

January 13, 2022

Summit Homes  
 120 SE 30<sup>th</sup> St.  
 Lee's Summit, MO 64082

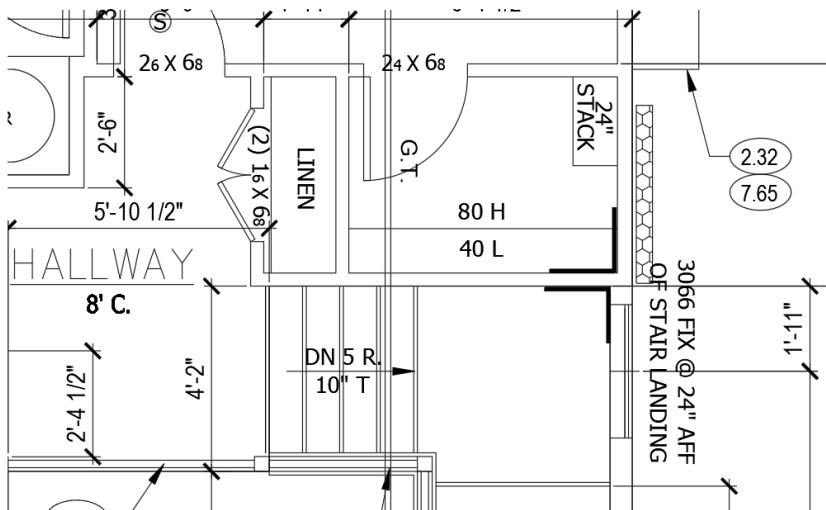
**RE: Field Issue of non-continuous deck post and top plate connection for 2x6 to 2x4 wall at stairs for Lot # 80 Reserve at Stoney Creek – 1426 SW Georgetown Dr. Lee's Summit, MO 64082 – Permit # PRRES20211043**

**Non-continuous deck post:**

- Install 16-gauge ST12 Simpson galvanized straps per post per manufacturer's specifications on both posts for deck and patio covering.
- Install with 16d common nails or #10 x 1-1/2" Strong-Drive SD screws.
- Straps shall be centered over post cut and installed on opposite sides of post.

**Top plate connection at 2x6 wall with 2x4 wall:**

- Install (4) 24" length of Simpson CS-16 with (20) .0131" x 2-1/2" nails per manufacturer's specs and at corner of 2x6 wall with 2x4 wall at stair corner with Bed 4 closet as shown in image below.
- Install strap on upper and lower top plate on both sides of rear Bed 4 closet 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	33"	(84) 16d	38"	9,215	I4, L3, FL
			(86) 10d	39"	(98) 10d	44"	9,215	
CMST14	52 1/2'	14	(56) 16d	26"	(66) 16d	30"	6,490	
			(66) 10d	30"	(76) 10d	34"	6,490	
CMSTC16	54'	16	(50) 16d sinker	20"	(58) 16d sinker	25"	4,585	
CS14	100'	14	(26) 10d	15"	(30) 10d	16"	2,490	
			(30) 8d	16"	(36) 8d	19"	2,490	
CS16	150'	16	(20) 10d	11"	(22) 10d	13"	1,705	
			(22) 8d	13"	(26) 8d	14"	1,705	
CS18	200'	18	(16) 10d	9"	(18) 10d	11"	1,370	
			(18) 8d	11"	(22) 8d	12"	1,370	
CS20	250'	20	(12) 10d	6"	(14) 10d	9"	1,030	
			(14) 8d	9"	(16) 8d	9"	1,030	
CS22	300'	22	(10) 10d	7"	(12) 10d	7"	845	
			(12) 8d	7"	(14) 8d	8"	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:

$$\text{Allowable Load} = \frac{\text{No. of Nails Used}}{\text{No. of Nails in Table}} \times \text{Table Load}$$

**Example:** CMSTC16 in DF/SP with 40 nails total.  
(Half of the nails in each member being connected)

$$\text{Allowable Load} = \frac{40 \text{ Nails (Used)}}{50 \text{ Nails (Table)}} \times 4,585 \text{ lb.} = 3,668 \text{ lb.}$$

4. Tension loads apply for uplift when installed vertically.
5. **Nails:** 16d = 0.162" dia. x 3 1/4" long. 16d sinker = 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.



Sincerely,

Bradley Huxol, PE

