## GENERAL NOTES:

1. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT ALL DIMENSIONS, ROOF PITCHES, AND SQUARE FOOTAGE ARE CORRECT PRIOR TO CONSTRUCTION. K&A HOME DESIGNS, INC. IS NOT RESPONSIBLE FOR ANY DIMENSIONING, ROOF PITCH, OR SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.
2. ALL WALLS SHOWN ON THE FLOOR PLANS ARE DRAWN AT 4" UNLESS NOTED OTHERWISE.
3. ALL ANGLED WALL SHOWN ON THE PLANS ARE 45 DEGREES UNLESS NOTED OTHERWISE.
4. STUD WALL DESIGN SHALL CONFORM TO ALL NORTH CAROLINA STATE BUILDING CODE REQUIREMENTS.
5. DO NOT SCALE PLANS. DRAWING SCALE MAY BE DISTORTED DUE TO COPIER IMPERFECTIONS.
6. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NORTH CAROLINA RESIDENTIAL STATE BUILDING CODE, 2018 EDITION.

## SQUARE FOOTAGE

| HEATED SQUARE FOOTAGE | | UNHEATED SQUARE FOOTAGE | |
|---|---|---|---|
| FIRST FLOOR= | N/A | GARAGE= | 1152 |
| SECOND FLOOR= | N/A | FRONT PORCH= | N/A |
| THIRD FLOOR= | N/A | SCREEN PORCH= | N/A |
| BASEMENT= | N/A | DECK= | N/A |
| | | STORAGE= | 763 |

**TOTAL HEATED= N/A** **TOTAL UNHEATED= 1915**

## CRAWL SPACE VENTILATION CALCULATIONS

-VENT LOCATIONS MAY VARY FROM THOSE SHOWN ON THE PLAN BUT SHOULD BE PLACED TO PROVIDE ADEQUATE VENTILATION AT ALL POINTS TO PREVENT DEAD AIR POCKETS.

-100% VAPOR BARRIER MUST BE PROVIDED WITH 12" MIN. LAP JOINTS.

***-THE TOTAL AREA OF VENTILATION OPENINGS MAY BE REDUCED TO 1/1500 AS LONG AS REQUIRED OPENINGS ARE PLACED SO AS TO PROVIDE CROSS-VENTILATION OF THE SPACE. THE INSTALLATION OF OPERABLE LOUVERS SHALL NOT BE PROHIBITED. (COMPLY WITH NC CODE MIN. WITH REGARD TO VENT PLACEMENT FROM CORNERS)***

N/A SQ. FT. OF CRAWL SPACE/1500

N/A SQ. FT. OF REQUIRED VENTILATION

PROVIDED BY: N/A VENTS AT 0.45 SQ. FT. NET FREE

VENTILATION EACH= N/A SQ. FT. OF VENTILATION

*****FOUNDATION DRAINAGE- WATERPROOFING PER SECTIONS 405 & 406.***

## ATTIC VENTILATION CALCULATIONS

- CALCULATIONS SHOWN BELOW ARE BASED ON VENTILATORS USED AT LEAST 3 FT. ABOVE THE CORNICE VENTS WITH THE BALANCE OF VENTIALTION PROVIDED BE EAVE VENTS.

- CATHEDRAL CEILINGS SHALL HAVE A MIN. 1" CLEARANCE BETWEEN THE BOTTOM OF THE ROOF DECK AND THE INSULATION.

1152 SQ. FT. OF ATTIC/300= 3.84

EACH OF INLET AND OUTLET REQUIRED.

****WALL AND ROOF CLADDING DESIGN VALUES***

- WALL CLADDING IS DESIGNED FOR A 24.1 SQ. FT. OR GREATER POSITIVE AND NEGATIVE PRESSURE.

- ROOF VALUES BOTH POSITIVE AND NEGATIVE SHALL BE AS FOLLOWS:

45.5 LBS. PER SQ. FT. FOR ROOF PITCHES OF 0/12 TO 2.25/12

34.8 LBS. PER SQ. FT. FOR ROOF PITCHES OF 2.25/12 TO 7/12

21 LBS. PER SQ. FT. FOR ROOF PITCHES OF 7/12 TO 12/12

***** MEAN ROOF HEIGHT 30' OR LESS***

## STRUCTURAL NOTES

1) ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF "NORTH CAROLINA STATE 2018 RESIDENTIAL BUILDING CODE", IN ADDITION TO ALL LOCAL CODES AND REGULATIONS.

