CMU EMBEDED TRUSS STRAP TABLE

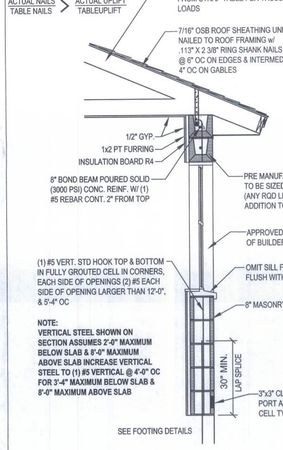
OBTAIN UPLIFT REQUIREMENTS FROM TRUSS MANUFACTURER'S ENGINEERING

UPLIFT LBS.	TRUSS CONNECTOR	MASONRY
< 1040	META20	7–10d, 1 1/2"
< 1490	META20	10–10d, 1 1/2"
< 1735	HETA24	14–10d, 1 1/2"
< 1780	LGT2	7 – 1"/4"x2 1/4" TITEN IN BLOCK 14 – 16d SINKER IN GROUT
< 1900	(2) META22	9–10d, 1 1/2" EA.
< 2130	HHETA20	17–10d, 1 1/2"
< 2310	HHETA24	21–10d, 1 1/2"
< 3965	MGT	16–10d TO TRUSS 5/8" x 14" THD ROD w/ 12" EMBEDMENT IN FILLED CELL

All connectors are Simpson Strongtie (u.n.o.)

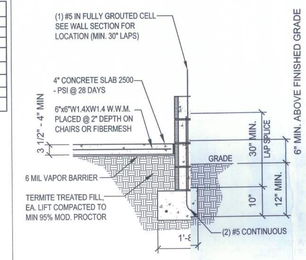
NOTE: SPECIFIED NUMBER OF FASTENERS MAY BE REDUCED PER SST CATALOG:

ACTUAL NAILS > TABLE NAILS — ACTUAL UPLIFT < TABLEUPLIFT



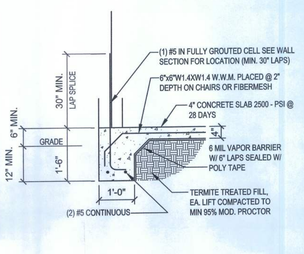
W6 - SINGLE - STORY CMU WALL SECTION

SCALE: 1/2"=1'-0" REV-08-JAN-05



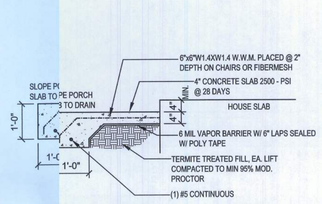
F14 - CMU WALL FOOTING - FLOATING SLAB

SCALE: 1/2"=1'-0" REV-08-JAN-05



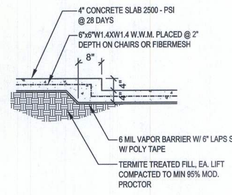
F15 - ALT. CMU WALL FOOTING - MONOLITHIC SLAB

SCALE: 1/2"=1'-0" REV-28-Jul-04



F2 - PORCH SLAB

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



F12 - NON - BEARING STEP FOOTING

SCALE: 1/2"=1'-0" REV-08-JAN-05

N9-DOOR & WINDOW BUCK ATTACHMENT

TAPCON IN FACE OF CMU
2 1/2" MIN. EDGE DISTANCE
1 1/4" MIN. EMBEDMENT
3" MIN. EDGE SPACING

WINDOWS & DOORS UP TO 6'X8'

3/16" TAPCONS @ 2' O.C.
1/4" TAPCONS @ 3' O.C.

WINDOWS & DOORS UP TO 8'X12'

3/16" TAPCONS @ 16" O.C.
1/4" TAPCONS @ 24" O.C.

SLIDERS UP TO 8'6X20'W

3/16" TAPCONS @ 12" O.C.
1/4" TAPCONS @ 18" O.C.

