MIDDLETON-RALE

RALEIGH - LOT 00.0080 THE FARM AT NEILL'S CREEK

(MODEL# 2183)

173 WINDING CREEK DR.

ELEVATION 4 - GL

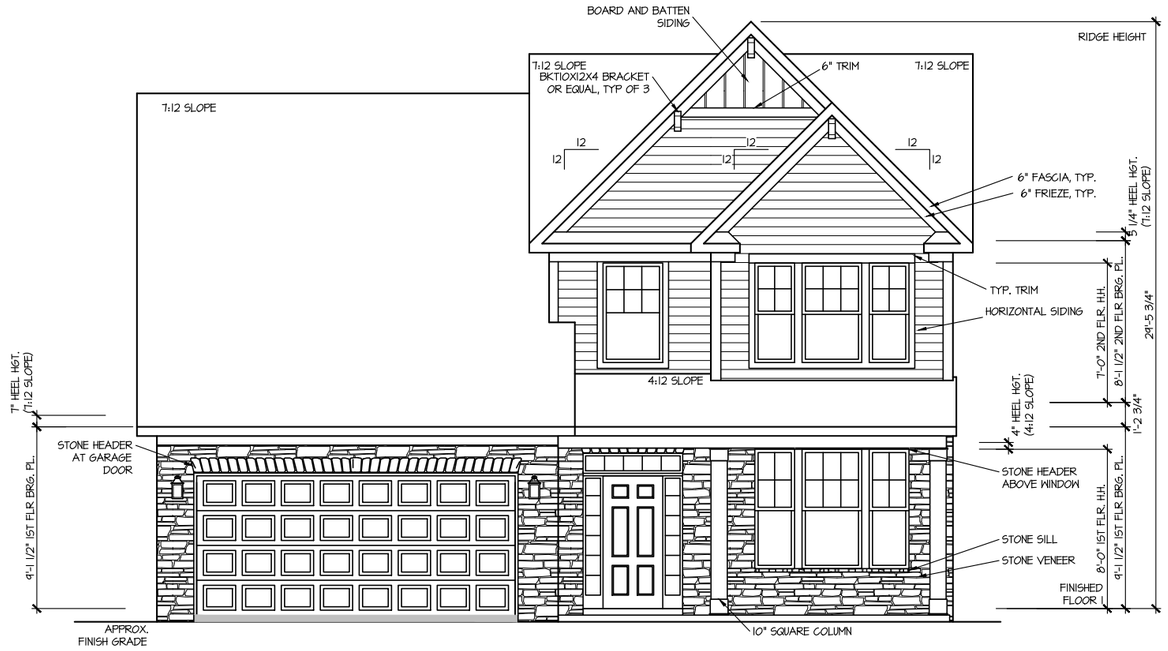
HOMES

INDEX

AREA CALCULATIONS	HEATED	COVERED / UNHEATED	UNCOVERED
ELEVATION 4			
FIRST FLOOR	1495 SF		
GARAGE		417 SF	
FRONT PORCH – ELEVATION 4		130 SF	
SECOND FLOOR	692 SF		
OPTIONS			
BONUS ROOM	310 SF		
SCREEN PORCH		124 SF	
TOTAL	2497 SF	671 SF	

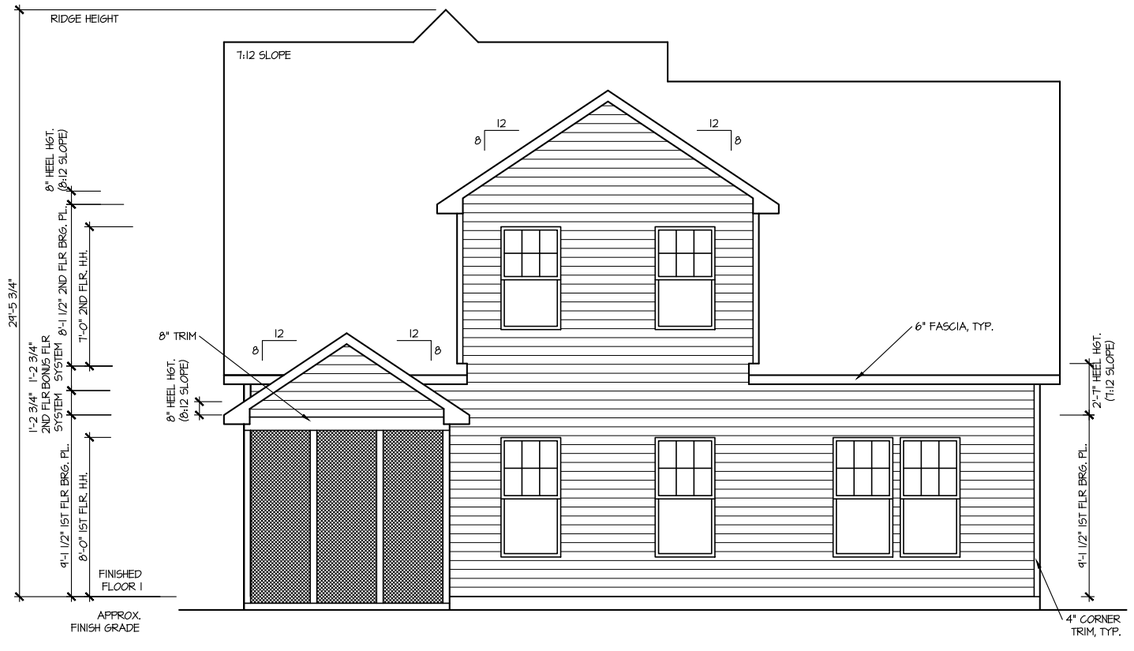
LOT SPECIFIC

1	LOT 00.0080	THE FARM AT NEILL'S CREEK
		MIDDLETON REV. RALE 1 ELEVATION 4
2	ADDRESS	173 WINDING CREEK DR LILLINGTON, NC 27546



FRONT ELEVATION 4

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



REAR ELEVATION 4

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

MASTER PLAN INFORMATION		
REVISION	DATE	UPDATED DATE
1-RALE	10-12-2018	04-20-2022

DRAWN BY: ITS

DATE: 07/22/2022

PLAN NO. 2183

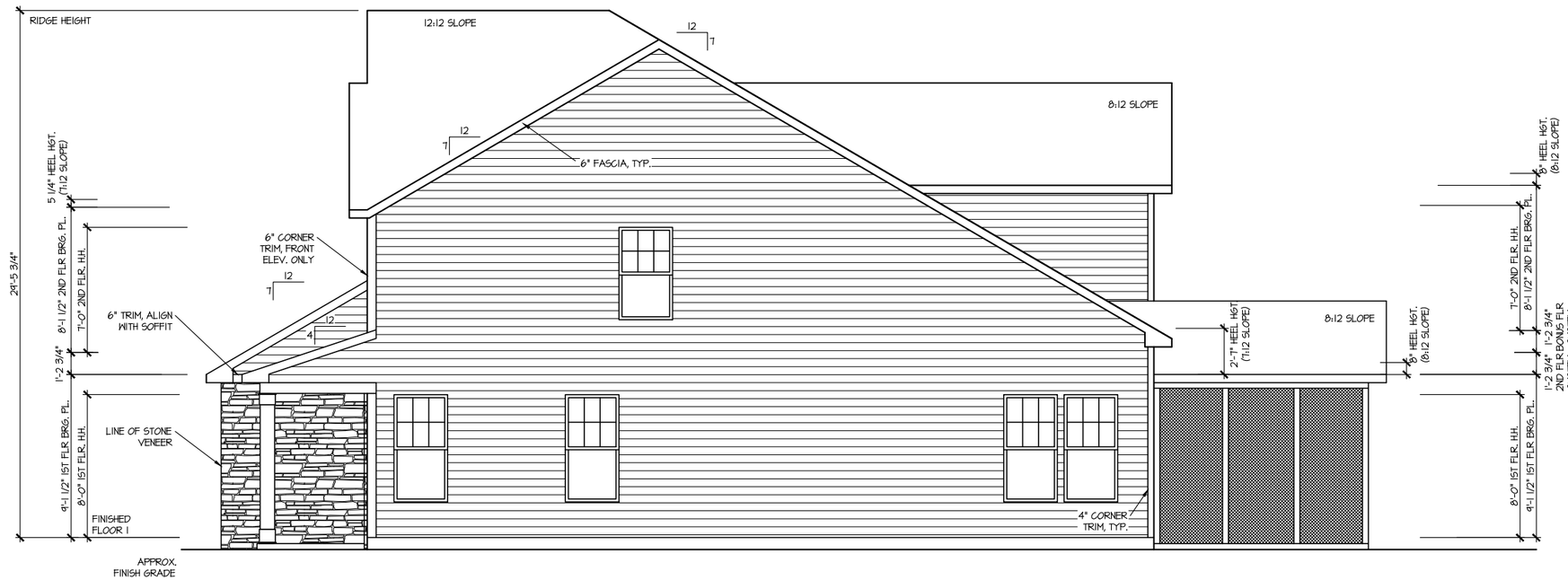
DRB HOMES

HOUSE NAME: MIDDLETON

DRAWING TITLE: FRONT & REAR ELEVATIONS

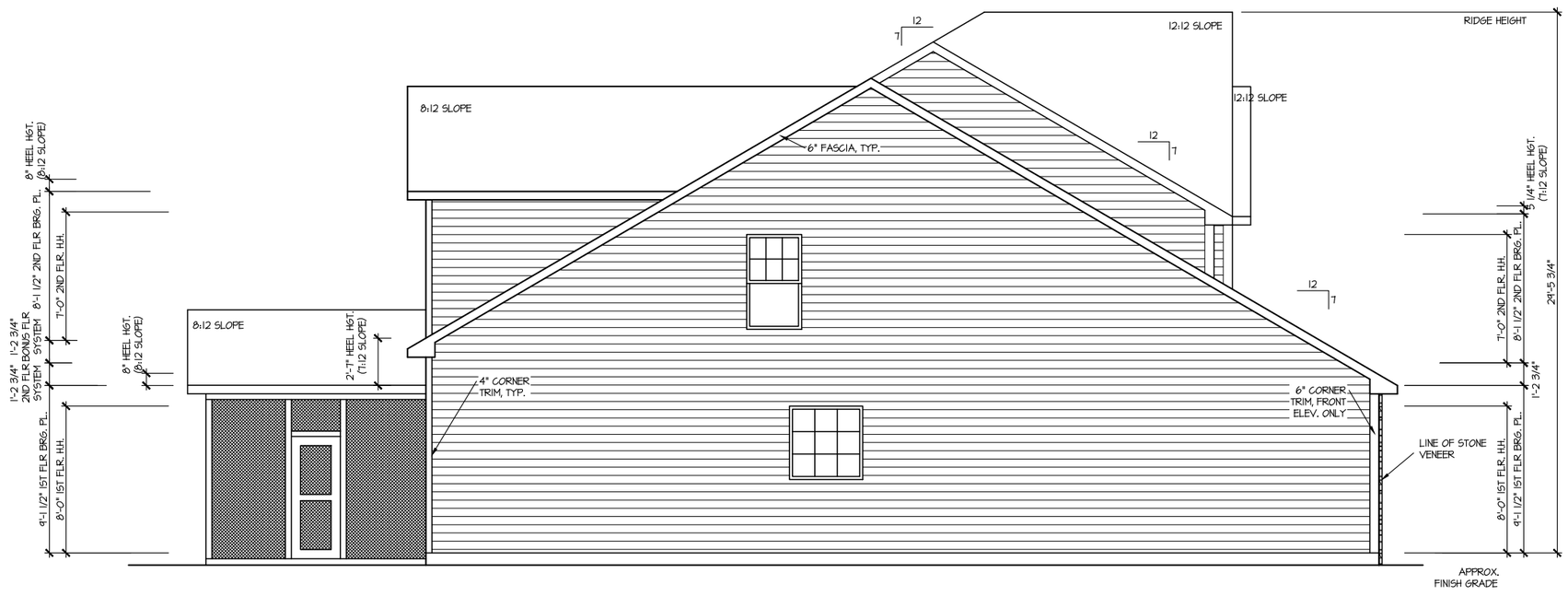
SHEET No. A1.1

FILE: Lot 00.0080.dwg DATE: 7/22/2022 9:35 AM



RIGHT ELEVATION 4

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



LEFT ELEVATION 4

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

FILE: Lot 00.0080.dwg DATE: 7/22/2022 9:35 AM

MASTER PLAN INFORMATION

REVISION	DATE
1-RALE	10-12-2018
UPDATED DATE	04-20-2022

DRAWN BY: ITS

DATE: 07/22/2022

PLAN NO. 2183

DRB HOMES

HOUSE NAME: MIDDLETON

DRAWING TITLE: RIGHT & LEFT ELEVATIONS

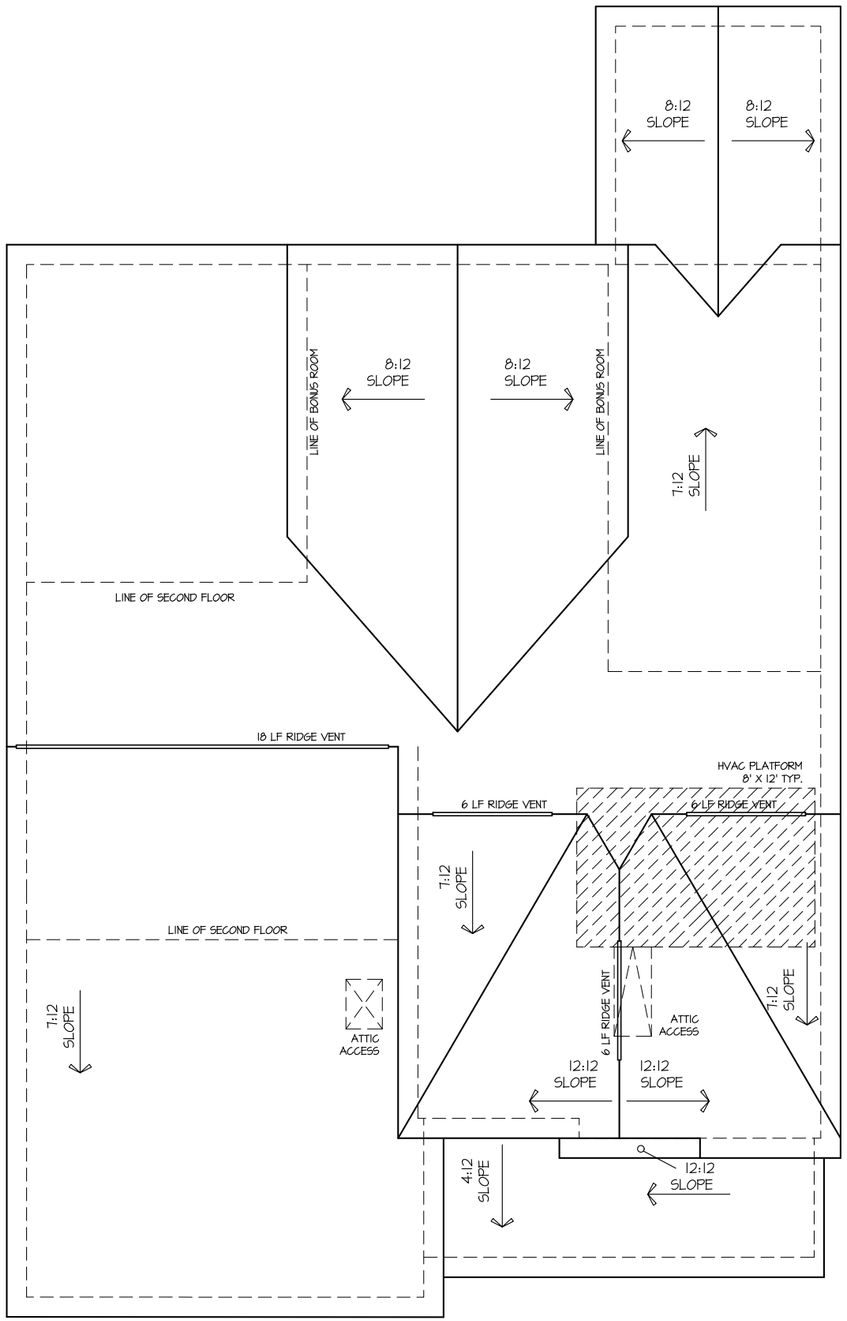
SHEET No. A1.2

ROOF VENTILATION CALCULATIONS:

ROOF AREA = 2102 SQ. FT.
OVERALL REQUIRED VENTILATION:
1 TO 150 = 14.01 SQ. FT.
1 TO 300 = 7.01 SQ. FT.
50-80% IN TOP THIRD = 3.50 - 5.61 SQ. FT. (1 TO 300)

NET FREE AREA OF VENTED SOFFIT = 5.7 SQ. IN / LINEAR FT.
NET FREE AREA OF RIDGE VENT = 18 SQ. IN/ LINEAR FT.

LOWER VENTING: (BOTTOM 2/3 RDS)
74 LINEAR FEET OF SOFFIT X 5.7 SQ. IN. = 2.93 SQ. FT.
UPPER VENTING: (TOP 1/3 RD)
36 LINEAR FEET OF RIDGE X 18 SQ. IN = 4.5 SQ. FT.
4.20 SQ. FT. BETWEEN 50% - 80%
(1 TO 300 ALLOWED)
TOTAL ROOF VENTILATION: 7.43 SQ. FT. > 7.01 SQ. FT. (RQD)



ROOF PLAN ELEV. 4

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

MASTER PLAN INFORMATION		
REVISION	DATE	UPDATED DATE
1-RALE	10-12-2018	04-20-2022

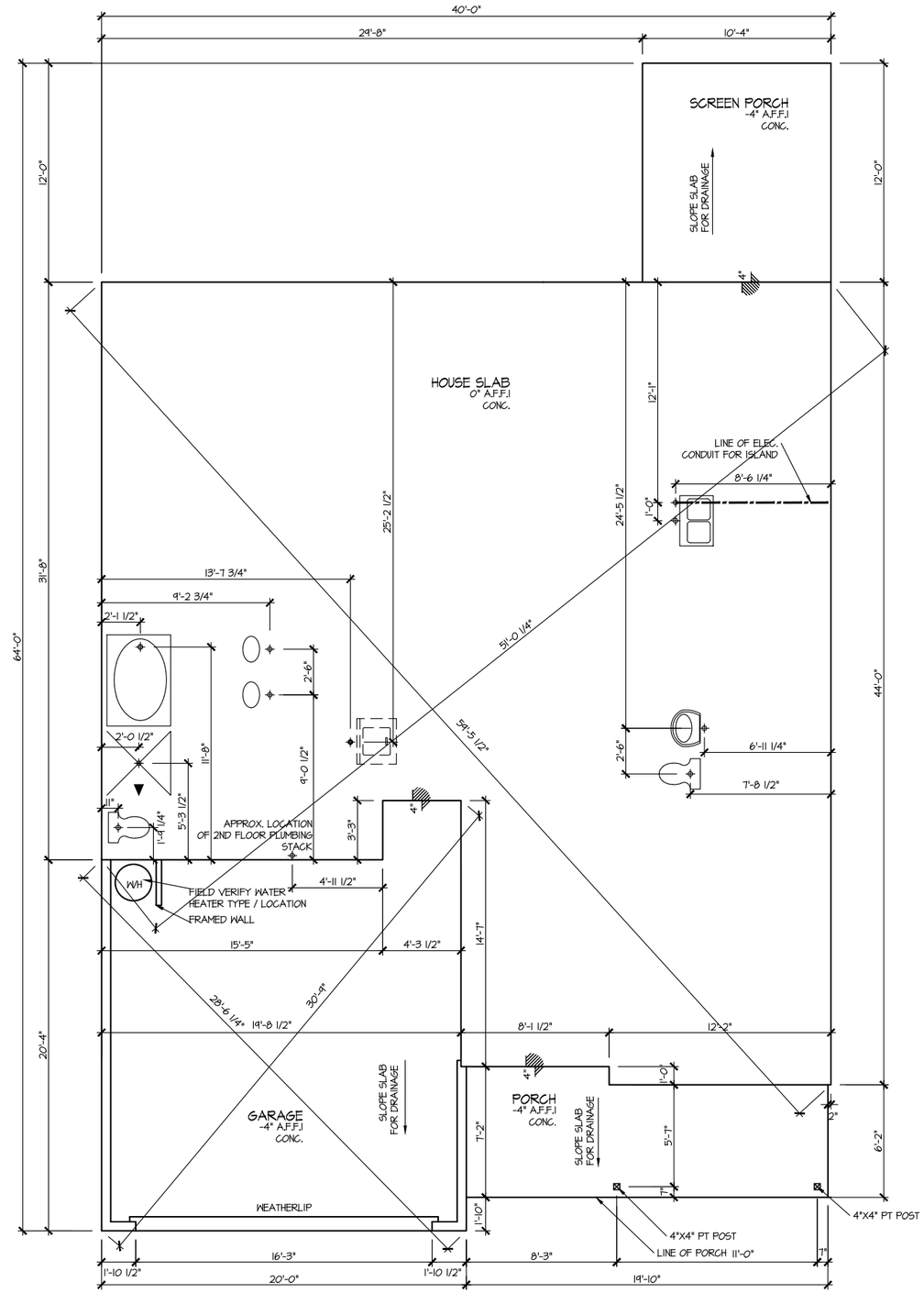
DRAWN BY: ITS
DATE: 07/22/2022
PLAN NO. 2183

