KE DURASOL GENNIUS PERGOLA SYSTEMS

GENNIUS PERGOLA SYSTEM MASTER PLAN A2C MODEL

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KE DURASOL GENNIUS PERGOLA SYSTEM WITH RETRACTABLE FABRIC SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATION.

- PERGOLA FABRIC SHALL BE RETRACTED PRIOR TO HIGH WIND EVENTS (WIND 40MPH+) AS OUTLINED HEREIN.
- FABRIC TO BE RETRATED DURING ALL TIMES OF SNOW, ICE, AND FREEZING RAIN
- PERGOLA FABRIC AND MECHANICAL CERTIFICATION IS BEYOND THE SCOPE OF THIS CERTIFICATION.
- THE AWNING OWNER SHALL BE NOTIFIED OF THESE CONDITIONS BY THE PERMIT HOLDER. USE OF THIS PLAN BY THE CONTRACTOR CONSENTS TO WRITTEN NOTIFICATION TO THE END USER THE TERMS LISTED HEREIN.
- REFER TO AFOREMENTIONED MANUFACTURER ISSUED ASSEMBLY MANUAL FOR ALL CONNECTION DETAILS THAT



DESIGN NOTES:

ALLOWABLE DESIGN PRESSURES FOR CANOPY ARE TO BE BE AS LISTED IN DESIGN SCHEDULES HEREIN. FOR ALL INSTALLATION CONDITIONS, FABRIC ROOF IS TO BE RETRACTED WHEN WIND SPEEDS, MPH. PER THIS DOCUMENT, SITE SPECIFIC CONDITIONS ARE NOT TO EXCEED 130 MPH WIND SPEEDS, EXPOSURE C (WITHIN 1000 FT OF COASTLINE), OR RISK CATEGORY 1. IF THESE CONDITIONS ARE EXCEEDED, ADDITIONAL ENGINEERING MAY BE REQUIRED

THE CONTRACTOR SHALL CONTACT THE AUTHORITY HAVING JURISDICTION TO ENSURE APPROPRIATE CRITERIA TO BE USED BEFORE CONSTRUCTION BEGINS. DESIGN DEAD LOAD = 2 PSF

DESIGN LIVE LOAD = 0 PSF (WIND LOADING ONLY CONSIDERED - SEE DESIGN SCHEDULES)

GENERAL NOTES:

- 1. THIS SYSTEM HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE 7TH EDITION (2020). ALSO APPLICABLE FOR THE FBC 6TH EDITION (2017), IBC/IRC (2015 & 2018), 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 ARE LISTED THEN MOST STRINGENT APPLIES. DESIGN SHALL UTILIZE ASD DESIGN METHOD USING ASCE 7-16 OR ASCE 7-10 CODES FOR SITE SPECIFIC APPLICATIONS AS APPLICABLE. DESIGN CRITERIA OR SPANS BEYOND STATED HEREIN MAY REQUIRE ADDITIONAL SITE SPECIFIC SEALED ENGINEERING.
- 2. PRODUCT APPROVED FOR USE IN SEISMIC DESIGN CATEGORY A PER REQUIREMENTS OF ASCE 7-16 AND CALIFORNIA BUILDING CODE 2019. FOR SEISMIC DESIGN CATEGORY B-F AND ANY CONCRETE CONNECTIONS, ADDITIONAL REVIEW BY THIRD-PARTY ENGINEERS IS REQUIRED FOR THE VALIDITY OF THE DESIGN.
- 3. NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM. WIND LOAD DURATION FACTOR Cd=1.6 HAS BEEN USED FOR WOOD ANCHOR DESIGN.
- 4. THE ARCHITECT/ENGINEER OF RECORD FOR THE PROJECT SUPERSTRUCTURE WITH 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 CONTRACTOR.
- 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. FABRIC AND FABRIC ATTACHMENT/SLIDING SYSTEM AND OPERABILITY ARE OUTSIDE THE SCOPE OF THIS
- 8. ALL FASTENERS TO BE #14 OR GREATER SAE GRADE 5 UNLESS NOTED OTHERWISE. FASTENERS SHALL BE CADMIUM-PLATED OR OTHERWISE CORROSION-RESISTANT MATERIAL AND SHALL COMPLY WITH "SPECIFICATIONS FOR ALUMINUM STRUCTURES" SECTION 5.2.1 BY THE ALUMINUM ASSOCIATION, INC., & ANY APPLICABLE FEDERAL, STATE,
- 9. FOR ALUMINUM MEMBERS ALL ANCHORS SHALL BE SPACED WITH 2xDIAMETER END DISTANCE AND 2.5xDIAMETER MIN. SPACING TO ADJACENT ANCHORS, UNLESS NOTED OTHERWISE.
- 10. 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 FINISHES.
- 11. ALL CONCRETE ANCHORS SHALL BE INSTALLED TO NON-CRACKED CONCRETE ONLY.
- 12. WOOD HOST STRUCTURE & ALL WOOD MEMBERS SHALL BE "SOUTHERN YELLOW PINE" G=0.55 OR GREATER DENSITY.
- 13. THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS, I.E. ALUMINUM PER THE CODES AND STANDARDS STATED HEREIN
- 14. ALL ALUMINUM SHALL BE 6061-T6 ALLOY AND TEMPER UNLESS NOTED OTHERWISE.
- 15. ALL CONCRETE AND EPOXY TO REACH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 7 DAYS.
- 16. THIS SYSTEM IS ONLY APPROVED FOR FROST PROTECTION WHEN THE TOTAL AREA OF THE STRUCTURE DES NOT EXCEED 600 SQUARE FEET WITH AN EAVE HEIGHT OF 10 FEET OR LESS, PER IBC 403. FOR USE WITH ANY OTHER CONFIGURATION REQUIRING FROST CERTIFICATION, THIS ENGINEER SHALL BE CONTACTED FOR FURTHER DESIGN CRITERIA. THIS SYSTEM HAS NOT BEEN DESIGNED FOR USE WITH FROZEN SOILS OR FILL. ANY FILL PLACED FOR FOUNDATION SUPPORT WITH THIS DESIGN SHALL BE PROTECTED AGAINST FREEZING TEMPERATURES BY OTHERS. PROPER PRECAUTIONS SHALL ALSO BE TAKEN TO PREVENT FROST PENETRATION BENEATH THE FOUNDATIONS FOLLOWING CONSTRUCTION WHICH IS OUTSIDE THE SCOPE OF THIS DOCUMENT CERTIFICATION.
- 17. 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.
- 18. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED. 19. ALTERATIONS, ADDITIONS, HIGHLIGHTING, OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE THIS CERTIFICATION.

