

**GENERAL NOTES:**

- ALL CONSTRUCTION AND DESIGN SHALL CONFORM TO THE 2023 FBC (8TH ED)
- THE STRUCTURAL DRAWINGS SHALL BE UTILIZED IN CONJUNCTION WITH OTHER CONSULTANTS' DRAWINGS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE REQUIREMENTS OF THE AWNINGS INTO THEIR SHOP DRAWINGS AND CONSTRUCTION.
- THE STRUCTURAL DRAWINGS ARE INTENDED FOR THE STRUCTURE TO ACT AS WHOLE ONCE CONSTRUCTION IS COMPLETE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE SAFETY AND STABILITY (I.E, TEMPORARY BRACING IF REQUIRED) DURING CONSTRUCTION AS A RESULT OF CONSTRUCTIONS METHODS AND SEQUENCES.
- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING STRUCTURES. THE ENGINEER SHALL BE NOTIFIED ON ANY DISCREPANCY BETWEEN THE EXISTING CONDITIONS AND CONSTRUCTION DOCUMENTS.
- DESIGN CRITERIA**
  - CODE: 2023 FBC (8TH ED)
  - LOADS AND DESIGN CRITERIA: THE FOLLOWING LOADS AND CRITERIA WERE USED IN ADDITION TO THE DEAD LOAD OF THE STRUCTURE.

**DEAD LOADS:**

REFER TO BUILDING MANUFACTURE SHOP DRAWINGS - DEAN STEEL BUILDINGS - SUWANNEE COUNTY AIRPORT HANGER PROECT - SHEETS 1 -6

**LIVE LOADS:**

REFER TO BUILDING MANUFACTURE SHOP DRAWINGS

**SOIL CRITERIA:**

ALLOWABLE SOIL BEARING 2000 PSF  
 PASSIVE PRESSURE 150 PCF  
 FRICTION COEFFICIENT 0.35

**WIND CRITERIA:**

WIND SPEED: 120 MPH (3-SECOND GUST)  
 CATEGORY: II  
 EXPOSURE C  
 INTERNAL PRESSURES: +/- 0.18

**CLADDING AND COMPONENTS**

REFER TO DEAN BUILDING SHOP DRAWINGS FOR BUILDING'S CLADDING AND COMPONENTS DESIGN PRESSURES

REFER TO INTEGRITY STRUCTURAL ENGINEERING DESIGN CALCULATIONS FOR HANGER DOOR'S ( HIGHER POWER DOOR) CLADDING AND COMPONENTS DESIGN PRESSURES.

**GENERAL STRUCTURAL NOTES**

**ADDITION CONCRETE ITEMS:**

SLAB AND WALL REINFORCING LAP SPLICE LENGTHS

LAP SPLICE LENGTHS FOR REINFORCING IN 4000 PSI CONCRETE AS FOLLOWS

BAR SIZE	TENSION SPLICE		DEVELOPMENT LENGTH
	TOP	OTHER	
#3	21"	15"	13"
#4	29"	20"	17"
#5	35"	25"	21"
#6	43"	31"	25"
#7	54"	39"	32"
#8	71"	51"	42"

LAP SPLICE LENGTHS FOR REINFORCING IN 3000 PSI CONCRETE AS FOLLOWS

BAR SIZE	TENSION SPLICE		DEVELOPMENT LENGTH
	TOP	OTHER	
#3	21"	15"	13"
#4	29"	20"	17"
#5	35"	25"	21"
#6	46"	33"	27"
#7	63"	45"	37"
#8	83"	59"	49"

**NOTES:**

- LAPPED SPLICE LENGTHS BASED ON ASTM A-615, GRADE 60, REBAR
- REINFORCING BARS CLASSIFIED AS TOP BARS WHEN MORE THAN 12" ON CONCRETE IS CAST BENEATH RESPECTIVE REINFORCING BAR.
- COMPRESSION SPLICES SHALL PERMISSIBLE ONLY WHERE SPECIFICALLY NOTED ON THE DRAWINGS
- TENSION SPLICES SHALL BE USED IN ALL BEAMS, SLABS, AND WALLS UNLESS OTHERWISE NOTED.
- WHEN LAPPING LARGER BARS WITH SMALLER BARS, LAP LENGTH FOR SMALLER BAR SHALL GOVERN RESPECTIVE SPLICE.
- SPLICE CONTINUOUS TOP REINFORCING BARS AT CENTER OF CLEAR SPAN WITH COMPRESSION SPLICES
- SPLICE CONTINUOUS REINFORCING BARS AT CENTER OF SUPPORTING ELEMENT WITH COMPRESSION SPLICES.

