

CONCRETE

CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF CHAPTER 19 OF THE 2023 FLORIDA BUILDING CODE (8TH EDITION).

CONCRETE MIXES: CONCRETE MIXES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

f'c (psi)	TEST AGE (DAYS)	USE
3,500	28	SLAB-ON-GRADE, CURBS AND PADS
3,500	28	FOUNDATIONS

WATER-REDUCING ADMIXTURES MAY BE INCORPORATED IN CONCRETE MIX DESIGNS, BUT SHALL CONFORM TO ASTM C 494, AND BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CaCl2 OR OTHER WATER-SOLUBLE CHLORIDE ADMIXTURES SHALL NOT BE USED.

WATER/CEMENT RATIO SHALL BE MEASURED BY WEIGHT AND SHALL BE BASED ON THE TOTAL CEMENTITIOUS MATERIAL. WATER/CEMENT RATIO AND WATER CONTENT SHALL BE DETERMINED BY THE SUPPLIER BASED ON STRENGTH REQUIREMENTS AND SHALL NOT EXCEED THE MAXIMUM WATER/CEMENT RATIO AND/OR WATER CONTENT IF SHOWN ABOVE OR IN THE PROJECT SPECIFICATIONS.

FIELD-MEASURED SLUMP SHALL CONFORM TO THE SUBMITTED CONCRETE MIX DESIGN. TOLERANCE OF SLUMP SHALL CONFORM TO ASTM C 94.

AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C 260 SHALL BE USED IN ALL CONCRETE MIXES FOR FLATWORK WHICH IS EXPOSED TO WEATHER. THE AMOUNT OF ENTRAINED AIR SHALL BE 5% +/- 1 1/2 % BY VOLUME. THE AMOUNT OF ENTRAINED AIR SHALL BE MEASURED IN THE FIELD AT THE DISCHARGE FROM THE TRUCK.

THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS FOR APPROVAL 2 WEEKS PRIOR TO PLACING ANY CONCRETE. THE MIX DESIGN SHALL BE IN CONFORMANCE WITH 2018 NC BUILDING CODE. THE SUBMITTAL SHALL INDICATE WHERE EACH CONCRETE MIX IS TO BE USED ON THE PROJECT, AS WELL AS THE MAXIMUM AGGREGATE SIZE OF EACH MIX. MAXIMUM AGGREGATE SIZE SHALL CONFORM TO THE PROJECT SPECIFICATIONS.

CURING: IF THE AIR TEMPERATURE WILL EXCEED 75 DEGREES F WITHIN 48 HOURS OF PLACING CONCRETE, A MOIST CURE SHALL BE APPLIED TO THE CONCRETE FOR A PERIOD OF 36 HOURS AFTER FINISHING CONCRETE SURFACES. REFER TO THE PROJECT SPECIFICATIONS FOR CURING REQUIREMENTS.

REINFORCING STEEL

DEFORMED BARS	ASTM A 615, GRADE 60
WELDED WIRE FABRIC (WWF)	ASTM A 185 (fy = 65,000 psi)
DEFORMED WIRE FABRIC (DWF)	ASTM A 497 (fy = 70,000 psi)

REINFORCING SHALL BE SUPPORTED AS SPECIFIED BY THE PROJECT SPECIFICATIONS AND THE CRSI MANUAL OF STANDARD PRACTICE, 27TH EDITION. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH ACI STANDARD OF PRACTICE AS OUTLINED IN "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT, ACI 315.

LAP ALL REINFORCING BARS AS NOTED ON THE DRAWINGS. WHERE SPLICE LENGTH IS NOT SHOWN, USE TYPE Lb (Lbt FOR TOP BARS) SPLICE PER DEVELOPMENT AND SPLICE LENGTH SCHEDULE. MECHANICAL OR WELDED BUTT SPLICES SHALL BE USED SUBJECT TO ARCHITECT'S APPROVAL.