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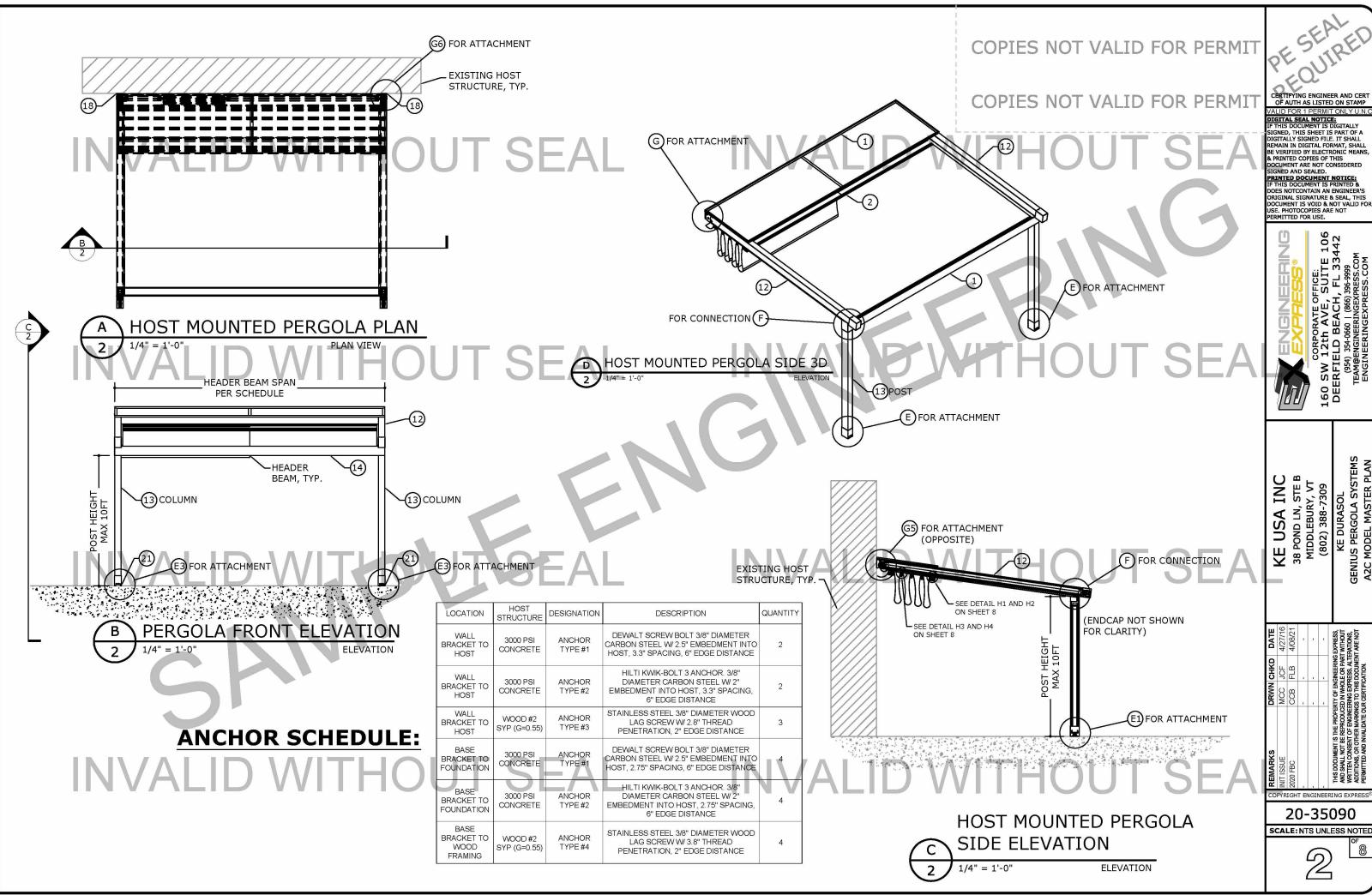
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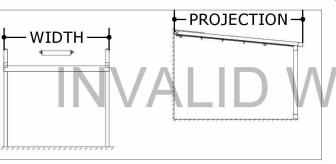
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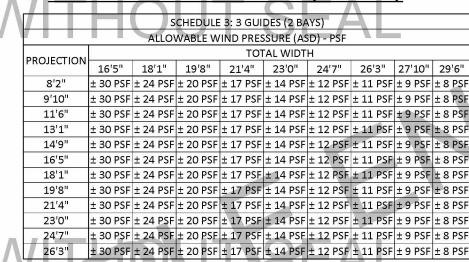
HOST MOUNTED CANOPY - ALLOWABLE WIND PRESSURE SCHEDULES

