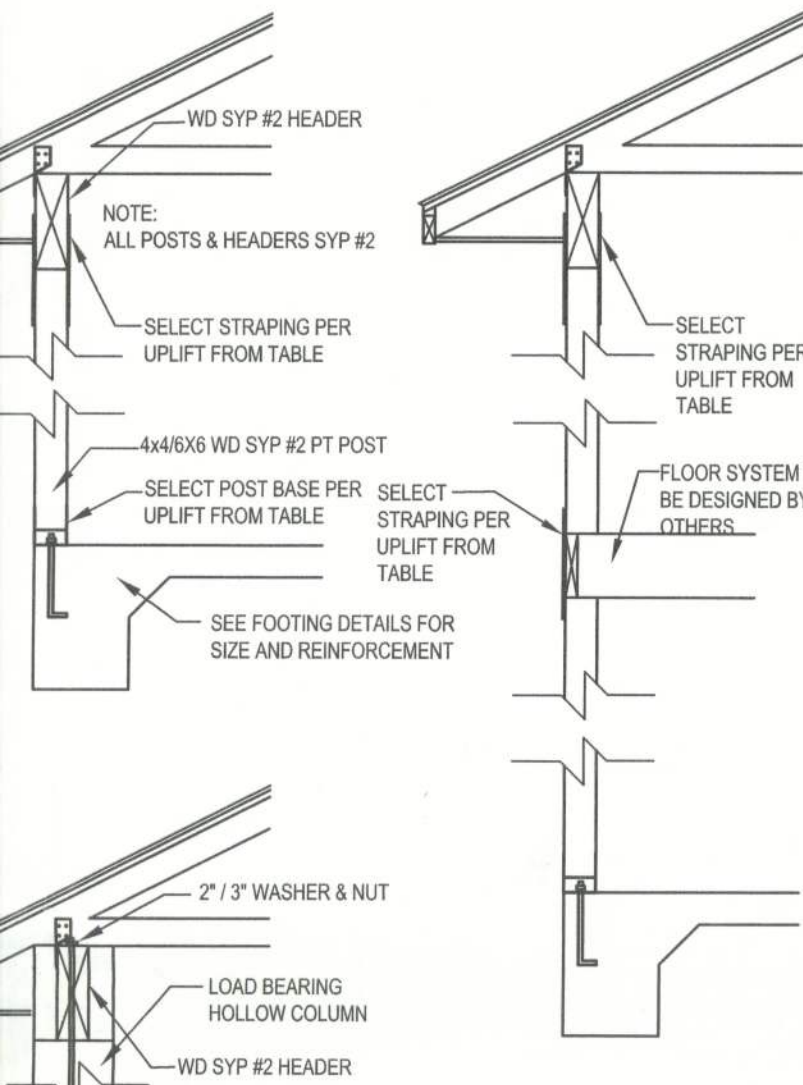


STUD ANCHOR TABLE			
TYPICAL TRUSS UPLIFT MAX 10'-0" WALL HEIGHT	ANCHOR BOLT SPACING	SP4 / SPS SPACING	ALTERNATE STRAPPING SPACING
770 LB	48" O.C.	48" O.C.	N/A
950 LB	48" O.C.	32" O.C.	N/A
1270 LB	32" O.C.	16" O.C.	32" O.C.
1500 LB	24" O.C.	16" O.C.	16" O.C.
2200 LB	LT101 W/ 5/8" X 7" WEDGE ANCHOR	N/A	(2) HTS20 NAILED TO STUD PACK

NOTE: SP2 TOP & SP1 BOTTOM ALTERNATE FOR SP4/6

NOTE: MINIMUM ANCHOR BOLT SPACING FOR WALLS WITH A HEIGHT GREATER THAN 10'-0" AND LESS THAN 14'-0" SHALL BE 32" O.C.

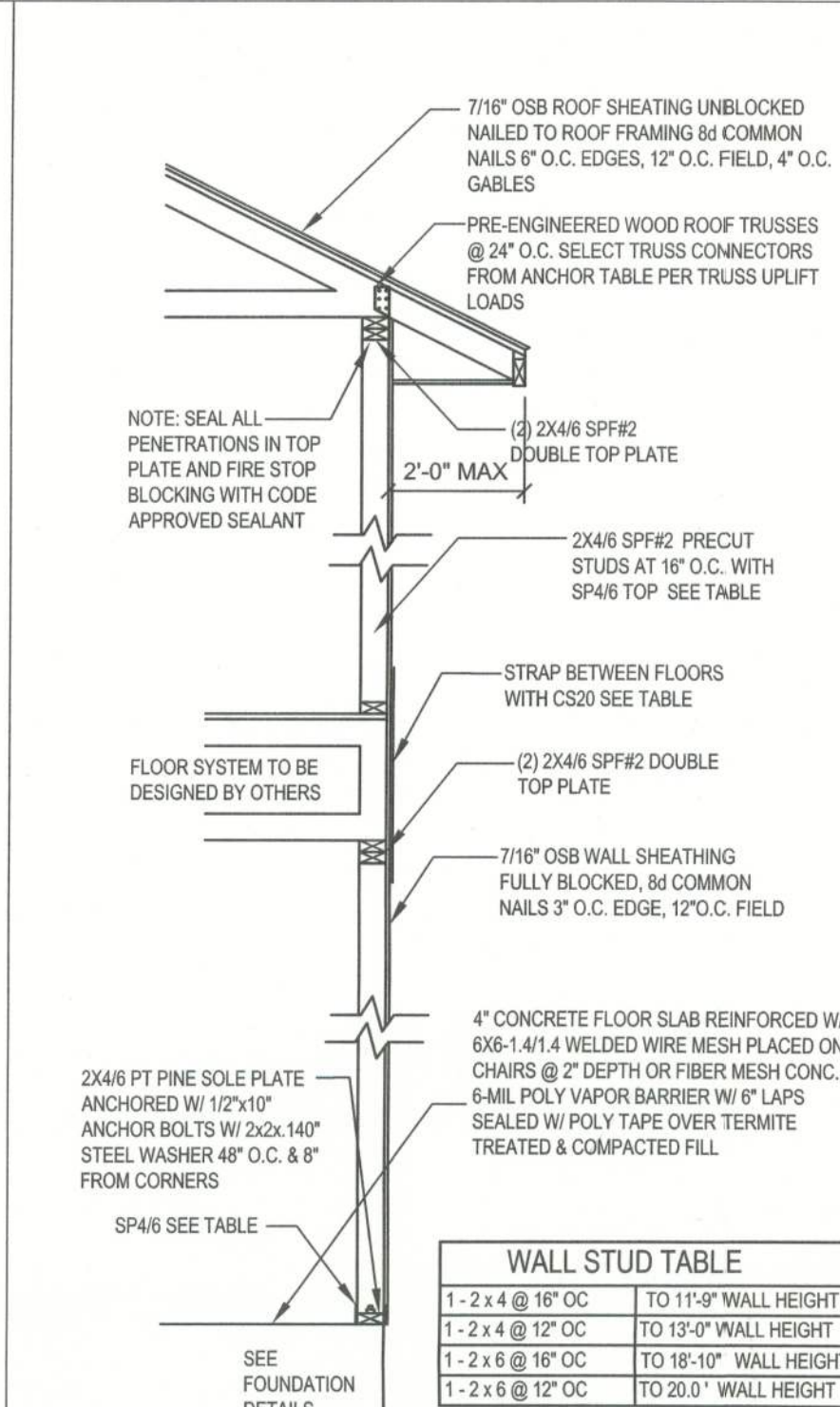
W1 - SINGLE STORY EXT. WALL SECTION
SCALE: 1/2"=1'-0" REV-22-AUG-03



2 STORY STUD ANCHOR TABLE			
TYPICAL TRUSS UPLIFT MAX 10'-0" WALL HEIGHT	ANCHOR BOLT SPACING	SP4 / SPS / CS20 SPACING	ALTERNATE SP4 / SPS / CS20 SPACING
770 LB	48" O.C.	48" O.C.	N/A
950 LB	48" O.C.	32" O.C.	N/A
1270 LB	32" O.C.	16" O.C.	32" O.C.
1500 LB	24" O.C.	16" O.C.	16" O.C.
2200 LB	LT101 W/ 5/8" X 7" WEDGE ANCHOR	(2) CS16	(2) HTS20 NAILED TO STUD PACK

NOTE: MINIMUM ANCHOR BOLT SPACING FOR WALLS WITH A HEIGHT GREATER THAN 10'-0" AND LESS THAN 14'-0" SHALL BE 32" O.C.

