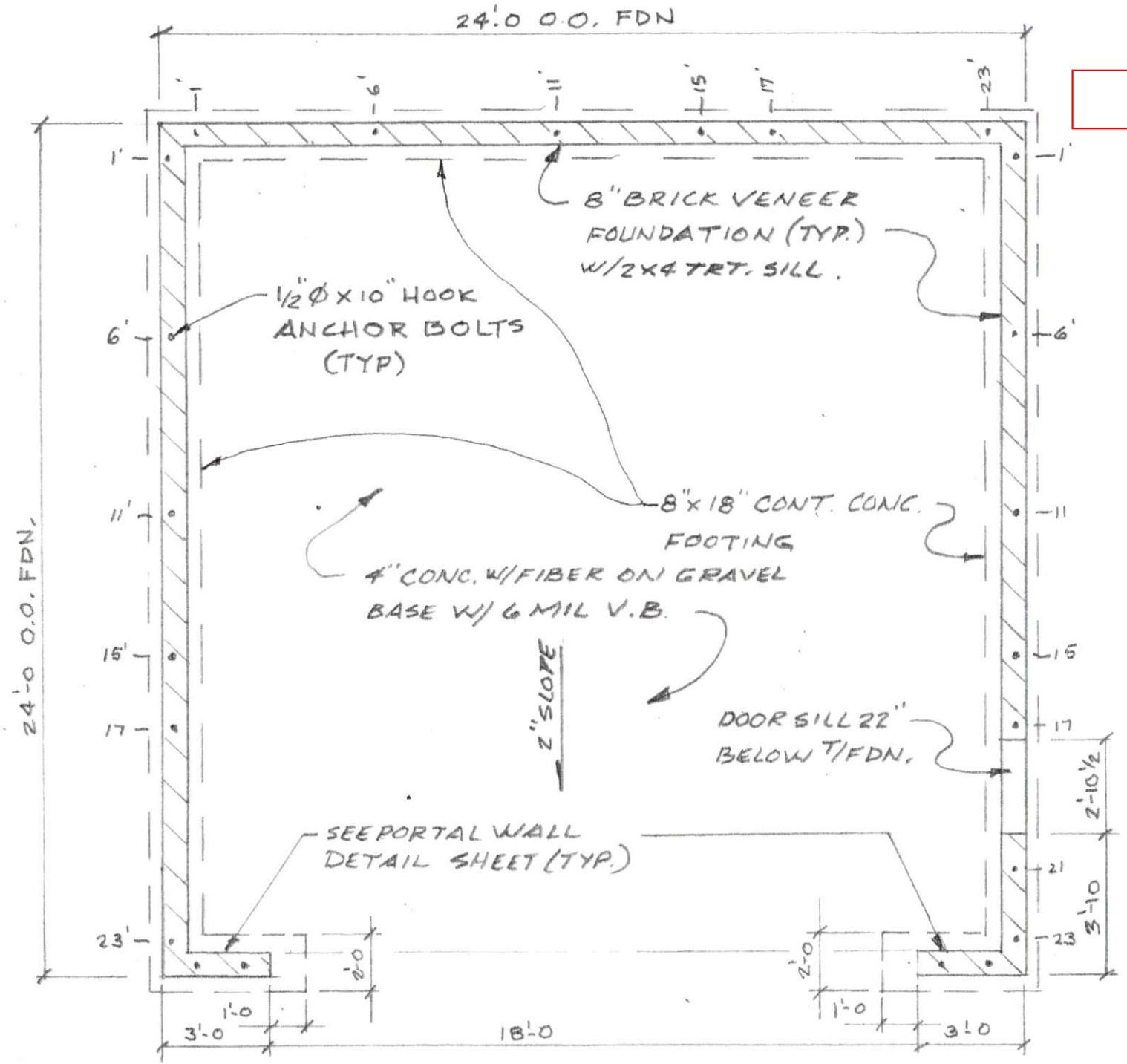

FOUNDATION PLAN 1/4"=1FT.

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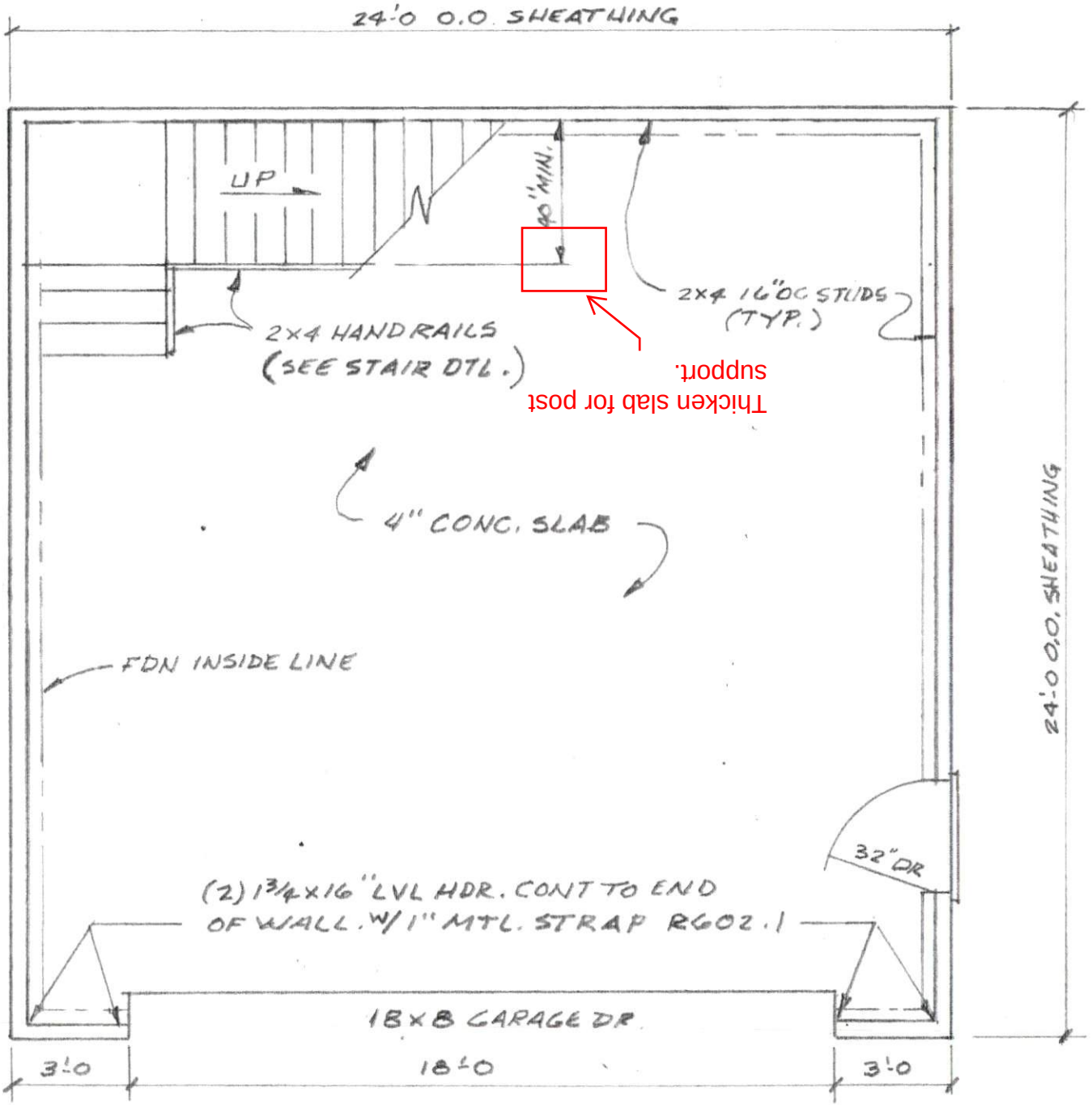
Approved
Harnett County, North Carolina
Date 07/31/2019