DRB HOMES

HOUSE NAME: MIDDLETON
DRAWING TITLE: ROOF PLAN

SHEET No. A1.3

FILE: Lot 00.0080.dwg DATE: 7/22/2022 9:35 AM



ELEVATION 4
SLAB PLAN

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

MASTER PLAN INFORMATION		
REVISION	DATE	UPDATED DATE
1-RALE	10-12-2018	04-20-2022

DRAWN BY: ITS

DATE: 07/22/2022

PLAN NO. 2183

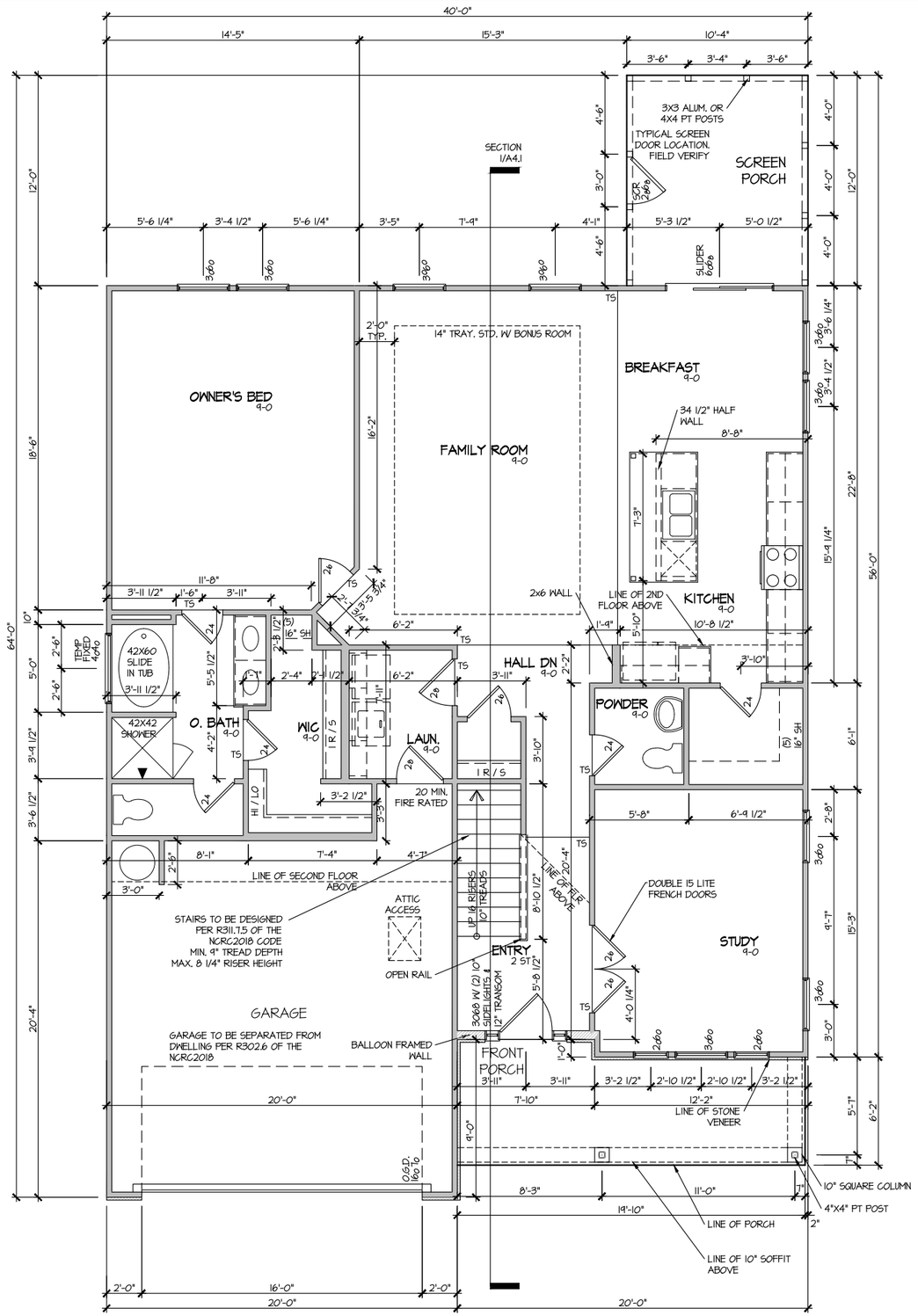
DRB HOMES

HOUSE NAME: MIDDLETON

DRAWING TITLE: SLAB PLAN

SHEET No. A2.1

FILE: Lot 00.0080.dwg DATE: 7/22/2022 9:35 AM



ELEVATION 4
FIRST FLOOR PLAN

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

MASTER PLAN INFORMATION		
REVISION	DATE	UPDATED DATE
1-RALE	10-12-2018	04-20-2022

DRAWN BY: ITS

DATE: 07/22/2022

PLAN NO. 2183

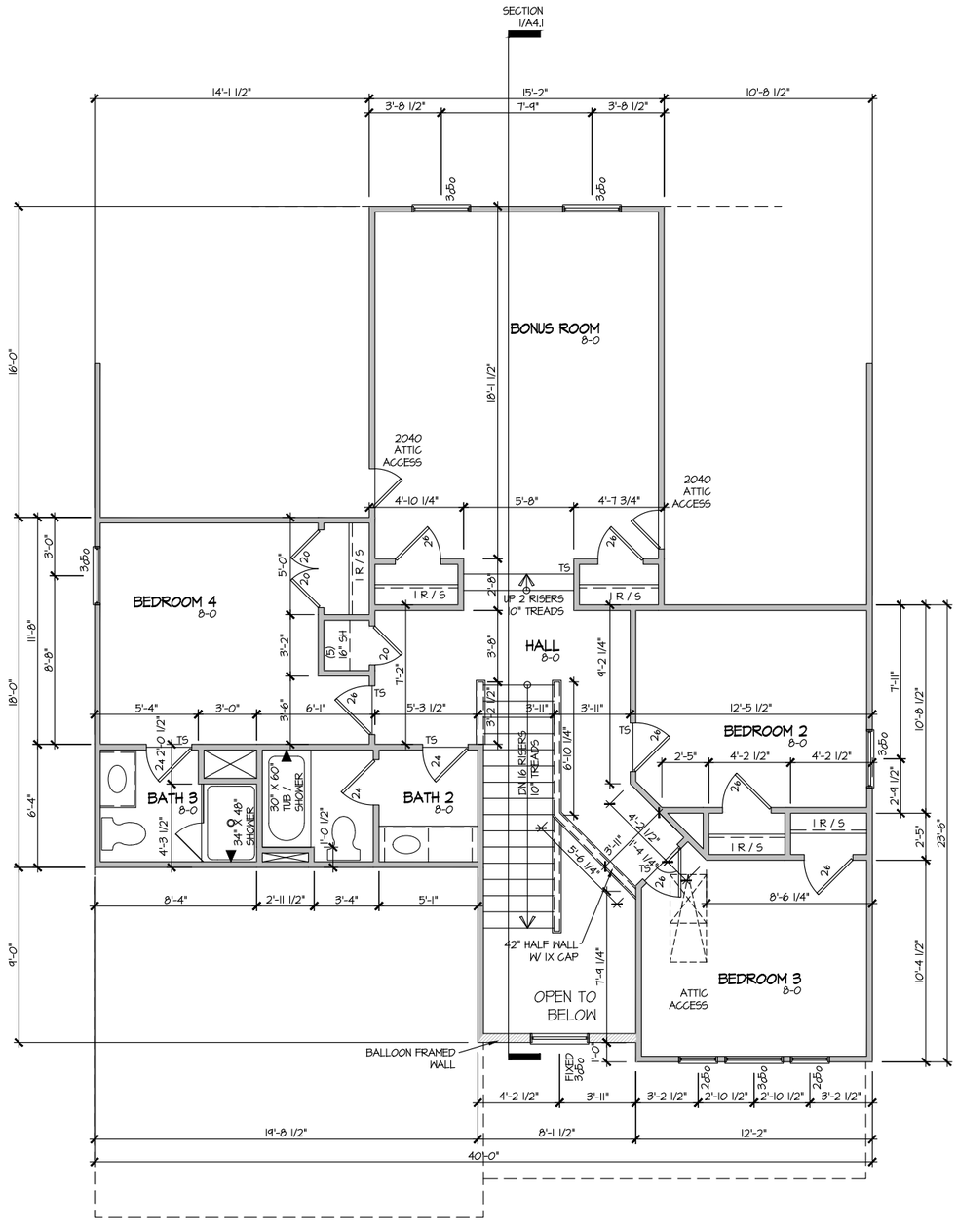
DRB HOMES

HOUSE NAME: MIDDLETON

DRAWING TITLE: FIRST FLOOR PLAN

SHEET No. A3.1

FILE: Lot 00.0080.dwg DATE: 7/22/2022 9:35 AM



ELEVATION 4
SECOND FLOOR PLAN

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

MASTER PLAN INFORMATION		
REVISION	DATE	UPDATED DATE
1-RALE	10-12-2018	04-20-2022

DRAWN BY: ITS

DATE: 07/22/2022

PLAN NO. 2183

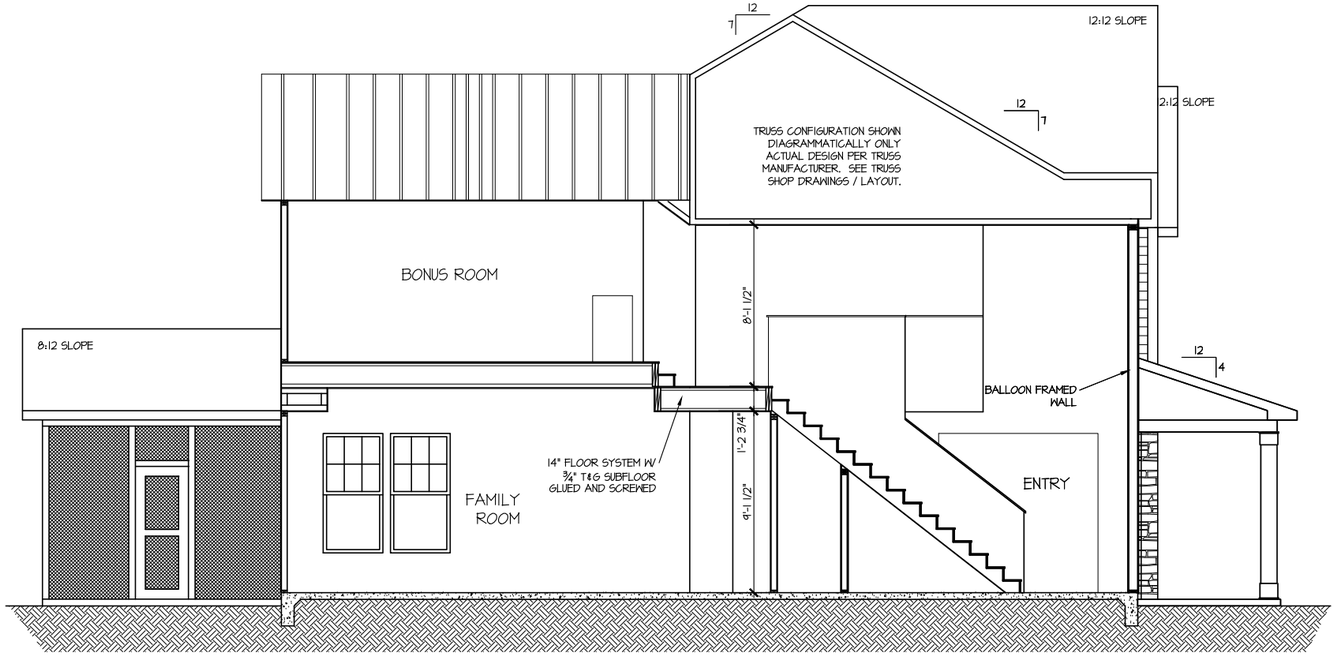
DR HOMES

HOUSE NAME: MIDDLETON

DRAWING TITLE: SECOND FLOOR PLAN

SHEET No. A3.2

FILE: Lot 00.0080.dwg DATE: 7/22/2022 9:35 AM



SECTION 1

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

FILE: Lot 00.0080.dwg DATE: 7/22/2022 9:35 AM

MASTER PLAN INFORMATION		
REVISION	DATE	UPDATED DATE
1-RALE	10-12-2018	04-20-2022

DRAWN BY: ITS

DATE: 07/22/2022

PLAN NO. 2183

DRB HOMES

HOUSE NAME: MIDDLETON

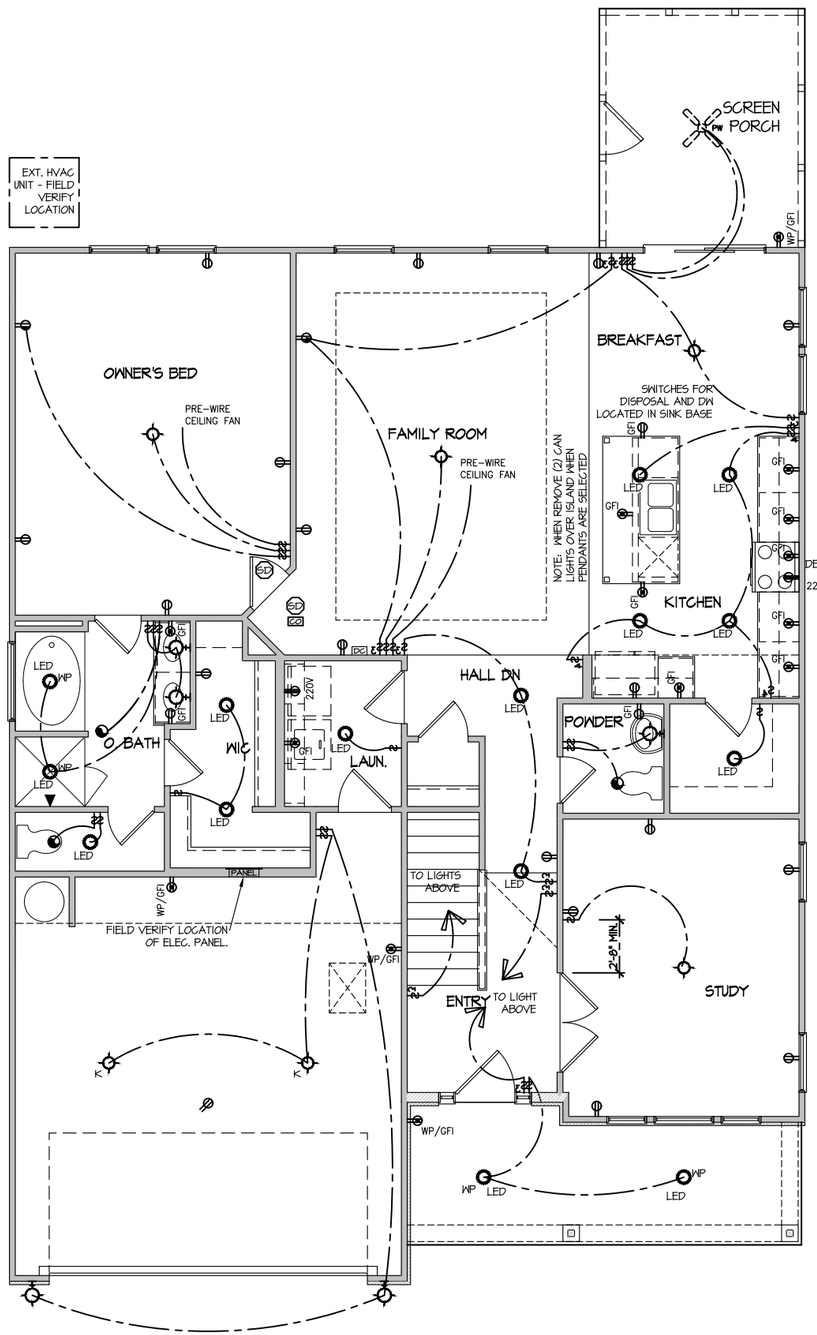
DRAWING TITLE: BUILDING SECTION

SHEET No. A4.1

ELECTRICAL LEGEND

- SINGLE POLE SWITCH
- $_3$ THREE WAY SWITCH
- $_4$ FOUR WAY SWITCH
- DUPLEX AFCI RECEPTACLE
- DUPLEX AFCI RECEPTACLE - BOTTOM HALF SWITCHED
- DUPLEX AFCI RECEPTACLE - FLOOR MOUNTED
- 220V RECEPTACLE - 220V
- GFI DUPLEX AFCI RECEPTACLE - GFI
- WP/GFI DUPLEX AFCI RECEPTACLE - WATERPROOF GFI
- SD SMOKE DETECTOR - WIRED IN SERIES
- EXHAUST FAN MOTOR
- CO DETECTOR
- DOOR CHIME
- LIGHT FIXTURE - WALL MOUNTED
- LIGHT FIXTURE - CEILING MOUNTED
- LED LIGHT FIXTURE - LED SURFACE MOUNTED
- P PULLCHAIN LAMPHOLDER
- K KEYLESS LAMPHOLDER

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. 4

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

FILE: Lot 00.0080.dwg DATE: 7/22/2022 9:35 AM

MASTER PLAN INFORMATION		
REVISION	DATE	UPDATED DATE
1-RALE	10-12-2018	04-20-2022

DRAWN BY: ITS

DATE: 07/22/2022

PLAN NO. 2183

DRB HOMES

HOUSE NAME: MIDDLETON

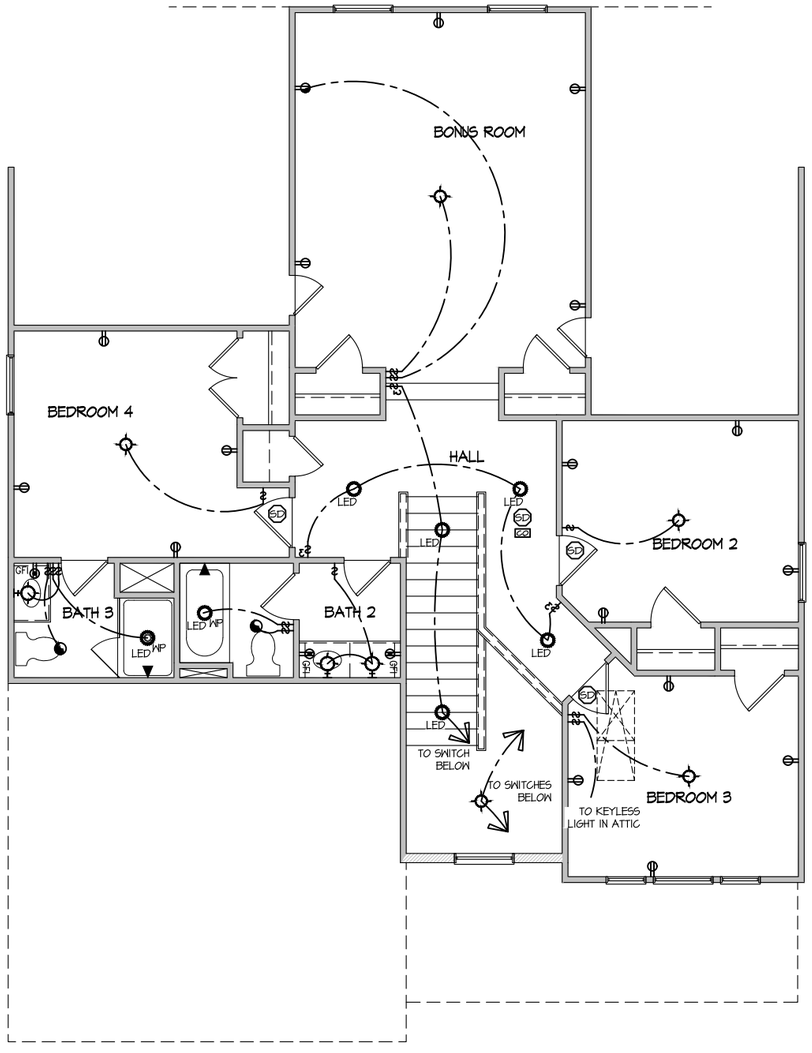
DRAWING TITLE: FIRST FLOOR ELECTRICAL

SHEET No. E1.1

ELECTRICAL LEGEND

S	SINGLE POLE SWITCH
S_3	THREE WAY SWITCH
S_4	FOUR WAY SWITCH
	DUPLEX AFCI RECEPTACLE
	DUPLEX AFCI RECEPTACLE - BOTTOM HALF SWITCHED
	DUPLEX AFCI RECEPTACLE - FLOOR MOUNTED
220V	RECEPTACLE - 220V
GFI	DUPLEX AFCI RECEPTACLE - GFI
WP/GFI	DUPLEX AFCI RECEPTACLE - WATERPROOF GFI
SD	SMOKE DETECTOR - WIRED IN SERIES
	EXHAUST FAN MOTOR
CO	CO DETECTOR
DC	DOOR CHIME
H	LIGHT FIXTURE - WALL MOUNTED
	LIGHT FIXTURE - CEILING MOUNTED
LED	LIGHT FIXTURE - LED SURFACE MOUNTED
P	PULLCHAIN LAMPHOLDER
K	KEYLESS LAMPHOLDER

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. 4

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

MASTER PLAN INFORMATION		
REVISION	DATE	UPDATED DATE
1-RALE	10-12-2018	04-20-2022

DRAWN BY: ITS

DATE: 07/22/2022

PLAN NO. 2183

DRB HOMES

HOUSE NAME: MIDDLETON

DRAWING TITLE: SECOND FLOOR ELECTRICAL

SHEET No. E1.2

FILE: Lot 00.0080.dwg DATE: 7/22/2022 9:35 AM

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	(9) 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)

LEGEND

- ▥ INTERIOR BEARING WALL
- ▭ BEARING WALL ABOVE
- — · · — BEAM / HEADER
- ▬ ▬ ▬ INDICATES SHEAR WALL & EXTENT
- ▨ EXTENT OF OVERFRAMING

⅃L METAL HANGER

* INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.

