

DESIGN CRITERIA:

APPLICABLE CODES, REGULATIONS & STANDARDS

1. THE 2020 FLORIDA BUILDING CODE, SPECIFICALLY CHAPTER 16 STRUCTURAL DESIGN, CHAPTER 20 ALUMINUM & CH. 23 WOOD.
2. AA ASM 35 & SPECIFICATIONS FOR ALUMINUM STRUCTURES, PART 1-A OF THE ALUMINUM DESIGN MANUAL PREPARED BY THE ALUMINUM ASSOCIATION, INC. WASHINGTON D.C. 2005 ED.
3. ASCE 7-16 & SE17
4. NDS NATIONAL DESIGN SPECIFICATION FOR WOOD.
5. ACI318 CONCRETE REFERENCE MANUAL.

WIND LOADS:

1. BUILDING OCCUPANCY CATEGORY, PARAGRAPH 1604.5 & TABLE 1604.5: RISK CATEGORY 1.
2. BASIC WIND SPEED, TABLE 1609C, STATE OF FLORIDA DEBRIS REGION & BASIC WIND SPEED, PARAGRAPH 1609.3.1 & TABLE 1609.3.1 EQUIVALENT BASIC WIND SPEED:

150

C

MPH EXPOSURE CATEGORY, PARAGRAPH 1609.4.3:
3. WIND LOADS PER FBC TABLE 2002.4 (MWFRS)
VULT = 150 MPH & EXPOSURE = C

FOR 20 X 20 X 0.013" MESH SCREEN

HORIZONTAL PRESSURES ON WINDWARD SURFACES =	43 PSF
HORIZONTAL PRESSURES ON LEEWARD SURFACES =	34 PSF
VERTICAL PRESSURES ON SCREEN SURFACES =	12 PSF
VERTICAL PRESSURES ON SOLID SURFACES =	36 PSF

FOR 18 X 14 X 0.013" MESH SCREEN, APPLIED FACTOR = .88

FOR ALLOWABLE STRESS DESIGN, APPLIED FACTOR = .6

FOUNDATION DESIGN:

FOOTING SIZE EXISTING CONCRETE SLAB. NO ADDITIONAL FOOTING OR FOUNDATION SYSTEM IS REQUIRED BY THE PROPOSED CONSTRUCTION IF A MINIMUM 4" CONCRETE SLAB IS PROVIDED IN SOUND CONDITION, FREE FROM STRUCTURAL CRACKING, SPALLING & OTHER DETERIORATION. EXISTING FOUNDATION/FOOTING UNDER CONCRETE SLAB MINIMUM 8"x8" W/ (1) #5 BAR TO BE VERIFIED BY CONTRACTOR. SEE TYPICAL FOOTING DETAILS FOR NEW FOOTING DESIGN MINIMUM REQUIREMENTS.

MISCELLANEOUS:

1. SCREENED ENCLOSURES CONTAINING SWIMMING POOLS SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF FBC R4501.17 RESIDENTIAL SWIMMING BARRIER REQUIREMENTS.
2. ALUMINUM ADDITIONS ARE NOT TO BE INSTALLED ON A MANUFACTURED HOME, TRAILER HOME, OR PRE-FAB HOME. IF THE EXISTING STRUCTURE IS ONE OF THESE, A SEPARATE 4TH WALL SUPPORT SYSTEM IS SO TO BE ENGINEERED SO THAT NO ADDITIONAL LOADING IS PLACED ON THE MANUFACTURED HOME.

FASTENER SPECIFICATIONS:

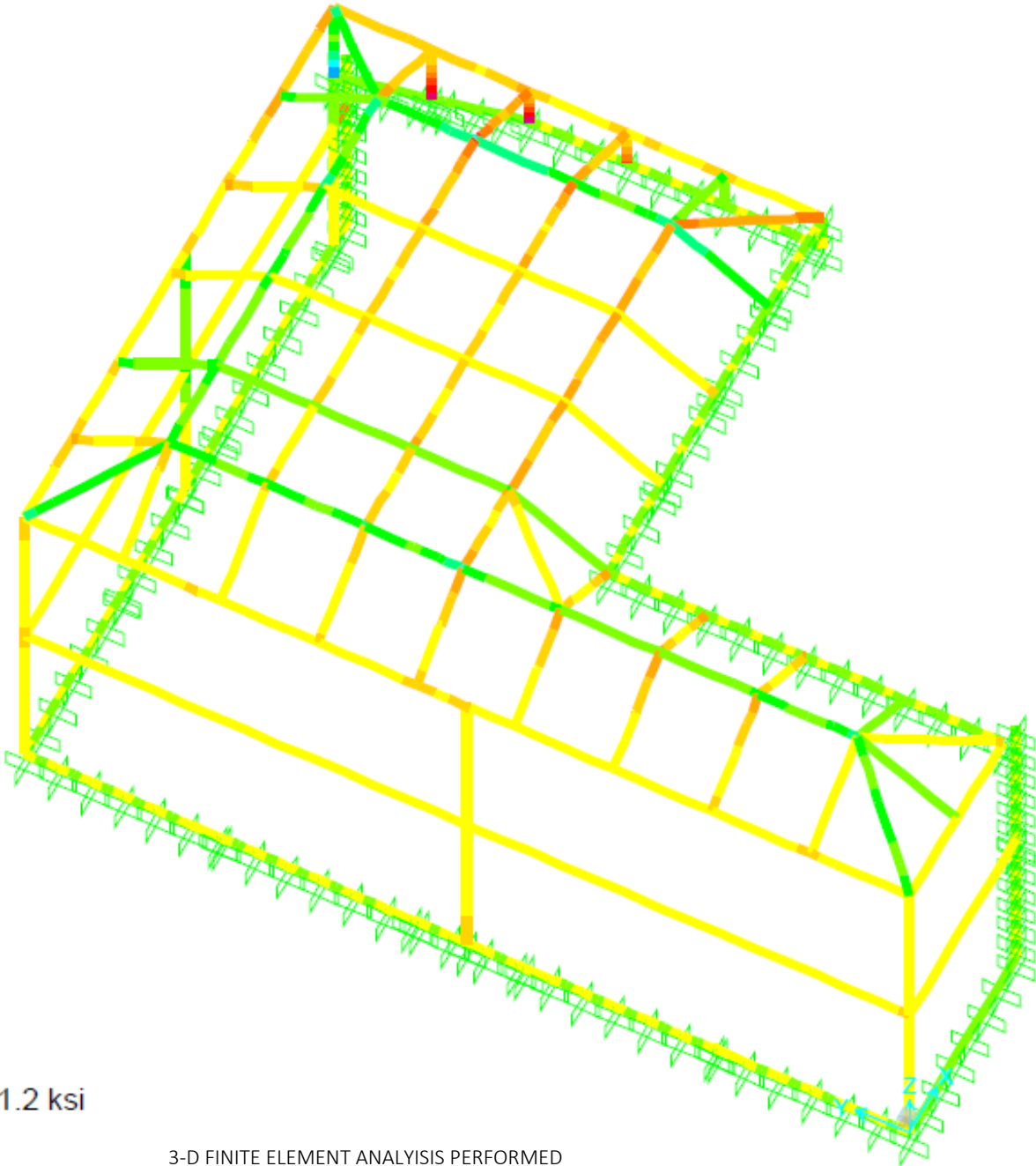
1. FASTENERS ARE REQUIRED TO BE SAE GRADE 2 OR BETTER ZINC PLATED. (CONCRETE ANCHORS ARE TO BE TAPCONS OR BETTER, INSTALLED TO MFG. SPECIFICATIONS)
2. IT IS THE OWNERS RESPONSIBILITY TO MAINTAIN THE SCREENS, FASTENERS AND SCREENS TO MANUFACTURING SPECIFICATIONS.
3. WHERE WOOD DECK IS PRESENT USE 1/4" X 3-1/2" GALV. LAG SCREWS IN LIEU OF MASONRY ANCHORS. UNLESS OTHERWISE SPECIFIED.
4. 1"x2" NON STRUCTURAL MEMBERS ATTACHED TO HOST
 - A. FOR MASONRY/CONCRETE APPLICATION USE GALVANIZED 1/4" X 2-3/4" TAPCONS OR EQUAL AT 24" O.C. AND 6" FROM ENDS
 - B. FOR WOOD APPLICATION USE #14 X 2-3/4" WOOD SCREW AT 24" O.C. AND 6" FROM ENDS.
 - C. FOR ALUMINUM APPLICATION USE #10 X 1-1/2" SMS OR TEK SCREW AT 24" O.C. AND 6" FROM ENDS
 - D. WHERE 1"x2" INSTALLED THROUGHOUT AN "OPEN VIEW" SPACING SHALL BE REDUCED TO 18" O.C. AND 6" FROM ENDS

