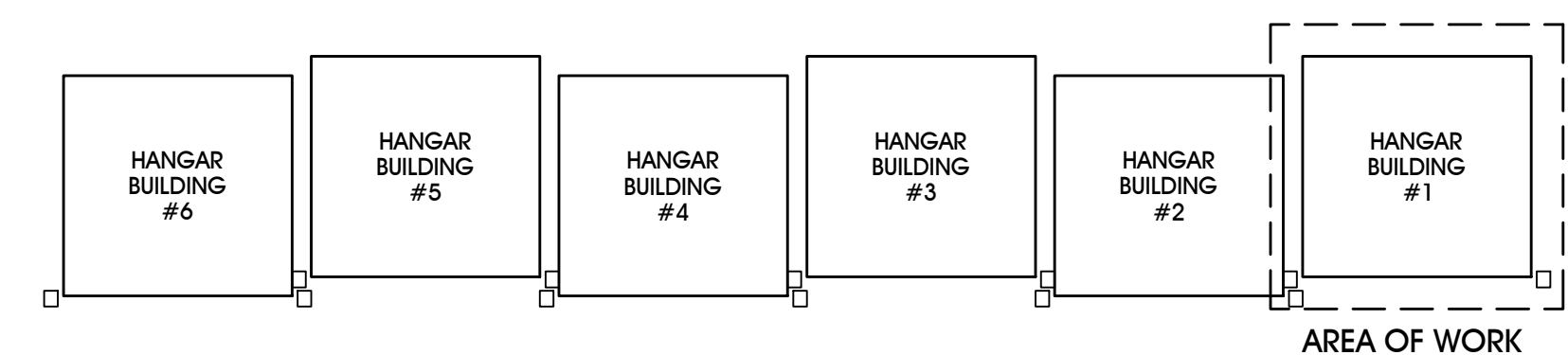


ENLARGED PLAN SHOWING RELATION TO ADJACENT HANGAR COLUMNS
 3/16" = 1'-0"

NOTE: SOME CONDITIONS MAY BE FLIPPED BETWEEN OTHER BUILDINGS. SEE SITE PLAN FOR ORIENTATION



KEY PLAN NO SCALE

4" CONC. SLAB ON GRADE w/ 6x6 W1.4 x W1.4 W.W.F. ON TREATED COMPACTED FILL. PROVIDE TSE-8 ALL AROUND. SLOPE AS SHOWN (TYPICAL x 5 WHERE SHOWN)

LEGEND

+PSF	WINDOW & DOOR DESIGN PRESSURES (PSF) (TYPICAL AS SHOWN) SEE COMPONENT & CLADDING PRESSURES FOR DISTANCES OF END ZONES FOR EACH BUILDING
D	DOOR
W	WINDOW
OHD	OVERHEAD DOOR
RD	ROLLING DOOR
L	LOUVER

FOUNDATION PLAN
 3/8" = 1'-0"

NOTES:

- ALL ELEVATIONS REFER TO TOP OF MAIN FLOOR SLAB @ +0'-0" U.O.N. (SEE CIVIL PLANS FOR ACTUAL ELEVATION).
- COLUMN BASE PLATES @ +0'-0" (TYPICAL)
- CONTRACTOR SHALL COORDINATE STRUCTURAL WORK WITH ARCHITECTURAL, MECHANICAL, PLUMBING & ELECTRICAL DRAWINGS FOR VERIFICATION OF LOCATIONS & DIMENSIONS OF ALL PROJECT REQUIREMENTS. ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT OR ENGINEER OF RECORD BEFORE PROCEEDING WITH WORK.
- ALL DIMENSIONS ARE TO ROUGH OPENING OR CENTERLINE OF STRUCTURE (TYPICAL, UNLESS OTHERWISE NOTED).
- SEE ARCHITECTURAL DRAWINGS FOR ANY DIMENSIONS NOT SHOWN.
- S.C.: DENOTES 1/2" WIDE x 1/2" x 1" DEEP SAW CUTS IN SLAB AS SHOWN IN PLAN. TO BE MADE AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY ENOUGH TO PREVENT THE AGGREGATE FROM BEING DISLOGGED BY THE SAW BLADE.
- W.J.: DENOTES 1/2" VERTICAL CMU WALL JOINT AS SHOWN IN PLAN. SEE TYPICAL CMU WALL JOINT DETAIL.
- E.J.: DENOTES EXPANSION JOINT

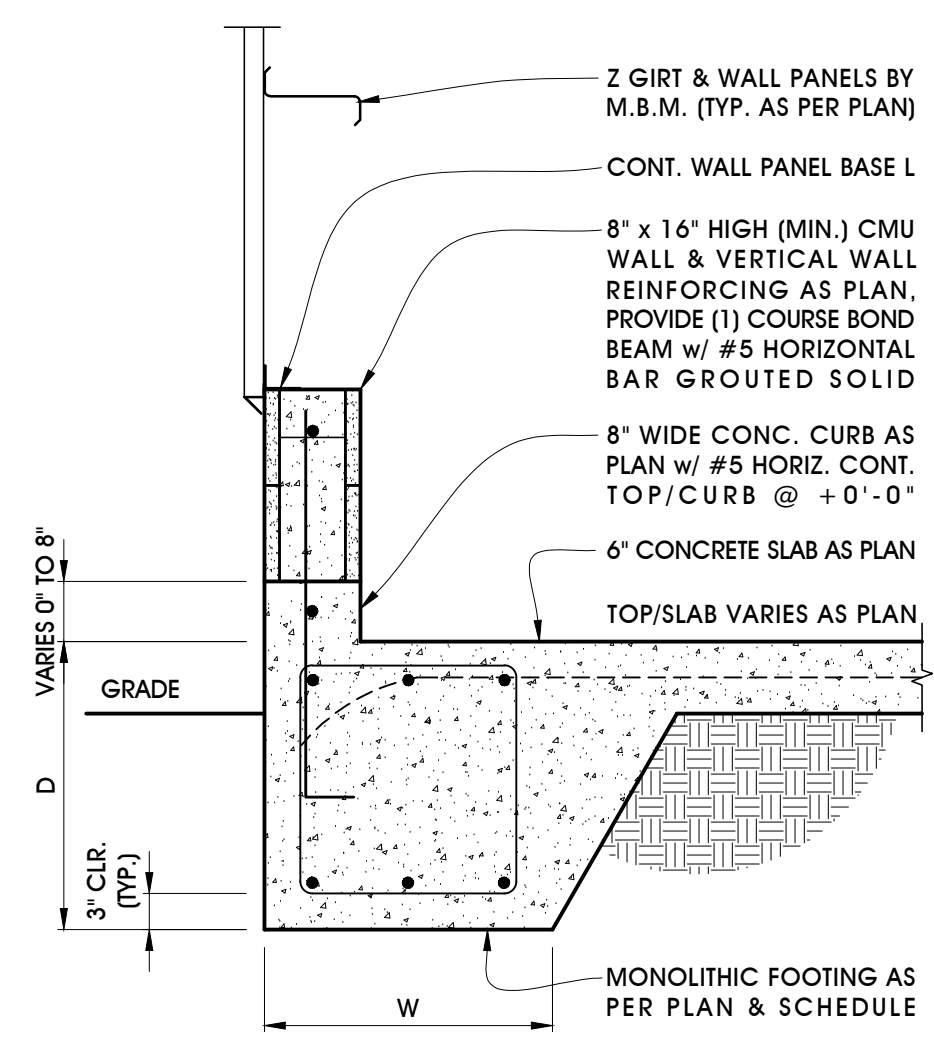
CONSULTANT:
M. ENGINEERING, INC.
 Consulting Structural Engineer
 2030 37th Avenue
 Vero Beach, Florida 32909
 Phone: 772.569.1257 Fax: 772.569.4041