NOTES:
1) (2) 2x8 HDR ON ALL DOORS & WINDOWS

1ST FLOOR PLAN 1/4" = 1FT.

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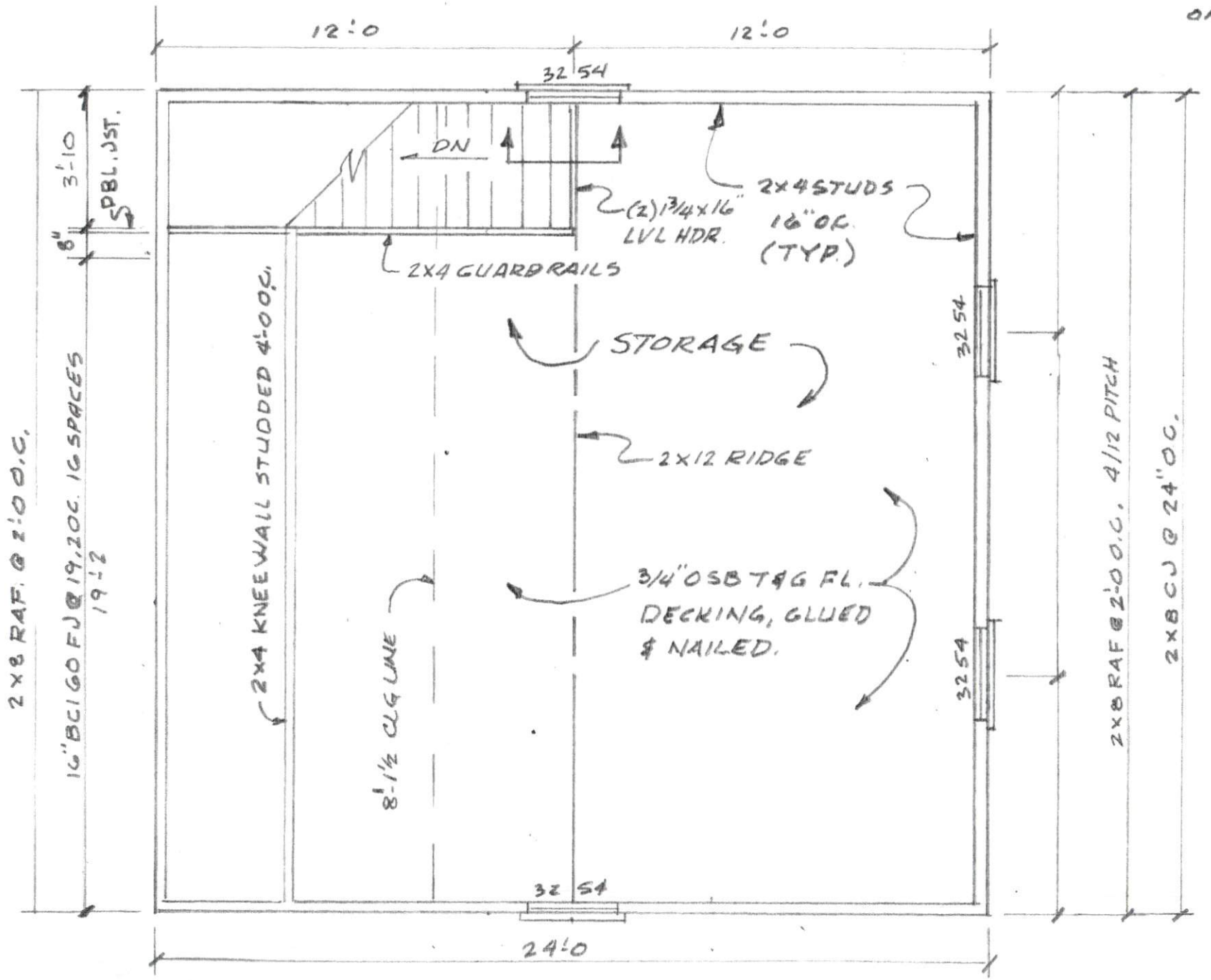
NOTE: (2) 2x8 HDR
ON ALL WINDOWS



2ND FL. JST & RAF. PLAN 1/4"=1FT.