GARAGE DOOR UP TO 16'W

(2) 3/16" TAPCONS @ 16" O.C.
(2) 1/4" TAPCONS @ 24" O.C.

GARAGE DOOR UP TO 18'W

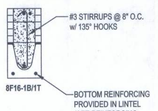
(2) 3/16" TAPCONS @ 8" O.C.
(2) 1/4" TAPCONS @ 12" O.C.
(1) 1/2" BOLT @ 32" O.C.
(1) 5/8"x6" TAPCON @ 32" O.C.

MASONRY NOTES:

MASONRY CONSTRUCTION AND MATERIALS FOR THIS PROJECT SHALL CONFORM TO ALL REQUIREMENTS OF "SPECIFICATION FOR MASONRY STRUCTURES" (ACI 530.1/ASCE 6/TMS 602). THE CONTRACTOR AND MASON MUST IMMEDIATELY, BEFORE PROCEEDING, NOTIFY THE ENGINEER OF ANY CONFLICTS BETWEEN ACI 530.1-02 AND THESE DESIGN DRAWINGS. ANY EXCEPTIONS TO ACI 530.1-02 MUST BE APPROVED BY THE ENGINEER IN WRITING.

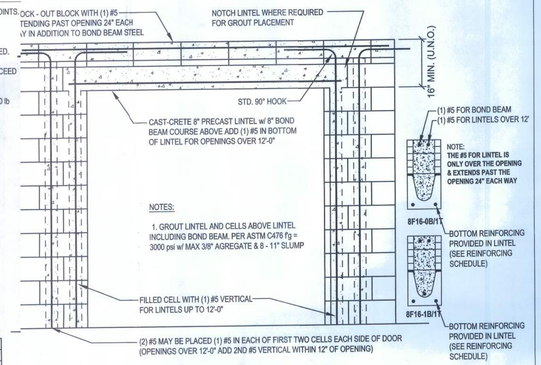
	ACI530.1-02 Section	Specifi Requirements
1.4A	Compressive strength	8" bloc bearing walls F'm = 1500 psi
2.1	Mortar	ASTM C 270, Type N, UNO
2.2	Grout	ASTM C 476, admixtures require approval
2.3	CMU standard	ASTM C 90-02, Normal weight, Hollow, mediu surface finish, 8"x8"x16" running bond ad 12"x12" or 16"x16" column block
2.4	Reinforcing bars, #3 - #11	ASTM 615, Grade 60, Fy = 60 ksi, Lap splicesmin 48 bar dia. (30" for #5)
2.4F	Coating for corrosion protection	Anchor, sheet metal ties completely embeded in mortar or grout, ASTM A525, Class G60, 0.60 oz/ft2 or 304SS
2.4F	Coating for corrosion protection	Joint reinforcement in walls exposed to moistur or wire ties, anchors, sheet metal ties nocompletely embedded in mortar or grout, STM A153, Class B2, 1.50 oz/ft2 or 304S
3.3.E.2	Pipes, conduits, and accessories	Any nc shown on the project drawings requireengineering approval.
3.3.E.7	Movement joints	Contrator assumes responsibility for type and loation of movement joints if not detailed on project drawings.

- SET PRECAST LINTEL IN FULL HEAD & BED JOINTS.
- GROUT ALL REINFORCED CELLS
- PLACE BOTTOM REBAR IN LINTEL IF REQUIRED.
- AVERAGE TRUSS GRAVITY LOAD NOT TO EXCEED 1900 lb FOR OPENINGS TO 16'-0"
- MAXIMUM TRUSS LOAD NOT TO EXCEED 3000 lb W/O ENGINEERING DESIGN OF LINTEL
- **STIRRUPS NOT REQUIRED IF ABOVE CONDITIONS ARE MET. IF THE ABOVE CONDITIONS ARE NOT MET SEE DETAIL BELOW AND PLAN**