**FLOOR SLABS:**

- FLOOR SLABS SHALL BE ON AT LEAST 4" OF RELATIVELY CLEAN GRANULAR MATERIAL SUCH AS SAND, SAND AND GRAVEL, OR CRUSHED STONE. GRANULAR MATERIAL SHALL HAVE 100% PASSING THE 1 1/2" SIEVE AND A MAXIMUM OF 10% PASSING THE NO. 200 SIEVE.
- STRUCTURAL FILL SHALL BE PLACED IN THIN LOOSE LIFTS NOT EXCEEDING 12" IN THICKNESS AND COMPACTED WITH A HEAVY ROLLER. EACH LIFT SHALL BE THOROUGHLY COMPACTED WITH THE LABORATORY ROLLER TO PROVIDE DENSITIES TO AT LEAST 95% OF THE PROCTOR MAXIMUM DRY DENSITY. STRUCTURAL FILL SHALL CONSIST OF AN INORGANIC NON-PLASTIC, GRANULAR SOIL CONTAINING LESS THAN 10% MATERIAL PASSING THE 200 MESH SIEVE.

**POST-INSTALLED REBAR:**

- POST-INSTALLED REINFORCING BAR CONNECTIONS SHALL BE DESIGNED PER THE ACI BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318). POST-INSTALLED REINFORCING BAR CONNECTIONS SHALL BE CONSIST OF HILTI EPOXY SYSTEMS OR EQUAL
- THE DESIGN OF STRAIGHT POST-INSTALLED REINFORCING BARS SHALL BE PREFORMED PER THE DEVELOPMENT AND SPLICE REQUIREMENTS OF THE ACI 318. THE POST-INSTALLED REINFORCING BAR SYSTEM IS AN ALTERNATIVE TO CAST-IN-PLACE REINFORCING BARS GOVERNED BY ACI 318 AND IBC CHAPTER 19.
- THE EPOXY SYSTEM SHALL BE TESTED IN ACCORDANCE WITH THE ICC-ES ACCEPTANCE CRITERIA FOR POST-INSTALLED EPOXY ANCHORS IN CONCRETE ELEMENTS (ACI 308), TABLE 3.8 TECHNICAL DATE SHALL BE PUBLISHED IN AN ICC-ES EVALUATION SERVICE REPORT SHOWING COMPLIANCE WITH IBC.
- POST-INSTALLED REINFORCING BAR INSTALLATION SHALL BE PERFORMED BY PERSONNEL TRAINED TO INSTALL THE SYSTEM PER THE MANUFACTURED PRINTED INSTALLATION INSTRUCTION (MP1), AS INCLUDED IN THE ANCHOR PACKAGING.

**PRE-ENGINEERED METAL BUILDING FRAME:**

- THE COMPLETE DESIGN OF METAL BUILDING INCLUDING ALL COMPONENTS SHOWN OR NOTE SHOWN ON THE DRAWINGS SHALL BE ACCOMPLISHED BY THE BUILDING MANUFACTURER. SEE THE ARCHITECTURAL DRAWINGS FOR EAVE HEIGHTS AND WALL CONDITIONS.
- THE DESIGN SHALL BE MADE BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE PROJECT IS CONSTRUCTED.  
 THE BUILDING AND ALL OF ITS COMPONENTS SHALL BE DESIGNED FOR THE FOLLOWING DEAD AND LIVE LOADS
  - ACTUAL WEIGHT OF STEEL STRUCTURE
  - 5 PSF COLLATERAL LOAD IN ADDITION TO ACTUAL WEIGHT
  - 20 PSF ROOF LIVE LOAD
  - ANY ADDITIONAL LOADS AND REACTIONS THAT ARE SHOWN OR NOTED ON THE DRAWINGS, SEE PLAN NOTES.
  - WIND LOADS AS REQUIRED BY CURRENT ADDITION OF THE FLORIDA BUILDING CODE
- RIGID FRAME COLUMN BASES SHALL BE DESIGNED FOR A PIN CONNECTION,
- THE DEFLECTION OF GIRTS AND PURLINS SHALL BE LIMITED TO 1/180 OF THE SPAN. DEFLECTION OF RIGID FRAMES SHALL BE LIMITED TO 1/360 OF THE SPAN. DEFLECTIONS SHALL BE BASED ON TOTAL LOAD (DEAD LOAD PLUS LIVE LOAD).
- THE PREFABRICATED METAL BUILDING SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE ABOVE NOTES. THE PLANS AND DETAILS, SPECIFICATIONS TO BE IN ACCORDANCE WITH THE RECOMMENDED DESIGN PRACTICES MANUAL OF THE METAL BUILDING MANUFACTURES ASSOCIATION (MBMA) AND IN ACCORDANCE WITH MBMA SPECIFICATIONS

