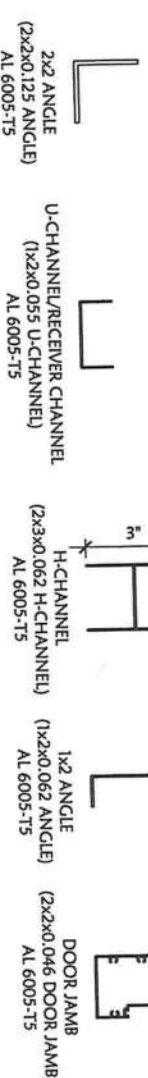


SELF-MATING BEAM (SMB) NAMING CONVENTION	
MARK	PROPER NAME
2x4 SMB	2x4x0.046x0.100 Self-Mating Beam
2x5 SMB	2x5x0.050x0.116 Self-Mating Beam
2x6 SMB	2x6x0.050x0.120 Self-Mating Beam
2x7 SMB	2x7x0.055x0.120 Self-Mating Beam
2x8 SMB	2x8x0.072x0.224 Self-Mating Beam
2x9 SMB	2x9x0.072x0.224 Self-Mating Beam
2x10 SMB	2x10x0.092x0.389 Self-Mating Beam

FASTENER STITCHING ALONG TOP & BOTTOM AT 24" O.C. SIZE OF SMB DETERMINED BY DEPTH OF BEAM.  
• 2x4 SMB - 2x7 SMB USES #10@ x 0.75 S.M.S.  
• 2x8 SMB - 2x10 SMB USES #14@ x 0.75 S.M.S.

SELF-MATING BEAM HALF-SHELL (AL 6005-T5)

SELF-MATING BEAM ATTACHMENT (AL 6005-T5)



# Aluminum Self-Mating Beam (SMB) Naming Convention

COLUMN SCHEDULE (EXPOSURE "B")	
TRIBUTARY WIDTH	EFFECTIVE HEIGHT (FT.)
2x2 H	6.2 5.8 5.5 5.1 4.8 4.6 4.2 3.9 3.3
2x3 H	8.1 7.8 7.3 6.9 6.7 6.4 6.1 5.9 5.5
2x4 H	9.0 8.7 8.2 7.8 7.4 7.0 6.8 6.1 5.8
2x5 SMB	13.9 13.1 12.4 11.8 11.3 10.9 10.5 10.1 9.8
2x6 SMB	17.2 16.2 15.3 14.6 14.0 13.5 13.0 12.5 12.1
2x7 SMB	19.6 18.5 17.6 16.7 16.0 15.4 14.8 14.3 13.9
2x8 SMB	22.0 20.7 19.7 18.8 18.0 17.3 16.6 16.1 15.5
2x9 SMB	30.3 28.9 27.4 26.1 25.0 24.0 23.2 22.4 21.7
2x10 SMB	36.0 34.6 33.2 31.6 30.3 29.1 28.0 27.1 26.7
2x5 TFB	41.5 39.9 38.5 37.0 35.4 34.0 32.6 31.7 30.7
2x6 TFB	48.2 46.3 44.8 43.2 41.6 40.2 38.8 37.4 36.0
2x7 TFB	54.2 52.8 51.6 50.6 49.7 48.9 48.2 47.6 47.1
2x8 TFB	62.8 61.6 60.6 59.7 58.9 58.2 57.6 57.0 56.4
2x9 TFB	72.9 71.9 70.9 70.0 69.1 68.3 67.6 67.0 66.4

PURLIN SCHEDULE (EXPOSURE "B")	
TRIBUTARY WIDTH	EFFECTIVE SPAN (FT.)
2x2x0.044	8.0 8.0 8.0 8.0 8.0 7.9 7.7 7.5
2x3x0.050	13.7 13.1 12.8 12.4 12.0 11.7 11.4 11.1 10.8
2x4x0.060	15.3 14.7 14.3 13.8 13.4 12.9 12.4 11.9 11.4
2x4x0.050	17.0 17.3 16.8 16.1 15.8 15.1 14.4 13.7 13.0

CHAIR RAIL SCHEDULE (EXPOSURE "B")	
TRIBUTARY WIDTH	EFFECTIVE SPAN (FT.)
2x2x0.045	8.5 7.8 7.6 7.1 6.8
2x3x0.050	11.0 10.4 9.7 9.1 8.7
2x4x0.060	12.7 11.8 11.1 10.6 10.1
2x4x0.050	13.6 12.7 11.7 11.2 10.5
2x5x0.050	15.0 13.4 12.2 11.3 10.6

BEAM SCHEDULE (EXPOSURE "B")	
TRIBUTARY WIDTH	EFFECTIVE SPAN (FT.)
2x4 SMB	20.4 18.9 17.3 16.0 14.9
2x5 SMB	27.3 24.4 22.2 20.6 19.3
2x6 SMB	31.8 28.9 26.4 24.4 22.8
2x7 SMB	36.2 33.3 30.4 28.1 26.3
2x8 SMB	47.1 43.7 41.2 39.1 37.3
2x9 SMB	55.9 51.9 48.8 46.4 44.4
2x10 SMB	60.0 59.9 56.4 53.5 51.2
2x5 TFB	28.5 26.0 23.7 22.0 20.5
2x7 TFB	38.5 35.7 33.4 30.9 28.9
2x9 TFB	51.1 47.5 44.7 42.4 40.6

KNEE BRACE SCHEDULE (EXPOSURE "B")	
SIZE	LENGTH
2x2x0.044	UP TO 2'
2x3x0.050	2 TO 4'
2x4x0.050	4 TO 6'
2x4x0.048 x 0.100 SMB	6 TO 7'
2x6x0.050 x 0.120 SMB	7 TO 8'

COLUMN MEMBER TYPE	
TRIBUTARY WIDTH	EFFECTIVE SPAN (FT.)
2x4 SMB	16.4 14.1 11.7 10.9 9.6 9.1 8.4 8.0 7.7 7.3
2x5 SMB	20.1 17.4 14.7 13.7 12.3 11.5 10.7 10.2 9.8 9.3
2x6 SMB	22.4 20.4 17.2 15.8 14.1 13.1 12.2 11.7 11.2 10.7
2x7 SMB	25.4 23.4 19.5 18.3 16.4 15.3 14.2 13.5 12.9 12.4
2x8 SMB	31.6 28.7 24.1 22.7 20.9 19.6 18.2 17.3 16.5 15.9
2x9 SMB	34.3 31.6 26.6 25.0 22.7 21.3 19.7 18.8 18.1 17.3
2x10 SMB	42.7 39.3 33.0 31.0 28.6 27.5 25.9 24.7 23.6 22.7
2x5 TFB	24.1 22.2 18.5 17.4 15.6 14.5 13.5 12.8 12.3 11.8
2x7 TFB	30.0 27.3 22.9 21.6 19.9 18.6 17.3 16.4 15.7 15.1
2x9 TFB	36.3 33.4 28.1 26.4 24.3 23.4 22.0 21.0 20.1 19.3

NOTES:  
1. THIS TABLE APPLIES TO BEARING & NON-BEARING WALLS FOR HORIZONTAL WIND LOADS IN DESIGN.  
2. HEIGHTS MAY BE INTERPOLATED BUT NOT EXTRAPOLATED.  
3. SPANS MAY BE INTERPOLATED BUT NOT EXTRAPOLATED.

## General Structural Notes

### GENERAL DRAWING NOTES:

- DO NOT SCALE DRAWINGS. USE DIMENSIONS PROVIDED. TYPICALLY, IN THE CASE OF DIMENSIONAL CONFLICT, ARCHITECTURAL DIMENSIONS GOVERN OVER STRUCTURAL DIMENSIONS. TYPICALLY.
- CONTRACTOR SHALL COORDINATE THE STRUCTURAL DOCUMENTS WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, & CIVIL DOCUMENTS. SCEDS SHALL BE NOTED IN WRITING OF ANY DISCREPANCY OR OMISSION.
- THE STRUCTURE IS STABLE ONLY IN ITS COMPLETED FORM. TEMPORARY SUPPORTS REQUIRED FOR STABILITY DURING ALL INTERMEDIATE STAGES OF CONSTRUCTION SHALL BE DESIGNED, FURNISHED, & INSTALLED BY THE CONTRACTOR. TYPICALLY.

### 02020 BUILDING CODES:

- FLORIDA BUILDING CODE - 2010 EDITION
- ASCE/SEI 7-10: MINIMUM DESIGN LOADS FOR BUILDINGS & OTHER STRUCTURES

### 02050 STRUCTURAL DESIGN CRITERIA:

THE STRUCTURE HAS BEEN DESIGNED IN ACCORD WITH THE BUILDING CODE AND/OR MORE RESTRICTIVE REQUIREMENTS FOR LOADS AS GIVEN BELOW UNLESS SPECIFIC AREAS OF THE DRAWING SPECIFICALLY CALL FOR DIFFERENT LOADING CRITERIA.

### GRAVITY LOADING IS TO BE UNIFORM (U.N.O.)

- ROOFS: 20 PSF (REDUCIBLE)
- WIND LOADING PER FLORIDA BUILDING CODE & ASCE/SEI 7
- BASIC MINIMUM WIND SPEED ( $V_{min}$ ) = 160 MPH (3 SECOND GUST)
- BASIC NOMINAL WIND SPEED ( $V_{nom}$ ) = 124 MPH (3 SECOND GUST)
- EXPOSURE CATEGORY = "B"
- RISK CATEGORY = "II"
- INTERNAL PRESSURE COEFFICIENTS = N/A (OPEN STRUCTURE)
- COMPONENT & CLADDING PRESSURES =  $\pm 18.6$  PSF (NOMINAL)

### SCREEN FRAME WALL w/ GUARDRAIL:

- GUARDRAIL: 20 LB/FT UNIFORM LOAD IN ANY DIRECTION or 200 LB. CONCENTRATED LOAD (WHICHEVER IS GREATER)

### 01051 DRAWING DIMENSIONS AND COORDINATION:

DIMENSIONAL INFORMATION, PAGING, ALL DETAILS AND CONSTRUCTION SHALL BE BASED ON THE ENTIRE SET OF CONTRACT DOCUMENTS. COORDINATE THE REQUIREMENTS OF ALL PROFESSIONALS. USE INFORMATION FROM APPROVED SHOP DRAWINGS TO SUPPLEMENT CONTRACT DOCUMENTS WHERE NECESSARY. REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING.

### 01100 SCORE OF SERVICE:

STRUCTURAL CONCEPTS & DESIGN, LLC AS THE STRUCTURAL ENGINEER OF RECORD HAS DESIGNED AND IS RESPONSIBLE FOR ONLY THE SPECIFIC STRUCTURAL COMPONENTS SHOWN IN THIS SET OF STRUCTURAL CONSTRUCTION DOCUMENTS. IF A SPECIALTY ENGINEER, AS DEFINED BY THE DEPARTMENT OF PROFESSIONAL REGULATION, IS REQUIRED, HIS SERVICES MUST COMPLY WITH THE SCOPE OF SERVICES AS OUTLINED IN THE PROJECT CONSTRUCTION DOCUMENTS.