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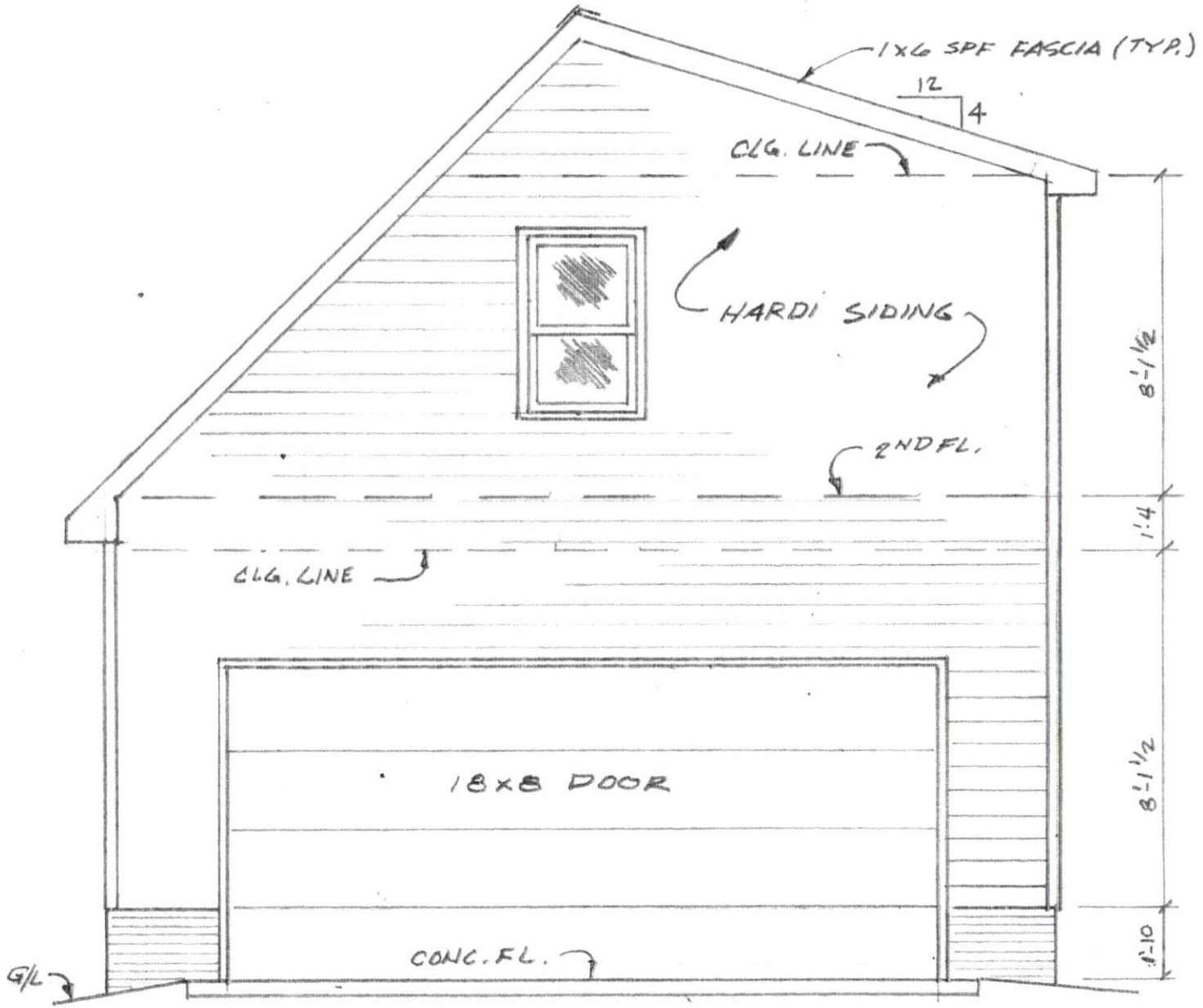
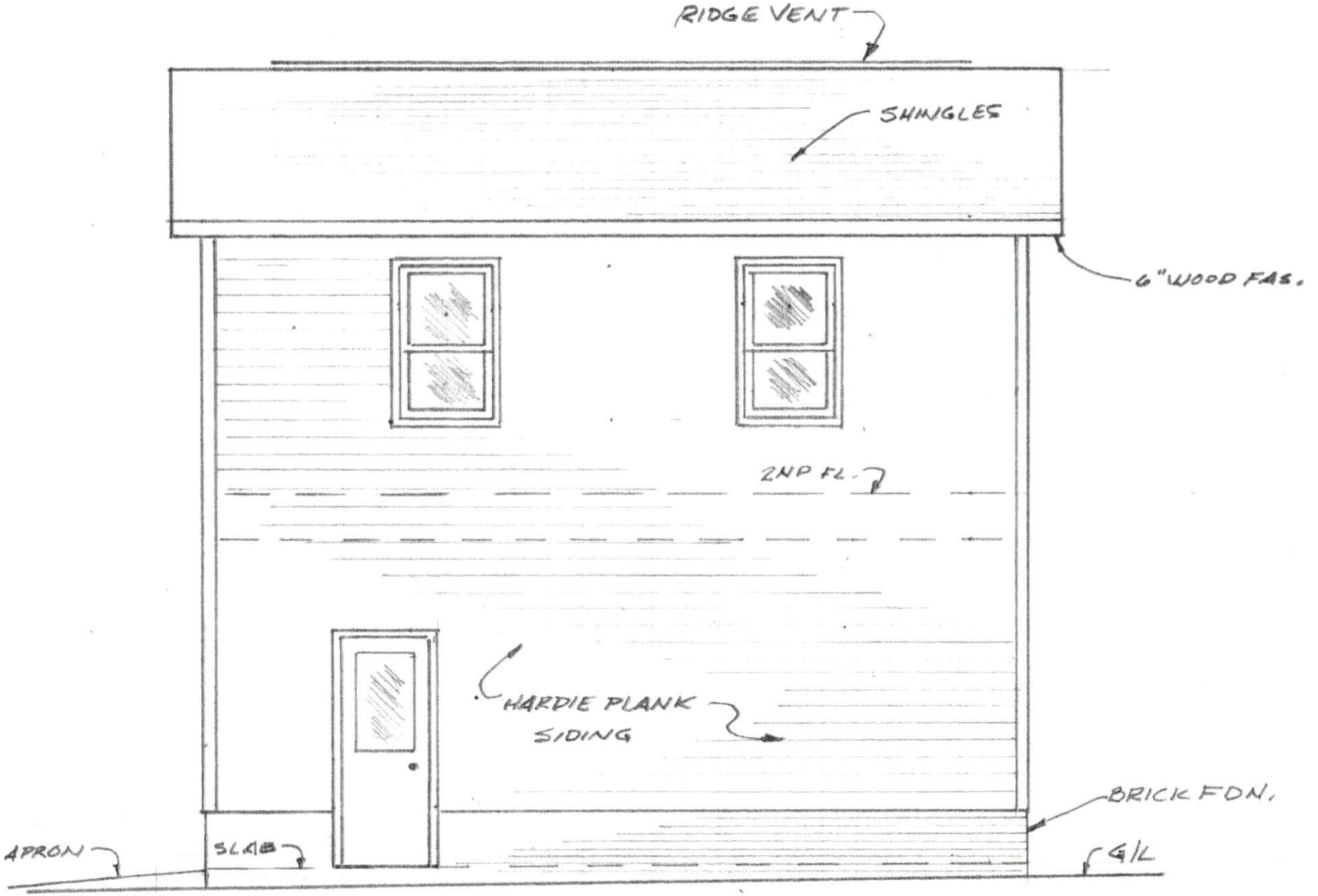


FRONT ELEVATION



RIGHT SIDE ELEVATION 1/4"=1FT

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Residental Floor Span Tables

About Floor Performance

Homeowner's expectations and opinions vary greatly due to the subjective nature of rating a new floor. Communication with the ultimate end user to determine their expectation is critical. Vibration is usually the cause of most complaints. Installing lateral bridging may help; however, squeaks may occur if not installed properly. Spacing the joists closer together does little to affect the perception of the floor's performance. The most common methods used to increase the performance and reduce vibration of wood floor systems is to *increase the joist depth, limit joist deflections, glue and screw a thicker, tongue-and-groove subfloor, install the joists vertically plumb with level-bearing supports, and install a direct-attached ceiling to the bottom flanges of the joists.*

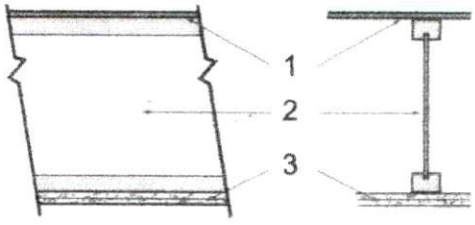
The floor span tables listed below offer three very different performance options, based on performance requirements of the homeowner.