RESPONSIBILITIES:

1. ALL SITE WORK SHALL BE PERFORMED BY A LICENSED CONTRACTOR IN ACCORDANCE WITH APPLICABLE BUILDING CODES, LOCAL ORDANANCES, AND THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.
2. FOR FASTENERS WHICH ARE NOT VISIBLE AFTER INSTALLATION, THE CONTRACTOR SHALL VERIFY AND ENSURE INSTALLATION HAS BEEN ACCOMPLISHED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS AND IN ACCORDANCE WITH THE ATTACHED DETAILS.
3. FOR "PICTURE WINDOW" MODIFICATION TO EXISTING SCREEN ENCLOSURES, ALL OTHER "EXISTING SCREEN ENCLOSURE" FEATURES ARE TO MEET THE TYPICAL DETAILS AS PROVIDED IN THESE DETAILS. CONTRACTOR IS TO VERIFY & ASSURE EXISTING SCREEN ENCLOSURE IS STRUCTURALLY SOUND.
4. CONTRACTOR TO PROVIDE NOA'S & INSTALL ALL MATERIALS AS PER MANUFACTURER'S SPECIFICATIONS.
5. INTEGRITY OF EXISTING/ HOST STRUCTURE SHALL NOT BE COMPROMISED WITH THE ATTACHMENT OF THE PROPOSED STRUCTURE.

SHEET NO.	DRAWING INDEX
S/01	GENERAL NOTES
S/02	PLAN/ ELEVATIONS
S/03	DETAILS
S/04	DETAILS
S/05	DETAILS
S/06	DETAILS

This item has been electronically signed and sealed by Craig E. Gunderson, P.E. on date below using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



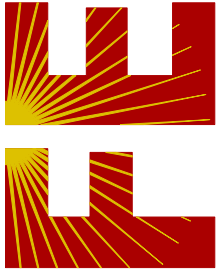
Allowable Stress is 21.2 ksi

3-D FINITE ELEMENT ANALYSIS PERFORMED
STRUCTURE COMPLIES w/ FBC 2020 7th EDITION



PROPOSED MANSARD SCREEN ENCLOSURE
SEE FOUNDATION DESIGN SHEET-01

FLORIDA ENGINEERING LLC
4161 TAMiami TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980



FLEng.com
Orders@FLEng.com

CA CERT. #30782

PROJECT NO. 2231436

CONTRACTOR:

BP SCREENS & OUTDOOR
SERVICES
1800 52ND TER SW
NAPLES, FL 34116

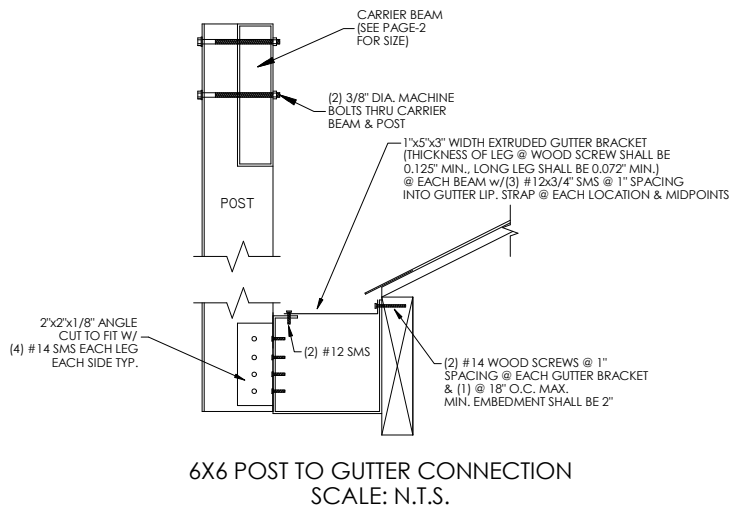
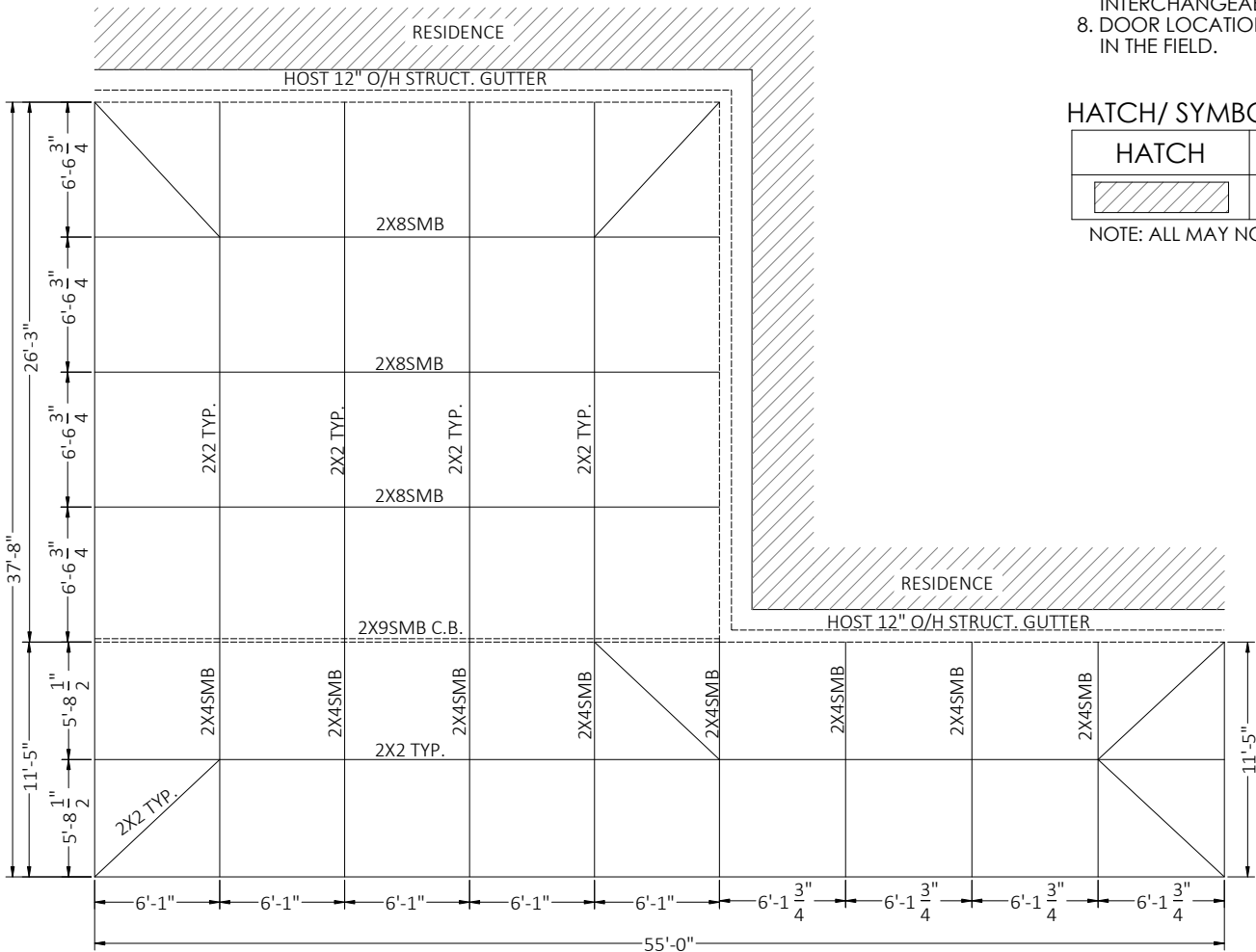
PROJECT ADDRESS:

DANG
3445 ATLANTIC CIR
BONITA SPRINGS, FL 34117

DESIGN DATE:	11/14/2022
REVISION 1:	DATE
REVISION 2:	DATE
DRAWN BY:	SJ
SCALE:	NTS

SHEET:

01

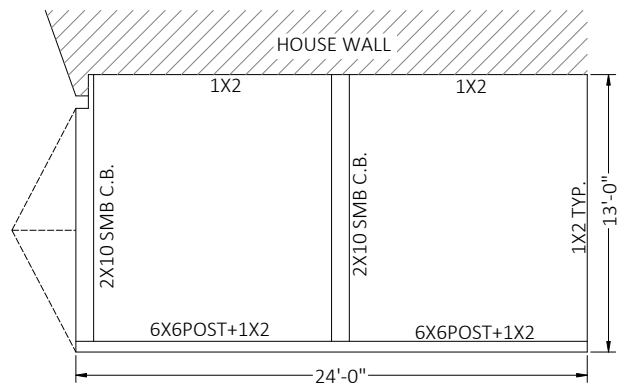


1. ALUMINUM EXTRUSIONS SHALL BE 6005 T5 ALLOY UNLESS OTHERWISE NOTED.
2. ALL SELF MATING BEAM SECTIONS ARE TO BE STITCHED WITH #12 SCREWS 6" FROM ENDS & 24" CENTER TO CENTER.
#10 SCREW 6" FROM ENDS & 12" CENTER TO CENTER.
3. ROOF BRACING SHALL BE A MINIMUM 2'X2'X.050".
4. THE MINIMUM NORMAL THICKNESS OF PROTECTOR PANELS (KICKPLATES) SHALL BE AN INDUSTRY STANDARD OF 0.024 INCHES.
5. VINYL AND ACRYLIC PANELS SHALL BE REMOVED WHEN WIND SPEEDS EXCEED 75 MPH PER FBC.
6. SCREEN MATERIAL SHALL BE 18/14 SCREEN UNLESS APPROVED BY FLORIDA ENGINEERING LLC.
7. 1"X2" & 1"X3" NON STRUCTURAL MEMBERS MAY BE USED INTERCHANGEABLY.
8. DOOR LOCATION MAY BE RELOCATED BY CONTRACTOR IN THE FIELD.

This item has been electronically signed and sealed by Craig E. Gunderson, P.E. on date below using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

HATCH	INDICATES
	EXIST. STRUCTURE

NOTE: ALL MAY NOT APPLY



FLORIDA ENGINEERING LLC

4161 TAMiami TRAIL, UNIT 101

RLOTTE, FLORE
(941) 391-5980

FLEng.com
Orders@FLEng.com

CACERT. #30782

PROJECT NO. 2231436

TRACTOR:
BP SCREENS & OUTDOOR
SERVICES

1800 52ND TER SW
NAPLES, FL 34116

PROJECT ADDRESS:

DANG
3445 ATLANTIC CIR
BONITA SPRINGS, FL 34117

DESIGN DATE: 11/14/2022

REVISION 1: DATE

REVISION 2: DATE

DRAWN BY: SJ

SHEET:

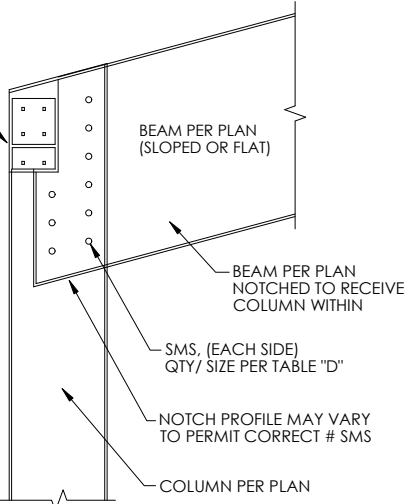
02

1"x2" FASTEN TO COL. (INTERNAL)
w/(2) #10x1-1/2" SMS, FASTEN TO
EAVE RAILS ABOVE w/#10 1-1/2" SMS
24" O.C. AND 6" WITHIN COL.

