



March 28, 2024

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Reference: Engineering Services
50 Otto Rd.
Lillington, NC 27546
TE&D Project No.: DRB2301-0466_B

To Whom It May Concern;

As requested, a representative of Tyndall Engineering & Design, PA (TE&D) was on-site to observe the following items:

1. LVL over addition not installed per plan.
2. Analysis of spliced rafters.
3. Analysis of (2) 2 x 10 girder.
4. Floor joists not installed per plan.

The following conclusions and recommendations were noted:

1. We observed a (2) 2 x 10 beam spanning left to right supporting the ceiling of the addition was installed in lieu of the (2) 1-3/4" x 11-7/8" LVL specified in the structural plan. Based on our observations and analysis, the existing configuration is inadequate to support the anticipated loading conditions. TE&D recommends replacing the existing beam with a (2) 1-3/4" x 11-7/8" LVL per plan.
2. We observed the rafters were spliced with an approximate 7'-10" long member at the lower end. Based on our observations and analysis, the existing configuration is inadequate to support the anticipated loading conditions. TE&D recommends installing new continuous 2 x 8 rafters at 16" o.c. spanning from the ridge to the exterior wall. The new rafters are to be fastened to the existing lower portion of the rafter splices with (3) rows of 10d nails at 4" o.c. 2 x 4 collar ties are to be fastened to the new rafters at 32" o.c.
3. We observed a (2) 2 x 10 girder spanning left to right supporting the floor at the center of the addition was installed in lieu of the (3) 2 x 10 girder specified on the plans. Based on our observations and analysis, this configuration is adequate to support the anticipated loading conditions. No further modification is required.
4. We observed the floor of the addition was framed with 2 x 10 joists at 16" o.c. spanning up to 14'-8". Based on our observations and analysis, the existing configuration is inadequate to support the anticipated loading conditions. TE&D recommends sistering an additional 2 x 10 joist to every third existing joist.



Upon completion, the framing modifications listed above will provide the required support for the anticipated loading conditions. We appreciate being able to assist you during this phase of the project. If you need further assistance or require additional information, please do not hesitate to contact us.

Sincerely,
Tyndall Engineering & Design

Prentice Tyndall Jr., P.E.
JMW | DRB2301-0466_B

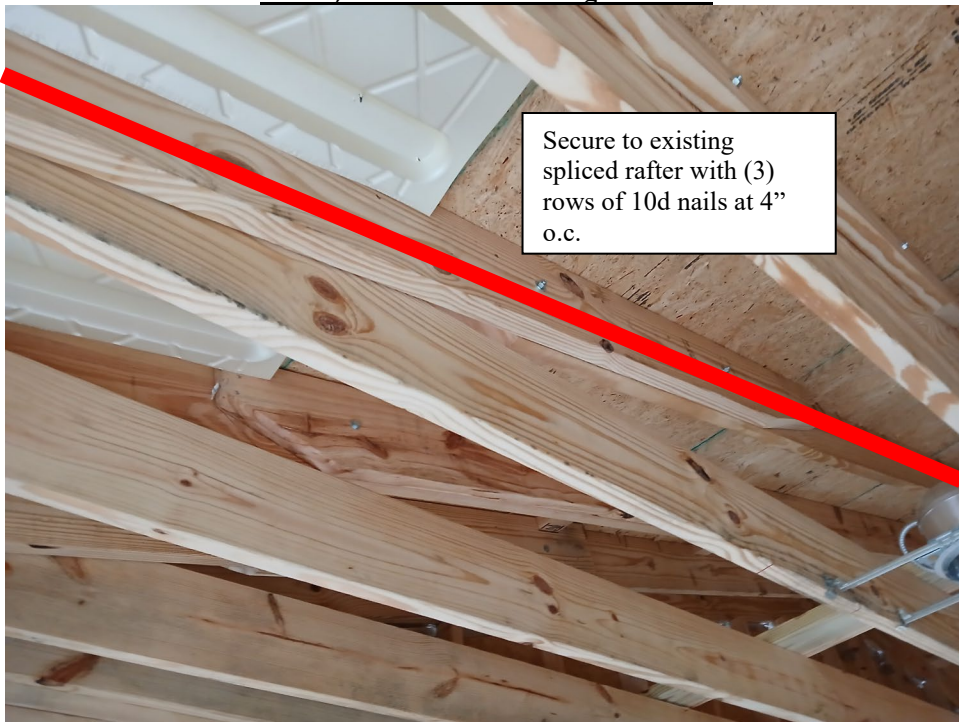




Item 1) Install (2) 1-3/4" x 11-7/8" LVL Per Plan.



Item 2) Install New Full-Length Rafters





Item 3) Girder Analyzed.



Item 4) Double Every 3rd Joist