VERO AIRCRAFT HANGER 1
 2600 Airport North Drive,
 Vero Beach, FL 32960

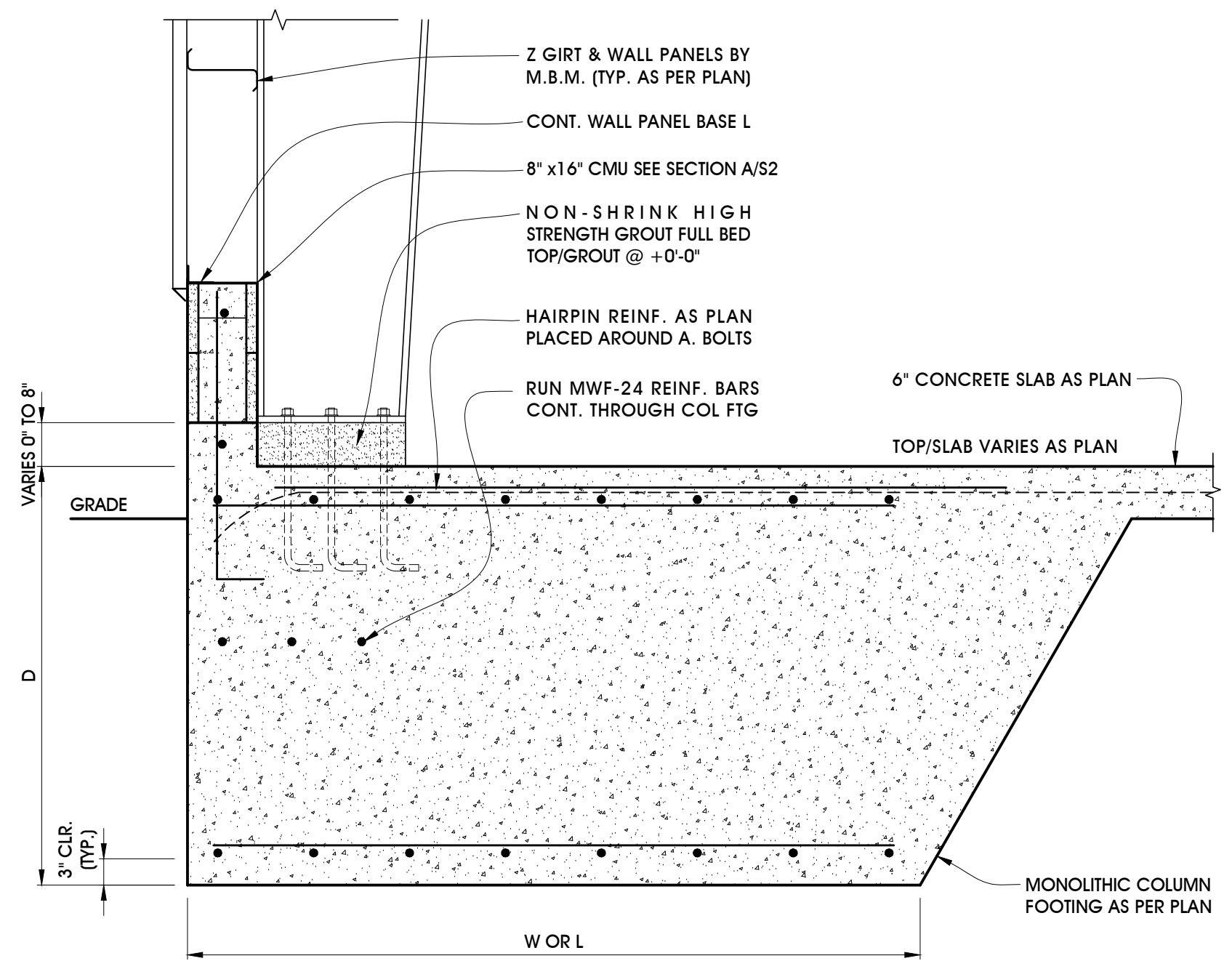
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 4316 WEST BROWARD BOULEVARD
 FORT LAUDERDALE, FL 33309
 PHONE: (954) 702-8825 FAX: (954) 332-4839
 AA #25000655 WWW.CPZARCHITECTS.COM



DRAWING TITLE:
 FOUNDATION PLAN & SECTIONS
 DRAWN: S.C. BAKER
 CHECKED: M. LUE
 DATE: 02.09.23
 SCALE: AS NOTED
 PROJECT NO. 22-199
 SHEET:

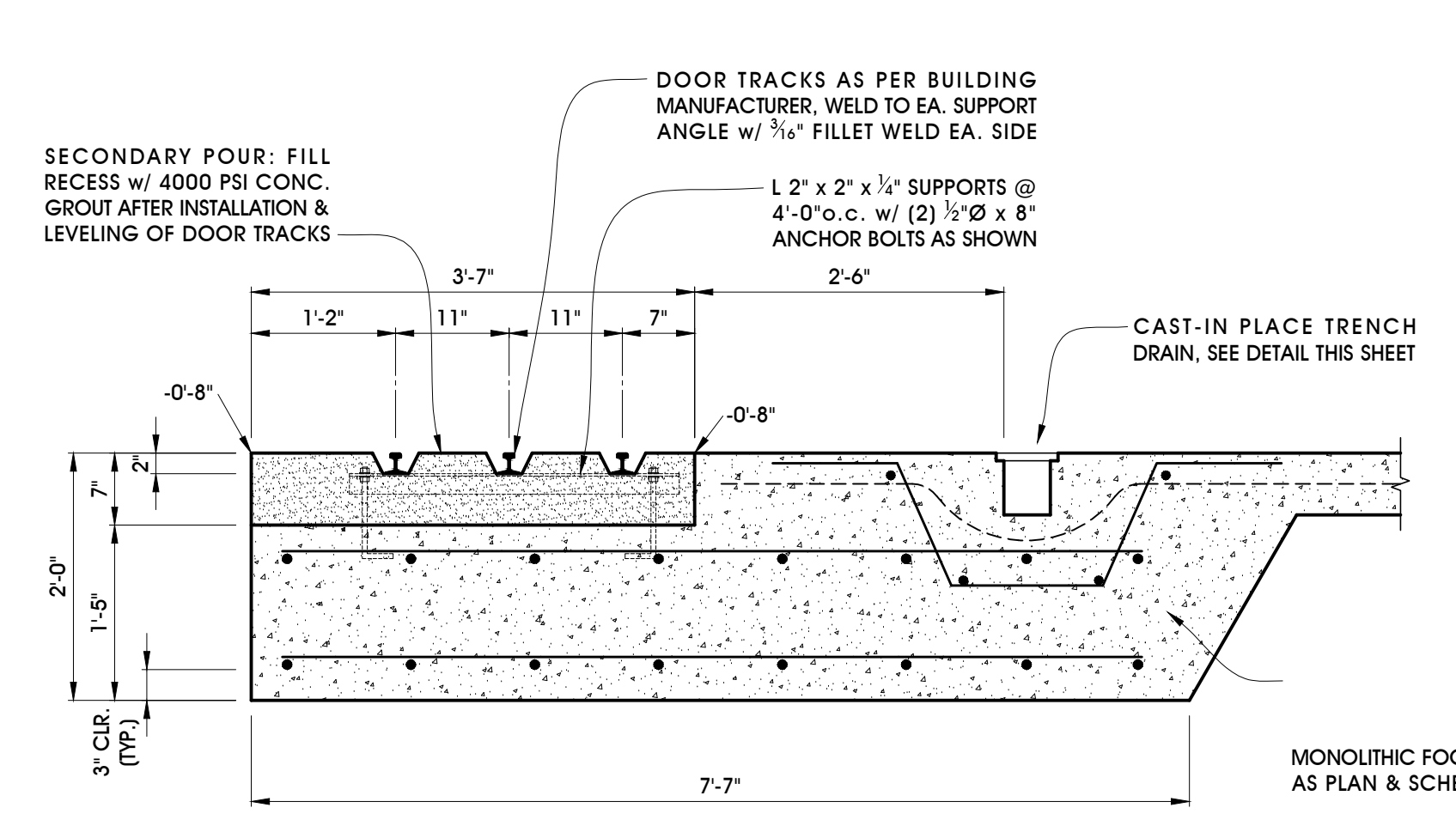


SECTION A-S2 $\frac{3}{4}'' = 1'-0''$

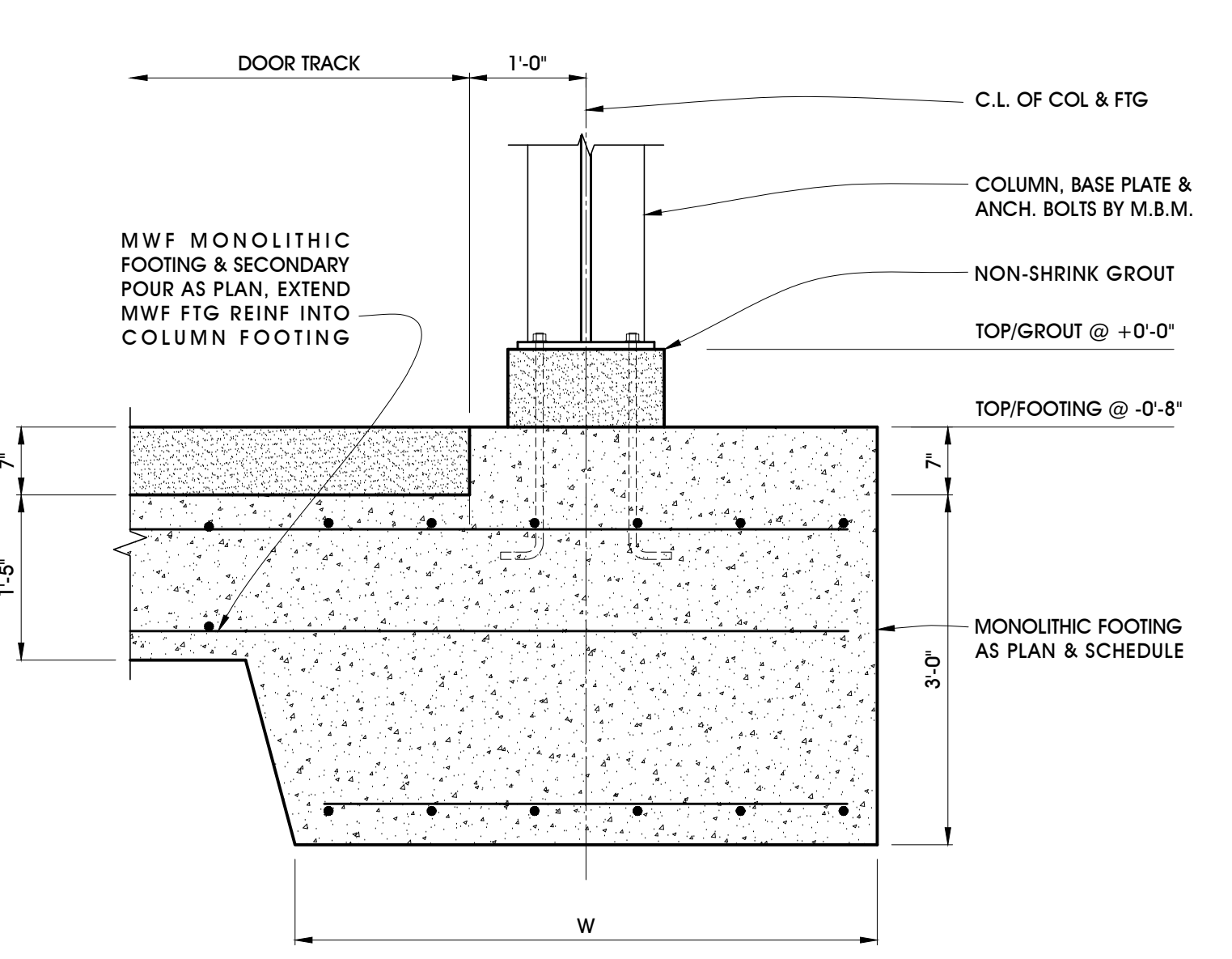


SECTION B-S2 $\frac{3}{4}'' = 1'-0''$

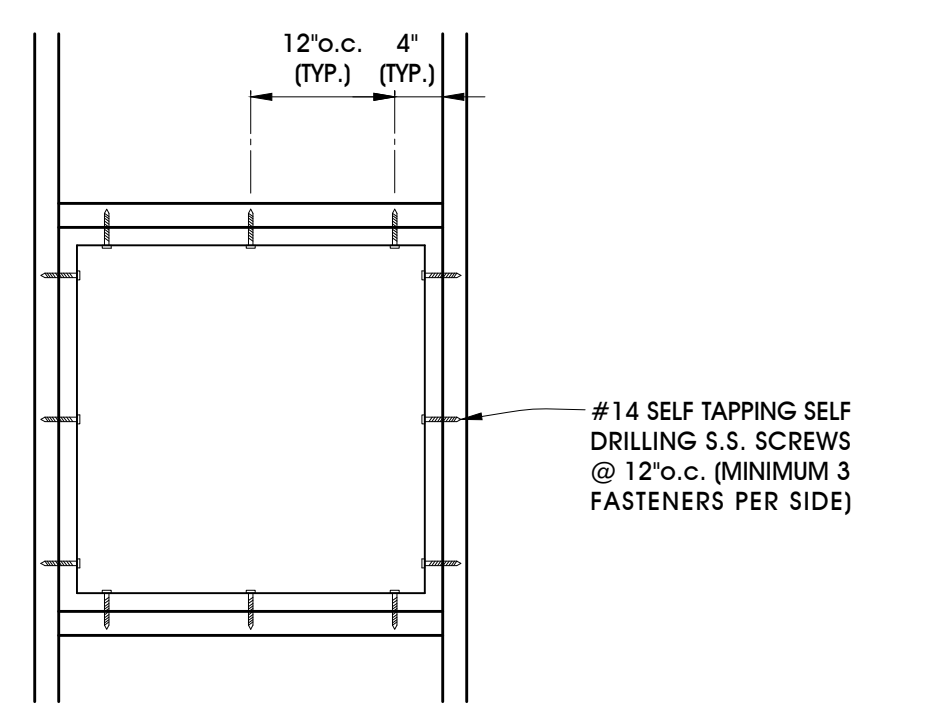
NOTE:
 M.B.M. TO INCREASE ANCHOR BOLT EMBEDMENT LENGTHS TO ACCOUNT FOR THE SLAB SLOPE AND GROUT BASE HEIGHT OF 8" MAXIMUM.



