

DESIGN DATA

ALL WORK SHALL CONFORM TO THE INTERNATIONAL BUILDING CODE, 2018 EDITION AND TOWN OF PARKER MUNICIPAL CODE LOCAL AMENDMENTS.

WIND:

115 MPH ULTIMATE (3 SEC. GUST)
RISK CATEGORY II
EXP. C

SNOW:

30 PCF - GROUND AND ROOF

MINIMUM FROST DEPTH: 36 INCHES

SOIL AND SUBGRADE VALUES (Assumed):

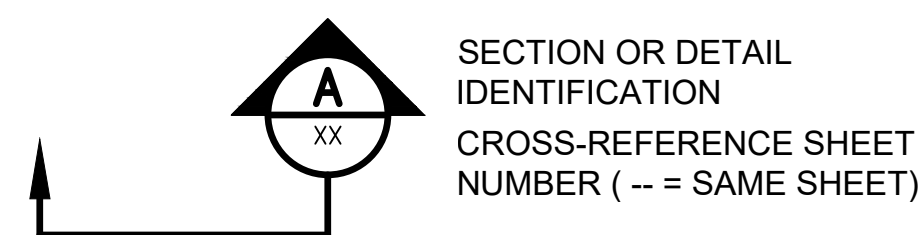
AT-REST = 60 PCF
PASSIVE = 300 PCF
COEFFICIENT OF FRICTION = 0.35
ALLOWABLE BEARING PRESSURE = 1500 PSF

CONCRETE NOTES

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF ACI 318, ACI 304, AND ACI 315.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS WITH 2.5-4.5% ENTRAINED AIR AND TYPE II CEMENT UNLESS NOTED OTHERWISE.
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS OTHERWISE NOTED. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B". ALL HOOKS SHALL BE STANDARD UNLESS NOTED OTHERWISE.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
CONCRETE CAST AGAINST EARTH = 3 IN
CONCRETE EXPOSED TO EARTH OR WEATHER
#6 AND LARGER = 2 IN
#5 AND SMALLER & WWF = 1-1/2 IN
CONCRETE NOT EXPOSED TO EARTH OR WEATHER NOR CAST AGAINST EARTH:
SLAB AND WALL = 3/4 IN
- WHEN PARALLEL REINFORCING BARS ARE PLACED IN LAYERS OF TWO OR MORE, THE CLEAR SPACING BETWEEN LAYERS SHALL BE AT LEAST 1".
- A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE UNLESS NOTED OTHERWISE IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
- HOLES TO RECEIVE EXPANSION/WEDGE ANCHORS SHALL BE 1/8" LARGER IN DIAMETER THAN THE ANCHOR BOLT, DOWEL OR ROD AND SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. LOCATE AND AVOID CUTTING EXISTING REBAR WHEN DRILLING HOLES IN ELEVATED CONCRETE SLABS.
- USE AND INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHORS SHALL BE PER ICC & MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURES.
- COLUMN BASE PLATES AND ANCHOR BOLTS SHALL BE PLACED WITH SETTING TEMPLATES.
- PLACE (2) #5 BARS (1 EACH FACE) WITH A 2'-0" PROJECTION ON ALL SIDES AND DIAGONALLY ACROSS CORNERS OF ALL OPENINGS LARGER THAN 12" SQUARE IN CONCRETE SLABS AND WALLS, UNLESS NOTED OTHERWISE.
- MAKE ALL BARS CONTINUOUS AROUND CORNERS OR PROVIDE CORNER BARS OF EQUAL SIZE AND SPACING.
- PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCEMENT.
- THE CONTRACTOR SHALL ALLOW FOR AND COORDINATE A VISUAL INSPECTION BY THE STRUCTURAL ENGINEER, OR OWNER'S TESTING AGENCY, OF ALL REINFORCING AND OTHER EMBEDDED ELEMENTS PRIOR TO PLACEMENT OF ASSOCIATED CONCRETE.
- CAST IN ANCHOR BOLTS SHALL BE ASTM F-1554 GR. 55.
- CONCRETE SURFACES TO RECEIVE CLASS C FINISH. CONCRETE SURFACE RECEIVING STONE VENEER SHALL HAVE CLASS B FINISH. CONCRETE SURFACE WITH FORM LINER OR EXPOSED TO VIEW SHALL HAVE A CLASS A FINISH.

