MECHANICALLY FASTENED LATTICE

STRUCTALL TRELLIS PERFORMANCE EVALUATION

FREESTANDING OR HOST-ATTACHED

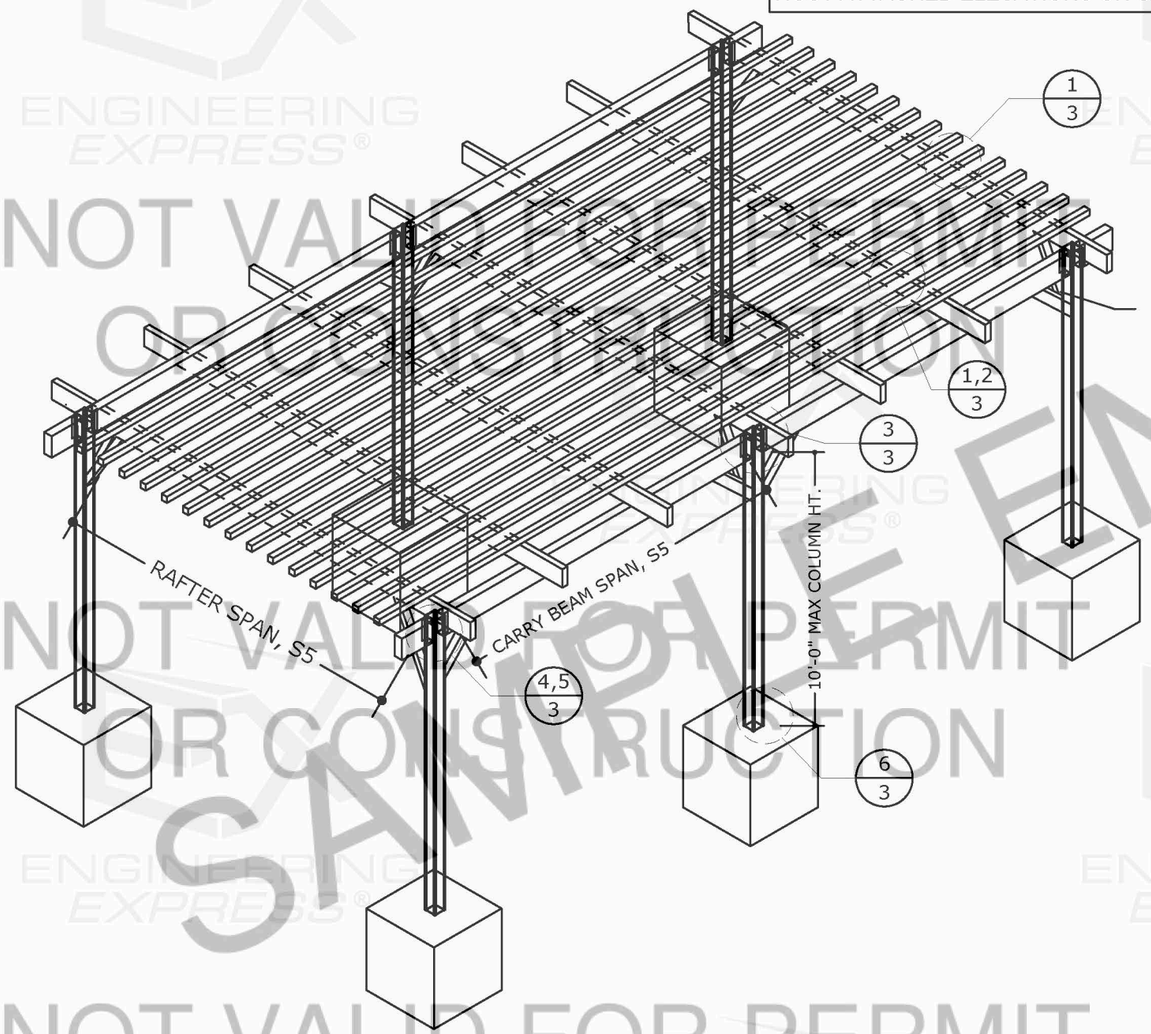
THIS IS A NON-SITE-SPECIFIC PERFORMANCE EVALUATION. A DESIGN PROFESSIONAL SHALL BE RESPONSIBLE FOR CERTIFYING THE APPLICATION OF THIS INFORMATION TO ANY SITE-SPECIFIC LOCATION.

NOTE : THIS DOCUMENT IS NOT TO BE USED WITHOUT AN ORIGINAL PEN SIGNATURE & RAISED SEAL OR ELECTRONICALLY VERIFIABLE ELECTRONIC SIGNATURE MEETING ALL DISCLAIMERS SET FORTH HEREIN. RUBBED PENCIL COPIES ARE NOT PERMITTED FOR USE IN ANY WAY

SPACE RESERVED FOR CERTIFYING ENGINEER'S DIGITAL OR PHYSICAL SEAL & DATE OF CERTIFICATION

COPIES WITHOUT ORIGINAL PE SEAL NOT VALID FOR PERMIT

HOST ATTACHED ELEVATIONS ON S2



OTHER INSTALLATION NOTES

1. STRUCTURAL ALUMINUM SHALL BE FRAMED PLUMB AND TRUE AND ADEQUATELY BRACED DURING CONSTRUCTION.
2. WHERE ALUMINUM IS IN CONTACT WITH OTHER METALS EXCEPT 300 SERIES STAINLESS STEEL, ZINC OR CADMIUM AND THE FAYING SURFACES ARE EXPOSED TO MOISTURE, THE OTHER METALS SHALL BE PAINTED OR COATED WITH ZINC, CADMIUM, OR ALUMINUM.
3. UNCOATED ALUMINUM SHALL NOT BE EXPOSED TO MOISTURE OR RUNOFF THAT HAS COME IN CONTACT WITH OTHER UNCOATED METALS EXCEPT 300 SERIES STAINLESS STEEL, ZINC, OR CADMIUM. ALUMINUM SURFACES TO BE PLACED IN CONTACT WITH MASONRY, CONCRETE, WOOD, FIBERBOARD, OR OTHER POROUS MATERIAL THAT ABSORBS WATER SHALL BE PAINTED.
4. ALUMINUM SHALL NOT BE EMBEDDED N CONCRETE WITH CORROSIVE ADDITIVES SUCH AS CHLORIDES IF THE ALUMINUM IS ELECTRICALLY CONNECTED TO STEEL. ALUMINUM EMBEDDED N CONCRETE SHALL BE WRAPPED WITH 10 M L PIPE WRAP OR PLASTIC TAPE.
5. AS AN ALTERNATIVE TO THE PREVIOUS REQUIREMENTS FOR ALUMINUM IN CONTACT WITH OTHER MATERIALS, ALUMINUM SHALL BE SEPARATED FROM THE MATERIALS OF THIS SECTION BY A NONPOROUS ISOLATOR COMPATIBLE WITH THE ALUMINUM AND THE DISSIMILAR MATERIAL.
6. BOLT HOLES SHALL BE DRILLED THE SAME NOMINAL DIAMETER AS THE BOLT + 1/16"
7. STAINLESS STEEL FASTENERS SHALL BE ASTM F593 316 SS COLD WORKED CONDITION. PROVIDE (5) PITCHES MINIMUM PAST THE THREAD PLANE FOR ALL SCREW CONNECTIONS. ALL FASTENER CONNECTIONS TO METAL SHALL PROVIDE 2xDIAMETER EDGE DISTANCE AND 3xDIAMETER SPACING.
8. SELF-DRILLING SCREWS SHALL BE TEK BRAND / ALL POINTS FASTENERS, UNLESS OTHERWISE NOTED.