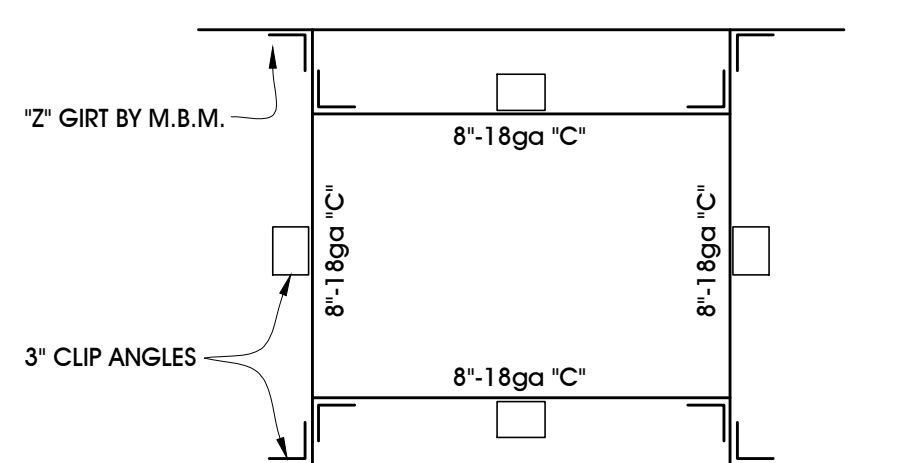
SECTION C-S2 $\frac{3}{4}'' = 1'-0''$



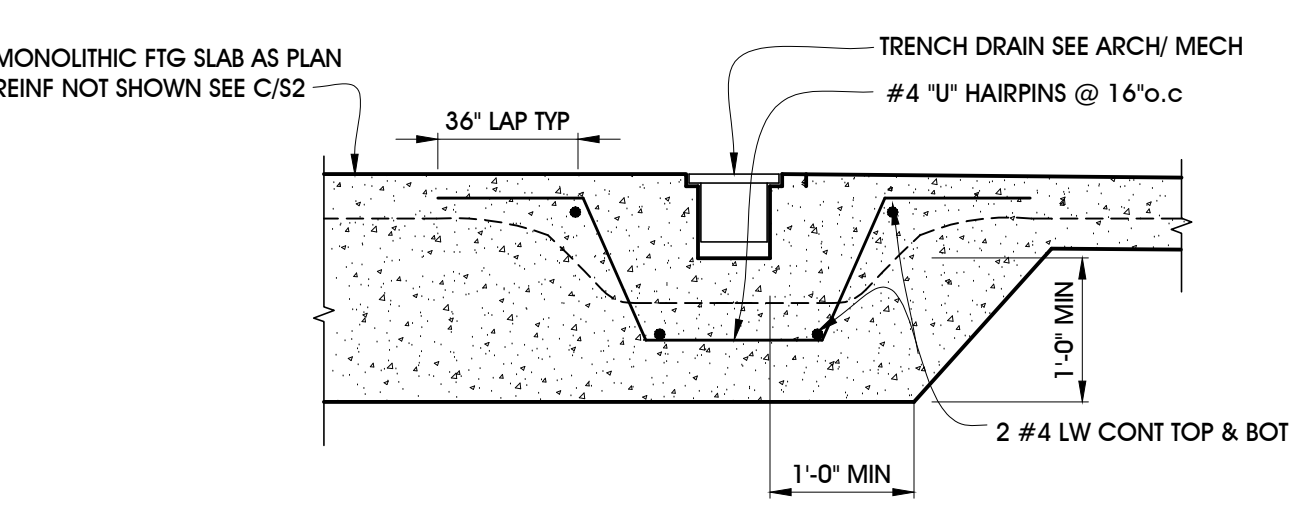
SECTION D-S2 $\frac{3}{4}'' = 1'-0''$



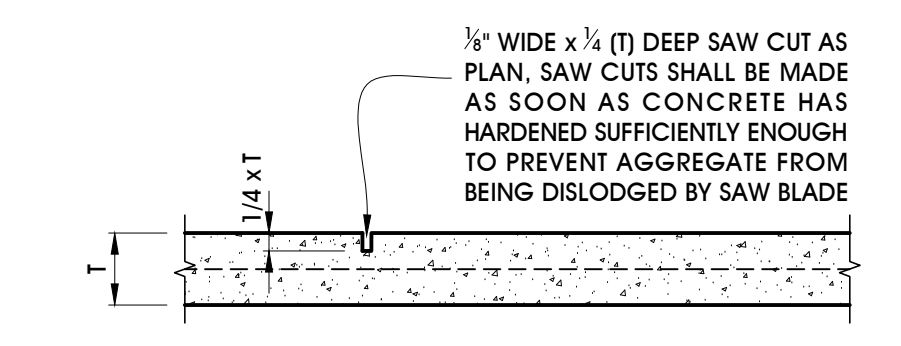
TYPICAL WINDOW & DOOR ATTACHMENT DET. TO METAL $\frac{3}{4}'' = 1'-0''$
 DOORS & WINDOWS SHALL BE DESIGNED, MANUFACTURED, INSTALLED & CERTIFIED TO WITHSTAND THE MIN. DESIGN WIND PRESSURES AS NOTED IN PLAN & SHALL BE IMPACT RATED.



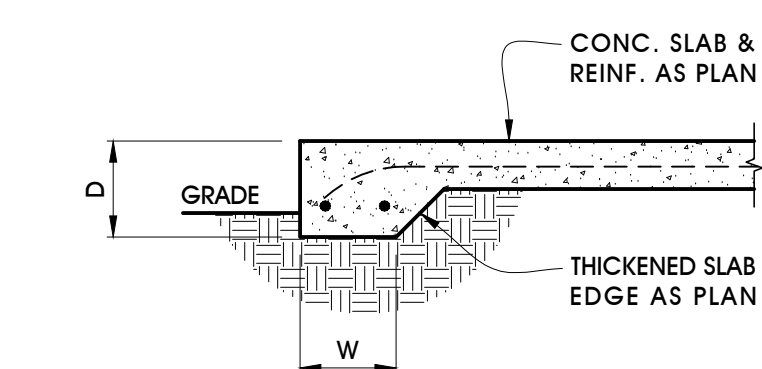
TYP. WALL VENT FRAMING $\frac{3}{4}'' = 1'-0''$
 NOTE:
 6"-18ga "C" STUDS AT EACH SIDE OF OPENING w/ CLIP L 3" x 3" x 16ga x 4" LONG w/ (4) # 14 SELF-DRILLING SELF-TAPPING SCREWS EACH LEG



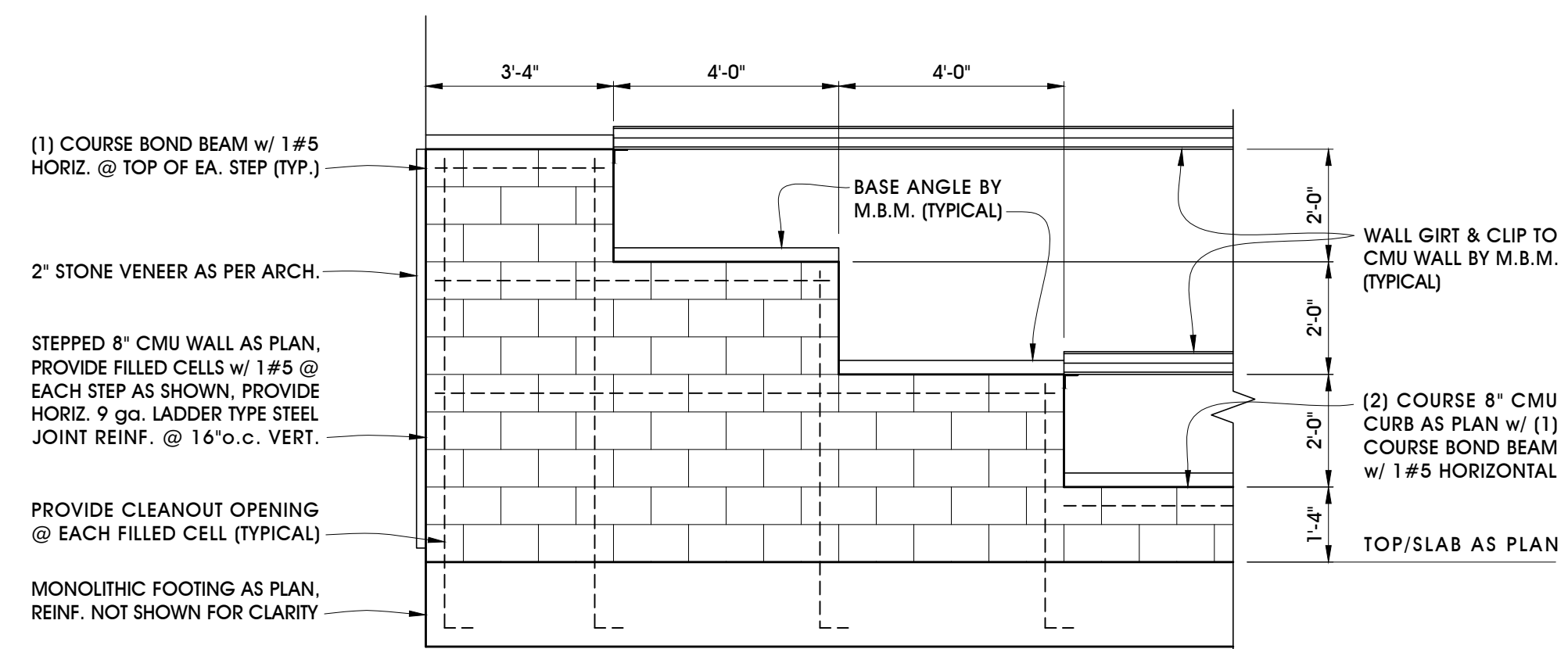
TYP. TRENCH DRAIN $\frac{3}{4}'' = 1'-0''$



