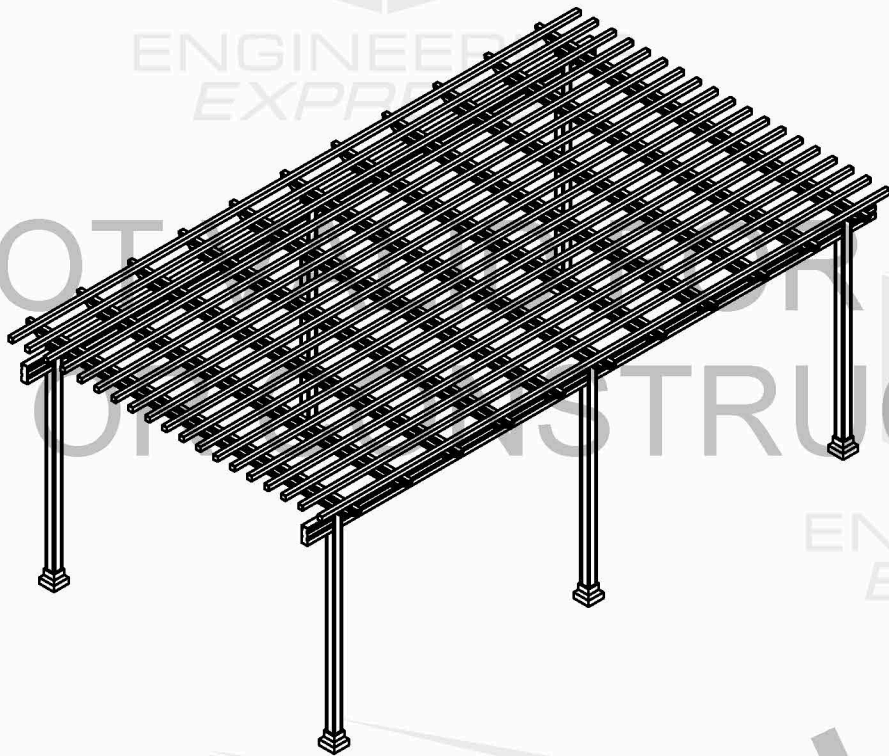


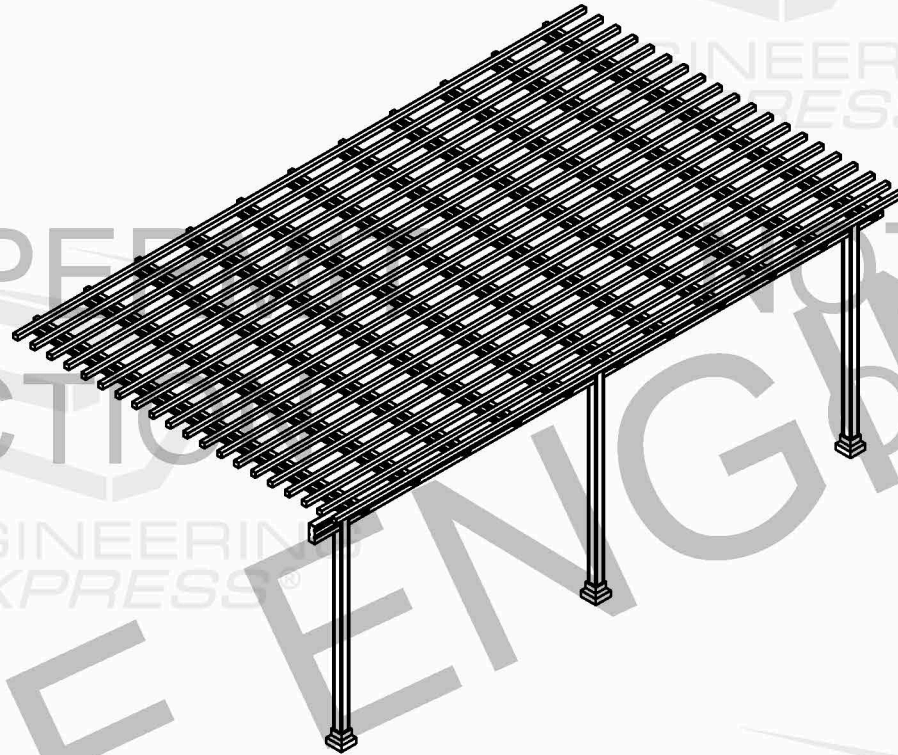
RENAISSANCE ARIA STYLE, TRELLIS ROOF PATIO COVER
FREESTANDING OR HOST ATTACHED
MASTER PERFORMANCE EVALUATION



FREESTANDING, ARIA
PERGOLA ISOMETRIC VIEW

1
1

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HOST ATTACHED, ARIA
PERGOLA ISOMETRIC VIEW

2
1

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SCOPE OF WORK:

GENERIC PERFORMANCE EVALUATION OF THE ARIA STYLE, TRELLIS ROOF PERGOLA OR PATIO COVER (FREESTANDING OR HOST ATTACHED AT GRADE) AS DETAILED HEREIN

EXCLUSIONS:

THE DESIGN OF ANY EXISTING HOST STRUCTURE, MECHANICAL ELEMENTS, EGRESS, WATERPROOFING ELECTRICAL, WIRING, FAN BEAMS, FANS, OR ANY ACCESSORY ATTACHMENTS ARE NOT INCLUDED WITH THIS DESIGN OR CERTIFICATION U.N.O.

PROJECT INFORMATION:

PERGOLA STYLE: ARIA
ROOF TYPE: TRELLIS ROOF
HARDWARE TYPE: SD / HD / WD / WD WITH INSERT
STRUCTURE SUPPORT: FREESTANDING / HOST ATTACHED
BASE CONNECTION: WELDED BASEPLATE / BOLTED BASEPLATE / EMBEDDED POST TO CONCRETE SLAB (WITH THICKENED EDGE) / ISOLATED FOOTING

DESIGN CRITERIA:

INTERNATIONAL BUILDING CODE (2018)
CURRENT, LOCAL STATE BUILDING CODE AS DETAILED IN GENERAL NOTES
ASCE 7-16 LOAD COMBINATIONS

- DEAD LOADING
1.1. ROOF DEAD LOAD..... 5 PSF
- LIVE LOADING
2.1. ROOF LIVE LOAD..... 20 PSF
- WIND LOADING INPUTS
3.1. METHODOLOGY..... OPEN STRUCTURE
3.2. ULTIMATE WIND SPEED..... UP TO 160 MPH
(ASD = SQRT(0.6)*Vult)
3.3. WIND EXPOSURE FACTOR..... B-C
3.4. WIND RISK CATEGORY..... II
3.5. DIRECTIONALITY/OTHER FACTORS..... Kd=0.85, G=0.85, Kz=0.85, Kzt=1.0
3.6. MEAN ROOF HEIGHT..... UP TO 10 FT
3.7. SYSTEM INSTALLATION HEIGHT..... 0 FT (AT GRADE)
- SNOW LOADING
4.1. GROUND SNOW LOAD..... UP TO 20 PSF
4.2. SNOW EXPOSURE FACTOR..... 1.0
4.3. SNOW LOAD IMPORTANCE FACTOR... 1.0
4.4. THERMAL FACTOR..... 1.2
4.5. SNOW DRIFT..... PER CODE

5. DESIGN SCHEDULES HEREIN TO UTILIZE ASD LOADING COMBINATIONS AS APPROPRIATE FOR SITE OS INSTALLATION. PRESSURES MAY BE CALCULATED USING THE DESIGN TABLES PROVIDED HEREIN OR SEPARATELY BY A CERTIFIED DESIGN PROFESSIONAL USING ASCE 7.

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ARIA SHADE TRELLIS PATIO COVER
GENERAL PERFORMANCE EVALUATION
FBC 7TH ED (2020); IBC (2018)

REMARKS	DATE	DRWN	CHKD
INIT ISSUE	5/21/19	LAO	FLB
FBC 2020	5/03/21	CCB	AEM
2022 UPDATE	11/03/22	CCB	FLB

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SCALE: NTS UNLESS NOTED

1 OF 13

GENERAL

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 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. CONTRACTOR SHALL INVESTIGATE AND CONFORM TO ALL LOCAL BUILDING CODE AMENDMENTS WHICH MAY APPLY AND GOVERN. 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. THIS DRAWING SET IS A GENERIC, NON-SITE-SPECIFIC PERFORMANCE EVALUATION. IT IS TO BE USED ALONG WITH A DESIGN PROFESSIONAL'S SITE-SPECIFIC DRAWING, EVALUATION & CERTIFICATION. THIS DRAWING SET SHALL ONLY BE FOR USE WITH A SITE SPECIFIC PLAN UNDER SEPARATE CERTIFICATION.
3. ANY 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 PATIO COVER SYSTEM. NO WARRANTY OR GUARANTEE TO THESE CONDITIONS, EITHER EXPRESSED OR IMPLIED, IS OFFERED WITH THIS CERTIFICATION.
4. THE CONTRACTOR SHALL CAREFULLY CONSIDER POSSIBLE IMPOSING LOADS ON ROOF, INCLUDING BUT NOT LIMITED TO ANY CONCENTRATED LOADS WHICH MAY JUSTIFY GREATER DESIGN CRITERIA. ALL STRUCTURAL MEMBERS AS SHOWN HAVE BEEN DESIGNED TO CARRY IN PLACE DESIGN LOADS ONLY; THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SUPPORT OF ANY ADDITIONAL LOADS AND FORCES IMPOSED DURING MANUFACTURING, TRUCKING, ERECTING, AND HANDLING.
5. THIS SYSTEM IS APPROVED FOR USE IN SEISMIC DESIGN CATEGORY A-C PER REQUIREMENTS OF ASCE 7 AND CALIFORNIA BUILDING CODE 2019. FOR SEISMIC DESIGN CATEGORY D-F AND ANY CONCRETE CONNECTIONS, ADDITIONAL REVIEW BY THIRD-PARTY ENGINEERS IS REQUIRED FOR THE VALIDITY OF THE DESIGN.
6. SPECIAL INSPECTIONS MAY BE REQUESTED OR REQUIRED AT THE DISCRETION OF THE AUTHORITY HAVING JURISDICTION.
- 6.1. IN AREAS OF SEISMIC DESIGN CATEGORY (SDC) D-F, AN INSPECTOR SHALL EXAMINE THE DESIGNATED SEISMIC SYSTEM, MOUNTING, AND ANCHORAGE REQUIRING QUALIFICATION IN ACCORDANCE WITH SECTION 13.2.2 OF ASCE 7 PER IBC 1705.12.4, AS WELL AS INSPECT REINFORCEMENT AND VERIFY PLACEMENT PER IBC 1908.4

PATIO COVER DESIGN & INSTALLATION:

3. SYSTEM NOT DESIGNED TO HANDLE CONCENTRATED LOADS FROM HUMAN ACTIVITY.
4. FOAM PANEL OR ACRYLIC PANEL ROOF SYSTEM SHALL BE DETAILED PER SEPARATE, SIGNED & SEALED APPROVAL (SUBMITTED ALONGSIDE THIS SEALED DOCUMENT). INSTALLATION REQUIREMENTS AND MAXIMUM SPANS SHALL FOLLOW DETAILS & GUIDELINES DETAILED IN THIS ADDITIONAL DOCUMENTATION (BY OTHERS).
5. NO CERTIFICATION IS OFFERED FOR WATERPROOFING, SIZING, OR OPERATION OF GUTTERS.
6. SYSTEM NOT DESIGNED FOR WATERSHED OF RAINFALL FROM ADJACENT ROOFS UNLESS SPECIFICALLY SHOWN HEREIN, TYP.

STRUCTURAL MATERIALS AND CONNECTIONS

STRUCTURAL ALUMINUM & ALUMINUM WELDING:

1. ALL COMPONENTS SHALL BE STRUCTURAL ALUMINUM (U.N.O.) AND SHALL BE FABRICATED AND ERECTED ACCORDING TO THE GOVERNING BUILDING CODE AND MATERIAL STANDARDS REFERENCED ON THIS SHEET.
2. UNLESS OTHERWISE NOTED, ALL STRUCTURAL ALUMINUM SHALL BE MIN 1/8" THICK AND BE OF THE FOLLOWING ALLOY AND TEMPER:
- 2.1. BEAMS, PURLINS, COLUMNS 6005-T5
- 2.2. ALL OTHER EXTRUSIONS 6005-T5
- 2.3. FASTENERS SS 316
3. STRUCTURAL ALUMINUM SHALL BE FRAMED PLUMB AND TRUE AND ADEQUATELY BRACED DURING CONSTRUCTION.
4. ALL BEAMS SHALL HAVE A MINIMUM 1 1/2" DEPTH FULL BEARING SUPPORT UNLESS NOTED OTHERWISE.
5. 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.
6. 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.
7. FOR ALUMINUM IN CONTACT WITH CONCRETE: ACCEPTABLE PAINTS: PRIMING PAINT (ONE COAT), SUCH AS ZINC MOLYBDATE PRIMER IN ACCORDANCE WITH FEDERAL SPECIFICATION TT-P-645B ("GOOD QUALITY", NO LEAD CONTENT). ALT: HEAVY COATING OF ALKALI RESISTANT BITUMINOUS PAINT. ALT: WRAP ALUMINUM WITH A SUITABLE PLASTIC TAPE APPLIED IN SUCH A MANNER AS TO PROVIDE ADEQUATE PROTECTION AT THE OVERLAPS.
8. ALUMINUM SHALL NOT BE EMBEDDED IN CONCRETE TO WHICH CORROSIVE COMPONENTS SUCH AS CHLORIDES HAVE BEEN ADDED IF THE ALUMINUM WILL BE ELECTRICALLY CONNECTED TO STEEL. EMBEDDED ALUMINUM ELEMENTS WILL BE COVERED WITH PLASTIC TAPE OR OTHERWISE PROTECTED AS PER 2015 ADM M.7.3.
9. BOLT HOLES SHALL BE DRILLED THE SAME NOMINAL DIAMETER AS THE BOLT + 1/16".
10. ALUMINUM WELDING SHALL BE PERFORMED IN ACCORDANCE WITH WELD FILLER ALLOYS MEETING ANSI/AWS A5.10 STANDARDS TO ACHIEVE ULTIMATE DESIGN STRENGTH IN ACCORDANCE WITH THE ALUMINUM DESIGN MANUAL PART I-A, TABLE 7.3.1. ALL ALUMINUM CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE TOLERANCES, QUALITY, AND METHODS OF CONSTRUCTION AS SET FORTH IN THE AMERICAN WELDING SOCIETY'S STRUCTURAL WELDING CODE-ALUMINUM (D1.2). MINIMUM WELD IS 1/8" THROAT FULL PERIMETER FILLET WELD UNLESS OTHERWISE NOTED.
11. 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.
12. SELF-DRILLING SCREWS SHALL BE TEK BRAND / ALL POINTS FASTENERS OF SIZE #14, STAINLESS STEEL 300 SERIES, WITH MINIMUM 1/2" THREAD ENGAGEMENT BEYOND THE CONNECTED PART, UNLESS OTHERWISE NOTED.
13. THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
14. ELECTRICAL GROUND, WHEN REQUIRED, TO BE DESIGNED & INSTALLED BY OTHERS.