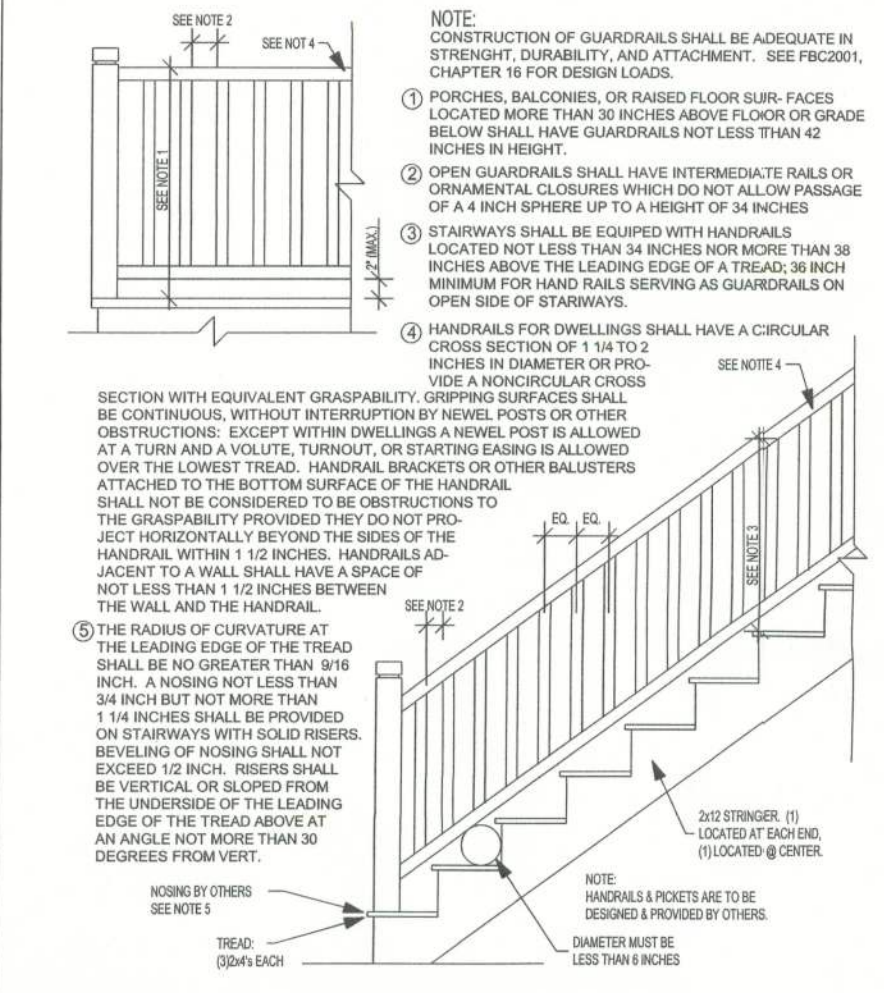
W12 - PORCH HEADER ANCHORS
SCALE: N.T.S. REV-19-JUL-03



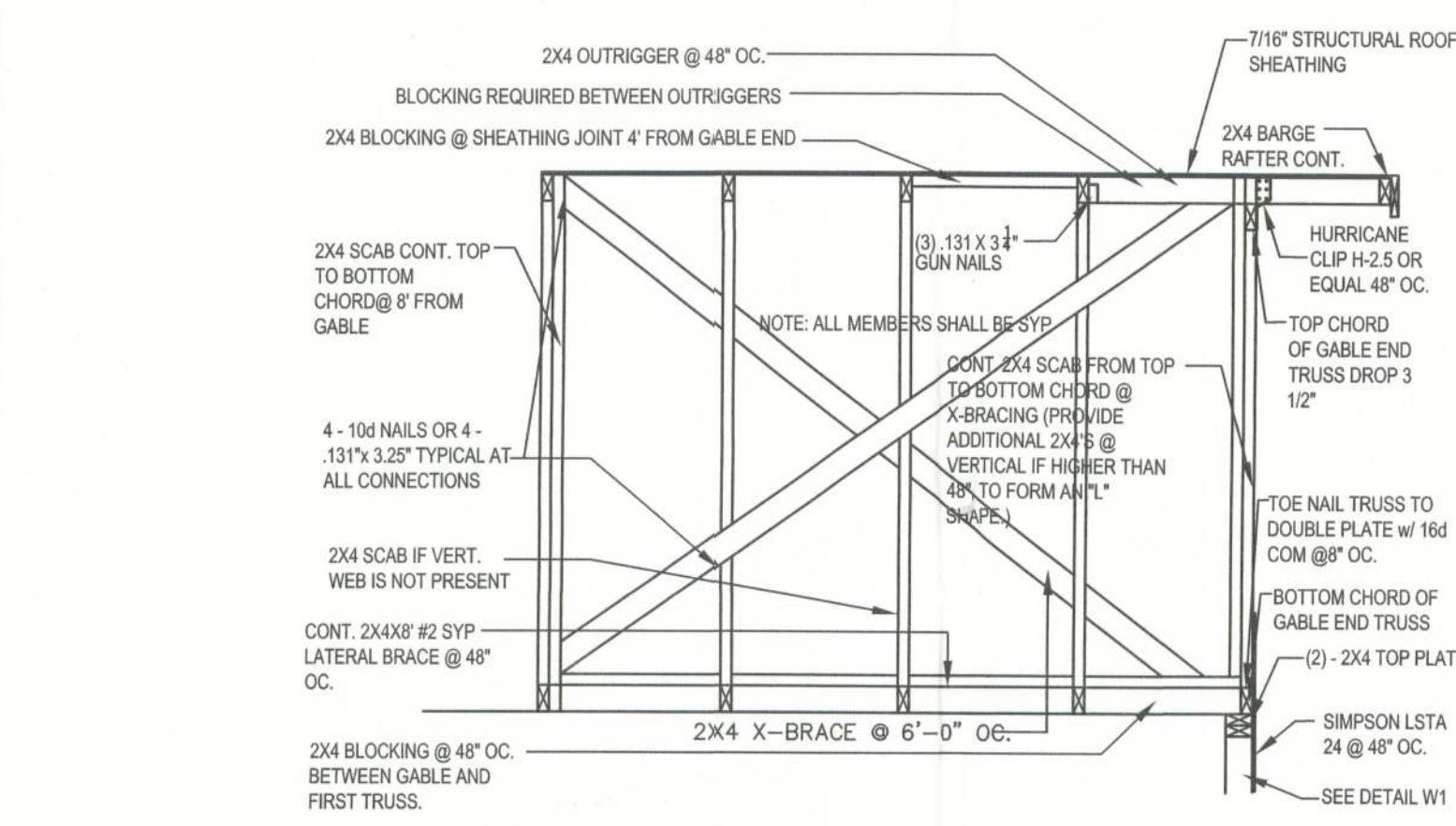
2 STORY STUD ANCHOR TABLE			
TYPICAL TRUSS UPLIFT MAX 10'-0" WALL HEIGHT	ANCHOR BOLT SPACING	SP4 / SPS / CS20 SPACING	ALTERNATE SP4 / SPS / CS20 SPACING
770 LB	48" O.C.	48" O.C.	N/A
950 LB	48" O.C.	32" O.C.	N/A
1270 LB	32" O.C.	16" O.C.	32" O.C.
1500 LB	24" O.C.	16" O.C.	16" O.C.
2200 LB	LT101 W/ 5/8" X 7" WEDGE ANCHOR	(2) CS16	(2) HTS20 NAILED TO STUD PACK

NOTE: MINIMUM ANCHOR BOLT SPACING FOR WALLS WITH A HEIGHT GREATER THAN 10'-0" AND LESS THAN 14'-0" SHALL BE 32" O.C.

