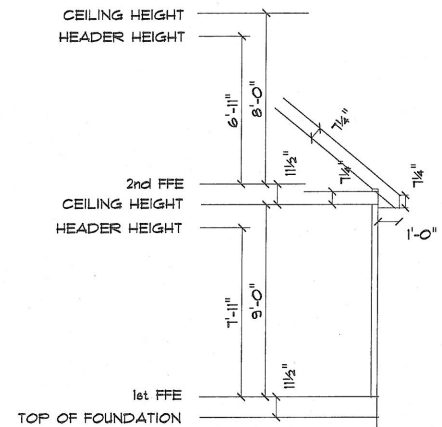


**FRONT ELEVATION**

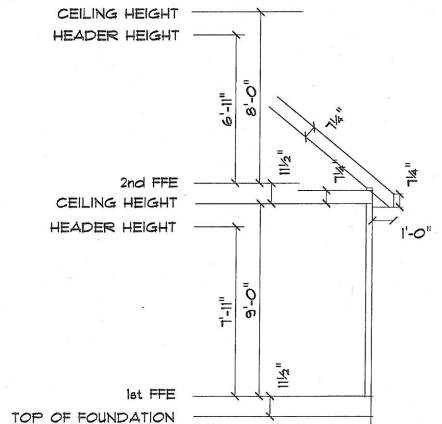
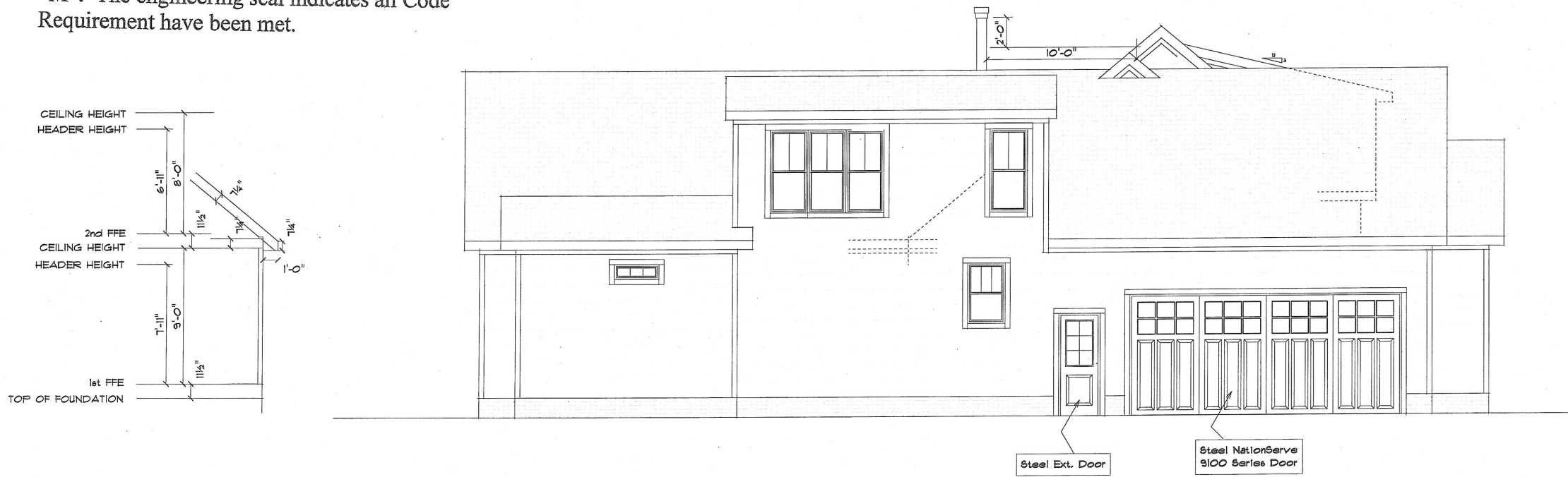
SCALE: 1/4" = 1'-0"



25'-9 1/2"  
AVG. RIDGE HEIGHT  
28'-8 3/4"  
MAX. RIDGE HEIGHT

**LEFT ELEVATION**

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



Designed by Brunssen Engineering Services PA  
Fritz Brunssen – NC registered engineer. The  
Drawings meet the requirements of the 2018 NC  
State Building Code: Residential Code and App.  
"M". The engineering seal indicates all Code  
Requirement have been met.