▶ INDICATES HOLD-DOWN OR STRAP. REFER TO SCHEDULE.

NON-BEARING HEADER SCHEDULE

SPAN	2x4 NON-BEARING PARTITION WALL	2x6 NON-BEARING PARTITION WALL
UP TO 3'-0"	(1)2x4 FLAT	(1)2x6 FLAT
UP TO 6'-0"	(2)2x4	(3)2x4
UP TO 8'-0"	(2)2x6	(3)2x6

NOTES:

- ALL NON-BEARING INTERIOR STUD WALLS SHALL BE CONSTRUCTED WITH 2x 'STUD' GRADE MEMBERS SPACED @ 24" O.C. (MAX.)

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. MULHERN & KULP CANNOT BE HELD RESPONSIBLE FOR ANY STRUCTURAL ISSUES RELATED TO ANY BUILDING COMPONENT IF COMPONENT SHOP DRAWINGS ARE NOT SUBMITTED TO M&K FOR REVIEW PRIOR TO FABRICATION, DELIVERY, OR INSTALLATION.

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 SYP "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 (SYP) 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 TO MEET OR EXCEED THE FOLLOWING:
  - 'LSL' - Fb=2325 psi; Fv=310 psi; E=1.55x10^6 psi
  - 'LVL' - Fb=2600 psi; Fv=285 psi; E=2.0x10^6 psi
- 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 ¼"x3½" SIMPSON SDS SCREWS (OR 3½" 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 3½" OR 5¼" 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 ¼"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 BCS2-2/4 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.
- I-JOIST/TRUSS SHOP DWGS. SHALL BE SUBMITTED TO ARCH. & ENG. FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY.
- FLOOR SHEATHING SHALL BE 23/32" A.P.A. RATED 'STURD-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 ⅜" x 0.120" NAILS @ 4" O.C. @ PANEL EDGES & @ 8" O.C. FIELD.
  - 2 ⅜" x 0.113" NAILS @ 3" O.C. @ PANEL EDGES & @ 6" O.C. IN 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 H2.5T CLIP (OR APPROVED EQUAL) @ ALL BEARING POINTS. PROVIDE (2) H2.5T CLIPS AT 2-PLY GIRDER TRUSSES, (3) H2.5T CLIPS AT 3-PLY GIRDER TRUSSES & ROOF BEAMS - AT ALL BEARING POINTS.
- METAL HANGERS SHALL BE SPECIFIED BY THE MANUFACTURER, U.N.O.
- ROOF TRUSS SHOP DWGS. SHALL BE SUBMITTED TO ARCH & ENG. FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY.
- ERECT AND INSTALL ROOF TRUSSES PER WTCA & TPI'S BCSI 1-08 "GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES."
- SUPPORT PORCH & SHORT SPAN ROOF TRUSSES w/2x4 LEDGER FASTENED TO FRAMING w/(2) 3"x0.131" NAILS @ 16" O.C. (MAX 7' SPAN).
- 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 ⅜" x 0.120" NAILS @ 4"o.c. @ PANEL EDGES & @ 8" O.C. FIELD.
  - w/ 2 ⅜" x 0.113" NAILS @ 3"o.c. @ PANEL EDGES & @ 6" O.C. FIELD.

HOLD-DOWN SCHEDULE

SYMBOL	SPECIFICATION
▶ HD-1	SIMPSON HTT4 HOLD-DOWN *
▶ HD-2	SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)
▶ HD-3	SIMPSON STHD14RJ HOLD-DOWN

ALTERNATIVE TO SSTB24 ANCHOR BOLT SPECIFICATION:

* UTILIZE SIMPSON "SET" EPOXY SYSTEM TO FASTEN ⅝" DIA. THREADED ROD INTO CONCRETE FOUNDATION. PROVIDE 12" MIN. EMBEDMENT INTO CONCRETE. INSTALL PER MANUF. RECOMMENDATIONS. DO NOT LOCATE ANCHORS WITHIN 1 ¾" OF EDGE OF FOUNDATION.

VENEER LINTEL SCHEDULE

SPAN (MAX)	HEIGHT OF VENEER ABOVE LINTEL	STEEL ANGLE SIZE
3'-0"	20 FT. MAX	L3"x3"x¼"
6'-0"	3 FT. MAX	L3"x3"x¼"
	12 FT. MAX	L4"x3"x¼"
	20 FT. MAX	L5"x3½"x5⁄16"
8'-0"	3 FT. MAX	L4"x4"x¼" *
	12 FT. MAX	L5"x3½"x5⁄16"
	16 FT. MAX	L6"x3½"x⅜"
9'-6"	12 FT. MAX	L6"x3½"x5⁄16"
16'-0"	2 FT. MAX	L7"x4"x½" **
	3 FT. MAX	L8"x4"x½" **

ALL LINTELS:
- SHALL SUPPORT 2 ⅝" - 3 ½" VENEER w/ 40 psf MAXIMUM WEIGHT.
< 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 ¼" WIDE OVER THE BEARING LENGTH ONLY. THIS IS TO ALLOW FOR MORTAR JOINT FINISHING.
- SEE STRUCTURAL PLANS FOR ANY LINTEL CONDITION NOT ENCOMPASSED BY THE ABOVE PARAMETERS.
* FOR QUEEN VENEER USE L4x3x¼".
** FOR 3½" VENEER ONLY. SEE PLAN FOR VENEER SUPPORT IF VENEER < 3½" THICK.

LATERAL BRACING & SHEAR WALL SHEATHING SPECIFICATIONS

THIS MODEL HAS BEEN DESIGNED TO RESIST LATERAL FORCES RESULTING FROM:

120 MPH WIND IN 2018 NCSBC: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 1609) & ASCE 7-10, AS PERMITTED BY R301.1.3 OF THE 2018 NCSBC:RC, OR THE SIMPLIFIED PRESCRIPTIVE PROCEDURE IN ACCORDANCE WITH THE 2015 IRC IF THE PARAMETERS OF SECTION R602.12 COMPLY. ACCORDINGLY, THIS MODEL, AS DOCUMENTED AND DETAILED HEREWITHIN, 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 NCSBC: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/ 8d 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: 1½" 16 GA STAPLES (7⁄16" CROWN) @ 3" O.C. AT EDGES & @ 6" O.C IN FIELD.

BLOCKED PANEL EDGES

- AT DESIGNATED AREAS - FASTEN SHEATHING w/ 8d NAILS @ 6" O.C. AT ALL PANEL EDGES AND 12" O.C. IN THE PANEL FIELD OR 1 ¾" 16 GA STAPLES (7⁄16" 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/ 10d NAILS @ 4" O.C. (THRU ONE SIDE ONLY)

▬ ▬ ▬ INDICATES EXTENT OF INT. OSB SHEARWALL OR 3" O.C. OSB SHEARWALL.

▶ INDICATES HOLDOWN 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 SYP, "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 (9½" 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 7% AIR ENTRAINMENT.
- ALL FOOTINGS SHALL BEAR AT LEAST 12" BELOW FINISH GRADE.
- FOOTINGS AND SLABS ON GRADE SHALL BEAR ON VIRGIN SOIL OR 95% 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 (F'm=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.

seal: 11/30/21

NORTH CAROLINA PROFESSIONAL SEAL 042188 ENGINEER STEPHEN IVES

[illegible]

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NC LIC. #C-3825

M&K project number: 126-21018

project mgr: JTR
drawn by: MDH
issue date: 07-16-21

REVISIONS:

date:	initial:

DRB GROUP

STRUCTURAL NOTES
MIDDLETON MODEL
RALEIGH, NC

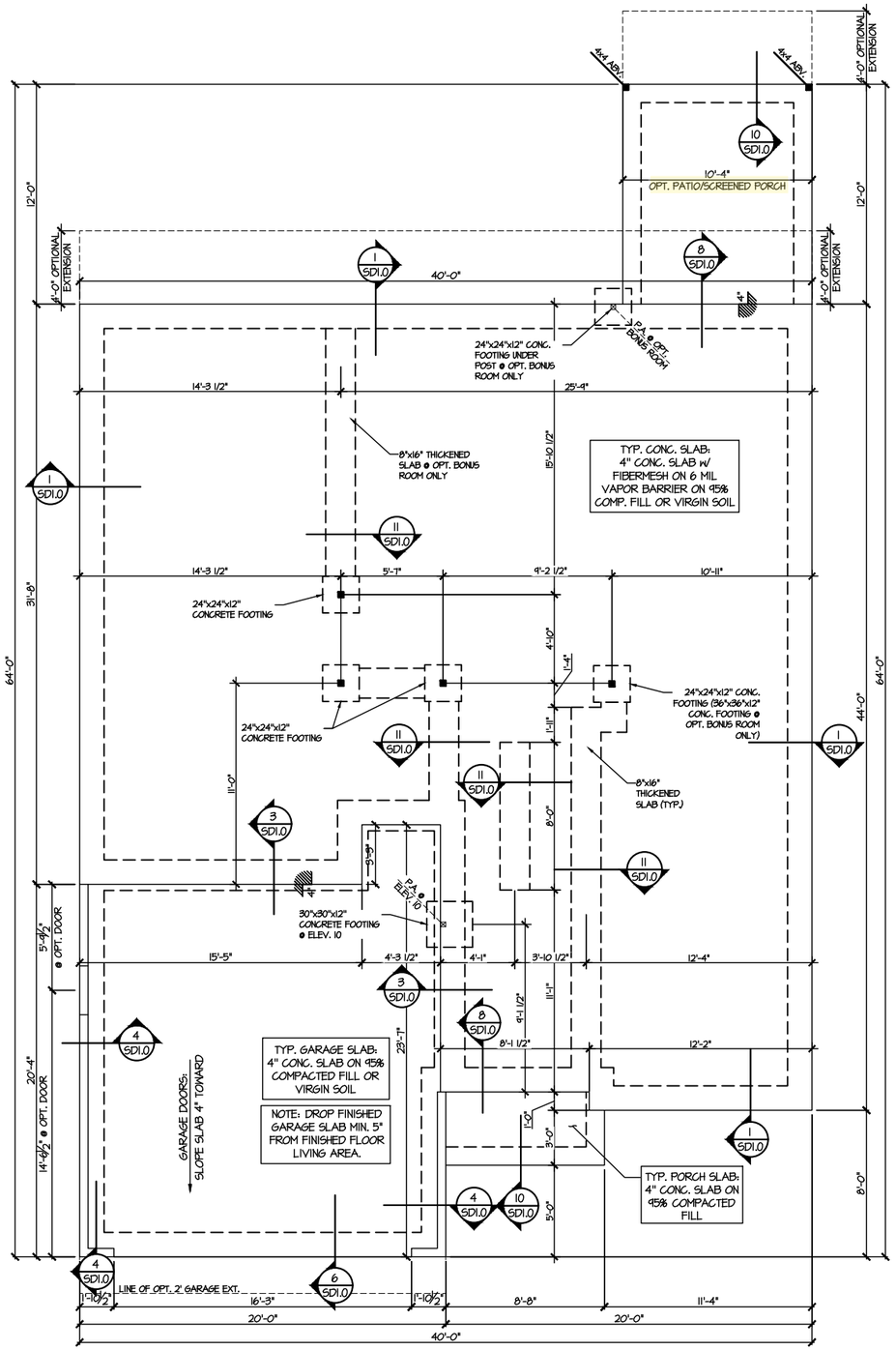
sheet: S0.0

FILE: RLH - Middleton - Structurals DATE: 11/30/2021 9:25 AM

REFER TO S0.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

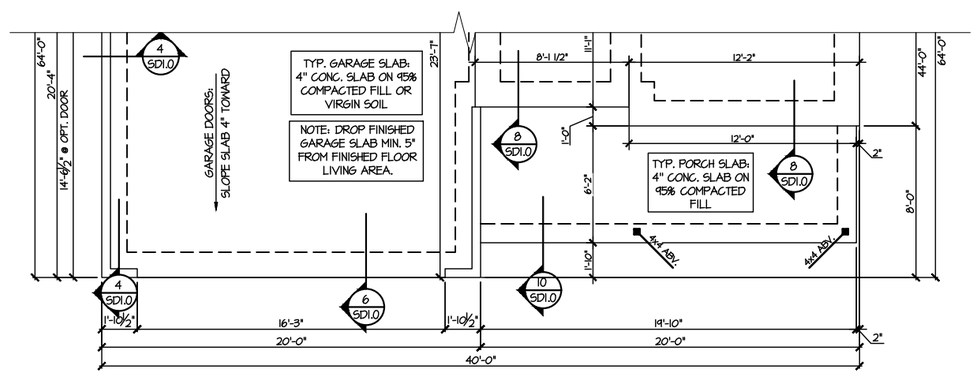
LEGEND

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



1 MONO SLAB FOUNDATION PLAN

SCALE: 1/8"=1'-0" — ELEVATION #1 OPTIONAL SCREENED PORCH SHOWN



3 PARTIAL MONO SLAB FOUNDATION PLAN

SCALE: 1/8"=1'-0" — ELEVATIONS #4

FILE: RLH - Middleton - Structurals DATE: 11/30/2021 9:25 AM

issue: 11/30/21

NORTH CAROLINA PROFESSIONAL SEAL 042188 ENGINEER STEPHEN VES

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date:	initial:

DRB GROUP

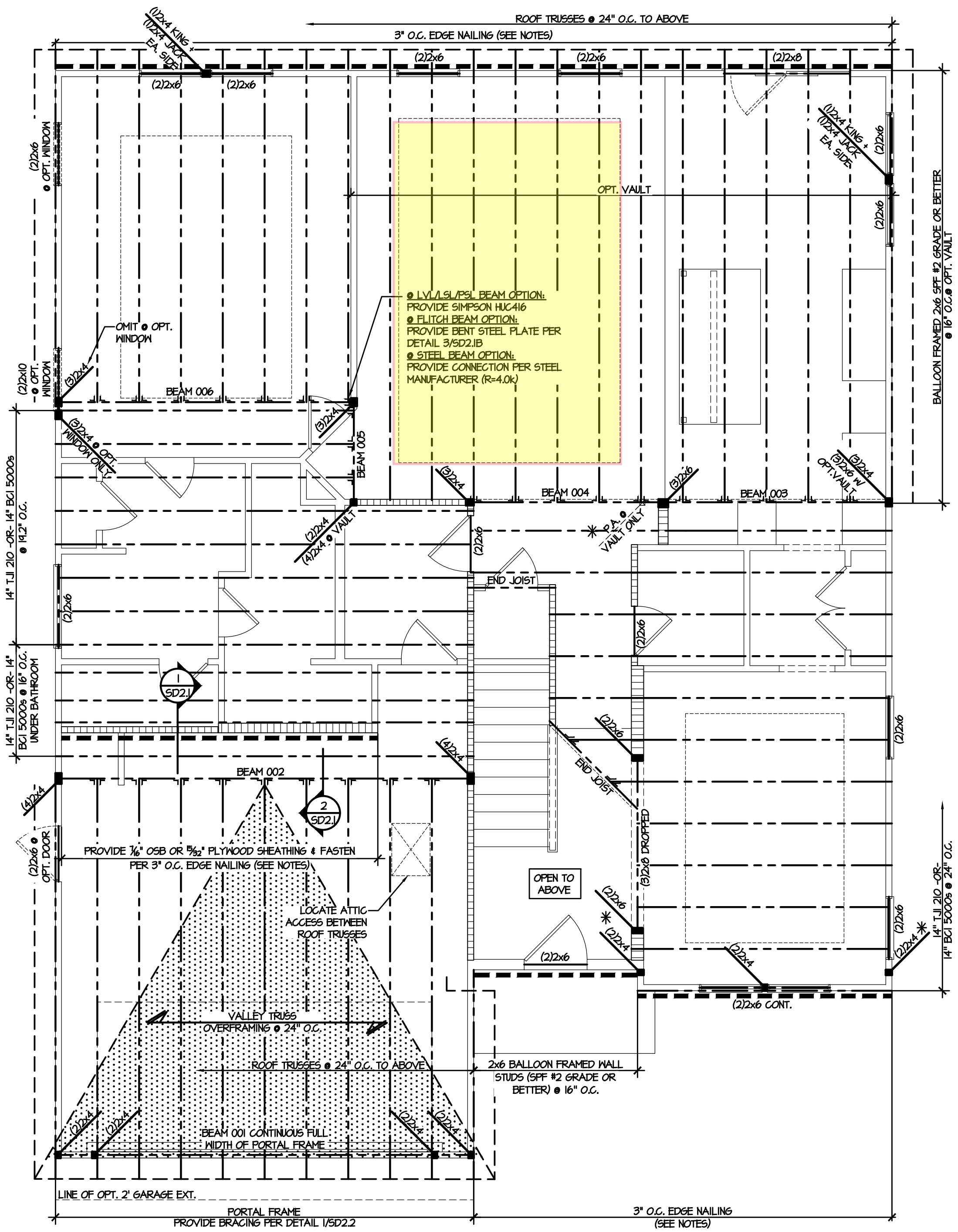
FOUNDATION PLANS

MIDDLETON MODEL

RALEIGH, NC

sheet: LEFT HAND

S1.0



(1) **2ND FLOOR FRAMING PLAN - I-JOISTS**
SCALE: 1/8"=1'-0" **ELEVATION #1**

ENGINEERED BEAM MATERIAL SCHEDULE

BEAM NUMBER	LVL OPTION	PSL OPTION	LSL OPTION	FLITCH OPTION	STEEL OPTION
001	(2)1¾"x11⅞" - H	3½"x11⅞" - H	(2)1¾"x11⅞" - H	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - H	N/A
001A	(2)1¾"x11⅞" - H	3½"x11⅞" - H	(2)1¾"x11⅞" - H	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - H	N/A
002	(2)1¾"x18" - FT	5¼"x18" - FT	N/A	(3)2x12 + (2) ½"x11¼" STEEL FLITCH PLATES - FB	W12x19 - F
003	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
004	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
005	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
006	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
007	(2)1¾"x11⅞" - F	3½"x11⅞" - F	(2)1¾"x11⅞" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - F	W10x12 - F
008	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
009	(3)1¾"x18" - FT	5¼"x18" - FT	N/A	(4)2x12 + (3) ½"x11¼" STEEL FLITCH PLATES - FB	W12x26 - F
010	(3)1¾"x20" - FT	5¼"x20" - FT	N/A	(4)2x12 + (3) ⅝"x11¼" STEEL FLITCH PLATES - FB	W12x35 - F
011	(2)1¾"x11⅞" - FB	3½"x11⅞" - FB	(2)1¾"x14" - FB	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W10x12 - FB

- 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.

LEGEND

- INTERIOR BEARING WALL
- BEARING WALL ABOVE
- BEAM / HEADER
- INDICATES SHEAR WALL & EXTENT
- EXTENT OF OVERFRAMING

METAL HANGER

* INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.

INDICATES HOLD-DOWN OR STRAP. REFER TO SCHEDULE.