**CONCRETE AND REINFORCING STEEL:**

- ALL CONCRETE DESIGNED PER CURRENT EDITION OF AC1 318
- CONCRETE SHALL HAVE THE FOLLOWING MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS:
  - FOUNDATION WALLS, PIERS, AND FOOTINGS 4000 PSI
  - SLAB ON CARE: 4000 PSI
  - ALL OTHER CONCRETE 4000 PSI
- ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE WITH A NORMAL AIR DENSITY OF 145 PSF.
- PROVIDE CONSTRUCTION JOINTS WHERE SHOWN, OMIT NONE AND ADD NONE WITHOUT WRITTEN APPROVAL FROM THE ARCHITECT / ENGINEER. SUBMIT DRAWINGS SHOWING ALL PROPOSED CONSTRUCTION JOINT LOCATIONS FOR APPROVAL PRIOR TO PREPARATIONS OF AFFECTED REINFORCEMENT SHOP DRAWINGS
- MINIMUM ELAPSED TIME BETWEEN ADJACENT CONCRETE PLACEMENTS SHALL BE 48 HOURS
- CONCRETE MIX DESIGN FOR EACH TYPE AND STRENGTH OF CONCRETE SPECIFIED SHALL BE SUBMITTED FOR ARCHITECT / ENGINEER REVIEW 30 DAYS PRIOR TO PLACEMENT OF CONCRETE
- ALL REINFORCING STEEL ASTM A615 GRADE 60, ALL WELDED WIRE FABRIC ASTM A185

**REINFORCING STEEL:**

- ALL BAR REINFORCEMENT SHALL BE CONFORM TO ASTM 615 GRADE 60.
- WELD WIRE FABRIC REINFORCEMENT SHALL CONFORM TO ASTM A185
- CLEARANCE OF MAIN REINFORCEMENT FROM ADJACENT SHALL BE CONFORM TO THE FOLLOWING (UNLESS OTHERWISE SHOWN IN DETAIL).
  - UNFORMED SURFACES IN CONTACT WITH GROUND (FOOTING OR WALL BOTTOM).....3"
  - SLAB ON GRADE .....2 1/2"
  - FORMED SURFACE IN CONTACT WITH GROUND OR EXPOSED TO WEATHER (WALLS, PIERS).....2"
  - IN ALL CASES, CLEARANCE NOT LESS THAN DIAMETER OF BARS.
 NOTE: MAXIMUM DEVIATION FROM THESE REQUIREMENTS SHALL BE + 1/4" FOR SECTIONS 10" OR LESS AND +1/2" FOR SECTIONS OVER 10" THICK.
- REINFORCEMENT SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS UNLESS OTHERWISE INDICATED ON DRAWS
- WHERE REINFORCEMENT IS NOT SHOWN ON DRAWINGS, PROVIDE REINFORCEMENT IN ACCORDANCE WITH APPLICABLE TYPICAL DETAILS OR SIMILAR TO THAT SHOWN FOR MOST NEARLY SIMILAR SITUATION, AS DETERMINED BY THE ARCHITECT / ENGINEER. IN NO CASE SHALL REINFORCEMENT BE LESS THAN MINIMUM PERMITTED BY APPLICABLE CODES.
- ALL WORKMANSHIP AND MATERIAL SHALL BE CONFORMED TO THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI-315)
- ALL REINFORCEMENT SHALL BE INSPECTED AND APPROVED BY THE ARCHITECT/ENGINEER OR OWNER TESTING AGENCY BEFORE CONCRETE IS PLACED.
- WHERE CONTINUOUS BARS ARE CALLED FOR THEY SHALL BE CONTINUOUSLY AROUND CORNERS, LAPPED AT NECESSARY SPLICES AND HOOKED AT CONTINUOUS ENDS.
- WELDED WIRE FABRIC SHALL BE LAPPED ONE FULL MESH PANEL OR 6" MIN.
- ALL REINFORCING SPLICES SHALL CONFORM TO THE TABLE(S) PROVIDED IN THE GENERAL NOTES FOR STRENGTH OF CONCRETE BUT IN NO CASE LESS THAN THE REQUIREMENTS OF THE LATEST EDITION OF A318
- SLABS AND WALLS SHALL NOT BE SLEEVED OR BOXED OUT OR HAVE THEIR REINFORCEMENT INTERRUPTED EXCEPT SPECIFICALLY NOTED ON THE DRAWINGS. PROVIDE ADDITIONAL REINFORCEMENT AROUND OPENINGS AS SHOWN IN THE DETAILS.
- SUBMIT CHECKED SHOP DRAWINGS TO THE ARCHITECT / ENGINEER FOR REVIEW PRIOR TO FABRICATION OF REINFORCEMENT.
- BAR SUPPORTS SHALL BE GALVANIZED OR STAINLESS STEEL. BAR SUPPORTS IN CONTACT WITH EXPOSE SURFACE SHALL BE GALVANIZE AND PLASTIC TIPPED.