DESIGN NOTES:

WORK HAS BEEN DESIGNED IN ACCORDANCE WITH THE 2018/2021 INTERNATIONAL BUILDING CODES, 7TH EDITION (2020) & 8TH EDITION (2023) FLORIDA BUILDING CODES. SITE SPECIFIC APPLICATIONS SHALL BE LESS THAN OR EQUAL TO THE POSITIVE OR NEGATIVE DESIGN PRESSURE CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN IN ACCORDANCE WITH ASCE 7-16 OR ASCE 7-22 AS APPLICABLE FOR CORRESPONDING CODE. PERFORMANCE VALUES LISTED APPLY TO BOTH CODES.

GENERAL NOTES:

1. CONTRACTOR SHALL INVESTIGATE AND CONFORM TO ALL LOCAL BUILDING CODE AMENDMENTS WHICH MAY APPLY AND GOVERN. DESIGN CRITERIA OR SPANS BEYOND STATED HEREIN MAY REQUIRE ADDITIONAL SITE SPECIFIC SEALED ENGINEERING.
2. THE EXISTING HOST STRUCTURE MUST BE CAPABLE OF SUPPORTING THE LOADED SYSTEM AS VERIFIED BY THE ENGINEER & OR ARCHITECT OF RECORD, et.al. THE HOST STRUCTURE WHICH IS DESIGNED, CERTIFIED, AND INSPECTED BY OTHERS MUST PROVIDE SUFFICIENT, CAPACITY FOR THIS SPECIFIED DECK SYSTEM. NO WARRANTY OR GUARANTEE TO THESE CONDITIONS, EITHER EXPRESSED OR IMPLIED, IS OFFERED WITH THIS CERTIFICATION.
3. THE CONTRACTOR SHALL CAREFULLY CONSIDER POSSIBLE IMPOSING LOADS ON ROOF, INCLUDING BUT NOT LIMITED TO ANY CONCENTRATED LOADS WHICH MAY JUSTIFY GREATER DESIGN CRITERIA.
4. THE INSTALLATION OF ANY ACCESSORIES THAT DO NOT AFFECT THE STRUCTURAL INTEGRITY OF THE STRUCTURE ARE OUTSIDE THE SCOPE OF THIS CERTIFICATION AND NOT REQUIRED TO BE CERTIFIED UNDER THIS STRUCTURAL DRAWING. THEY MAY BE INSTALLED AS DESIRED PER MFR. SPECIFICATIONS.

ANCHORAGE:

5. ALL FASTENERS TO BE #14 OR GREATER ASTM F593 COLD WORKED 316 STAINLESS STEEL, UNLESS NOTED OTHERWISE. FASTENERS SHALL BE CADMIUM-PLATED OR OTHERWISE CORROSION-RESISTANT MATERIAL AND SHALL COMPLY WITH "SPECIFICATIONS FOR ALUMINUM STRUCTURES" SECTION J.3.7.2 BY THE ALUMINUM ASSOCIATION, INC., & ANY APPLICABLE FEDERAL, STATE, AND/OR LOCAL CODES. Fy= 65 KSI MIN.
6. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS. EMBEDMENT SHALL BE AS NOTED HEREIN. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES STUCCO, FOAM, BRICK, AND OTHER WALL FINISHES.
7. ALL CONCRETE ANCHORS SHALL BE INSTALLED TO NON-CRACKED CONCRETE ONLY.

MATERIALS:

8. ALUMINUM TO BE 6063-T6 OR BETTER.
9. THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
10. ALL LIGHT GAUGE STEEL MEMBERS SHALL CONFORM TO ASTM A36 AND CURRENT EDITION OF AISC WITH MINIMUM Fy = 55KSI.
11. ALL CONCRETE AND EPOXY TO REACH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 7 DAYS.

OTHER:

12. HOST STRUCTURE, MECHANICAL, EGRESS, ELECTRICAL, WIRING, FAN BEAMS, FANS, OR ANY ACCESSORY ATTACHMENTS
13. THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
12. DIMENSIONS ARE SHOWN TO ILLUSTRATE DESIGN FORCES AND OTHER DESIGN CRITERIA. THEY MAY VARY SLIGHTLY, BUT SHALL REMAIN IN CONFORMANCE WITH THE LIMITATIONS OF THIS PLAN. THE CONTRACTOR IS TO VERIFY ALL FIELD DIMENSIONS PRIOR TO INSTALLATION, AND VERIFY THAT PROPOSED DIMENSIONS AND FIELD CONDITIONS AGREE WITH THIS PROPOSED PLAN. USE OF THIS DOCUMENT CONSTITUTES ACCEPTANCE OF THE PROPOSED SYSTEM LAYOUT, COMPONENTS SELECTED, AND INSTALLATION. THESE DRAWINGS ARE NOT INTENDED TO BE USED AS FABRICATION OR SHOP DRAWINGS.
13. ENGINEER SEAL AFFIXED HERETO VALIDATES STRUCTURAL DESIGN AS SHOWN ONLY. USE OF THIS SPECIFICATION BY CONTRACTOR, et. al. INDEMNIFIES & SAVES HARMLESS THIS ENGINEER FOR ALL COST & DAMAGES INCLUDING LEGAL FEES & APPELLATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, & CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE, & FEDERAL CODES & FROM DEVIATIONS OF THIS PLAN.
14. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.

VISIT ECALC.IO/STRUCTALL

FOR ENGINEER CERTIFIED ORIGINALS & MORE INFORMATION ABOUT THIS DOCUMENT OR SCAN THE QR CODE TO THE RIGHT >

VISIT ENGINEERINGEXPRESS.COM/STORE FOR ADDITIONAL PLANS, REPORTS & RESOURCES

DIGITAL SEAL NOTICE:
IF THIS DOCUMENT IS DIGITALLY SIGNED, THIS ITEM HAS BEEN DIGITALLY SIGNED BY THE ABOVE-SIGNING ENGINEER ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.
VISIT ECALC.IO/DS FOR MORE INFORMATION.
PRINTED DOCUMENT NOTICE:
IF THIS DOCUMENT IS PRINTED & DOES NOT CONTAIN AN ENGINEER'S ORIGINAL SIGNATURE & SEAL, THIS DOCUMENT IS VOID & NOT VALID FOR USE. PHOTOCOPIES ARE NOT PERMITTED FOR USE.
VALID FOR 1 PERMIT ONLY U.N.O.