REFER TO S0.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

SD2.0 & SD2.1 REFERS TO SD2.0J & SD2.1J FOR I-JOIST FLOOR FRAMING OR SD2.0T & SD2.1T FOR TRUSS FLOOR FRAMING

SD2.1J/SD2.1T REFERS TO SD2.1JA/SD2.1TA FOR LVL/PSL/LSL BEAMS OR SD2.1JB/SD2.1TB FOR FLITCH BEAMS OR SD2.1JC/SD2.1TC FOR STEEL BEAMS

seal: 11/30/21

NORTH CAROLINA PROFESSIONAL SEAL 042188 ENGINEER STEPHEN IVES

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M&K project number: 126-21018

project mgr: JTR
drawn by: MDH
issue date: 07-16-21

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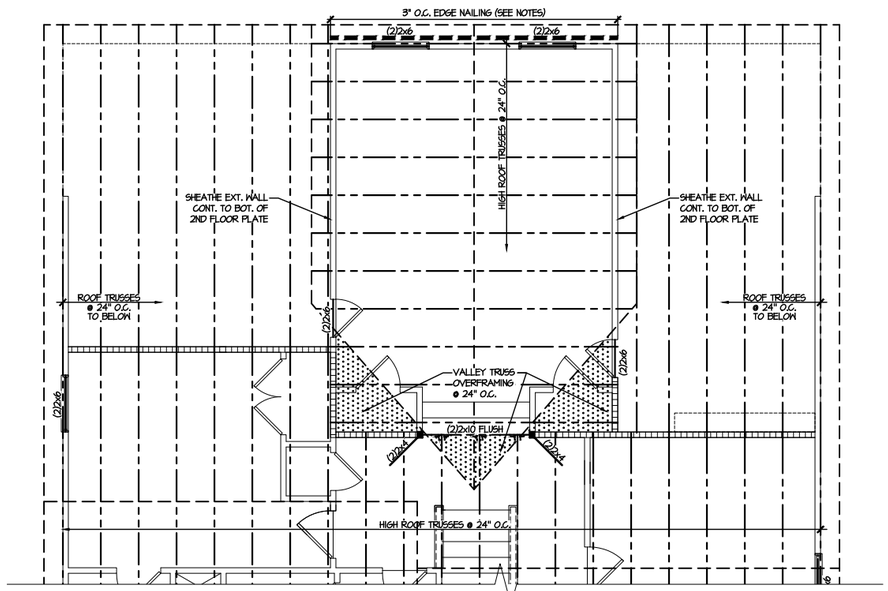
date:	initial:

DRB GROUP

FLOOR FRAMING PLANS
MIDDLETON MODEL
RALEIGH, NC

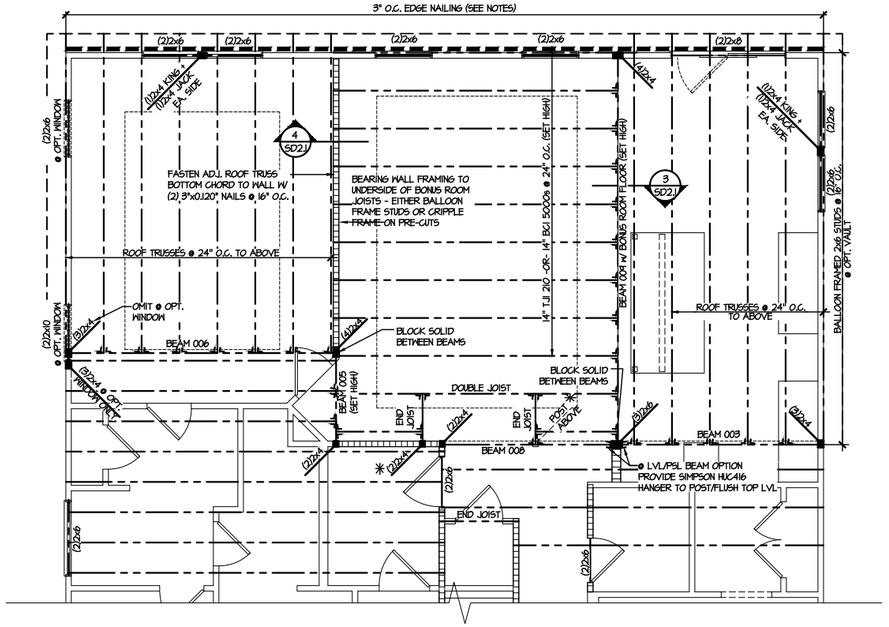
sheet: LEFT HAND
S3.0J

FILE: RLH - Middleton - Structurals DATE: 11/30/2021 9:27 AM



1 PARTIAL ROOF FRAMING PLAN OPTIONAL BONUS ROOM - I-JOISTS

SCALE: 1/8"=1'-0" ELEV. #1 SHOWN - ALL ELEV. SIM.
OPT. REAR 4' EXT. SIM.



2 PARTIAL SECOND FLOOR FRAMING PLAN OPTIONAL BONUS ROOM - I-JOISTS

SCALE: 1/8"=1'-0" ELEV. #1 SHOWN - ALL ELEV. SIM.

ENGINEERED BEAM MATERIAL SCHEDULE

BEAM NUMBER	LVL OPTION	PSL OPTION	LSL OPTION	FLITCH OPTION	STEEL OPTION
001	(2)1¾"x11⅞" - H	3½"x11⅞" - H	(2)1¾"x11⅞" - H	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - H	N/A
001A	(2)1¾"x11⅞" - H	3½"x11⅞" - H	(2)1¾"x11⅞" - H	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - H	N/A
002	(2)1¾"x18" - FT	5¼"x18" - FT	N/A	(3)2x12 + (2) ½"x11¼" STEEL FLITCH PLATES - FB	W12x19 - F
003	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
004	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
005	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
006	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
007	(2)1¾"x11⅞" - F	3½"x11⅞" - F	(2)1¾"x11⅞" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - F	W10x12 - F
008	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
009	(3)1¾"x18" - FT	5¼"x18" - FT	N/A	(4)2x12 + (3) ½"x11¼" STEEL FLITCH PLATES - FB	W12x26 - F
010	(3)1¾"x20" - FT	5¼"x20" - FT	N/A	(4)2x12 + (3) ⅝"x11¼" STEEL FLITCH PLATES - FB	W12x35 - F
011	(2)1¾"x11⅞" - FB	3½"x11⅞" - FB	(2)1¾"x14" - FB	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W10x12 - FB

- 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.

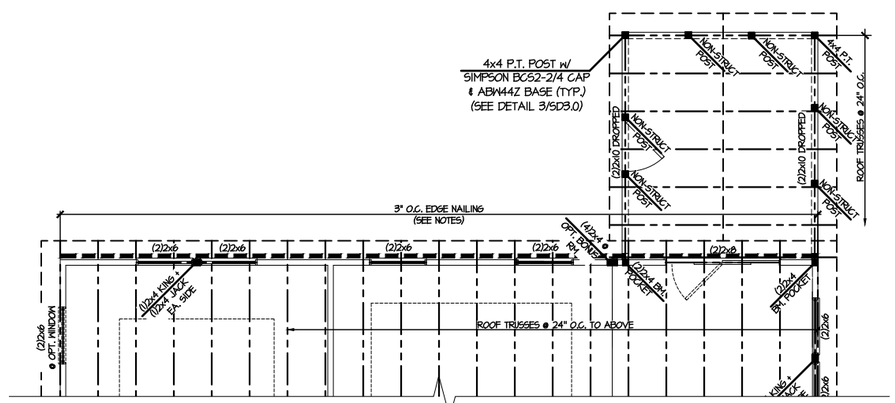
LEGEND

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

REFER TO S0.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

SD2.0 & SD2.1 REFERS TO SD2.0J & SD2.1J FOR I-JOIST FLOOR FRAMING OR SD2.0T & SD2.1T FOR TRUSS FLOOR FRAMING

SD2.1J/SD2.1T REFERS TO SD2.1JA/SD2.1TA FOR LVL/PSL/LSL BEAMS OR SD2.1JB/SD2.1TB FOR FLITCH BEAMS OR SD2.1JC/SD2.1TC FOR STEEL BEAMS



4 PARTIAL 2ND FLOOR FRAMING PLAN OPTIONAL SCREENED PORCH - I-JOISTS

SCALE: 1/8"=1'-0" ELEV. #1 SHOWN - ALL ELEV. SIM.

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NC LIC. #C-3825

NORTH CAROLINA PROFESSIONAL SEAL 042188 ENGINEER STEPHEN J. MULHERN

date: 11/30/21

M&K project number: 126-21018
project mgr: JTR
drawn by: MDH
issue date: 07-16-21

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date: initial:

DRB GROUP

OPTION FRAMING PLANS
MIDDLETON MODEL
RALEIGH, NC

sheet: LEFT HAND
S5.0J

FILE: RLH - Middleton - Structurals DATE: 11/30/2021 9:29 AM

ENGINEERED BEAM MATERIAL SCHEDULE

BEAM NUMBER	LVL OPTION	PSL OPTION	LSL OPTION	FLITCH OPTION	STEEL OPTION
001	(2)1¾"x11⅞" - H	3½"x11⅞" - H	(2)1¾"x11⅞" - H	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - H	N/A
001A	(2)1¾"x11⅞" - H	3½"x11⅞" - H	(2)1¾"x11⅞" - H	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - H	N/A
002	(2)1¾"x18" - FT	5¼"x18" - FT	N/A	(3)2x12 + (2) ½"x11¼" STEEL FLITCH PLATES - FB	W12x19 - F
003	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
004	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
005	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
006	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
007	(2)1¾"x11⅞" - F	3½"x11⅞" - F	(2)1¾"x11⅞" - F	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - F	W10x12 - F
008	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
009	(3)1¾"x18" - FT	5¼"x18" - FT	N/A	(4)2x12 + (3) ½"x11¼" STEEL FLITCH PLATES - FB	W12x26 - F
010	(3)1¾"x20" - FT	5¼"x20" - FT	N/A	(4)2x12 + (3) ⅝"x11¼" STEEL FLITCH PLATES - FB	W12x35 - F
011	(2)1¾"x11⅞" - FB	3½"x11⅞" - FB	(2)1¾"x14" - FB	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - FB	W10x12 - FB

- 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.

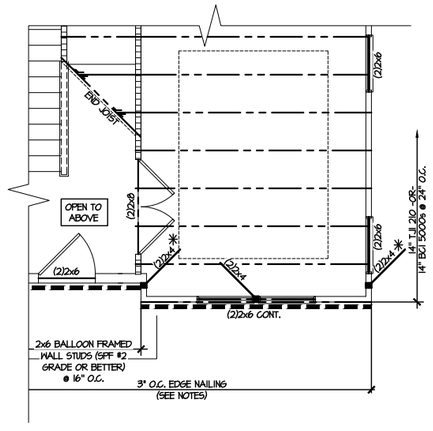
LEGEND

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

REFER TO S0.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

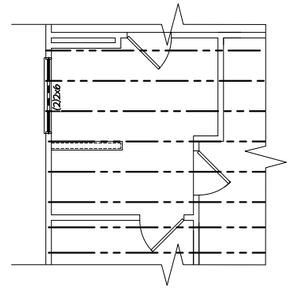
SD2.0 & SD2.1 REFERS TO SD2.0J & SD2.1J FOR I-JOIST FLOOR FRAMING OR SD2.0T & SD2.1T FOR TRUSS FLOOR FRAMING

SD2.1J/SD2.1T REFERS TO SD2.1JA/SD2.1TA FOR LVL/PSL/LSL BEAMS OR SD2.1JB/SD2.1TB FOR FLITCH BEAMS OR SD2.1JC/SD2.1TC FOR STEEL BEAMS



3 PARTIAL 2ND FLOOR FRAMING PLAN OPTIONAL STUDY - I-JOISTS

SCALE: 1/8"=1'-0" ELEV. #1 SHOWN - ALL ELEV. SIM.



4 PARTIAL 2ND FLOOR FRAMING PLAN OPTIONAL DELUXE OWNER'S BATH - I-JOISTS

SCALE: 1/8"=1'-0" ELEV. #1 SHOWN - ALL ELEV. SIM.

issue/rev: 11/30/21

NORTH CAROLINA PROFESSIONAL SEAL 042188 ENGINEER STEPHEN VES

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NC LIC. #C-3825

M&K project number: 126-21018

project mgr: JTR
drawn by: MDH
issue date: 07-16-21

REVISIONS:

date:	initial:

DRB GROUP

OPTION FRAMING PLANS

MIDDLETON MODEL

RALEIGH, NC

sheet: LEFT HAND

S5.1J

FILE: RLH - Middleton - Structurals DATE: 11/30/2021 9:29 AM

ENGINEERED BEAM MATERIAL SCHEDULE

BEAM NUMBER	LVL OPTION	PSL OPTION	LSL OPTION	FLITCH OPTION	STEEL OPTION
001	(2)1¾"x11⅞" - H	3½"x11⅞" - H	(2)1¾"x11⅞" - H	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - H	N/A
001A	(2)1¾"x11⅞" - H	3½"x11⅞" - H	(2)1¾"x11⅞" - H	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - H	N/A
002	(2)1¾"x18" - FT	5¼"x18" - FT	N/A	(3)2x12 + (2) ½"x11¼" STEEL FLITCH PLATES - FB	W12x19 - F
003	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
004	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
005	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
006	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
007	(2)1¾"x11⅞" - F	3½"x11⅞" - F	(2)1¾"x11⅞" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - F	W10x12 - F
008	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
009	(3)1¾"x18" - FT	5¼"x18" - FT	N/A	(4)2x12 + (3) ½"x11¼" STEEL FLITCH PLATES - FB	W12x26 - F
010	(3)1¾"x20" - FT	5¼"x20" - FT	N/A	(4)2x12 + (3) ⅝"x11¼" STEEL FLITCH PLATES - FB	W12x35 - F
011	(2)1¾"x11⅞" - FB	3½"x11⅞" - FB	(2)1¾"x14" - FB	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W10x12 - FB

- 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.

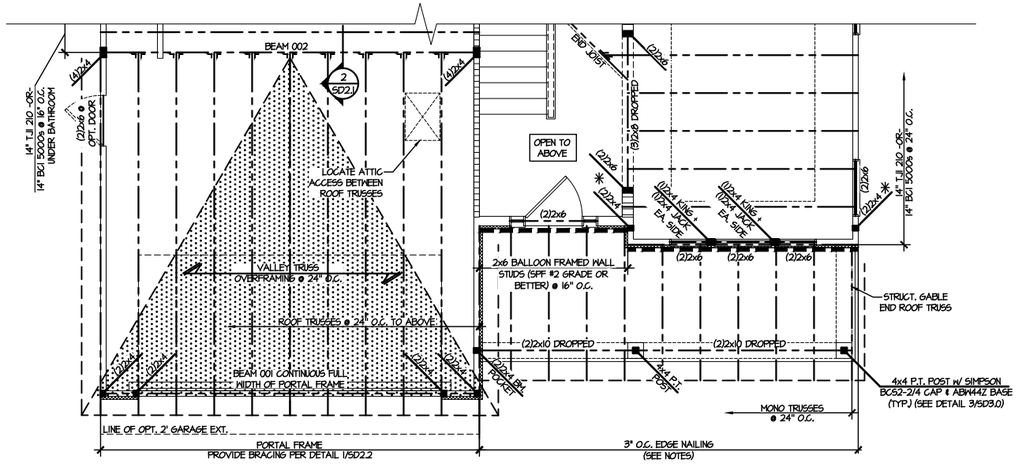
LEGEND

- INTERIOR BEARING WALL
- BEARING WALL ABOVE
- BEAM / HEADER
- INDICATES SHEAR WALL & EXTENT
- EXTENT OF OVERFRAMING
- ⊥L 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

SD2.0 & SD2.1 REFERS TO SD2.0J & SD2.1J FOR I-JOIST FLOOR FRAMING OR SD2.0T & SD2.1T FOR TRUSS FLOOR FRAMING

SD2.1J/SD2.1T REFERS TO SD2.1JA/SD2.1TA FOR LVL/PSL/LSL BEAMS OR SD2.1JB/SD2.1TB FOR FLITCH BEAMS OR SD2.1JC/SD2.1TC FOR STEEL BEAMS



2 PARTIAL 2ND FLOOR FRAMING PLAN - I-JOIST

SCALE: 1/8"=1'-0" ELEVATION #4

FILE: RLH - Middleton - Structurals DATE: 11/30/2021 9:28 AM

issue date: 11/30/21

NORTH CAROLINA PROFESSIONAL SEAL 042188 ENGINEER STEPHEN VES

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M&K project number: 126-21018

project mgr: JTR
drawn by: MDH
issue date: 07-16-21

REVISIONS:

date:	initial:

DRB GROUP

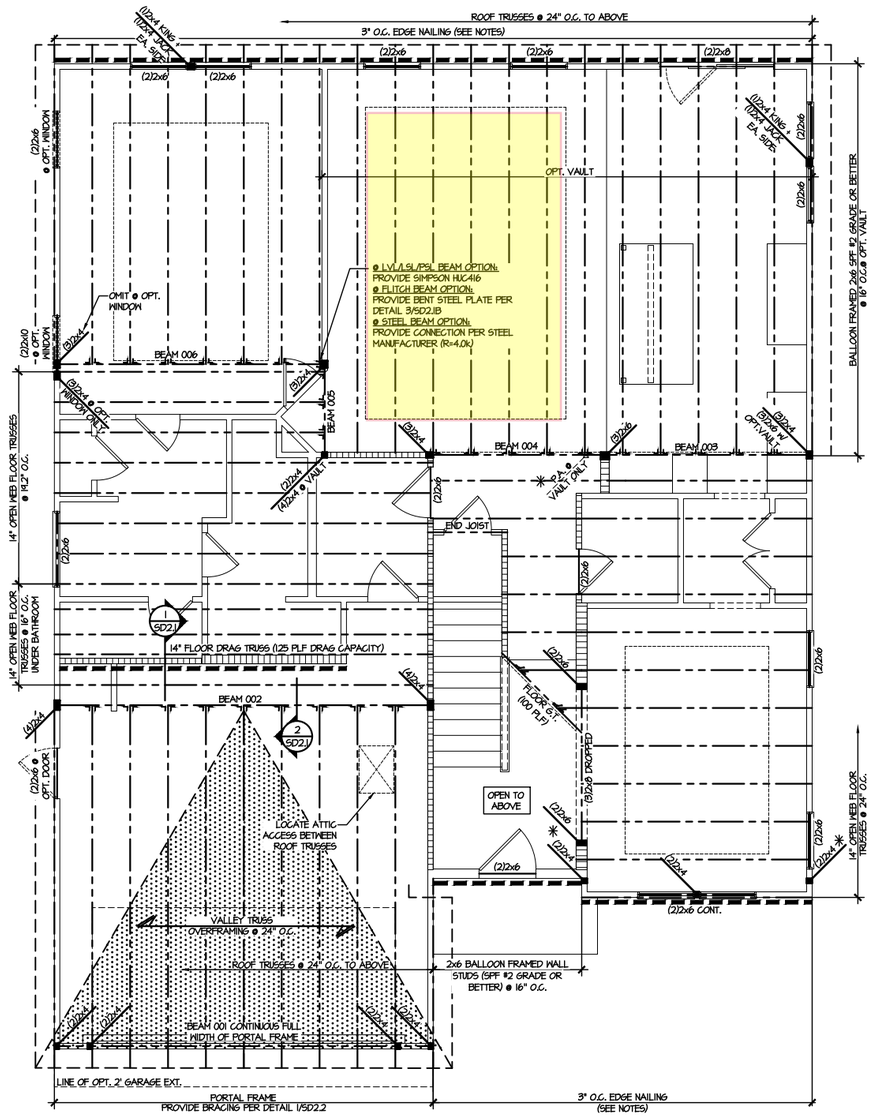
FLOOR FRAMING PLANS

MIDDLETON MODEL

RALEIGH, NC

sheet: LEFT HAND

S3.1J



1 2ND FLOOR FRAMING PLAN - TRUSSES

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

ENGINEERED BEAM MATERIAL SCHEDULE

BEAM NUMBER	LVL OPTION	PSL OPTION	LSL OPTION	FLITCH OPTION	STEEL OPTION
001	(2)1¾"x11⅞" - H	3½"x11⅞" - H	(2)1¾"x11⅞" - H	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - H	N/A
001A	(2)1¾"x11⅞" - H	3½"x11⅞" - H	(2)1¾"x11⅞" - H	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - H	N/A
002	(2)1¾"x18" - FT	5¼"x18" - FT	N/A	(3)2x12 + (2) ½"x11¼" STEEL FLITCH PLATES - FB	W12x19 - F
003	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
004	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
005	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
006	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
007	(2)1¾"x11⅞" - F	3½"x11⅞" - F	(2)1¾"x11⅞" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - F	W10x12 - F
008	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
009	(3)1¾"x18" - FT	5¼"x18" - FT	N/A	(4)2x12 + (3) ½"x11¼" STEEL FLITCH PLATES - FB	W12x26 - F
010	(3)1¾"x20" - FT	5¼"x20" - FT	N/A	(4)2x12 + (3) ⅝"x11¼" STEEL FLITCH PLATES - FB	W12x35 - F
011	(2)1¾"x11⅞" - FB	3½"x11⅞" - FB	(2)1¾"x14" - FB	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W10x12 - FB

- 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.

