 3" NOMINAL                |             |
| À           | 48"x48"x12" | (6) #4 BARS E-W  | 3" NOMINAL                | SOLVE SOLVE |
| Æ           | 54"x54"x16" | (8) #4 BARS E-W  | 3 1/2" NOMINAL<br>(4" OD) | 5,41        |
| Æ           | 60"x60"x16" | (10) #4 BARS E-W | 3 1/2" NOMINAL<br>(4" OD) |             |

RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
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09/27/2021



5 COLUMN PAD DETAIL



NOTES:

1. MIN 3000 PSI FOOTING COMPRESSIVE CONCRETE STRENGTH.

2. MIN 3000 PSI WALL COMPRESSIVE CONCRETE STRENGTH.

3. AIR ENTRAINED BETWEEN 5% & 7% OF CONCRETE VOLUME.

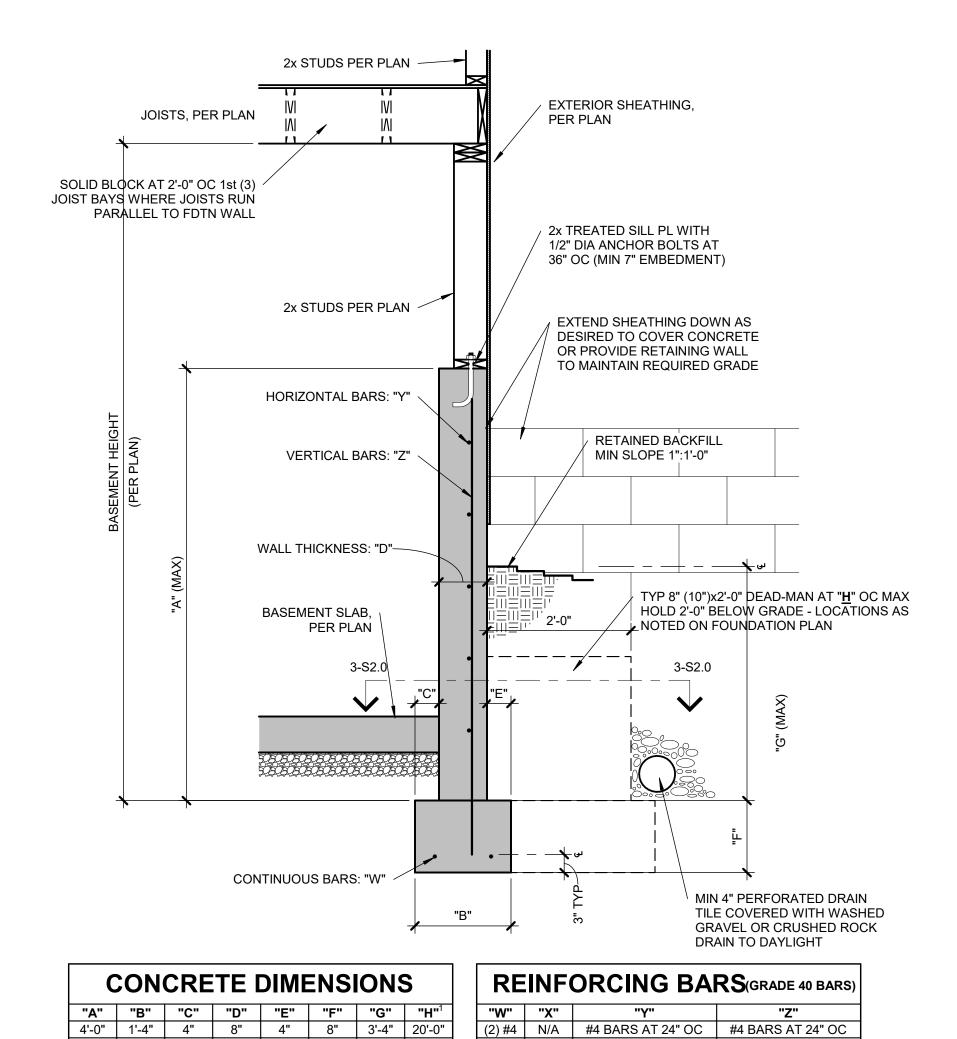
4. GRADE 40 REINFORCING STEEL UNLESS OTHERWISE NOTED.

5. LAP SPLICES 24" MIN.

6. 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.

7. ASSUMED 2,000 PSF BEARING (TO BE VERIFIED BY GEOTECHNICAL ENGINEER).

3 TYPICAL DEAD-MAN SECTION



4'-0" 1'-4" 4" 8" 4" 8" 3'-4" 20'-0" 6'-0" 1'-4" 4" 8" 4" 8" 4'-4" 20'-0 9'-0" 1'-8" 5" 8" 4" 8" 4'-4" 20"-0" (2) #4 N/A #4 BARS AT 24" OC #4 BARS AT 24" OC NOTES:

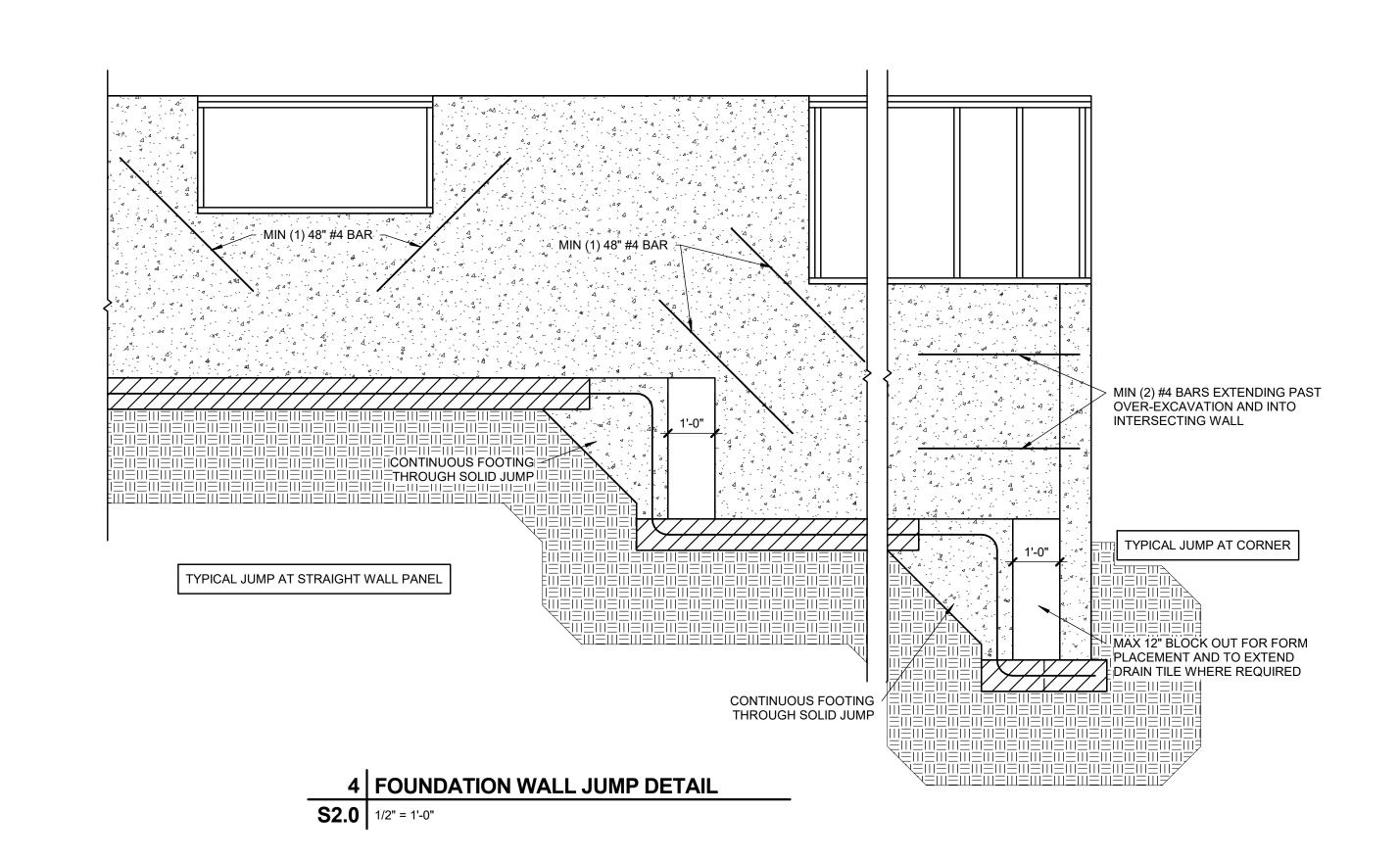
1. DIMENSION SHOWN IS FOR MAXIMUM UNINTERRUPTED WALL PANEL LENGTH BEFORE A DEAD-MAN SHALL BE INSTALLED. NOTE, A MINIMUM 2'-0" RETURN OR OFFSET IN THE FOUNDATION WALL SHALL SUBSTITUTE AS A DEAD-MAN AND/OR BREAK IN THE WALL PANEL LENGTH.