### 02020 FOUNDATIONS:

GEOTECHNICAL DATA AND RECOMMENDATIONS HAVE BEEN NOT BEEN PROVIDED AT THE TIME THESE DRAWINGS WERE ISSUED. BASED ON SIMILAR PROJECTS IN THE AREA, THE FOLLOWING FOUNDATION SYSTEM WILL BE USED:

- SHALLOW FOOTINGS w/ ALLOWABLE BEARING = 2,000 PSF (TO BE VERIFIED BY GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION)

### 02200 EARTHWORK:

CONTRACTOR SHALL DESIGN AND ERECT FORMWORK IN STRICT COMPLIANCE WITH ACI 347. SEE TYPICAL DETAILS FOR CAMBER REQUIREMENTS. CONTRACTOR SHALL COORDINATE ALL OPENINGS AS REQUIRED FOR OTHER TRADES. OPENINGS WHERE SHOWN ON THE STRUCTURAL DRAWINGS ARE TO IDENTIFY DESIGN INTENT ONLY. THE SPECIFIC DIMENSIONS AND LOCATIONS SHALL BE PROVIDED OR CONFIRMED BY THE TRADE REQUIREING THE OPENING. PROVIDE CHAMBERS AT ALL CORNERS IN CONCRETE MEMBERS EXPOSED TO VIEW. FORMWORK TO REMAIN IN PLACE UNTIL CONCRETE HAS ATTAINED ENOUGH STRENGTH TO SUPPORT ALL DEAD LOADS PLUS A MINIMUM OF 50 PSF OF ADDITIONAL CONSTRUCTION LOAD. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

### 03100 FORMWORK:

CONTRACTOR SHALL DESIGN AND ERECT FORMWORK IN STRICT COMPLIANCE WITH ACI 347. SEE TYPICAL DETAILS FOR CAMBER REQUIREMENTS. CONTRACTOR SHALL COORDINATE ALL OPENINGS AS REQUIRED FOR OTHER TRADES. OPENINGS WHERE SHOWN ON THE STRUCTURAL DRAWINGS ARE TO IDENTIFY DESIGN INTENT ONLY. THE SPECIFIC DIMENSIONS AND LOCATIONS SHALL BE PROVIDED OR CONFIRMED BY THE TRADE REQUIREING THE OPENING. PROVIDE CHAMBERS AT ALL CORNERS IN CONCRETE MEMBERS EXPOSED TO VIEW. FORMWORK TO REMAIN IN PLACE UNTIL CONCRETE HAS ATTAINED ENOUGH STRENGTH TO SUPPORT ALL DEAD LOADS PLUS A MINIMUM OF 50 PSF OF ADDITIONAL CONSTRUCTION LOAD. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

### 03200 CONCRETE REINFORCEMENT:

WORK SHALL BE IN ACCORD WITH ACI 318-02, ACI 318R-02, ACI 315-99, ACI 318-02, CRI MANUAL OF STANDARD PRACTICE 2001, CRI PAVING REINFORCING BARS 1997, WIRE REINFORCEMENT INSTITUTE MANUAL OF STANDARD PRACTICE-STRUCTURAL WELDED WIRE REINFORCEMENT, 2001. BARS SHALL CONFORM TO ASTM SPECIFICATION A615(S1). GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. CONCRETE COVER REQUIRED AS FOLLOWS:

- A. CAST AGAINST AND EXPOSED TO EARTH: 3" (1/2" & LARGER)
- B. FORMED, EXPOSED TO EARTH OR WEATHER: 1 1/2" (1/2" & SMALLER)
- C. SLABS AND WALLS: NO EARTH OR WEATHER EXPOSURE 3/4" (#11 & SMALLER)

### LAP SPICE LENGTHS SHALL BE AS FOLLOWS:

- 1. ALL LAP SPICES SHALL BE TENSION CLASS "B" UNLESS OTHER LAP CONDITIONS ARE SPECIFICALLY SHOWN ON THE DRAWINGS.
- 2. SPICE LENGTHS SHALL BE SHOWN ON SHOP DRAWINGS.
- 3. USE GENERAL HOOK BAR DEVELOPMENT LENGTHS UNLESS SPECIAL CONFINEMENT CONDITIONS ARE SATISFIED IN ACCORDANCE WITH ACI 318.

### 03300 CAST-IN-PLACE CONCRETE:

TO BE MIXED AND PLACED IN ACCORDANCE WITH ACI 301-99. ALL REINFORCED CONCRETE TO HAVE 28 DAY COMPRESSIVE STRENGTHS AS FOLLOWS. (ALL STRUCTURAL ELEMENTS SHALL BE  $F_c = 4,000$  PSI UNLESS NOTED OTHERWISE).

- SLABS:  $F_c = 3,000$  PSI
- FOUNDATIONS:  $F_c = 3,000$  PSI

### 03600 GROUT:

GROUTING IS CLASSIFIED AS "PRECISION GROUTING" FOR SUPPORT OF OPERATING MACHINE BASES, EQUIPMENT SUBJECT TO THERMAL MOVEMENT, AND BASE PLATES, BEARING PLATES, ALL OTHER GROUTING BEARINGS EXCEEDING 8" IN LEAST DIMENSION. ALL OTHER GROUTING MAY BE "ORDINARY GROUTING". METALLIC AGGREGATE GROUT MAY BE USED ONLY IN INTERIOR APPLICATIONS NOT EXPOSED TO VIEW IN FINISHED BUILDING AREAS. USE ORDINARY CEMENT GROUT ONLY WHERE SPECIFICALLY NOTED AS "CEMENT GROUT" ON DETAILS. USE NON-SHRINK GROUT FOR ALL OTHER LOCATIONS. PRECISION GROUT SHALL CONFORM TO CRD-C671-80 WHEN MIXED TO FLUID CONSISTENCY OF 22 TO 25 SECONDS (FLOW CONE METHOD, CRD-C611-80). REQUIRED 28 DAY STRENGTHS SHALL BE AS FOLLOWS:

- CEMENT GROUT: 1,800 PSI
- NON-SHRINK GROUT: 5,000 PSI
- PRECISION GROUT: 6,500 PSI

### 04220 CONCRETE UNIT MASONRY:

ALL MASONRY CONSTRUCTION TO BE IN ACCORDANCE WITH "SPECIFICATION FOR CONCRETE MASONRY CONSTRUCTION", ACI 550.1-02 AND ALL APPLICABLE LOCAL BUILDING CODE PROVISIONS. ALL MASONRY WALLS TO BE CONSTRUCTED ENTIRELY OF UNITS CONFORMING TO ASTM C 90, AND REINFORCED WITH #9 GAUGE LADDER TYPE HORIZONTAL MASONRY REINFORCING LOCATED AT 16" O.C. ALL MASONRY TO BE LAID IN TYPE "F" MORTAR (1,800 PSI ON THE JOB) WITH FULL HEAD AND BED JOINTS. ALL MASONRY CONSTRUCTION TO BE EITHER BOUND BY THE BEAM, THE COLUMN MEMBERS OR TIED TO FRAME WITH 16 GAUGE CONTINUOUS DOVETAIL NOT AND 12 GAUGE DOVETAIL ANCHOR SPACED @ 16" O.C. (TOP AND TWO VERTICAL SIDES).

### 04230 REINFORCED UNIT MASONRY:

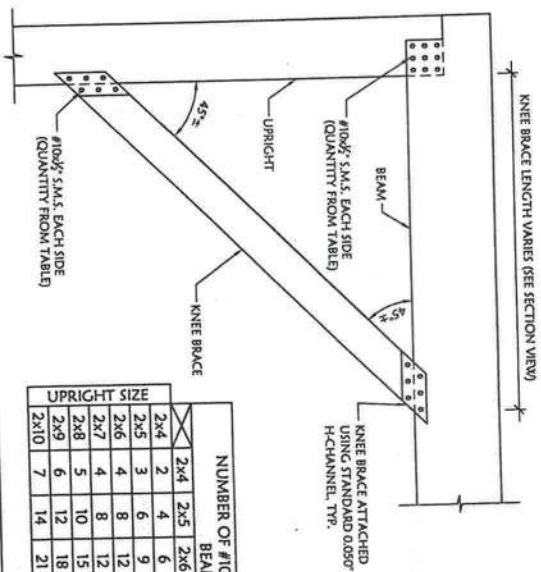
ALL REINFORCED MASONRY CONSTRUCTION SHALL BE IN ACCORD WITH APPLICABLE PROVISIONS OF CONCRETE REINFORCEMENT, CAST-IN-PLACE CONCRETE, AND CONCRETE MASONRY. VERTICAL REINFORCING SHALL ANCHOR INTO SUPPORTING CONCRETE MEMBERS A CLASS "B" LAP LENGTH PLUS 3" OR FULL DEPTH PLUS A STANDARD HOOK. LAYS WITHIN REINFORCED MASONRY SHALL BE 48 BAR DIAMETERS. CONTRACTOR SHALL COORDINATE PLACING OF DOWELS TO ACCOMMODATE MODULE OF MASONRY UNITS. ALL VERTICAL CELLS AND BEAMS WITH REINFORCING SHALL BE FILLED WITH COARSE GROUT CONSISTING OF 3,000 PSI (SUPERPLASTICIZED) WHERE HEIGHT OF LIFT EXCEEDS 5'-0". WHERE HEIGHT OF OPEN CELL EXCEEDS 5'-0", USE HIGH-LIFT GROUTING TECHNIQUE WHICH REQUIRES A CLEAN-OUT OPENING AT THE BOTTOM OF ALL CELLS. ALL WALLS TO BE REINFORCED WITH #5 BARS SPACED AT 48" O.C. MAX. VERTICAL, TYP. (U.N.O.)

STRUCTURAL CONCEPTS & DESIGN

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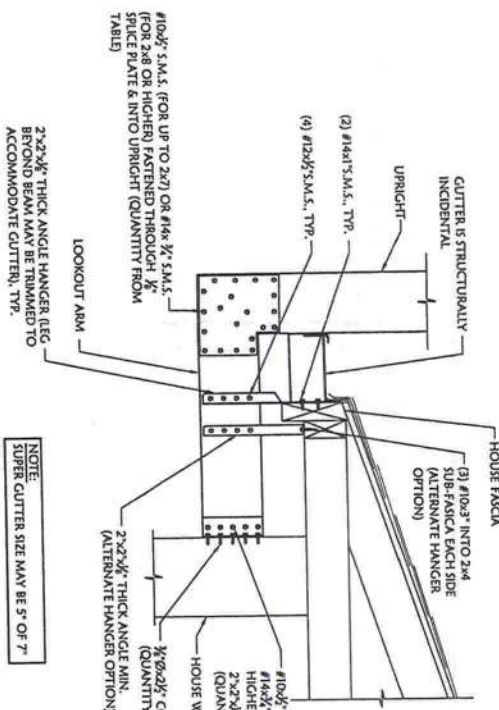
06/07/13  
Robert C. Stroggin, P.E.  
FL Registration No. 56158





