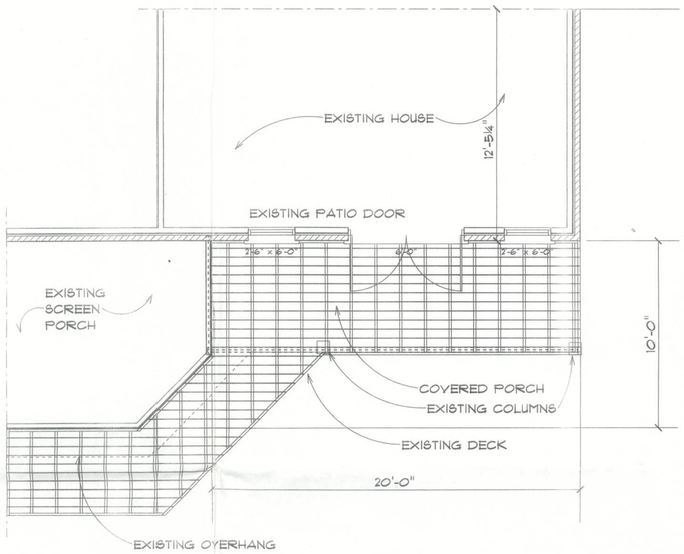
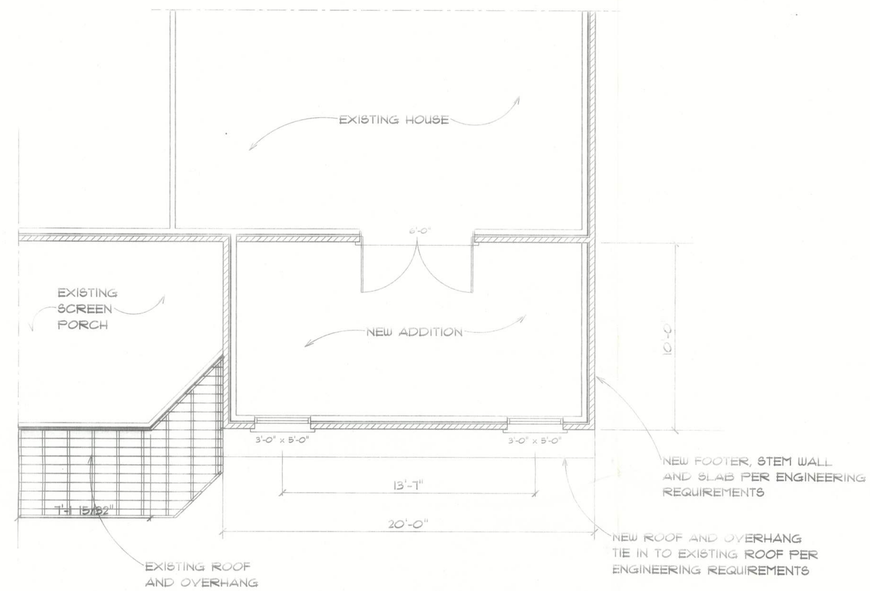


EXISTING LAYOUT



PROPOSED LAYOUT

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

NO	DATE	REVISION
A	02-20-13	INITIAL RELEASE

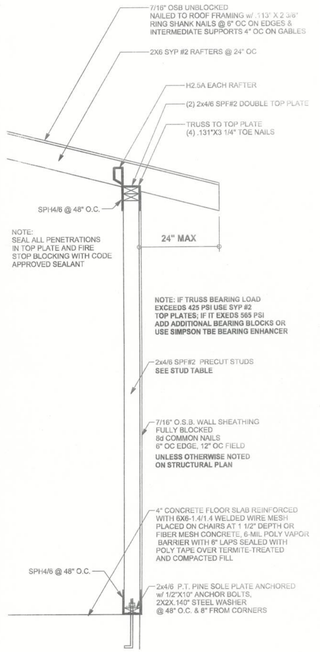
Whiddon Construction Company
10280 SW 250th st Branford
FLORIDA STATE LICENSE NO. CRC1328025