SCHEDULE 2: 2 GUIDES (1 BAY)



SCHEDULE 2: 2 GUIDES (1 BAY)								
ALLOWABLE WIND PRESSURE (ASD) - PSF								
PROJECTION	TOTAL WIDTH							
	8'2"	9'10"	11'6"	13'1"	14'9"	16'5"		
8'2"	± 30 PSF	± 20 PSF	± 14 PSF	± 11 PSF	± 8 PSF	± 6 PSF		
9'10"	± 30 PSF	± 20 PSF	± 14 PSF	± 11 PSF	±8 PSF	± 6 PSF		
11'6"	± 30 PSF	± 20 PSF	± 14 PSF	± 11 PSF	±8 PSF	± 6 PSF		
13'1"	± 30 PSF	± 20 PSF	± 14 PSF	± 11 PSF	±8 PSF	± 6 PSF		
14'9"	± 30 PSF	± 20 PSF	± 14 PSF	± 11 PSF	±8 PSF	± 6 PSF		
16'5"	± 30 PSF	± 20 PSF	± 14 PSF	± 11 PSF	±8 PSF	± 6 PSF		
18'1"	± 30 PSF	± 20 PSF	± 14 PSF	± 11 PSF	±8 PSF	± 6 PSF		
19'8"	± 30 PSF	± 20 PSF	± 14 PSF	± 11 PSF	±8 PSF	± 6 PSF		
21'4"	± 30 PSF	± 20 PSF	± 14 PSF	± 11 PSF	±8 PSF	± 6 PSF		
23'0"	± 30 PSF	± 20 PSF	± 14 PSF	± 11 PSF	±8 PSF	± 6 PSF		
23'10"	± 30 PSF	± 20 PSF	± 14 PSF	± 11 PSF	±8 PSF	± 6 PSF		
24'7"	± 30 PSF	± 20 PSF	± 14 PSF	± 11 PSF	±8 PSF	± 6 PSF		
26'3"	± 30 PSF	± 20 PSF	± 14 PSF	± 11 PSF	±8 PSF	± 6 PSF		

SCHEDULE 3: 3 GUIDES (2 BAYS)



WIDTH PROJECTION .

-PROJECTION

SCHEDULE 4: 4 GUIDES (3 BAYS)

SCHEDULE 4: 4 GUIDES (3 BAYS)									
ALLOWABLE WIND PRESSURE (ASD) - PSF									
PROJECTION	TOTAL WIDTH								
	31'2"	32'9"	34'5"	36'1"	37'8"	39'4"	41'0"	42'8"	
8'2"	± 18 PSF	± 16 PSF	± 14 PSF	± 13 PSF	± 12 PSF	± 11 PSF	± 10 PSF	±9 PSF	
9'10"	± 18 PSF	± 16 PSF	± 14 PSF	± 13 PSF	± 12 PSF	± 11 PSF	± 10 PSF	±9 PSF	
11'6"	± 18 PSF	± 16 PSF	± 14 PSF	± 13 PSF	± 12 PSF	± 11 PSF	± 10 PSF	±9 PSF	
13'1"	± 18 PSF	± 16 PSF	± 14 PSF	± 13 PSF	± 12 PSF	± 11 PSF	± 10 PSF	± 9 PSF	
14'9"	± 18 PSF	± 16 PSF	± 14 PSF	± 13 PSF	± 12 PSF	± 11 PSF	± 10 PSF	± 9 PSF	
16'5"	± 18 PSF	± 16 PSF	± 14 PSF	± 13 PSF	± 12 PSF	± 11 PSF	± 10 PSF	±9 PSF	
18'1"	± 18 PSF	± 16 PSF	± 14 PSF	± 13 PSF	± 12 PSF	± 11 PSF	± 10 PSF	± 9 PSF	
19'8"	± 18 PSF	± 16 PSF	± 14 PSF	± 13 PSF	± 12 PSF	± 11 PSF	± 10 PSF	±9 PSF	
21'4"	± 18 PSF	± 16 PSF	± 14 PSF	± 13 PSF	± 12 PSF	± 11 PSF	± 10 PSF	±9 PSF	
23'0"	± 18 PSF	± 16 PSF	± 14 PSF	± 13 PSF	± 12 PSF	± 11 PSF	± 10 PSF	±9 PSF	
24'7"	± 18 PSF	± 16 PSF	± 14 PSF	± 13 PSF	± 12 PSF	± 11 PSF	± 10 PSF	±9 PSF	
26'3"	± 18 PSF	± 16 PSF	± 14 PSF	± 13 PSF	± 12 PSF	± 11 PSF	± 10 PSF	± 9 PSF	

