- PLANS TO BE DESIGNED UNDER 2018 NORTH CAROLINA RESIDENTIAL CODE.
- HOUSE DESIGNED FOR 115 MPH 3 SECOND GUST (89 FASTEST WIND) , EXPOSURE B
- ANCHOR BOLTS SHALL BE MIN. 1/2" DIAMETER & SHALL EXTEND A MINIMUM 7" INTO MASONRY OR CONCRETE
- ANCHOR BOLTS TO BE NO MORE THAN 6' O.C. AND WITHIN 12" OF THE CORNER
- WALL BRACING IS REQUIRED . DESIGNER MUST SPECIFY METHOD OF BRACING PER SECTION R602 (NC 2018 RESIDENTIAL BUILDING CODE ) AND PROVIDE DETAIL

MEAN ROOF HEIGHT = < 30'-0"

COMPONENT & CLADDING DESIGNED FOR THE FOLLOWING LOADS

| MEAN ROOF HEIGHT | UP TO 30' | 30'-1" - 35' | 35'-1" - 40' | 40'-1" - 45' |
|---|---|---|---|---|
| ZONE 1 | 16.5, -18.0 | 17.3, -18.9 | 18.0, -19.6 | 18.5, -20.2 |
| ZONE 2 | 16.5, -21.0 | 17.3, -22.1 | 18.0, -22.9 | 18.5, -23.5 |
| ZONE 3 | 16.5, -21.0 | 17.3, -22.1 | 18.0, -22.9 | 18.5, -23.5 |
| ZONE 4 | 18.0, -19.5 | 18.9, -20.5 | 19.6, -21.3 | 20.2, -21.8 |
| ZONE 5 | 18.0, -24.1 | 18.9, -25.3 | 19.6, -26.3 | 20.2, -27.0 |

MINIMUM VALUES FOR ENERGY COMPLIANCE:
ZONE 4
MAX GLAZING U-FACTOR = 0.35
CEILING R-38 WALLS R-15 FLOORS R-19

NOTE: PLANS DESIGNED UNDER 2018 NORTH CAROLINA RESIDENTIAL CODE.


## FRONT ELEVATION

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

## LIST OF ABBREVIATIONS

CLG. : CEILING
HGT. : HEIGHT
D.O. : DOUBLE OVEN
WD. : WOOD
CONT.:CONTINUOUS
CONC. : CONCRETE
COL. : COLUMN
ELLIP. : ELLIPSE
W/ - WITH
TRANS. : TRANSOM
CANT. : CANTILEVER
M.O. : MASONRY OPENING
5S= 5 SHELVES
1R/1S = 1 ROD AND 1 SHELF
2R/2S =2 RODS AND 2 SHELVES
SD= SMOKE DETECTOR
CMD= CARBON MONOXIDE DETECTOR
ABV. : ABOVE
C.O. : CASED OPENING
REFG. : REFRIGERATOR
D.W. : DISHWASHER
T.B.D.: TO BE DETERMINED
W.I.C. : WALK IN CLOSET
W : WASHER
D : DRYER
SHWR. : SHOWER
DN. : DOWN
K.S. : KNEE SPACE
TYP. : TYPICAL

## GENERAL PLAN NOTES

1.) SEE CHAPTER 6 OF 2018 NCRC FOR WALL CONSTRUCTION.

2.) TEMPERED GLASS TO BE USED AT ALL SAFETY REQUIRED LOCATIONS ACCORDING TO 2018 NCRC SECTION R308.4.

3.) DWELLING/GARAGE FIRE SEPARATION SHALL PER TABLE 302.6 OF 2018 NCRC.

4.) ALL HABITABLE ROOMS SHALL MEET LIGHT/VENTILATION & EGRESS AS REQUIRED IN 2018 NCRC SECTIONS R303.1 AND R310

5.) ALL ANGLED WALLS ARE 45° UNLESS NOTED OTHERWISE.

6.) VERIFY ALL WINDOW SIZES, RADIUS, AND DETAILS WITH CHOSEN MANUFACTURE.

7.) LOCATE DORMER FACE TO ALLOW 4" MIN. BELOW WINDOW FRAME.

8.) FLOOR PLAN NOTATIONS GOVERN OVER ELEVATION SCALE.

9.) ALL CABINET DESIGNS/LAYOUTS TO BE VERIFIED WITH OWNER VIA SHOP DRAWINGS FROM CABINET MANUF.

10.) ALL FLOOR COVERINGS AND FINISHES BY OWNER/ BLDR. COORDINATE HEIGHTS DUE TO THICKNESS CHANGES.

11.) ALL WINDOW GLAZING TO HAVE 0.32 U-FACTOR MIN. SEE TABLE E-4A, E-4B

12.) FINISHES OF SCREEN PORCH COLUMNS,RAILS, FLOORS , CEILINGS ;SCREEN DOOR SYSTEM,AND DOOR TO PORCH BY BLDR. & OWNER, PER CONTRACT SPECIFICATIONS

13.) FINISHES FOR CLOSET SHELVING AND ROD BY BLDR. & OWNER, PER CONTRACT SPECIFICATIONS

14.) FINISHES OF ALL INTERIOR BASE BOARD , CLG. DETAIL / MOLDING ,OPENING DETAILS ,PASS-THRUS ,WAINSCOTTING DETAILS BY BLDR. & OWNER, PER CONTRACT SPECIFICATIONS

## ACCESSORIES LEGEND

PROVIDE BLOCKING FOR:
TB = TOWEL BAR
TP = TOILET PAPER
TR = TOWEL RING
MR = MAGAZINE RACK
MC = MEDICINE CABINET

NOTE:
SELECTION BY OWNER PER BUILDER CONTRACT SPECIFICATIONS

NOTE:
-SEE ROOF PLAN FOR KNEEWALL HEIGHTS AND LOCATIONS.

-GRADE LINES ARE ASSUMED. VERIFY WITH FINAL GRADING PLAN.

## AREA CALCULATIONS

| HEATED (SQ. FT.) | |
|---|---|
| 1ST FLOOR: | 3360 |
| 2ND FLOOR: | 1454 |
| REC ROOM/ EXERCISE: | 605 |
| TOTAL: (HEATED) | 5419 |

| UNHEATED (SQ. FT.) | |
|---|---|
| GARAGE: | 1162 |
| SCR. PORCH: | 293 |
| PORCH: | 714 |
| OUTDOOR KITCHEN: | 190 |
| TOTAL: (UNHEATED) | 2359 |

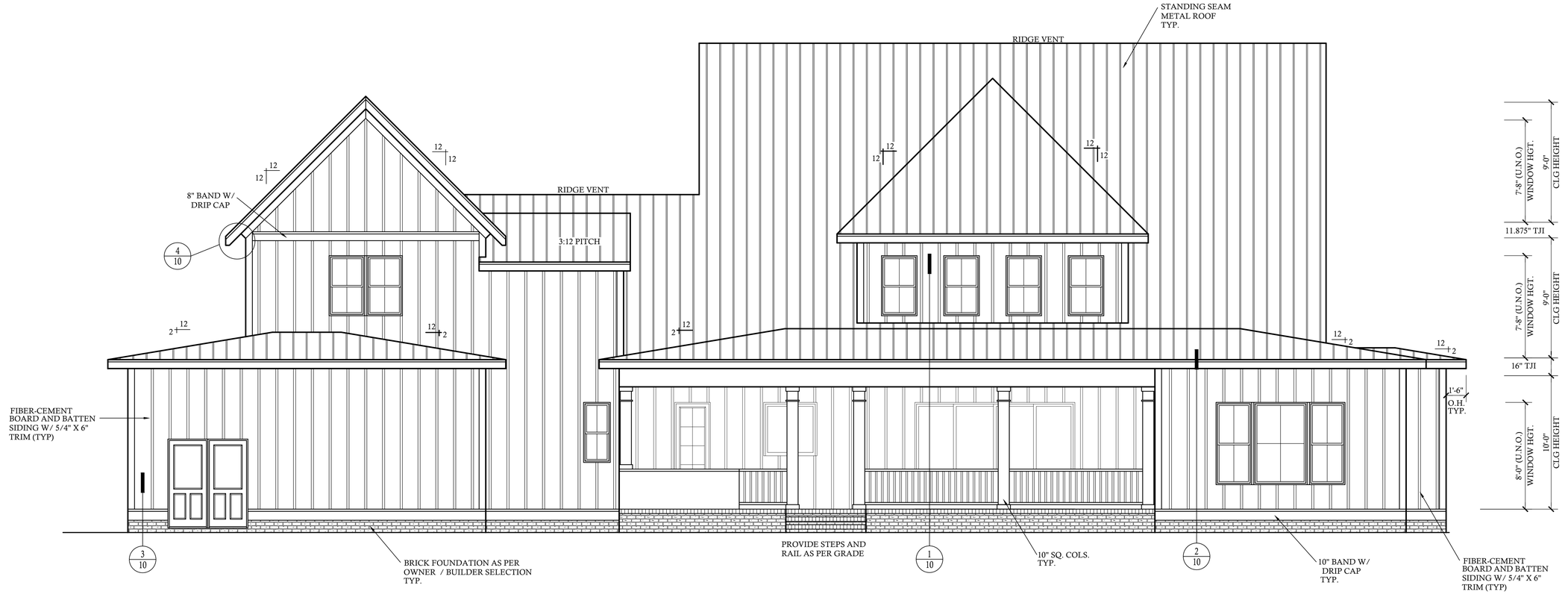
| OVERALL DIMENSION | |
|---|---|
| WIDTH: | 98'-10" |
| DEPTH: | 71'-7" |

| UNFINISHED (SQ. FT.) | |
|---|---|
| STORAGE 1: | 200 |
| STORAGE 2: | 106 |
| ATTIC: | 838 |

RYAN MAY RESIDENCE
PLAN #121221-DOWDS DESIGN COLLECTION LLC

NOTE:
SEE ROOF PLAN FOR KNEEWALL
HEIGHTS AND LOCATIONS.

NOTE:
GRADE LINES ARE ASSUMED. VERIFY
WITH FINAL GRADING PLAN.



## REAR ELEVATION

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

RYAN MAY RESIDENCE
PLAN #121221-DOWDS DESIGN COLLECTION LLC

3-2-23

NOTE:
SEE ROOF PLAN FOR KNEEWALL HEIGHTS AND LOCATIONS.

NOTE:
GRADE LINES ARE ASSUMED. VERIFY WITH FINAL GRADING PLAN.


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


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

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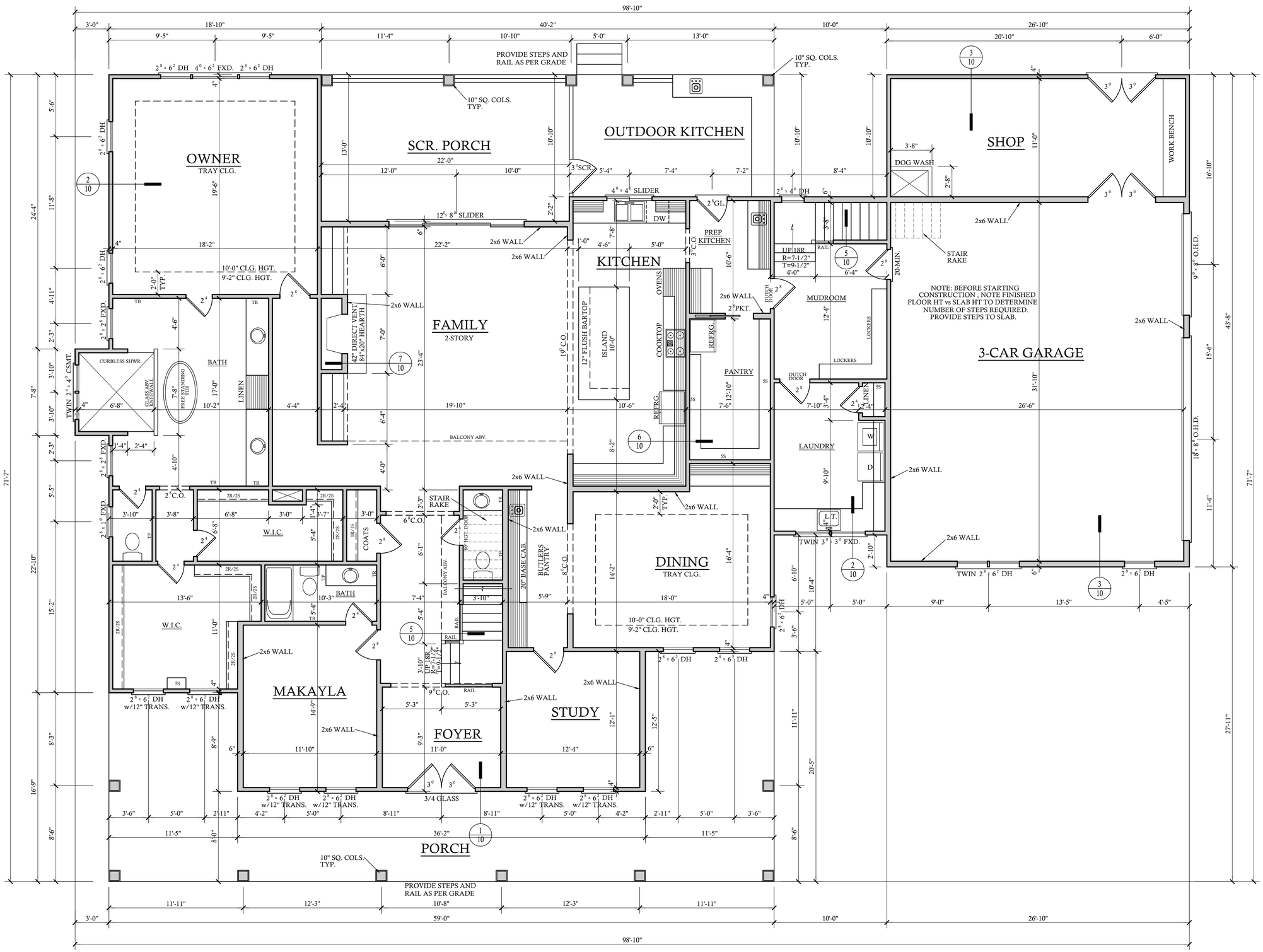


NOTE:
ALL DOORS AND CASED OPENINGS ON THE FIRST FLOOR TO BE 8'-0" TALL (U.N.O.)

# FIRST FLOOR PLAN

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

10'-0" CLG. HGT. U.N.O.
SET WINDOWS @ 8'-0" U.N.O.

RYAN MAY RESIDENCE
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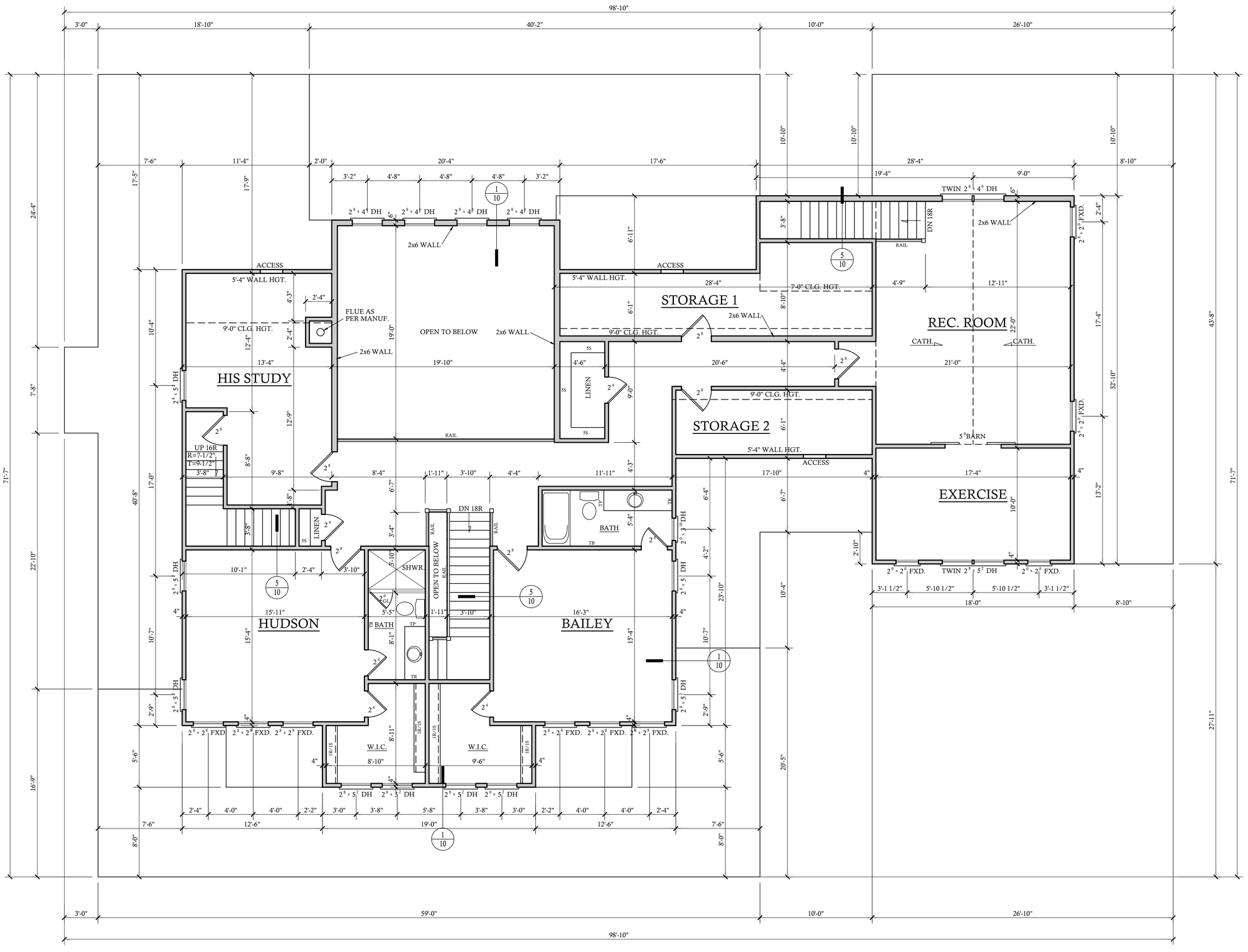
4

3-2-23

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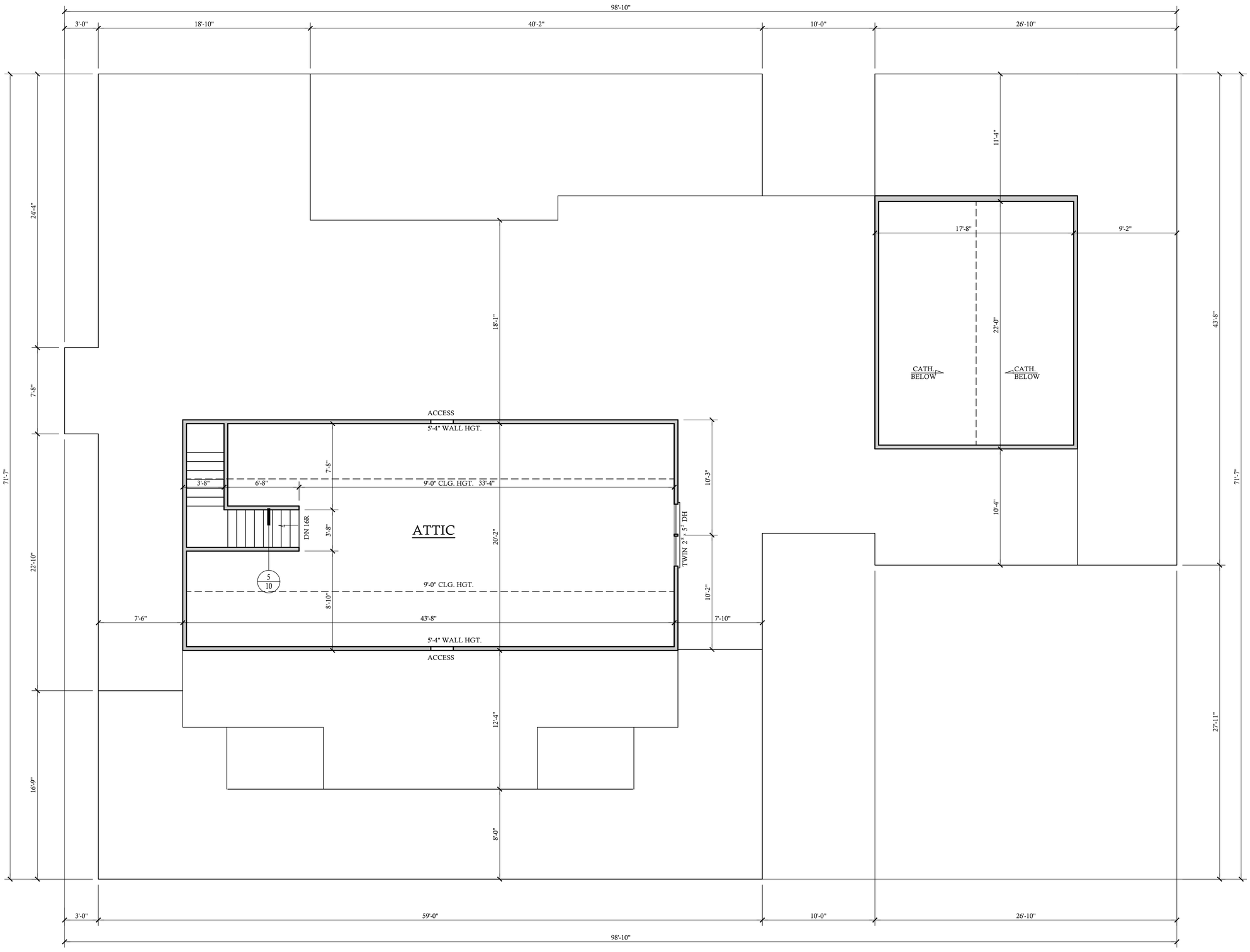
## SECOND FLOOR PLAN

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

9'-0" CLG. HGT. U.N.O.
SET WINDOWS @ 7'-8" U.N.O.




# THIRD FLOOR PLAN

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

9'-0" CLG. HGT. U.N.O.
SET WINDOWS @ 7'-8" U.N.O.

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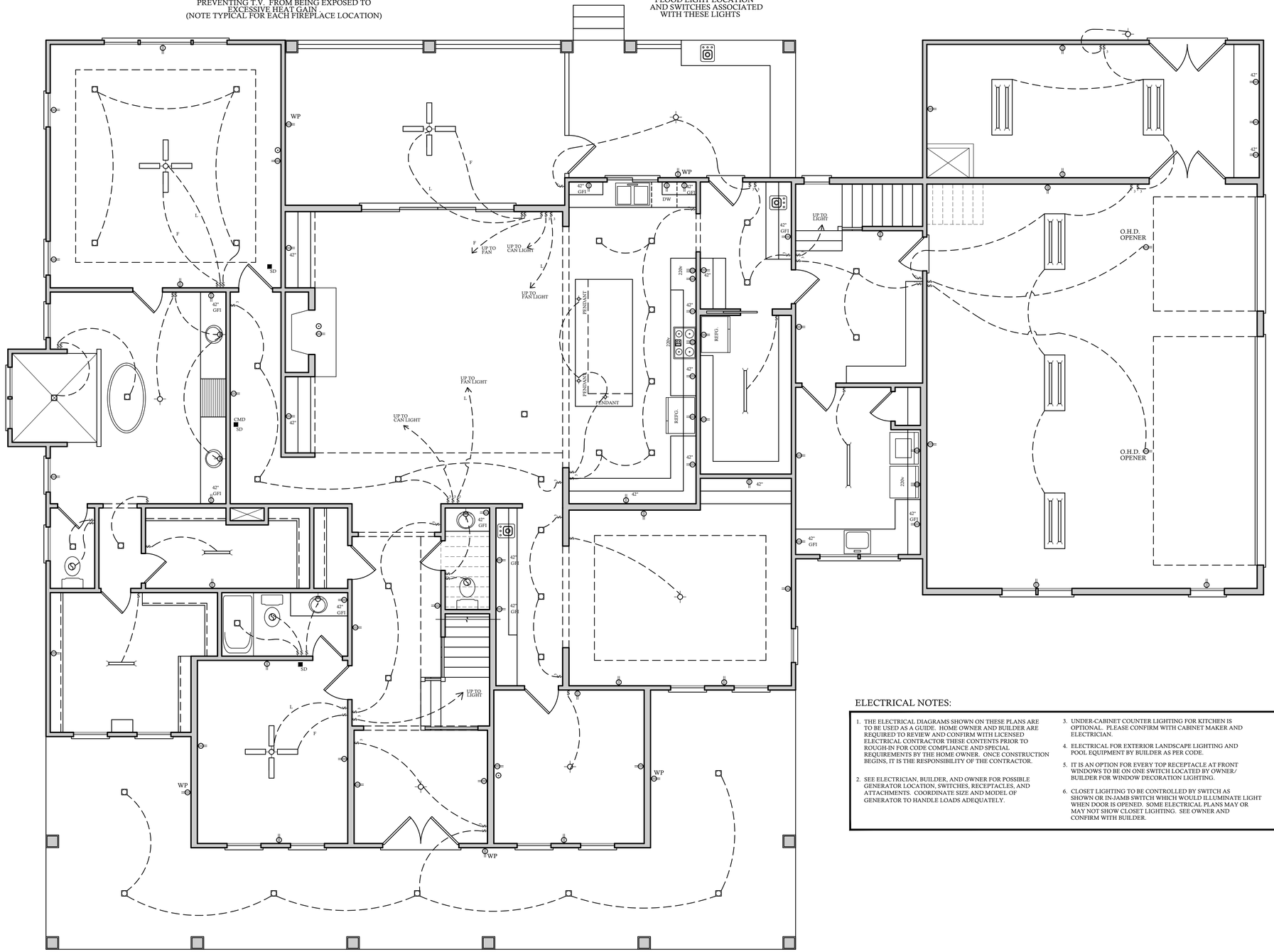
PLAN #121221-DOWDS DESIGN COLLECTION LLC

NOTE:
IF T.V. CABLE OUTLETS ARE TO BE LOCATED ABOVE A FIRE PLACE , FLAME RIBBON , ETC , CONSULT WITH BUILDER FOR APPROVED METHOD FOR PREVENTING T.V. FROM BEING EXPOSED TO EXCESSIVE HEAT GAIN
(NOTE TYPICAL FOR EACH FIREPLACE LOCATION)

NOTE:
BUILDER TO COORDINATE FLOOD LIGHT LOCATION AND SWITCHES ASSOCIATED WITH THESE LIGHTS




## ELECTRICAL LEGEND

- LIGHT FIXTURE
- FAN/LIGHT
- WP · WATERPROOF OUTLET
- RECESSED LIGHTING
- CAN LIGHT W/ FAN
- $ · SINGLE SWITCH
- $3 · 3-WAY SWITCH
- $4 · 4-WAY SWITCH
- $D · DIMMER SWITCH
- CMD / SD · CARBON MONOXIDE DETECTOR / SMOKE DETECTOR
- FLOOD LIGHTS
- EYEBALL SPOTS
- DUPLEX RECEPTACLE (110V)
- 220 VOLT RECEPTACLE
- SWITCHED RECEPTACLE (TOP WIRE ONLY)
- GFI · GROUND FAULT CIRCUIT INTERRUPTOR
- CLG FAN/LIGHTS
- TRACK LIGHTS
- FLUORESCENT/LED LIGHTING
- CABLE OUTLET
- TELEPHONE OUTLET
- COMPUTER DATA OUTLET
- INTERCOM

NOTE:
ALL ELECTRICAL INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE NEC.

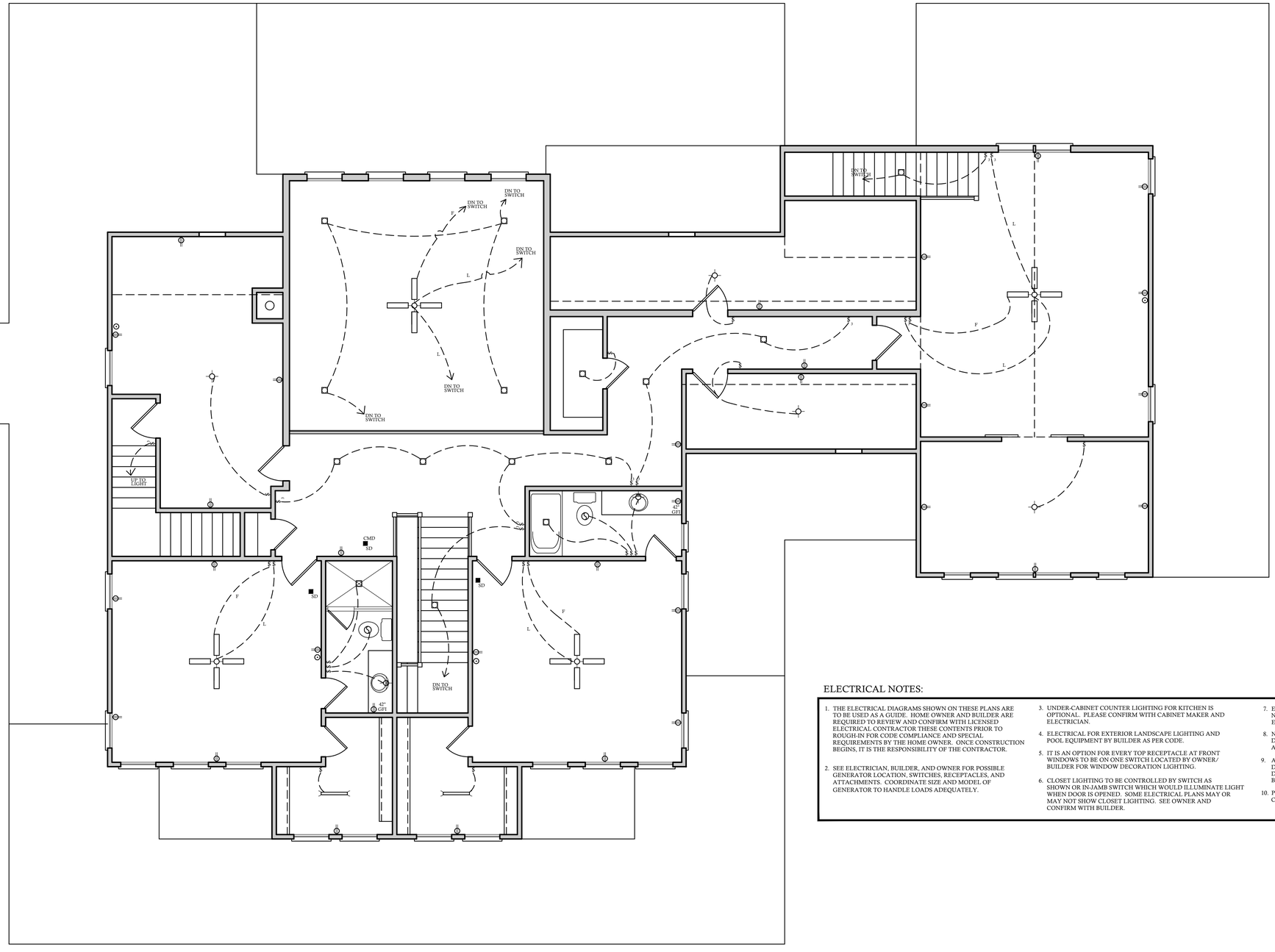
## ELECTRICAL NOTES:

1. THE ELECTRICAL DIAGRAMS SHOWN ON THESE PLANS ARE TO BE USED AS A GUIDE. HOME OWNER AND BUILDER ARE REQUIRED TO REVIEW AND CONFIRM WITH LICENSED ELECTRICAL CONTRACTOR THESE CONTENTS PRIOR TO ROUGH-IN FOR CODE COMPLIANCE AND SPECIAL REQUIREMENTS BY THE HOME OWNER. ONCE CONSTRUCTION BEGINS, IT IS THE RESPONSIBILITY OF THE CONTRACTOR.
2. SEE ELECTRICIAN, BUILDER, AND OWNER FOR POSSIBLE GENERATOR LOCATION, SWITCHES, RECEPTACLES, AND ATTACHMENTS. COORDINATE SIZE AND MODEL OF GENERATOR TO HANDLE LOADS ADEQUATELY.
3. UNDER-CABINET COUNTER LIGHTING FOR KITCHEN IS OPTIONAL. PLEASE CONFIRM WITH CABINET MAKER AND ELECTRICIAN.
4. ELECTRICAL FOR EXTERIOR LANDSCAPE LIGHTING AND POOL EQUIPMENT BY BUILDER AS PER CODE.
5. IT IS AN OPTION FOR EVERY TOP RECEPTACLE AT FRONT WINDOWS TO BE ON ONE SWITCH LOCATED BY OWNER/ BUILDER FOR WINDOW DECORATION LIGHTING.
6. CLOSET LIGHTING TO BE CONTROLLED BY SWITCH AS SHOWN OR IN-JAMB SWITCH WHICH WOULD ILLUMINATE LIGHT WHEN DOOR IS OPENED. SOME ELECTRICAL PLANS MAY OR MAY NOT SHOW CLOSET LIGHTING. SEE OWNER AND CONFIRM WITH BUILDER.
7. EXHAUST FANS ARE REQUIRED IN BATHROOMS WITHOUT NATURAL VENTILATION. OUR PLANS WILL ALWAYS SHOW EXHAUST FAN.
8. NO HEAT LAMPS OR HEATERS MAY BE SHOWN IN THIS DRAWING. PLEASE CONFIRM WITH BUILDER FOR PRESENCE AND LOCATION.
9. ALL SLEEPING AREAS/BEDROOMS SHOULD CONTAIN SMOKE DETECTORS. SOME CORRIDORS ALSO REQUIRE SMOKE DETECTORS. PLEASE SEE LOCAL, STATE, AND FEDERAL BUILDING CODES TO CONFIRM THESE REQUIREMENTS.
10. PANEL BOX LOCATION BY ELECTRICIAN/BUILDER AS PER CODE.

NOTE:
BUILDER TO COORDINATE FLOOD LIGHT LOCATION AND SWITCHES ASSOCIATED WITH THESE LIGHTS

# FIRST FLOOR ELECTRICAL PLAN

RYAN MAY RESIDENCE
PLAN #121221-DOWDS DESIGN COLLECTION LLC




## ELECTRICAL LEGEND

- LIGHT FIXTURE
- FAN/LIGHT
- WP - WATERPROOF OUTLET
- RECESSED LIGHTING
- CAN LIGHT W/ FAN
- $ - SINGLE SWITCH
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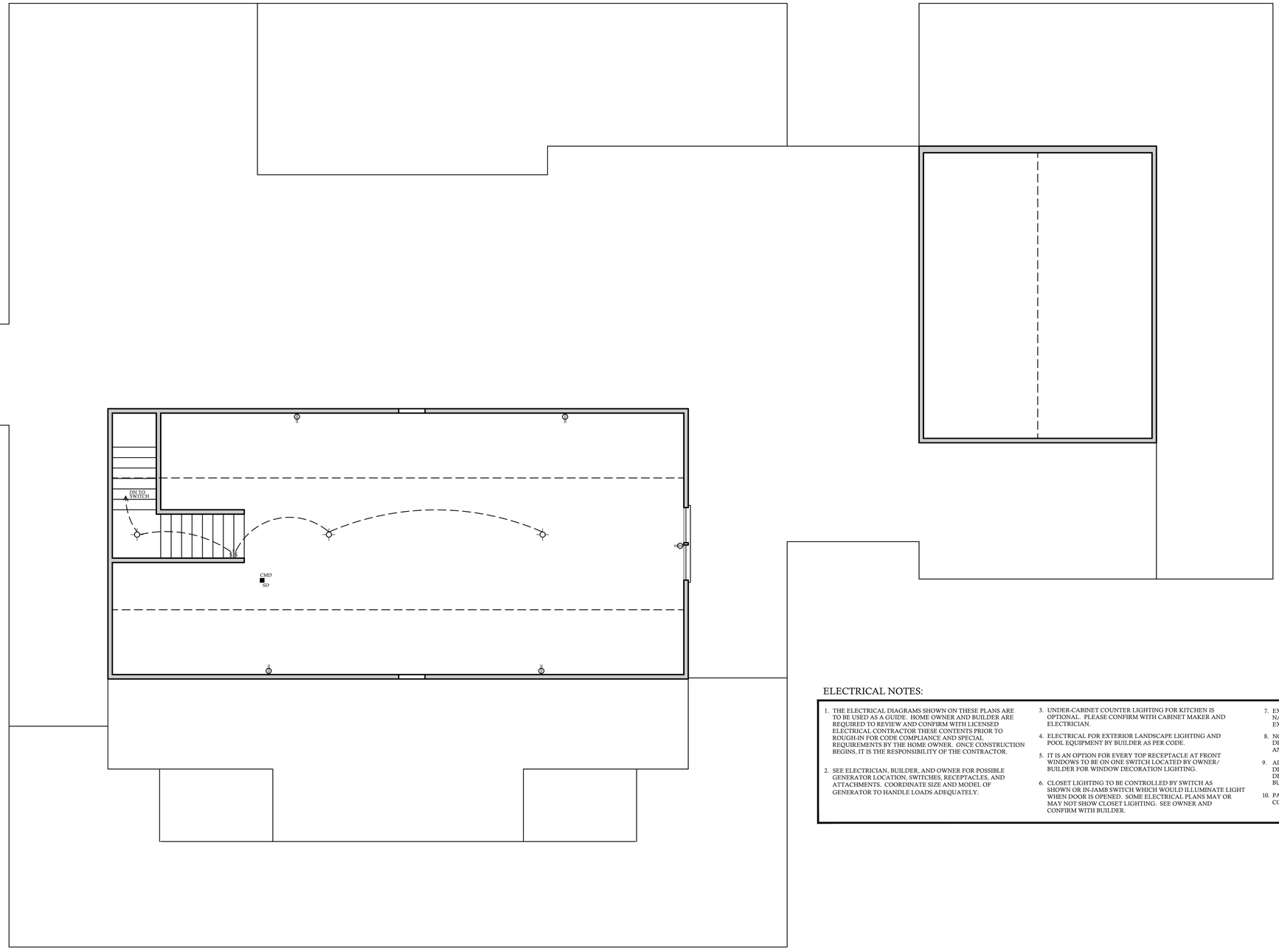
10. PANEL BOX LOCATION BY ELECTRICIAN/BUILDER AS PER CODE.

# SECOND FLOOR ELECTRICAL PLAN

RYAN MAY RESIDENCE
PLAN #121221-DOWDS DESIGN COLLECTION LLC




## ELECTRICAL LEGEND

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10. PANEL BOX LOCATION BY ELECTRICIAN/BUILDER AS PER CODE.

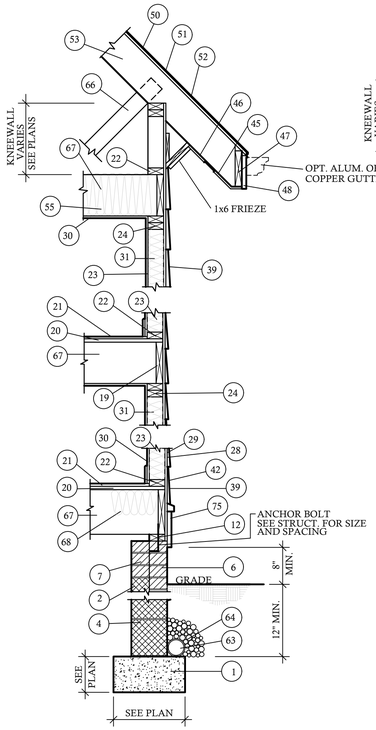
# THIRD FLOOR ELECTRICAL PLAN

RYAN MAY RESIDENCE
PLAN #121221-DOWDS DESIGN COLLECTION LLC

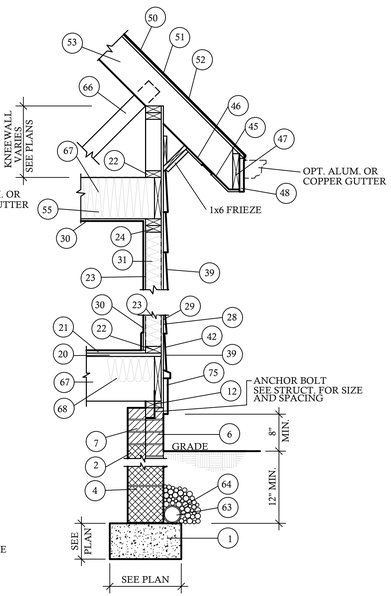
# MATERIAL REFERENCE

1. CONT. POURED CONC. FOOTING
2. 4 X 8 X 16 C.M.U.
3. 6 X 8 X 16 C.M.U.
4. 8 X 8 X 16 C.M.U.
5. 12 X 8 X 16 C.M.U.
6. BRICK
7. SOLID MASONRY CAP
8. 4" CONCRETE SLAB
9. 6 MIL VAPOR BARRIER
10. 4" STONE BASE
11. 6" X 6" 10/10 W.W.M.
12. 2 X 4 TREATED SILL PLATE
13. 2 X 6 TREATED SILL PLATE
14. 2 X 6 JOIST
15. 2 X 6 BAND
16. 2 X 8 JOIST
17. 2 X 8 BAND
18. 2 X 10 JOIST
19. 2 X 10 BAND
20. A.P.A. RATED SUB-FLOOR
21. A.P.A. RATED UNDERLAYMENT
22. 2 X 4 SOLE PLATE
23. 2 X 4 STUD WALL
24. DBL 2 X 4 TOP PLATE
25. 2 X 6 SOLE PLATE
26. 2 X 6 STUD WALL
27. DBL 2 X 6 TOP PLATE
28. EXTERIOR SHEATHING
29. SHEATHING PAPER
30. 1/2" DRY WALL
31. R-15 BATT INSULATION MIN.
32. BRICK VENEER
33. WALL TIE
34. WEEP HOLES @ 16" O.C. HORZ.
35. FLASHING AS REQ. PER CODE
36. SELF FURRING GALV METAL LATH
37. METAL BEAD
38. STUCCO PLASTER
39. SIDING AS SPECIFIED
40. TPL 2 X BLOCKING
41. WOOD FILLER
42. 1 X FRIEZE BOARD
43. NAILER
44. LOOKOUT
45. 3/8" EXT PLYWOOD SOFFIT
46. SOFFIT VENT
47. SUB FASCIA
48. 1 X FASCIA
49. METAL DRIP STRIP
50. SHINGLES AS SPECIFIED
51. 15 LB. FELT PAPER
52. A.P.A. RATED SHEATHING
53. 2 X 8 RAFTER
54. 2 X 6 RAFTER
55. R-38 BATT INSULATION MIN.
56. C.M.U. PIER
57. TREATED 2 X 6 SHIM PLATE
58. GIRDER SIZE PER PLAN
59. 2 X 2 LEDGER BOARD
60. 1/2" EXPANSION JOINT
61. 1 1/2" RIGID INSULATION (R 5.0 MIN)
62. WATERPROOFING
63. 4" PERFORATED DRAIN TILE (SLOPE TO DRAIN)
64. CRUSHED STONE W/ INFILTRATION BARRIER ABOVE
65. CONC. WASH
66. 2 X 4 RAFTER TIE BACKS PER ENG SPECS. AT MIN EVERY THIRD RAFTER
67. SEE STRUCTURAL SHEETS FOR JOIST DIRECTION & SIZES
68. R-19 BATT INSULATION (MIN.)
69. POURED CONC. FND. WALL
70. OPT. TRIM SEE BLDR.
71. STONE VENEER
72. TRUSSES PER MANUFACTURER
73. STUCCO DRIP CAP
74. STUCCO ON CMU OR CONCRETE WALL
75. BAND W/ DRIP CAP
76. SOFFIT BED MOLD TRIM
77. 2 X 8 TREATED SILL PLATE
78. 2 X 12 JOIST
79. 2 X 12 BAND
80. 66 MIL. OF THRU WALL FLASHING

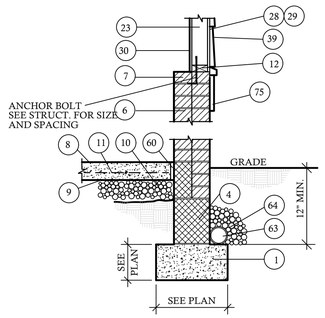
BRICK
CONC. MASONRY UNIT
CONCRETE
STEEL
EARTH
BATT INSULATION
RIGID INSULATION
STUCCO
WOOD
STONE
GRAVEL BED
WELDED WIRE MESH
DETAIL NUMBER / SHEET NUMBER
INT ELEV LETTER
INT ELEV NUMBER / SHEET NUMBER
SECTION NUMBER / SHEET NUMBER
ROOF PITCH RATIO (12 / #)
ROOM NUMBER (101)



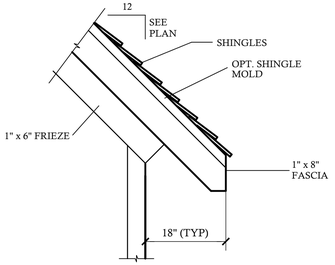

1 TWO STORY WALL W/ SIDING @ 3/4"=1'-0"
DESIGNED FOR 115 MPH WINDS



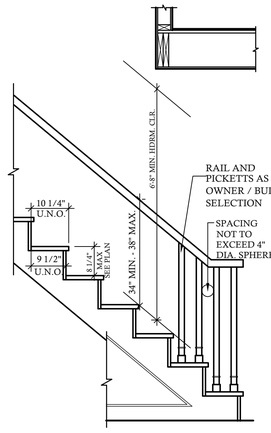

2 ONE STORY WALL W/ SIDING @ 3/4"=1'-0"
DESIGNED FOR 115 MPH WINDS



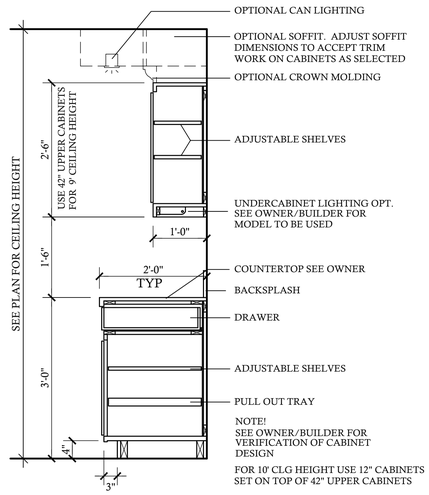

3 GARAGE WALL W/ SIDING @ 3/4"=1'-0"
DESIGNED FOR 115 MPH



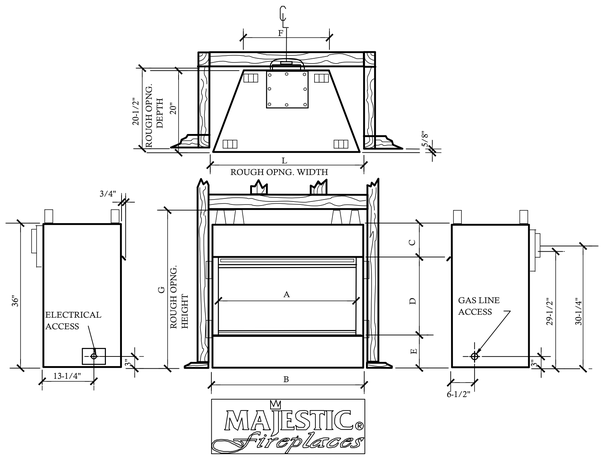

4 BOXING DETAIL @ 3/4"=1'-0"




5 TYP. STAIR DETAIL @ 3/4"=1'-0"




6 TYP. KITCHEN CABINET SECTION @ 3/4"=1'-0"




MAJESTIC® Fireplaces

HISTYLE REAR VENT
DVBR36

7 DIRECT VENT FIREPLACE NTS

| FIREPLACE DIMENSIONS | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | J | K | L | M |
| DVBR36 | 36" | 40" | 6-3/8" | 23-1/4" | 6-3/8" | 22" | 40-1/2" | 45-3/4" | 45-3/4" | 64-3/4" | 41" | 32-3/8" |
| DVBR42 | 42" | 46" | 6-3/8" | 23-1/4" | 5-3/8" | 28" | 40-1/2" | 49" | 49" | 69-1/2" | 47" | 35-1/4" |

NOTE - VERIFY W/ MANUF. UNIT MODEL NO. & DIMENSIONS REQUIRED FOR FRAMING AROUND FIREPLACE UNIT PRIOR TO CONSTRUCTION

# FOUNDATION VENT CALCS.

3178 SQ. FT. / 1500 = 2.12 MINIMUM NET AREA OF VENTILATION OPENING REQ'D

2.12 SQ. FT. / .56 = 4 VENTS REQUIRED - (11) VENTS PROVIDED

NOTE: FIGURE BASED ON SECTION R-408.1.1 OF THE 2018 NCRC.

NOTE: FND VENT SPEC'S BASED ON PUSH/PULL POLYPROPYLENE FND. VENT THAT ALLOWS 72 SQ. IN. OF NET FREE AREA PER VENT.

NOTE: ONE VENTILATION OPENING SHALL BE WITHIN 3 FEET OF EACH CORNER OF THE BUILDING PER R-408.1.2 2018 NCRC . THE REMAINING VENTS LOCATED TO PROVIDE CROSS VENTILATION OF THE CRAWL SPACE .

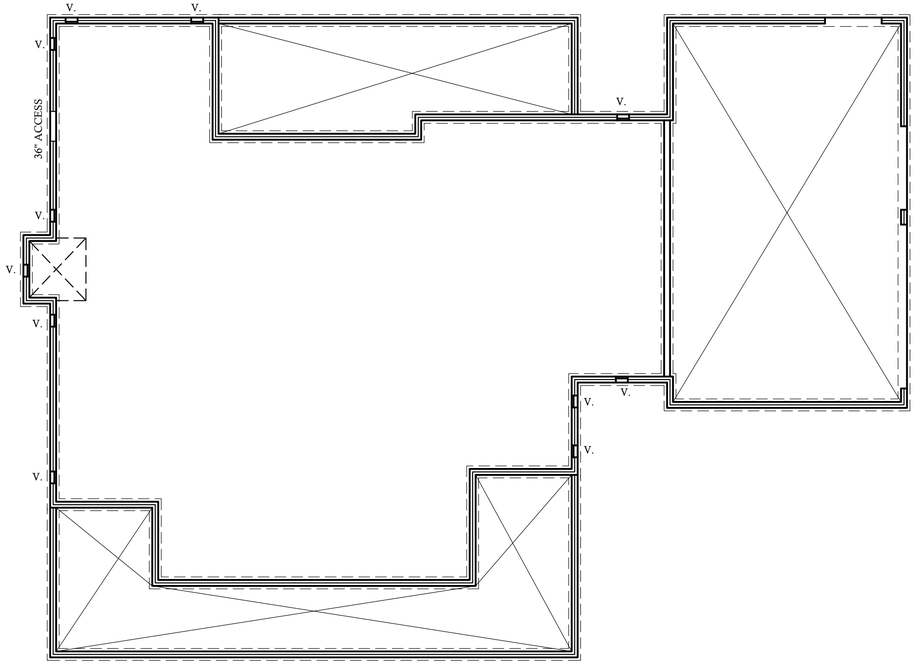
EXCEPTIONS:

1. QUANTITY OF VENTS CAN BE REDUCED .

WHEN AN APPROVED VAPOR RETARDER MATERIAL IS USED IN ACCORDANCE WITH SECTION 408.2 OF THE 2018 NCRC . THE MINIMUM NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 SQUARE FOOT FOR EACH 1500 SQUARE FEET OF UNDER FLOOR SPACE AREA. ONE VENTILATION OPENING SHALL BE WITHIN 3 FEET OF EACH CORNER OF THE BUILDING PER R-408.1.2 2018 NCRC . THE REMAINING VENTS LOCATED TO PROVIDE CROSS VENTILATION OF THE CRAWL SPACE .

2. FOUNDATION VENTS CAN BE ELIMINATED

IF CONDITIONS ARE MET AS PER SECTION R409 2018 NCRC




# FOUNDATION VENT PLAN

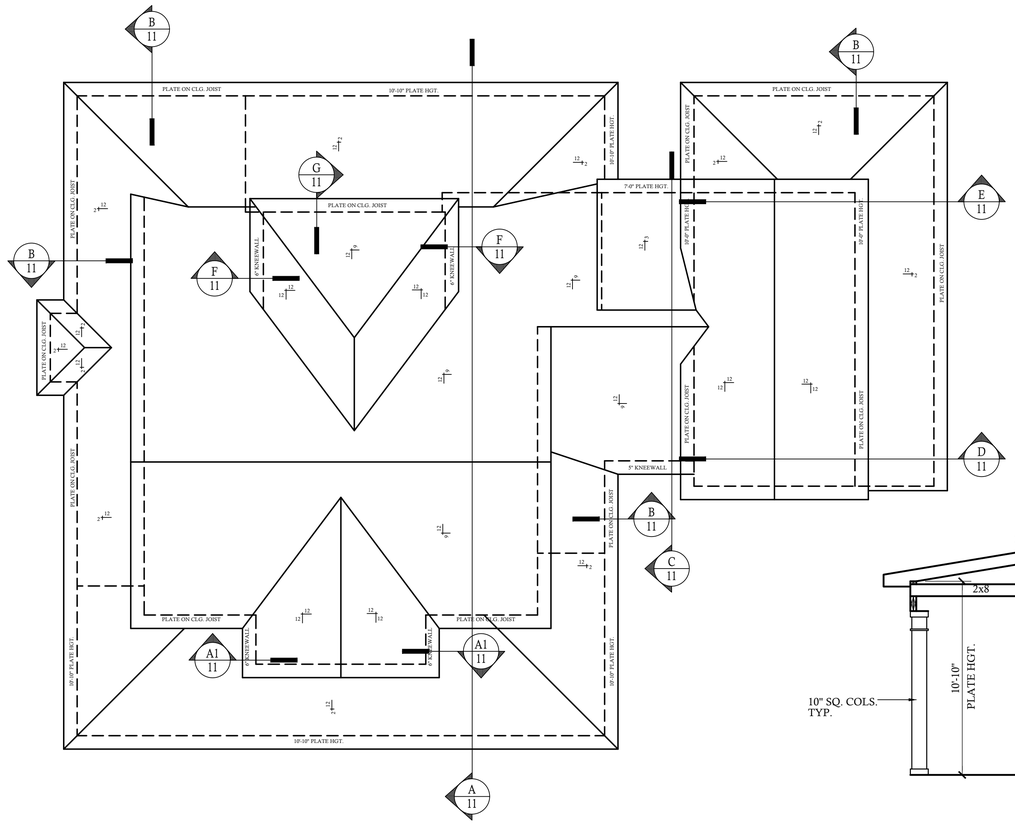
SCALE: 1/8"=1'-0"

-VENT LOCATIONS ARE TO BE VERIFIED PRIOR TO CONSTRUCTION W/ BUILDER BASED ON SECTION R-408 IN THE 2018 NCRC.

-CRAWL SPACE TO HAVE A MIN. OF 24" OF CLEAR SPACE ABOVE GRADE.

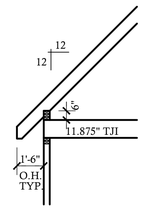
-A MIN. OF 36" OF CLEAR SPACE ABOVE GRADE IS NEEDED WHEN HVAC UNIT IS LOCATED IN CRAWL, PROVIDE A CLEAR PATH FROM ACCESS TO THE HVAC UNIT.

RYAN MAY RESIDENCE
PLAN #121221-DOWDS DESIGN COLLECTION LLC




## ROOF FRAMING PLAN

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




A1 BUILDING SECTION
1/4"=1'-0"

## ROOF VENTILATING REQUIREMENTS

SQ.FT. OF AREA VENTILATED $\frac{5718}{150}$ (144) = $\frac{5489.28}{}$ TOTAL SQ. IN. OF ATTIC VENTILATION REQ'D

NOTE: FIGURE BASED ON SECTION R-806.2 OF THE 2018 NCRC .

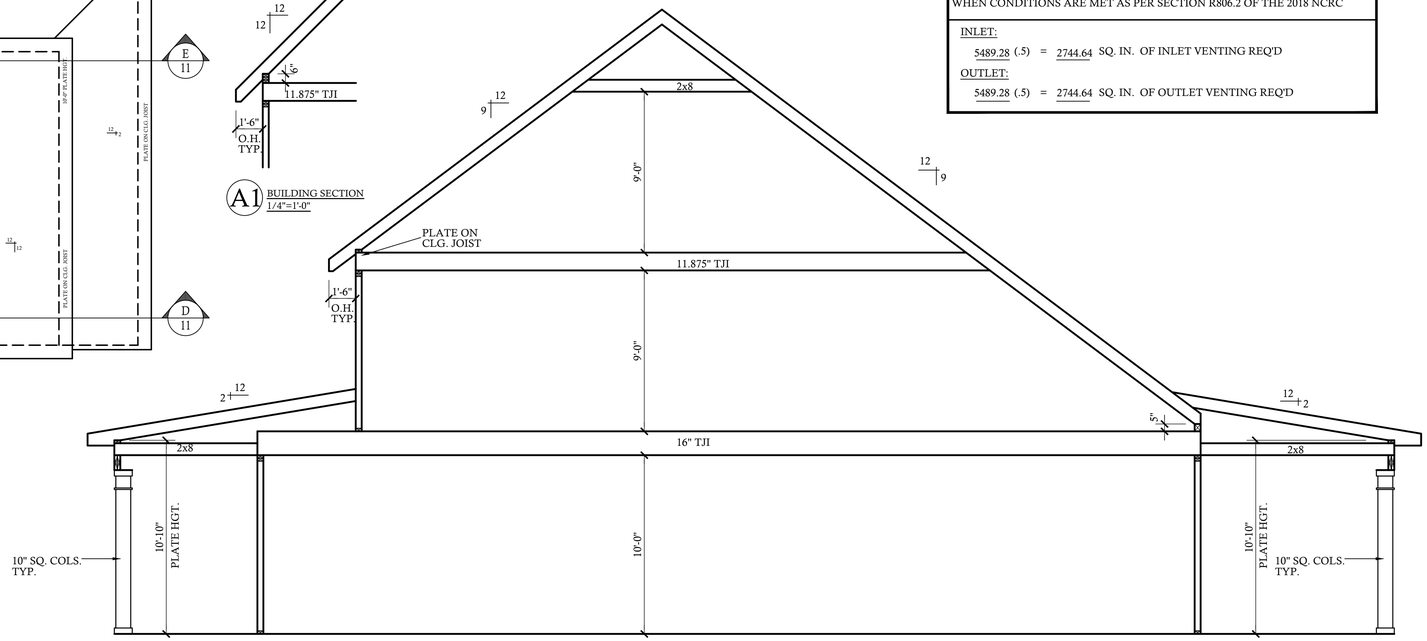
MINIMUM NET FREE VENTILATING AREA IS PERMITTED TO BE REDUCED TO 1 TO 300 WHEN CONDITIONS ARE MET AS PER SECTION R806.2 OF THE 2018 NCRC

INLET:

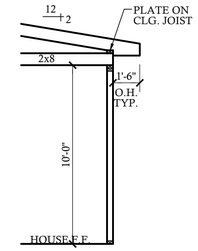
5489.28 (.5) = 2744.64 SQ. IN. OF INLET VENTING REQ'D

OUTLET:

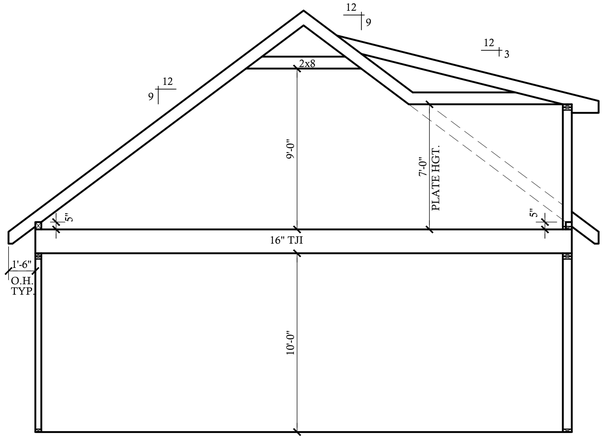
5489.28 (.5) = 2744.64 SQ. IN. OF OUTLET VENTING REQ'D



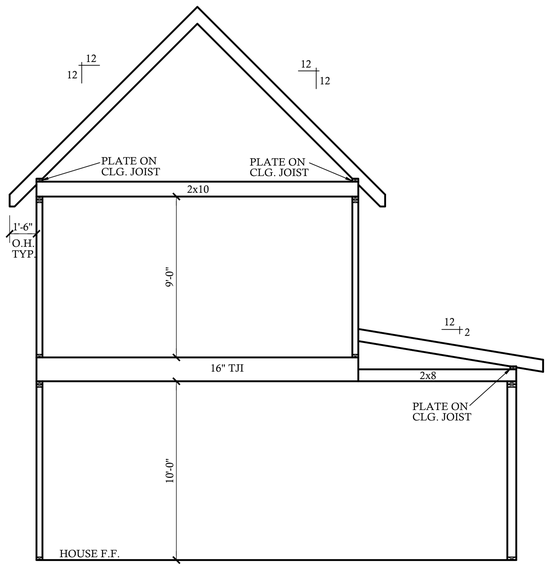

A BUILDING SECTION SCALE : 1/4"=1'-0"



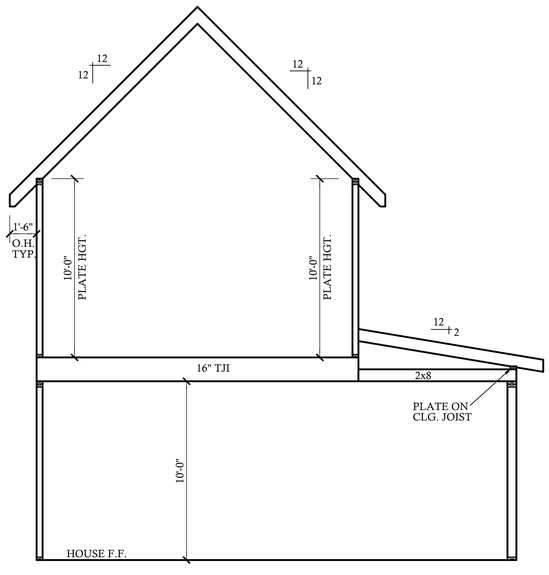

B BUILDING SECTION SCALE : 1/4"=1'-0"



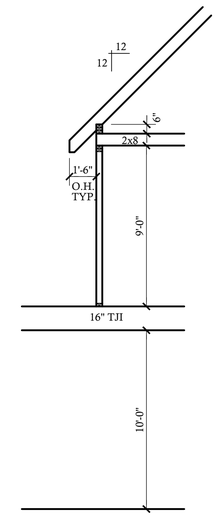

C BUILDING SECTION SCALE : 1/4"=1'-0"



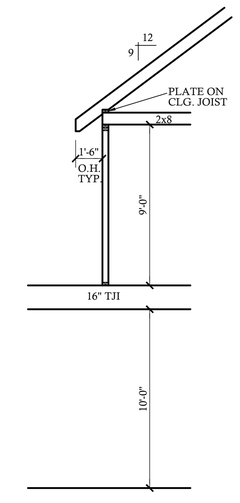

D BUILDING SECTION SCALE : 1/4"=1'-0"




E BUILDING SECTION SCALE : 1/4"=1'-0"




F BUILDING SECTION SCALE : 1/4"=1'-0"




G BUILDING SECTION SCALE : 1/4"=1'-0"

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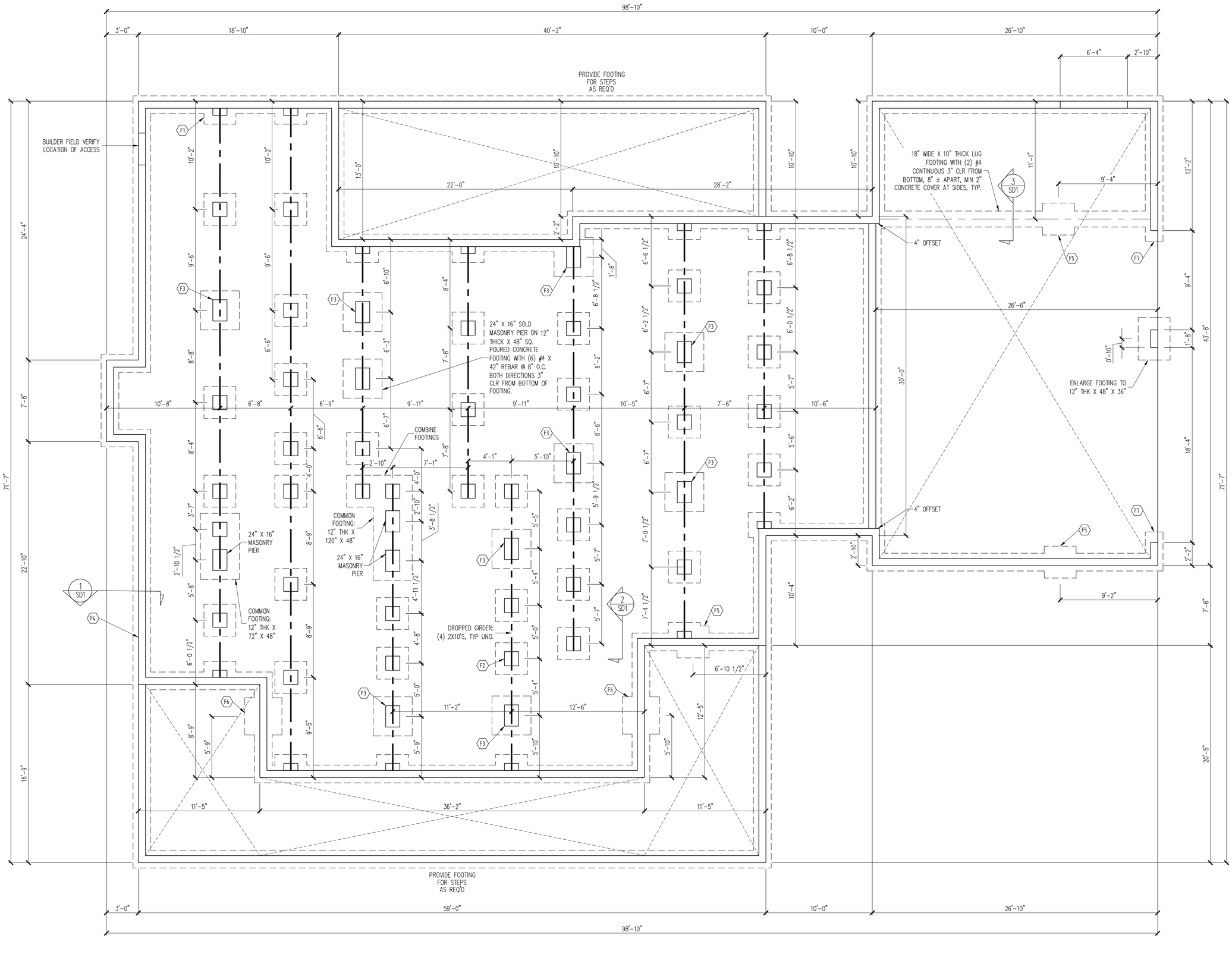
PLAN #121221-DOWDS DESIGN COLLECTION LLC