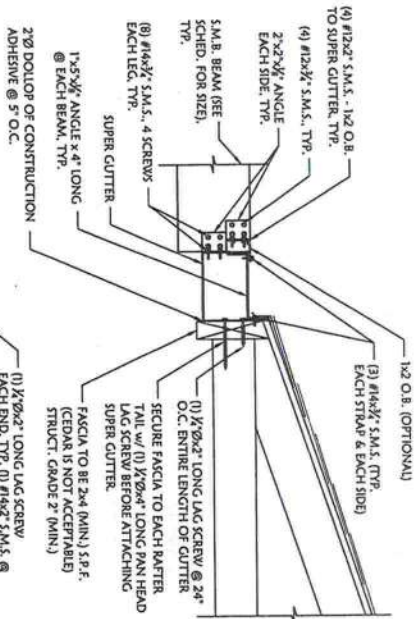
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		BEAM SIZE									
		2x4	2x5	2x6	2x7	2x8	2x9	2x10	2x11	2x12	2x14
2x4	2	2	2	2	2	2	2	2	2	2	2
2x5	2	2	2	2	2	2	2	2	2	2	2
2x6	2	2	2	2	2	2	2	2	2	2	2
2x7	2	2	2	2	2	2	2	2	2	2	2
2x8	2	2	2	2	2	2	2	2	2	2	2
2x9	2	2	2	2	2	2	2	2	2	2	2
2x10	2	2	2	2	2	2	2	2	2	2	2

1 Typical Beam to Column Connection w/ Knee Brace  
S-2.1 SCALE: 1/2" = 1'-0"



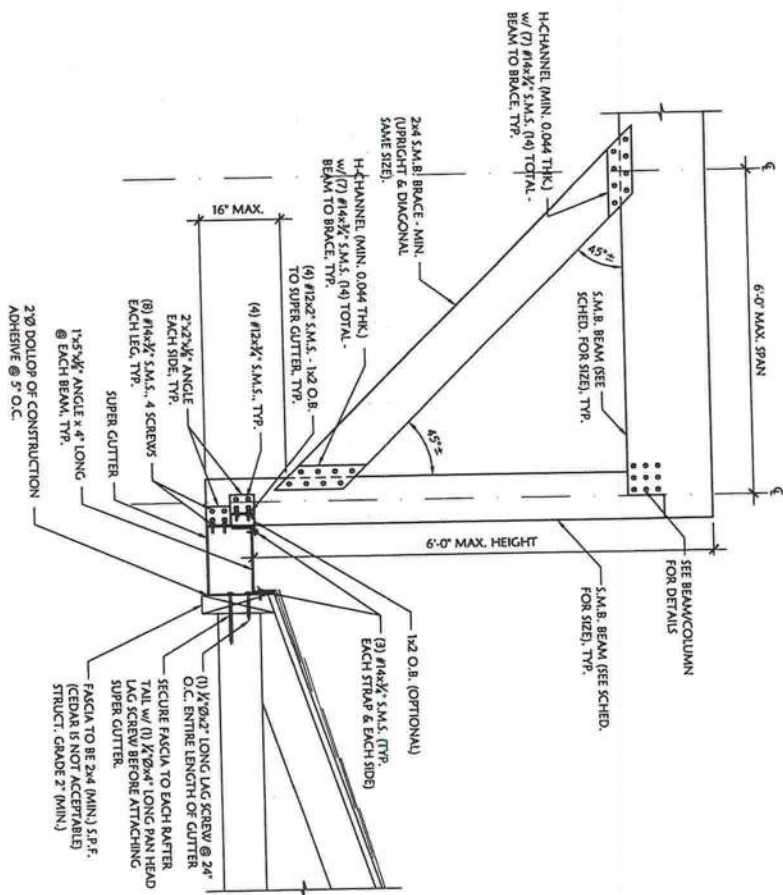
UPRIGHT SIZE		NUMBER OF GUSSET PLATE									
		SCREWS									
		2x4	2x5	2x6	2x7	2x8	2x9	2x10	2x11	2x12	2x14
2x4	2	2	2	2	2	2	2	2	2	2	2
2x5	2	2	2	2	2	2	2	2	2	2	2
2x6	2	2	2	2	2	2	2	2	2	2	2
2x7	2	2	2	2	2	2	2	2	2	2	2
2x8	2	2	2	2	2	2	2	2	2	2	2
2x9	2	2	2	2	2	2	2	2	2	2	2
2x10	2	2	2	2	2	2	2	2	2	2	2

2 Lookout Arm Connection Detail  
S-2.1 SCALE: 1/2" = 1'-0"

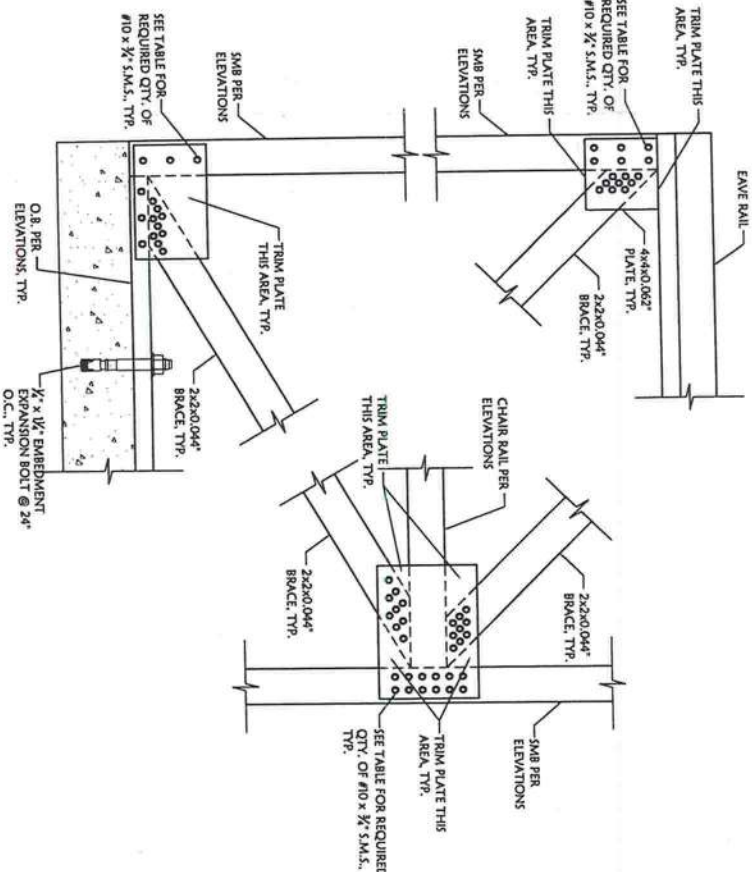


UPRIGHT SIZE		NUMBER OF FASTENERS TO ANGLE CLIP									
		2x4	2x5	2x6	2x7	2x8	2x9	2x10	2x11	2x12	2x14
2x4	2	2	2	2	2	2	2	2	2	2	2
2x5	2	2	2	2	2	2	2	2	2	2	2
2x6	2	2	2	2	2	2	2	2	2	2	2
2x7	2	2	2	2	2	2	2	2	2	2	2
2x8	2	2	2	2	2	2	2	2	2	2	2
2x9	2	2	2	2	2	2	2	2	2	2	2
2x10	2	2	2	2	2	2	2	2	2	2	2

3 Roof Beam to Super Gutter Connection  
S-2.1 SCALE: 1/2" = 1'-0"



4 Transom Upright to Super Gutter Connection Detail  
S-2.1 SCALE: 1/2" = 1'-0"



5 Typical K-Brace Connection Detail  
S-2.1 SCALE: 1/2" = 1'-0"

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2889 WEST 134th Avenue, Suite 100, Fort Lauderdale, FL 33329  
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www.structuralconceptsdesign.com  
FLORIDA C.O. NO. 27193

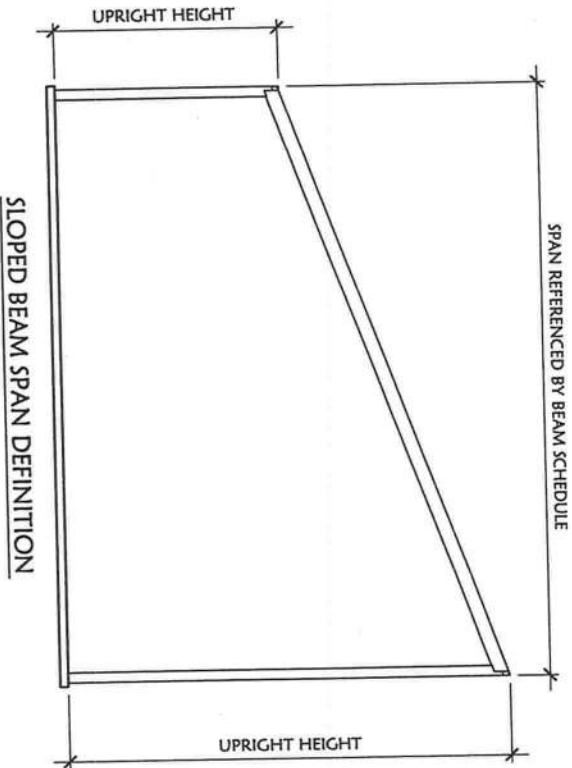
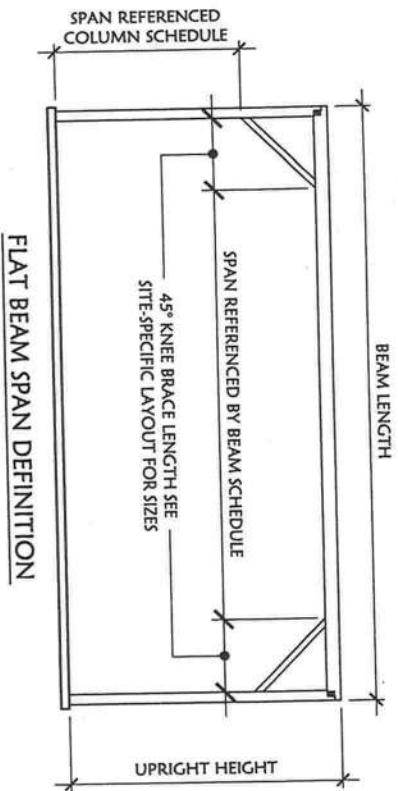
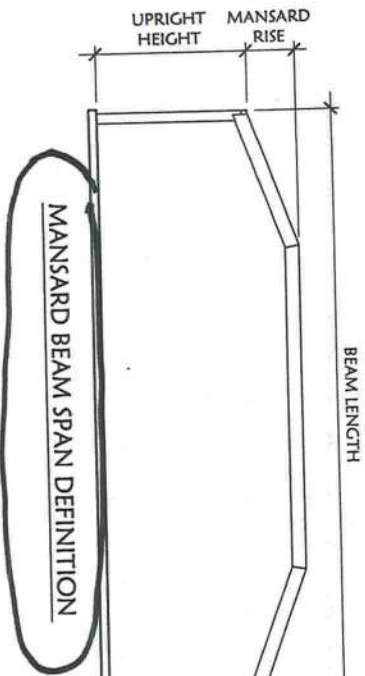
06/07/13  
Robert C. Stogdins, P.E.  
FL Registration No. 56158

REV.	DATE	DESCRIPTION

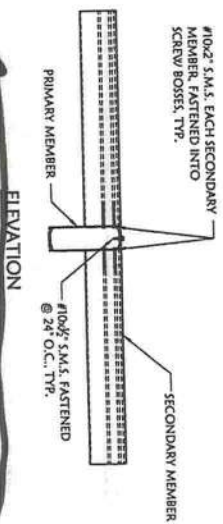
Client: **Florida Pool Enclosures, Inc.**  
222 Hickory Street • Altamonte Springs, FL 32714  
TEL 407/260-2800 • FAX 407/260-4411  
www.floridapoolenclosures.com

