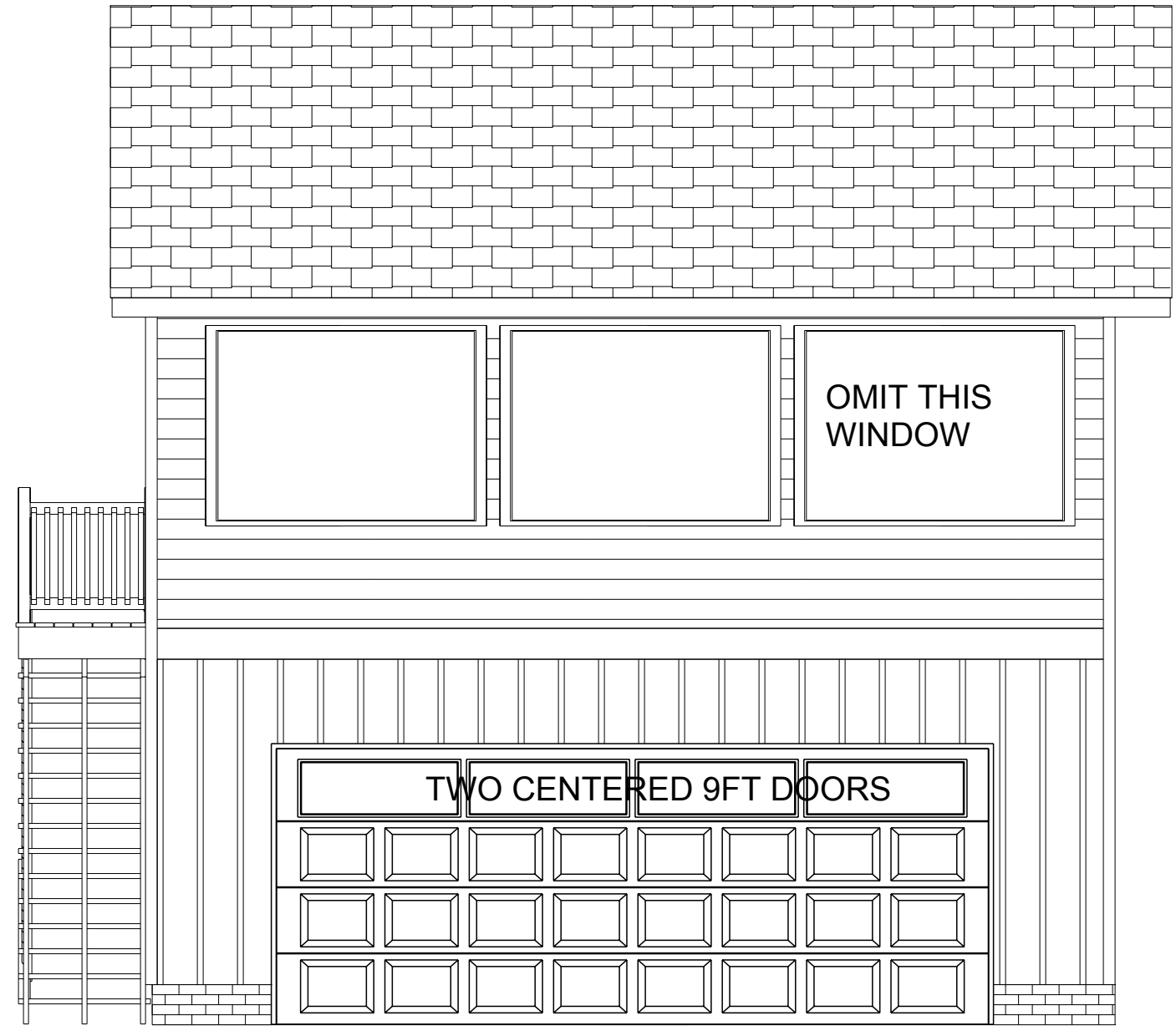
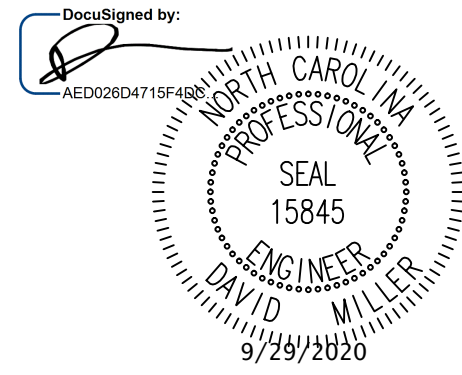