Joist Depth	BCI® Joist Series	★★★ THREE STAR ★★★ Live Load deflection limited to L/480. The common industry and design community standard for residential floor joists, 33% stiffer than L/360 code minimum. However, floor performance may still be an issue in certain applications, especially with 9½" and 11⅞" deep joists without a direct-attached ceiling.					★★★★ FOUR STAR ★★★★ Live Load deflection limited to L/600. In addition to providing a floor that is 100% stiffer than the three star floor, field experience has been incorporated into the values to provide a floor with a premium performance level for the more discriminating homeowner.					CAUTION ★ MINIMUM STIFFNESS ALLOWED BY CODE ★ CAUTION Live Load deflection limited to L/360: Floors that meet the minimum building code L/360 criteria are structurally sound to carry the specified loads; however, there is a much higher risk of floor performance issues. This table should only be used for applications where floor performance is not a concern.				
		12" o.c.	16" o.c.	19.2" o.c.	24" o.c.	32" o.c.	12" o.c.	16" o.c.	19.2" o.c.	24" o.c.	32" o.c.	12" o.c.	16" o.c.	19.2" o.c.	24" o.c.	32" o.c.
9½"	4500s 1.8	16'–11"	15'–6"	14'–8"	13'–7"	11'–9"	11'–6"	11'–6"	10'–0"	10'–0"	9'–7"	18'–9"	16'–8"	15'–3"	13'–7"	11'–9"
	5000s 1.8	17'–6"	16'–0"	15–2"	14'–1"	12'–5"	11'–6"	11'–6"	10'–0"	10'–0"	9'–11"	19'–4"	17'–9"	16'–4"	14'–7"	12'–5"
	6000s 1.8	18'–2"	16'–8"	15'–8"	14'–8"	13'–4"	11'–6"	11'–6"	10'–0"	10'–0"	10'–0"	20'–2"	18'–5"	17'–5"	15'–9"	13'–8"
	6500s 1.8	18'–8"	17'–1"	16'–1"	15'–0"	13'–8"	11'–6"	11'–6"	10'–0"	10'–0"	10'–0"	20'–8"	18'–11"	17'–10"	16'–7"	14'–3"
11⅞"	4500s 1.8	20'–0"	18'–4"	17'–3"	15'–5"	13'–4"	15'–6"	14'–3"	13'–5"	12'–6"	11–4"	21'–10"	18'–11"	17'–3"	15'–5"	13'–4"
	5000s 1.8	20'–9"	19'–0"	17'–11"	16'–7"	13'–4"	15'–6"	14'–9"	13'–11"	12'–11"	11'–9"	23'–0"	20'–4"	18'–6"	16'–7"	13'–4"
	6000s 1.8	21'–7"	19'–8"	18'–7"	17'–4"	14'–10"	15'–6"	15'–4"	14'–5"	13'–5"	12'–1"	23'–10"	21'–10"	20'–0"	17'–11"	14'–10"
	6500s 1.8	22'–2"	20'–3"	19'–2"	17'–10"	14'–10"	16'–0"	15'–10"	14'–11"	13'–10"	12'–7"	24'–6"	22'–5"	21'–1"	18'–10"	14'–10"
	60s 2.0	23'–7"	21'–6"	20'–4"	18'–11"	16'–4"	18'–0"	16'–9"	15'–9"	14'–8"	13'–3"	26'–1"	23'–10"	22'–6"	21'–0"	16'–4"
	90s 2.0	26'–7"	24'–3"	22'–10"	21'–3"	19'–4"	19'–0"	18'–10"	17'–8"	16'–5"	14'–10"	29'–5"	26'–10"	25'–3"	23'–6"	19'–4"
14"	4500s 1.8	22'–9"	20'–7"	18'–9"	16'–9"	13'–11"	17'–10"	16'–3"	15'–4"	14'–3"	13'–0"	23'–10"	20'–7"	18'–9"	16'–9"	13'–11"
	5000s 1.8	23'–7"	21'–7"	20'–2"	18'–0"	13'–11"	18'–6"	16'–10"	15'–11"	14'–9"	13'–5"	25'–7"	22'–1"	20'–2"	18'–0"	13'–11"
	6000s 1.8	24'–6"	22'–5"	21'–2"	19'–6"	15'–5"	19'–2"	17'–6"	16'–6"	15'–4"	13'–11"	27'–1"	23'–11"	21'–10"	19'–6"	15'–5"
	6500s 1.8	25'–2"	23'–0"	21'–8"	20'–2"	15'–5"	19'–8"	17'–11"	16'–11"	15'–8"	14'–3"	27'–9"	25'–2"	22'–11"	20'–6"	15'–5"
	60s 2.0	26'–9"	24'–5"	23'–0"	21'–5"	16'–4"	20'–11"	19'–0"	17'–11"	16'–7"	15'–1"	29'–7"	27'–0"	25'–6"	21'–10"	16'–4"
	90s 2.0	30'–1"	27'–5"	25'–10"	24'–0"	19'–6"	23'–6"	21'–4"	20'–0"	18'–6"	16'–9"	33'–3"	30'–4"	28'–7"	26'–0"	19'–6"
16"	4500s 1.8	25'–2"	22'–0"	20'–1"	17'–11"	14'–1"	19'–9"	18'–0"	17'–0"	15'–10"	14'–1"	25'–5"	22'–0"	20'–1"	17'–11"	14'–1"
	6000s 1.8	27'–0"	24'–9"	23'–4"	20'–10"	15'–9"	21'–2"	19'–4"	18'–2"	16'–11"	15'–4"	29'–6"	25'–6"	23'–4"	20'–10"	15'–9"
	6500s 1.8	27'–9"	25'–4"	23'–11"	21'–1"	15'–8"	21'–9"	19'–9"	18'–8"	17'–4"	15'–8"	30'–8"	26'–11"	24'–6"	21'–1"	15'–9"
	60s 2.0	29'–7"	27'–0"	25'–6"	21'–10"	16'–4"	23'–2"	21'–1"	19'–10"	18'–5"	16'–4"	32'–8"	29'–10"	27'–4"	21'–10"	16'–4"
	90s 2.0	33'–4"	30'–4"	28'–7"	26'–2"	19'–7"	26'–0"	23'–7"	22'–2"	20'–6"	18'–7"	36'–10"	33'–7"	31'–8"	26'–2"	19'–7"

- Span table is based on a residential floor load of 40 psf live load and 10 psf dead load (12 psf dead load for 90s 2.0 joists).
- Span values assume $^{23}/_{32}$" minimum plywood/OSB rated sheathing is glued and nailed to joists for composite action (joists spaced at 32" o.c. require sheathing rated for such spacing - $^{7}/_{8}$" plywood/OSB).
- Span values represent the most restrictive of simple or multiple span applications. Analyze multiple span joists with BC CALC® sizing software if the length of any span is less than half the length of an adjacent span.
- Span values are the maximum allowable clear distance between supports.
- Table values assume minimum bearing lengths without web stiffeners for joist depths of 16" inches and less.
- Floor tile will increase dead load and may require specific deflection limits, contact Boise Cascade EWP Engineering for further information.
- This table was designed to apply to a broad range of applications. It may be possible to exceed the limitations of this table by analyzing a specific application with the BC CALC® sizing software.