ENGINEERING EXPRESS®
POSTAL ADDRESS:
2234 NORTH FEDERAL HWY #7664
BOCA RATON, FL 33431
ENGINEERINGEXPRESS.COM

STRUCTALL BUILDING SYSTEMS, INC.
350 BURBANK RD
OLDSMAR, FL 34677
(813) 855-2627

TRELLIS - MECHANICALLY FASTENED LATTICE
FLORIDA BUILDING CODE 8TH ED (2023)
INTERNATIONAL BUILDING CODE (2021)

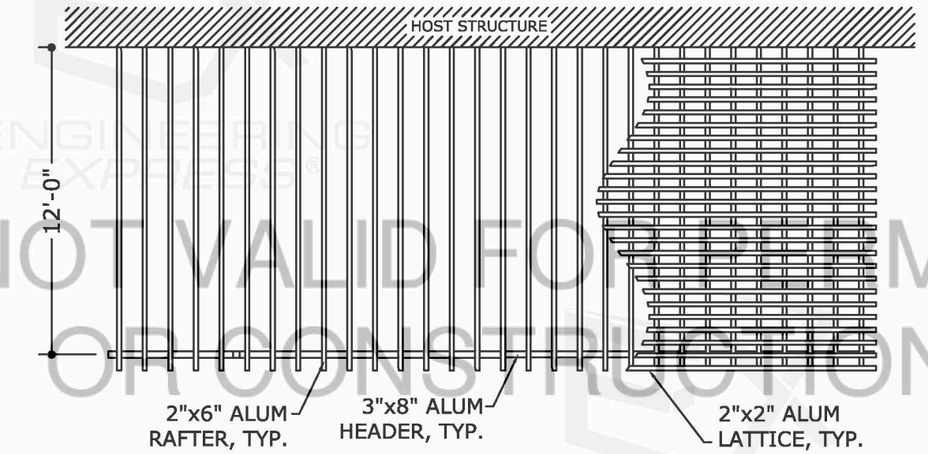
REMARKS	DRWN	CHKD	DATE
ORIGINAL PROJECT (25-2255)	TT	FB	06/10/20
FBC 2023 (23-69342)	CLV	CCB	01/05/24
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

23-69342

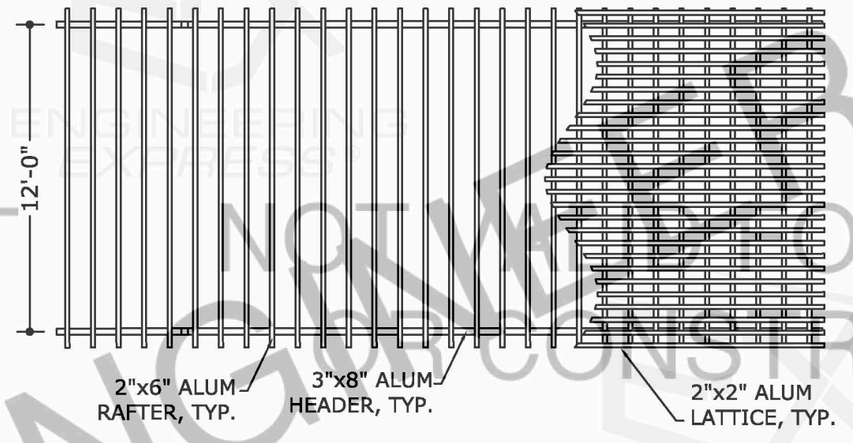
SCALE: NTS UNLESS NOTED

1 OF 6

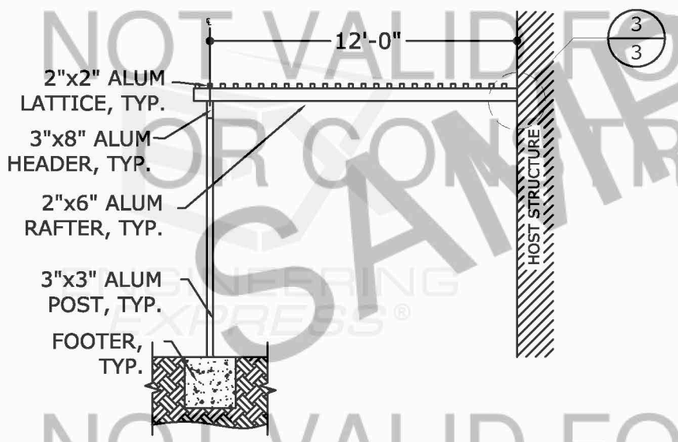
ELEVATIONS:



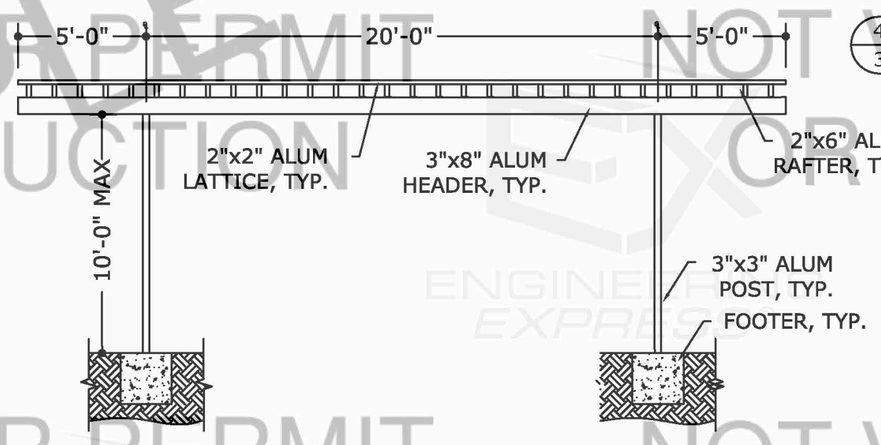
1/2 HOST ATTACHED
N.T.S. PLAN VIEW



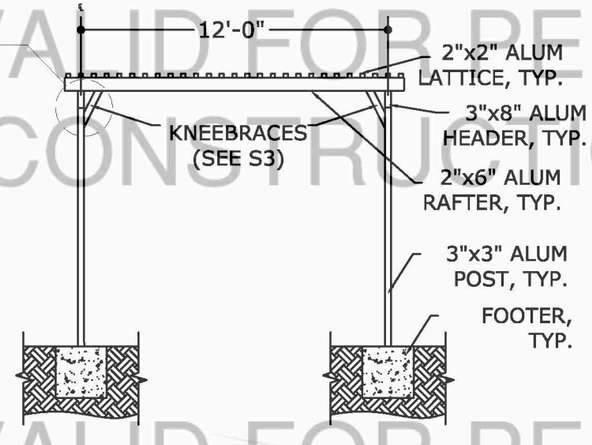
2/2 FREESTANDING
N.T.S. PLAN VIEW



3/2 HOST ATTACHED
N.T.S. SIDE VIEW



4/2 HOST ATTACHED & FREESTANDING
N.T.S. FRONT VIEW



5/2 FREESTANDING
N.T.S. SIDE VIEW

SPACE RESERVED FOR CERTIFYING ENGINEER'S DIGITAL OR PHYSICAL SEAL & DATE OF CERTIFICATION

COPIES WITHOUT ORIGINAL PE SEAL NOT VALID FOR PERMIT

DIGITAL SEAL NOTICE:
IF THIS DOCUMENT IS DIGITALLY SIGNED, THIS ITEM HAS BEEN DIGITALLY SIGNED BY THE ABOVE-SIGNING ENGINEER ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.
VISIT ECALC.IO/DS FOR MORE INFORMATION.
PRINTED DOCUMENT NOTICE:
IF THIS DOCUMENT IS PRINTED IS DOES NOT CONTAIN AN ENGINEER'S ORIGINAL SIGNATURE & SEAL, THIS DOCUMENT IS VOID & NOT VALID FOR USE. PHOTOCOPIES ARE NOT PERMITTED FOR USE.
VALID FOR 1 PERMIT ONLY U.N.O.

ENGINEERING EXPRESS®
POSTAL ADDRESS:
2234 NORTH FEDERAL HWY #7664
BOCA RATON, FL 33431
ENGINEERINGEXPRESS.COM

STRUCTALL BUILDING SYSTEMS, INC.
350 BURBANK RD
OLDSMAR, FL 34677
(813) 855-2627

TRELLIS - MECHANICALLY FASTENED LATTICE
FLORIDA BUILDING CODE 8TH ED (2023)
INTERNATIONAL BUILDING CODE (2021)

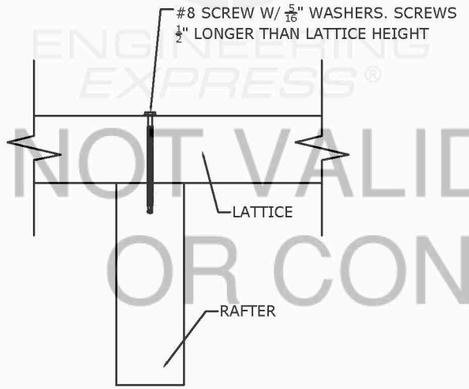
REMARKS	DRWN	CHKD	DATE
ORIGINAL PROJECT (20-2825)	TT	FB	06/10/20
FBC 2023 (23-69342)	GLV	CCB	01/05/24
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

23-69342

SCALE: NTS UNLESS NOTED

2 OF 6

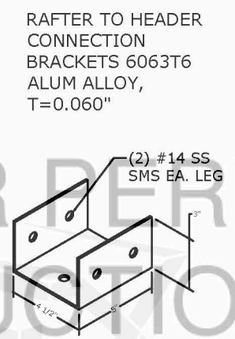
CONNECTIONS:

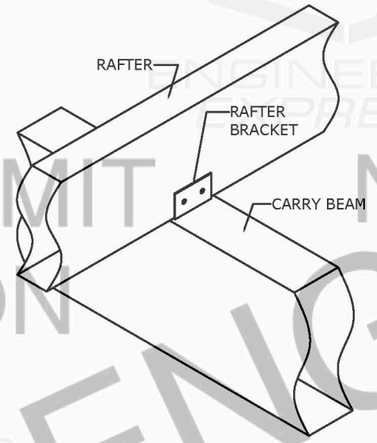


1/3 LATTICE TO RAFTER

N.T.S. ELEVATION VIEW

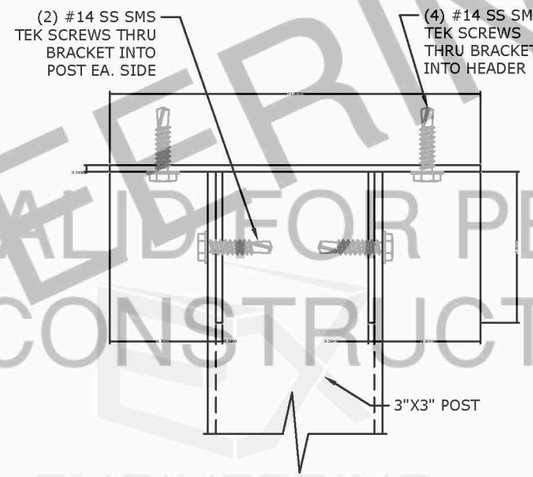
RAFTER TO HEADER CONNECTION BRACKETS 6063T6 ALUM ALLOY, T=0.060"





2/3 RAFTER TO CARRY BEAM

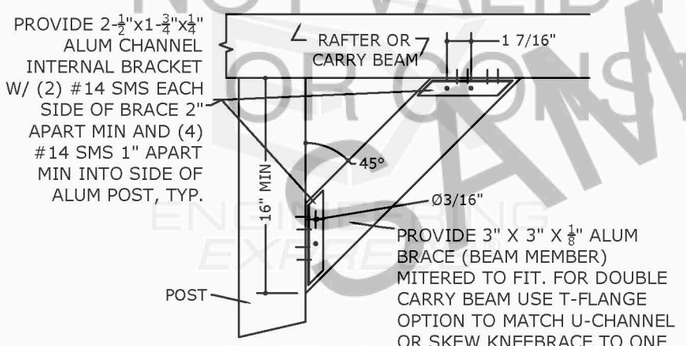
N.T.S. ISOMETRIC VIEW



3/3 RAFTER TO POST CONNECTION

N.T.S. ELEVATION VIEW

NOTE : KNEEBRACES SHALL BE PROVIDED IN BOTH DIRECTIONS AT ALL SUPPORTING POSTS



NOTE: KNEEBRACES SHALL BE PROVIDED IN BOTH DIRECTIONS AT ALL SUPPORTING POSTS

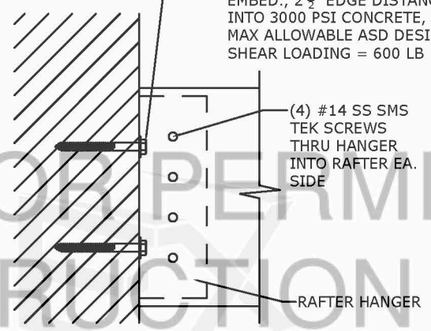
NOTE: MITRE KNEEBRACES TO FIT AROUND PURLINS AT RAFTER CONNECTION POINTS AS NEEDED. MAINTAIN ANCHORAGE INTEGRITY.