CUSTOMER APPROVAL

APPROVAL

BOWDOIN ADDITION
LAKE CITY, FLORIDA

DATE
02/20/2013
DESIGNED BY
R.W
DRAWN BY
R.W
CHECKED BY
R.W
DWG. NO.
A-1
SCALE:
1/4" = 1'-0"



ONE STORY WALL SECTION

SCALE: 3/4" = 1'-0"

EXTERIOR WALL STUD TABLE FOR SPF #2 STUDS

(1) 2x4 @ 16" OC	TO 10'-1" STUD HEIGHT
(1) 2x4 @ 12" OC	TO 11'-2" STUD HEIGHT
(1) 2x6 @ 16" OC	TO 15'-7" STUD HEIGHT
(1) 2x6 @ 12" OC	TO 17'-3" STUD HEIGHT

THIS STUD HEIGHT TABLE IS PER 2012 WFCM, TABLE 3.20B4.
EXTERIOR LOAD BEARING & NON LOAD BEARING STUD LENGTHS
FOR WALLS WITH OSB EXTERIOR AND 1/2" GYP INTERIOR
RESISTING INTERIOR ZONE WINDLOADS, 130 MPH, EXPOSURE C.
STUD DEFLECTION LIMIT H240 (NOT OK FOR SOME BRITTLE FINISH?).
STUD SPACINGS SHALL BE MULTIPLIED BY 0.8 FOR FRAMING
LOCATED WITHIN 4 FEET OF CORNERS FOR END ZONE LOADING.
(END ZONE EXAMPLE 16" O.C. x 0.8 = 12.8" O.C.)

GRADE & SPECIES TABLE

		Fb (psi)	E (10^6 psi)
2x8	SYP #2	1200	1.6
2x10	SYP #2	1050	1.6
2x12	SYP #2	975	1.6
GLB	24F-V3 SP	2400	1.8
LSL	TIMBERSTRAND	1700	1.7
LVL	MICROLAM	1600	1.9
PSL	PARALAM	2900	2.0

GENERAL NOTES:

TRUSSES: TRUSSES SHALL BE DESIGNED BY A FLORIDA LICENSED ENGINEER IN ACCORDANCE WITH THE 2010 FBCR. TRUSS ENGINEERING SHALL INCLUDE TRUSS DESIGN, PLACEMENT PLANS, TEMPORARY AND PERMANENT BRACING DETAILS, TRUSS-TO-TRUSS CONNECTIONS, AND UPLIFT AND REACTION LOADS FOR ALL BEARING LOCATIONS. TRUSS ENGINEERING IS THE RESPONSIBILITY OF THE TRUSS MANUFACTURER AND SHALL BE SIGNED & SEALED BY THE MANUFACTURER'S DESIGN ENGINEER. IT IS THE BUILDER'S RESPONSIBILITY VERIFY THE TRUSS DESIGNER FULLY SATISFIES ALL THE ABOVE REQUIREMENTS AND TO SELECT UPLIFT CONNECTIONS BASED ON TRUSS ENGINEERING UPLIFT AND PROVIDE FOOTINGS FOR INTERIOR BEARING WALLS. BUILDER IS TO FURNISH TRUSS ENGINEERING TO WIND LOAD ENGINEER FOR REVIEW OF TRUSS REACTIONS ON THE BUILDING STRUCTURE. STRAP 2X6 RAFTERS WITH MIN UPLIFT CONNECTION 415LB EACH END; 2X8 RAFTERS 700 LB EACH END.

SITE PREPARATION: SITE ANALYSIS AND PREPARATION IS NOT PART OF THIS PLAN

FOUNDATION: CONFIRM THAT THE FOUNDATION DESIGN & SITE CONDITIONS MEET GRAVITY LOAD REQUIREMENTS (ASSUME 1000 PSF BEARING CAPACITY UNLESS VISUAL OBSERVATION OR SOILS TEST PROVES OTHERWISE

CONCRETE: MINIMUM COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS, $F'c = 3000$ PSI.