(Shaded values do not satisfy the requirements of the North Carolina State Building Code. Refer to the THREE STAR table when spans exceed 20 feet.)

One-Hour Fire Resistive Assembly



See the US version of the Boise Cascade Fire Design & Installation Guide for specific assembly information and other fire resistive options or contact your local Boise Cascade representative.

ICC ESR 1336

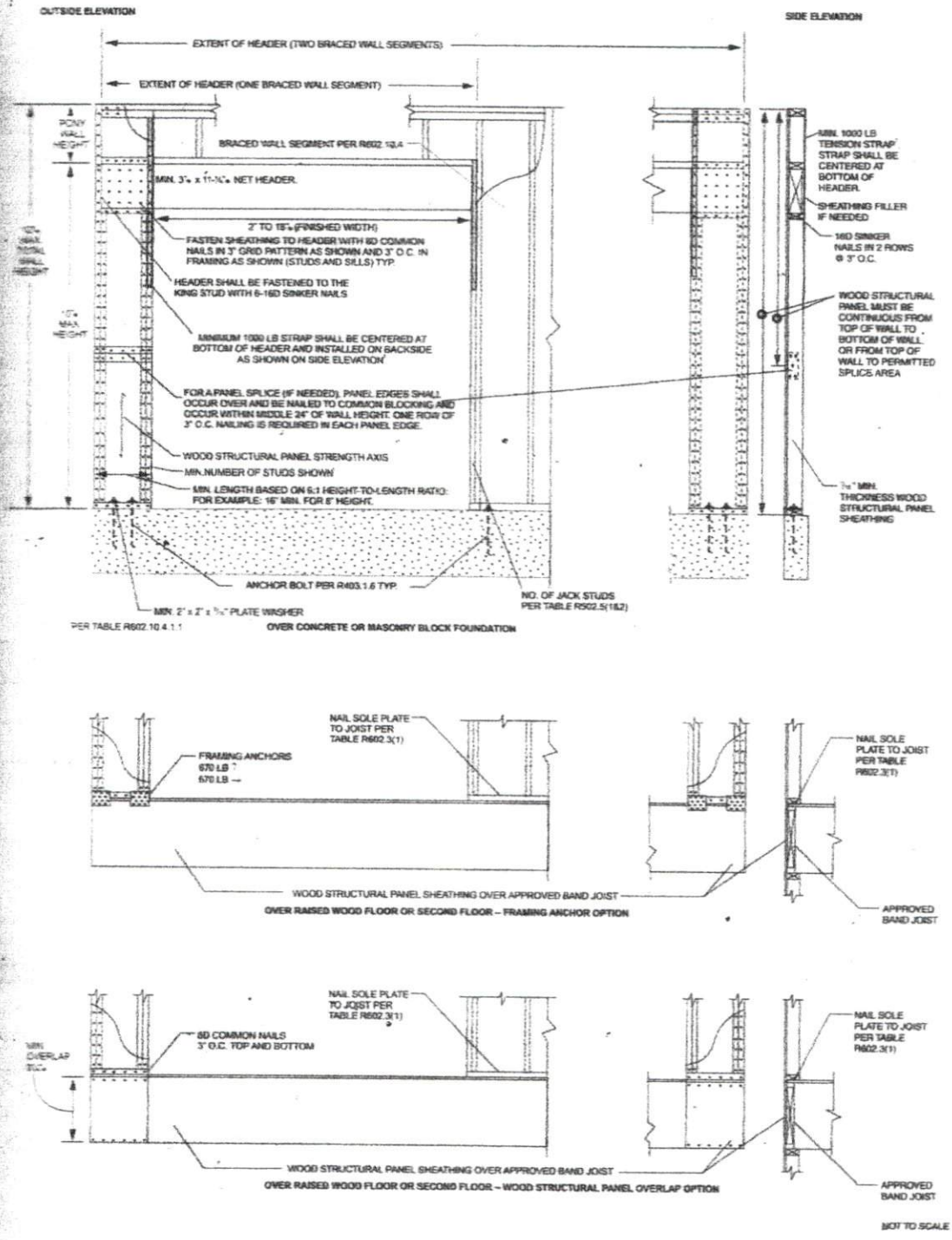
FIRE ASSEMBLY COMPONENTS

1. Min. $^{23}/_{32}$" thick tongue and groove sheathing (exterior glue), installed with long edge perpendicular to joist length, staggered one joist spacing with adjacent sheets, and glued to joists with construction adhesive.
2. BCI® Joists at 24" o.c. or less.
3. Two layers ⅝" Type X or two layers ½" Type C gypsum board, installed per Figures 2 or 3 of ICC ESR 1336.