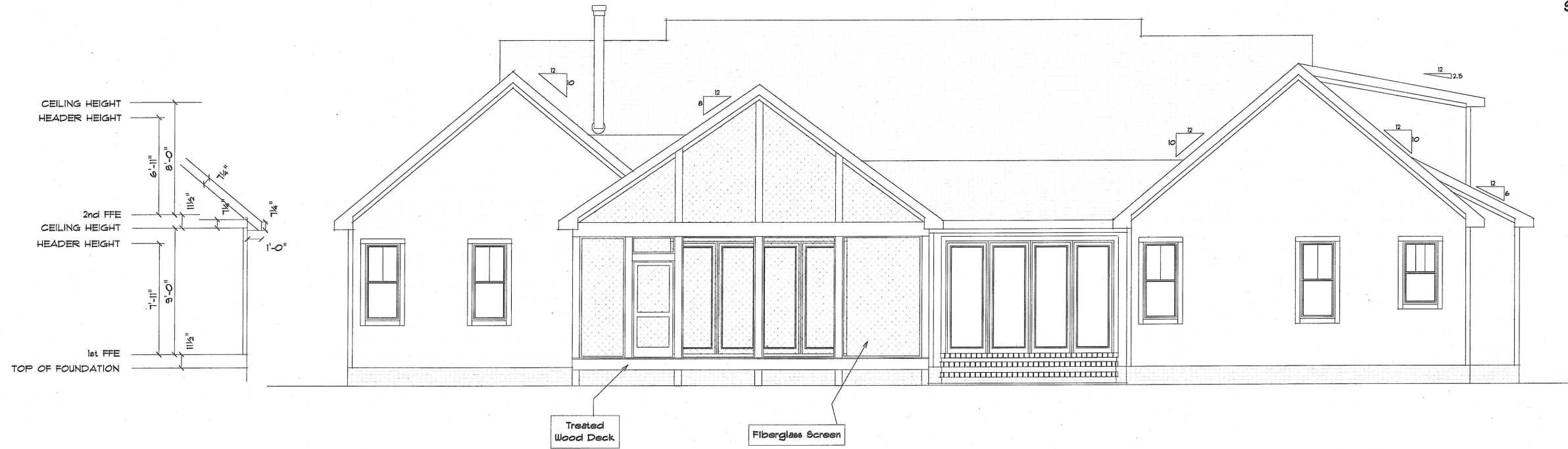
**Brunssen Engineering**  
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Durham, NC 27713

Plan Area Totals		
First Floor Heated	2913	Sq. Ft.
Second Floor Heated	367	Sq. Ft.
<b>Total Heated</b>	<b>3280</b>	<b>Sq. Ft.</b>
Garage	670	Sq. Ft.
Front Porch	260	Sq. Ft.
Screen Porch	393	Sq. Ft.
Deck	0	Sq. Ft.
Attic	0	Sq. Ft.
<b>Total Unheated</b>	<b>1313</b>	<b>Sq. Ft.</b>
<b>Total Gross Sq. Footage</b>	<b>4593</b>	<b>Sq. Ft.</b>

Sheet	1
DATE	11-15-2020
REVISIONS	
Grayson Dare Homes, Inc. 3108 Lyckan Pkwy. Suite 206 Durham, N.C. 27707	
SCALE	1/4" = 1'-0"
DRAWN BY	
APPROVED	
Mike and Tracey Hyder 0 Jackson Rd. Fuquay Varina NC 27536	

**REAR ELEVATION**

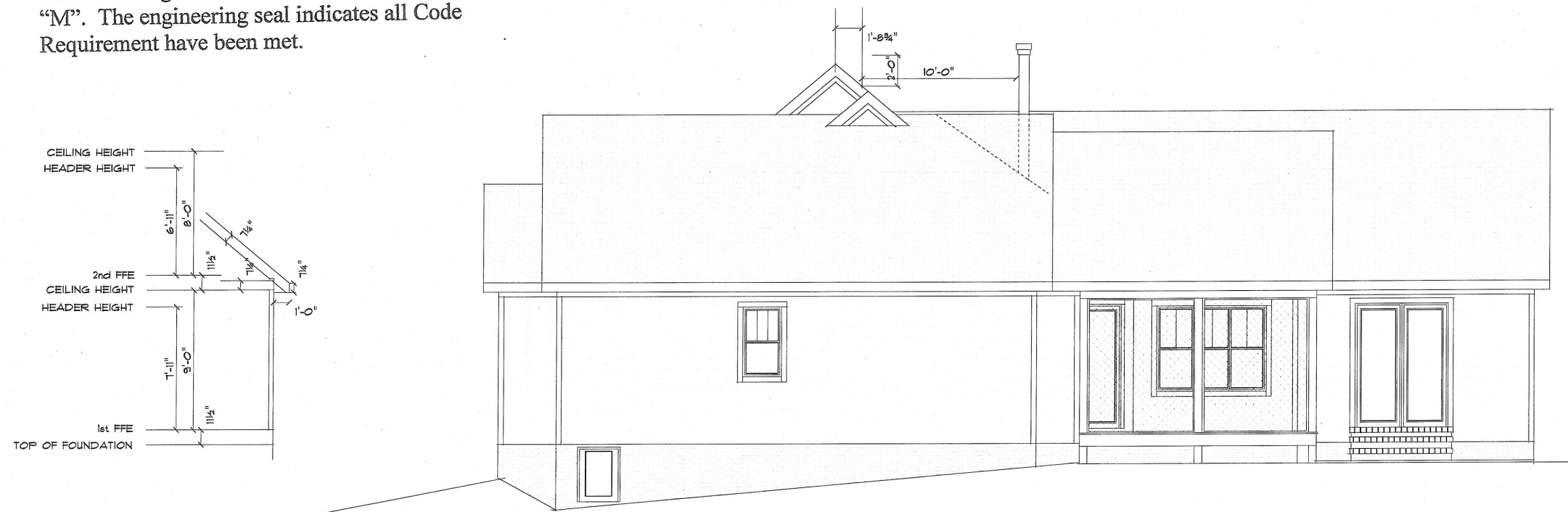
SCALE: 1/4" = 1'-0"