STRUCTURAL WOOD (AS APPLICABLE):

1. ALL DIMENSION LUMBER SHALL BE STRUCTURAL GRADE #2 SOUTHERN YELLOW PINE OR BETTER MEETING APPLICABLE REQUIREMENTS OF THE SOUTHERN PINE INSPECTION BUREAU (SPIB) AND PRESSURE-IMPREGNATED (PT) BY AN APPROVED PROCESS (ACQ 0.4 PRESSURE TREATED) PRESERVATIVE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE BUILDING CODE AND AMERICAN WOOD PRESERVERS ASSN (AWPA) "BOOK OF STANDARDS" OR 0.55 SPECIFIC GRAVITY MIN.
2. ALL METAL CONNECTORS IN CONTACT WITH WOOD USED IN LOCATIONS EXPOSED TO WEATHER SHALL BE GALVANIZED.
3. NAILS SHALL PENETRATE THE SECOND MEMBER A DISTANCE EQUAL TO THE THICKNESS OF THE MEMBER BEING NAILED THERETO. THERE SHALL BE NOT LESS THAN 2 NAILS IN ANY CONNECTION.
4. MEMBERS SHALL BE FREE OF CRACKS AND KNOTS. MOISTURE CONTENT SHALL BE 19% OR LESS.
5. WOOD THAT IS IN CONTACT WITH CONCRETE OR MASONRY, AND AT OTHER LOCATIONS AS SHOWN ON STRUCTURAL DRAWINGS, SHALL BE PROTECTED WITH 30 # FELT (UNLESS NOTED OTHERWISE) OR PRESSURE TREATED IN ACCORDANCE WITH AITC-109. MEMBER SIZE SHOWN ARE NOMINAL UNLESS NOTED OTHERWISE.

OTHER MATERIALS (AS APPLICABLE)

1. ANY SPECIFIED LIGHT GAUGE STEEL MEMBERS SHALL CONFORM TO ASTM A36 AND CURRENT EDITION OF AISC WITH MINIMUM Fy = 36KSI
2. MATERIALS NOT DETAILED HEREIN SHALL BE DESIGNED AND INSTALLED CONFORMING TO THE MANUFACTURER'S SPECIFICATIONS AND ANY GOVERNING CODES & STANDARDS.

ANCHORS & FASTENERS

1. 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" BY THE ALUMINUM ASSOCIATION, INC., & ANY APPLICABLE FEDERAL, STATE, AND/OR LOCAL CODES.
2. ALL METAL CONNECTORS USED IN LOCATIONS EXPOSED TO WEATHER SHALL BE HOT-DIP GALVANIZED.
3. ALL FASTENERS SHALL BE SPACED WITH 2x DIAMETER END DISTANCE AND 2.5xDIAMETER MIN. SPACING TO ADJACENT FASTENERS, UNLESS NOTED OTHERWISE. PROVIDE (5) PITCHES MINIMUM PAST THE THREAD PLANE FOR ALL FASTENERS.
4. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS. MINIMUM EMBEDMENT SHALL BE AS NOTED HEREIN. MINIMUM EMBEDMENT AND EDGE DISTANCE ARE DEPTHS INTO SOLID SUBSTRATE AND DO NOT INCLUDE THICKNESS OF STUCCO, FOAM, BRICK, AND OTHER WALL FINISHES. ALL CONCRETE ANCHORS SHALL BE INSTALLED TO NON-CRACKED

CONCRETE ONLY.

5. ANCHOR QUANTITIES INDICATED IN DETAILS ARE FOR GRAPHICAL PURPOSES ONLY. DO NOT SCALE DIAMETER, LENGTH, OR PENETRATION(S). HEAD STYLE(S) ARE FREELY INTERCHANGEABLE.

NON-STRUCTURAL ELEMENTS:

1. 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 WITHIN LIMITATIONS STATED HEREIN AND AS DESIRED PER MFR. SPECIFICATIONS. DETAILS PROVIDED HEREIN ARE FOR REFERENCE ONLY

FOUNDATION, CONCRETE, AND REINFORCEMENT

FOUNDATION & EARTHWORK

1. SURROUNDING SOIL TO BE WELL COMPACTED BY MECHANICAL MEANS TO 90% OPTIMUM DENSITY, BE FREE OF MUCK AND ORGANICS, AND ACHIEVE 2000 PSF MIN BEARING PRESSURE AND LATERAL BEARING PRESSURE BELOW NATURAL GRADE OF 150 PSF.
2. EXCAVATIONS NEAR ADJACENT FOOTINGS AND FOUNDATIONS SHALL NOT REMOVE LATERAL SUPPORT WITHOUT FIRST UNDERPINNING OR PROTECTING THE THE FOOTING OR FOUNDATION AGAINST SETTLEMENT OR LATERAL TRANSLATION.
3. SOIL SHALL BE CLASSIFIED OR VERIFIED BY OTHERS PRIOR TO CONSTRUCTION AS SAND CLASS OR BETTER. SHOULD OTHER CONDITIONS OR MATERIALS BE ENCOUNTERED THE ENGINEER OF RECORD MUST BE NOTIFIED.
4. FILL TO BE PLACED OVER THE NATURAL GROUND TO ACHIEVE THE FINISH PAD ELEVATION. BACKFILL MATERIAL SHALL CONSIST OF CLEAN GRANULAR SOILS CONTAINING LESS THAN 5% ORGANIC WITH NO MORE THAN 30% ROCK, AND NO ROCK LARGER THAN 3 INCHES IN DIAMETER AND PLACED IN LOOSE LIFTS NOT TO EXCEED 12 INCHES IN THICKNESS. ALL FILL MATERIAL FOUND AT FOUNDATION LEVEL AND BACKFILL SHALL BE COMPACTED TO 98% OF THE STANDARD PROCTOR DENSITY.

CONCRETE

1. CONCRETE MIXTURES SHALL BE DESIGNED TO REACH A COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS.
2. ALL MIXING, TRANSPORTING, PLACING, & CURING OF CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318.
3. NO ADMIXTURES ARE TO BE USED WITHOUT THE WRITTEN APPROVAL OF THE ABOVE-SIGNED ENGINEER.
4. CONCRETE SHALL BE TYPE 1 PORTLAND CEMENT MEETING THE REQUIREMENTS OF ASTM C150, AGGREGATES TO MEET ASTM C33. POTABLE WATER SHALL BE USED.
5. SLUMP SHALL BE A MINIMUM OF 3" AND MAXIMUM OF 5" CONCRETE DURING AND IMMEDIATELY AFTER DEPOSITING SHALL BY THOROUGHLY COMPACTED BY MEANS OF MECHANICAL VIBRATION.
6. ALL FOOTINGS ARE TO BE INSTALLED BELOW ANY CODE REQUIRED FROST LINE. ADDITIONALLY, IN HIGH VELOCITY HURRICANE ZONES (MIAMI-DADE & BROWARD COUNTIES, FL), TOP OF FOOTING SHALL BE 8" MINIMUM BELOW GRADE.

REINFORCING STEEL

12. ALL REINFORCEMENT SHALL BE DEFORMED BARS OF INTERMEDIATE GRADE NEW BILLET STEEL CONFORMING TO CURRENT REQUIREMENTS OF ASTM A615, GRADE 60 (U.O.N.), FREE FROM OIL, LOOSE SCALE AND LOOSE RUST AND BENT, LAPPED, PLACED, SUPPORTED AND FASTENED ACCORDING TO THE "ACI DETAILING MANUAL" (SP-66) AND THE ACI 318.
13. ALL WELDING WIRE FABRIC IS TO CONFORM TO ASTM A185 MINIMUM YIELD STRENGTH OF 85 KSI.
14. CLEAR COVER FOR REINFORCEMENT SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:
- | | |
|----------------------------------|----|
| FOOTINGS EXPOSED TO EARTH: | 3" |
| UNFORMED FACES EXPOSED TO EARTH: | 3" |
| SLABS EXPOSED TO WEATHER: | 2" |
15. 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.
16. STRUCTURAL CONCRETE SLABS SHALL BE 4" THICK MINIMUM & INCLUDE MINIMUM REINFORCEMENT OF EITHER W6XW6 / 6X6 WELDED WIRE MESH, OR#3 BARS @ 12" EACH WAY. STRUCTURAL SLABS SHALL ONLY BE UTILIZED AS A STRUCTURAL FOUNDATION FOR HOST-ATTACHED PATIO COVERS WITH SUFFICIENT HOST STRUCTURE SUPPORT.

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6. 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.
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ARIA SHADE TRELLIS PATIO COVER

GENERAL PERFORMANCE EVALUATION

FBC 7TH ED (2020); IBC (2018)

DATE	DRWN	CHKD	REMARKS
5/21/19	LAO	FLB	INIT ISSUE
5/03/21	CCB	AEM	FBC 2020
11/03/22	CCB	FLB	2022 UPDATE
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ABBREVIATIONS:

θ = SLOPE, DEGREES
(+) = POSITIVE (DOWN-IN) PRESSURE
(-) = NEGATIVE (UP-OUT) PRESSURE
Hc = CANOPY HEIGHT
He = EAVE HEIGHT
PSF = POUNDS PER SQUARE FOOT
MPH = MILES PER HOUR
TYP = TYPICAL

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WIND SPEED TO PRESSURE LOAD COMBINATION

CONVERSION TABLES FOR CANOPIES & PERGOLAS WITH 50% ROOF POROSITY

ASD DESIGN LOAD COMBINATION PRESSURES CONSIDER $DL = 3$ PSF, $L_r = 20$ PSF, $S = 20$ PSF, AND WIND LOAD, W AS CALCULATED FOR THE SELECTED STRUCTURE USING ASCE 7-16 V_{ult} WIND SPEED & ASD PRESSURE METHOD & CALCULATED AT MEAN SEA LEVEL FOR **OPEN-WALLED CANOPY STRUCTURES WITH AT LEAST 50% ROOF POROSITY**

TABLE 1:
LATERAL
PRESSURES

(WIND PRESSURE AGAINST SIDE OF
FREESTANDING OR HOST ATTACHED
STRUCTURES WITH OPEN WALLS)

DESIGN LATERAL PRESSURE		
ULT WIND SPEED (MPH)	ASCE EXPOSURE CATEGORY	LATERAL PRESSURE (PSF)
110 MPH	B	14
	C	17
	D	19
120 MPH	B	17
	C	20
	D	22
130 MPH	B	20
	C	24
	D	26
140 MPH	B	23
	C	27
	D	30
150 MPH	B	26
	C	31
	D	35
160 MPH	B	30
	C	36
	D	39

TABLE 2:
ROOF
PRESSURES

(WIND, AND LISTED GRAVITY LOADING
AGAINST ROOF OF FREESTANDING STRUCTURE
(+ = GRAVITY; - = UPLIFT))

ASD DESIGN ROOF PRESSURE FOR FREESTANDING TRELLIS WITH OPEN WALLS				
ULT WIND SPEED (MPH)	ASCE EXPOSURE CATEGORY	MONOSLOPE (PSF)		$\theta < 7.5^\circ$
		(+)	(-)	
110 MPH	B	24	-10	
	C	28	-10	
	D	29	-11	
120 MPH	B	25	-10	
	C	28	-10	
	D	29	-11	
130 MPH	B	26	-10	
	C	29	-11	
	D	32	-14	
140 MPH	B	27	-10	
	C	31	-14	
	D	33	-16	
150 MPH	B	28	-10	
	C	33	-16	
	D	36	-19	
160 MPH	B	30	-12	
	C	35	-19	
	D	38	-22	

TABLE 3:
ATTACHED
CANOPY

(WIND, AND LISTED GRAVITY LOADING AGAINST
ROOF OF HOST-ATTACHED STRUCTURE
(+ = GRAVITY; - = UPLIFT))

DESIGN ROOF PRESSURES FOR HOST ATTACHED TRELLIS					
ULTIMATE WIND SPEED	ASCE EXPOSURE CATEGORY	CANOPY ATTACHED 1FT OR MORE BELOW EAVE ($h_c/h_e < 0.9$)	CANOPY ATTACHED 1FT OR LESS BELOW EAVE ($0.9 \leq h_c/h_e \leq 1$)	DESIGN WIND PRESSURE (PSF)	
110 MPH	B	23	-10	23	-10
	C	23	-10	23	-10
	D	23	-10	23	-10
120 MPH	B	23	-10	23	-10
	C	23	-10	23	-10
	D	23	-10	23	-10
130 MPH	B	23	-10	23	-10
	C	23	-10	23	-10
	D	23	-10	23	-11
140 MPH	B	23	-10	23	-10
	C	23	-10	23	-11
	D	24	-10	24	-13
150 MPH	B	23	-10	23	-10
	C	24	-10	24	-13
	D	25	-10	25	-15
160 MPH	B	23	-10	23	-10
	C	25	-10	25	-14
	D	26	-10	26	-17

DESIGN LOAD COMBINATION CONDITIONS

PRESSURES PROVIDED IN THE TABLES HEREIN ARE ALLOWABLE STRESS DESIGN FACTORED LOAD COMBINATIONS PER ASCE 7-16 CHAPTER 2.4 & CORRESPONDING WIND PRESSURE DESIGN CHAPTERS. THE WIND PRESSURES UTILIZED IN THESE CALCULATIONS ASSUME A CANOPY OF HEIGHT = 10FT AND AN AREA OF 100 SQFT OR GREATER.