SOUND ASSEMBLY COMPONENTS

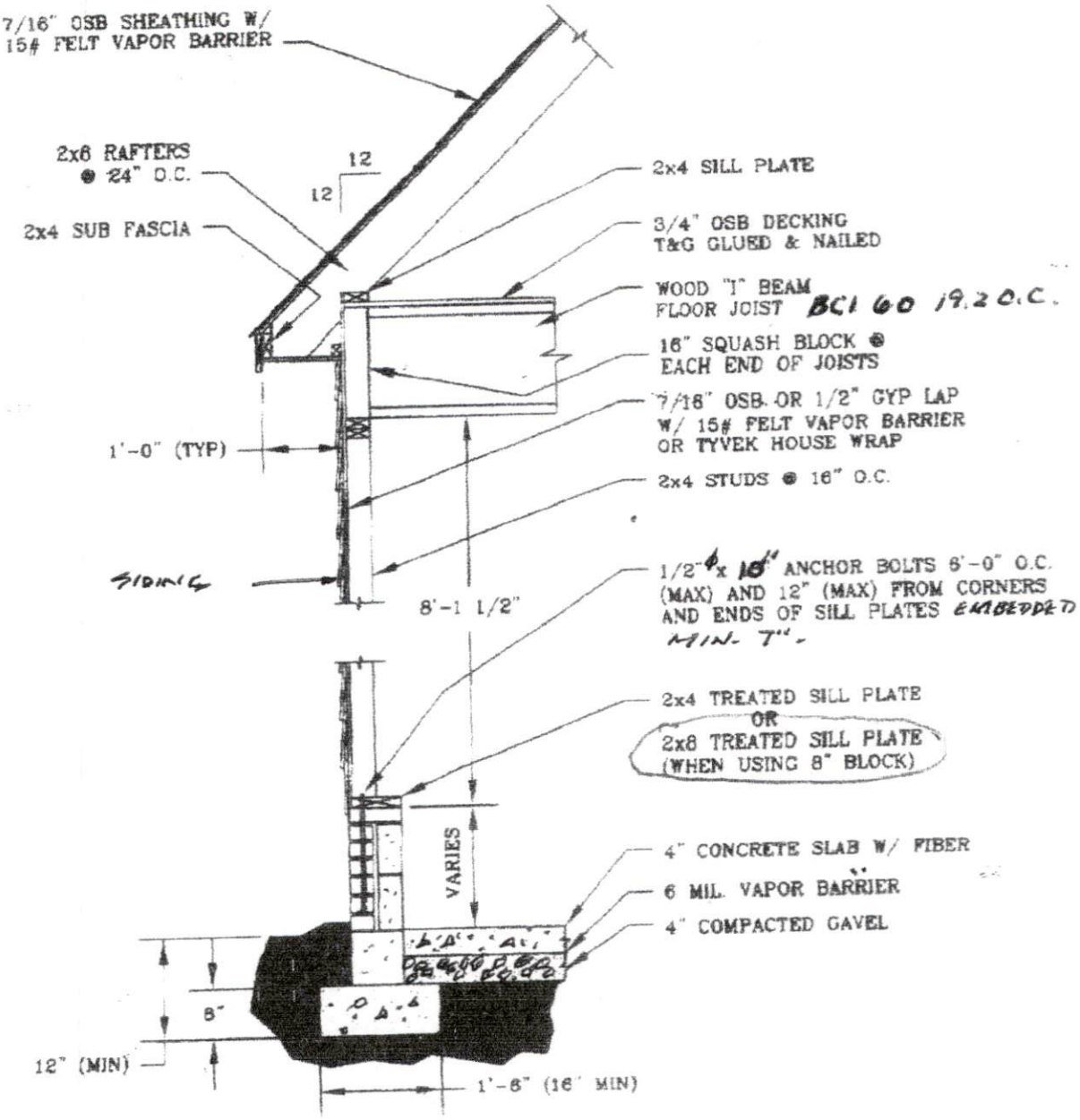
When constructed with resilient channels

- Add carpet & pad to fire assembly: STC=54 | IIC=68 or
- Add 3½" glass fiber insulation to fire assembly: STC=55 | IIC=46 or
- Add an additional layer of minimum ⅝" sheathing and 9½" glass fiber insulation to fire assembly: STC=61 | IIC=50



= 25.4 mm, 1 foot = 304.8 mm, 1 pound force = 4.448 N.

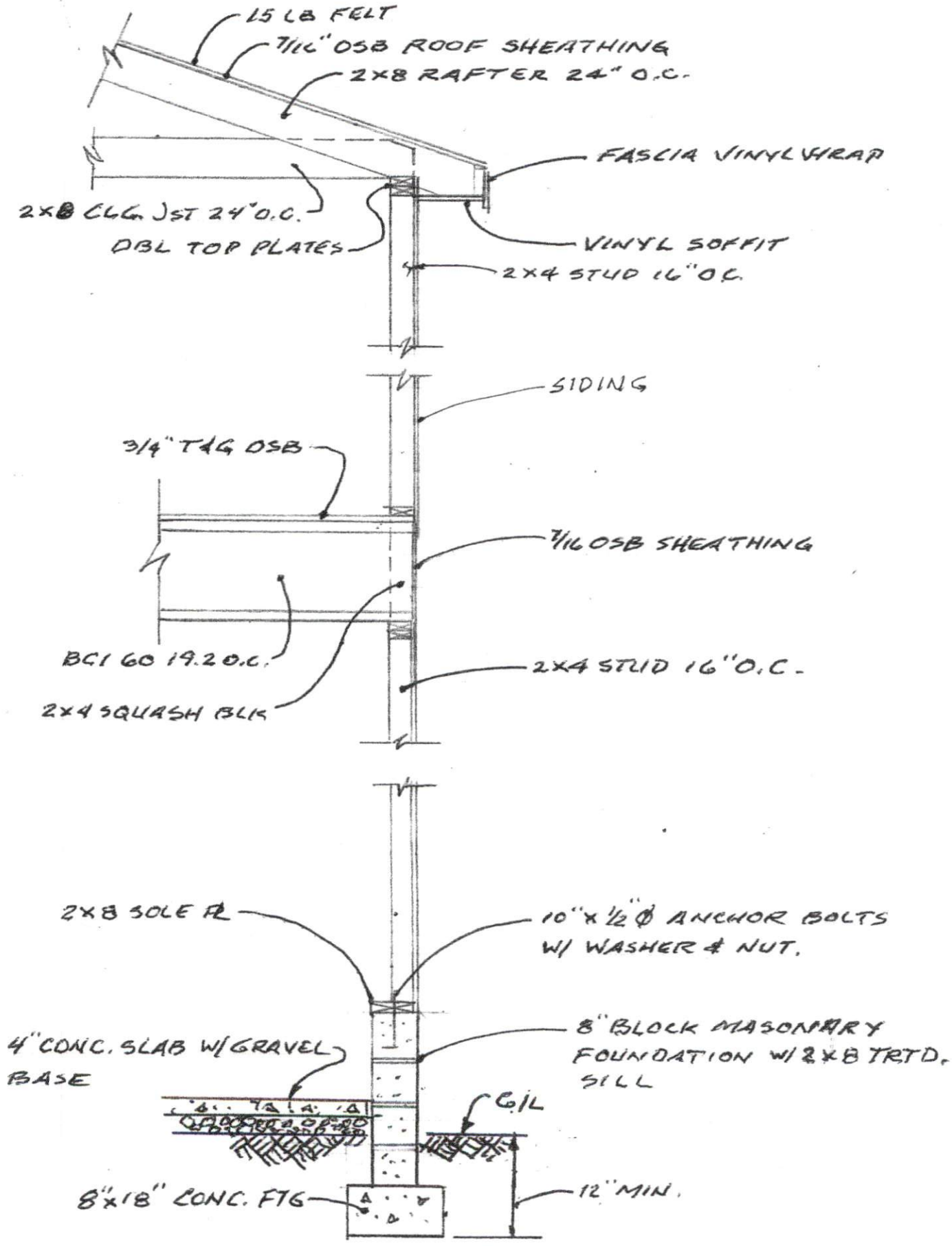
FIGURE R602.10.4.1.1
METHOD CS-PF: CONTINUOUS PORTAL FRAME PANEL CONSTRUCTION



TYPICAL WALL SECTION

20 SCALE : 1" = 2'

HOME WORK SERVICES (919) 562-8313	DRAWN BY: [redacted] DATE: [redacted] CUSTOMER: [redacted]

