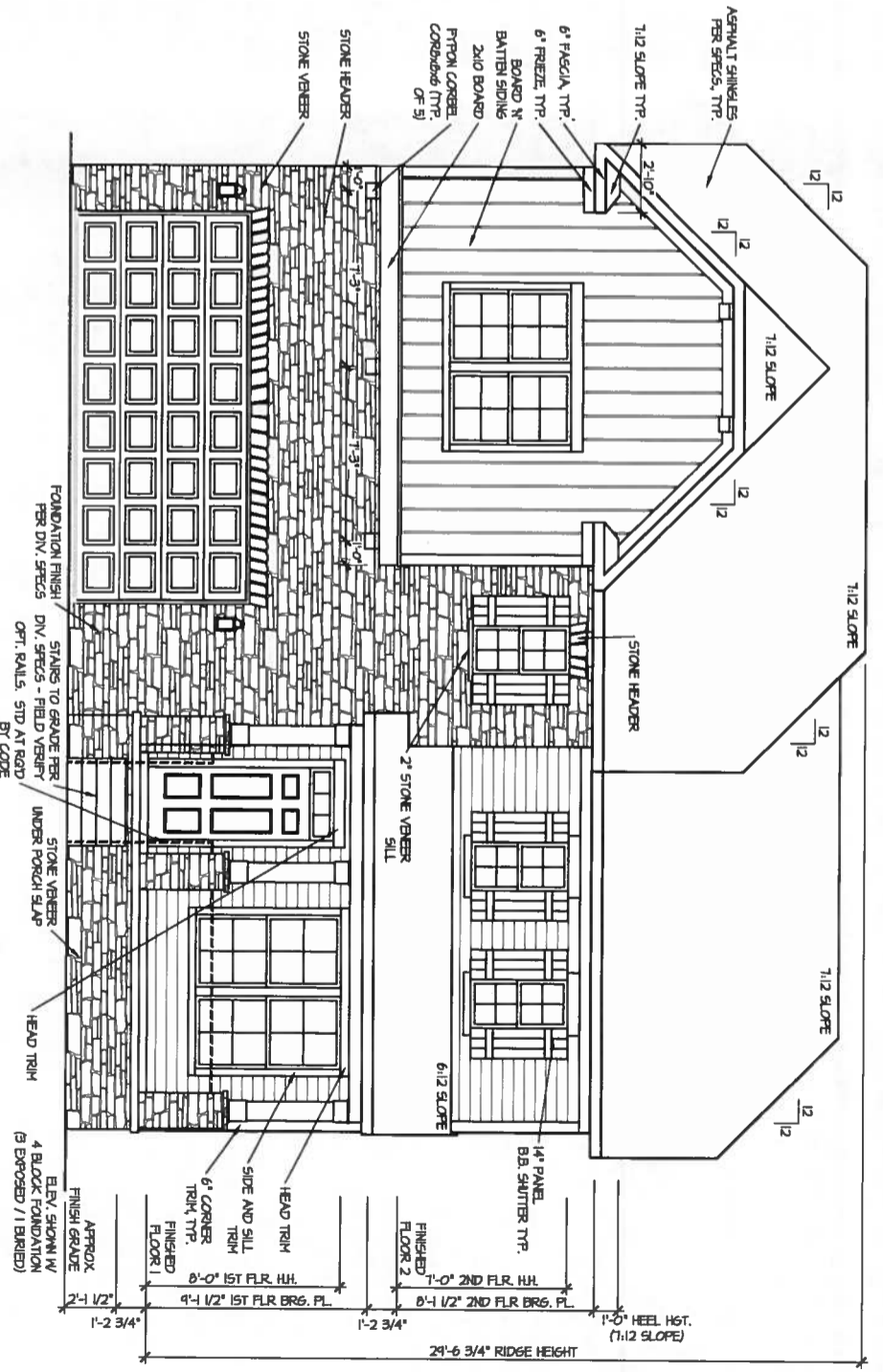


REAR ELEVATION 5
SCALE 1/8" = 1'-0"



FRONT ELEVATION 5
SCALE 1/8" = 1'-0"

A1

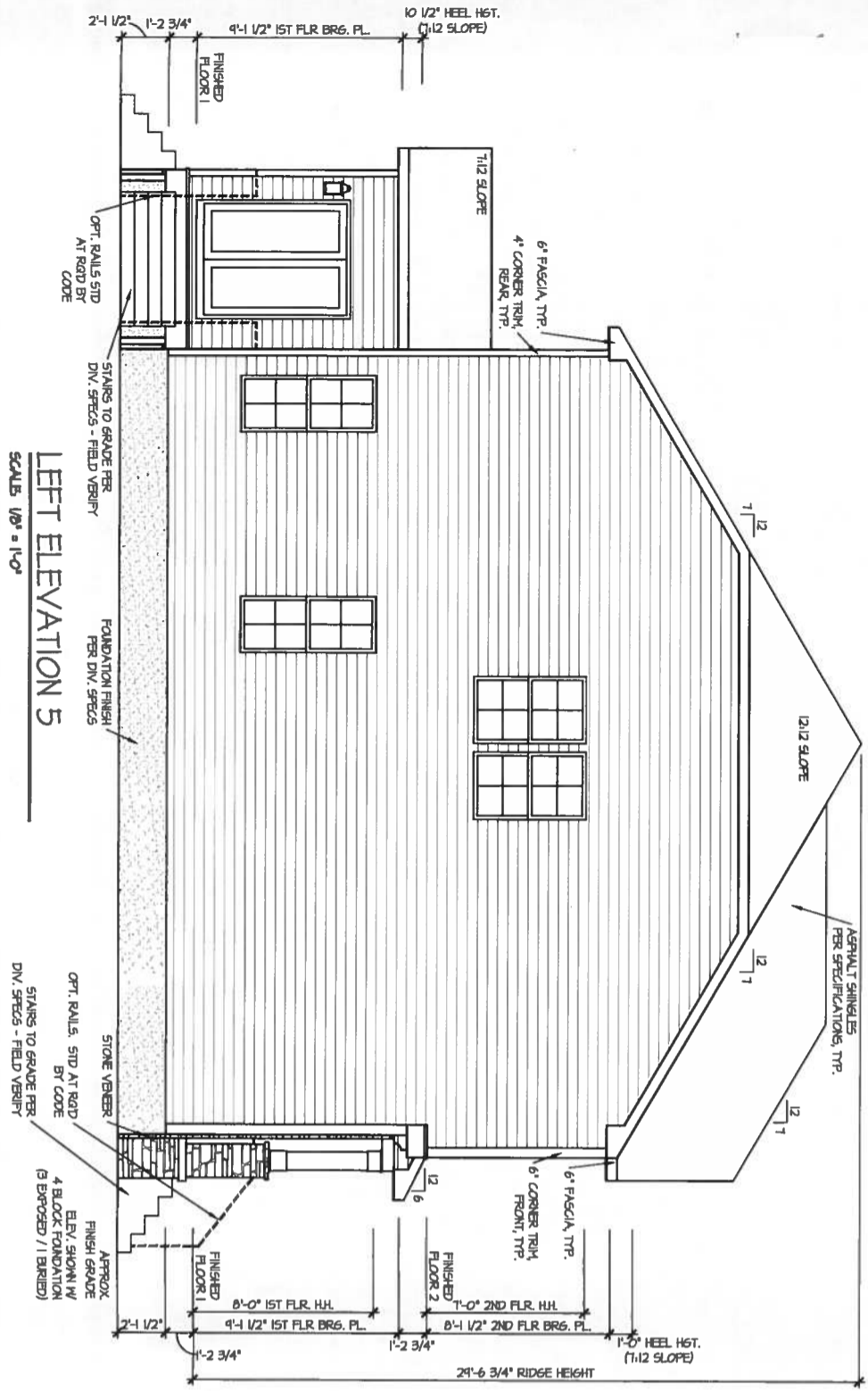
HOUSE NAME:
2223-ELMHURST

DAN RYAN
ARCHITECT

DRAWN BY:
MS
DATE: 01/21/23
HOUSE ORIENT:
GARAGE
PLAN REVISION:
RALE

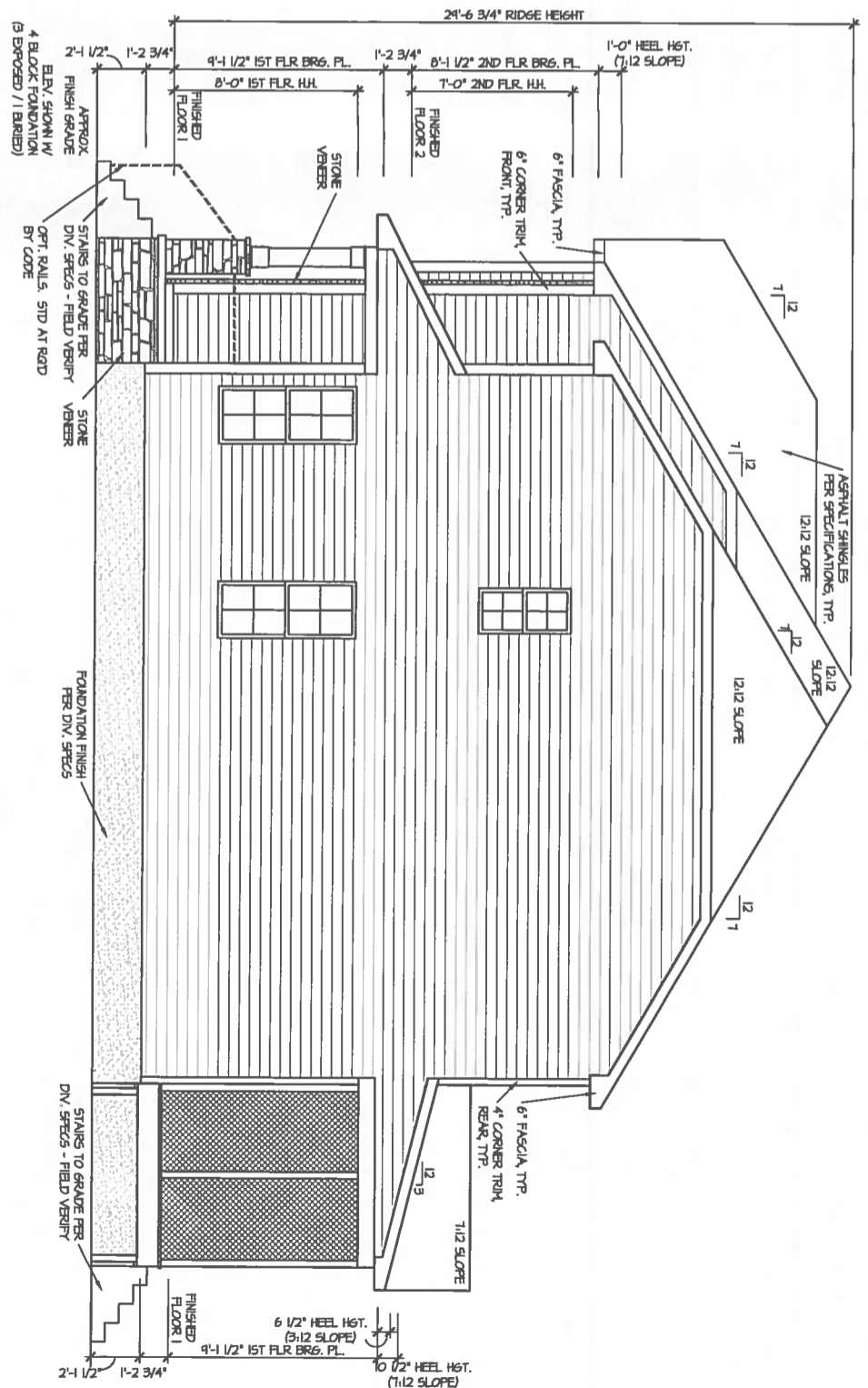
SUBDIVISION:
OLDE MILL VILLAGE (NC) (RAL)
LOT 00.0002 PHASE

DATE	CHANGE
X	X
X	X
X	X



LEFT ELEVATION 5

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



RIGHT ELEVATION 5

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

SHEET No. A1

HOUSE NAME:
2223-ELMHURST

DAN RYAN

DATE: 01/27/21
DRAWN BY: MTS
HOUSE ORIENT: GARAGE
PLAN REVISION: RALE

SUBDIVISION:
OLDE MILL VILLAGE (NC) (RAL)
LOT 00.0002 PHASE

DATE	CHANGE
X	X
X	X
X	X

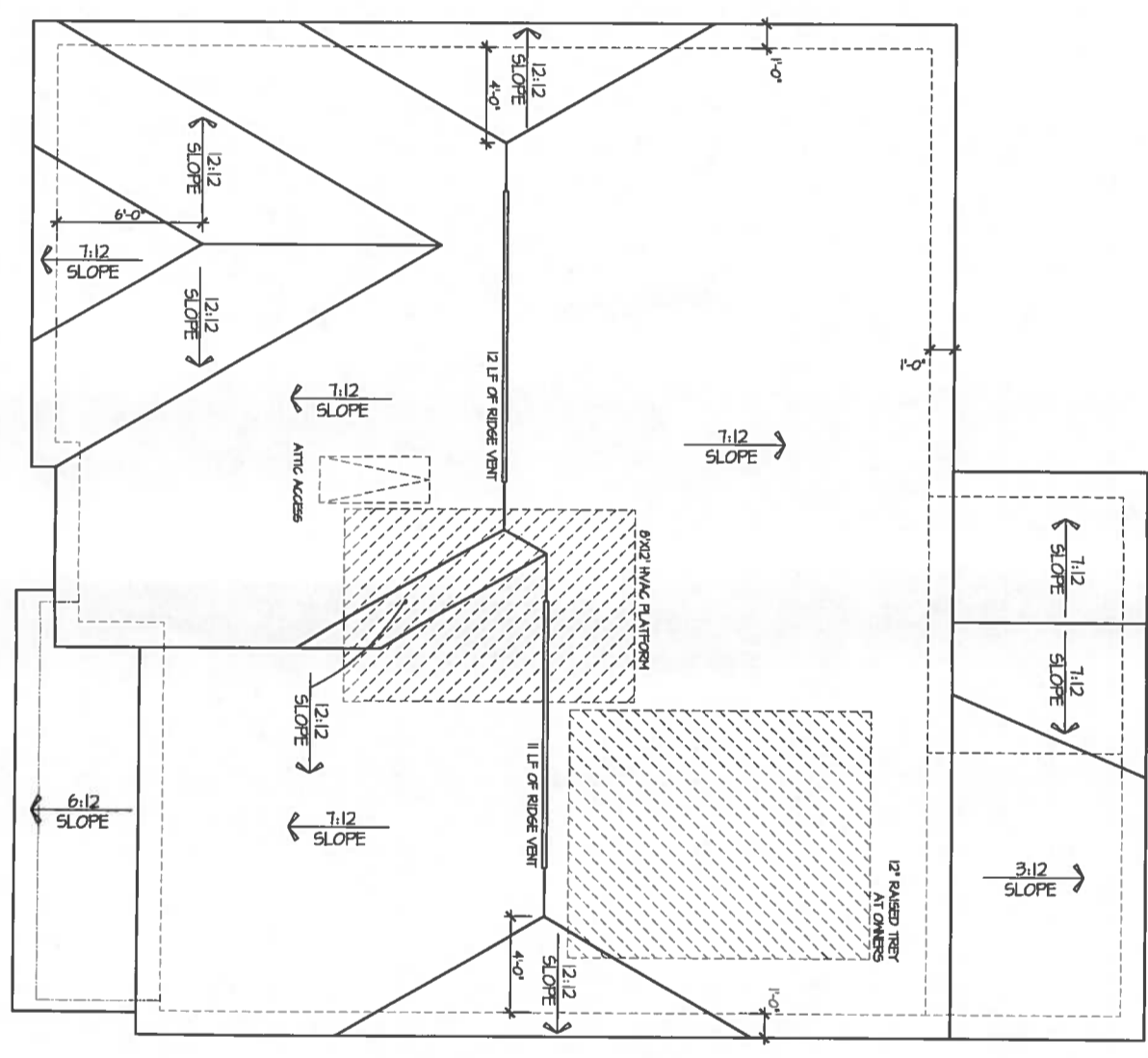
ROOF VENTILATION CALCULATIONS: OPT. THIRD FLOOR

ROOF AREA = 1956 SQ. FT.
 OVERALL REQUIRED VENTILATION:
 1 TO 50 = 404 SQ. FT.
 1 TO 300 = 453 SQ. FT.

50-60% IN TOP THIRD = 226- 941 FT. (1 TO 300)
 NET FREE AREA OF VENTED SOFFIT = 57 SQ. IN / LINEAR FT.
 NET FREE AREA OF RIDGE VENT = 18 SQ. IN / LINEAR FT.

LOWER VENTING, BOTTOM 2/3 ROOF:
 63 LINEAR FEET OF SOFFIT X 57 SQ. IN. = 25 SQ. FT.
 UPPER VENTING, TOP 1/3 ROOF:
 23 LINEAR FEET OF RIDGE X 18 SQ. IN. = 24 SQ. FT.
 24 SQ. FT. BETWEEN 50% - 60%
 (1 TO 300 ALLOWED)

TOTAL ROOF VENTILATION, 51 SQ. FT. > 445 SQ. FT. (ROOF)



ROOF PLAN ELEV. 5
 SCALE 1/8" = 1'-0"

DATE	CHANGE
X	X
X	X
X	X

SUBDIVISION:
 OLDE MILL VILLAGE (NC) (RAL)
 LOT 00.0002 PHASE

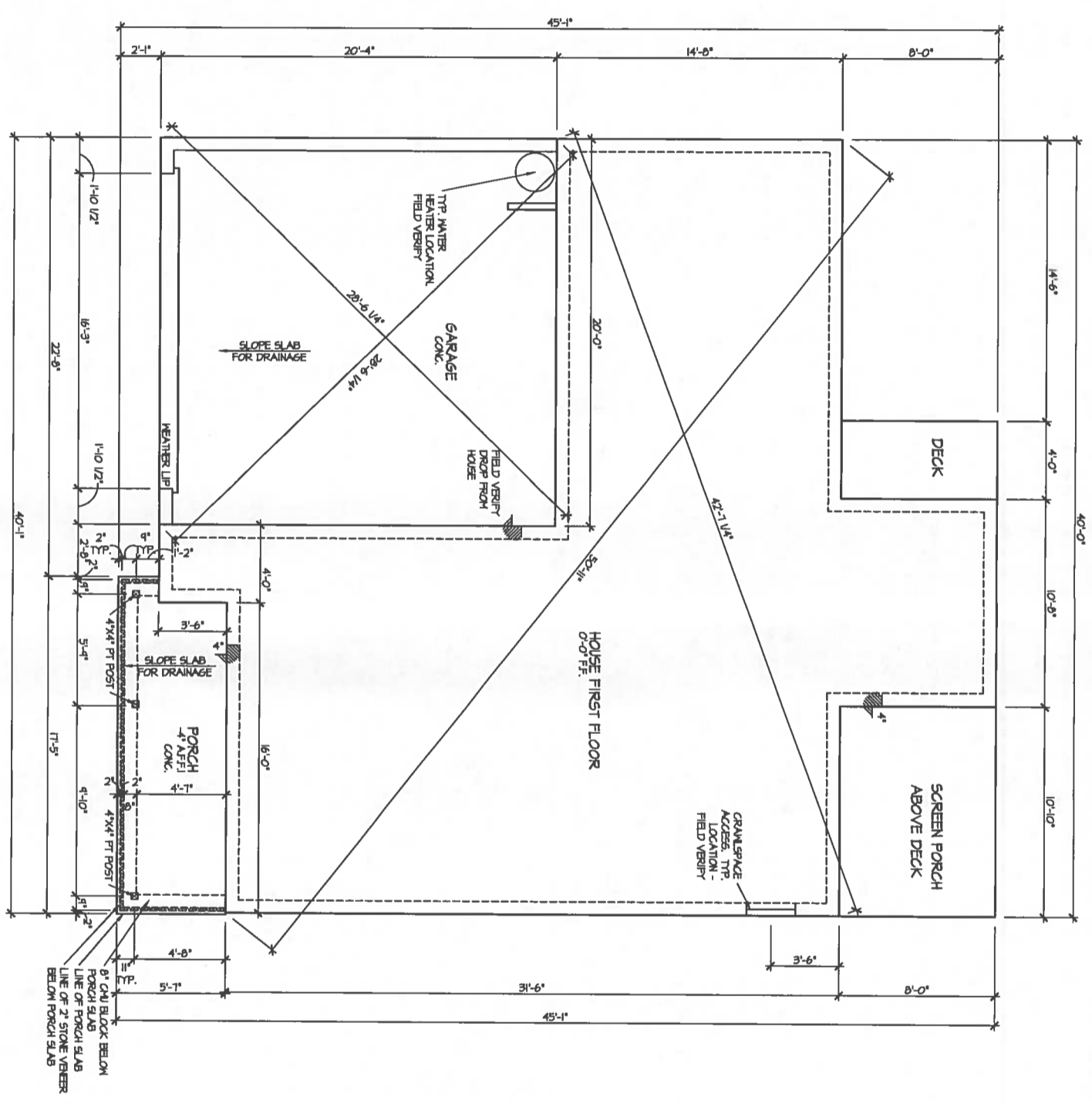
DRAWN BY: MS
 DATE: 01/15/2
 HOUSE ORIENT:
 GARAGE:
 PLAN REVISION:
 SCALE:



HOUSE NAME:
 2223-ELMHURST
 DRAWING TITLE:

SHEET No. A1

VENT CALCULATIONS
 CRAWL AREA = 431 SQ. FT.
 OVERALL REQUIRED VENTILATION
 1 TO 50 = 63 SQ. FT.
 NET FREE AREA OF VENT = 62 SQ. IN PER VENT.
 HIDDEN AUTOMATIC VENT 3-BLOCK (H3) OR EQUAL
 VENTING REQUIREMENT:
 63 SQ. FT. / 62 SQ. IN = 1469 VENTS = 5 VENTS



ELEVATION 5
CRAWL SPACE PLAN
 SCALE: 1/8" = 1'-0"