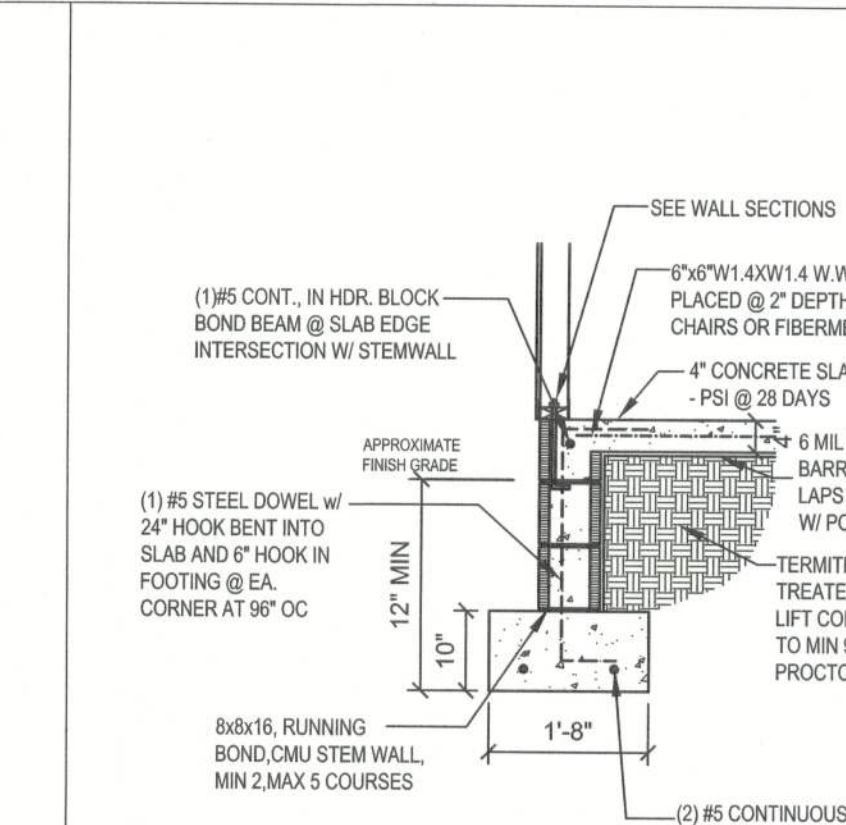
W4-2 STORY EXT. WALL SECTION
SCALE: 1/2"=1'-0" REV-22-AUG-03



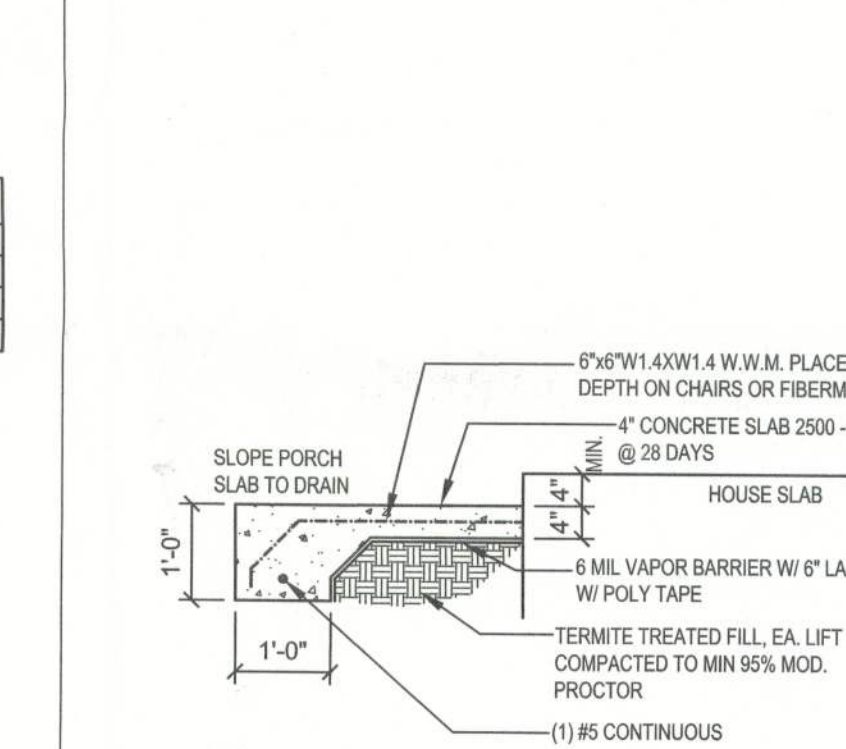
SG1 - TYPICAL STAIR & GUARDRAIL DETAIL
SCALE: N.T.S. REV-28-AUG-03



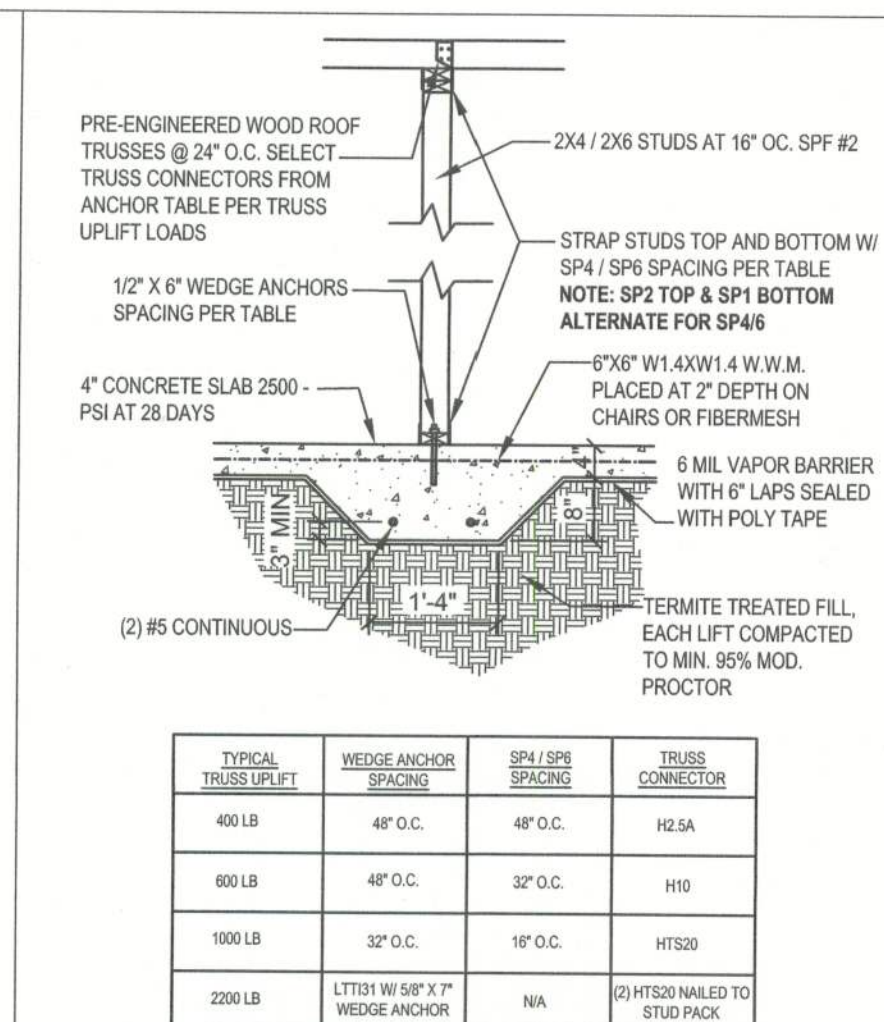
W10 - TYPICAL GABLE END (X-BRACING)
SCALE: 1/2"=1'-0"



