

TESD CONESTOGA
ATHLETIC FIELDS

TREDYFFRIN TOWNSHIP
CHESTER COUNTY, PA

HSA PROJECT # :21-019

HSA
Heckendorn Shiles Architects

PROJECT TEAM

CLIENT
Tredyffrin/Eastown School District
940 West Valley Road, Suite 1700
Wayne, PA 19087
610-994-3500

ARCHITECTURAL
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610-994-3500

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610-825-2600

MEPP Engineers
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(215) 527-9825

ISSUE HISTORY

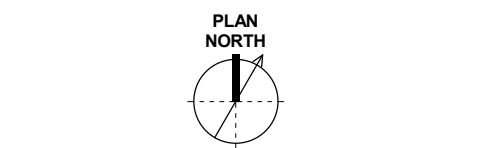
DATE	ISSUED FOR
3-18-2024	BID ISSUE

SHEET TITLE

**FIELD HOUSE
FOUNDATION AND
ROOF FRAMING PLANS**

DRAWING NUMBER

S100



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HECKENDORN SHILES ARCHITECTS

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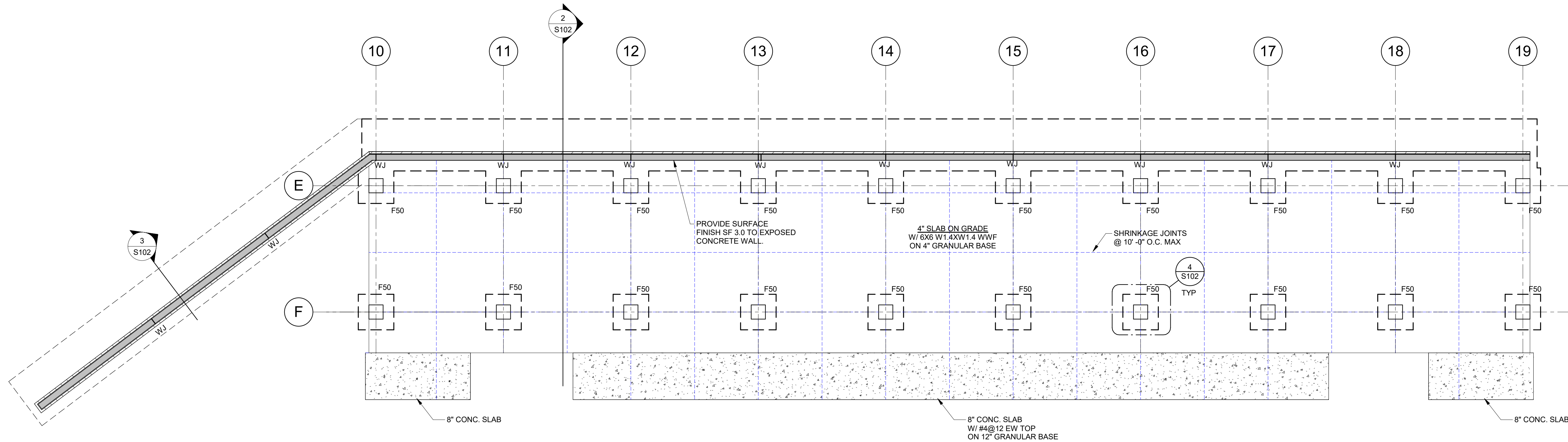
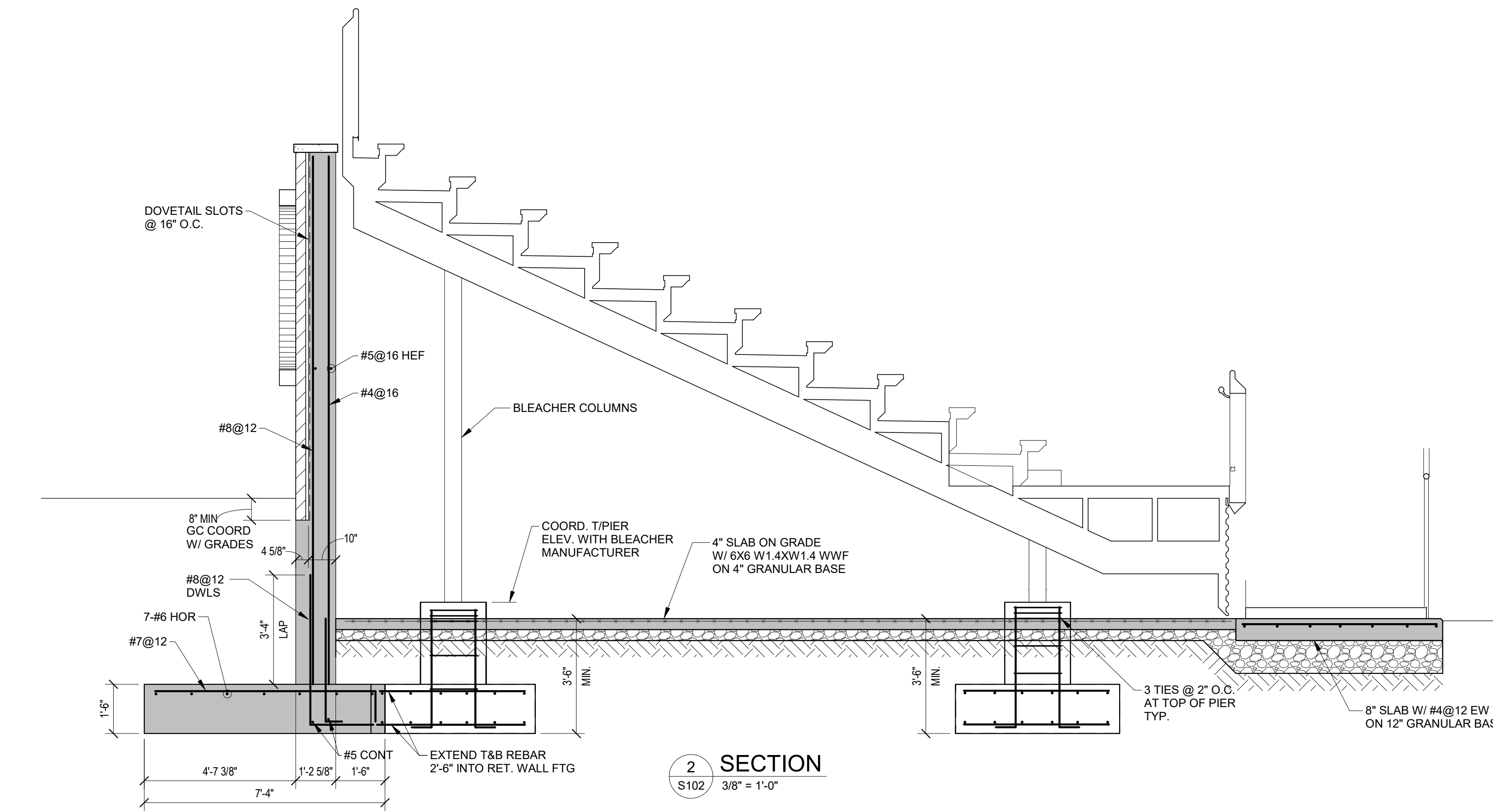
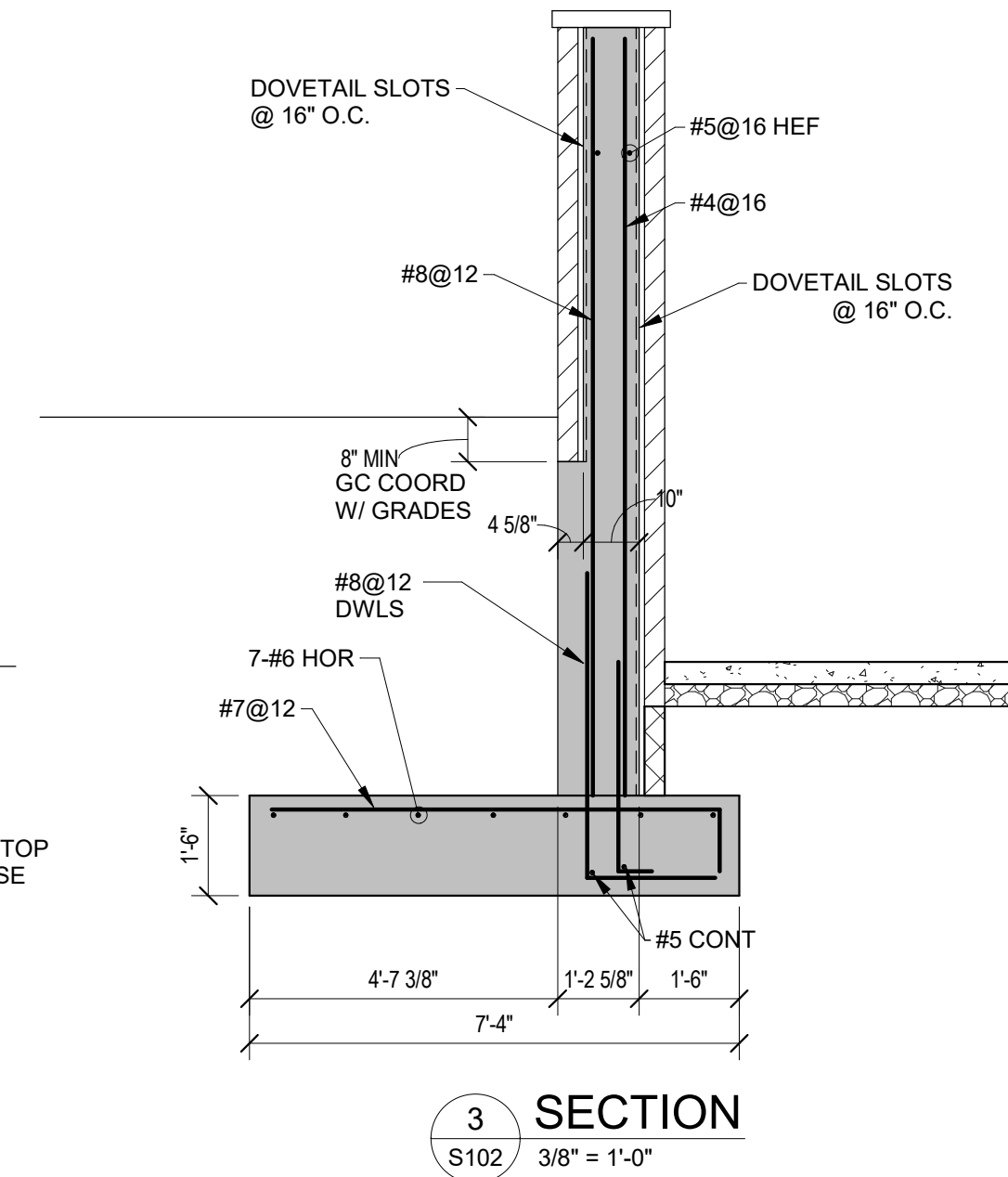
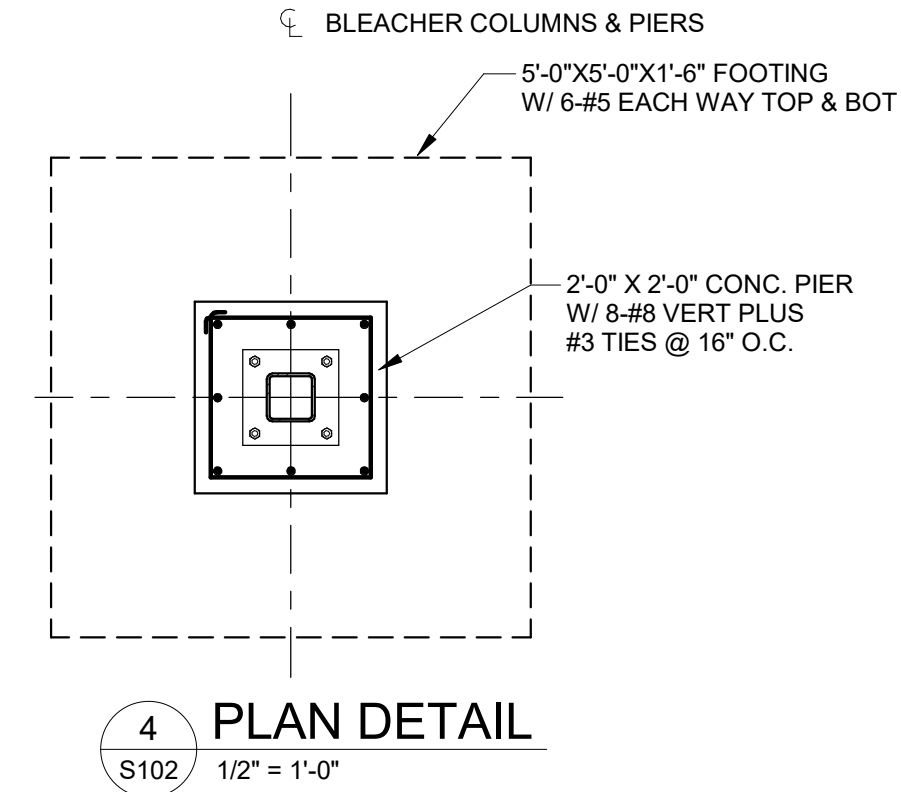
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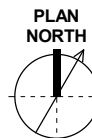
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1
S102
ATHLETIC STANDS FOUNDATION PLAN
1/8" = 1'-0"

- NOTES:
- WJ INDICATES WALL SHRINKAGE OR CONSTRUCTION JOINT PER DETAIL 12/S203 OR 13/S203.
 - COORDINATE LAYOUT AND DIMENSIONS WITH BLEACHER SUPPLIER AND ARCHITECTURAL DRAWINGS.
 - PIER AND FOUNDATION SIZES SHOWN ARE PRELIMINARY AND NEED TO BE CONFIRMED WITH THE FINAL BLEACHER DESIGN PRIOR TO CONSTRUCTION. SIGNED AND SEALED BLEACHER CALCULATIONS SHALL BE SUBMITTED AT LEAST THREE WEEKS PRIOR TO START OF FOUNDATION WORK AND SUBMISSION OF CONCRETE REINFORCEMENT SHOP DRAWINGS TO CONFIRM FOUNDATION DESIGN. CALCULATIONS SHALL INCLUDE DESCRIPTION OF EACH LOAD CASE AND REACTIONS FOR EACH LOAD CASE. COORDINATE BLEACHER POST BASE BOTTOM ELEVATIONS WITH SECTIONS. BLEACHER POST ANCHOR BOLTS ARE TO BE SIZED AND FURNISHED BY BLEACHER SUPPLIER.