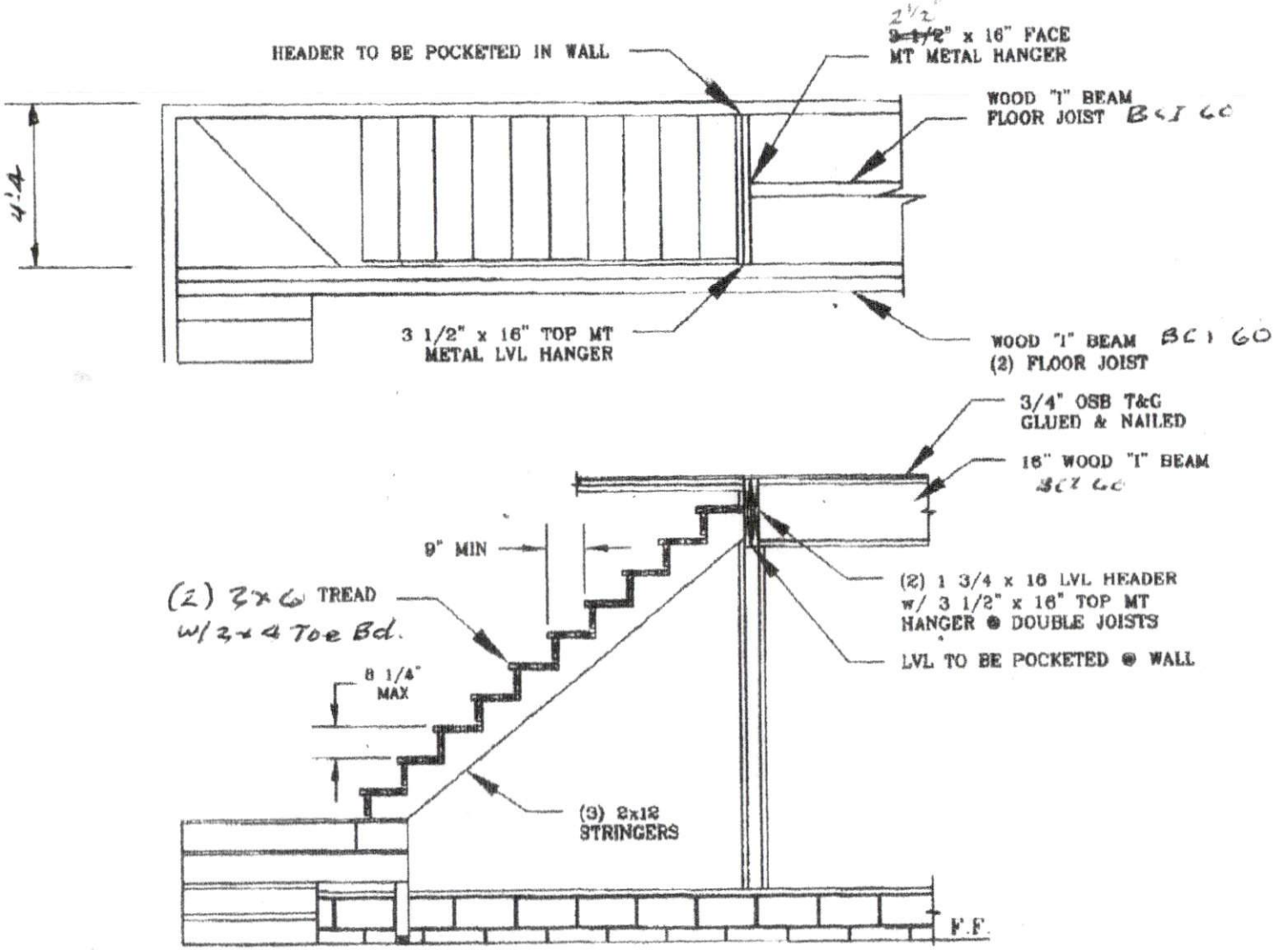


FULL SHED DORMER WALL SECTION. 1/2" = 1FT.