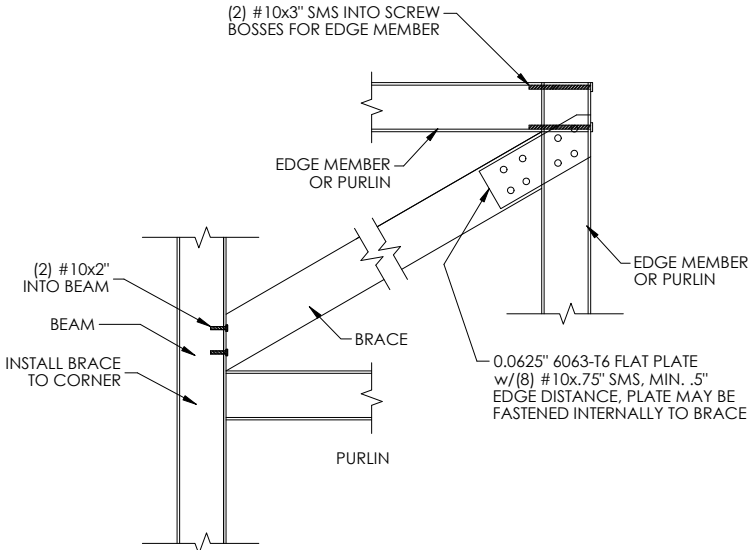
TABLE "D"

BEAM	QTY/ SIZE EACH SIDE
2 x 3	(4)/ #12
2 x 4	(5)/ #12
2 x 5	(5)/ #12
2 x 6	(6)/ #12
2 x 7	(7)/ #12
2 x 8	(8)/ #14
2 x 9	(9)/ #14
2 x 10	(9)/ #14

MAINTAIN MIN. OF 5/8" SEPERATION
FROM EDGE OF BEAM SMS O.C.



DETAIL E - UPRIGHT TO BEAM
CONNECTION SCALE: NTS



DETAIL "D" - ROOF BRACING CONNECTION
SCALE: NTS

ALUMINUM MEMBERS DIMENSIONS:

HOLLOW SECTIONS

2 x 2: 2" x 2" x 0.050"
2 x 3: 2" x 3" x 0.050"
2 x 4: 2" x 4" x 0.050"
2 x 5: 2" x 5" x 0.050"

OPEN BACK SECTIONS

1 x 2: 1" x 2" x 0.044"
1 x 3: 1" x 3" x 0.045"

SNAP SECTIONS

2 x 2 SNAP: 2" x 2" x 0.045"
2 x 3 SNAP: 2" x 3" x 0.050"
2 x 4 SNAP: 2" x 4" x 0.045"

SELF MATING (SMB)

2 x 4 SMB: 2" x 4" x 0.046" x 0.100"
2 x 5 SMB: 2" x 5" x 0.050" x 0.116"
2 x 6 SMB: 2" x 6" x 0.050" x 0.120"
2 x 7 SMB: 2" x 7" x 0.055" x 0.120"
2 x 8 SMB: 2" x 8" x 0.072" x 0.224"
2 x 9 SMB: 2" x 9" x 0.072" x 0.224"
2 x 9(H) SMB: 2" x 9" x 0.082" x 0.306"
2 x 10 SMB: 2" x 10" x 0.092" x 0.374"

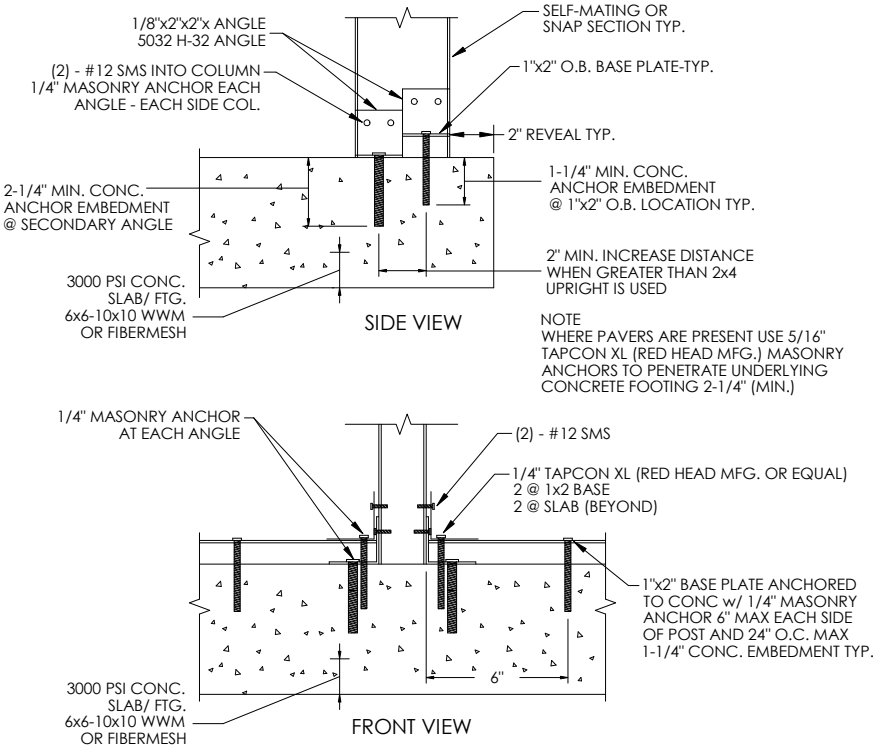
ALL MAY NOT APPLY

DETAIL A

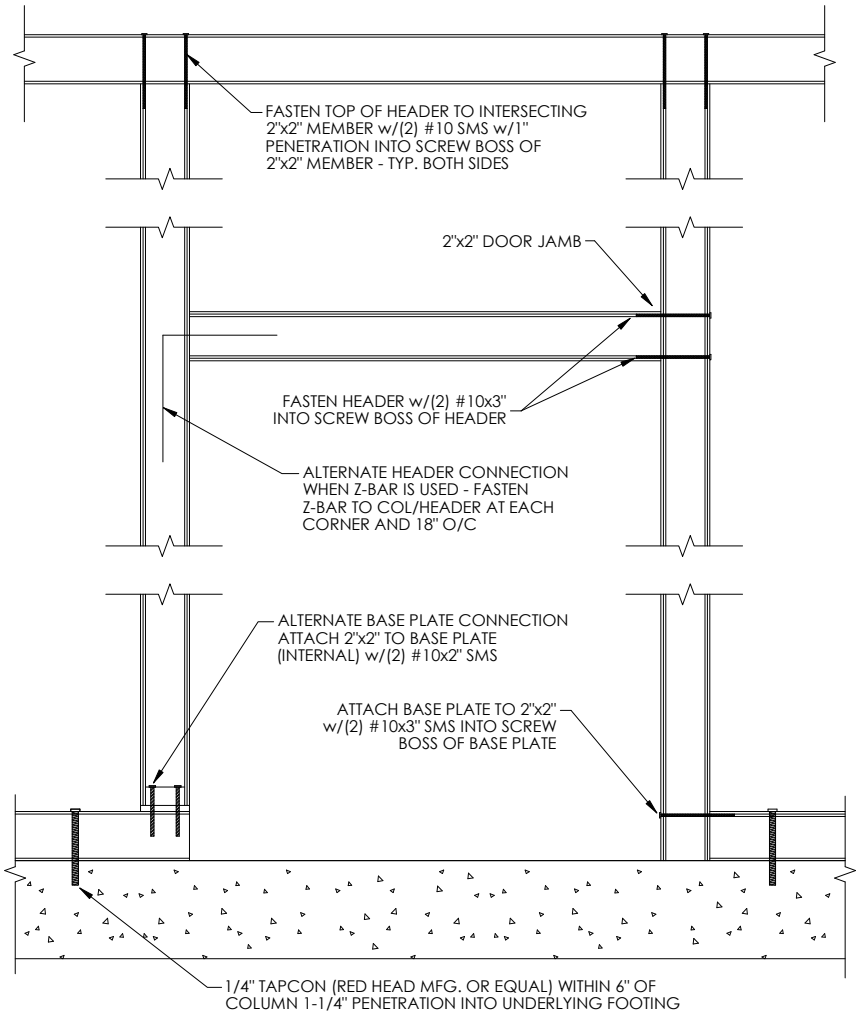
This item has been electronically
signed and sealed by Craig E.
Gunderson, P.E. on date below
using a Digital Signature. Printed
copies of this document are not
considered signed and sealed and
the signature must be verified on any
electronic copies.