ISSUE HISTORY

A.	DATE	ISSUED FOR
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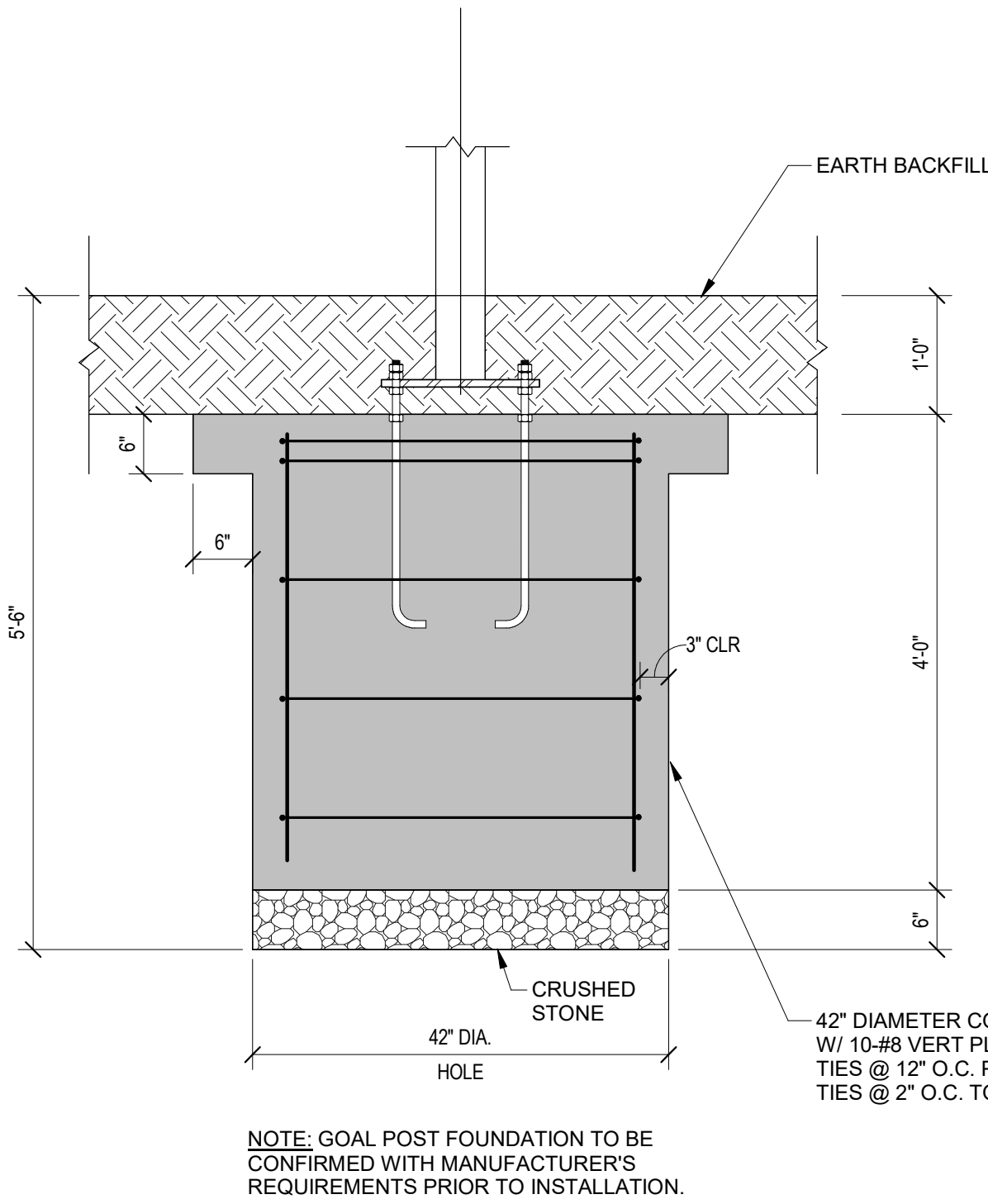
ATHLETIC STANDS
FOUNDATION PLAN &
DETAILS

DRAWING NUMBER

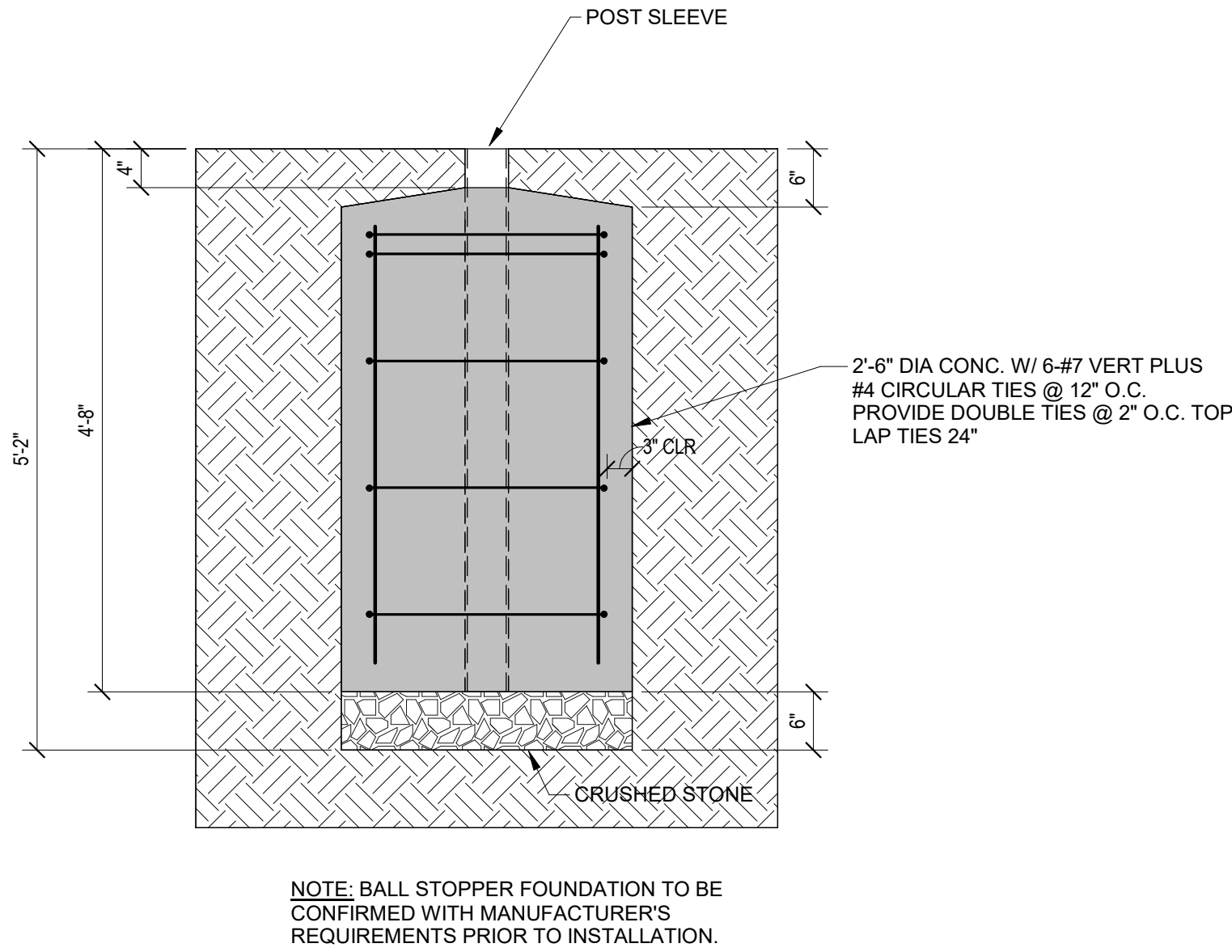
S102

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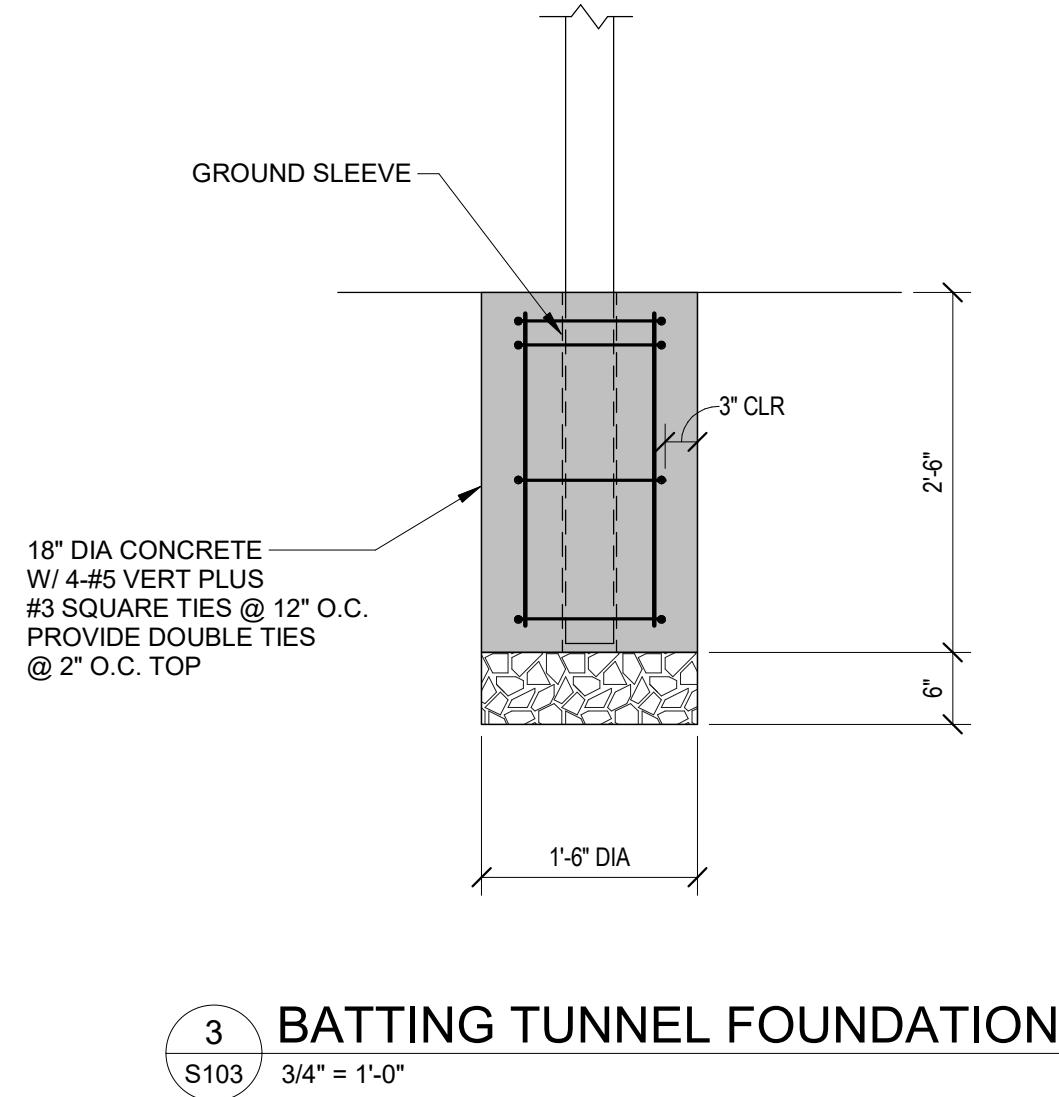
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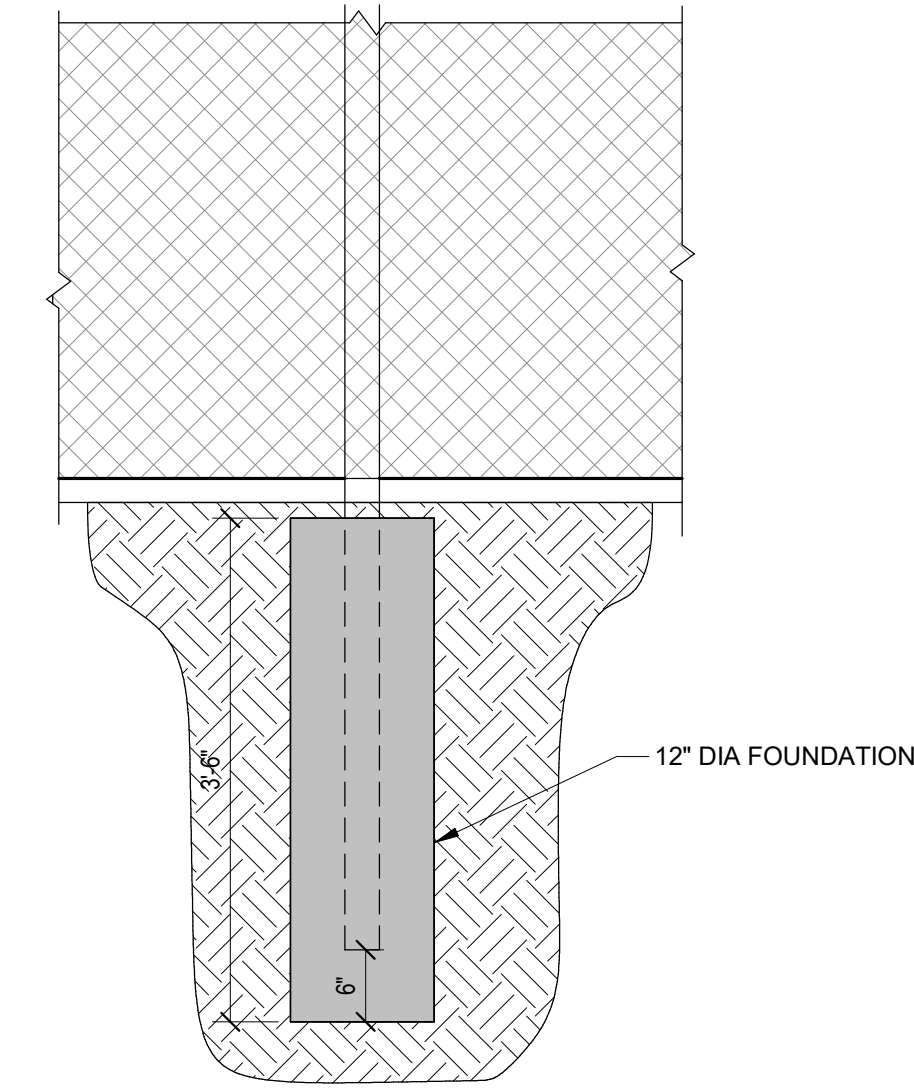
1 FOOTBALL GOAL POST FOUNDATION
S103 3/4" = 1'-0"