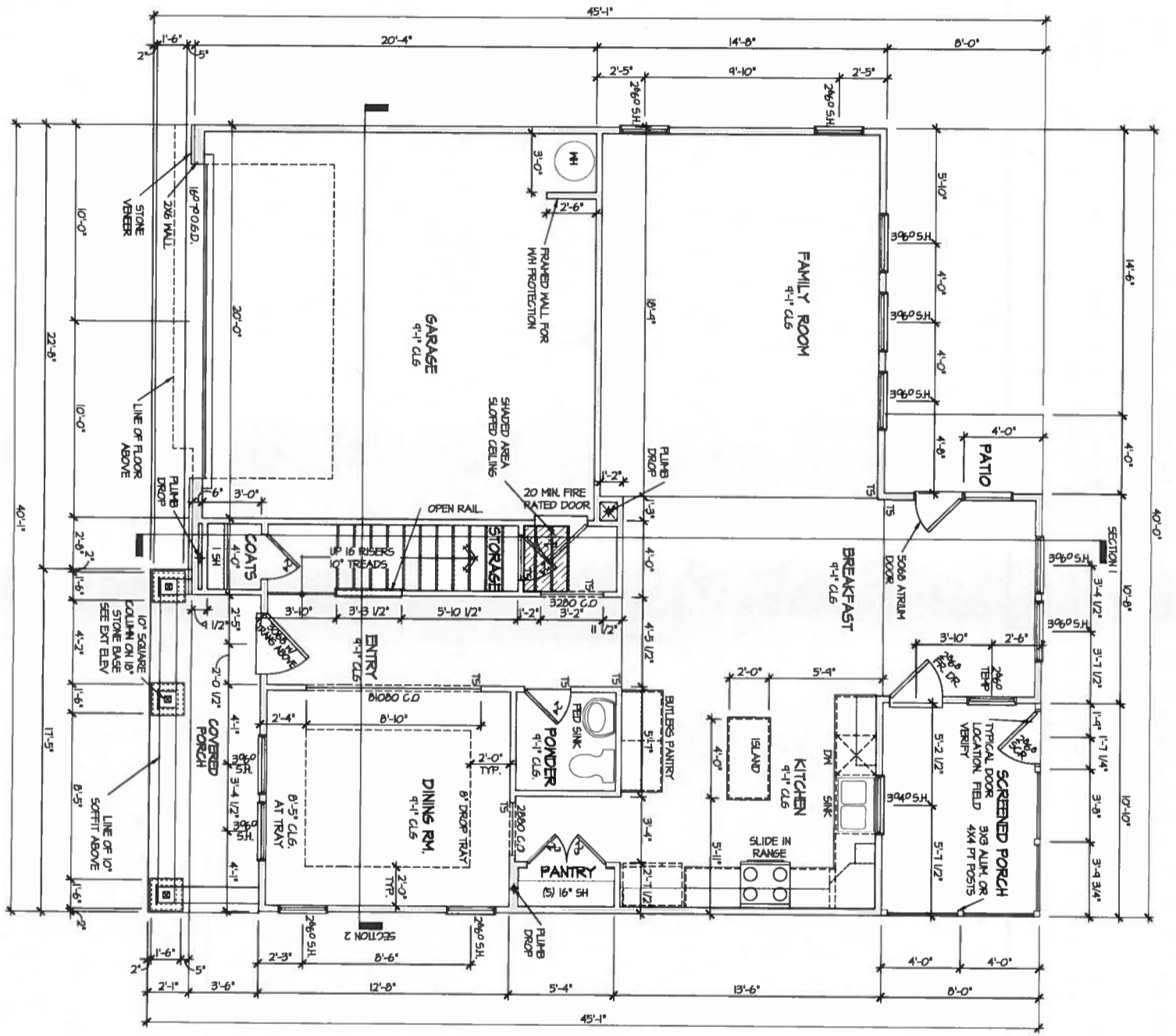
DATE	CHANGE
X	X
X	X
X	X

SUBDIVISION:
 OLDE MILL VILLAGE (NC) (RAL)
 LOT 00.0002 PHASE

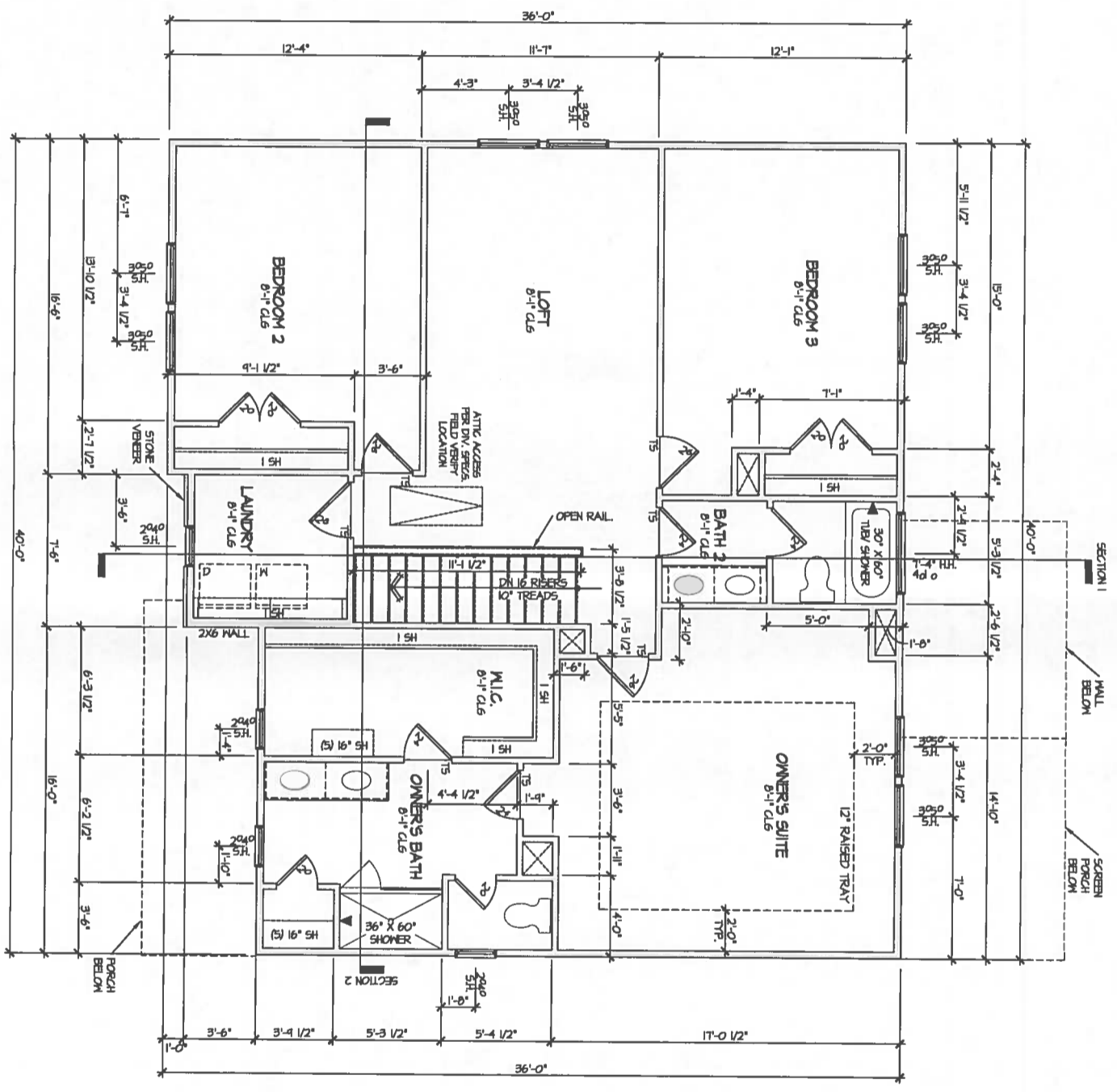
DATE: 01/15/22
 HOUSE ORIGIN: GARAGE
 PLAN REVISION: NONE



HOUSE NAME:
 2223-ELMHURST
 DRAWING TITLE:



ELEVATION 5
FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"



ELEVATION 5
 SECOND FLOOR PLAN
 SCALE 1/8" = 1'-0"

A3

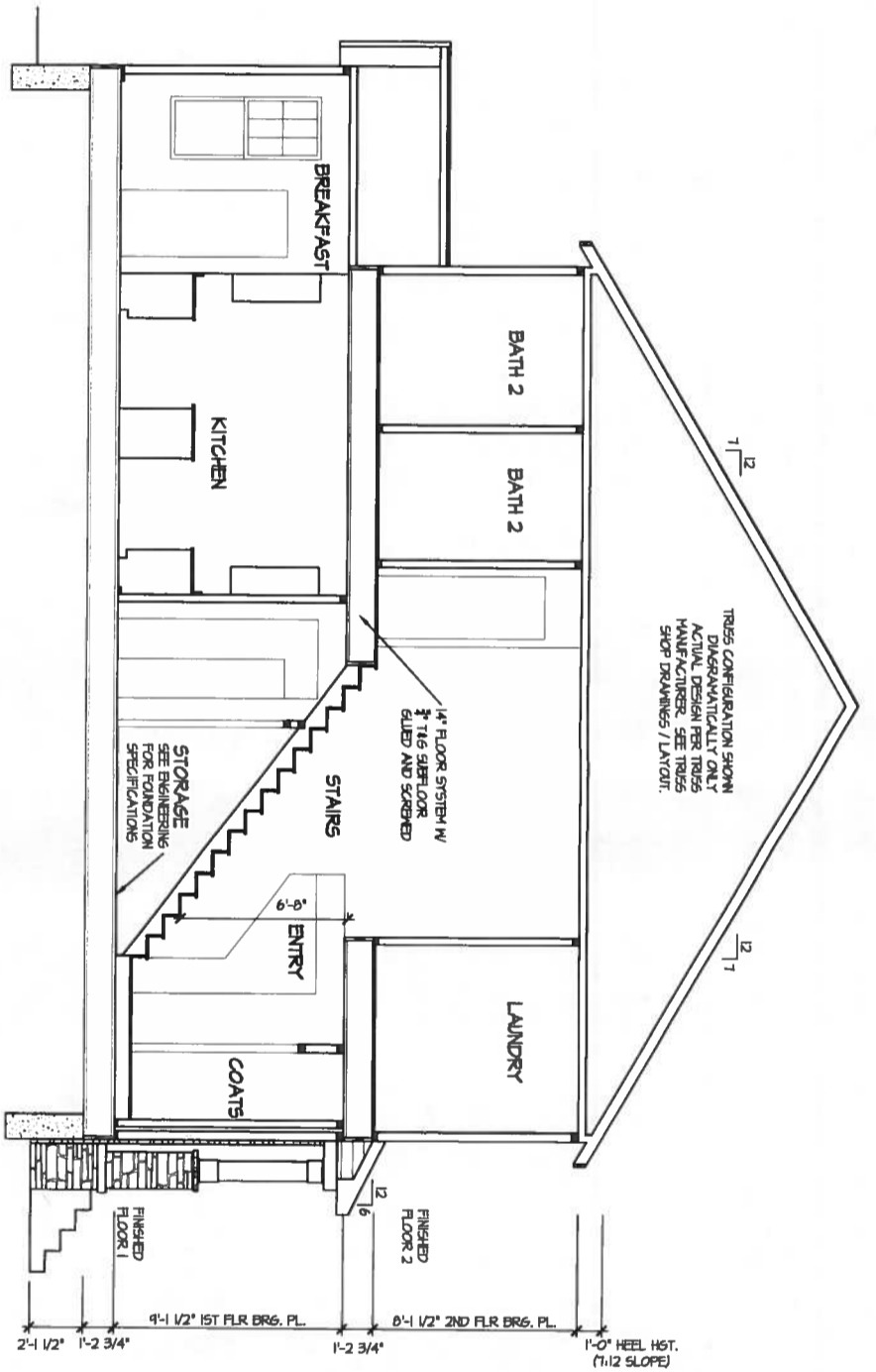
HOUSE NAME:
 2223-ELMHURST



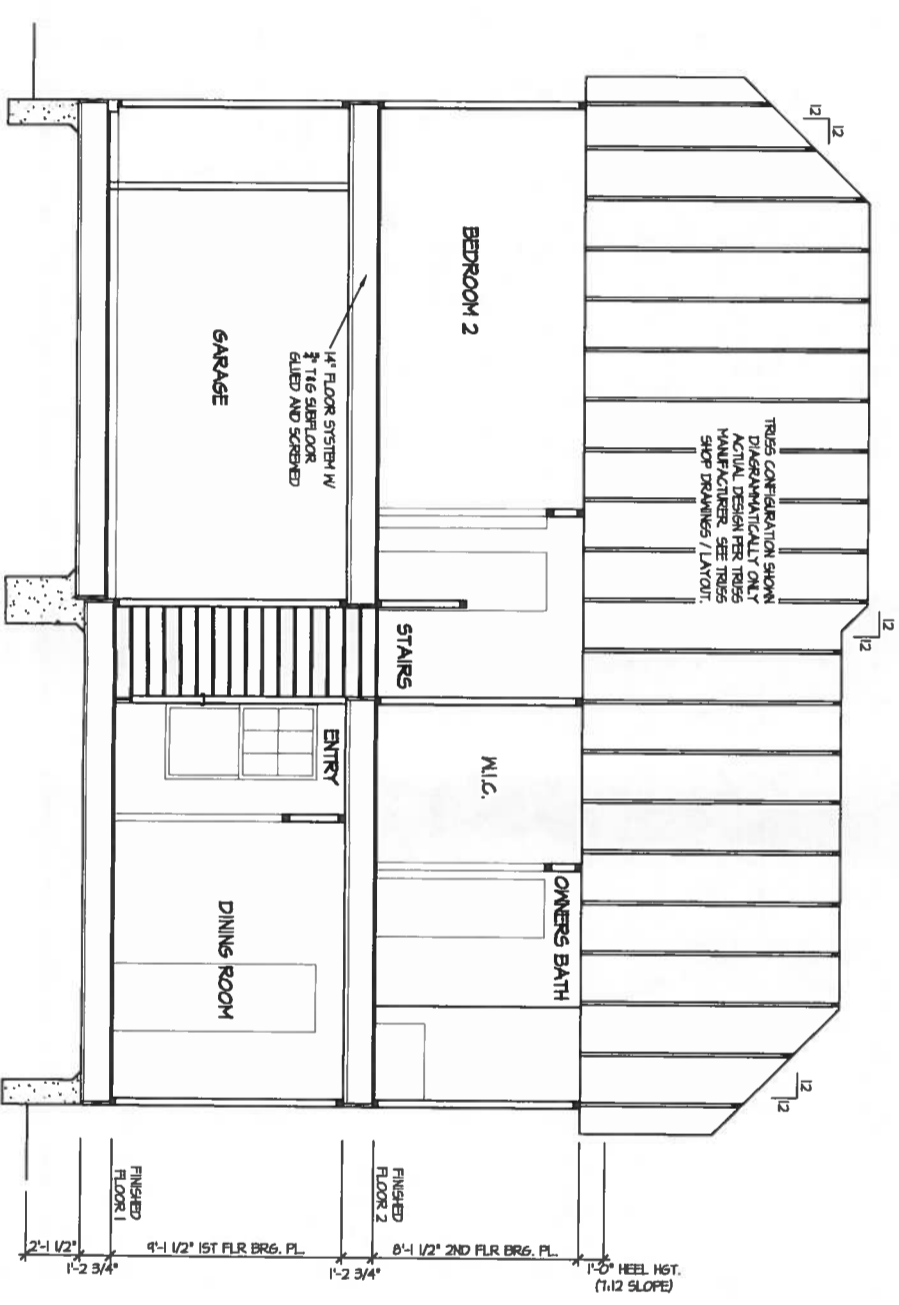
DRAWN BY:
 DATE: OVI/21
 HOUSE ORIE:
 GARAGE
 PLAN REVISION
 SCALE

SUBDIVISION:
 OLDE MILL VILLAGE (NC) (RAL)
 LOT 00.0002 PHASE

DATE	CHANGE
X	X
X	X
X	X



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



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

DATE	CHANGE
X	X
X	X
X	X

SUBDIVISION:
OLDE MILL VILLAGE (NC) (RAL)
LOT 00.0002 PHASE

DRAWN BY:
ITS
DATE: 01/15/12
HOUSE ORIGIN:
GARAGE
PLAN REVISION:
SCALE

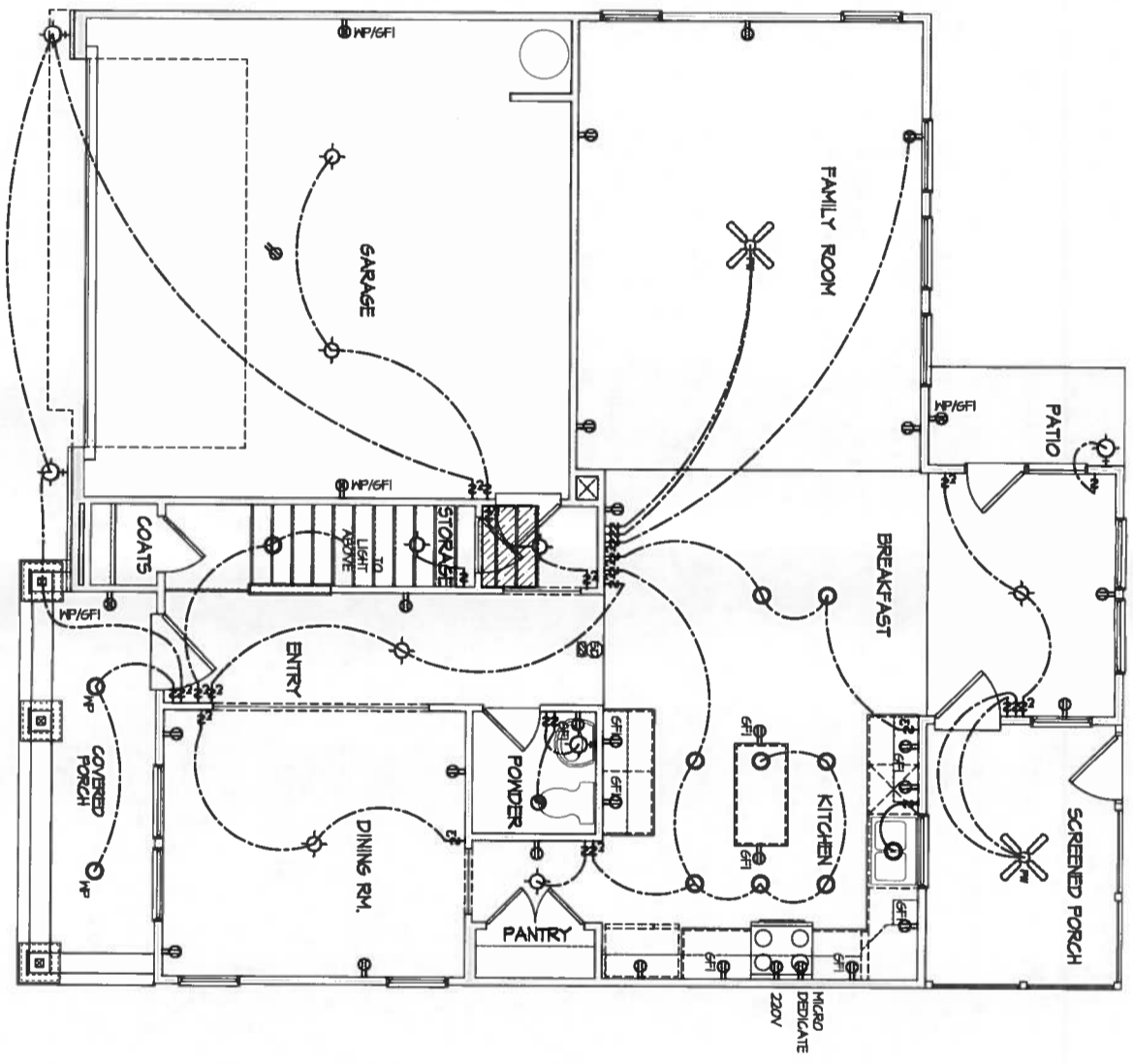
DAN RYAN
BUILDERS

HOUSE NAME:
2223-ELMHURST
DRAWING TITLE

SHEET No.
A4

ELECTRICAL LEGEND

- \$ SINGLE POLE SWITCH
- \$3 THREE WAY SWITCH
- \$4 FOUR WAY SWITCH
- ⊖ DUPLEX AFCI RECEPTACLE
- ⊖ DUPLEX AFCI RECEPTACLE - BOTTOM HALF SCHEDULED
- ⊖ DUPLEX AFCI RECEPTACLE - FLOOR MOUNTED
- ⊖ RECEPTACLE - 220V
- ⊖ DUPLEX AFCI RECEPTACLE - GFI
- ⊖ DUPLEX AFCI RECEPTACLE - WATERPROOF GFI
- ⊖ SMOKE DETECTOR - WIRED IN SERIES
- ⊖ EXHAUST FAN MOTOR
- ⊖ CO DETECTOR
- ⊖ DOOR CHIME
- ⊖ LIGHT FIXTURE - WALL MOUNTED
- ⊖ LIGHT FIXTURE - CEILING MOUNTED
- ⊖ PULLCHAIN LAMPHOLDER
- ⊖ RECESSED LAMPHOLDER



ELECTRICAL PLAN
FIRST FLOOR - ELEV. 5
 SCALE 1/8" = 1'-0"