MINIMUM NUMBER OF TAPCONS INTO CONCRETE &
12 X 3/4" S.M.S. INTO UPRIGHT / EACH SIDE OF BEAM
THROUGH SECONDARY 2" X 2" X 0.125" ANGLES
(SEE BELOW)

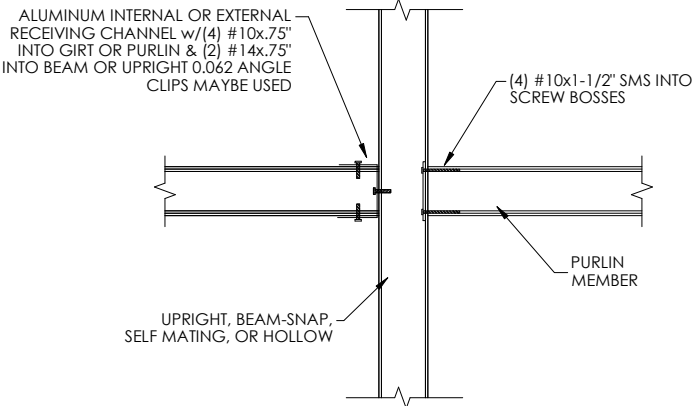
2X4 S.M.B. (1) 1/4" X 2-1/4" S.S. TAPCON & (2) # 12 X 3/4" S.M.S.
2X5 S.M.B. (1) 1/4" X 2-1/4" S.S. TAPCON & (2) # 12 X 3/4" S.M.S.
2X6 S.M.B. (2) 1/4" X 2-1/4" S.S. TAPCON & (3) # 12 X 3/4" S.M.S.
2X7 S.M.B. (2) 1/4" X 2-1/4" S.S. TAPCON & (4) # 12 X 3/4" S.M.S.
2X8 S.M.B. (3) 1/4" X 2-1/4" S.S. TAPCON & (5) # 12 X 3/4" S.M.S.
2X9 S.M.B. (4) 1/4" X 2-1/4" S.S. TAPCON & (6) # 12 X 3/4" S.M.S.
2X10 S.M.B. (5) 1/4" X 2-1/4" S.S. TAPCON & (7) # 12 X 3/4" S.M.S.



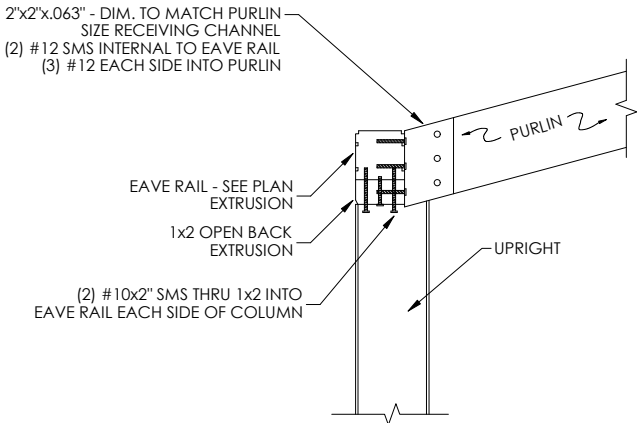
DETAIL "B" - 2"x4" OR LARGER SELF MATING
UPRIGHT TO DECK DETAILS SCALE: NTS



DETAIL "F" - DOOR JAMB & HEADER
CONNECTION SCALE: NTS



DETAIL "C" - GIRT OR PURLIN TO BEAM
OR POST DETAIL SCALE: NTS



DETAIL "G" - SLOPED PURLIN
CONNECTION SCALE: NTS

FLORIDA ENGINEERING LLC
4161 TAMiami TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980
FLEng.com
Orders@FLEng.com



CA CERT. #30782

PROJECT NO. 2231436

CONTRACTOR:
BP SCREENS & OUTDOOR
SERVICES
1800 52ND TER SW
NAPLES, FL 34116

PROJECT ADDRESS:

DANG
3445 ATLANTIC CIR
BONITA SPRINGS, FL 34117

DESIGN DATE: 11/14/2022

REVISION 1: DATE

REVISION 2: DATE

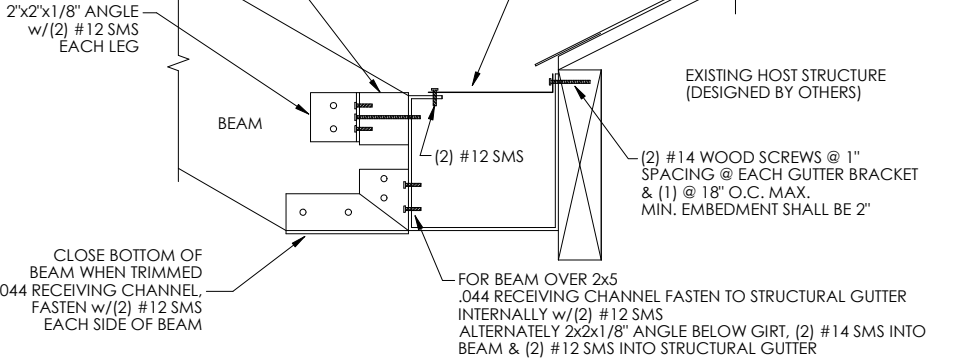
DRAWN BY: SJ

SCALE: NTS

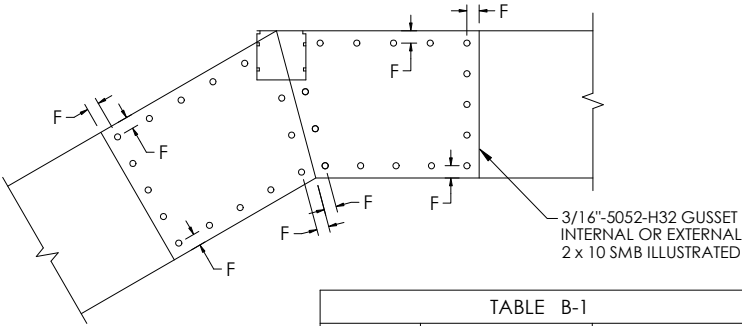
SHEET:

03

GIRT FASTENED INTERNALLY AT EACH END w/ #10x1.5" EACH SCREW GROOVE. FASTEN TO BEAM w/ 2"x2"x1/8" ANGLE (2) #12 SMS INTO BEAM & (2) #10x1.5 THRU ANGLE INTO GUTTER WHERE NO GIRT IS PRESENT, ATTACH ANGLE DIRECTLY TO GUTTER



DETAIL "H" BEAM TO GUTTER CONNECTION SCALE: NTS

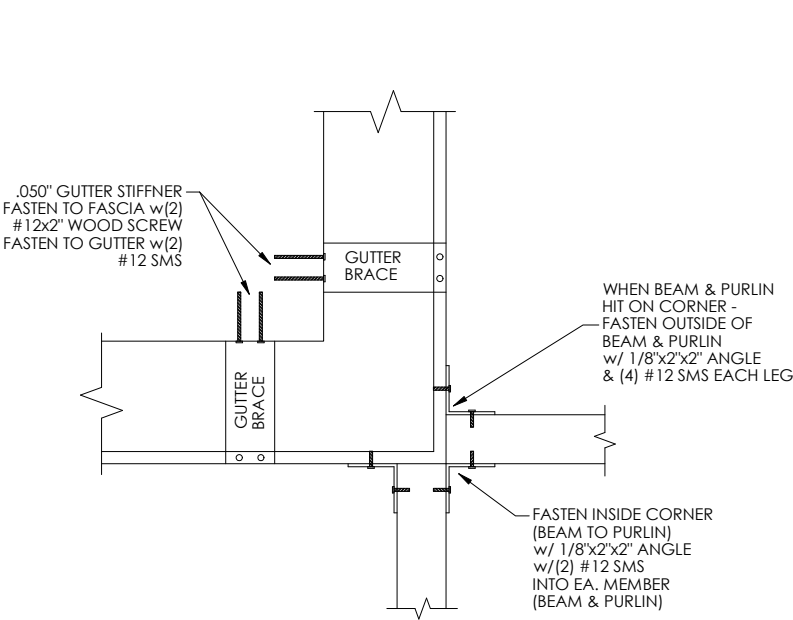


NOTE F
INSTALL FASTENERS ALONG PERIMETER OF GUSSET -BEAM JOINT 3/8" MIN, FROM EDGE. FASTENERS MAY BE STAGGERED TO INSURE PROPER QUANTITY PER TABLE B-1

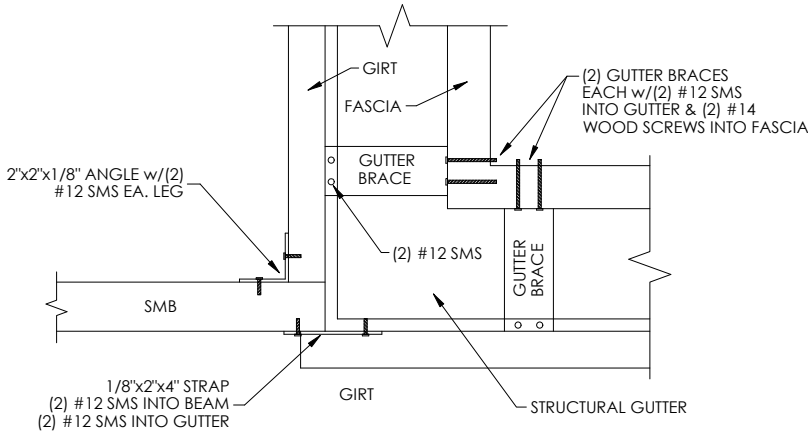
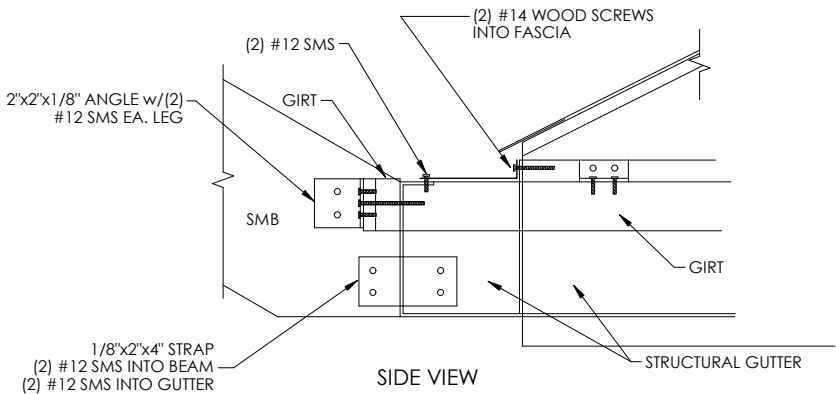
FASTENER PATTERN MAY APPEAR DIFFERENT FROM ILLUSTRATION. MAINTAIN 1/2" SEPARATION BETWEEN FASTENERS. MAINTAIN 3/8" MIN. FASTENER SEPARATION FROM BEAM JOINT OR EDGE OF BEAM LAP. FASTENERS MAY BE EVENLY SPACED AROUND EDGE OF GUSSET WITHIN 3/8" OF BEAM JOINT. FASTENERS MAY BE STAGGERED TO INSURE PROPER QUANTITY PER TABLE B-1

DETAIL "K" GUSSET CONNECTION SCALE: NTS

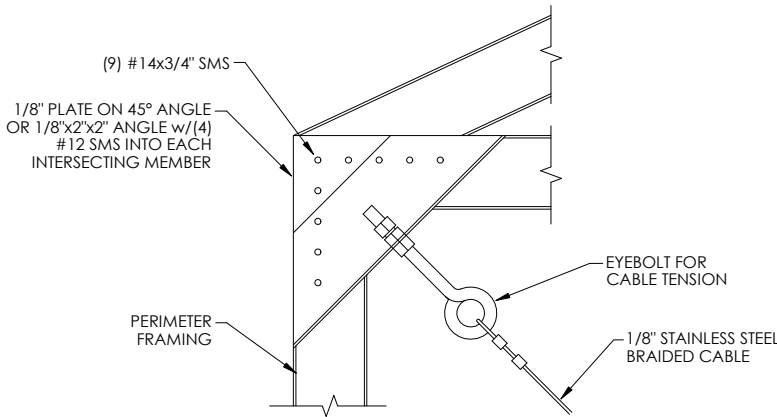
TABLE B-1		
BEAM SIZE	COL. TO BEAM QTY SMS/ SIDE OF COL.	BEAM TO BEAM QTY SMS/ EA. FACE/SIDE
2 x 4	(5) #12	(9) #12
2 x 5	(5) #12	(9) #12
2 x 6	(7) #12	(9) #12
2 x 7	(10) #12	(10) #12
2 x 8	(12) #12	(14) #12
2 x 9	(14) #14	(14) #14
2 x 10	(16) #14	(15) #14



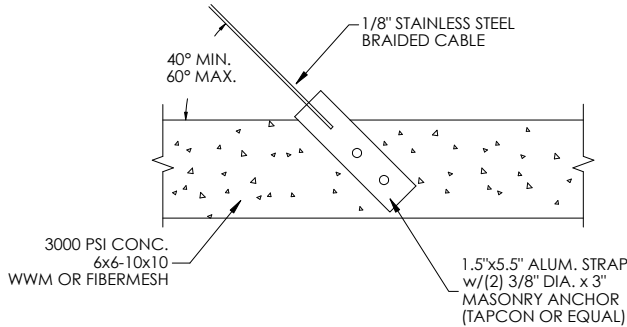
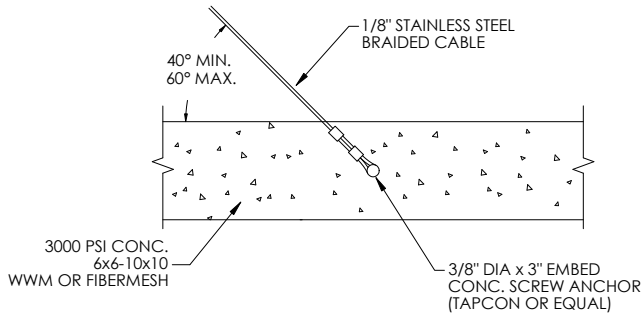
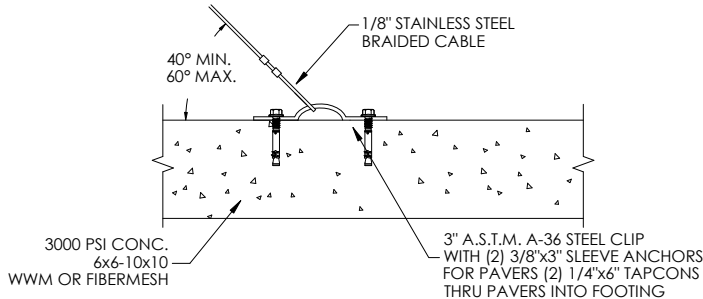
DETAIL "M" BEAM & PURLIN TO GUTTER CONNECTION SCALE: NTS



DETAIL "L" CORNER CONNECTION SCALE: NTS



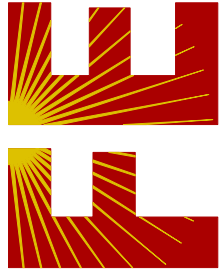
DETAIL "I-2" CABLE CONNECTION AT CORNER SCALE: NTS



DETAIL "I-1" CABLE CONNECTION AT FOUNDATION SCALE: NTS

This item has been electronically signed and sealed by Craig E. Gunderson, P.E. on date below using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

FLORIDA ENGINEERING LLC
4161 TAMiami TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980



FLEng.com
Orders@FLEng.com

PROJECT NO. 2231436

CA CERT. #30782

CONTRACTOR:
BP SCREENS & OUTDOOR SERVICES
1800 52ND TER SW
NAPLES, FL 34116

PROJECT ADDRESS:

DANG
3445 ATLANTIC CIR
BONITA SPRINGS, FL 34117

DESIGN DATE: 11/14/2022

REVISION 1: DATE

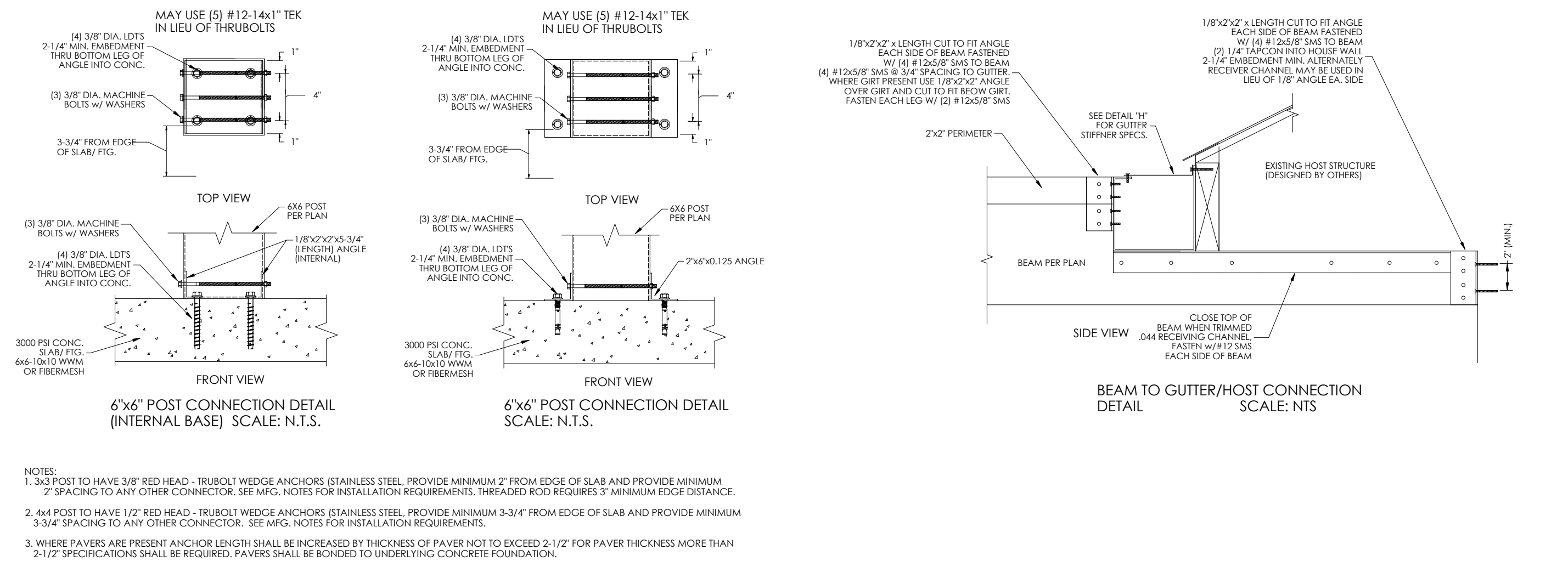
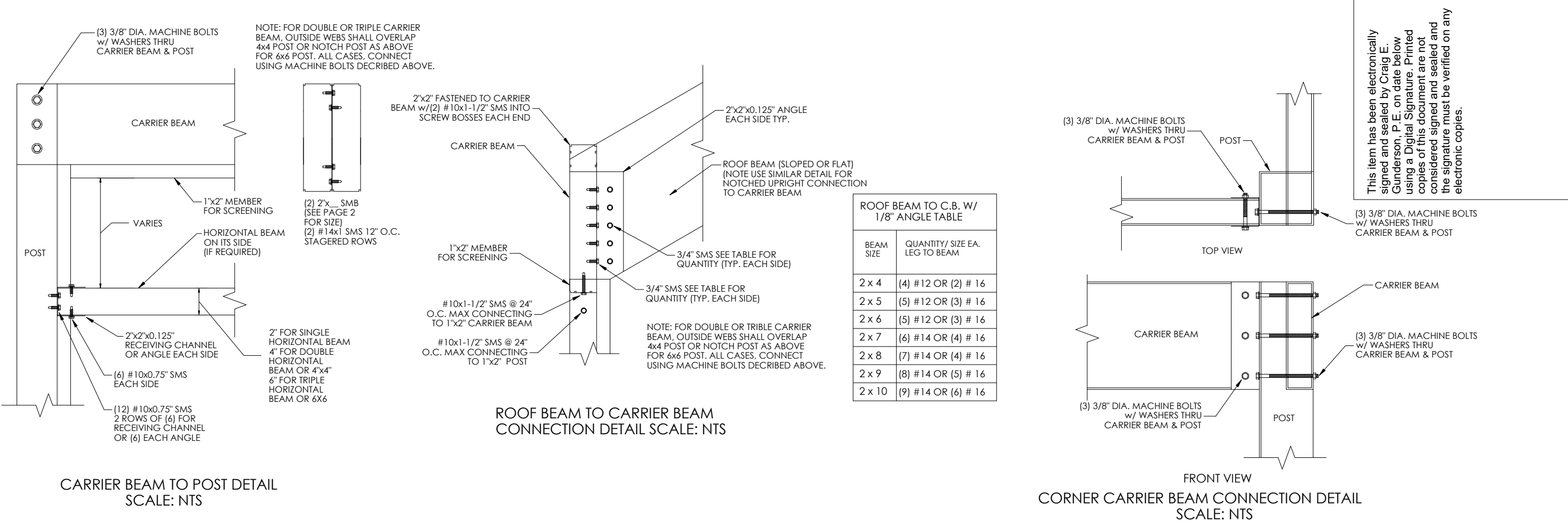
REVISION 2: DATE