WELDED WIRE REINFORCED SLAB: 6" x 6" W1.4 x W1.4, 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 LENGTH 1/2 INCH TO 2 INCHES. DOSAGE AMOUNTS FROM 0.75 TO 1.5 POUNDS PER CUBIC YARD PER THE MANUFACTURER'S RECOMMENDATIONS. FIBERS TO COMPLY WITH ASTM C 1116. SUPPLIER TO PROVIDE ASTM C 1116 CERTIFICATION OF COMPLIANCE WHEN REQUESTED BY 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 12'FT. DO NOT CUT WWM 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, FY = 60 KSI. ALL LAP SPLICES 40 * D3 (25" FOR #5 BARS); UNO. ALL REINFORCEMENT SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI 315-99, U.N.O.

GLULAM BEAMS: GLULAM BEAM, GLB, 24F-V3SP, Fb = 2.4ksi, E = 1800ksi; UNO. SUPPLIER MAY SUPPLY AN ALTERNATE BEAM WITH EQUAL PROPERTIES OR MAY SUBMIT THEIR OWN SIZING CALCS.

ROOF SHEATHING: ALL ROOFS ARE HORIZONTAL DIAPHRAGMS; 7/16" OSB SHEATHING, UNBLOCKED, APPLIED PERPENDICULAR TO FRAMING, OVER A MINIMUM OF 3 FRAMING MEMBERS; WITH PANEL EDGES STAGGERED, FASTENED WITH 8d COMMON NAILS (.131), 6"OC PANEL EDGES, 12"OC INTERMEDIATE MEMBERS, GABLE ENDS AND DIAPHRAGM BOUNDARY; 4"OC, UNO.

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"; UNO.

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

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 SITE CONDITIONS, FOUNDATION BEARING CAPACITY, GRADE AND BACKFILL HEIGHT, WIND SPEED AND DEBRIS ZONE, AND FLOOD ZONE.

PROVIDE MATERIALS AND CONSTRUCTION TECHNIQUES, WHICH COMPLY WITH 2010 FBCR REQUIREMENTS FOR THE STATED WIND VELOCITY AND DESIGN PRESSURES.

PROVIDE A CONTINUOUS LOAD PATH FROM TRUSSES TO FOUNDATION. IF YOU BELIEVE THE PLAN OMITS A CONTINUOUS LOAD PATH CONNECTION, CALL THE WIND LOAD ENGINEER IMMEDIATELY.