DATE	CHANGE
X	X
X	X
X	X

SUBDIVISION:
 OLDE MILL VILLAGE (NC) (RAL)
 LOT 00.0002 PHASE

DRAWN BY: ITS
 DATE: 01/25/2
 HOUSE ORIENT: GARAGE
 PLAN REVISION: RALE

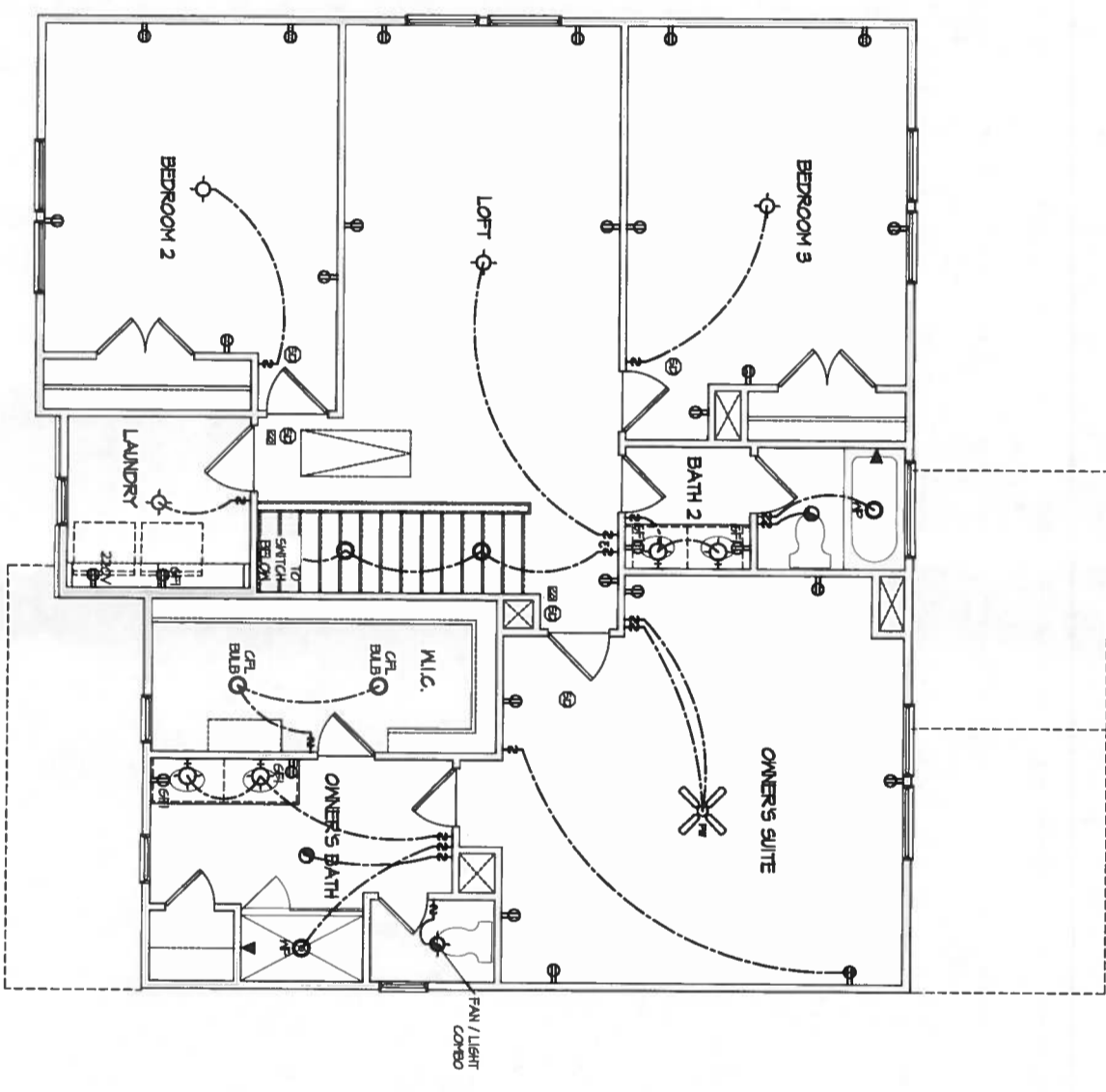


HOUSE NAME:
 2223-ELMHURST
 DRAWING TITLE

SHEET NO. 11

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
- ⊕ CO DETECTOR
- ⊕ DOOR CHIME
- ⊕ LIGHT FIXTURE - WALL MOUNTED
- ⊕ LIGHT FIXTURE - CEILING MOUNTED
- ⊕ LIGHT FIXTURE - RECESSED CAN
- ⊕ FULLCHAIN LAMPHOLDER
- ⊕ KEYLESS LAMPHOLDER



ELECTRICAL PLAN
SECOND FLOOR - ELEV. 5
 SCALE: 1/8" = 1'-0"

DATE	CHANGE
X	X
X	X
X	X

SUBDIVISION:
 OLDE MILL VILLAGE (NC) (RAL)
 LOT 00.0002 PHASE

DRAWN BY:
 MS
 DATE: 01/15/2
 HOUSE ORIGIN:
 GARAGE:
 PLAN REVISION:
 SALE:



HOUSE NAME:
 2223-ELMHURST
 DRAWING TITLE:

SHEET NO.
 11

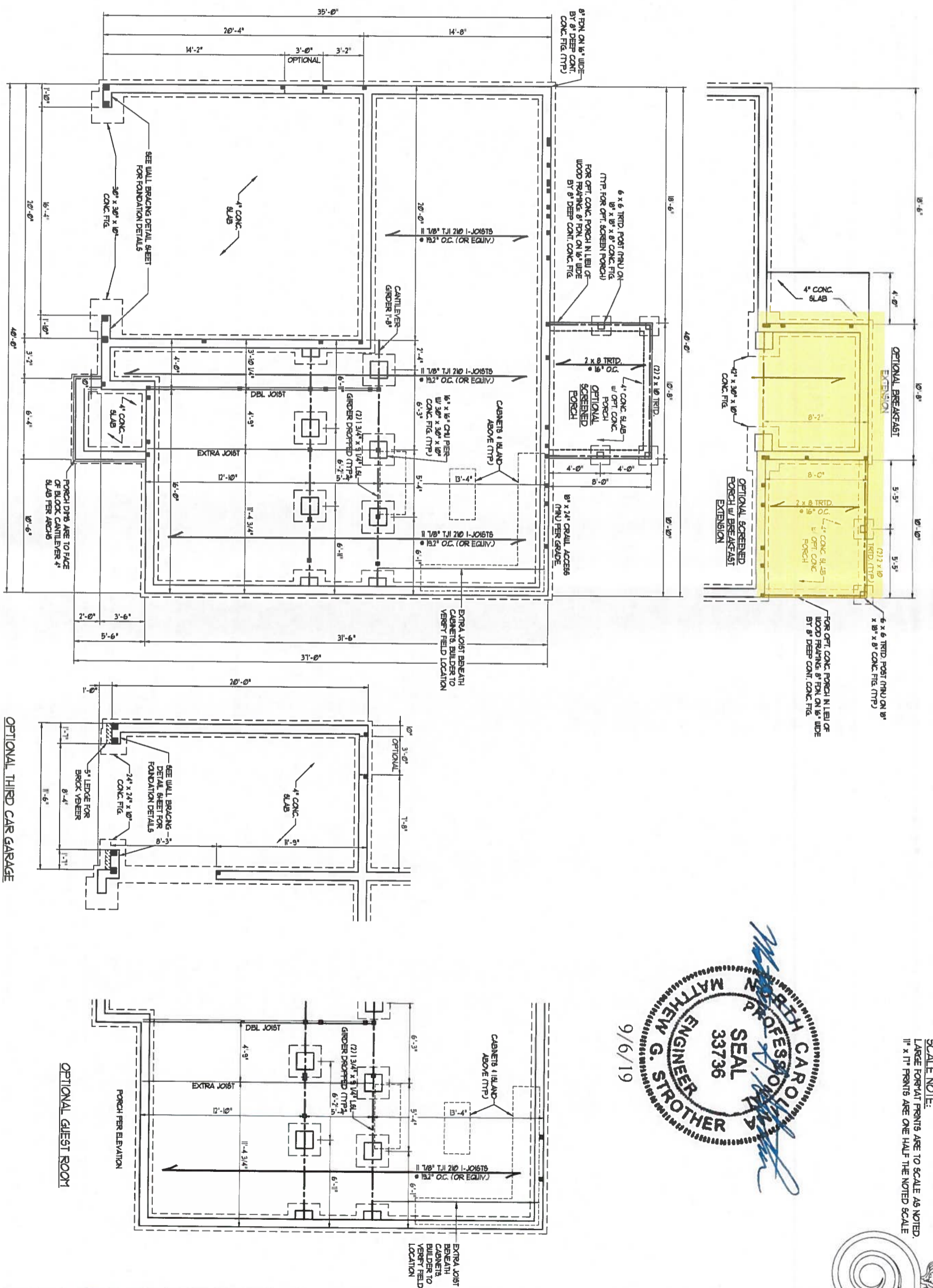
SCALE NOTE:
LARGE FORMAT PRINTS ARE TO SCALE AS NOTED.
1/4" x 1/4" PRINTS ARE ONE HALF THE NOTED SCALE



NOTE: BCI 50000-18 JOISTS MAY BE USED IN LIEU OF TJI 200 JOISTS AT THE SPACING NOTED ON THE PLAN.

- 200 PFTI UL TRITE DESIGN WIND SPEEDS**
NOTES FOR LITER THAN 20' TRAY ROOF HEIGHT:
- BRICKMEN SEAL JAMB IS ONLY TO STRUCTURAL COMPONENT. BRICKMEN SEAL DOES NOT COVER OPERATIONAL, ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF ENTRY.
 - STRUCTURAL DESIGN PER NORTH CAROLINA BRICKMEN SEALING SYSTEMS.
 - BRICKMEN SEAL JAMB IS 6'-0" O.C. AND SHALL BE INSTALLED AT EACH CORNER AND JOINT. BRICKMEN SEAL SHALL EXTEND A MINIMUM OF 1" AND MAXIMUM OF 2" ABOVE THE TOP OF THE SEAL BOARD. SEAL BOARD SHALL BE INSTALLED TO THE EXTERIOR WALLS. BRICKMEN SEAL SHALL BE INSTALLED TO THE EXTERIOR WALLS.
 - WALL CLADDING DESIGNED FOR 45 PSF AND 20 PSF (2) WIND SPEEDS.
 - ROOF CLADDING DESIGNED FOR 40 PSF AND 20 PSF (2) WIND SPEEDS.
 - BRICKMEN SEAL SHALL BE INSTALLED TO THE EXTERIOR WALLS AND SHALL EXTEND A MINIMUM OF 1" AND MAXIMUM OF 2" ABOVE THE TOP OF THE SEAL BOARD. SEAL BOARD SHALL BE INSTALLED TO THE EXTERIOR WALLS.
 - REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

- STRUCTURAL NOTES:**
- ALL REINFORCING LITERER TO BE 9' PFT (IND) ALL REINFORCING LITERER TO BE 9' S1T (IND).
 - INSTALL AN EXTRA OR DOUBLE JOIST UNDER WALLS PARALLEL TO FLOOR JOISTS WHERE NOTED.
 - CALLS OUT DETAIL POINT LOADS TO GIBBER OR FOUNDATION.
 - BLUES PILES TO BE FILLED.
 - INSTALL LADDER WITH 9' x 9' O.C. TO SECURE MULTIPLE LITERER FOUNDATION WALLS TOGETHER.
 - REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.



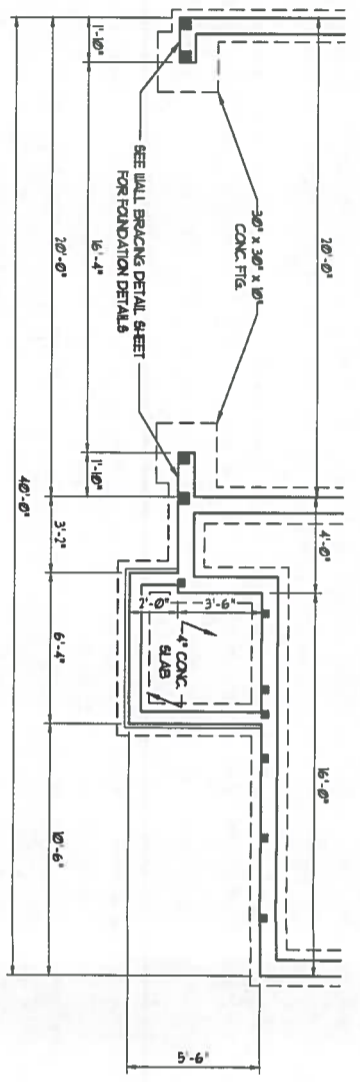
DATE: SEPTEMBER 5, 2019
SCALE: 1/4" = 1'-0"
DRAWN BY: DAN RYAN BUILDERS
ENGINEERED BY: WTB

SHEET 1 OF 17
S1.1a
CRAWL
FOUNDATION PLAN

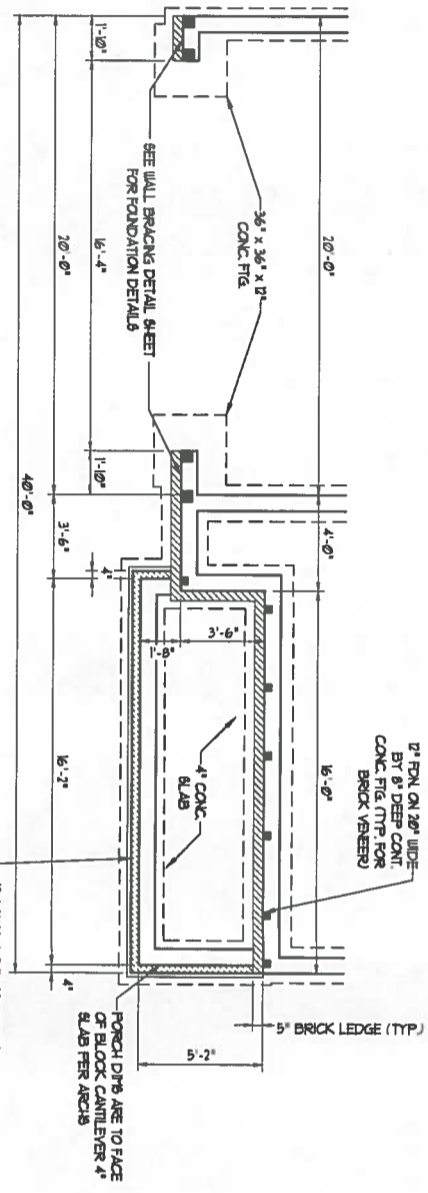
ELMHURST - RALE
RELEASE #3-08/23/19
DAN RYAN BUILDERS

J.S. THOMPSON
ENGINEERING, INC
606 WADE AVE., SUITE 104 RALEIGH, NC 27605
PHONE: (919) 789-9919 FAX: (919) 789-9921
N.C. LICENSE NO.: C-1733

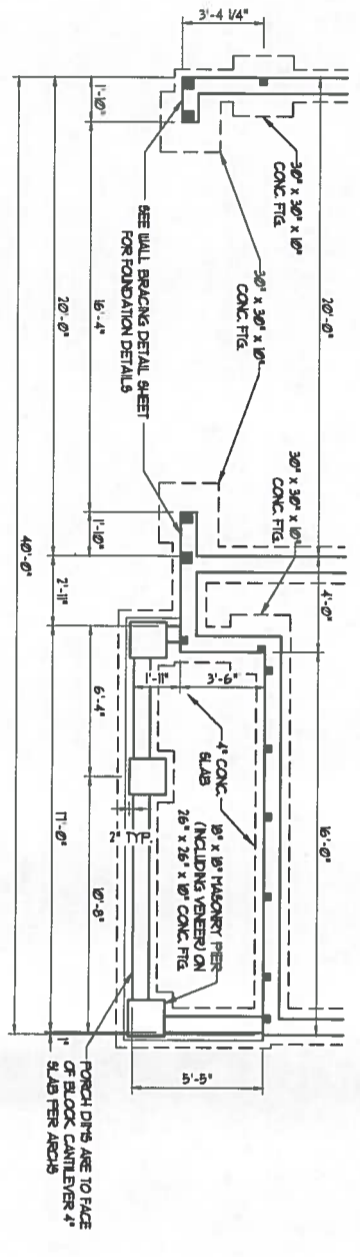
SCALE NOTE:
 LARGE FRONTAL PRINTS ARE TO SCALE AS NOTED.
 1/2" x 1/4" PRINTS ARE ONE HALF THE NOTED SCALE



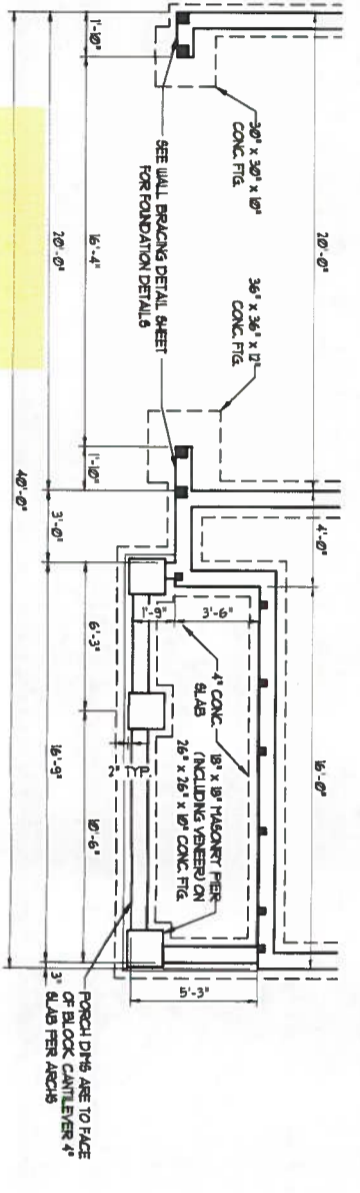
ELEVATION 2



ELEVATION 3



ELEVATION 4



ELEVATION 5

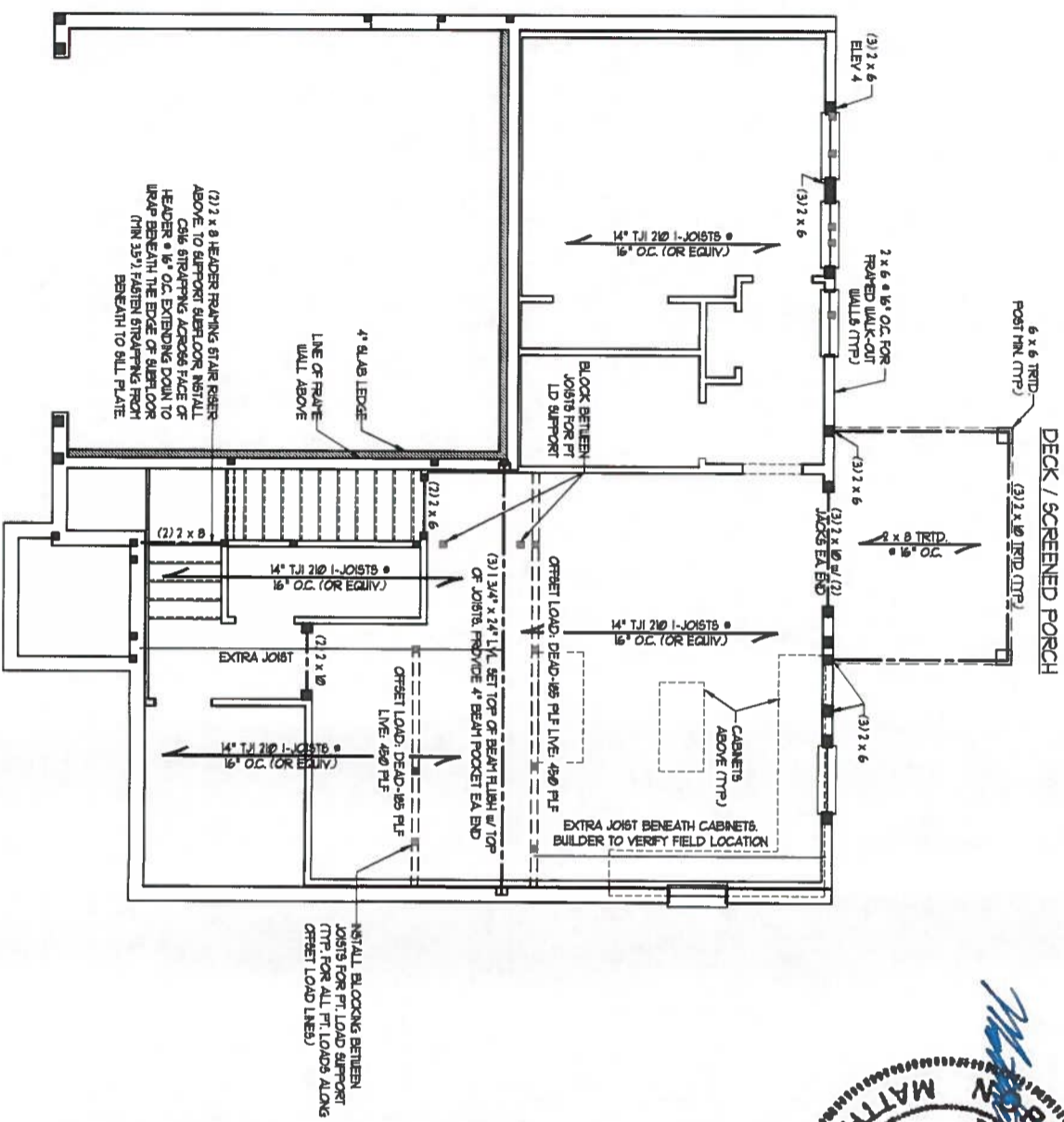
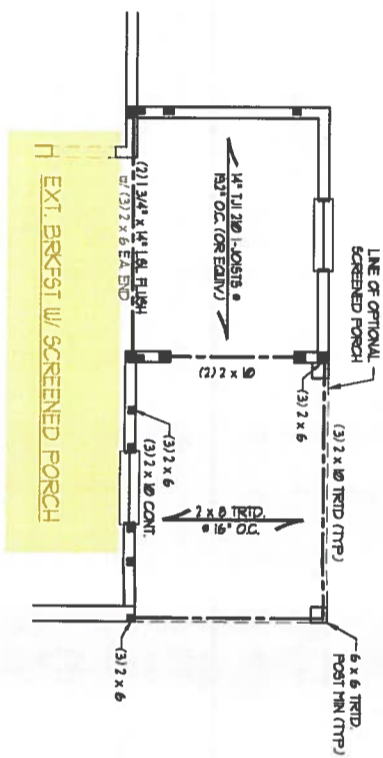
MATTHEW G. STROTHER
 PROFESSIONAL ENGINEER
 SEAL 33736
 9/6/19

DATE: SEPTEMBER 3, 2019
 SCALE: 1/4" = 1'-0"
 DRAWN BY: DAN RYAN BUILDERS
 ENGINEERED BY: VTB

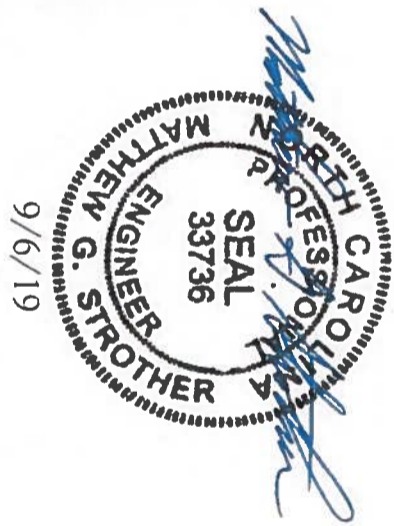
ELMHURST - RALE
 RELEASE #3 - 08/23/19
 DAN RYAN BUILDERS

J.S. THOMPSON
 ENGINEERING, INC
 606 WADE AVE., SUITE 104 RALEIGH, NC 27605
 PHONE: (919) 789-9919 FAX: (919) 789-9921
 N.C. LICENSE NO.: C-1733