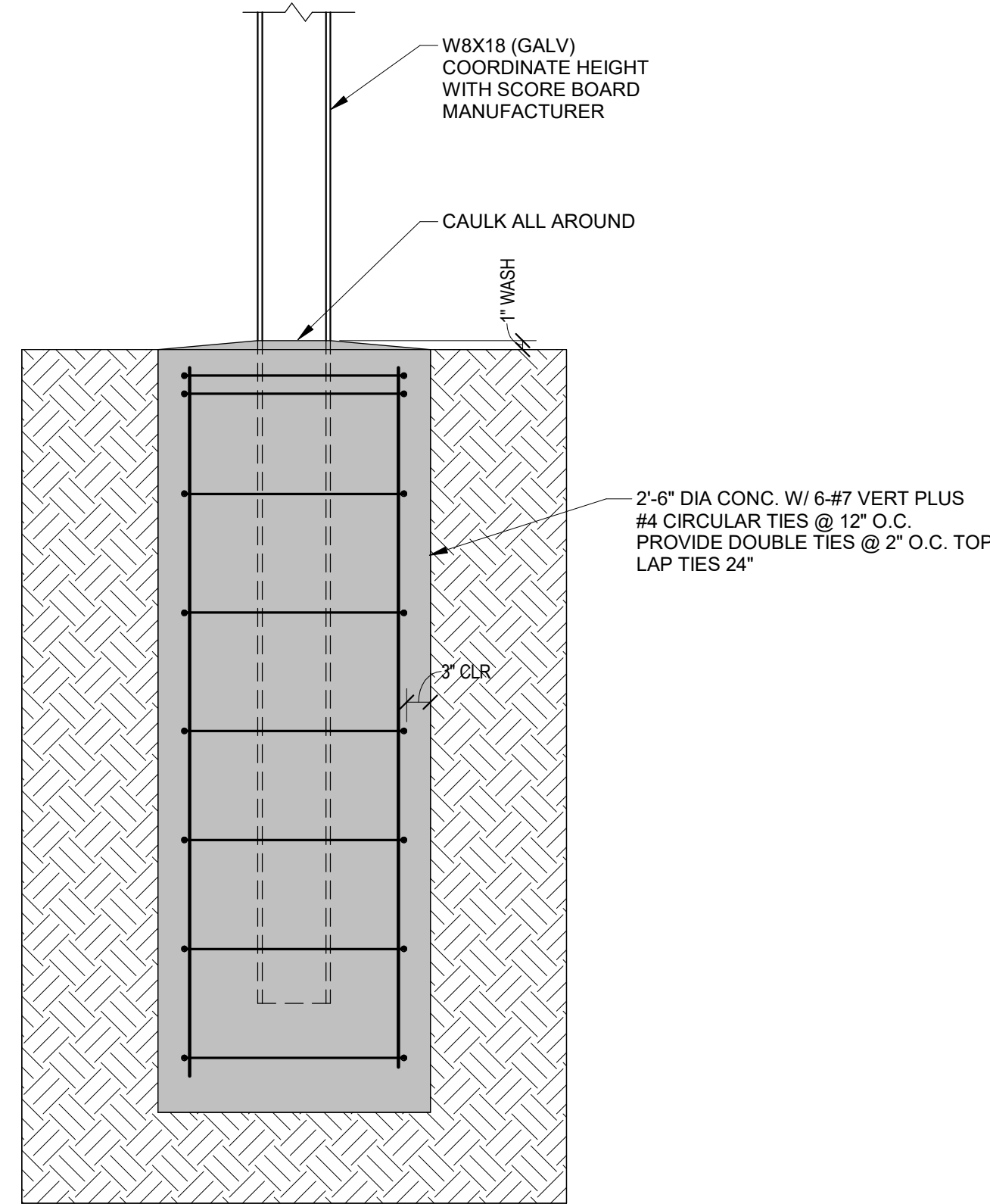
2 BALL STOPPER FOUNDATION
S103 3/4" = 1'-0"
(FOR 20' HIGH BALLS STOPPER AT TURF FIELD)



3 BATTING TUNNEL FOUNDATION
S103 3/4" = 1'-0"



4 10' FENCE FOUNDATION
S103 3/4" = 1'-0"



5 SCOREBOARD FOUNDATION
S103 3/4" = 1'-0"

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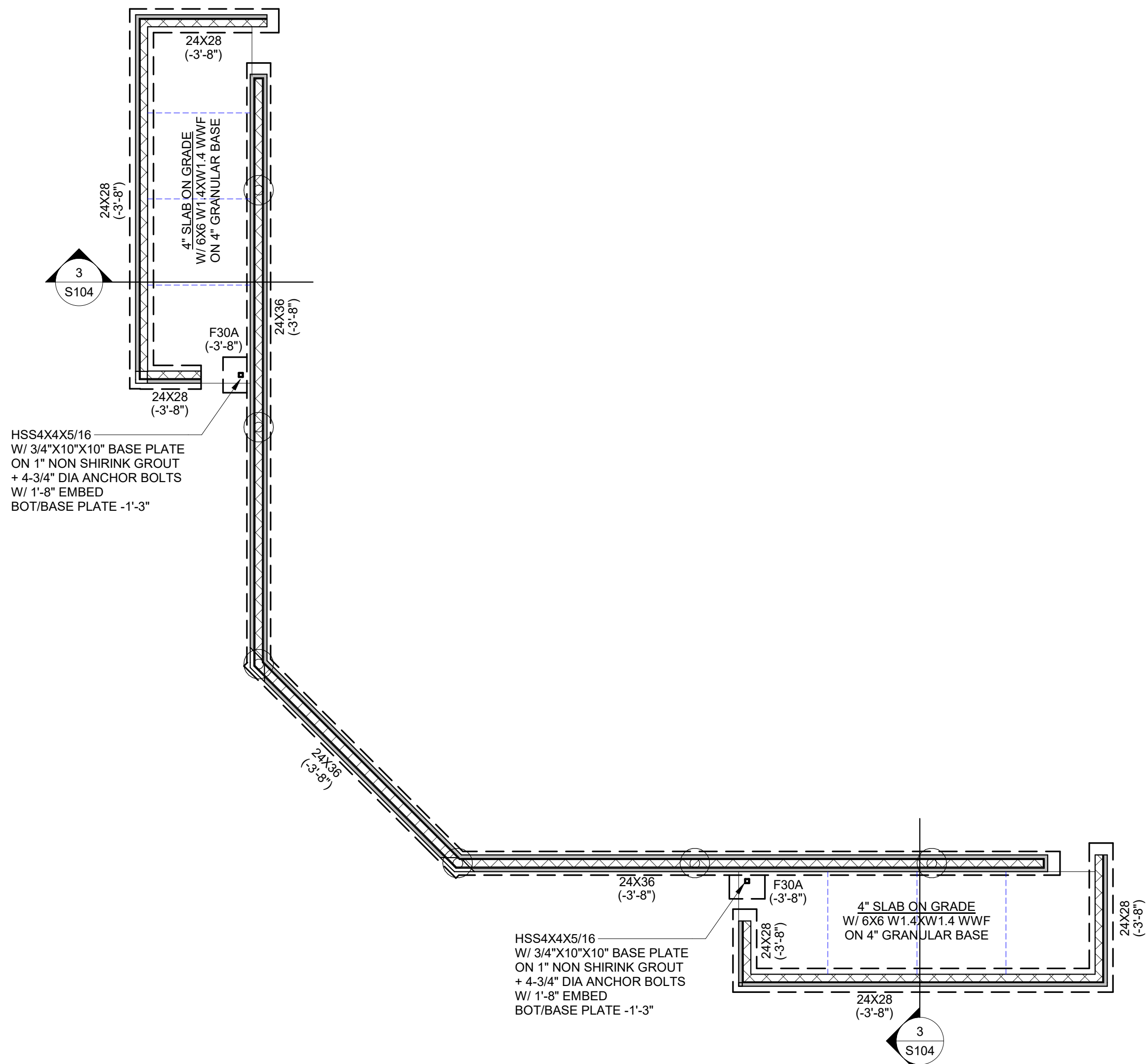
ATHLETIC EQUIPMENT FOUNDATIONS

DRAWING NUMBER

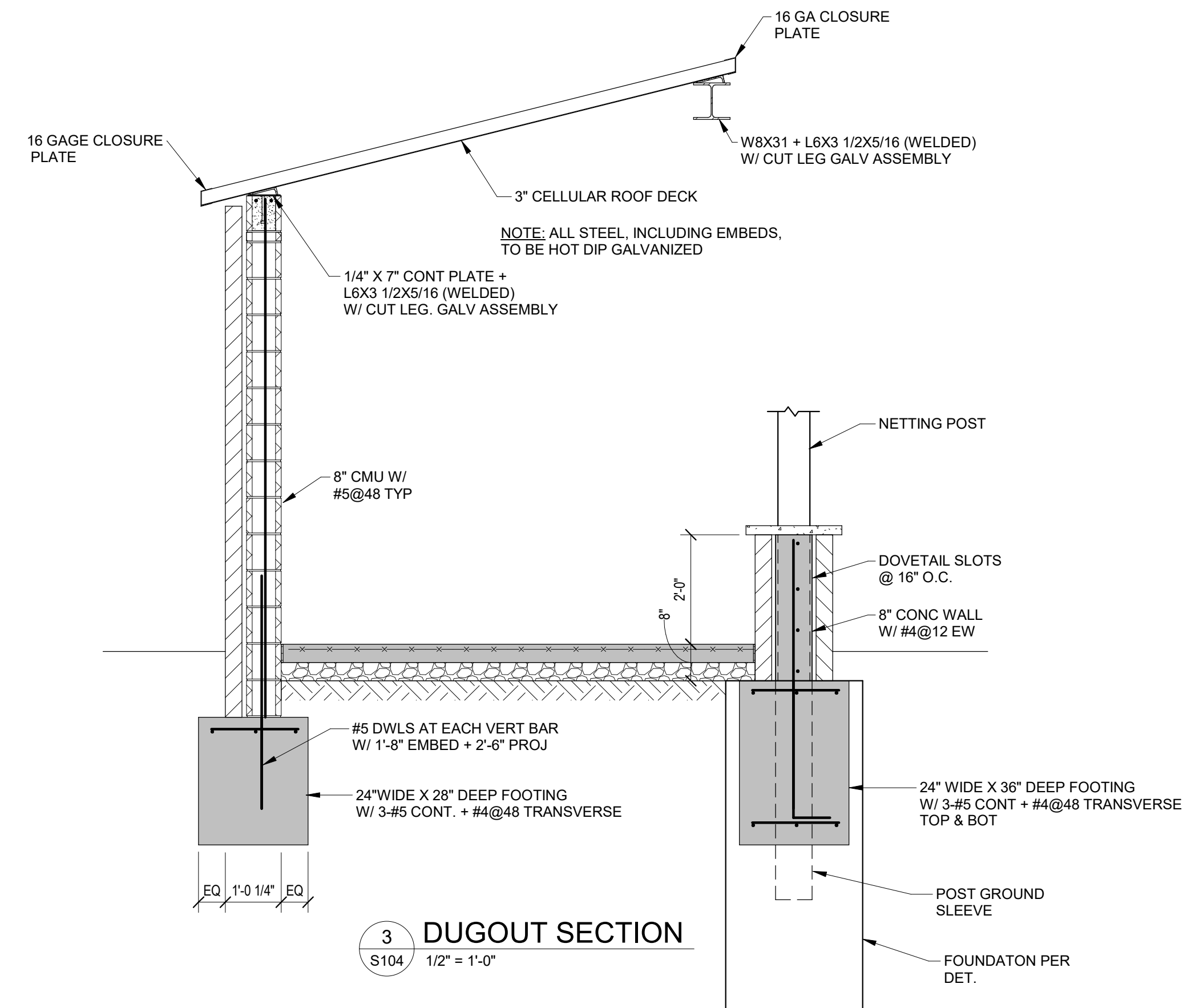
S103

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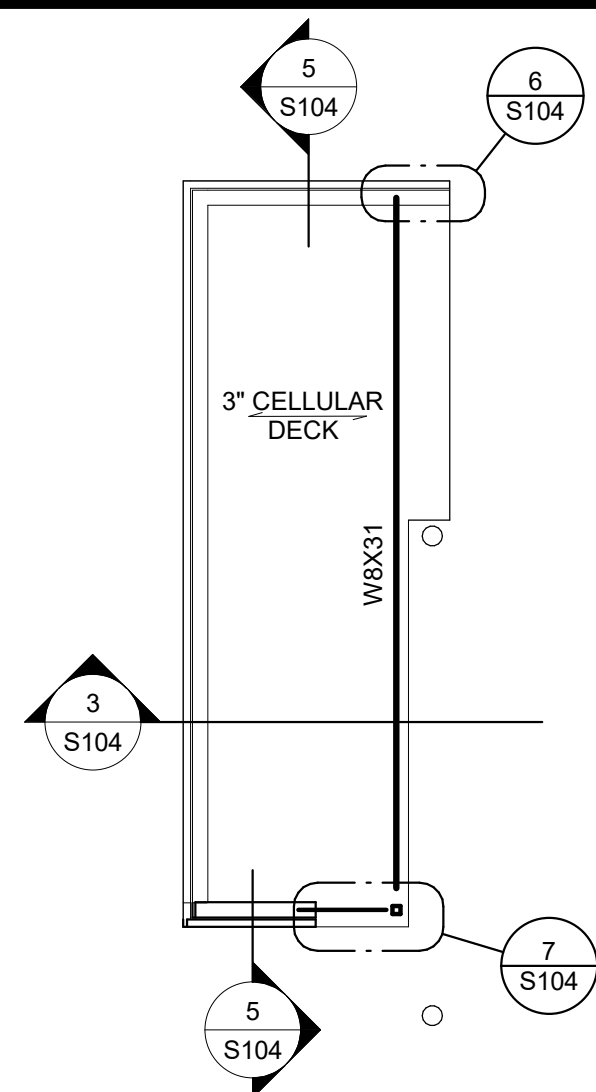
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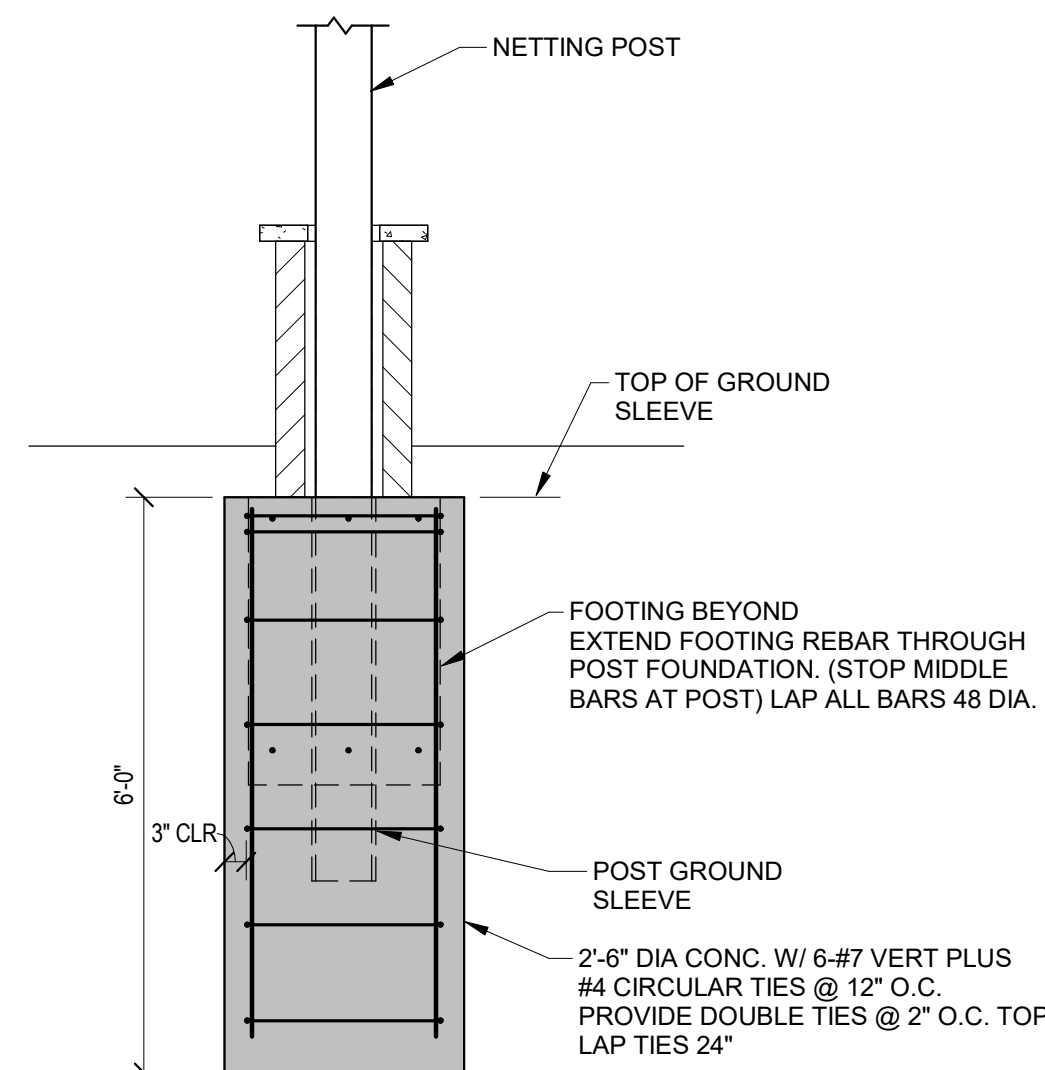
1 **SOFTBALL DUGOUT AND BACKSTOP FOUNDATION PLAN**
S104 1/8" = 1'-0"
NOTE: F30A FOOTING 3'-0"X3'-0"X2'-4" DEEP WITH 4-#4 EW TOP & BOT