Project: **Residential Pool Screen Enclosure**, Florida

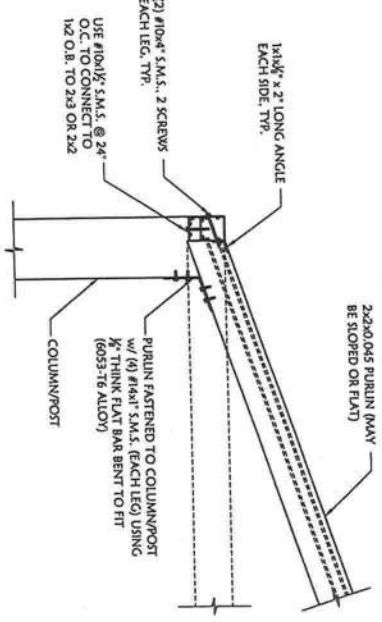




1 Typical Beam Span Definitions  
S-2.2 SCALE: 1/2" = 1'-0"



2 Typical Secondary Member to Primary Member Connection  
S-2.2 SCALE: 1/2" = 1'-0"



3 Typical Purlin to Sidewall Post/Column Connection Detail  
S-2.2 SCALE: 1/2" = 1'-0"

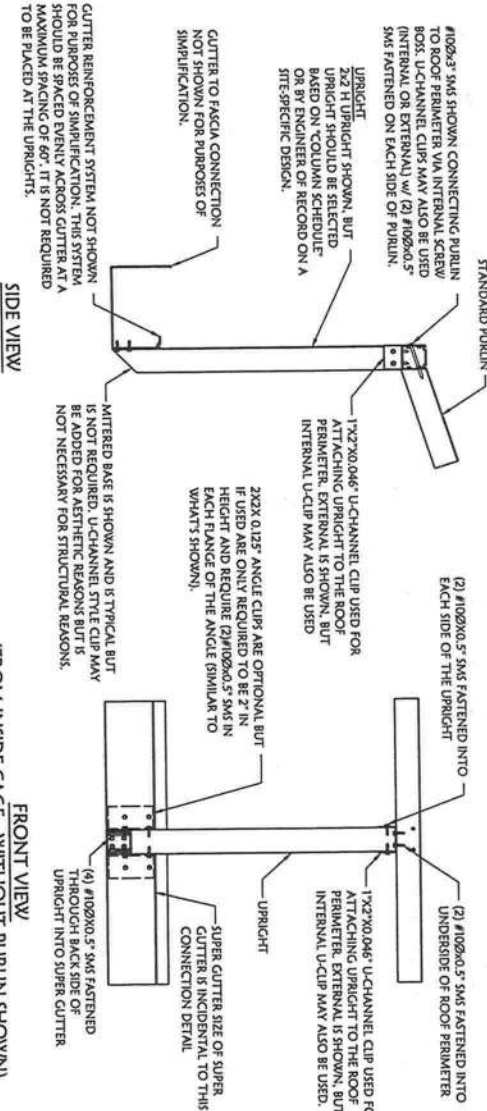
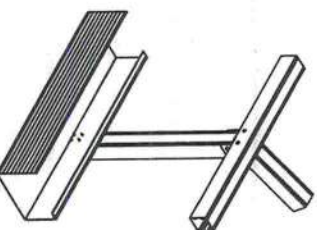
QUANTITY OF SCREWS REQUIRED	
BEAM SIZE	# SCREWS
2x4-2x6	12
2x7	16
2x8	18
2x9	20
2x10	22

LENGTH OF SPLICE PLATE	
BEAM SIZE	LENGTH
2x4	8 IN.
2x5	10 IN.
2x6	12 IN.
2x7	14 IN.
2x8	16 IN.
2x9	18 IN.
2x10	18 IN.

#10x1/2" S.M.S. (IF BEAM IS 2x4-2x7) OR #10x1/2" S.M.S. (FOR 2x8 OR LARGER) FASTENED INTO 1/2" THICK FLAT BAR BENT TO FIT BEAM EACH SIDE (QUANTITY FROM TABLE)

4 Mansard Beam Splice Detail  
S-2.2 SCALE: 1/2" = 1'-0"



5 NON-LOAD BEARING TRANSM WALL CONNECTION  
S-2.2 SCALE: 1/2" = 1'-0"

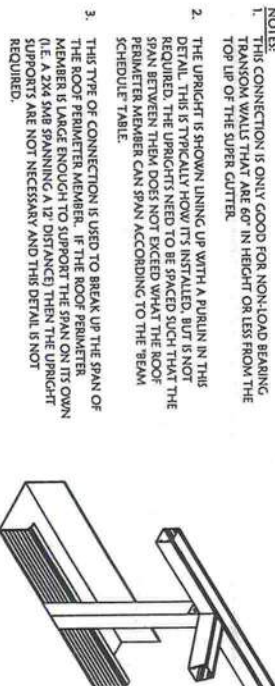
QUANTITY OF #10 FASTENERS REQUIRED	
BEAM SIZE	UPRIGHT SIZE
2x4	2x4
2x5	2x5
2x6	2x6
2x7	2x7
2x8	2x8
2x9	2x9
2x10	2x10

QUANTITY OF #14 FASTENERS REQUIRED	
BEAM SIZE	UPRIGHT SIZE
2x4	2x4
2x5	2x5
2x6	2x6
2x7	2x7
2x8	2x8
2x9	2x9
2x10	2x10

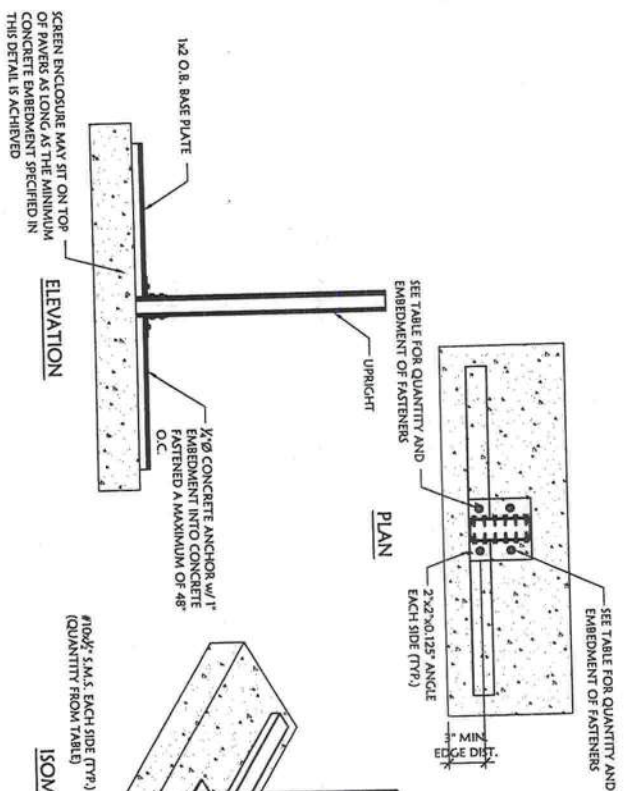
#10x1/2" S.M.S. (IF BEAM IS 2x4-2x7) OR #10x1/2" S.M.S. (FOR 2x8 OR LARGER) FASTENED INTO 1/2" THICK FLAT BAR BENT TO FIT BEAM EACH SIDE (QUANTITY FROM TABLE)

6 Mansard Beam to Upright Connection Detail  
S-2.2 SCALE: 1/2" = 1'-0"

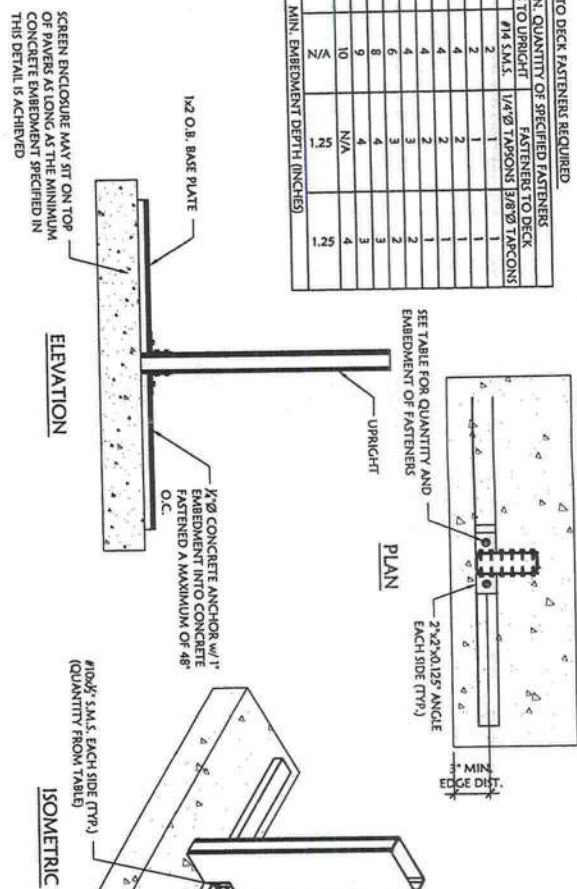


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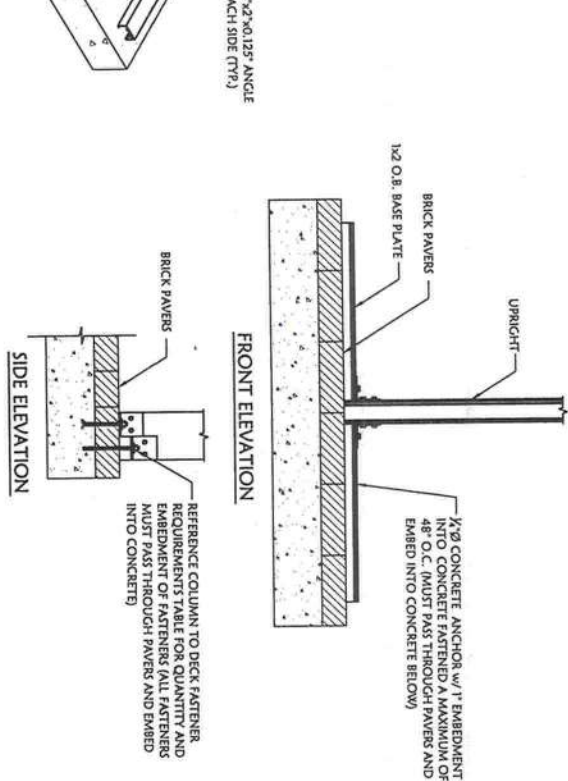