ELEVATION 1



SCALE NOTE:
LARGE FRONT PRINTS ARE TO SCALE AS NOTED.
1/4\"/>

NOTE: PCI 50800-19 JOISTS MAY BE USED IN LIEU OF 1/2\"/>

BRACED WALL DESIGN NOTE:

- BRACED WALL DESIGN PER SECTION R602.10 OF THE IBC 2018 EDITION.
- CS-JWP REFERS TO CONTINUOUS BRACING - WOOD STRUCTURAL PANELS. CONTRACTOR IS TO INSTALL 1/4\"/>

NOTE:

- PER SECTION R602.10.4 OF THE 2018 IBC, THE AMOUNT OF BRACING REQUIRED ON THE WALK OUT BASEMENT WALLS EXCEEDS THE AMOUNT OF BRACING ON THE WALL ABOVE THE FINISHED FINISH FLOOR BY A FACTOR OF 1.5.
- SHEATH ALL EXTERIOR WALLS WITH 1/4\"/>

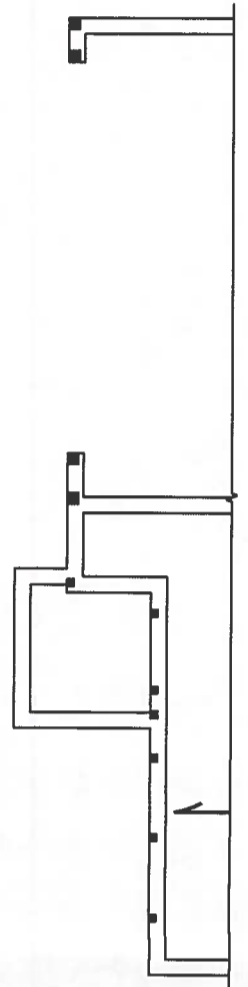
STRUCTURAL NOTES:

- ALL FRAMING LUMBER TO BE #2 GF (INO); ALL TREATED LUMBER TO BE #1 SYP (INO).
- INSTALL AN EXTRA JOIST UNDER WALLS PARALLEL TO FLOOR JOISTS WHERE NOTED ON THE PLAN.
- WINDOW AND DOOR HEADERS TO BE SUPPORTED W/ (1) JACK STUD AND (1) KING STUD EA END (INO). SEE TABLE R602.11 FOR ADDITIONAL KING STUD REQUIREMENTS.
- SQUARES DEVOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GROUND OR FOUNDATION. SUPPORT UNDEFERRED FT. LOADS ALONG FRAMED WALLS W/ (2) STUDS (INO).
- ALL LOAD BEARING HEADERS TO BE (3) 2 x 10 (INO).
- SUPPORT STEEL BEAMS WITH 4\"/>

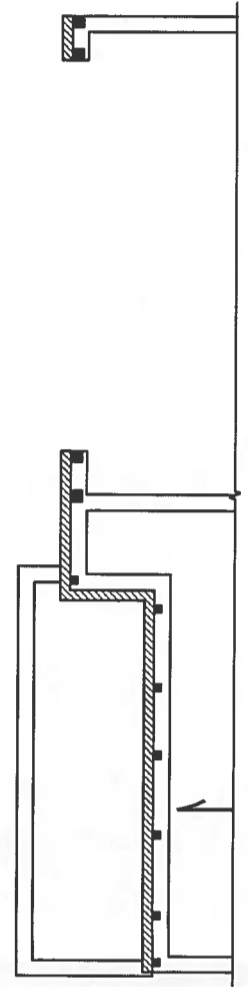
TABLE R602.15
MINIMUM NUMBER OF FULL HEIGHT STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS (OTHER TABLE R602.15)

HEADER SPAN (FEET)	16	24
UP TO 3'	1	1
4'	2	1
5'	3	2
6'	3	3
7'	4	4

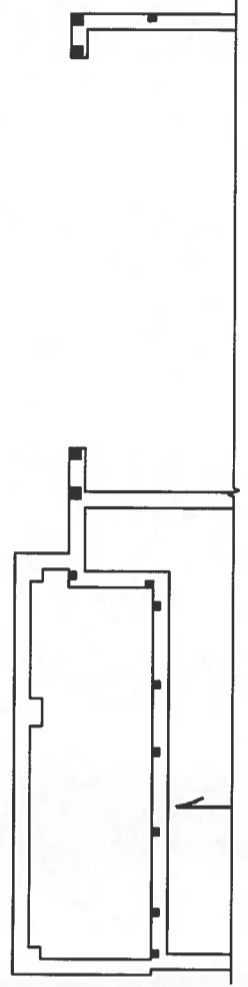
SCALE NOTE:
LARGE PRINTS ARE TO SCALE AS NOTED.
1/8" x 1/4" PRINTS ARE ONE HALF THE NOTED SCALE



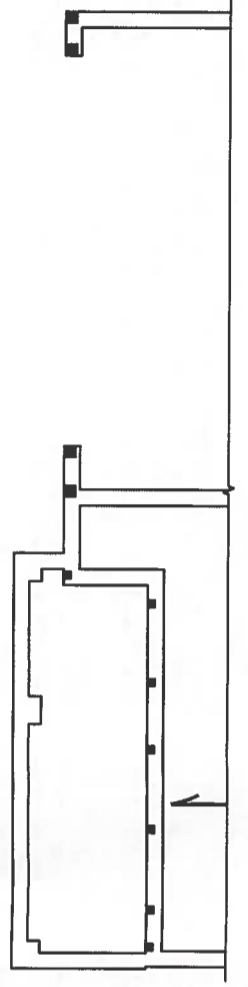
ELEVATION 2



ELEVATION 3



ELEVATION 4



ELEVATION 5

PROFESSIONAL SEAL
NORTH CAROLINA
ENGINEER
MATTHEW G. STROTHER
33736
9/6/19

SHEET 10 OF 17
S-2.2
FIRST FLOOR
FRAMING PLAN

DATE: SEPTEMBER 3, 2019
SCALE: 1/4" = 1'-0"
DRAWN BY: DAN RYAN BUILDERS
ENGINEERED BY: WTB

ELMHURST - RALE
RELEASE #3 - 08/23/19
DAN RYAN BUILDERS

**J.S. THOMPSON
ENGINEERING, INC**
606 WADE AVE., SUITE 104 RALEIGH, NC 27605
PHONE: (919) 789-9919 FAX: (919) 789-9921
N.C. LICENSE NO.: C-1733

SCALE NOTE:
LARGE PORTAL FRONTS ARE TO SCALE AS NOTED.
1/2" x 1/2" PRINTS ARE ONE HALF THE NOTED SCALE.

NOTE:
1. ALL JOISTS AT THE SPACING NOTED ON THE PLANS SHALL BE USED IN LIEU OF THE 24" O.C. JOISTS AT THE SPACING NOTED ON THE PLANS.
2. ALL JOISTS AT THE SPACING NOTED ON THE PLANS SHALL BE USED IN LIEU OF THE 24" O.C. JOISTS AT THE SPACING NOTED ON THE PLANS.

STRUCTURAL NOTES:

1. ALL RAFTING LUMBER TO BE 6" x 9" (N.O.D.). ALL TREATED LUMBER TO BE 6" x 9" (N.O.D.).
2. ALL LOAD BEARING HEADERS TO BE (2) 2" x 6" OR STP 9" (N.O.D.).
3. ALL LOAD BEARING HEADERS TO BE DESIGNED BASED ON CALCULATED LOADS. CODE TABLES HAVE NOT BEEN USED.
4. INSTALL AN EXTRA JOIST UNDER WALLS PARALLEL TO FLOOR JOISTS WHERE NOTED ON THE PLANS.
5. WINDOW AND DOOR HEADERS TO BE SUPPORTED BY (1) JACK STUD AND (1) KING STUD EA END (N.O.D.). SEE TABLE R6602.13 FOR ADDITIONAL KING STUD REQUIREMENTS.
6. SQUARES DEVOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GROVER OR FOUNDATION. ALL SQUARES TO BE (2) STUDS (N.O.D.).
7. ALL 4" x 4" POSTS SHALL BE ANCHORED TO SLABS W/ 6" DIA. ANCHOR BARS (OR EQUAL) AND 6" x 6" POSTS W/ 4" DIA. ANCHOR BARS (OR EQUAL) (N.O.D.). ALL 4" x 4" AND 6" x 6" POSTS TO BE INSTALLED WITH 700 LB CAPACITY PLATE CONNECTORS AT TOP (N.O.D.) FOR FIBERGLASS, ALUMINUM, OR COLUIN END. BY OTHERS, SECURE TO SLAB W/ (2) VERTICAL ANCHOR BARS TO COLUIN W/ 1/4" THROUGH BOLTS W/ NUTS AND WASHERS. LOCATE ANGLES ON OPPOSITE SIDES OF COLUIN THROUGH BOLTS THAT BE INSTALLED PRIOR TO SETTING COLUIN.
8. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

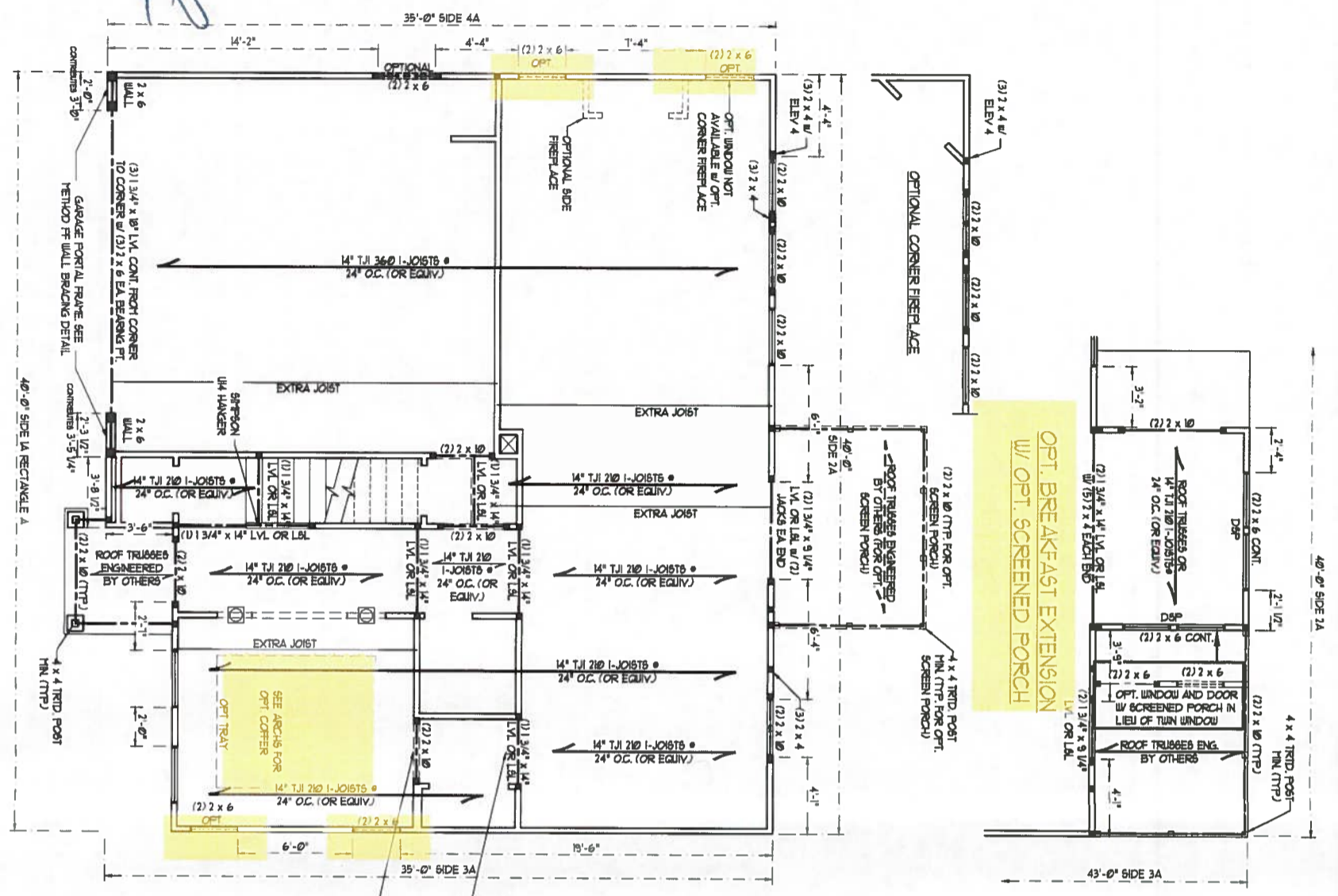
NOTE: DSP DEVOTES DOUBLE END POCKET 1/2" DEVOTES TRIPLE END POCKET

TABLE R6602.13
MINIMUM NUMBER OF FULL HEIGHT STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS

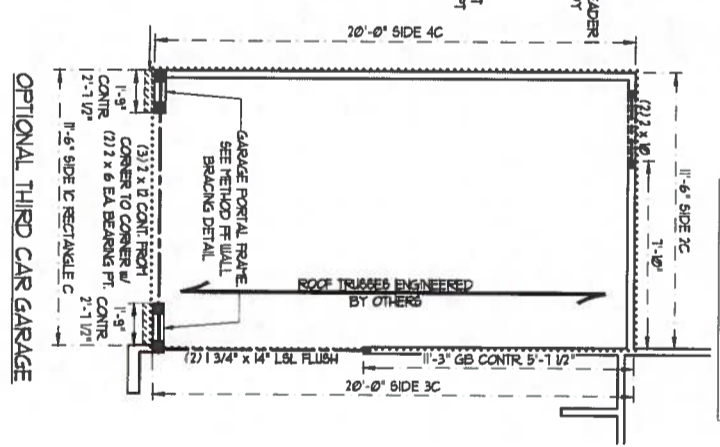
HEADER SPAN (FEET)	MINIMUM END STUDS (INCELS)
UP TO 5'	2
5' TO 6'	3
6' TO 7'	4
7' TO 8'	5
8' TO 9'	6



9/6/19



ELEVATION 1



OPTIONAL THIRD CAR GARAGE

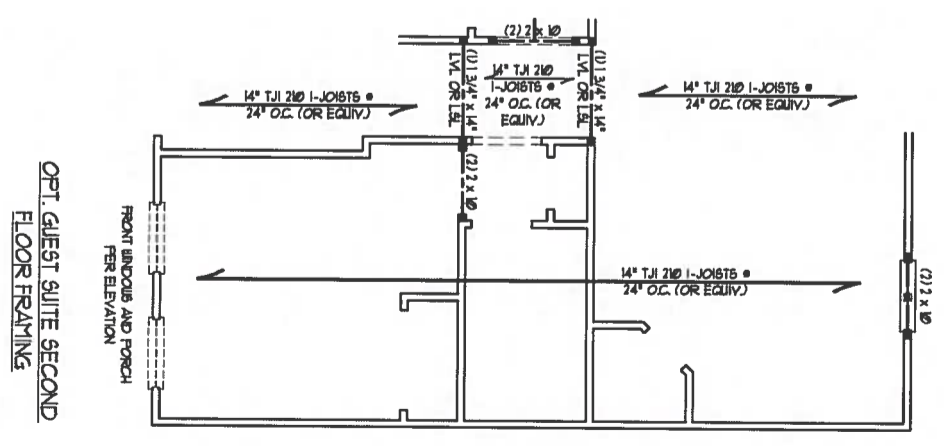
BRACED WALL DESIGN NOTES:
1. BRACED WALL DESIGN PER SECTION R602.10 OF THE NIRC 2008 EDITION.
2. CS-4UP REFERS TO CONTINUOUS SEPARATING - WOOD STRUCTURAL PANELS CONTRACTOR IS TO INSTALL 1/2" OSB ON ALL EXTERIOR WALLS ATTACHED TO RAFTERS SPACED 6" O.C. ALONG PANEL EDGES AND 2' O.C. IN THE FIELD.
3. CS-4UP REFERS TO GYPSUM BOARD CONTRACTOR IS TO INSTALL 1/2" GYPSUM BOARD WHERE NOTED ON THE PLANS ALONG PANEL EDGES AND IN THE FIELD INCLUDING TOP AND BOTTOM PLATES.
4. BRACED WALL DESIGN APPLIED IN UNID ZONES UP TO 160 TYP. FOR HIGH WIND ZONES BRACE WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 45 OF THE NIRC 2008 EDITION. SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL INFORMATION.

BRACED WALL DESIGN

RECTANGLE A	EXTENDED BREAKFAST
SIDE 1A (ELEVATION 1)	SIDE 1A (ELEVATION 1)
METHOD: CS-4UP	METHOD: CS-4UP
TOTAL REQUIRED LENGTH: 827"	TOTAL REQUIRED LENGTH: 1271"
TOTAL PROVIDED LENGTH: 827"	TOTAL PROVIDED LENGTH: 1271"
SIDE 2A	SIDE 2A
METHOD: CS-4UP	METHOD: CS-4UP
TOTAL REQUIRED LENGTH: 527"	TOTAL REQUIRED LENGTH: 1171"
TOTAL PROVIDED LENGTH: 527"	TOTAL PROVIDED LENGTH: 1171"
SIDE 3A	SIDE 3A
METHOD: CS-4UP	METHOD: CS-4UP
TOTAL REQUIRED LENGTH: 624"	TOTAL REQUIRED LENGTH: 1024"
TOTAL PROVIDED LENGTH: 624"	TOTAL PROVIDED LENGTH: 1024"
SIDE 4A	SIDE 4A
METHOD: CS-4UP	METHOD: CS-4UP
TOTAL REQUIRED LENGTH: 730"	TOTAL REQUIRED LENGTH: 1230"
TOTAL PROVIDED LENGTH: 730"	TOTAL PROVIDED LENGTH: 1230"

BRACED WALL DESIGN
RECTANGLE C

SIDE 1C	METHOD: FF	TOTAL REQUIRED LENGTH: 230"	TOTAL PROVIDED LENGTH: 230"
SIDE 2C	METHOD: CS-4UP	TOTAL REQUIRED LENGTH: 525"	TOTAL PROVIDED LENGTH: 525"
SIDE 3C	METHOD: CS-4UP	TOTAL REQUIRED LENGTH: 230"	TOTAL PROVIDED LENGTH: 230"
SIDE 4C	METHOD: CS-4UP	TOTAL REQUIRED LENGTH: 183"	TOTAL PROVIDED LENGTH: 183"
SIDE 5C	METHOD: CS-4UP	TOTAL REQUIRED LENGTH: 1264"	TOTAL PROVIDED LENGTH: 1264"
SIDE 6C	METHOD: CS-4UP	TOTAL REQUIRED LENGTH: 1264"	TOTAL PROVIDED LENGTH: 1264"
SIDE 7C	METHOD: CS-4UP	TOTAL REQUIRED LENGTH: 200"	TOTAL PROVIDED LENGTH: 200"



OPT. GUEST SUITE SECOND FLOOR FRAMING

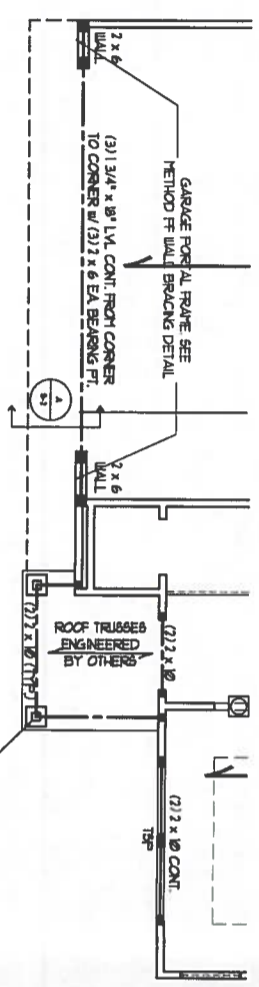
DATE: SEPTEMBER 3, 2019
SCALE: 1/4" = 1'-0"
DRAWN BY: DAN RYAN BUILDERS
ENGINEERED BY: VTB

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RELEASE #3 - 08/23/19
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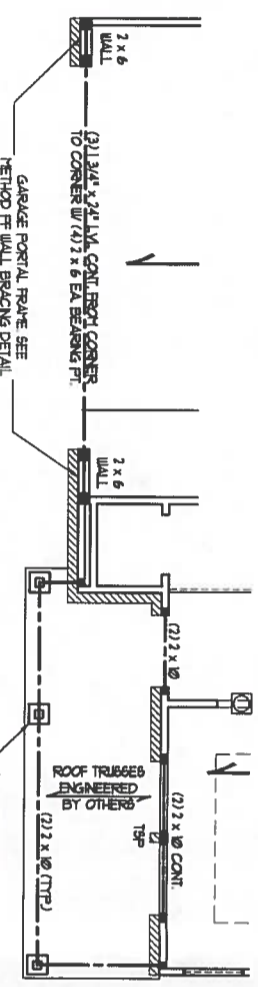
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SHEET: 11 OF 17
S-3.1
SECOND FLOOR FRAMING PLAN

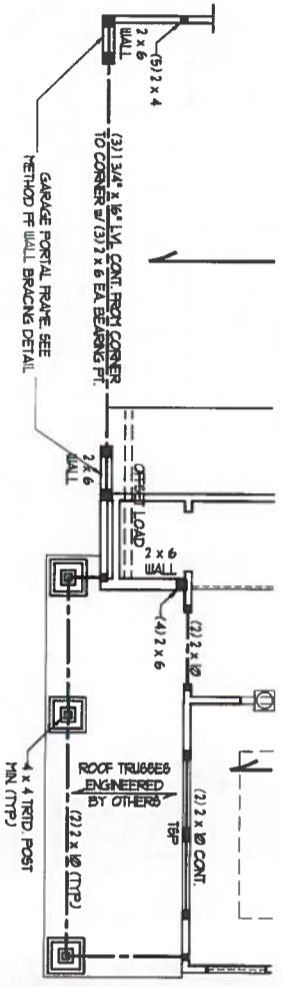
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LARGE PORTAL PRINTS ARE TO SCALE AS NOTED.
IF * 1/2 PRINTS ARE ONE HALF THE NOTED SCALE



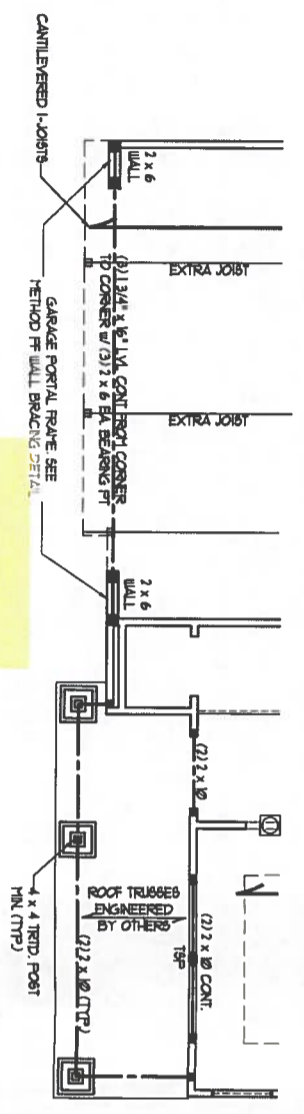
ELEVATION 2



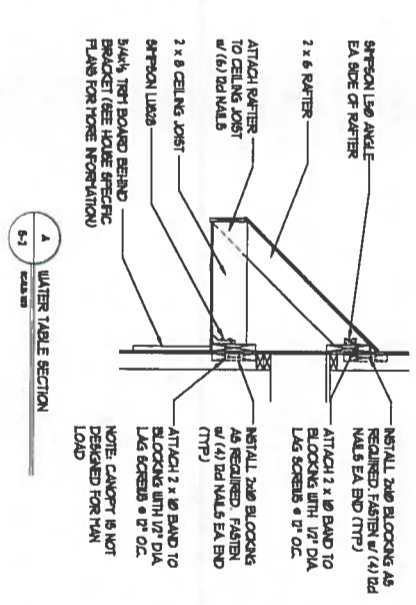
ELEVATION 3



ELEVATION 4



ELEVATION 5



WATER TABLE SECTION

LINTEL SCHEDULE FOR BRICK/NATURAL STONE SUPPORT		
LENGTH (FT)	SIZE OF LINTEL	
UP TO 4 FT.	1 3/2 x 3 1/2 x 1/4	
4-8	1 5/8 x 3 1/2 x 5/8 LTV	
8 AND GREATER	1 6 x 4 x 5/8 LTV	

- BRICK SUPPORT NOTES:
- LINTEL SCHEDULE APPLIED TO ALL OPENINGS IN BRICK VENEER (NOD) SEE ARCH DATA FOR SIZE AND LOCATION OF OPENINGS.
 - LENGTH - LONG LEG VERTICAL (LLV) - CLEAR OPENING.
 - EMBED ALL ANGLE IRONS HALF 4" EACH SIDE INTO VENEER TO PROVIDE BEARING. FOR ALL HEADERS 8" AND GREATER IN LENGTH, ATTACH STEEL ANGLE TO HEADER W/ 1/2" LAG SCREWS @ 12" O.C. STAGGERED.
 - FOR ALL BRICK SUPPORT - ROOF LINE, FASTEN (2) 2 x 10 BLOCKING BETWEEN STUDS W/ (4) D4 NAILS PER FT. FASTEN 4" x 4" x 5/8" STEEL ANGLE TO (2) 2 x 10 BLOCKING W/ (2) 1/2" LAG SCREWS @ 12" O.C. STAGGERED. SEE SECTION R102A21 OF THE 2008 NCCRC FOR ADDITIONAL BRICK SUPPORT INFORMATION.
 - PRECAST REINFORCED CONCRETE LINTELS ENGINEERED BY OTHERS MAY BE USED IN LIEU OF STEEL LINTELS.