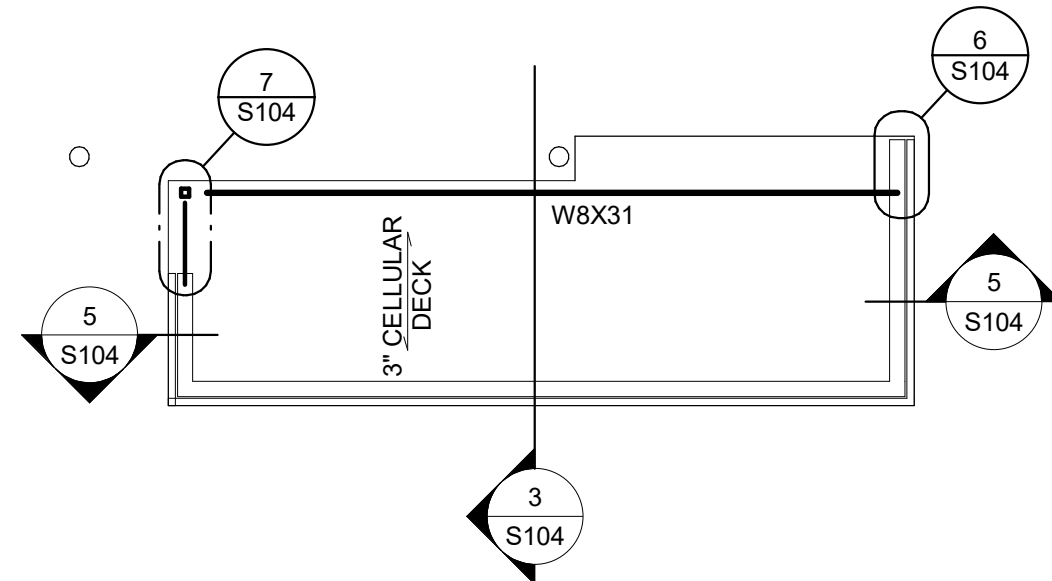
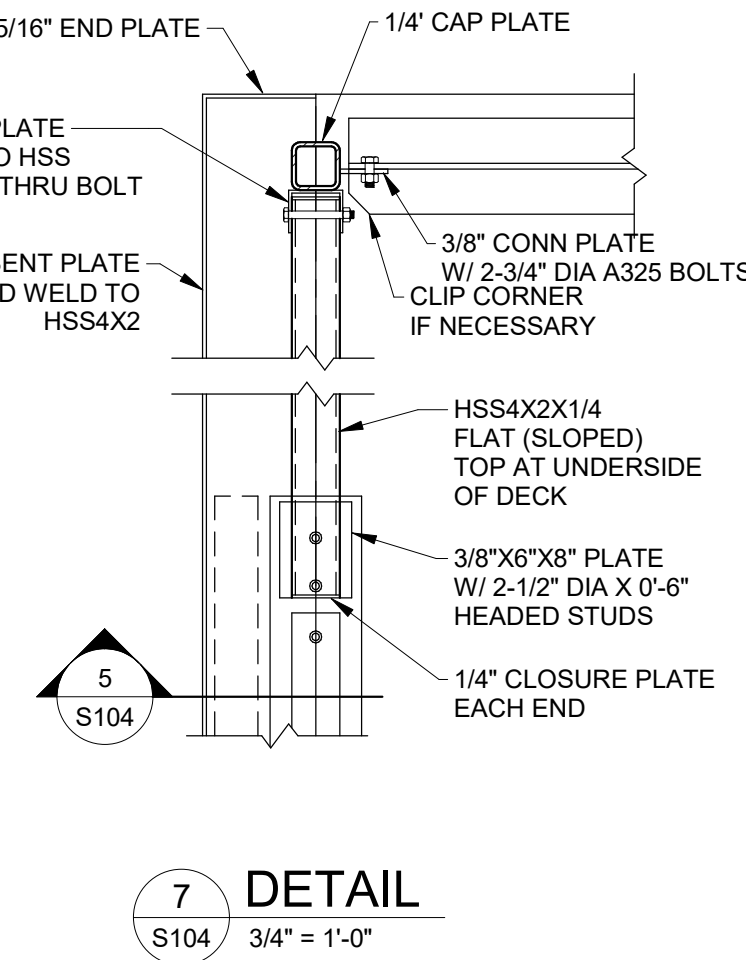
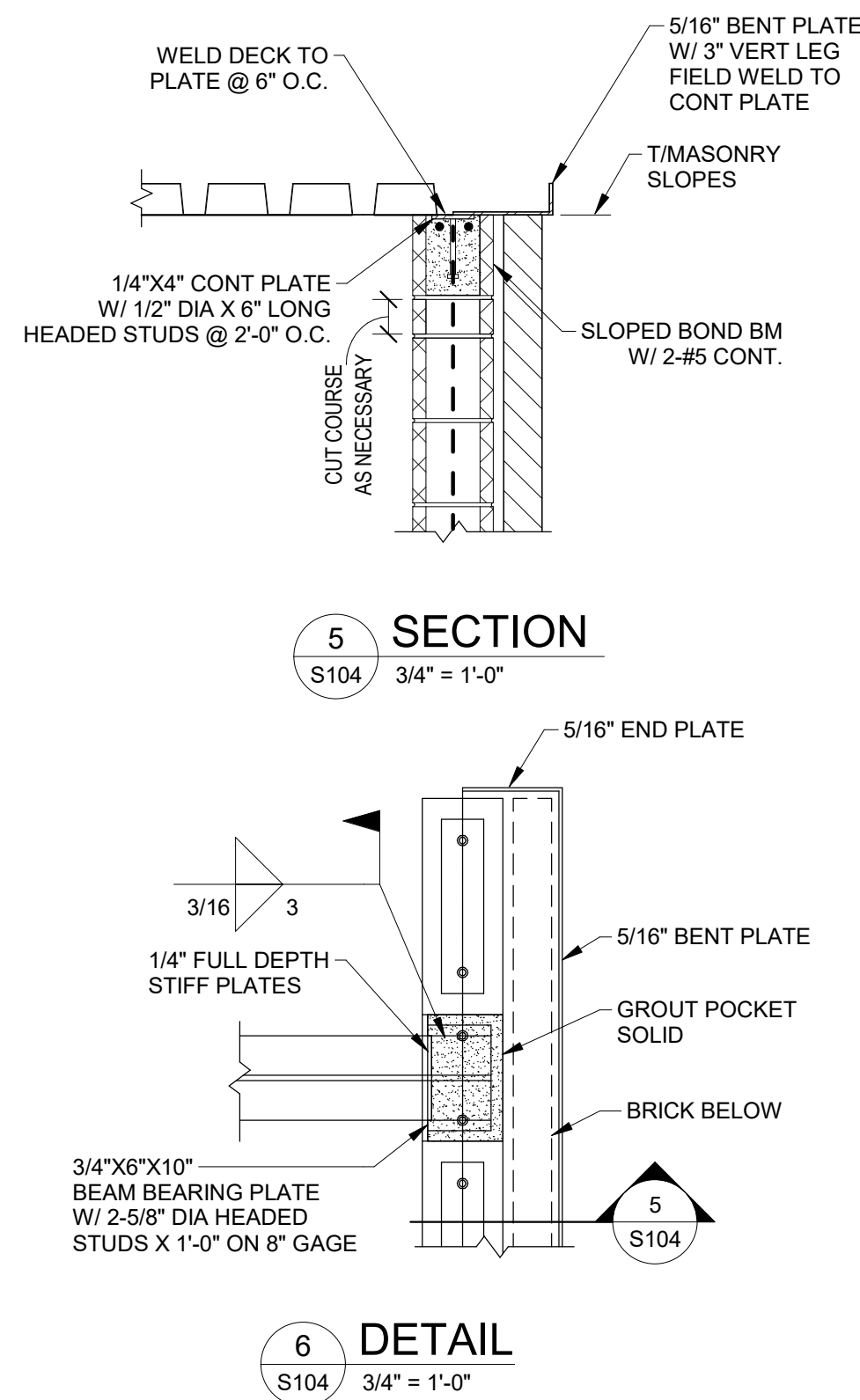
3 **DUGOUT SECTION**
S104 1/2" = 1'-0"



2 **SOFTBALL DUGOUT FRAMING PLAN**
S104 1/8" = 1'-0"
NOTE: ROOF DECK IS 3" DEEP 20GA/20GA G90 CELLULAR ROOF DECK, WELD TO SUPPORTS WITH WELDS AT 8" O.C. AT RIBS; 6" O.C. AT EDGES.



4 **BACKSTOP FOUNDATION**
S104 1/2" = 1'-0"



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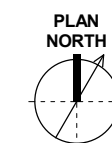
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SOFTBALL DUGOUTS & BACKSTOP FOUNDATIONS AND FRAMING PLANS

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S104

3/20/2024 12:01:01 PM HECKENDORN SHILES ARCHITECTS expressly reserves its common law copyright and other property rights in these plans. These are not to be reproduced, nor are they to be assigned to any third party, without first obtaining the expressed written consent of HECKENDORN SHILES ARCHITECTS

GENERAL NOTES

GENERAL: ALL WORK TO CONFORM TO THE 2018 INTERNATIONAL BUILDING CODE AND ALL OTHER GOVERNING FEDERAL, STATE AND LOCAL REGULATIONS.

VERIFY AND/OR ESTABLISH ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE BEFORE SUBMITTING SHOP DRAWINGS, ORDERING ANY MATERIAL OR COMMENCEMENT OF ANY WORK.

SHOP DRAWINGS FOR CONCRETE REINFORCING, MASONRY REINFORCING, STRUCTURAL STEEL, WOOD I JOISTS, AND WOOD TRUSSES TO BE SUBMITTED AND REVIEWED PRIOR TO START OF FABRICATION.

CONTACT PROPER AUTHORITIES TO LOCATE EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATION.

REMOVE AND RELOCATE ALL EXISTING UTILITIES, DUCTS, CONDUITS, ETC. THAT INTERFERE WITH INSTALLATION OF NEW FRAMING ELEMENTS.

SPECIAL STRUCTURAL INSPECTIONS: SPECIAL TESTING AND INSPECTIONS OF THE FABRICATION, INSTALLATION, ERECTION, AND PLACEMENT OF THE FOLLOWING BUILDING ELEMENTS ARE TO BE PROVIDED IN ACCORDANCE WITH CHAPTER 17 OF THE BUILDING CODE. SEE NOTES AND SPECIFICATIONS FOR ADDITIONAL TESTING AND INSPECTIONS REQUIRED.

- PREPARED FILL: SITE PREPARATION, FILL PLACEMENT, AND EVALUATION OF IN PLACE DENSITY.
- CONCRETE CONSTRUCTION: MATERIALS, REINFORCING STEEL, FOUNDATION SUBGRADE, CONCRETING OPERATIONS, AND ERECTION OF PRECAST UNITS.
- MASONRY CONSTRUCTION: MATERIALS, STRENGTH, AND CONSTRUCTION OPERATIONS.
- STEEL CONSTRUCTION: FABRICATION, MATERIALS, AND ERECTION, INCLUDING BOLTING AND WELDING.

DESIGN GRAVITY LIVE LOADS:

ROOFS	30 PSF MINIMUM
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DESIGN SNOW LOADS:

GROUND SNOW LOAD	25 PSF
SNOW IMPORTANCE FACTOR	1.0
SNOW EXPOSURE FACTOR	1.0
SNOW THERMAL FACTOR CT	1.1 TYP, 1.2 UNHEATED SPACES
FLAT ROOF SNOW LOAD	21 PSF
UNBALANCED & DRIFT LOAD	PER CODE

DESIGN WIND LOADS:

WIND SPEED	115 MPH (ULT)
MEAN BUILDING HEIGHT	21 FT
WIND EXPOSURE CATEGORY	B

DESIGN SEISMIC LOADS:

RISK CATEGORY	II
SITE CLASS	C
SPECTRAL ACCELERATIONS	Ss=0.184 S1=0.048 SDS=0.160 SD1=0.048
SEISMIC DESIGN CATEGORY	A
RESPONSE MODIFICATION FACTOR	3.5

FOUNDATIONS: FOUNDATION WORK HAS BEEN DESIGNED AND ELEVATIONS ESTABLISHED ON THE BASIS OF THE REPORT OF DAVID BLACKMORE & ASSOCIATES DATED AUGUST 29, 2022 (REVISED MARCH 18, 2024) WRITTEN FOR THE USE OF THE OWNER, ARCHITECT AND ENGINEER. FOOTINGS HAVE BEEN DESIGNED TO BEAR ON UNDISTURBED RESIDUAL SOILS OR COMPACTED STRUCTURAL FILL CAPABLE OF SAFELY SUPPORTING A NET PRESSURE OF 3000 PSF. IF FOUNDATION CONDITIONS PROVE UNACCEPTABLE AT ELEVATIONS SHOWN, FOOTING SHALL BE CARRIED DEEPER OR OTHER REDESIGN OF FOUNDATIONS WILL BE REQUIRED AT THE DIRECTION OF THE ARCHITECT. BOTTOM OF EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 3'-0" FT BELOW FINISHED GRADE.

DO NOT PLACE UNDERGROUND UTILITIES OR PIPES BELOW FOOTINGS. IF ANY SUCH CONDITIONS OCCUR, NOTIFY THE ARCHITECT AND DROP THE BOTTOM OF FOOTING ELEVATION IN ORDER TO CLEAR PIPE.

THE OWNER WILL EMPLOY A TESTING AGENCY TO PERFORM INSPECTIONS AND TESTING OF FOOTING BEARING ELEVATIONS WITH REGARD TO THE DESIGN SOIL BEARING PRESSURE NOTED ABOVE. NOTIFY THE TESTING AGENCY WITHIN 24 HOURS WHEN EXCAVATION OF THE BOTTOM OF FOOTINGS HAVE BEEN COMPLETED. DO NOT POUR FOOTINGS UNTIL THE INSPECTION AGENCY HAS VERIFIED THE BEARING VALUE.

EARTHWORK: ALL EARTHWORK, INCLUDING EXCAVATIONS, FILLS, PROOFROLLING, TESTING, COMPACTION, ETC., TO BE PERFORMED IN ACCORDANCE WITH RECOMMENDATIONS CONTAINED IN SOILS REPORT PREPARED BY DAVID BLACKMORE & ASSOCIATES DATED AUGUST 29, 2022 (REVISED MARCH 18, 2024) AND THE SPECIFICATIONS. ALL EARTHWORK, INCLUDING FOUNDATION BEARING SHALL BE INSPECTED FOR CONFORMANCE WITH THE SOILS REPORT AND CONTRACT DOCUMENTS AS REQUIRED BY THE SPECIFICATIONS.