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**RIGHT ELEVATION**

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



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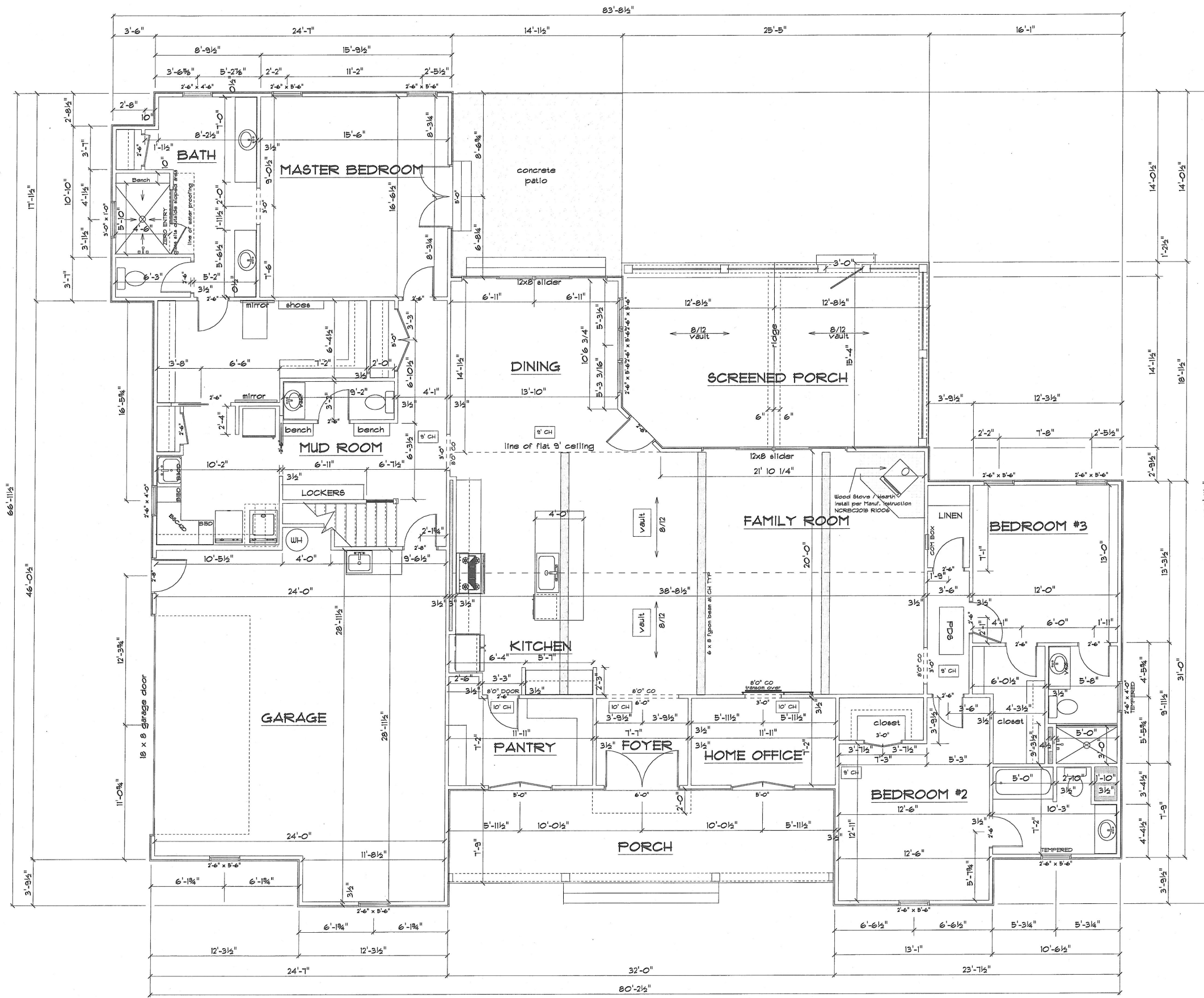
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 O Jackson Rd. Fuquay Varina NC 27536

SCALE 1/4" = 1'-0"  
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DATE 11-15-2020  
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Sheet 2