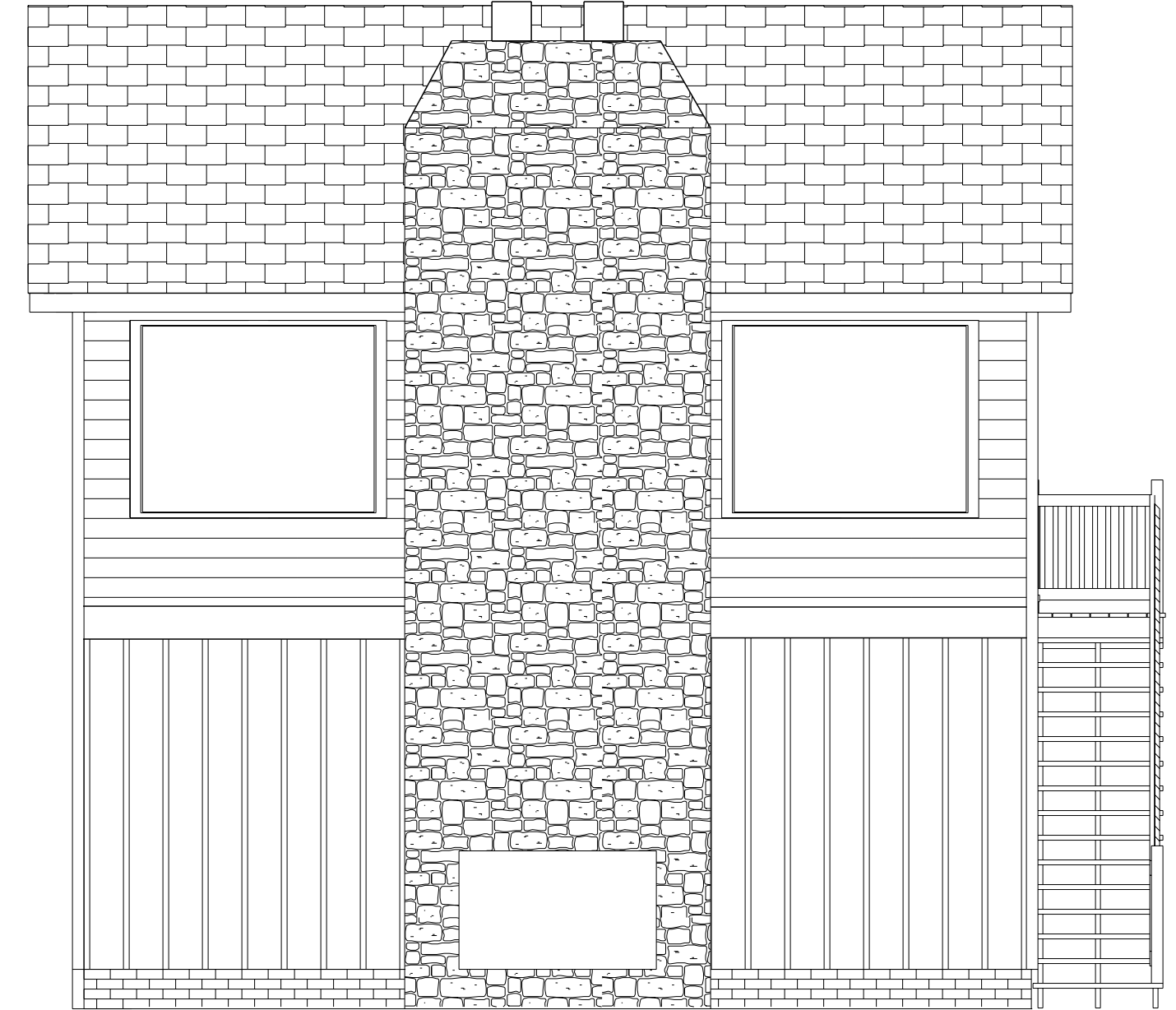


