



Wise Engineering
3915 Old Fairground Rd.
Angier, NC 27501
(919)894-2203

August 14, 2020

Jarid James

Subject: 5586 US 401 N, Fuquay Varina, NC 27526

Mr. James,

At your request, I reviewed the proposed roof structure for a deck covering being constructed at your residence. Specifically, I analyzed a timber truss for use as the deck roof structure.

Based on my analysis, the trusses may be constructed of 4x6 sawn lumber (SYP) as described below. The king post truss should consist of a middle "king" post, 2 top chord (or rafter members), and a single bottom chord. The king post trusses should be constructed of 4x6's fastened together with TimberLok screws (4 per connection minimum). The trusses should be spaced 3'-0" on center and span approximately 13 ft. The top chord to bottom chord connections as well as the king post to top and bottom chord connections should be supplemented with "Strap Ties" (or plates) such as Simpson Strong-Tie PS418PC or equivalent. In addition, as an option, the truss may have struts if desired, but are not needed structurally. The actual roof covering can be supported over these trusses by use of purlins and 2x4 rafter plates.

Additionally, the 6x6 beam (truss supports) located on each side of the roof structure should span a maximum of 9' between supports. 6x6 corner braces may be used to reduce the actual span between post.

If you need additional information or have other questions, please let us know.

Sincerely,

Randy K. Wise, PE

