



# ENGINEERING, INC.

Consulting Structural and Civil Engineers

5907 Raytown Trafficway  
Raytown, Missouri 64133  
816-356-1445

November 21, 2024

Development Services  
Building Inspections  
220 SE Green  
Lee's Summit, MO 64063

**Re: 1404 NE Ernest Way  
PRRES20236587**

To Whom it May Concern,

This letter will address the connection of one of the headers at the rear covered porch to the house structure. This was partially addressed in my letter dated August 26, 2024.

The header is connected to the wall framing with a Simpson LSCZ bracket, normally used as a stair stringer connector. 8 - 10d nails connect the bracket to the header and 16 - 10d nails connect the bracket to the house. The roof above the header is hipped so the load to the header is triangular with the larger load being at the end that connects to the house.

The load width at the big end is 7 feet with a dead and live load totaling 30 psf. The load width at the corner of the deck is 0 feet. The header length is 12 feet. The reaction at the house is  $(210 \text{ plf} \times 12' / 2) \times 2/3 = 840$  pounds. The normal installation of the bracket is bent around the end of the stringer. It is assumed that the allowable load is based on the nails connecting to the stringer rim board which is half of the nails that are used for the bracket. This bracket is straight so we can assume that the allowable load for this application can be based on all of the nails or double what is listed in the catalog. For standard installation, the connector capacity from the catalog is 650 pounds. Doubling that would be 1300 pounds which is greater than the actual load of 840 pounds.

It is my opinion that the bracket used to connect the header to the house is adequate to support the anticipated design load.

If there are any questions, please let me know.

Yours truly,

Albert Hermans, P.E.