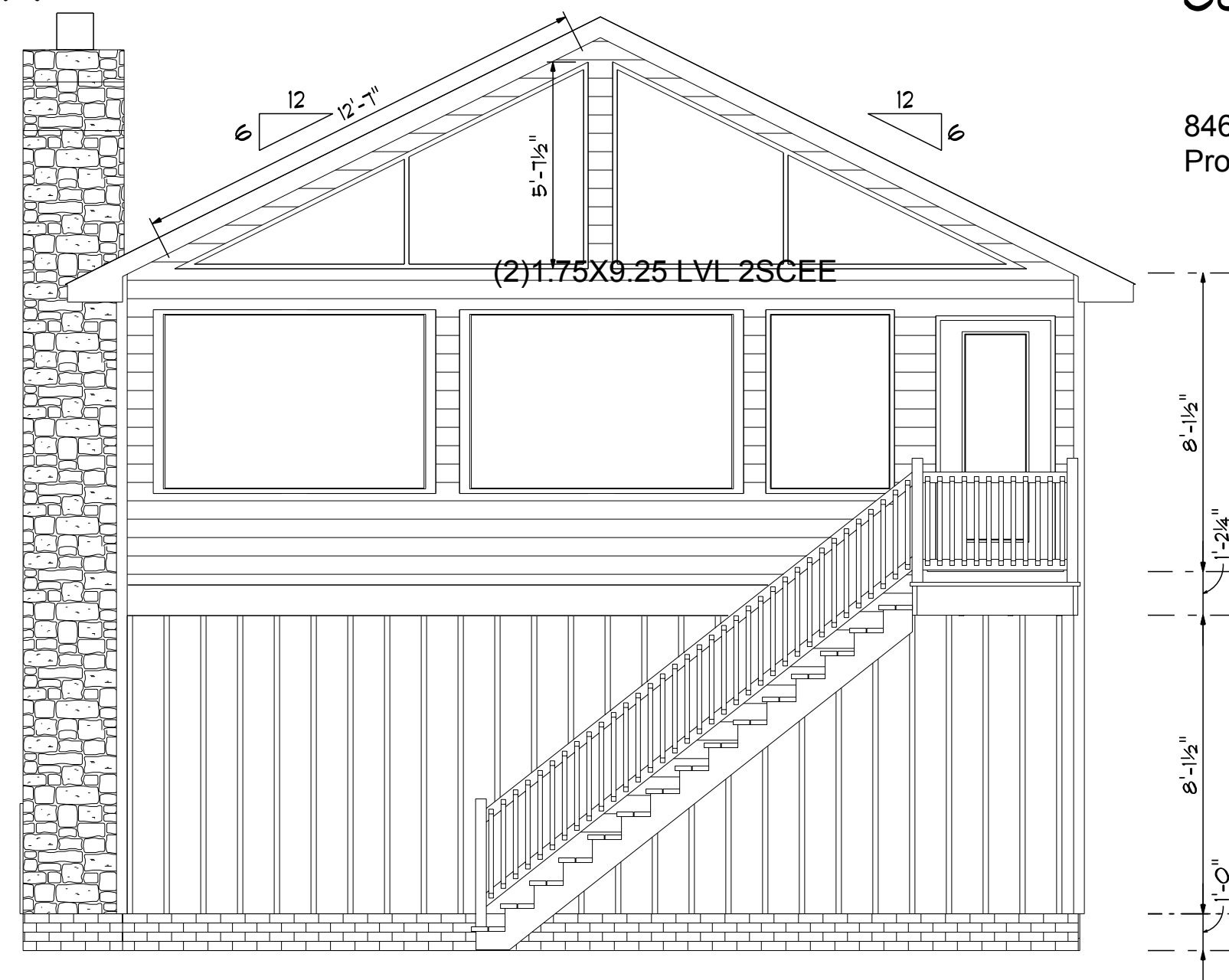
DAVID MILLER, PE  
6300 Creedmoor Rd, STE 170#363  
Raleigh, NC 27612  
(919) 422-8932 (Office)  
DAVE@DMA-PA.COM  
STRUCTURAL MEMBERS ONLY