## CONSTRUCTION SPECIFICATIONS

INSTANT REFERENCES

REFER TO THE CONSTRUCTION SPECIFICATIONS SECTIONS FOR THE FOLLOWING INFORMATION:

PART 1.01: CURRENT GOVERNING CODE

PART 14: STUD SUPPORT FOR BEAMS

PART 16.02: GENERAL WALL BRACING NOTES

PART 17: KING STUDS FOR EXTERIOR WALLS

SEE DETAIL / CONSTRUCTION SPECIFICATIONS SHEETS FOR I-JOISTS ALLOWABLE SUBSTITUTIONS

## FOUNDATION SCHEDULE

F1 8" X 16" CMU PILASTER, PROJECT FOOTING 8" X 10" THICK, TYP UNO.

F2 16" SQ. MASONRY PIER ON A 36" SQ. X 10" THICK CONC FTG TYP UNO.

F3 16" X 24" MASONRY PIER ON A 48" SQ. X 10" THICK CONC FTG.

F4 8" THICK MASONRY FND WALL ON A 18" X 10" THICK CONT POUR CONC FTG TYP AT WALLS WITHOUT BRICK VENEER

F5 ENLARGE FOOTING TO 36" SQ. X 12" THICK

F6 ENLARGE FOOTING TO 42" SQ. X 12" THICK

F7 PROJECT FOOTING 12" X 12" THICK AT GARAGE OPENING

F8 FLUSH PIER; FOUNDATION WALL HEIGHT

NOTES:
- HEIGHT AND BACKFILL LIMITATIONS FOR FOUNDATION WALLS ARE TO BE GOVERNED BY THE NCSBC, LATEST EDITION.
- 14" SQ POURED CONC PIERS OR 16" ø POURED CONC PIERS MAY BE USED IN LIEU OF 16" SQ MASONRY PIERS.

# FOUNDATION PLAN

1/4" = 1'-0"


Engineering Tech ASSOCIATES, P.A.
STRUCTURAL ENGINEERS
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318 W Millbrook Rd. Unit 201
Raleigh, North Carolina 27609
Phone (919) 844-1661


HARRY T. BRUCE SEAL 054410 PROFESSIONAL ENGINEER TYLER R. BRUCE

SCOPE: STATEMENT CUSTOM HOMES
STRUCTURAL ADDENDUM

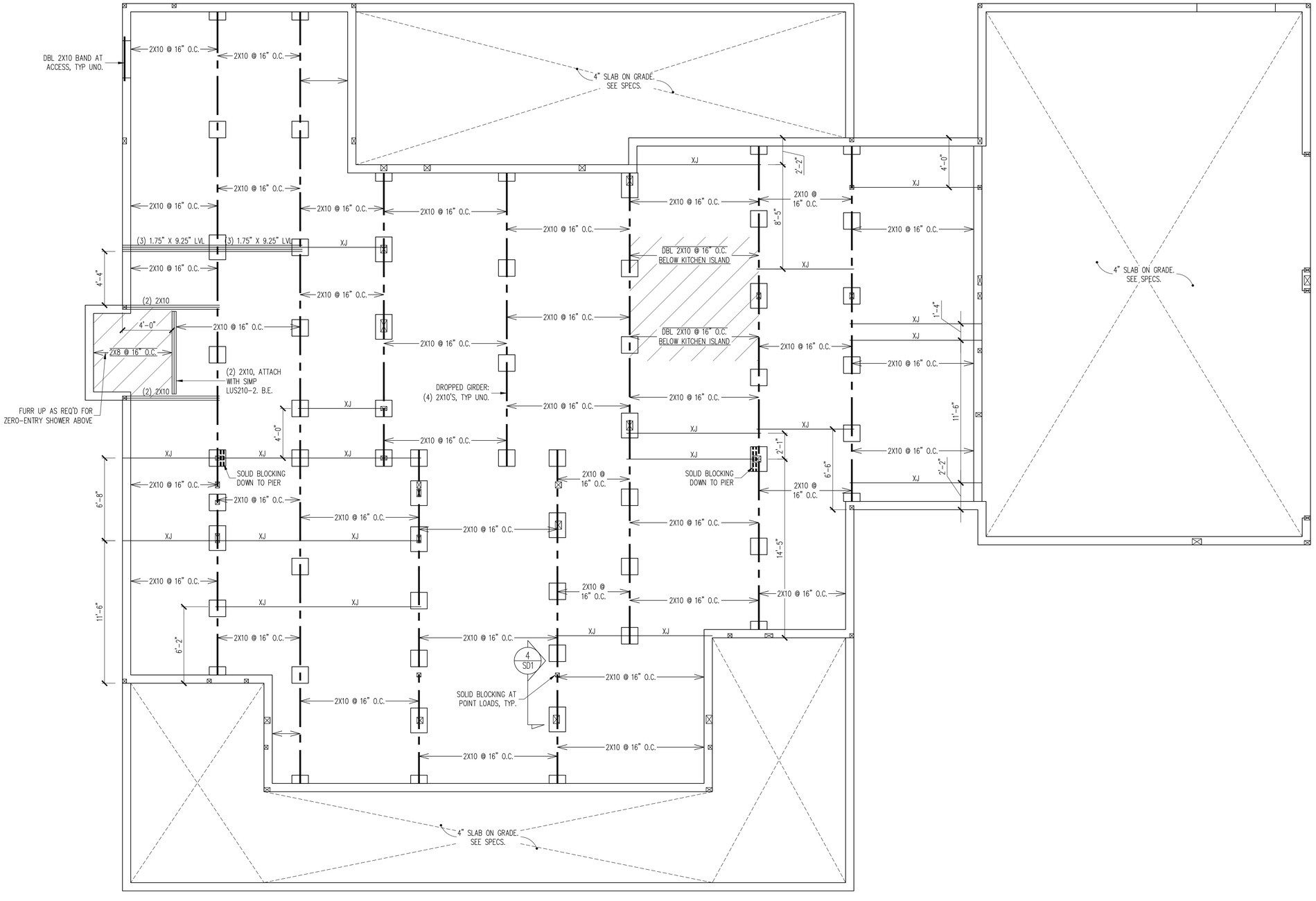
LOC: EBENEZER CHURCH RD
PRIVATE LOT

| REV # | REF PROJ # | DATE |
|---|---|---|
| | | |

ENG: TRB
DATE: 2/16/2023

PROJECT NO.
23-15-005

SHEET NO.
S1
1 of 8




CRAWL SPACE FRAMING PLAN

1/4" = 1'-0"


NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 054410 TYLER R. BLACK
Engineering Tech ASSOCIATES, P.A.
STRUCTURAL ENGINEERS
License No. C-3870
318 W Millbrook Rd. Unit 201
Raleigh, North Carolina 27609
Phone (919) 844-1661


STATEMENT CUSTOM HOMES

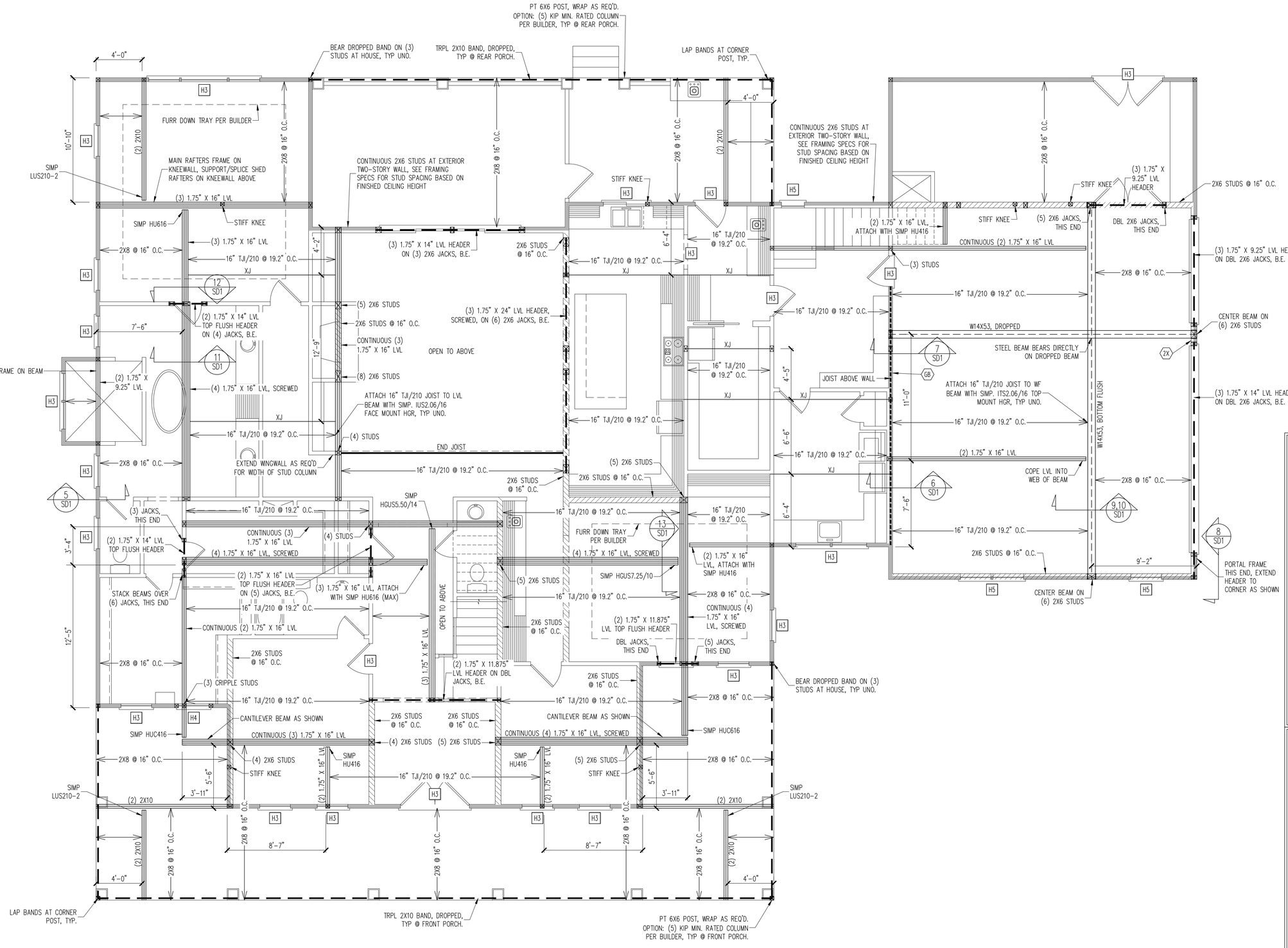
| SCOPE: | STRUCTURAL ADDENDUM | REV # | REF PROJ # | DATE |
|---|---|---|---|---|
| LOC: | EBENEZER CHURCH RD PRIVATE LOT | | | |

ENG: TRB

DATE: 2/16/2023

PROJECT NO.
23-15-005

SHEET NO.
S2




## WALL BRACING

FIRST FLOOR ONLY

CS – ALL EXTERIOR STUD WALLS, EXTERIOR SIDE, ARE TO BE CONTINUOUSLY SHEATHED WITH 7/16 APA RATED OSB NAILED TO STUDS WITH 8d NAILS @ 6" O.C. AT PANEL EDGES, 12" O.C. IN PANEL FIELD.

SHADED WALLS:

WSP ONE SIDE OF INTERIOR WALL OR INSIDE OF EXTERIOR WALL WITH 3/8" MIN. THICKNESS WOOD STRUCTURAL PANELING. ATTACH WSP TO STUD WALL WITH 8d NAILS @ 4" O.C. AT PANEL EDGES, 8" O.C. IN PANEL FIELD.

GB INTERIOR BRACED WALL. 1/2" GB SECURED PER TABLE R602.10.2 OF THE 2012 NCRBC. (FASTENERS @ 7" O.C.) BOTH SIDES OF WALL, OR (FASTENERS @ 4" O.C.) ONE SIDE OF WALL AT STAIRS

2X – SHEATH BOTH SIDES OF STUD WALL WITH 7/16 APA RATED OSB, NAILED TO STUDS WITH 8d NAILS @ 6" O.C. AT PANEL EDGES, 12" O.C. IN PANEL FIELD.

NOTES:
–PROVIDED CONTINUOUS SHEATHING = 357' MIN.

## HEADER SCHEDULE

H1 SINGLE 2X4 TURNED FLAT (A)

H2 (2) 2X4'S ON SINGLE JACKS (B)

H3 (2) 2X10'S ON SINGLE JACKS (C)

H4 (2) 1.75" X 9.25" LVL'S ON DBL JACKS

H5 (3) 2X10'S ON SINGLE JACKS

(A) TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPENING 38" MAX.

(B) TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPNG 38" TO 74" MAX.

(C) TYPICAL FOR ALL CONDITIONS NOT LISTED IN (A) OR (B) UNO.

NOTES:
–HEADERS IN NON LOAD BEARING INTERIOR WALLS ARE NOT LABELED.