2) DESIGN LOADS:

| | LIVE LOAD (PSF) | DEAD LOAD (PSF) | DEFLECTION (DL & LL) |
|---|---|---|---|
| ALL FLOORS | 40 | 10 | L/360 |
| ATTIC (pull down access) | 20 | 10 | L/240 |
| ATTIC (no access) | 10 | 5 | L/240 |
| EXTERNAL BALCONY | 60 | 10 | L/360 |
| ROOF | 20 | 10 | L/180 |
| ROOF TRUSS | 20 | 20 | L/240 |
| WIND LOAD | [BASED ON 115 MPH (3-second gusts)] | | |

3) MINIMUM ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF

4) CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF FIVE INCHES UNLESS NOTED OTHERWISE (UNO).

5) MAXIMUM DEPTH OF UNBALANCED FILL AGAINST FOUNDATION WALLS TO BE LESS THAN 4'-0" WITHOUT USING SUFFICIENT WALL BRACING. REFER TO SECTION R404 OF 2018 NC RESIDENTIAL BUILDING CODE FOR BACKFILL LIMITATIONS BASED ON WALL HEIGHT, WALL THICKNESS, SOIL TYPE, AND UNBALANCED BACKFILL HEIGHT

6) ALL FRAMING LUMBER SHALL BE SYP #2 (Fb = 800 PSI) UNO.
ALL FRAMING LUMBER EXPOSED TO THE ELEMENTS SHALL BE TREATED MATERIAL.

7) ALL LOAD BEARING HEADERS SHALL BE (2)2x10 (UNO), ALL WINDOW AND DOOR HEADERS SHALL BE SUPPORTED BY (1) JACK STUD AND (1) KING STUD AT EACH END UNLESS NOTED. ALL OTHER BEAMS SHALL BE SUPPORTED BY 2 STUDS OR THE AMOUNT OF STUDS REQUIRED FOR FULL BEARING AT EACH END UNLESS NOTED, POINT LOADS (STIFF KNEES, ETC.) SHALL CONSIST OF 2 STUDS UNLESS NOTED, ALL SUPPORTS OF 2 STUDS OR MORE SHALL BE TRANSFERRED THROUGH EACH FLOOR TO THE FOUNDATION.

8) ALL EXTERIOR WALLS TO BE SHEATHED WITH MIN. 7/16" WOOD STRUCTURAL PANELS FASTNED WITH 8D NAILS 6" O.C. AT EDGES AND 12" O.C. AT INT. SUPPORTS. BLOCKING SHALL BE INSTALLED IF LESS THAN 50 PERCENT OF THE WALL LENGTH IS SHEATHED. WHERE BLOCKING IS REQ'D, ALL PANELS SHALL BE FASTENED AT 3" O.C AT EDGES AND 6" O.C. AT INT. SUPPORTS.

9) ALL STRUCTURAL STEEL SHALL ASTM A-36. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3-1/2" INCHES AND FULL FLANGE WIDTH. PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO LAG SCREWS (1/2 DIAMETER AND 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOISTS ARE TOE NAILED TO THE SOLE PLATES, AND THE SOLE PLATES ARE NAILED OR BOLTED TO THE BEAM FLANGES @ 48" O.C.

10) ANCHOR BOLT PLACEMENT PER SECTION R403.1.6. 1/2" DIAMETER ANCHOR BOLTS SPACED AT 6'-0" O/C AND PLACED 12" FROM THE END OF EACH PLATE SECTION

11) FOUNDATION DRAINAGE-DAMP PROOFING OR WATERPROOFING PER SECTION 405 AND 406 OF 2018 NC RESIDENTIAL BUILDING CODE

12) WALL AND ROOF CLADDING VALUES:
WALL CLADDING SHALL BE DESIGNED FOR A 24.1 SQ.FT. OR GREATER POSITIVE AND NEGATIVE PRESSURE
ROOF VALUES BOTH POSITIVE AND NEGATIVE SHALL BE AS FOLLOWS:
45.5 LBS/SQFT FOR ROOF PITCHES OF 0/12 TO 2.25/12
34.8 LBS/SQFT FOR ROOF PITCHES OF 2.25/12 TO 7/12
21.0 LBS/SQFT FOR ROOF PITCHES OF 7/12 TO 12/12
** MEAN ROOF HEIGHT 30' OR LESS