**Left Elevation**  
Scale: 1/8" = 1'0"

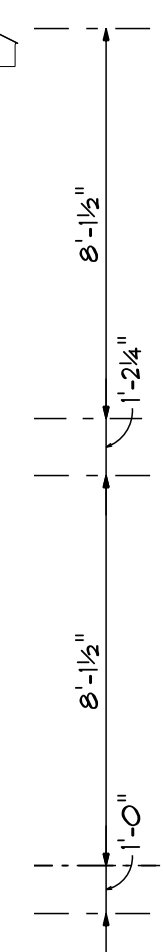


**Right Elevation**  
Scale: 1/8" = 1'0"



**Rear Elevation**  
Scale: 1/8" = 1'0"

Engineering - Structural - Garage Addition  
846 Keith Hills Road; Lillington, Harnett County, NC  
Project No.: 20DDM-0929C



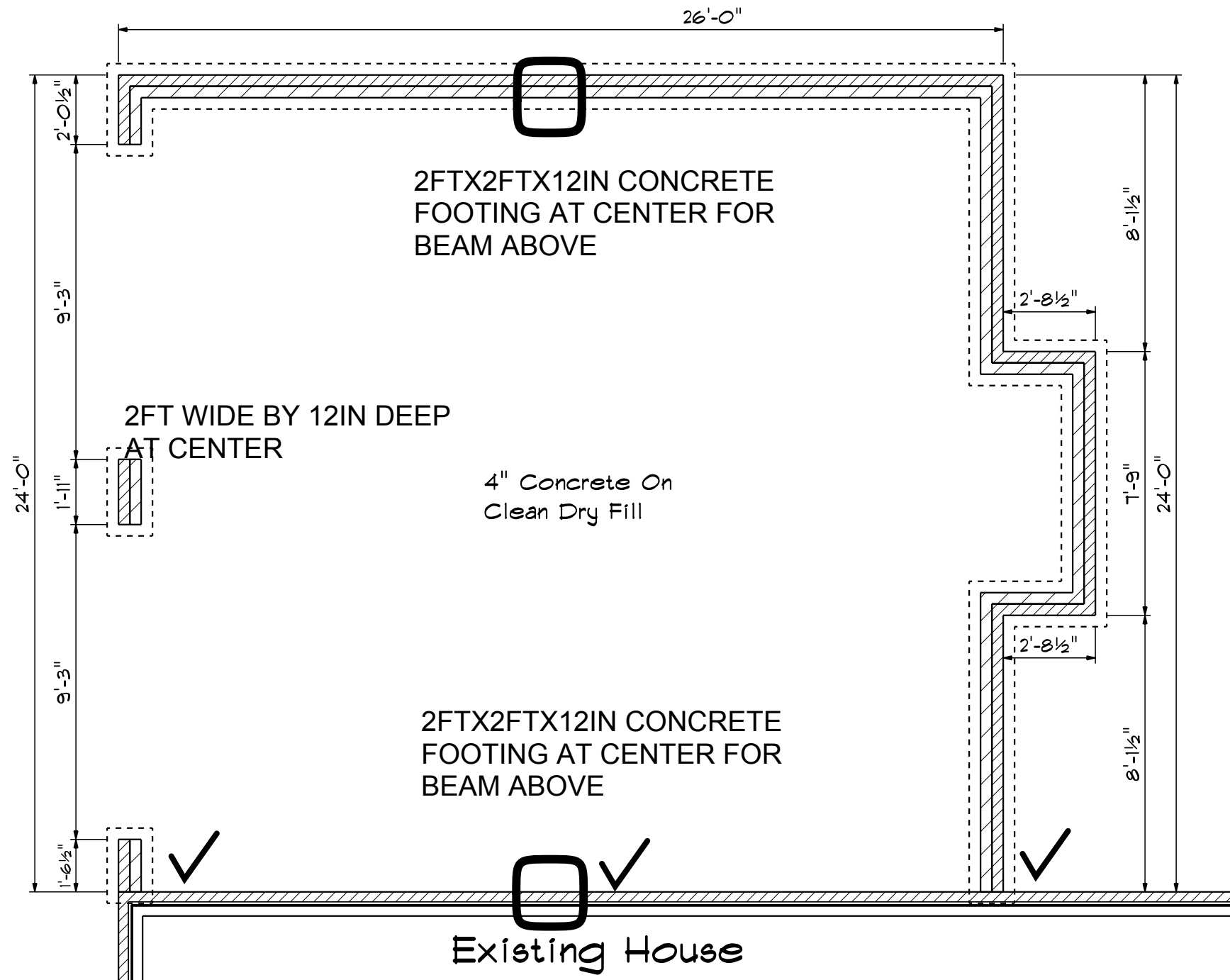
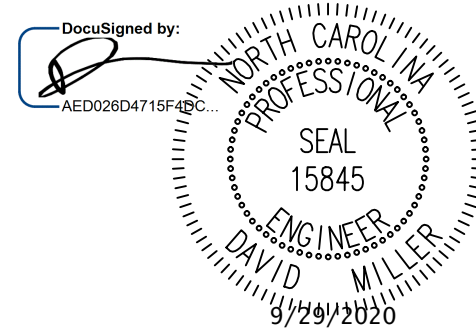
DATE: 9/18/2020  
REVISED  
DRAWING#