CONTROLLED COMPACTED FILL: ALL EXISTING FILL AND INSITU SOFT MATERIAL THAT CANNOT BE COMPACTED AND MATERIAL THAT CANNOT SUPPORT THE REQUIRED THICKNESSES OF CONTROLLED COMPACTED FILL AND/OR FOUNDATION LOADS WITHOUT DETRIMENTAL SETTLEMENT MUST BE REMOVED PRIOR TO PROOFROLLING.

AFTER STRIPPING AND GENERAL EXCAVATIONS, THE ENTIRE BUILDING AREA SHALL BE PROOFROLLED WITH A HEAVY (MINIMUM 15 TON) SMOOTH DRUM ROLLER TO DETECT CAVITIES, SINKHOLES, SOFT SPOTS OR IRREGULARITIES IN THE SUBGRADE. OWNER'S INSPECTION AGENCY TO OBSERVE AND MAKE RECOMMENDATIONS DURING PROOFROLLING OPERATION.

AFTER PROOFROLLING AND ALL CORRECTIVE MEASURES AS REQUIRED BY THE OWNER'S INSPECTION AGENCY ARE ACCOMPLISHED, GENERAL FILL WITHIN THE BUILDING SHALL BE PLACED PRIOR TO CONSTRUCTION OF FOUNDATIONS. ALL FILL WITHIN AND 5'-0" BEYOND THE BUILDING LINES SHALL BE CONTROLLED, PLACED AND COMPACTED TO 98% STANDARD PROCTOR DENSITY (ASTM D968). FILL SHALL BE PLACED IN LAYERS OF APPROPRIATE THICKNESSES REQUIRED BY THE NATURE OF THE SOIL OR AS DIRECTED SO THAT THE MATERIAL WILL BE COMPACTED THROUGHOUT THE ENTIRE LAYER. SPECIAL CARE SHALL BE TAKEN TO ADEQUATELY COMPACT FILL AND BACKFILL IN AREAS EXCAVATED FOR PIPE TRENCHES, FOOTINGS AND FOUNDATION WALLS.

THE OWNER WILL RETAIN THE SERVICES OF A SOILS CONSULTANT TO TEST PROPOSED FILL MATERIALS, ESTABLISH COMPACTION PROCEDURES, OBSERVE CONTROLLED COMPACTED FILL PLACEMENT ON A FULL-TIME BASIS WHENEVER FILL IS BEING PLACED, AND PERFORM IN-PLACE DENSITY TESTS TO CONFIRM THE ADEQUACY OF COMPACTION.

DEWATERING: PROVIDE FOR ANY DEWATERING AS REQUIRED DURING EXCAVATION AND CONSTRUCTION.

CONCRETE: MINIMUM 28 DAY CYLINDER STRENGTH, MAXIMUM SLUMP (PRIOR TO ADDITION OF SUPERPLASTICIZER) AND MAXIMUM WATER/CEMENT RATIO AS FOLLOWS:

	F'c (PSI)	SLUMP	W/C RATIO	AIR CONTENT
FOOTINGS	3000	3"		
RETAINING WALLS AND PIERS	4500	4"	0.45	5-7%
WORK EXPOSED TO WEATHER	4500	4"	0.45	5-7%
FIELD HOUSE SLAB ON GROUND	4000	3"	0.48	2-3%
FOUNDATIONS & FIELDS SLAB ON GROUND	4500	3"	0.45	2-3%

BEFORE PLACING ANY CONCRETE, SUBMIT MIX DESIGNS, ADMIXTURES, CURING COMPOUNDS, ETC. FOR REVIEW. MIX DESIGN TO BE IN ACCORDANCE WITH ACI 318, CHAPTER 5. NO CALCIUM CHLORIDE OR ADMIXTURE CONTAINING CHLORIDES SHALL BE USED IN ANY CONCRETE. ALL PUMPED CONCRETE AND CONCRETE FOR SLABS SHALL CONTAIN SUPERPLASTICIZER.

COARSE AGGREGATE ASTM C33 SIZE #57.

REINFORCING STEEL ASTM A615, GRADE 60. WELDED WIRE FABRIC ASTM A185. LAPS 40 DIAMETERS UNLESS NOTED. ALL BARS SECURELY HELD IN ACCURATE POSITION BY SUITABLE ACCESSORIES, TIE BARS, SUPPORT BARS, ETC. ALL CONCRETE WORK TO COMPLY WITH ACI BUILDING CODE (ACI-318) AND DETAILING MANUAL (ACI-SP66). SHOP DRAWINGS SHOWING REINFORCING DETAILS INCLUDING BAR SIZES, SPACING, AND PLACEMENT SHALL BE SUBMITTED AND REVIEWED PRIOR TO FABRICATION.

ALL FOOTINGS TO HAVE DOWELS THE SAME SIZE AND NUMBER AS VERTICAL REINFORCING IN WALLS, PIERS OR COLUMNS ABOVE, AND EXTEND A MINIMUM OF 48 BAR DIAMETERS ABOVE THE TOP OF FOOTING UNLESS NOTED OTHERWISE.

THE OWNER WILL EMPLOY A TESTING AGENCY TO PERFORM INSPECTIONS AND TESTING OF CONCRETE AND REINFORCING STEEL. MAKE ONE SET OF FOUR CONCRETE CYLINDERS FROM EACH 50 CUBIC YARDS WITH A MINIMUM OF ONE SET FROM EACH DAYS OPERATION FOR EACH CLASS OF CONCRETE. TEST SPECIMENS SHALL BE MADE IN ACCORDANCE WITH ASTM C31. MAKE ONE SLUMP TEST ON THE CONCRETE AT THE BEGINNING OF THE POUR AND FOR EACH SET OF CYLINDERS TAKEN IN ACCORDANCE WITH ASTM C143. MAKE ONE ENTRAINED AIR TEST WITH EACH SLUMP TEST IN ACCORDANCE WITH ASTM C31. CYLINDER SHALL BE TESTED IN ACCORDANCE WITH ASTM C39, TWO CYLINDERS AT 7 DAYS AND TWO AT 28 DAYS OLD. THE TESTING AGENCY SHALL SUBMIT, WITHIN 24 HOURS, THE RESULTS OF THEIR INSPECTIONS AND TESTS TO THE ARCHITECT FOR REVIEW.

CURE FLATWORK USING AN APPROVED CURING COMPOUND WITH 30% MINIMUM SOLIDS, OR BY MOIST CURING 7 DAYS MINIMUM. CURE FORMED SURFACES BY LEAVING FORMS IN PLACE 7 DAYS MINIMUM, BY MOIST CURING OR BY APPLYING AN APPROVED CURING COMPOUND IF FORMS ARE REMOVED IN LESS THAN 7 DAYS.

SLAB ON GROUND: CONSTRUCTION AND SHRINKAGE JOINTS AS SHOWN. IF NOT SHOWN, PROVIDE AT 3xSLAB THICKNESS ON CENTER EACH WAY. EXCEPT AS SHOWN, MINIMUM SLAB THICKNESS TO BE 4". SEE PLAN FOR CRUSHED STONE OR GRAVEL BASE COURSE THICKNESS AND SLAB REINFORCEMENT. MINIMUM FLOOR FLATNESS (FF) 35, MINIMUM FLOOR LEVELNESS (FL) 20.

CONTRACTOR TO RECOGNIZE THE POTENTIAL PROBLEM OF CURLING AND SHRINKAGE CRACKING WHEN CASTING SLABS ON VAPOR BARRIER AND/OR SUBGRADE. EVERY EFFORT MUST BE MADE TO USE PROPER MIX, ADMIXTURES WITH LOW SHRINKAGE POTENTIAL AND SLUMP AS SPECIFIED. AFTER CASTING, CURE SLABS TO MAINTAIN THE MOISTURE CONTENT OF THE SLAB AS UNIFORM AS POSSIBLE, AND DO NOT ALLOW THE TOP OF THE SLAB TO BECOME DRIER THAN THE BOTTOM.

SEE ARCHITECTURAL DRAWINGS FOR MISCELLANEOUS ITEMS OF CONCRETE WORK. SHOP DRAWINGS TO BE SUBMITTED AND APPROVED PRIOR TO FABRICATING MATERIAL.

INSTALLATION OF ANCHOR RODS, BOLTS AND OTHER EMBEDDED ITEMS MUST COMPLY WITH TOLERANCES SET FORTH IN THE AISC CODE OF STANDARD PRACTICE SECTION 7.5.

UNIT MASONRY: CONSTRUCT ALL MASONRY WALLS TO COMPLY WITH TMS 402/602 BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES. SEE SPECIFICATIONS FOR COLD AND HOT WEATHER CONSTRUCTION AND WALL PROTECTION REQUIREMENTS. SUBMIT FOR REVIEW PROPOSED MORTAR MIX DESIGNS, GROUT MIX DESIGNS, PRE-CONSTRUCTION TEST DATA, PRODUCT DATA, AND STEEL REINFORCING SHOP DRAWINGS PRIOR TO START OF CONSTRUCTION.

MASONRY WALLS HAVE BEEN DESIGNED ON THE BASIS OF THE FOLLOWING MINIMUM 28-DAY COMPRESSIVE STRENGTH (PSI) OF MATERIALS:

LOCATION	CMU (NET AREA)	MORTAR TYPE & STRENGTH	GROUT	PRISM STRENGTH F'm
	2000	S - 1800	2000	2000

ALL CONCRETE MASONRY UNITS, INCLUDING SPECIAL SHAPES, SHALL CONFORM TO ASTM C90 NORMAL WEIGHT AND SHALL MEET SCHEDULED COMPRESSIVE STRENGTH REQUIREMENTS. MASONRY UNITS SHALL BE STEAM CURED, A MINIMUM OF 28 DAYS OLD AT THE TIME OF DELIVERY AND CONTINUOUSLY PROTECTED FROM EXPOSURE TO RAIN OR OTHER SOURCES OF WATER FROM TIME OF CASTING TO FINAL PLACEMENT IN WALL. MASONRY UNITS SHALL BE DRY, FREE FROM SOIL, ICE AND FROST WHEN LAID IN WALL.

MORTAR SHALL CONFORM TO ASTM C-270 PROPORTION SPECIFICATION. MORTAR SHALL BE PROPORTIONED BY VOLUME AS FOLLOWS: 1 PART PORTLAND CEMENT, 1/4 TO 1/2 PARTS HYDRATED LIME OR LIME PUTTY, AND FINE AGGREGATE NOT LESS THAN 2-1/4 AND NOT MORE THAN 3 TIMES THE SUM OF THE VOLUMES OF CEMENT AND LIME USED. NO ADMIXTURES ARE PERMITTED. ADD WATER AS REQUIRED FOR PROPER CONSISTENCY.

GROUT SHALL CONFORM TO ASTM C476 PROPORTION SPECIFICATION AND SHALL MEET SCHEDULED COMPRESSIVE STRENGTH REQUIREMENTS. USE FINE GROUT FOR FILLING OPENINGS OR CORE OPENINGS SMALLER THAN 4" IN LEAST DIMENSION. FINE GROUT SHALL CONSIST OF PORTLAND CEMENT, LIME OR LIME PUTTY, WATER, AND FINE AGGREGATE. USE COARSE GROUT FOR FILLING OPENINGS OR CORES WHERE LEAST DIMENSION OF OPENING IS 4" OR MORE. COARSE GROUT SHALL CONSIST OF PORTLAND CEMENT, HYDRATED LIME OR LIME PUTTY, WATER, FINE AGGREGATE AND COARSE AGGREGATE.

LOW LIFT GROUTING: WALLS SHALL BE CONSTRUCTED TO 5'-4" MAXIMUM HEIGHT BETWEEN GROUT POURS. GROUT POUR HEIGHT SHALL NOT EXCEED 5'-4". CONSOLIDATE GROUT AT TIME OF PLACEMENT BY MECHANICAL VIBRATION AND RECONSOLIDATE BY MECHANICAL VIBRATION AFTER INITIAL WATER LOSS AND SETTLEMENT HAS OCCURRED.

ALL MASONRY WALLS BELOW THE SLAB ON GRADE TO BE GROUTED 100% SOLID UNLESS OTHERWISE NOTED.

IN REINFORCED MASONRY WALLS, ALLOW GROUT TO CURE AT LEAST 48 HOURS BEFORE APPLYING STRUCTURAL LOADS.

REINFORCEMENT: ALL REINFORCING STEEL SHALL BE ASTM A615, GRADE 60. MINIMUM LAP 48 BAR DIAMETERS. REINFORCING, METAL TIES AND ANCHORS SHALL BE PROTECTED FROM CONTACT WITH SOIL AND BEFORE BEING PLACED SHALL BE FREE FROM LOOSE RUST AND OTHER COATINGS THAT WILL DESTROY OR REDUCE THE BOND.

UNLESS OTHERWISE NOTED, REINFORCE WALLS WITH 2 VERTICAL #5 BARS AT CORNERS AND ENDS OF WALLS, AND 1 VERTICAL #5 BAR EVERY 4' O.C. A MINIMUM OF 2 #5 HORIZONTAL BARS SHALL BE PLACED AT ROOF LEVEL. OPENINGS TO BE REINFORCED WITH 2 #5 BARS AT HEAD, SILL AND JAMBS, EXTENDING 2' MINIMUM BEYOND EDGE OF OPENING.

SHOP DRAWINGS SHOWING ALL REINFORCEMENT SHALL BE SUBMITTED AND REVIEWED PRIOR TO FABRICATION.

PROVIDE, INSTALL AND REMOVE TEMPORARY BRACING REQUIRED TO ENSURE STABILITY DURING CONSTRUCTION.

LINTELS: UNLESS OTHERWISE DETAILED, PROVIDE LINTELS OVER DOOR, WINDOW, AND OTHER MASONRY OPENINGS FOR EACH 4" OF WALL THICKNESS, AS FOLLOWS:

OPENING WIDTH	BRICK (1-L) *	CONCRETE BLOCK
UP TO 4'-0"	L 4 X 4 X 5/16	P/C UNIT, 1-#4 T&B
4'-1" TO 5'-8"	L 6 X 4 X 5/16	P/C UNIT, 1-#4 T&B
5'-9" TO 6'-8"	L 6 X 4 X 3/8	P/C UNIT, 1-#5 T&B
* PLACE 4" LEG HORIZONTALLY.		

PROVIDE 1" OF SOLID BEARING FOR EACH FOOT OF OPENINGS WIDTH (4" MIN.) EACH END. PROVIDE LINTELS FOR OPENINGS GREATER THAN 6'-8" AS ELSEWHERE DETAILED. STEEL LINTELS IN EXTERIOR MASONRY TO BE HOT-DIP GALVANIZED.

NOTE: WHERE CMU WALL THICKNESS IS 6", USE (1) 6" WIDE P/C LINTEL UNIT.