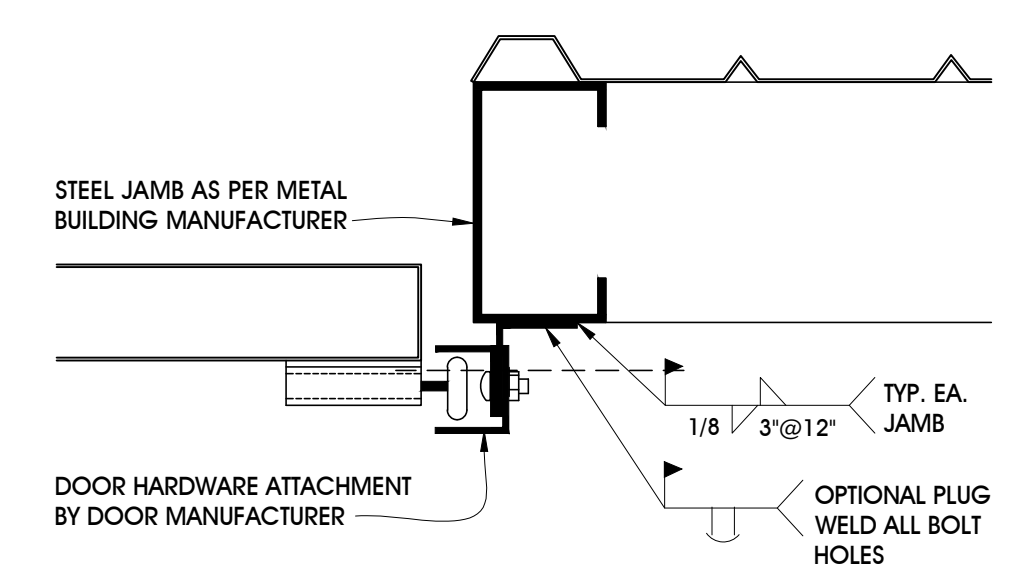
TYPICAL SAW CUT DETAIL NO SCALE



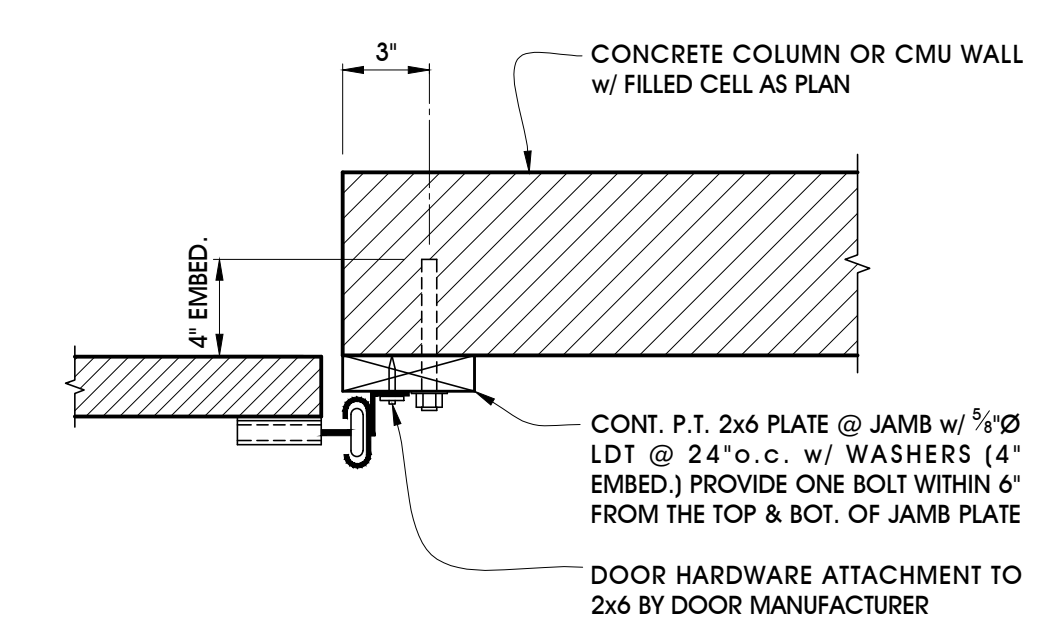
TYPICAL TSE THICKENED SLAB EDGE $\frac{3}{4}'' = 1'-0''$



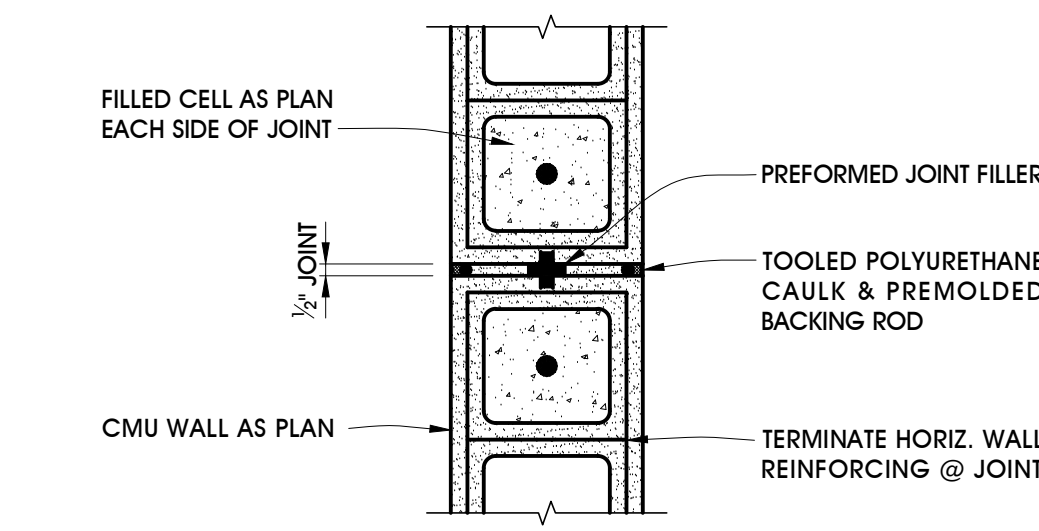
TYPICAL STEPPED CMU WALL ELEVATION $\frac{3}{8}'' = 1'-0''$



TYPICAL OVERHEAD DOOR JAMB ATTACHMENT TO METAL FRAME $1\frac{1}{2}'' = 1'-0''$
 1. OVERHEAD DOORS SHALL BE DESIGNED, MANUFACTURED, INSTALLED & CERTIFIED TO WITHSTAND A DESIGN WIND PRESSURE AS SHOWN IN PLAN.
 2. REFER TO MANUF. CONNECTION REQUIREMENTS IF MORE STRINGENT.