REINFORCING STEEL SHALL HAVE PROTECTION AS FOLLOWS, UNLESS NOTED OTHERWISE:

USE	COVER
BEAM STIRRUPS AND COLUMN TIES	1 1/2"
SLAB-ON-GRADE	MID-DEPTH
WALL BARS	INTERIOR FACES 3/4"
	EXPOSED TO EARTH OR WEATHER 1 1/2" (#5 AND SMALLER)
	2" (#6 AND LARGER)
	FOOTING
	BOTTOM BARS 3" (CAST AGAINST EARTH)
	TOP BARS 1 1/2"
	2" (#6 AND LARGER WHERE EXPOSED TO EARTH OR WEATHER)
	SIDE BARS 2"

WELDING OF REINFORCING, WHEN APPROVED BY THE ARCHITECT, SHALL BE PERFORMED USING LOW HYDROGEN ELECTRODES AND PREHEATED IN ACCORDANCE WITH AWS D1.4, REINFORCING STEEL WELDING CODE. WELDERS AND WELDING PROCEDURES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS D1.4. MATERIALS SHALL CONFORM TO THE FOLLOWING:

REINFORCING BARS TO BE WELDED ASTM A 706, GRADE 60 LOW ALLOY WELDING ELECTRODES E80XX

NON-SHRINK GROUT: BASE PLATE GROUT SHALL BE NON-SHRINK TYPE WITH MINIMUM Fc = 8,000 psi. ALL OTHER NON-SHRINK GROUT SHALL HAVE MINIMUM Fc = 5,000 psi.

No.	Revision/Issue	Date
2	ISSUE FOR PERMIT	02/07/2024
1	ISSUE FOR CLIENT REVIEW	07/28/2023



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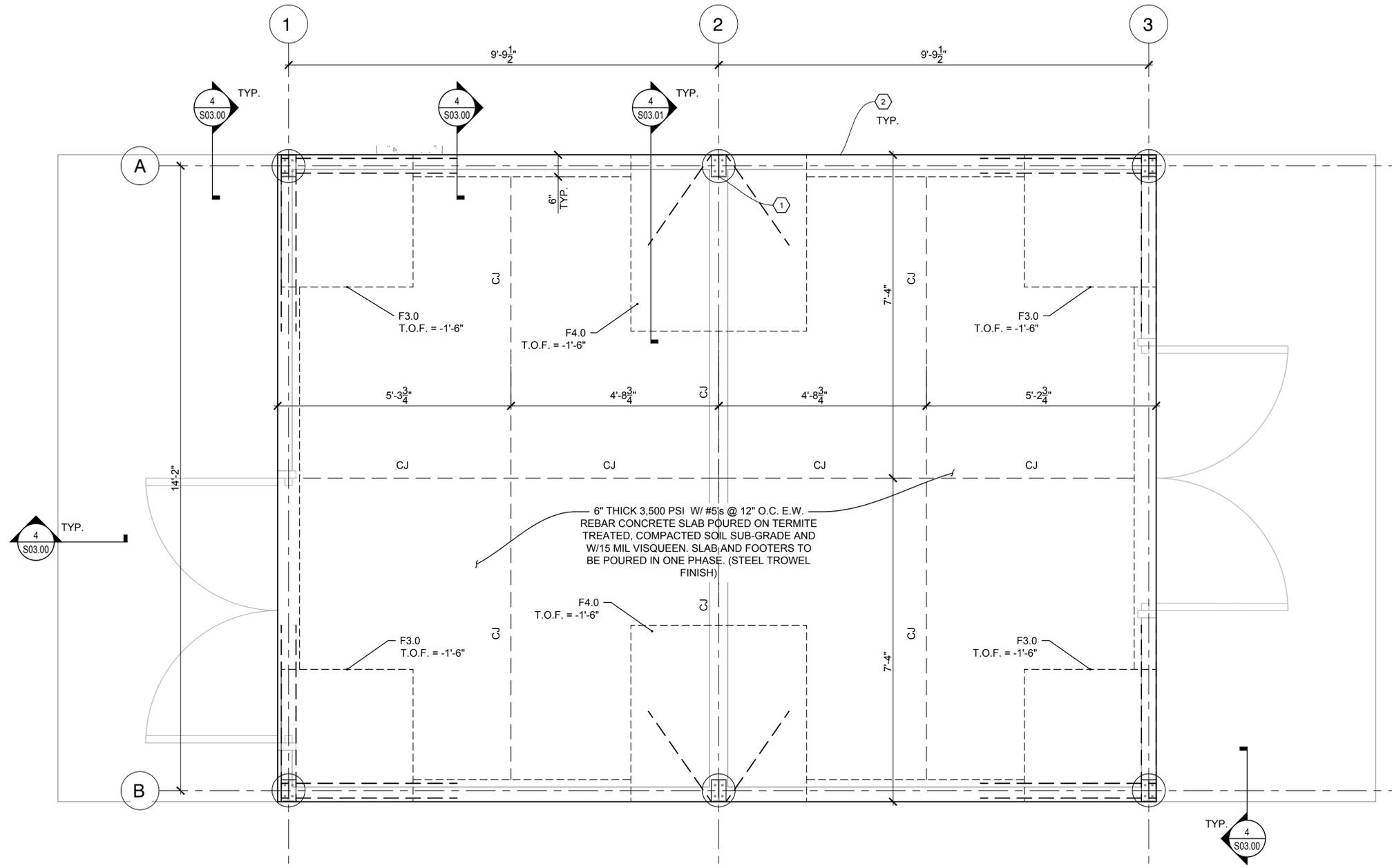
NISIT SAPPARKHAO, P.E.
FL REG. NO. 64085