LEGEND

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

REFER TO S0.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

SD2.0 & SD2.1 REFERS TO SD2.0J & SD2.1J FOR I-JOIST FLOOR FRAMING OR SD2.0T & SD2.1T FOR TRUSS FLOOR FRAMING

SD2.1J/SD2.1T REFERS TO SD2.1JA/SD2.1TA FOR LVL/PSL/LSL BEAMS OR SD2.1JB/SD2.1TB FOR FLITCH BEAMS OR SD2.1JC/SD2.1TC FOR STEEL BEAMS

NORTH CAROLINA PROFESSIONAL SEAL 042183 ENGINEER STEPHEN J. MULHERN

final: 11/30/21

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M&K project number: 126-21018

project mgr: JTR
drawn by: MDH
issue date: 07-16-21

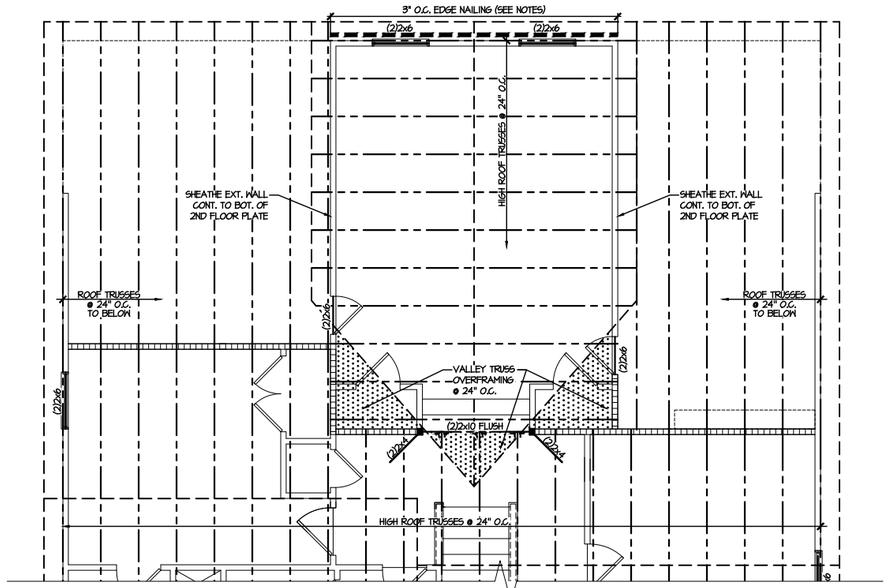
REVISIONS:
date: initial:

DRB GROUP
DRB Coastal
Dan Ryan Builders
Fielding Homes

FLOOR FRAMING PLANS
MIDDLETON MODEL
RALEIGH, NC

sheet: LEFT HAND
S3.0T

FILE: RLH - Middleton - Structurals DATE: 11/30/2021 9:27 AM

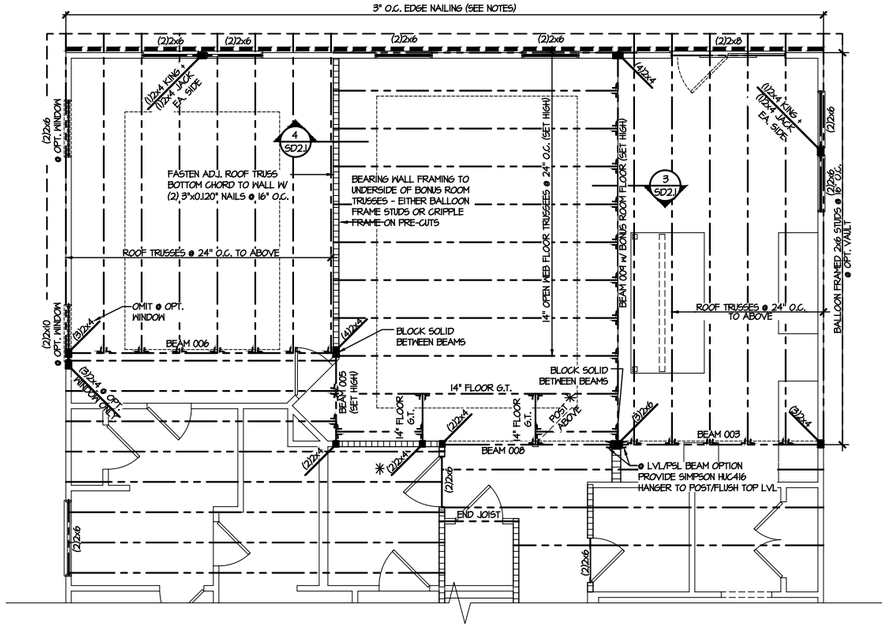


PARTIAL ROOF FRAMING PLAN OPTIONAL BONUS ROOM - TRUSSES

1

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

ELEV. #1 SHOWN - ALL ELEV. SIM.
OPT. REAR 4' EXT. SIM.



PARTIAL SECOND FLOOR FRAMING PLAN OPTIONAL BONUS ROOM - TRUSSES

2

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

ELEV. #1 SHOWN - ALL ELEV. SIM.

ENGINEERED BEAM MATERIAL SCHEDULE

BEAM NUMBER	LVL OPTION	PSL OPTION	LSL OPTION	FLITCH OPTION	STEEL OPTION
001	(2)1¾"x11⅞" - H	3½"x11⅞" - H	(2)1¾"x11⅞" - H	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - H	N/A
001A	(2)1¾"x11⅞" - H	3½"x11⅞" - H	(2)1¾"x11⅞" - H	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - H	N/A
002	(2)1¾"x18" - FT	5¼"x18" - FT	N/A	(3)2x12 + (2) ½"x11¼" STEEL FLITCH PLATES - FB	WI2x19 - F
003	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	WI2x14 - F
004	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	WI2x14 - F
005	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	WI2x14 - F
006	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	WI2x14 - F
007	(2)1¾"x11⅞" - F	3½"x11⅞" - F	(2)1¾"x11⅞" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - F	WI10x12 - F
008	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	WI2x14 - F
009	(3)1¾"x18" - FT	5¼"x18" - FT	N/A	(4)2x12 + (3) ½"x11¼" STEEL FLITCH PLATES - FB	WI2x26 - F
010	(3)1¾"x20" - FT	5¼"x20" - FT	N/A	(4)2x12 + (3) ⅝"x11¼" STEEL FLITCH PLATES - FB	WI2x35 - F
011	(2)1¾"x11⅞" - FB	3½"x11⅞" - FB	(2)1¾"x14" - FB	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	WI10x12 - FB

- 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.

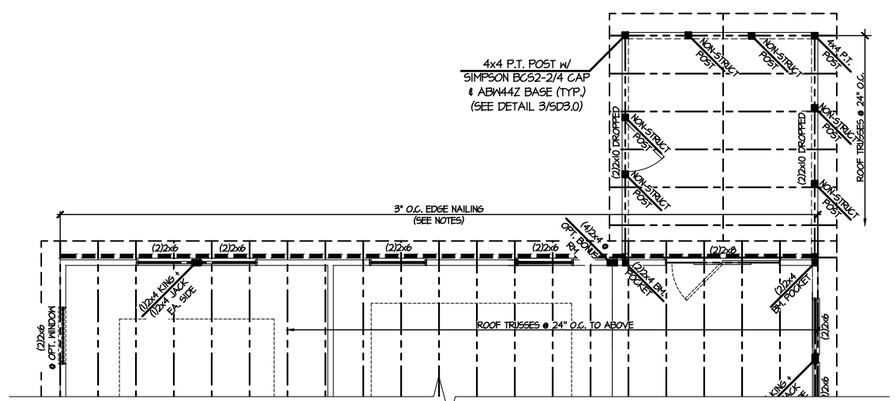
LEGEND

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

REFER TO S0.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

SD2.0 & SD2.1 REFERS TO SD2.0J & SD2.1J FOR I-JOIST FLOOR FRAMING OR SD2.0T & SD2.1T FOR TRUSS FLOOR FRAMING

SD2.1J/SD2.1T REFERS TO SD2.1JA/SD2.1TA FOR LVL/PSL/LSL BEAMS OR SD2.1JB/SD2.1TB FOR FLITCH BEAMS OR SD2.1JC/SD2.1TC FOR STEEL BEAMS



PARTIAL 2ND FLOOR FRAMING PLAN OPTIONAL SCREENED PORCH - TRUSSES

4

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

ELEV. #1 SHOWN - ALL ELEV. SIM.

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NORTH CAROLINA PROFESSIONAL SEAL 042188 ENGINEER STEPHEN J. VES

11/30/21

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NC LIC. #C-3825

M&K project number: 126-21018

project mgr: JTR
drawn by: MDH
issue date: 07-16-21

REVISIONS:

date:	initial:

DRB GROUP

OPTION FRAMING PLANS

MIDDLETON MODEL

RALEIGH, NC

sheet: LEFT HAND

S5.0T

ENGINEERED BEAM MATERIAL SCHEDULE

BEAM NUMBER	LVL OPTION	PSL OPTION	LSL OPTION	FLITCH OPTION	STEEL OPTION
001	(2)1¾"x11⅞" - H	3½"x11⅞" - H	(2)1¾"x11⅞" - H	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - H	N/A
001A	(2)1¾"x11⅞" - H	3½"x11⅞" - H	(2)1¾"x11⅞" - H	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - H	N/A
002	(2)1¾"x18" - FT	5¼"x18" - FT	N/A	(3)2x12 + (2) ½"x11¼" STEEL FLITCH PLATES - FB	W12x19 - F
003	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
004	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
005	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
006	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
007	(2)1¾"x11⅞" - F	3½"x11⅞" - F	(2)1¾"x11⅞" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - F	W10x12 - F
008	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
009	(3)1¾"x18" - FT	5¼"x18" - FT	N/A	(4)2x12 + (3) ½"x11¼" STEEL FLITCH PLATES - FB	W12x26 - F
010	(3)1¾"x20" - FT	5¼"x20" - FT	N/A	(4)2x12 + (3) ⅝"x11¼" STEEL FLITCH PLATES - FB	W12x35 - F
011	(2)1¾"x11⅞" - FB	3½"x11⅞" - FB	(2)1¾"x14" - FB	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W10x12 - FB

- 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.

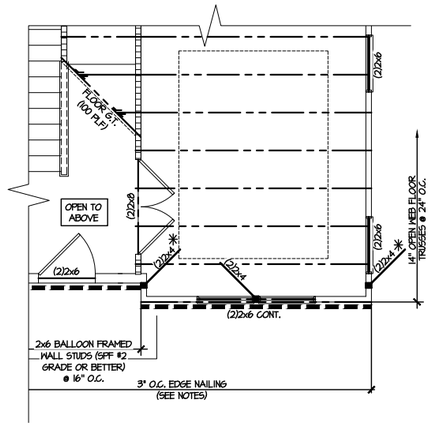
LEGEND

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

REFER TO S0.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

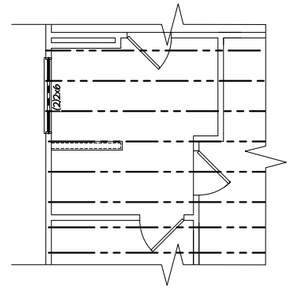
SD2.0 & SD2.1 REFERS TO SD2.0J & SD2.1J FOR I-JOIST FLOOR FRAMING OR SD2.0T & SD2.1T FOR TRUSS FLOOR FRAMING

SD2.1J/SD2.1T REFERS TO SD2.1JA/SD2.1TA FOR LVL/PSL/LSL BEAMS OR SD2.1JB/SD2.1TB FOR FLITCH BEAMS OR SD2.1JC/SD2.1TC FOR STEEL BEAMS



3 PARTIAL 2ND FLOOR FRAMING PLAN OPTIONAL STUDY - TRUSSES

SCALE: 1/8"=1'-0" ELEV. #1 SHOWN - ALL ELEV. SIM.



4 PARTIAL 2ND FLOOR FRAMING PLAN OPTIONAL DELUXE OWNER'S BATH - TRUSSES

SCALE: 1/8"=1'-0" ELEV. #1 SHOWN - ALL ELEV. SIM.

NORTH CAROLINA PROFESSIONAL SEAL 042188 ENGINEER STEPHEN VES

11/30/21

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NC LIC. #C-3825

M&K project number: 126-21018

project mgr: JTR
drawn by: MDH
issue date: 07-16-21

REVISIONS:

date:	initial:

DRB GROUP

OPTION FRAMING PLANS

MIDDLETON MODEL

RALEIGH, NC

sheet: LEFT HAND

S5.1T

FILE: RLH - Middleton - Structurals DATE: 11/30/2021 9:30 AM

ENGINEERED BEAM MATERIAL SCHEDULE

BEAM NUMBER	LVL OPTION	PSL OPTION	LSL OPTION	FLITCH OPTION	STEEL OPTION
001	(2)1¾"x11⅞" - H	3½"x11⅞" - H	(2)1¾"x11⅞" - H	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - H	N/A
001A	(2)1¾"x11⅞" - H	3½"x11⅞" - H	(2)1¾"x11⅞" - H	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - H	N/A
002	(2)1¾"x18" - FT	5¼"x18" - FT	N/A	(3)2x12 + (2) ½"x11¼" STEEL FLITCH PLATES - FB	W12x19 - F
003	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
004	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
005	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
006	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
007	(2)1¾"x11⅞" - F	3½"x11⅞" - F	(2)1¾"x11⅞" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - F	W10x12 - F
008	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W12x14 - F
009	(3)1¾"x18" - FT	5¼"x18" - FT	N/A	(4)2x12 + (3) ½"x11¼" STEEL FLITCH PLATES - FB	W12x26 - F
010	(3)1¾"x20" - FT	5¼"x20" - FT	N/A	(4)2x12 + (3) ⅝"x11¼" STEEL FLITCH PLATES - FB	W12x35 - F
011	(2)1¾"x11⅞" - FB	3½"x11⅞" - FB	(2)1¾"x14" - FB	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	W10x12 - FB

- 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.

LEGEND

- INTERIOR BEARING WALL
- BEARING WALL ABOVE
- BEAM / HEADER
- INDICATES SHEAR WALL & EXTENT
- EXTENT OF OVERFRAMING
- ⊥L 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

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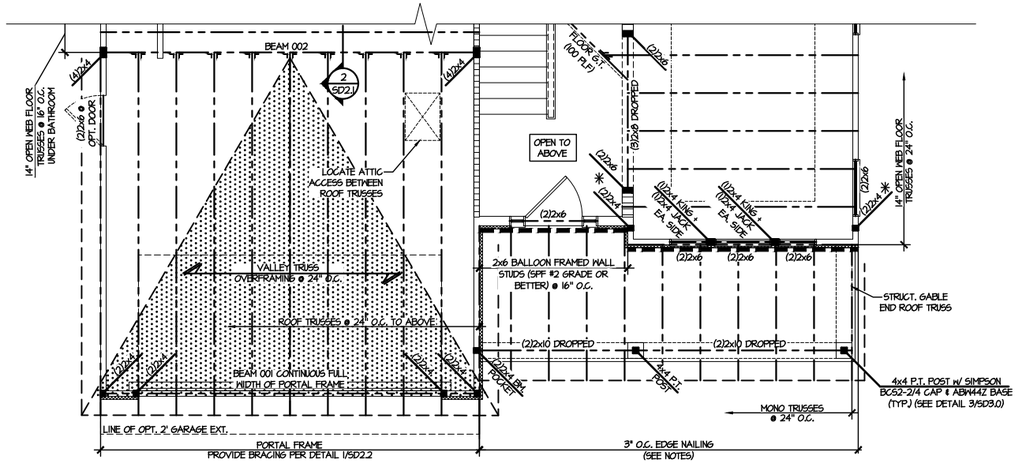
SD2.1J/SD2.1T REFERS TO SD2.1JA/SD2.1TA FOR LVL/PSL/LSL BEAMS OR SD2.1JB/SD2.1TB FOR FLITCH BEAMS OR SD2.1JC/SD2.1TC FOR STEEL BEAMS



2 PARTIAL 2ND FLOOR FRAMING PLAN - TRUSSES

SCALE: 1/8"=1'-0" ELEVATION #4

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issued: 11/30/21

NORTH CAROLINA PROFESSIONAL SEAL 042188 ENGINEER STEPHEN MULHERN

M&K project number: 126-21018

project mgr: JTR
drawn by: MDH
issue date: 07-16-21

REVISIONS:

date:	initial:

DRB GROUP

FLOOR FRAMING PLANS

MIDDLETON MODEL

RALEIGH, NC

sheet: LEFT HAND

S3.1T

FILE: RLH - Middleton - Structurals DATE: 11/30/2021 9:28 AM

ENGINEERED BEAM MATERIAL SCHEDULE

BEAM NUMBER	LVL OPTION	PSL OPTION	LSL OPTION	FLITCH OPTION	STEEL OPTION
001	(2)1¾"x11⅞" - H	3½"x11⅞" - H	(2)1¾"x11⅞" - H	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - H	N/A
001A	(2)1¾"x11⅞" - H	3½"x11⅞" - H	(2)1¾"x11⅞" - H	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - H	N/A
002	(2)1¾"x18" - FT	5¼"x18" - FT	N/A	(3)2x12 + (2) ½"x11¼" STEEL FLITCH PLATES - FB	WI2x19 - F
003	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	WI2x14 - F
004	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	WI2x14 - F
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006	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	WI2x14 - F
007	(2)1¾"x11⅞" - F	3½"x11⅞" - F	(2)1¾"x11⅞" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - F	WI0x12 - F
008	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	WI2x14 - F
009	(3)1¾"x18" - FT	5¼"x18" - FT	N/A	(4)2x12 + (3) ½"x11¼" STEEL FLITCH PLATES - FB	WI2x26 - F
010	(3)1¾"x20" - FT	5¼"x20" - FT	N/A	(4)2x12 + (3) ⅝"x11¼" STEEL FLITCH PLATES - FB	WI2x35 - F
011	(2)1¾"x11⅞" - FB	3½"x11⅞" - FB	(2)1¾"x14" - FB	(2)2x12 + (1) ¼"x11¼" STEEL FLITCH PLATE - FB	WI0x12 - FB

- BEAM NOTATION:
  - "F" INDICATES FLUSH BEAM
  - "FT" INDICATES FLUSH TOP BEAM
  - "FB" INDICATES FLUSH BOTTOM BEAM
  - "D" INDICATES DROPPED BEAM
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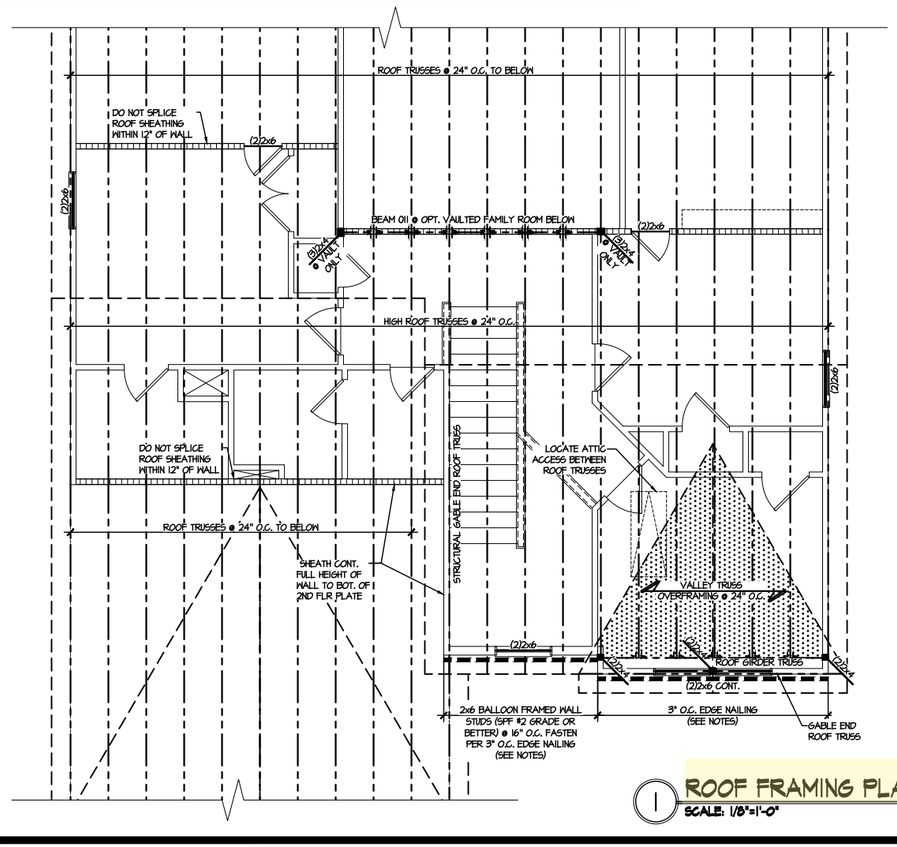

1 ROOF FRAMING PLAN
SCALE: 1/8"=1'-0"

ELEVATIONS #1

REFER TO SO.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

SD2.0 & SD2.1 REFERS TO SD2.0J & SD2.1J FOR I-JOIST FLOOR FRAMING OR SD2.0T & SD2.1T FOR TRUSS FLOOR FRAMING

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LEGEND

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

NORTH CAROLINA PROFESSIONAL SEAL 042188 ENGINEER STEPHEN R. IVES

11/30/21

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RESIDENTIAL STRUCTURAL ENGINEERING
309 Brookside Ave, Building 1 • Ambler, PA 19002
p 215.646.8001 • mulhernkulp.com
NC LIC #C-3825

M&K project number: 126-21018

project mgr: JTR
drawn by: MDH
issue date: 07-16-21

REVISIONS:

date:	initial:

DRB GROUP

ROOF FRAMING PLANS
MIDDLETON MODEL
RALEIGH, NC

sheet: LEFT HAND
S4.0

FILE: RLH - Middleton - Structurals DATE: 11/30/2021 9:28 AM

ENGINEERED BEAM MATERIAL SCHEDULE

BEAM NUMBER	LVL OPTION	PSL OPTION	LSL OPTION	FLITCH OPTION	STEEL OPTION
001	(2)1¾"x11⅞" - H	3½"x11⅞" - H	(2)1¾"x11⅞" - H	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - H	N/A
001A	(2)1¾"x11⅞" - H	3½"x11⅞" - H	(2)1¾"x11⅞" - H	(2)2x12 + (1) ½"x11¼" STEEL FLITCH PLATE - H	N/A
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009	(3)1¾"x18" - FT	5¼"x18" - FT	N/A	(4)2x12 + (3) ½"x11¼" STEEL FLITCH PLATES - FB	W12x26 - F
010	(3)1¾"x20" - FT	5¼"x20" - FT	N/A	(4)2x12 + (3) ⅝"x11¼" STEEL FLITCH PLATES - FB	W12x35 - F
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SD2.1J/SD2.1T REFERS TO SD2.1JA/SD2.1TA FOR LVL/PSL/LSL BEAMS OR SD2.1JB/SD2.1TB FOR FLITCH BEAMS OR SD2.1JC/SD2.1TC FOR STEEL BEAMS