# 1ST FLOOR FRAMING PLAN

WALLS AND CEILING 1/4" = 1'-0"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Phone (919) 844-1661


CAROLINA H. TYLER SEAL 054410 ENGINEER TYLER R. WOOTTEN

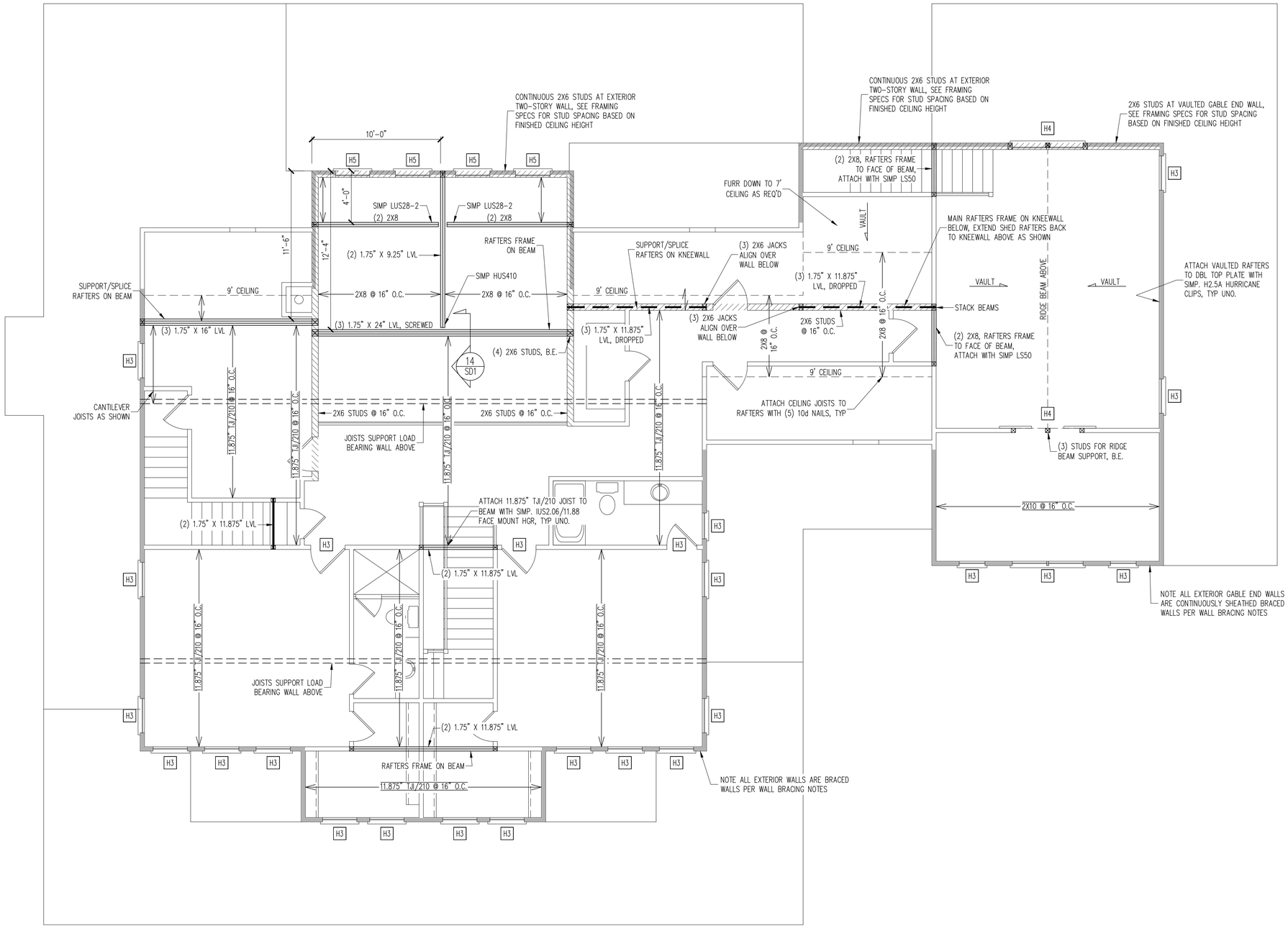
SCOPE: STATEMENT CUSTOM HOMES
STRUCTURAL ADDENDUM
LOC: EBENEZER CHURCH RD
PRIVATE LOT

| REV # | REF PROJ # | DATE |
|---|---|---|
| | | |

ENG: TRB
DATE: 2/16/2023

PROJECT NO.
23-15-005

SHEET NO.
S3
3 of 8




## WALL BRACING

SECOND FLOOR ONLY

CS – ALL EXTERIOR STUD WALLS, EXTERIOR SIDE, ARE TO BE CONTINUOUSLY SHEATHED WITH 7/16 APA RATED OSB NAILED TO STUDS WITH 8d NAILS @ 6" O.C. AT PANEL EDGES, 12" O.C. IN PANEL FIELD.

SHADED WALLS:

NOTES:
–PROVIDED CONTINUOUS SHEATHING = 248' MIN.

## HEADER SCHEDULE

H1 SINGLE 2X4 TURNED FLAT (A)

H2 (2) 2X4'S ON SINGLE JACKS (B)

H3 (2) 2X10'S ON SINGLE JACKS (C)

H4 (2) 1.75" X 9.25" LVL'S ON DBL JACKS

H5 (3) 2X10'S ON SINGLE JACKS

(A) TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPENING 38" MAX.

(B) TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPNG 38" TO 74" MAX.

(C) TYPICAL FOR ALL CONDITIONS NOT LISTED IN (A) OR (B) UNO.

NOTES:
–HEADERS IN NON LOAD BEARING INTERIOR WALLS ARE NOT LABELED.

# 2ND FLOOR FRAMING PLAN

WALLS AND CEILING 1/4" = 1'-0"


NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 054410 TYLER R. BLOCK
Engineering Tech ASSOCIATES, P.A.
STRUCTURAL ENGINEERS
License No. C-3870
318 W Millbrook Rd. Unit 201 Raleigh, North Carolina 27609
Phone (919) 844-1661


STATEMENT CUSTOM HOMES

SCOPE: STRUCTURAL ADDENDUM

LOC: EBENEZER CHURCH RD PRIVATE LOT

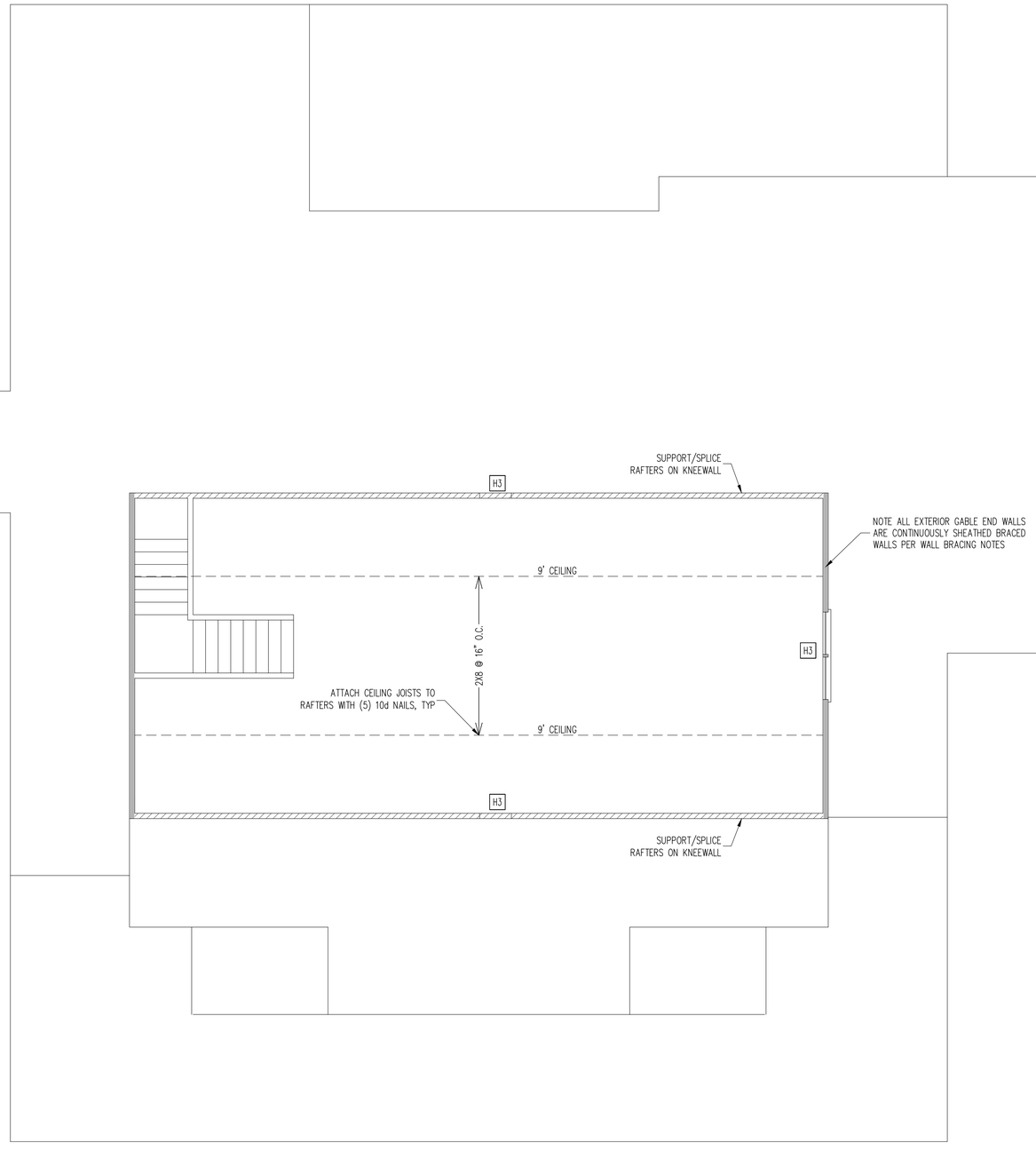
| REV # | REF PROJ # | DATE |
|---|---|---|
| | | |

ENG: TRB

DATE: 2/16/2023

PROJECT NO. 23-15-005

SHEET NO. S4




## WALL BRACING

ATTIC ONLY

CS – ALL EXTERIOR STUD WALLS, EXTERIOR SIDE, ARE TO BE CONTINUOUSLY SHEATHED WITH 7/16 APA RATED OSB NAILED TO STUDS WITH 8d NAILS @ 6" O.C. AT PANEL EDGES, 12" O.C. IN PANEL FIELD.

SHADED WALLS:

NOTES:
–PROVIDED CONTINUOUS SHEATHING = 42' MIN.

## HEADER SCHEDULE

H1 SINGLE 2X4 TURNED FLAT (A)

H2 (2) 2X4'S ON SINGLE JACKS (B)

H3 (2) 2X10'S ON SINGLE JACKS (C)

H4 (2) 1.75" X 9.25" LVL'S ON DBL JACKS

H5 (3) 2X10'S ON SINGLE JACKS

(A) TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPENING 38" MAX.

(B) TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPNG 38" TO 74" MAX.

(C) TYPICAL FOR ALL CONDITIONS NOT LISTED IN (A) OR (B) UNO.

NOTES:
–HEADERS IN NON LOAD BEARING INTERIOR WALLS ARE NOT LABELED.

# ATTIC FRAMING PLAN

WALLS AND CEILING 1/4" = 1'-0"


NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 054410 TYLER R. BLOCK 2/16/2023

Engineering Lech ASSOCIATES, P.A.
STRUCTURAL ENGINEERS
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318 W Millbrook Rd. Unit 201
Raleigh, North Carolina 27609
Phone (919) 844-1661


STATEMENT CUSTOM HOMES

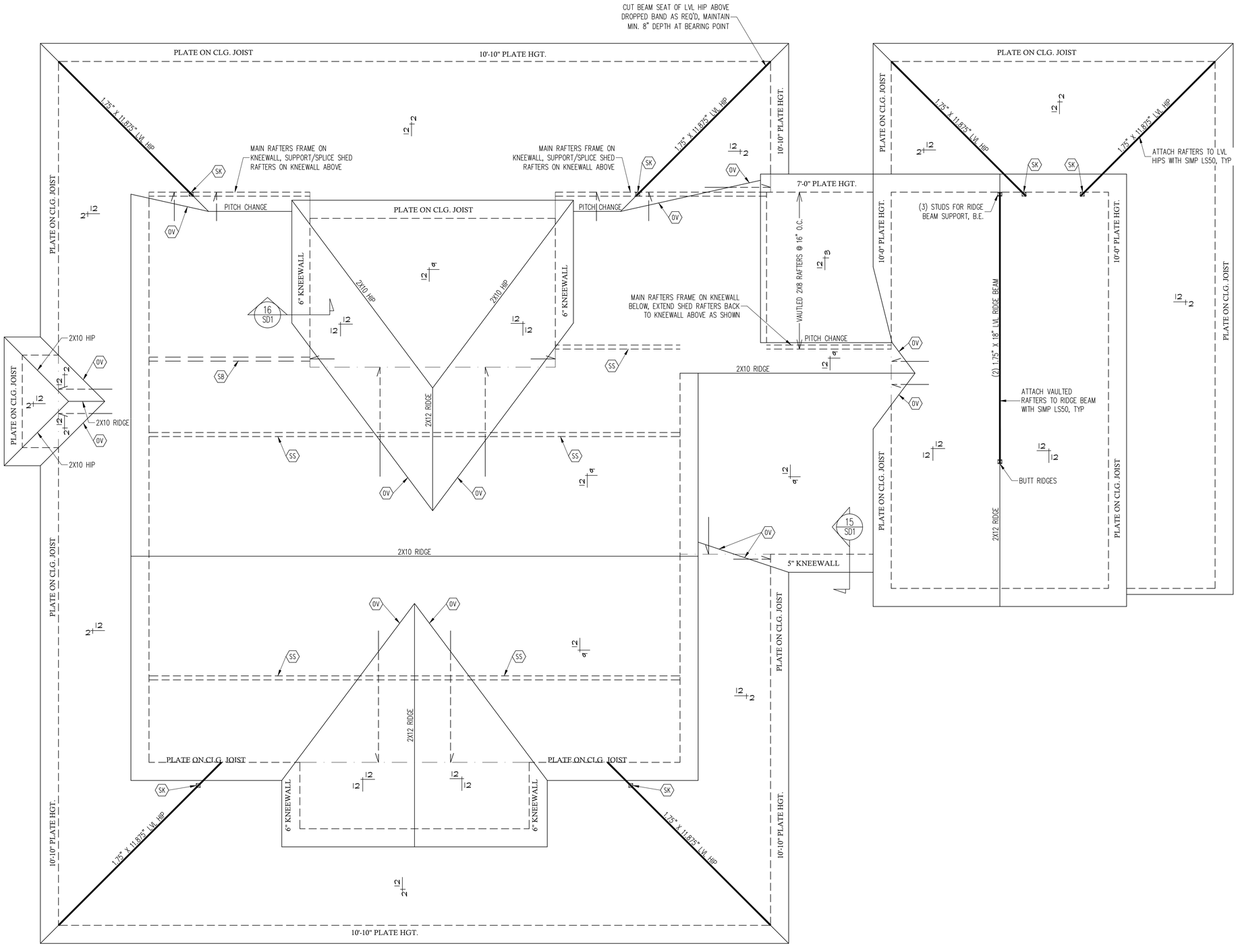
| SCOPE: | LOC: |
|---|---|
| STRUCTURAL ADDENDUM | EBENEZER CHURCH RD |
| | PRIVATE LOT |

| REV # | REF PROJ # | DATE |
|---|---|---|
| | | |

ENG: TRB
DATE: 2/16/2023

PROJECT NO.
23-15-005

SHEET NO.
S5
5 of 8




## FRAMING NOTES

ROOF ONLY

- COMMON RAFTERS 2X8 @ 16" O.C. TYP U.N.O.
- COLLAR TIES 2X4 EVERY 3RD SET OF RAFTERS TYP U.N.O.
- VERIFY ROOF PITCHES, OVERHANG LENGTHS, AND KNEEWALL FRAMING HGTS WITH ARCHITECTURAL DRAWINGS, TYPICAL.

## FRAMING SCHEDULE

ROOF ONLY

| | |
|---|---|
| OV | OVERFRAME VALLEY ( 2X10 SLEEPER ) |
| SS | SUPPORT/SPLICE RAFTERS ON KNEEWALL BELOW |
| SB | SUPPORT/SPLICE RAFTERS ON BEAM BELOW |
| DR | DOUBLE RAFTER |
| SK | DBL 2X4 STIFF KNEE |

# ROOF FRAMING PLAN

1/4" = 1'-0"


CAROL LYNN TYLER
NORTH CAROLINA
SEAL
054410
ENGINEER
TYLER, R.
Engineering Tech ASSOCIATES, P.A.
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Raleigh, North Carolina 27609
Phone (919) 844-1661

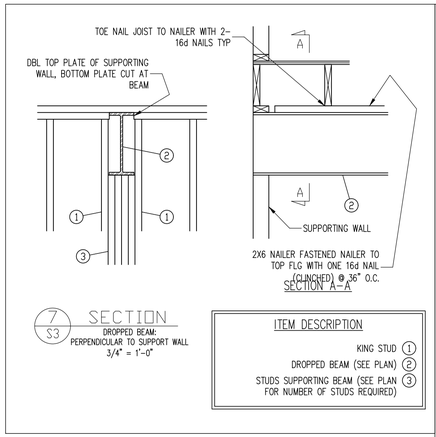

STATEMENT CUSTOM HOMES
STRUCTURAL ADDENDUM
SCOPE:
LOC: EBENEZER CHURCH RD
PRIVATE LOT

| REV # | REF PROJ # | DATE |
|---|---|---|
| | | |

ENG: TRB
DATE: 2/16/2023

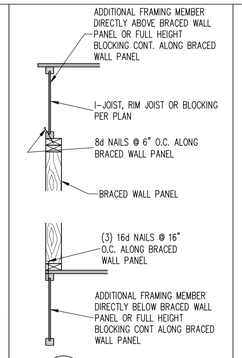
PROJECT NO.
23-15-005

SHEET NO.
S6
6 of 8

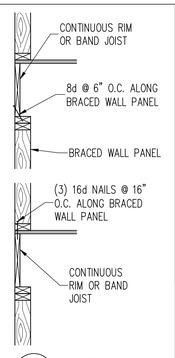



7 S3 SECTION
DROPPED BEAM: PERPENDICULAR TO SUPPORT WALL
3/4" = 1'-0"

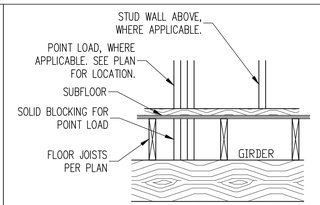
| ITEM | DESCRIPTION |
|---|---|
| | KING STUD (1) |
| | DROPPED BEAM (SEE PLAN) (2) |
| | STUDS SUPPORTING BEAM (SEE PLAN FOR NUMBER OF STUDS REQUIRED) (3) |




6 S3 SECTION
TYPICAL BRACED WALL PANEL CONNECTION AT INTERIOR WALL, JOISTS PERPENDICULAR OR PARALLEL.
3/4" = 1'-0"

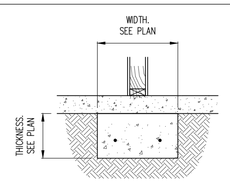



5 S3 SECTION
TYPICAL BRACED WALL PANEL CONNECTION AT EXTERIOR WALL, JOISTS PERPENDICULAR OR PARALLEL.
3/4" = 1'-0"

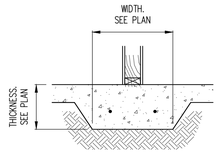



4 S2 SECTION
TYPICAL DROPPED GIRDER
3/4" = 1'-0"

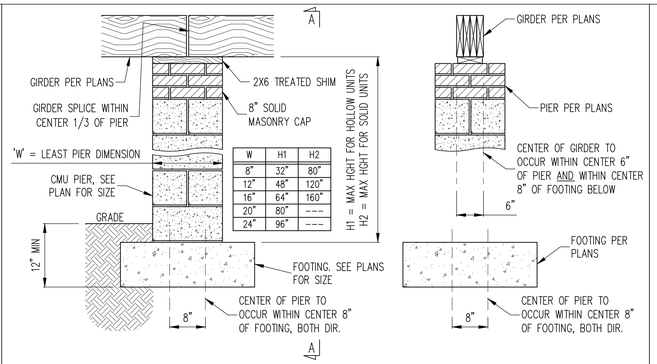

10 S3 SECTION
BEAM CONNECTION LVL TO WF, TYP.
3/4" = 1'-0"




3 S1 SECTION
LUG FOOTING, COLD JOINT OPTION
3/4" = 1'-0"




3 S1 SECTION
LUG FOOTING, MONOLITHIC OPTION
3/4" = 1'-0"

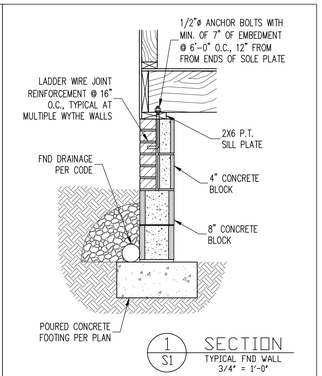



| W | H1 | H2 |
|---|---|---|
| 8" | 32" | 80" |
| 12" | 48" | 120" |
| 16" | 64" | 160" |
| 20" | 80" | --- |
| 24" | 96" | --- |

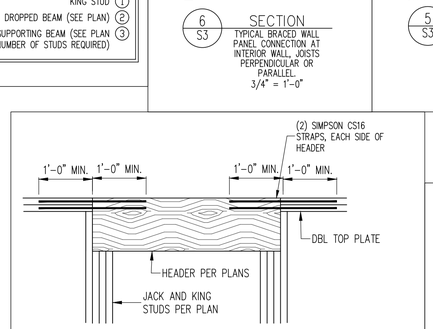
2 S1 SECTION
TYPICAL MASONRY PIER, GIRDER
3/4" = 1'-0"



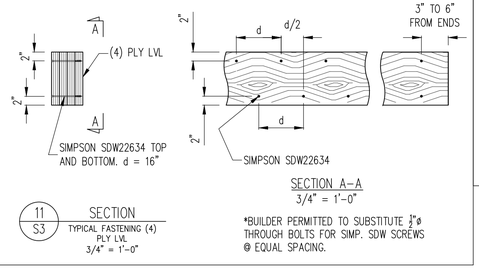

SECTION A-A
3/4" = 1'-0"




1 S1 SECTION
TYPICAL FND WALL
3/4" = 1'-0"

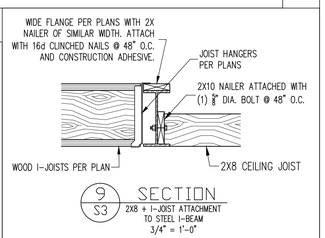



12 S3 SECTION
TOP FLUSH HEADER
3/4" = 1'-0"

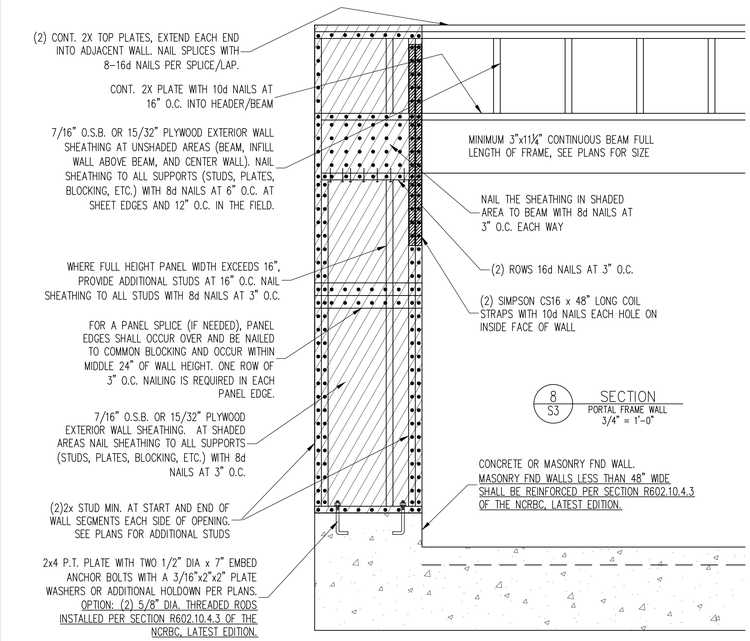



11 S3 SECTION
TYPICAL FASTENING (4) PLY LVL
3/4" = 1'-0"

*BUILDER PERMITTED TO SUBSTITUTE ½"ø THROUGH BOLTS FOR SIMP. SDW SCREWS @ EQUAL SPACING.



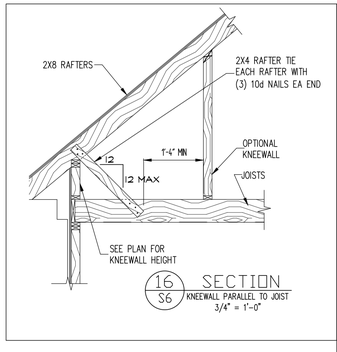

9 S3 SECTION
2X8 + I-JOIST ATTACHMENT TO STEEL I-BEAM
3/4" = 1'-0"



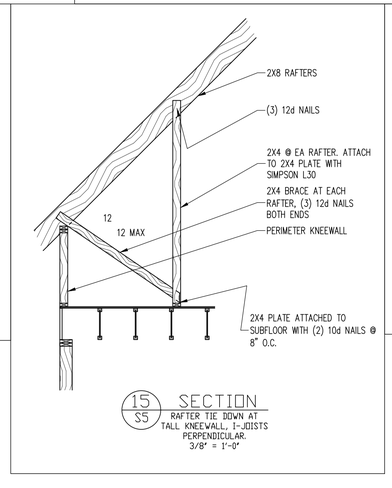

8 S3 SECTION
PORTAL FRAME WALL
3/4" = 1'-0"



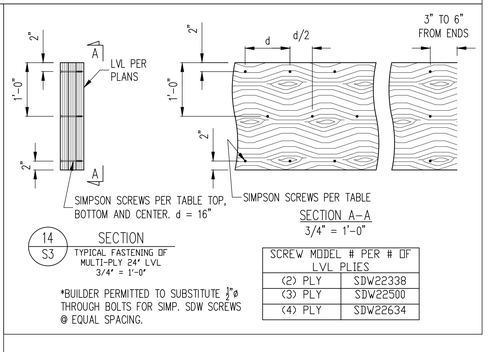

13 S3 SECTION
HIGH CAPACITY HANGER CONNECTION
3/4" = 1'-0"




16 S6 SECTION
KNEEWALL PARALLEL TO JOIST
3/4" = 1'-0"




15 S5 SECTION
RAFTER TIE DOWN AT TALL KNEEWALL, I-JOISTS PERPENDICULAR.
3/8" = 1'-0"




14 S3 SECTION
TYPICAL FASTENING OF MULTI-PLY 24" LVL
3/4" = 1'-0"

| SCREW MODEL # PER # OF LVL PLIES | |
|---|---|
| (2) PLY | SDW22338 |
| (3) PLY | SDW22500 |
| (4) PLY | SDW22634 |

*BUILDER PERMITTED TO SUBSTITUTE ½"ø THROUGH BOLTS FOR SIMP. SDW SCREWS @ EQUAL SPACING.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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 054410 TYLER R. BOWE 2/16/2023

SCOPE: STATEMENT CUSTOM HOMES
STRUCTURAL ADDENDUM
LOC: EBENEZER CHURCH RD
PRIVATE LOT

| REV # | REF PROJ # | DATE |
|---|---|---|
| | | |

ENG: TRB
DATE: 2/16/2023

PROJECT NO.
23-15-005

SHEET NO.
SD1
7 of 8

# CONSTRUCTION SPECIFICATIONS

PART 1: GENERAL

1.01 CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.

1.02 DIMENSIONS SHOWN SHALL GOVERN OVER SCALE ON THESE DRAWINGS.

1.05 METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR, WHO SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.

PART 2: DESIGN LOADS

2.01 DESIGN LOADS SHALL CONFORM WITH THE TABLE BELOW:

| USE | LIVE LOAD (PSF) | DEAD LOAD (PSF) |
|---|---|---|
| BALCONIES, DECKS, ATTICS WITH FIXED STAIR ACCESS, DWELLING UNITS INCLUDING ATTICS WITH FIXED STAIR ACCESS, STAIRS, FIRE ESCAPES | 40 | 10 |
| GARAGES (PASSENGER CARS ONLY) | 50 | -- |
| ATTICS (NO STORAGE, LESS THAN 5' HEADROOM) | 10 | 10 |
| ATTICS (WITH STORAGE) | 20 | 10 |
| ROOF | 20 | 10 (15 FOR VAULTS) |

NOTES: – INDIVIDUAL STAIR TREADS ARE TO BE DESIGNED FOR THE UNIFORMLY DISTRIBUTED LIVE LOAD OF 40 PSF OR A 300 LB. CONCENTRATED LOAD ACTING OVER AN AREA OF 4 SQ. WHICHEVER PRODUCES THE GREATER STRESS.
– BUILDER TO VERIFY DEAD LOAD DOES NOT EXCEED 10 PSF WHEN HEAVY FLOOR OR ROOF FINISHES SUCH AS TILE OR SLATE ARE UTILIZED. NOTIFY ENGINEERING UNDER THESE CONDITIONS

2.02 INTERIOR WALLS: 5 PSF LATERAL.

2.03 BASIC WIND DESIGN VELOCITY OF 120 MPH.

2.04 SOIL BEARING CAPACITY 2000 PSF (PRESUMPTIVE).

PART 3: STRUCTURAL STEEL

3.01 WIDE FLANGE BEAMS AND TEE SECTIONS SHALL CONFORM TO ASTM A992 MINIMUM GRADE

3.02 SQUARE AND RECTANGULAR TUBING SHALL CONFORM TO ASTM A500 GRADE B MINIMUM GRADE.

3.03 STEEL PIPE SHALL CONFORM TO ASTM A53 GRADE B, TYPE S, MINIMUM GRADE

3.04 ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO ASTM A36 MINIMUM GRADE

3.05 STRUCTURAL STEEL CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.

PART 4: WELDING

4.01 WELDING ELECTRODES SHALL BE E70XX AND ALL WELDING SHALL BE PERFORMED BY AN AWS CERTIFIED WELDER

PART 5: CONCRETE AND SLABS ON GRADE

5.01 CAST IN PLACE CONCRETE SHALL BE OF NORMAL WEIGHT, 4–6% AIR ENTRAINMENT, FOR EXTERIOR CONCRETE AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS TYP UNO. ALL ITEMS NOTED AS 'CONCRETE' ARE TO BE CAST IN PLACE, TYP UNO.

5.02 REINFORCED CAST IN PLACE CONCRETE SHALL BE PROPORTIONED, MIXED AND PLACED IN ACCORDANCE WITH THE SPECIFICATIONS OF ACI 318, LATEST EDITION.

5.03 SLABS ON GRADE, IF ANY, SHALL BE CAST IN PLACE, CONTAIN SYNTHETIC POLYPROPYLENE FIBRILLATED MICRO FIBERS, FIBER LENGTH 1 1/2", DOSAGE RATE 1 1/2 LBS/CU YD. SLAB TO BE PLACED ON A 6 MIL VAPOR BARRIER ON 4" MIN GRANULAR FILL ON SOIL WITH 90% MIN STANDARD PROCTOR DENSITY. VAPOR BARRIER MAY BE OMITTED FOR SLABS NOT IN ENCLOSED AREAS

PART 6: REBAR AND WIRE REINFORCEMENT

6.01 REBAR SHALL BE DEFORMED STEEL CONFORMING TO ASTM A615 GRADE 60 TYP UNO

6.02 LAP SPLICES SHALL BE CLASS B AS DEFINED BY ACI 318, TYP UNO

6.03 WIRE REINFORCEMENT SHALL BE 9 GA AND SHALL CONFORM TO ASTM A1064.

PART 7: MASONRY

7.01 CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 AND C55, NORMAL WEIGHT, f'M = 1,500 PSI MIN

7.02 CLAY MASONRY UNITS SHALL CONFORM TO ASTM C62–17 GRADE SW

7.03 MORTAR SHALL BE TYPE S. MORTAR AND GROUT SHALL CONFORM TO ASTM C476, MIN COMPRESSIVE STRENGTH OF 2000 PSI.

7.04 MASONRY CONSTRUCTION SHALL CONFORM TO THE SPECIFICATIONS OF ACI 530

7.05 LADDER WIRE REINFORCEMENT SHALL CONFORM TO ASTM A951. 6" MIN LAPS FOR CONTINUOUS WALL APPLICATIONS

PART 8: BOLTS AND LAG SCREWS

8.01 BOLTS SHALL CONFORM TO ASTM A307 MINIMUM GRADE TYP UNO. INSTALL STANDARD STEEL WASHERS (ASTM F844–07a) FOR THE NUT / BOLT HEAD WHEN BOLTING WOOD MEMBERS. HOLES FOR BOLTS SHALL BE AISC STANDARD HOLES UNO

8.02 LAG SCREWS SHALL CONFORM TO ANSI/ASME STANDARD B18.2.1–1981. PILOT HOLES SHALL BE USED FOR LAG SCREW INSTALLATION AND SHALL BE BORED ACCORDING TO NDS SPECIFICATIONS. INSTALL STANDARD STEEL WASHERS (ASTM F844–07a) FOR SCREW HEAD

8.03 ANCHOR RODS AND BOLTS SHALL CONFORM TO ASTM F1554–15 GRADE 36 UNO. BENT ANCHOR BOLTS SHALL HAVE A 2" MIN HOOK UNO

PART 9: DRIVEN FASTENERS

9.01 NAILS, SPIKES AND STAPLES SHALL CONFORM TO ASTM F 1667– 05. NAILS ARE TO BE COMMON WIRE OR BOX

PART 10: DIMENSIONAL LUMBER

10.01 SOLID SAWN WOOD FRAMING DESIGN IS BASED ON NO. 2 SPRUCE PINE FIR OR SYP #2 FOR JOISTS, RAFTERS, GIRDERS, BEAMS, STUDS, ETC. MINIMUM ALLOWABLE DESIGN PROPERTIES ARE AS FOLLOWS:
E= 1,400,000 PSI, $F_{c\ perp}$ = 425 PSI, $F_v$ = 135 PSI, SPECIFIC GRAVITY = 0.42 MIN
$F_b$ = 875 PSI FOR 2X4, 2X6, 2X8. $F_b$ = 800 PSI FOR 2X10'S, 750 PSI FOR 2X12'S