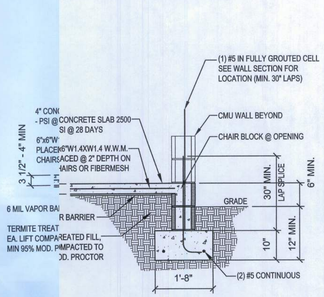
REINFORCING SCHEDULE

LENGTH	BOTTOM STEEL
UP TO 6'-10"	(2) - #3 REBAR
UP TO 10'-6"	(2) - #4 REBAR
UP TO 14'-0"	(2) - #5 REBAR
UP TO 19'-4"	(2) - 7/16 STRAND



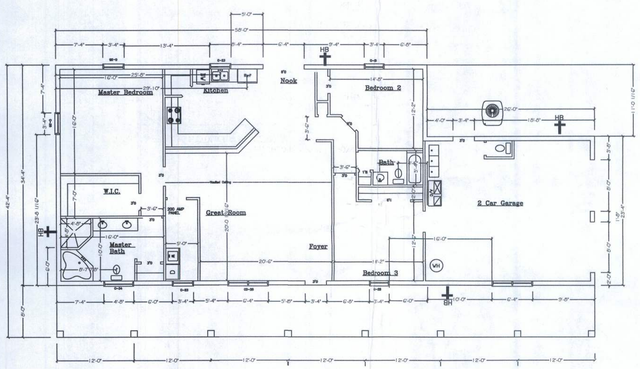
W22 - TYPICAL FILLED LINTEL ASSEMBLY DETAIL

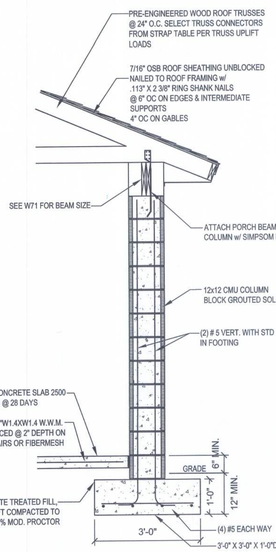
SCALE: 1/2"=1'-0" REV-08-JAN-05



F28 - CMU WALL FOOTING @ OPENING

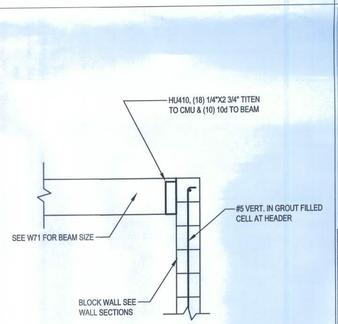
SCALE: 1/2"=1'-0" REV-24-Jul-04





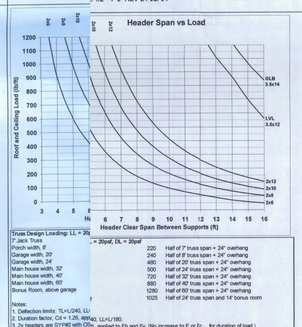
W51 - CMU PORCH COLUMN

SCALE: 1/2"=1'-0" REV-24-Jul-04



W30 - WOOD PORCH HEADER AT CMU WALL

SCALE: 1/2"=1'-0" REV-24-Jul-04



Truss Design Loading: LL = 20psf, DL = 20psf

Porch width, 8'
Garage width, 20'
Garage width, 24'
Main house width, 32'
Main house width, 40'
Main house width, 60'
Bonus Room, above garage

Notes:
1. Deflection limits: TL=L/240, LL=L/180
2. Duration factor, Cd = 1.25, 60% load, LL=L/180
3. 2x headers are SYP#2 with CDX, applied to Fb and Fv (No increase to E or $F_{c\perp}$ for duration of load.)
4. 3.5" x 14" GLB is Anthony Forest Products Co. GLB 65fch spacer and (2) 12x65 18"OC. (strength increased 5% for OSB)
5. 3.5" x 12" LVL is Blue Link - Ply Power Header, 2600 Fb, 1.9 E, or GP (23.75x14 LVL, 2950 Fb, 2.0 E)
6. Minimum bearing for SYP headers - GP Lam, (2) 1.75" x 11.78" LVL, 2900 Fb, 2.0 E, 285 Fv
7. Shear strength is increased 50% for SYP header, F_v = 565psi, 2600 lb per jack stud; For SPF plate, F_c = 425psi, 2200 lb per jack stud
8. Deflection has not been adjusted for 50% for minimal splits and checks headers cut to size on site.
9. The chart is based on NDS2005 adjusted for creep due to long term loading, Kr = 1.0.
10. Chart is for uniform loads only. NDS2001 bending, horizontal shear, and deflection requirements.
11. (For non-uniform loads sum the only. Sum the loads on the header; divide by header span; and multiply by 2.)