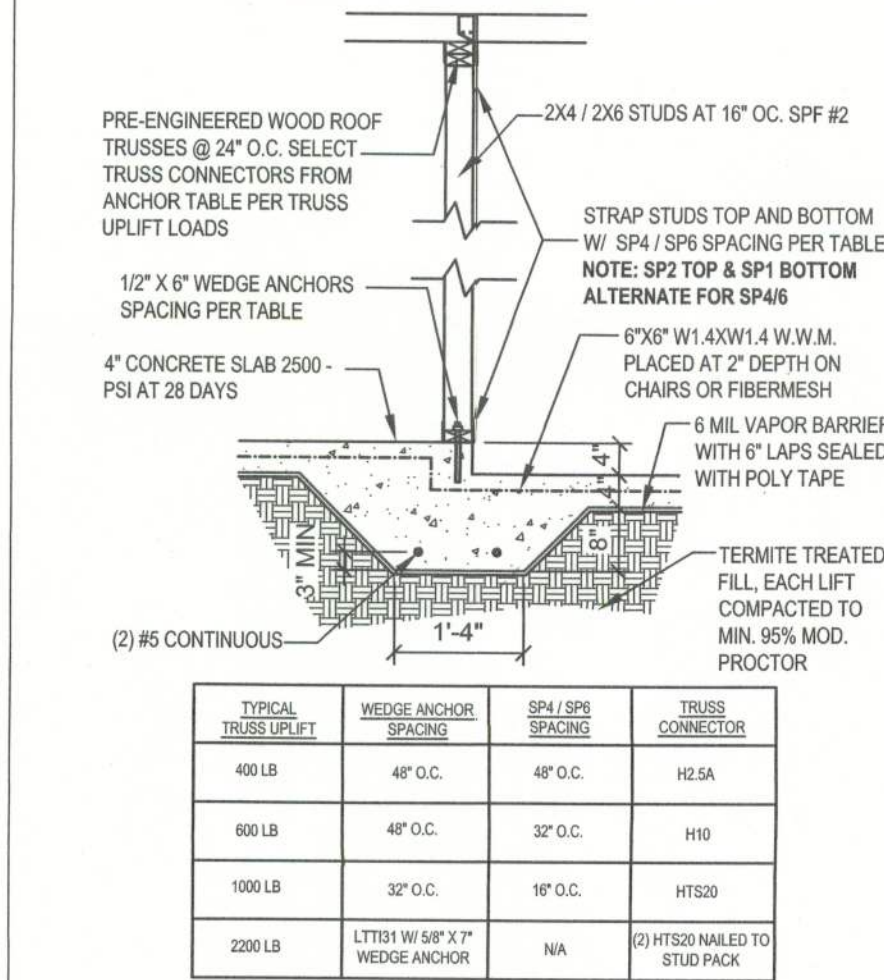
F1 - STEM WALL FOUNDATION
SCALE: 1/2"=1'-0" REV-21-MAY-03



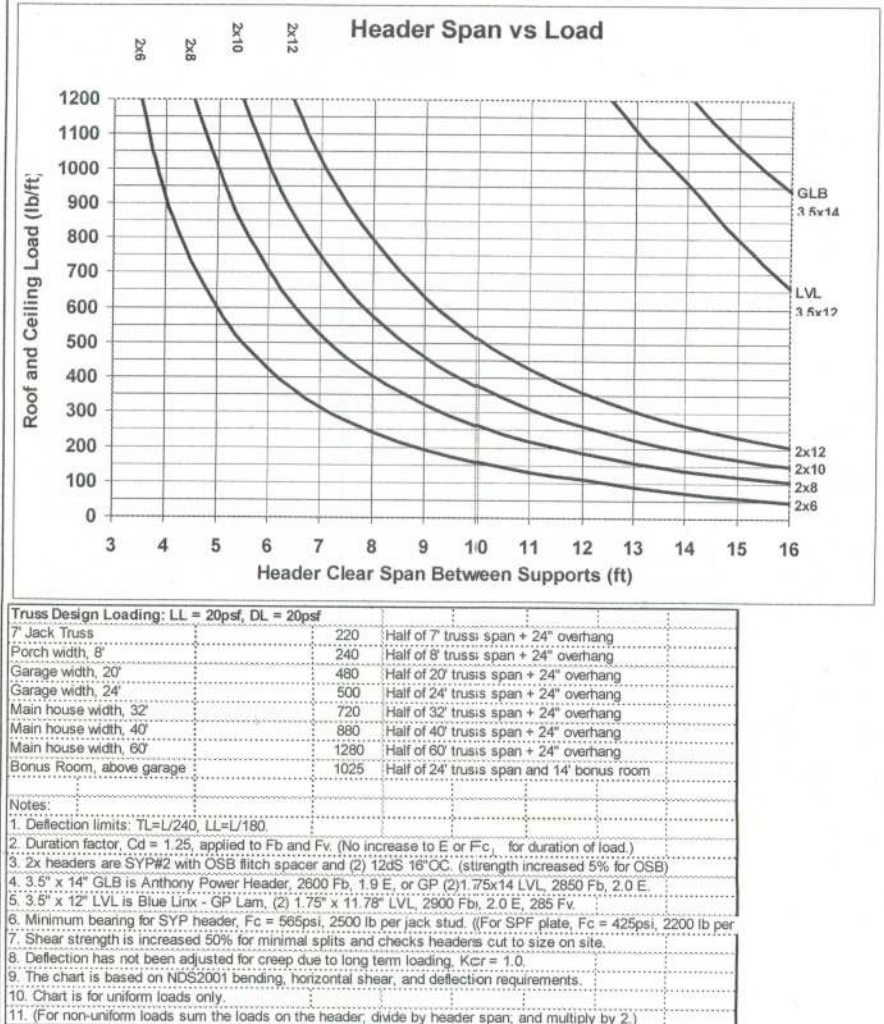
F2 - PORCH SLAB
SCALE: 1/2"=1'-0" REV-22-AUG-03