SCALE: 1/4"  
DRAWN BY  
APPROVED

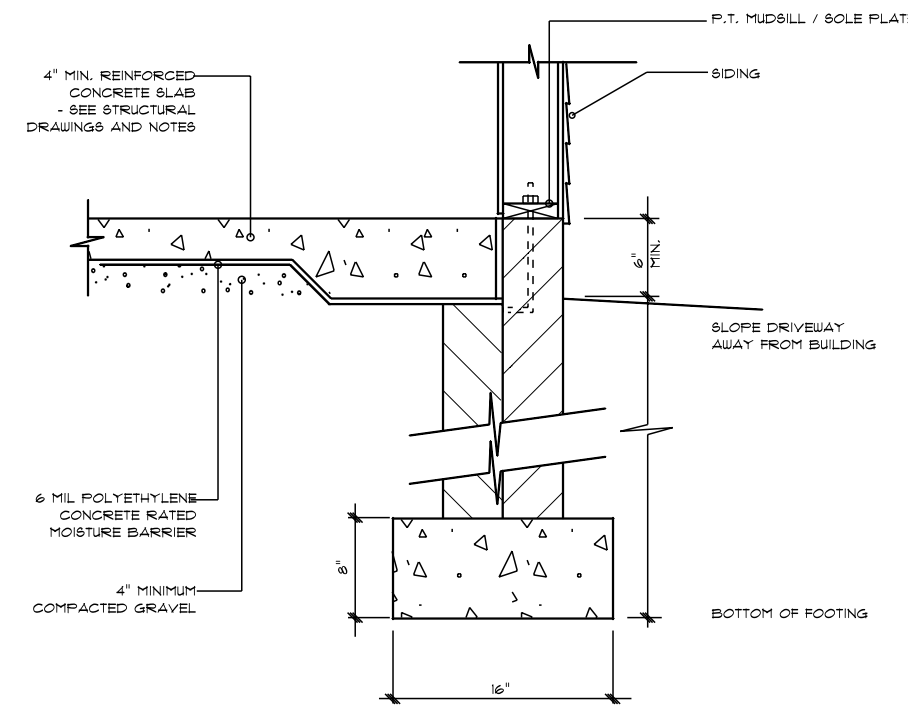
**Attached Garage**

DAVID MILLER, PE  
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Foundation Plan  
Scale: 1/4" = 1'-0"