13) FOR ROOF SLOPES FROM 2:12 THROUGH 4:12, BUILDER TO INSTALL 2 LAYERS OF 15# FELT PAPER

14) IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SQ. FTG. ARE CORRECT PRIOR TO CONSTRUCTION. DESIGNER IS NOT RESPONSIBLE FOR DIMENSIONING OR SQ. FTG. ERRORS ONCE CONSTRUCTION BEGINS

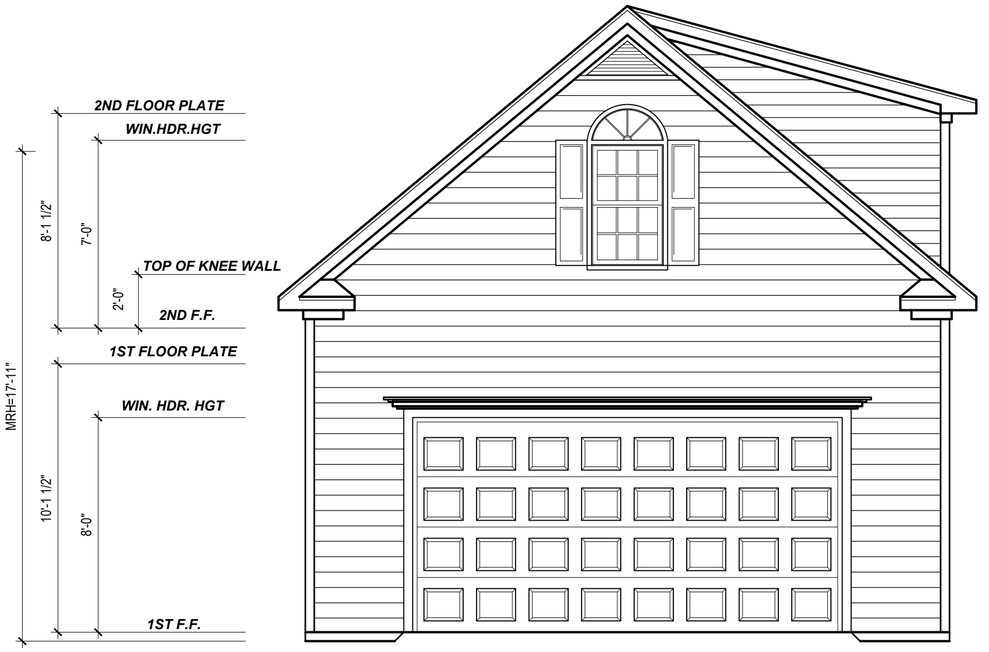
## TABLE N1102.1 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT

| CLIMATE ZONE | MAXIMUM GLAZING U-FACTOR | MINIMUM INSULATION R-VALUE | | | | | |
|---|---|---|---|---|---|---|---|
| | | CEILINGS | WALLS | FLOORS | BASEMENT WALLS | SLAB PERIMETER | CRAWL SPACE WALLS |
| 3 | .35 | R-38 or R-30 | R-15 | R-19 | R-5/13 | R-0 | R-5/13 |
| 4 | .35 | R-38 or R-30 | R-15 | R-19 | R-10/15 | R-10 | R-10/15 |

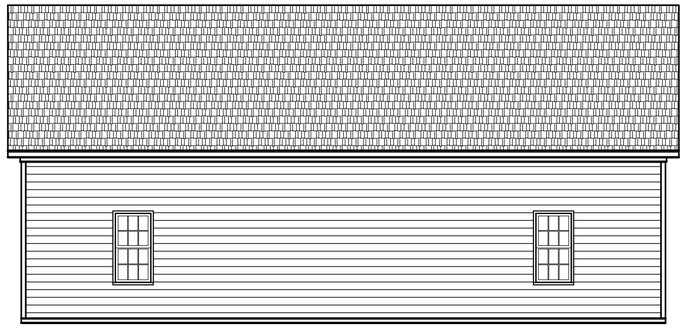
NORTH CAROLINA PROFESSIONAL 032702 8-17-21 ENGINEER MARK E. JONES

NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.
APPROVED
Limited building only review
Permit holder responsible for full compliance with the code
08/23/2021
Harnett COUNTY NORTH CAROLINA

See Note

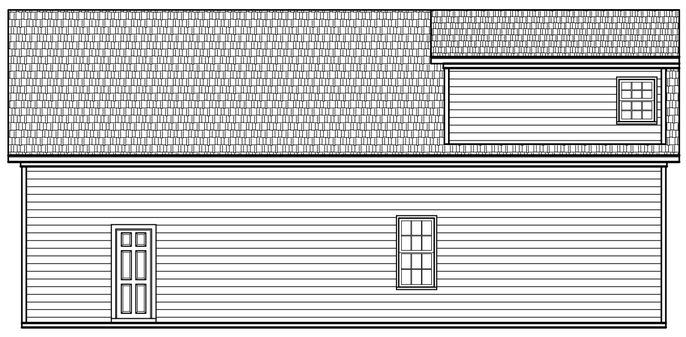



## FRONT ELEVATION
1/4" = 1'-0"



## LEFT ELEVATION
1/8" = 1'-0"

## REAR ELEVATION
1/8" = 1'-0"



## RIGHT ELEVATION
1/8" = 1'-0"

Project #: 21-082
Date: 3-22-21
Drawn/Design By: KBB
Scale: REFER TO ELEV.

REVISIONS

| No. | Date: | Remarks |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |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Stephens Garage

Dewey Stephens
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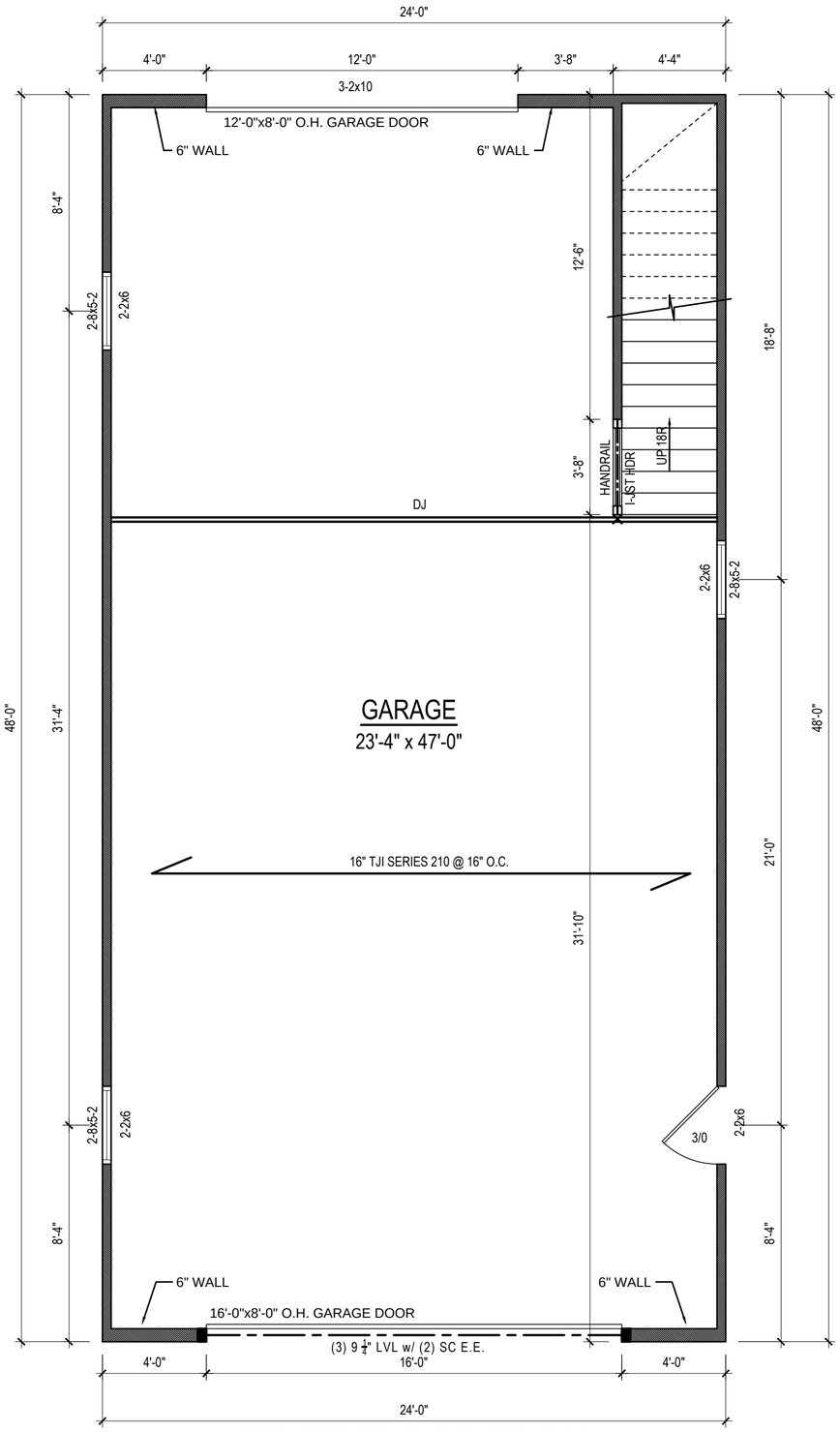
Angier, NC 27501