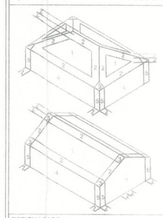
ANCHOR TABLE

OBTAIN UPLIFT REQUIREMENTS FROM TRUSS MANUFACTURER'S ENGINEERING

UPLIFT LBS. SYP	UPLIFT LBS. SPF	TRUSS CONNECTOR*	TO PLATES	TO RAFTER/TRUSS	TO STUDS
< 420	< 245	H5A	3-8d	3-8d	
< 455	< 265	H5	4-8d	4-8d	
< 360	< 235	H4	4-8d	4-8d	
< 455	< 320	H3	4-8d	4-8d	
< 415	< 365	H2.5	5-8d	5-8d	
< 600	< 535	H2.5A	5-8d	5-8d	
< 950	< 820	H6	8-8d	8-8d	
< 745	< 565	H8	5-10d, 1 1/2"	5-10d, 1 1/2"	
< 1465	< 1050	H14-1	13-8d	12-8d, 1 1/2"	
< 1465	< 1050	H14-2	15-8d	12-8d, 1 1/2"	
< 990	< 850	H10-1	8-8d, 1 1/2"	8-8d, 1 1/2"	
< 780	< 655	H10-2	6-10d	6-10d	
< 1470	< 1265	H16-1	10-10d, 1 1/2"	2-10d, 1 1/2"	
< 1470	< 1265	H16-2	10-10d, 1 1/2"	2-10d, 1 1/2"	
< 1020	< 860	MTS24C	7-10d 1 1/2"	7-10d 1 1/2"	
< 1450	< 1245	HTS24	12-10d 1 1/2"	12-10d 1 1/2"	
< 2900	< 2490	2 - HTS24			
< 2850	< 1785	LGT2	14 -16d	14 -16d	
		HEAVY GIRDER TIEDOWNS*			TO FOUNDATION
< 3965	< 3330	MGT		22 -10d	1-5/8" THREADED ROD 12" EMBEDMENT
< 10260	< 9485	HGT-2		16 -10d	2-5/8" THREADED ROD 12" EMBEDMENT
< 10530	< 9835	HGT-3		16 -10d	2-5/8" THREADED ROD 12" EMBEDMENT
< 9250	< 8250	HGT-4		16 -10d	2-5/8" THREADED ROD 12" EMBEDMENT
		STUD STRAP CONNECTOR*			TO STUDS
< 435	< 435	SSP DOUBLE TOP PLATE	3 -10d		4 -10d
< 455	< 420	SSP SINGLE SILL PLATE	1 -10d		4 -10d
< 825	< 825	DSP DOUBLE TOP PLATE	6 -10d		8 -10d
< 825	< 600	DSP SINGLE SILL PLATE	2 -10d		8 -10d
< 885	< 760	SPH4			6-10d, 1 1/2"
< 1240	< 1060	SPH4			10-10d, 1 1/2"
< 885	< 760	SP6			6-10d, 1 1/2"
< 1240	< 1060	SPH6			10-10d, 1 1/2"
< 1235	< 1165	LSTA18	14-10d		
< 1235	< 1235	LSTA21	16-10d		
< 1930	< 1930	CS20	18-8d		
< 1705	< 1705	CS16	28-8d		
		STUD ANCHORS*	TO STUDS		TO FOUNDATION
< 1350	< 1300	LTT19	8-16d		1/2" AB
< 2310	< 2310	LTT31	18-10d, 1 1/2"		1/2" AB
< 2775	< 2570	HDZA	2-5/8" BOLTS		5/8" AB
< 4175	< 3695	HTT16	18 - 16d		5/8" AB
< 1400	< 1400	PAHD42	16-16d		
< 3335	< 3335	HPAHD22	16-16d		
< 2200	< 2200	ABU44	12-16d		1/2" AB
< 2300	< 2300	ABU66	12-16d		1/2" AB
< 2320	< 2320	ABU88	18 - 16d		2-5/8" AB

DESIGN DATA

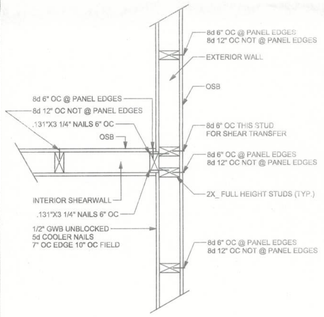
WIND LOADS PER 2010 FLORIDA BUILDING CODE RESIDENTIAL, SECTION R301.2.1
(ENCLOSED SIMPLE DIAPHRAGM BUILDINGS WITH FLAT, HIPPED, OR GABLE ROOFS; MEAN ROOF HEIGHT
BUILDING IS NOT IN THE HIGH VELOCITY HURRICANE ZONE
BUILDING IS NOT IN THE WIND-BORNE DEBRIS REGION
1.) BASIC WIND SPEED = 130 MPH, (3 SEC GUST, 33 FT, EXP. C)
2.) WIND EXPOSURE = C, BUILDER MUST FIELD VERIFY
3.) TOPOGRAPHIC FACTOR = 1.0, BUILDER MUST FIELD VERIFY
4.) RISK CATEGORY = II, (MRI = 700 YR)
5.) ROOF ANGLE = 7-45 DEGREES
6.) MEAN ROOF HEIGHT = <30 FT
7.) INTERNAL PRESSURE COEFFICIENT = +/-0 (ENCLOSED BUILDING)
8.) COMPONENTS AND CLADDING DESIGN WIND PRESSURES (TABLE R301.2(2))



Zone	Effective Wind Area (ft2)			
	10			
1	39	-43		
2	39	-68		
3	39	-100		
4	43	-46		
5	43	-57		