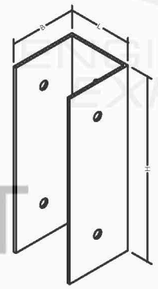
4/3 KNEEBRACE TO POST & RAFTER

N.T.S. ELEVATION VIEW

FOR WOOD HOST
(3) 1/4" Ø SS LAG SCREWS W/ 1 1/2" MIN THREAD PENETRATION, 2 1/2" EDGE DISTANCE INTO SOUTHERN YELLOW PINE NO.2 WOOD (G=0.55)
MAX ALLOWABLE ASD DESIGN SHEAR LOADING = 529 LB

FOR CONCRETE HOST
(2) 1/4" Ø SS TAPCON W/ 1 1/4" EMBED., 2 1/2" EDGE DISTANCE INTO 3000 PSI CONCRETE, MIN.
MAX ALLOWABLE ASD DESIGN SHEAR LOADING = 600 LB





RAFTER HANGER
6063-T5 ALUM. ALLOY T=0.078"

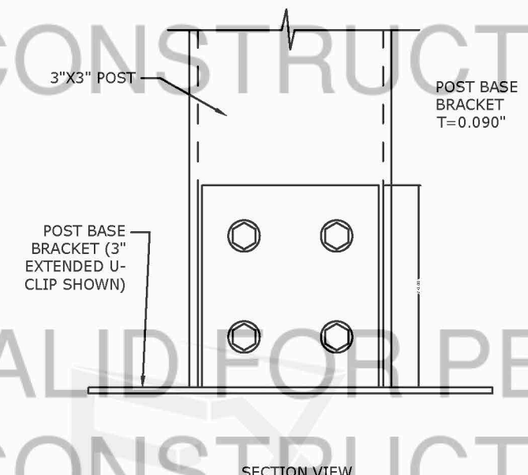
L=1.92" FOR 2"X6 5/8" RAFTERS
L=2.92" FOR 3"X8" RAFTERS

H=5 1/2" FOR 2"X6 5/8" RAFTERS
H=7 1/2" FOR 3"X8" RAFTERS

B=1 1/2" FOR 2"X6 5/8" RAFTERS
B=2 3/4" FOR 3"X8" RAFTERS

5/3 RAFTER TO HOST

N.T.S. ELEVATION VIEW



SECTION VIEW

6/3 POST BASE

N.T.S. ELEVATION VIEW

SPACE RESERVED FOR CERTIFYING ENGINEER'S DIGITAL OR PHYSICAL SEAL & DATE OF CERTIFICATION

COPIES WITHOUT ORIGINAL PE SEAL NOT VALID FOR PERMIT

DIGITAL SEAL NOTICE:
IF THIS DOCUMENT IS DIGITALLY SIGNED, THIS ITEM HAS BEEN DIGITALLY SIGNED BY THE ABOVE-SIGNING ENGINEER ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.
VISIT ECALC.IO/DS FOR MORE INFORMATION.
PRINTED DOCUMENT NOTICE:
IF THIS DOCUMENT IS PRINTED IS DOES NOT CONTAIN AN ENGINEER'S ORIGINAL SIGNATURE & SEAL, THIS DOCUMENT IS VOID & NOT VALID FOR USE. PHOTOCOPIES ARE NOT PERMITTED FOR USE.
VALID FOR 1 PERMIT ONLY U.N.O.

ENGINEERING EXPRESS®
POSTAL ADDRESS:
2234 NORTH FEDERAL HWY #7664
BOCA RATON, FL 33431
ENGINEERINGEXPRESS.COM

STRUCTALL BUILDING SYSTEMS, INC.
350 BURBANK RD
OLDSMAR, FL 34677
(813) 855-2627

TRELLIS - MECHANICALLY FASTENED LATTICE
FLORIDA BUILDING CODE 8TH ED (2023)
INTERNATIONAL BUILDING CODE (2021)

REMARKS	DRWN	CHKD	DATE
ORIGINAL PROJECT (20-26755)	TT	FB	06/10/20
FBC 2023 (23-69342)	GLV	CCB	01/05/24
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

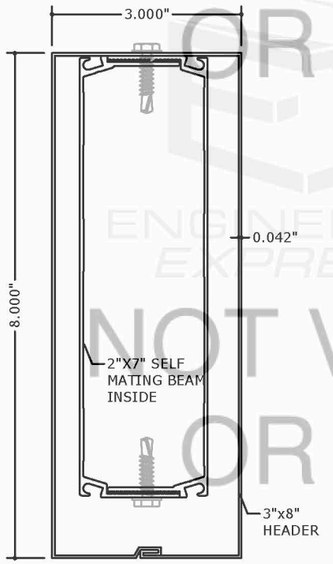
23-69342

SCALE: NTS UNLESS NOTED

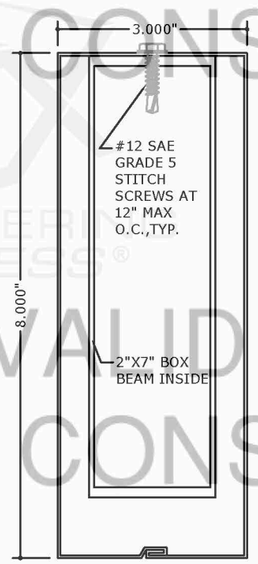
3 OF 6

EXTRUSIONS:

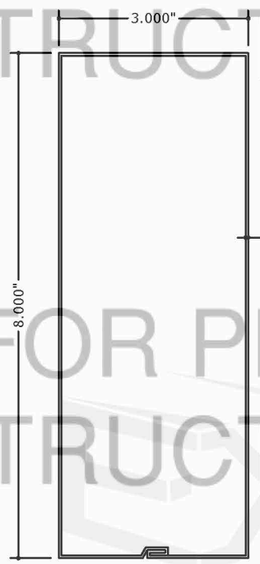
CARRY BEAM



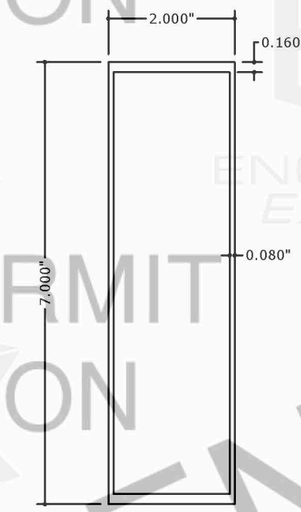
3X8 CARRY BEAM



3X8 CARRY BEAM

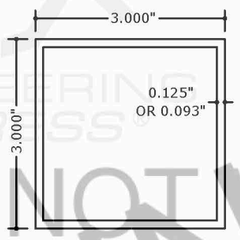


3X8 HEADER

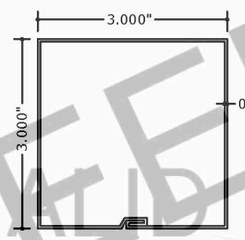


2X7 BOX BEAM

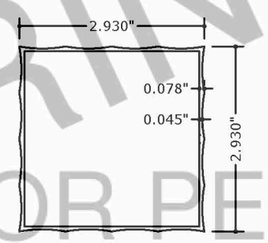
POSTS



3"X3" POST TUBE

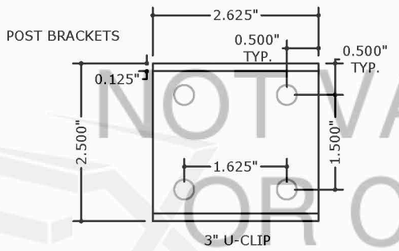


3"X3" POST TUBE

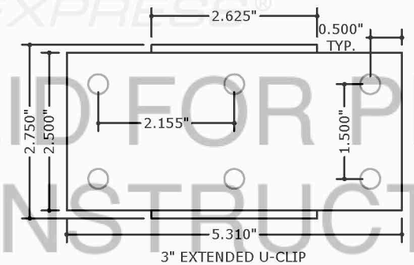


3" FLUTED POST TUBE

CLIPS



3" U-CLIP



3" EXTENDED U-CLIP

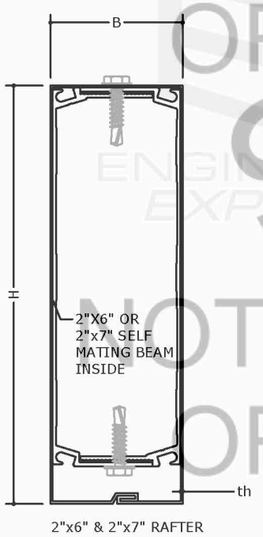
RAFTERS

RAFTER TABLE:

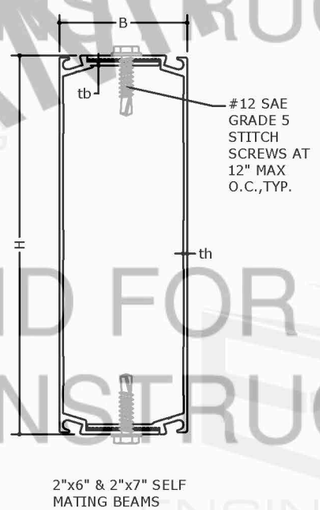
BEAM TYPE	B	H	th
2"x6"	2"	6.625"	0.032"
2"x7"	2"	7.625"	0.032"

SELF MATING BEAM TABLE:

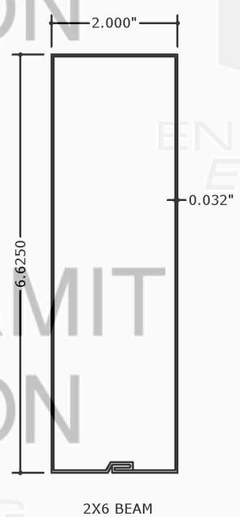
BEAM TYPE	B	H	tb	th
2"x6" SMB	2"	6"	0.060"	0.065"
2"x7" SMB	2"	7"	0.060"	0.057"



2"x6" & 2"x7" RAFTER

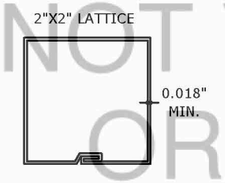


2"x6" & 2"x7" SELF MATING BEAMS



2X6 BEAM

LATTICE



SPACE RESERVED FOR CERTIFYING ENGINEER'S DIGITAL OR PHYSICAL SEAL & DATE OF CERTIFICATION

COPIES WITHOUT ORIGINAL PE SEAL NOT VALID FOR PERMIT

DIGITAL SEAL NOTICE:
IF THIS DOCUMENT IS DIGITALLY SIGNED, THIS ITEM HAS BEEN DIGITALLY SIGNED BY THE ABOVE-SIGNING ENGINEER ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.
VISIT ECALC.IO/DS FOR MORE INFORMATION.
PRINTED DOCUMENT NOTICE:
IF THIS DOCUMENT IS PRINTED IS DOES NOT CONTAIN AN ENGINEER'S ORIGINAL SIGNATURE & SEAL, THIS DOCUMENT IS VOID & NOT VALID FOR USE. PHOTOCOPIES ARE NOT PERMITTED FOR USE.
VALID FOR 1 PERMIT ONLY U.N.O.

ENGINEERING EXPRESS®
POSTAL ADDRESS:
2234 NORTH FEDERAL HWY #7664
BOCA RATON, FL 33431
ENGINEERINGEXPRESS.COM

STRUCTALL BUILDING SYSTEMS, INC.
350 BURBANK RD
OLDSMAR, FL 34677
(813) 855-2627

TRELLIS - MECHANICALLY FASTENED LATTICE
FLORIDA BUILDING CODE 8TH ED (2023)
INTERNATIONAL BUILDING CODE (2021)

REMARKS	DRWN	CHKD	DATE
ORIGINAL PROJECT (20-29255)	TT	FB	06/10/20
FBC 2023 (23-69342)	CLV	CCB	01/05/24
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

23-69342

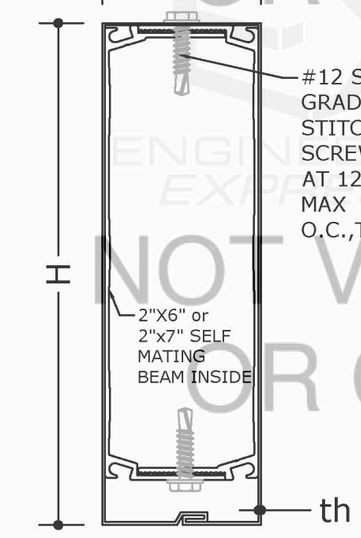
SCALE: NTS UNLESS NOTED

4 OF 6

TABLES:

SELF MATING BEAM SCHEDULE:

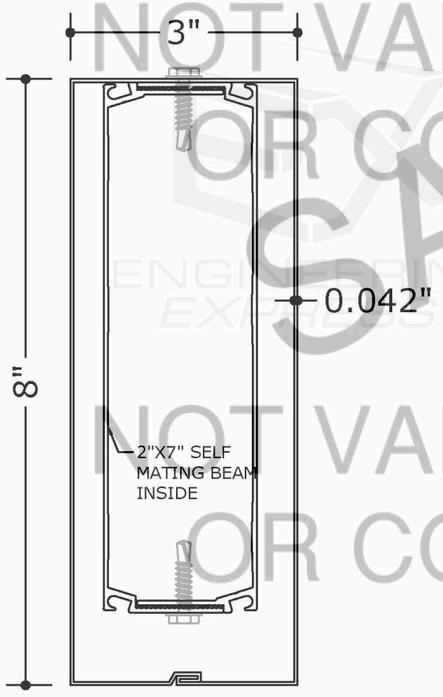
BEAM TYPE	B	H	tb	th
2"x6" SMB	2"	6"	0.060"	0.065"
2"x7" SMB	2"	7"	0.060"	0.057"