PART 11: ENGINEERED LUMBER

11.01 LVL OR PSL MINIMUM ALLOWABLE DESIGN PROPERTIES ARE AS FOLLOWS:
E= 1,900,000 PSI, $F_b$ = 2600 PSI, $F_v$ = 285 PSI, $F_{c\ perp}$ = 750 PSI
LSL MINIMUM ALLOWABLE DESIGN STRESSES ARE AS FOLLOWS:
E= 1.3 X 10E6 PSI, $F_b$ = 1700 PSI, $F_v$ = 400 PSI, $F_{c\ perp}$ = 680 PSI

11.02 LVL OR PSL MEMBERS MAY BE RIPPED FROM DEEPER MEMBERS TO MATCH THE MEMBER DEPTH SPECIFIED IN THE PLANS

PART 12: PRESSURE TREATED LUMBER

12.01 LUMBER IN CONTACT WITH THE GROUND, CONCRETE OR MASONRY SHALL BE PRESSURE TREATED IN ACCORDANCE WITH AWPA STANDARD C–15. ALL OTHER EXPOSED LUMBER SHALL BE TREATED IN ACCORDANCE WITH AWPA STANDARD C–2 OR BY ANY METHOD GIVING EQUAL PROTECTION. THE BUILDING CODE OFFICE MAY ALSO APPROVE A NATURAL DECAY RESISTANT WOOD PER SECTION 19–6(A)

PART 13: STEEL FLITCH PLATE BEAMS

13.01 FLITCH PLATE BEAMS SHALL CONSIST OF A CONTINUOUS STEEL PLATE BOLTED BETWEEN TWO PIECES OF CONTINUOUS LUMBER AS SIZED ON THE PLANS. BOLT PIECES TOGETHER USING 1/2" ø BOLTS SPACED AT 16" O.C. STAGGERED TOP TO BOTTOM OF THE BEAM. MAINTAIN A 2" EDGE DISTANCE. PLACE TWO BOLTS, ONE ABOVE THE OTHER, 16" MAX FROM EACH END OF THE BEAM. TYP UNO

PART 14: STUD SUPPORTS FOR BEAMS

14.01 STEEL, ENGINEERED LUMBER, AND FLITCH PLATE BEAMS BEARING ON A STUD WALL SHALL BEAR AS FOLLOWS:

1–WHEN THE BEAM IS PERPENDICULAR TO, OR SKEWED RELATIVE TO THE WALL, THE BEAM SHALL BEAR FULL WIDTH ON THE SUPPORTING WALL INDICATED AND SHALL BE SUPPORTED BY A MINIMUM OF THREE GANGED STUDS, OR A GANGED STUD COLUMN WITH A NUMBER OF STUDS SUCH THAT THE STUD COLUMN IS AT LEAST AS WIDE AS THE TRUE WIDTH OF THE BEAM BEING SUPPORTED, WHICHEVER IS GREATER, TYP UNO. FOR THE SKEWED CONDITION PARTICULAR CARE SHALL BE TAKEN TO ENSURE STUD COLUMN IS CENTERED ON THE BEAM
2–BEAMS BEARING ONTO THE END OF A STUD WALL PARALLEL TO THE BEAM SHALL BEAR A MINIMUM OF 4 1/2" ONTO THE WALL AND BE SUPPORTED BY A TRPL STUD GANGED COLUMN TYP UNO.

14.02 DIMENSIONAL LUMBER BEAMS BEARING ON A STUD WALL SHALL BEAR AS FOLLOWS:

1–WHEN THE BEAM IS PERPENDICULAR TO, OR SKEWED RELATIVE TO THE WALL, THE BEAM SHALL BEAR FULL WIDTH ON THE SUPPORTING WALL INDICATED (LESS 1 1/2" TO ALLOW FOR A CONTINUOUS RIM JOIST WHERE APPLICABLE) AND SHALL BE SUPPORTED BY A GANGED STUD COLUMN THE SAME WIDTH AS THE BEAM TYP UNO. (E.G. A TRIPLE 2X10 IS TO BE SUPPORTED BY (3) STUDS). FOR THE SKEWED CONDITION PARTICULAR CARE SHALL BE TAKEN TO ENSURE STUD COLUMN IS CENTERED ON THE BEAM
2–BEAMS BEARING ONTO THE END OF A STUD WALL PERPENDICULAR TO OR SKEWED RELATIVE TO THE BEAM SHALL BE SUPPORTED BY ONE ADDITIONAL STUD.

14.03 EXTRA JOISTS BEARING ON A STUD WALL PERPENDICULAR TO OR SKEWED RELATIVE TO THE BEAM SHALL BE SUPPORTED BY ONE ADDITIONAL STUD.

14.04 STUDS THAT ARE GANGED TO FORM A COLUMN SHALL HAVE ADJACENT STUDS WITHIN THE COLUMN NAILED TOGETHER WITH ONE ROW OF 10d NAILS AT 8" O.C. (TWO ROWS OF 10d NAILS @ 8" O.C., 3" APART, FOR 2X8 OR 2X10 STUDS) ALL COLUMNS SHALL BE CONTINUOUS DOWN TO THE FOUNDATION OR OTHER PROPERLY DESIGNED STRUCTURAL ELEMENT SUCH AS A BEAM. COLUMNS TRANSFERRING LOADS THROUGH FLOOR LEVELS SHALL BE SOLIDLY BLOCKED FOR THE FULL WIDTH OF THE STUD COLUMN WITHIN THE CAVITY FORMED BY THE FLOOR JOISTS.

PART 15: NAILING OF MULTI PLY WOOD BEAMS

15.01 SOLID SAWN LUMBER JOISTS THAT ARE GANGED TO FORM A BEAM SHALL HAVE ADJACENT MEMBERS IN THE BEAM NAILED TOGETHER WITH THREE ROWS OF 10d NAILS @ 16" O.C. FOR 2X10 OR LARGER, TWO ROWS OF 10d NAILS @ 16" O.C. FOR 2X8, ONE ROW OF 10d NAILS @ 16" O.C. FOR 2X6 OR SMALLER. STAGGER ROWS 5" MIN.

15.02 LVL MEMBERS THAT ARE GANGED TO FORM A BEAM SHALL HAVE ADJACENT MEMBERS IN THE BEAM FASTENED TOGETHER PER MANUFACTURERS RECOMMENDATIONS, TYP UNO

PART 16: WALL FRAMING AND BRACING

16.01 STUD WALLS SHALL CONSIST OF 2X4 STUDS SPACED AT 16" O.C. UNO. STUDS SHALL BE CONTINUOUS FROM SOLE PLATE AT FLOOR TO DOUBLE TOP PLATE AT THE CEILING OR ROOF. NO INTERMEDIATE BANDS OR PLATES SHALL CAUSE DISCONTINUITIES IN A STUD WALL EXCEPT AS REQUIRED FOR DOOR OR WINDOW OPENINGS. THE KING STUDS FOR SUCH OPENINGS SHALL BE CONTINUOUS, TYP UNO.
MAX ALLOWABLE WALL HEIGHTS FOR EXTERIOR STUD WALLS, INCLUSIVE OF SOLE PLATE AND DBL TOP PLATE AND 7/16" OSB EXTERIOR BRACING AND ROW OF 2X4 2X6 PURLINS AT 8' HEIGHT (AND AT 16' HEIGHT FOR TALL WALLS), TYP UNO:
2X4 @ 16" O.C.: 11'–1 1/2" 2X6 @ 16" O.C.: 17'–0"
2X4 @ 12" O.C.: 12'–1 1/2" 2X6 @ 12" O.C.: 18'–8"
DBL 2X4 @ 16" O.C.: 13'–4" DBL 2X6 @ 16" O.C.: 21'–0"

16.02 FOR WALL BRACING THE FOLLOWING SHALL APPLY:
–BLOCKING AT UNSUPPORTED PANEL EDGES IS REQUIRED TYP UNO.
–WALL BRACING IS BY ENGINEERED DESIGN AND NOT PRESCRIPTIVE PER SECTION 602.10 OF THE 2018 NCRC. CONTINUOUS SHEATHING HAS BEEN PROVIDED, ALONG WITH ALTERNATIVE METHODS TO INSURE THE MINIMUM INTENT OF SECTION 602.10 OF THE 2018 NCRC HAS BEEN MET AND EXCEEDED.
–BRACED WALL PANELS SHALL BE FASTENED IN ACCORDANCE WITH TABLE 602.3(1) TO PROVIDE CONTINUOUS PANEL UPLIFT RESISTANCE AND COMPLIANCE WITH NCRBC R602.3.5 AND R802.11 UNLESS NOTED OTHERWISE ON STRUCTURAL PLANS.
–MAY SUBSTITUTE WSP FOR GB
–SINGLE JOIST, CONTINUOUS RIM JOIST, OR BLOCKING OF EQUAL DEPTH IS REQUIRED ABOVE AND BELOW ALL BRACED WALLS. NAIL BLOCKING ABOVE WALL TO TOP PLATE WITH 16d TOE NAILS @ 6" O.C. NAIL SOLE PLATE OF BRACED WALL TO BLOCKING BELOW WITH (3) 16d NAILS @ 16" O.C. BLOCKING AT HORIZONTAL JOINTS IN BRACED WALL LINES ONLY REQUIRED AT SHADED WALLS, UNO.

PART 17: KING STUDS

17.01 KING STUDS FOR OPENINGS IN EXTERIOR WALLS SHALL BE AS FOLLOWS:

| | | NUMBER OF KING STUDS | | | | |
|---|---|---|---|---|---|---|
| MAX OPENING WIDTH | | 5'–0" | 9'–0" | 13'–0" | 17'–0" | 21'–0" |
| STUD SIZE | 2X4 | 1 | 2 | 3 | 4 | 5 |
| | 2X6 | 1 | 1 | 2 | 2 | 2 |
| | 2X8 | 1 | 1 | 1 | 1 | 2 |

PART 18: SUBSTITUTIONS

18.01 MATERIAL OR MEMBER SIZE SUBSTITUTIONS OR PLAN DEVIATIONS REQUIRE THE WRITTEN AUTHORIZATION OF THE DESIGNERS. UNAUTHORIZED DEVIATIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

PART 19: OWNERSHIP OF STRUCTURAL DESIGN

19.01 THE STRUCTURAL DESIGN OF THIS PLAN IS THE PROPERTY OF ENGINEERING TECH ASSOCIATES (ETA). THESE PLANS ARE FOR THE ONE TIME USE AT THE LOCATION INDICATED AND FOR THE CLIENT LISTED. ETA ASSUMES NO LIABILITY FOR THESE PLANS IF THEY ARE REPRODUCED, IN WHOLE OR IN PART, FOR CONSTRUCTION AT ANY OTHER LOCATION WITHOUT WRITTEN PERMISSION FROM ETA

# NOTES

THE BUILDER IS RESPONSIBLE FOR REVIEWING PLANS PRIOR TO CONSTRUCTION. THE BUILDER SHALL IMMEDIATELY CONTACT THE ENGINEER OF RECORD (EOR) BEFORE PROCEEDING IF THE FOLLOWING CONDITIONS ARE NOTED BEFORE OR DURING CONSTRUCTION:
1) THE WORKING PLANS DO NOT BEAR THE SEAL OF THE EOR
2) THE PLANS CONTAIN DISCREPANT OR INCOMPLETE INFORMATION

ANY ERRORS DUE TO A FAILURE TO FOLLOW THE ABOVE PROCEDURES SHALL NOT BE THE RESPONSIBILITY OF THE EOR. FURTHERMORE, IT IS THE RESPONSIBILITY OF THE BUILDER TO ENSURE THAN ANY REVISIONS ISSUED BY THE EOR ARE PROMPLY DISTRIBUTED TO THE SUBCONTRACTORS

THE EOR DOES NOT PERFORM FENESTRATION OR VENTING CALCULATIONS OR ANY OTHER CALCULATIONS THAT ARE NOT DIRECTLY RELATED TO STRUCTURAL ENGINEERING.

ROOF AND FLOOR TRUSSES TO BE DESIGNED BY AN ENGINEER REGISTERED BY THE STATE. FINAL TRUSS DRAWING SHOULD BE SUBMITTED TO THE EOR FOR REVIEW

# ABBREVIATIONS

| | | | | | |
|---|---|---|---|---|---|
| ABV | ABOVE | FND | FOUNDATION | TJ | TRIPLE JOIST |
| B. | BOTH | FTG | FOOTING | TYP | TYPICAL |
| B.E. | BOTH ENDS | HDG | HOT DIPPED GALVANIZED | TRPL | TRIPLE |
| BTWN | BETWEEN | HGR | HANGER | TSP | TRIPLE STUD POCKET |
| CIP | CAST IN PLACE | LVL | LAMINATED VENEER LUMBER | UNO | UNLESS NOTED OTHERWISE |
| CONC | CONCRETE | NTS | NOT TO SCALE | XJ | EXTRA JOIST |
| CS | CONTINUOUS SHEATHING | O.C. | ON CENTER | | |
| DIA | DIAMETER | PSL | PARALLEL STRAND LUMBER | | |
| DBL | DOUBLE | PT | PRESSURE TREATED | | |
| DJ | DOUBLE JOIST | QJ | QUAD JOIST | | |
| DSP | DBL STUD POCKET | SP | SPACE (OR SPACING) | | |
| EQ | EQUAL | SSP | SINGLE STUD POCKET | | |
| EA | EACH | SQ | SQUARE | | |
| FLG | FLANGE | | | | |
| FL PL | FLITCH PLATE | | | | |
| FLR | FLOOR | | | | |

## ALLOWABLE I-JOIST SUBSTITUTION

NOTE: MAINTAIN JOIST DEPTH, DIRECTION, AND SPACING SPECIFIED ON PLANS.

| MANUFACTURER | DEPTH | SERIES | SIMPSON FACE MOUNT HGR | SIMPSON TOP FLANGE HGR |
|---|---|---|---|---|
| BLUELINX | 11.875" | BLI 40 | IUS2.56/11.88 | ITS2.56/11.88 |
| BOISE CASCADE | 11.875" | BCI 5000s | IUS2.06/11.88 | ITS2.06/11.88 |
| BOISE CASCADE | 11.875" | BCI 6000s | IUS2.37/11.88 | ITS2.37/11.88 |
| INTERNATIONAL BEAMS | 11.875" | IB 400 | IUS2.56/11.88 | ITS2.56/11.88 |
| LP CORP | 11.875" | LPI 20+ | IUS2.56/11.88 | ITS2.56/11.88 |
| NORDIC | 11.875" | NI 40X | IUS2.56/11.88 | ITS2.56/11.88 |
| ROSEBURG | 11.875" | RFPI 40S | IUS2.56/11.88 | ITS2.56/11.88 |
| WEYERHAEUSER | 11.875" | TJI 210 | IUS2.06/11.88 | ITS2.06/11.88 |
| WEYERHAEUSER | 11.875" | EEI–20 | IUS2.37/11.88 | ITS2.37/11.88 |
| BLUELINX | 16" | BLI 40 | IUS2.56/16 | ITS2.56/16 |
| BLUELINX | 16" | BLI 60 | IUS2.56/16 | ITS2.56/16 |
| BOISE CASCADE | 16" | BCI 5000s | IUS2.06/16 | ITS2.06/16 |
| BOISE CASCADE | 16" | BCI 6000S | IUS2.37/16 | ITS2.37/16 |
| INTERNATIONAL BEAMS | 16" | IB 600 | IUS2.56/16 | ITS2.56/16 |
| LP CORP | 16" | LPI 20+ | IUS2.56/16 | ITS2.56/16 |
| NORDIC | 16" | NI 40X | IUS2.56/16 | ITS2.56/16 |
| ROSEBURG | 16" | RFPI 60S | IUS2.56/16 | ITS2.56/16 |
| WEYERHAEUSER | 16" | TJI 210 | IUS2.06/16 | ITS2.06/16 |

JOISTS NOT LISTED IN THE ABOVE TABLE MAY BE USED PROVIDED THEY MEET OR EXCEED THE PROPERTIES OF THOSE LISTED. SUBSTITUTE USP BRAND HANGERS WITH EQUIVALENT VALUES AS DESIRED.


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Phone (919) 844-1661

STATEMENT CUSTOM HOMES

| SCOPE: | LOC: | REV # | REF PROJ # | DATE |
|---|---|---|---|---|
| STRUCTURAL ADDENDUM | EBENEZER CHURCH RD | | | |
| | PRIVATE LOT | | | |

ENG: TRB
DATE: 2/16/2023

PROJECT NO.
23-15-005

SHEET NO.
SPECS
8 of 8