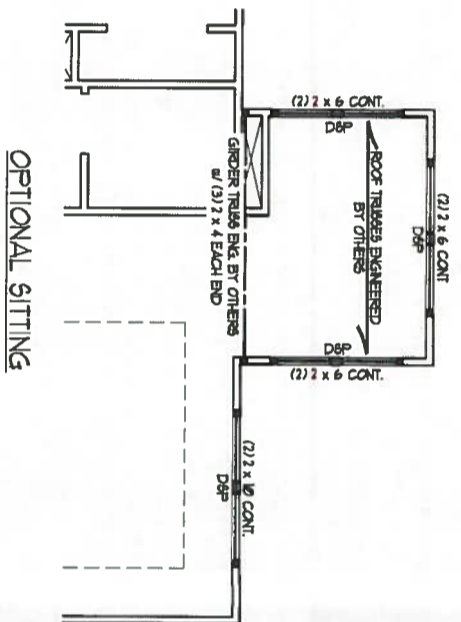


DATE: SEPTEMBER 3, 2019
SCALE: 1/4" = 1'-0"
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ENGINEERED BY: VTB

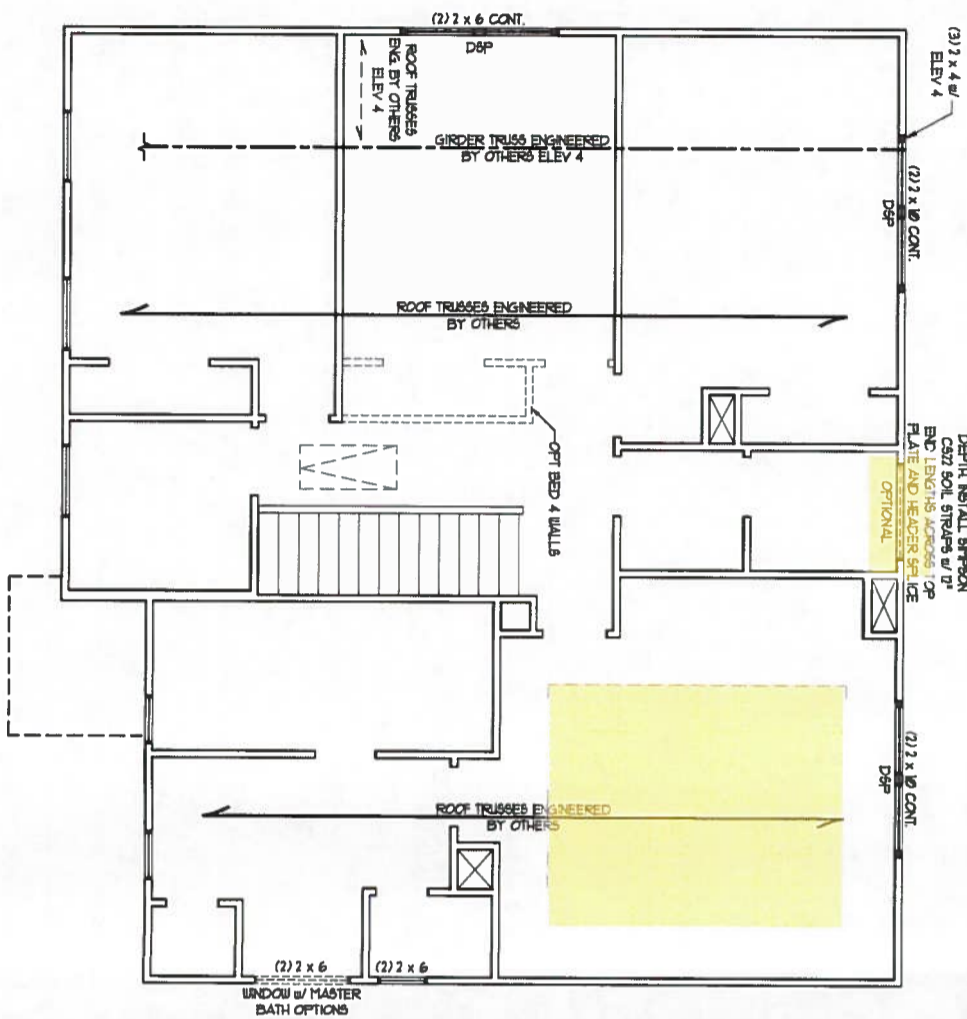
SHEET: 12 OF 17
S-3.2
SECOND FLOOR
FRAMING PLAN

ELMHURST - RALE
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OPTIONAL SITING



ELEVATION 1

SCALE NOTE:
LARGE FORMAT PRINTS ARE TO SCALE AS NOTED.
1/4" x 1/4" PRINTS ARE ONE HALF THE NOTED SCALE.

- BRACED WALL DESIGN NOTES:**
1. BRACED WALL DESIGN PER SECTION R601.6 OF THE 2008 NCRC. THE AMOUNT OF BRACING SHALL BE DETERMINED BY THE AMOUNT OF OVERSTRESS ON THE SECOND FLOOR EXCEEDS THE AMOUNT ALLOWED FOR THE FIRST FLOOR AND NO BRACED WALL ANALYSIS IS REQUIRED.
 2. SHEATH ALL EXTERIOR WALLS WITH 1/4" OSB SHEATHING ATTACHED WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD.
 3. BRACED WALL DESIGN APPLIED IN WIND ZONE UP TO 150 MPH FOR HIGH WIND ZONES BRACE WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 45 OF THE 2008 EDITION. SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL INFORMATION.
 4. BRACED WALL DESIGN APPLIED IN WIND ZONE UP TO 150 MPH FOR HIGH WIND ZONES BRACE WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 45 OF THE 2008 EDITION. SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL INFORMATION.
 5. SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL INFORMATION.

- NOTE:**
1. PER SECTION R601.6.3 OF THE 2008 NCRC, THE AMOUNT OF BRACING ON THE SECOND FLOOR EXCEEDS THE AMOUNT ALLOWED FOR THE FIRST FLOOR AND NO BRACED WALL ANALYSIS IS REQUIRED.
 2. SHEATH ALL EXTERIOR WALLS WITH 1/4" OSB SHEATHING ATTACHED WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD.

STRUCTURAL NOTES:

1. ALL FRAMING LUMBER TO BE #1 SPF (NO).
2. ALL LOAD BEARING HEADERS TO BE (2) 2 x 10 (NO).
3. WINDOW AND DOOR HEADERS TO BE SUPPORTED W/ (1) JACK STUD AND (1) KING STUD EA END (NO). SEE TABLE RESULTS FOR ADDITIONAL KING STUD REQUIREMENTS.
4. SQUARE DRYWALL POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION. SQUARES TO BE (2) STUDS (NO).
5. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

D&P - DOUBLE STUD POCKET

TABLE R602.15
MINIMUM NUMBER OF FULL HEIGHT STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS

HEADER SPACING (FEET)	MINIMUM NUMBER OF STUDS
UP TO 3'	2
4'	2
6'	3
8'	4
10'	5
12'	6



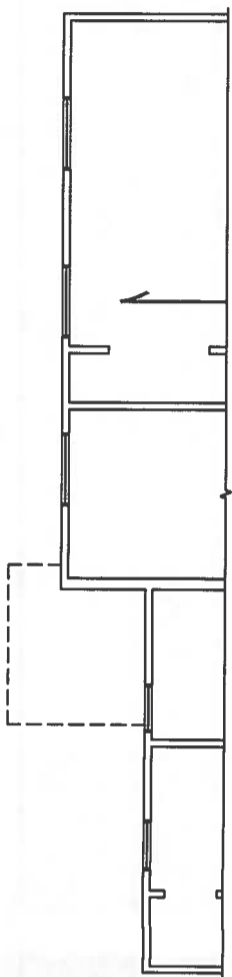
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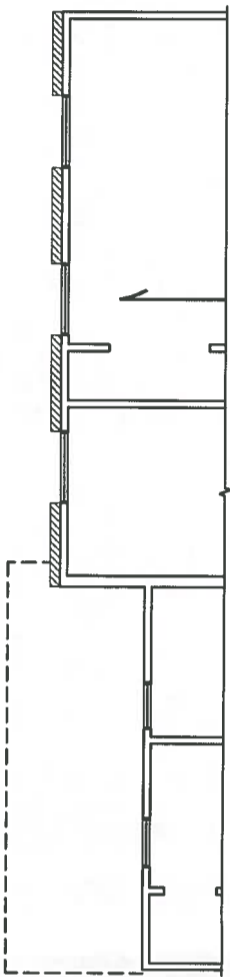
DATE: SEPTEMBER 5, 2019
SCALE: 1/4" = 1'-0"
DRAWN BY: DAN RYAN BUILDERS
ENGINEERED BY: WTS

SHEET 13 OF 17
S4.1
CEILING FRAMING PLAN

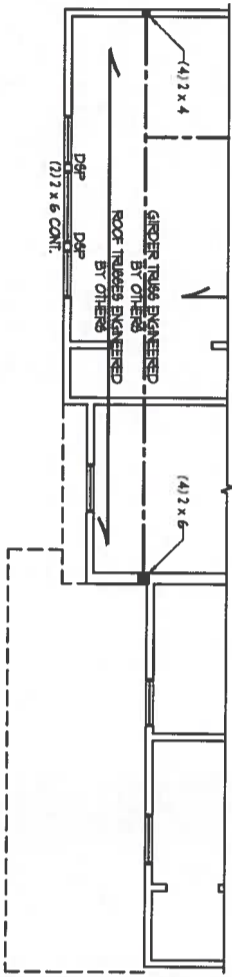
SCALE NOTE:
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IF X IT PRINTS ARE ONE HALF THE NOTED SCALE



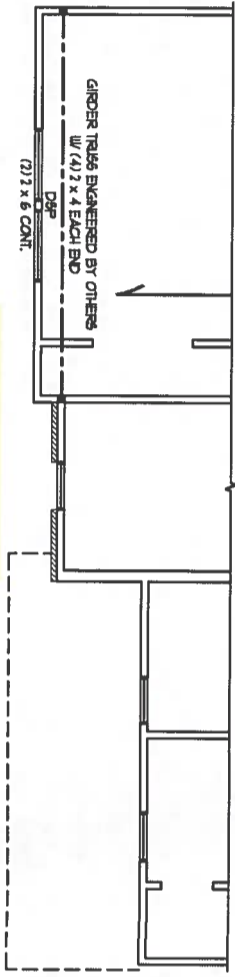
ELEVATION 2



ELEVATION 3



ELEVATION 4



ELEVATION 5

LINTEL SCHEDULE FOR BRICK/NATURAL STONE SUPPORT		
LENGTH/FT	SIZE OF LINTEL	
UP TO 4 FT.	1.5/2 x 3/2 x 1/4	
4-8	1.5 x 3/2 x 5/8 LLY	
8 AND GREATER	1.6 x 4 x 5/8 LLY	

- BRICK SUPPORT NOTES:**
- LINTEL SCHEDULE APPLIES TO ALL OPENINGS IN BRICK VENEER (MVD) SEE ARCH DETAILS FOR SIZE AND LOCATION OF OPENINGS.
 - (LLV) - LONG LEGS VERTICAL.
 - LEGNH - CLEAR OPENING.
 - EMBED ALL ANGLE IRONS MIN 4" EACH SIDE INTO VENEER TO PROVIDE BEARING FOR ALL HEADERS & UP AND GREATER HEADERS. ATTACH STEEL ANGLE TO VENEER BY 1/2" LAG BOLTS @ 12" O.C.
 - FOR ALL BRICK SUPPORT & ROOF LINES, FASTEN (2) 4" DIA. ANCHORS BETWEEN STUDS (2) 4" DIA. ANCHORS PER FT. FASTEN 4" x 4" x 5/8" STEEL ANGLE TO (2) 2" x 10" BLOCKING w/ (2) 1/2" LAG BOLTS @ 12" O.C. STUDDED SEE SECTION (909.8.2) OF THE 2009 NCEC FOR ADDITIONAL BRICK SUPPORT INFORMATION.
 - PRECAST REINFORCED CONCRETE LINTELS ENGINEERED BY OTHERS MAY BE USED IN LIEU OF STEEL LINTELS.



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SCALE: 1/4" = 1'-0"
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ENGINEERED BY: WTB

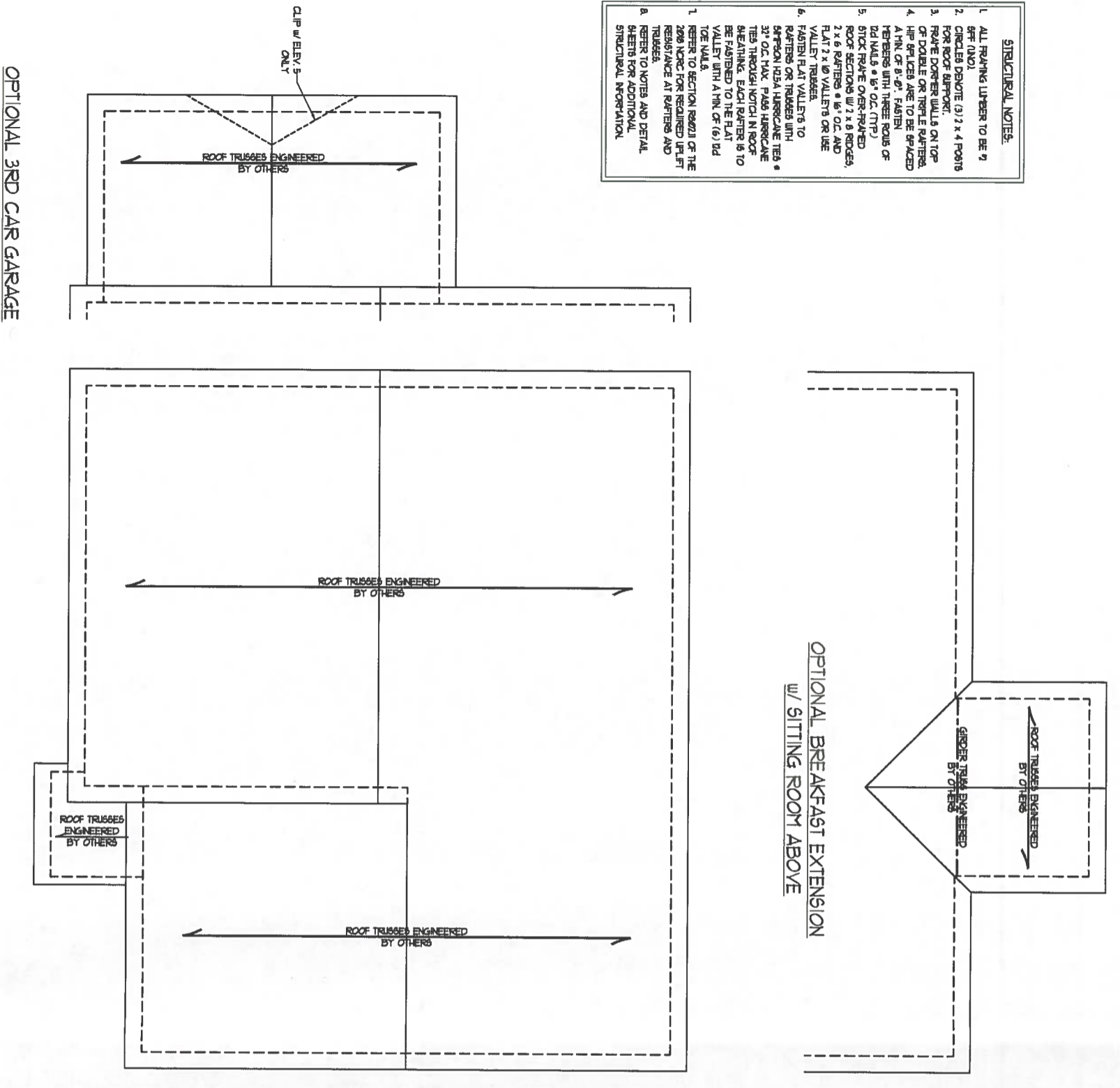
SHEET 14 OF 17
S4.2
CEILING FRAMING PLAN

ELMHURST - RALE
RELEASE #3 - 08/23/19
DAN RYAN BUILDERS

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SCALE NOTE:
LARGE FORMAT PRINTS ARE TO SCALE AS NOTED.
11" x 17" PRINTS ARE ONE HALF THE NOTED SCALE.

- STRUCTURAL NOTES:**
1. ALL RAFTING LUMBER TO BE #1 SFR (NO) 2.
 2. CIRCLED DIMS (3) 2 x 4 POSTS FOR ROOF BRITTON.
 3. RAFTER DOGGER WALLS ON TOP OF DOUBLE OR TRIPLE RAFTERS. HP BRIDGES ARE TO BE PLACED A MIN. OF 8'-0". FASTEN MEMBERS WITH THREE ROWS OF 12d NAILS @ 16" O.C. (TYP).
 4. BRCK RAFTS OVER-RAFTED.
 5. ROOF SECTIONS W/ 2 x 8 RIDGES, 2 x 6 RAFTERS @ 16" O.C. AND FLAT 2 x 8 VALLEYS OR USE VALLEY TRUSSER.
 6. FASTEN FLAT VALLEYS TO RAFTERS OR TRUSSES WITH 3/4" DIA. HERRING TIE @ 32" O.C. MAX. PASS HERRING TIES THROUGH NOTCH IN ROOF SHEATHING. EACH RAFTER IS TO BE FASTENED TO THE FLAT VALLEY WITH A MIN. OF (6) 12d TOE NAILS.
1. REFER TO SECTION 2002.1 OF THE 2006 IBC FOR REQUIRED UPLIFT TRUSSES.
A. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.