**1ST FLOOR LAYOUT**  
SCALE: 1/4" = 1'-0"

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Durham, NC 27713

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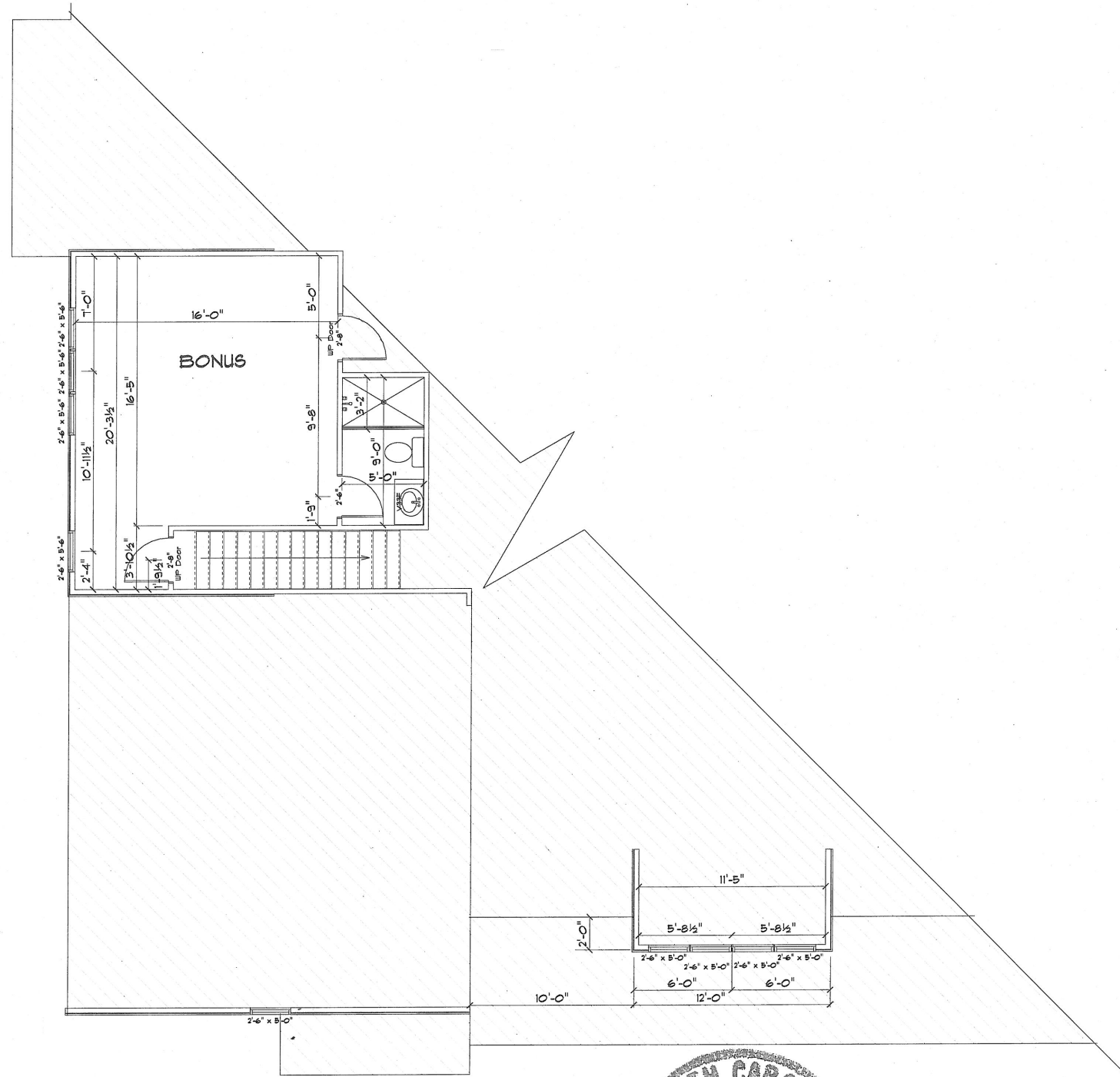
**Mike and Tracey Hyder**  
O Jackson Rd. Fuquay Varina NC 27526

SCALE: 1/4" = 1'-0"  
DRAWN BY:  
APPROVED:

Grayson Dare Homes, Inc.  
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DATE: 11-15-2020  
REVISIONS:  
Sheet: **3**

2ND FLOOR LAYOUT  
SCALE: 1/4" = 1'-0"