F4 - INTERIOR BEARING FOOTING
SCALE: 1/2"=1'-0" REV-22-AUG-03



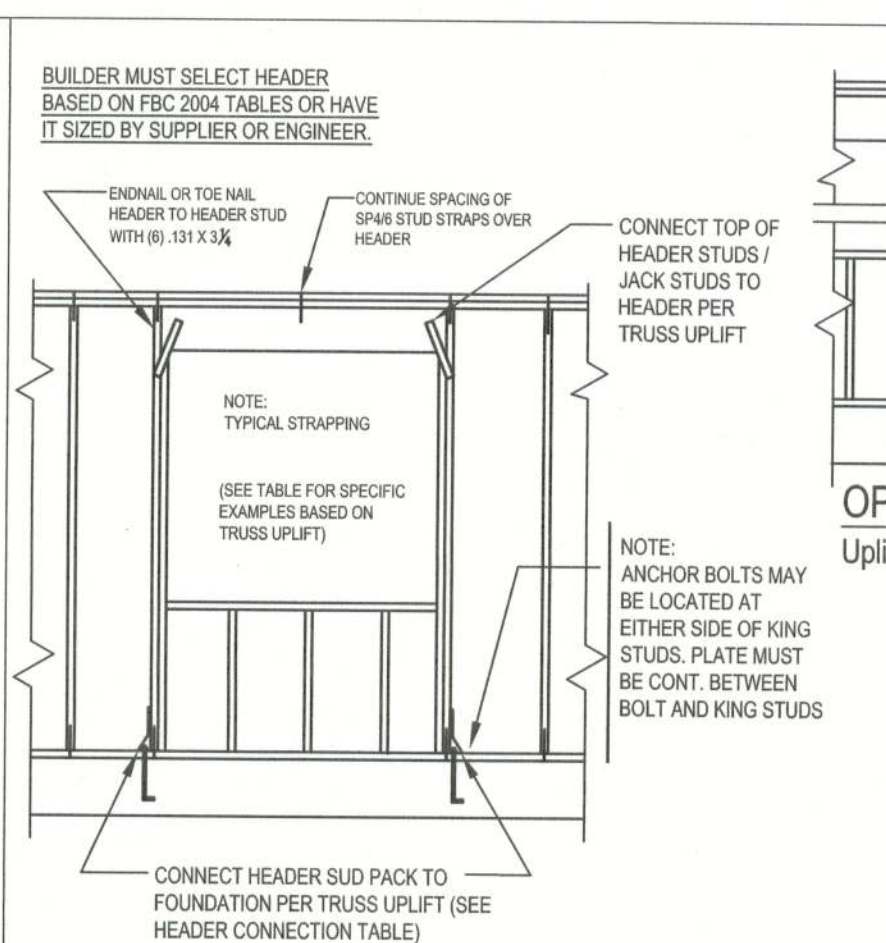
F5 - INTERIOR BEARING STEP FOOTING
SCALE: 1/2"=1'-0" REV-22-AUG-03



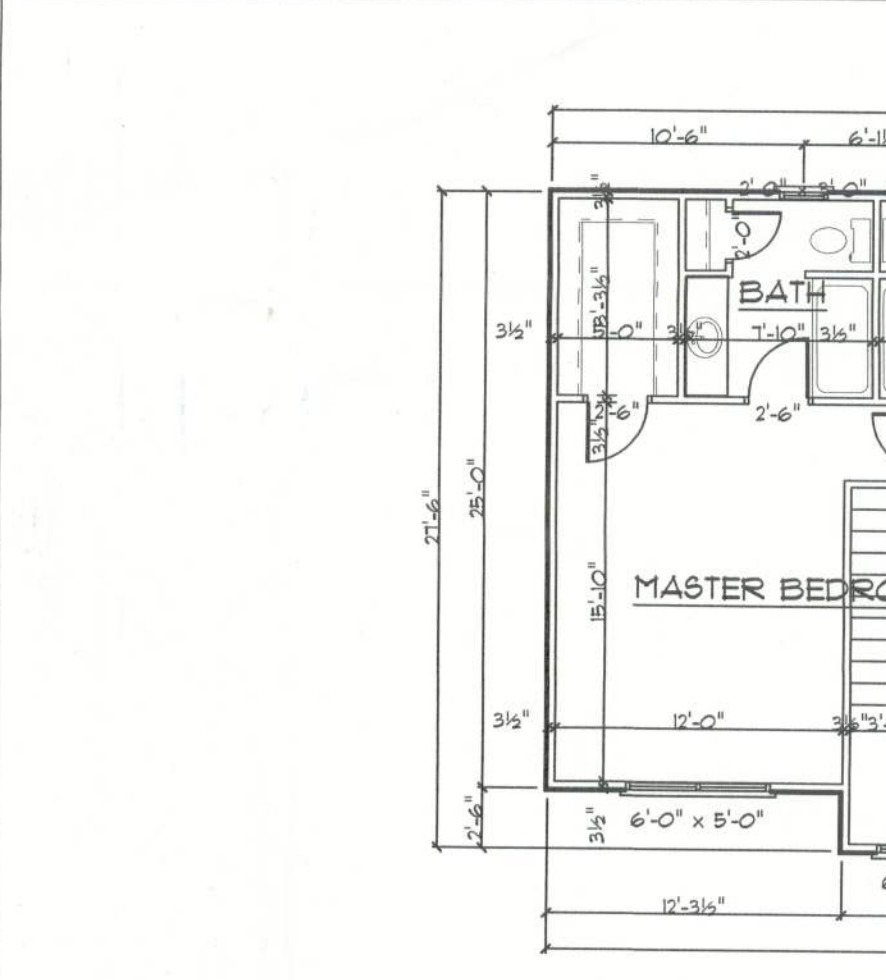
W71 - HEADER SPANS FOR ROOF/CEILING LOAD

N5 - TRUSS UPLIFT CONNECTOR TABLE			
Uplift SYP	Uplift SYP	Truss Connector	To Truss / Rafter
320	455	H3	4-8d
245	350	HA	3-8d
535	600	H2-SA	5-8d
620	720	H10	6-10d x 1/2"
850	990	LTST2	8-8d x 1/2"
1245	1450	HTS20	10-10d or 12-10d x 1/2"
1295	1470	H16, H16-2	10-10d x 1/2"
1785	2050	LG12	14-10d Sinkers
3655	4200	MGT	3/4" Thd. Rod
SPF	SYP	Strap Connector	To One Member
760	885	SP4	6-10d x 1/2"
885	1005	CS20	9-8d or 7-10d
1085	1285	LSTA18-24	7-10d
1170	1380	SPH4	12-10d x 1/2"
420	455	SSP	4-10d
600	825	DSP	8-10d
1420	1650	CS16	14-8d or 11-10d
SPF	SYP	Column Anchor	To Foundation
1160	1350	LT119	3/4" x 16" AB
1885	2310	LT131	3/4" x 16" AB
2385	2775	H2A	2-3/4" Bolts
3590	4175	HT116	3/4" x 16" AB
1975	2300	ABU86	3/4" x 16" AB