CONTRACTOR RESPONSIBILITY DURING CONSTRUCTION

- THE CONTRACTOR SHALL REMAIN RESPONSIBLE FOR THE STABILITY OF ALL EXISTING AND PROPOSED STRUCTURES DURING ALL PHASES OF CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO, CONSTRUCTION OPERATIONS SUCH AS DEMOLITION, EXCAVATION, AND STEEL ERECTION.
- ALL TEMPORARY FORMWORK, FALSEWORK, BRACING, EXCAVATION SHORING, OR OTHER MEASURES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION AND TAKE THE APPROPRIATE MEASURES TO AVOID ALL UTILITY CONFLICTS DURING CONSTRUCTION.



STRUCTURAL STEEL

- STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC MANUAL OF STEEL CONSTRUCTION AND THE AISC CODE OF STANDARD PRACTICE CURRENT EDITION.
- CONTRACTOR SHALL MEET ALL OSHA REQUIREMENTS.
- ROUND, SQUARE AND RECTANGULAR HOLLOW STRUCTURAL SECTIONS (HSS) SHALL BE ASTM A500 GR. B (42 KSI ROUND, 46 KSI SQUARE AND RECTANGULAR).
- MISCELLANEOUS STRUCTURAL STEEL INCLUDING PLATES, ANGLES, AND CHANNELS SHALL BE ASTM A36 (36 KSI MIN).
- BOLTED CONNECTIONS SHALL BE HIGH-STRENGTH ASTM A325-N BOLTS, UNLESS NOTED OTHERWISE. A MINIMUM OF TWO BOLTS ARE REQUIRED FOR ALL CONNECTIONS. A MINIMUM FACTORED LRFD CONNECTION CAPACITY OF 12 KIPS IS REQUIRED UNLESS SHOWN AS GREATER ON PLANS.
- HIGH STRENGTH BOLTS SHALL CONFORM TO PROVISIONS OF THE "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", LATEST EDITION.
- HIGH-STRENGTH BOLTS SHALL BE BEARING TYPE AND SNUG TIGHT UNLESS NOTED OTHERWISE. SNUG TIGHT IS DEFINED AS THE TIGHTNESS THAT EXISTS WHEN ALL PLIES IN A JOINT ARE IN FIRM CONTACT. A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF A MAN USING AN ORDINARY SPUD WRENCH MAY ATTAIN THIS.
- CONNECTIONS SHALL BE AS SPECIFIED ON THE STRUCTURAL DETAILS OR BOLT CONNECTION SCHEDULES. ANY PROPOSED CHANGES SHALL BE SUBMITTED WITH THE FABRICATOR'S SHOP DRAWINGS INCLUDING STAMPED AND SIGNED CALCULATIONS FROM THE CONTRACTOR'S ENGINEER.
- WELDING ELECTRODES SHALL BE ASTM E70XX.
- A CERTIFIED WELDER IN ACCORDANCE WITH AWS SHALL PERFORM ALL WELDING.
- SHOP DRAWINGS FOR ALL STEEL INDICATED ON THE CONSTRUCTION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER & DESIGNER(S) FOR REVIEW PRIOR TO FABRICATION.
- ALL WELDING OF STEEL REINFORCING TO STRUCTURAL STEEL REQUIRES CONTINUOUS INSPECTION BY A QUALIFIED INSPECTOR.
- NO CUTTING OR BURNING OF STRUCTURAL STEEL IS ALLOWED WITHOUT WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER.
- 3/8" WEEP HOLES SHALL BE PROVIDED IN LOW ENDS OF ALL ENCLOSED TUBULAR MEMBERS. NO ADDITIONAL HOLES OTHER THAN THOSE SPECIFICALLY DETAILED ARE ALLOWED IN THE STRUCTURAL STEEL.
- NO SPLICING OF STRUCTURAL STEEL IS PERMITTED UNLESS APPROVED IN WRITING BY ENGINEER.

STRUCTURAL CONSTRUCTION NARRATIVE

STEEL-FRAMED SHADE STRUCTURES SUPPORTED ON SPREAD FOOTINGS.