ASD LOAD COMBINATIONS HEREIN ASSUME A CONSTANT DEAD LOAD OF 3 PSF, ROOF LIVE LOAD, $L_r = 20$ PSF, SNOW LOAD, $S = 20$ PSF, AND WIND LOAD, W AS CALCULATED FOR THE SELECTED STRUCTURE & SITE SPECIFIC CONDITIONS. PRESSURES LISTED ARE VALID FOR DESIGN CONDITIONS EQUAL TO OR LESS THAN THE LOAD COMBINATION CONSIDERED.

FOR LOADING CONDITIONS EXCEEDING THE CONSTANTS STATED ABOVE (SUCH AS A ROOF OR SNOW LOADING EXCEEDING 20 PSF, OR THE CONSIDERATION OF SEISMIC LOADING), USE THE ONLINE LOAD COMBINATION TOOLS FOUND AT THE QR CODE PROVIDED.

INSTRUCTIONS FOR TABLE USE:

- IDENTIFY THE LOCAL V_{ult} WIND VELOCITY BASED ON 3 SECOND GUST FACTOR FROM BUILDING DEPT OR PUBLISHED DATA. REFERENCED STANDARD WIND INFORMATION CAN BE FOUND AT HAZARDS.ATCOUNCIL.ORG AND AT THE QR CODE BELOW
- CONFIRM THAT THE SITE-SPECIFIC & LOCAL MUNICIPALITY DESIGN CONDITIONS ARE WITHIN THE LIMITATIONS OF THIS MASTER PLAN AS STATED ABOVE. CONFIRM THAT THESE CONDITIONS ALSO COMPLY WITH LOCAL CODE REQUIREMENTS
- IDENTIFY THAT THE STRUCTURE TO BE USED CONFORMS TO THE LIMITATIONS NOTED HEREIN. THIS DOCUMENT PROVIDES INFORMATION FOR OPEN-WALLED STRUCTURES THAT ARE EITHER FREESTANDING OR HOST-ATTACHED, AND HAVE A ROOF THAT IS AT LEAST 50% POROUS.
- READ OFF POSITIVE (DOWNWARD), NEGATIVE (UPLIFT), AND LATERAL PRESSURES AS ASD DESIGN LOAD COMBINATIONS FOR DIRECT USE WITH CORRESPONDING PRESSURE-DESIGNED SYSTEMS

ADDITIONAL ENGINEERING IS REQUIRED FOR DESIGN CONDITIONS THAT EXCEED THE CONSIDERATIONS OF THIS MASTER PLAN.

CALCULATION NOTES:

- INTERPOLATION OF THESE RESULTS ARE NOT PERMITTED WITHOUT SIGNED AND SEALED RESULTS.
- PRESSURES HEREIN ARE VALID FOR CONDITIONS EQUAL OR LESS THAN THE DESIGN CONDITIONS LISTED. FOR CONDITIONS EXCEEDING THOSE LISTED, VISIT ECALC.IO/WIND TO CALCULATE A SITE SPECIFIC PRESSURE
- TABLES USE ASCE ZONE 2 PRESSURES FOR A ROOF AREA=100FT² MIN AND CANOPY HEIGHT $H_c = 10$ FT, C&C METHOD, FLAT TERRAIN. FOR MORE EXACT ANSWERS USE THE MATCHING ONLINE CALCULATOR AT ECALC.IO/WIND.

DESIGN NOTES

- PRESSURES HEREIN ARE CALCULATED IN CONFORMANCE WITH (ASD) "ALLOWABLE STRESS DESIGN METHODOLOGY" PER IBC (2018) / FBC (2020) SECTION 1605 & ASCE 7-16 SECTION 2.4.1, WITH WIND PRESSURES PER ASCE CHAPTER 30, AND LOADING CONDITIONS USING THE CODES & CRITERIA AS OUTLINED.
- 'WORST CASE' CRITICAL CONDITIONS SHALL BE ASSUMED FOR SAFE PRESSURE RATINGS.
- TOPOGRAPHIC FACTOR $K_{zt}=1.0$ FOR FLAT TERRAIN USE ONLY. NO HILLS SHALL BE NEARBY AREA.
- VERIFY USE OF K_d (DIRECTIONALITY FACTOR) WITH LOCAL BUILDING DEPARTMENT, $K_d=0.85$ USED HEREIN. PRESSURES SHALL BE ADJUSTED AS REQUIRED BY USE OF ALTERNATE K_d VALUES.

GENERAL NOTES

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- CONTRACTOR SHALL INVESTIGATE AND CONFORM TO ALL LOCAL BUILDING CODE AMENDMENTS WHICH MAY APPLY.
- IT IS RECOMMENDED THAT A LICENSED ENGINEER OR REGISTERED ARCHITECT PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT. SEPARATE 'SITE-SPECIFIC' SEALED ENGINEERING IS REQUIRED IN ORDER TO DEVIATE FROM LOADS OR CONFIGURATIONS CONTAINED HEREIN. CONTACT THIS ENGINEER OR A LICENSED PROFESSIONAL FOR ALTERNATE CONFIGURATION CALCULATIONS AS MAY BE REQUIRED.
- THE CONTRACTOR SHALL CAREFULLY CONSIDER POSSIBLE IMPOSING LOADS ON ROOF, INCLUDING BUT NOT LIMITED TO ANY CONCENTRATED LOADS WHICH MAY JUSTIFY GREATER DESIGN CRITERIA. ADDITIONAL ROOF LOAD CRITERIA SHALL BE PROPERLY ANALYZED BY A PROFESSIONAL ENGINEER. RESULTS ARE WIND ONLY.
- EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
- ALTERATIONS, ADDITIONS OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE OUR CERTIFICATION.

NOTE: ROOF DESIGN LOADS SHOWN HEREIN INCLUDE A 50% REDUCTION IN TOTAL WIND PRESSURE TO ACCOUNT FOR A POROUS ROOF SURFACE AREA EXPOSED TO WIND AND SNOW (SUCH AS A TRELLIS OR OPERABLE LOUVERED ROOF WHEN IN THE FULLY OPENED POSITION). TO UTILIZE THESE VALUES, ROOF STRUCTURE SHOULD BE CLEAR OF OBSTRUCTION, AND ANY LOUVERS SHALL BE FULLY OPENED BEFORE ANY NAMED STORM OR SIMILAR HIGH-WIND EVENT. IF NOT, THE DESIGN PRESSURES SHOWN ABOVE SHALL BE DOUBLED BEFORE INSTALLATION & USE.

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USE OUR ONLINE CALCULATIONS
WITH BETTER ANSWERS

HELPFUL EXPLANATIONS &
MORE WIND RESOURCES



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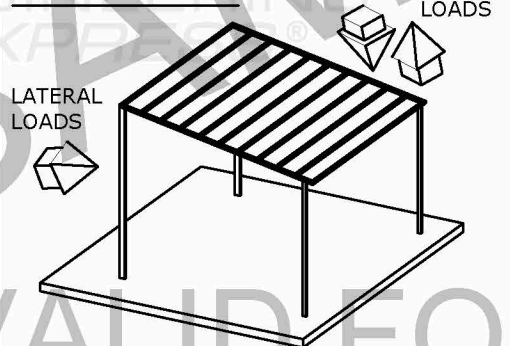
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GENERAL PERFORMANCE EVALUATION
FBC 7TH ED (2020); IBC (2018)

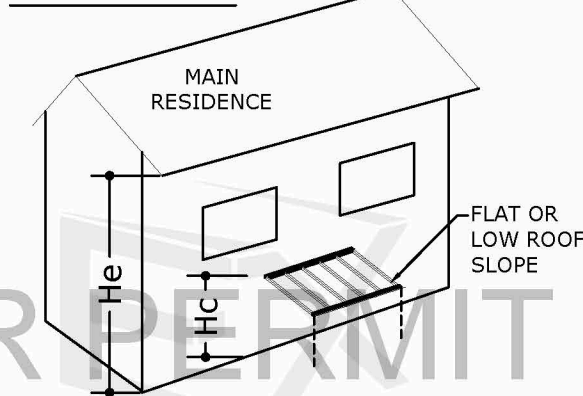
ABBREVIATIONS:
 θ = SLOPE, DEGREES
(+) = POSITIVE
(DOWN-IN)
PRESSURE
(-) = NEGATIVE
(UP-OUT)
PRESSURE
 H_c = CANOPY HEIGHT
 H_e = EAVE HEIGHT
PSF = POUNDS PER
SQUARE FOOT
(ASD)
MPH = MILES PER
HOUR (V_{ult})

FOR TABLE 2



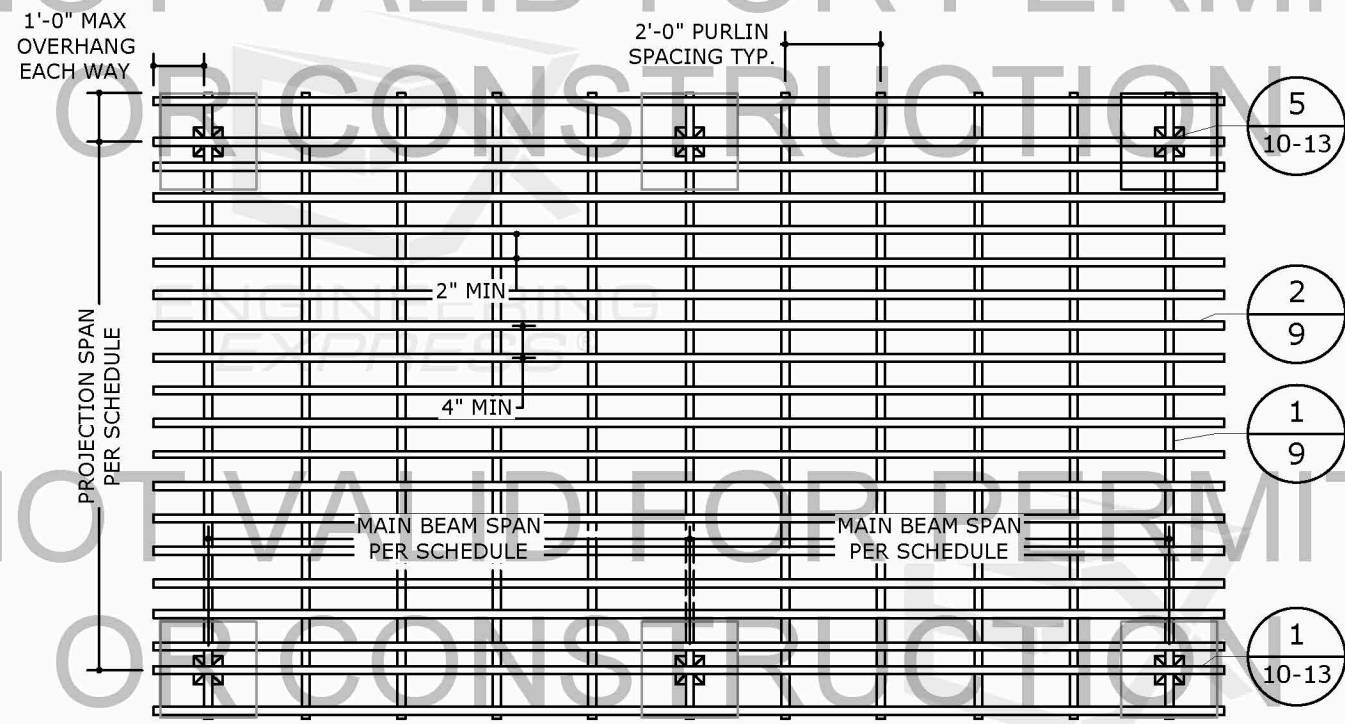
OPEN-FREESTANDING PERGOLA
MONOSLOPE ROOF ONLY
WITH 50% POROSITY (MIN)
(SUCH AS TRELLIS OR LOUVERED ROOF)

FOR TABLE 3

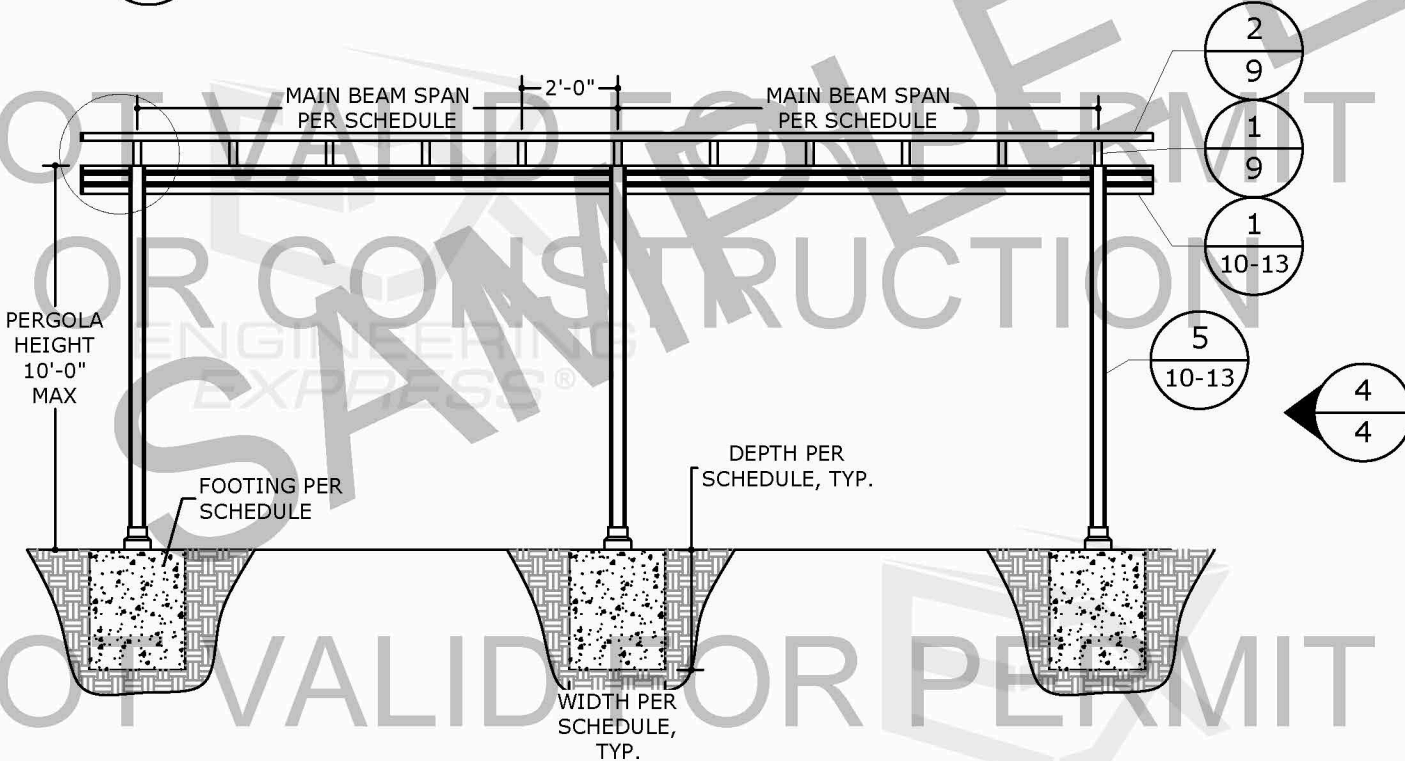


HOST ATTACHED CANOPY/PATIO COVER ISOMETRIC
(TABLE 3-ROOF, OPEN WALL)

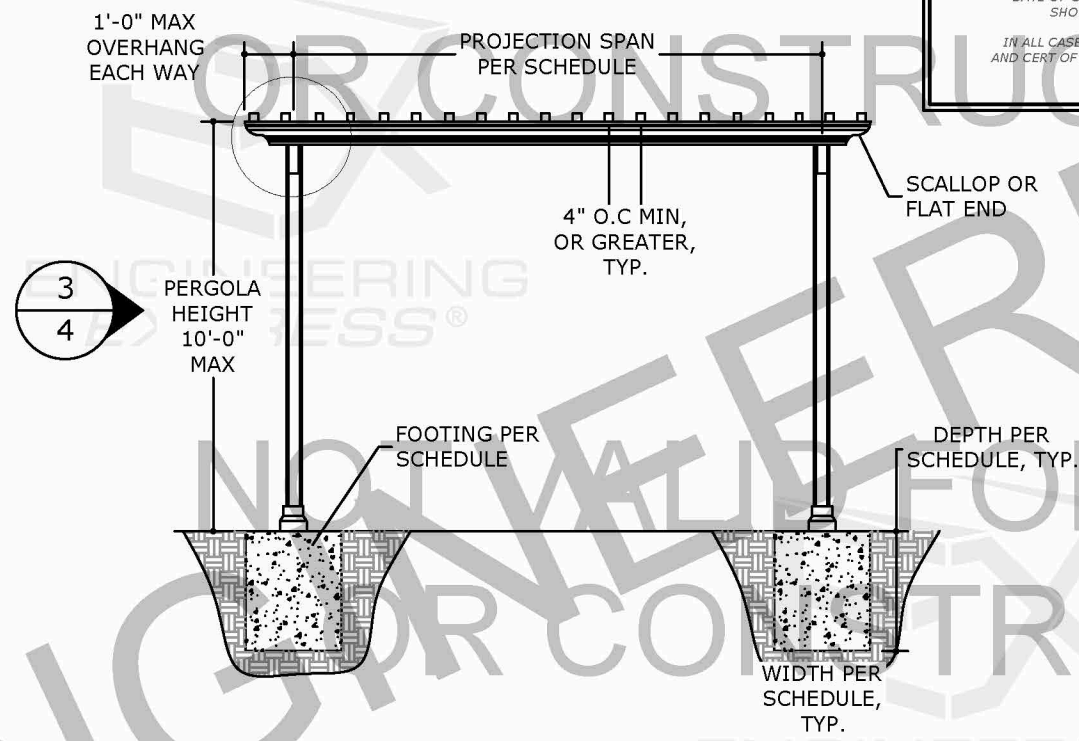
PROJECT VIEWS - ISOMETRIC, PLANS & ELEVATIONS



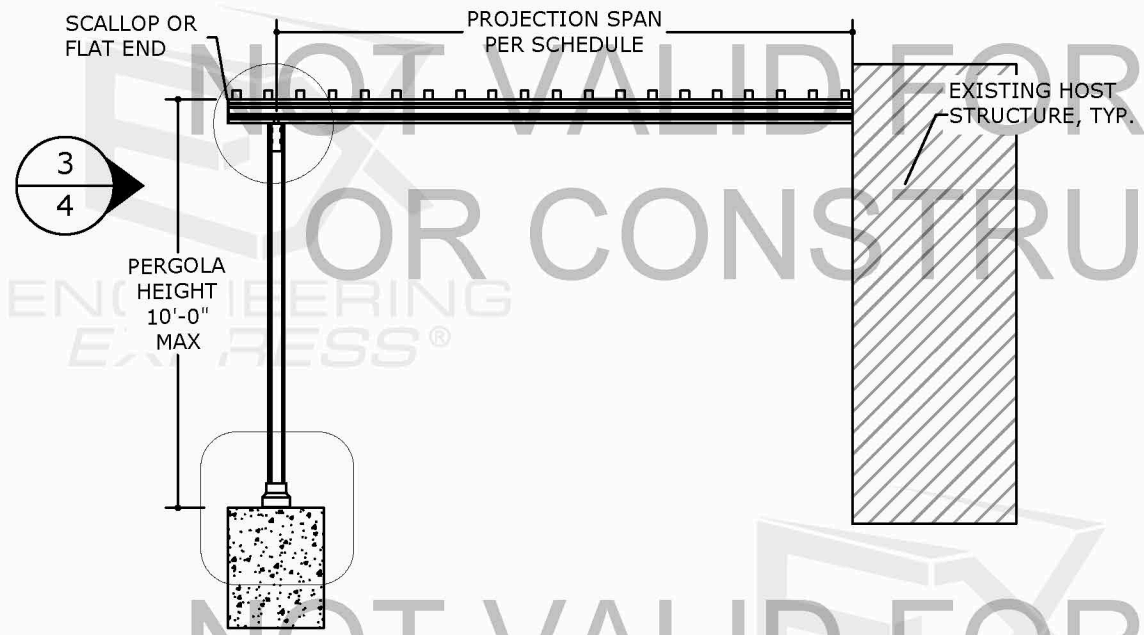
1 ARIA STYLE, TRELLIS PERGOLA PLAN VIEW
4 NOT TO SCALE ISO



3 ARIA STYLE, TRELLIS PERGOLA FRONT ELEVATION
4 NOT TO SCALE ELEV



2 ARIA STYLE, TRELLIS FREESTANDING PERGOLA SIDE ELEV
4 NOT TO SCALE PLAN



4 ARIA STYLE, TRELLIS HOST ATTACHED PERGOLA SIDE ELEV
4 NOT TO SCALE PLAN

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REMARKS	DRWN	CHKD	DATE
INIT ISSUE	LAO	FLB	5/21/19
FBC 2020	CCB	AEM	5/03/21
2022 UPDATE	CCB	FLB	11/03/22

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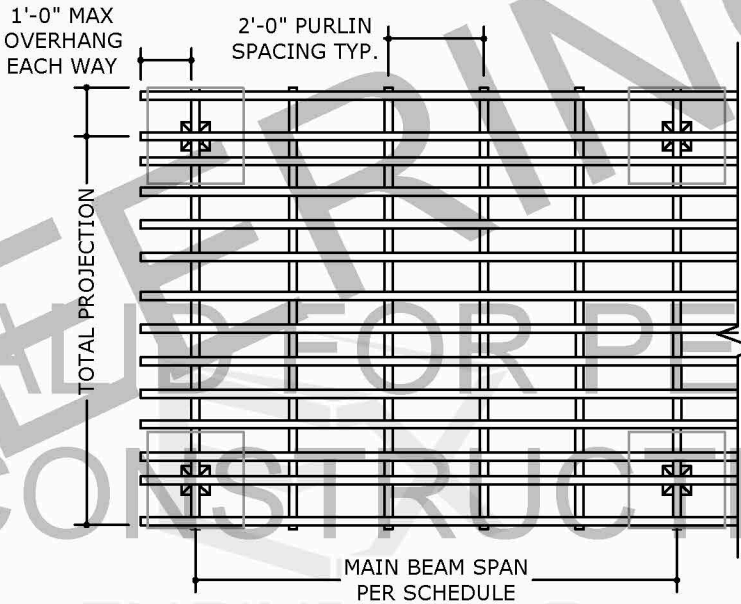
SCHEDULES 1 TO 4:
HOST ATTACHED & FREESTANDING TRELLIS
ALLOWABLE MAIN BEAM SPANS PER BEAM SECTIONS

SCHEDULE 1 - MAIN BEAM SPAN SD BEAM - POST HEIGHT UP TO 10 FT								
FACTORED ASD	20 PSF	25 PSF	30 PSF	35 PSF	40 PSF	45 PSF	50 PSF	
PROJECTION	15.0'	14'-6"	13'-0"	11'-10"	10'-11"	10'-2"	9'-7"	9'-1"
	14.0'	15'-1"	13'-5"	12'-2"	11'-4"	10'-7"	9'-11"	9'-5"
	12.0'	16'-0"	14'-6"	13'-2"	12'-2"	11'-5"	10'-10"	10'-2"
	10.0'	16'-0"	15'-11"	14'-6"	13'-5"	12'-7"	11'-10"	11'-2"
	8.0'	16'-0"	16'-0"	16'-0"	15'-1"	14'-1"	13'-2"	12'-7"

SCHEDULE 2 - MAIN BEAM SPAN HD BEAM - POST HEIGHT UP TO 10 FT								
FACTORED ASD	20 PSF	25 PSF	30 PSF	35 PSF	40 PSF	45 PSF	50 PSF	
PROJECTION	15.0'	18'-8"	16'-11"	15'-6"	14'-4"	13'-5"	12'-7"	12'-0"
	14.0'	19'-1"	17'-6"	16'-0"	14'-10"	13'-10"	13'-0"	12'-5"
	12.0'	20'-1"	18'-8"	17'-4"	16'-0"	15'-0"	14'-1"	13'-5"
	10.0'	21'-5"	19'-11"	18'-8"	17'-6"	16'-5"	15'-6"	14'-8"
	8.0'	23'-0"	21'-5"	20'-1"	19'-1"	18'-4"	17'-4"	16'-5"

SCHEDULE 3 - MAIN BEAM SPAN WD BEAM - POST HEIGHT UP TO 10 FT								
FACTORED ASD	20 PSF	25 PSF	30 PSF	35 PSF	40 PSF	45 PSF	50 PSF	
PROJECTION	15.0'	21'-1"	19'-7"	18'-2"	16'-10"	15'-8"	14'-10"	14'-1"
	14.0'	21'-7"	20'-0"	18'-10"	17'-5"	16'-4"	15'-5"	14'-7"
	12.0'	22'-8"	21'-1"	19'-10"	18'-10"	17'-7"	16'-7"	15'-8"
	10.0'	24'-1"	22'-5"	21'-1"	20'-0"	19'-1"	18'-2"	17'-2"
	8.0'	26'-0"	24'-1"	22'-8"	21'-7"	20'-7"	19'-10"	19'-5"

SCHEDULE 4 - MAIN BEAM SPAN WD BEAM WITH INSERT - POST HEIGHT UP TO 10 FT								
FACTORED ASD	20 PSF	25 PSF	30 PSF	35 PSF	40 PSF	45 PSF	50 PSF	
PROJECTION	15.0'	25'-5"	23'-7"	22'-2"	21'-1"	20'-2"	19'-5"	18'-8"
	14.0'	26'-0"	24'-1"	22'-8"	21'-7"	20'-7"	19'-10"	19'-1"
	12.0'	26'-0"	25'-5"	23'-11"	22'-8"	21'-8"	20'-11"	20'-2"
	10.0'	26'-0"	26'-0"	25'-5"	24'-1"	23'-1"	22'-2"	21'-5"
	8.0'	26'-0"	26'-0"	26'-0"	26'-0"	24'-11"	23'-11"	23'-1"



SCHEDULE 1 - 4 MEMBER SELECTION INSTRUCTIONS:

- STEP 1: DETERMINE LOCAL DESIGN PRESSURES (ASD - MAXIMUM OF GRAVITY & UPLIFT) PER SHEET 3 OR SEPARATE SITE SPECIFIC ENGINEERING
- STEP 2: DETERMINE DESIRED MAXIMUM PROJECTION BEAM SPAN AND MAIN BEAM SPAN
- STEP 3: FIND PROJECTION BEAM SPAN ON CHART & READ OFF ALLOWABLE MAIN BEAM SPAN UNDER DETERMINED SITE PRESSURE
- STEP 4: IF DESIRED MAIN BEAM SPAN IS WITHIN THE VALUES IN THE DESIGN CHART, THEN THAT CHART'S BEAM STRENGTH MAY BE USED
- IF THE DESIRED MAIN BEAM SPAN IS LARGER THAN WHAT APPEARS IN THE CHART, CHOOSE A STRONGER STYLE OF BEAM & HARDWARE.

SCHEDULE 5:
POST SELECTION PER AXIAL FORCE CALCULATION

SCHEDULE 5 - POST SIZING & SELECTION			
NAME	SIZE	USE	MAX AXIAL FORCE (MAX + or -)
SD POST	4" X 4" X 0.090"	HA ONLY	2000 LBS
HD POST	4" X 4" X 0.188"	FS & HA	2800 LBS
WD POST	6" X 6" X 0.125"	FS & HA	3700 LBS
WD POST WITH INSERT	WD POST + 5 3/8" x 5 3/8" x 0.125" INSERT	FS & HA	6600 LBS

MAX HEIGHT FOR ALL POSTS = 10FT
FS = FREESTANDING; HA = HOST ATTACHED

SAMPLE AXIAL FORCE CALC:

AXIAL FORCE = (1/2 PROJECTION + OVERHANG) * BEAM SPAN * PRESSURE
(USE VALUES FOR SPECIFIC INSTALLATION OR FROM BEAM SPAN TABLES)

EX: HOST ATTACHED, 14 FT PROJECTION, 1 FT OVERHANG, 13FT BEAM SPAN, 25PSF

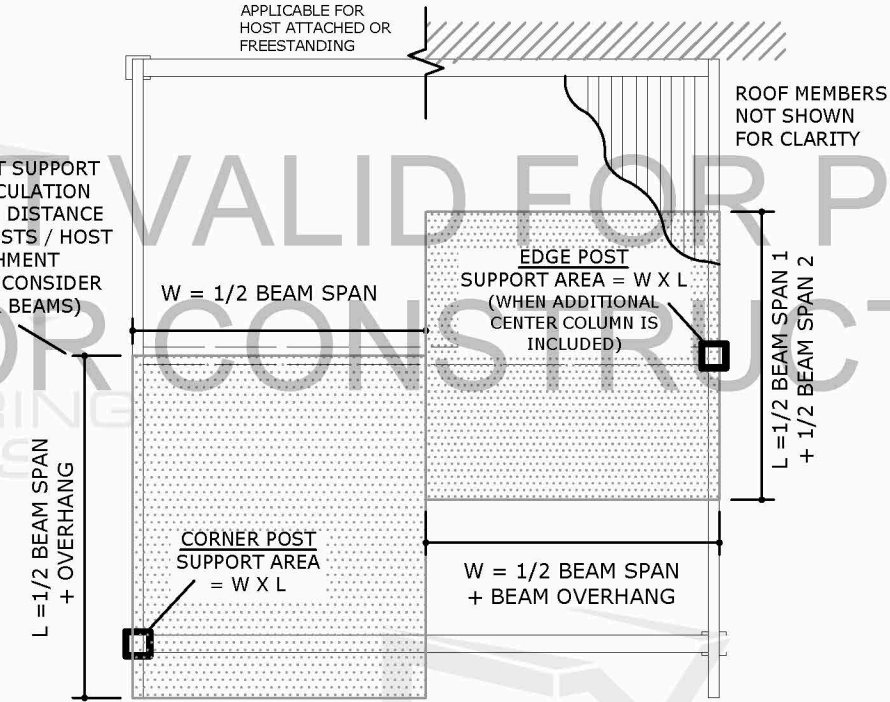
AXIAL FORCE = (14 FT/2 +1 FT) * 13 FT * 25 PSF = 2,600 LBS

AXIAL 2600 LBS > 2000 LBS, SO SD POST IS NOT APPLICABLE

AXIAL 2600 LBS < 2800 LBS, SO HD POST (& LARGER) ARE OK

NOTE: LATERAL FORCE EQUAL TO LOAD COMBINATION PRESSURE HAS BEEN CONSIDERED IN DETERMINING AXIAL ALLOWANCE VALUES

NOTE: POST SUPPORT AREA CALCULATION CONSIDERS DISTANCE BETWEEN POSTS / HOST ATTACHMENT (DOES NOT CONSIDER INTERIOR BEAMS)



NOTE: POST SUPPORT AREA MAY BE CALCULATED SEPARATELY FOR EACH POST. EACH POST MAY UTILIZE DIFFERENT POST AND FOOTER SELECTIONS FROM THE TABLES HEREIN BASED ON THE SITE DESIGN CONDITIONS & ITS SUPPORT AREA

1 POST SUPPORT AREA CALCULATION
5 NTS ELEVATION

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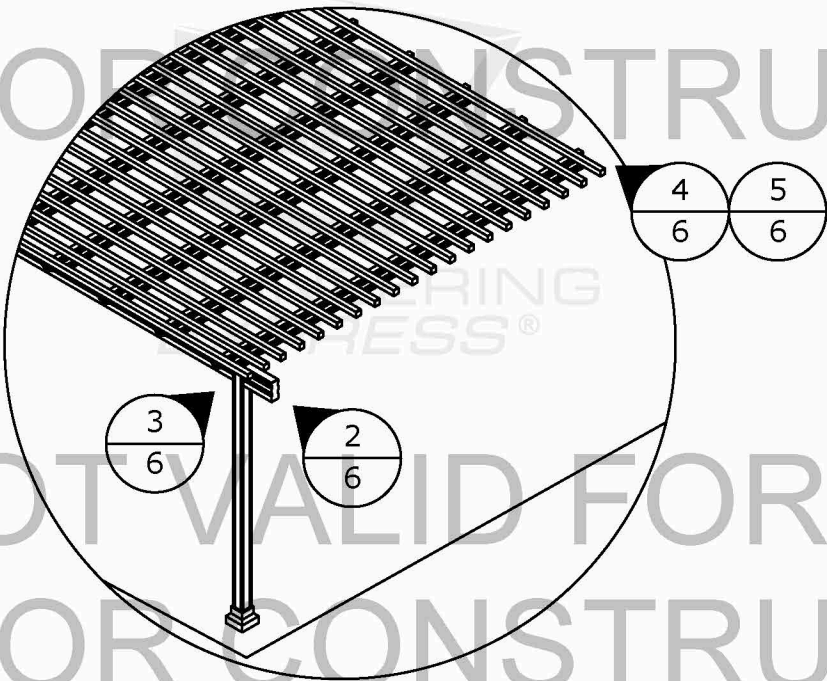
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DATE	DRWN	CHKD	REMARKS
5/21/19	LAO	FLB	INIT
5/03/21	CCB	AEM	FBC 2020
11/03/22	CCB	FLB	2022 UPDATE

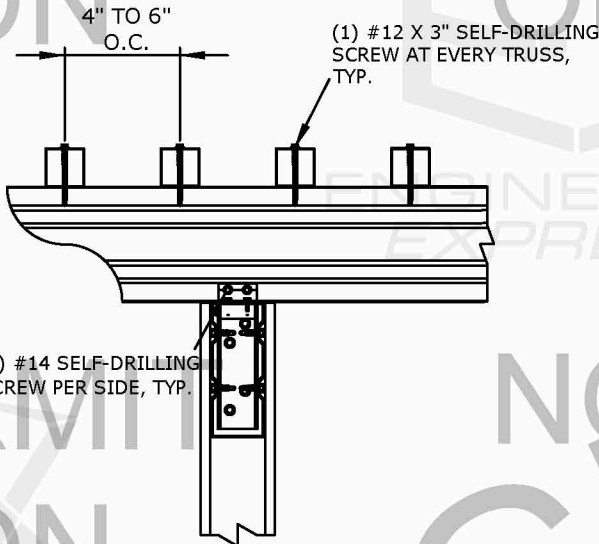
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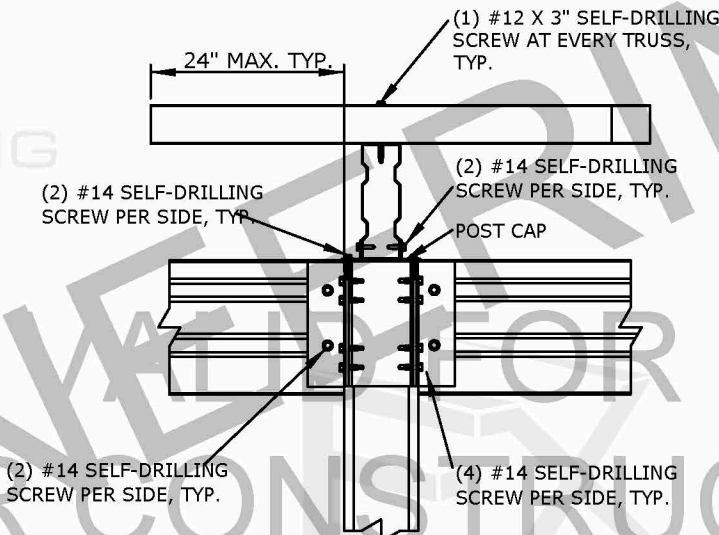
ARIA TRELLIS ROOF PATIO COVER - CONNECTION DETAILS



1 BEAM-POST-RAFTER CONNECTION
6 NOT TO SCALE ISO

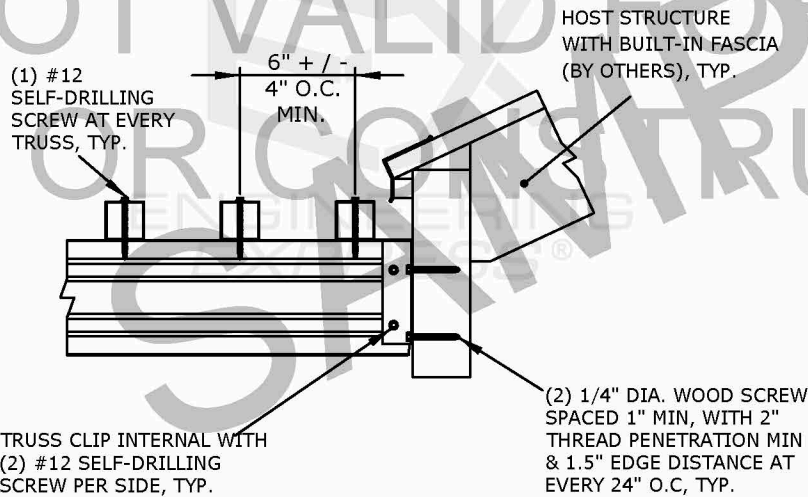


2 BEAM-POST-PANEL CONNECTION
6 NOT TO SCALE SIDE ELEV

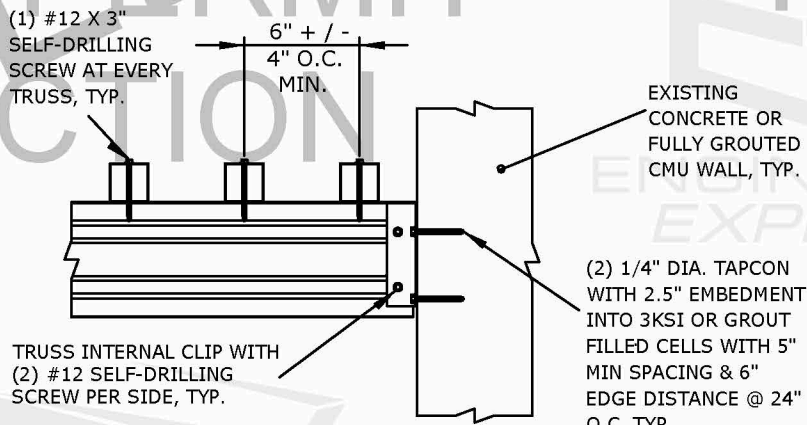


3 BEAM-POST-PANEL CONNECTION
6 NOT TO SCALE FRONT ELEV

HOST STRUCTURE CONNECTION DETAILS



4 HOST CONNECTION TO WOOD
6 NOT TO SCALE DETAIL



5 HOST CONNECTION TO CONCRETE
6 NOT TO SCALE DETAIL

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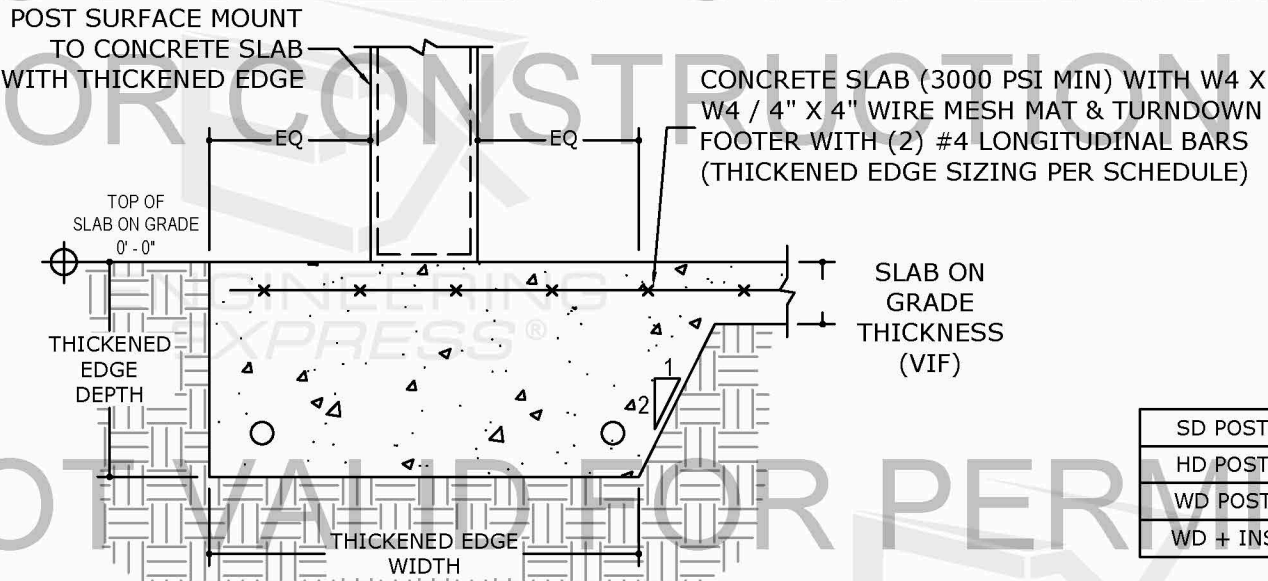
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FOOTING REQUIRED SIZE & CONSTRUCTION



SCHEDULE 6: SLAB WITH TURNDOWN FOOTING SIZING

	SLAB DIMENSIONS		
	MIN SLAB THICKNESS	THICKENED EDGE DEPTH	THICKENED EDGE WIDTH
SD POST	6"	NONE	NONE
HD POST	5"	8"	8"
WD POST	5"	8"	12"
WD + INS	5"	12"	12"

FOOTER SCHEDULE NOTES:

- ALL CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS AND RECOMMENDATIONS OF ACI 318 "SPECIFICATION FOR STRUCTURAL CONCRETE FOR BUILDINGS".
- SLABS AND FOOTERS SHALL BE 3000 PSI MINIMUM CONCRETE, BEARING ON SOIL WITH A MINIMUM BEARING CAPACITY OF 2000 PSF AS VERIFIED BY OTHERS.
- FOOTERS SHALL HAVE THE MINIMUM REINFORCEMENT INDICATED IN THE SCHEDULES HEREIN.
- ALL REINFORCEMENT SHALL BE DEFORMED BARS OF INTERMEDIATE GRADE NEW BILLET STEEL CONFORMING TO CURRENT REQUIREMENTS OF ASTM A615, GRADE 60 (U.O.N.), FREE FROM OIL, LOOSE SCALE AND LOOSE RUST AND BENT, LAPPED, PLACED, SUPPORTED AND FASTENED ACCORDING TO THE "ACI DETAILING MANUAL" (SP-66) AND THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318).
- MINIMUM REINFORCING STEEL CLEAR COVERAGE SHALL BE AS FOLLOWS. (PER ACI 318)
FOOTING: TOP, SIDES, BOTTOM = 1-1/2" MIN. INSTALLED ON A SMOOTH LEVEL SURFACES ONLY. MAINTAIN 3" IF NOT IN SMOOTH FORM.
- POSTS MAY BE EMBEDDED INTO CONCRETE FOOTING OR ANCHORED INTO FINISHED CONCRETE FOOTING OR SLAB (AS DETAILED HEREIN).
- ALLOW 3 DAYS CURE TIME BEFORE INSTALLING ANCHORS INTO CONCRETE.
- ALL FOOTINGS ARE TO BE INSTALLED LOWER THAN CODE REQUIRED FROST LINE. GENERAL CONTRACTOR IS RESPONSIBLE FOR ADHERENCE TO LOCAL FROST LINE REQUIREMENTS. ADDITIONALLY, TOP OF FOOTINGS ARE TO BE 8" MINIMUM BELOW GRADE IN HVHZ (DADE & BROWARD COUNTIES, FL).