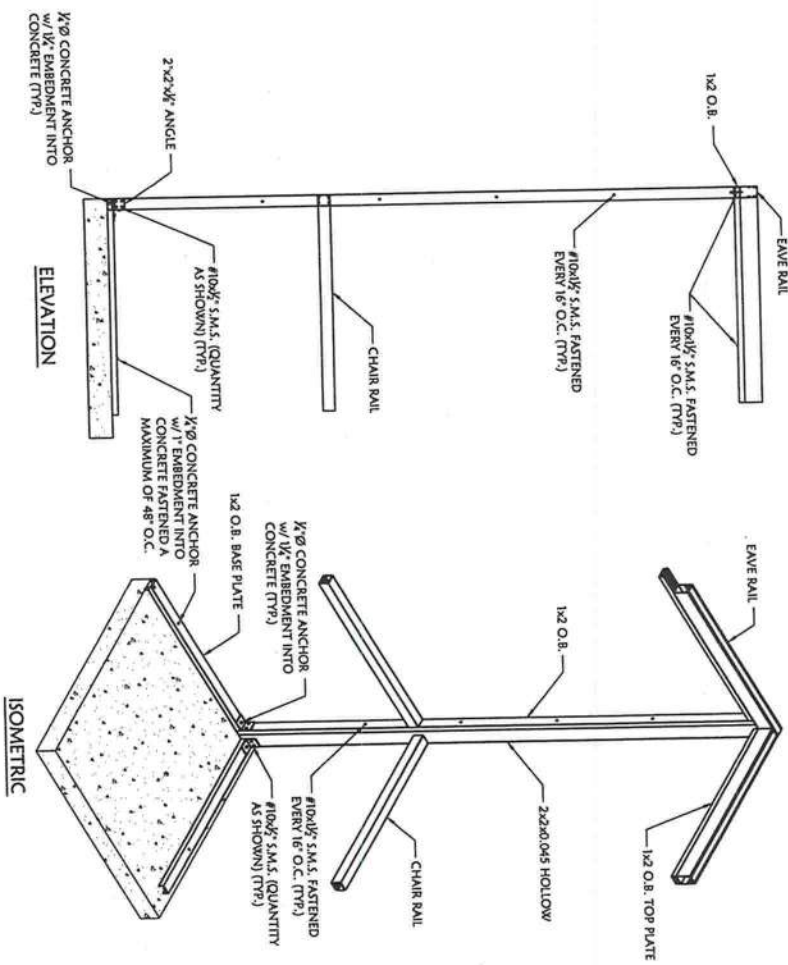
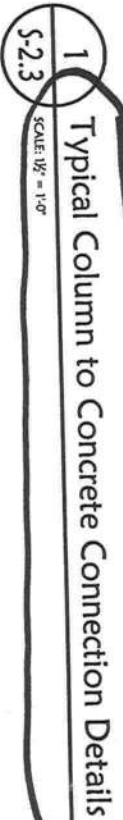
UPRIGHT SIZE	MIN. QUANTITY OF SPECIFIED FASTENERS		FASTENING TO DECK	
	FASTENERS TO UPRIGHT	FASTENERS TO DECK	FASTENERS TO UPRIGHT	FASTENERS TO DECK
	#10 S.M.S.	#14 S.M.S.	1/4" Ø TAPCON	3/8" Ø TAPCON
2x4 H	2	2	1	1
2x4 H	4	4	2	1
2x4 S.M.B.	4	4	2	1
2x5 S.M.B.	4	4	2	1
2x6 S.M.B.	6	4	3	2
2x7 S.M.B.	7	6	3	2
2x8 S.M.B.	N/A	8	4	4
2x9 S.M.B.	N/A	9	4	3
2x10 S.M.B.	N/A	10	N/A	4
	N/A	N/A	5 1/2	1 1/2



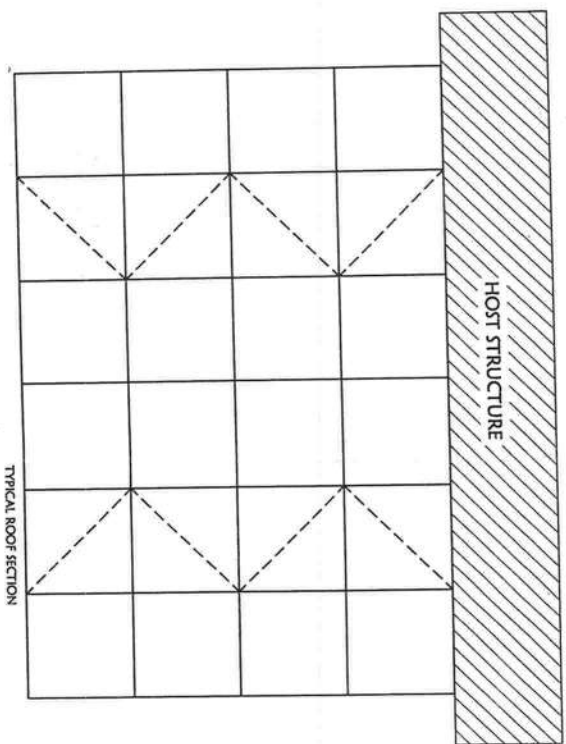
COLUMN @ SIDE WALL CONNECTION



## 2 Column Connection to Concrete Deck w/ Pavers

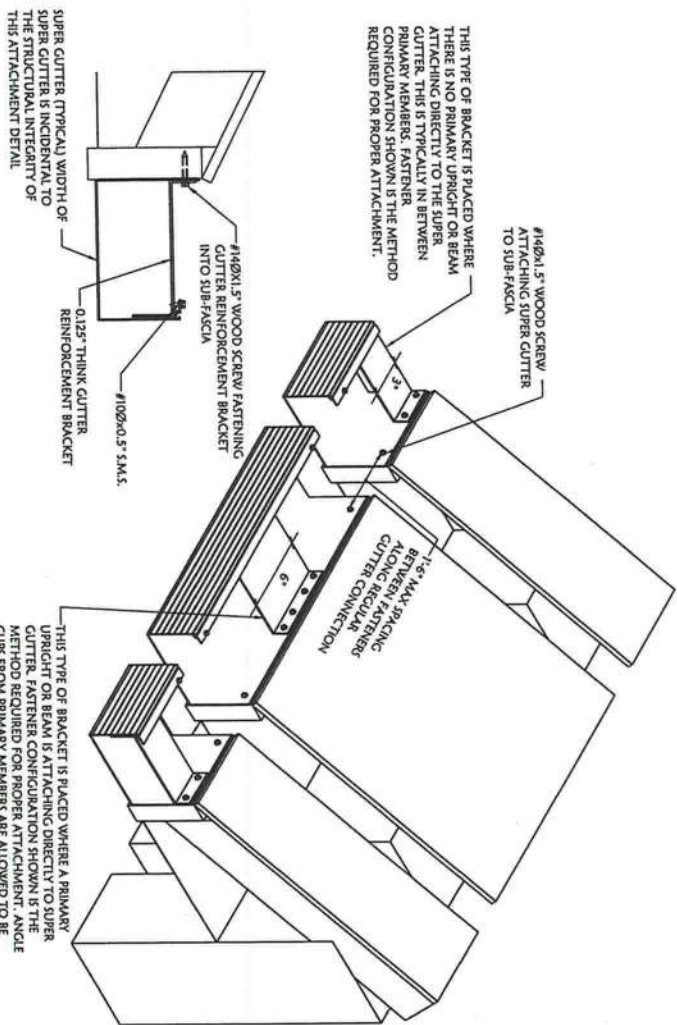


### 3 Typical Front Wall to Side Wall Connections



#### 4 Diagonal Roof Bracing Plan

- NOTES:**
1. ROOF BRACING MAY BE PLACED IN EITHER THE FIRST OR SECOND ROOF SECTION ON EACH SIDE OF THE ENCLOSEURE
  2. THE ORIENTATION (I.E. DIRECTION) OF THE ROOF BRACING IS INCIDENTAL TO STRUCTURAL INTEGRITY
  3. IF THERE ARE AN ODD NUMBER OF PANELS, A BRACE IN THE CENTER MAY BE OMITTED
  4. ANY ENCLOSEURE THAT IS BRACED ON MORE THAN ONE SIDE BY THE HOST STRUCTURE DOES NOT REQUIRE ROOF BRACING



## 5 Typical Super Gutter Connection to Host Structure

1. FASCIA SHOWN IS A FLUSH CUT FASCIA. IF THE FASCIA IS SQUARE CUT PERPENDICULAR TO THE ROOF PITCH THEN THE SUPER CLIMBER, THIS COMPONENT IS INCIDENTAL TO THE STRUCTURAL ANALYSIS OF THE DECK.
  2. FOR A FLUSH CUT BRACKET IS 60".
  3. FOR A RUN OF SUPER CLITTER THAT HAS A STRUCTURAL OR LOAD BEARING COMPONENT ATTACHING TO IT AND THERE IS A CONTINUOUS LOAD ACROSS THE SUPERCLIMBER WITHOUT PRIMARY LOAD POINTS (IE. BEAM OR UPJOIST) THEN THE MAXIMUM SPACING BETWEEN THE 3" REINFORCEMENT BRACKETS IS 48".
  4. CLITTER MAY BE ATTACHED TO A CONVENTIONAL WOOD PLANKED WALL IN THE SAME MANNER THAT IS SHOWN IN THIS DETAIL. IF THE WALL IS A CMU, THEN REPLACE THE #10 WOOD SCREWS WITH 0.25WAL, 35" TACKS (OR EQUIVALENT), THIS CONNECTION SHALL ALSO REMAIN THE SAME FOR A SUPER CLITTER ATTACHING TO A CORNER BEAM.
  5. WHEN THE WOOD AND SCREWS ARE 0.75 S.M.I., REPLACED BY 100S.
- WHEN THE SUPER CLITTER IS BEING USED FOR STRUCTURAL PURPOSES (IE. STRUCTURAL SUPPORT MEMBERS ATTACH TO IT) THEN THE FRAGMENTS THAT ATTACH TO THE FASCIA MUST PENETRATE INTO THE SUB-FASCIA AT A MINIMUM OF 1" IN THE EMBEDEDMENT.

## STRUCTURAL CONCEPTS

&amp; DESIGN

100

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PHONE #407/682-2085 • FAX #407/682-2085

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FLORIDA C.O.A. NO. 2



06/07/13

STANDARD

Robert C. Scroggins, P.  
FL Registration No. 561

100

111

To the best of the Design Engineer's knowledge, the plans and specifications for this project comply with the applicable minimum building codes as determined by the local authority in accordance with the Florida Statutes.