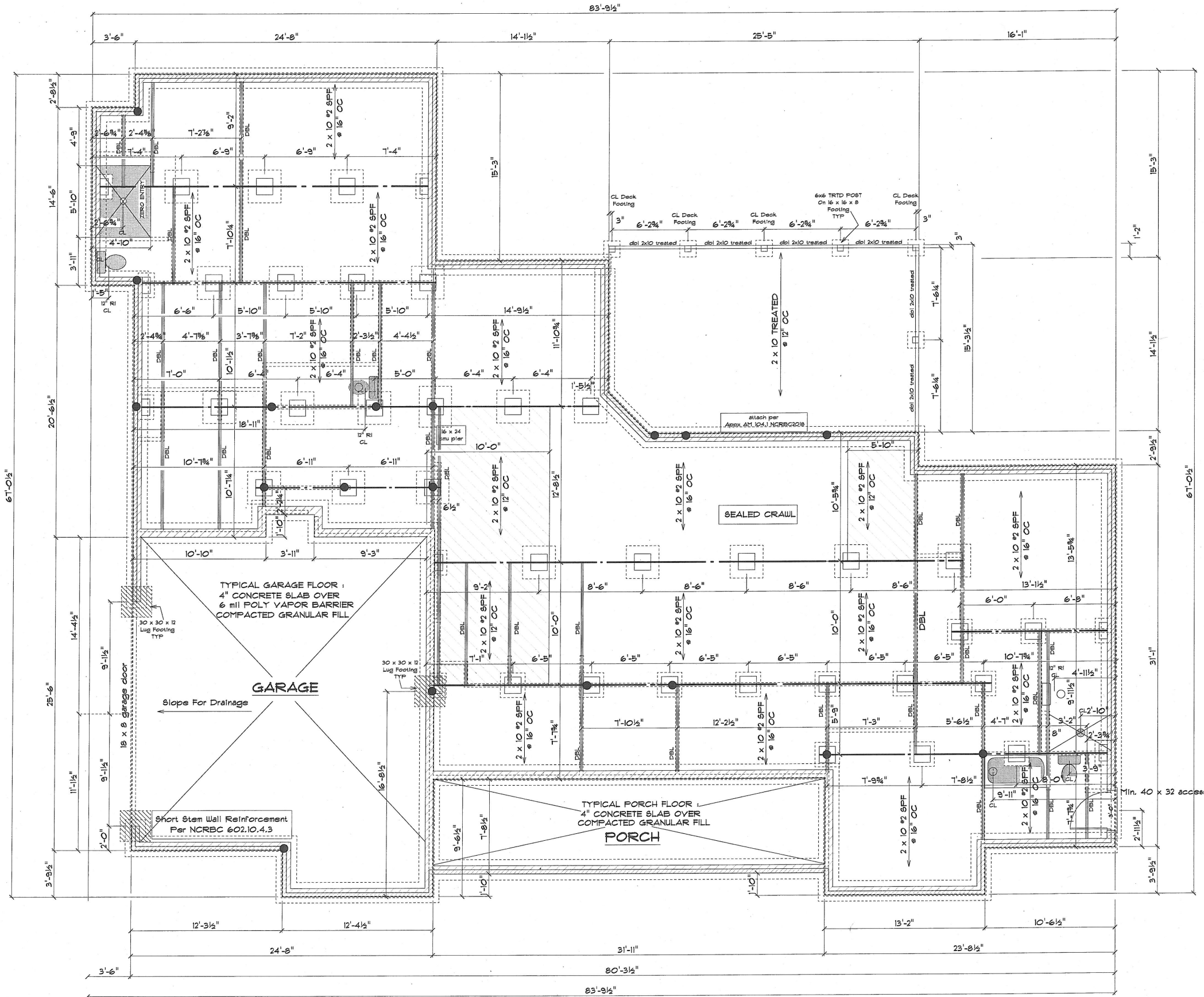
Designed by Brunssen Engineering Services PA  
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Durham, NC 27713



1-25-2021

SCALE 1/4" = 1'-0"	DRAWN BY APPROVED	DATE REVISID	DATE REVISID	11-15-2020	Sheet 4
Mike and Tracey Hyder 00 Jackson Rd. Fuquay Varina NC 27526					



TYPICAL GARAGE FLOOR:  
4" CONCRETE SLAB OVER  
6 mil POLY VAPOR BARRIER  
COMPACTED GRANULAR FILL

GARAGE

TYPICAL PORCH FLOOR:  
4" CONCRETE SLAB OVER  
COMPACTED GRANULAR FILL

PORCH

SEALED CRAWL



1-25-2021

- General Notes:  
All Symbols Unless Otherwise Noted (AON)
- 8" Masonry (4" brick block) w/ 8" solid cap on 18" x 8" Continuous Footing 3000 PSI Concrete
  - 8" CMU Wall w/ 8" solid cap on 20" x 8" Continuous Footing 3000 PSI Concrete
  - 3 Ply 2 x 10 GYP Gilder
  - Double 2 x 10 Floor
  - Wall from floor above
  - Operable vinyl crawl vent
  - 16" x 16" w/ 8" solid cap masonry pier on 24" x 24" x 10" footing 4000
  - 8" x 16" w/ 8" solid cap masonry pier on 24" x 24" x 10" footing
  - Point Load Above Solid Block to Bearing
- 1/2" x 10" anchor bolts w/ T-embed to be installed on all foundation walls @ 6' OC 4 within 12" of corner
- TRANSFER ALL POINT LOADS FROM ABOVE TO FULL BEARING
- DESIGNED TO NCRBC 2018
- Vent Calculations
- Venting Requirement
- Provide 100% of ground surface covered with an approved vapor barrier and vents are located within 3 feet of each corner.
- XXXX/500 = XX Sq. Ft. of vent required  
VENTS PROVIDE 31 SQ FT OF NET FREE AREA EA.  
XXXX/0.31 = XXX Vents Required  
XXXX VENTS PROVIDED \*\*\* SEALED CRAWL \*\*\*\*

Designed by Brunssen Engineering Services PA  
Fritz Brunssen - NC registered engineer. The Drawings meet the requirements of the 2018 NC State Building Code: Residential Code and App. "M". The engineering seal indicates all Code Requirement have been met.