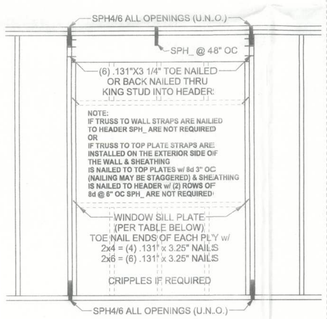
Garage Door 2010 FBCR, Table R301.2.(4)		
8x7 Garage Door	37	-42
16x7 Garage Door	36	-40

DESIGN LOADS
FLOOR 40 PSF (ALL OTHER DWELLING ROOMS)
30 PSF (SLEEPING ROOMS)
30 PSF (ATTICS WITH STORAGE)
10 PSF (ATTICS WITHOUT STORAGE, <3:12)
ROOF 20 PSF (FLAT OR <4:12)
18 PSF (4:12 TO <12:12)
12 PSF (12:12 AND GREATER)
STAIRS 40 PSF (ONE & TWO FAMILY DWELLINGS)
SOIL BEARING CAPACITY 1500 PSF
NOT IN FLOOD ZONE (BUILDER TO VERIFY)



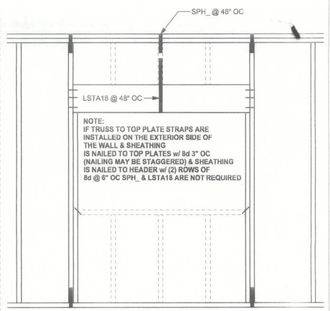
(TYP.) INTERSECTING WALL FRAMING

WOOD FRAME



TYPICAL HEADER STRAPING DETAIL

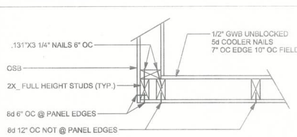
ONE STORY WOOD FRAME w/ STRAPS & ANCHORS



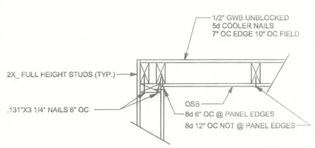
OPTION: 2 (DROPPED HEADER)

SILL PLATE SPANS FOR 10'-0" WALL HEIGHT

DESIGN WIND SPEED	MAX. SPANS FOR SPF #2				BASED ON WFCM TABLE A-3.28B
	(1) 2x4	(2) 2x4	(1) 2x6	(2) 2x6	
115-130 MPH	5'-3"	7'-8"	7'-8"	11'-4"	FOR OTHER WALL HEIGHTS (H) SILL SPAN SHALL BE DIVIDED BY (H/10)
140-150 MPH	4'-4"	6'-8"	6'-5"	9'-6"	
160 MPH	4'-0"	6'-0"	5'-11"	8'-9"	



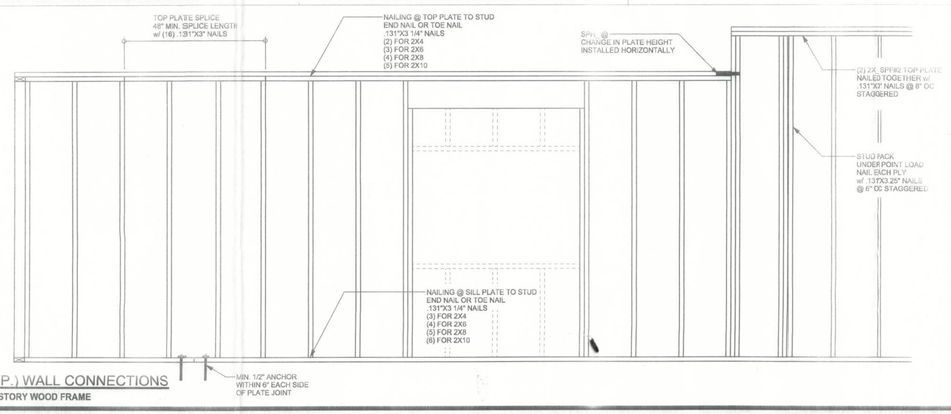
OUTSIDE CORNER



INSIDE CORNER

(TYP.) CORNER FRAMING

WOOD FRAME



(TYP.) WALL CONNECTIONS

ONE STORY WOOD FRAME

REVISIONS	

SOFTPLAN ARCHITECTURAL DESIGN SOFTWARE

WINDLOAD ENGINEER: Mark Disosway, PE No.53915, POB 868, Lake City, FL 32056, 386-754-5419