TYPICAL OVERHEAD DOOR JAMB ATTACHMENT TO CMU $1\frac{1}{2}'' = 1'-0''$
 1. OVERHEAD DOORS SHALL BE DESIGNED, MANUFACTURED, INSTALLED & CERTIFIED TO WITHSTAND A DESIGN WIND PRESSURE AS SHOWN IN PLAN.
 2. REFER TO MANUF. CONNECTION REQUIREMENTS IF MORE STRINGENT.



TYPICAL CMU WALL JOINT DETAIL $1\frac{1}{2}'' = 1'-0''$
 NOTES:
 1. 1/2" CMU WALL JOINT AS PLAN & NOTED AS THUS: W.J.
 2. DISCONTINUE HORIZONTAL JOINT REINFORCING EACH SIDE OF JOINT.
 3. CONTINUE ALL HORIZONTAL BEAM REINFORCING THROUGH THE JOINT.
 4. ALIGN MASONRY HEAD JOINTS IN BOND BEAM WITH WALL JOINT.
 5. ALIGN STUCCO JOINTS WITH WALL JOINTS.

VERO AIRCRAFT HANGER 1
 2600 Airport North Drive,
 Vero Beach, FL 32960

CPZ ARCHITECTS, INC.
 4316 WEST BROWARD BOULEVARD
 FORT LAUDERDALE, FL 33309
 PHONE: (954) 702-8825 FAX: (954) 332-4839
 AA #26060655 WWW.CPZARCHITECTS.COM

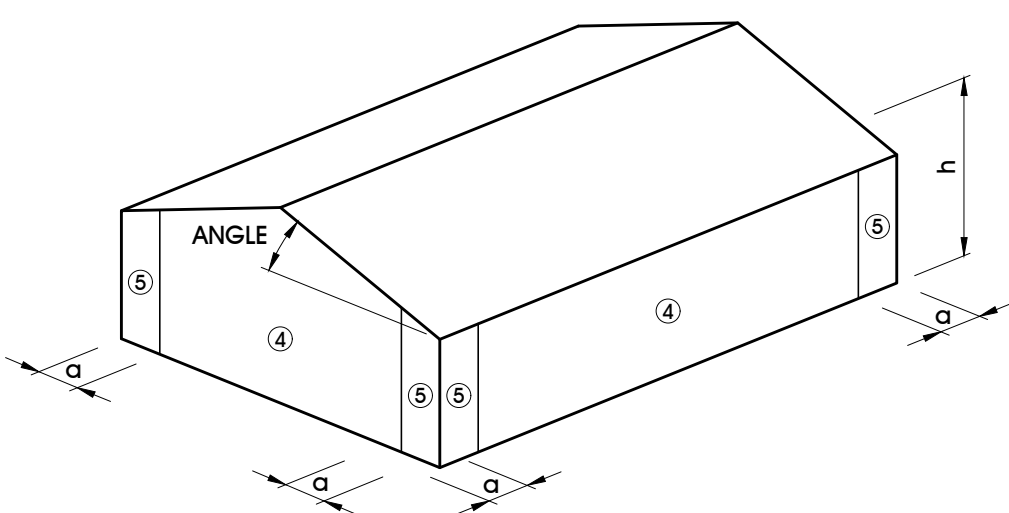


DRAWING TITLE:
 SECTIONS & DETAILS
 DRAWN S.C.BAKER
 CHECKED M.LUE
 DATE 02.09.23
 SCALE AS NOTED
 PROJECT NO. 22-199
 SHEET:

HANGAR AND OFFICE ROOF PITCH 1:12

COMPONENT AND CLADDING PRESSURES (PSF) (ASD)							
ZONE	EFFECTIVE AREA (SQUARE FEET)						
	0 < 10	11 < 20	21 < 30	31 < 40	41 < 50	51 < 100	
ROOF	1	+16	-35	+15	-35	+13	-35
	2	+16	-81	+15	-76	+13	-69
	3	+16	-111	+15	-100	+13	-87
SOFFIT WALL	4	+39	-42	+37	-40	+35	-38
	5	+39	-52	+37	-48	+35	-44
	6	-75	-69	-69	-77	-77	-64

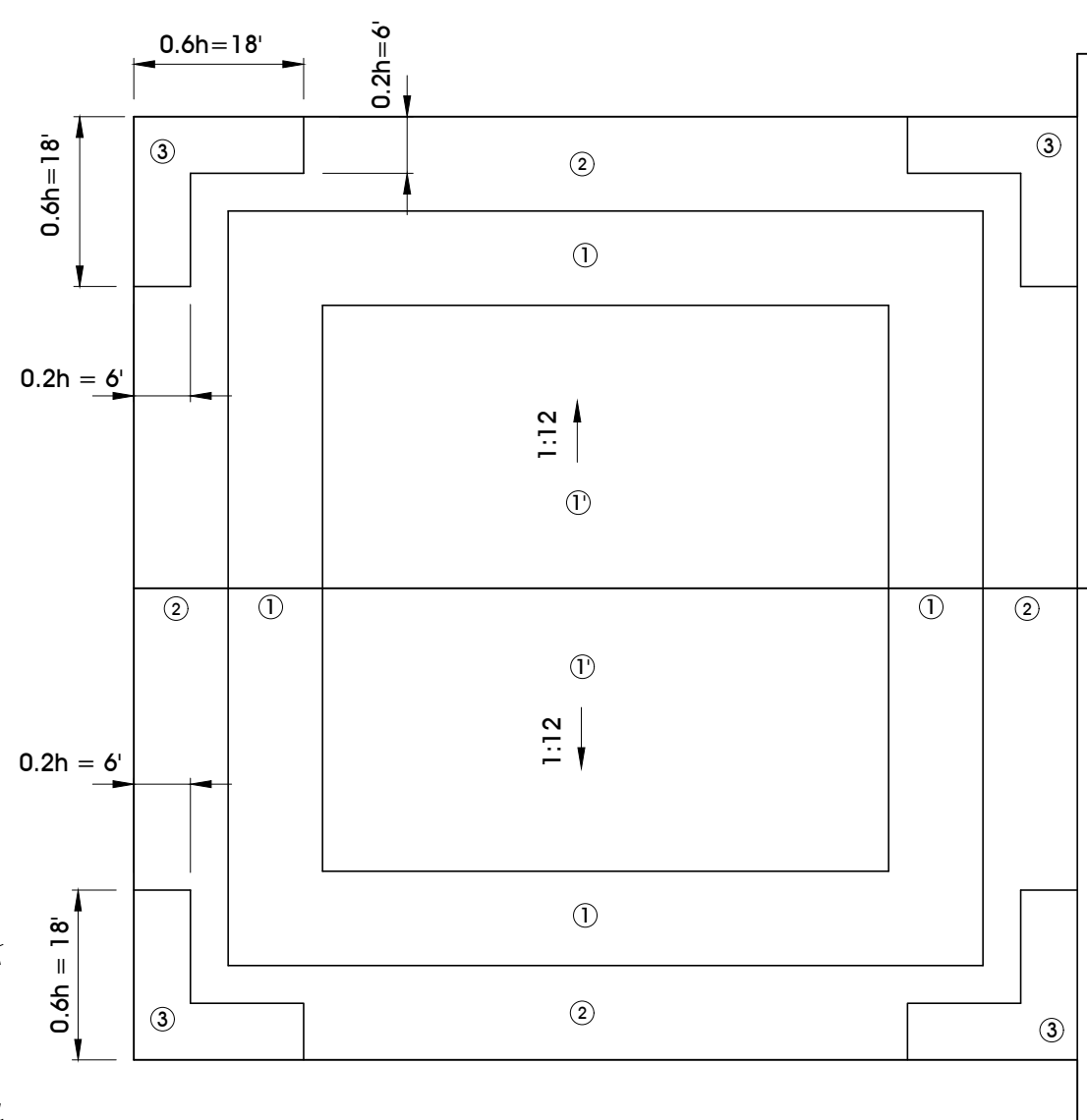
NOTES:
 1. END ZONE 5 IS WITHIN A DISTANCE OF (a) = 10.0 FT. FROM CORNERS
 2. BLDG DESIGN HEIGHT h=30'
 0.6h = 18 FT
 0.2h = 6 FT



