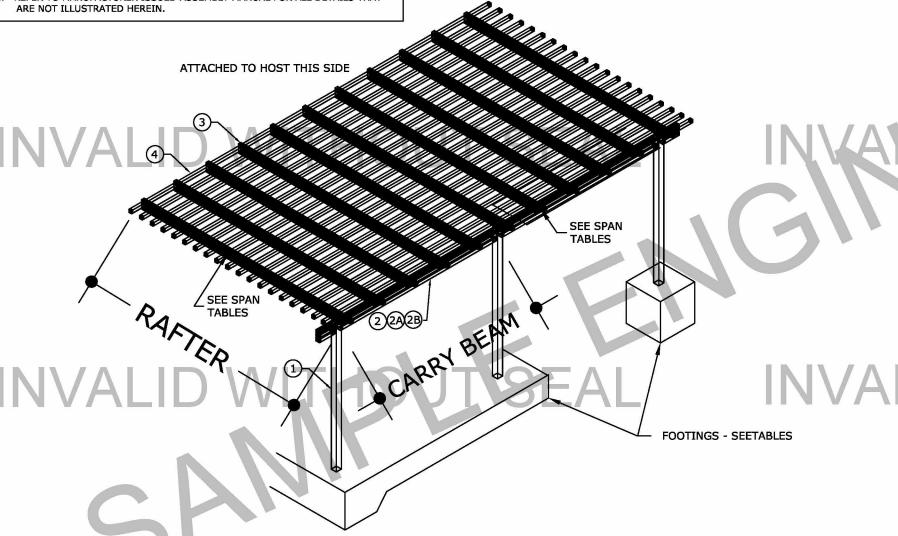
# NATUREWOOD LATTICE

ALUMINUM LATTICE OPEN PERGOLA SYSTEM MASTER PLAN SHEET (HOST ATTACHED)

### SYSTEM NOTES:

LATTICE SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATION FABRICATED BY ELITE ALUMINUM, INC.

1. REFER TO MANUFACTURER ISSUED ASSEMBLY MANUAL FOR ALL DETAILS THAT ARE NOT ILLUSTRATED HEREIN.



HOST ATTACHED LATTICE SCALE: N.T.S

FOR ENGINEER-CERTIFIED ORIGINALS, SITE SPECIFIC ORDERING & OTHER RESOURCES

VISIT ENGINEERINGEXPRESS.COM/ELITE FOR MORE MANUFACTURER PLANS

THIS DOCUMENT IS ONLY VALID WITH **ORIGINAL ENGINEER CERTIFICATION** 



COPIES OF THIS PLAN ARE NOT PERMITTED FOR PERMIT

### **DESIGN NOTES:**

POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED BY OTHERS ON A JOB-SPECIFIC BASIS IN ACCORDANCE WITH THE STRUCTURAL REQUIREMENTS OF THE FLORIDA BUILDING CODE SEVENTH EDITION (2020), 2012/2015/2018 INTERNATIONAL BUILDING CODES, AS WELL AS CURRENT VERSIONS OF THE MN, NC, NJ, NY, OH, SC, & VA BUILDING CODES AS APPLICABLE. CODE ENFORCED COMPLIES WITH STATE OF SEAL AND IF MULTIPLE VERSIONS LISTED THEN MOST STRINGENT APPLIES.

THE SYSTEM HAS **NOT BEEN DESIGNED** TO WITHSTAND CONCENTRATED LOADS FROM HUMAN ACTIVITY.

### **GENERAL NOTES:**

- GENERAL:

  1. THIS DOCUMENT SHALL NOT BE USED OR REPRODUCED WITHOUT THE ORIGINAL SIGNATURE & RAISED SEAL OF AN ENGINEER FROM ENGINEERING EXPRESS.