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

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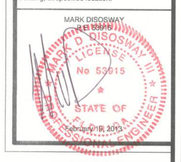
CERTIFICATION: I hereby certify that I have examined this plan, and that the applicable portions of the plan, relating to wind engineering comply with section R301.2.1, 2010 Florida Building Code Residential to the best of my knowledge.

LIMITATION: This design is valid for one building, at specified location.

MARK DISOSWAY
PE 53915



Whiddon Construction Company, Inc.

Bowdoin Addition

ADDRESS:
Columbia County, Florida

Mark Disosway P.E.
P.O. Box 868
Lake City, Florida 32056
Phone: (386) 754 - 5419
Fax: (386) 269 - 4871

PRINTED DATE:
February 19, 2013

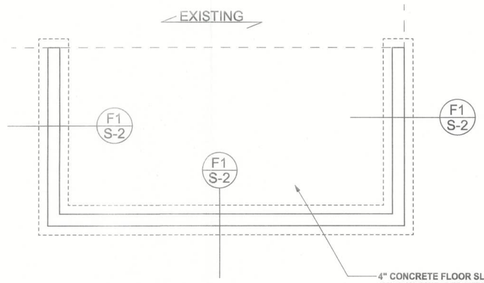
DRAWN BY:	STRUCTURAL BY:
FINALS DATE: 19Feb12	

JOB NUMBER:
1302041

DRAWING NUMBER
S-1
OF 2 SHEETS

REVISIONS	

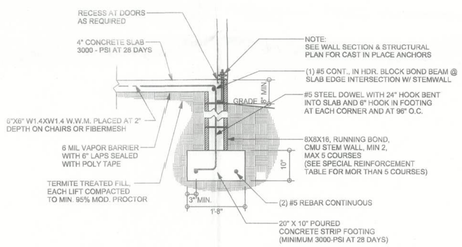
SOFTPLAN
ARCHITECTURAL DESIGN SOFTWARE



FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

DIMENSIONS ON STRUCTURAL SHEETS
ARE NOT EXACT. REFER TO ARCHITECTURAL
FLOOR PLAN FOR ACTUAL DIMENSIONS



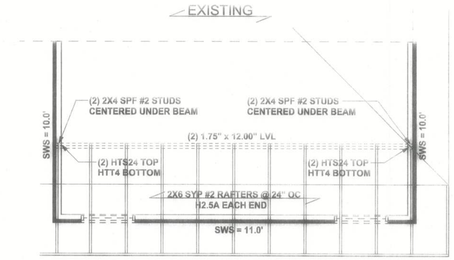
F1 S-2 STEM WALL FOOTING

SCALE: 1/2" = 1'-0"

TALL STEM WALL TABLE

The table assumes 60 ksi reinforcing bars with 6" hook in the footing and bent 24" into the reinforced slab at the top. The vertical steel is to be placed toward the tension side of the CMU wall (away from the soil pressure, within 2" of the exterior side of the wall). If the wall is over 8' high, add Durowall ladder reinforcement at 16"OC vertically or a horizontal bond beam with 145 continuous at mid height. For higher parts of the wall 12" CMU may be used with reinforcement as shown in the table below.

