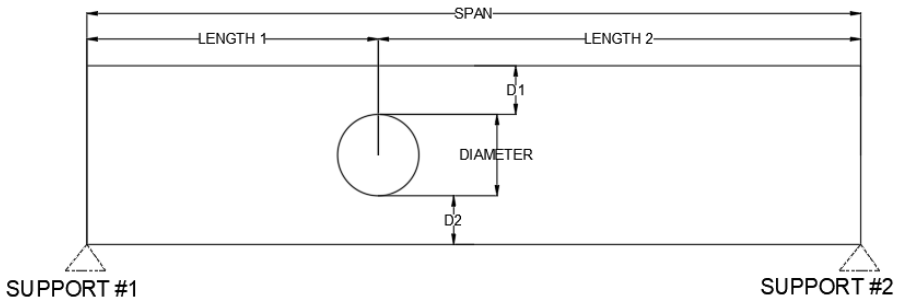
EVERSTEAD
ENGINEERING & DESIGN

May 13, 2022

Clover & Hive
120 SE 30th St.
Lee's Summit, MO 64082

RE: Field Issue of holes in bottom 2" of floor joists and top plate splice for DWV for Lot #7 Osage – 3711, 3713, 3715, 3717 SW Walsh Dr. Lee's Summit, MO 64082 – Permit # PRRES20213590

This letter addresses the holes in bottom 2" of floor joists for electrical and top plate splice for Lot#7 Osage.



- D1 – 6.75" – 5.75"
- D2 – 1"- 2"
- Diameter of hole – 1.5"
- Located throughout

Recommended modifications:
Install a 36" length of CS16 strap per manufacturer's specs entered under the hole along the bottom of each overbored floor joist.

Top plate splice:
- Top plate is spliced for DWV

Recommended modifications:
Connect spliced ends of top plate with a minimum 16 gage x 1.5" metal tie with (8) 10d nails on each side.

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	
			(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	I4, L3, FL
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.

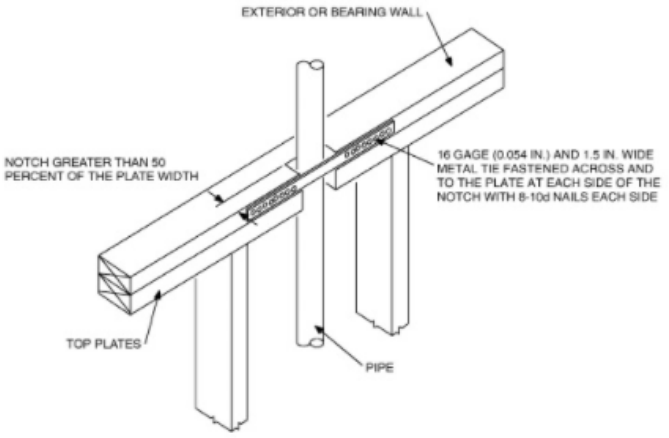


FIGURE R602.6.1TOP PLATE FRAMING TO ACCOMMODATE PIPING

Sincerely,

Bradley Huxol, PE

STATE OF MISSOURI
BRADLEY HUXOL
NUMBER PE-2011000903
PROFESSIONAL ENGINEER