STEM WALL FOOTING DETAIL

WITH EXCEPTION OF THE THREE LOCATIONS SHOWN

✓ DRILL AND DOWEL INTO EXISTING FOOTINGS (LUG AT 2FTX2FTX12IN)

DATE: 9/18/2020  
REVISED  
DRAWING#

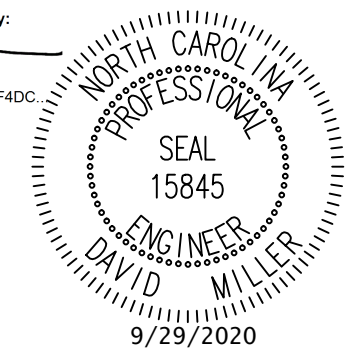
SCALE: 1/4"  
DRAWN BY  
APPROVED

Attached Garage

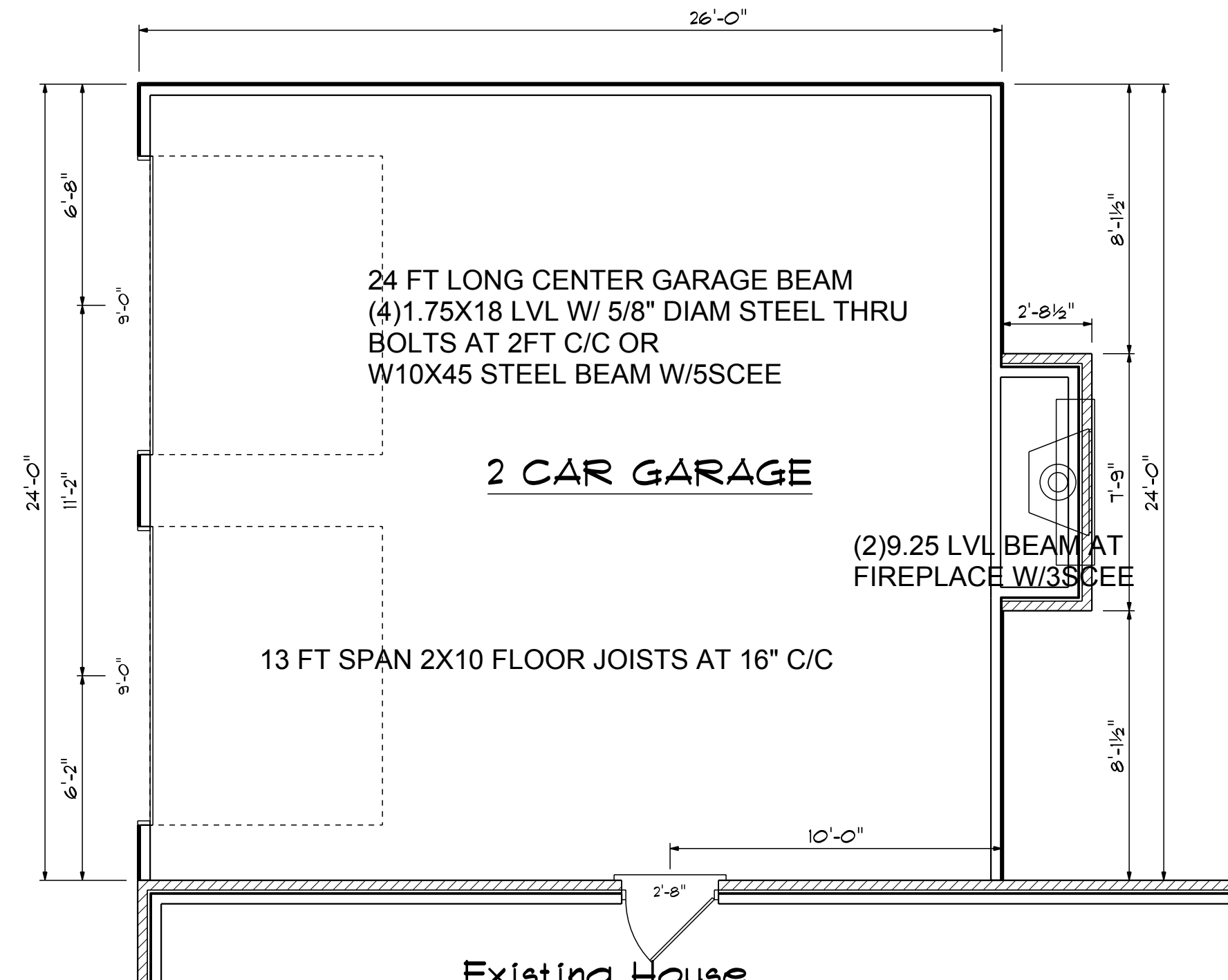
DAVID MILLER, PE  
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STRUCTURAL MEMBERS ONLY