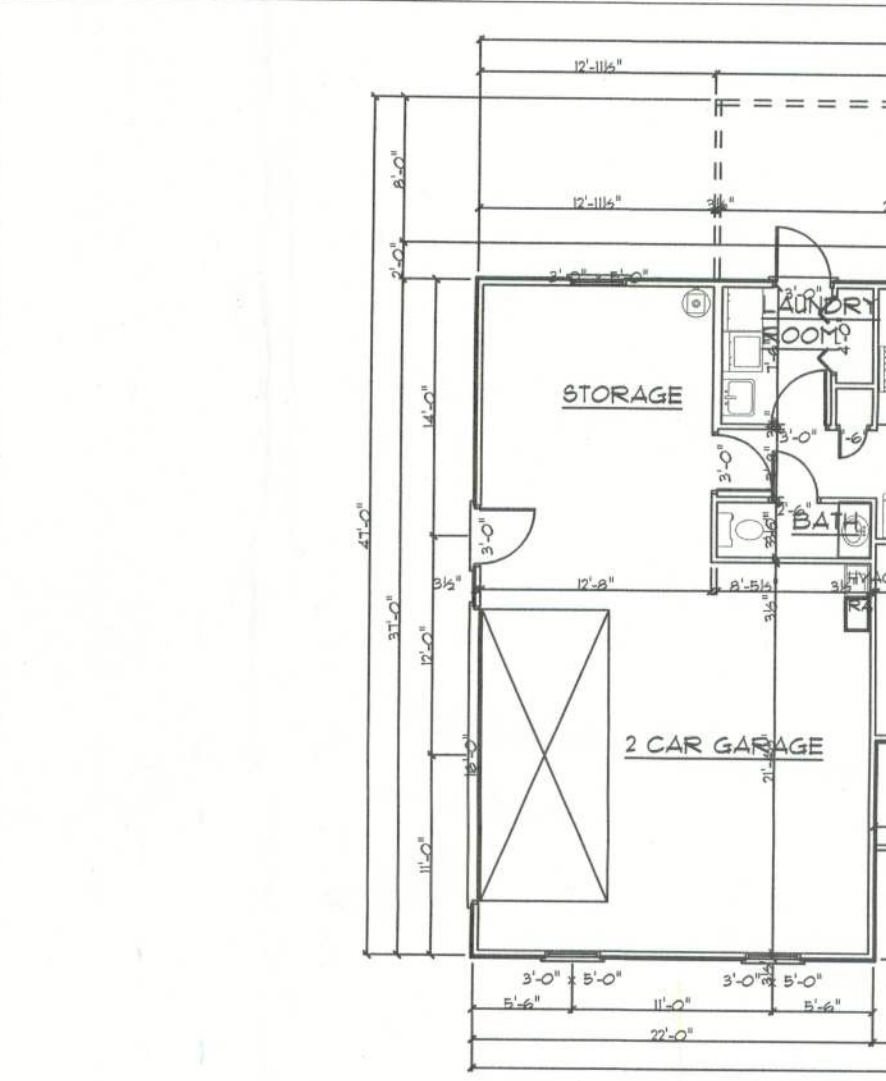
Notes: 1. Check for uniform loads only. 2. For non-uniform loads sum the loads on the truss, divide by header span, and multiply by 2. 3. Duration factor, Cd = 1.35, applied to Fb and Fc (the increase to 6 or Fc, for duration of loads). 4. 5/8" x 14" CLB is Antimony Power Header, 2600 P.S.I. 1.8 ft. or GP (C) 175-14 LVL, 2600 P.S.I. 2.5 ft. 5. 1/4" x 12" CLB is Blue Line, 1500 P.S.I. 1.8 ft. or GP (C) 175-14 LVL, 2600 P.S.I. 2.5 ft. 6. Minimum bearing for SYP header, Fc = 860psi, 2500 lb per sq ft, (for SYP plates, Fc = 425psi, 2500 lb per sq ft). 7. Header strength is increased for minimal splits and checks headers cut to size on site. 8. Deflection has not been adjusted for creep due to long term loading, Kc = 1.0. 9. Header is based on NDS2001 bending, horizontal shear, and deflection requirements. 10. Check for uniform loads only. 11. For non-uniform loads sum the loads on the truss, divide by header span, and multiply by 2.



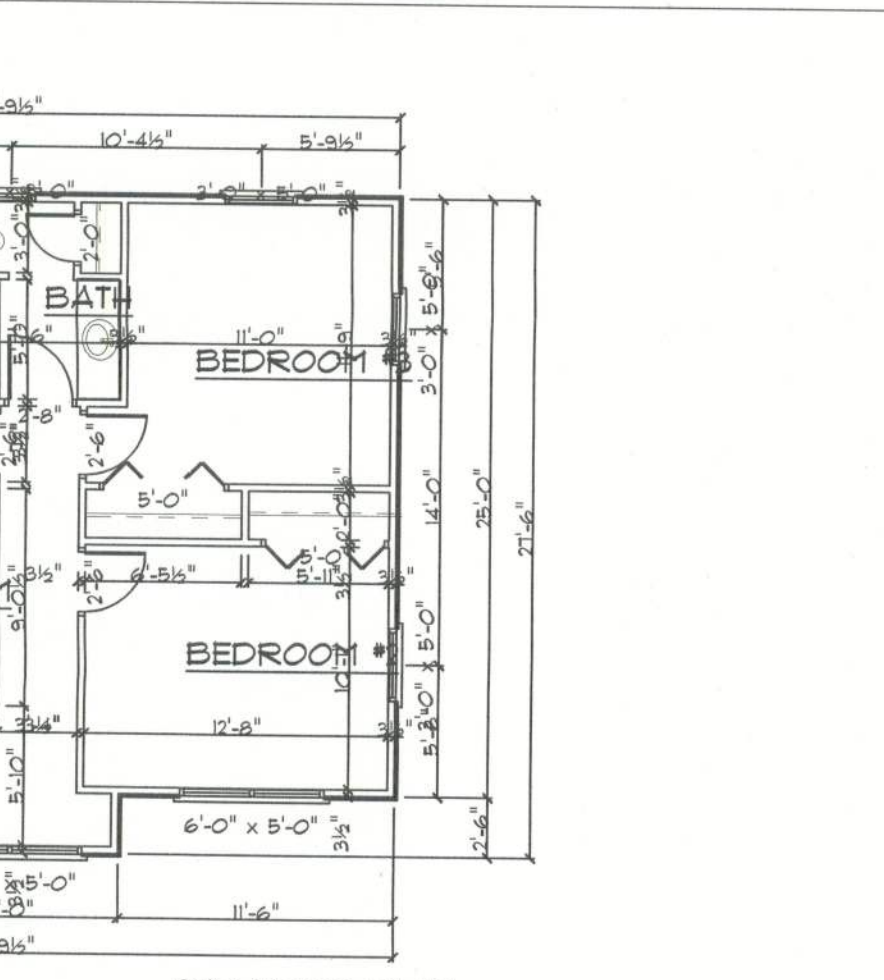
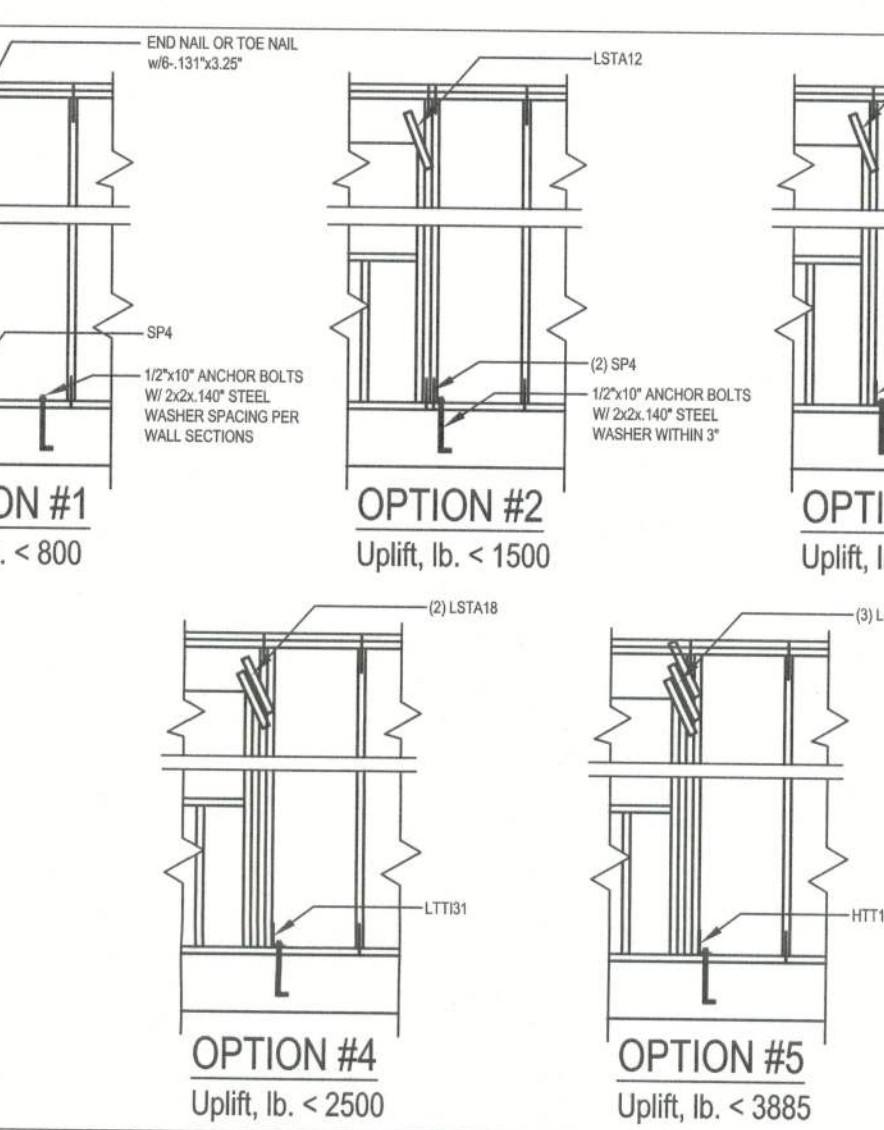
W13-TYPICAL HEADER SIZING & STRAPING DETAIL
SCALE: N.T.S. REV-22-AUG-03