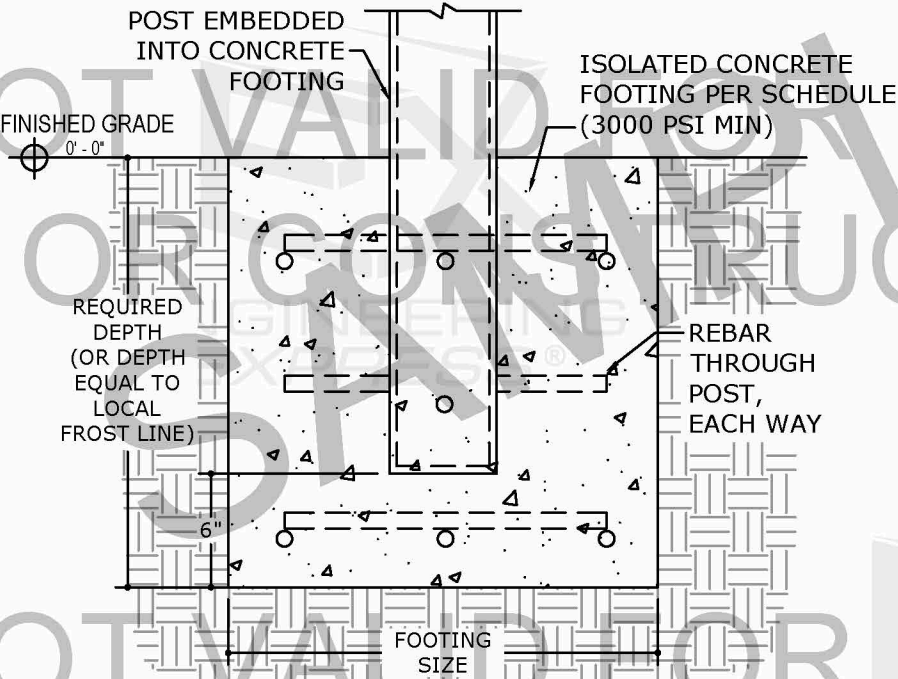
SCHEDULE 7 - FOOTING SELECTION

DESIGN UPLIFT PRESSURE (-)	POST SUPPORT AREA								
	36 FT²	50 FT²	75 FT²	100 FT²	125 FT²	150 FT²	175 FT²	200 FT²	250 FT²
-10 PSF	1	1	2	3	3	4	4	5	6
-15 PSF	1	2	3	4	5	5	6	6	8
-20 PSF	2	3	4	5	6	6	7	8	9
-25 PSF	2	3	5	6	7	8	8	9	9
-30 PSF	3	4	5	6	8	8	9	9	N/A
-35 PSF	4	4	6	7	8	9	9	N/A	N/A
-40 PSF	4	5	6	8	9	9	N/A	N/A	N/A
-45 PSF	4	5	7	8	9	N/A	N/A	N/A	N/A

USE POST SUPPORT AREA (CALCULATED FOR POST SELECTION) TO DETERMINE FOOTING # TO DETERMINE SIZE & REINFORCEMENT REQUIRED FOR EACH POST

SCHEDULE 8 - FOOTING DETAILS

FOOTING DETAILS: USE FOOTING PER # FOUND IN SCHEDULE ABOVE									
#	WIDTH	LENGTH	DEPTH	VOLUME	WEIGHT	REINFORCEMENT			
1	24"	24"	18"	6.0 CUFT	900 LBS	2	#4 TOP & BOT EACH WAY	-	#4 VERTICAL TIES
2	30"	30"	18"	9.4 CUFT	1406 LBS	4		-	
3	30"	30"	24"	12.5 CUFT	1875 LBS	4		& 5	
4	36"	36"	24"	18.0 CUFT	2700 LBS	4		& 6	
5	36"	36"	30"	22.5 CUFT	3375 LBS	4	#5 TOP & BOT EACH WAY	& 6	
6	42"	42"	30"	30.6 CUFT	4594 LBS	4		& 8	
7	42"	42"	36"	36.8 CUFT	5513 LBS	5		& 8	
8	48"	48"	36"	48.0 CUFT	7200 LBS	6		& 11	
9	48"	48"	48"	64.0 CUFT	9600 LBS	8		& 14	



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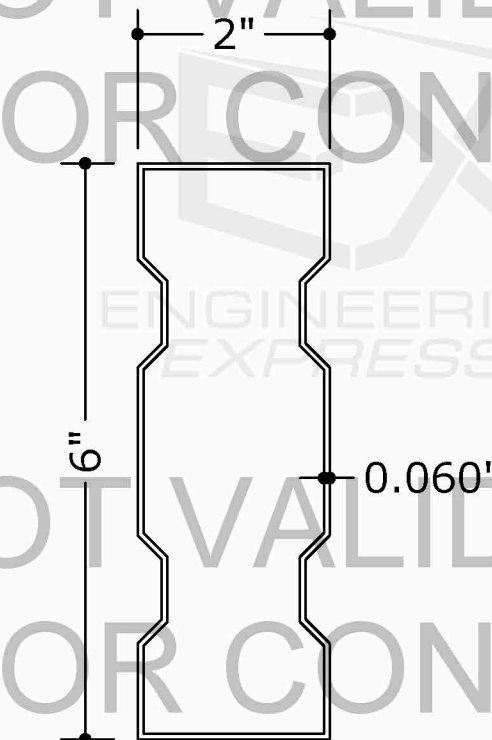
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ARIA TRELLIS ROOF PATIO COVER - ADDITIONAL COMPONENTS

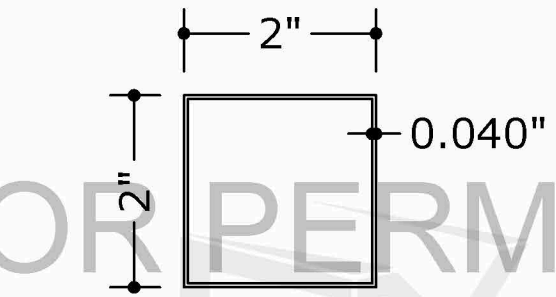
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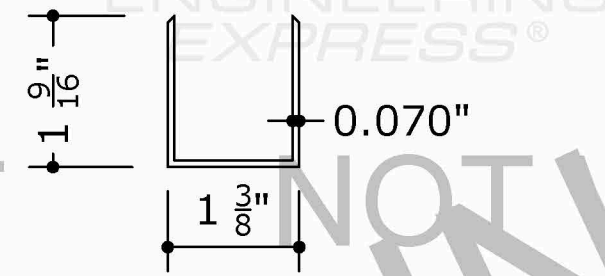
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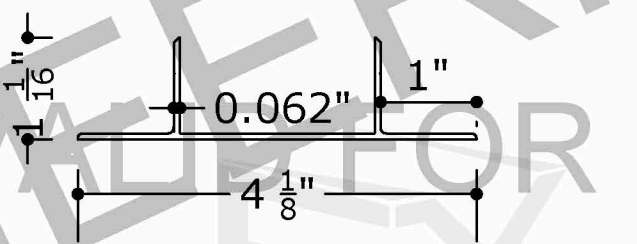
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9 ARIA TRELLIS TRUSS BEAM
NOT TO SCALE DETAIL



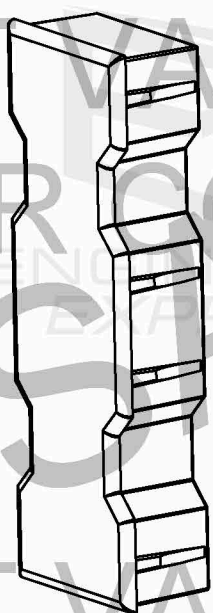
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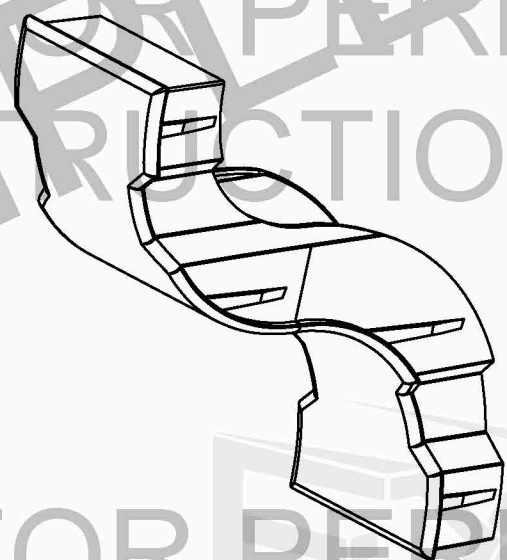
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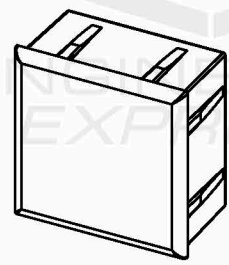
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9 ARIA TRELLIS TRUSS BEAM EXTERIOR CLIP
NOT TO SCALE DETAIL



5
9 ARIA TRELLIS TRUSS STRAIGHT END CAP
NOT TO SCALE DETAIL



6
9 ARIA TRELLIS TRUS SCALLOP END CAP
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7
9 ARIA TRELLIS SHADE TUBE END CAP
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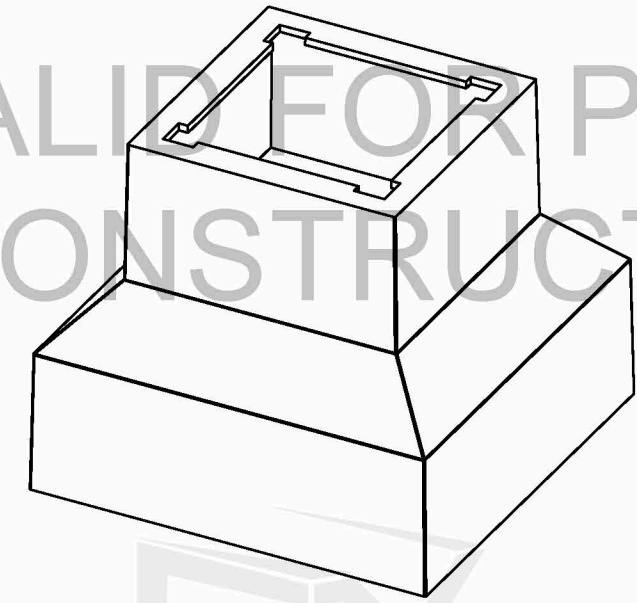
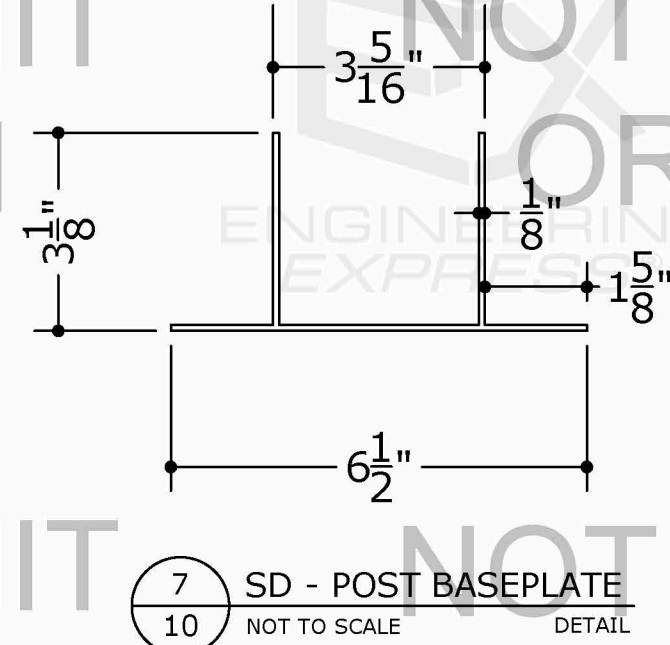
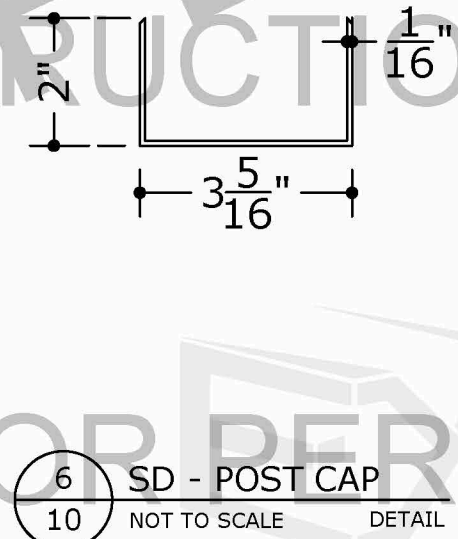
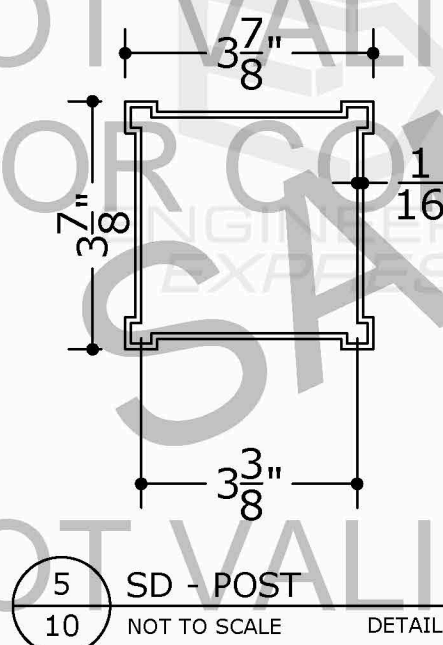
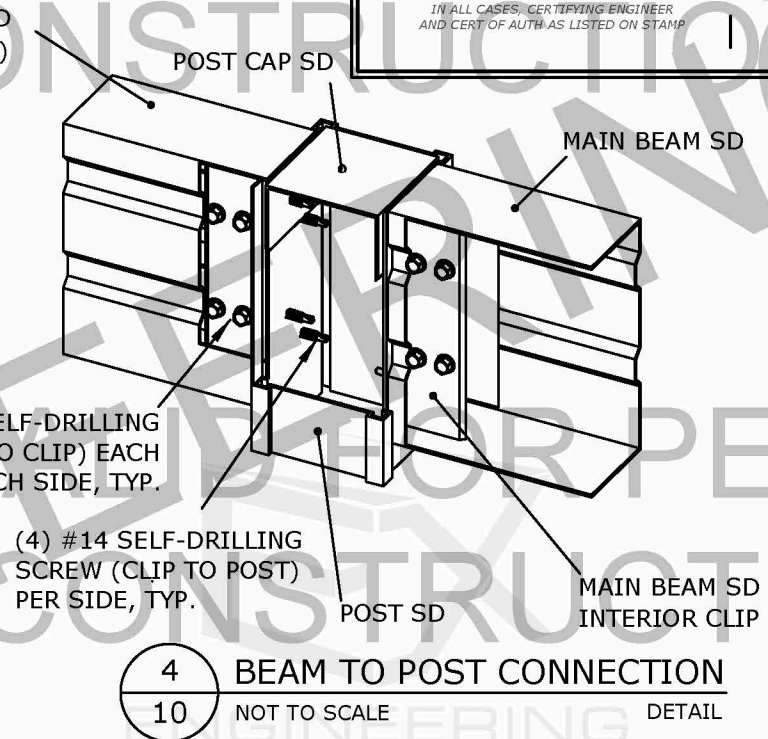
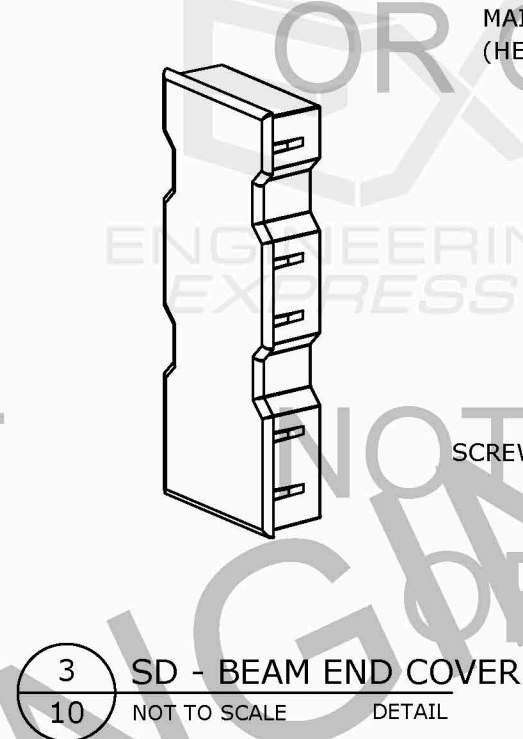
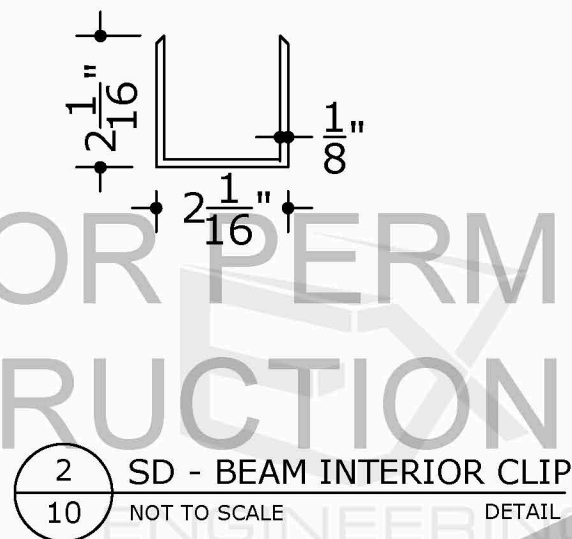
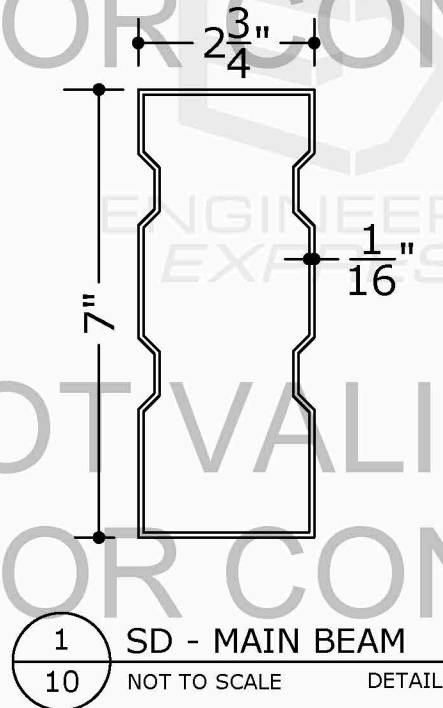
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SD - MEMBER SIZE HARDWARE COMPONENT DETAILS