## Structural Framing Sections & Details

# Residential Pool Screen Enclosure

, Florida

Client:  **Florida Pool Enclosures, Inc**  
*Committed to Your Satisfaction*

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TEL 407/260-2800 • FAX 407/260-6411  
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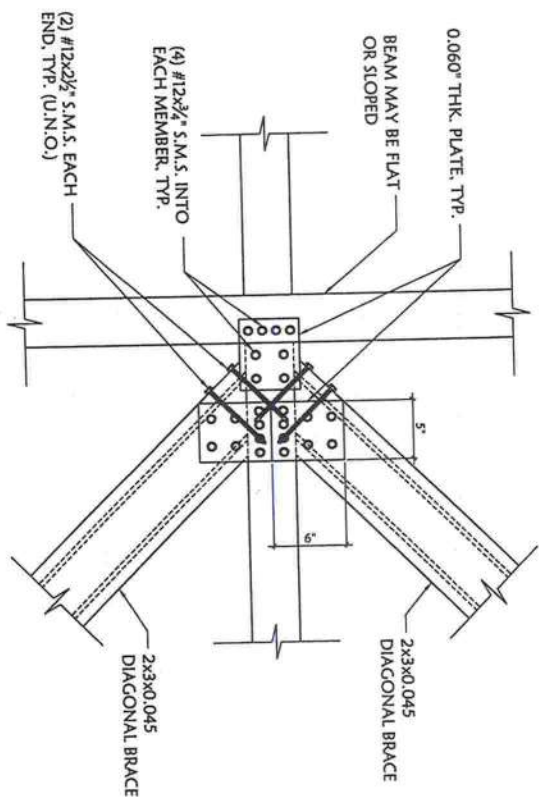
REV.	DATE	DESCRIPTION

Project No.: #13-002.7
Drawn By: TLW
Checked By: RCS
Approved By: RCS
Date: 06/07/13

Sheet

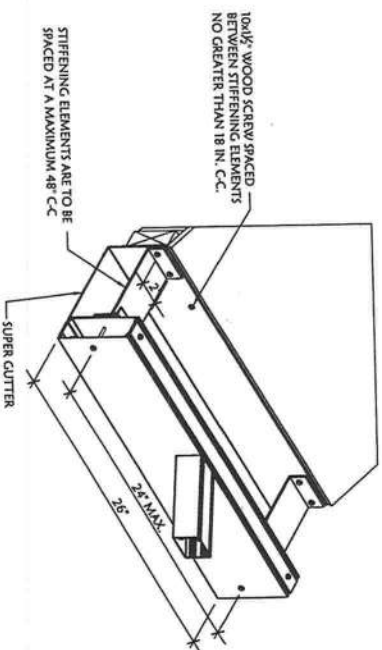
### S-2.2.3



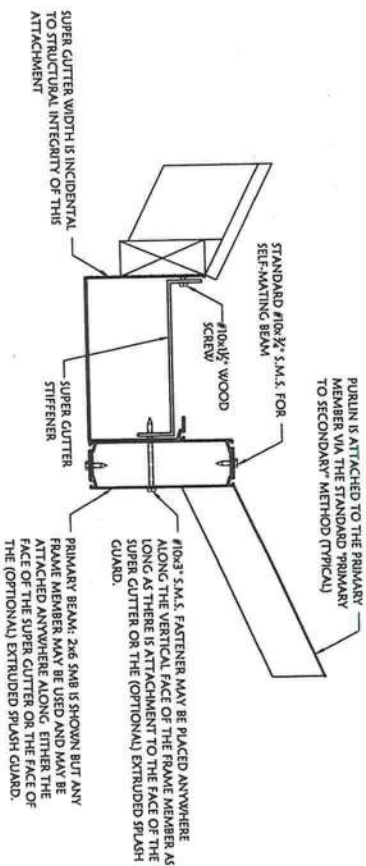


1  
S-2.4

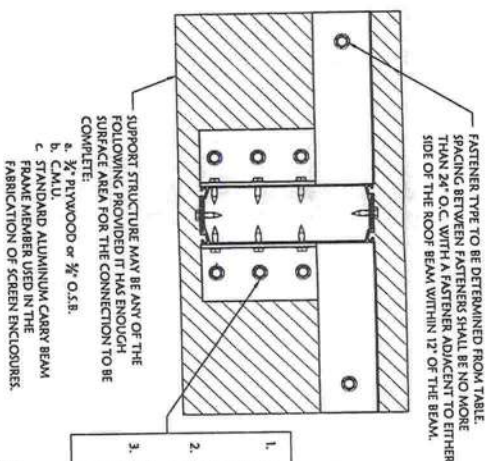
Typical Roof Brace to  
Beam Connection Detail



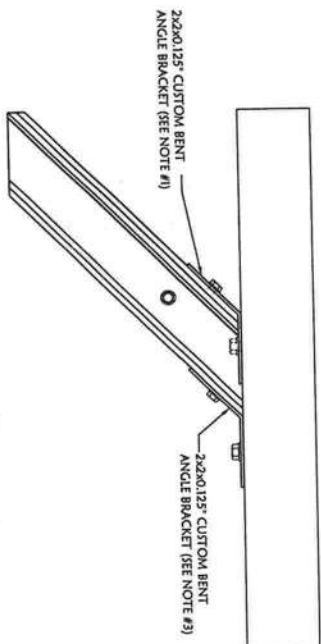
1. 2-2x2x10/12" ANGLE MAY BE USED IN LIEU OF JOH IN ADDITION TO THE #10/25 S.M.S. ATTACHMENT AND MAY BE ON TOP OF OR BEHIND THE ATTACHING FRAME MEMBER. THE SPACING AND TYPE OF FASTENERS SHALL BE AS BEHIND THE SAME AS STATED IN THE DETAIL. EACH FASTENER WILL BE ON THE SAME PLANE FOR EACH OPPOSING FACE (FLANGE) OF THE 2x2 ANGLE.
2. SUPER CUTTER IS SHOWN AS THE COMPONENT BEING FASTENED TO, BUT THIS DETAIL CAN BE USED IN THE CASE WHERE SUPER CUTTER IS SUBSTITUTED FOR A DIFFERENT ALUMINUM STRUCTURAL COMPONENT (E.G. SELF-ALIGNING BEAM ETC.) PROVIDED THE FASTENERS AND STRUCTURAL COMPONENT IS SUFFICIENTLY PROPERLY IN ACCORDANCE WITH THE DETAILS IN THE SEALED ENGINEERING PACKAGE.



## 2 Parallel Frame Member to Super Gutter Connection



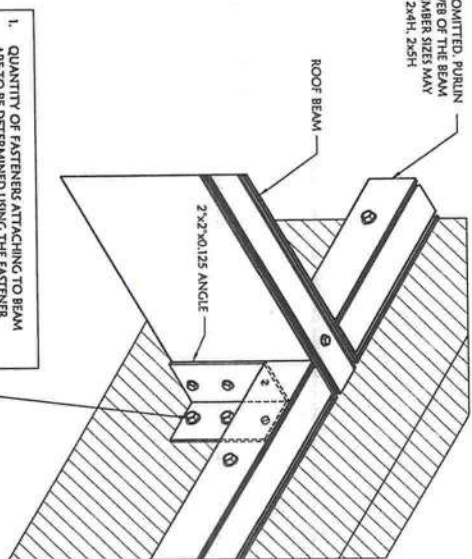
3 Straight Beam to Support Structure Connection Detail



Angled Beam to Support  
Structure Connection Detail  
4  
S-2.4  
N.T.S.

- NOTE:
1. ACUTE SIDE OF BEAM MAY BE NOTCHED TO ALLOW FOR THE 2X24X125 CUSTOM BEAM ANGLE BRACKET TO SLIDE IN BETWEEN THE BEAM AND SUPPORT STRUCTURE THE ANGLE BRACKETING METHOD TO ACHIEVE THIS WOULD BE TO WELD ATTACH THE ANGLE BRACKET TO THE BEAM PRIOR TO INSTALLING THE BEAM HANGERS. PROVIDE THE ACUTE SIDE OF THE BEAM IS INSTALLED FIRST. THIS WOULD ALLOW FOR THE FASTENERS TO BE INSTALLED INTO THE SUPPORT STRUCTURE PRIOR TO THE INSTALLATION OF THE ORTHUSIDE OF THE BEAM.
2. IF THE FABRICATION METHOD SHOWN HERE CANNOT BE ACHIEVED THEN A SECONDARY 2X4X125 ANGLE MUST BE INSTALLED BENEATH THE BEAM. TYPE AND QTY OF FASTENERS SHOULD REFERENCE THE NOW DATED 222 H IN THE FASTENER REQUIREMENTS TABLE.
3. A CUSTOM BEAM 2X24X125 ANGLE MUST ALWAYS BE INSTALLED ON THE ORTHUSIDE OF THE BEAM. 4) ALL OTHER NOTES AND SPECIFICATION FROM THE STRAIGHT BEAM TO SUPPORT STRUCTURE. DETAIL APPLY TO THE DETAIL.

BEAM TO HOIST STRUCTURE FASTENER REQUIREMENTS									
MIN. QUANTITY OF SPECIFIED FASTENERS									
FASTENERS TO BEAM		FASTENERS TO CHU		FASTENERS TO WOOD					
UP/LICHT SIZE	#10 S.M.S.	#14 S.M.S.	1/4" Ø T.N.CONS	3/8" Ø T.N.CONS	#10 WOOD SCREW	#14 WOOD SCREW			
2x2 H	2	3	1	1	3	1			
2x3 H	3	4	1	1	4	2			
2x4 H	4	5	1	1	5	2			
2x4 S.M.B.	4	4	1	1	5	3			
2x6 S.M.B.	5	5	2	2	6	4			
2x7 S.M.B.	6	6	3	3	7	5			
2x8 S.M.B.	7	7	4	4	8	6			
2x8 S.M.B.	8	8	4	5	9	7			
2x9 S.M.B.	9	9	5	6	10	8			
2x10 S.M.B.	10	10	6	7	11	9			
	N/A	N/A	1.25	1.25	1.0	1.0			
MIN. EMBEDMENT DEPTH (INCHES)									



1. QUANTITY OF FASTENERS ATTACHING TO BEAM ARE TO BE DETERMINED USING THE FASTENER TABLE. TYPE OF FASTENERS WILL BE 10 S&S, FOR BEAM SIZES 2X4 - 2X6 & 4X S&S, FOR BEAM SIZES 2X8 - 2X10.
2. FASTENERS SHALL NOT BE LESS THAN 0.37" CENTER-TO-CENTER FROM EACH OTHER AND SHALL THEY BE GREATER THAN 2" CENTER-TO-CENTER FROM EACH OTHER.
3. FASTENERS MAY BE ARRANGED IN ANY PATTERN PROVIDED THE MINIMUM C/C FROM THE TABLE IS MET ALONG WITH THE ABOVE MENTIONED SPACING REQUIREMENTS.


ROOF PURLIN IS TYPICAL BUT MAY BE OMITTED. PUR-  
LIN IS TO BE ATTACHED THROUGH THE WEB OF THE BEAM  
INTO ITS INTERNAL SCREW BOLTS. MEMBER SIZES MAY  
BE AS FOLLOWS: 1x2 O.B., 2x2H, 2x3H, 2x4H, 2x5H

**STRUCTURAL CONCEPTS  
& DESIGN**

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FLORIDA C.O. NO. 2719

Robert C. Scroggins, P.E.  
FL Registration No. 56158

To the best of the Design Engineer's knowledge, the plans and specifications for this project comply with the applicable minimum building codes as determined by the local authority in accordance with the Florida Statutes.

