

WILKINS ENGINEERING, P.C.

Post Office Box 37446

Raleigh, NC 27627

January 26, 2021

Mr. Chris Wrenn
129 Kipling Road
Fuquay Varina, N.C. 27526

REFERENCE: Metal Building Construction
129 Kipling Road
Fuquay Varina, N.C.

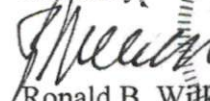
Dear Mr. Wrenn:

I have reviewed the design drawing provided by you for the rigid frame metal frame building to be constructed at the above referenced location. My findings and recommendations are outlined below.

The structural design for this building was provided by Metallic Building Company of Houston, Texas for Carolina Metal Structures. The design drawings (project 0605-199945) were issued for construction March 18, 2002. The design parameters given on the design drawings show a wind design velocity of 80 MPH. The result of increasing the design wind velocity on a rigid frame structure is that horizontal and vertical reactions at the base of the structure are increased proportionally. Rigid frame base reactions for a structure of the size shown on the design drawings would be on the order of 8 kips horizontal and 12 kips vertical at each rigid frame depending on the direction of the wind load. This is a "worst case" load evaluation and these loads are not realized at the end wall frames. I have checked the anchor bolt and base plate design shown on the design drawings and find them structurally adequate to carry the aforementioned loads. These loads should be used to determine the size of footings at the base plate locations. In discussions with a manufacturer who produces the same rigid frame structures I was advised that this structure will meet increased design wind velocity of 115 MPH requirement in the 2018 Code. Accordingly, this pre-manufactured structure can be constructed at your location without any upgrade or addition to the rigid frame.

I hope you find this information useful. If you have any questions, or require additional information, please do not hesitate to contact me.

Sincerely,



Ronald B. Wilkins, PE