  ALTERATIONS, ADDITIONS OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE OUR CERTIFICATION. PHOTOCOPIES & UNSEALED DOCUMENTS ARE NOT
- 2. 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. 3. STRUCTURE SHALL NOT BE ENCLOSED UNLESS ADDITIONAL ENGINEERING IS PROVIDED AND APPROVAL BY THE LOCAL BUILDING AUTHORITY.
- 4. THE ARCHITECT/ENGINEER OF RECORD FOR THE PROJECT HOST STRUCTURE WHICH THIS DESIGN IS USED SHALL BE RESPONSIBLE FOR THE INTEGRITY OF ALL SUPPORTING SURFACES TO THIS DESIGN WHICH SHALL BE COORDINATED BY THE PERMITTING
- 5. 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.
- 6. THE CONTRACTOR SHALL CAREFULLY CONSIDER POSSIBLE IMPOSING LOADS ON ROOF, INCLUDING BUT NOT LIMITED TO ANY CONCENTRATED LOADS WHICH MAY JUSTIFY GREATER DESIGN CRITERIA. THIS ADDITIONAL ROOF LOAD CRITERIA SHALL BE PROPERLY ANALYZED BY A LICENSED ENGINEER OR REGISTERED ARCHITECT.

- 7. ALL FASTENERS TO BE #12 SAE GRADE 2 OR STAINLESS STEEL 304 UNLESS NOTED OTHERWISE, FASTENERS SHALL BE CADMIUM-PLATED OR OTHERWISE
  CORROSION-RESISTANT MATERIAL AND SHALL COMPLY WITH "SPECIFICATIONS FOR ALUMINUM STRUCTURES" BY THE ALUMINUM ASSOCIATION, INC., & ANY APPLICABLE FEDERAL, STATE, AND/OR LOCAL CODES.
- 8. FOR ALUMINUM MEMBERS ALL ANCHORS SHALL BE SPACED WITH 2xDIAMETER END DISTANCE AND 2.5xDIAMETER MIN. SPACING TO ADJACENT ANCHORS, UNLESS NOTED
- 9. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS. MINIMUM EMBEDMENT SHALL BE AS NOTED HEREIN. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES STUCCO, FOAM, BRICK, AND OTHER WALL
- 10. ALL CONCRETE ANCHORS SHALL BE INSTALLED TO NON-CRACKED CONCRETE ONLY.

- MATERIALS

  11. WOOD HOST STRUCTURE & ALL WOOD MEMBERS SHALL BE "SOUTHERN YELLOW PINE" G=0.55 OR GREATER DENSITY.
- 12. THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
- 13. ALL ALUMINUM SHALL BE 6063-T6 ALLOY AND TEMPER UNLESS NOTED OTHERWISE. 14. STEEL SHALL BE ASTM A1011 OR A653 GRADE 50 (Fy=50 KSI, Fu=65 KSI) OR
- 15. ALL CONCRETE AND EPOXY TO REACH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 7 DAYS.

16. 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. 17. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR

AFFIRMATIONS ARE INTENDED.

DIGITAL SEAL NOTICE: IF THIS DOCUMENT IS DIGITALLY SIGNED, THIS SHEET IS PART OF A DIGITALLY SIGNED FILE. IT SHALL EMAIN IN DIGITAL FORMAT, SHAL

PRINTED DOCUMENT NOTICE:
IF THIS DOCUMENT IS PRINTED &
DOES NOTCONTAIN AN ENGINEER'S
ORIGINAL SIGNATURE & SEAL, THIS DOCUMENT IS VOID & NOT VALID FOR

ALUMINUM, INC.