LEGEND

- INTERIOR BEARING WALL
- BEARING WALL ABOVE
- BEAM / HEADER
- INDICATES SHEAR WALL & EXTENT
- EXTENT OF OVERFRAMING
- ⊥L METAL HANGER
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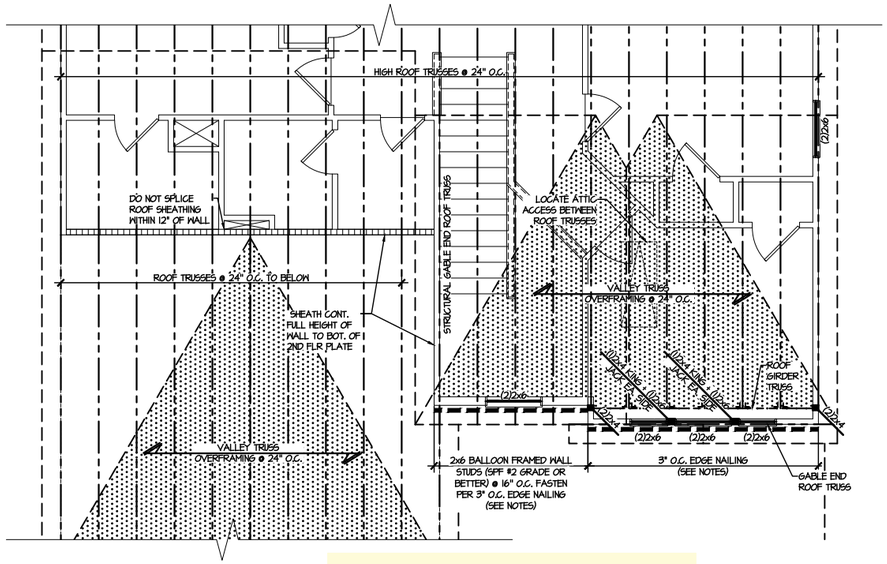

1 PARTIAL ROOF FRAMING PLAN
SCALE: 1/8"=1'-0" ELEVATION #4

FILE: RLH - Middleton - Structurals DATE: 11/30/2021 9:29 AM

NORTH CAROLINA PROFESSIONAL SEAL 042188 ENGINEER STEPHEN J. MULHERN

issue date: 11/30/21

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REVISIONS:

date:	initial:

DRB GROUP

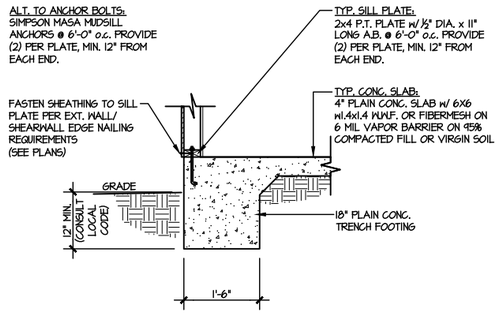
ROOF FRAMING PLANS

MIDDLETON MODEL

RALEIGH, NC

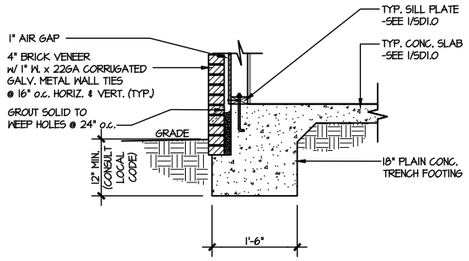
sheet: LEFT HAND

S4.1



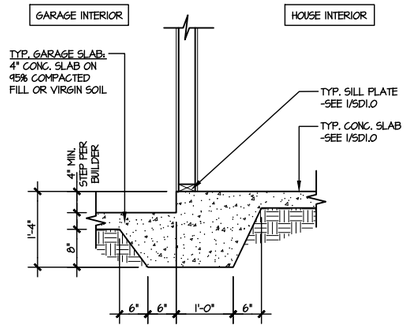
1 TYPICAL SLAB ON GRADE PERIMETER FOOTING

SCALE: 3/8"=1'-0"



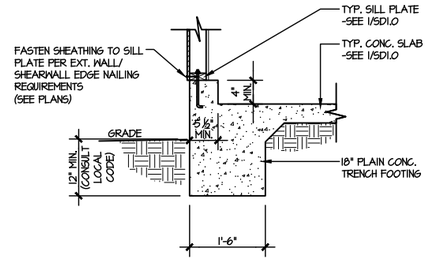
2 TYPICAL SLAB ON GRADE PERIMETER FOOTING

SCALE: 3/8"=1'-0" w/ BRICK VENEER



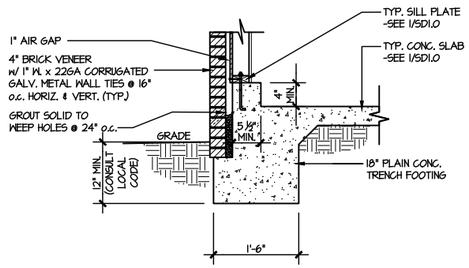
3 TYPICAL MONOLITHIC INTERIOR GARAGE FOOTING

SCALE: 3/8"=1'-0"



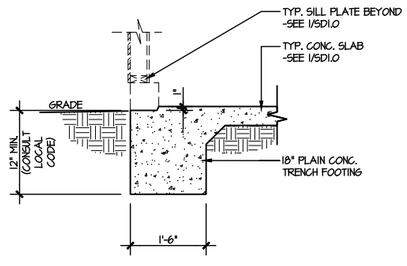
4 TYPICAL SLAB ON GRADE GARAGE PERIMETER FOOTING

SCALE: 3/8"=1'-0"



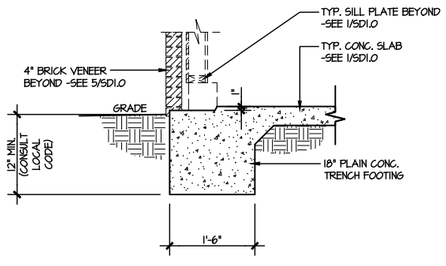
5 TYPICAL SLAB ON GRADE GARAGE PERIMETER FOOTING

SCALE: 3/8"=1'-0" w/ BRICK VENEER



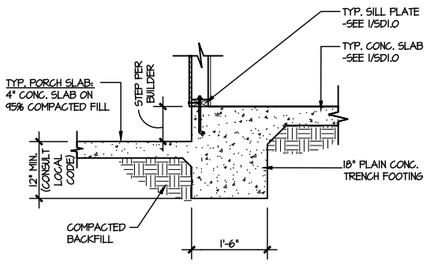
6 TYPICAL SLAB ON GRADE GARAGE ENTRY @ PERIMETER FOOTING

SCALE: 3/8"=1'-0"



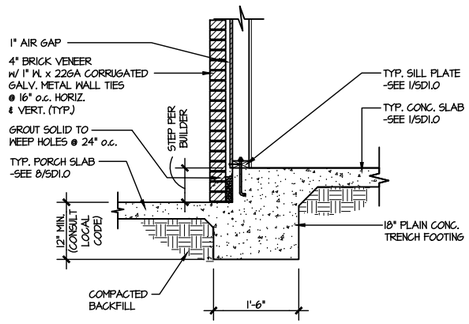
7 TYPICAL SLAB ON GRADE GARAGE ENTRY @ PERIMETER FOOTING

SCALE: 3/8"=1'-0" w/ BRICK VENEER



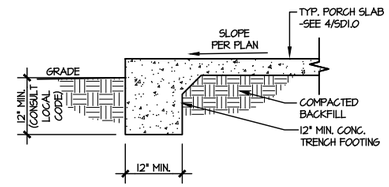
8 TYPICAL SLAB ON GRADE PERIMETER FOOTING @ PORCH/PATIO

SCALE: 3/8"=1'-0"



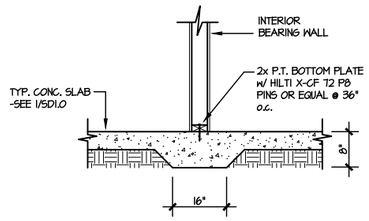
9 TYPICAL SLAB ON GRADE PERIMETER FOOTING @ PORCH/PATIO

SCALE: 3/8"=1'-0" w/ BRICK VENEER



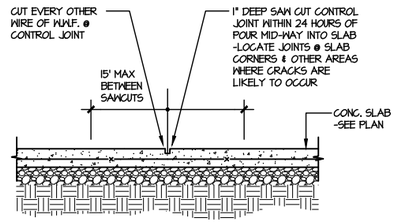
10 TYPICAL FOOTING @ PORCH SLAB

SCALE: 3/8"=1'-0"



11 TYPICAL THICKENED SLAB @ INTERIOR BEARING WALL

SCALE: 3/8"=1'-0"



A TYPICAL CONTROL JOINT

SCALE: 3/8"=1'-0"

LOCATE @ 15'-0" o.c. MAX. OR CORNERS WHERE CRACKS LIKELY TO DEVELOP

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11/30/21

NORTH CAROLINA PROFESSIONAL SEAL 042188 ENGINEER STEPHEN R. VES

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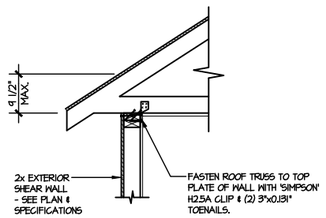
DRB GROUP

FOUNDATION DETAILS

MIDDLETON MODEL

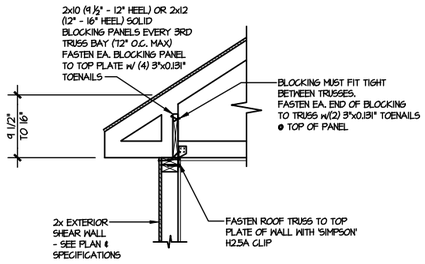
RALEIGH, NC

sheet: SD1.0



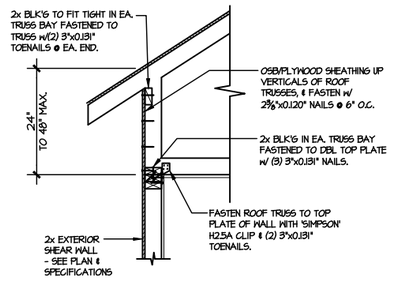
TYPICAL SHEAR TRANSFER DETAIL @ ROOF

A1 SCALE: 3/8"=1'-0" HEEL HEIGHT LESS THAN 9 ½" NO BLOCKING REQ'D



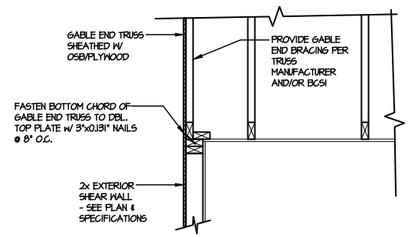
TYPICAL SHEAR TRANSFER DETAIL @ ROOF

A2 SCALE: 3/8"=1'-0" HEEL HEIGHT BETWEEN 9 ½" - 16" BLOCKING REQ'D



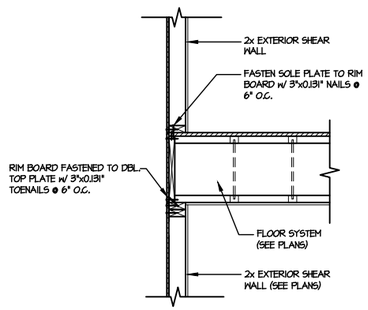
TYPICAL SHEAR TRANSFER DETAIL @ RAISED HEEL TRUSS

A3 SCALE: 3/8"=1'-0" HEEL HEIGHT UP TO 48" MAX.



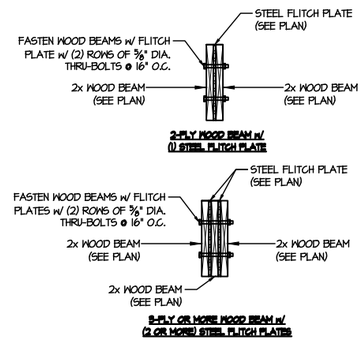
TYPICAL GABLE END DETAIL

B SCALE: 3/8"=1'-0"



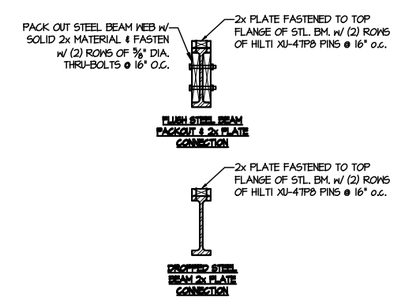
TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ EXTERIOR WALL

C SCALE: 3/8"=1'-0"



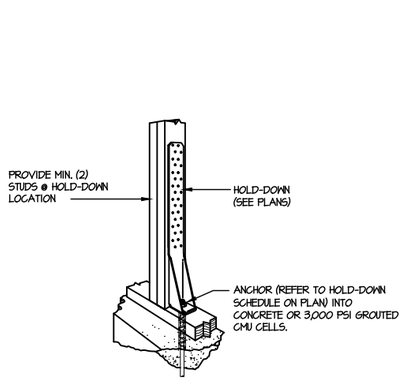
TYPICAL FLITCH BEAM CONNECTION DETAIL

D SCALE: 3/4"=1'-0"



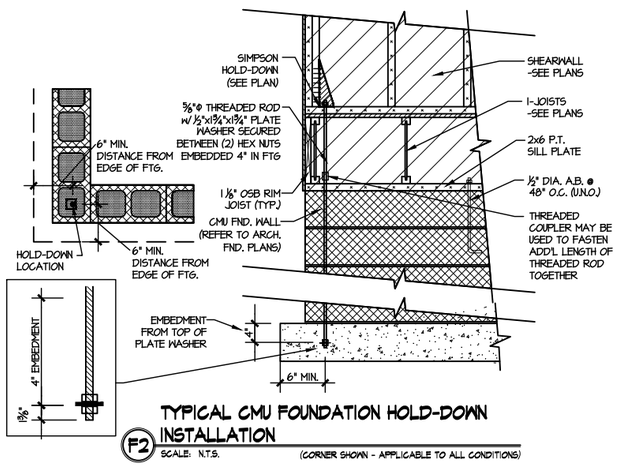
TYPICAL STEEL BEAM CONNECTION DETAIL

E SCALE: 3/4"=1'-0"



TYPICAL HOLD DOWN INSTALLATION

F1 SCALE: N.T.S.



TYPICAL CMU FOUNDATION HOLD-DOWN INSTALLATION

F2 SCALE: N.T.S. (CORNER SHOWN - APPLICABLE TO ALL CONDITIONS)

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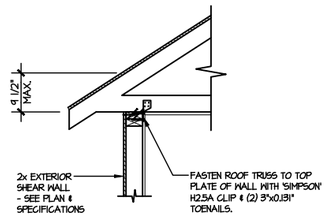
DRB GROUP

FRAMING DETAILS

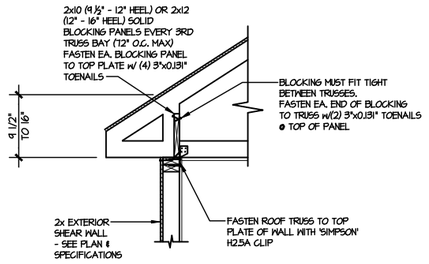
MIDDLETON MODEL
RALEIGH, NC

sheet: SD2.0J



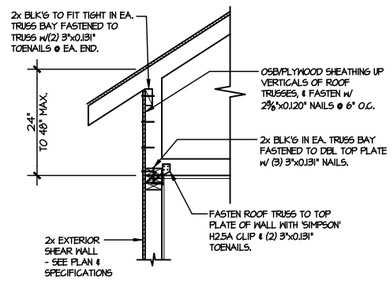
A1 TYPICAL SHEAR TRANSFER DETAIL @ ROOF

SCALE: 3/8"=1'-0" HEEL HEIGHT LESS THAN 9 ½" NO BLOCKING REQ'D



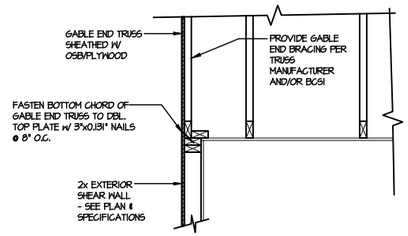
A2 TYPICAL SHEAR TRANSFER DETAIL @ ROOF

SCALE: 3/8"=1'-0" HEEL HEIGHT BETWEEN 9 ½" - 16" BLOCKING REQ'D



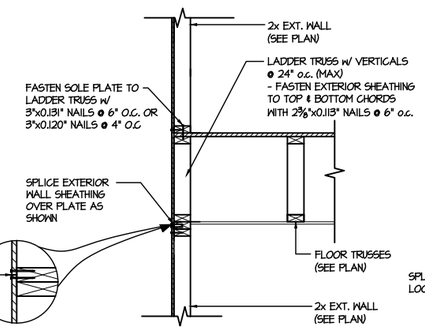
A3 TYPICAL SHEAR TRANSFER DETAIL @ RAISED HEEL TRUSS

SCALE: 3/8"=1'-0" HEEL HEIGHT UP TO 48" MAX.



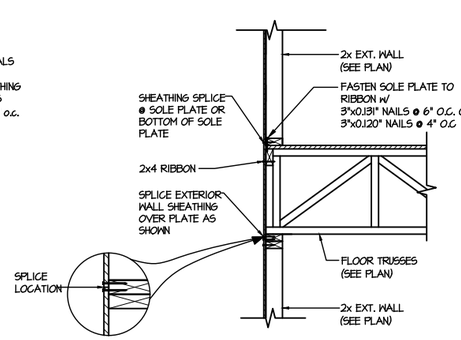
B TYPICAL GABLE END DETAIL

SCALE: 3/8"=1'-0"



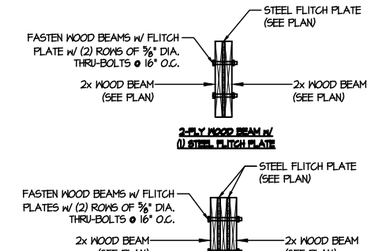
C1 TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ EXTERIOR WALL

SCALE: 3/8"=1'-0" PARALLEL FRMG



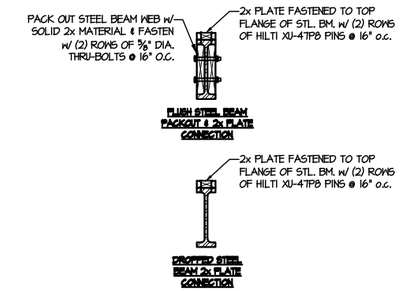
C2 TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ EXTERIOR WALL

SCALE: 3/8"=1'-0" PERPENDICULAR FRMG



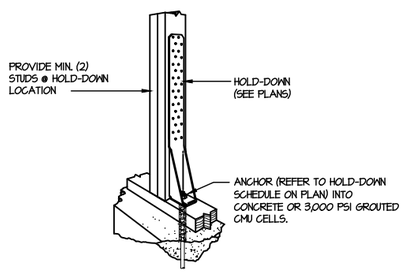
D TYPICAL FLITCH BEAM CONNECTION DETAIL

SCALE: 3/4"=1'-0"



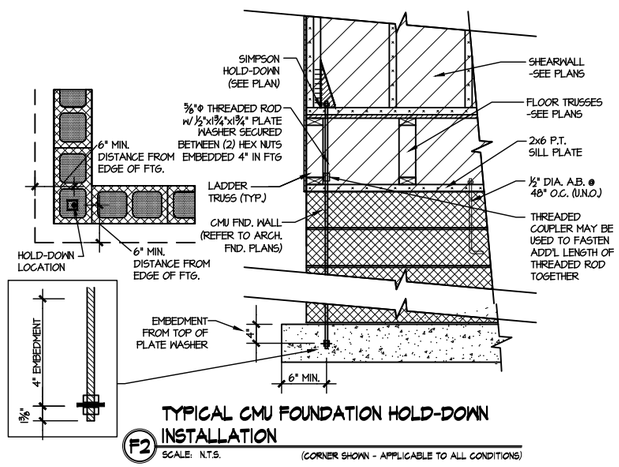
E TYPICAL STEEL BEAM CONNECTION DETAIL

SCALE: 3/4"=1'-0"



F1 TYPICAL HOLD DOWN INSTALLATION

SCALE: N.T.S.