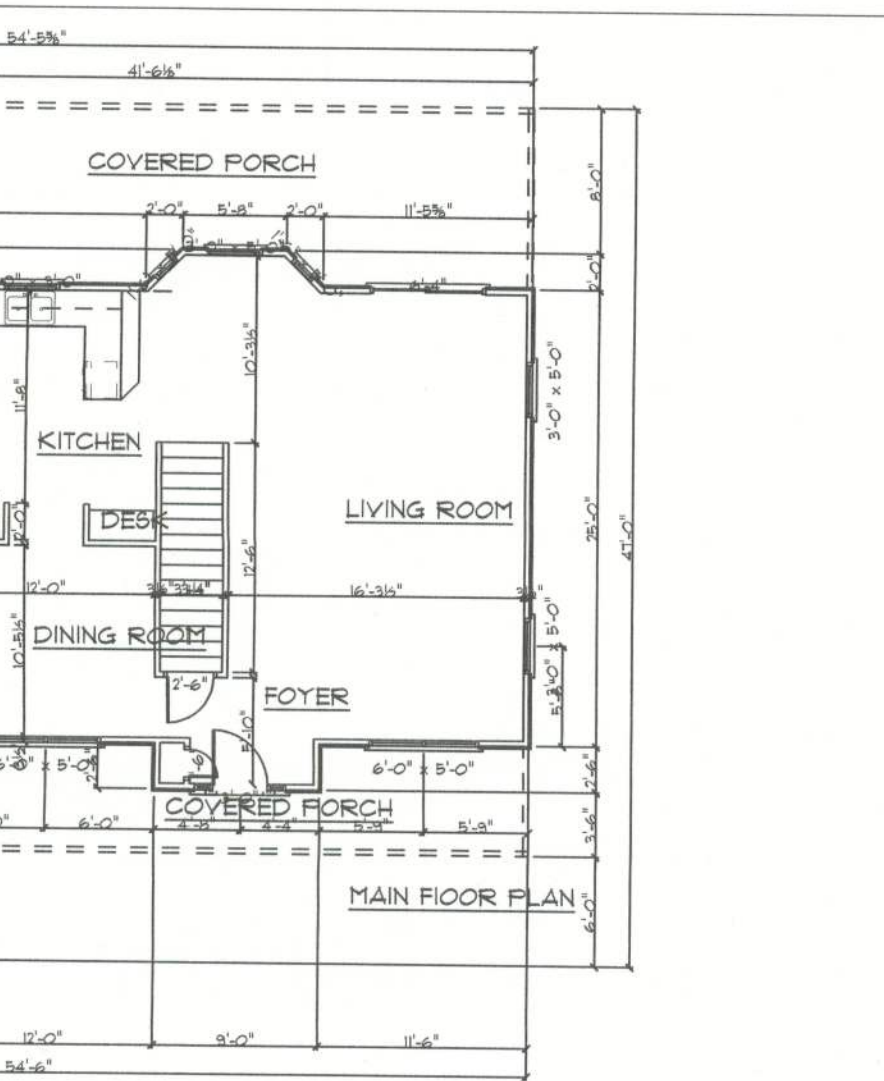
W13-TYPICAL HEADER SIZING & STRAPING DETAIL
SCALE: N.T.S. REV-22-AUG-03



N4-WIND LOAD DESIGN DATA			
(Wind loads are per FBC 2004, Section 1609 for enclosed simple diaphragm buildings with mean roof height less than 60' or the least horizontal dimension; not sited on the upper half of an unobstructed 60' high hill with >10% slope.)	Basic Wind Speed	110 MPH	
Wind Exposure	II		
Wind Importance Factor	1.0		
Building Category	II		
Internal pressure Coefficient	N/A (Enclosed)		
Building not in the high velocity hurricane zone			
Building not in the high velocity hurricane zone			
Mean Roof Height	< 30 ft		
Roof Angle	10-45 degrees		
Components And Cladding Wind Pressures (FBC Table 1609 BSC)			
Zone	Effective Wind Area (ft2)		
10	100		
4	21.8 x 23.8	18.5	20.4
5	21.8 x 23.1	18.5	22.6
1st Floor Total Shear Wall Segments			
2-4' min for 6-9' min wall, 2-10' min for 10-21' min wall	Transverse	Longitudinal	
Required	45.8'	39.8'	
Actual	46.5'	55.6'	
2nd Floor Total Shear Wall Segments			
2-4' min for 6-9' min wall, 2-10' min for 10-21' min wall	Transverse	Longitudinal	
Required	29.6'	26.8'	
Actual	44.0'	40.4'	



W13-TYPICAL HEADER SIZING & STRAPING DETAIL
SCALE: N.T.S. REV-22-AUG-03



N3-WINDLOAD ENGINEER'S SCOPE OF WORK			
The wind load requirements of FBC 2004, Section 1609. If trusses are used, the wind load engineer is not required of record for the trusses and did not design the trusses or delegate to the truss designer.	Builder's Responsibility: The builder and owner are responsible for the following, which are specifically not part of the wind load engineer's scope of work.		
Confirm that the foundation design & site conditions meet gravity load requirements (assume 1000 PSF bearing capacity unless visual observation or soils test proves otherwise).	Provide materials and construction techniques, which comply with FBC 2004 requirements for the stated wind velocity and design pressures.		
Verify the truss engineering includes truss design, placement plans, temporary and permanent bracing details, truss-to-truss connections, and load reactions for all bearing locations.	Select uplift connections, walls, columns, and footings based on truss engineering bearing locations and reactions; including interior bearing walls.		
Size headers for gravity loads; headers sized by the builder for gravity loads will also satisfy wind loads.			
DOCUMENT CONTROL AND PRIORITY: Structural requirements on S-1 control unless the building code or architectural sheets have more stringent requirements. Non-structural requirements on architectural sheets control. Specific requirements have precedence over general requirements. Revision control is by the latest signature date and is the responsibility of the builder.	COPYRIGHTS AND PROPERTY RIGHTS: Mark Disoway, P.E. hereby expressly reserves its common law copyrights and property right in these instruments of service. This document is not to be reproduced, altered or copied in any form or manner without first the express written permission and consent of Mark Disoway.		
DIMENSIONS: Stated dimensions supersede scaled dimensions. Refer all questions to Mark Disoway, P.E. for resolution. Do not proceed without clarification.	CERTIFICATION: The attached plans and "Windload Engineering", sheet S-1, comply with FBC 2004, Section 1609 wind loads, to the best of my knowledge.		
LIMITATION: This design is valid for one building, at specified location. This drawing is not valid for construction unless raised seal is affixed.			