PRE-CONSTRUCTION TESTING: 6 WEEKS PRIOR TO DELIVERY OF MASONRY MATERIALS TO THE SITE, PERFORM PRELIMINARY TESTS ON PROPOSED MATERIALS AND SUBMIT RESULTS OF 28 DAY COMPRESSIVE TESTS FOR THE FOLLOWING:

- 1 MASONRY UNIT TEST PER ASTM C140 FOR EACH SIZE AND STRENGTH OF CMU INDICATED. PREPARE AND TEST 3 SPECIMENS AT 28 DAYS.
- 1 MORTAR TEST PER ASTM C780 FOR EACH TYPE OF MORTAR INDICATED. PREPARE AND TEST 3 SPECIMENS AT 28 DAYS.
- 1 GROUT TEST PER ASTM C1019 FOR EACH TYPE AND STRENGTH OF GROUT INDICATED. PREPARE AND TEST 3 SPECIMENS AT 28 DAYS.

THE OWNER WILL EMPLOY A TESTING AND INSPECTION AGENCY TO INSPECT AND TEST SAMPLES OF ALL STRUCTURAL MASONRY WORK. INSPECTIONS AND TESTING SHALL BE IN ACCORDANCE WITH TMS 602 MINIMUM VERIFICATION REQUIREMENTS AND MINIMUM SPECIAL INSPECTION REQUIREMENTS, LEVEL B QUALITY ASSURANCE. TESTING AGENCY SHALL INSPECT EACH ASPECT OF MASONRY CONSTRUCTION INCLUDING LAYING OF CMU, PLACEMENT OF REINFORCING BARS, GROUTING AND PROTECTION OF REINFORCED MASONRY WALLS.

DURING CONSTRUCTION THE FOLLOWING MATERIALS SHALL BE TESTED FOR COMPLIANCE WITH MINIMUM STRENGTH REQUIREMENTS:

- MORTAR TESTS PER ASTM C780 FOR EACH TYPE OF MORTAR INDICATED. PREPARE 3 SPECIMENS AND TEST 1 AT 7 DAYS AND 2 AT 28 DAYS.
- GROUT TESTS PER ASTM C1019 FOR EACH TYPE AND STRENGTH OF GROUT INDICATED. PREPARE 3 SPECIMENS AND TEST 1 AT 7 DAYS AND 2 AT 28 DAYS.

TESTING FREQUENCY AND REPORTS: SPECIMENS SHALL BE PREPARED AND TESTS CONDUCTED FOR EACH TYPE AND STRENGTH OF MATERIAL AND FOR EACH 5000 SQUARE FOOT OF WALL AREA OR EACH STORY, WHICHEVER IS MORE FREQUENT. THE TESTING AGENCY SHALL SUBMIT WITHIN 24 HOURS THE RESULTS OF THEIR INSPECTIONS AND TESTS TO THE OWNER, ARCHITECT, ENGINEER AND CONTRACTOR.

STRUCTURAL STEEL: ALL FABRICATION AND ERECTION SHALL CONFORM TO AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", AND AWS "CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION". WIDE FLANGE AND TEE SECTIONS ASTM A992. STEEL ANGLES, CHANNELS, PLATES AND THREADED RODS ASTM A36. HEADED AND UNHEADED ANCHOR RODS ASTM F1554 GRADE 36. RECTANGULAR AND SQUARE HOLLOW STRUCTURAL SECTIONS (HSS) ASTM A500 GRADE B. ROUND HSS ASTM A500 GRADE B OR ASTM A501. WELDING ELECTRODES E70XX. SHOP CONNECTIONS BOLTED OR WELDED. FIELD CONNECTIONS BOLTED WITH A325-N BOLTS, INSTALLED SNUG TIGHT, UNLESS FULLY TENSIONED (F-T), SLIP-CRITICAL (S-C) OR WELDED CONNECTIONS ARE NOTED ON DRAWINGS.

SUBMIT FOR REVIEW WELDING PROCEDURE SPECIFICATIONS (WPSs) AND PROCEDURE QUALIFICATION RECORDS (PQRs) ACCORDING TO AWS D1.1 FOR EACH WELDED JOINT, WHETHER PREQUALIFIED OR QUALIFIED BY TESTING. SUBMIT WELDER'S CERTIFICATIONS FOR ALL PERSONNEL INVOLVED WITH FIELD WELDING.

ALL BEAM-TO-BEAM AND BEAM-TO-COLUMN CONNECTIONS SHALL BE DESIGNED FOR ASD SERVICE LOAD REACTIONS INDICATED ON PLAN USING ASD METHODOLOGY. WHERE NOT INDICATED, SIZE CONNECTION FOR 10 KIPS MINIMUM.

ALL STEEL SHALL BE CLEANED OF RUST, LOOSE MILL SCALE AND OTHER FOREIGN MATERIALS, AND RECEIVE ONE SHOP COAT OF PRIMER PAINT AS REQUIRED BY SPECIFICATIONS. DO NOT PAINT TOP FLANGE OF COMPOSITE BEAMS, STEEL TO RECEIVE SPRAYED ON FIREPROOFING, OR STEEL WITHIN 3" OF BOLT HOLES AT SLIP-CRITICAL CONNECTIONS. STEEL AND HARDWARE EXPOSED TO THE ELEMENTS SHALL BE HOT DIP GALVANIZED PER ASTM A123 AND ASTM A153 AS APPLICABLE, UNLESS OTHERWISE NOTED TO BE PAINTED.

GUYS AND OTHER BRACING REQUIRED TO PROVIDE LATERAL STABILITY TO THE BUILDING SHALL BE ADEQUATELY SIZED AND ANCHORED. THIS BRACING SHALL REMAIN UNTIL THE PERMANENT BRACING SYSTEM IS IN PLACE.

THE FABRICATOR SHALL FURNISH CHECKED SHOP AND ERECTION DRAWINGS, AND OBTAIN APPROVAL PRIOR TO FABRICATING ANY STRUCTURAL STEEL.

THE OWNER WILL EMPLOY A TESTING AGENCY, ACCEPTABLE TO THE OWNER, TO PERFORM SHOP AND FIELD INSPECTIONS OF STRUCTURAL STEEL CONNECTIONS AND ERECTION. INSPECTING AGENCY SHALL PERFORM VISUAL OBSERVATIONS TO CONFIRM THAT WORK IS FABRICATED AND ERECTED IN ACCORDANCE WITH APPROVED SHOP DRAWINGS AND CONTRACT DOCUMENTS. PERFORM VISUAL OBSERVATIONS OF ALL SHOP/FIELD WELDS AND BOLTS. TORQUE TEST AT LEAST 10% OF ALL BOLTS AND ALL SLIP CRITICAL BOLTS. SUBMIT WRITTEN REPORTS OF OBSERVATIONS AND RESULTS OF TESTS WITHIN TWO DAYS TO ARCHITECT AND ENGINEER. IMMEDIATELY NOTIFY ENGINEER WHEN DEVIATION FROM THE CONTRACT DOCUMENTS IS OBSERVED.

MISCELLANEOUS: SEE ARCHITECTURAL DRAWINGS FOR MISCELLANEOUS ITEMS OF STRUCTURAL WORK. SHOP DRAWINGS TO BE SUBMITTED AND REVIEWED PRIOR TO FABRICATING MATERIAL.

STEEL JOISTS: JOISTS TO BE OPEN WEB STEEL JOISTS, K-SERIES, COMPLYING WITH LATEST SPECIFICATIONS OF SJI. FURNISH AND INSTALL ANGLE BRIDGING IN ACCORDANCE WITH SJI SPECIFICATIONS. JOISTS SHALL BE DESIGNED AND FABRICATED TO SUPPORT LOADS INDICATED IN SPECIAL JOIST SCHEDULE. DESIGN ALL ROOF JOIST AND BRIDGING TO RESIST A NET UPLIFT FORCE OF 10 PSF.

ATTACH JOISTS ON COLUMN LINES WITH ERECTION BOLTS EACH END AND WELD AFTER PLUMBING AND ALIGNING. ATTACH ALL OTHER JOISTS TO STEEL BEAMS AND BEARING PLATES BY WELDING. PROVIDE ANGLE EXTENSIONS AT BOTTOM CHORDS OF JOISTS FRAMING INTO COLUMNS AND GIRDERS AS DETAILED. ALL JOISTS TO RECEIVE SHOP COAT OF PAINT AS REQUIRED BY SPECIFICATIONS.

ERECTION OF JOISTS SHALL COMPLY WITH LATEST EDITION OF SJI STANDARD SPECIFICATIONS CONCERNING ERECTION STABILITY AND HANDLING, ESPECIALLY AS FOLLOWS: ONE END OF ALL JOISTS SHALL BE ATTACHED TO ITS SUPPORT BEFORE ALLOWING THE WEIGHT OF AN ERECTOR ON THE JOISTS. WHEN BOLTED CONNECTIONS ARE USED, THE BOLTS MUST BE SNUG TIGHTENED.

STEEL DECK: ALL MATERIALS AND INSTALLATION SHALL CONFORM TO AISI SPECIFICATION FOR THE "DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" AND TO RECOMMENDATIONS OF THE STEEL DECK INSTITUTE'S (SDI) DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS AND ROOF DECKS.

STEEL ROOF DECK TO BE 1 1/2" INCH DEEP, 20 GAUGE, GALVANIZED, WIDE RIB DECK COMPLYING WITH LATEST SPECIFICATION OF SDI. SHEETS TO BE AS LARGE AS POSSIBLE, SPANNING A MINIMUM OF 4 SUPPORTS. ATTACH TO SUPPORTS BY WELDING 6" O.C. AT ENDS AND END LAPS, AND 12" O.C. AT INTERMEDIATE SUPPORTS. SIDE LAPS TO BE SCREW-FASTENED AT MID-SPAN, 36" ON CENTER, MAXIMUM UNO.

THE OWNER WILL EMPLOY A TESTING AGENCY TO PERFORM FIELD INSPECTIONS OF METAL DECK INSTALLATION. INSPECTION AGENCY SHALL VISUALLY INSPECT TYPE AND GAGE OF DECK, BEARING LENGTHS, SIDELAP FASTENING AND FASTENING TO SUPPORTS. DO NOT INSTALL ROOFING MATERIALS UNTIL ALL CORRECTIONS REQUIRED BY THE INSPECTION AGENCY HAVE BEEN MADE AND HAVE BEEN RE-INSPECTED.

ROUGH CARPENTRY: ALL MATERIALS AND WORKMANSHIP TO BE IN ACCORDANCE WITH THE LATEST EDITION OF "TIMBER CONSTRUCTION STANDARDS" OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION, AND THE "NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION" BY THE NATIONAL FOREST PRODUCTS ASSOCIATION.

SAWN LUMBER SHALL BE SPRUCE PINE FIR OR EQUAL WITH THE FOLLOWING BASE DESIGN VALUES:

ELEMENT	GRADE	Fb (PSI)	Fv (PSI)	Fc (PSI)	E (PSI)
JOISTS & RAFTERS	#2	875	135	1,150	1,400,000
STUDS	#2	875	135	1,150	1,400,000
POSTS	#2	500	125	500	1,000,000

PLYWOOD FOR ROOF SHEATHING TO BE C-D/INT APA WITH EXTERIOR GLUE. MINIMUM THICKNESS 19/32". MINIMUM SPAN RATING 40/20. PROVIDE 1/8" MINIMUM GAP AT ALL PANEL JOINTS. FASTEN ROOF SHEATHING TO FRAMING USING 8d NAILS AT 6" O.C. AT PANEL EDGES AND 12" O.C. AT ALL OTHER SUPPORTS. PROTECT PANELS FROM WEATHER UNTIL FULLY COVERED AND PERMANENTLY PROTECTED BY ROOFING MATERIALS.

ALL EXPOSED HARDWARE TO BE GALVANIZED, ASTM A525, G90.

PROVIDE GALVANIZED STEEL HURRICANE TIE DOWN ANCHORS WHERE INDICATED ON DRAWINGS.

ALL WOOD FRAMING ELEMENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR AS REQUIRED FOR ANY ANGULAR FIT AGAINST ABUTTING MEMBERS. MEMBER SHALL BE HELD POSITIVELY IN PLACE UNTIL PROPERLY FASTENED.

CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE TEMPORARY BRACING OF ALL BUILDING ELEMENTS. TEMPORARY BRACING SHALL NOT BE REMOVED UNTIL THE STRUCTURE IS SECURELY TIED TOGETHER.

TESD CONESTOGA ATHLETIC FIELDS

TREDYFFRIN TOWNSHIP
CHESTER COUNTY, PA

HSA PROJECT # :21-019

**Heckendorn Shiles Architects**

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ISSUE HISTORY

A.	DATE	ISSUED FOR
	3-18-2024	BID ISSUE

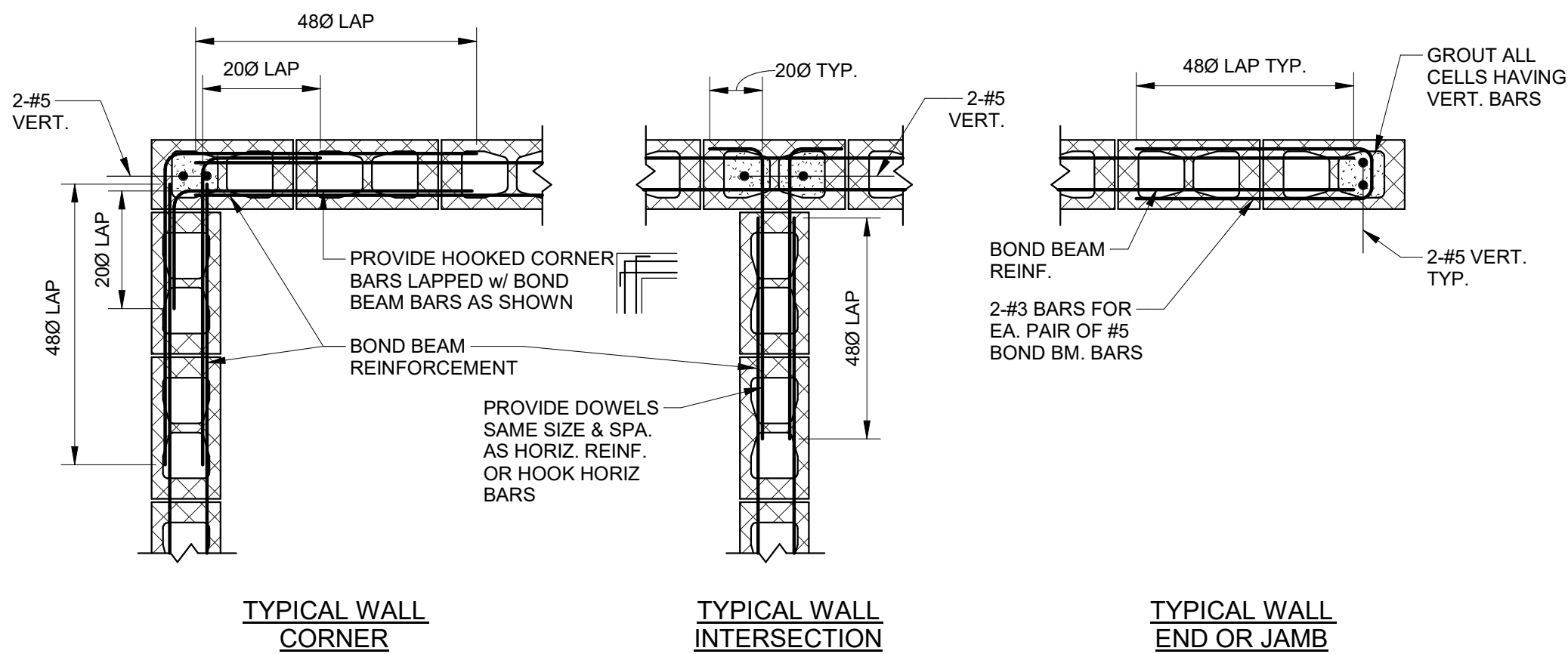
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GENERAL NOTES

