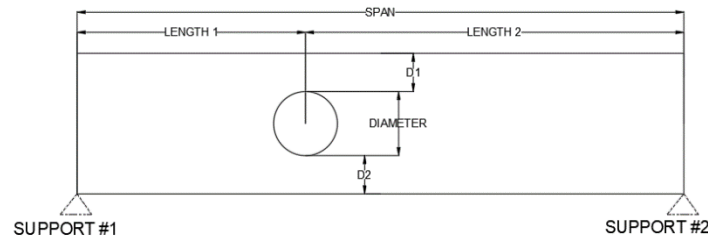


July 11, 2022

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

**RE: Field Issues for Lot #146 Hawthorne Ridge – 3213 SW Arboridge Drive,
 Lee's Summit, MO 64082 – Permit # PRRES20220403**



1. Holes within top 2" in floor joist above garage:

- | | |
|--|---|
| <ul style="list-style-type: none"> • D1 – at or less than 2" • D2 – at least 2" • Diameter of hole – 2" • Length 1 – 3' • Length 2 – 11' • Span – 14' • Support #1 – Load bearing wall, rear of garage • Support #2 – Steel W10 x 17 garage beam • Location – Garage • Loading - <ul style="list-style-type: none"> ◦ Dead = 10 psf @ 16" oc ◦ Live = 40 psf @ 16" oc | <ul style="list-style-type: none"> • D1 – at or less than 2" • D2 – at least 2" • Diameter of hole – 2" • Length 1 – 5.5' • Length 2 – 8.5' • Span – 14' • Support #1 – Load bearing wall, rear of garage • Support #2 – Steel W10 x 17 garage beam • Location – Garage • Loading - <ul style="list-style-type: none"> ◦ Dead = 10 psf @ 16" oc ◦ Live = 40 psf @ 16" oc |
|--|---|

Recommended modifications:

- Install 24" length of CS-16 centered under each hole along bottom of floor joist per manufacturer's specifications.

2. Split floor joist above great room:

- Split in floor joist was approximately 2' in length extending from load bearing rear wall great room.

Recommended modifications:

- Sister a 6' length douglas fir larch #2 2x10 to split floor joist.
- Glue and install four (4) fasteners per linear foot in a "W" pattern.

3. Overbored and less than 5/8" at edge of stud at fireplace:

- Wall has approximately 165 PLF of roof load and exterior wall weight.

Recommended modifications:

- Install SS1.5 stud shoe on overbored stud.
- OR
- Remove blocking and install rotated stud adjacent to overbored stud.

4. Overbored floor joist above bedroom 5:

- D1 – at least 2"
- D2 – at least 2"
- Diameter of hole – 4"
- Length 1 – 1.5'
- Length 2 – 8.5'
- Span – 10'
- Support #1 – Bedroom 5 load bearing wall
- Support #2 – Great room load bearing wall
- Location – Above bedroom 5 closet
- Loading -
 - o Dead = 10 psf @ 16" oc
 - o Live = 40 psf @ 16" oc

Model No.	Total L	Ca	DFSP		SPF/NF		Allowable Tension Loads (lbs)	Code Ref.
			Fasteners	End Length	Fasteners	End Length		
CMST12	40'	12	(1) 16d	31"	(8) 16d	31"	8,275	UL, L.L., F.L.
			(8) 16d	31"	(8) 16d	44"	8,275	
CMST14	52'6"	14	(5) 16d	26"	(8) 16d	30"	6,490	
			(8) 16d	30"	(7) 16d	34"	6,490	
CMSTC16	54'	16	(2) 16d anchor	20"	(6) 16d anchor	25"	4,585	
			(2) 16d	15"	(3) 16d	18"	2,490	
CS14	100'	14	(2) 8d	12"	(2) 8d	12"	2,490	
			(2) 10d	11"	(2) 10d	12"	1,705	
CS16	150'	16	(2) 8d	12"	(2) 8d	14"	1,705	
			(2) 10d	9"	(1) 10d	11"	1,370	
CS18	200'	18	(2) 8d	11"	(2) 8d	12"	1,370	
			(2) 10d	6"	(1) 10d	8"	1,030	
CS20	250'	20	(2) 8d	9"	(1) 8d	8"	1,030	
			(2) 10d	7"	(1) 10d	7"	845	
CS22	300'	22	(2) 8d	7"	(1) 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 value.
 3. Calculate the connector value for a reduced number of nails as follows:
 Allowable Load = No. of Nails Used
 No. of Nails in Table X Table Load
 Example: CMSTC16 in DFSP with 40 nails total.
 (Half of the nails in each member being connected)
 Allowable Load = 40 Nails Used
 40 Nails in Table X 4,585 lb. = 2,490 lb.
 Allowable Load = 50 Nails (75d/4d)
 4. Tension loads apply for uplift when installed vertically.
 5. Nails: 16d = 0.162" dia. x 3 1/2" long. 10d anchor = 0.148" dia. x 3 1/4" long.
 10d = 0.148" dia. x 3" long. See pp. 25-27 for other nail sizes and information.

Recommended modifications:

- Install 24" length of CS-16 centered under hole along bottom of floor joist per manufacturer's specifications.

Sincerely,



Bradley Huxol, PE