2"x6" & 2"x7" RAFTER

BEAM TYPE	TOTAL ALLOWABLE RAFTER SPAN TABLE					
	Purlin Spacing	ASD UPLIFT LOAD, PSF	ASD LATERAL LOAD, PSF	Live Load,PSF	Rafter Spacing, FT	Rafter Span, FT
2"x6" Beam	4"	-37 PSF	24 PSF	20 PSF	2'-0"	20'-0"
				30 PSF	2'-0"	20'-0"
				40 PSF	2'-0"	20'-0"
				50 PSF	2'-0"	20'-0"
				60 PSF	2'-0"	19'-4"

BEAM TYPE	TOTAL ALLOWABLE RAFTER SPAN TABLE					
	Purlin Spacing	ASD UPLIFT LOAD, PSF	ASD LATERAL LOAD, PSF	Live Load,PSF	Rafter Spacing, FT	Rafter Span, FT
2"x7" Beam	4"	-37 PSF	24 PSF	20 PSF	2'-0"	20'-0"
				30 PSF	2'-0"	20'-0"
				40 PSF	2'-0"	20'-0"
				50 PSF	2'-0"	20'-0"
				60 PSF	2'-0"	19'-4"



3X8 CARRY BEAM

BEAM TYPE	TOTAL ALLOWABLE RAFTER SPAN TABLE					
	Purlin Spacing	ASD UPLIFT LOAD, PSF	ASD LATERAL LOAD, PSF	Live Load,PSF	Rafter Span, FT	Carry Beam Span, FT
3"x8" Header	4"	-37 PSF	24 PSF	20 PSF	10'-0"	17'-4"
					20'-0"	12'-10"
				30 PSF	10'-0"	14'-2"
					20'-0"	10'-6"
				40 PSF	10'-0"	12'-3"
					20'-0"	9'-1"
				50 PSF	10'-0"	11'-0"
					20'-0"	8'-1"

TABLE NOTES:

1. WORK DESIGNED PER 2015 ALUMINUM DESIGN MANUAL
2. DEFLECTION LIMITS SET TO L/60
3. TABLED CONSIDER LOAD OVER ENTIRE SURFACE DUE TO BUILD-UP OF SNOW & ICE.
4. SNOW DRIFT SHALL BE CONSIDERED SEPARATELY BY THE SITE SPECIFIC DESIGN & FACTORED INTO TOTAL LOADS HEREIN. CONSULT AN ENGINEER OR ARCHITECT FOR ANY DISCREPANCIES OR DIFFERENCES IN DESIGN TO ACTUAL FIELD CONDITIONS.
5. SPANS ARE CLEAR SPANS, SPACING IS C/C.
6. GREATER PURLIN SPACING MAY BE USED WITHOUT AFFECTING TABLE RESULTS.

SPACE RESERVED FOR CERTIFYING ENGINEER'S DIGITAL OR PHYSICAL SEAL & DATE OF CERTIFICATION

COPIES WITHOUT ORIGINAL PE SEAL NOT VALID FOR PERMIT

DIGITAL SEAL NOTICE:
IF THIS DOCUMENT IS DIGITALLY SIGNED, THIS ITEM HAS BEEN DIGITALLY SIGNED BY THE ABOVE-SIGNING ENGINEER ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.
VISIT ECALC.IO/DS FOR MORE INFORMATION.
PRINTED DOCUMENT NOTICE:
IF THIS DOCUMENT IS PRINTED IS DOES NOT CONTAIN AN ENGINEER'S ORIGINAL SIGNATURE & SEAL, THIS DOCUMENT IS VOID & NOT VALID FOR USE. PHOTOCOPIES ARE NOT PERMITTED FOR USE.
VALID FOR 1 PERMIT ONLY U.N.O.

ENGINEERING EXPRESS®
POSTAL ADDRESS:
2234 NORTH FEDERAL HWY #7664
BOCA RATON, FL 33431
ENGINEERINGEXPRESS.COM

STRUCTALL BUILDING SYSTEMS, INC.
350 BURBANK RD
OLDSMAR, FL 34677
(813) 855-2627

TRELLIS - MECHANICALLY FASTENED LATTICE
FLORIDA BUILDING CODE 8TH ED (2023)
INTERNATIONAL BUILDING CODE (2021)

REMARKS	DRWN	CHKD	DATE
ORIGINAL PROJECT (20-2825)	TT	FB	06/10/20
FBC 2023 (23-69342)	GLV	CCB	01/05/24
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

23-69342

SCALE: NTS UNLESS NOTED

5 OF 6

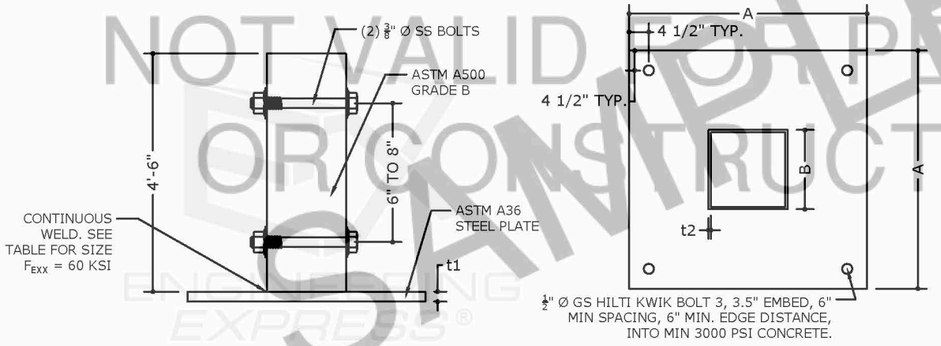
FOOTINGS:

ISOLATED FOOTING REQUIREMENTS TABLE

MAX WIND CONDITIONS SPEED (MPH)	MAX ASD UPLIFT LOAD (PSF)	MAX ASD LATERAL LOAD (PSF)	MAX CORNER CARRY BEAM SPAN (FT)	MAX ROOF PANEL SPAN (FT)	SPREAD FOOTING TYPE	FOOTING WIDTH (FT)	FOOTING DEPTH (FT)	ANCHORS/POST EMBEDMENT
160 MPH / EXP C	-37 PSF	24 PSF	20'-0"	14'-0"	KNEEBRACES IN BOTH DIRECTIONS OR HOST ATTACHED + WELDED BASEPLATE (2/6)	2'-0"	2'-0"	(4) 1/2" DIA, GS HILTI KWIK BOLT 3, 3.5" EMBED, 6" MIN SPACING, INTO MIN 3000 PSI CONCRETE
				12'-0"				
				10'-0"			1'-6"	
				8'-0"				
			10'-0"	14'-0"		2'-0"	1'-0"	
				12'-0"				
				10'-0"				
				8'-0"				
			20'-0"	14'-0"	EMBEDDED POST WITHOUT KNEEBRACES (3/6)	3'-0"	2'-0"	POST EMBEDMENT DEPTH: 1'-6"
				12'-0"				
				10'-0"				
				8'-0"				
			10'-0"	14'-0"		2'-6"	2'-0"	
				12'-0"				
				10'-0"				
				8'-0"				

THE USE OF WELDED BASEPLATE IS ONLY ACCEPTABLE FOR **HOST-ATTACHED SYSTEMS** OR IF **KNEE BRACES** ARE PROVIDED IN **BOTH DIRECTIONS AT ALL SUPPORTING POSTS**

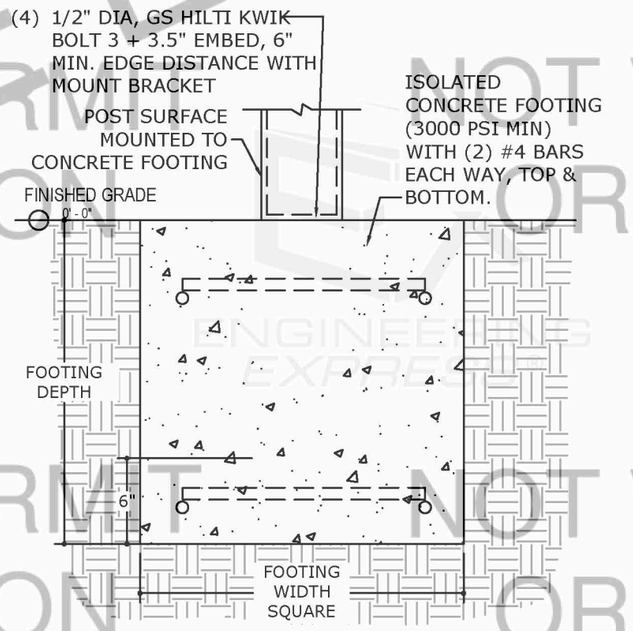
IN ALL OTHER CONDITIONS, POST IS TO BE EMBEDDED IN CONCRETE FOOTING AS DETAILED BELOW

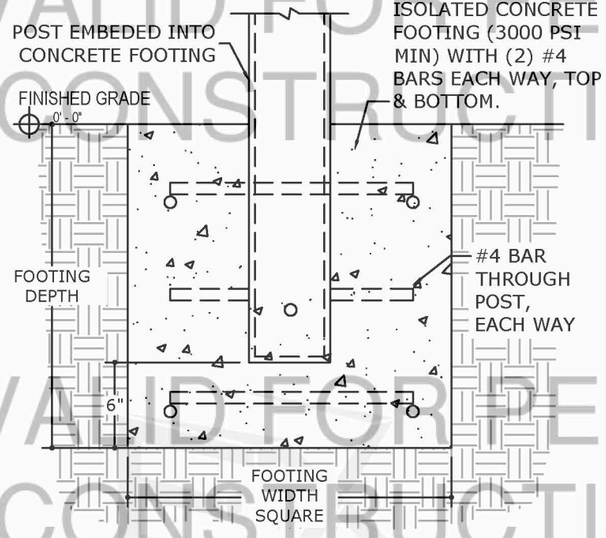


1/4" Ø GS HILTI KWIK BOLT 3, 3.5" EMBED, 6" MIN SPACING, 6" MIN. EDGE DISTANCE, INTO MIN 3000 PSI CONCRETE.

ALLOWED ON MAX. CONSTRAINED FOOTING SIZE D (IN)	PLATE SIZE A (IN)	PLATE THICKNESS t1 (IN)	STUB POST SIZE B (IN)	STUB POST THICKNESS t2 (IN)	MINIMUM WELD SIZE	MAXIMUM DIMENSION OF LONG SIDE OF CANOPY (FT)
24	12	0.375	2.5	0.125	0.125	20

NOTE:
- WELDED MOMENT-RESISTING STEEL BASE PLATE, ALTERNATIVE TO POST EMBEDMENT IN CONCRETE FOOTING WHERE APPLICABLE.
- WELDED POST BRACKET MUST BE FABRICATED IN ACCORDANCE FBC/IBC SECTION 1704.2.5.1 BY AN APPROVED FABRICATOR TO THE SATISFACTION OF THE CODE OFFICIAL
- CONNECTION CHECKED FOR PURE BENDING
- MAXIMUM DIMENSION OF LONG SIDE OF CANOPY TO COMPLY WITH MAXIMUM ALLOWABLE SPANS IN MASTER CHARTS
- ANALYSIS FOR MAXIMUM FREESTANDING CANOPY SIZE TAKING 115 MPH Vult WIND SPEED, EXPOSURE 'C', POST HEIGHT = 10 FT & BEAM DEPTH 8 IN. HOST ATTACHED CANOPY VALID UP TO 150MPH EXPOSURE 'C'.
- ADDITIONAL ENGINEERING REQUIRED BEYOND THIS WIND LIMIT.





1/6 WELDED STEEL BASEPLATE
N.T.S. ELEVATION VIEW

2/6 ISOLATED SPREAD FOOTING FOR SURFACE MOUNTED POST
NOT TO SCALE SIDE ELEV

3/6 ISOLATED DEEP FOOTING FOR EMBEDDED POST
NOT TO SCALE SIDE ELEV

SPACE RESERVED FOR CERTIFYING ENGINEER'S DIGITAL OR PHYSICAL SEAL & DATE OF CERTIFICATION

ENGINEERING EXPRESS®
POSTAL ADDRESS:
2234 NORTH FEDERAL HWY #7664
BOCA RATON, FL 33431
ENGINEERINGEXPRESS.COM

STRUCTALL BUILDING SYSTEMS, INC.
350 BURBANK RD
OLDSMAR, FL 34677
(813) 855-2627

TRELLIS - MECHANICALLY FASTENED LATTICE
FLORIDA BUILDING CODE 8TH ED (2023)
INTERNATIONAL BUILDING CODE (2021)

REMARKS	DRWN	CHKD	DATE
ORIGINAL PROJECT (20-26755)	TT	FB	06/10/20
FBC 2023 (23-69342)	GLV	CCB	01/05/24
-	-	-	-
-	-	-	-
-	-	-	-

23-69342

SCALE: NTS UNLESS NOTED

6 OF 6