

March 28, 2022

Summit Homes
 120 SE 30th St.
 Lee's Summit, MO 64082


RE: Field Issue of studs at daylight window and top plate connection for Lot #91 Manor at Stoney Creek – 4420 SW Alabaster Cir Lee's Summit, MO 64082 – Permit # PRRES20213077

Top plate connection for 2x4 wall at Foyer / garage wall:

- Install 24" length of Simpson CS-16 with (20) .0131" x 2-1/2" nails per manufacturer's specs at the corner of foyer / garage wall.
- Install strap on wall top plate and pony wall top plate attached to nearest structural member on front door wall.

Model No.	Total L	Ga.	DF/SP		SPF/HF		Allowable Tension Loads (160)	Code Ref.
			Fasteners	End Length	Fasteners	End Length		
CMST12	40"	12	(74) 16d (86) 10d	33" 39"	(84) 16d (96) 10d	38" 44"	9,215 9,215	I4, L3, FL
CMST14	52 1/2"	14	(56) 16d (66) 10d	26" 30"	(66) 16d (76) 10d	30" 34"	6,490 6,490	
CMSTC16	54"	16	(50) 16d shaker	20"	(58) 16d shaker	25"	4,585	
CS14	100"	14	(26) 10d (30) 8d	15" 16"	(30) 10d (36) 8d	16" 19"	2,490 2,490	
CS16	150"	16	(20) 10d (22) 8d	11" 13"	(22) 10d (26) 8d	13" 14"	1,705 1,705	
CS18	200"	18	(16) 10d (18) 8d	9" 11"	(18) 10d (22) 8d	11" 12"	1,370 1,370	
CS20	250"	20	(12) 10d (14) 8d	6" 9"	(14) 10d (16) 8d	9" 9"	1,030 1,030	
CS22	300"	22	(10) 10d (12) 8d	7" 7"	(12) 10d (14) 8d	7" 8"	845 845	

1. Fastener quantities and end lengths are calculated using an increase for wind or seismic loading.
 2. Use half of the required nails in each member being connected to achieve the listed loads.
 3. Calculate the connector value for a reduced number of nails as follows:
 Allowable Load = $\frac{\text{No. of Nails Used}}{\text{No. of Nails in Table}} \times \text{Table Load}$
Example: CMSTC16 in DF/SP with 40 nails total.
 (half of the nails in each member being connected)
 Allowable Load = $\frac{40 \text{ Nails (Used)}}{50 \text{ Nails (Table)}} \times 4,585 \text{ lb.} = 3,668 \text{ lb.}$
 4. Tension loads apply for uplift when installed vertically.
 5. Nails: 16d = 0.162" dia. x 3 1/8" long. 10d shaker = 0.148" dia. x 3 1/4" long.
 10d = 0.148" dia. x 3" long. See pp. 26-27 for other nail sizes and information.



Studs for beam bearing at rec room:

- Install (4) #2 2x6 Douglas Fir Larch studs centered under W8x24 steel beam in basement.

Sincerely,



Bradley Huxol, PE