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SCHEDULE 5: WIND SPEED TO DESIGN PRESSURE FOR HOST ATTACHED CANOPY (ASCE 7-16 CH 30.11)

ULT WIND SPEED	ASCE EXPOSURE	1FT OR	ATTACHED MORE V EAVE	CANOPY ATTACHED 1FT OR LESS BELOW EAVE				
	CATEGORY	ASD LOAD COMBINATION PRESSURE (+ / -)						
40 MPH	В	6.7 psf	-1.0 psf	6.7 psf	-1.0 psf			
	С	6.7 psf	-1.0 psf	6.7 psf	-1.2 psf			
50 MPH	В	7.1 psf	-1.0 psf	7.1 psf	-1.8 psf			
	С	7.1 psf	-1.0 psf	7.1 psf	-1.8 psf			
60 MPH	В	7.6 psf	-1.2 psf	7.6 psf	-3.0 psf			
	С	7.6 psf	-1.2 psf	7.6 psf	-3.0 psf			
70 MPH	В	8.0 psf	-1.8 psf	8.0 psf	-4.2 psf			
	C	8.5 psf	-2.4 psf	8.5 psf	-4.8 psf			
80 MPH	В	8.9 psf	-3.0 psf	8.9 psf	-5.4 psf			
	\	8.9 psf	-3.0 psf	8.9 psf	-6.6 psf			
90 MPH	В	9.4 psf	-3.6 psf	9.4 psf	-7.2 psf			
	С	9.8 psf	-4.2 psf	9.8 psf	-8.4 psf			
100 MPH	В	10.3 psf	-4.8 psf	10.3 psf	-9.0 psf			
	C	10.7 psf	-5.4 psf	10.7 psf	-10.2 psf			
110 MPH	В	11.2 psf	-6.0 psf	11.2 psf	-11.4 psf			
	С	12.1 psf	-7.2 psf	12.1 psf	-12.6 psf			
120 MPH	В	12.5 psf	-7.8 psf	12.5 psf	-13.8 psf			
	С	13.0 psf	-8.4 psf	13.0 psf	-15.6 psf			
130 MPH	В	13.4 psf	-9.0 psf	13.4 psf	-16.2 psf			
	С	14.3 psf	-10.2 psf	14.3 psf	-18.0 psf			

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WIND SPEED TO WIND PRESSURE
CALCULATIONS FOR PERMIT
SE OUR ONLINE USE OUR ONLINE CALCULATORS

WITH BETTER ANSWERS **HELPFUL EXPLANATIONS** & MORE WIND RESOURCES

OR SCAN THIS CODE

SCHEDULE 2-5 NOTES:

- 1. LOADING VALUES SHOWN ARE ASD LOAD COMBINATIONS WHICH REPRESENT ABSOLUTE MINIMUM DESIGN REQUIRED FOR THIS STRUCTURE. NOTE THAT DURING ANY WIND, RAIN OR WEATHER EVENT, PERGOLA FABRIC IS TO BE
- 2. LOAD COMBINATIONS CONSIDER ONLY A SELF IMPOSED DEAD LOAD OF +2 PSF & NO LIVE LOADING. NO 10PSF MINIMUM HAS BEEN ASSUMED HEREIN.
- WIND PRESSURES ARE TO BE DETERMINED ON A SITE SPECIFIC BASIS PER ASCE 7 ROOF OVER OPEN STRUCTURE WITH OBSTRUCTED WIND FLOW DESIGN CRITERIA PER THE CODES STATED HEREIN WIND LOADS SHOWN INCLUDE REDUCTION TO
- CONSIDER POROSITY OF STRUCTURE. NO FURTHER REDUCTIONS ARE TO BE TAKING FOR POROSITY CONSIDERATION. DESIGN PROFESSIONAL SHALL CONSIDER ALL
- FORCES, INCLUDING SNOW LOADS PER GOVERNING BUILDING CODES. DEFLECTION LIMIT FOR HOST-ATTACHED PERGOLA
- TAKEN AS L/60 FOR THESE CALCULATIONS. THE ASCE 7-16 MINIMUM WIND PRESSURE
- LOADING OF 10 PSF HAS NOT BEEN APPLIED HEREIN. FOR INSTALLATIONS RATED TO LESS THAN 5 PSF, FABRC IS TO REMAIN RETRACTED AT ALL TIMES WHEN NOT IN USE. VERIFY ANY LIMITATION ACCEPTANCE WITH LOCAL BUILDING OFFICIAL.
- IT SHALL BE THE USER'S RESPONSIBILITY TO FULLY RETRACT THE FABRIC IN THE EVENT OF A WIND STORM (FOR ALL INSTALLATION CONDTIONS).
- SCHEDULE 5: WIND SPEED & EXPOSURE TO WIND PRESSURE MAY BE USED DIRECTLY WITH THE INCLUDED DESIGN SCHEDULES, BUT ASSUMES NO ADDITIOAL LOADING IS APPLIED (INCLUDING ADDITIONAL DEAD, LIVE, SNOW, RAIN, OR SEISMIC LOADS). ADDITIONAL SITE-SPECIFIC DESIGN PRESSURE CALCULAITONS MAY BE REQUIRED PER THE AUTHORITY HAVING JURISDICTION.
- FOR INSTALLATION CONDITIONS EXCEEDING THE ALLOWABLE PRESSURES LISTED HEREIN. ADDITIONAL ENGINEERING MAY BE REQUIRED.

(3) #5 BARS EACH WAY, TOP AND воттом REBAR NOT SHOWN **VERT SECTION** FOR CLARITY **PLAN VIEW**

TYPICAL FOOTER

FOOTER NOTES:

- PROVIDES THE REQUIRED FOOTER REINFORCEMENT FOR THE RESPECTIVE FOOTER SIZE.
- REQUIRED REINFORCEMENT IS BASED ON 30" DEEP
- ALL REINFORCEMENT SHALL HAVE A MINIMUM CLEAR
- INTERMEDIATE GRADE NEW BILLET STEEL CONFORMING TO CURRENT REQUIREMENTS OF ASTM A615, GRADE 60 (U.N.O.), FREE FROM OIL, LOOSE SCALE AND LOOSE RUST; AND BENT, LAPPED, PLACED, SUPPORTED AND FASTENED ACCORDING TO THE "ACI DETAILING MANUAL" AND ACI 318. ALL STEEL SHALL BE SECURELY HELD IN PLACE DURING POURING OF CONCRETE, IF REQUIRED, ADDITIONAL BARS SHALL BE PROVIDED BY THE GENERAL CONTRACTOR TO FURNISH SUPPORT FOR ALL BARS ADHERE TO ALL JURISDICTIONS THAT REQUIRE FOOTINGS
- PLACED BELOW THE FROSTLINE. IN CASES THAT APPLY, THE BOTTOM 6" OF THICKENED EDGE MUST BE BELOW THE FROSTLINE OR DESIGNED PER ASCE 7-32.

