



CIVIL ENGINEERING CONSULTANTS

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September 6, 2019

Attn: Kevin Stallings
Dreams and Designs Homes
P.O. Box 7014
Lee's Summit, MO 64064

RE: Monticello, Lot 37, 4720 N. East Ponoco Circle
Covered patio fastener specification

Dear Mr. Stallings,

We are providing herewith an alternate method to anchor the open roof structure covering the rear patio at the above referenced residential construction. Currently, at the top of a supporting post is a knee-wall to the base of the soffit with a structural header at the top of the wall. Primary force on the post is resisting uplift, a secondary minor force is the hinge-joint induced from lateral loads at the knee wall.

In order to resist the uplift at the post, a Simpson Strong Tie CS18 may be applied to the interior face of the post, extending from the rafter to the post. A minimum of 8 ~ 10d fasteners and a nine-inch end length is required at each end of the strap (rafter/header and post). Strap shall be continuous over the knee-wall framing.

The forces on the interior hinge-joint are adequately resisted by the same strap as specified above. The forces at the exterior of the hinge joint are adequately resisted by exterior sheathing (smart siding or other system) extending from the top of the header, to six inches past the top of the column. If an alternate trim method is required for the top of the column, a framing plate below the sheathing at the bottom of the knee-wall can be added (or above sheathing with an offset plate similar to LTP5). An additional alternative may consist of a continuous 2x6 member along the side exterior length of the rafter-knee wall-post assembly extending 12 inches down the post. Fasten the member to the assembly with 16d at four inches on center, staggered.

If there are any questions regarding this analysis, please contact our offices.

Very Truly Yours,

R.E.O. ENGINEERING, P.C.

By: , President
Aaron D. Obermiller, P.E.