Engineering - Structural - Garage Addition  
846 Keith Hills Road; Lillington, Harnett County, NC  
Project No.:20DDM-0929C

DocuSigned by:  
AED026D4715F4DC

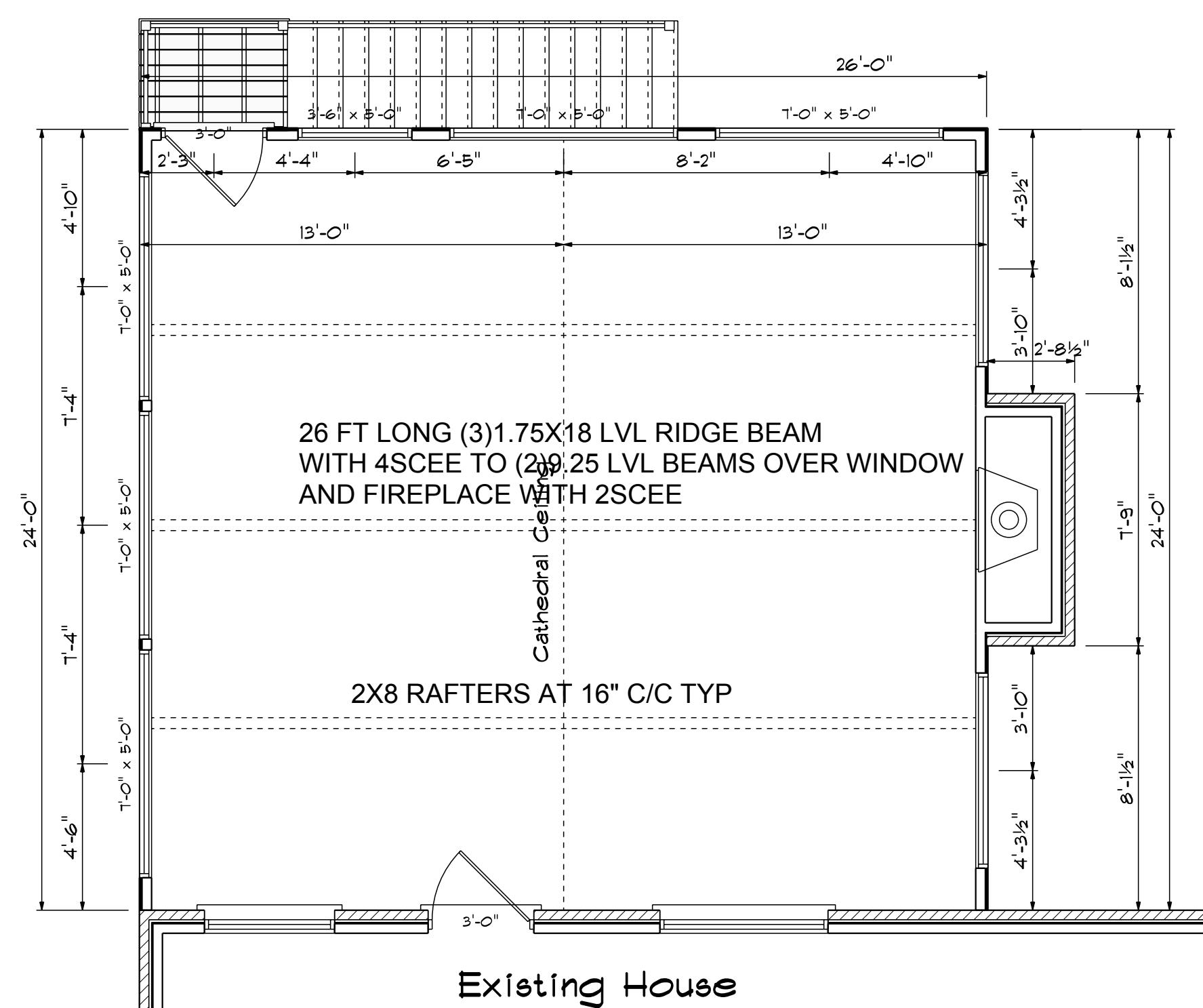


GARAGE DOOR BEAM  
(2)1.75X11.25 LVL CONTINUOUS PER R602 PORTAL FRAME



Existing House  
**First Floor Plan**  
Scale: 1/4" = 1'-0"

ALL WINDOW HEADERS (2)2X10 W/2SCEE  
UNO



Existing House  
**Second Floor Plan**  
Scale: 1/4" = 1'-0"

DATE: 9/18/2020
REVISED
DRAWING#
SCALE: 1/4"
DRAWN BY
APPROVED

Attached Garage

# DAVID MILLER, PE

6300 Creedmoor Rd, STE 170#363  
Raleigh, NC 27612

(919) 422-8932 (Office); [DAVE@DMA-PA.COM](mailto:DAVE@DMA-PA.COM)

September 29, 2020

Gary Robinson Homes  
Adam Weaver  
919 868 9679

[lauren.grhomes@gmail.com](mailto:lauren.grhomes@gmail.com) ; [aweaver1225@centurylink.net](mailto:aweaver1225@centurylink.net) ; [adamw.grhomes@gmail.com](mailto:adamw.grhomes@gmail.com)

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RE: Engineering - Structural - Garage Addition  
846 Keith Hills Road; Lillington, Harnett County, NC  
Project No.: 20DDM-0929C

To Whom It May Concern:

The undersigned has reviewed the plans attached and has designed and analyzed the structural members for the plans for the garage addition for the above referenced site.