2. VERTICAL REINFORCING STEEL TO EXTEND TO WITHIN 8" OF TOP WALL. MINIMUM (1) #4 HORIZONTAL BAR WITHIN 12" OF TOP AND BOTTOM OF WALL.

3. THE BASEMENT SLAB IS AN INTEGRAL PART OF THE 'UNRESTRAINED' FOUNDATION WALL DESIGN THEREFORE, IF THE WALL IS BACKFILLED PRIOR TO PLACEMENT OF THE BASEMENT SLAB, THE CONTRACTOR SHALL BE RESPONSIBLE FOR

# TYPICAL 'UNRESTRAINED' 2 FOUNDATION WALL DETAIL

PROPERLY BRACING THE WALL UNTIL THE BASEMENT SLAB HAS BEEN PLACED.



ENGINEERS, INC.

1625 LOCUST ST
KANSAS CITY, MO 64108
816.421.3222
www.apex-engineers.com



CLIENT:

COMMENTS

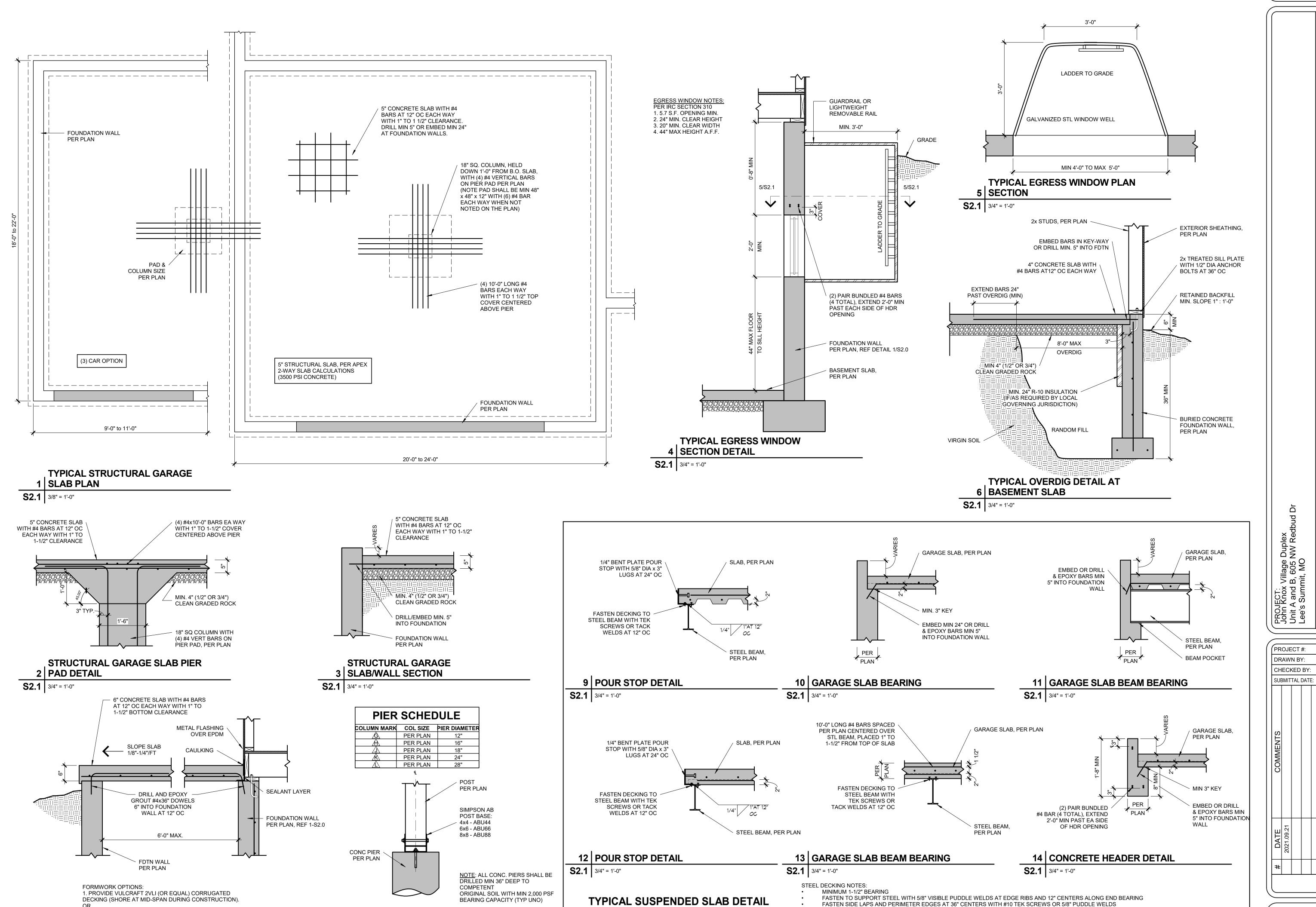
COMMENT

# DATE: 5/8/2020
# 2021.09.21

SHEET:
FOUNDATION DETAILS







MAX UNSUPPORTED CONSTRUCTION SPAN 6'-0", UNO ON PLANS BY APEX

CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
Victoria Nelson
09/27/2021

2. PLYWOOD FORMS WITH EXPANDABLE BAR JOISTS OR

8 POST BASE DETAIL

**S2.1** 3/4" = 1'-0"

TEMPORARY FRAMED WALLS BY CONTRACTOR.

SUSPENDED PORCH STOOP

7 DETAIL

**S2.1** 3/4" = 1'-0"

**RELEASE FOR** 

SHEET:
FOUNDATION DETAILS

S2.1

40919

APEX

BDC

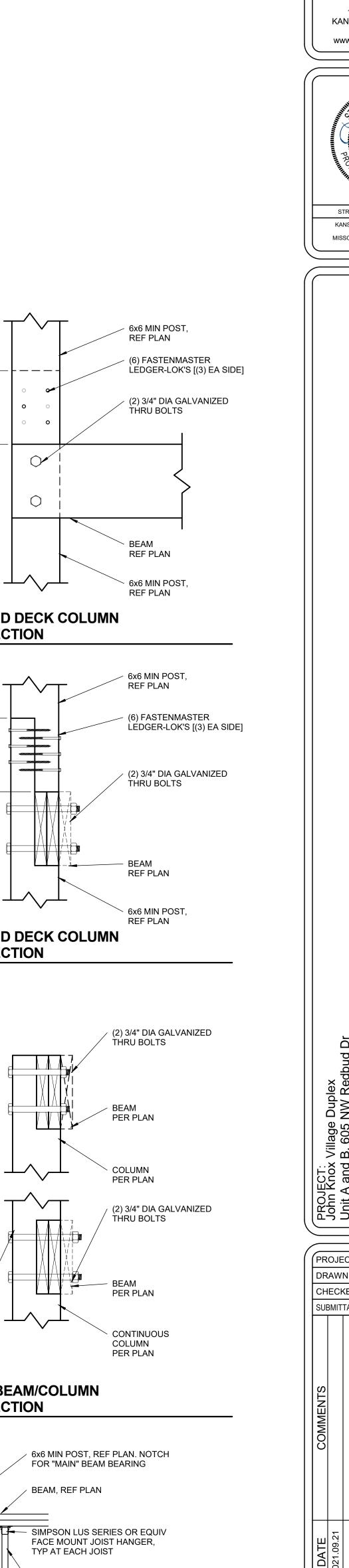
5/8/2020

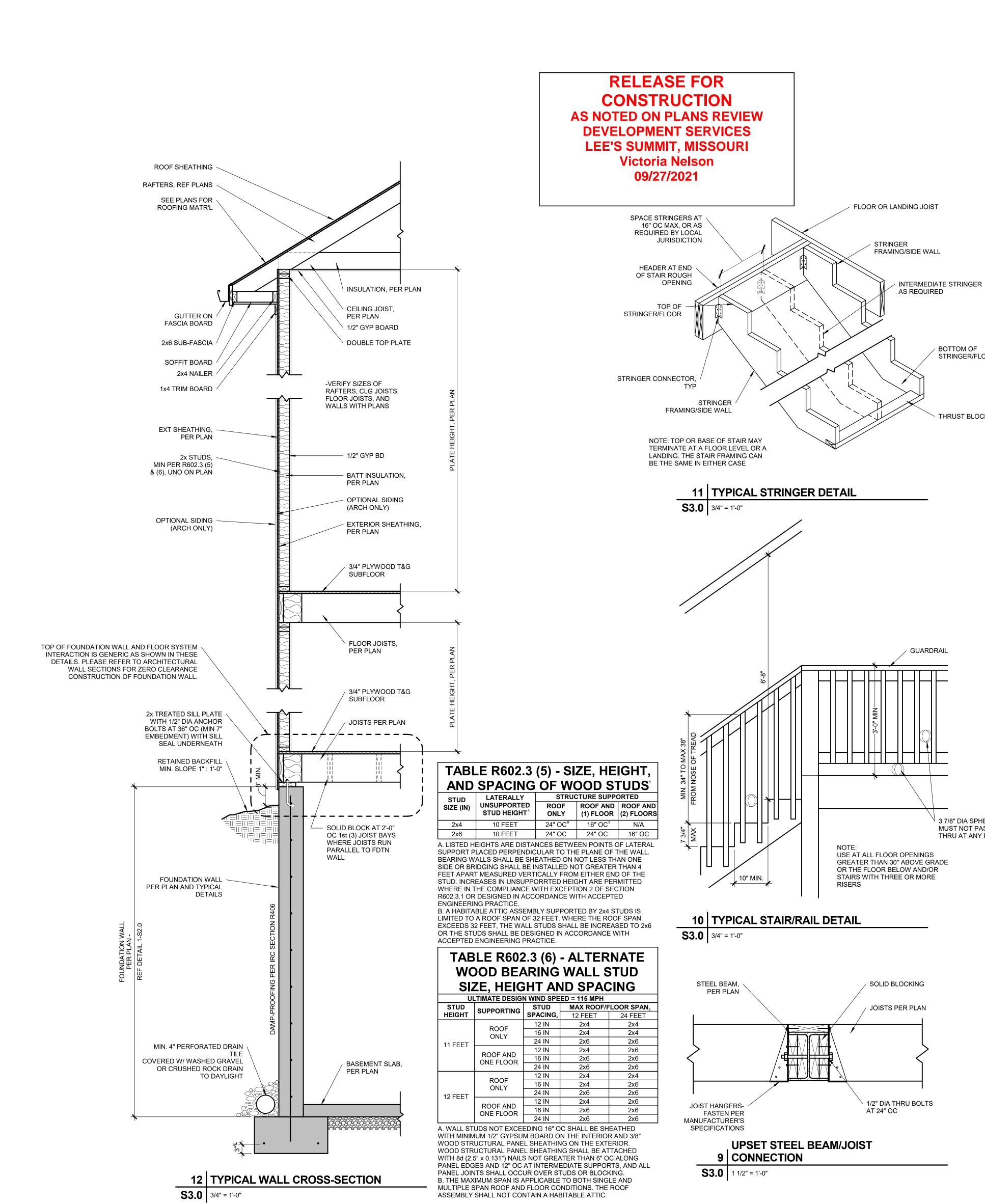
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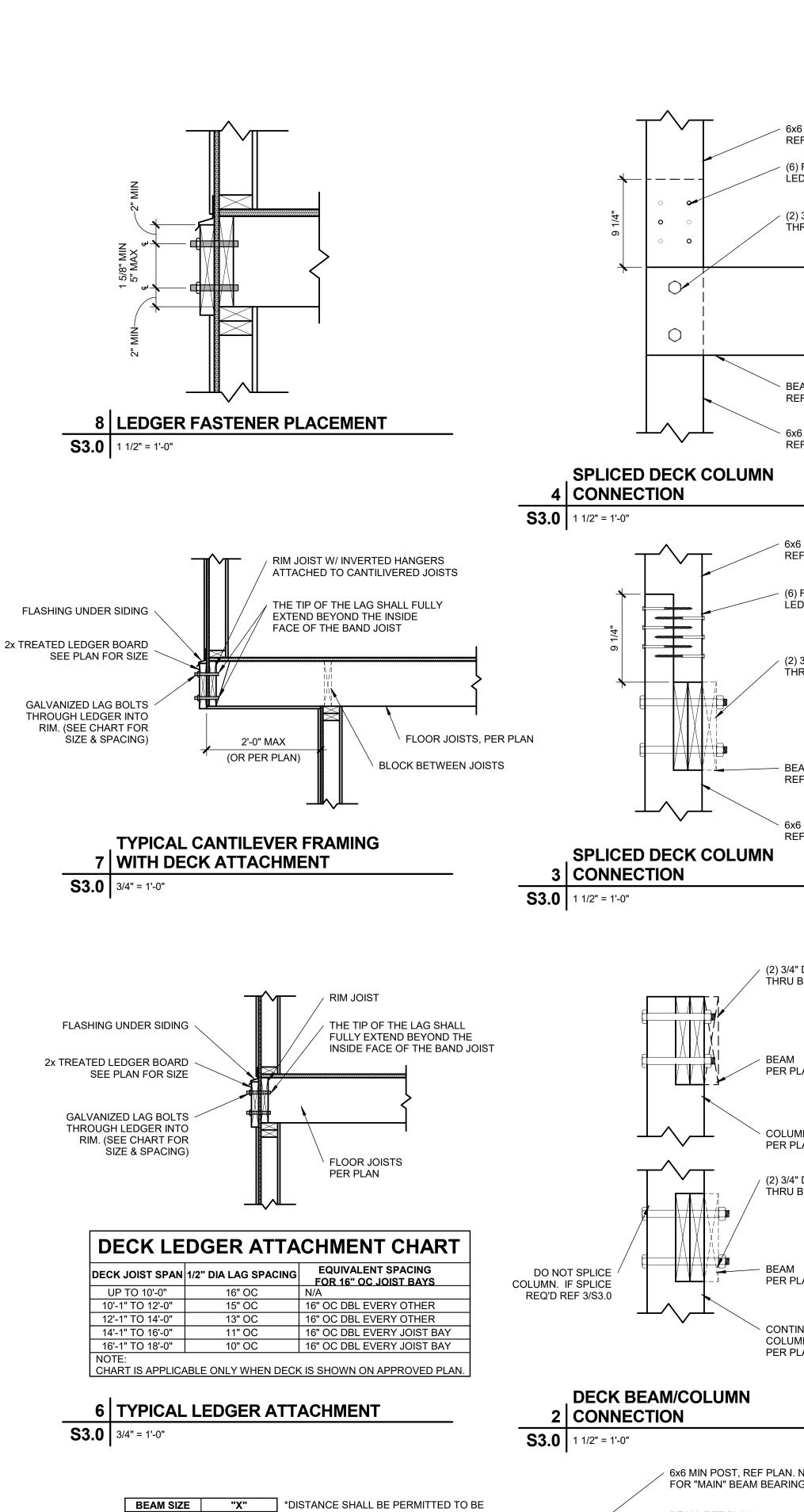
APEX

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5/8/2020







5 1/2" MIN REDUCED TO 4 1/2" IF LAG SCREWS

FASTENERS

DECK JOIST OR SIDE

1 CONDITION

**S3.0** 3/4" = 1'-0"

IN 2 ROWS

2x10 6 1/2" MIN

2x12 7 1/2" MIN

ARE USED OR BOLT SPACING IS

REDUCED TO THAT OF LAG SCREWS TO

ATTACH 2x8 LEDGERS TO 2x8 BAND

LOISTS

A STAGGER

5 TYPICAL LEDGER BOLT SPACING

**BOTTOM OF** 

STRINGER/FLOOR

THRUST BLOCK

√ 3 7/8" DIA SPHERE

MUST NOT PASS

THRU AT ANY POINT

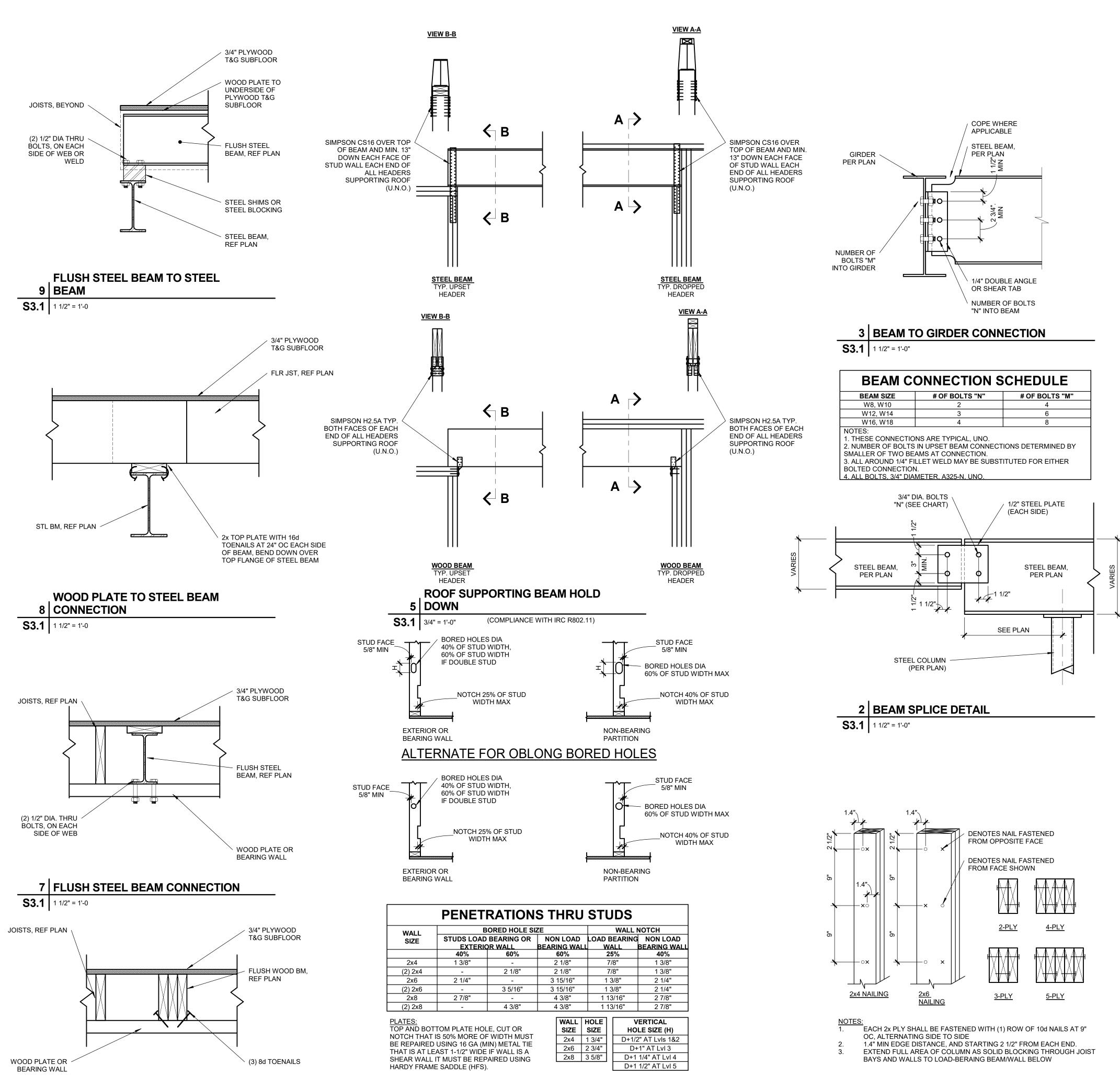
LAG SCREW OR BOLT

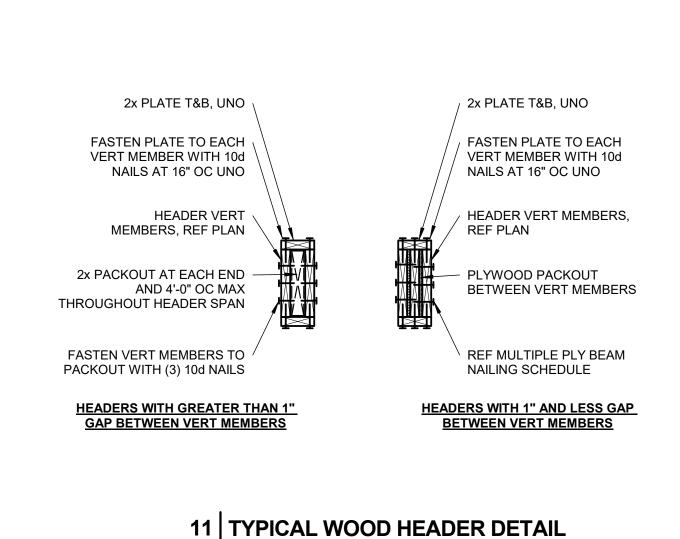
LEDGER, SEE

**S3.0** 3/4" = 1'-0"

PLAN FOR SIZE







S3.1 NOT TO SCALE

**RELEASE FOR** 

CONSTRUCTION

**AS NOTED ON PLANS REVIEW** 

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**Victoria Nelson** 

09/27/2021

2 - PLY 3 - PLY (3) ROWS OF 16d x (3) ROWS OF 16d x (2) ROWS OF 1/2' DIA 3-1/2" NAILS AT 6" 3-1/2" NAILS AT 4" A307 THRU-BOLTS AT 12" OC STAGGERED

NAILING SHOWN APPLIES UNLESS SPECIFICALLY NOTED

SPACE NAILS EVENLY THROUGHOUT DEPTH OF BEAM.

MULTIPLE PLY BEAM NAILING 10 SCHEDULE S3.1 NOT TO SCALE

IN DETAILS.

6 FLUSH WOOD BEAM CONNECTION **S3.1** 1 1/2" = 1'-0

4 DRILLING & NOTCHING DETAIL

NOTE: SEE SECTION R602.6 AND FIGURES R602.6.1

**S3.1** 1 1/2" = 1'-0"

FRAMING DETAILS 1 BUILT-UP STUD COLUMN S3.<sup>2</sup>

PROJECT #:

DRAWN BY:

CHECKED BY:

SUBMITTAL DATE:

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APEX

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5/8/2020

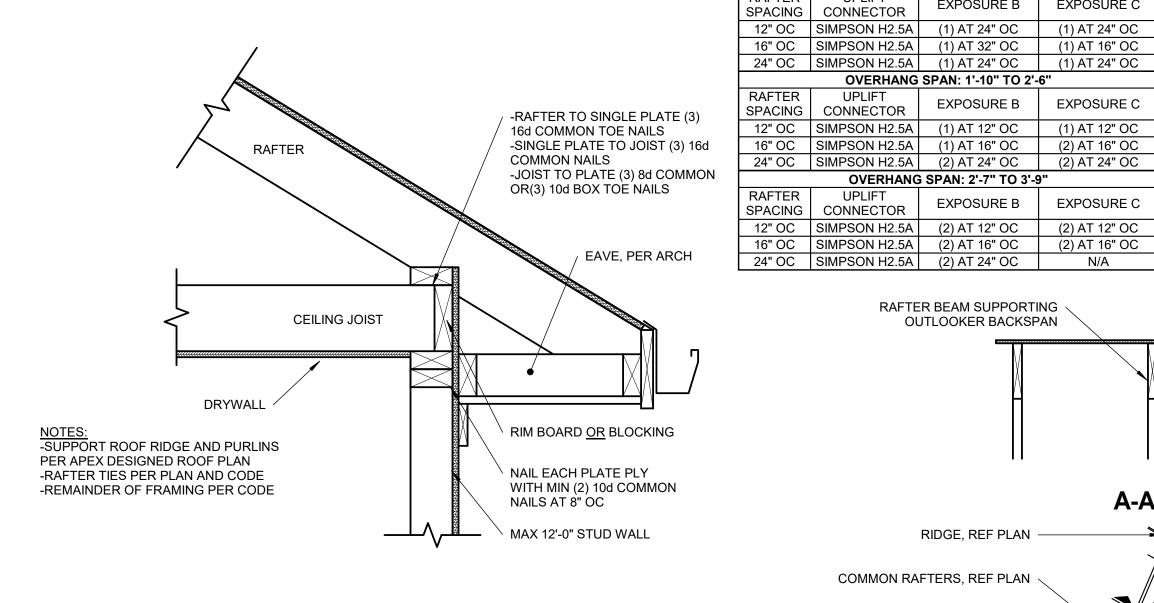




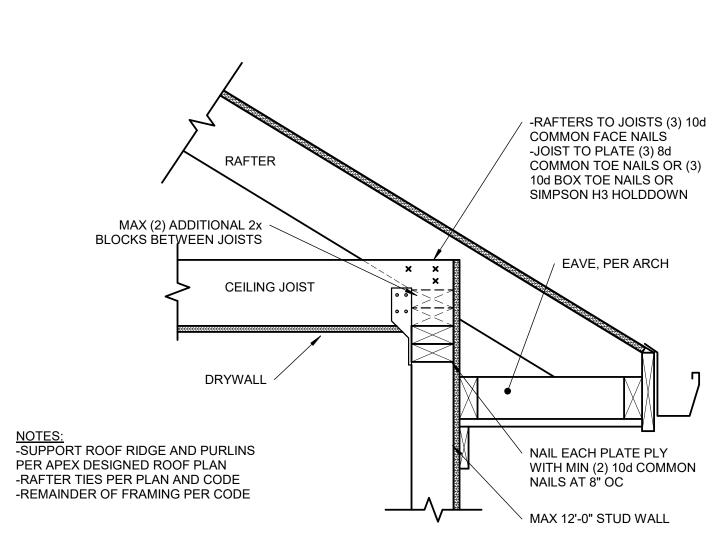
**UPLIFT CONNECTION SCHEDULE** OVERHANG SPAN: 1'-1" TO 1'-9" UPLIFT EXPOSURE B EXPOSURE C SPACING | CONNECTOR | NOTES: 12" OC SIMPSON H2.5A (1) AT 24" OC (1) AT 24" OC 16" OC SIMPSON H2.5A (1) AT 32" OC (1) AT 16" OC 24" OC SIMPSON H2.5A (1) AT 24" OC (1) AT 24" OC EXCEEDS CHART OPTIONS. OVERHANG SPAN: 1'-10" TO 2'-6" SPACING CONNECTOR EXPOSURE B EXPOSURE C RAFTER UPLIFT 12" OC SIMPSON H2.5A (1) AT 12" OC (1) AT 12" OC 16" OC SIMPSON H2.5A (1) AT 16" OC (2) AT 16" OC 24" OC SIMPSON H2.5A (2) AT 24" OC (2) AT 24" OC

OVERHANG SPAN: 2'-7" TO 3'-9"

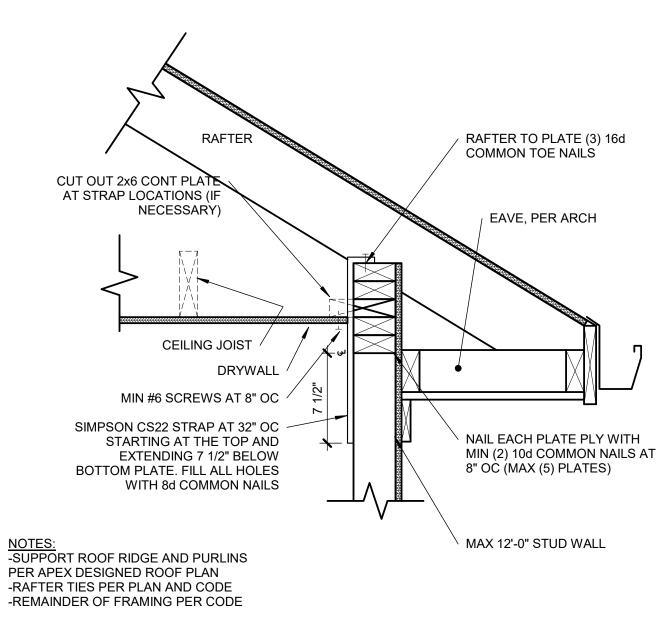
OVERHANG SPAN MIN BACKSPAN LENGTH 1'-0" 1'-1" to 2'-0" EQUALS OVERHANG SPAN ≥2'-1" OVERHANG SPAN x2 -CHART IS ONLY APPLICABLE IF NO RAFTER BEAM SHOWN ON PLAN. -CONTACT EOR IF OVERHANG LENGTH



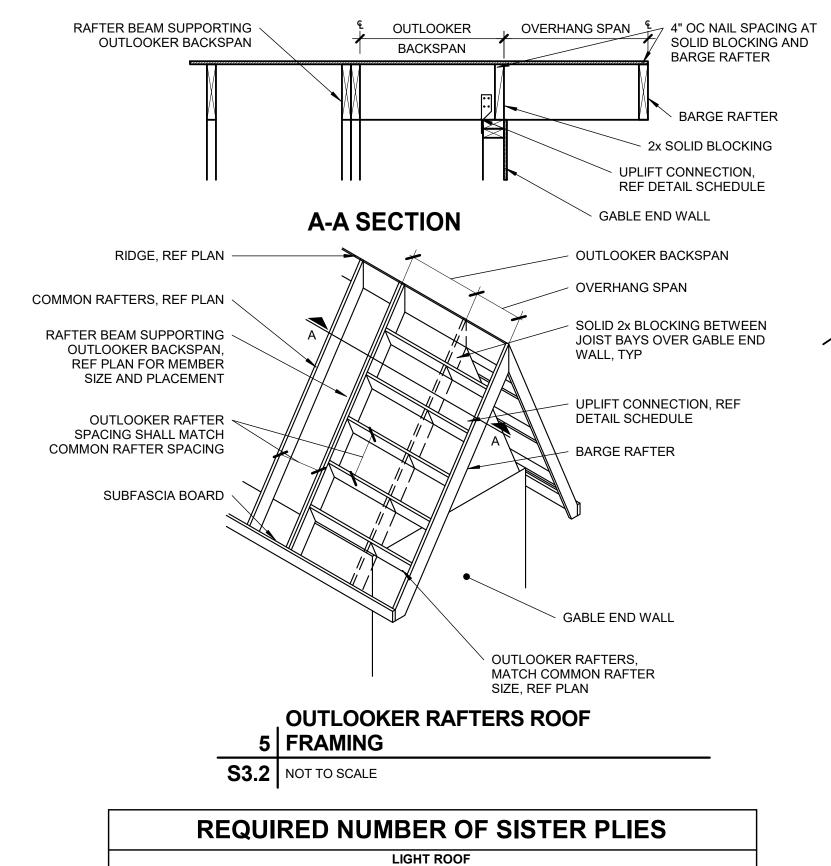
### 8 OPTIONAL RAFTER BEARING **S3.2** 1 1/2" = 1'-0



7 OPTIONAL RAFTER BEARING **S3.2** 1 1/2" = 1'-0



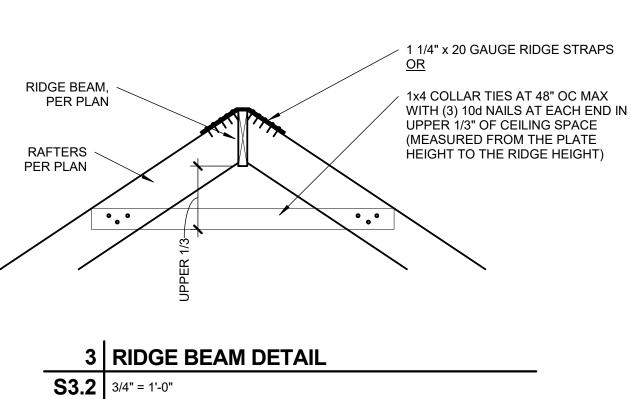
6 OPTIONAL RAFTER BEARING **S3.2** 1 1/2" = 1'-0

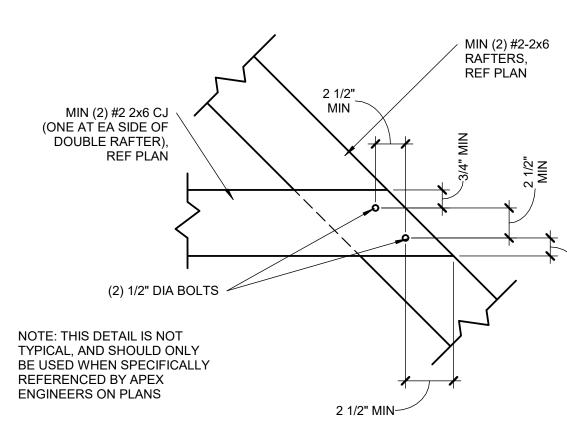


|                                    |   |                                      | LIGHT                                       | ROOF  |                                       |                           |         |
|------------------------------------|---|--------------------------------------|---|---|---------------------------------------|---------------------------|---------|
|                                    | 2x VALI                                 | LEY                                  |   |   | LVL VAL                               | .LEY                      |         |
| # OF SISTER                        | F                                       | RAFTER SIZ                           | E   | # OF SISTER   | F                                     | RAFTER SIZ                | E       |
| PLIES                              | 2x6                                     | 2x8                                  | 2x10  | PLIES   | 2x6                                   | 2x8                       | 2x10    |
| 0                                  | 4'-8"                                   | 6'-2"                                | 7'-11"                                      | 0   | 8'-8"                                 | 11'-5"                    | 14'-7"  |
| 1                                  | 9'-5"                                   | *                                    | *   | 1   | *                                     | *                         | *       |
| 2                                  | *                                       | N/A                                  | N/A   | 2   | N/A                                   | N/A                       | N/A     |
|                                    |   |                                      | HEAV  | / ROOF  |                                       |                           |         |
|                                    | 2x VALI                                 | LEY                                  |   |   | LVL VAL                               | LEY                       |         |
| # OF SISTER                        | F                                       | RAFTER SIZ                           | E   | # OF SISTER   | F                                     | RAFTER SIZ                | E       |
| PLIES                              | 2x6                                     | 2x8                                  | 2x10  | PLIES   | 2x6                                   | 2x8                       | 2x10    |
| 0                                  | 3'-6"                                   | 4'-7"                                | 5'-11"                                      | 0   | 6'-6"                                 | 8'-7"                     | 10'-11" |
| 1                                  | 7'-1"                                   | 9'-3"                                | *   | 1   | 13'-1"                                | *                         | *       |
| 2                                  | *                                       | *                                    | N/A   | 2   | *                                     | N/A                       | N/A     |
| BENDING. APF<br>1. THIS T<br>ENGIN | PLY THE NUI<br>ABLE IS INT<br>EERED PLA | MBER OF SI<br>ENDED TO<br>.NS AS THE | STER PLIES (<br>BE USED IN C<br>Y ARE DRAW! | UND IN THE CELL A<br>CORRESPONDING<br>CONJUNCTION WIT<br>N BY APEX. BRACI<br>O SPAN FROM VALL | TO THIS RO<br>H THE STAI<br>NG LOCATI | OW.<br>MPED,<br>ONS SHALL |         |

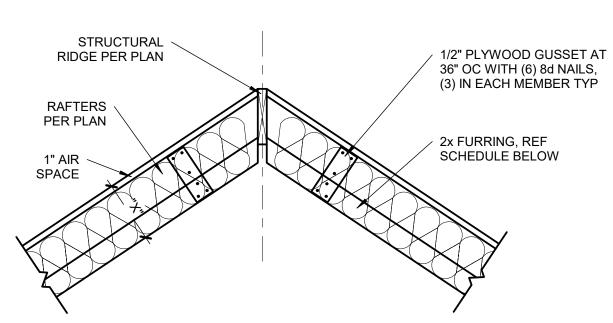
DEPTH OF THE RAFTERS. IF d IS OBSERVED TO BE LESS THAN THE DEPTH OF THE RAFTER, THE VALLEY WILL NEED TO BE EITHER REPLACED OR ANALYZED BY APEX. TABLE VALUES ARE VALID FOR TAPERED CUTS ONLY, REF DETAIL 4/S3.2.
IF MULTI-PLY VALLEY IS SPECIFIED ON PLAN TREAT EACH ADDITIONAL PLY AS A SISTER PLY WHEN LOOKING UP MAX SPAN. MAX 14'-0" HORIZONTAL RAFTER SPAN IN BOTH DIRECTIONS FROM VALLEY.
ALL HIPS ARE DESIGNED TO BE CONTROLLED BY BENDING. SHEAR AT BEARING WITH
MIN 5 1/2" DEPTH DOES NOT CONTROL DESIGN. VALLEY STRUT, REF PLAN (16) 10d COMMON NAILS \ PER SISTER SISTER, PER TABLE, MATCH SIZE/MATERIAL AND PROFILE OF VALLEY UNBRACED HORIZONTAL LENGTH/SPAN, PER PLAN EXTERIOR WALL 4 TAPERED VALLEY

**S3.2** 3/4" = 1'-0"





BOLTED RAFTER HIP 2 CONNECTION **S3.2** 1 1/2" = 1'-0"



| RAFTER SIZE | R-30C INSULATION (X= 9 1/4")                            | R-38C INSULATION (X=11 1/4"  |
|-------------|---|------------------------------|
| 2x6         | 2x6   | 2x8                          |
| 2x8         | 2x4   | 2x6                          |
| 2x10        | NOT REQUIRED  | 2x4                          |
| 2x12        | NOT REQUIRED  | REQUIRED                     |
|             | ED RAFTERS SHALL BE #2-2x6 D<br>UNLESS NOTED OTHERWISE. | F-L, MINIMUM, AT 16" OC, PER |

**VAULTED RAFTER INSULATION** 1 FURR OUT **S3.2** 3/4" = 1'-0"

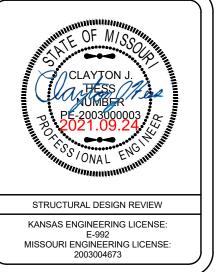
| ( | PR          | OJE        | СТ  | #:   |            | 40 | 919 | 9      |     |
|---|-------------|------------|-----|------|------------|----|-----|--------|-----|
|   | DR          | AW         | N B | Y:   |            |    | А   | (PE    | ζ   |
|   | СН          | ECŁ        | ΚED | BY:  |            |    |     | В      | DC  |
|   | SUE         | BMIT       | TAL | DATE | <u>:</u> : |    | 5   | 5/8/20 | )20 |
|   | COMMENTS    |            |     |      |            |    |     |        |     |
|   | DATE        | 2021.09.21 |     |      |            |    |     |        |     |
|   | #           |            |     |      |            |    |     |        |     |
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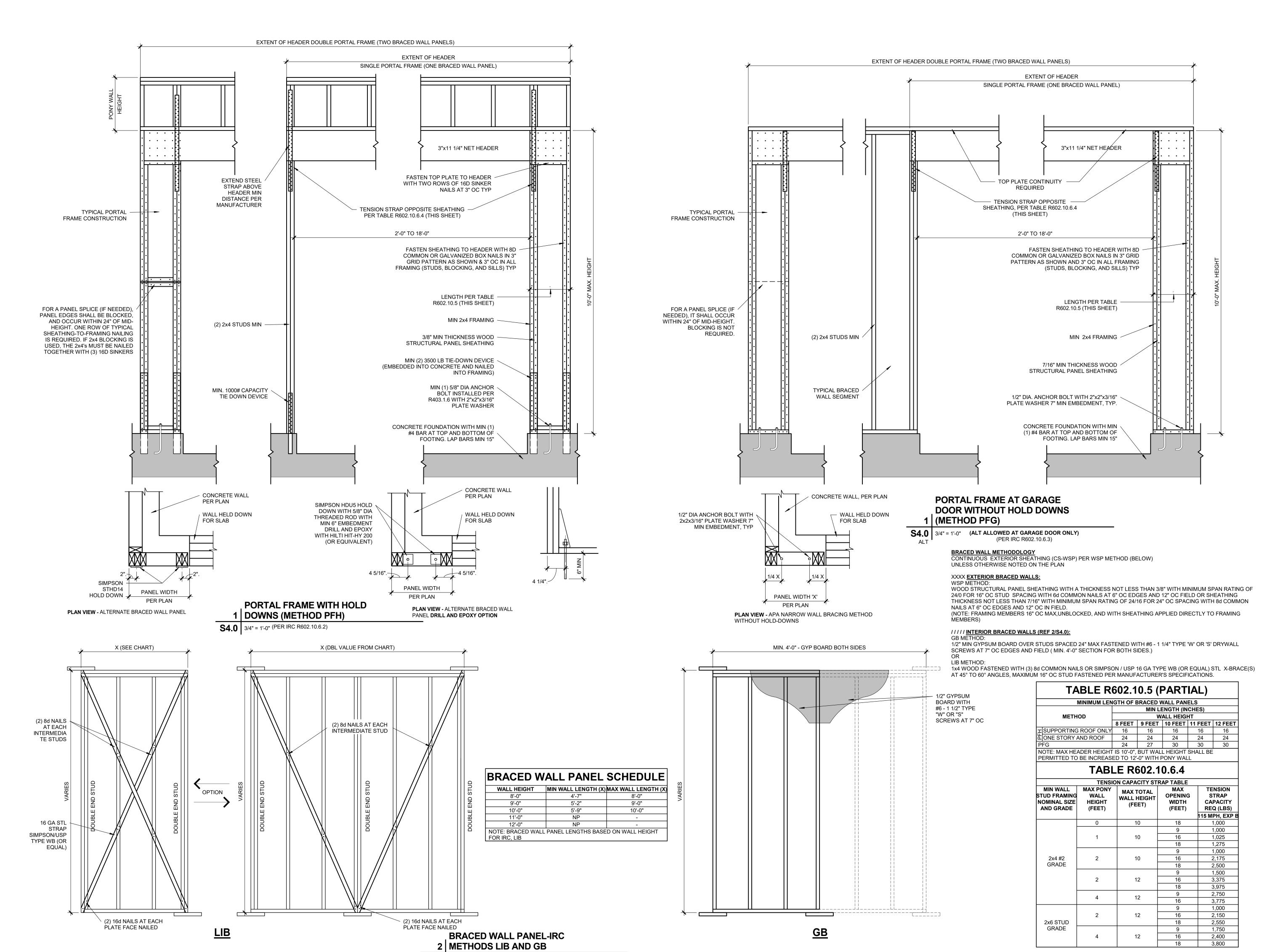
FRAMING DETAILS

CONSTRUCTION **AS NOTED ON PLANS REVIEW DEVELOPMENT SERVICES** LEE'S SUMMIT, MISSOURI Victoria Nelson 09/27/2021

**RELEASE FOR** 







**S4.0** 3/4" = 1'-0"

RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
Victoria Nelson
09/27/2021

SHEET:

GENERAL BRACED WALL
DETAILS

SA

PROJECT #:

CHECKED BY:

SUBMITTAL DATE:

DRAWN BY:

40919

APEX

BDC

5/8/2020





PROJECT #:

CHECKED BY:

SUBMITTAL DATE:

GENERAL BRACED WALL

DRAWN BY:

40919

APEX

BDC

EXTENT OF HEADER WITH DOUBLE PORTAL FRAME (TWO BRACED WALL PANELS) EXTENT OF HEADER WITH SINGLE PORTAL FRAME (ONE BRACED WALL PANEL) 2'-18' FINISHED WIDTH OF OPENING FOR SINGLE OR DOUBLE PORTAL . . . . • 3"x11 1/4" NET HEADER . . . . STEEL HEADER PROHIBITED \ EXTEND STEEL STRAP ABOVE TENSION STRAPS PER TABLE FASTEN TOP PLATE TO HEADER MIN DISTANCE PER 602.10.6.4 (ON OPPOSITE SIDE HEADER WITH TWO ROWS OF OF SHEATHING) MANUFACTURER 16d SINKER NAILS AT 3" OC, BRACED WALL LINE FASTEN SHEATHING TO HEADER WITH CONTINUOUSLY SHEATHED 8d COMMON OR GALVANIZED BOX WITH WOOD STRUCTURAL NAILS IN 3" GRID PATTERN AS SHOWN HEADER TO JACK-STUD STRAP PER -IF NEEDED PANEL SPLICE \ TABLE R602.10.6.4 ON BOTH SIDES OF OPENING OPPOSITE SIDE OF EDGE SHALL OCCUR AND BE ATTACHED TO COMMON SHEATHING BLOCKING WITH 24" OF WALL MID-HEIGHT. ONE ROW OF 3" OC NAILING IS REQUIRED IN MIN 7/16" WOOD STRUCTURAL EACH PANEL EDGE. PANEL SHEATHING MIN DOUBLE 2x4 FRAMING COVERED WITH MIN 7/16" THICK WOOD STRUCTURAL PANEL SHEATHING WITH 8d COMMON OR MIN DOUBLE 2x4 POST (KING GALVANIZED BOX NAILS AT 3" OC IN ALL AND JACK STUD). NUMBER FRAMING (STUDS, BLOCKING, AND SILLS), OF JACK STUDS PER TABLE MIN (2) 1/2" DIAMETER ANCHOR BOLTS INSTALLED PER R403.1.6 WITH 2"x2"x3/16" TYPICAL PORTAL FRAME CONSTRUCTION / PLATE WASHER ANCHOR BOLTS PER SECTION R403.1.6 CONCRETE FOUNDATION WITH MIN (1) #4 BAR AT TOP AND BOTTOM OF FOOTING. LAP BARS MIN 15" OVER CONCRETE OR MASONRY BLOCK FOUNDATION NAIL SOLE PLATE TO JOIST PER TABLE WOOD STRUCTURAL PANEL (2) FRAMING ANCHORS SHEATHING TO TOP OF APPLIED ACROSS SHEATHING BAND OR RIM JOIST JOINT WITH A CAPACITY OF 670 LBS IN THE HORIZONTAL NAIL SOLE PLATE TO JOIST AND VERTICAL DIRECTIONS PER TABLE R602.3(1) APPROVED BAND OR RIM WOOD STRUCTURAL PANEL SHEATHING OVER APPROVED BAND OR RIM JOIST **OVER RAISE WOOD FLOOR - FRAMING ANCHOR OPTION** (WHEN PORTAL SHEATHING DOES NOT LAP OVER BAND OR RIM JOIST) NAIL SOLE PLATE TO JOIST PER TABLE WOOD STRUCTURAL PANEL ATTACH SHEATHING TO BAND OR RIM JOIST WITH SHEATHING TO TOP OF BAND OR RIM JOIST 8d COMMON NAILS AT 3" OC TOP AND BOTTOM NAIL SOLE PLATE TO JOIST PER TABLE R602.3(1) WOOD STRUCTURAL PANEL SHEATHING APPROVED BAND OR RIM OVER APPROVED BAND OR RIM JOIST

**OVER RAISE WOOD FLOOR - OVERLAP OPTION** 

(WHEN PORTAL SHEATHING LAPS OVER BAND OR RIMBOARD)

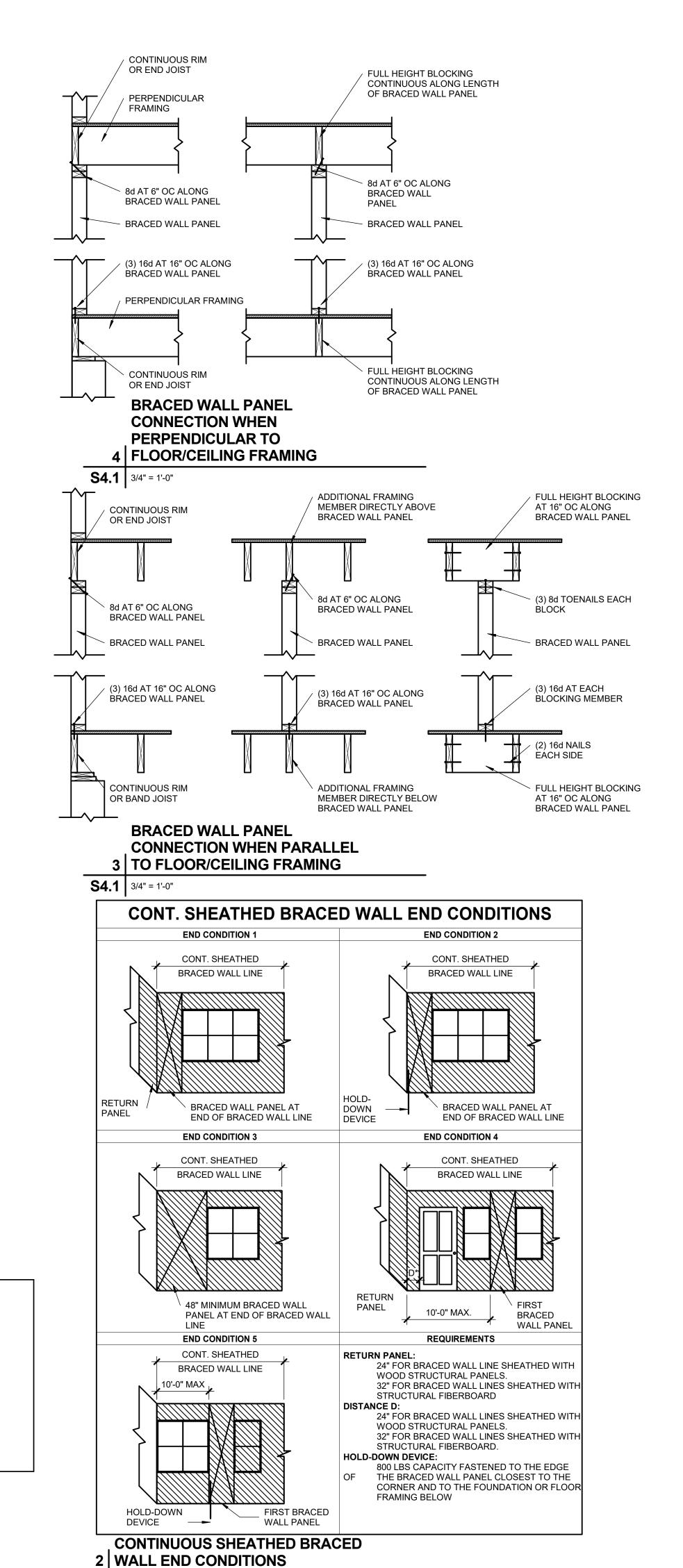
BRACED WALL PANEL-IRC

SHEATHED PORTAL FRAME

1 PANEL CONSTRUCTION

METHOD CS-PF CONTINUOUSLY

(PER IRC R602.10.6.4)



**S4.1** NOT TO SCALE (COMPLIANCE WITH IRC R602.10.7)

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