220	Half of 7' truss span + 24" overhang
240	Half of 8' truss span + 24" overhang
480	Half of 20' truss span + 24" overhang
500	Half of 24' truss span + 24" overhang
720	Half of 32' truss span + 24" overhang
880	Half of 40' truss span + 24" overhang
1280	Half of 60' truss span + 24" overhang
1025	Half of 24' truss span and 14' bonus room

W71 - HEADER SPANS FOR ROOF/CEILING LOAD

N5 - TRUSS UPLIFT CONNECTOR TABLE

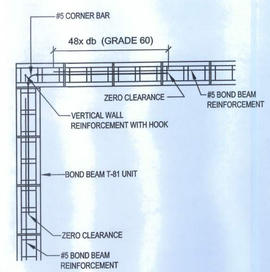
REV-18-NOV-04

All connectors are Simpson Strongtie, uno. Select top and bottom connections from this table or SST catalog to meet truss uplift. Use fasteners as specified.

Uplift SPF	Uplift SYP	Truss Connector	To Plate	To Truss / Rafter
320	455	H3	4-8d	4-8d
245	350	H5A	3-8d	3-8d
535	600	H2.5A	5-8d	5-8d
620	720	H10	6-10dx1½"	6-10dx 1½"
850	990	LTS12	8-8dx1½"	8-8dx 1½"
1245	1450	HTS20	10-10d or 12-10dx1½"	10-10d or 12-10dx 1½"
1265	1470	H16, H16-2	10-10dx1½"	2-10dx 1½"
1785	2050	LGT2	14-10d Sinker	16-16d Sinker
3655	4200	MGT	⅝" Thd. Rod	22-10d
SPF	**SYP**	**Strap Connector**	**To One Member**	**To Other Member**
760	885	SP4	6-10dx1½"	N/A
865	1005	CS20	9-8d or7-10d	9-8d or 7-10d
1085	1265	LSTA18-24	7-10d	7-10d
1170	1360	SPH4	12-10dx1½"	N/A
420	455	SSP	4-10d	3-10d to double plate or 1-10d to single
600	825	DSP	8-10d	6-10d to double plate or 2-10d to single
1420	1650	CS16	14-8d or 11-10d	14-8d or 11-10d
SPF	**SYP**	**Column Anchor**	**To Foundation**	**To Column / Truss**
1160	1360	LTT19	⅝"x 16" AB	8-16d Sinkers
1985	2310	LTT31	⅝"x 16" AB	18-10dx 1½"
2385	2775	HD2A	⅝"x 16" AB	2-⅝" Bolts
3590	4175	HTT16	⅝"x 16" AB	18-16d
1975	2300	ABU66	⅝"x 16" AB	12-16d

Studs Supporting Trusses: The 2300 lb of reaction. Check the Manufacturer and product numb for any devices listed in the exa achieve rated loads. All connec duration. Strap uplift may be 10dx1½"=16d sinker). SPF=.80

a. The builder is responsible for gravity loads, but you should put an extra 2x4 stud under truss bearing location for each s the minimum bearing requirements of the truss and top plate (SPF, Fc=425psi=2200lb/sf). number are listed for example and endorsement. An equivalent device of the same or other manufacturer can be substituted example tables as long as it meets the required load capacities. Manufacturer's installation instructions must be followed to nnections exposed directly to the weather shall be hot dipped galvanized after fabrication. Loads are increased for wind be reduced proportionally to number of nails. See spec sheet for alternate nail sizes (10d=.84*16d, 10dx1½"=.80*10d, =.84*.80*SYP