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0 Jackson Rd. Fuquay Varina, NC 27526

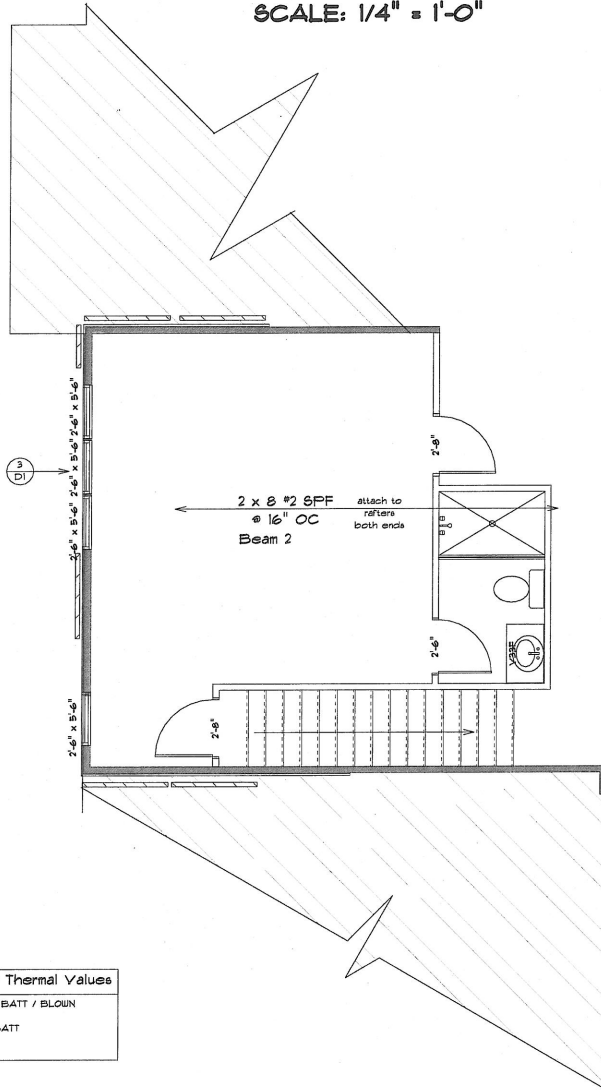
SCALE 1/4" = 1'-0"  
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DATE 11-15-2020  
REVISID  
Sheet 5

**2ND FLOOR STRUCTURAL PLAN**

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



**Insulation / Thermal Values**

CEILING - R-38 BATT / BLOWN  
 WALL - R-15  
 FLOOR - R-19 BATT  
 U FACTOR .31  
 SHGC .28

**Beam Schedule**

beam #	beam size	support
Beam 1	double 1.75 x 24 LVL - portal frame	4 studs / 4 studs
Beam 2	double 1.75 x 24 LVL - Stack on Beam 1	/ 6 Studs
Beam 3	double 1.75 x 14 LVL - 3 Studs	/ 3 Studs
Beam 4	double 1.75 x 9.25 - 4 studs	/ 4 studs
Beam 5	double 1.75 x 9.25 - 4 studs	/ 4 studs
Beam 6	double 1.75 x 9.25 - 2 studs	/ 2 studs
Beam 7	double 1.75 x 9.25 - 4 studs	/ Simpson HHUS410
Beam 8	double 1.75 x 18 LVL - 6 Studs	/ 4 studs
Beam 9	double 1.75 x 9.25 - 4 studs	/ 4 studs
Beam 10	double 1.75 x 18 LVL - 6 Studs	/ 4 cripple
Beam 11	double 1.75 x 14 LVL - 5 Studs	/ 5 Studs
Beam 12	double 1.75 x 9.25 - 2 studs	/ 2 studs
Beam 13	double 1.75 x 9.25 - 2 studs	/ 2 studs
Beam 14	double 1.75 x 9.25 - 2 studs	/ 2 studs
Beam 15	double 1.75 x 14 LVL - 5 Studs	/ 5 Studs
Beam 16	double 1.75 x 9.25 - 3 studs	/ columns / 3 studs
Beam 17	double 1.75 x 14 LVL - 4 Studs	/ Studs

Windows exceeding height requirements per NCRBC 612.2  
 Must have opening limiters installed per NCRBC 612.4