STEMWALL HEIGHT (FEET)	UNBALANCED BACKFILL HEIGHT	VERTICAL REINFORCEMENT FOR 8"CMU STEMWALL (INCHES O.C.)			VERTICAL REINFORCEMENT FOR 12" CMU STEMWALL (INCHES O.C.)		
		#5	#7	#8	#5	#7	#8
3.3	3.0	96	96	96	96	96	96
4.0	3.7	96	96	96	96	96	96
4.7	4.3	88	96	96	96	96	96
5.3	5.0	56	96	96	96	96	96
6.0	5.7	40	80	96	80	96	96
6.7	6.3	32	56	80	56	96	96
7.3	7.0	24	40	56	40	80	96
8.0	7.7	16	32	48	32	64	80
8.7	8.3	8	24	32	24	48	64
9.3	9.0	8	16	24	16	40	48



STRUCTURAL PLAN

SCALE: 1/4" = 1'-0"

STRUCTURAL PLAN NOTES

SN-1 ALL LOAD BEARING FRAME WALL & PORCH HEADERS SHALL BE A MINIMUM OF (2) 2X10 SYP #2 U.N.O.

SN-2 ALL LOAD BEARING FRAME WALL HEADERS SHALL HAVE (1) JACK STUD & (1) KING STUD EACH SIDE (U.N.O.)

SN-3 DIMENSIONS ON STRUCTURAL SHEETS ARE NOT EXACT. REFER TO ARCHITECTURAL FLOOR PLAN FOR ACTUAL DIMENSIONS

WALL LEGEND

	EXTERIOR WALL
	INTERIOR NON-LOAD BEARING WALL
	INTERIOR LOAD BEARING WALL w/ NO UPLIFT
	INTERIOR LOAD BEARING WALL w/ UPLIFT

HEADER LEGEND

(2) 2X10X0',1J 1K — HEADER/BEAM CALL-OUT (U.N.O.)

- NUMBER OF KING STUDS (FULL LENGTH)
- NUMBER OF JACK STUDS (UNDER HEADER)
- SPAN OF HEADER
- SIZE OF HEADER MATERIAL
- NUMBER OF PLIES IN HEADER

TOTAL SHEAR WALL SEGMENTS

INDICATES SHEAR WALL SEGMENTS

	REQUIRED	ACTUAL
TRANSVERSE	10.0'	20.0'
LONGITUDINAL	8.0'	11.0'

CEILING JOISTS SPANS FOR SOUTHERN PINE #2 UNINHABITABLE ATTICS (L/240)								
CEILING JOIST SPACING	WITHOUT STORAGE LIVE LOAD = 10 psf DEAD LOAD = 5 psf				WITH LIMITED STORAGE LIVE LOAD = 20 psf DEAD LOAD = 10 psf			
	2x4	2x6	2x8	2x10	2x4	2x6	2x8	2x10
	MAXIMUM RAFTER SPANS (HORZONTAL PROJECTION)							
12" OC	12'-5"	19'-6"	25'-8"	26'-0"	9'-10"	15'-6"	20'-1"	26'-0"
16" OC	11'-3"	17'-8"	23'-4"	26'-0"	8'-11"	13'-8"	17'-5"	20'-9"
19.2" OC	10'-7"	16'-8"	21'-11"	26'-0"	8'-5"	12'-3"	15'-10"	18'-11"
24" OC	9'-10"	15'-4"	20'-1"	23'-11"	7'-8"	11'-0"	14'-2"	16'-11"

R06 CEILING JOIST SPAN TABLE (SYP#2)

BASED ON IRC TABLE R802.4(1-2)

WINDLOAD ENGINEER: Mark Disosway, PE No.53915, POB 868, Lake City, FL 32056, 386-754-5419

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

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CERTIFICATION: I hereby certify that I have examined this plan, and that the applicable portions of the plan, relating to wind engineering comply with section R301.2.1, 2010 Florida Building Code Residential to the best of my knowledge.

LIMITATION: This design is valid for one building, at specified location.

MARK DISOSWAY
STATE OF FLORIDA
LICENSE
No 53915
STATE OF FLORIDA
PROFESSIONAL ENGINEER

Whiddon Construction Company, Inc.

Bowdoin Addition

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PRINTED DATE:
February 19, 2013

DRAWN BY:	STRUCTURAL BY:
FINALS DATE: 19Feb12	

JOB NUMBER:
1302041

DRAWING NUMBER

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OF 2 SHEETS