W21 - TYPICAL BOND BEAM CORNER DETAIL

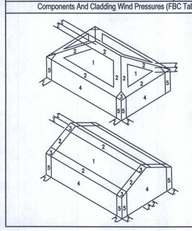
SCALE: 1/2"=1'-0" REV-24-Jul-04

N4-WIND LOAD DESIGN DATA

Wind loads are per FBC 2007, 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	C
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 wind-borne debris region	
Mean Roof Height	< 30 ft
Roof Angle	10-45 degrees

Components And Cladding Wind Pressures (FBC Table1609 B&C)



Zone	Effective Wind Area (ft2)			
	10		100	
4	30.5	-33.0	25.9	-28.5
5	30.5	-40.7	25.9	-31.6

	Transverse	Longitudinal
Required	25.5'	20.0"
Actual	49.3'	121.0'

N3-WINDLOAD ENGINEER'S SCOPE OF WORK: The wind load engineer is engineer of record for compliance of the structure to wind load requirements of FBC 2007, Section 1609. If trusses are used, the wind load engineer is not engineer 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 1500 PSF bearing capacity unless visual observation or soils test proves otherwise
* Provide materials and construction techniques, which comply with FBC 2007 requirements for the stated wind velocity and design pressures.
* Provide a continuous load path from roof to foundation. If you believe the plan omits a continuous load path connection, call the wind load engineer immediately.
* 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 take precedence over general requirements. Revision control is by the latest signature date and is the responsibility of the builder.

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DIMENSIONS: Stated dimensions supercede scaled dimensions. Refer all questions to Mark Disoway, P.E. for resolution. Do not proceed without clarification.

WINDLOAD ENGINEER: Mark Disoway, PE No.53915

CERTIFICATION: The attached plans and "Windload Engineering", sheet S-1, comply with FBC 2007, 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.

N2-GENERAL NOTES:

FOUNDATION: FOR POINT LOADS GRATER THAN 5000 lb OR RETITIVE TRUSS LOADS GRATER THAN 2000 lb PER TRUSS PROVIDE A THICKENED SLAB OR PAD FOOTING 1'-0"D 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" W1.4 x W1.4, FB = 85SI. 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 1/2 INCH 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 1.5 AND TYPICAL SPACING OF CUTS TO BE 12FT. DO NOT CUT WWM OR REINFORCING STEEL. (RECOMMENDED LOCATION OF CONTROL JOINTS IS SUBJECT TO OWNER AND CONTRACTORS APPROVAL. THE CONTROL JOINTS ARE NOT INTENDED TO PREVENT CRACKS BUT RATHER TO ENCOURAGE THE SLAB TO CRACK (A GIVEN LINE.)

REBAR: ASTM A 615, GRADE 60, DEFORMED BARS, FY = 60 KSI. ALL LAPS SPLICES 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 5" IN GROUTED CMU.

WASHERS: WASHERS USED WITH 1/2" BOLTS TO BE 2" x 2" x 9/4"; 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 3x 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.

COLUMBIA COUNTY BUILDING DEPARTMENT Received for FILE COPY Code Compliance PLANS EXAMINER

REV-27-Jul-04

WINDLOAD ENGINEERING

"EVERYTHING YOU NEED FOR YOUR BUILDING PERMIT"

Mark Disoway P.E.

POB 868, Lake City, FL 32056 Phone: (386) 754-5419

Fax: (386) 269-4871 Email: windloadengineer@bellsouth.net

Location: 154 SW Coles Ct. Columbia City, FL

Cannon Resicence

Builder: House Craft Homes

Designer: House Craft Homes

Approved PLFE53915 — Revisions:

STATE OF FLORIDA MARK DISOWAY No 53915 PROFESSIONAL ENGINEER

Sheet S-1 of 1 Sheet

Windoad Engineering

Job#1109080