Revision Schedule		
Revision Number	Revision Description	Revision Date
0	ISSUED FOR CONSTRUCTION	12/28/25

SHEET SCHEDULE			
SHEET NUMBER	SHEET NAME	REVISION	REVISION DATE
S-001	STRUCTURAL NOTES	0	12/28/25
S-002	FOUNDATION PLAN	0	12/28/25
S-003	SECTION VIEWS	0	12/28/25

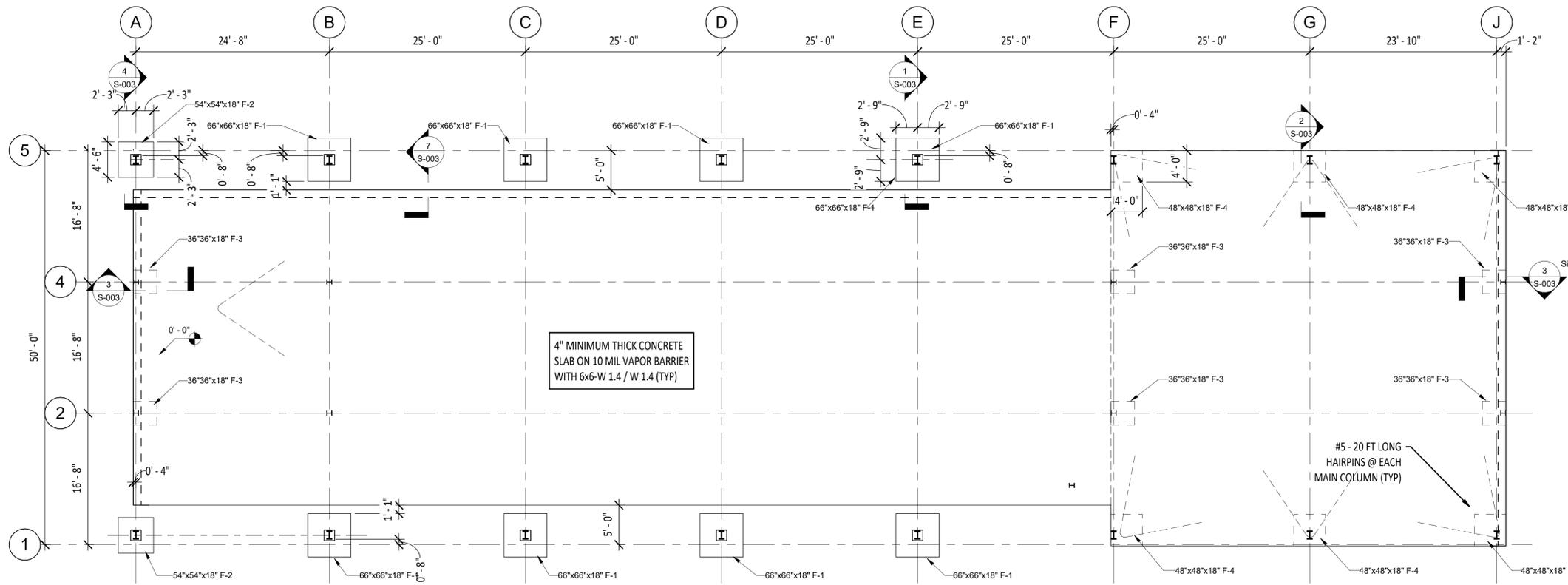
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<b>PUBLIC WORKS - FACILITY - FOUNDATION</b>		
COLUMBIA CO., FL		
<b>LMC STEEL</b>		GILL ENGINEERING SERVICES, INC AUTH # 30824 GARY GILL PE #51942 163 SW MIDTOWN PL. SUITE 101 LAKE CITY, FL 32025 386-590-1242
DRAWN BY: GG		
CHKD BY: GG		
APPRD BY: GG		
<b>STRUCTURAL NOTES</b>		
PROJECT #: 2550-076	DWG #: S-001	REV #: 0