F2 TYPICAL CMU FOUNDATION HOLD-DOWN INSTALLATION

SCALE: N.T.S. (CORNER SHOWN - APPLICABLE TO ALL CONDITIONS)

FILE: RLH - Middleton - Structurals DATE: 11/30/2021 9:32 AM

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M&K project number: 126-21018

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issue date: 07-16-21

REVISIONS:

date:	initial:

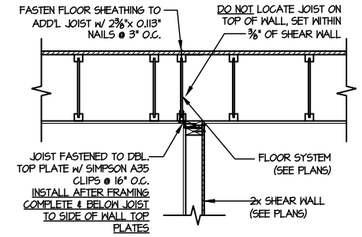
DRB GROUP

FRAMING DETAILS

MIDDLETON MODEL

RALEIGH, NC

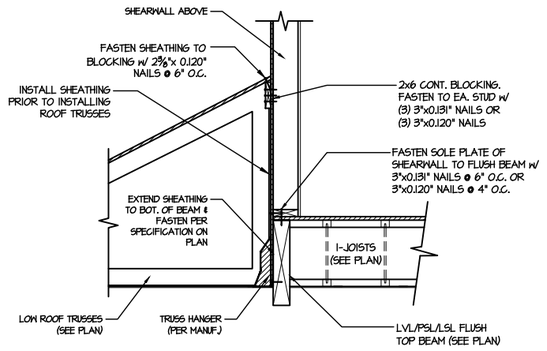
sheet: SD2.0T



1 SHEAR TRANSFER DETAIL @ INTERIOR SHEARWALL BELOW

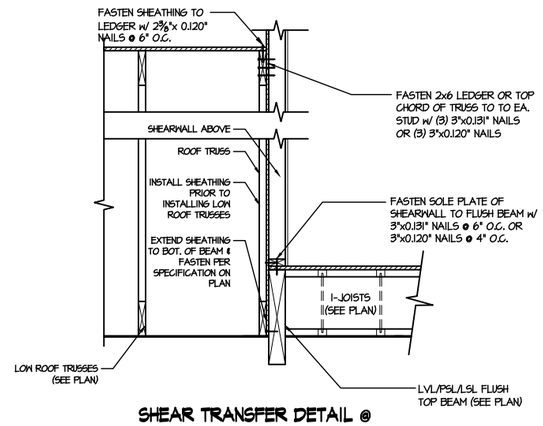
SCALE: 3/4"=1'-0"

PARALLEL TO FRAMING ONLY REQ'D WHERE NOTED ON PLAN



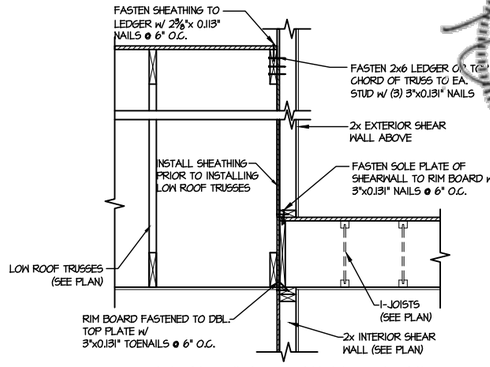
2 SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE

SCALE: 3/8"=1'-0"



3 SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE

SCALE: 3/8"=1'-0"



4 TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL

SCALE: 3/4"=1'-0"

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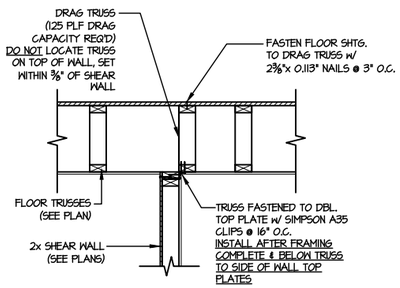
FRAMING DETAILS

MIDDLETON MODEL

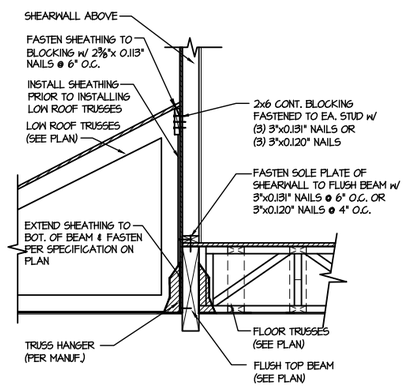
RALEIGH, NC

sheet: SD2.1AJ



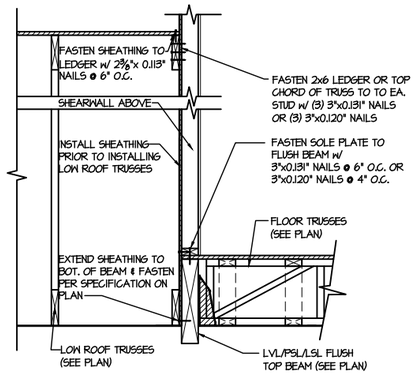
SHEAR TRANSFER DETAIL @ INTERIOR SHEAR WALL

1 SCALE: 3/4"=1'-0" PARALLEL FRAMING



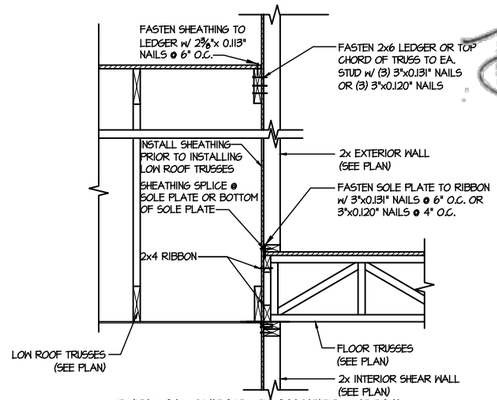
SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE

2 SCALE: 3/4"=1'-0"



SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE

3 SCALE: 3/8"=1'-0"



TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL

4 SCALE: 3/4"=1'-0"

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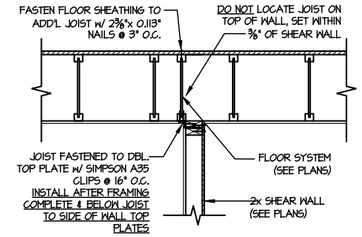
FRAMING DETAILS

MIDDLETON MODEL

RALEIGH, NC

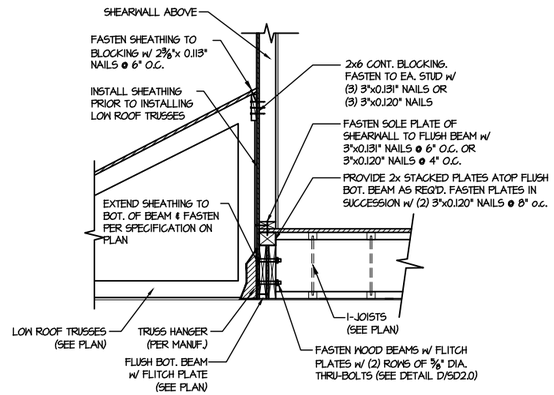
sheet: SD2.1AT



SHEAR TRANSFER DETAIL @ INTERIOR SHEARWALL BELOW

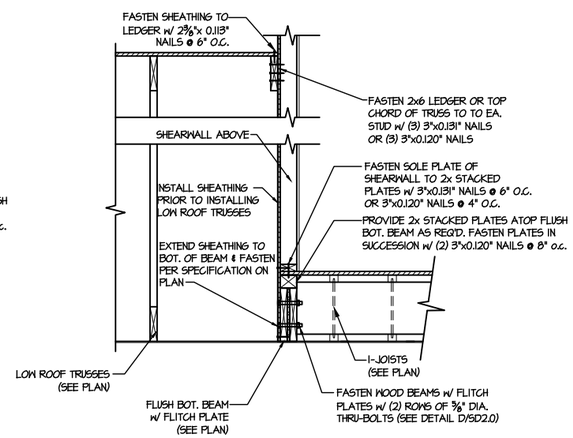
1 SCALE: 3/4"=1'-0"

PARALLEL TO FRAMING ONLY REQ'D WHERE NOTED ON PLAN



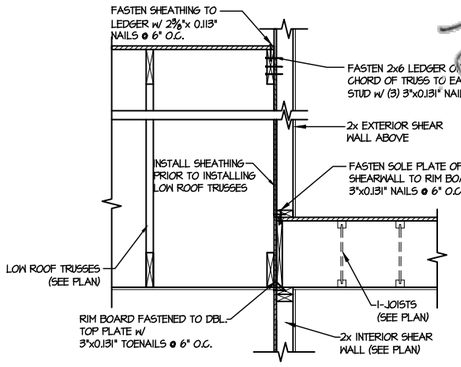
SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE

2 SCALE: 3/8"=1'-0"



SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE

2 SCALE: 3/8"=1'-0"



TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL

3 SCALE: 3/4"=1'-0"

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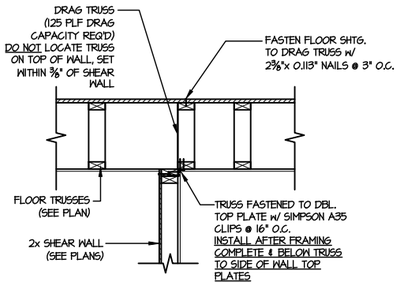
FRAMING DETAILS

MIDDLETON MODEL

RALEIGH, NC

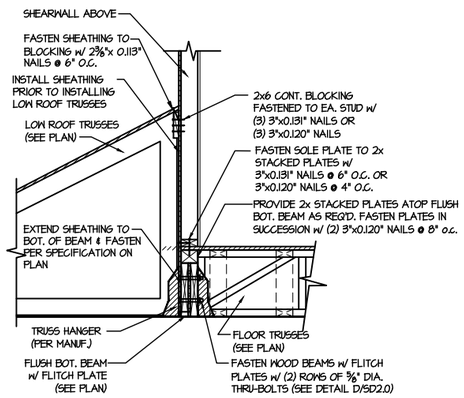
sheet:

SD2.1BJ



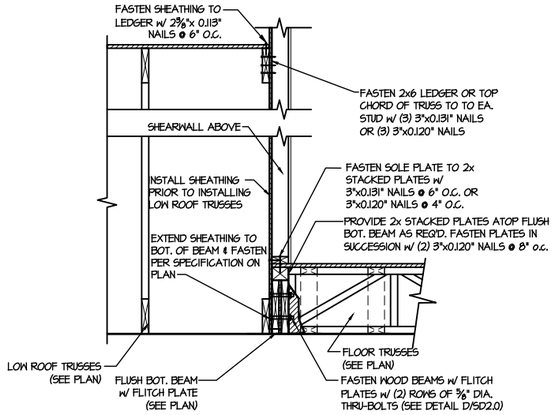
SHEAR TRANSFER DETAIL @ INTERIOR SHEAR WALL

1 SCALE: 3/4"=1'-0" PARALLEL FRAMING



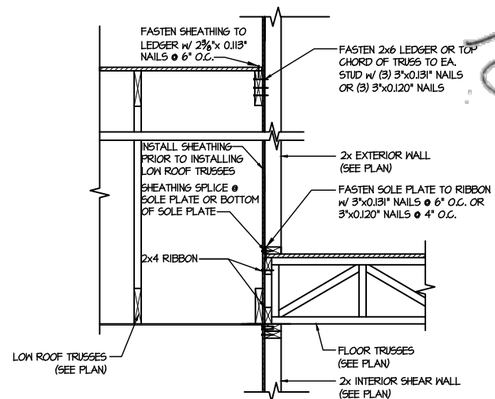
SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE

2 SCALE: 3/8"=1'-0"



SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE

3 SCALE: 3/8"=1'-0"



TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL

4 SCALE: 3/4"=1'-0"

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NC LIC. #C-3825

M&K project number: 126-21018

project mgr: JTR
drawn by: MDH
issue date: 07-16-21

REVISIONS:

date:	initial:

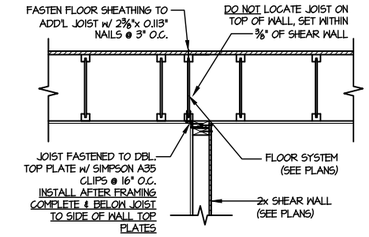
DRB GROUP

FRAMING DETAILS

MIDDLETON MODEL

RALEIGH, NC

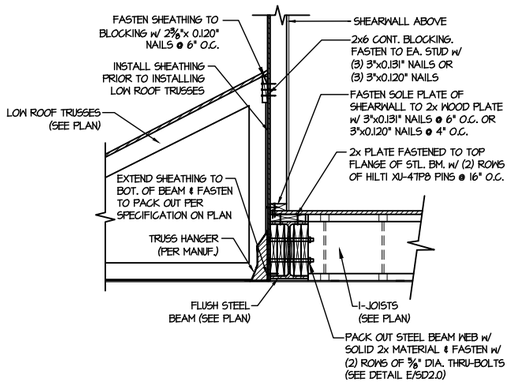
sheet: SD2.1BT



SHEAR TRANSFER DETAIL @ INTERIOR SHEARWALL BELOW

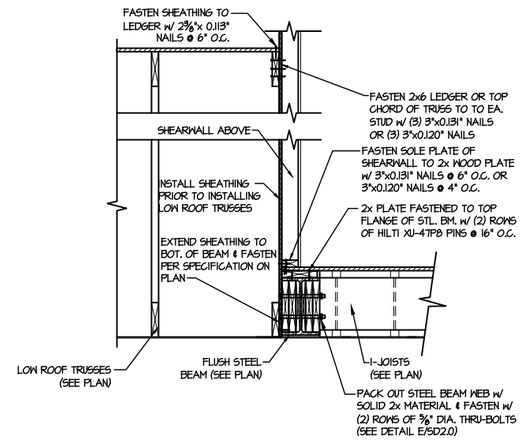
1 SCALE: 3/4"=1'-0"

PARALLEL TO FRAMING ONLY REQ'D WHERE NOTED ON PLAN



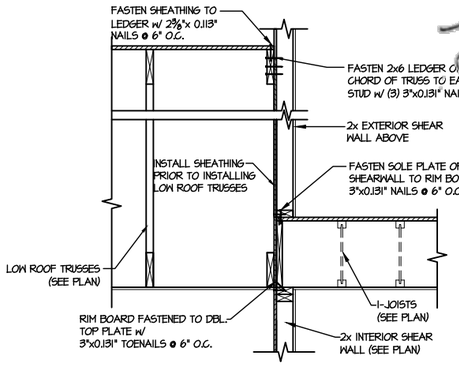
SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE

2 SCALE: 3/8"=1'-0"



SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE

2 SCALE: 3/8"=1'-0"



TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL

3 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.

FILE: RLH - Middleton - Structurals DATE: 11/30/2021 9:33 AM

issue date: 11/30/21

NORTH CAROLINA PROFESSIONAL SEAL 042188 ENGINEER STEPHEN VES

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
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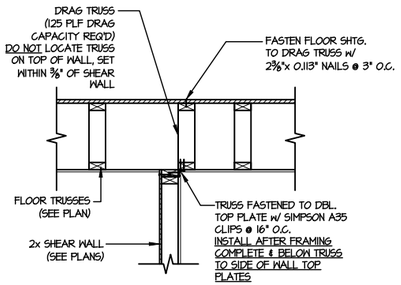
DRB GROUP

FRAMING DETAILS

MIDDLETON MODEL

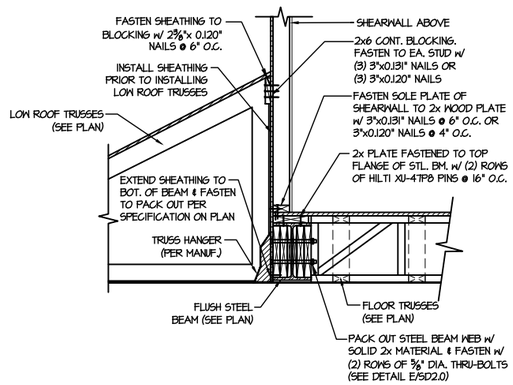
RALEIGH, NC

sheet: SD2.1CJ



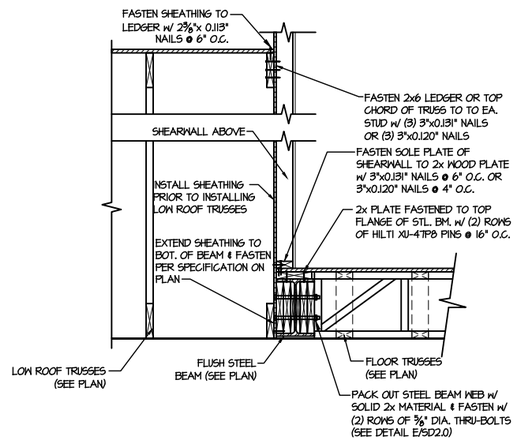
1 SHEAR TRANSFER DETAIL @ INTERIOR SHEAR WALL

SCALE: 3/4"=1'-0" PARALLEL FRAMING



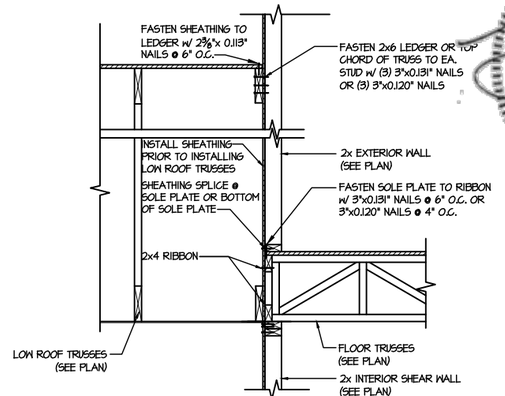
2 SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE

SCALE: 3/8"=1'-0"



3 SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE

SCALE: 3/8"=1'-0"



4 TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL

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.

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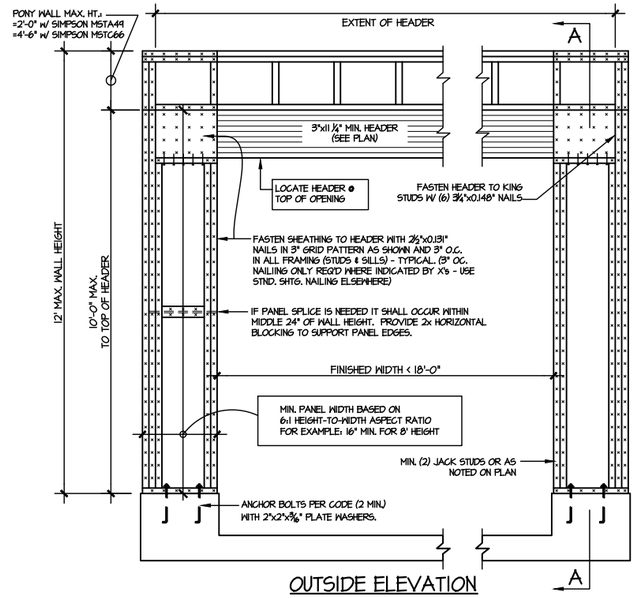
DRB GROUP

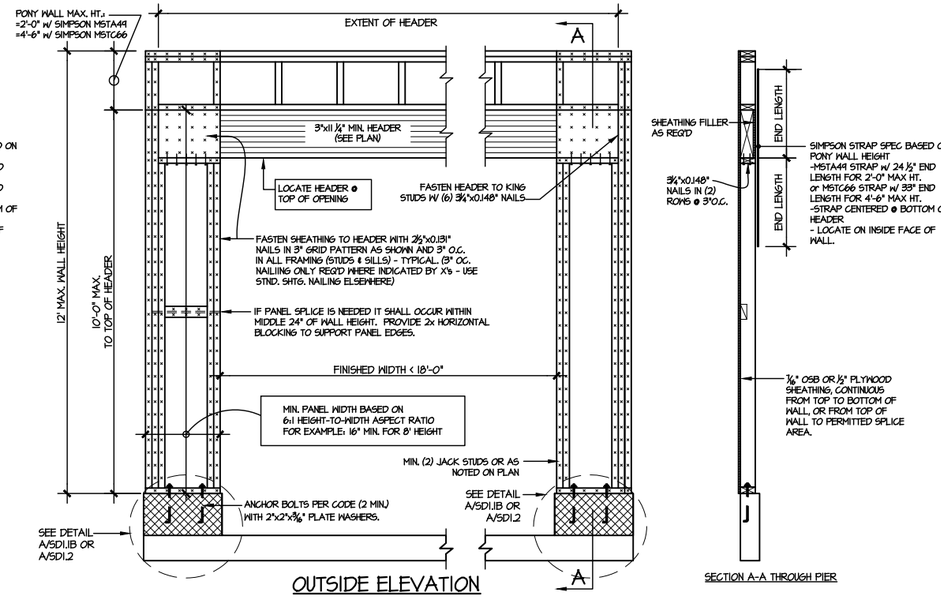
FRAMING DETAILS

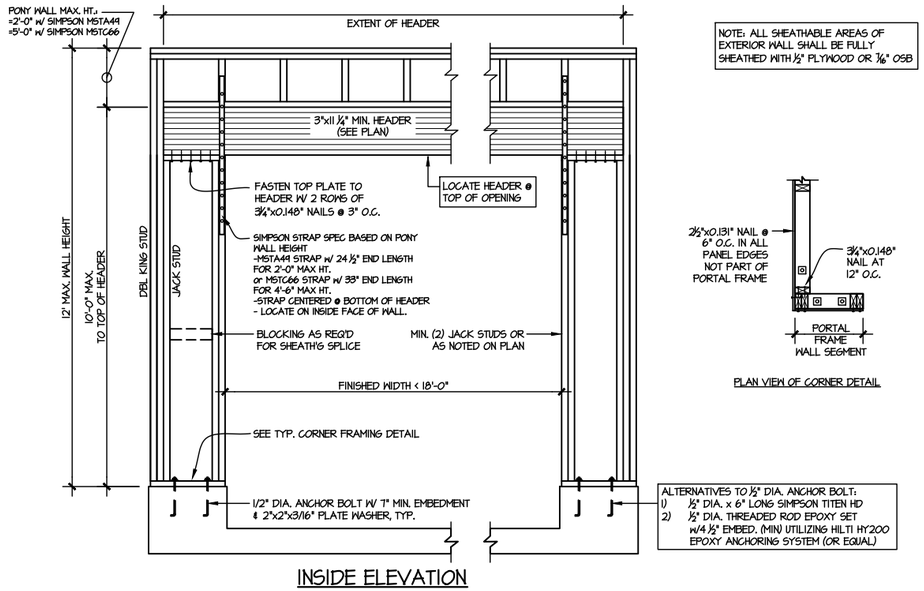
MIDDLETON MODEL

RALEIGH, NC

sheet: SD2.1CT

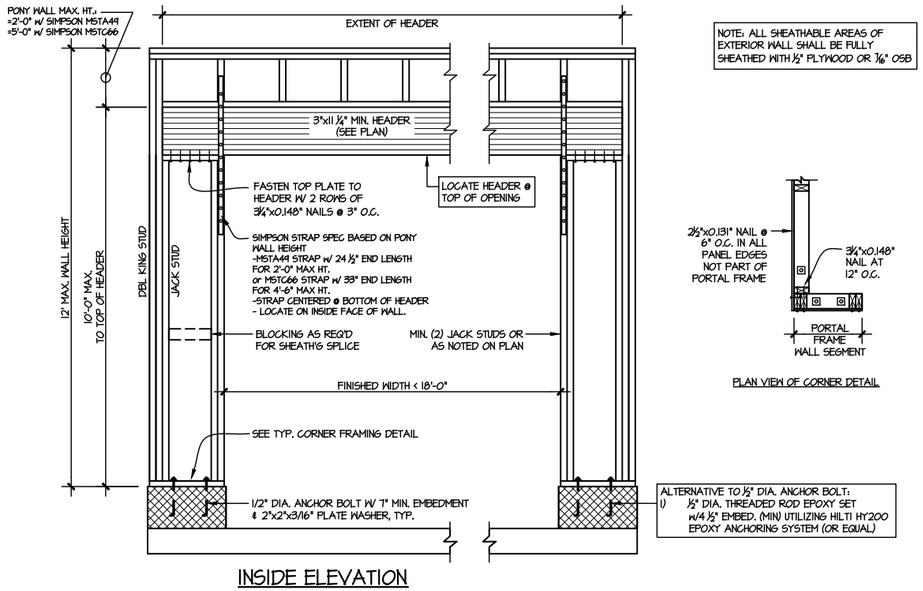






1A TWO SIDED GARAGE PORTAL FRAME BRACING ELEVATION ON CONCRETE STEM

SCALE: N.T.S.