Load Bearing Header Sizing Methods (BY BUILDER)			
1. Determine header size from FBC 2001, Tables 2308.3 A, B, & C, or 2308.5.	2. Use supplier published data or Southern pine span tables.	3. For engineered lumber beams have suppliers engineer size beam.	
4. Lookup jack studs from FBC 2001, Tables 2308.3 A, B, & C, or 2308.5.	5. Use one jack stud for every 3000 lb vertical load.	6. Total King plus jack studs = studs needed to be there if no opening was there.	
Header Uplift Connections (BY BUILDER)	7. Calculate the uplift at each end of the header by summing the moments of all truss uplifts and dividing by the length of the header.	8. Select header connections from table below or mfg. catalog to connect header to stud (top connection) and stud to foundation (bottom connection).	
Option #	Uplift, lb.	Top Connector	Bottom Connector
#1	< 800	End nail or toe nail w/8-131x32"	SP4, 6-10d x 1/2"
#2	< 1500	LSTA12, 10-10d	(2) SP4, 6-10d x 1/2"
#3	< 1750	LSTA18, 14-10d	(2) SP4, 6-10d x 1/2"
#4	< 2500	(2) LSTA18, 14-10d	(2) LTT101, 18-10d x 1/2"
#5	< 3885	(3) LSTA18, 14-10d	(3) HTT16, 18-16d x 1/2"

Uplift greater than 3885 lb requires engineering design

N2-GENERAL NOTES:

FOUNDATION: FOR POINT LOADS GREATER THAN 5000 lb OR REPETITIVE TRUSS LOADS GREATER THAN 2000 lb PER TRUSS PROVIDE A THICKENED SLAB OR PAD FOOTING 1'-0" X 1 sq ft. FOR EVERY 1000 lb OF BEARING REINFORCE WITH #5 @ 8" O.C. EACH WAY

CONCRETE: MINIMUM COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS SHALL BE $F_c = 3000$ PSI, WHERE EXCESS WATER IS ADDED TO THE CONCRETE SO THAT ITS SERVICABILITY IS DEGRADED, THE ATTAINMENT OF REQUIRED STRENGTH SHALL NOT RELEASE THE CONTRACTOR FROM PROVIDING SUCH MODIFICATIONS AS MAY BE REQUIRED BY THE ENGINEER TO PROVIDE A SERVICEABLE MEMBER OR SURFACE. ALL CONCRETE SHALL BE VIBRATED. NO REPAIR OR RUBBING OF CONCRETE SURFACES SHALL BE MADE PRIOR TO INSPECTION BY AND APPROVAL OF THE ENGINEER, OWNER OR HIS REPRESENTATIVE.

WELDED WIRE REINFORCED SLAB: 6" x 6" W14 x W14, FB = 85KSI, WELDED WIRE REINFORCEMENT FABRIC (W.W.M.) CONFORMING TO ASTM A185; LOCATED IN MIDDLE OF THE SLAB; SUPPORTED WITH APPROVED MATERIALS OR SUPPORTS AT SPACINGS NOT TO EXCEED 3'.

FIBER CONCRETE SLAB: CONCRETE SLABS ON GROUND CONTAINING SYNTHETIC FIBER REINFORCEMENT. FIBER LENGTHS SHALL BE 10 INCHES TO 2 INCHES IN LENGTH. DOSAGE AMOUNTS SHALL BE FROM 0.75 TO 1.5 POUNDS PER CUBIC YARD IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SYNTHETIC FIBERS SHALL COMPLY WITH ASTM C 1116. THE MANUFACTURER OR SUPPLIER SHALL PROVIDE CERTIFICATION OF COMPLIANCE WITH ASTM C 1116 WHEN REQUESTED BY THE BUILDING OFFICIAL.

CONTROL JOINTS: WHERE SPECIFIED, SAWN CONTROL JOINTS IN SLAB-ON-GRADE SHALL BE CUT IN ACCORDANCE WITH ACI 302. JOINTS SHALL BE CUT WITHIN 12 HOURS OF SLAB PLACEMENT. THE LENGTH / WIDTH RATIOS OF SLAB AREAS SHALL NOT EXCEED 15 AND TYPICAL SPACING OF CUTS TO BE 12FT. DO NOT CUT W/M OR REINFORCING STEEL. (RECOMMENDED LOCATION OF CONTROL JOINTS IS SUBJECT TO OWNER AND CONTRACTOR'S APPROVAL. THE CONTROL JOINTS ARE NOT INTENDED TO PREVENT CRACKS BUT RATHER TO ENCOURAGE THE SLAB TO CRACK ON A GIVEN LINE.)

REBAR: ASTM A 615, GRADE 60, DEFORMED BARS, $F_y = 60$ KSI. ALL LAPS SPICES 48" db (30" FOR #5 BARS). UNO. ALL REINFORCEMENT SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI 315-95 WITH ACI 315-96 UNLESS NOTED OTHERWISE. ALL TENSION DEVELOPMENT LENGTHS SHALL BE 30 INCHES.

STRUCTURAL CONNECTORS: MANUFACTURERS AND PRODUCT NUMBER FOR CONNECTORS, ANCHORS, AND REINFORCEMENT ARE LISTED FOR EXAMPLE NOT ENDORSEMENT. AN EQUIVALENT DEVICE OF THE SAME OR OTHER MANUFACTURER CAN BE SUBSTITUTED FOR ANY DEVICES LISTED IN THE EXAMPLE TABLES AS LONG AS IT MEETS THE REQUIRED LOAD CAPACITIES. MANUFACTURER'S INSTALLATION INSTRUCTIONS MUST BE FOLLOWED TO ACHIEVE RATED LOADS.

ANCHOR BOLTS: A-307 ANCHOR BOLTS WITH MINIMUM EMBEDMENT AS SPECIFIED IN DRAWINGS BUT NO LESS THAN 7" IN CONCRETE OR REINFORCED BOND BEAM OR 15" IN GROUTED CMU.

WASHERS: WASHERS USED WITH 1/2" BOLTS TO BE 2" x 2" x 9/64"; WITH 5/8" BOLTS TO BE 3" x 3" x 9/64"; WITH 3/4" BOLTS TO BE 3" x 3" x 9/64"; WITH 7/8" BOLTS TO BE 3" x 3" x 5/16"; NO.

NAILS: ALL NAILS ARE COMMON NAILS UNLESS OTHERWISE SPECIFIED OR ACCEPTED BY FBC TEST REPORTS AS HAVING EQUAL STRUCTURAL VALUES.

WINDLOAD ENGINEERING

"EVERYTHING YOU NEED FOR YOUR BUILDING PERMIT"

Mark Disoway P.E.

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Location: 275 SW Scenic Court, Ft. White, Florida 32038

Adam & Kim Service Residence

Builder: Stephen Crawford Construction

Designer: Stephen Crawford Construction

Approved: FLPER53915 Revisions:

Sheet S-1 of 1 Sheet

Windload Engineering

Job # 510121