ELITE,

OPYRIGHT ENGINEERING EXPRESS

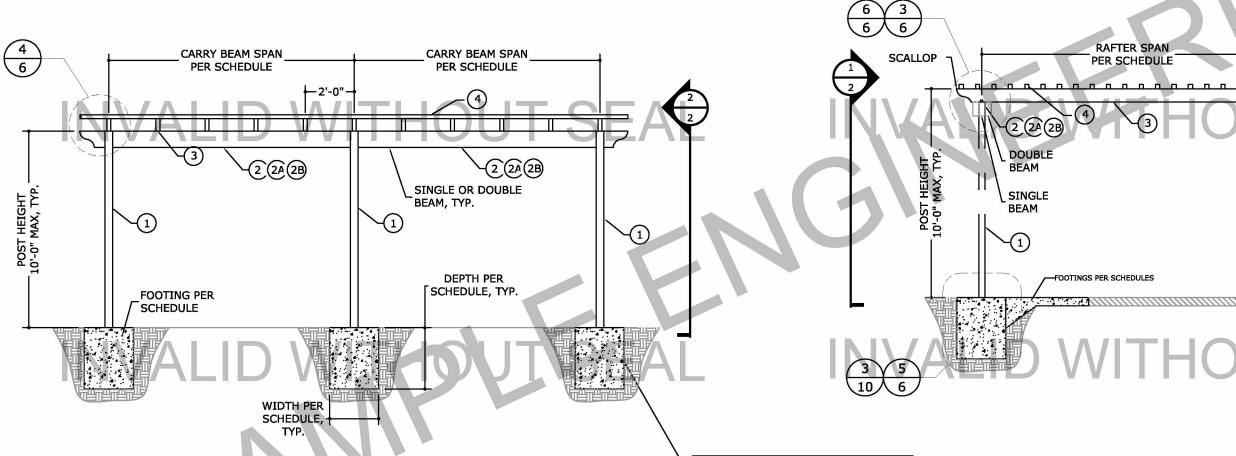
20-25067

SCALE: NTS UNLESS NOTED

### **ELEVATION VIEWS**

# INVALID WITHOUT SEAL

# INVALID WITHOUT SFA



POST TO SLAB NOTE: POSTS MAY BE ATTACHED CONCRETE SLAB WITHOUT THE USE OF FOOTERS SO LONG AS THE SLAB THICKNESS IS A MINIMUM OF 5½' SLAB SHALL BE CONTINUOUS AND SHALL COVER THE ENTIRE AREA UNDERNEATH THE CANOPY AND SHALL BE REINFORCED PER THE MINIMUM CODE REQUIREMENTS (BY OTHERS)

HOST MOUNTED LATTICE

INVALID WITHOUT SEAL

HOST MOUNTED LATTICE

# FOR ALTERNATE FOOTING SIZES

SCAN THIS QR CODE OR VISIT THIS LINK TO ORDER ENGINEER-CERTIFIED, SIGNED AND SEALED CALCULATIONS FOR ALTERNATE FOOTINGS SUBMIT WITH THIS DOCUMENT FOR PERMITTING.

> THIS DOCUMENT IS ONLY VALID WITH **ORIGINAL ENGINEER CERTIFICATION**



**EXISTING HOST** -STRUCTURE, TYP.

**DIGITAL SEAL NOTICE:** IF THIS DOCUMENT IS DIGITALLY SIGNED, THIS SHEET IS PART OF *I* DIGITALLY SIGNED FILE. IT SHALL BENTALLY STATE THE TOTAL TO SHALL BE VERIFIED BY ELECTRONIC MEAN & PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED

PRINTED DOCUMENT NOTICE: IF THIS DOCUMENT IS PRINTED & DOES NOTCONTAIN AN ENGINEER'S ORIGINAL SIGNATURE & SEAL, THIS DOCUMENT IS VOID & NOT VALID FO USE. PHOTOCOPIES ARE NOT PERMITTED FOR USE.

ELITE ALUMINUM, INC.

