



HAYES STRUCTURAL
Consulting & Design, PLLC

NC FIRM LICENSE NO.: P-2854
1991 EDDIE HOWARD ROAD | WILLOW SPRING, NC 27592
ZACH@HAYESSTRUCTURAL.COM | (919) 210-3480

Date: March 4, 2024

To: Kyle Terrett
Provision Building Co
PO Box 10092
Raleigh, NC 27605

Re: 24-FRM-019
Framing Inspection
50 Alban Row
Fuquay-Varina, NC 27526

Mr. Terrett:

At your request, a site visit was made to the above referenced single family residence to inspect the fire-damaged roof framing members within the walk-up attic. Additionally, the permitted plan set for the attic conversion was reviewed.

Observations:

1. The rafters at the rear side of the attic above the kitchen and living room were observed to have minor to moderate charring, with the worst charring at the top of the rafters. The rafter ties and collar were observed to have moderate to severe charring. The rafters above the front side of the attic above the dining room and foyer were observed to have minor charring. Review of the permitted plan set revealed a large shed dormer to be constructed at the rear side of the attic and a gable dormer to be constructed at the front side of the attic.
2. The 2x10 ridge and furring strip spanning left to right above the center of the attic were observed to have minor to moderate charring. The worst charring was observed along the underside of the furring strip.
3. The (2) 2x10 hip at the left rear side of the attic above the secondary bedrooms was observed to have moderate to severe charring.

Recommendations:

1. The noted rafters at the rear side of the attic may remain in place, however, each rafter is to be reinforced with an additional 2x8 rafter sistered with (3) staggered rows of 10d nails spaced 16" o.c. Added rafters are to be fastened to the ridge with (3) 10d toe nails. Reinforced rafters at the new rear dormer are to be cut back to bear on the new LVL flush beam as specified on the permitted structural plans. The charred rafter ties are to be removed and replaced with new ceiling joists per the permitted structural plans. The charred collar ties are to be removed and new 2x4 collar ties are to be installed at a maximum spacing of 48" o.c. per code. The noted rafters at the front side of the attic do not require reinforcement.

2. The noted 2x10 ridge may remain in place. The noted charred furring strip is to be removed and replaced with a new 2x furring strip to allow the rafters to have full bearing. The furring strip is to be fastened to the ridge with (1) row of 10d nails spaced 8" o.c.
3. The noted (2) 2x10 hip is to be removed and replaced with a new (2) 2x10 hip. Plies of the hip are to be fastened with (3) staggered rows of 10d nails spaced 16" o.c. Rafters supported by the hip are to be fastened to the hip with (3) 10d toe nails.

Temporary support of the existing framing during construction is the responsibility of the framing contractor. New framing lumber is to be SYP #2 or SPF #2 or better. All construction is to conform to the 2018 North Carolina Residential Code and is to be verified by a municipal inspector. I recommend consulting a restoration contractor to clean and seal the fire and smoke-damaged framing members remaining in place prior to installing wall and ceiling finishes.

Please call me if you have any questions.

Respectfully submitted,

Zachary H. Hayes, PE
Owner/Structural Engineer
Hayes Structural Consulting & Design, PLLC



Digitally signed
by Zachary H.
Hayes, PE
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