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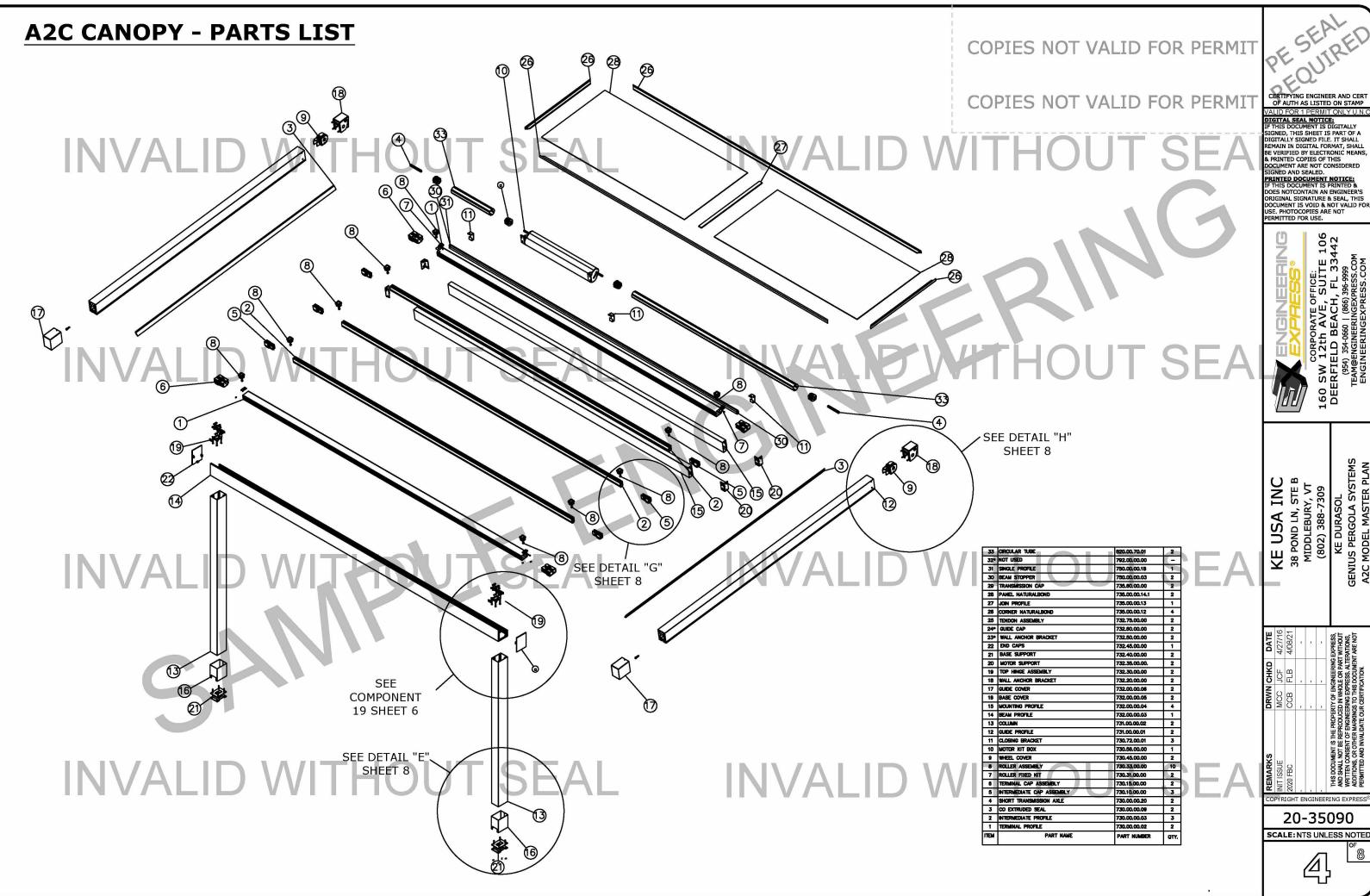
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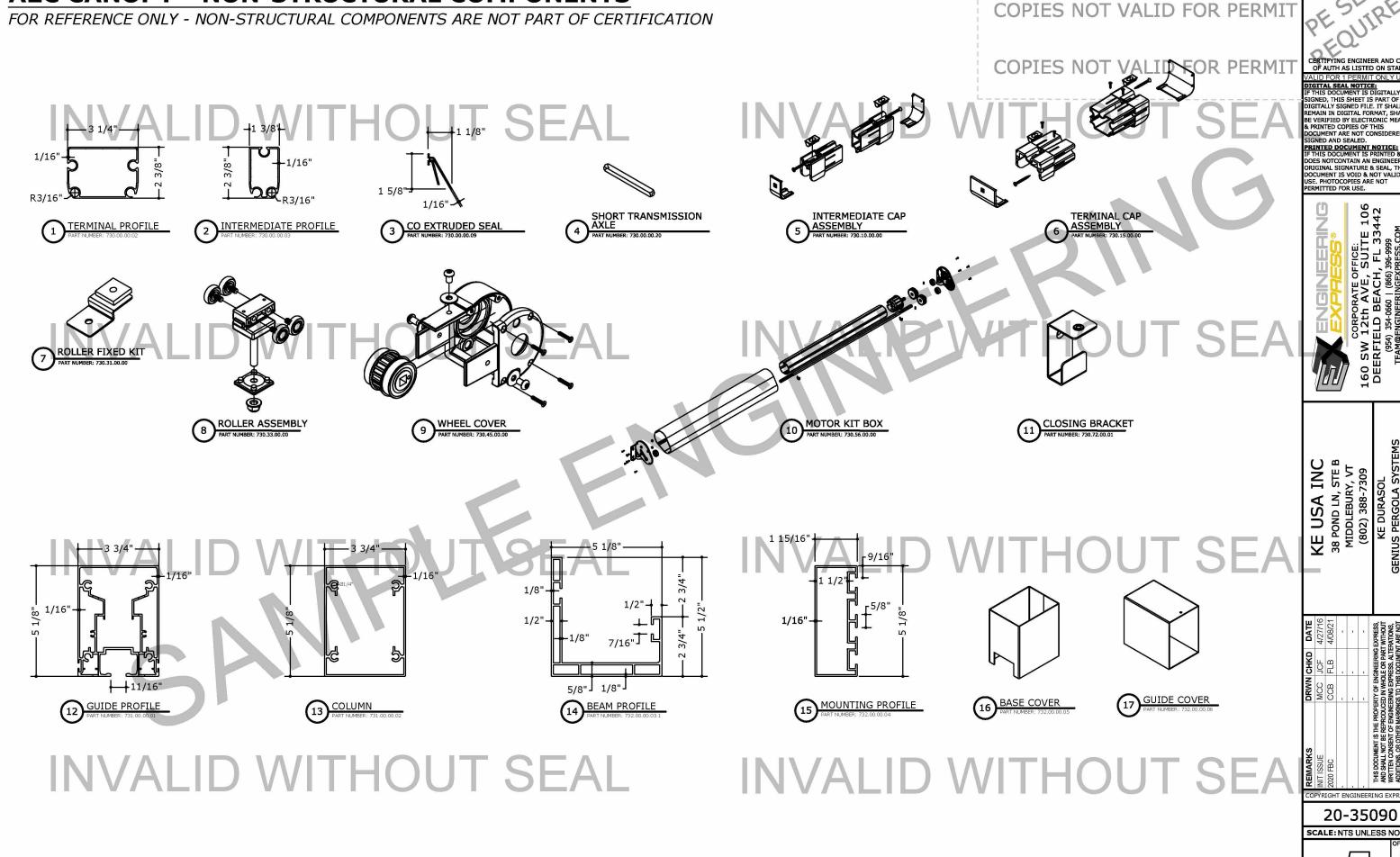