Project No.: #13-002.7 Drawn By: TLW Checked By: RCS Approved By: RCS Date: 06/07/13	REV.      DATE      DESCRIPTION	Client:  <b>Florida Pool Enclosures, Inc</b> <i>Committed to Your Satisfaction</i> 922 HICKORY STREET • ALTA MONTE, SPRING, FL 32701 TEL: 407-260-2890 • FAX: 407-260-6411 www.FLORIDAPOOLENCLOSURES.com	Project: <b>Residential Pool Screen Enclosure</b> _____, Florida	Structural Framing Sections & Details
	(Empty table rows for revisions)		(Empty table rows for revisions)	



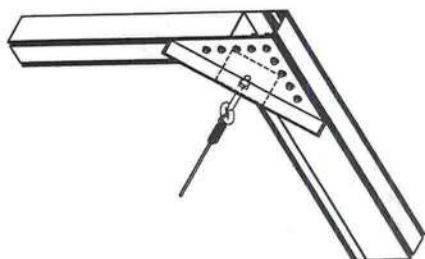
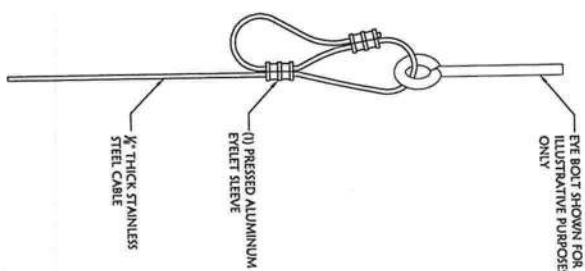
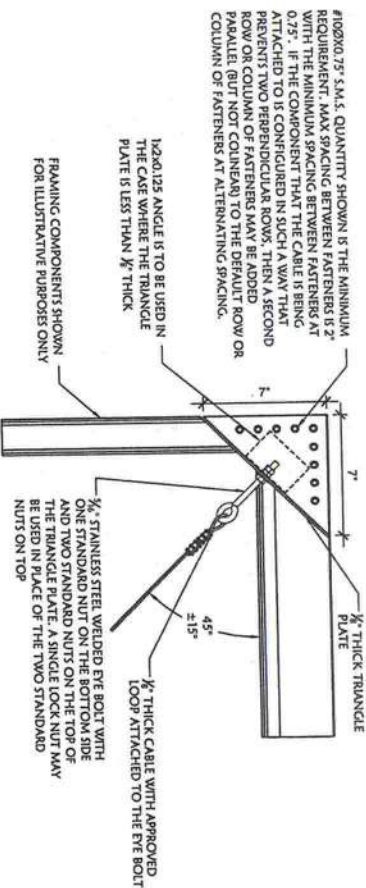
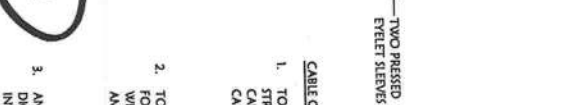


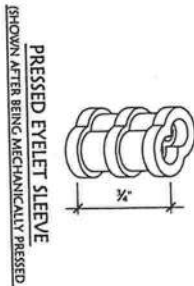
FIGURE 8 LOOP



SINGLE LOOP



TRIANGLE PLATE TOP ATTACHMENT

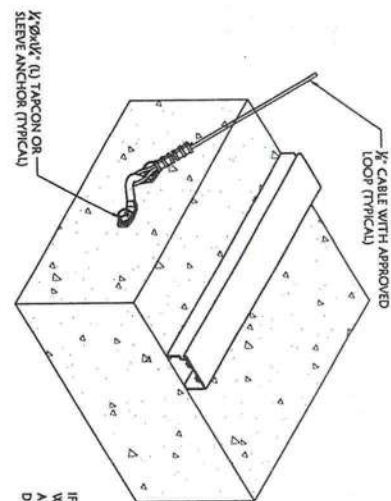


CABLE CONNECTION NOTES:

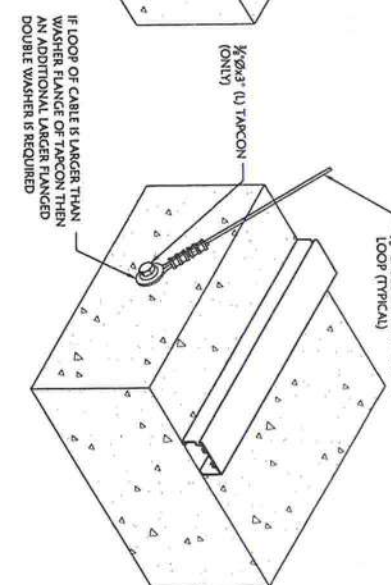
1. TO DETERMINE THE QUANTITY OF CABLES NEEDED FOR A GREEN WALL BASED ON ONE SIDE BY A HOST STRUCTURE TAKE THE TOTAL SQUARE FOOTAGE OF THE BACKED WALL AND DIVIDE BY 250. ROUND THE CALCULATED VALUE TO THE CLOSEST WHOLE NUMBER AND SUBTRACT ONE. IT IS INTENDED TO NOT HAVE A CABLE ON A WALL THAT IS LESS THAN 250 S.F.  
EXAMPLE: 430 S.F. / 250 = 1.72 -> ROUNDS TO 2 -> 2 - 1 = 1 CABLE  
EXAMPLE: 230 S.F. / 250 = 0.92 -> ROUNDS TO 1 -> 1 - 1 = 0 CABLES
2. TO DETERMINE THE QUANTITY OF CABLES NEEDED FOR AN UNBACKED SCREEN WALL, TAKE THE TOTAL SQUARE FOOTAGE OF THE UNBACKED WALL AND DIVIDE BY 250. ROUND THE CALCULATED VALUE TO THE CLOSEST WHOLE NUMBER AND MULTIPLY BY 2. IT IS REQUIRED THAT AN UNBACKED SCREEN WALL HAVE AN EQUAL AMOUNT OF CABLES OPPOSING EACH OTHER.  
EXAMPLE: 535 S.F. / 250 = 2.14 -> ROUNDS TO 3 -> 3 \* 2 = 6 CABLES (3 PAIRS OF OPPOSING CABLES)  
EXAMPLE: 780 S.F. / 250 = 3.12 -> ROUNDS TO 4 -> 4 \* 2 = 8 CABLES (4 PAIRS OF OPPOSING CABLES)
3. ANY ONE OF THE APPROVED CABLE-TO-DECK ATTACHMENTS SHOWN MAY BE USED. FIELD CONDITIONS WILL DICTATE THE TYPE OF ATTACHMENT USED AND MAY CHANGE DYNAMICALLY FROM THE ORIGINAL DESIGN INTENT. THIS HAS NO BEARING ON THE DESIGN OR THE STRUCTURAL INTEGRITY OF THE ENCLOSURE AND THEREFORE IS ALLOWED TO BE DONE AS LONG AS ONE OF THE APPROVED ATTACHMENT DETAILS IS UTILIZED.
4. CABLES MAY ATTACH THROUGH PAVERS AS LONG AS THE MINIMUM CONCRETE EMBEDMENT OF 1 1/2" IS ACHIEVED BY USING A LONGER TAPCON
5. MINIMUM CONCRETE EDGE DISTANCE FOR ALL CONCRETE FASTENERS IS 2 1/2"
6. CABLES SHOULD BE AT A 45° ANGLE TO THE VERTICAL UPRIGHTS (±15°).

## 1 Typical Cable Attachment Details

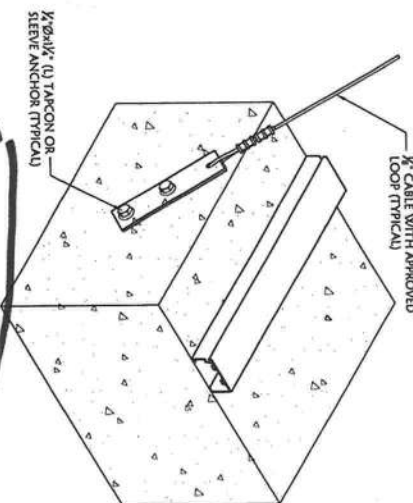
S-2.5



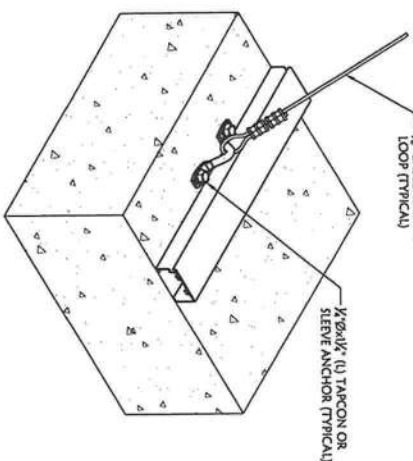
CAMELBACK TO SIDE DECK



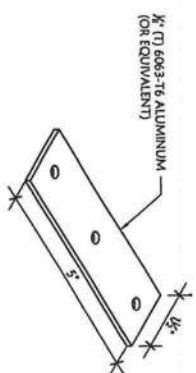
SINGLE CONCRETE FASTENER TO SIDE DECK



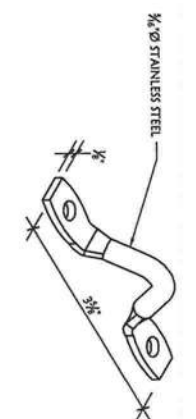
FLAT BAR TO SIDE OF DECK



CAMELBACK TO TOP OF DECK



FLAT BAR PLATE



CAMELBACK CLIP BRACKET

STRUCTURAL CONCEPTS & DESIGN

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FLORIDA C.O.A. NO. 2719

06/07/13  
Robert C. Scroggins, P.E.  
FL Registration No. 56158

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S-2.5

Sheet

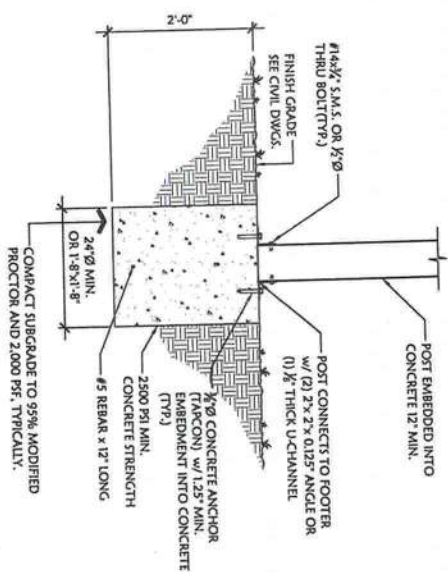
REV.	DATE	DESCRIPTION

Client: **Florida Pool Enclosures, Inc.**  
922 HICKORY STREET • ALTAMONTE SPRING, FL 32701  
TEL: 407/260-2800 • FAX: 407/260-6411  
WWW.FLORIDAPOOLENCLOSURES.COM

Project: **Residential Pool Screen Enclosure**, Florida

Structural Framing Sections & Details

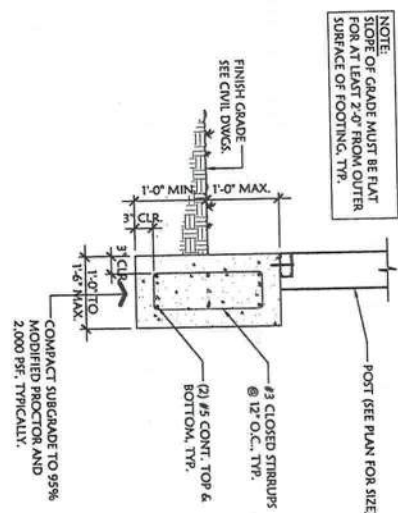




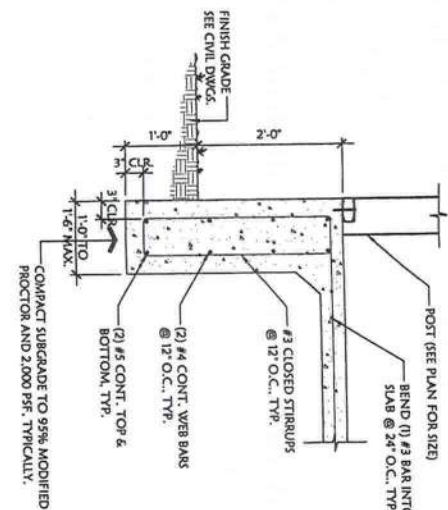
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S-2.6