OPYRIGHT ENGINEERING EXPRESS

20-25067

SCALE: NTS UNLESS NOTED



# TABLE 1 NON-REINFORCED CARRY BEAM (SEE S5)

SINGLE	VAL				
PURLIN SPACING	LIVE LOAD PSF	RAFTER LENGTH, FT	CARRY BEAM CLEAR SPAN		
	20	10	9'-8''		
	20	20	7'-1''		
	20	10	7'-10''		
4" MIN	30	20	5'-10''		
O.C.	40	10	6'-10''		
	40	20	5'-0''		
	FO	10	6'-1"		
11817	50	20	4'-6"		
	20	10	19'-3"		
11 4	20	20	14'-3"		
	30	10	15'-9"		
4.1" - 8"	30	20	11'-8''		
O.C.	40	10	13'-8"		
	40	20	10'-1"		
	F0	10	12'-2"		
	50	20	9'-0''		

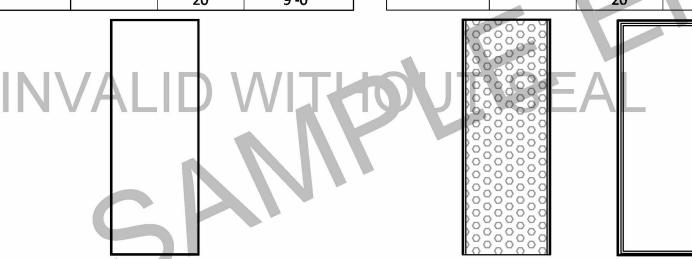
## TABLE 2 REINFORCED/DOUBLE CARRY BEAM (SEE S5)

DOUBLE OR REINF.	SE	AL			
PURLIN SPACING	LIVE LOAD PSF	RAFTER SPAN, FT	CARRY BEAM CLEAR SPAN		
	20	10	20'-0''		
4" MIN. O.C.	20	20	20'-0''		
	30	10	20'-0''		
	30	20	17'-7''		
	40	10	20'-0''		
	40	20	15'-3"		
	50	10	18'-6"		
OLIT	30	20	13'-8"		
	20	10	20'-0''		
	20	20	20'-0''		
	30	10	20'-0"		
4.1" - 8"	30	20	20'-0''		
O.C.	40	10	20'-0''		
	40	20	20'-0"		
	E0.	10	20'-0"		
	50	20	20'-0"		

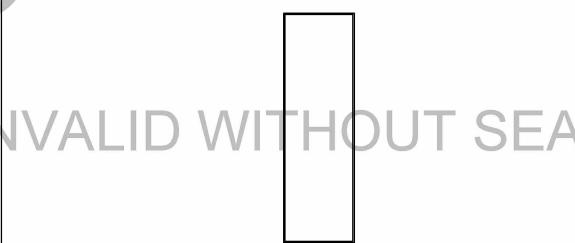
## TABLE 3 RAFTER SPAN

SINGLE RAFTER
24" O.C.

LIVE LOAD PSF	RAFTER SPACING (IN)	RAFTER CLEAR SPAN					
10	24	17'-5"					
20	24	12'-4"					
30	24	10'-1''					
40	24	8'-8''					
10	24	20'-0''					
20	24	17'-5"					
30	24	14'-3"					
40	24	12'-4''					
	PSF 10 20 30 40 10 20 30	PSF SPACING (IN)  10 24 20 24 30 24 40 24 10 24 20 24 30 24					