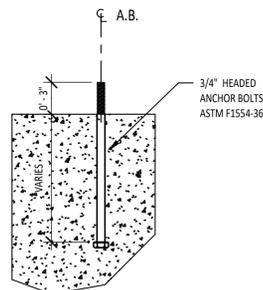
Revision Schedule		
Revision Number	Revision Description	Revision Date
0	ISSUED FOR CONSTRUCTION	12/28/25



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

FOUNDATION SCHEDULE				
FOUNDATION MARK	SIZE	REBAR	ANCHOR BOLT SIZE	EMBED.
F-1	5'-6"x5'-6"x18"	#6 BOTTOM @ 12" O.C.E.W	3/4"	12"
F-2	4'-6"x4'-6"x18"	#6 BOTTOM @ 12" O.C.E.W	3/4"	12"
F-3	3'-0"x3'-0"x18"	#6 BOTTOM @ 12" O.C.E.W	3/4"	12"
F-4	4'-0"x4'-0"x18"	#6 BOTTOM @ 12" O.C.E.W	3/4"	12"

REFER TO PEMB SHOP DRAWINGS FOR THE PLACEMENT LOCATION OF ALL ANCHOR BOLTS. SCOPE OF GES ENGINEERING DRAWINGS ARE LIMITED TO THE DESIGN OF THE STRUCTURAL FLOOR SLAB AND FOUNDATION SYSTEM.



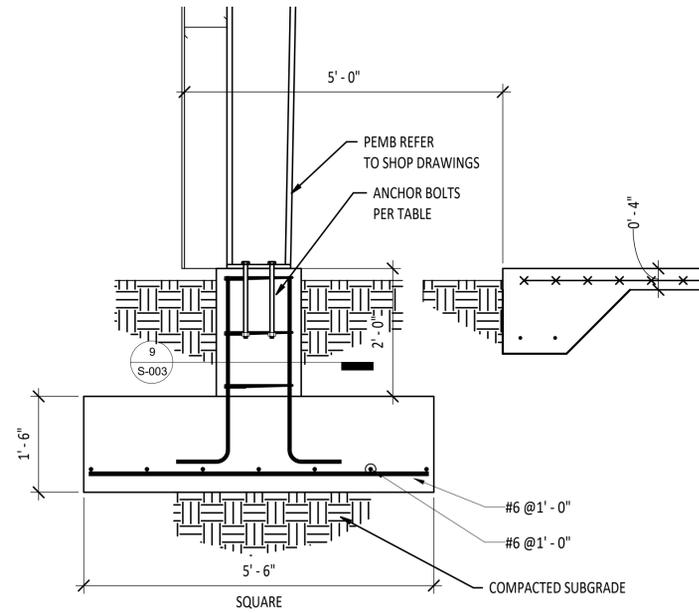
2 HEADED ANCHOR BOLT DETAIL  
1 1/2" = 1'-0"

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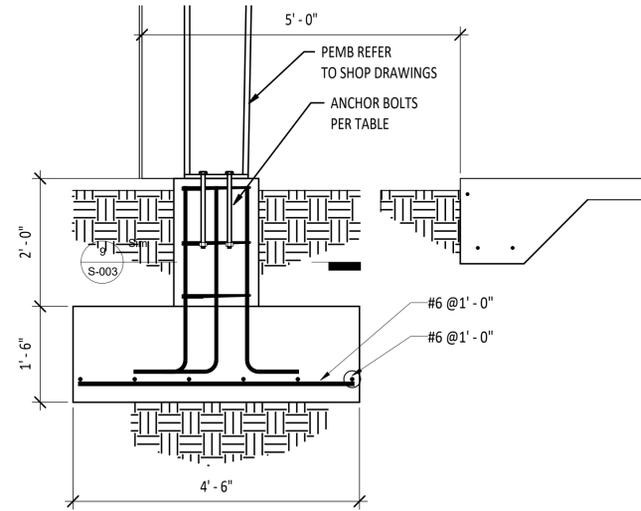