Typical Isolated Footing Detail

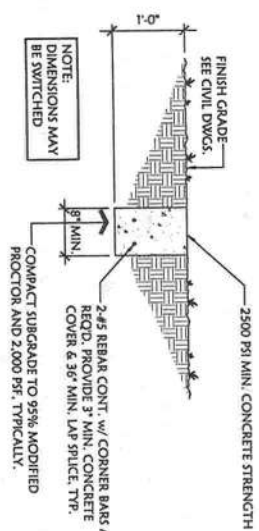
SCALE 1/4" = 1'-0"



2 Retaining Wall Footing  
S-2.6 SCALE 1/2" = 1'-0"



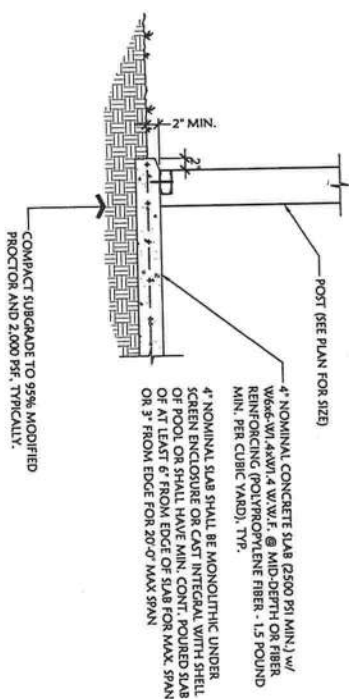
3 Retaining wall footing  
S-2.6 SCALE  $\frac{1}{4}" = 1'-0"$



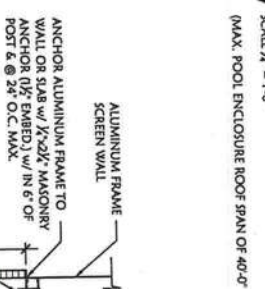
4  
S-2.6

Typical Continuous  
Perimeter Footing Detail

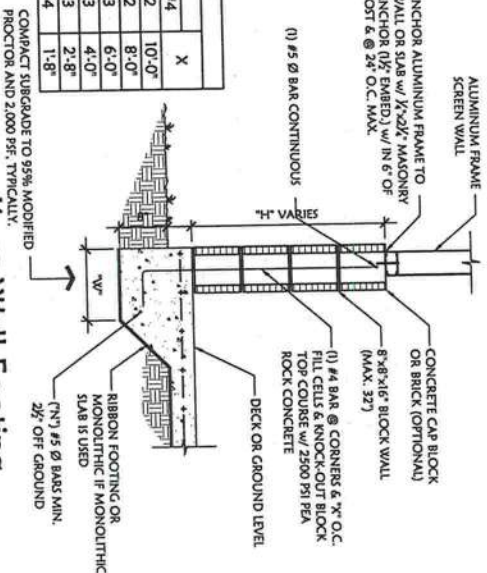
SCALE  $W = 1'-0"$   
(MAX. POOL ENCLOSURE ROOF SPAN OF 50'-0")



**5 Post to Concrete Slab Connection**  
 SCALE:  $\frac{1}{4}" = 1'-0"$   
 S-2.6 (MAX. POOL ENCLOSURE ROOF SPAN OF 40'-0")



H	W	N		X
		#3	#4	
32"	12"	3	2	10'-0"
40"	12"	3	2	8'-0"
48"	18"	N/A	3	6'-0"
56"	18"	N/A	3	4'-0"
64"	24"	N/A	3	2'-8"
72"	30"	N/A	4	1'-8"

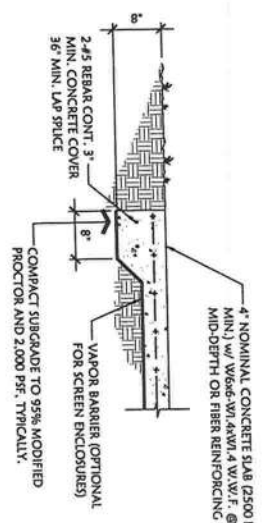


**Knee Wall Footing  
For Screen Enclosures**

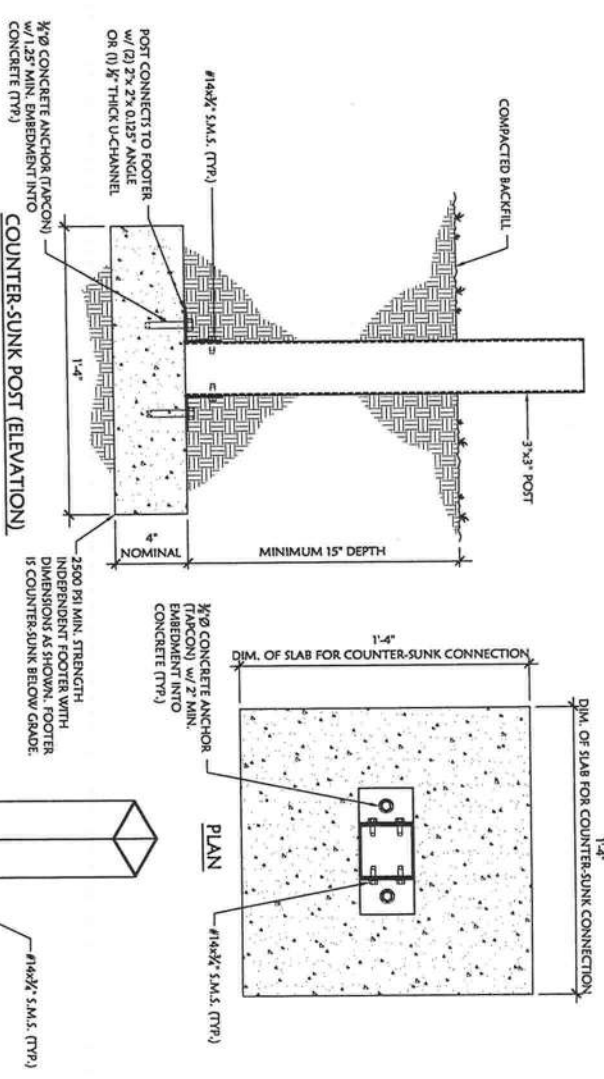
6

SCALE  $\frac{3}{4}" = 1'-0"$

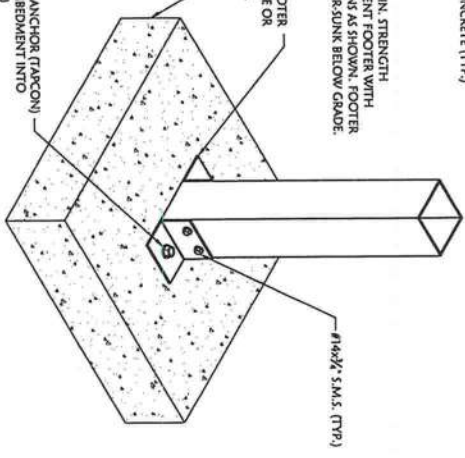
S-2.6



7 Typical Thickened Slab Footing



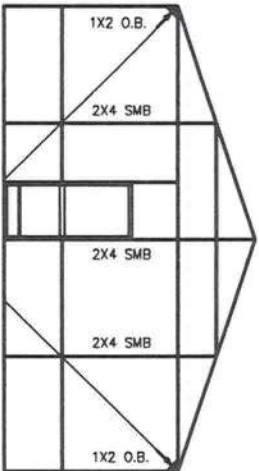
8  
5-2.6  
NTA





<b>Florida Pool Enclosures</b> 922 Hickory St. Altamonte Springs, FL 407-260-2800 fax 407-260-6411		<b>Job # 13405</b> Project Address: Eric Preston 247 S.E. Mogave Lake City, FL 32025		tax district: Columbia County		<b>Structural Concepts &amp; Design, LLC</b>
				date: 06/29/13	scale: NTS	
				prepared by: Allen Thompson		

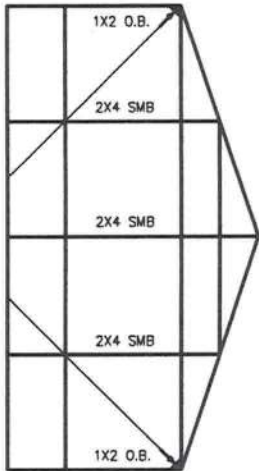
LEFT FRAMING ELEVATION



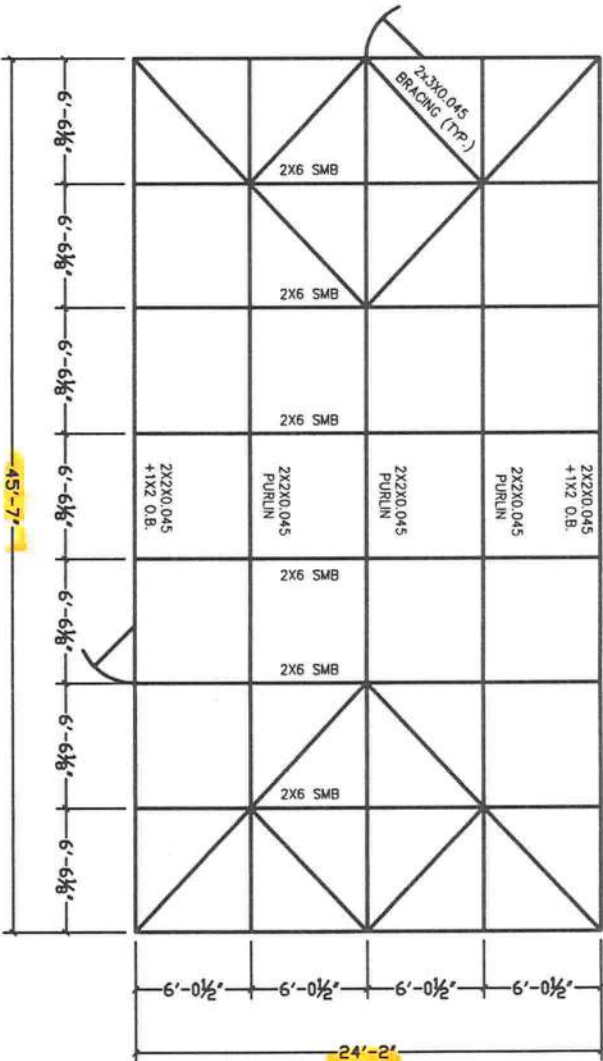
FRONT FRAMING ELEVATION



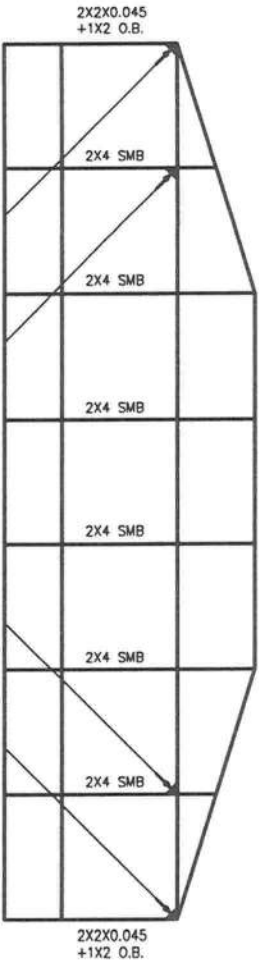
RIGHT FRAMING ELEVATION



POOL ENCLOSURE PLAN



BACK FRAMING ELEVATION



The locations of doors are incidental to the design.  
Girts remain the same throughout the design unless otherwise noted.  
Dimensions are to center of walls and members.  
Length given for knee braces represents horizontal and vertical displacements.