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Project Name and Address
FPL - WALTON ICE MACHINE
1050 SE BRANDON COURT, PORT ST. LUCIE, FL 34952

Sheet Title
STRUCTURAL GENERAL NOTES

Project No. 230-83.00	Sheet S01.01
Date AS NOTED	
Scale AS NOTED	



PROPOSED FOUNDATION PLAN SCALE 3/4" = 1'-0" **1**

PROPOSED FOUNDATION KEY NOTES:

- ① PROPOSED PEMB COLUMN BY OTHERS (TYP.)
- ② TYP. SLAB EDGE. SEE DETAIL 2/S03.00.

FOUNDATION PLAN NOTES:

1. FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMISSION OF SHOP DRAWINGS.
2. TOP OF SLAB ELEVATION TO MATCH EXISTING FINISH FLOOR = BUILDING DATUM ELEVATION +0'-0".
3. SEE ARCHITECTURAL DRAWINGS FOR OVERALL BUILDING DIMENSIONS OF WALLS AND WALL OPENINGS.
4. SEE SHEET S03.00 FOR FOOTING SCHEDULE AND SHEET S03.01 FOR BASE PLATE INFORMATION.
5. CENTER FOOTINGS ON COLUMN LINES U.N.O.
6. TOP OF FOOTING ELEVATION AT COLUMNS = (-1'-6") BELOW FINISH FLOOR U.N.O.
7. SEE 6/S03.00 FOR TYPICAL METAL BUILDING ANCHOR BOLT DETAILS.
8. COORDINATE METAL BUILDING ANCHOR BOLT DIAMETERS, QUANTITY, LOCATIONS AND PLACEMENT WITH ANCHOR BOLT SETTING PLAN PREPARED BY METAL BUILDING MANUFACTURER.
9. CJ INDICATES CONSTRUCTION JOINT OR SAWED CONTRACTION JOINT IN SLAB ON GRADE - SEE DETAILS 3/S03.00.
10. LATERAL LOAD DESIGN IS CONTROLLED BY WIND.
11. THE CONTRACTOR SHALL PROVIDE SHORING AS REQUIRED TO MAINTAIN THE STABILITY OF EXISTING STRUCTURES DURING DEMOLITION AND CONSTRUCTION.
12. SUBMIT SHOP DRAWINGS FOR FOUNDATION REINFORCING BARS REVIEW AND APPROVAL.

DISCLAIMER:
SLAB ON GRADE DESIGNED FOR THE AXLE LOAD OF 50KIPS WITH 100PCI SUB-GRADE MODULUS OF REACTION AND W/ COMPRESSIVE STRENGTH OF CONCRETE 3500 PSI FOR THE H550-700HDS FORK LIFT VEHICLE - NOT LOADED AND PNEUMATIC TIRE TYPE ONLY.

DISCLAIMER:
FOUNDATION DESIGN SHALL BE RE-VISITED UPON THE RECEIVAL OF PEMB DESIGN DRAWINGS AND CONFORM TO THE MECKLENBURG COUNTY'S CODE ENFORCEMENT GUIDELINES FOR PRE-ENGINEERED METAL BUILDINGS OPTION B.

REFER TO PEMB/BUTLER MANUFACTURING DRAWINGS (ANCHOR ROD PLAN - DETAILS) FOR BASE PLATE AND ANCHOR ROD INFORMATION.