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DRAWN BY:	GG		
CHKD BY:	GG		
APPRD BY:	GG		
<b>FOUNDATION PLAN</b>			
PROJECT #:	2550-076	DWG #:	S-002
		REV #:	0

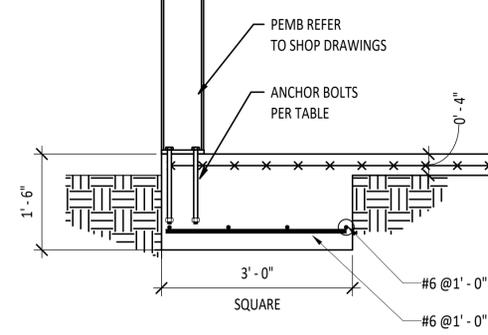
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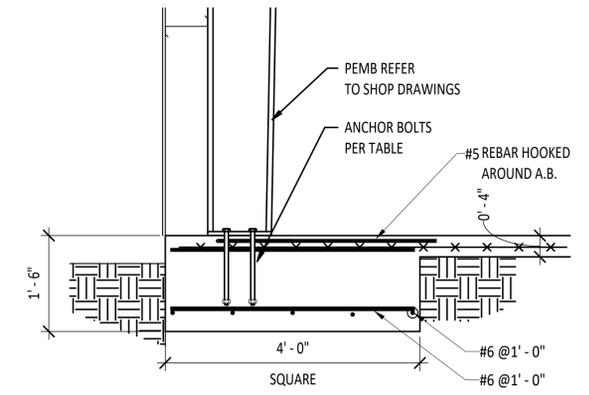
1 SECTION - FOOTING F-1  
3/4" = 1'-0"



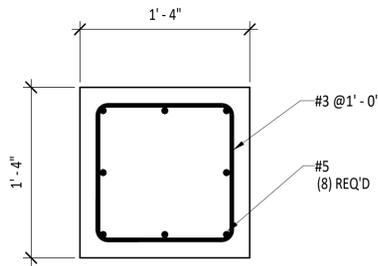
4 SECTION - FOOTING F-2  
3/4" = 1'-0"



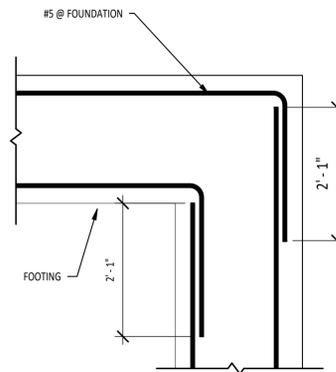
3 SECTION - FOOTING F-3  
3/4" = 1'-0"



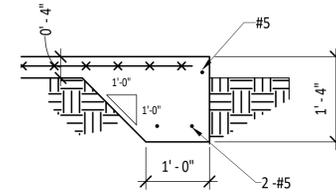
2 SECTION - FOOTING F-4  
3/4" = 1'-0"



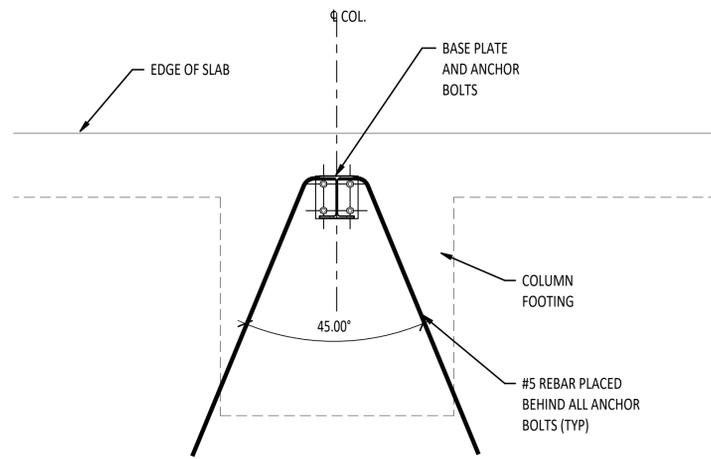
9 DETAIL - PEDESTAL  
1 1/2" = 1'-0"



5 TYP. FOOTING SPLICE  
3/4" = 1'-0"



7 DETAIL - THICKENED EDGE  
3/4" = 1'-0"



6 HAIR PIN DETAIL  
3/4" = 1'-0"

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GARY GILL PE #51942  
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**SECTION VIEWS**

PROJECT #:	DWG #:	REV #:
2550-076	S-003	0