COMPONENT AND CLADDING PRESSURE ZONES

NO SCALE

- NOTES:
 1. PRESSURES ARE IN ALLOWABLE STRESS DESIGN (ASD) FOR WINDOWS, DOORS, ROOFING, METAL DECK, AND STEEL ROOF JOISTS AND GIRDERS AND ALL OTHER BUILDING COMPONENTS AND CLADDING.
 2. POSITIVE PRESSURES INDICATE PRESSURES ACTING TOWARD A PROJECTED SURFACE. NEGATIVE PRESSURES INDICATE PRESSURES ACTING AWAY FROM A PROJECTED SURFACE.
 3. NET DESIGN ROOF PRESSURES SHALL BE CALCULATED USING SELF WEIGHT OF MATERIAL.
 4. END ZONE "a" = PER COMPONENT AND CLADDING SCHEDULE



DESIGN CRITERIA
 THE FLORIDA BUILDING CODE, 7th EDITION (2020)

HANGAR
 ROOF LOADS
 DEAD (PER MBM)
 COLLATERAL LOAD (SPRINKLER) 2 PSF
 LIVE 20 PSF (REDUCIBLE)
 CEILING FAN.....SEE ARCH & MECH PLANS

WIND LOADS PER ASCE 7-16
 WIND SPEED REGION V_(ult) 160 MPH
 V_(asf) 124 MPH
 WIND BORNE DEBRIS REGION
 ENCLOSED STRUCTURE
 BUILDING RISK CATEGORY II
 BUILDING DESIGN HEIGHT < 30 FT.
 ROOF PITCH 1 / 12
 INTERNAL PRESSURE COEFF ± 0.18
 EXPOSURE C
 HEIGHT & EXPOSURE COEFF 1.4

STRUCTURAL NOTES

- CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- ALL CONSTRUCTION SHALL BE BRACED AND SHORED BY THE CONTRACTOR AS REQUIRED TO SAFELY PERFORM THE WORK.
- ALL DOORS, WINDOWS AND HARDWARE MUST BE DESIGNED AND CERTIFIED TO WITHSTAND THE DESIGN WIND PRESSURES NOTED IN THIS DOCUMENT AND GLAZED OPENINGS SHALL BE IMPACT RESISTANT AS REQ. BY THE FLORIDA BUILDING CODE.
- THE MINIMUM STRUCTURAL SUBMITTALS SHALL BE AS PER SPECS AND AS FOLLOWS:
 - CONCRETE MIX DESIGNS
 - MASONRY & ACCESSORIES
 - REINFORCEMENT
 - STRUCTURAL STEEL
 - PRE-ENGINEERED METAL BUILDING

SIGNED & SEALED

FOUNDATION

- FOUNDATIONS ARE DESIGNED BASED ON AN ALLOWABLE BEARING PRESSURE OF 2,500 PSF.
- CONTRACTOR SHALL VERIFY THAT THE MIN. COMPACTION OF 95% OF ITS MODIFIED PROCTOR IN ACCORDANCE WITH ASTM D1557 IS OBTAINED PRIOR TO FOOTING & SLAB PLACEMENT. REFER TO SOLS REPORT.
- FOOTINGS SHALL BE PLACED ON COMPACTED SOIL FREE OF ORGANIC DEBRIS.
- REFER TO SOILS INVESTIGATIVE REPORT BY KSM REPORT NO. 2204470d, DATED MAY 17, 2022 FOR ALL SITE PREPARATION REQUIREMENTS.

CONCRETE

- CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF A.C.I. 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" AND A.C.I. 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
- THE MINIMUM CONCRETE 28 DAY COMPRESSIVE STRENGTHS SHALL BE AS FOLLOWS:
 FOUNDATIONS/SLAB 4000 PSI SLUMP 5" ± 1" MAX. W/C = 0.45 AGGR. 3/4" WITH FIBERMESH
 MASONRY GROUT 3000 PSI SLUMP 10" ± 1" N/A
- ALL INTERIOR CONCRETE SLABS ON GRADE SHALL INCLUDE BARRIER ONE ADMIXTURE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED DOSAGE RATE. INSTALLATION AND TESTING. ALL CONCRETE MIX DESIGNS SHALL BE SUBMITTED FOR APPROVAL AND HIGHLIGHT THE INCLUSION OF BARRIER ONE IN THE SLAB ON GRADE MIX DESIGNS.
- REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A615 GRADE 60.
- WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH ASTM A185 AND SHALL BE ADEQUATELY SUPPORTED AT 36" o.c. E.W.
- THE MINIMUM CONCRETE COVERAGES SHALL BE AS FOLLOWS:
 CAST AGAINST EARTH.....3" EXPOSED TO WEATHER..... 1-1/2"
- PROVIDE 90° CORNER LAP SPLICES AT ALL INTERSECTIONS.
- THE MINIMUM LAP SPICE SHALL BE 30 BAR DIAMETERS OR AS NOTED IN SCHEDULE.
- CONCRETE SHALL BE TESTED BY AN INDEPENDENT TESTING LABORATORY IN ACCORDANCE WITH ASTM C39. A MINIMUM OF (5) TEST CYLINDERS SHALL BE TAKEN FOR EACH POUR, AND ADDITIONAL SETS FOR EVERY 50 CUBIC YARDS OF POUR. CYLINDERS SHALL BE TESTED AS FOLLOWS:
 1 AT 5 DAYS, 1 AT 14 DAYS, 1 AT 28 DAYS & 1 AT 56 DAYS (IF THE MINIMUM STRENGTH IS NOT MET IN 28 DAYS)
- CONTRACTOR SHALL PROVIDE SAW CUTS IN SLABS ON GRADE AND SECOND FLOOR PRECAST TOPPING SLABS AS PLAN OR AT A MAXIMUM SPACING OF 20'-0" o.c. EACH WAY OR 400 S.F. U.O.N. AND AT ALL RE-ENTRANT CORNERS. SAW CUTS SHALL BE 1/4 OF THE SLAB DEPTH AND SHALL BE PERFORMED AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY ENOUGH TO PREVENT THE AGGREGATE FROM BEING DISLODGED BY THE SAW BLADE. THIS IS AN EFFORT TO CONTROL THE STRESSES, AN INHERENT PROPERTY OF CONCRETE WHICH SOMETIMES RESULTS IN CRACKS, WHICH IS NOT UNCOMMON.