**EPS, STEEL, OR DOUBLE CARRY BEAM OPTIONS** 



**RAFTER** 

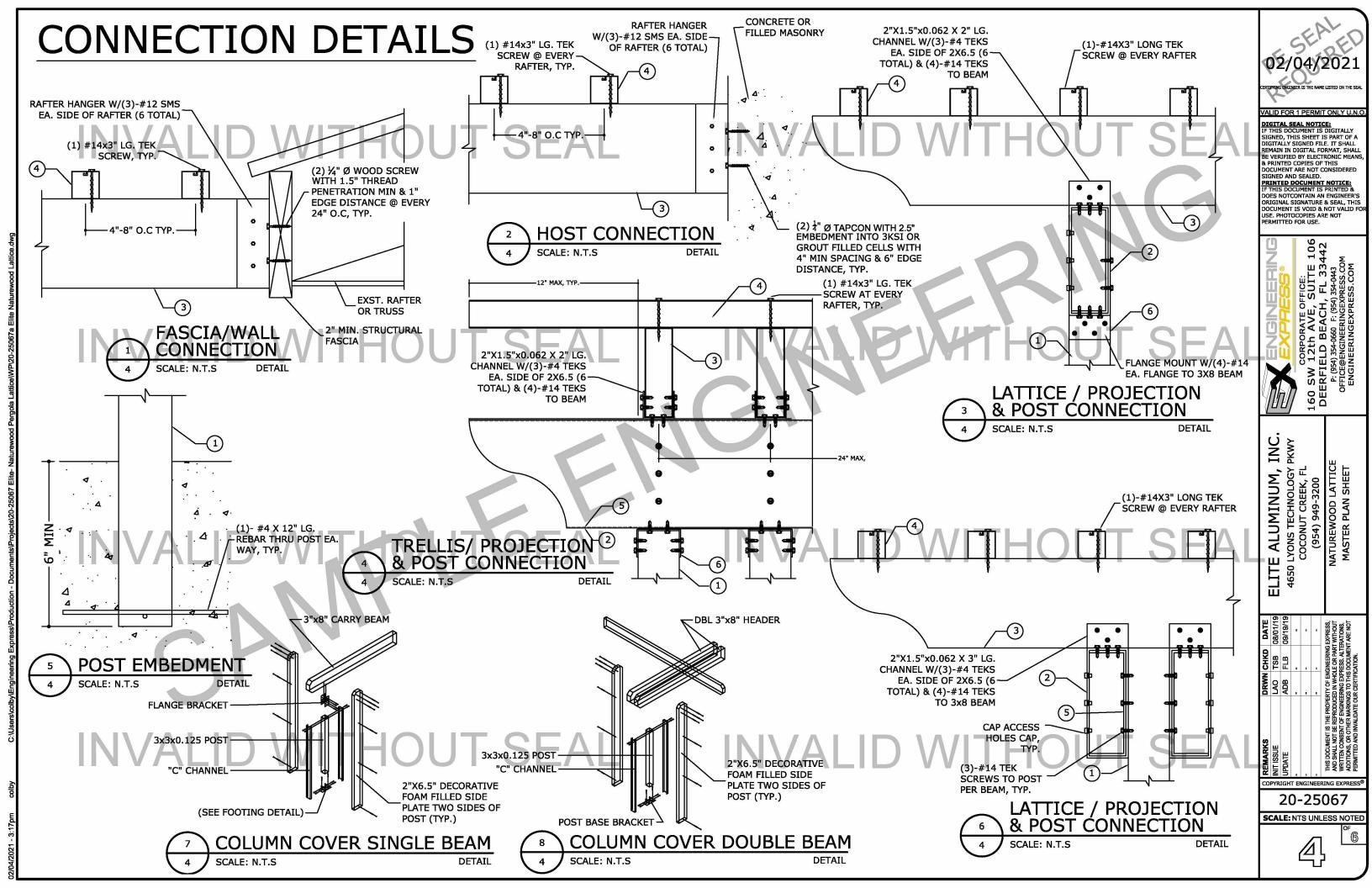
### **TYP. TABLE NOTES:**

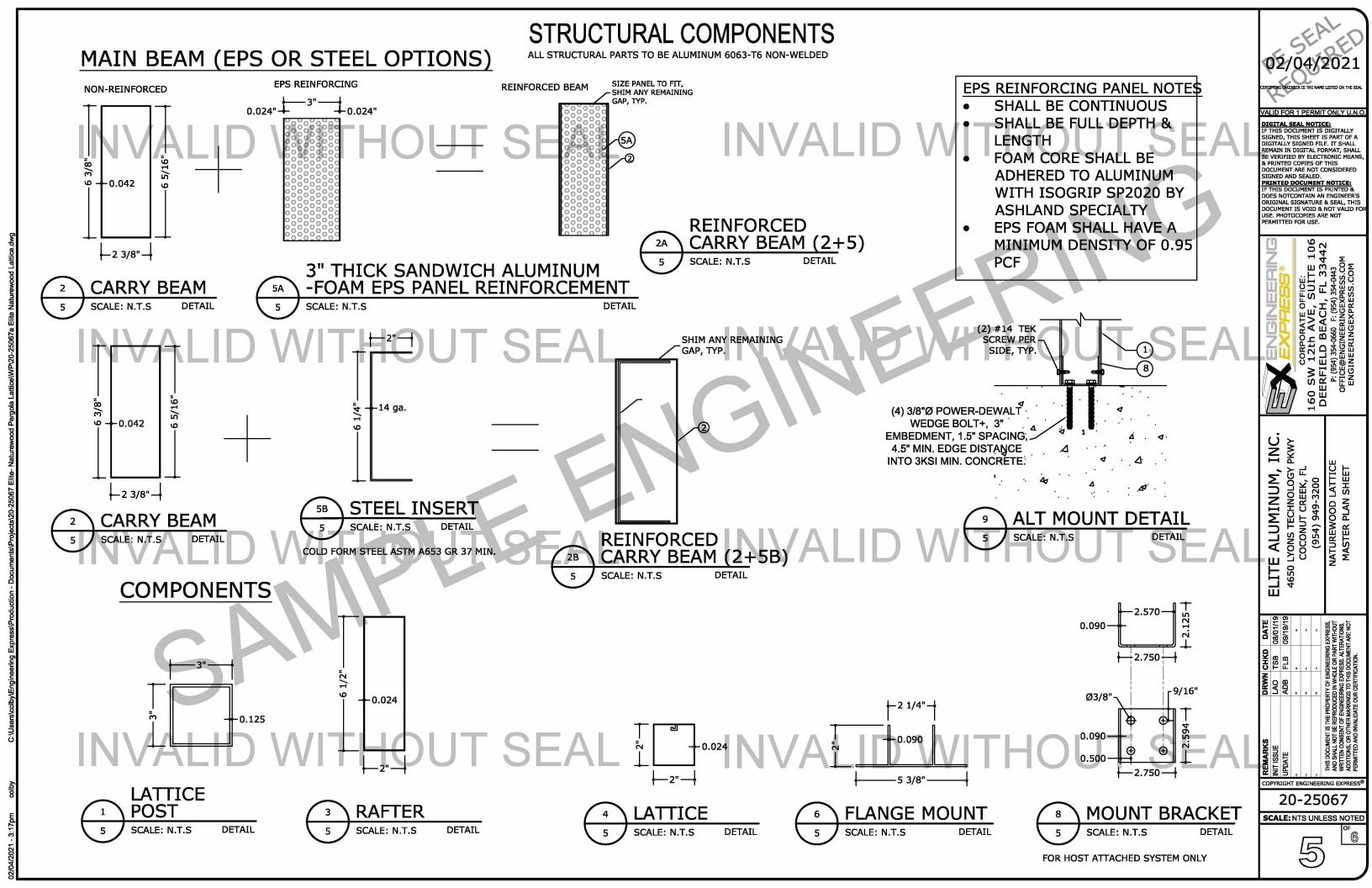
- TOTAL LOAD IS THE GOVERNING GRAVITY OR UPLIFT LOAD ON PERGOLA SURFACE AS REQUIRED BY CODE.
- LIVE LOADS CONSIDER POROSITY OF PERGOLA. FOR POROSITY <= 25%, SOLID ROOF ASSUMED.
- ADD OR SUBTRACT 2 PSF DEAD LOAD (GRAVITY OR UPLIFT) TO OBTAIN TOTAL LOAD.
- DEFLECTION LIMIT OF L/60 USED FOR DETERMINATION OF ALLOWABLE SPANS.