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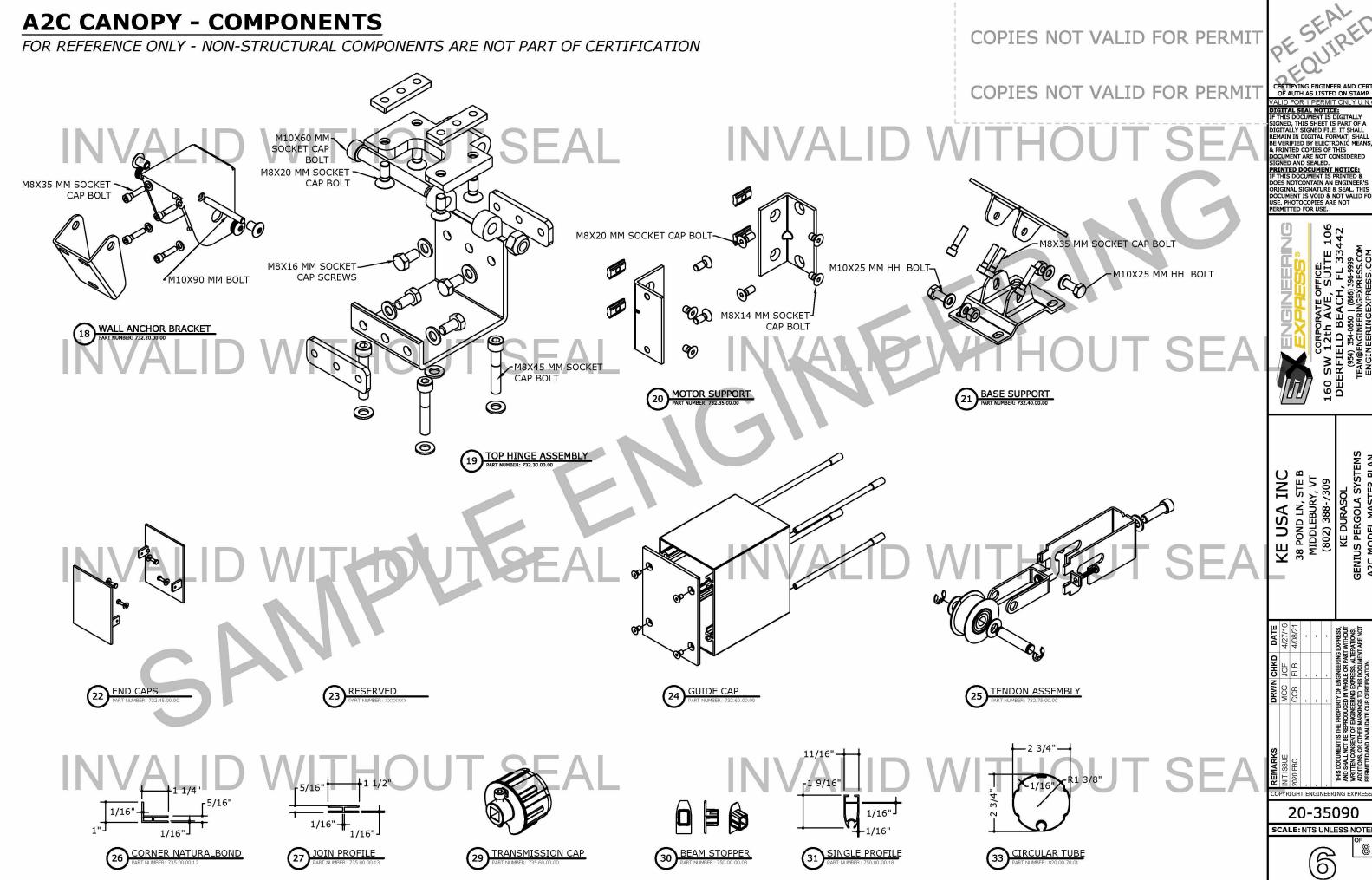