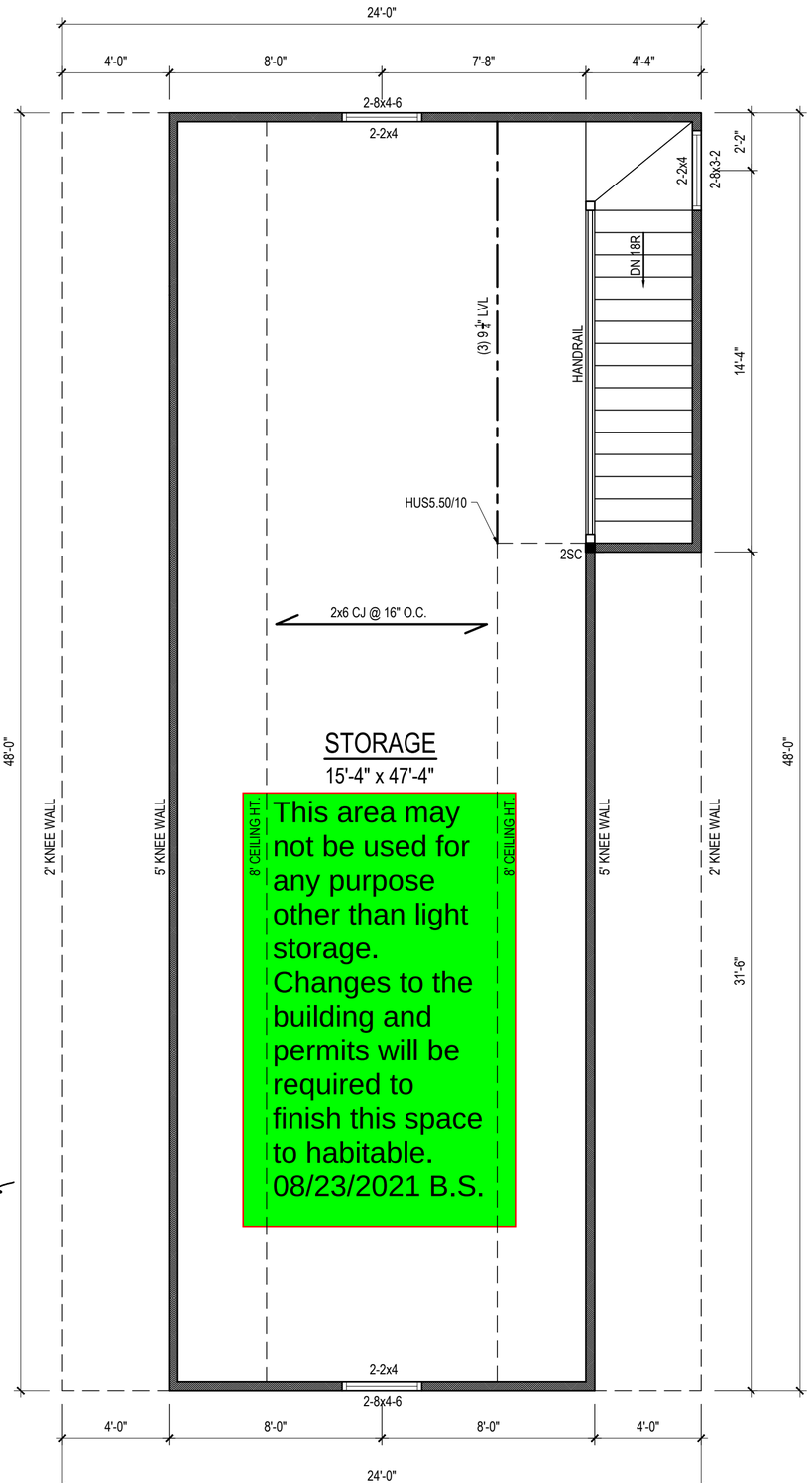
ELEVATIONS

Sheet Number 1 of 2




## FIRST FLOOR PLAN

*1/4" = 1'-0"* *CEILING HT. = 10'-0"*




## SECOND FLOOR PLAN

*1/4" = 1'-0"* *CEILING HT. = 8'-0"*

NORTH CAROLINA PROFESSIONAL 032702 8-17-21 ENGINEER MARK E. JONES

Structural Engineering by:
**Mark E. Jones, PE**
6425 Glen Dean Court
Raleigh, NC 27603
Phone: (919) 395-5618

*Engineers seal applies only to structural components on this document. Seal does not include construction means, methods, techniques, sequences, procures or safety precautions.
*Any deviations or discrepancies on plans are to be brought to the immediate attention of Mark E. Jones, PE. Failure to do so will void Mark E. Jones, PE liability.
Structural analysis based on 2018 North Carolina Residential Code.

Project No. 21-182

Project #:
21-082
Date:
3-22-21
Drawn/Design By:
KBB
Scale:
1/4" = 1'-0"