20-25067

SCALE: NTS UNLESS NOTED







GROUND SNOW	ISOLATED FOOTING DIMENSIONS									
(PSF) WIND PRESS		SURE (PSF) 10		15		20		25		
	DIMENSION		w	D	W	D	w	D	w	D
	A I	13.0 '	14.0 "	14.0 "	-	-	-		-	
10	$\Delta$	12.0 '	14.0 "	14.0 "	18.0 "	14.0 "	= - ( )	-)	-	-
		10.0 '	14.0 "	14.0 "	16.0 "	14.0 "	18.0 "	14.0 "	18.0 "	16.0
		8.0 '	14.0"	12.0"	16.0 "	14.0 "	16.0 "	15.0 "	18.0 "	15.0
		10.0 '	12.0"	12.0"						
		9.0 '	12.0"	12.0 "	15.0 "	14.0 "	16.0 "	14.0 "	18.0 "	14.0
20	<u>S</u>	8.0 '	12.0"	12.0 "	14.0 "	14.0 "	15.0 "	15.0 "	16.0 "	16.0
N SE	CARRY BEAM C/C SPACING DR MAX RAFTER PROJECTIO	6.0 '	12.0"	12.0"	14.0 "	12.0 "	14.0 "	14.0 "	15.0 "	14.0
	PAC	4.0 '	12.0"	12.0 "	12.0 "	12.0 "	14.0 "	12.0 "	14.0 "	12.0
	C S PR	9.0 '	12.0"	12.0 "	14.0 "	14.0 "	-	-	-	-
20	1 C/	8.0 '	12.0"	12.0"	14.0 "	14.0 "	15.0 "	14.0 "	16.0 "	15.0
30	EAN	6.0 '	12.0"	12.0 "	14.0 "	12.0"	14.0 "	14.0 "	15.0 "	15.0
	AX∃	4.0 '	12.0"	12.0"	12.0 "	12.0 "	14.0 "	12.0 "	14.0 "	12.0
	ARF	8.0 '	12.0"	12.0 "	14.0 "	14.0 "	16.0 "	12.0 "	-	-
40	7.0 '	12.0"	12.0 "	14.0 "	12.0 "	14.0 "	14.0 "	16.0 "	12.0	
	ΛĪ	6.0 '	12.0 "	12.0 "	14.0 "	12.0 "	14.0 "	14.0 "	16.0 "	12.0
	$\Delta$	4.0 '	12.0"	12.0"	12.0 "	12.0 "	12.0 "	12.0 "	14.0 "	12.0
		7.0 '	12.0"	12.0 "	14.0 "	12.0 "	14.0 "		~	-
		6.0 '	12.0 "	12.0 "	12.0 "	12.0 "	14.0 "	12.0 "	14.0 "	14.0
60		5.0 '	12.0 "	12.0 "	12.0 "	12.0 "	14.0 "	12.0 "	14.0 "	12.0
		4.0 '	12.0"	12.0 "	12.0 "	12.0 "	12.0 "	12.0 "	14.0 "	12.0