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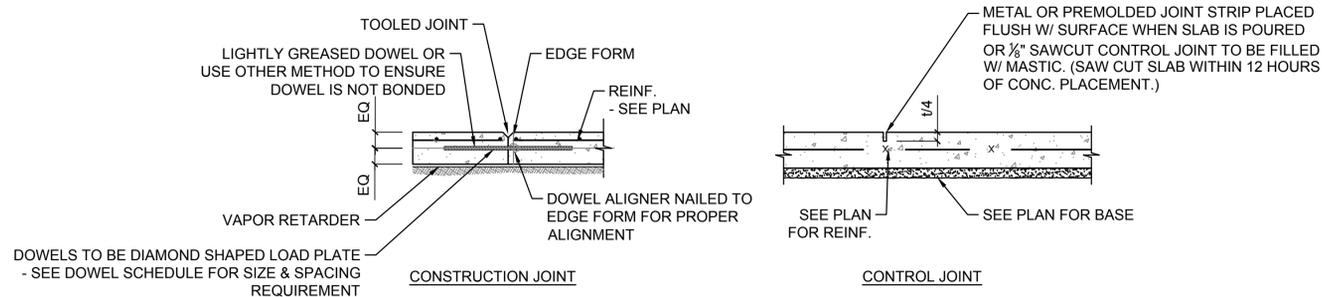
Project Name and Address
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Sheet Title
FOUNDATION PLAN

Project No. 230-83.00	Sheet S02.00
Date AS NOTED	
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COLUMN FOOTING SCHEDULE			
MARK	SIZE LENGTH X WIDTH X DEPTH	REINFORCEMENT	REMARK
F6.5	6'-6" X 6'-6" X 18"	7-#5'S EW T&B	
F8.0	8'-0" X 8'-0" X 18"	8-#6'S EW T&B	
NOTES: 1. SEE SHEET S03.02 FOR TYP. FOUNDATION DETAILS. 2. SEE SHEET S03.01 FOR TYP. BASE PLATE DETAILS. 3. SEE SHEET S02.00 FOR COLUMN PIER LOCATION & 5/S03.00 AND S03.03 FOR TYP. COLUMN PIER INFORMATION.			

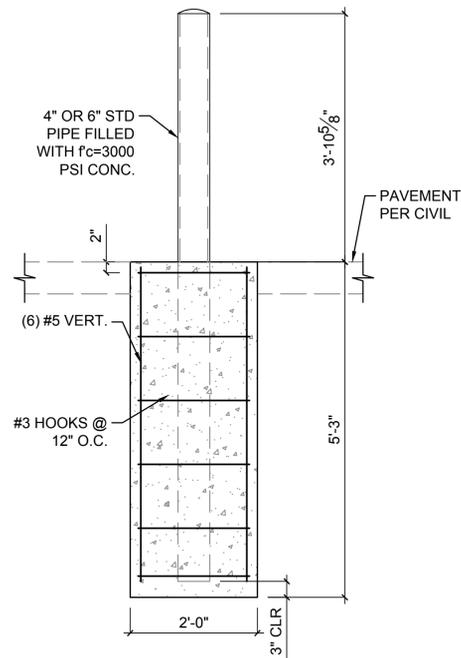
COLUMN FOOTING SCHEDULE SCALE 3/4" = 1'-0" 1



SLAB DEPTH (IN.)	DOWEL DIMENSION (IN.)				DOWEL SPACING CENTER TO CENTER (IN.)			
	ROUND	SQUARE	RECTANGULAR	DIAMOND LOAD PLATE	ROUND	SQUARE	RECTANGULAR	DIAMOND LOAD PLATE
5" TO 6"	3/4 x 14	3/4 x 14	3/8 x 3 x 12	1/4 x 4 1/2 x 4 1/2	12	14	19	24

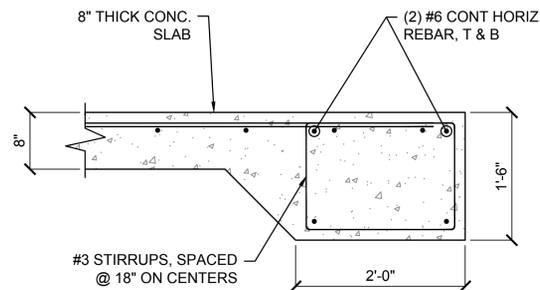
- NOTES:**
- CONSTRUCTION JOINT MAY REPLACE CONTROL JOINT.
 - REFER TO ARCHITECTURAL DETAILS FOR JOINT FILLER WHERE REQUIRED.
 - SEE PLAN FOR LOCATION OF JOINTS.
 - PROVIDE SUPPORT CHAIRS TO HOLD WWF AND/OR REINFORCING IN POSITION DURING CONCRETE PLACEMENT.
 - DOWELS SHOULD BE PLACED NO CLOSER THAN 12 IN. FROM THE INTERSECTION OF ANY JOINTS.

TYP. SLAB JOINT DETAILS SCALE 3/4" = 1'-0" 2



- NOTE:**
- WHERE BOLLARD IS ON TOP OF FOOTING, PROVIDE PL 1/2"x10"x10" BASE PLATE W/ (4) 3/8"Ø HILTI KWIK BOLT 3 EXPANSION ANCHOR (4 3/8" EMBED).

CONCRETE BOLLARD DETAIL SCALE 3/4" = 1'-0" 3



MONOLITHIC FOOTER SECTION VIEW SCALE 1/2" = 1'-0" 4

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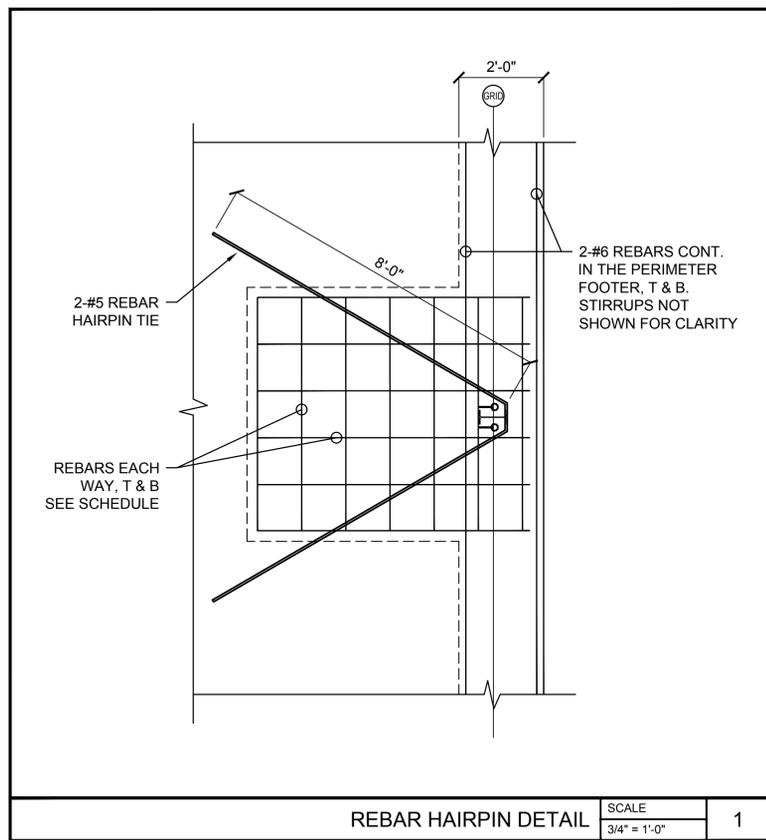


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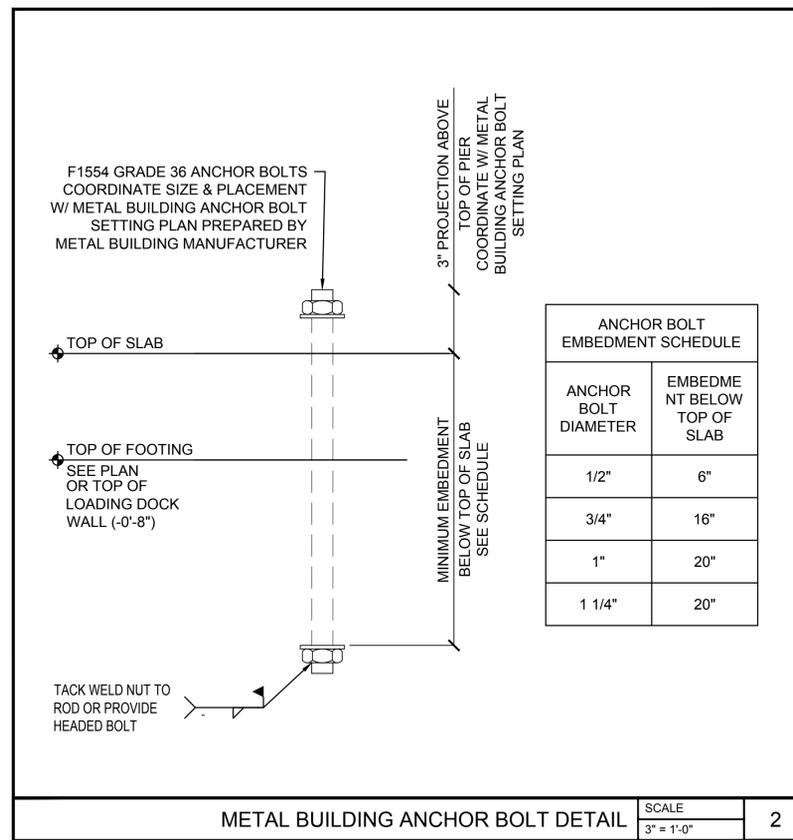
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Sheet Title: **FOUNDATION DETAILS**

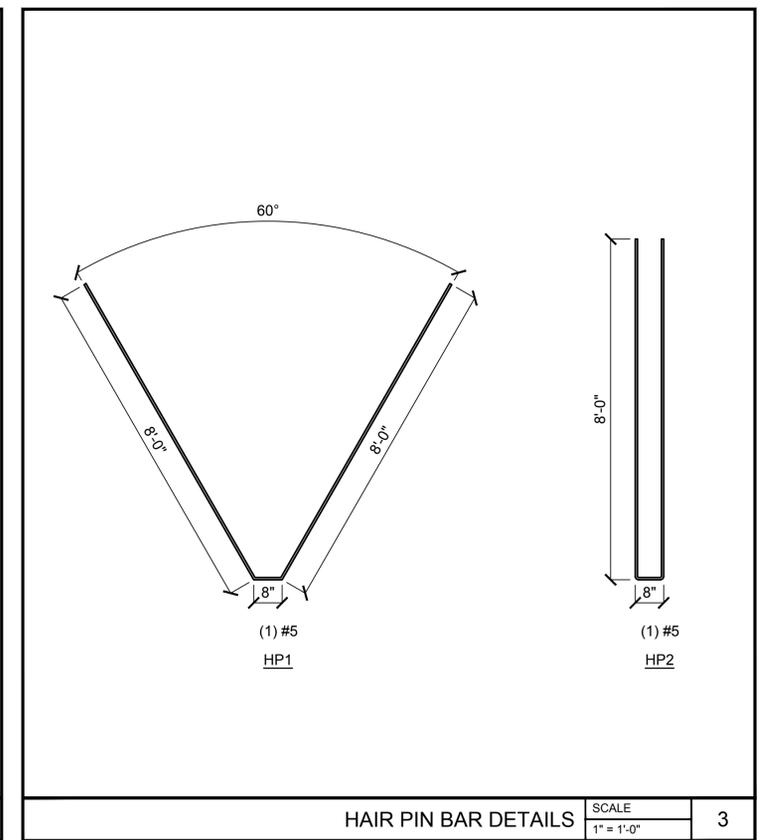
Project No. 230-83.00
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Sheet **S03.00**