**Bracing Shall Be CS-WSP**

END CONDITIONS SHOWN  
 NCRBC R602.10.1

800 lb tie down

24" Braced Wall Panel

48" Braced Wall Panel

Designed to NCRBC2018

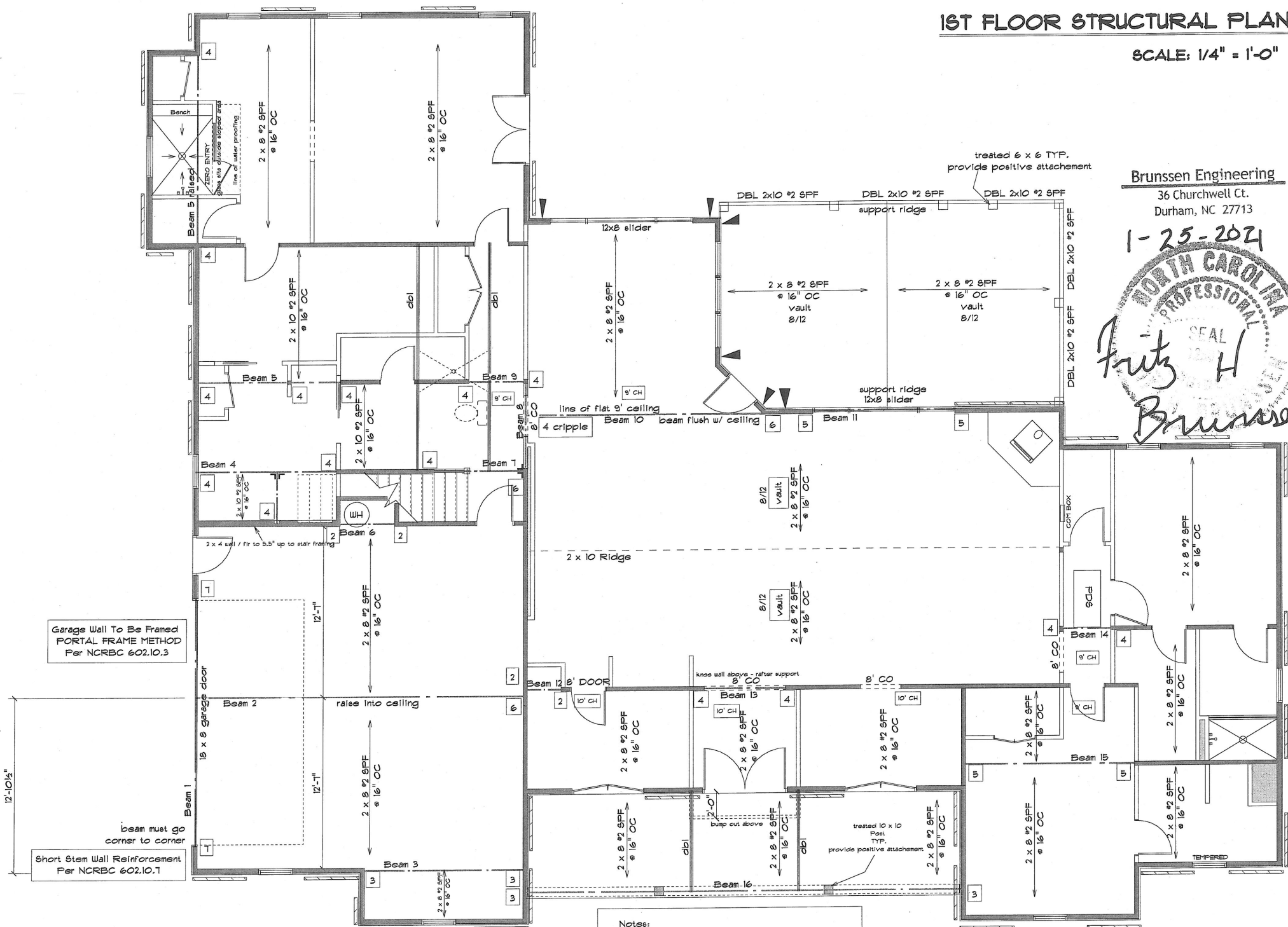
**Dwelling / Garage Separation**

SEPARATION	MATERIAL
From the Residence and Attics	Not less than 1/2 gypsum board or equivalent, applied to the garage side
From all habitable rooms above garage	Not less than 5/8 Inch TYPE X gypsum board or equivalent
Structure(s) supporting floor/ceiling assemblies used for separation required by this code	Not less than 1/2 Inch gypsum board or equivalent
Garages located less than 3 ft. from a dwelling unit on the same lot	Not less than 1/2 inch gypsum board or equivalent, applied to the interior side of exterior walls that are within this area lot
Door from Garage to House	Min. 2 hour fire rated

All stairs / landings shall meet or exceed NCRBC2018 R311.1 and R312  
 All Exterior Porches / Decks / Screen Porches Shall have Rail & Guards where required  
 Exterior Rails and Guards shall meet or exceed NCRBC2018 AM111