A2C CANOPY - NON-STRUCTURAL COMPONENTS

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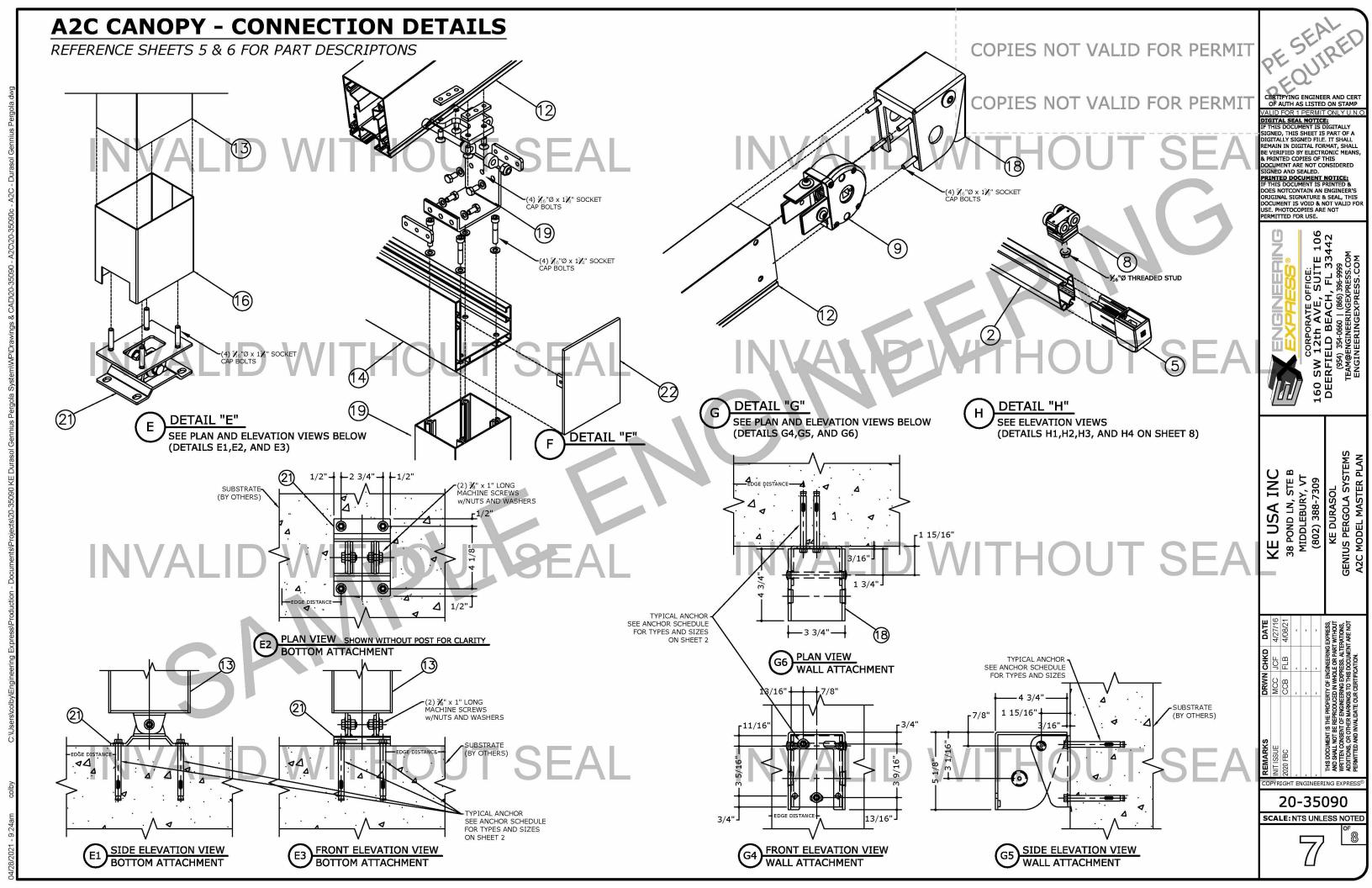
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A2C CANOPY - ROLLER CONNECTION

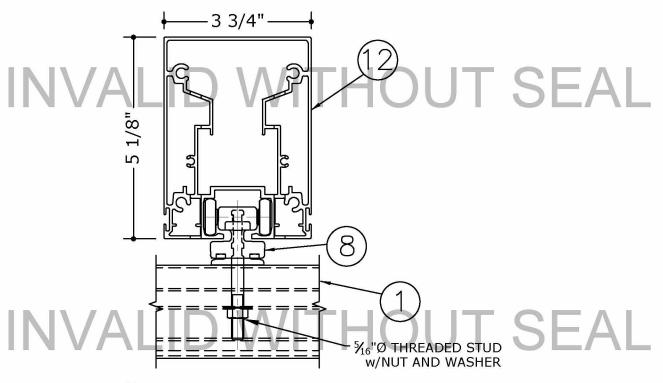
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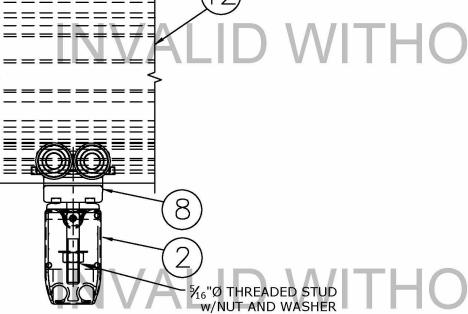
ROLLER FRONT VIEW CONNECTION AT TERMINAL PROFILE

-3 3/4"-- 5/6"Ø THREADED STUD W/NUT AND WASHER

> **ROLLER FRONT VIEW** CONNECTION AT INTERMEDIATE PROFILE

 $\frac{1}{2}\%$ THREADED STUD w/NUT AND WASHER **ROLLER SIDE VIEW** CONNECTION AT TERMINAL PROFILE

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ROLLER SIDE VIEW CONNECTION AT INTERMEDIATE PROFILE



