

February 11, 2022

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

RE: Field Issue of over notched floor joist, spliced top plate and spliced double joist for Lot #87 Reserve at Stoney Creek – 1528 SW Georgetown Dr. Lee's Summit, MO 64082 – Permit # PRRES20211818

Over notched floor joist above garage:

- Notch was approximately 3.5" x 3.5" located approximately 1' from steel beam.
- Floor joist is DFL #2 spanning approximately 6.25' with a point load from main floor rafter and an additional point load from second floor roof and exterior wall.
- **Install approximately 3' of CS-16 along bottom of floor joist per manufacturer's spec's.**
- **Center strap as close as possible under notch.**

Spliced top plate at rear garage wall:

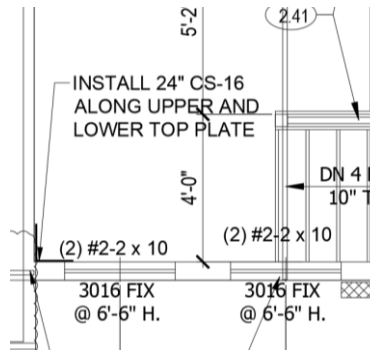
- Rear garage wall top plate was spliced for HVAC for approximately 16".
- **Install approximately 8' of CS-16 along upper and lower top plate per manufacturer's spec's.**

Spliced top plate and floor joist above garage dining:

- Top plate and double joist were spliced for approximately 16" for HVAC.
- **Sister approximately 7.5' of Douglas Fir Larch #2 2x10 to spliced floor joist. Fasten with 4 fasteners per linear foot in a "W" pattern.**
- **Install approximately 4' of CS-16 along upper top plate per manufacturer's spec's.**
- **Install approximately 32" of CS-16 along lower top plate per manufacturer's spec's.**

Spliced top plate at second floor stairs connection of 2x4 to 2x6 wall:

- **Install approximately 2' of CS-16 along upper top plate per manufacturer's spec's as shown in image below.**



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	14, L3, FL
			(86) 10d	39"	(98) 10d	44"	9,215	
CMST14	52½'	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 3½" long. 16d sinker = 0.148" dia. x 3¼" long. 10d = 0.148" dia. x 3" long. See pp. 26-27 for other nail sizes and information.



Sincerely,

Bradley Huxol, PE

