

RJB, P.E., P.A.

C-0269

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November 25, 2020 (Revised: 11/28/20)

Harnett County Building Inspections
P.O. Box 65
Lillington, NC 27546

REF: Structural Inspection of Roof
1876 NC 87 N
Vicky Olive, Don White Res.
Sanford, N C 27332

Dear Sir/Madam:

I made an onsite visit to the above referenced Residential site on November 24, 2020. The purpose of the visit was to examine the Roof structure to see if the roof will support the additional loading of 3.04 pounds per square foot for a solar panel array.

The roof materials and construction is as follows:

Materials: The roof rafters are a full 2x6 Southern Yellow Pine #1 Dense with a Bending stress of fb 2000. (The grading is based on the age of the SLP)
The roof sheathing is a full 2x6 boards.
The ridge beam is a full 2x10 SYP.

Construction: The rafters are placed 16 inches on center and spanning approximately 17'-6".

There is a structural supporting knee wall at approximately the center of the rafter span which increases the supporting factor of the rafters.

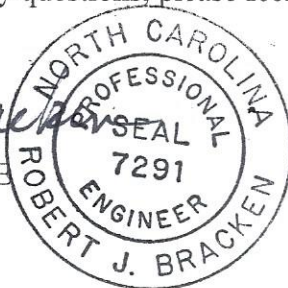
There is also a foam insulation applied to the roof which increases the supporting factor.

The roof will support the additional 3.04 pound per square foot load applied by the Heliene 96M480 Solar Panel and will meet or exceed the requirements set forth in the North Carolina Residential Building Code, 2018,ed. for roof loading.

If you have any questions, please feel free to contact me @ 919-774-6074.

Sincerely,

Robert J. Bracken
Robert J. Bracken, PE



RJB:jeb