DRAWN BY: SJ

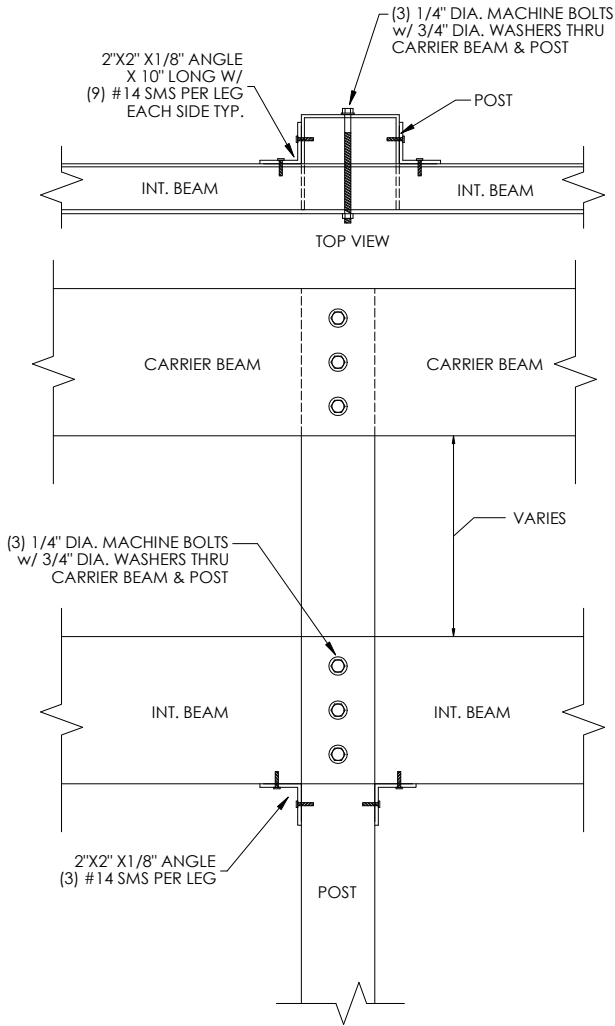
SCALE: NTS

SHEET:

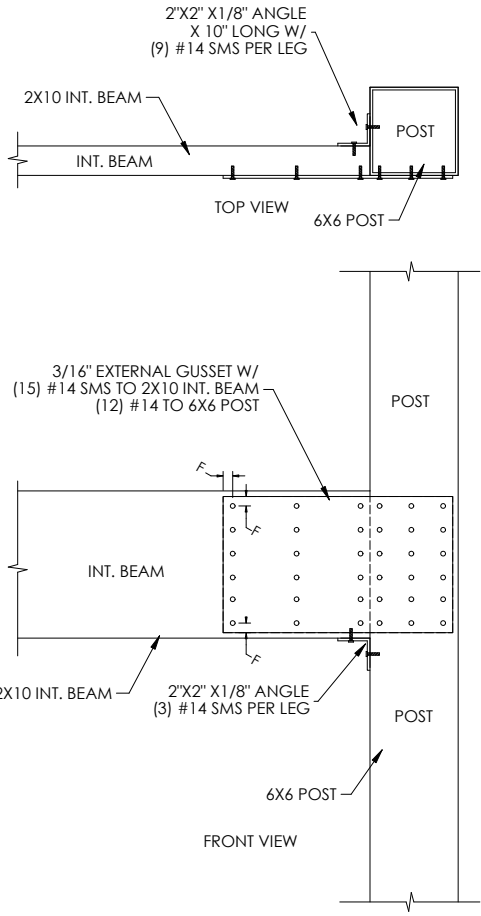
04



This item has been electronically signed and sealed by Craig E. Gunderson, P.E. on date below using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



INTERMEDIATE BEAM CONNECTION - I
SCALE: N.T.S.

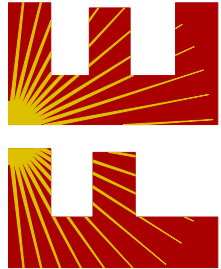


INTERMEDIATE BEAM CONNECTION - II
SCALE: N.T.S.

NOTE F
INSTALL FASTENERS ALONG PERIMETER OF GUSSET -BEAM JOINT 3/8" MIN, FROM EDGE. FASTENERS MAY BE STAGGERED TO INSURE PROPER QUANTITY PER TABLE B-1

FASTENER PATTERN MAY APPEAR DIFFERENT FROM ILLUSTRATION. MAINTAIN 1/2" SEPARATION BETWEEN FASTENERS. MAINTAIN 3/8" MIN, FASTENER SEPARATION FROM BEAM JOINT OR EDGE OF BEAM LAP. FASTENERS MAY BE EVENLY SPACED AROUND EDGE OF GUSSET WITHIN 3/8" OF BEAM JOINT. FASTENERS MAY BE STAGGERED TO INSURE PROPER QUANTITY PER TABLE B-1

FLORIDA ENGINEERING LLC
4161 TAMiami TRAIL, UNIT 101
PORT CHARLOTTE, FLORIDA 33952
(941) 391-5980



FLEng.com
Orders@FLEng.com

PROJECT NO. 2231436

CA CERT. #30782

CONTRACTOR:
BP SCREENS & OUTDOOR SERVICES
1800 52ND TER SW
NAPLES, FL 34116

PROJECT ADDRESS:

DANG
3445 ATLANTIC CIR
BONITA SPRINGS, FL 34117

DESIGN DATE: 11/14/2022

REVISION 1: DATE

REVISION 2: DATE

DRAWN BY: SJ

SCALE: NTS

SHEET:

06