**REVISIONS**

| No. | Date: | Remarks |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |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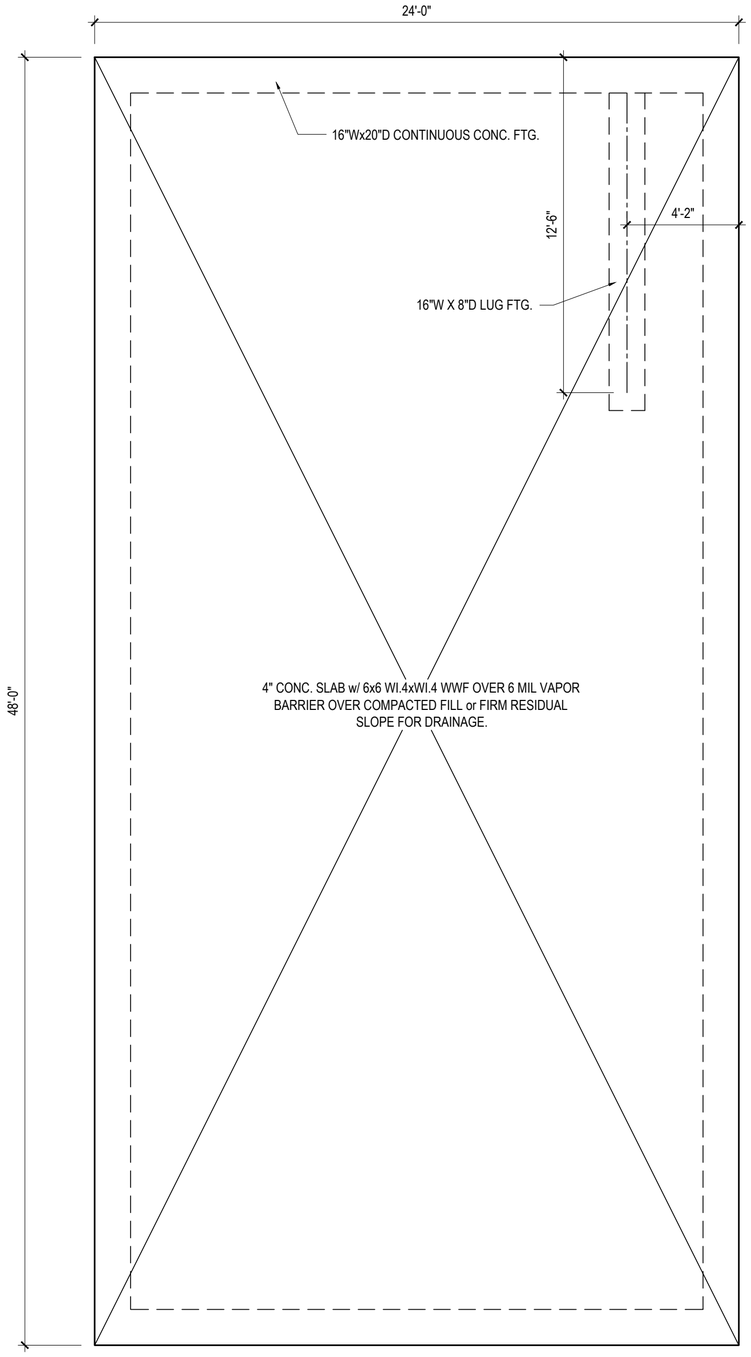
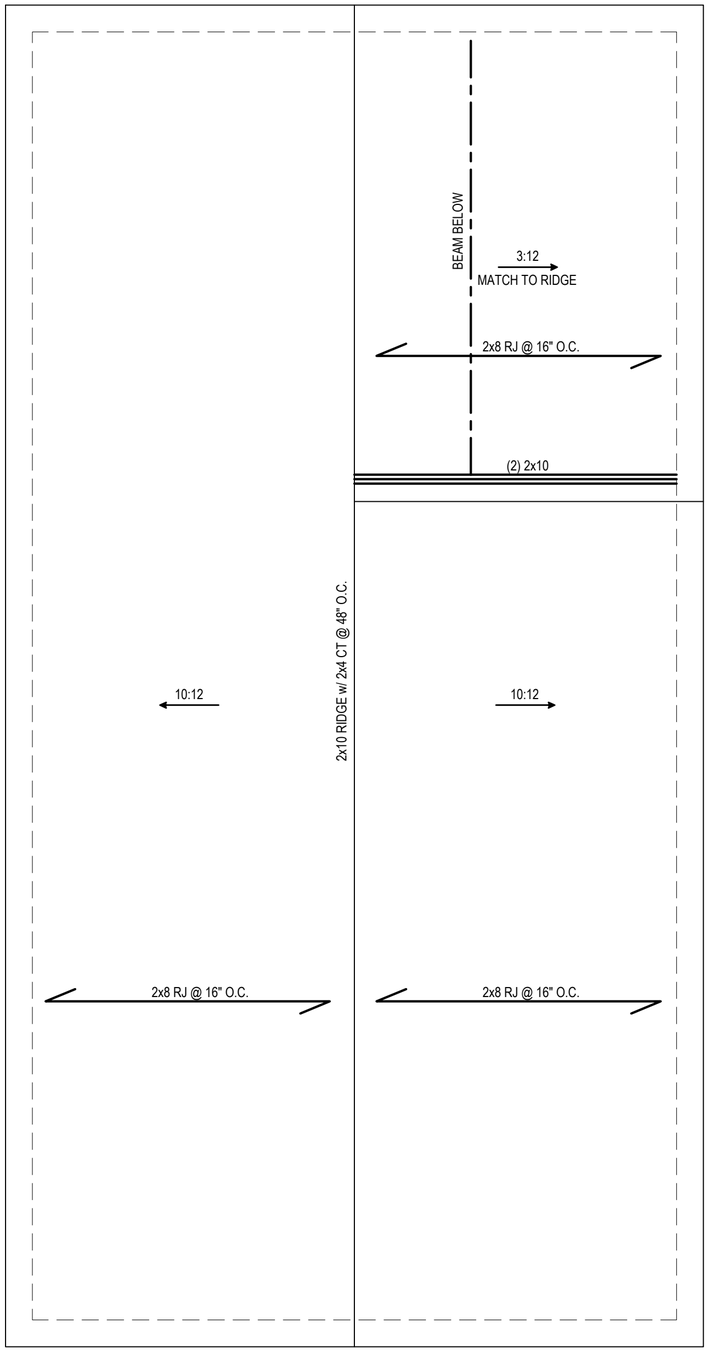
FIRST & SECOND FLOOR

Sheet Number
2
of 2




## FOUNDATION PLAN
*1/4" = 1'-0"*




## ROOF PLAN
*1/4" = 1'-0"*

NORTH CAROLINA PROFESSIONAL 032702 8-17-21 ENGINEER MARK E. JONES

| | |
|---|---|
| Project #: | 21-082 |
| Date: | 3-22-21 |
| Drawn/Design By: | KBB |
| Scale: | 1/4" = 1'-0" |

**REVISIONS**

| No. | Date: | Remarks |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |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FOUNDATION/
ROOF LAYOUT

Sheet Number
3
of 3