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HD - MEMBER SIZE HARDWARE COMPONENT DETAILS

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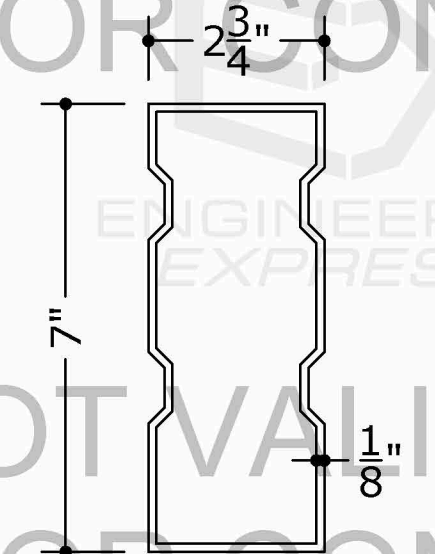
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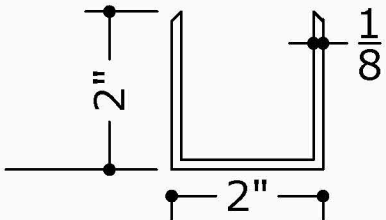
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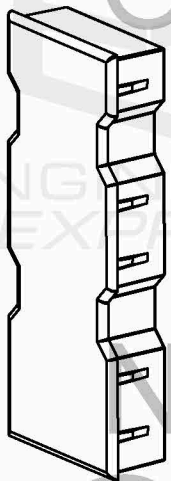
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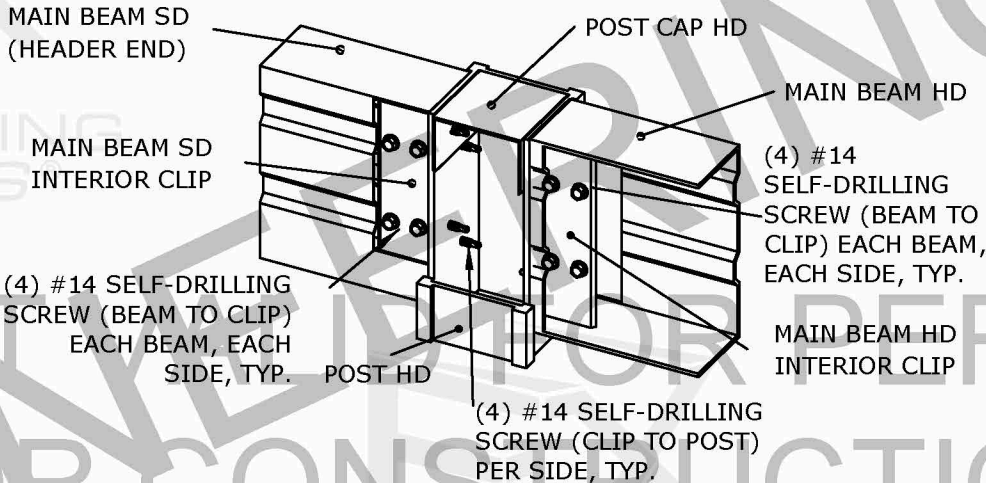
1 HD - MAIN BEAM
11 NOT TO SCALE DETAIL



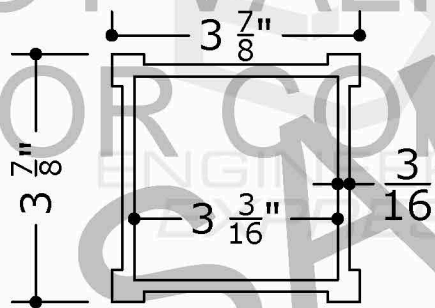
2 HD - BEAM INTERIOR CLIP
11 NOT TO SCALE DETAIL



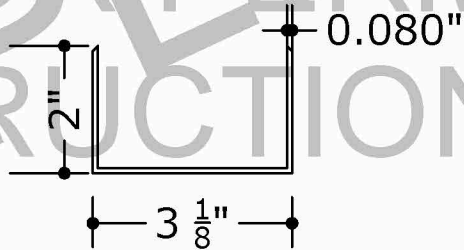
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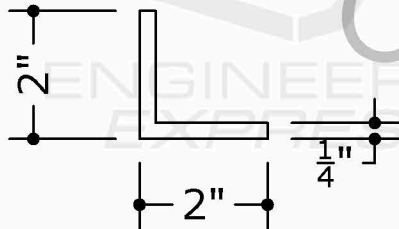
4 BEAM TO POST CONNECTION
11 NOT TO SCALE ISO



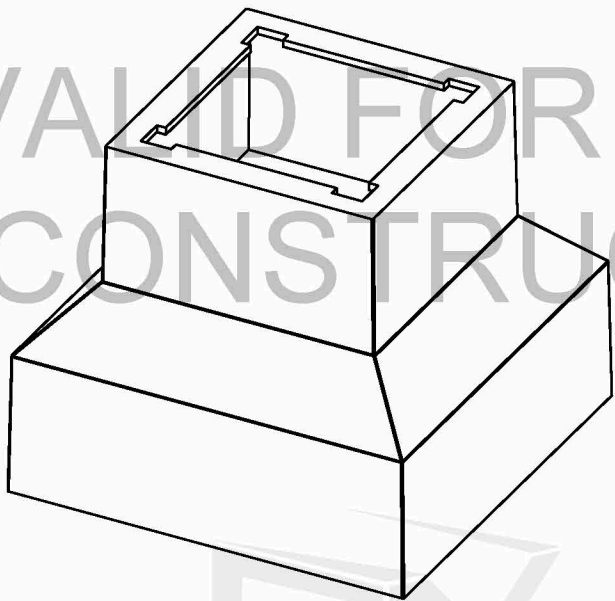
5 HD - POST
11 NOT TO SCALE DETAIL



6 HD - POST CAP
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7 HD - BASE CONNECTION L-ANGLE
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8 HD - POST BASE COVER
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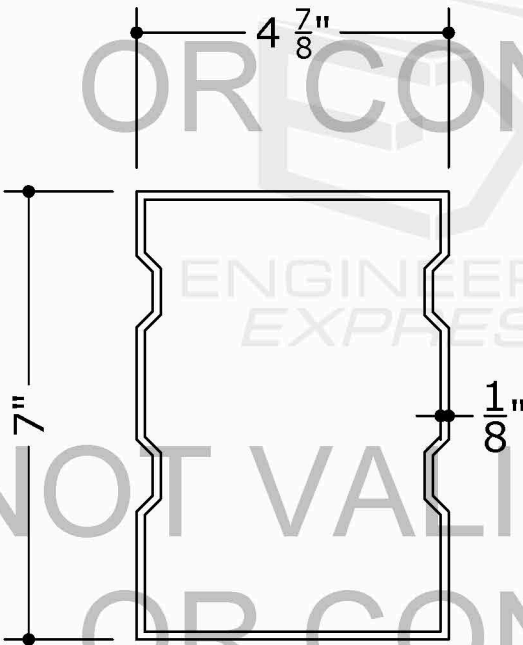
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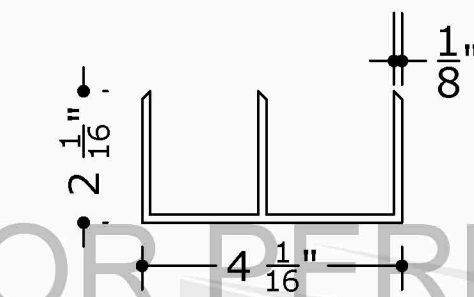
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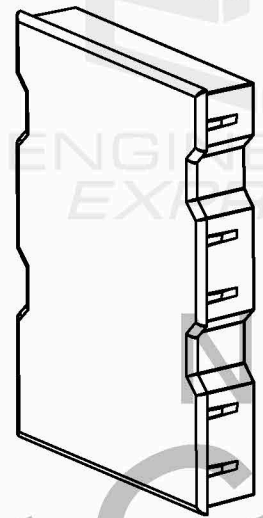
WD - MEMBER SIZE HARDWARE COMPONENT DETAILS



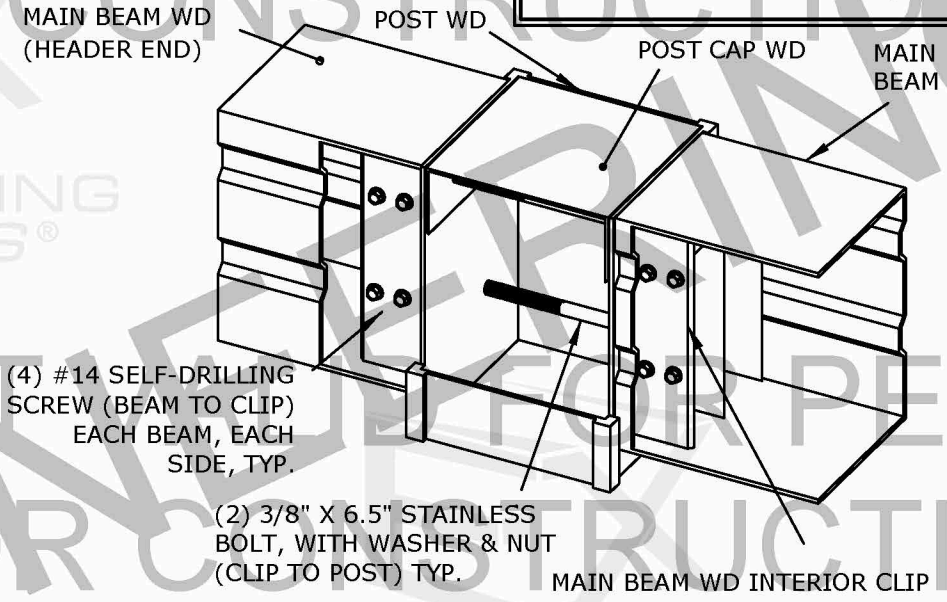
1 WD - MAIN BEAM
12 NOT TO SCALE DETAIL



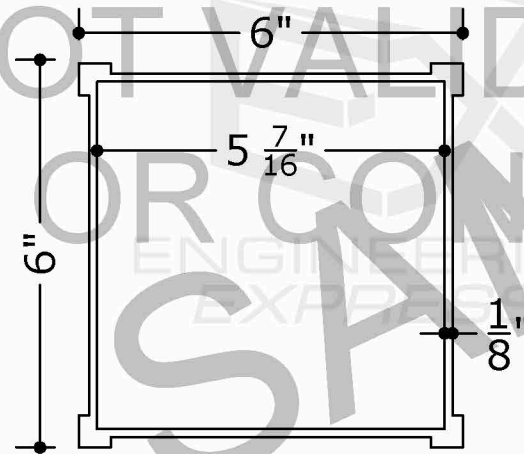
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12 NOT TO SCALE DETAIL