1B TWO SIDED GARAGE PORTAL FRAME BRACING ELEVATION ON CMU STEM

SCALE: N.T.S.

FILE: RLH - Middleton - Structurals DATE: 11/30/2021 9:33 AM

11/30/21

NORTH CAROLINA PROFESSIONAL SEAL 042188 ENGINEER STEPHEN J. VES

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NC LIC. #C-3825

M&K project number: 126-21018

project mgr: JTR
drawn by: MDH
issue date: 07-16-21

REVISIONS:

date:	initial:

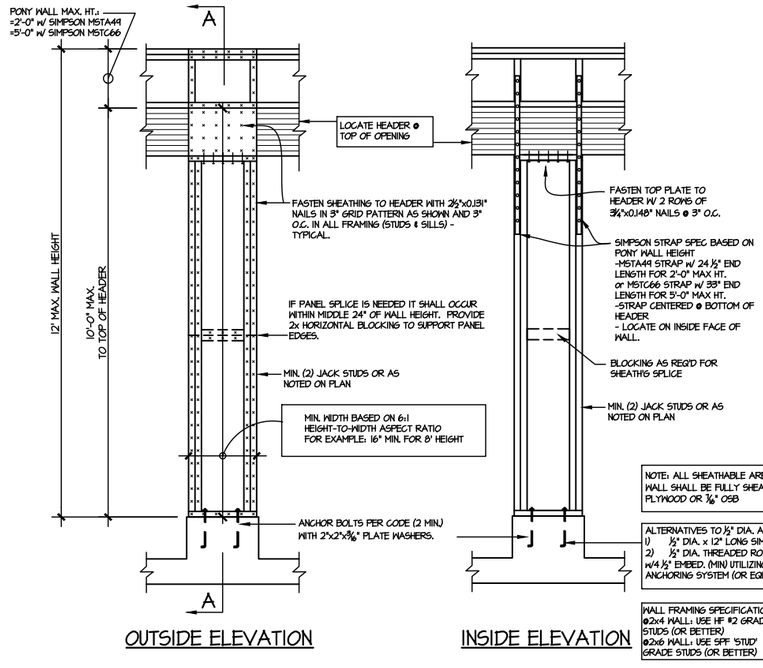
DRB GROUP

FRAMING DETAILS

MIDDLETON MODEL

RALEIGH, NC

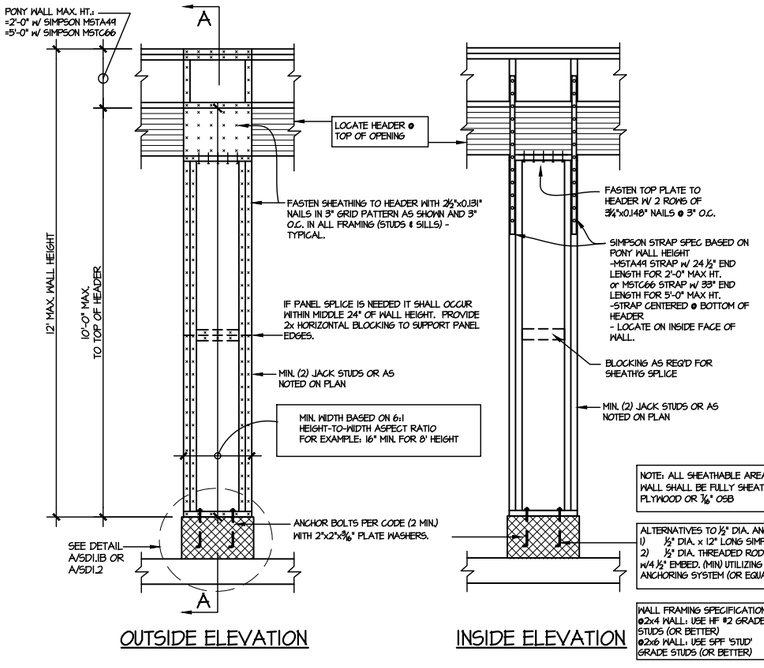
sheet: SD2.2



1A GARAGE PORTAL FRAME BRACING ELEVATION

SCALE: N.T.S.

CENTER PIER BETWEEN 2 GARAGE DOORS
CONCRETE STEM



1B GARAGE PORTAL FRAME BRACING ELEVATION

SCALE: N.T.S.

CENTER PIER BETWEEN 2 GARAGE DOORS
CMU STEM

11/30/21

NORTH CAROLINA PROFESSIONAL SEAL 042188 ENGINEER STEPHEN E. VES

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REVISIONS:

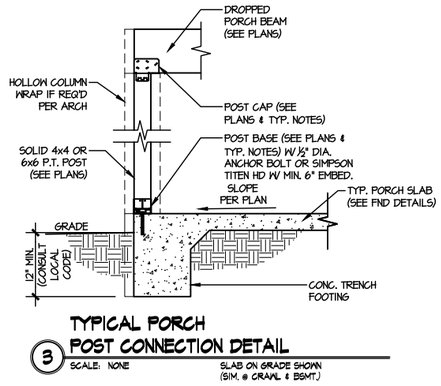
date:	initial:

DRB GROUP

FRAMING DETAILS

MIDDLETON MODEL
RALEIGH, NC

sheet: SD2.3



TYPICAL PORCH POST CONNECTION DETAIL

3 SCALE: NONE — SLAB ON GRADE SHOWN (SIM. @ CRAWL & BSMT.)

FILE: RLH - Middleton - Structurals DATE: 11/30/2021 9:33 AM

11/30/21

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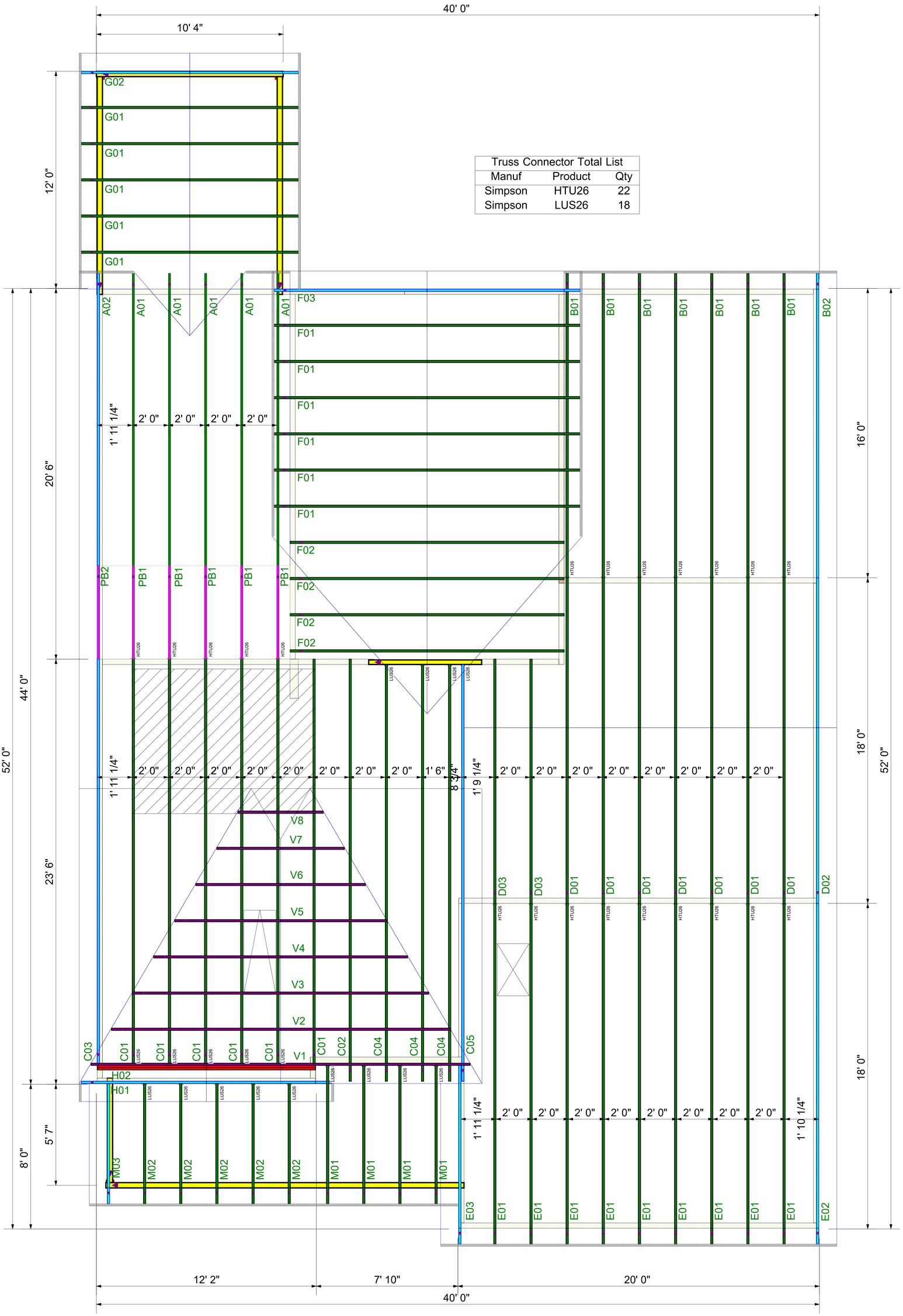
DRB GROUP

FRAMING DETAILS

MIDDLETON MODEL

RALEIGH, NC

sheet: SD3.0



Truss Connector Total List		
Manuf	Product	Qty
Simpson	HTU26	22
Simpson	LUS26	18

ROOF LAYOUT

DRAWING SCALE : NTS

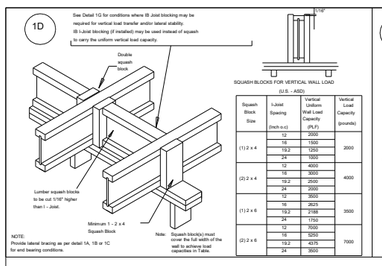
PROJECT NUMBER	REVISIONS	
XXXXXXXX	DATE	BY
SHEET NUMBER	8-9-22	ND
1 / 1		

DRB GROUP

MIDDLETON 4 - 80 FaNC

ROOF TRUSS LAYOUT

Kempsville Building Materials
A Division of the Carter Lumber Company

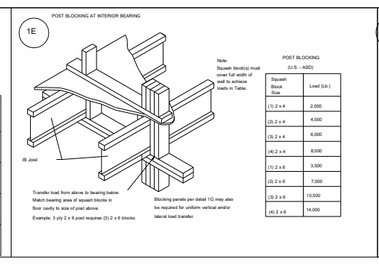


SQUASH BLOCKS FOR VERTICAL WALL LOAD

(U.S. - ASD)

Squash Block Size	I-Joist Spacing (inch o.c)	Vertical Uniform Wall Load Capacity (PLF)	Vertical Load Capacity (pounds)
(1) 2 x 4	12	2000	2000
	16	1500	
	19.2	1250	
	24	1000	
(2) 2 x 4	12	4000	4000
	16	3000	
	19.2	2500	
	24	2000	
(1) 2 x 6	12	3500	3500
	16	2625	
	19.2	2188	
	24	1750	
(2) 2 x 6	12	7000	7000
	16	5250	
	19.2	4375	
	24	3500	

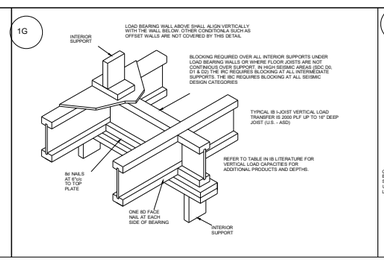
NOTE:
Provide lateral bracing as per detail 1A, 1B or 1C for end bearing conditions.

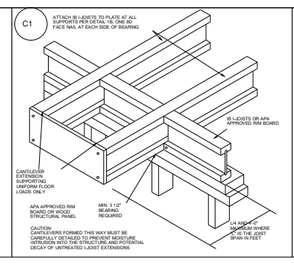


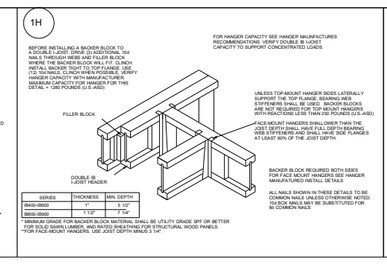
POST BLOCKING

(U.S. - ASD)

Squash Block Size	Load (Lb.)
(1) 2 x 4	2,000
(2) 2 x 4	4,000
(3) 2 x 4	6,000
(4) 2 x 4	8,000
(1) 2 x 6	3,500
(2) 2 x 6	7,000
(3) 2 x 6	10,500
(4) 2 x 6	14,000

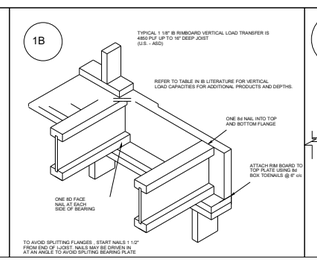


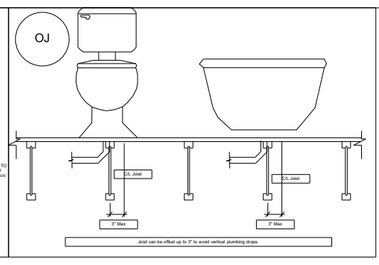


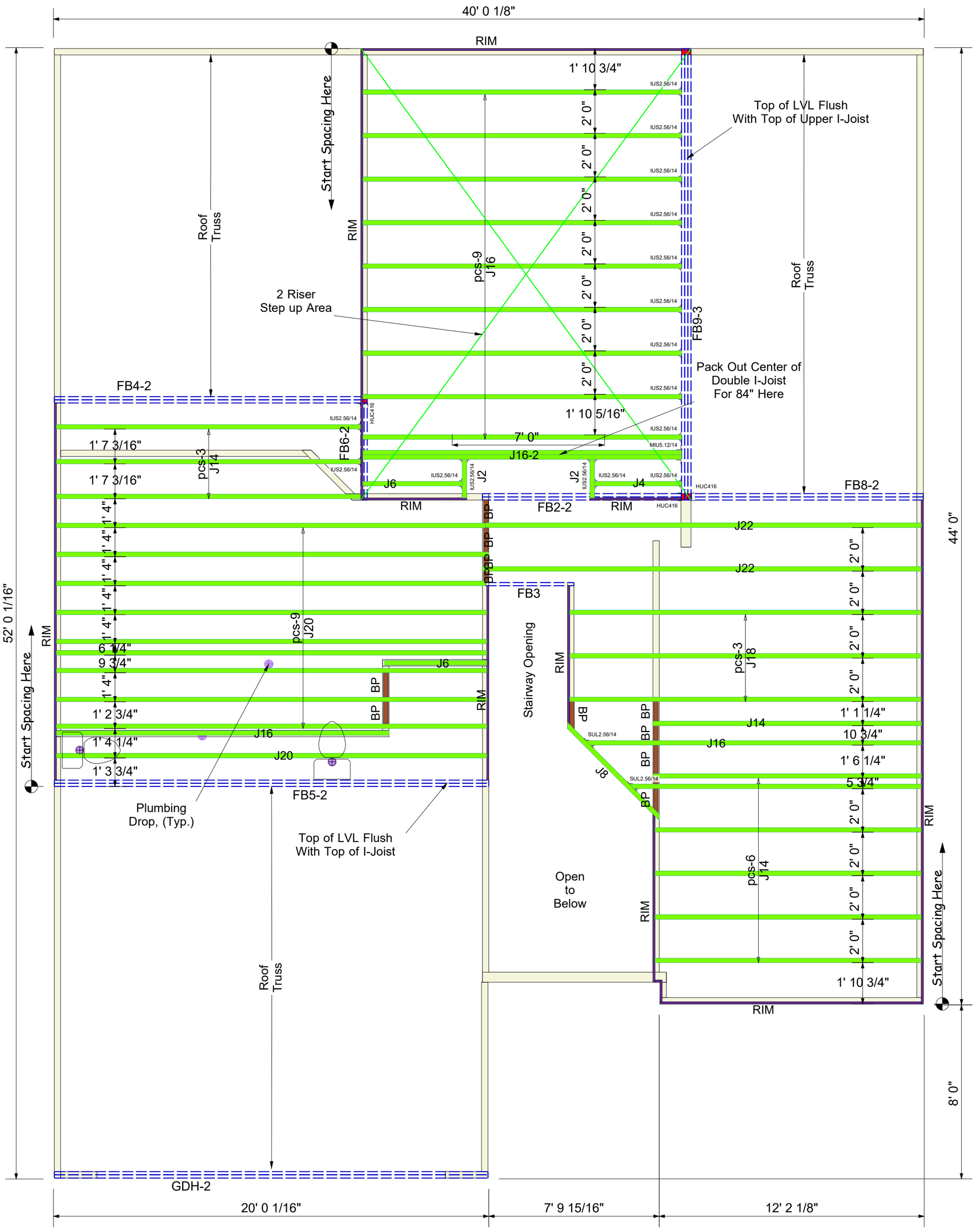


SERIES	THICKNESS	MIN. DEPTH
BHX-/BMX-	2"	5 1/2"
BHX-/BMX-	1 1/2"	7 1/4"

* MINIMUM GRADE FOR BACKER BLOCK MATERIAL SHALL BE UTILITY GRADE SPF OR BETTER FOR SOLID SAWN LUMBER, AND RATED SHEATHING FOR STRUCTURAL WOOD PANELS
**FOR FACE-MOUNT HANGERS, USE JOIST DEPTH MINUS 3 1/4".







Connector Summary		
Qty	Manuf	Product
3		HUC416
16	Simpson	IUS2.56/14
1	Simpson	MIU5.12/14
2		SUL2.56/14

Products					
PlotID	Length	Product	Plies	Net Qty	Fab Type
J22	22' 0"	14" PJI-40	1	2	MFD
J20	20' 0"	14" PJI-40	1	10	MFD
J18	18' 0"	14" PJI-40	1	3	MFD
J16	16' 0"	14" PJI-40	1	11	MFD
J16-2	16' 0"	14" PJI-40	2	2	MFD
J14	14' 0"	14" PJI-40	1	10	MFD
J8	8' 0"	14" PJI-40	1	1	FF
J6	6' 0"	14" PJI-40	1	2	MFD
J4	4' 0"	14" PJI-40	1	1	MFD
J2	2' 0"	14" PJI-40	1	2	MFD
GDH-2	20' 0"	2.0 RigidLam DF LVL 1-3/4 x 11-7/8	2	2	FF
FB4-2	16' 0"	2.0 RigidLam DF LVL 1-3/4 x 14	2	2	FF
FB8-2	12' 0"	2.0 RigidLam DF LVL 1-3/4 x 14	2	2	FF
FB2-2	10' 0"	2.0 RigidLam DF LVL 1-3/4 x 14	2	2	FF
FB3	6' 0"	2.0 RigidLam DF LVL 1-3/4 x 14	1	1	FF
FB6-2	6' 0"	2.0 RigidLam DF LVL 1-3/4 x 14	2	2	FF
FB9-3	22' 0"	2.0 RigidLam DF LVL 1-3/4 x 18	3	3	FF
FB5-2	20' 0"	2.0 RigidLam DF LVL 1-3/4 x 18	2	2	FF
RIM	12' 0"	1 1/8" x 14" APA Rim Board	1	11	FF
BP	2' 0"	14" PJI-40	1	6	FF

BLOCK SOLID UNDER ALL POST /POINT LOADS FROM ABOVE - TYPICAL AT ALL LOCATIONS

2nd Floor I-Joist
DRAWING SCALE : NTS

PROJECT NUMBER
22080079
SHEET NUMBER
1 / 1

REVISIONS	
DATE	BY
08.10.22	RKW

DRB Homes NC LLC

80 Farm at Neills Creek (Middleton 4-GLFE)

2nd FLOOR I-JOIST PLACEMENT PLAN

Kempsville Building Materials
A Division of the Carter Lumber Company