McLam

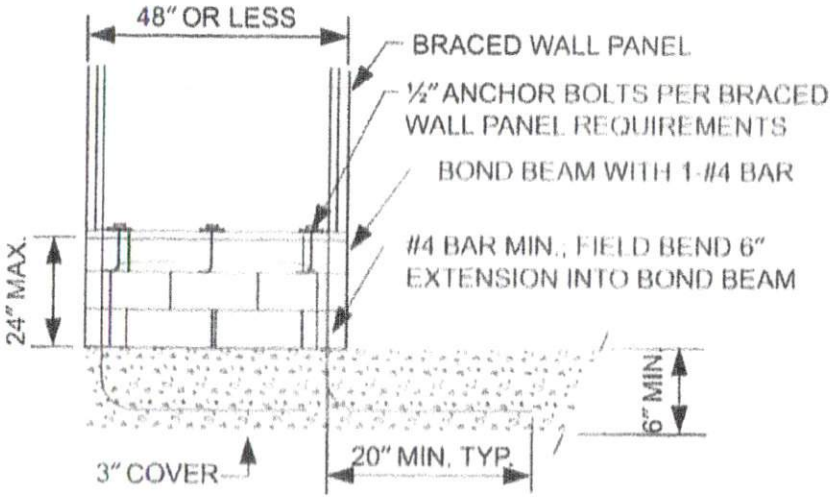
(919) 269-2223

Bill Follmer

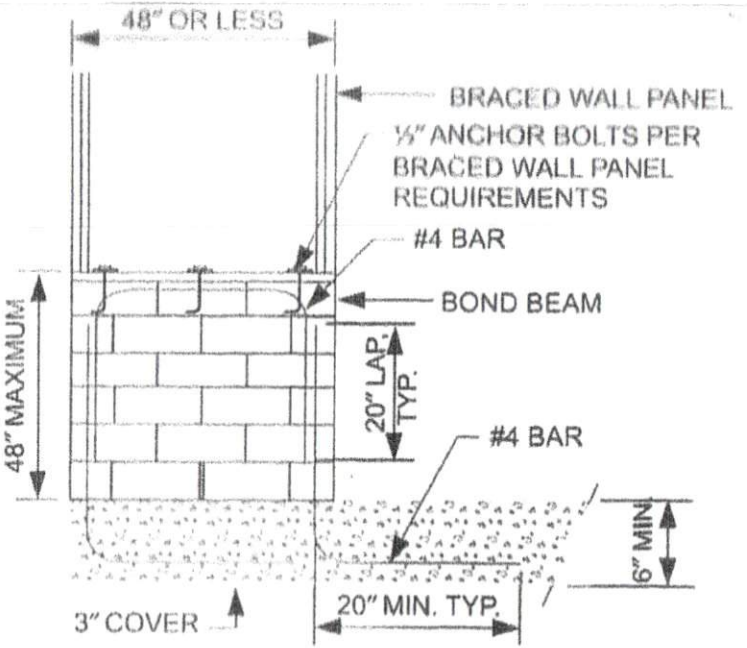


STAIR DETAIL

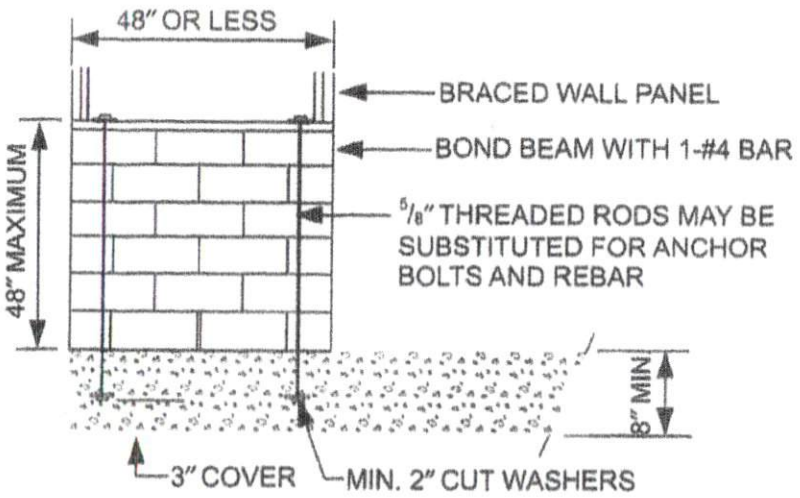
HOME WORK SERVICES (919) 562-8313	DRAWN BY: BILL FOLLMER DATE: CUSTOMER:



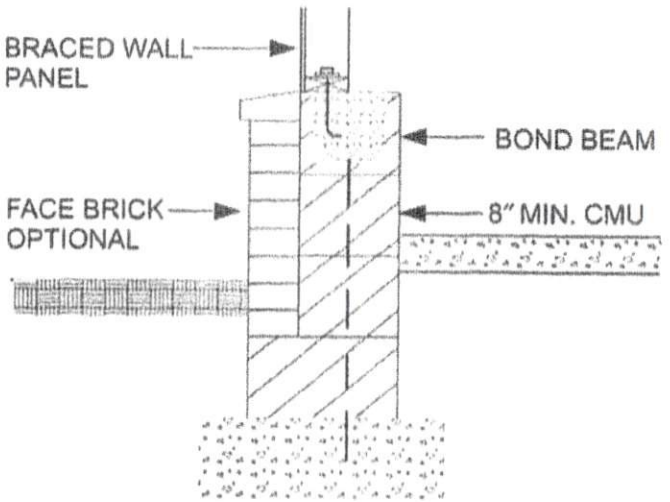
SHORT STEM WALL REINFORCEMENT



TALL STEM WALL REINFORCEMENT



OPTIONAL STEM WALL REINFORCEMENT

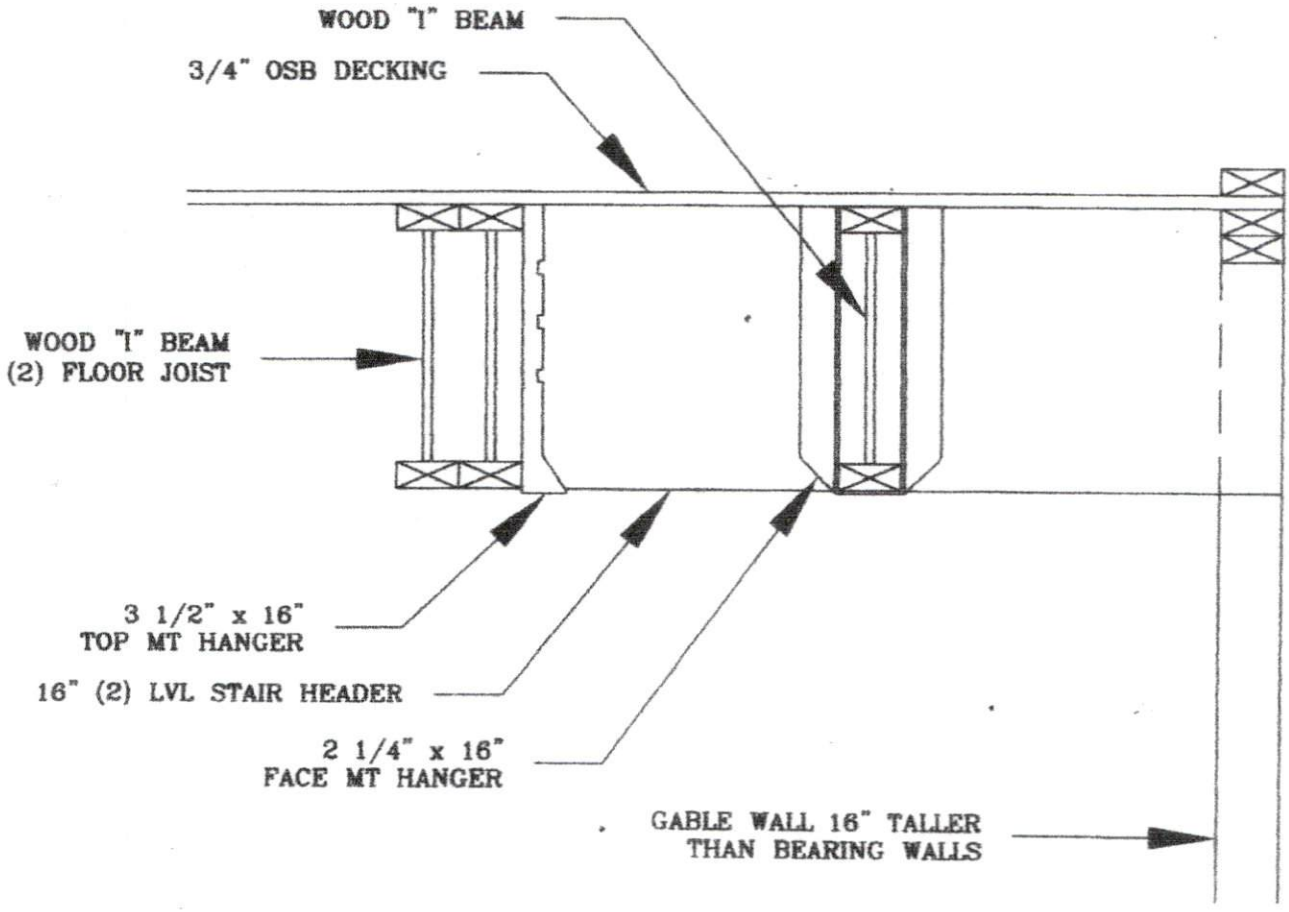


TYPICAL STEM WALL SECTION

NOTE: GROUT BOND BEAMS AND ALL CELLS WHICH CONTAIN REBAR, THREADED RODS AND ANCHOR BOLTS.

For SI: 1 inch = 25.4 mm.

FIGURE R602.10.7
MASONRY STEM WALLS SUPPORTING BRACED WALL PANELS



SECTION "A" – "A"

10 SCALE : 1" = 1'

HOME WORK SERVICES
(919) 562-8313

DRAWN BY: BILL FOLLMER
DATE:
CUSTOMER: