

---

# STONEHAVEN-RALE

---

RALEIGH- LOT 00.0023 CAMPBELL RIDGE SF

(MODEL# 3656)

# ELEVATION 1 - GL

## 95 PINON DRIVE

[illegible]The logo for DRB HOMES, featuring the letters "DRB" in a large, bold, black sans-serif font, with "HOMES" in a smaller, blue, sans-serif font directly below it.[illegible][illegible]



FRONT ELEVATION I  
SCALE: 1/8" = 1'-0"



REAR ELEVATION I  
SCALE: 1/8" = 1'-0"

FILE: Lot\_00.0023.dwg DATE: 3/13/2025 2:06 PM

| MASTER PLAN INFORMATION |            |  | UPDATED DATE |
|-------------------------|------------|--|--------------|
| REVISION                | DATE       |  |              |
| 2-RALE                  | 11-10-2023 |  | 09-13-2024   |
|                         |            |  |              |
|                         |            |  |              |
|                         |            |  |              |

|           |            |
|-----------|------------|
| DRAWN BY: | ITS        |
| DATE:     | 03/13/2025 |
| PLAN NO.  | 3656       |

DRB  
HOMES

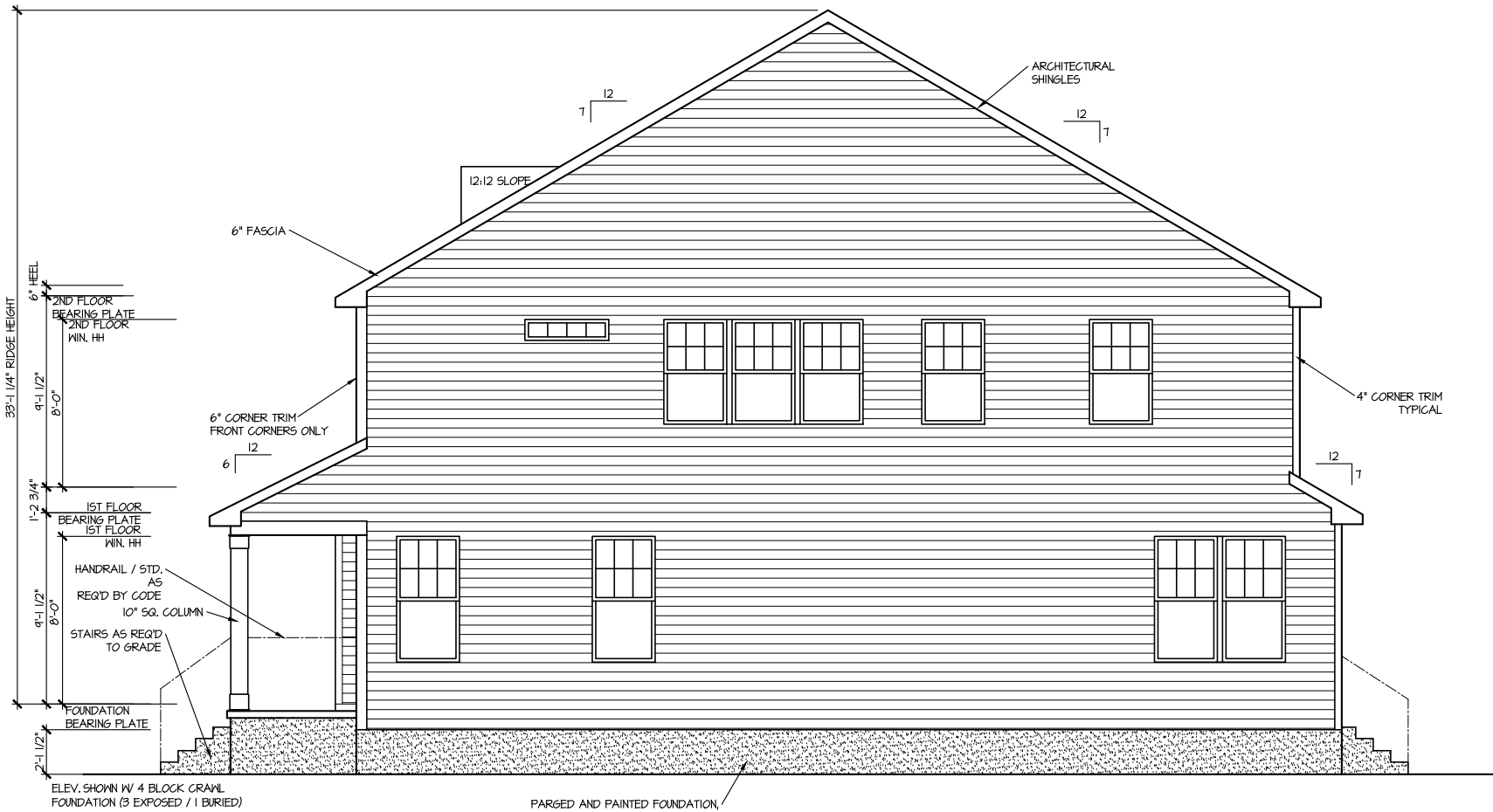
HOUSE NAME:  
STONEHAVEN  
DRAWING TITLE  
FRONT & REAR ELEVATIONS

SHEET No.  
A.I.

FILE: Lot\_00.0023.dwg DATE: 3/13/2025 2:06 PM

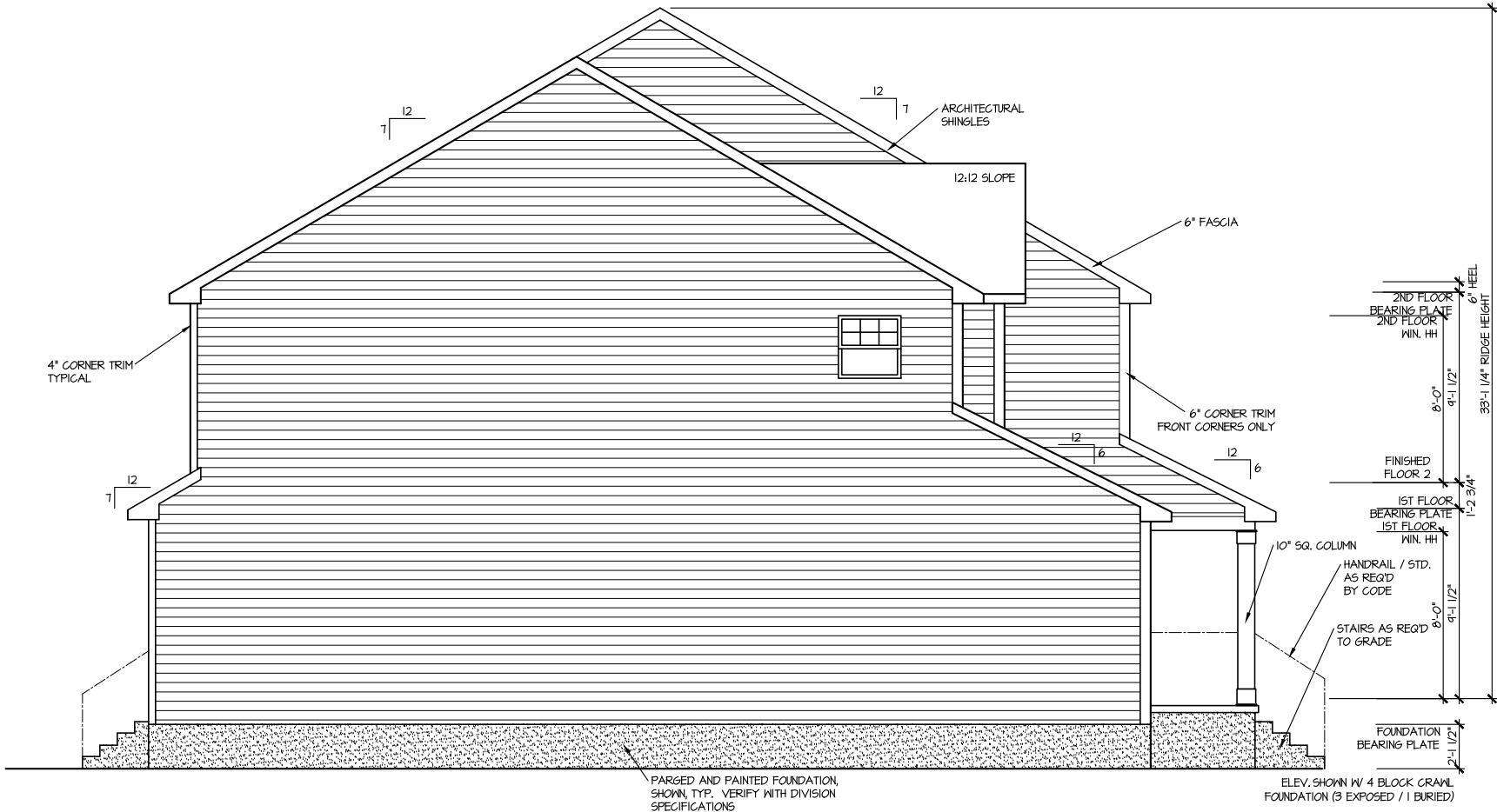
RIGHT ELEVATION I

SCALE: 1/8" = 1'-0"



LEFT ELEVATION I

SCALE: 1/8" = 1'-0"



| MASTER PLAN INFORMATION |            |    |              |
|-------------------------|------------|----|--------------|
| REVISION                | DATE       | BY | UPDATED DATE |
| 2-RAL                   | 11-10-2023 |    | 09-13-2024   |
|                         |            |    |              |
|                         |            |    |              |
|                         |            |    |              |
|                         |            |    |              |

|           |            |
|-----------|------------|
| DRAWN BY: | ITS        |
| DATE:     | 03/13/2025 |
| PLAN NO.  | 3656       |

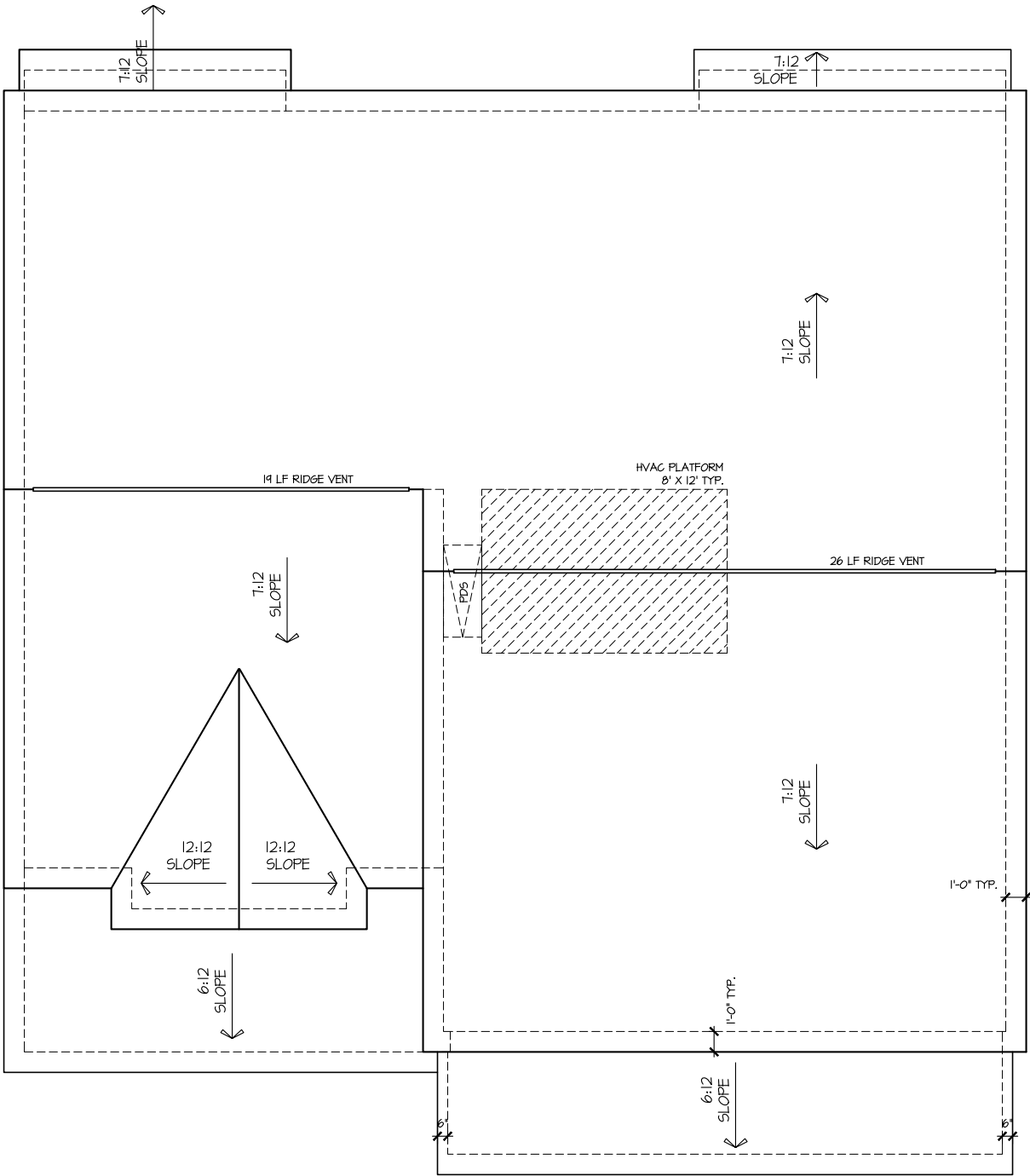
DRB  
HOMES

HOUSE NAME:  
STONEHAVEN  
DRAWING TITLE  
RIGHT & LEFT ELEVATIONS

SHEET No.  
A1.2

ROOF VENTILATION CALCULATIONS:

ROOF AREA = 241 SQ. FT.  
OVERALL REQUIRED VENTILATION:  
1 TO 50 = 14.21 SQ. FT.  
1 TO 300 = 3.14 SQ. FT.  
50-60% IN TOP THIRD = 3.51 - 5.11 SQ. FT. (1 TO 300)  
NET FREE AREA OF VENTED SOFFIT = 5.1 SQ. IN / LINEAR FT.  
NET FREE AREA OF RIDGE VENT = 19 SQ. IN / LINEAR FT.  
LOWER VENTING (BOTTOM 2/3 RIDG):  
66 LINEAR FEET OF SOFFIT X 5.1 SQ. IN. = 3.40 SQ. FT.  
UPPER VENTING (TOP 1/3 RIDG):  
45 LINEAR FEET OF RIDGE X 19 SQ. IN. = 5.63 SQ. FT.  
5.63 SQ. FT. BETWEEN 50% - 60%  
(1 TO 300 ALLOWED)  
TOTAL ROOF VENTILATION: 4.03 SQ. FT. > 1.14 SQ. FT. (REQ'D)



ROOF PLAN ELEV. 1

SCALE: 1/8" = 1'-0"

| MASTER PLAN INFORMATION |            |      |              |
|-------------------------|------------|------|--------------|
| REVISION                | DATE       | DATE | UPDATED DATE |
| 2-RAL                   | 11-10-2023 |      | 09-13-2024   |
|                         |            |      |              |
|                         |            |      |              |
|                         |            |      |              |
|                         |            |      |              |

|           |            |
|-----------|------------|
| DRAWN BY: | ITS        |
| DATE:     | 03/13/2025 |
| PLAN NO.  | 3656       |



|               |            |
|---------------|------------|
| HOUSE NAME:   | STONEHAVEN |
| DRAWING TITLE | ROOF PLAN  |

SHEET No.  
A.3

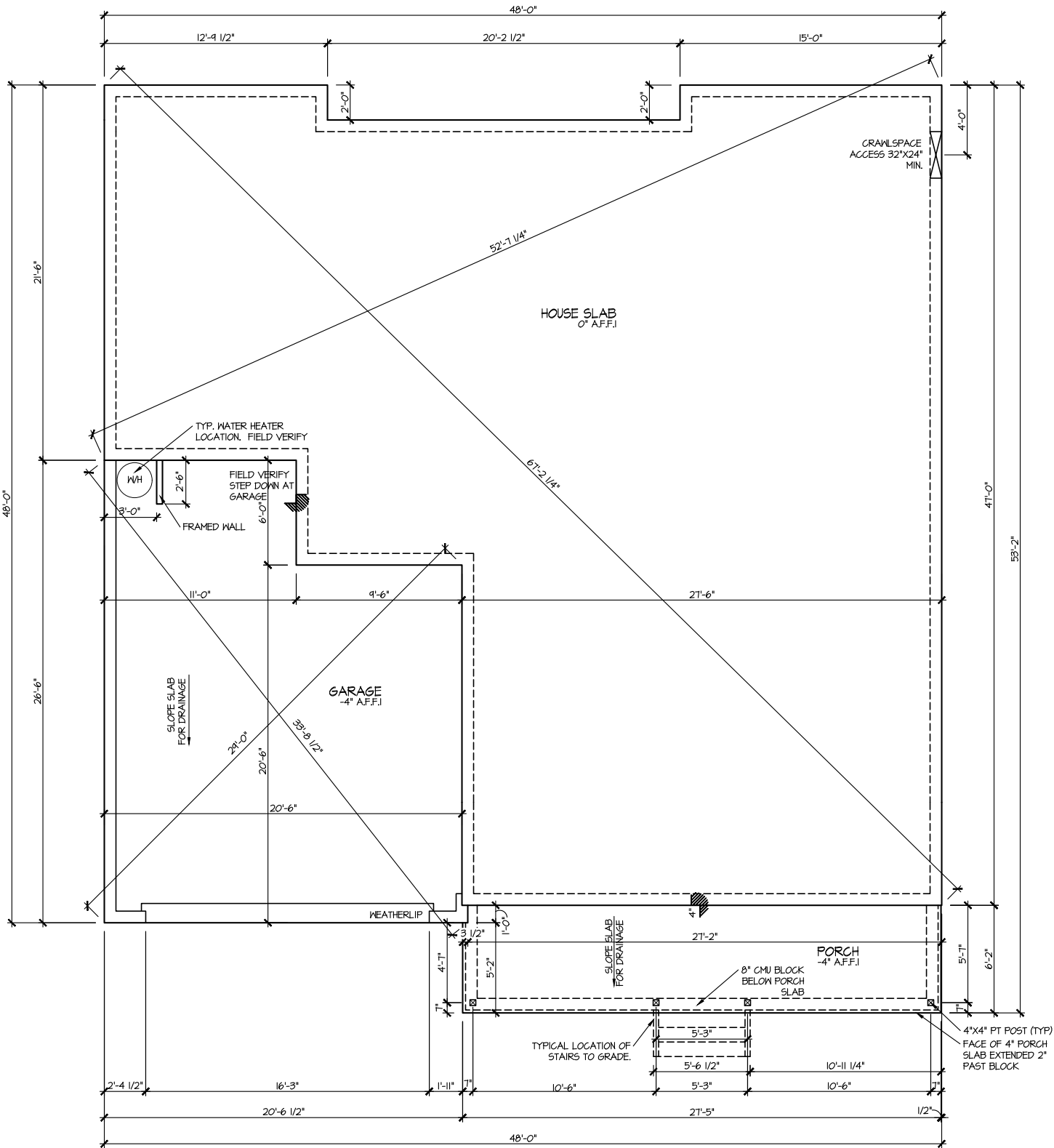


FILE: Lot 00.0023.dwg DATE: 3/13/2025 2:06 PM

CRAWLSPACE VENT CALCULATIONS:  
CRAWL AREA = 1724 SQ. FT.  
OVERALL REQUIRED VENTILATION:  
1 TO 150 = 11.84 SQ. FT.  
NET FREE AREA OF VENT = 62 SQ. IN PER VENT  
WITTEN AUTOMATIC VENT B-BLACK (MB) OR EQUAL  
VENTING REQUIREMENT:  
4.97 SQ. FT / 62 SQ. IN = 215 VENTS = 28 VENTS

ELEVATION I  
CRAWL SPACE PLAN

SCALE: 1/8" = 1'-0"



| MASTER PLAN INFORMATION |            |              |
|-------------------------|------------|--------------|
| REVISION                | DATE       | UPDATED DATE |
| 2-RAL                   | 11-10-2023 | 09-13-2024   |
|                         |            |              |
|                         |            |              |
|                         |            |              |
|                         |            |              |

|           |            |
|-----------|------------|
| DRAWN BY: | ITS        |
| DATE:     | 03/13/2025 |
| PLAN NO.  | 3656       |

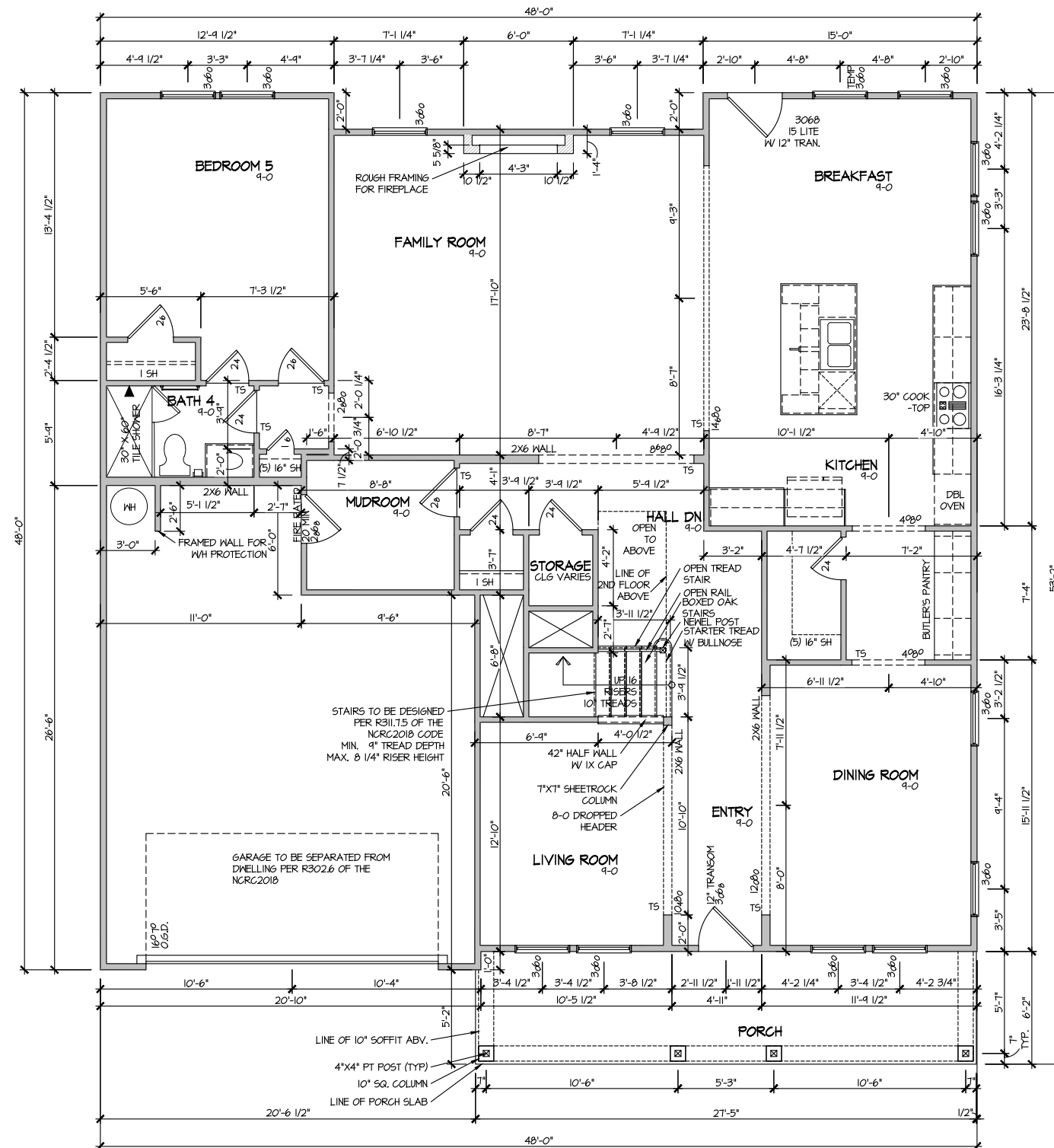
DRB  
HOMES

HOUSE NAME:  
STONEHAVEN  
DRAWING TITLE  
CRAWL SPACE PLAN

SHEET No.  
A2.1

ELEVATION I  
FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

[illegible]

|           |            |
|-----------|------------|
| DRAWN BY: | ITS        |
| DATE:     | 03/13/2025 |
| PLAN NO.  | 3656       |

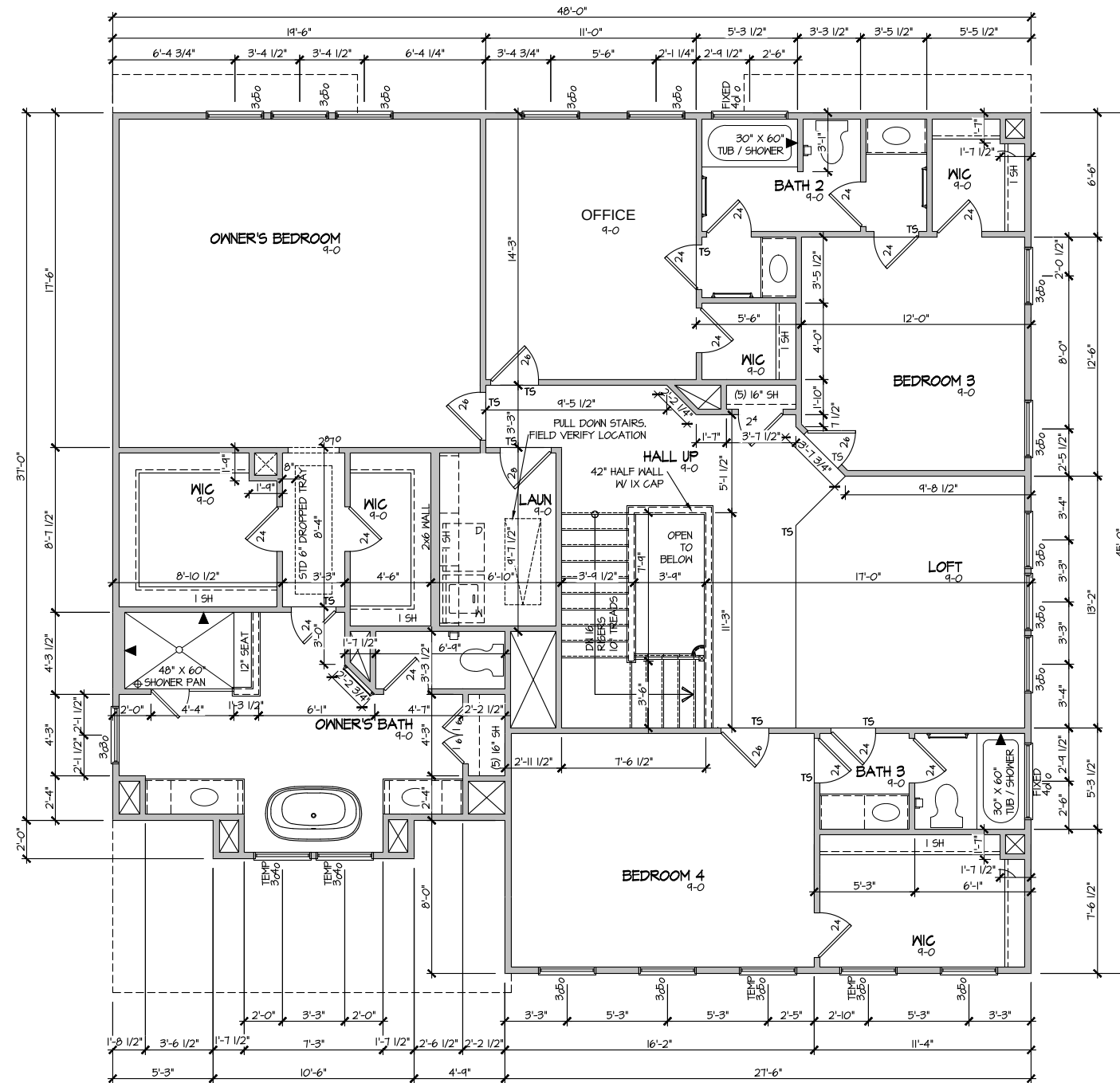


HOUSE NAME:  
**STONEHAVEN**

DRAWING TITLE  
**FIRST FLOOR PLAN**

SHEET No.

A3.1



ELEVATION I  
SECOND FLOOR PLAN  
SCALE: 1/8" = 1'-0"

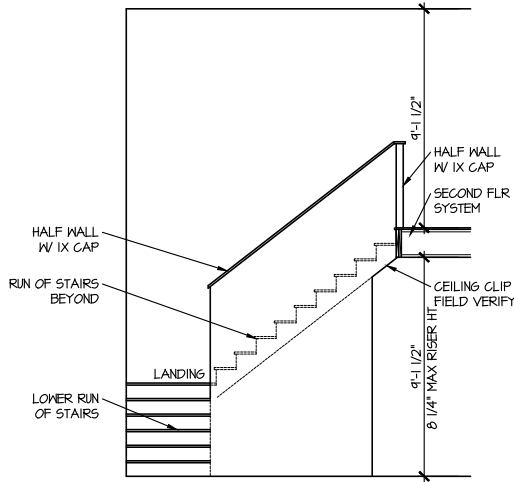
| MASTER PLAN INFORMATION |            |              |
|-------------------------|------------|--------------|
| REVISION                | DATE       | UPDATED DATE |
| 2-RALE                  | 11-10-2023 | 09-13-2024   |
|                         |            |              |
|                         |            |              |
|                         |            |              |

|           |            |
|-----------|------------|
| DRAWN BY: | ITS        |
| DATE:     | 03/13/2025 |
| PLAN NO.  | 3656       |



|               |                   |
|---------------|-------------------|
| HOUSE NAME:   | STONEHAVEN        |
| DRAWING TITLE | SECOND FLOOR PLAN |

|           |      |
|-----------|------|
| SHEET No. | A3.2 |
|-----------|------|



STAIR SECTION  
SCALE: 1/8" = 1'-0"

| MASTER PLAN INFORMATION |            |  | UPDATED DATE |
|-------------------------|------------|--|--------------|
| REVISION                | DATE       |  |              |
| 2-RAL                   | 11-10-2023 |  | 09-13-2024   |
|                         |            |  |              |
|                         |            |  |              |
|                         |            |  |              |
|                         |            |  |              |

|           |            |
|-----------|------------|
| DRAWN BY: | ITS        |
| DATE:     | 03/13/2025 |
| PLAN NO.  | 3656       |



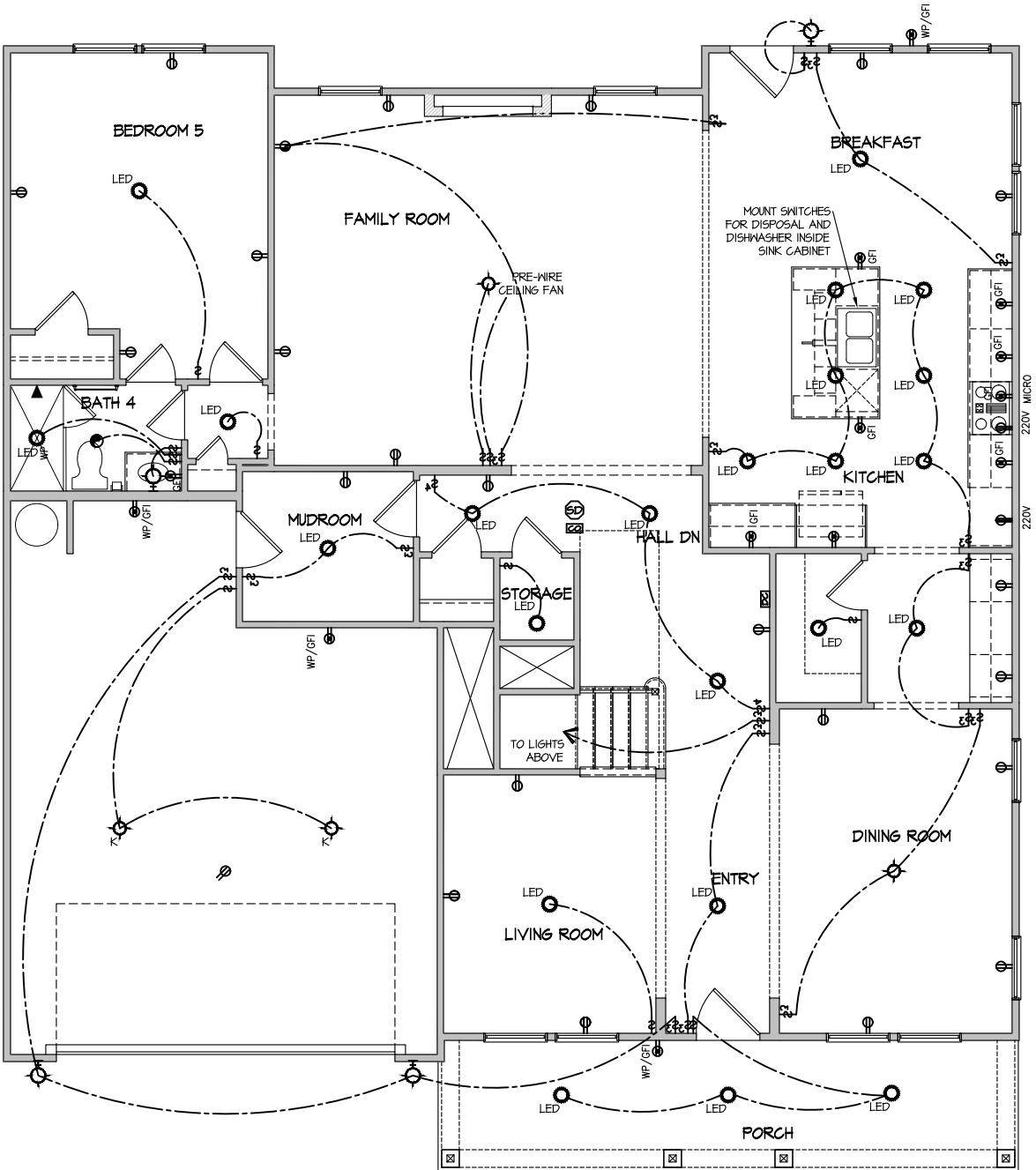
HOUSE NAME:  
STONEHAVEN  
DRAWING TITLE  
BUILDING SECTION

SHEET No.  
A4.1

FILE: Lot 00.0023.dwg DATE: 3/13/2025 2:06 PM

| ELECTRICAL LEGEND |                                               |
|-------------------|-----------------------------------------------|
|                   | SINGLE POLE SWITCH                            |
|                   | THREE WAY SWITCH                              |
|                   | FOUR WAY SWITCH                               |
|                   | DUPLEX AFCI RECEPTACLE                        |
|                   | DUPLEX AFCI RECEPTACLE - BOTTOM HALF SWITCHED |
|                   | DUPLEX AFCI RECEPTACLE - FLOOR MOUNTED        |
|                   | RECEPTACLE - 220V                             |
|                   | DUPLEX AFCI RECEPTACLE - GFI                  |
|                   | DUPLEX AFCI RECEPTACLE - WATERPROOF GFI       |
|                   | SMOKE DETECTOR - WIRED IN SERIES              |
|                   | EXHAUST FAN MOTOR                             |
|                   | FAN LIGHT COMBO                               |
|                   | WATER PROOFED                                 |
|                   | CO DETECTOR                                   |
|                   | DOOR CHIME                                    |
|                   | LIGHT FIXTURE - WALL MOUNTED                  |
|                   | LIGHT FIXTURE - CEILING MOUNTED               |
|                   | LIGHT FIXTURE - CEILING MOUNTED LED           |
|                   | LIGHT FIXTURE - LED SURFACE MOUNTED           |
|                   | LIGHT FIXTURE - RECESSED CAN                  |
|                   | PULLCHAIN LAMPHOLDER                          |
|                   | KEYLESS LAMPHOLDER                            |
|                   | 2x4' STRIP LIGHT                              |

NOTE: ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE ADOPTED VERSION OF THE NATIONAL ELECTRICAL CODE, THE LOCAL POWER COMPANY AND TO ALL APPLICABLE LOCAL REGULATIONS.



ELECTRICAL PLAN  
FIRST FLOOR - ELEV. 1  
SCALE: 1/8" = 1'-0"

| MASTER PLAN INFORMATION |              |
|-------------------------|--------------|
| REVISION                | DATE         |
| 2-RALE                  | 11-10-2023   |
|                         | UPDATED DATE |
|                         | 09-13-2024   |

|           |            |
|-----------|------------|
| DRAWN BY: | ITS        |
| DATE:     | 03/13/2025 |
| PLAN NO.  | 3656       |

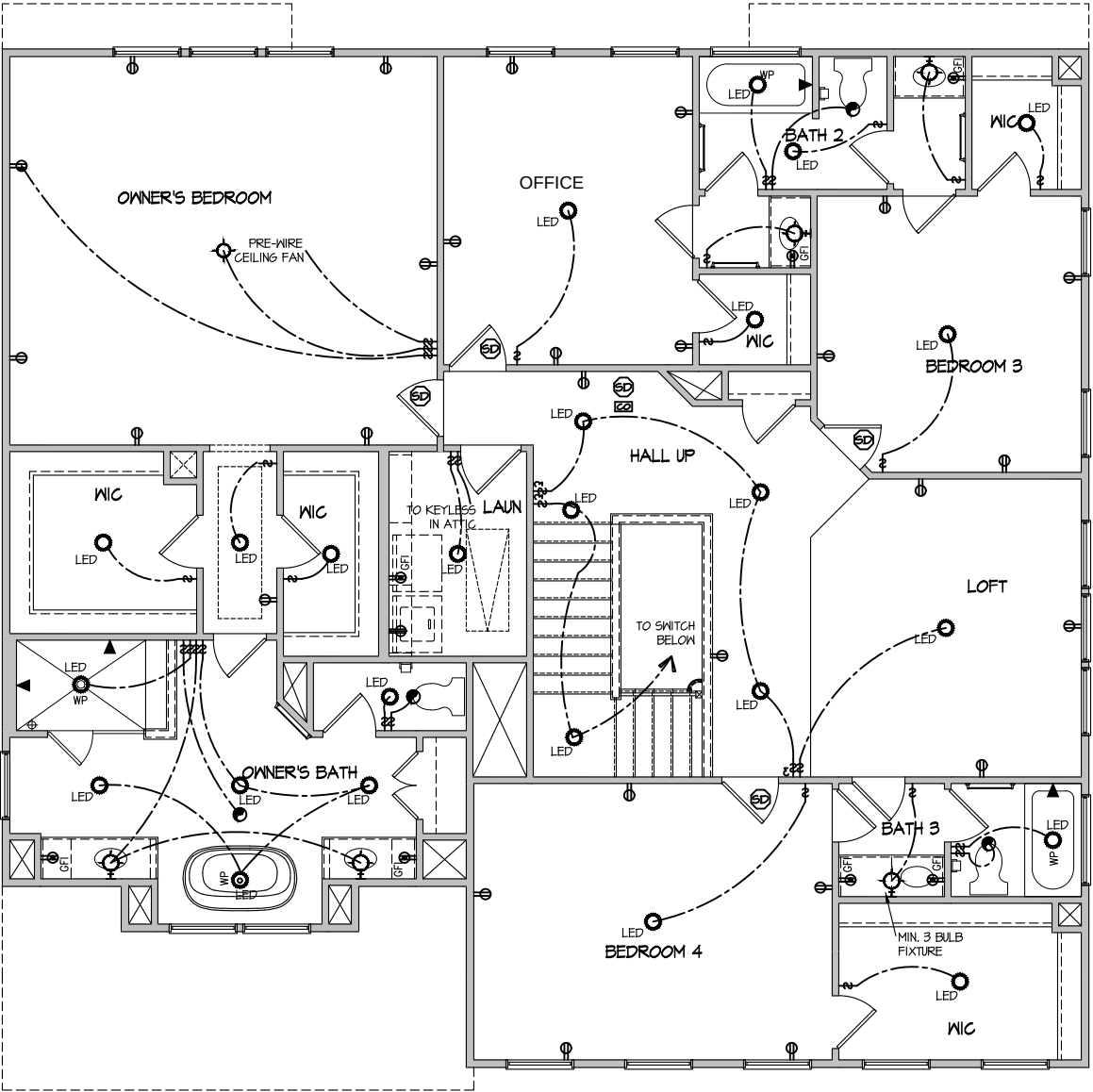
DRB  
HOMES

|               |                        |
|---------------|------------------------|
| HOUSE NAME:   | STONEHAVEN             |
| DRAWING TITLE | FIRST FLOOR ELECTRICAL |

|           |   |
|-----------|---|
| SHEET No. | 1 |
|-----------|---|

| ELECTRICAL LEGEND |                                               |
|-------------------|-----------------------------------------------|
|                   | SINGLE POLE SWITCH                            |
|                   | THREE WAY SWITCH                              |
|                   | FOUR WAY SWITCH                               |
|                   | DUPLEX AFCI RECEPTACLE                        |
|                   | DUPLEX AFCI RECEPTACLE - BOTTOM HALF SWITCHED |
|                   | DUPLEX AFCI RECEPTACLE - FLOOR MOUNTED        |
|                   | RECEPTACLE - 220V                             |
|                   | DUPLEX AFCI RECEPTACLE - GFI                  |
|                   | DUPLEX AFCI RECEPTACLE - WATERPROOF GFI       |
|                   | SMOKE DETECTOR - WIRED IN SERIES              |
|                   | EXHAUST FAN MOTOR                             |
|                   | FAN LIGHT COMBO                               |
|                   | WATER PROOFED                                 |
|                   | CO DETECTOR                                   |
|                   | DOOR CHIME                                    |
|                   | LIGHT FIXTURE - WALL MOUNTED                  |
|                   | LIGHT FIXTURE - CEILING MOUNTED               |
|                   | LIGHT FIXTURE - CEILING MOUNTED LED           |
|                   | LIGHT FIXTURE - LED SURFACE MOUNTED           |
|                   | LIGHT FIXTURE - RECESSED CAN                  |
|                   | PULLCHAIN LAMPHOLDER                          |
|                   | KEYLESS LAMPHOLDER                            |
|                   | 2'x4' STRIP LIGHT                             |

NOTE: ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE ADOPTED VERSION OF THE NATIONAL ELECTRICAL CODE, THE LOCAL POWER COMPANY AND TO ALL APPLICABLE LOCAL REGULATIONS.



ELECTRICAL PLAN  
SECOND FLOOR - ELEV. 1  
SCALE: 1/8" = 1'-0"

FILE: Lot\_00.0023.dwg DATE: 3/13/2025 2:06 PM

| MASTER PLAN INFORMATION |              |
|-------------------------|--------------|
| REVISION                | DATE         |
| 2-RALE                  | 11-10-2023   |
|                         | UPDATED DATE |
|                         | 09-13-2024   |

|           |            |
|-----------|------------|
| DRAWN BY: | ITS        |
| DATE:     | 03/13/2025 |
| PLAN NO.  | 3656       |

DRB  
HOMES

|               |                         |
|---------------|-------------------------|
| HOUSE NAME:   | STONEHAVEN              |
| DRAWING TITLE | SECOND FLOOR ELECTRICAL |

|           |     |
|-----------|-----|
| SHEET No. | 1.2 |
|-----------|-----|



CONNECTION SPECIFICATIONS (TYP. U.N.O.)

| DESCRIPTION OF BLDG. ELEMENT                 | 3"x0.131" NAILS          | 3"x0.120" NAILS           |
|----------------------------------------------|--------------------------|---------------------------|
| JOIST TO SOLE PLATE                          | (3) TOENAILS             | (3) TOENAILS*             |
| SOLE PLATE TO JOIST/BLK'G.                   | (3) NAILS @ 4" O.C.      | (3) NAILS @ 4" O.C.       |
| STUD TO SOLE PLATE                           | (2) TOENAILS             | (3) TOENAILS*             |
| TOP OR SOLE PLATE TO STUD                    | (2) NAILS                | (3) NAILS                 |
| RIM TO TOP PLATE                             | TOENAILS @ 8" O.C.       | TOENAILS @ 6" O.C.*       |
| BLK'G. BTWN. JOISTS TO TOP PL.               | (3) TOENAILS             | (3) TOENAILS*             |
| DOUBLE STUD                                  | NAILS @ 24" O.C.         | NAILS @ 16" O.C.          |
| DOUBLE TOP PLATE                             | NAILS @ 24" O.C.         | NAILS @ 16" O.C.          |
| DOUBLE TOP PLATE LAP SPLICE                  | (4) NAILS IN LAPPED AREA | (11) NAILS IN LAPPED AREA |
| TOP PLATE LAP @ CORNERS & INTERSECTING WALLS | (2) NAILS                | (2) NAILS                 |

\* 2½"x0.113 IS AN ACCEPTABLE ALTERNATIVE TO A 3"x0.120", SAME SPACING OR NUMBER OF NAILS. (ONLY ACCEPTABLE WHERE \* ARE SHOWN)

MEANS & METHODS NOTES

THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS FINISHED AND ALL PLAN, DETAIL, AND NOTE SPECIFICATIONS HAVE BEEN COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE THE ERECTION PROCEDURES AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS, AND TIE-DOWNS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING AND BRACING REQUIRED TO STABILIZE AND PROTECT EXISTING AND ADJACENT STRUCTURES AND SYSTEMS DURING COURSE OF DEMOLITION AND CONSTRUCTION OF THE PROJECT.

STRUCTURAL DESIGN AND SPECIFICATIONS ASSUME THAT ALL SUPPORTING AND NON-SUPPORTING ELEMENTS IN CONTACT WITH FLOOR FRAMING ARE LEVEL, INCLUDING, BUT NOT LIMITED TO; FOUNDATIONS, SLABS ON GRADE, BEAMS, WALLS, AND NON-BEARING ELEMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LEVELNESS AND MAKE ADJUSTMENTS AS NECESSARY, INCLUDING CONSIDERATION OF THOSE AREAS THAT MAY BE WITHIN CONTRACTUAL, INDUSTRY, OR WARRANTY TOLERANCES.

ADDITIONAL NOTES FOR TRUSS & I-JOIST MANUFACTURER

ROOF TRUSS, FLOOR TRUSS AND ENGINEERED JOISTS SHALL BE DESIGNED TO MEET THE DIFFERENTIAL DEFLECTION CRITERIA BELOW, UNLESS NOTED OTHERWISE ON PLAN.

TRUSSES/JOISTS SHALL BE DESIGNED SO THAT DIFFERENTIAL DEFLECTION BETWEEN ADJACENT PARALLEL TRUSSES/JOISTS OR GIRDER TRUSSES/FLUSH BEAMS DO NOT EXCEED THE FOLLOWING:

- A. ROOF TRUSSES:  
1/4" DEAD LOAD
- B. FLOOR TRUSSES, ATTIC TRUSSES, & I-JOISTS:  
1/8" DEAD LOAD
- C. FLOOR TRUSSES & ATTIC TRUSSES ADJACENT TO FLOOR FRAMING BY OTHERS:  
LIMIT ABSOLUTE TRUSS DEFLECTION TO 3/16" DEAD LOAD. (NOT DIFFERENTIAL DEFLECTION)

GENERAL STRUCTURAL NOTES

- DESIGN IS BASED ON 2018 NORTH CAROLINA STATE BUILDING CODE: RESIDENTIAL CODE.
- WOOD FRAME ENGINEERING IS BASED ON NDS, "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" - LATEST EDITION.
- DESIGN LOADS:
  - ROOF DEAD = 7 PSF T.C., 10 PSF B.C.  
LIVE = 16 PSF  
LOAD DURATION FACTOR = 1.25
  - FLOOR LIVE = 40 PSF (30 PSF @ SLEEPING AREAS)  
DEAD = 10 PSF (I-JOISTS & SOLID SAWN)  
10 PSF T.C., 5 PSF B.C. (TRUSSES)  
(ADD'L 10 PSF @ TILE)
  - LATERAL 120 MPH, EXPOSURE B. SEISMIC A/B.
  - SOIL 2,000 PSF ASSUMED ALLOWABLE BEARING PRESSURE (TO BE VERIFIED BY BUILDER)

GENERAL FRAMING

- ALL TYP. NAIL FASTENER REQUIREMENTS ARE NOTED IN STANDARD CONNECTIONS TABLE OR ON PLANS. ALL NAILS SPECIFIED ARE MIN DIAMETER AND LENGTH REQUIRED FOR CONNECTION. ALL HANGER NAILS SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS FOR MAX CHARTED CAPACITY. NOTE: HANGERS USE COMMON NAIL DIAMETERS NOT TYPICAL FRAMING GUN NAILS.
- REFER TO FASTENING SCHEDULE TABLE R602.3(1) FOR ALL CONNECTIONS, TYP. U.N.O.
- EXT. & INT. BRG WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) @ 16" O.C. SPF OR 51P "STUD" GRADE LUMBER, OR BETTER, U.N.O.
  - WALLS OVER 12' TALL SHALL BE PER PLAN.
- ALL HEADERS, BEAMS & OTHER STRUCTURAL MEMBERS SHALL BE SPRUCE-PINE-FIR #2 (SPF) OR SOUTHERN PINE #2 (51P) LUMBER, OR BETTER (KILN-DRIED). ALL HEADERS HAVE BEEN DESIGNED BASED ON CALCULATED LOADS & SIZED ACCORDINGLY. CODE TABLES HAVE NOT BEEN USED.
- ALL NON-BEARING INTERIOR STUD WALLS SHALL BE CONSTRUCTED WITH 2x STUD' GRADE MEMBERS SPACED @ 16" O.C. (MAX, U.N.O.)
  - HEADERS IN NON-LOAD BEARING WALLS SHALL BE: (1)2x4/6 FLAT @ OPENINGS UP TO 4'; (2)2x4/6 FLAT UP TO 8'.
- ALL FRAMING LUMBER SHALL BE DRIED TO 15% MC (KD-15).
- ENGINEERED LUMBER BEAMS TO MEET OR EXCEED THE FOLLOWING:
  - 'LSL' - Fb=2325 psi; Fv=310 psi; E=1.55x10<sup>6</sup> psi
  - 'LVL' - Fb=2600 psi; Fv=285 psi; E=2.0x10<sup>6</sup> psi
  - 'PSL' - Fb=2400 psi; Fv=240 psi; E=2.0x10<sup>6</sup> psi
- M&K SHALL BE FULLY INDEMNIFIED FOR ANY AND ALL ISSUES RESULTING FROM OR RELATED TO ANY BUILDING COMPONENT IF THE OWNER DOES NOT SUBMIT THE COMPONENT SHOP DRAWINGS TO M&K FOR STRUCTURAL REVIEW PRIOR TO FABRICATION, DELIVERY, OR INSTALLATION.
- FOR 2 & 3 PLY BEAMS OF EQUAL WIDTH, FASTEN PLIES TOGETHER WITH 3 ROWS OF 3"x0.120" NAILS @ 8" O/C OR 2 ROWS ½"x3½" SIMPSON SDS SCREWS (OR ¾" TRUSSLOK SCREWS) @ 16" O/C. USE A MINIMUM OF 3 ROWS FOR BEAM DEPTHS OF 14" OR GREATER. APPLY FASTENING AT BOTH FACES FOR 3-PLY CONDITION. LOCATE TOP & BOTTOM NAILS/SCREWS 2" FROM EDGE. SOLID 3 ½" OR 5 ½" BEAMS ARE ACCEPTABLE. USE 2 ROWS OF NAILS FOR 2x6 & 2x8 MEMBERS.
- FOR 4 PLY BEAMS OF EQUAL WIDTH, FASTEN PLIES TOGETHER WITH 3 ROWS OF ½"x6" SIMPSON SDS SCREWS (OR 6 ¾" TRUSSLOK SCREWS) @ 16" O/C. USE A MINIMUM OF 4 ROWS FOR BEAM DEPTHS OF 14" OR GREATER. APPLY FASTENING AT BOTH FACES (ONE SIDE ONLY FOR TRUSSLOK SCREWS). LOCATE TOP AND BOTTOM SCREWS 2" FROM EDGE. A SOLID 7" BEAM IS ACCEPTABLE.
- ALL HEADERS SHALL BE SUPPORTED BY (1)2x JACK STUD & (1)2x KING STUD, MINIMUM.
  - THE NUMBER OF STUDS SPECIFIED AT A SUPPORT INDICATES THE NUMBER OF JACK STUDS REQUIRED, U.N.O..
- ALL MULTI-PLY STUDS TO BE FASTENED TOGETHER W/ 3"x0.131" NAILS @ 24" O.C. (MIN), EACH PLY.
- PROVIDE SOLID BLOCKING IN FLOOR SYSTEM UNDER ALL POSTS CONTINUOUS TO FND/BEARING. BLOCKING TO MATCH POST ABOVE.
- FASTEN 2x WOOD PLATES TO TOP FLANGE OF STEEL BEAMS WITH P.A.F.'s (HILTI' X-CF PINS OR EQUAL) @ 16" O.C. STAGGERED, OR 1/2" DIA. BOLTS @ 48" O.C. STAGGERED.
- ALL EXTERIOR 4x4 WOOD POSTS SHALL HAVE SIMPSON BC52-2/4 CAP & ABW44Z BASE, U.N.O.

FLOOR FRAMING

- I-JOISTS/TRUSSES SHALL BE DESIGNED BY MANUF. TO MEET OR EXCEED L/480 LIVE LOAD DEFLECTION CRITERIA. (EXCLUDES MARBLE FLOORS - CONTACT M&K FOR MARBLE FLOOR DESIGNS)
- AT I-JOIST FLOORS, PROVIDE 1 1/8" MIN. OSB RIM BOARD.
- METAL HANGERS SHALL BE SPECIFIED BY MANUFACTURER, U.N.O.
- FLOOR SHEATHING SHALL BE 23/32" A.P.A. RATED 'STUD-I-FLOOR' 24" O.C. EXPOSURE 1 (OR APPROVED EQUAL) WITH TONGUE AND GROOVE EDGES. FASTEN TO FRAMING MEMBERS W/ GLUE AND - 2 ½" x 0.131" NAILS @ 6" O.C. @ PANEL EDGES @ 12" O.C. FIELD.  
- 2 ¾" x 0.120" NAILS @ 4" O.C. @ PANEL EDGES @ 8" O.C. FIELD.  
- 2 ¾" x 0.113" NAILS @ 3" O.C. @ PANEL EDGES @ 6" O.C. IN FIELD.  
- ¾" x 2" MIN. SCREWS @ 6" O.C. @ PANEL EDGES @ 12" O.C. FIELD.

ROOF FRAMING

- BAY WINDOWS & SHED ROOFS (UP TO 6' SPAN) CAN BE 2x4 OR 2x6 RAFTERS & CEILING JOISTS @ 16/24" O.C.
- FASTEN EACH ROOF TRUSS TO TOP PLATE W/ SIMPSON H25T CLIP (OR APPROVED EQUAL) @ ALL BEARING POINTS. PROVIDE (2) H25T CLIPS AT 2-PLY GIRDER TRUSSES, (3) H25T CLIPS AT 3-PLY GIRDER TRUSSES & ROOF BEAMS - AT ALL BEARING POINTS.
- METAL HANGERS SHALL BE SPECIFIED BY THE MANUFACTURER, U.N.O.
- ERECT AND INSTALL ROOF TRUSSES PER WTCA & TPI'S BC51 I-08 "GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES."
- SUPPORT PORCH & SHORT SPAN ROOF TRUSSES (MAX 7' SPAN) W/ 2x4 LEDGER FASTENED TO:
  - RIM BOARD W/ (2) 3"x0.131" NAILS @ 16" O.C. MAX. (I-JOISTS)
  - TRUSS VERTICALS W/ (3) 3"x0.131" NAILS @ 14/2" O.C. MAX. (FLOOR TRUSSES)
- ROOF SHEATHING SHALL BE 7/16" A.P.A. RATED SHEATHING 24/16 EXPOSURE 1 (OR APPROVED EQUAL). FASTEN TO FRAMING MEMBERS
  - W/ 2 ½" x 0.131" NAILS @ 6" O.C. @ PANEL EDGES @ 12" O.C. FIELD.
  - W/ 2 ¾" x 0.120" NAILS @ 4" O.C. @ PANEL EDGES @ 8" O.C. FIELD.
  - W/ 2 ¾" x 0.113" NAILS @ 3" O.C. @ PANEL EDGES @ 6" O.C. FIELD.

VENEER LINTEL SCHEDULE

| SPAN (MAX) | HEIGHT OF VENEER ABOVE LINTEL | STEEL ANGLE SIZE |
|------------|-------------------------------|------------------|
| 3'-0"      | 20 FT. MAX                    | L3"x3"x¼"        |
|            | 3 FT. MAX                     | L3"x3"x¼"        |
| 6'-0"      | 12 FT. MAX                    | L4"x3"x¼"        |
|            | 20 FT. MAX                    | L5"x3½"x¾"       |
| 8'-0"      | 3 FT. MAX                     | L4"x4"x¼" *      |
|            | 12 FT. MAX                    | L5"x3½"x¾"       |
|            | 16 FT. MAX                    | L6"x3½"x¾"       |
|            | 12 FT. MAX                    | L6"x3½"x¾"       |
| 16'-0"     | 2 FT. MAX                     | L7"x4"x½" **     |
|            | 3 FT. MAX                     | L8"x4"x½" **     |

ALL LINTELS:  
- SHALL SUPPORT 2 ¾" - 3 ½" VENEER W/ 40 psf MAXIMUM HEIGHT.  
< 16' SHALL HAVE 4" MIN. BEARING  
> 16' SHALL HAVE 8" MIN. BEARING  
< 16' SHALL NOT BE FASTENED BACK TO HEADER.  
> 16' SHALL BE FASTENED BACK TO WOOD HEADER IN WALL @ 48" O.C.  
W/ ½" DIA. x 3 ½" LONG LAG SCREWS IN 2" LONG VERTICALLY SLOTTED HOLES.  
- MAX VENEER HT. APPLIES TO ANY PORTION OF BRICK OVER THE OPENING.  
- ALL LINTELS SHALL BE LONG LEG VERTICAL.  
- WHEN SUPPORTING VENEER < 3" WIDE THE EXTERIOR TOE OF THE HORIZONTAL LEG MAY BE CUT IN THE FIELD TO BE 3 ½" WIDE OVER THE BEARING LENGTH ONLY. THIS IS TO ALLOW FOR MORTAR JOINT FINISHING.  
- SEE STRUCTURAL PLANS FOR ANY LINTEL CONDITION NOT INDICATED BY THE ABOVE INFORMATION FOR ALL LINTELS

SD2.1 REFERS TO SD2.1A FOR LVL/PSL/LSL BEAMS OR SD2.1B FOR FLITCH BEAMS OR SD2.1C FOR STEEL BEAMS

LATERAL BRACING & SHEAR WALL SHEATHING SPECIFICATIONS

THIS MODEL HAS BEEN DESIGNED TO RESIST LATERAL FORCES RESULTING FROM:  
**120 MPH WIND IN 2018 NCSCBC:RC**  
(120 MPH WIND SPEED IN ASCE 7-10 WIND MAP, PER IRC R301.2.1.1) EXP. B, RISK CAT. 2 & SEISMIC CAT. A/B.

THE DESIGN WAS COMPLETED PER 2015 IBC (SECTION 1604) & ASCE 7-10, AS PERMITTED BY R301.1.3 OF THE 2018 NCSCBC:RC, OR THE SIMPLIFIED PRESCRIPTIVE PROCEDURE IN ACCORDANCE WITH THE 2015 IRC IF THE PARAMETERS OF SECTION R602.1.2 COMPLY. ACCORDINGLY, THIS MODEL, AS DOCUMENTED AND DETAILED HEREIN, IS ADEQUATE TO RESIST THE CODE REQUIRED LATERAL FORCES.

DESIGN WIND UPLIFT LOADS HAVE BEEN CALCULATED UTILIZING ASCE 7-10 (ACCEPTED ENGINEERING PRACTICE) AS ALLOWED PER 2018 NCSCBC:RC SECTION R802.11.1.1. THIS MODEL HAS BEEN DETAILED WHERE REQUIRED & ENGINEERED TO RESIST THE WIND UPLIFT LOAD PATH PER SECTIONS R602.3.5 & R802.11.

EXT. WALL SHEATHING SPECIFICATION

- 7/16" OSB OR 15/32" PLYWOOD:
  - FASTEN SHEATHING W/ 2 ¾"x0.113" NAILS @ 6" O.C. AT EDGES @ 12" O.C. IN THE PANEL FIELD. TYP. U.N.O.
- HORIZONTAL BLOCKING OF EXT. WALL/SHEAR WALL PANEL EDGES IS NOT REQUIRED BY THIS DESIGN EXCEPT FOR THOSE AREAS SPECIFICALLY NOTED.
- ALL EXT. WALLS SHALL BE CONTINUOUSLY SHEATHED AND ARE CONSIDERED SHEAR WALLS.
- ALT. STAPLE CONNECTION SPEC: 1 ½" 16 GA STAPLES (¾" CROWN) @ 3" O.C. AT EDGES @ 6" O.C. IN FIELD.

BLOCKED PANEL EDGES

- AT DESIGNATED AREAS - FASTEN SHEATHING W/ 2 ¾" x 0.113" NAILS @ 6" O.C. AT ALL PANEL EDGES AND 12" O.C. IN THE PANEL FIELD OR 1 ¾" 16 GA STAPLES (¾" CROWN) @ 3" O.C. AT EDGES @ 6" O.C. IN FIELD. ALL SHEATHING PANELS SHALL BE ORIENTED AND INSTALLED FULL HEIGHT OF SHEAR WALL OR 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT ALL UNSUPPORTED PANEL EDGES & EDGE FASTENING.

3" O.C. EDGE NAILING

- AT DESIGNATED AREAS - FASTEN PANEL EDGES OF WOOD STRUCTURAL WALL SHEATHING TO FRAMING W/ 8d NAILS @ 3" O.C. NO STAPLE ALTERNATIVE AVAILABLE AT THIS SPEC. ALL SHEATHING PANELS SHALL BE ORIENTED AND INSTALLED FULL HEIGHT OF SHEAR WALL OR 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT UNSUPPORTED PANEL EDGES AND 3" O.C. EDGE FASTENING.

NOTES

- SEE CONNECTION SPECIFICATIONS CHART FOR STANDARD SHEAR TRANSFER DETAILING. IF ADDITIONAL CAPACITY IS REQUIRED BY DESIGN, IT WILL BE SPECIFICALLY NOTED ON PLAN.
- DESIGN ASSUMES 16" O.C. MAX. STUD SPACING, U.N.O.
- ALL STRUCTURAL PANELS ARE TO BE DIRECTLY APPLIED TO STUD FRAMING.
- PRE-MANUFACTURED PANELIZED WALLS: FASTEN TOGETHER END STUDS OF WALL PANELS SHEATHED W/ OSB OR PLYWOOD W/ 3" x 0.120" NAILS @ 4" O.C. (THRU ONE SIDE ONLY)

--- INDICATES EXTENT OF INT. OSB SHEARWALL OR 3" O.C. OSB SHEARWALL.  
▶ INDICATES HOLD-DOWN BELOW

GENERAL STRUCTURAL NOTES

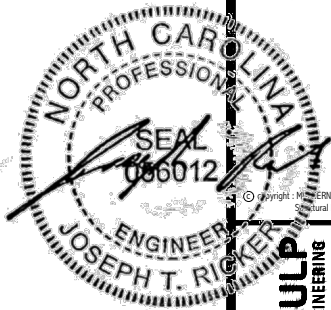
FOUNDATION

- DESIGN IS BASED ON 2018 NORTH CAROLINA STATE BUILDING CODE: RESIDENTIAL CODE.
- FOOTING DESIGN - 2,000 PSF ALLOWABLE SOIL BEARING PRESSURE IS ASSUMED. BUILDER/CONTRACTOR MUST VERIFY.
- FASTEN 2x4/6 SILL PLATES TO FND WITH A MINIMUM OF 2 ANCHORS PER PLATE, 12" MAX. FROM PLATE ENDS - UTILIZING:
  - 1/2" DIA. ANCHOR BOLTS @ 6'-0" O.C., 7" MIN. EMBEDMENT (CONC), 15" MIN. EMBEDMENT (CMU)
  - SIMPSON MASA ANCHOR STRAPS @ 6'-0" O.C. (CONC)
  - SIMPSON MAB23 ANCHOR STRAPS @ 2'-8" O.C. (CMU)(REFER TO DETAILS FOR 10' TALL WALL ANCHOR REQUIREMENTS)
- ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT W/ CONCRETE OR CMU SHALL BE PRESERVATIVE TREATED SOUTHERN PINE #2.
- BUILDER TO VERIFY CORROSION-RESISTANCE COMPATIBILITY OF HARDWARE & FASTENERS IN CONTACT W/ PRESERVATIVE-TREATED WOOD. CONTACT LUMBER & HARDWARE SUPPLIERS TO COORD.
- BASEMENT INTERIOR BEARING WALLS & EXTERIOR WALK-OUT BASEMENT WALLS SHALL BE 2x6 @ 16" O.C. SPF OR 51P, "STUD" GRADE OR BETTER.
- CONCRETE DESIGN BASED ON ACI 318. CONCRETE SHALL ATTAIN THE FOLLOWING MIN. COMPRESSIVE STRENGTHS IN 28 DAYS, U.N.O.:
  - f'c = 4,000 psi: ..... FOUNDATION WALLS
  - 2,500 psi: ..... FOOTINGS & INTERIOR SLABS ON GRADE
  - 3,000 psi: ..... GARAGE & EXTERIOR SLABS ON GRADE
  - fy = 60,000 psi
- BASEMENT FOUNDATION WALL DESIGN BASED ON:
  - 9' OR 10' HEIGHT (AS NOTED ON PLANS)
  - TALLER WALLS MUST BE ENGINEERED.
  - NOMINAL WIDTH (9 ½" FOR 10' THICK WALL).
- BASEMENT WALL DESIGN IS BASED ON 60 PCF BACKFILL SOIL TYPE CLASSIFICATIONS (SC, ML-CL, OR CL).
- BASEMENT WALLS SHALL BE BRACED, PRIOR TO BACKFILLING, BY ADEQUATE TEMPORARY BRACING OR INSTALL 1st FLOOR DECK.
- PROVIDE (2) #5 BARS AROUND ALL SIDES OF OPENINGS IN CONCRETE BSMT. FND. WALL WITH 2" CLEAR. REINFORCEMENT SHALL EXTEND 12" PAST CORNER OF OPENING IN ALL DIRECTIONS.
  - FOR OPENINGS UP TO 36", PROVIDE MINIMUM 10" CONCRETE DEPTH OVER OPENING OR (3)2x10 W/ (2)2x6 JACK STUDS, U.N.O.
  - LARGER OPENINGS SHALL BE PER PLAN.
- ALL CONCRETE EXPOSED TO THE WEATHER SHALL NOT HAVE LESS THAN 5% OR MORE THAN 1% AIR ENTRAINMENT.
- ALL FOOTINGS SHALL BEAR AT LEAST 12" BELOW FINISH GRADE.
- FOOTINGS AND SLABS ON GRADE SHALL BEAR ON VIRGIN SOIL OR 45% COMPACTED FILL.
- PROVIDE CONTROL JOINTS AT ALL INSIDE CORNERS OF SLAB EDGES, AND OTHER LOCATIONS WHERE SLAB CRACKS ARE LIKELY TO DEVELOP.
  - JOINTS SHALL BE LOCATED @ 10'-0" O.C. (RECOMMENDED) OR 15'-0" O.C. (MAXIMUM)
  - JOINT GRID PATTERN SHALL BE AS CLOSE TO SQUARES AS POSSIBLE (1:1 RATIO), WITH A MAXIMUM OF 1:1.5 RATIO
  - CONTROL JOINTS SHALL NOT BE INSTALLED IN STRUCTURAL SLABS
- CONCRETE MASONRY UNITS (CMU) SHALL BE ASTM C90 WITH A MIN. COMPRESSIVE STRENGTH OF 1900 psi (Fm=1500 psi). MORTAR SHALL BE ASTM C270, TYPE S. CMU DESIGN PER ACI 530 @ 530.1.
- CMU FOUNDATION WALLS SHALL HAVE 'DUR-O-WALL' HORIZONTAL JOINT REINFORCEMENT (OR EQUAL) - 9 GA. MINIMUM @ 16" O.C.
- PROVIDE 2x8 x 16" LONG P.T. PLATE ON TOP OF ALL CRAWL SPACE PIERS. ALL PIERS SHALL BE GROUTED SOLID.
- PROVIDE 2x6 P.T. PLATE ON INTERIOR CRAWL SPACE WALLS, FASTENED PER ANCHORAGE SPECIFICATION NOTED ABOVE.
- DIMENSIONS BY OTHERS, BUILDER TO VERIFY.
- BUILDER TO VERIFY THAT MODEL HAS BEEN ADEQUATELY TREATED BY A LICENSED AND BONDED PEST CONTROL COMPANY FOR SUBTERRANEAN TERMITES. METHOD AND TYPE OF TREATMENT TO BE DETERMINED BY PEST CONTROL COMPANY.

HOLD-DOWN SCHEDULE

| SYMBOL | SPECIFICATION                                                                          |
|--------|----------------------------------------------------------------------------------------|
| ▶ HD-1 | SIMPSON HTT4 HOLD-DOWN * (¾" DIA. ANCHOR)                                              |
| ▶ HD-2 | SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.) -OR- MSTC66B3 ALTERNATE |
| ▶ HD-3 | SIMPSON 5THD14/5THD14RJ                                                                |

\* UTILIZE THE SSTB24 ANCHOR BOLT @ ALL MONOSLAB & INTERIOR RAISED SLAB (I.E. THICKENED SLABS, FOOTINGS) CONDITIONS. MINIMUM 24" MIN. FOOTING THICKNESS REQUIRED.  
EPOXY-SET ALTERNATE FOR MONOSLAB & INTERIOR RAISED SLAB CONDITIONS ONLY: UTILIZE SIMPSON SET EPOXY SYSTEM TO FASTEN THREADED ROD INTO CONCRETE FOUNDATION. PROVIDE 10" (FOR 5/8" DIA.) OR 15" (FOR 1/8" DIA.) MIN. EMBEDMENT INTO CONCRETE. INSTALL PER MANUF. INSTRUCTIONS. MINIMUM 16" FOOTING THICKNESS REQ'D. DO NOT LOCATE ANCHORS WITHIN 1 3/4" OF EDGE OF CONCRETE.



seal: 3/20/25

**MULHERN+KULP**  
RESIDENTIAL STRUCTURAL ENGINEERING  
300 Dunsmuir Ave. Building 4 - Junkin, PA 15067  
P: 717-548-5001 • mulhern+kulp.com  
NC LICENSE #C-3825



M&K project number:  
**126-24045**

project mgr: JTR  
drawn by: JAD  
issue date: 03-19-25

REVISIONS:

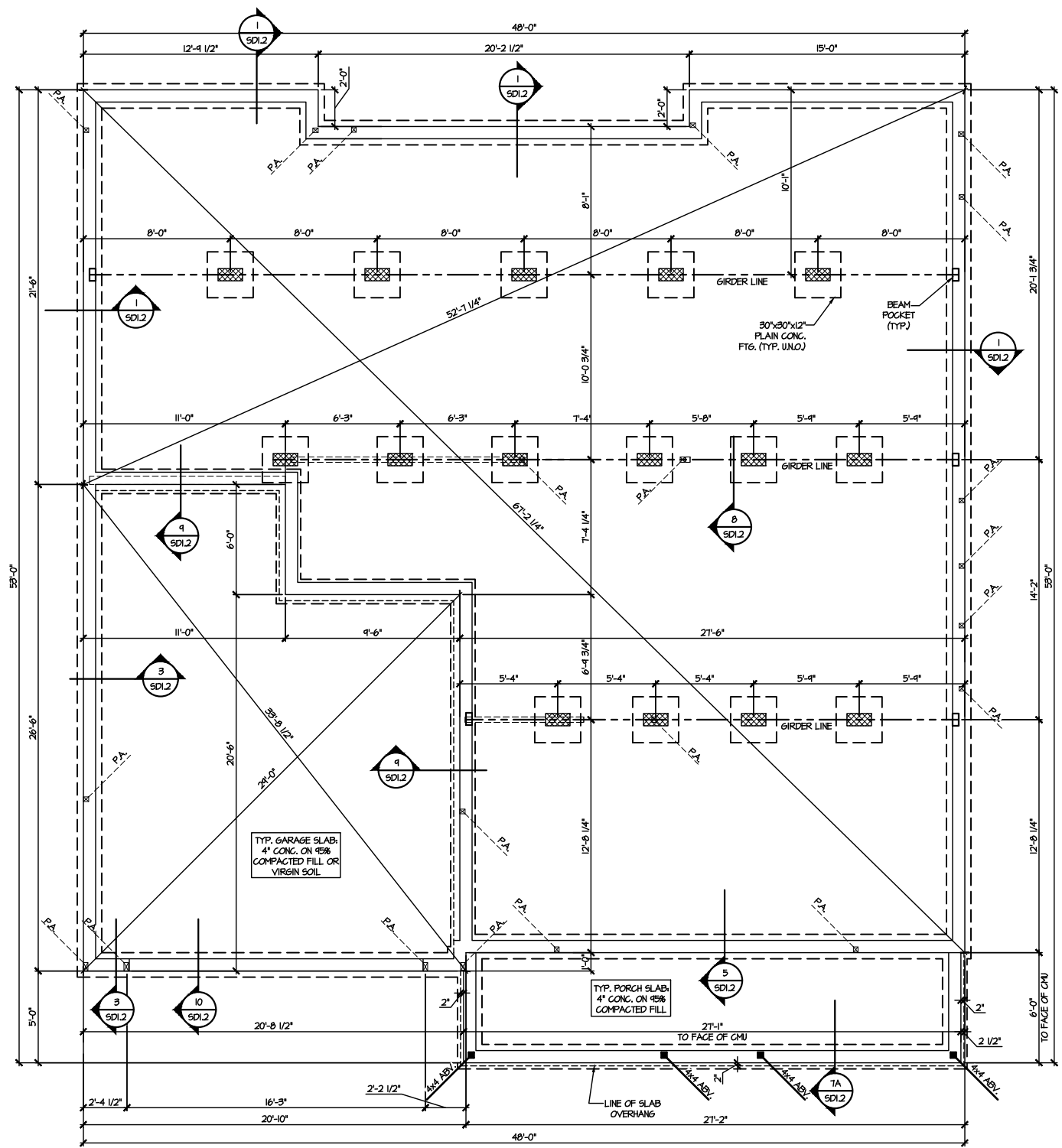
**DRB**  
**HOMES**

STRUCTURAL NOTES  
**CAMPBELL RIDGE**  
LOT 23 - STONEHAVEN 1  
RALEIGH, NC

sheet:

**S0.0**

FILE: RLH - Campbell Ridge - Lot 23 - Structurals DATE: 3/20/2025 10:17 AM

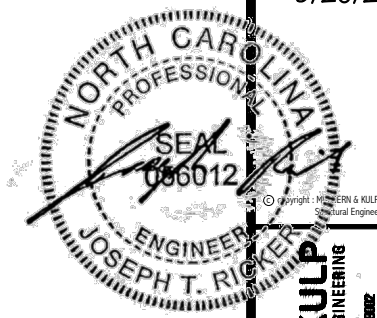


**1 CRAWL SPACE FOUNDATION PLAN**  
SCALE: 1/8"=1'-0"

**LEGEND**

- INTERIOR BEARING WALL
- BEARING WALL ABOVE
- BEAM / HEADER
- INDICATES SHEAR WALL & EXTENT
- EXTENT OF OVERFRAMING
- J.L. METAL HANGER
- \* INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
- INDICATES HOLD-DOWN OR STRAP. REFER TO SCHEDULE.

**REFER TO 50.0 FOR  
TYPICAL STRUCTURAL NOTES  
& SCHEDULES**



**MULHERN+KULP**  
RESIDENTIAL STRUCTURAL ENGINEERING  
300 Remondale Ave. Building 4 - Jambler, PA 15082  
P 715-948-5001 • mulhern+kulp.com  
NC LICENSE #C-3825

|                     |           |
|---------------------|-----------|
| M&K project number: | 126-24045 |
| project mgr:        | JTR       |
| drawn by:           | JAD       |
| issue date:         | 03-19-25  |
| REVISIONS:          |           |
|                     |           |
|                     |           |
|                     |           |
|                     |           |
|                     |           |

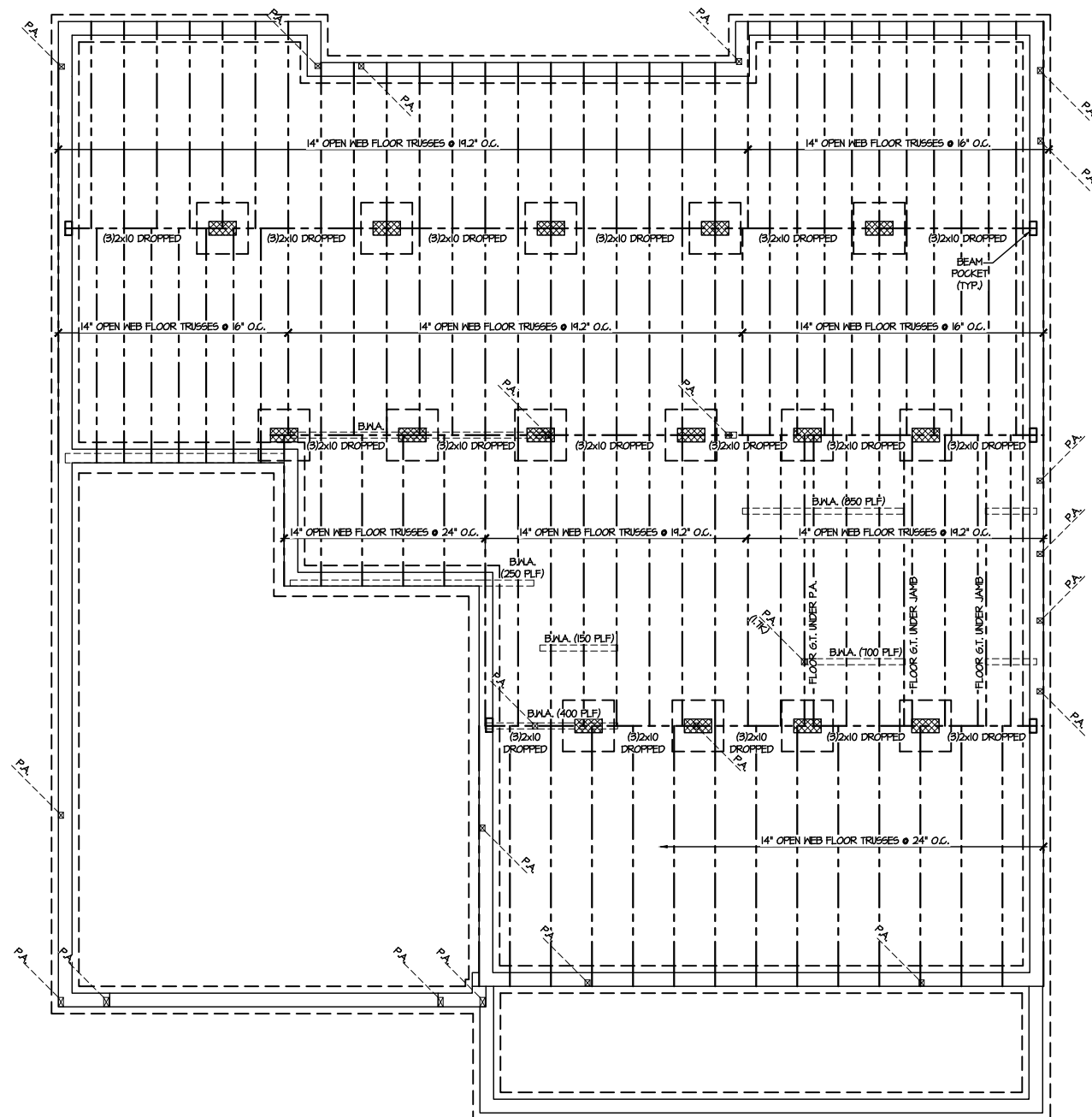


**FOUNDATION PLANS**  
**CAMPBELL RIDGE**  
LOT 23 - STONEHAVEN 1  
RALEIGH, NC

sheet:  
**S1.0**

seal: 3/20/25





**1 1ST FLOOR FRAMING PLAN**  
SCALE: 1/8"=1'-0"

### ENGINEERED BEAM MATERIAL SCHEDULE

| BEAM NUMBER | LVL OPTION          | PSL OPTION       | LSL OPTION          | FLITCH OPTION                                     | STEEL OPTION |
|-------------|---------------------|------------------|---------------------|---------------------------------------------------|--------------|
| 001         | (2)3/4"x1 1/4" - F  | 3/2"x1 1/4" - F  | N/A                 | (2)2x10 + (1) 1/2"x9/8" STEEL FLITCH PLATES - F   | M2x10 - F    |
| 002         | (2)3/4"x10" - FB    | 3/2"x10" - FB    | N/A                 | (2)2x12 + (1) 1"x1 1/4" STEEL FLITCH PLATES - F   | M2x14 - F    |
| 002A        | (3)3/4"x16" - FB    | 5/4"x16" - FB    | N/A                 | (3)2x12 + (2) 1/2"x1 1/4" STEEL FLITCH PLATES - F | M2x14 - F    |
| 003         | (2)3/4"x14" - F     | 3/2"x14" - F     | (2)3/4"x14" - F     | (2)2x12 + (1) 1/2"x1 1/4" STEEL FLITCH PLATES - F | M2x14 - F    |
| 004         | (2)3/4"x14" - F     | 3/2"x14" - F     | (3)3/4"x14" - F     | (2)2x12 + (1) 1/2"x1 1/4" STEEL FLITCH PLATES - F | M2x14 - F    |
| 005         | (4)3/4"x10" - D     | 7"x10" - D       | N/A                 | (4)2x12 + (3) 3/8"x1 1/4" STEEL FLITCH PLATES - D | M2x30 - D    |
| 006         | (2)3/4"x11 3/8" - H | 3/2"x11 3/8" - H | (3)3/4"x11 3/8" - H | N/A                                               | N/A          |
| 007         | (2)3/4"x14" - H     | 3/2"x14" - H     | (3)3/4"x14" - H     | (2)2x12 + (1) 3/8"x1 1/4" STEEL FLITCH PLATES - H | N/A          |
| 008         | (3)3/4"x14" - F     | 5/4"x14" - F     | N/A                 | (3)2x10 + (2) 1/4"x1 1/4" STEEL FLITCH PLATES - F | M2x14 - F    |
| 009         | (3)3/4"x10" - H     | 5/4"x10" - H     | N/A                 | (3)2x12 + (2) 1/2"x1 1/4" STEEL FLITCH PLATES - H | N/A          |
| 010         | (2)3/4"x9/4" - H    | 3/2"x9/4" - H    | (2)3/4"x9/4" - H    | (2)2x10 + (1) 1/2"x9/8" STEEL FLITCH PLATES - H   | M2x10 - H    |
| 011         | (3)3/4"x9/4" - F    | 5/4"x9/4" - F    | (3)3/4"x9/4" - F    | (3)2x10 + (2) 1/2"x1 1/4" STEEL FLITCH PLATES - F | M2x10 - F    |
| 012         | (4)3/4"x11 3/8" - D | 7"x11 3/8" - D   | N/A                 | (4)2x12 + (3) 3/8"x1 1/4" STEEL FLITCH PLATES - D | M2x14 - D    |
| 013         | (3)3/4"x16" - FT    | 5/4"x16" - FT    | N/A                 | (3)2x12 + (2) 1/2"x1 1/4" STEEL FLITCH PLATES - F | M2x14 - F    |
| 014         | (2)3/4"x14" - F     | 3/2"x14" - F     | (3)3/4"x14" - F     | (2)2x12 + (1) 3/8"x1 1/4" STEEL FLITCH PLATES - F | M2x14 - F    |

- BEAM NOTATION:  
- "F" INDICATES FLUSH BEAM  
- "FT" INDICATES FLUSH TOP BEAM  
- "FB" INDICATES FLUSH BOTTOM BEAM  
- "D" INDICATES DROPPED BEAM  
- "H" INDICATES DROPPED OPENING HEADER
- REFER TO DETAIL D/SD2.0 FOR TYPICAL FLITCH BEAM CONNECTIONS
- REFER TO DETAIL E/SD2.0 FOR TYPICAL STEEL BEAM CONNECTIONS
- FOR FLUSH TOP BEAMS PROVIDE 2X STACKED PLATES BENEATH BEAM AS REQ'D. FASTEN PLATES IN SUCCESSION W/ (2) 3"x0.120" NAILS @ 8" O.C.
- FOR FLUSH BOTTOM BEAMS PROVIDE 2X STACKED PLATES ATOP BEAM AS REQ'D. FASTEN PLATES IN SUCCESSION W/ (2) 3"x0.120" NAILS @ 8" O.C.

**SD2.1 REFERS TO SD2.1A FOR LVL/PSL/LSL BEAMS OR SD2.1B FOR FLITCH BEAMS OR SD2.1C FOR STEEL BEAMS**

### LEGEND

- [Pattern] INTERIOR BEARING WALL
- [Pattern] BEARING WALL ABOVE
- [Pattern] BEAM / HEADER
- [Pattern] INDICATES SHEAR WALL & EXTENT
- [Pattern] EXTENT OF OVERFRAMING
- JL METAL HANGER
- \* INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
- ▶ INDICATES HOLD-DOWN OR STRAP. REFER TO SCHEDULE.

**REFER TO SO.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES**



seal: 3/20/25

**MULHERN+KULP**  
RESIDENTIAL STRUCTURAL ENGINEERING  
300 Riverside Ave. Building 4 - Jambler, PA 15082  
P 715-948-8001 • mulhern+kulp.com  
NC LICENSE #C-3825



M&K project number:  
**126-24045**

project mgr: JTR  
drawn by: JAD  
issue date: 03-19-25

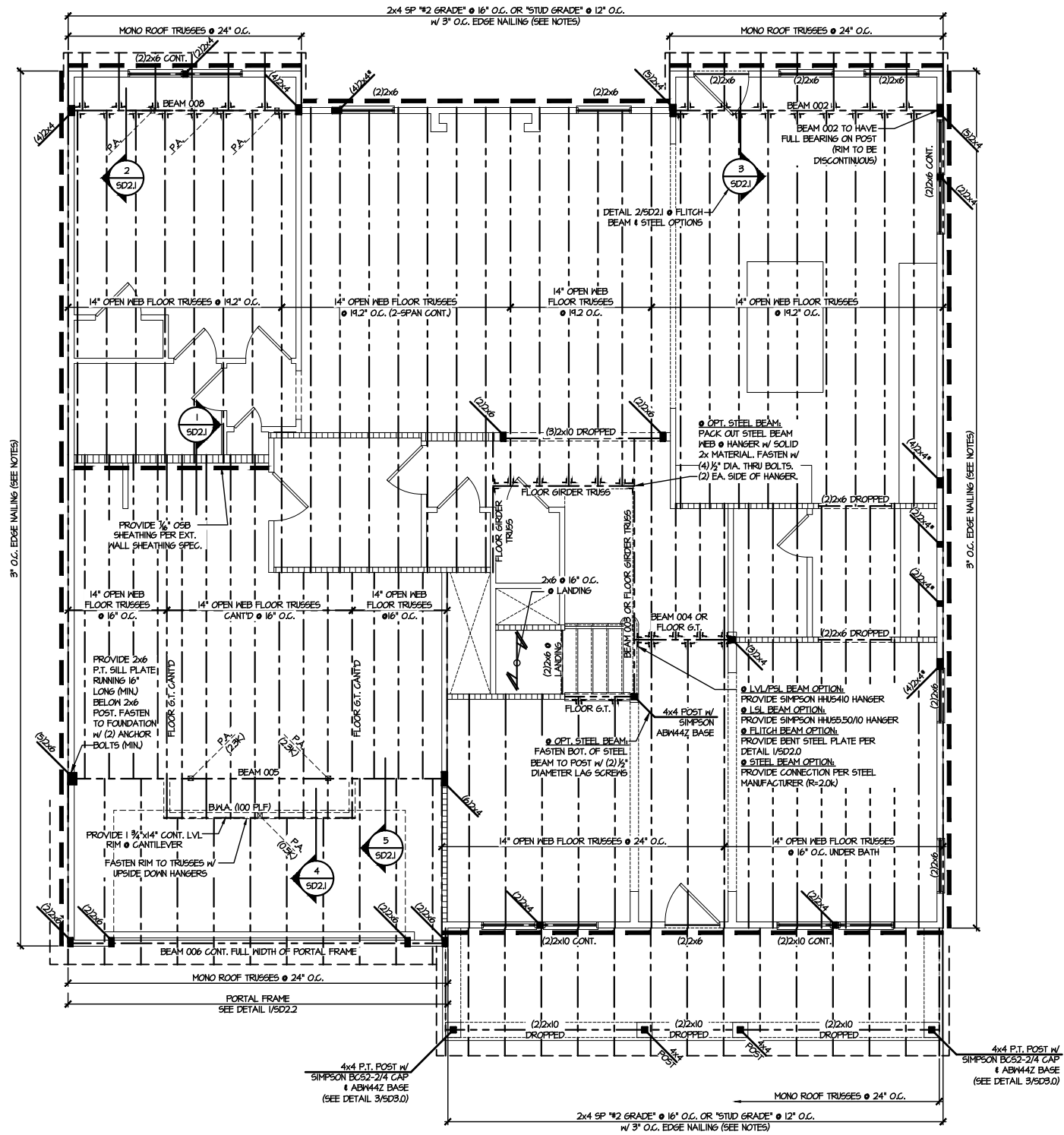
REVISIONS:

**DRB HOMES**

**FLOOR FRAMING PLANS**  
**CAMPBELL RIDGE**  
LOT 23 - STONEHAVEN 1  
RALEIGH, NC

sheet:

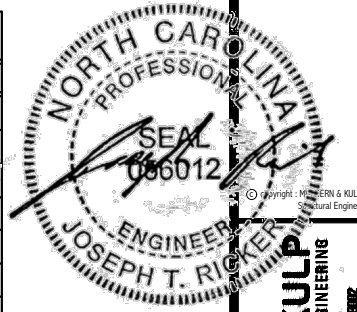
**S2.0**



**2ND FLOOR FRAMING PLAN**  
SCALE: 1/8"=1'-0"

| ENGINEERED BEAM MATERIAL SCHEDULE |                     |                  |                     |                                                      |              |
|-----------------------------------|---------------------|------------------|---------------------|------------------------------------------------------|--------------|
| BEAM NUMBER                       | LVL OPTION          | PSL OPTION       | LSL OPTION          | FLITCH OPTION                                        | STEEL OPTION |
| 001                               | (2)3/4"x1 1/4" - F  | 3/8"x1 1/4" - F  | N/A                 | (2)2x12 + (1) 1/2"x4"x4" STEEL FLITCH PLATES - F     | M6x10 - F    |
| 002                               | (2)3/4"x10" - FB    | 3/8"x10" - FB    | N/A                 | (2)2x12 + (1) 1"x10"x4" STEEL FLITCH PLATES - F      | M12x19 - F   |
| 002A                              | (3)3/4"x10" - FB    | 5/8"x10" - FB    | N/A                 | (3)2x12 + (2) 1/2"x10"x4" STEEL FLITCH PLATES - F    | M12x19 - F   |
| 003                               | (2)3/4"x14" - F     | 3/8"x14" - F     | (2)3/8"x14" - F     | (2)2x12 + (1) 3/4"x14"x4" STEEL FLITCH PLATES - F    | M12x14 - F   |
| 004                               | (2)3/4"x14" - F     | 3/8"x14" - F     | (3)3/8"x14" - F     | (2)2x12 + (1) 3/4"x14"x4" STEEL FLITCH PLATES - F    | M12x14 - F   |
| 005                               | (4)3/4"x10" - D     | 1"x10" - D       | N/A                 | (4)2x12 + (3) 3/4"x14"x4" STEEL FLITCH PLATES - D    | M12x30 - D   |
| 006                               | (2)3/4"x11 1/8" - H | 3/8"x11 1/8" - H | (3)3/4"x11 1/8" - H | N/A                                                  | N/A          |
| 007                               | (2)3/4"x14" - H     | 3/8"x14" - H     | (3)3/8"x14" - H     | (2)2x12 + (1) 3/4"x14"x4" STEEL FLITCH PLATES - H    | N/A          |
| 008                               | (3)3/4"x14" - F     | 5/8"x14" - F     | N/A                 | (3)2x10 + (2) 1/2"x14"x4" STEEL FLITCH PLATES - F    | M12x14 - F   |
| 009                               | (3)3/4"x10" - H     | 5/8"x10" - H     | N/A                 | (3)2x12 + (2) 1/2"x14"x4" STEEL FLITCH PLATES - H    | N/A          |
| 010                               | (2)3/4"x9 1/4" - H  | 3/8"x9 1/4" - H  | (2)3/8"x9 1/4" - H  | (2)2x10 + (1) 3/4"x9 1/4"x4" STEEL FLITCH PLATES - H | M6x10 - H    |
| 011                               | (3)3/4"x9 1/4" - F  | 5/8"x9 1/4" - F  | (3)3/8"x9 1/4" - F  | (3)2x10 + (2) 3/4"x14"x4" STEEL FLITCH PLATES - F    | M6x10 - F    |
| 012                               | (4)3/4"x11 1/8" - D | 1"x11 1/8" - D   | N/A                 | (4)2x12 + (3) 3/4"x14"x4" STEEL FLITCH PLATES - D    | M12x14 - D   |
| 013                               | (3)3/4"x10" - FT    | 5/8"x10" - FT    | N/A                 | (3)2x12 + (2) 1/2"x14"x4" STEEL FLITCH PLATES - F    | M12x19 - F   |
| 014                               | (2)3/4"x14" - F     | 3/8"x14" - F     | (3)3/8"x14" - F     | (2)2x12 + (1) 3/4"x14"x4" STEEL FLITCH PLATES - F    | M12x14 - F   |

- BEAM NOTATION:**
  - "F" INDICATES FLUSH BEAM
  - "FT" INDICATES FLUSH TOP BEAM
  - "FB" INDICATES FLUSH BOTTOM BEAM
  - "D" INDICATES DROPPED BEAM
  - "H" INDICATES DROPPED OPENING HEADER
- REFER TO DETAIL D/SDD.0 FOR TYPICAL FLITCH BEAM CONNECTIONS
- REFER TO DETAIL E/SDD.0 FOR TYPICAL STEEL BEAM CONNECTIONS
- FOR FLUSH TOP BEAMS PROVIDE 2X STACKED PLATES BENEATH BEAM AS REQ'D. FASTEN PLATES IN SUCCESSION W/ (2) 3"x10x120" NAILS @ 8" O.C.
- FOR FLUSH BOTTOM BEAMS PROVIDE 2X STACKED PLATES ATOP BEAM AS REQ'D. FASTEN PLATES IN SUCCESSION W/ (2) 3"x10x120" NAILS @ 8" O.C.



**MULHERN+KULP**  
RESIDENTIAL STRUCTURAL ENGINEERING  
3300 Borekville Ave, Building 4 - Ambler, PA 19002  
p. 215-948-3001 • [mulhern@kulp.com](mailto:mulhern@kulp.com)  
NC LICENSE #C-3825



SK project number: 126-24045

Project mgr: JTR

Drawn by: JAD

Issue date: 03-19-25

REVISIONS:

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |



SD2.I REFERS TO SD2.IA FOR  
LVL/PSL/LSL BEAMS OR SD2.IB  
FOR FLITCH BEAMS OR SD2.IC  
FOR STEEL BEAMS

## LEGEND

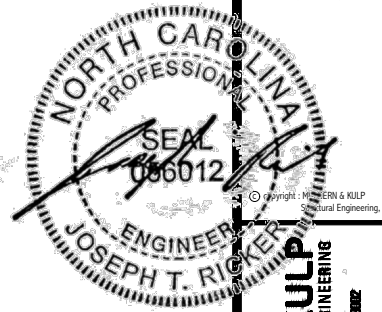
-  INTERIOR BEARING WALL
  -  BEARING WALL ABOVE
  -  BEAM / HEADER
  -  INDICATES SHEAR WALL & EXTENT
  -  EXTENT OF OVERFRAMING
- 1L METAL HANGER
- \* INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
-  INDICATES HOLD-DOWN OR STRAP. REFER TO SCHEDULE.

REFER TO SO.0 FOR  
TYPICAL STRUCTURAL NOTES  
& SCHEDULES

**CAMPBELL RIDGE**  
LOT 23 - STONEHAVEN I  
RALEIGH, NC

meet:

**S3.0**



**MULHERN+KULP**  
RESIDENTIAL STRUCTURAL ENGINEERING  
300 Dunsmuir Ave. Building 4 - Jambler, PA 15082  
P: 715-948-5001 • mulhern+kulp.com  
NC LICENSE #C-3825



M&K project number:  
126-24045

project mgr: JTR  
drawn by: JAD  
issue date: 03-19-25

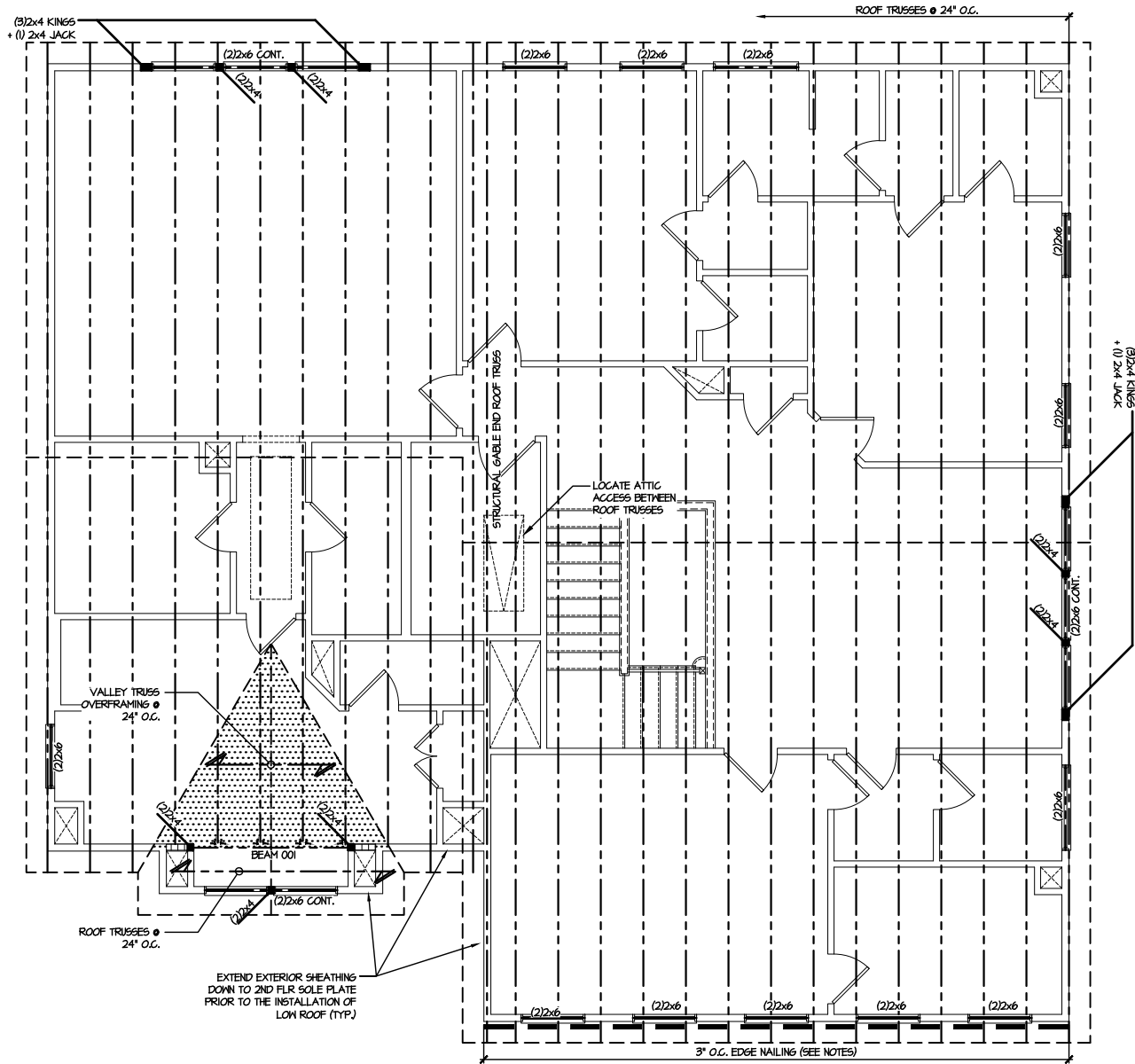
REVISIONS:

**DRB**  
**HOMES**

ROOF FRAMING PLANS  
CAMPBELL RIDGE  
LOT 23 - STONEHAVEN 1  
RALEIGH, NC

sheet:

**S4.0**



**1 ROOF FRAMING PLAN**  
SCALE: 1/8"=1'-0"

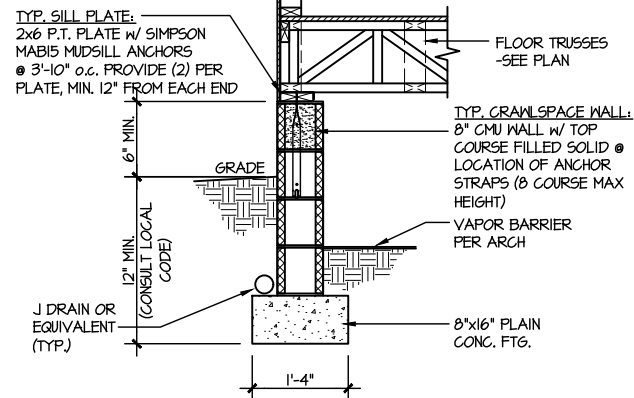
**LEGEND**

- INTERIOR BEARING WALL
- BEARING WALL ABOVE
- BEAM / HEADER
- INDICATES SHEAR WALL & EXTENT
- EXTENT OF OVERFRAMING
- JL METAL HANGER
- \* INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
- INDICATES HOLD-DOWN OR STRAP. REFER TO SCHEDULE.

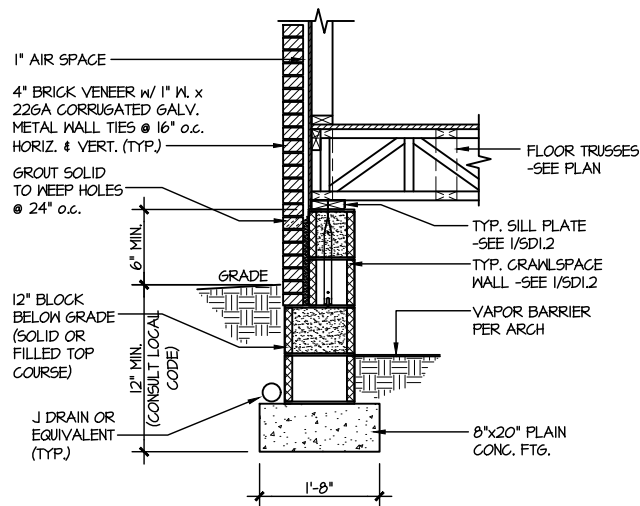
REFER TO 50.0 FOR  
TYPICAL STRUCTURAL NOTES  
& SCHEDULES



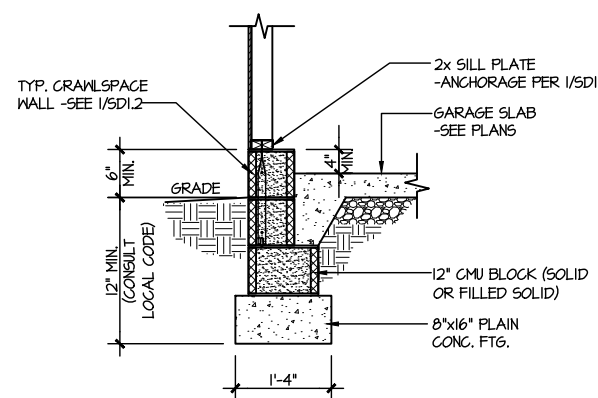
ALT. TO MUDSILL ANCHORS:  
1/2" DIA. x 10" LONG A.B. @ 6'-0" o.c.



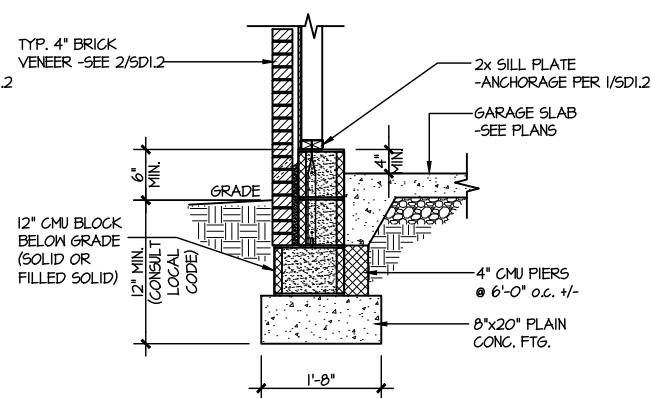
1 TYPICAL CRAWLSPACE FOUNDATION  
SCALE: 3/8"=1'-0"



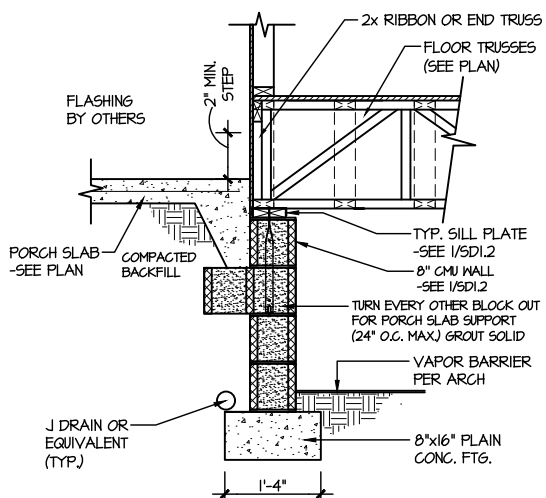
2 TYPICAL CRAWLSPACE FOUNDATION  
SCALE: 3/8"=1'-0" w/ BRICK VENEER



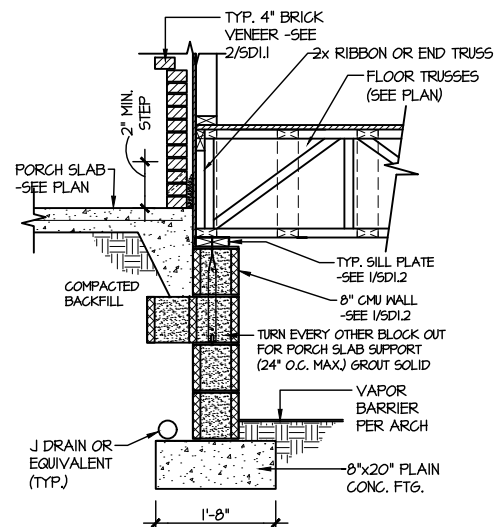
3 TYPICAL GARAGE FOUNDATION  
SCALE: 3/8"=1'-0"



4 TYPICAL GARAGE FOUNDATION  
SCALE: 3/8"=1'-0" w/ BRICK VENEER

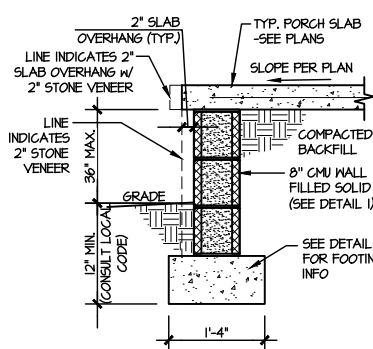


5 TYPICAL CRAWLSPACE FOUNDATION  
@ PORCH/PATIO SLAB  
SCALE: 3/8"=1'-0"  
(REFER TO DETAIL 12 FOR WOOD PORCH OPTION)

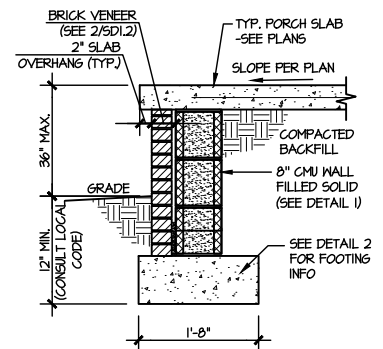


6 TYPICAL CRAWLSPACE FOUNDATION  
@ PORCH/PATIO SLAB  
SCALE: 3/8"=1'-0" w/ BRICK VENEER

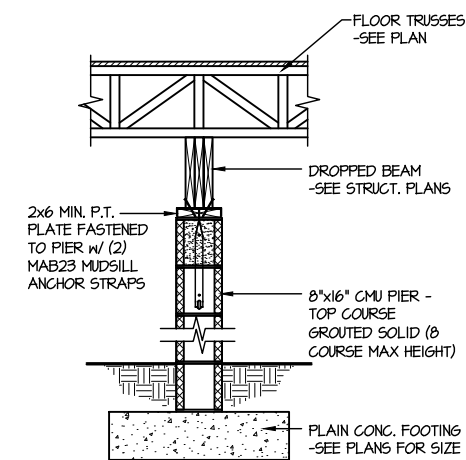
PLAIN CONC. FOOTINGS AS DIMENSIONED & SHOWN ARE MINIMUM SIZES REQUIRED & HAVE BEEN ENGINEERED. ADDITION OF CONTINUOUS REBAR OR LARGER FOOTINGS MAY BE PROVIDED AT THE DISCRETION OF THE BUILDER.



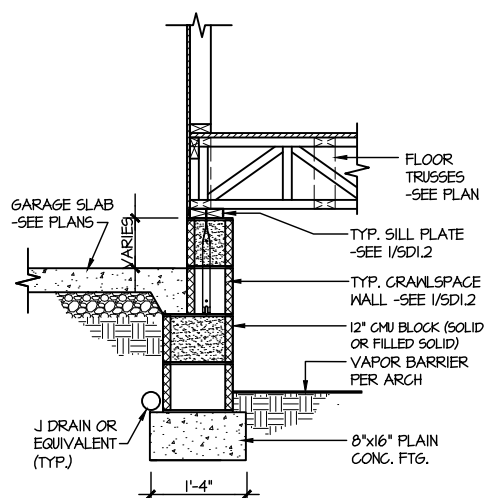
7A TYP. FOOTING @ PORCH SLAB  
SCALE: 3/8"=1'-0"



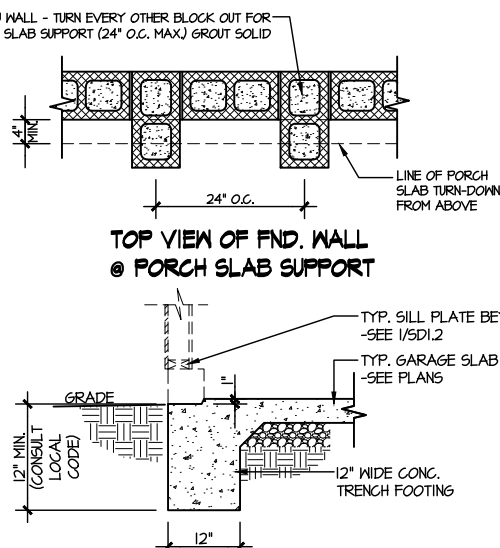
7B TYP. FOOTING @ PORCH SLAB  
SCALE: 3/8"=1'-0" w/ BRICK VENEER



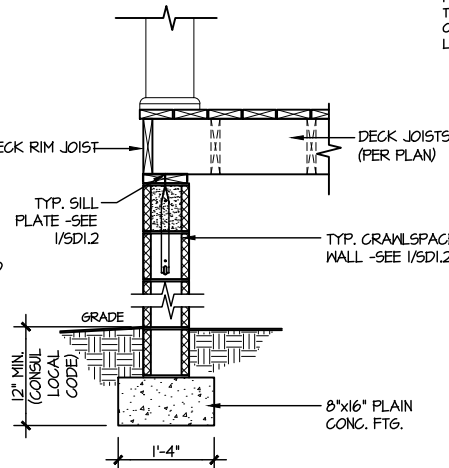
8 TYPICAL CRAWLSPACE FND.  
@ INTERIOR PIER  
SCALE: 3/8"=1'-0"



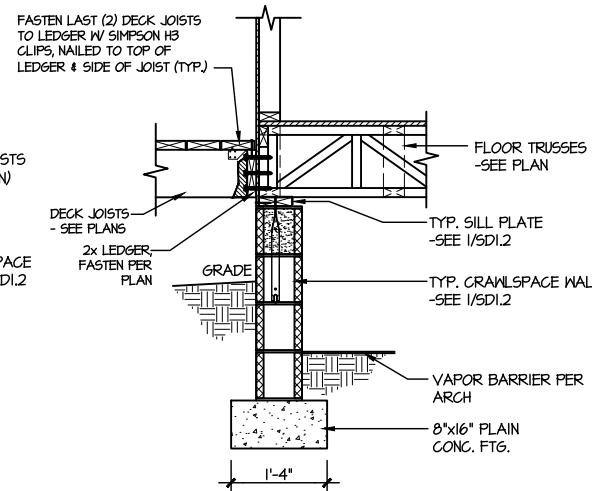
9 TYPICAL CRAWLSPACE FOUNDATION  
@ GARAGE  
SCALE: 3/8"=1'-0"



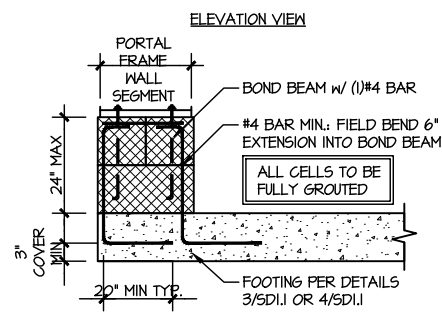
10 TYPICAL SLAB ON GRADE GARAGE  
ENTRY @ PERIMETER FOOTING  
SCALE: 3/8"=1'-0"



11 TYPICAL CRAWLSPACE FOUNDATION  
@ WOOD PORCH/DECK PERIMETER  
SCALE: 3/8"=1'-0"



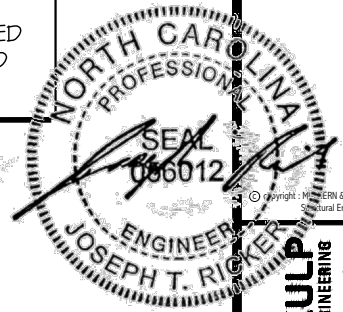
12 TYPICAL CRAWLSPACE FOUNDATION  
@ WOOD PORCH/DECK  
SCALE: 3/8"=1'-0"



A GARAGE PORTAL FRAME STEM  
WALL REINFORCEMENT  
SCALE: 3/8"=1'-0"

LETTERED DETAILS ARE TYPICAL FOR THIS HOME & SHALL BE IMPLEMENTED IN ALL APPLICABLE AREAS. THESE DETAILS ARE NOT "CUT" ON THE PLANS.

NUMBERED DETAILS ARE PLAN SPECIFIC AND ARE ONLY REQUIRED WHERE SPECIFICALLY INDICATED ("CUT") ON THE PLANS.



3/20/25

Copyright: MULHERN+KULP

MULHERN+KULP  
RESIDENTIAL STRUCTURAL ENGINEERING  
300 Dunsmuir Ave. Building 4 - Asheville, NC 28802  
P: 715-948-8001 • mulhern+kulp.com  
NC LICENSE #C-3825

M&K project number:  
126-24045

project mgr: JTR  
drawn by: JAD  
issue date: 03-19-25

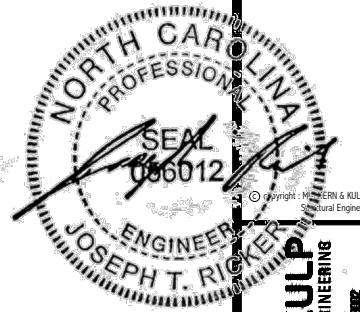
REVISIONS:

DRB  
HOMES

FOUNDATION DETAILS  
CAMPBELL RIDGE  
LOT 23 - STONEHAVEN 1  
RALEIGH, NC

sheet:

SD1.2



**MULHERN+KULP**  
RESIDENTIAL STRUCTURAL ENGINEERING  
300 Dunsmuir Ave. Building 4 - Asheville, PA 18002  
P 715-948-5001 • mulhern+kulp.com  
NC LICENSE #C-3825

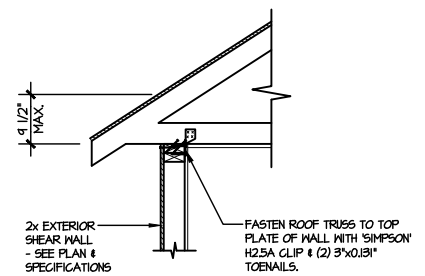
M&K project number:  
**126-24045**  
project mgr: JTR  
drawn by: JAD  
issue date: 03-19-25

REVISIONS:

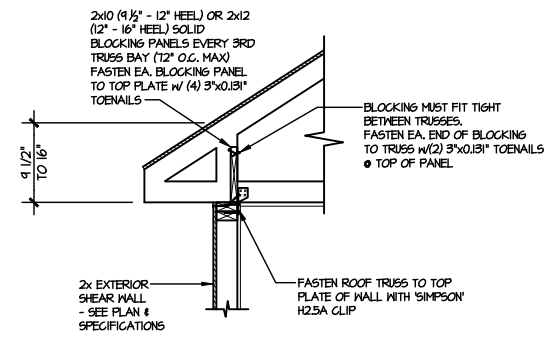
**DRB**  
**HOMES**

FRAMING DETAILS  
**CAMPBELL RIDGE**  
LOT 23 - STONEHAVEN 1  
RALEIGH, NC

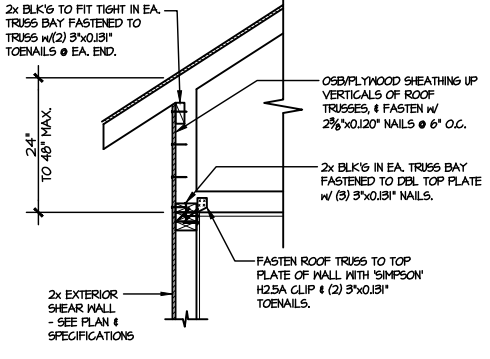
sheet:  
**SD2.0**



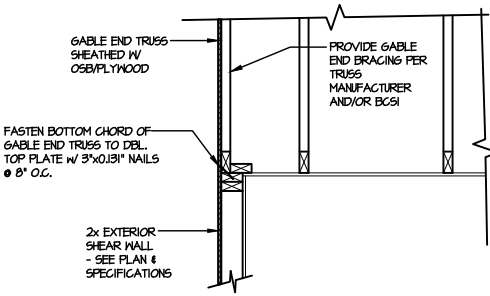
**TYPICAL SHEAR  
TRANSFER DETAIL @ ROOF**  
**(A1)** SCALE: 3/8"=1'-0"  
HEEL HEIGHT LESS THAN 1 1/2"  
NO BLOCKING REQ'D



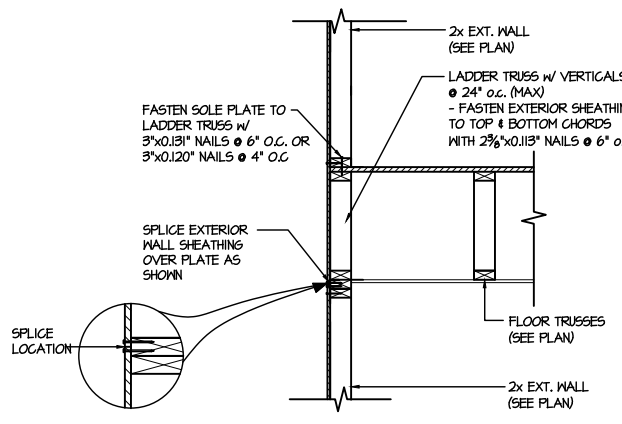
**TYPICAL SHEAR  
TRANSFER DETAIL @ ROOF**  
**(A2)** SCALE: 3/8"=1'-0"  
HEEL HEIGHT BETWEEN 1 1/2" - 16"  
BLOCKING REQ'D



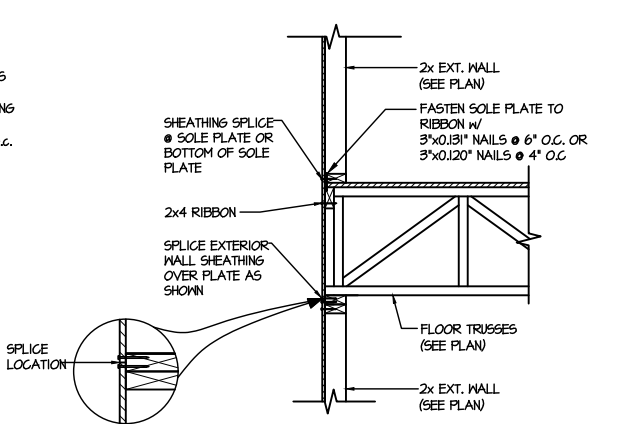
**TYPICAL SHEAR TRANSFER  
DETAIL @ RAISED HEEL TRUSS**  
**(A3)** SCALE: 3/8"=1'-0"  
HEEL HEIGHT UP TO 48" MAX.



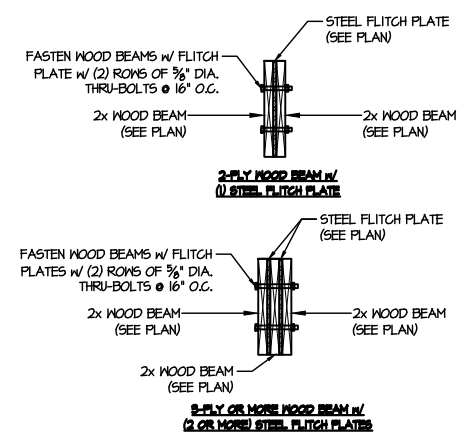
**TYPICAL GABLE END DETAIL**  
**(B)** SCALE: 3/8"=1'-0"



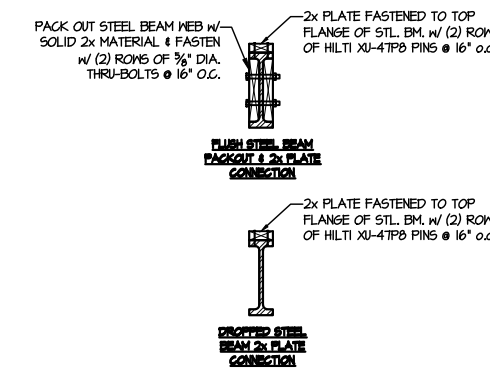
**TYPICAL SHEAR TRANSFER DETAIL  
BETWEEN FLOORS @ EXTERIOR WALL**  
**(C1)** SCALE: 3/8"=1'-0"  
PARALLEL FRMS



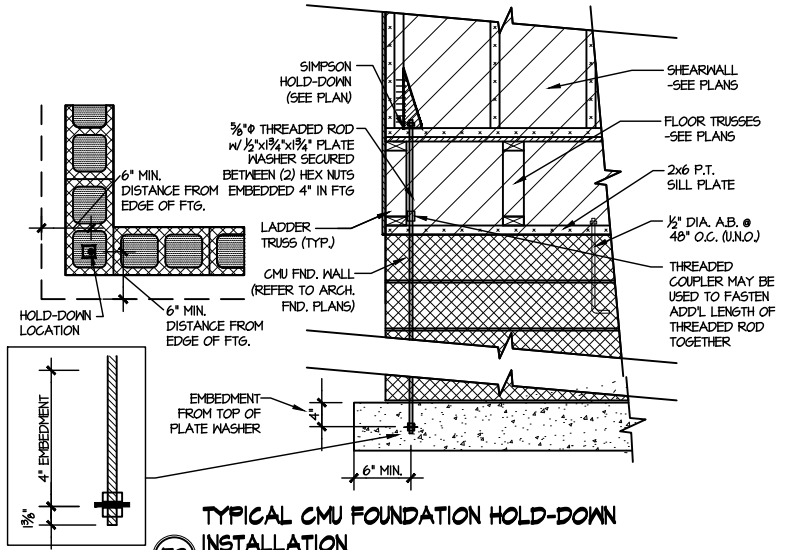
**TYPICAL SHEAR TRANSFER DETAIL  
BETWEEN FLOORS @ EXTERIOR WALL**  
**(C2)** SCALE: 3/8"=1'-0"  
PERPENDICULAR FRMS



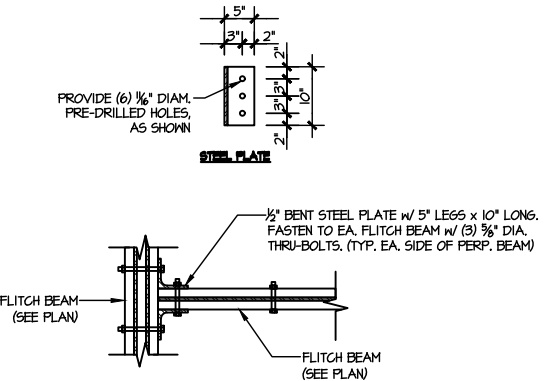
**TYPICAL FLITCH BEAM CONNECTION DETAIL**  
**(D)** SCALE: 3/4"=1'-0"



**TYPICAL STEEL BEAM CONNECTION DETAIL**  
**(E)** SCALE: 3/4"=1'-0"



**TYPICAL CMU FOUNDATION HOLD-DOWN  
INSTALLATION**  
**(F2)** SCALE: N.T.S.  
(CORNER SHOWN - APPLICABLE TO ALL CONDITIONS)

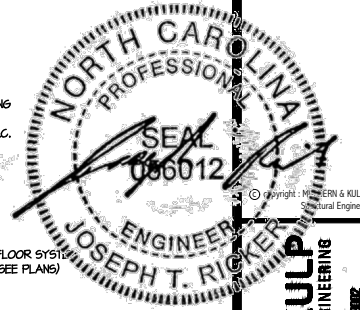


**TYPICAL FLITCH BEAM TO FLITCH BEAM  
CONNECTION DETAIL**  
**(I)** SCALE: 3/4"=1'-0"

LETTERED DETAILS ARE TYPICAL FOR THIS HOME & SHALL BE IMPLEMENTED IN ALL APPLICABLE AREAS. THESE DETAILS ARE NOT "CUT" ON THE PLANS.

NUMBERED DETAILS ARE PLAN SPECIFIC AND ARE ONLY REQUIRED WHERE SPECIFICALLY INDICATED ("CUT") ON THE PLANS.





**MULHERN+KULP**  
RESIDENTIAL STRUCTURAL ENGINEERING  
300 Riverside Ave. Building 4 - Asheville, PA 18027  
P: 715-948-8001 • mulhern+kulp.com  
NC LICENSE #C-3825

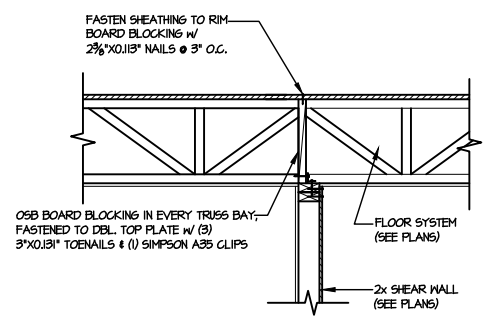
M&K project number:  
126-24045  
project mgr: JTR  
drawn by: JAD  
issue date: 03-19-25

REVISIONS:

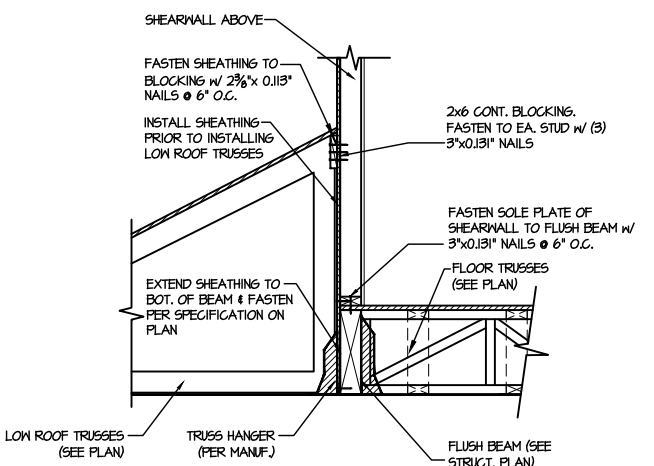
**DRB**  
**HOMES**

FRAMING DETAILS  
CAMPBELL RIDGE  
LOT 23 - STONEHAVEN 1  
RALEIGH, NC

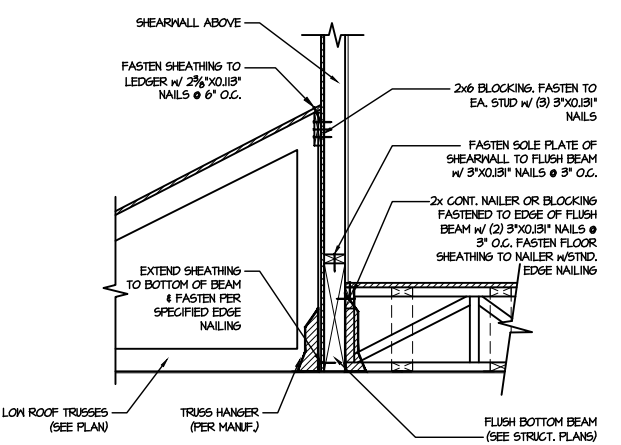
sheet:  
**SD2.1A**



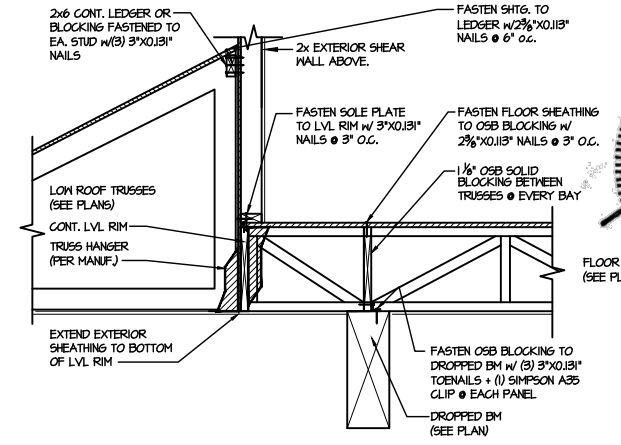
**1** **SHEAR TRANSFER DETAIL @ INTERIOR SHEAR WALL**  
SCALE: N.T.S. PERPENDICULAR TO FRAMING



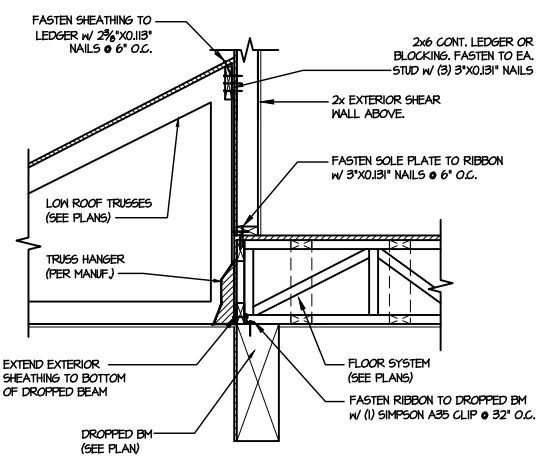
**2** **SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE**  
SCALE: 3/4"=1'-0"



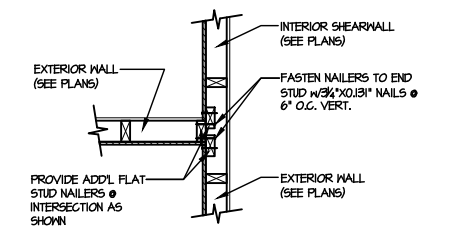
**3** **SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE**  
SCALE: 3/4"=1'-0"



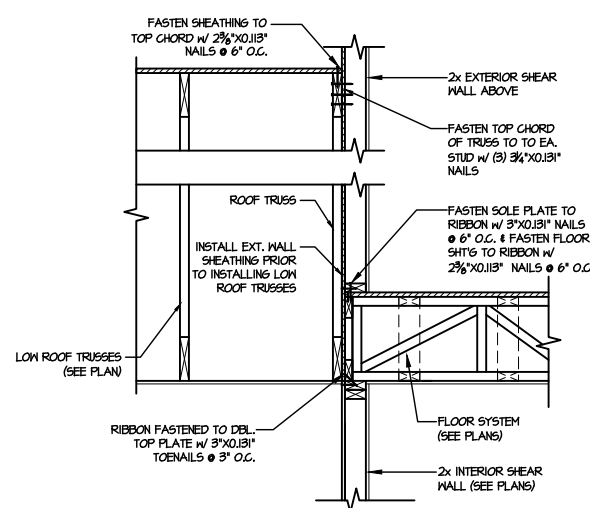
**4** **TYPICAL SHEAR TRANSFER DETAIL @ EXTERIOR WALL ABOVE GARAGE**  
SCALE: 3/4"=1'-0"



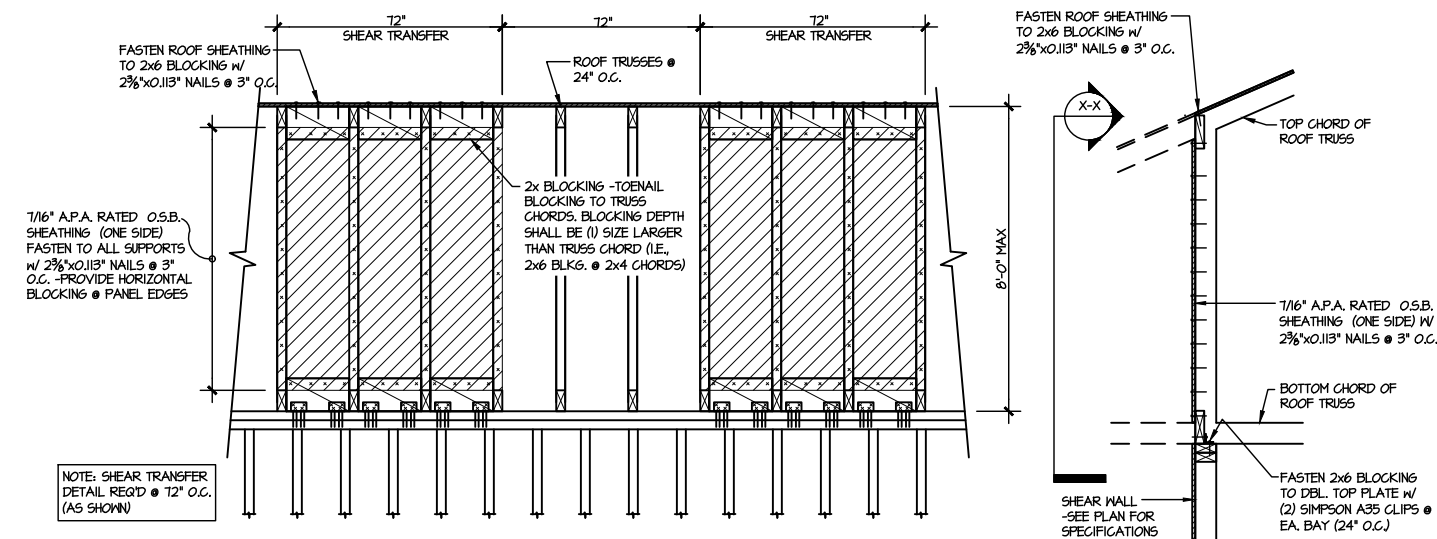
**5** **TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL**  
SCALE: 3/4"=1'-0"



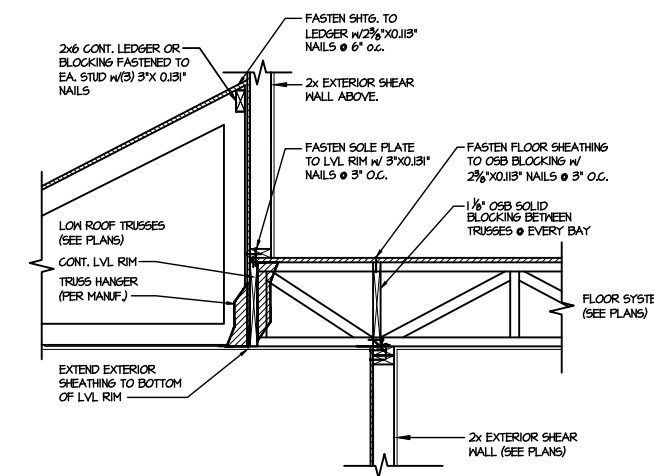
**7** **SHEAR TRANSFER DETAIL @ INTERSECTING INT. SHEARWALL**  
SCALE: 3/4"=1'-0" SHG. ON SAME FACE



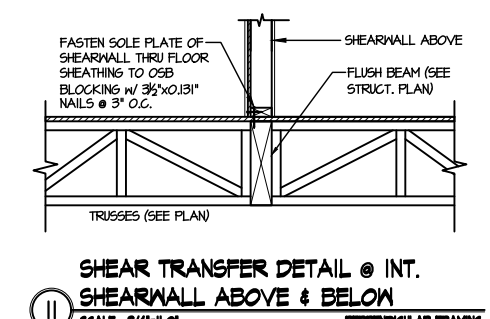
**8** **TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL**  
SCALE: 3/4"=1'-0"



**9** **TYPICAL SHEAR TRANSFER DETAIL @ INTERIOR SHEARWALL**  
SCALE: 3/4"=1'-0"



**10** **TYPICAL SHEAR TRANSFER DETAIL @ EXTERIOR WALL CANT'D ABOVE**  
SCALE: 3/4"=1'-0"

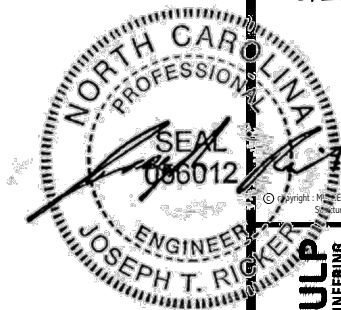


**11** **SHEAR TRANSFER DETAIL @ INT. SHEARWALL ABOVE & BELOW**  
SCALE: 3/4"=1'-0" PERPENDICULAR FRAMING









**MULHERN+KULP**  
RESIDENTIAL STRUCTURAL ENGINEERING  
300 Remick Ave. Building 4 - Jambler, PA 15062  
P 715-948-5001 • mulhern+kulp.com  
NC LICENSE #C-3825

M&K project number:  
126-24045

project mgr: JTR  
drawn by: JAD  
issue date: 03-19-25

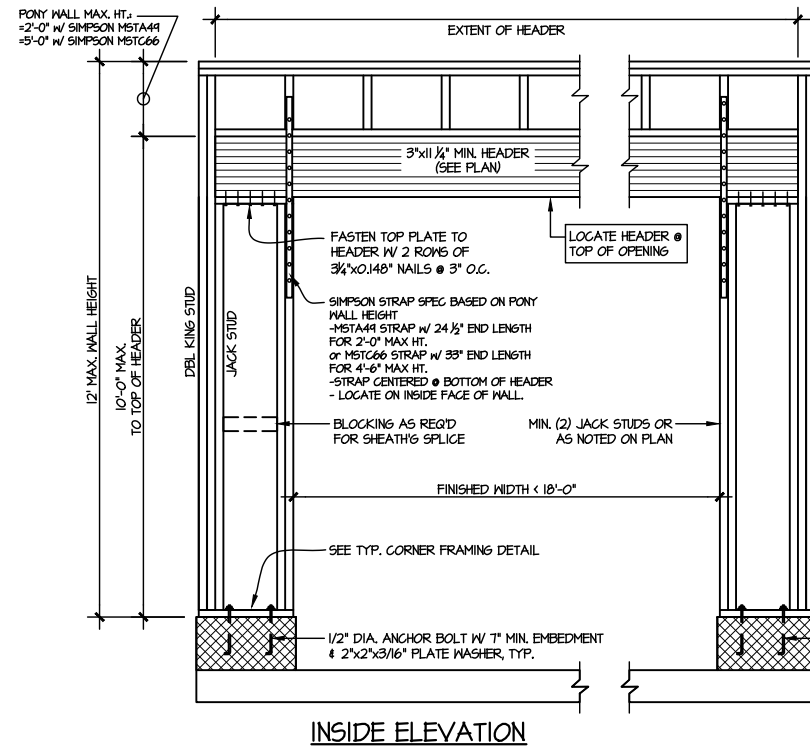
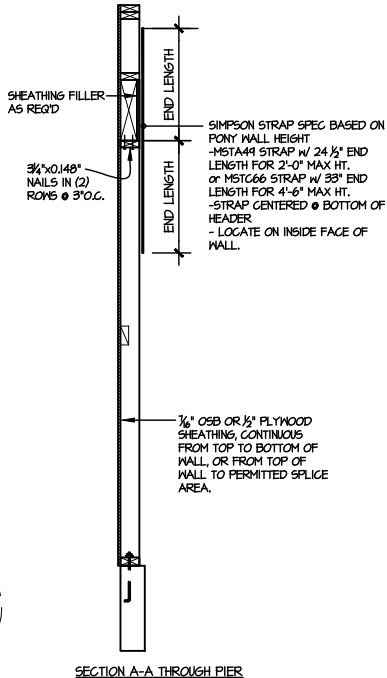
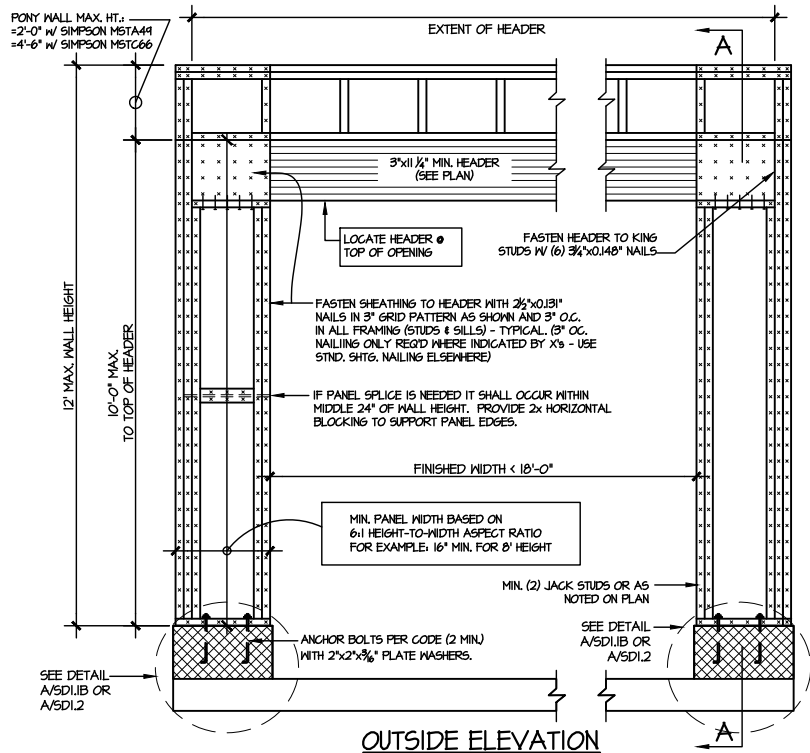
REVISIONS:

**DRB**  
**HOMES**

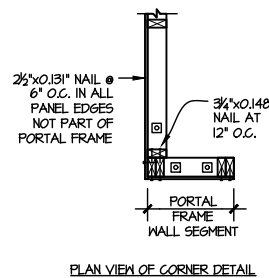
FRAMING DETAILS  
CAMPBELL RIDGE  
LOT 23 - STONEHAVEN 1  
RALEIGH, NC

sheet:

**SD2.2**

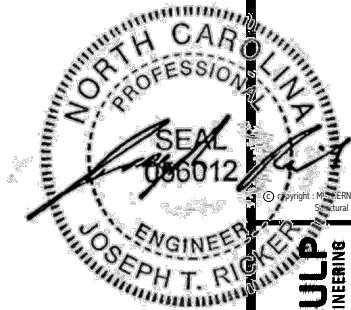


NOTE: ALL SHEATHABLE AREAS OF EXTERIOR WALL SHALL BE FULLY SHEATHED WITH 1/2" PLYWOOD OR 3/4" OSB



ALTERNATIVE TO 1/2" DIA. ANCHOR BOLT:  
1) 1/2" DIA. THREADED ROD EPOXY SET w/ 4 1/2" EMBED. (MIN UTILIZING HILTI HY200 EPOXY ANCHORING SYSTEM (OR EQUAL))

**TWO SIDED GARAGE PORTAL FRAME BRACING**  
**ELEVATION ON CMU STEM**  
SCALE: N.T.S.



**MULHERN+KULP**  
RESIDENTIAL STRUCTURAL ENGINEERING  
300 Dismalside Ave. Building 4 - Asheville, NC 28802  
P 715-948-5001 • mulhern+kulp.com  
NC LICENSE #C-3825



M&K project number:

126-24045

project mgr: JTR

drawn by: JAD

issue date: 03-19-25

REVISIONS:

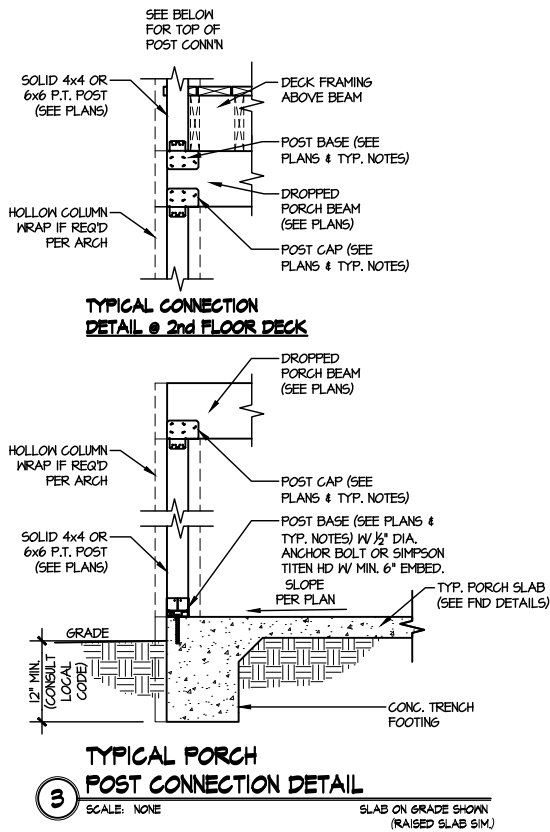
|  |
|--|
|  |
|  |
|  |
|  |
|  |

**DR3**  
**HOMES**

FRAMING DETAILS  
CAMPBELL RIDGE  
LOT 23 - STONEHAVEN 1  
RALEIGH, NC

sheet:

**SD3.0**





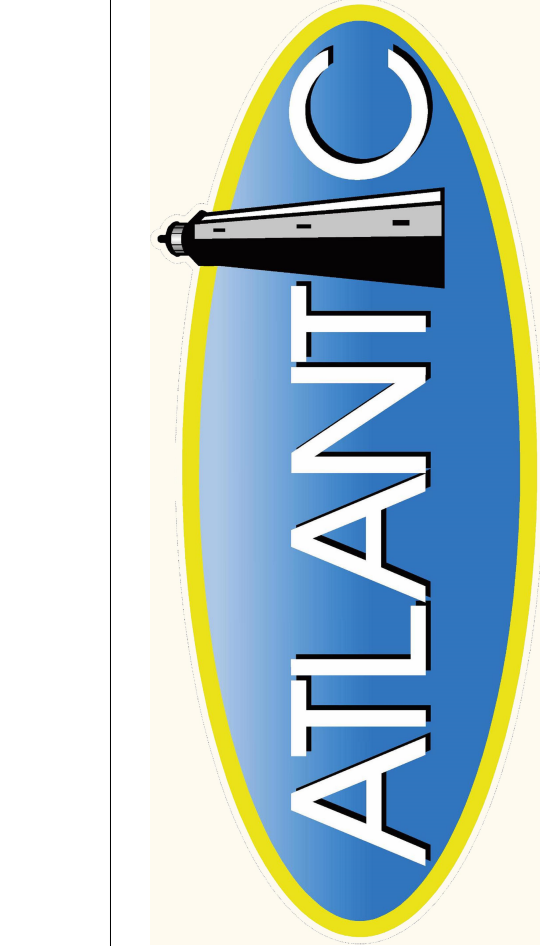
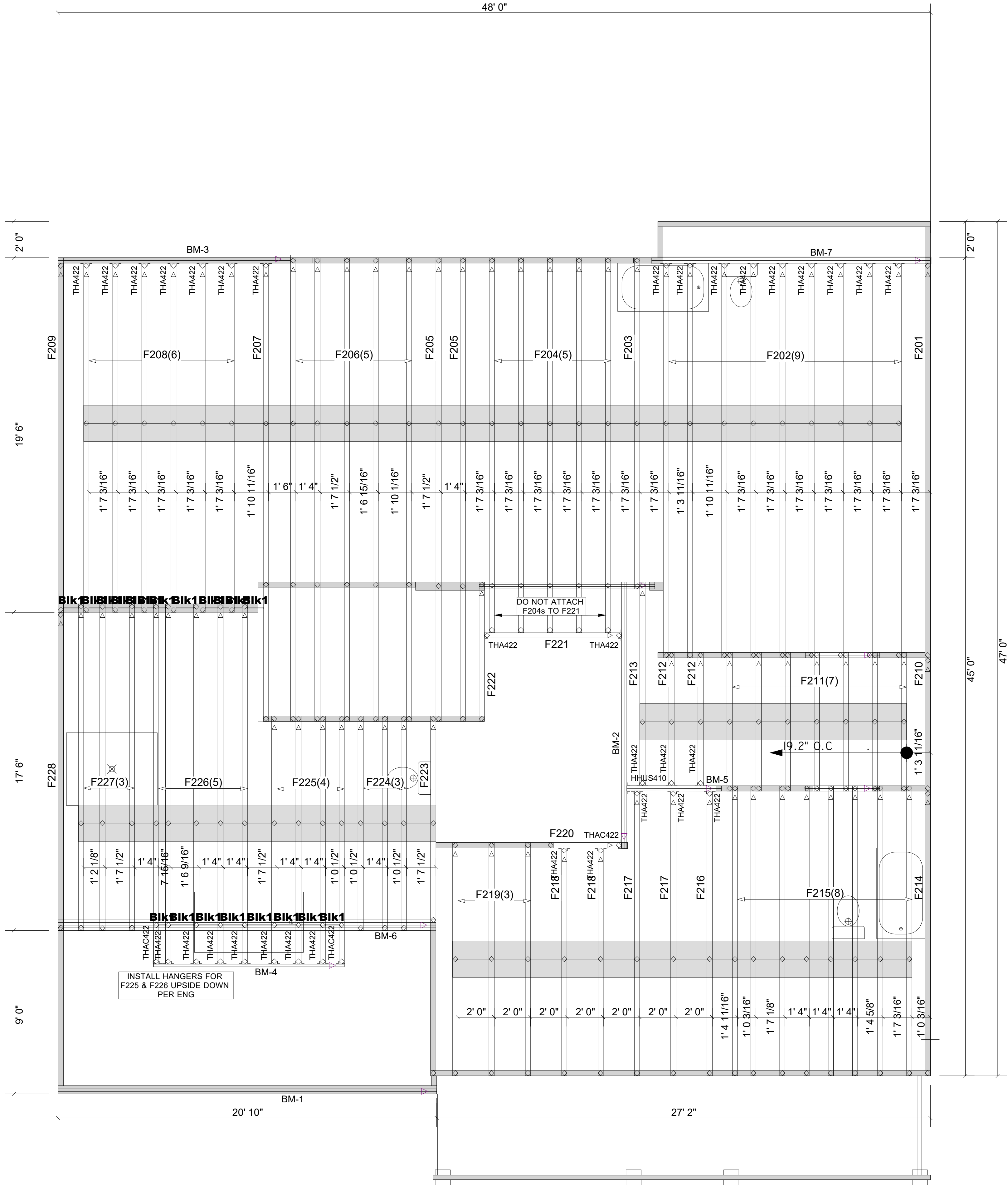




| Products |       |                                         |         |        |        |
|----------|-------|-----------------------------------------|---------|--------|--------|
| Net Qty  | Plies |                                         | Product | Length | PlotID |
| 2        | 2     | 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP |         | 22' 0" | BM-1   |
| 2        | 2     | 1-3/4" x 14" VERSA-LAM® 2.0 3100 SP     |         | 16' 0" | BM-2   |
| 3        | 3     | 1-3/4" x 14" VERSA-LAM® 2.0 3100 SP     |         | 14' 0" | BM-3   |
| 1        | 1     | 1-3/4" x 14" VERSA-LAM® 2.0 3100 SP     |         | 12' 0" | BM-4   |
| 2        | 2     | 1-3/4" x 14" VERSA-LAM® 2.0 3100 SP     |         | 6' 0"  | BM-5   |
| 4        | 4     | 1-3/4" x 18" VERSA-LAM® 2.0 3100 SP     |         | 22' 0" | BM-6   |
| 2        | 2     | 1-3/4" x 18" VERSA-LAM® 2.0 3100 SP     |         | 16' 0" | BM-7   |
| 2        | 1     | 1-1/8" x 14" BC RIM BOARD OSB           |         | 12' 0" | Blk1   |

| Truss Connector Total List |         |         |  |
|----------------------------|---------|---------|--|
| Qty                        | Product | Manuf   |  |
| 33                         | THA422  |         |  |
| 3                          | THAC422 | Simpson |  |

| Connector Summary |         |         |     |
|-------------------|---------|---------|-----|
| Flange            | Product | Manuf   | Qty |
| None              | HHUS410 | Simpson | 1   |



Moncks Corner/Easley, SC (800) 475-3999  
Sparta, NC (336) 372-2226

REVISIONS:

▲ = LEFT END OF TRUSS

FOR PERMIT

| FLOOR             |                           |                                 |  |
|-------------------|---------------------------|---------------------------------|--|
| Client:           | DRB GROUP-RALEIGH         |                                 |  |
| Job:              | LOT 0.0023 CAMPBELL RIDGE |                                 |  |
| Plan Information: |                           |                                 |  |
| STONEHAVEN-1      |                           |                                 |  |
| NOT TO SCALE      | Date: 03/14/25            |                                 |  |
| Drawn By: CGT     | Job #:                    | Sales Rep: KYLE GIBSON          |  |
|                   |                           | 25-2453-F02 Phone: 864-304-3282 |  |



