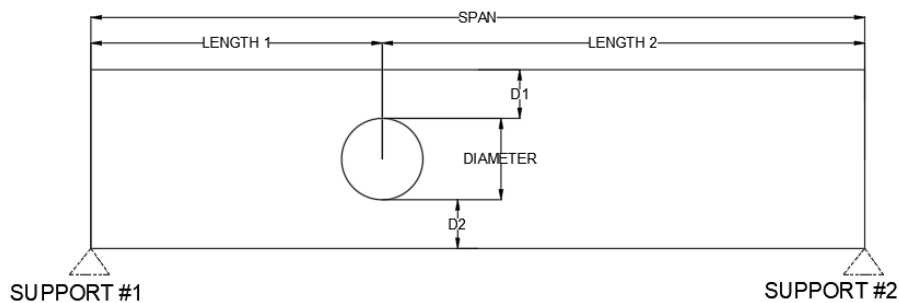


February 1, 2022

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

**RE: Field Issue of overbored hole in floor joist and spliced top plate at garage wall and stair wall
 for Lot # 109 Hawthorne Ridge– 3201 SW Arbortree Dr. Lee's Summit, MO 64082 – Permit # PRRES20212837**

Overbored hole in floor joist above kitchen:



- D1 – 3.25"
- D2 – 2"
- Diameter of hole – 4"
- Length 1 – 2'
- Length 2 – 13'-5"
- Span – 15'-5"
- Support #1 – load bearing wall at kitchen/pantry
- Support #2 – exterior kitchen wall
- Location – above kitchen
- Loading -
 - Dead = 15 psf @ 16" oc
 - Live = 40 psf @ 16" oc
- Install 24" length of CS-16 centered under hole along bottom of floor joist with a minimum of (16) 0.131" x 2-1/2" nails per manufacturer's spec's.

Model No.	Total L	Ga.	DF/SP		SPF/NF		Allowable Tension Loads (KIP)	Code Ref.
			Fasteners	End Length	Fasteners	End Length		
CMST12	40'	12	(16) 16d (66) 16d	30" 30"	(84) 16d (66) 16d	30" 44"	9,215 9,215	
CMST14	52'6"	14	(66) 16d (66) 16d	26" 30"	(66) 16d (76) 16d	30" 34"	6,490 6,490	
CMSTC16	54'	16	(50) 16d (50) 16d	20"	(50) 16d (50) 16d	25"	4,585	
CS14	40'	14	(26) 16d (30) 16d	15" 16"	(30) 16d (36) 16d	16" 19"	2,490 2,490	
CS16	150'	16	(20) 16d (22) 16d	11" 13"	(22) 16d (26) 16d	13" 14"	1,705 1,705	
CS18	200'	18	(16) 16d (18) 16d	9" 11"	(18) 16d (22) 16d	11" 12"	1,370 1,370	
CS20	250'	20	(12) 16d (14) 16d	6" 9"	(14) 16d (18) 16d	8" 9"	1,030 1,030	
CS22	300'	22	(10) 16d (12) 16d	7" 7"	(12) 16d (14) 16d	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 = No. of Nails Used x Table Load
 Example: CMSTC16 in DF/SP with 40 nails total.
 (Half of the nails in each member being connected)
 Allowable Load = 40 Nails (Used) x 4,585 lb. = 3,668 lb.
 4. Tension loads apply for uplift when installed vertically.
 5. Nails: 16d = 0.162" dia. x 3 1/4" long. 18d shank = 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.

Spliced top plate at garage wall:

- Install 24" length of CS-16 centered at splice per manufacturer's spec's at both upper and lower top plate.

Spliced top plate at stair wall joining 2x6 and 2x4 wall:

- Install 24" length of CS-16 centered at splice per manufacturer's spec's at both upper and lower top plate.

Sincerely,



Bradley Huxol, PE