ELEVATION 1



DATE: SEPTEMBER 3, 2019
SCALE: 1/4" = 1'-0"
DRAWN BY: DAN RYAN BUILDERS
ENGINEERED BY: WTB

SHEET 15 OF 17
S-5.1
ROOF FRAMING PLAN
ELEVATION 1

ELMHURST - RALE
RELEASE #3 - 08/23/19
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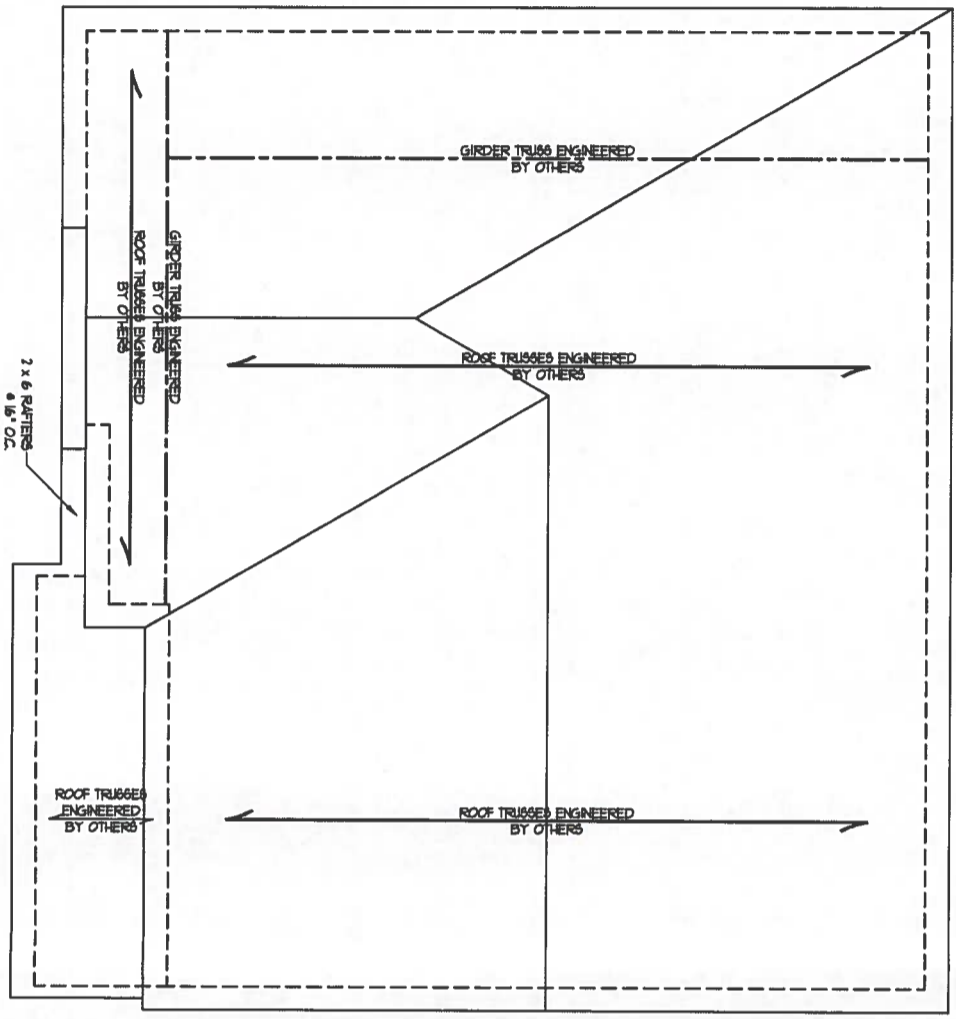
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SCALE NOTE:
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11" x 17" PRINTS ARE ONE HALF THE NOTED SCALE



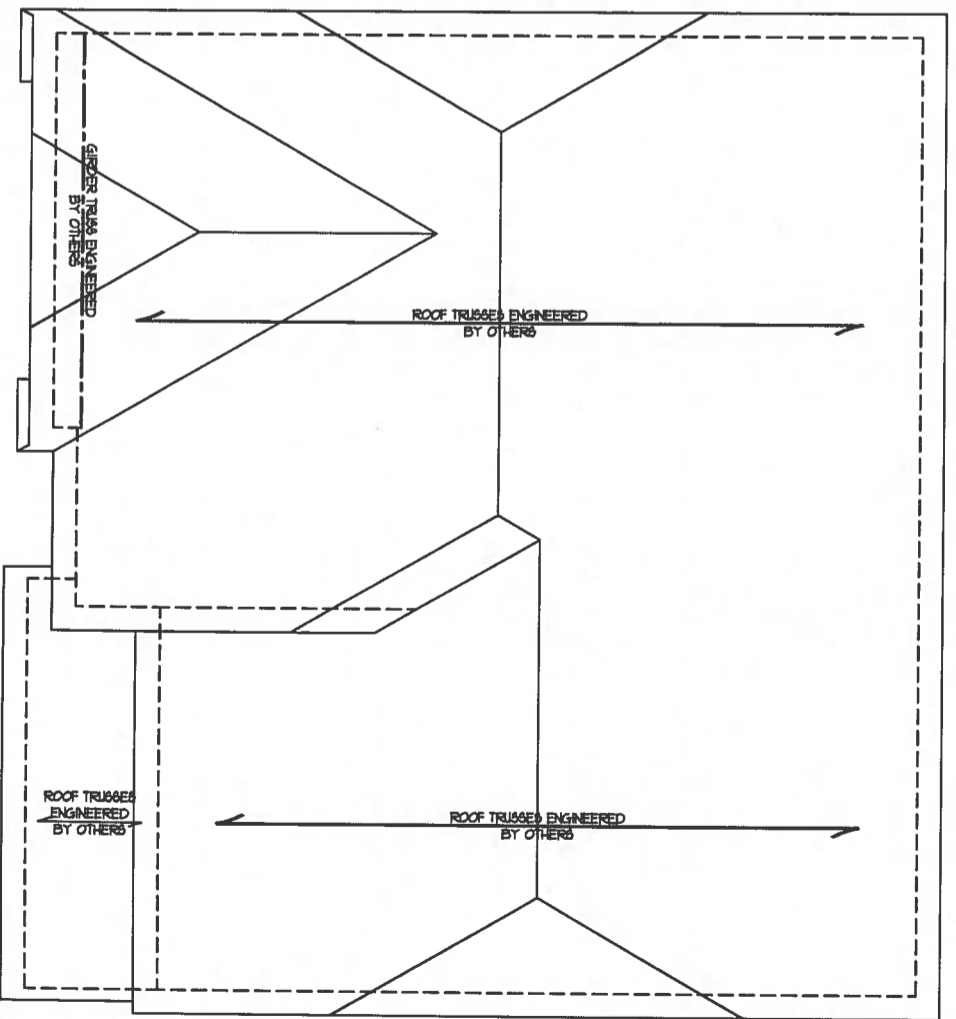
- STRUCTURAL NOTES:**
1. ALL FRAMING LITERS TO BE 9/8" (NOI)
 2. CIRCLES DENOTE (3) 2 x 4 POSTS FOR ROOF SUPPORT.
 3. FRAME DOWNER WALLS ON TOP OF DOUBLE OR TRIPLE RAFTERS. HP APPLIES ARE TO BE PLACED A MIN. OF 8'-0". FASTEN MEMBERS WITH THREE ROWS OF DD WALLS @ 8" O.C. (TYP)
 4. STOCK FRAME OVER-FRAMED ROOF SECTIONS W/ 2 x 8 RIDGES, 2 x 6 RAFTERS @ 8" O.C. AND FLAT 2 x 10 VALLEYS OR USE VALLEY TRUSSES.
 5. FASTEN FLAT VALLEYS TO PARTIAL OR TRUSSES WITH 3/8" DIA. HERRICANE TIES @ 3" O.C. MAX. PASS HERRICANE TIES THROUGH NOTCH IN ROOF BEATING. EACH RAFTER IS TO BE FASTENED TO THE FLAT VALLEY WITH A MIN. OF (6) DD TOE WALLS.
 6. REFER TO SECTION 9602.1 OF THE 2009 IBC FOR REQUIRED UPLIFT RESISTANCE AT RAFTERS AND TRUSSES.
 7. REFER TO NOTES AND DETAIL SHEET FOR ADDITIONAL STRUCTURAL INFORMATION.

SEE SHEET S-5.1 FOR OPTIONS



ELEVATION 4

SEE SHEET S-5.1 FOR OPTIONS



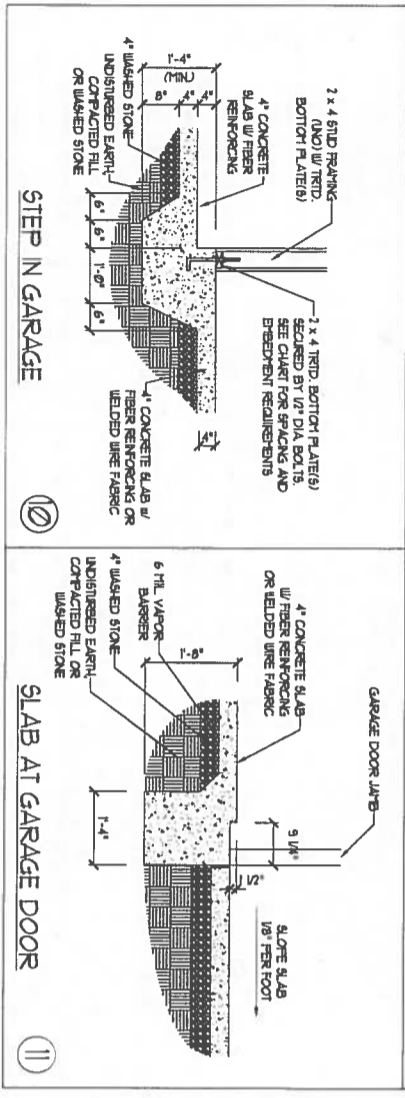
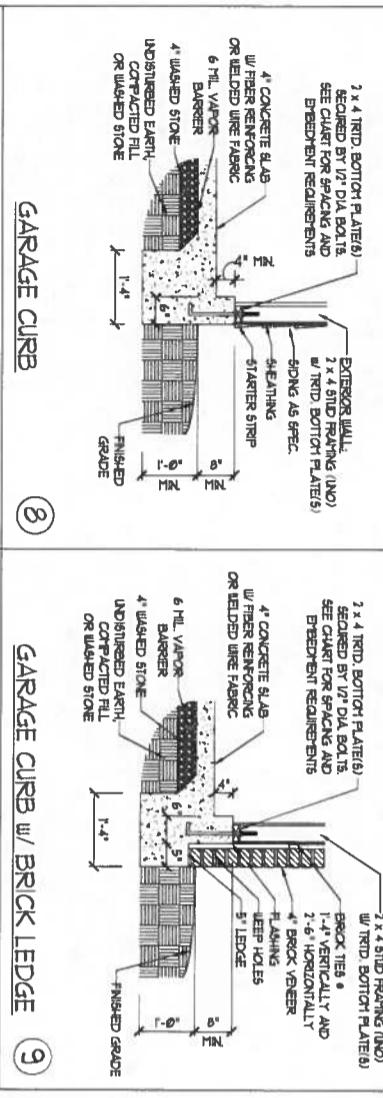
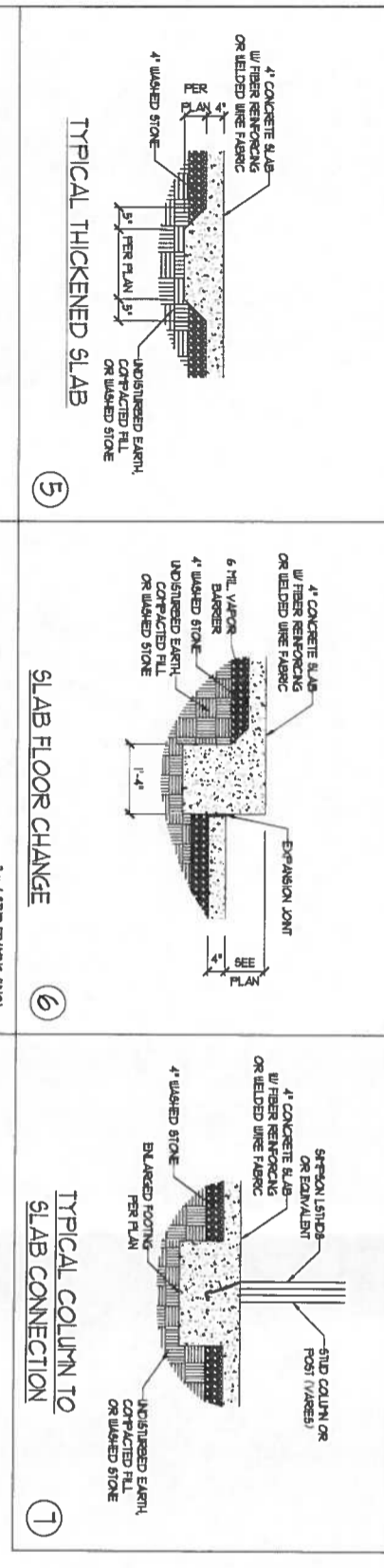
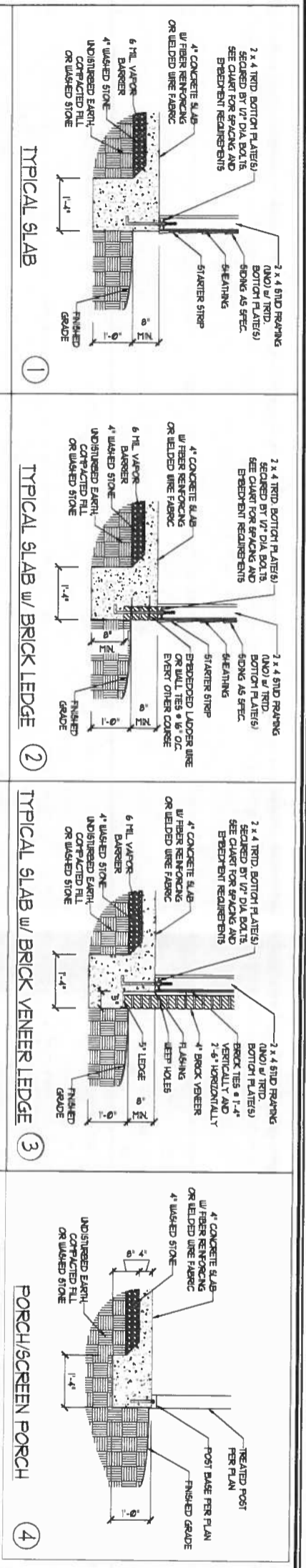
ELEVATION 5

DATE: SEPTEMBER 5, 2019
SCALE: 1/4" = 1'-0"
DRAWN BY: DAN RYAN BUILDERS
ENGINEERED BY: WBS

SHEET 17 OF 17
S.5.3
ROOF FRAMING PLAN
ELEVATIONS 4 & 5

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ANCHOR SPACING AND EMBEDMENT	
WIND ZONE	120 MPH
SPACING	6'-0" O.C. INSTALL MIN (2) ANCHORS PER PLATE SECTION AND (1) ANCHOR WITHIN 12" OF CORNERS
EMBEDMENT	4'-0" O.C. INSTALL MIN (2) ANCHORS PER PLATE SECTION AND (1) ANCHOR WITHIN 12" OF CORNERS
	EMBED INTO CONCRETE

NOTE:
 THREADED ROD WITH EPOXY, SIMPSON TITEN HD, OR APPROVED ANCHORS SPACED AS REQUIRED TO PROVIDE EQUIVALENT ANCHORAGE TO 1/2" DIAMETER ANCHOR BOLTS. MAY BE USED IN LIEU OF 1/2" ANCHOR BOLTS.

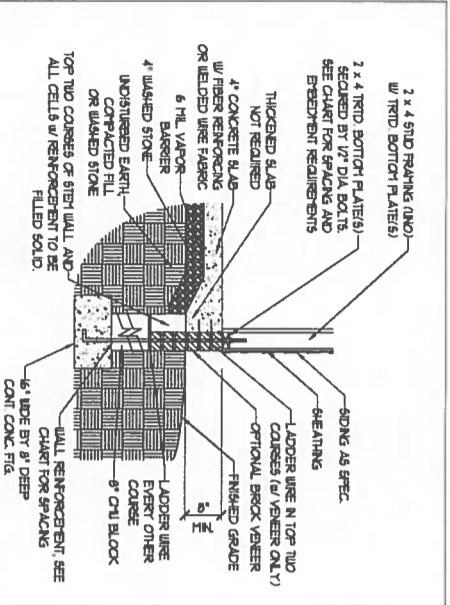
MATTHEW G. STROTHER
 PROFESSIONAL ENGINEER
 SEAL
 33736
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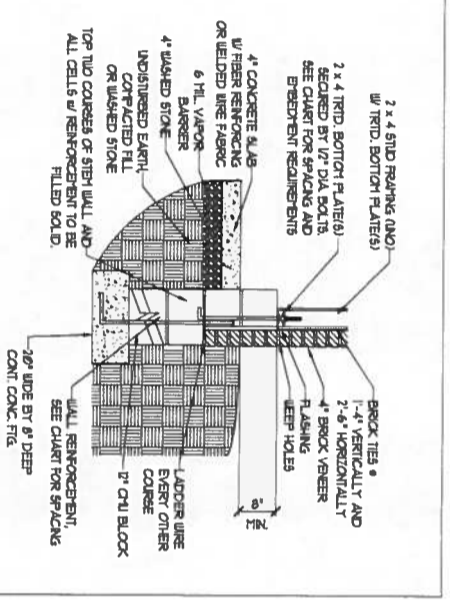
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 DIMENSIONED BY: BT

MONOLITHIC SLAB
 FOUNDATION DETAILS

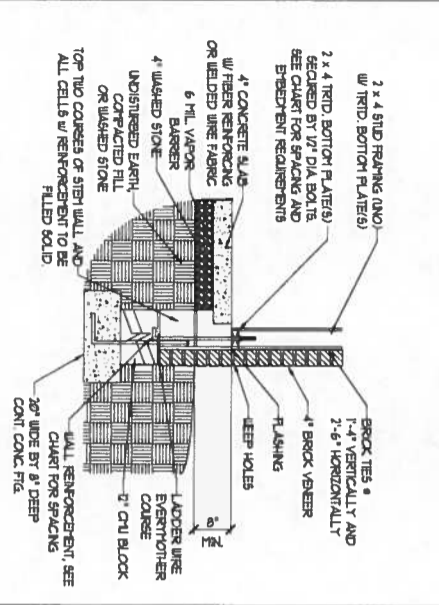
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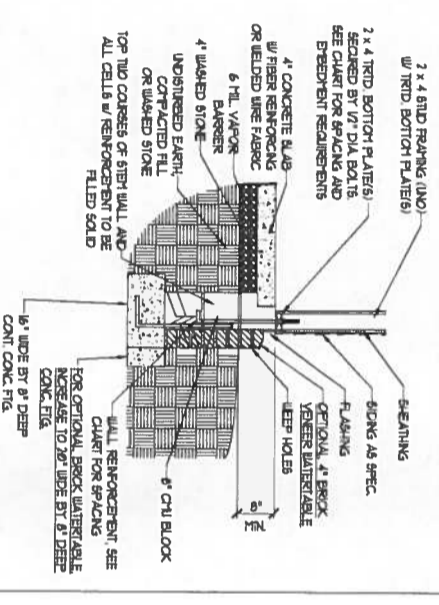
STEM WALL FDN. DETAIL (1)



STEM WALL FDN. W/ BRICK AND CURB (2)



STEM WALL FDN. W/ BRICK DETAIL (3)



STEM WALL FDN. W/ OPTIONAL BRICK WATERBABLE DETAIL (4)

MASONRY STEMWALL SPECIFICATIONS				
WALL HEIGHT (FEET)	MASONRY WALL TYPE			
	2 AND BELOW	8" CMU	4" BRICK AND 4" CMU	4" BRICK AND 8" CMU
3	UNROUTED	GROUT SOLID	UNROUTED	UNROUTED
4	GROUT SOLID	GROUT SOLID w/ 1/4" REBAR @ 48" O.C.	GROUT SOLID	GROUT SOLID w/ 1/4" REBAR @ 64" O.C.
5	GROUT SOLID w/ 1/4" REBAR @ 36" O.C.	NOT APPLICABLE	GROUT SOLID w/ 1/4" REBAR @ 36" O.C.	GROUT SOLID w/ 1/4" REBAR @ 64" O.C.
6	GROUT SOLID w/ 1/4" REBAR @ 24" O.C.	NOT APPLICABLE	GROUT SOLID w/ 1/4" REBAR @ 24" O.C.	GROUT SOLID w/ 1/4" REBAR @ 64" O.C.
1 AND GREATER	ENGINEERED DESIGN BASED ON SITE CONDITIONS			

STRUCTURAL NOTES:

- 1) WALL HEIGHT REQUIRED FROM TOP OF FOOTING TO TOP OF THE WALL.
- 2) THE MULTIPLE UNITIES TOGETHER WITH LADDER WIRE AT 6" O.C. VERTICALLY.
- 3) CHART APPLICABLE FOR HOUSE FOUNDATION ONLY. CONSULT ENGINEER FOR DESIGN OF GARAGE FOUNDATION NOT COMMON TO HOUSE.
- 4) BACKFILL OF CLEAN #1 / #1 WASHED STONE IS ALLOWABLE.
- 5) 1) BACFILL OF WELL DRAINED OR SAND - GRAVEL THICKNESS SOLLS (45 PSF)FT BELOW GRADE) CL ASSIGNED AS GROUP 1 ACCORDING TO UNIFIED SOILS CLASSIFICATION SYSTEM IN ACCORDANCE WITH TABLE R405.1 OF THE 2018 NORTH CAROLINA RESIDENTIAL CODE ARE ALLOWABLE.
- 6) FREE SLAB PER 806.21 AND 806.22 BASE AND EXCEPTION OF 2018 NORTH CAROLINA RESIDENTIAL CODE.
- 7) MINIMUM 24" LAP 90% ICE LENGTH.
- 8) LOCATE REBAR IN CENTER OF FOUNDATION WALL.
- 9) WHERE REQUIRED, FILL BLOCK SOLID WITH TYPE "S" MORTAR OR 3000 PSI GROUT. USE OF "LOW LIFT GROUTING" METHOD REQUIRED WHEN FILING WALLS WITH GROUT AT HEIGHTS OF 5' AND GREATER.

ANCHOR SPACING AND EMBEDMENT		
WIND ZONE	120 MPH	130 MPH
SPACING	6'-0" O.C. INSTALL MIN. (2) ANCHORS PER FLATE SECTION AND (1) ANCHOR WITHIN 12" OF CORNERS	4'-0" O.C. INSTALL MIN. (2) ANCHORS PER FLATE SECTION AND (1) ANCHOR WITHIN 12" OF CORNERS
EMBEDMENT	1"	5" INTO MASONRY 1" INTO CONCRETE

NOTE:
THREADED ROD WITH EPOXY, SIFPERSON TITEN HD, OR APPROVED ANCHORS SPACED AS REQUIRED TO PROVIDE EQUIVALENT ANCHORAGE TO 1/2" DIAMETER ANCHOR BOLTS MAY BE USED IN LIEU OF 1/2" ANCHOR BOLTS.