CONCRETE MASONRY

- CONCRETE MASONRY WORK SHALL BE IN ACCORDANCE WITH ACI 530.1/ASCE 6/TMS 602. SPECIFICATION FOR CONCRETE MASONRY STRUCTURES AND ACI 530/ASCE 5/TMS 402. BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.
- CONCRETE MASONRY UNITS SHALL BE IN CONFORMANCE WITH ASTM C90, GRADE N, TYPE II. MASONRY UNITS SHALL BE TESTED IN ACCORDANCE WITH ASTM C140 AND SHALL HAVE A MINIMUM NET AREA STRENGTH OF 1900 PSI (F_m = 1500 PSI).
- GROUT SHALL BE IN CONFORMANCE WITH ASTM C476. COARSE TYPE WITH A 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI AND A SLUMP OF 9" ± 1".
- MORTAR SHALL BE IN ACCORDANCE WITH ASTM C270, TYPE S.
- ALL MASONRY JOINTS SHALL BE WATER-TIGHT AND CONCAVE TOOLED WITH A NON-STAINING TOOL.
- EXTERIOR SURFACES SHALL BE SEALED AND PAINTED.
- PROVIDE CLEANOUTS FOR ALL GROUTED CONSTRUCTION & LIMIT MORTAR PROTRUSIONS TO 1/2" MAX. IN GROUTED CELLS.
- ALL MASONRY WALLS SHALL BE CONSTRUCTED IN RUNNING BOND WITH 9 GA. LADDER TYPE JOINT REINFORCING SPACED 16" o.c. VERTICALLY. LAP 8" MINIMUM AT ALL CORNERS & SPLICES.
- PROVIDE PRECAST CONCRETE LINTEL WITH 2#6 HORIZ. BARS GROUTED SOLID WITH 8" MINIMUM BEARING AT ALL MASONRY OPENINGS (TYP. UNLESS OTHERWISE NOTED).

STRUCTURAL STEEL

- STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH A.I.S.C. "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", LATEST EDITION.
- THE MINIMUM STRUCTURAL STEEL GRADES SHALL BE AS FOLLOWS:
 PLATES & ANGLES ASTM A36 Fy = 36 KSI
 STRUCTURAL TUBE ASTM A500 Fy = 46 KSI
 PIPE ASTM A36 Fy = 36 KSI
 WF SHAPES..... ASTM A992 Fy = 50 KSI
- STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE A.I.S.C. "CODE OF STANDARD PRACTICE", LATEST EDITION.
- WELDING OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH A.W.S. D1.1 WITH E70XX ELECTRODES. FILLET WELDS SHALL BE A MINIMUM OF 3/16" UNLESS NOTED OTHERWISE.
- HIGH STRENGTH BOLTS SHALL BE IN ACCORDANCE WITH ASTM A325 & SHALL BE DESIGNED AS BEARING TYPE CONNECTIONS WITH THREADS EXCLUDED FROM THE SHEAR PLANE.
- ANCHOR BOLTS SHALL BE IN ACCORDANCE WITH ASTM A307.
- ALL MEMBERS SHALL BE POWER TOOL CLEANED AND PAINTED WITH A GRAY RUST INHIBITIVE SHOP PRIMER WITH A MINIMUM THICKNESS OF 1.5 MILS.

PRE-ENGINEERED METAL BUILDING

- PRE-ENGINEERED METAL BUILDING STRUCTURE SHALL BE DESIGNED & MANUFACTURED FOR ALL LOADS PRESCRIBED HEREIN.
- SUBMIT METAL BUILDING SHOP DRAWINGS AND REACTIONS SIGNED AND SEALED BY A FLORIDA REGISTERED ENGINEER FOR REVIEW BY THE ENGINEER OF RECORD PRIOR TO FABRICATION.
- ALL METAL BUILDING COMPONENTS SHALL BE COLD FORMED WITH A MINIMUM GRADE OF F_y = 50KSI AND SHALL BE IN ACCORDANCE WITH AISI AND AISC LATEST EDITION.
- ROOF PANELS SHALL BE A MINIMUM OF 24 GA STANDING SEAM PANELS INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS AS REQUIRED TO RESIST THE SPECIFIED WIND UPLIFT LOADS. COLOR SHALL BE AS SELECTED BY ARCHITECT AND OWNER.
- WALL PANELS SHALL BE A MIN. OF 26 GA GALVALUME AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS AS REQUIRED TO RESIST THE SPECIFIED WIND LOADS. COLOR SHALL BE AS SELECTED
- ALL MEMBERS SHALL BE POWER TOOL CLEANED AND PAINTED WITH A RUST INHIBITIVE SHOP PRIMER WITH A MIN. THICKNESS OF 1.5 MILS. U.N.O
- DIAGONAL WALL AND ROOF BRACING SHALL BE PLACED IN BAYS WITHOUT OPENINGS.
- METAL BUILDING MANUFACTURER SHALL PROVIDE ALL THE NECESSARY TRIM, FLASHING AND COVER PLATES AS NEEDED TO PROVIDE A COMPLETE WEATHER PROOFED BUILDING ENVELOPE AND STRUCTURE.
- METAL BUILDING MANUFACTURER SHALL DESIGN THE FRAMING TO SUPPORT ALL LOADS SPECIFIED IN PLAN.

FOUNDATION SCHEDULE							
MARK	T/FTG ELEV	SIZE D x W x L	BOT. REINF.		TOP REINF.		REMARKS
			L.W.	S.W.	L.W.	S.W.	
TSE-8	AS PLAN	8" x 8" x CONT.	1#5				THICKENED SLAB EDGE
MWF-24	AS PLAN	24" x 24" x CONT.	3#5		3#5		#4 TIES @ 24" o.c. THICK. SLAB EDGE
MWF-91	AS PLAN	24" x 91" x CONT.	8#6	#6 @ 24"	8#6	#6 @ 24"	THICKENED SLAB EDGE
F-4	AS PLAN	24" x 48" x 48"	5#6	5#6	5#6	5#6	MONOLITHIC COLUMN FOOTING
F-7	AS PLAN	48" x 84" x 84"	8#6	8#6	8#6	8#6	MONOLITHIC COLUMN FOOTING
F-8	AS PLAN	48" x 96" x 96"	9#6	9#6	9#6	9#6	MONOLITHIC COLUMN FOOTING
F-59	AS PLAN	36" x 60" x 108"	6#6	10#6	6#6	9#6	MONOLITHIC COLUMN FOOTING

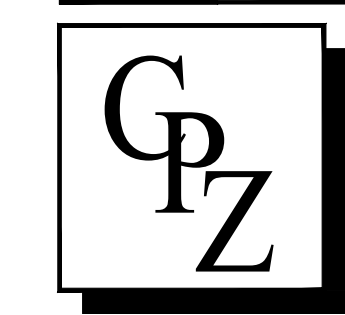
NOTES:

ACI STANDARD HOOK LENGTHS								
BAR SIZE (#)	3	4	5	6	7	8	9	
LENGTH (INCH)	6	8	10	12	14	16	19	

LAP SPICE LENGTHS (3000 PSI)								
BAR SIZE (#)	3	4	5	6	7	8	9	
TOP BARS	28"	37"	47"	56"	81"	93"	105"	
ALL OTHER BARS	18"	24"	30"	36"	42"	48"	54"	

VERO AIRCRAFT HANGER 1
 2600 Airport North Drive,
 Vero Beach, FL 32960

CPZ ARCHITECTS, INC.
 4316 WEST BROWARD BOULEVARD
 FORT LAUDERDALE, FL 33309
 PHONE: (954) 792-8282 FAX: (954) 337-4399
 AA #26006655 WWW.CPZARCHITECTS.COM



DRAWING TITLE:
 DETAILS & SPECIFICATIONS
 DRAWN S.C.BAKER
 CHECKED M.LUE
 DATE 02.09.23
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