



# Takla Engineering, PLLC

NC Firm License # P-1952

Consulting | Design | Efficiency

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**Project:** Prince Place Lot 22  
**Location:** Fuquay Varina, NC  
**Company:** Davidson Homes  
**Care Of:** Lee Aversano  
**Subject:** Roof Truss Repairs  
**Job Number:** 2-2671-22



As requested, Andy Takla, PE visited the above referenced site on June 6th, 2022 to review the damage and provide a repair recommendation to the following damaged roof trusses.

1) A total of 4 trusses extending from the rear LVL (1st story ceiling) to the rear of the rear porch are damaged. The right most truss has already undergone some repairs. Moving forward, we recommend the following additional reinforcement:

A) Ensure each in-place gusset plate is fastened with (2) 10d x 1.5" nails spaced at 3" on center to all adjoining truss members.

B) Install 8' long 2x4 scabs to both sides of the top chord, centered where top chord and field framed top chord meet. Attach with (2) 10d nails spaced at 3" on center.

C) Where vertical web over porch is slightly misaligned with loose mending plate, we recommend realigning the vertical web and applying a 16"x16"x 1/2" OSB gusset plate to both faces. Center on the joint and attach with (2) 10d x 1.5" nails spaced at 3" on center.

2) To the other 3 trusses at this area we recommend the following:

A) Removing existing scab repairs at the forward vertical web and install a 2' wide x 8' tall OSB gusset plate to both faces of the truss at the forward bottom chord joint. Attach with (2) 10d x 1.5" nails spaced at 3" on center to all adjoining truss members.

B) Install an additional 8' long 2x4 scab to both faces of the truss directly atop the OSB gusset plates; Attach with (2) 10d nails spaced at 3" on center.

C) Where bottom chords are cracked at any of these 4 trusses. Install a 8' long 2x4 scabs to both sides of the bottom chord, centered at the damage and attach with (2) 10d nails spaced at 3" on center.

3) Where bottom chord tie plate is loose at the center of the room to the right of the rear porch, we recommend installing an additional and identical (minimum 4' long) 2x4 scab to the opposite face of the truss, centered on the tie plate. Ensure both scabs are attached with (2) 10d nails spaced at 3" on center.

Limitations of Inspection: Services provided are in accordance with the standard of practice for structural engineering, the North Carolina Residential Code (2018 edition) and within the limits imposed by scope, schedule and budget. The determinations contained in this report are based on conditions observed at the time of the evaluation. No guarantees or warranties, expressed or implied, under this agreement or otherwise, shall be construed in connection with services provided. Sequencing, shoring, means and methods of construction are considered beyond the scope of this report. All information used to form decisions and recommendations provided to engineer are taken as truthful. Takla Engineering assumes no responsibility for untruthful statements provided by any party. Lastly, while every effort has been made to ensure accuracy in the preparation of this document, the maker cannot guarantee against human error nor evaluations of structural elements which are concealed from visual inspection.