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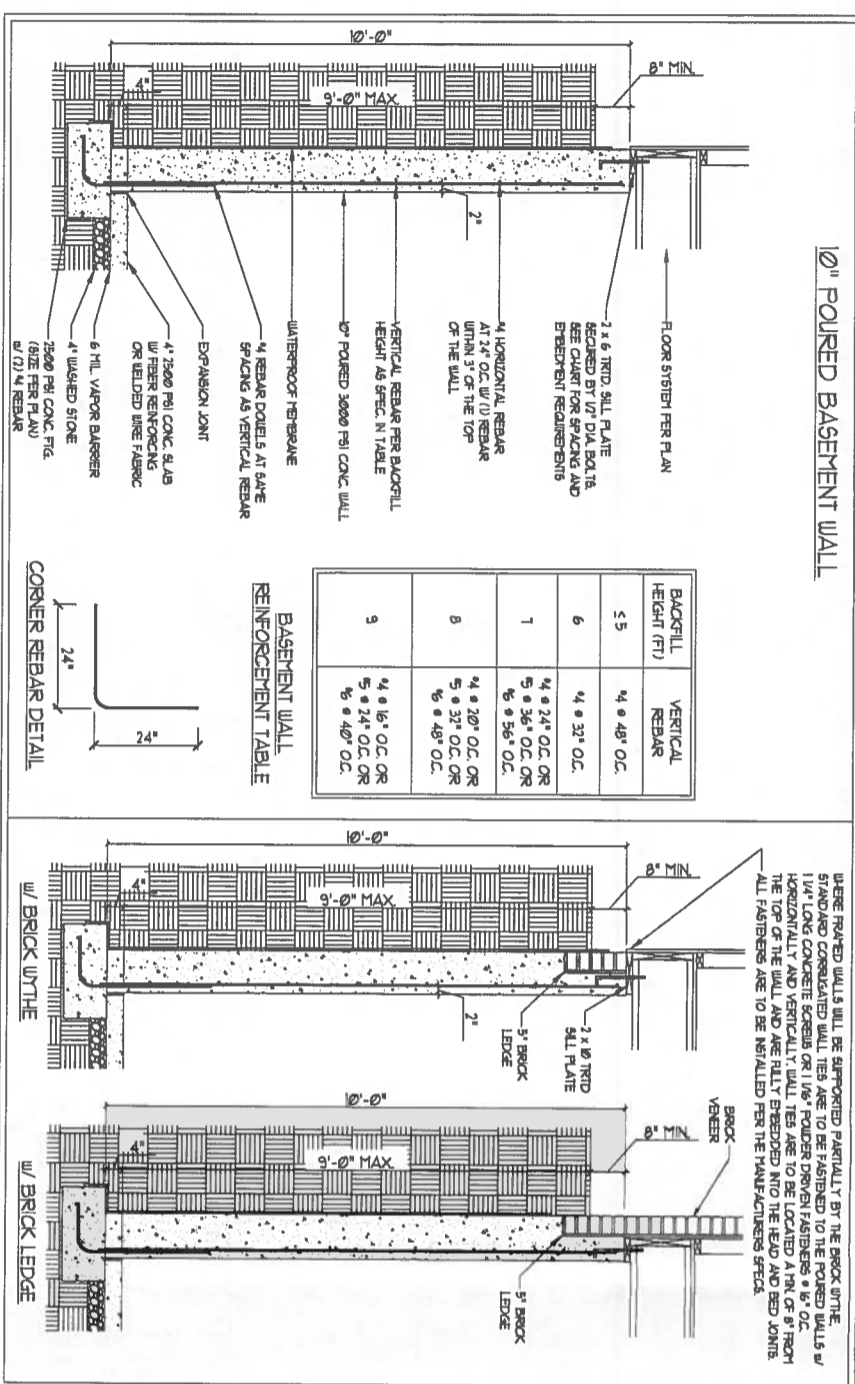
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STEM WALL FOUNDATION DETAILS

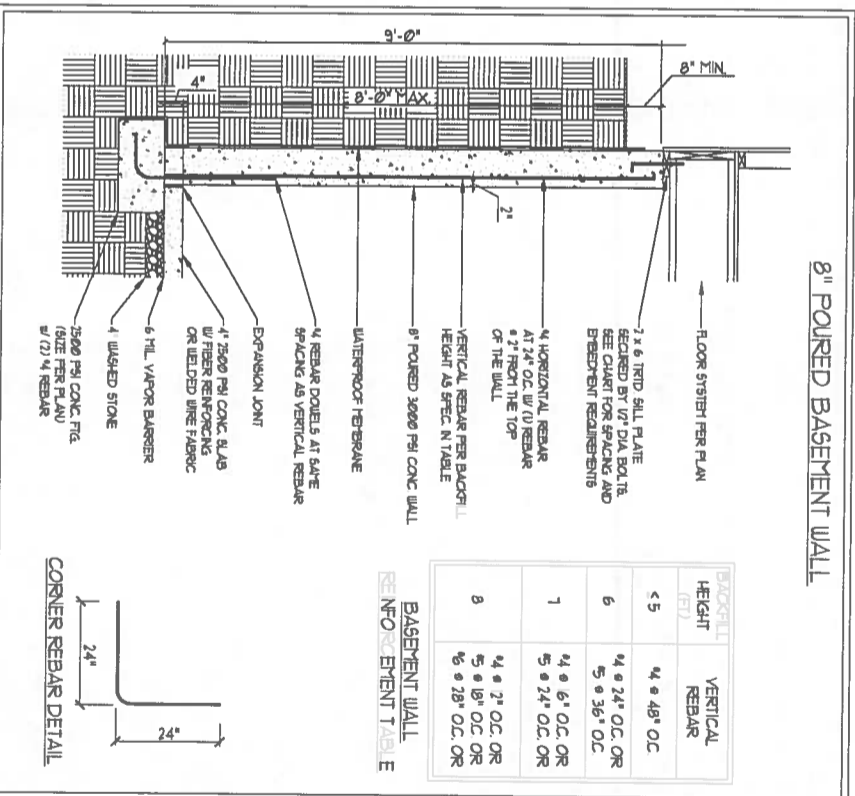
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DATE: NOVEMBER 1, 2018
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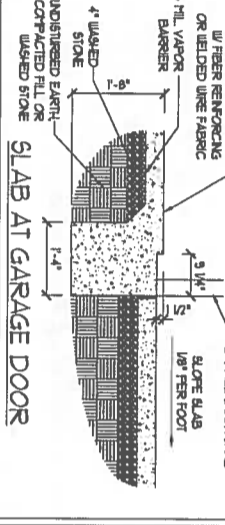
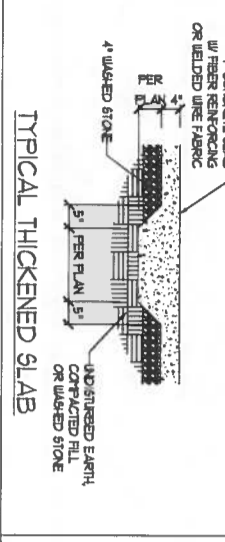
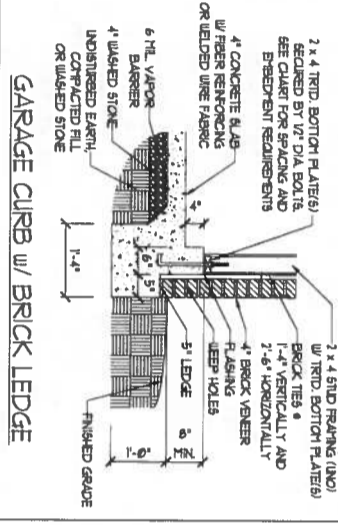
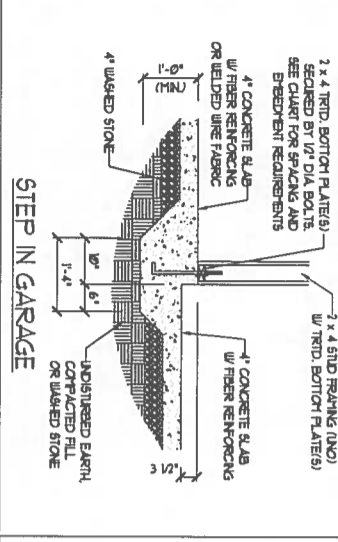
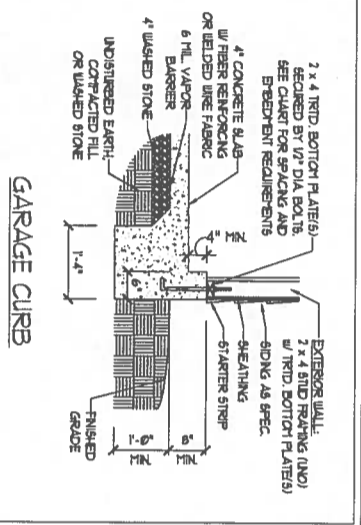
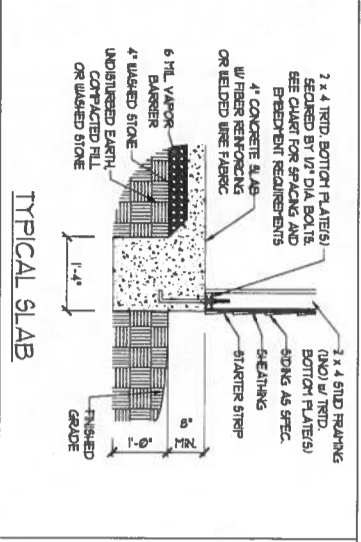
FOUNDATION DETAILS



BACKFILL HEIGHT (FT)	VERTICAL REBAR
< 5	4 # 4@8' O.C.
6	4 # 24" O.C. OR 5 # 36" O.C.
1	4 # 6" O.C. OR 5 # 24" O.C. OR 6 # 36" O.C.
8	4 # 30" O.C. OR 5 # 37" O.C. OR 6 # 48" O.C.
9	4 # 18" O.C. OR 5 # 24" O.C. OR 6 # 48" O.C.



BACKFILL HEIGHT (FT)	VERTICAL REBAR
< 5	4 # 4@8' O.C.
6	4 # 24" O.C. OR 5 # 36" O.C.
1	4 # 6" O.C. OR 5 # 24" O.C. OR 6 # 36" O.C.
8	4 # 7" O.C. OR 5 # 18" O.C. OR 6 # 28" O.C. OR



ANCHOR SPACING AND EMBEDMENT		
WIND ZONE	120 MPH	130 MPH
SPACING	6'-0" O.C. INSTALL MIN. (2) ANCHORS PER PLATE SECTION AND (1) ANCHOR WITHIN 12" OF CORNERS	4'-0" O.C. INSTALL MIN. (2) ANCHORS PER PLATE SECTION AND (1) ANCHOR WITHIN 12" OF CORNERS
EMBEDMENT	7"	5" INTO MASONRY 7" INTO CONCRETE

NOTE:
THREADED ROD WITH EPOXY,
5 MPSON TITEN HD, OR APPROVED
ANCHORS SPACED AS REQUIRED
TO PROVIDE EQUIVALENT
ANCHORAGE TO 1/2" DIAMETER
ANCHOR BOLTS MAY BE USED IN
LIEU OF 1/2" ANCHOR BOLTS.

- STRUCTURAL NOTES:**
- 1) FOR 4" REBAR, 24" MINIMUM REBAR LAP SPICE LENGTH. FOR 5" REBAR, 37" MINIMUM REBAR LAP SPICE LENGTH. FOR 6" REBAR, 39" MINIMUM REBAR LAP SPICE LENGTH.
 - 2) REBAR TO BE INSTALLED IN A MINIMUM CONCRETE COVER OF 3" (NO).
 - 3) REBAR TO BE ASHIN A66 GGRADE 60.
 - 4) SOIL BEARING CAPACITY IS REQUIRED TO BE 2000 PSF MIN.
 - 5) INSTALL 4" L-BARS AT ALL WALL CORNERS AT BAYE SPACING AS HORIZ. STEEL. SEE DETAIL.
 - 6) THE CORNER REBAR IS TO BE INSTALLED AND A MIN. OF SEVEN DATS IS REQUIRED TO ALLOW THE CORNER REBAR TO BE FULLY DEVELOPED.
 - 7) 4" L-BARS AT ALL CORNERS AND ALL BAYE SPACING AS HORIZ. STEEL. SEE DETAIL.
 - 8) WHERE THE FLOOR JOISTS ARE PARALLEL TO THE WALLS, 2 x 4 BLOCKING IS TO BE INSTALLED 24" O.C. DIAGONAL 2 x 6 BLOCKS MAY BE INSTALLED 24" O.C. FROM THE EDGE OF THE SLAB PLATE TO THE TOP FLANGE AND SUPPORTING, ATTACHED W/ (3) 1/2" DIA WALLS EACH BAY.

NOTE TO FOUNDATION CONTRACTOR:
ALTERNATE REINFORCED CONCRETE POURED WALL DESIGNS
ENGINEERED BY OTHERS MAY BE CONSTRUCTED, NO CONTINUOUS
FOOTINGS OR LUG FOOTINGS THAT BE REDUCED IN SIZE



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FOUNDATION
DETAILS

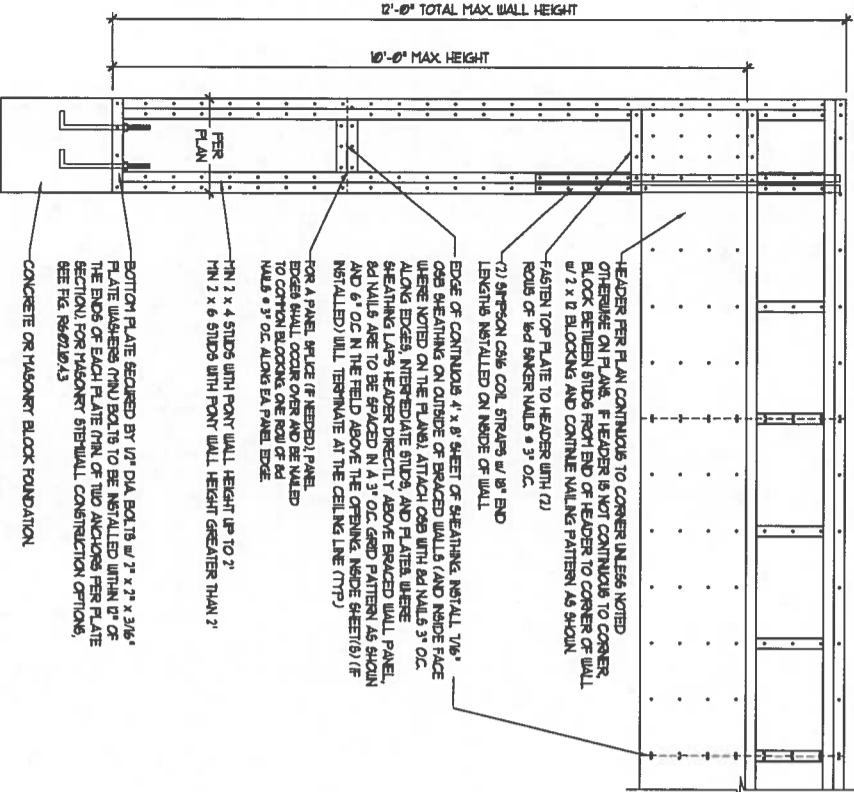
DATE: NOVEMBER 1, 2018
SCALE: NTS
DRAWN BY: JST
ENGINEERED BY: JST

POURED WALL BASEMENT
FOUNDATION DETAILS

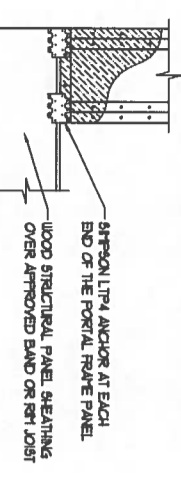
**J.S. THOMPSON
ENGINEERING, INC**
606 WADE AVE., SUITE 104 RALEIGH, NC 27605
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N.C. LICENSE NO. C-1733

GENERAL WALL BRACING NOTES:

1. WALL BRACING DESIGNED IN ACCORDANCE WITH CHAPTER 6 OF THE 2006 NC RESIDENTIAL BUILDING CODE (NRC). TABLES AND FIGURES REFERRED TO ARE FROM THE 2006 NRC.
2. SEE THIS SHEET FOR GENERAL DETAIL 6. REFER TO THE 2006 NRC FOR ADDITIONAL INFORMATION AS NEEDED.
3. BRACED EXTERIOR WALLS SUPPORTING ROOF TRUSSES AND BATTENS INCLUDING STORES BELOW THE TOP FLOOR HAVE BEEN DESIGNED PER FIGURE 6(1). WALL SHEATHING AND FASTENERS HAVE BEEN DESIGNED TO RESIST COMBINED UPLIFT AND SHEAR FORCES IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE.
4. SEE STRUCTURAL SHEETS FOR BRACING WALL LOCATION, DIMENSIONS, HOLD DOWN TIE AND LOCATION. BRACED WALL LINE KEY WITH WALL DESIGN SYMBOL OF REQUIRED/PROVIDED TORSION FOR EACH TIE AND ANY SPECIAL NOTES OR REQUIREMENTS.
5. ALL EXTERIOR WALLS ARE TO BE SHEATHED WITH OS-B/SP N ACCORDANCE WITH SECTION R602.2(3) UNLESS NOTED OTHERWISE.
6. ALL EXTERIOR AND INTERIOR WALLS TO HAVE 1/2" GYPHUM INSTALLED WHEN NOT USING METHOD 9(a), GYPHUM TO BE FASTENED PER TABLE R602.3. METHOD 9(b) TO BE FASTENED PER TABLE R602.3(1).
7. OS-B/SP REFER TO THE CONTINUOUS SHEATHING - WOOD STRUCTURAL PANELS. 2" WALL BRACING METHOD, 1/4" OS-B SHEATHING IS TO BE INSTALLED ON ALL EXTERIOR WALLS ATTACHED TO FOUNDATION WALLS OR 1/2" LONG x 2" DIA. DIAPHRAGM WALLS SPACED 6" O.C. ALONG PANEL EDGES AND 7" O.C. IN THE FIELD (UNO).
8. OS-B REFER TO THE GYPHUM BOARD WALL BRACING METHOD. 1/2" GYPHUM WALL BOARD IS TO BE INSTALLED ON BOTH SIDES OF THE BRACED WALL FASTENED WITH 1 1/4" SCREWS OR 1 3/8" NAILS SPACED 7" O.C. ALONG PANEL EDGES INCLUDING TOP AND BOTTOM FLATES AND INTERMEDIATE SUPPORTS (UNO). VERIFY ALL FASTENER OPTIONS FOR 1/2" AND 5/8" GYPHUM PRIOR TO CONSTRUCTION. FOR INTERIOR FASTENER OPTIONS SEE TABLE R602.3 FOR EXTERIOR FASTENER OPTIONS SEE TABLE R602.3(1). EXTERIOR GBS TO BE INSTALLED VERTICALLY.
9. REQUIRED BRACED WALL LENGTH FOR EACH SIDE OF THE CIRCUMSCRIBED RECTANGLE ARE INTERPOLATED PER TABLE R602.1. METHOD 9(b) CONTRIBUTES ITS ACTUAL LENGTH. METHOD 9(a) CONTRIBUTES 5 ITS ACTUAL LENGTH AND METHOD 9(c) CONTRIBUTES 15 TIMES ITS ACTUAL LENGTH.

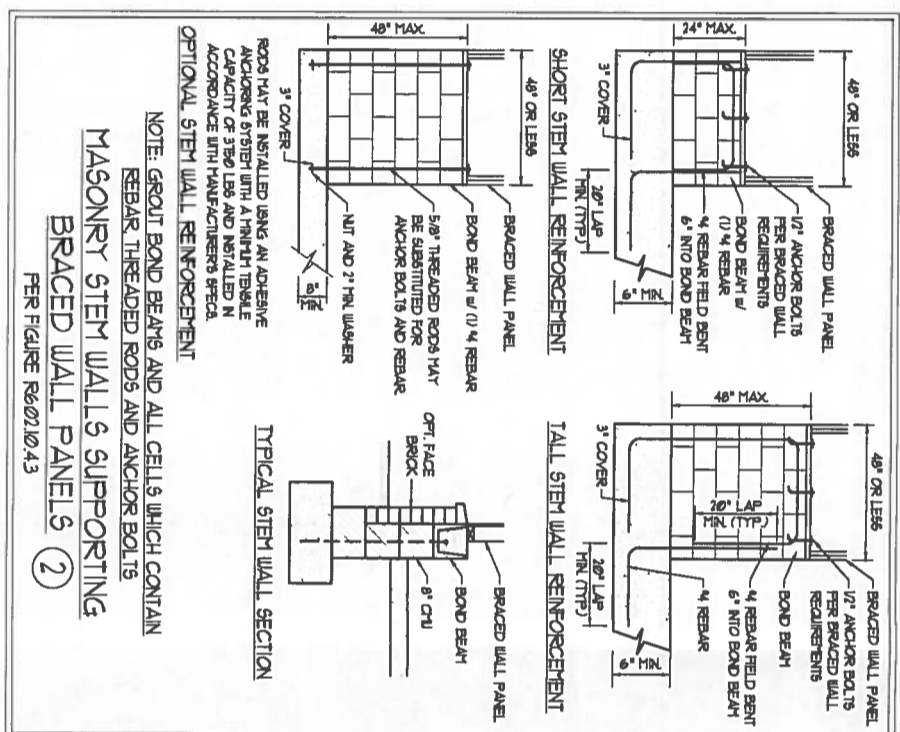


OVER CONCRETE OR MASONRY BLOCK FOUNDATION

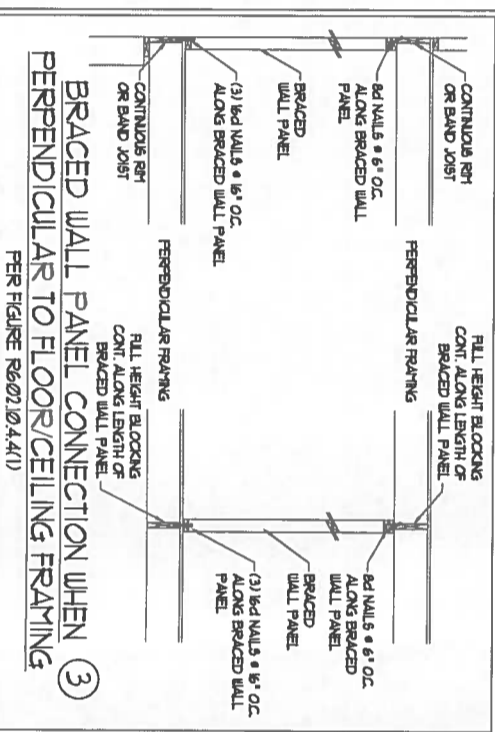


METHOD PF-PORTAL FRAME DETAIL ①

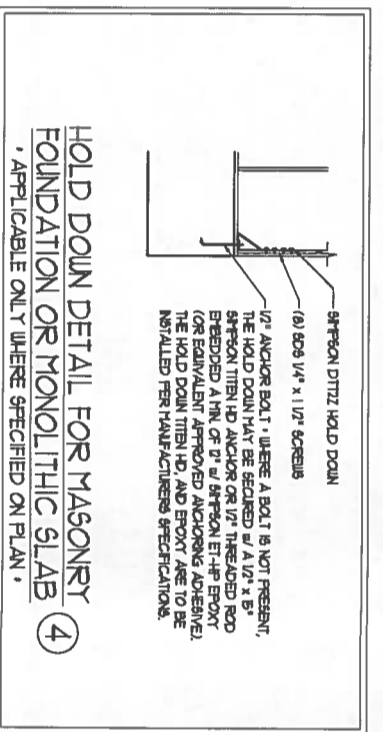
• APPLICABLE W/ GREATER THAN 12\"/>



NOTE: GROUT BOND BEAMS AND ALL CELLS WHICH CONTAIN REBAR THREADED RODS AND ANCHOR BOLTS BRACED WALL PANELS ② PER FIGURE R602.10.4.3