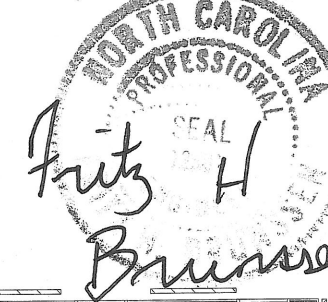
**1ST FLOOR STRUCTURAL PLAN**

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



**Brunssen Engineering**  
 36 Churchwell Ct.  
 Durham, NC 27713

1-25-2021



**Notes:**

All headers to be 2 x 8 unless otherwise noted

Indicates wall floor above / below

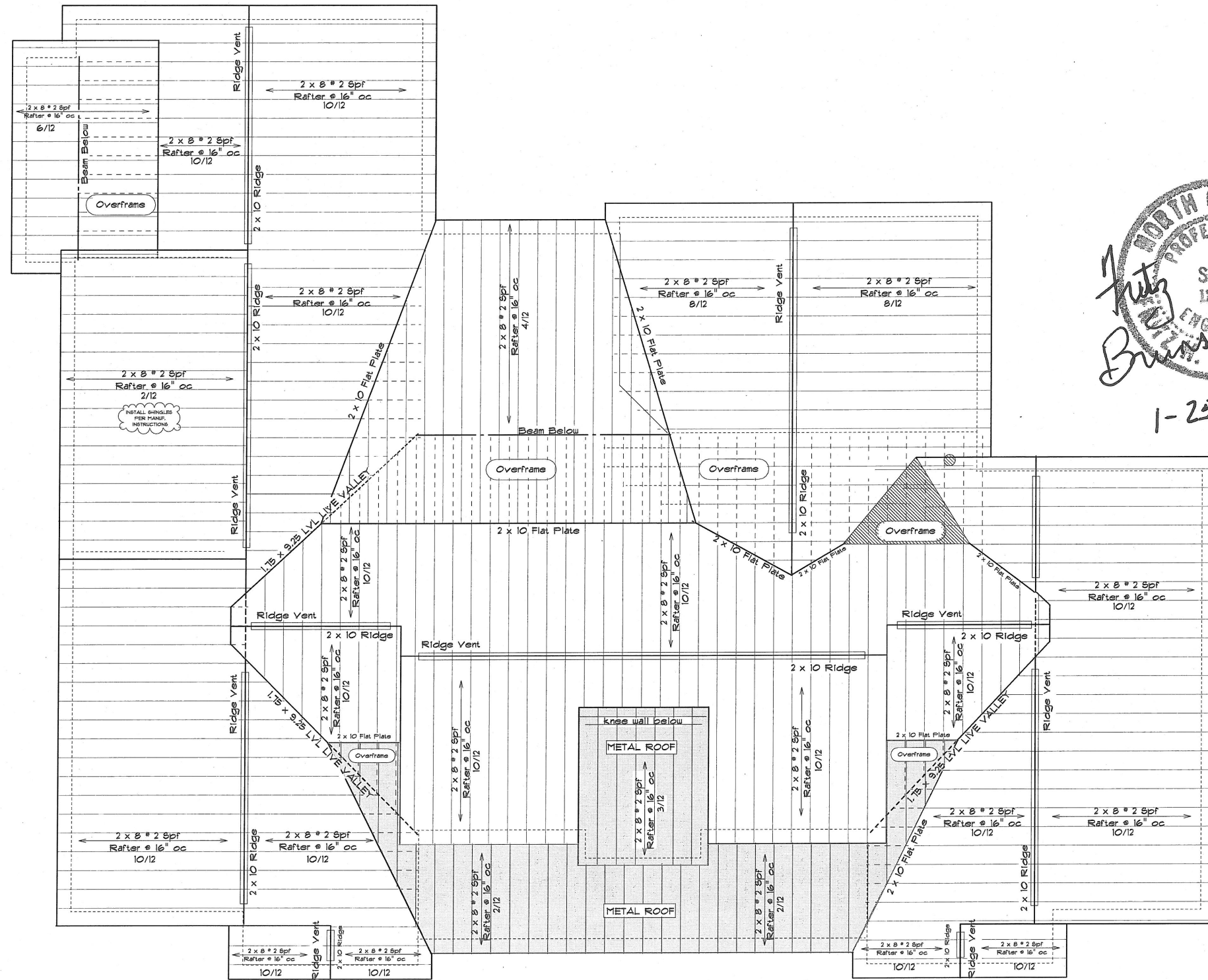
Indicates bearing wall

Stud under double and triple joists for full bearing

stud column (see beam chart for # of jack studs reqd.) all other stud columns to be 2 studs unless otherwise noted.

Simpson HUS-210 or similar unless otherwise noted

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*1-25-2021*

**Professional Seal:**  
NORTH CAROLINA  
PROFESSIONAL SEAL  
12381  
MICHAEL BRUNSEN  
ENGINEER

**Roof General Notes:**  
All rafters to be 2 x 8 spf U.O.N.  
All Ridge to be 2 x 10 spf U.O.N.  
All Overhangs to be 12" U.O.N.  
Dormer and screen porch Overhangs to be 12" in front 6" on sides.  
All Shingle Types to be installed per manufacturers instructions over 15lb felt attached per code.

**Roof Venting Calculations:**  
Roof Area = 3131  
3131 / 300 = 10.44 Sq. Ft. of Net free Area Req.  
Install Minimum 50% Venting and no more than 80% in upper areas of roof.  
Use continuous soffit vent.  
185 Linear Ft. Provided = .0625 Sq. Ft. Net free Area  
185 x .0625 = 11.66 Net free Area  
Ridge vent Provided  
140 Linear Ft. Ridge Vent Provided = 16.1 Sq. Ft. per Linear Ft. Net free Area  
140 x 16.1 = 2254.6/144 = 15.65 Net free Area  
Total Soffit Venting Provided = 11.66 Sq. Ft.  
Total Ridge Venting Provided = 15.65 Sq. Ft.  
Total Net free Area Provided = 27.31 Sq. Ft.  
Total required = 10.44 Sq. Ft.

Mike and Tracey Hyder  
OO Jackson Rd. Fuquay Varina NC 27526

SCALE 1/4" = 1'-0"  
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