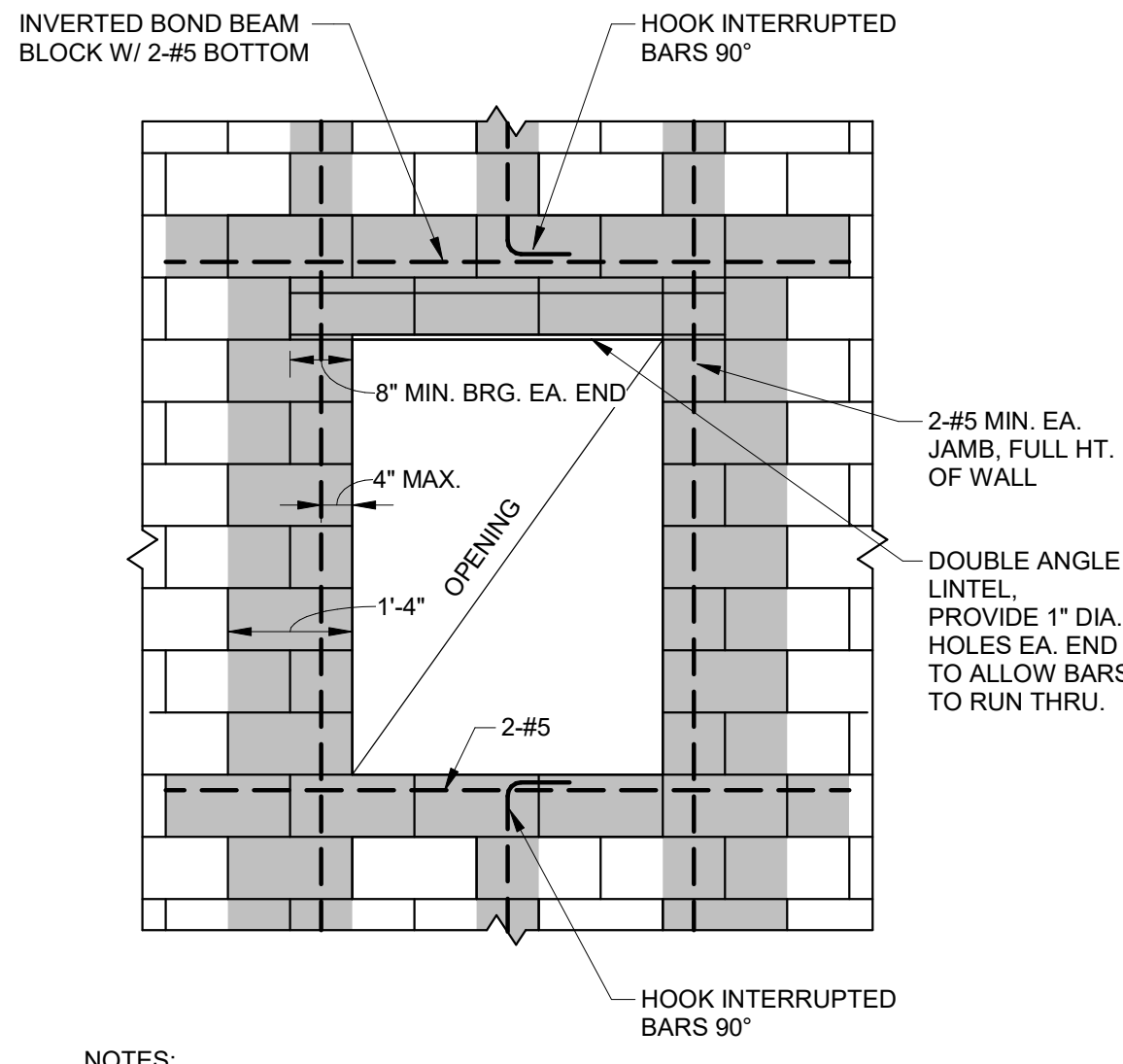
DRAWING NUMBER

S201

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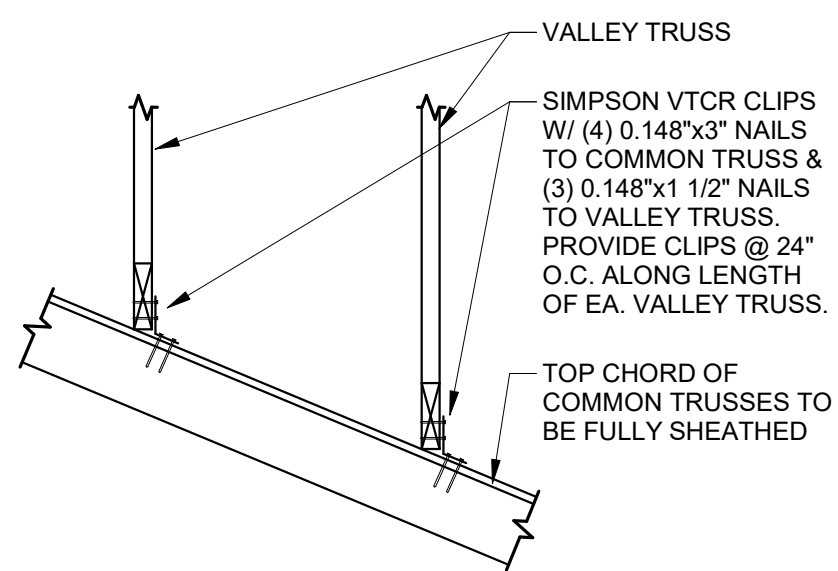
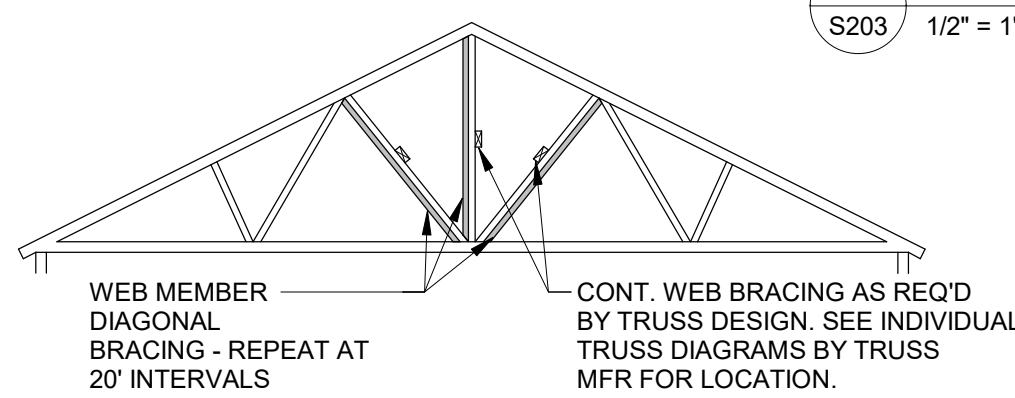
2 TYPICAL MASONRY CONTROL JOINT
S203 3/4" = 1'-0"



4 TYPICAL STRUCTURAL TO ARCHITECTURAL CMU WALL TRANSITION
S203 3/4" = 1'-0"

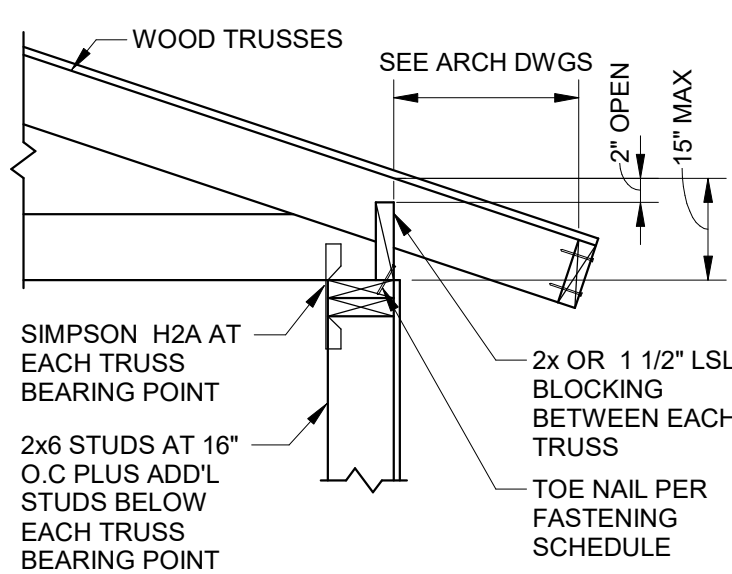
- NOTES:
1. DETAIL APPLIES FOR M.O. 6'-4" AND LESS. CONTACT A/E FOR DIRECTION FOR OPENINGS > 6'-4" THAT ARE NOT DETAILED.
 2. SHADED AREAS TO BE GROUTED 100% SOLID
 3. EXTEND HEAD & SILL REINFORCING 2'-0" MIN BEYOND EA. JAMB. HOOK 90 DEGREES INTO RETURN WALL WHERE 2'-0" EXTENSION IS NOT POSSIBLE.

3 TYPICAL REINFORCEMENT AT CMU WALL OPENING
S203 1/2" = 1'-0"

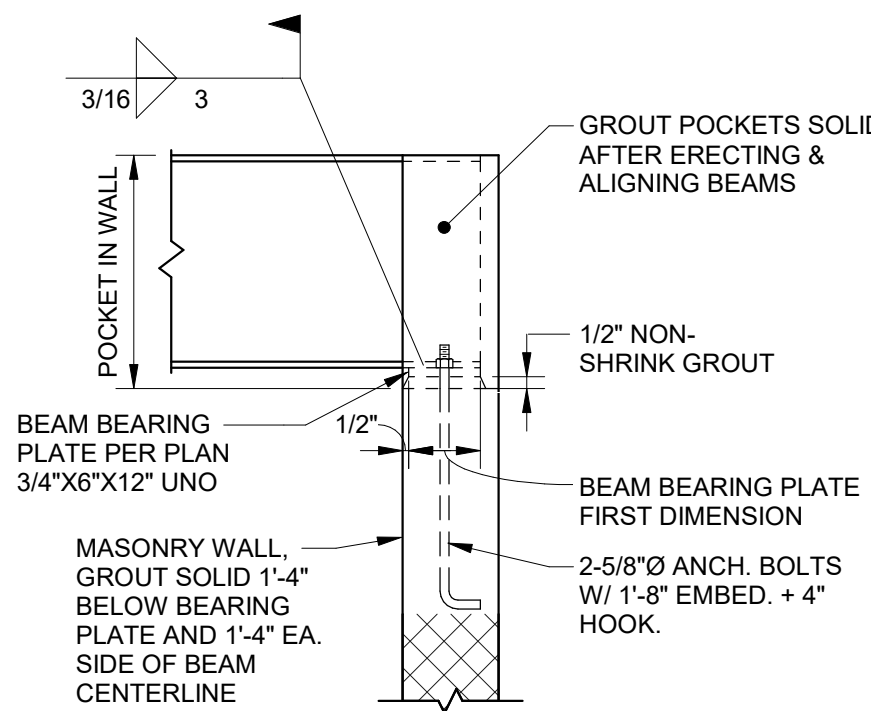
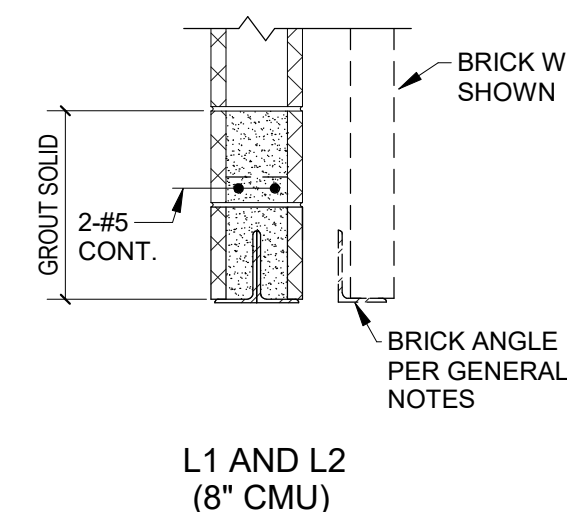


9 TYPICAL BLOCKING AT RIDGE VENT
S203 3/4" = 1'-0"

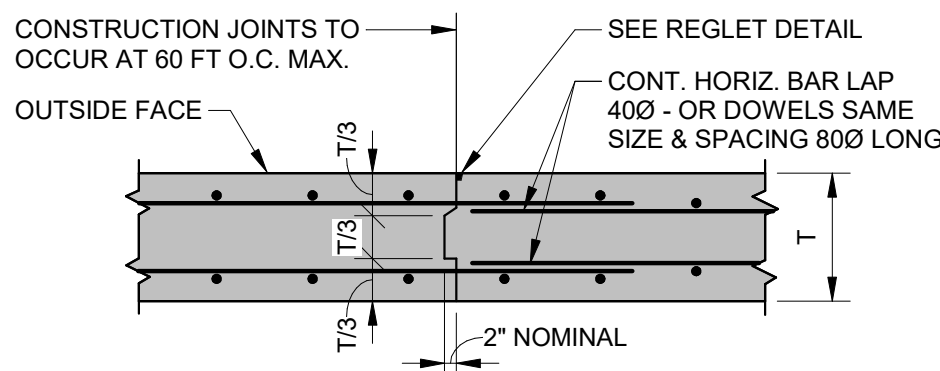
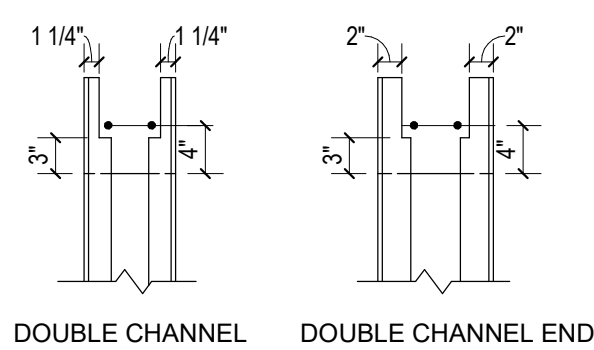
5 TYPICAL BOTTOM CHORD BRACING
S203 1/8" = 1'-0"



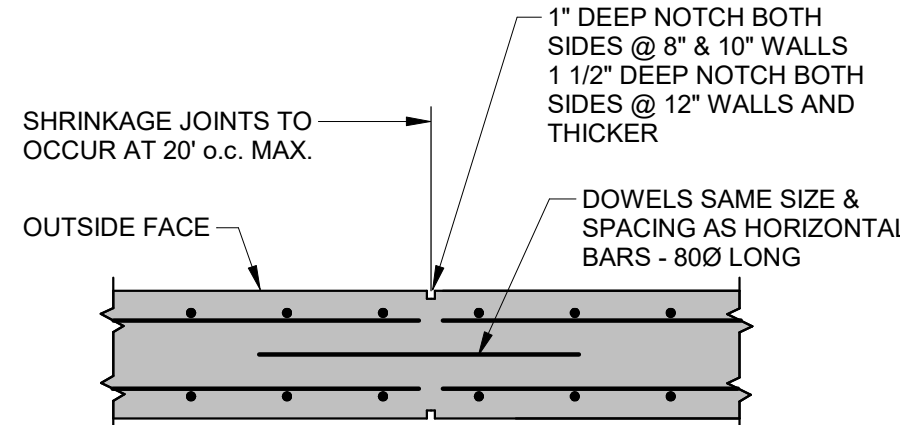
10 TYPICAL TRUSS EAVE
S203 3/4" = 1'-0"



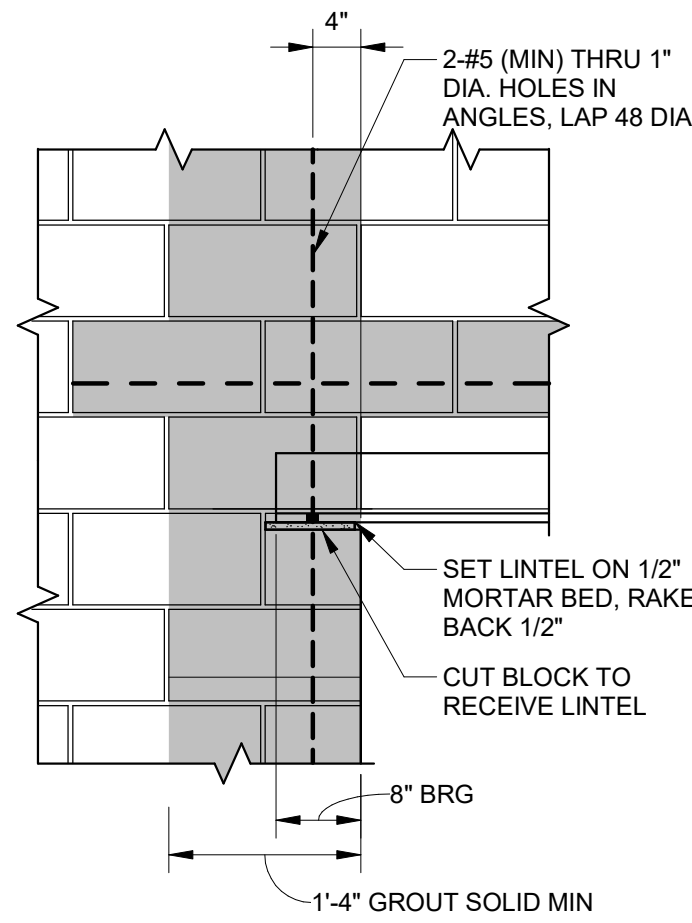
11 TYPICAL BEAM BEARING ON CMU WALL
S203 3/4" = 1'-0"



12 TYPICAL CONCRETE WALL CONSTRUCTION JOINT
S203 1/2" = 1'-0"



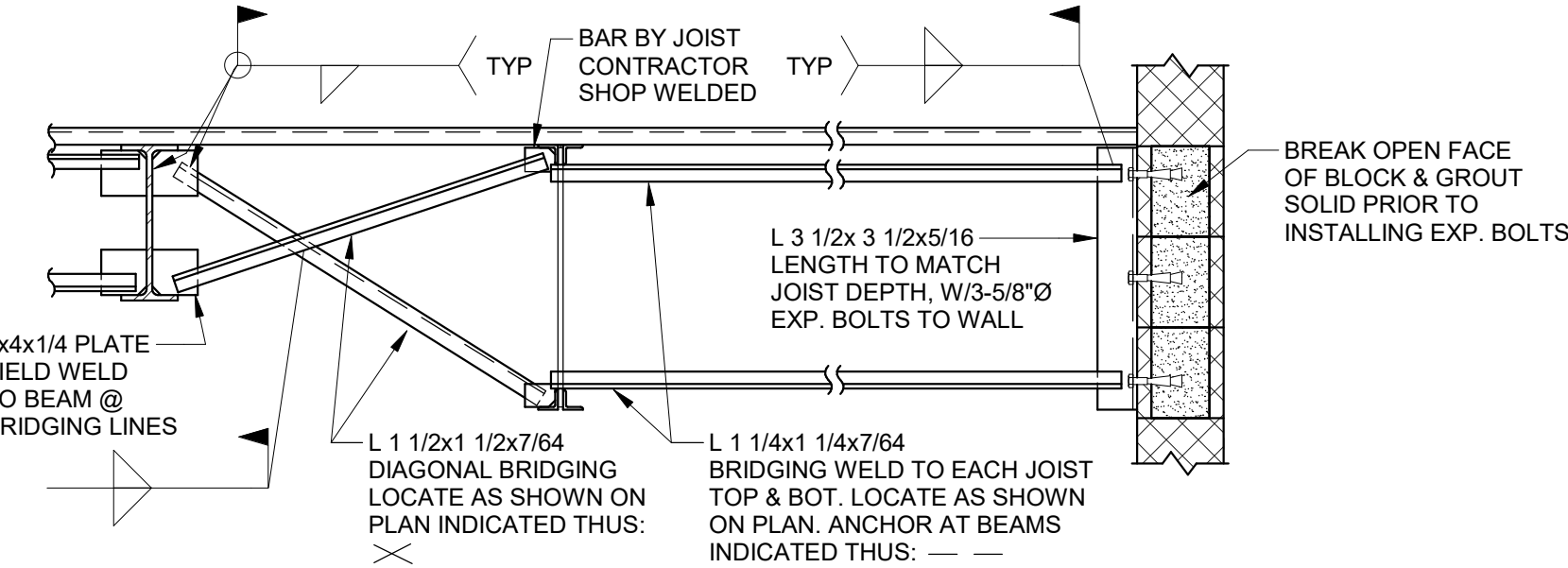
13 TYPICAL CONCRETE WALL SHRINKAGE JOINT
S203 1/2" = 1'-0"



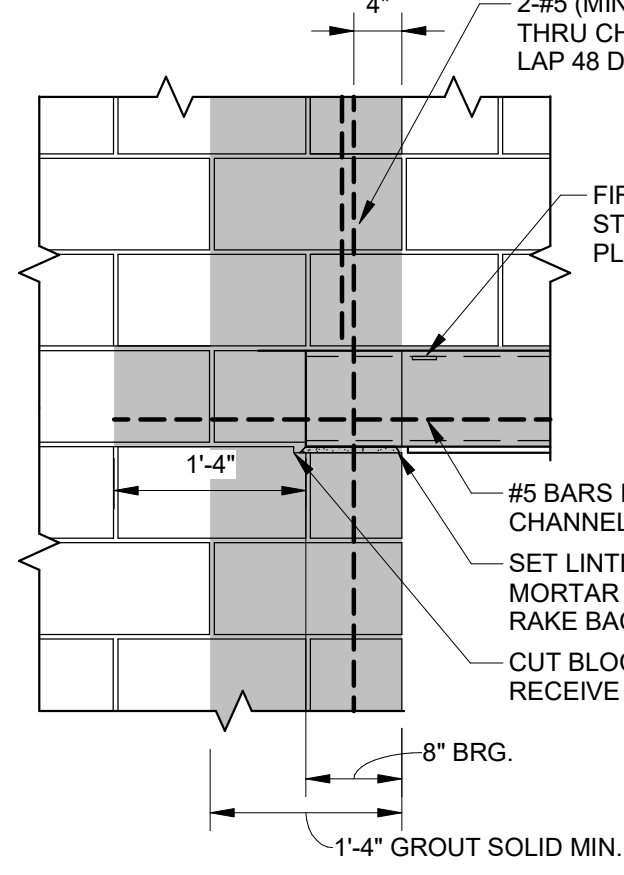
17 TYPICAL DOUBLE ANGLE LINTEL BEARING ON CMU
S203 3/4" = 1'-0"



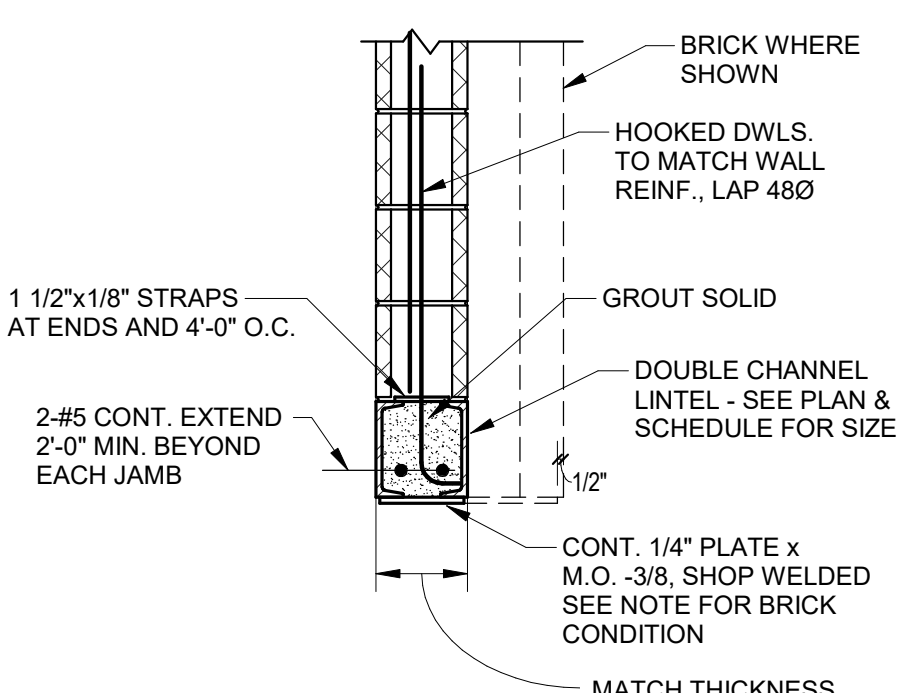
14 TYPICAL JOIST BRIDGING DETAIL
S203 3/4" = 1'-0"



15 TYPICAL JOIST BRIDGING DETAIL
S203 3/4" = 1'-0"



18 TYPICAL DOUBLE CHANNEL LINTEL BEARING ON CMU
S203 3/4" = 1'-0"



19 TYPICAL DOUBLE CHANNEL LINTEL
S203 3/4" = 1'-0"

TESD CONESTOGA ATHLETIC FIELDS

TREDYFFRIN TOWNSHIP
CHESTER COUNTY, PA

HSA PROJECT # :21-019

HECKENDORN SHILES ARCHITECTS

PROJECT TEAM

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MISC DISCIPLINE

Teranet Consulting & Technical Services
(215) 527-9825

ISSUE HISTORY

A.	DATE	ISSUED FOR
	3-18-2024	BID ISSUE

SHEET TITLE

TYPICAL DETAILS

DRAWING NUMBER

S203

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ATHLETIC FIELDS

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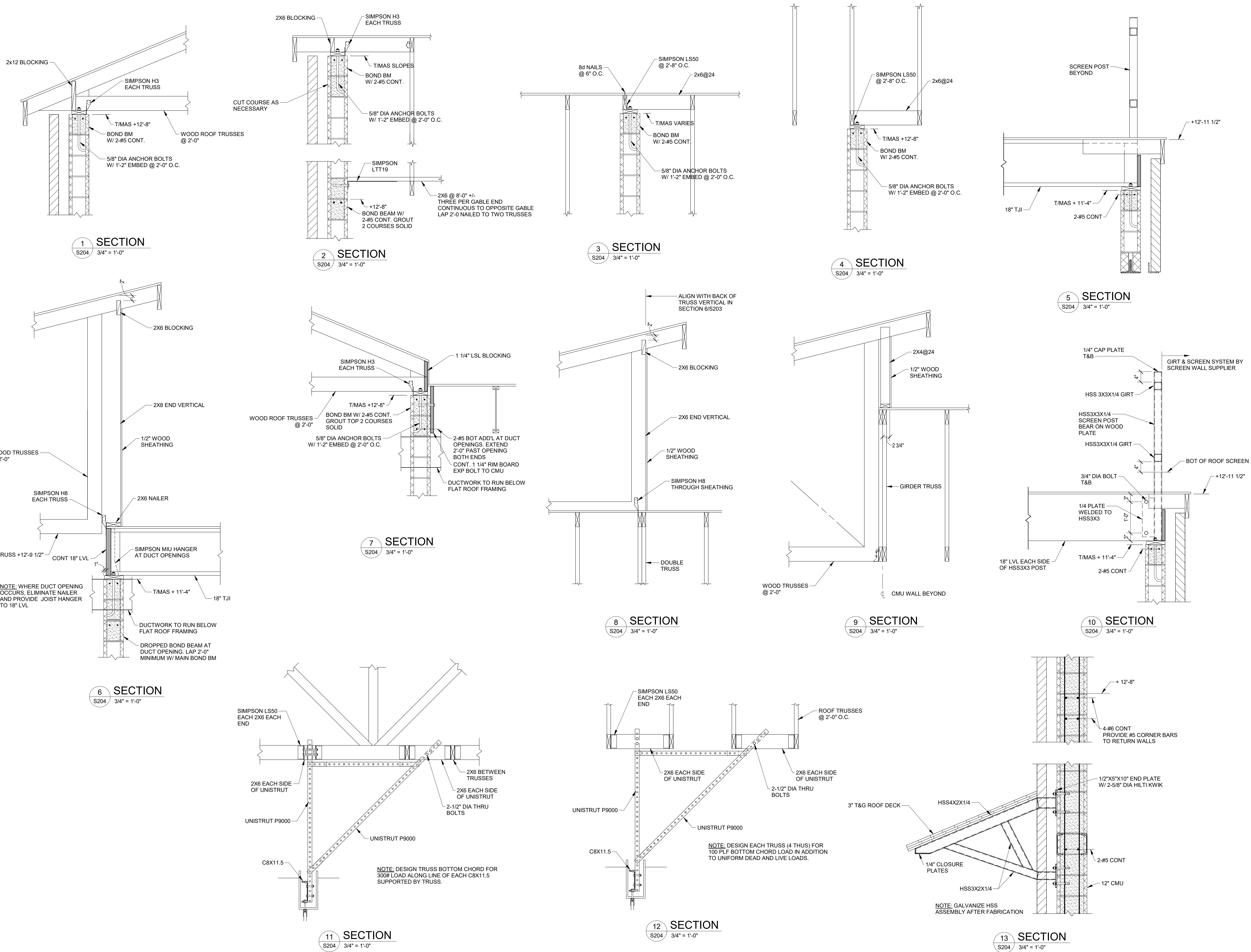
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1	3-18-2024	BID ISSUE

SHEET TITLE

SECTIONS AND
DETAILS

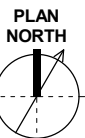
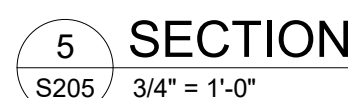
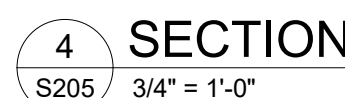
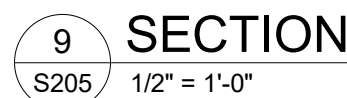
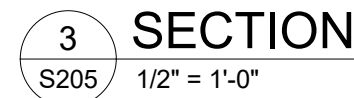
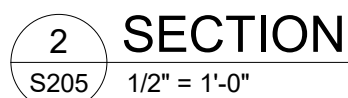
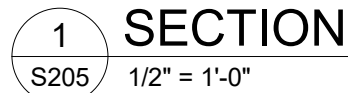
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S204



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S205