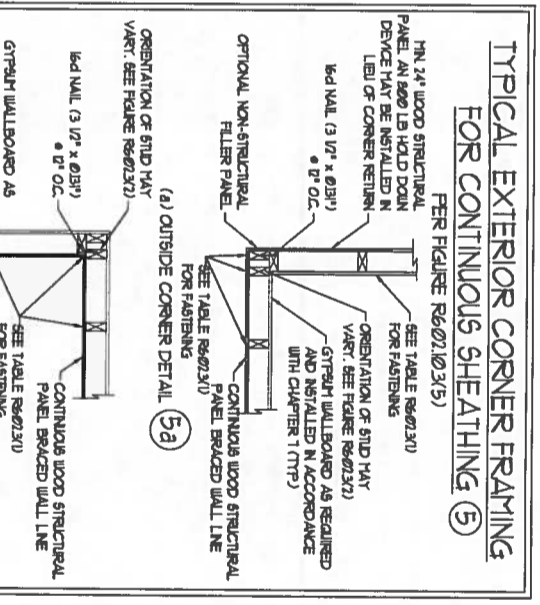


BRACED WALL PANEL CONNECTION WHEN PERPENDICULAR TO FLOOR/CEILING FRAMING ③ PER FIGURE R602.10.4.4(1)

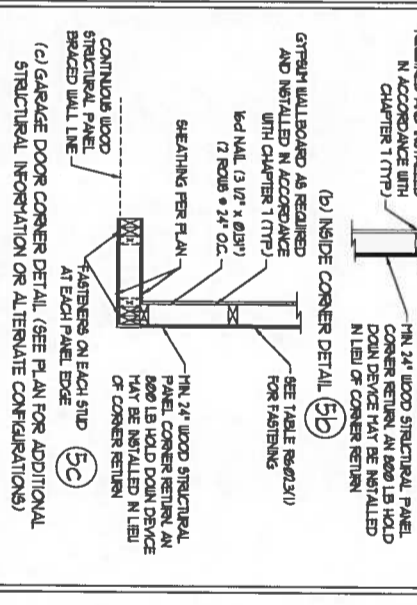


HOLD DOWN DETAIL FOR MASONRY FOUNDATION OR MONOLITHIC SLAB ④

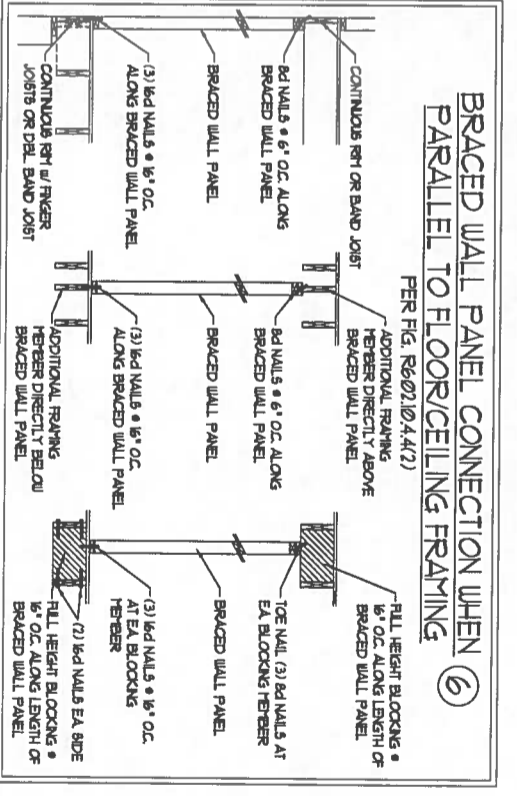
• APPLICABLE ONLY WHERE SPECIFIED ON PLAN.



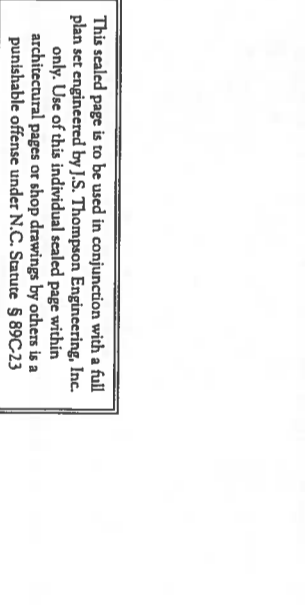
TYPICAL EXTERIOR CORNER FRAMING FOR CONTINUOUS SHEATHING ⑤ PER FIGURE R602.10.3(5)



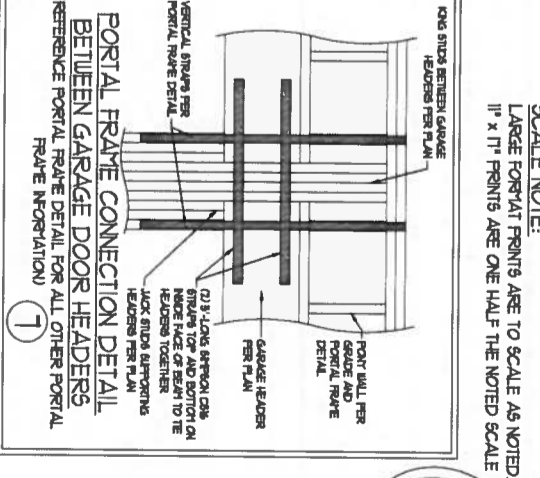
(c) GARAGE DOOR CORNER DETAIL (SEE PLAN FOR ADDITIONAL STRUCTURAL INFORMATION OR ALTERNATE CONFIGURATIONS) ⑤c



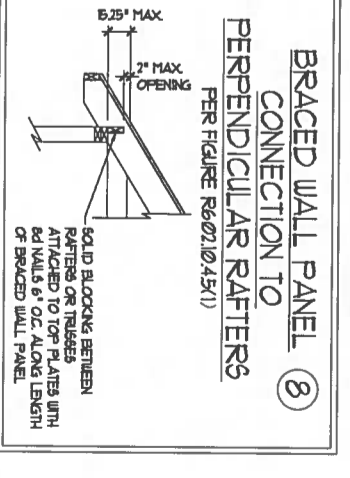
BRACED WALL PANEL CONNECTION WHEN PARALLEL TO FLOOR/CEILING FRAMING ⑥ PER FIG. R602.10.4.4(2)



BRACED WALL PANEL CONNECTION TO PERPENDICULAR ROOF TRUSSES ⑨ PER FIGURE R602.10.4.5(3) (OR ALTERNATIVE: FIGURE R602.10.4.5(1))



SCALE NOTE: LARGE PORTAL FRAMES TO SCALE AS NOTED. 1/2\"/>



MATTHEW G. STROTHER
 PROFESSIONAL ENGINEER
 NO. 33736
 STATE OF NORTH CAROLINA

SCALE NOTE:
LARGE FORMAT PRINTS ARE TO SCALE AS NOTED.
11" x 17" PRINTS ARE ONE HALF THE NOTED SCALE.

GENERAL NOTES

- ENGINEER'S SEAL APPLIED ONLY TO STRUCTURAL COMPONENTS INCLUDING ROOF PARTS, HIPS, VALLEYS, ROOFERS, FLOORS, WALLS, BEAMS, HEADERS, COLUMNS, CANTILEVERS, OTHER LOAD BEARING WALLS, FIBER, GROUND STRIPES AND FOOTING. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OF ARCHITECTURAL LAYOUT INCLUDING ROOF. ENGINEER'S SEAL DOES NOT APPLY TO I-LIGHT OR FLOOR/ROOF TRUSS LAYOUT DESIGN AND ACCURACY.
 - ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE (NRC), 2008 EDITION, PLUS ALL LOCAL CODES AND REGULATIONS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR AND WILL NOT HAVE CONTROL OF CONSTRUCTION METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK. NOR WILL THE ENGINEER BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
 - STRUCTURAL DESIGN BASED ON THE PROVISIONS OF THE NRC, 2008 EDITION (R2004 - R2007)
- | DESIGN CRITERIA | LIVE LOAD (PSF) | DEAD LOAD (PSF) | DEFLECTION (IN) |
|--------------------------------|--|-----------------|-----------------------------------|
| ATTIC WITH LIMITED STORAGE | 20 | 10 | L/140 (L/360 w/ BRITTLE FINISHES) |
| ATTIC WITHOUT STORAGE | 10 | 10 | L/360 |
| DECKS | 40 | 10 | L/360 |
| EXTERIOR BALCONIES | 40 | 10 | L/360 |
| FIRE ESCALARS | 40 | 10 | L/360 |
| HANDRAILS/BALUSTRADES | 200 LB OR 50 (PL) | 10 | L/360 |
| PASSENGER VEHICLE GARAGE | 50 | 10 | L/360 |
| ROOMS OTHER THAN SLEEPING ROOM | 40 | 10 | L/360 |
| SLEEPING ROOMS | 30 | 10 | L/360 |
| STAIRS | 40 | 10 | L/360 |
| WIND LOAD | BASED ON TABLE R2002(4) WIND ZONE AND EXPOSURE | | |
| GROUND SHOCK LOAD, Pg | 20 (PSF) | | L/360 |
- I-LIGHT SYSTEMS DESIGNED WITH 2 PPF DEAD LOAD AND DEFLECTION (IN) OF L/400
 - FLOOR TRUSS SYSTEMS DESIGNED WITH 2 PPF DEAD LOAD
 - FOR IS AND 100 MPH WIND ZONE, FOUNDATION ANCHORAGE IS TO CONFORM WITH SECTION R401.6 OF THE NRC, 2008 EDITION FOR 100 MPH, 140 MPH, AND 160 MPH WIND ZONES. FOUNDATION ANCHORAGE IS TO CONFORM WITH SECTION 400.6 OF THE NRC, 2008 EDITION.
 - ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 1 OF THE NRC, 2008 EDITION.

FOOTING AND FOUNDATION NOTES

- FOUNDATION DESIGN BASED ON A MINIMUM ALLOWABLE BEARING CAPACITY OF 20000 PSF. CONTACT GEOTECHNICAL ENGINEER FOR BEARING CAPACITY IS NOT ACHIEVED.
- FOR ALL CONCRETE SLABS AND FOOTINGS, THE AREA WITHIN THE PERIMETER OF THE BUILDING ENVELOPE SHALL HAVE ALL VEGETATION TOP SOIL AND FORESKIN MATERIAL REMOVED. THE AREA WITHIN THE PERIMETER OF THE BUILDING ENVELOPE SHALL BE FERTILIZED AND WATERED TO MAINTAIN VEGETATION. THE FILL SHALL BE CEMENTED TO A MINIMUM OF 4% CEMENT. THE FILL SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION. THE FILL SHALL BE COVERED WITH A MINIMUM OF 2" OF TOP SOIL. THE FILL SHALL BE COVERED WITH A MINIMUM OF 2" OF TOP SOIL. THE FILL SHALL BE COVERED WITH A MINIMUM OF 2" OF TOP SOIL.
- PROVIDE 1/2" DIA. STEEL REINFORCING BARS TO PROVIDE CONCRETE WITH BOTTOM OF CONCRETE SLAB IS AT OR BELOW WATER TABLE. F. APPLICABLE 3/4" - 1" DEEP CONTROL JOINTS ARE TO BE SHOWN WITHIN 4 TO 8 HOURS OF CONCRETE FINISHING AND WALL LOCATIONS HAVE BEEN MARKED. ADJUST WHERE NECESSARY.
- CONCRETE SHALL CONFORM TO SECTION R402.2 OF THE NRC, 2008 EDITION. CONCRETE REINFORCING STEEL TO BE ASTM A635 GRADE 60 UNLESS OTHERWISE NOTED. MINIMUM 4" THICK CONCRETE COVER ABOVE AND REINFORCING STEEL OF 3" IN FOOTINGS AND 1 1/2" IN SLABS. FOR FORMED CONCRETE WALLS, CONCRETE COVER FOR REINFORCING STEEL, REBAR FROM THE OUTSIDE FACE OF THE WALL SHALL NOT BE LESS THAN 3/4". CONCRETE COVER FOR REINFORCING STEEL, REBAR FROM THE OUTSIDE FACE OF THE WALL SHALL NOT BE LESS THAN 1 1/2" FOR 5 BARS OR SMALLER AND NOT LESS THAN 2" FOR 6 BARS OR LARGER.
- MASONRY UNITS TO CONFORM TO ACE 530/ALICE 5/THS 402. HORIZONTAL SHALL CONFORM TO ASTM C750.
- THE UNBARRICADED HEIGHT OF MASONRY FIBER SHALL NOT EXCEED FOUR TIMES THEIR LEAST DIMENSION FOR UNBARRICADED HOLLOW CONCRETE MASONRY UNITS AND TEN TIMES THEIR LEAST DIMENSION FOR SOLID OR SOLID FILLED PERFORATED FIBER. FIBER MAY BE FILLED WITH SOLID CONCRETE OR TYPE M OR S HORIZONTAL FIBER AND WALLS SHALL BE CAPPED WITH 8" OF SOLID MASONRY.
- THE CENTER OF EACH OF THE FIBER SHALL BEAR IN THE MIDDLE THIRD OF ITS RESPECTIVE FOOTING. EACH GIRDER SHALL BEAR IN THE MIDDLE THIRD OF THE FIBER.
- ALL CONCRETE AND MASONRY FOUNDATION WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION R404 OF THE NRC, 2008 EDITION OR IN ACCORDANCE WITH ACI 308, ACI 310, ACI 308.4 OR ACE 530/ALICE 5/THS 402. MASONRY FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE R404(1)(1), R404(1)(2), R404(1)(3), OR R404(1)(4) OF THE NRC, 2008 EDITION. CONCRETE FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE R404(1)(1) OF THE NRC, 2008 EDITION. 6" PER CONCRETE FOUNDATION WALLS TO 7 x 6 REINFORCED WALLS AT 8" O.C. WHERE GRADE PERMITS (IND).

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FRAMING NOTES

- ALL RAFTING LATHERS SHALL BE 2" STAINLESS STEEL (S) - 575 PSL, 1/4" x 5/8" DIA. OR 1/2" DIA. (S) UNLESS NOTED OTHERWISE (IND). ALL TREATED LATHERS SHALL BE 2" STAINLESS STEEL (S) - 575 PSL, 1/4" x 5/8" DIA. OR 1/2" DIA. (S) UNLESS NOTED OTHERWISE (IND).
- LATHING OVER BRICK LATHER (L) SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: 1/2" DIA. LATHERS: 26000 PSL, 1/4" x 5/8" DIA. OR 1/2" DIA. (S) UNLESS NOTED OTHERWISE (IND). 1/2" DIA. LATHERS: 26000 PSL, 1/4" x 5/8" DIA. OR 1/2" DIA. (S) UNLESS NOTED OTHERWISE (IND). 1/2" DIA. LATHERS: 26000 PSL, 1/4" x 5/8" DIA. OR 1/2" DIA. (S) UNLESS NOTED OTHERWISE (IND). 1/2" DIA. LATHERS: 26000 PSL, 1/4" x 5/8" DIA. OR 1/2" DIA. (S) UNLESS NOTED OTHERWISE (IND).
- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:
A. W AND W T SQUARES: ASTM A992
B. CHANNELS AND ANGLES: ASTM A36
C. PLATES AND BARS: ASTM A36
D. HOLLOW STRUCTURAL SECTIONS: ASTM A500 GRADE B
E. STEEL PIPE: ASTM A53 GRADE B, TYPE E OR S
- STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" AND FULL FLANGE WIDTH (IND). PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED AT THE BOTTOM FLANGE TO EACH SUPPORT AS FOLLOWS (IND):
A. WOOD FRAMING: (2) 1/2" DIA. x 4" LONG LAG SCREWS
B. CONCRETE: (2) 1/2" DIA. x 4" LONG ANCHORS
C. MASONRY (FULLY GROUTED): (2) 1/2" DIA. x 4" LONG BRICK TIE HD ANCHORS
LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOISTS ARE TOE NAILLED TO THE 2x WALKER ON TOP OF THE STEEL BEAM AND THE 2x WALKER IS SECURED TO THE TOP OF THE STEEL BEAM W/ (2) ROWS OF SELF TAPPING SCREWS @ 16" O.C. OR (2) ROWS OF 1/2" DIA. DIAMETER BOLTS @ 16" O.C. IF 1/2" BOLTS ARE USED TO FASTEN THE WALKER, THE STEEL BEAM SHALL BE FABRICATED W/ (2) ROWS OF 5/16" DIA. DIAMETER BOLTS @ 16" O.C.
- SOULERS ABOVE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION SHOWN SOULERS ABOVE POINT LOADS FROM ABOVE WHICH REQUIRE SOLID BLOCKING TO SUPPORTING MEMBER BELOW.
- ALL LOAD BEARING HEADERS TO BE SUPPORTED BY TABLE R402.1(1) AND R402.1(2) OF THE NRC, 2008 EDITION OR BE (2) 2" x 6" WITH (1) JACK AND (1) KING STUD EACH END (IND) WHOEVER IS GREATER. ALL HEADERS TO BE SECURED TO EACH JACK STUD WITH (4) 1/2" DIA. WALL BOLTS TO BE SUPPORTED WITH (2) STUDS AT EACH BEARING POINT (IND). INSTALL KING STUDS PER SECTION R602.15 OF THE NORTH CAROLINA RESIDENTIAL CODE, 2008 EDITION.
- ALL BEAMS, HEADERS, OR GIRDERS TRUSSES PARALLEL TO WALL ARE TO BEAR FULLY ON (1) JACK OR (2) STUDS MINIMUM OR THE NUMBER OF JACKS OR STUDS NOTED. ALL BEAMS OR GIRDERS TRUSSES PERPENDICULAR TO WALL AND SUPPORTED BY (3) STUDS OR LESS ARE TO HAVE 1/2" MINIMUM BEARING (IND). ALL BEAMS OR GIRDERS TRUSSES PERPENDICULAR TO WALL AND SUPPORTED BY MORE THAN (3) STUDS OR OTHER NOTED COLUMN ARE TO BEAR FULLY ON SUPPORT COLUMN FOR ENTIRE WALL DEPTH (IND). BEAM ENDS THAT BUTT INTO ONE ANOTHER ARE TO EACH BEAR EQUAL LENGTHS (IND).
- FIBER BEAMS SHALL BE BOLTED TOGETHER USING 1/2" DIA. WALKER BOLTS (ASTM A307) WITH WASHERS PLACED AT THE UNBARRICADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" CENTER (MAXIMUM) AND STAGGERED AT TOP AND BOTTOM OF BEAM (17" EDGE DISTANCE) WITH (2) BOLTS LOCATED AT 6" FROM EACH END (IND).
- ALL I-LIGHT OR TRUSS LATHERS ARE TO BE IN COMPLIANCE WITH THE OVERALL DESIGN SPECIFIED ON THE PLAN. ALL DEVIATIONS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD PRIOR TO INSTALLATION.
- BRACED WALL PANELS SHALL BE CONSTRUCTED ACCORDING TO THE NORTH CAROLINA RESIDENTIAL CODE 2008 EDITION WALL BRACING CRITERIA THE AMOUNT, LENGTH, AND LOCATION OF BRACING SHALL CONFORM WITH ALL APPLICABLE TABLES IN SECTION R402.16.
- PROVIDE DOUBLE JOIST UNDER ALL WALLS PARALLEL TO FLOOR JOISTS. PROVIDE SUPPORT UNDER ALL WALLS PARALLEL TO FLOOR TRUSSES OR I-LIGHTS PER MANUFACTURER'S SPECIFICATION. INSTALL BLOCKS BETWEEN JOISTS OR TRUSSES FOR POINT LOAD SUPPORT FOR ALL POINT LOADS ALONG OTHER LOAD LINES.
- FOR ALL HEADERS SUPPORTING BRICK VENEER THAT ARE LESS THAN 8'-0" IN LENGTH, REST A 6" x 4" x 5/16" STEEL ANGLE WITH 6" MINIMUM BRIDGMENT AT SIDES FOR BRICK SUPPORT (IND). FOR ALL HEADERS 8'-0" AND GREATER IN LENGTH, BOLT A 6" x 4" x 5/16" STEEL ANGLE TO HEADER WITH 1/2" LAG BOLTS AT 7' O.C. STAGGERED FOR BRICK SUPPORT. FOR ALL BRICK SUPPORT AT ROOF LINES, BOLT A 6" x 4" x 5/16" STEEL ANGLE TO (2) 2" x 6" BLOCKS INSTALLED W/ (4) 1/2" DIA. WALL BOLTS EA. IN BETWEEN WALL STUDS WITH (2) ROWS OF 1/2" LAG SCREWS AT 7' O.C. STAGGERED AND IN ACCORDANCE WITH SECTION R702.2(1) OF THE NRC, 2008 EDITION.
- FOR STICK FRAMED ROOFS, CIRCLES ABOVE (3) 2" x 4" POIS FOR ROOF TRUSS SUPPORT. HP BRACKETS ARE TO BE SPACED A MINIMUM OF 8'-0". FASTEN TRUSSES WITH THREE ROWS OF 2x WALLS AT 8" O.C. FRAME DOGGER WALLS ON TOP OF DOUBLE OR TRIPLE PARTERS AS SHOWN (IND).
- FOR TRUSSED ROOFS, FRAME DOGGER WALLS ON TOP OF 2" x 4" LATHERS WITH 24" O.C. BETWEEN ADJACENT ROOF TRUSSES. STICK WALL OVER-FRAMED ROOF SECTIONS WITH 2" x 8" RIBS, 2" x 6" PARTERS AT 8" O.C. AND FLAT 2" x 6" VALLEYS (IND).
- ALL 4" x 4" AND 6" x 6" POIS TO BE INSTALLED WITH 100 LB CAPACITY LEFT CONNECTIONS TOP AND BOTTOM (IND). POIS MAY BE SECURED USING ONE SHEFFSON 16 OR L180 LEFT CONNECTION FASTENED TO THE BAND AT THE BOTTOM AND THE BEAM AT THE TOP OF EACH POIS. ONE 6" SECTION OF SHEFFSON C16 COIL STRAPPING WITH (8) 1/2" DIA. WALL BOLTS AT EACH END MAY BE USED IN LIEU OF EACH INSET STRAP IF DESIRED. FOR MASONRY OR CONCRETE FOUNDATION USE SHEFFSON POST BASE.



DATE: OCTOBER 19, 2018
DRAWN BY: JES
ENGINEERED BY: ST

STANDARD STRUCTURAL NOTES

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