



HD Engineering & Design

Solutions for all your engineering and design needs

FRAMING INSPECTION ITEM RESPONSE

7/15/2022

SAB HOMES

RE: SOLAIA PLAN (HF025)

2023 SW HOOK FARM DR

LEE'S SUMMIT, MO.

Our firm has been asked to address a rough framing inspection item for the home being built at the location listed above. At the time of inspection the home was in a rough framed state. Please find below our firm's response and recommendations for the item.

Great Room Wall Framing

The inspector has questioned the great room wall construction. The framers have constructed a 10' 2x4 wall with a continuous header and placed a gable wall on top of the lower wall. To allow the wall to transfer load and perform as intended our firm recommends placing 20 ga. coil strap running from the header up onto the studs of the upper wall. The straps will be placed at 32" on center fastened per the manufacturer's recommendations and have an end length of 9".

With the addition of the coil strapping per the attached calculation our firm recommends approval of the wall for transfer of code loads.

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted engineering practices. No warranties, either express or implied, are intended or made.

We appreciate the opportunity to be of service to you on this project. If you have any questions regarding this report, please contact us.

Very truly yours,
HD ENGINEERING & DESIGN, INC.

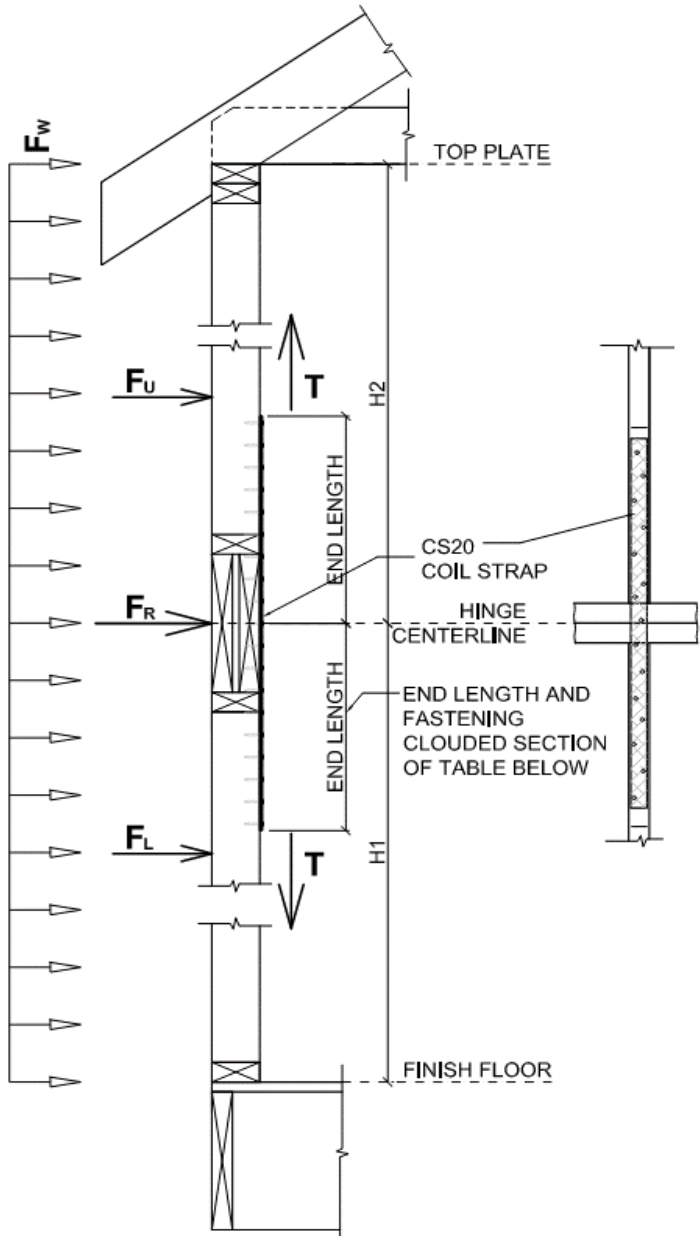
John Hulse, Principal



STRUCTURAL REVIEW
HD ENGINEERING & DESIGN
HD: 42762 DATE: 7/15/2022

BUILDING LOCATION: 2023 SW HOOK FARN DR (HF025)

WALL LOCATION: GREAT ROOM REAR WALL

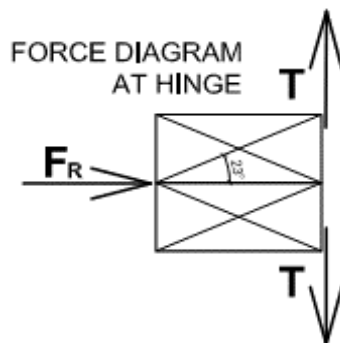


WALL HINGE TENSION STRAP CHECK

INPUT	VALUE
(W) WIND LOAD (psf)	14.4
(TS) TENSION STRAP SPACING (in)	32
(H1) LOWER WALL HEIGHT (ft)	10
(H2) UPPER WALL HEIGHT (ft)	5

CALCULATED VALUES

Fw (lbs/ft)	38.4
Wx(TS/12)	
Fu (lbs)	192
H2 x Fw	
FL (lbs)	384
H2 x W	
FR (lbs)	288
FL/2 + Fu/2	
T (lbs)	457.3881
FR x TAN(23)	
CS20 = 1,030 ALLOWABLE/ Tv < 1,030# = O.K.	



TENSION STRAP CHECK (T <= 1,030# = O.K.)

Model No.	Total L	Ga.	DF/SP		SPF/HF		Allowable Tension Loads (160)	Code Ref.
			Fasteners (in.)	End Length	Fasteners (in.)	End Length		
CMST12	40'	12	(74) 0.162 x 2 1/2	33"	(84) 0.162 x 2 1/2	38"	9,215	IBC, FL, LA
			(86) 0.148 x 2 1/2	39"	(98) 0.148 x 2 1/2	44"	9,215	
CMST14	52 1/2'	14	(56) 0.162 x 2 1/2	26"	(66) 0.162 x 2 1/2	30"	6,475	
			(68) 0.148 x 2 1/2	30"	(78) 0.148 x 2 1/2	34"	6,475	
CMSTC16	54'	16	(50) 0.148 x 3/4	20"	(58) 0.148 x 3/4	25"	4,690	
CS14	100'	14	(26) 0.148 x 2 1/2	15"	(30) 0.148 x 2 1/2	16"	2,490	
			(30) 0.131 x 2 1/2	16"	(36) 0.131 x 2 1/2	19"	2,490	
CS16	150'	16	(20) 0.148 x 2 1/2	11"	(22) 0.148 x 2 1/2	13"	1,705	
			(22) 0.131 x 2 1/2	13"	(26) 0.131 x 2 1/2	14"	1,705	
CS20	250'	20	(12) 0.148 x 2 1/2	6"	(14) 0.148 x 2 1/2	9"	1,030	
			(14) 0.131 x 2 1/2	9"	(16) 0.131 x 2 1/2	9"	1,030	