### TABLE 5 STRIP FOOTING

GROUND SNOW	STRIP FOOTING DIMENSIONS										
(PSF)	WIND PRESSURE (PSF)		10		15		20		25		
	DIMEN	SION	W	D	W	D	w	D	W	D	
\ /	$\Lambda$ I	13.0 '	12.0 "	12.0 "		-					
10		12.0 '	12.0 "	12.0 "	12.0 "	12.0 "	-EA	1	-	- \	
V		10.0	12.0 "	12.0 "	12.0"	12.0"	12.0 "	12.0 "	12.0"	12.0	
		8.0 '	12.0 "	12.0 "	12.0"	12.0 "	12.0"	12.0 "	12.0 "	12.0	
		10.0'	12.0 "	12.0"	- \	-	1	-	-	=	
	2	9.0 '	12.0 "	12.0"	12.0 "	12.0 "	12.0"	12.0 "	12.0 "	12.0 '	
20	E	8.0 '	12.0 "	12.0 "	12.0 "	12.0 "	12.0"	12.0"	12.0 "	12.0 '	
	ING JEC	6.0 '	12.0 "	12.0 "	12.0 "	12.0 "	12.0 "	12.0 "	12.0 "	12.0 '	
	PAC	4.0 '	12.0 "	12.0 "	12.0"	12.0 "	12.0 "	12.0 "	12.0 "	12.0 '	
	CSI	9.0 '	12.0 "	12.0"	12.0"	12.0 "		-	-	<u> </u>	
20	CARRY BEAM C/C SPACING (FOR MAXIMUM RAFTER PROJECTION)	8.0 '	12.0 "	12.0 "	12.0"	12.0 "	12.0 "	12.0 "	12.0 "	12.0 '	
30		A E	6.0 '	12.0 "	12.0 "	12.0"	12.0 "	12.0"	12.0"	12.0 "	12.0 '
		4.0 '	12.0 "	12.0 "	12.0 "	12.0 "		12.0 "	12.0 "	12.0 '	
	CARF R MAXI	8.0 '	12.0 "	12.0 "	12.0"	12.0 "		12.0 "	-	-	
		7.0'	12.0 "	12.0 "	12.0"	12.0 "	12.0 "	12.0 "	12.0 "	12.0 '	
40	6.0 '	12.0 "	12.0"	12.0 "	12.0 ''		12.0 "	12.0 "	12.0		
	4.0 '	12.0 "	12.0 "	12.0"		12.0"	12.0 "		12.0		
	60	7.0 '	12.0 "	12.0 "	12.0"	12.0 "	12.0 "	12.0 "	-	-	
		6.0 '	12.0 "	12.0 "	12.0"	12.0 "		12.0 "	12.0 "	12.0	
60		5.0 '	12.0 "	12.0 "	12.0"	12.0 "	12.0 "	12.0 "	12.0 "	12.0	
		4.0 '	12.0 "	12.0 "	12.0"	12.0 "	12.0"	12.0 "	12.0 "	12.0	

### **ISOLATED FOOTING NOTES**

1. W= WIDTH, D= DEPTH, SQUARE FOOTING (UNLESS OTHERWISE NOTED HEREIN).

- 2. CONCRETE TO BE 3,000 PSI MIN.
- 3. MINIMUM SOIL BEARING CAPACITY 2,000 PSI.
- 4. SEE DETAIL 5/4 FOR MORE INFORMATION.
- 5. ADHERE TO ALL FROST LINE **EMBEDMENTS TO PREVENT HEAVE**

**STRIP FOOTING NOTES** 

W= WIDTH, D= DEPTH (UNLESS OTHERWISE NOTED HEREIN).

2. CONCRETE TO BE 3,000 PSI MIN

MINIMUM SOIL BEARING CAPACITY 2,000 PSI.

- 4. SLAB TO BE 4" MIN. THICK.
- 5. SLAB LENGTH TO BE SAME AS LATTICE RAFTER.
- 6. COLUMN TO BE 12" MIN. EMBED.
- 7. USE (2) #5 BARS CONTINUOUS, 6 X 6 1.4/1.4 WWF SLAB REINF, DOUBLE 30" BACK IN 4" SLAB

POST TO SLAB NOTE: POSTS MAY BE ATTACHED CONCRETE SLAB WITHOUT THE USE OF FOOTERS SO LONG AS THE SLAB THICKNESS IS A MINIMUM OF 51/21 SLAB SHALL BE CONTINUOUS AND SHALL COVER THE ENTIRE AREA UNDERNEATH THE CANOPY AND SHALL BE REINFORCED PER THE MINIMUM CODE REQUIREMENTS (BY OTHERS)

ELITE ALUMINUM, INC. 4650 LYONS TECHNOLOGY PKWY

20-25067 SCALE: NTS UNLESS NOTED



NOTE: FOOTING INFORMATION FOR GENERAL SIZING ONLY. **CONTRACTOR IS TO ADHERE TO ALL CODE** MINIMUM REQUIREMENTS FOR PROPER **INSTALLATION OF FOOTINGS WHICH IS** BEYOND THE SCOPE OF THESE SIZING TABLES.