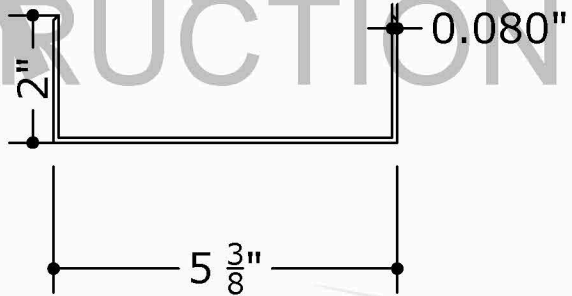
3 WD - BEAM END COVER
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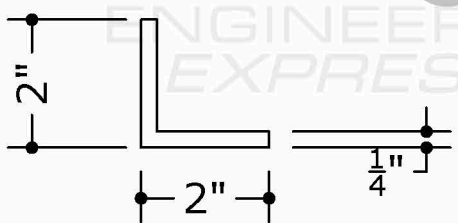
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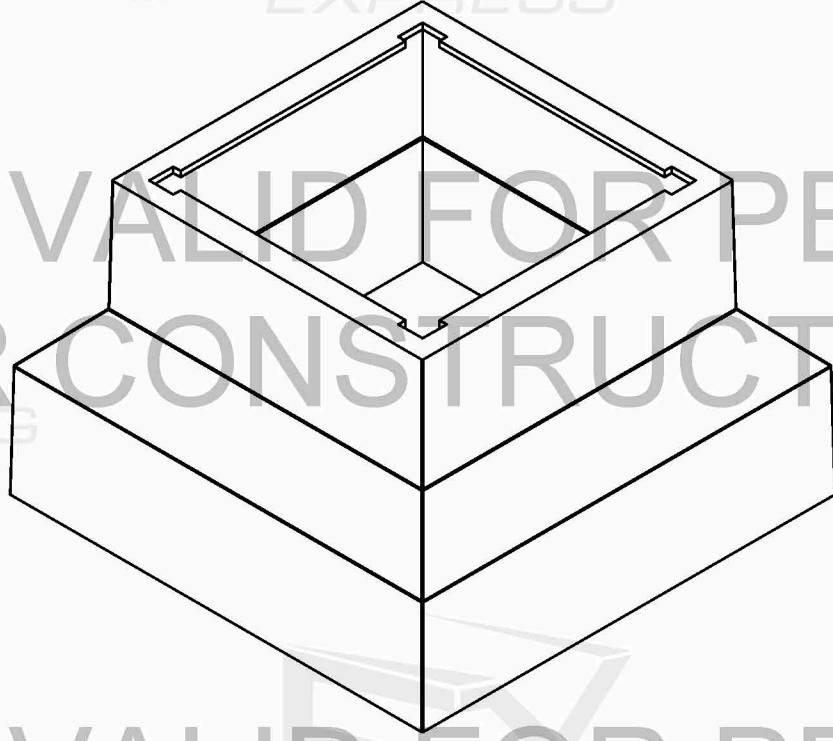
5 WD - POST
12 NOT TO SCALE DETAIL



6 WD - POST CAP
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7 WD - BASE CONNECTION L-ANGLE
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8 WD - POST BASE COVER
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WD + INSERT - MEMBER SIZE HARDWARE COMPONENT DETAILS

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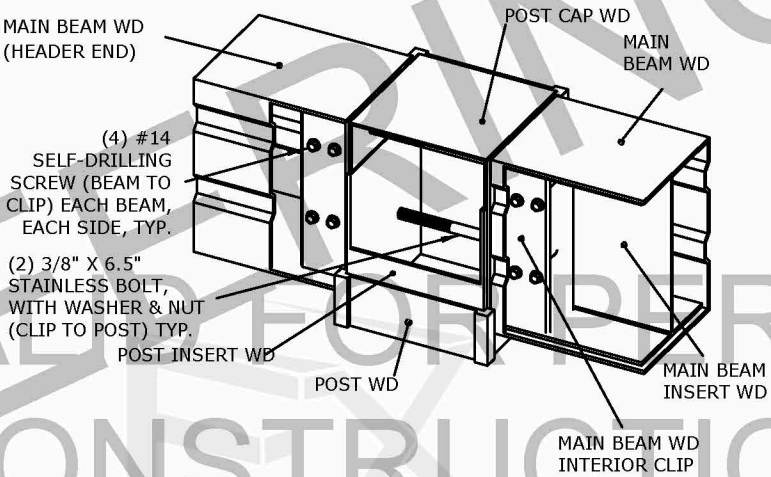
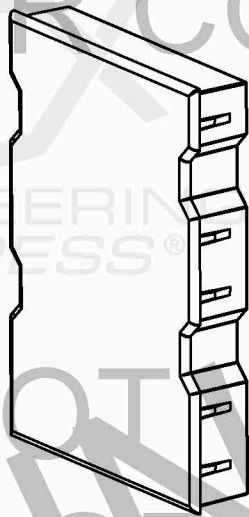
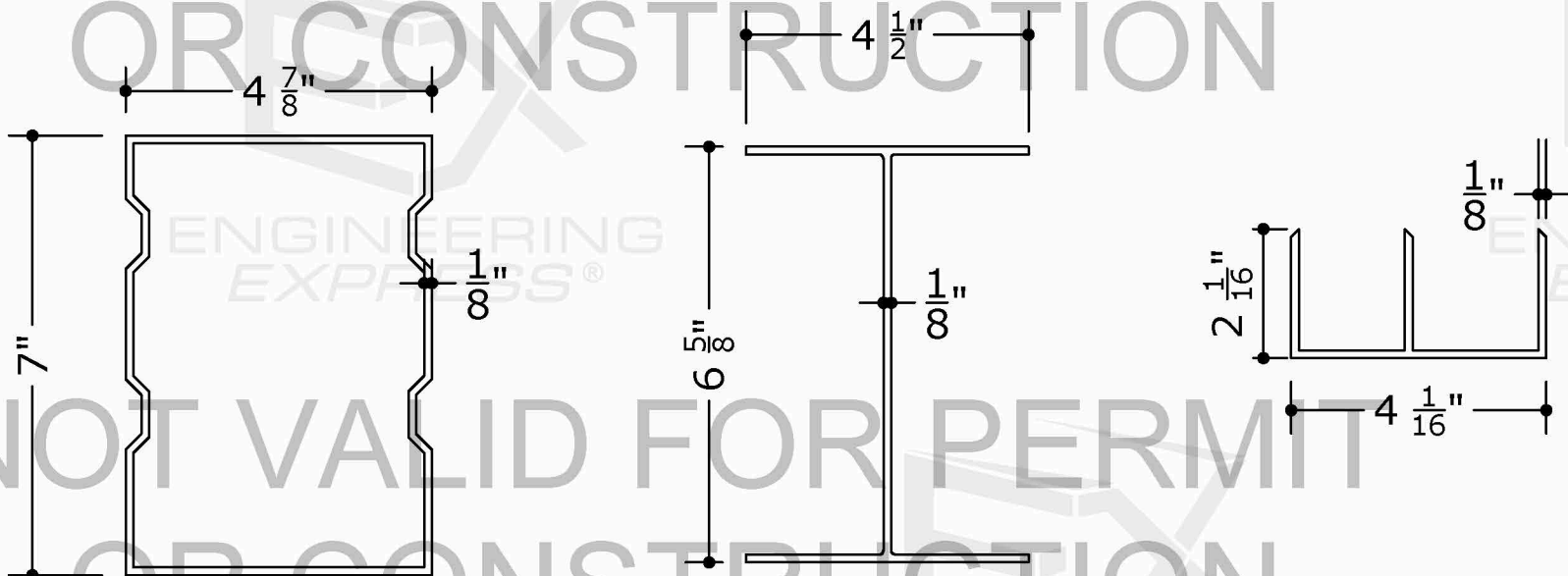
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1

WD+ - MAIN BEAM

13

NOT TO SCALE

DETAIL

1A

WD+ - BEAM INSERT

13

NOT TO SCALE

DETAIL

2

WD+ INTERIOR CLIP

13

NOT TO SCALE

DETAIL

3

WD+ - BEAM END CAP

13

NOT TO SCALE

DETAIL

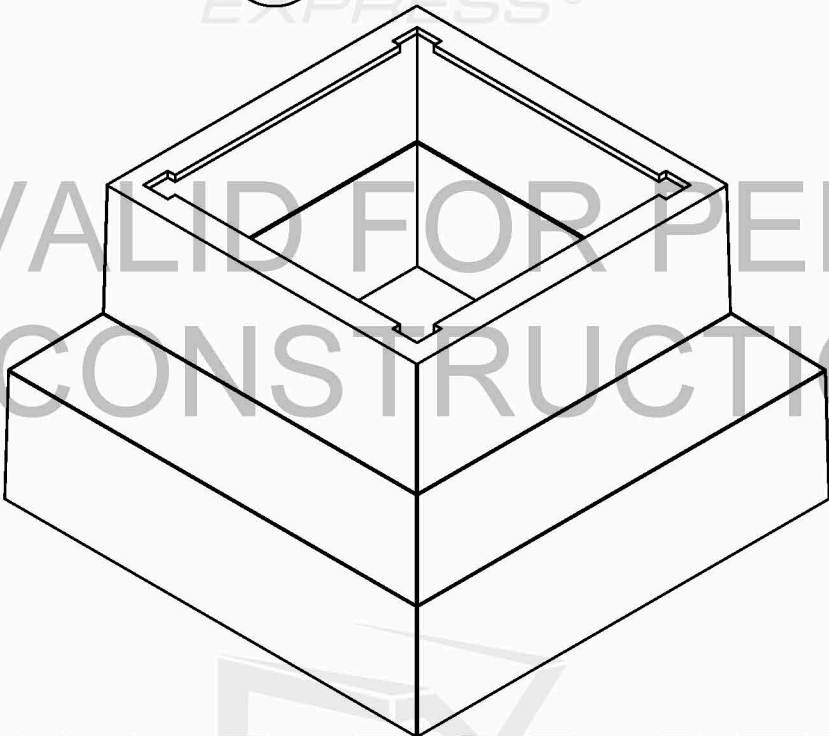
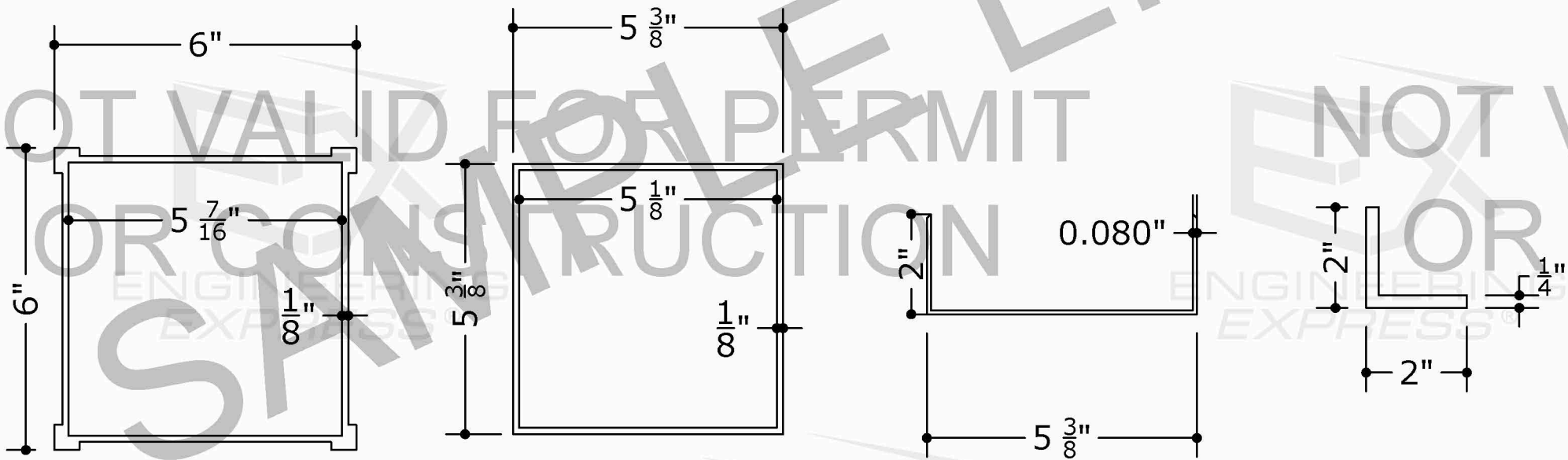
4

BEAM TO POST CONNECTION

13

NOT TO SCALE

ISO



5

WD+ - POST

13

NOT TO SCALE

DETAIL

5A

WD+ - POST INSERT

13

NOT TO SCALE

DETAIL

6

WD+ - POST CAP

13

NOT TO SCALE

DETAIL

7

WD - BASE CONECTION L-ANGLE

13

NOT TO SCALE

DETAIL

8

WD+ - POST BASE COVER

13

NOT TO SCALE

DETAIL

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ARIA SHADE TRELLIS PATIO COVER
GENERAL PERFORMANCE EVALUATION
FBC 7TH ED (2020); IBC (2018)

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	LAO	FLB	5/21/19
FBC 2020	CCB	AEM	5/03/21
2022 UPDATE	CCB	FLB	11/03/22

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