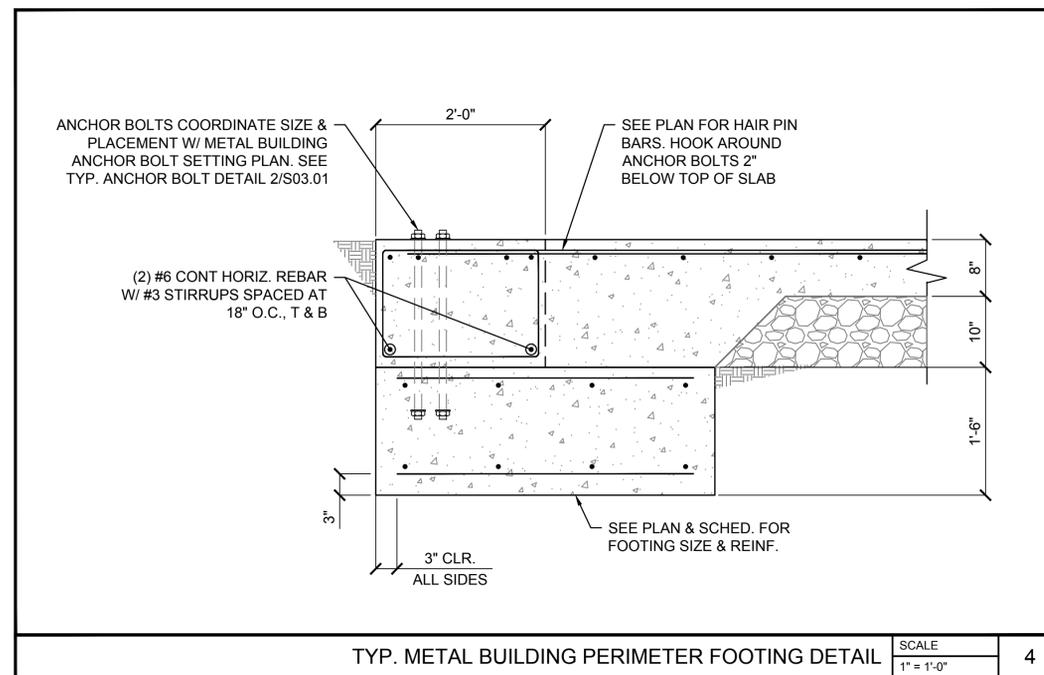
REBAR HAIRPIN DETAIL SCALE 3/4" = 1'-0" 1



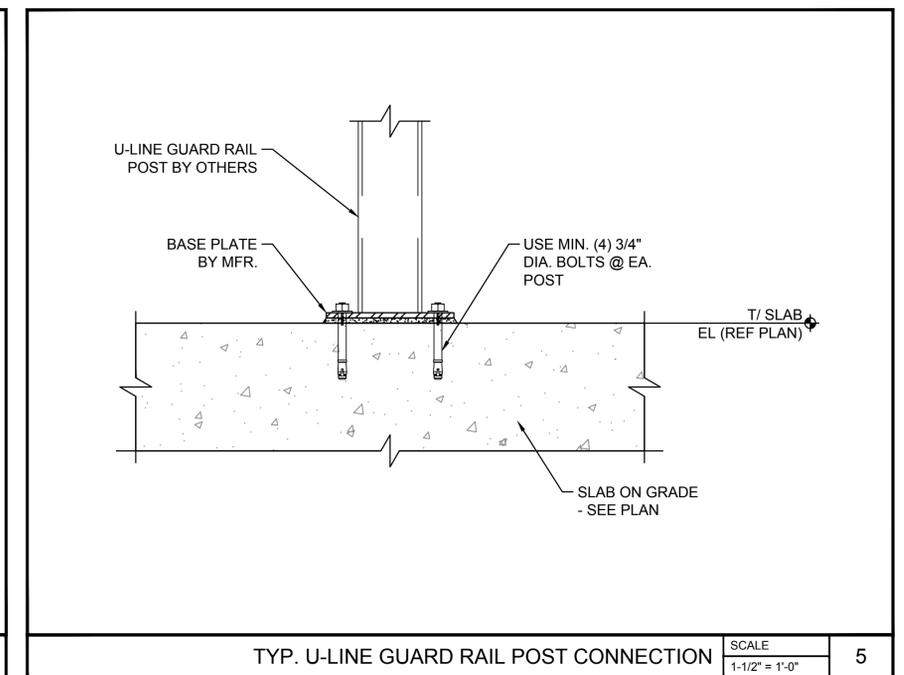
METAL BUILDING ANCHOR BOLT DETAIL SCALE 3" = 1'-0" 2



HAIR PIN BAR DETAILS SCALE 1" = 1'-0" 3



TYP. METAL BUILDING PERIMETER FOOTING DETAIL SCALE 1" = 1'-0" 4



TYP. U-LINE GUARD RAIL POST CONNECTION SCALE 1-1/2" = 1'-0" 5

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