The attachment of the garage plans were analyzed for the 2018 Residential North Carolina State Building Code (NCSBC). The roof rafters should be 2X8's at 16" c/c on a 6:12 pitch to a 26 foot long (3)1.75X18 LVL structural ridge for the planned cathedral ceiling. The window headers should be (2)2X10's with the exception of the rear elevation below the ridge beam which should be a (2)1.75X9.25 LVL. All headers for the windows should have a (2)2X4 stud column each end (SCEE) to adequately transfer and support the loading conditions. The ridge should be supported by a (4)2x4 SCEE and will bear on a (2)1.75X9.25 LVL over the fireplace with 2SCEE to adequately transfer and support the loading conditions. All rafters should be attached to the top plate with a Simpson H2.5 hanger and the ridge should have a Simpson CS16 twist strap at least 9 inches over the beam to the stud columns.

The second floor should have 2X10 floor joists spanning 13 feet at 16" c/c to either a (4)1.75X18 LVL with 5/8" diameter steel through bolt every 2 ft c/c or a steel W10X45 beam 26 feet long to support the floor loading conditions. The floor joists should be supported by a continuous (2)1.75X11.25 LVL garage header per the R602 portal frame requirements. The rear portions at the fireplace opening should have a (2)1.75X9.25 LVL with 3SCEE to adequately transfer and support the loading conditions.

Sincerely,

David Miller, PE

DEM/20DDM-0929C