STRUCTURAL DRAWING INDEX

- S1.0 GENERAL STRUCTURAL NOTES
- S2.0 SHADE STRUCTURE FOUNDATION PLANS
- S3.0 SHADE STRUCTURE ROOF FRAMING PLANS
- S4.0 SHADE STRUCTURE STRUCTURAL SECTIONS AND DETAILS

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DESIGNED: KSP
DRAWN: KB
CHECKED: JKH

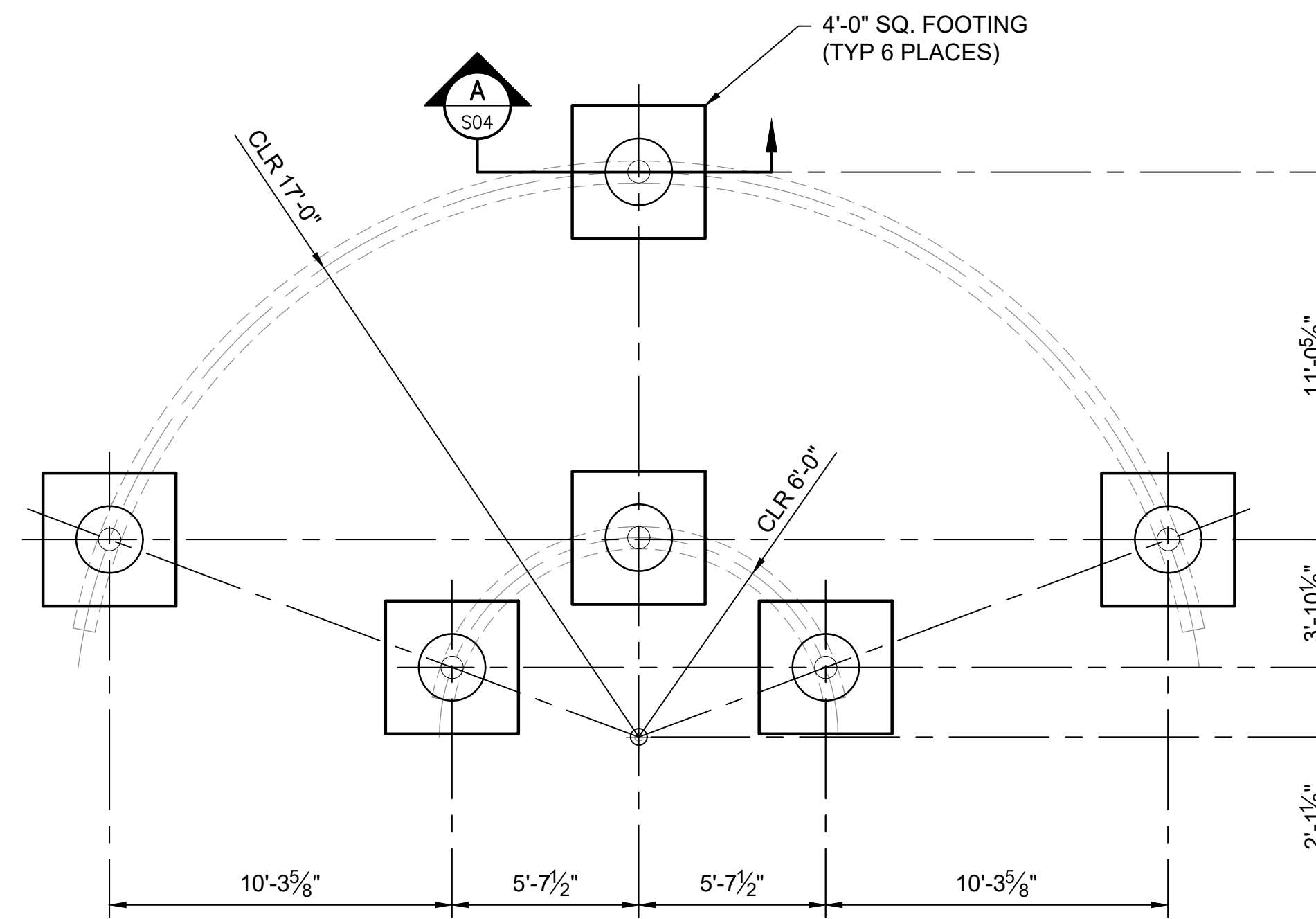
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JOB DESCRIPTION:
CONSTRUCTION DOCUMENTS

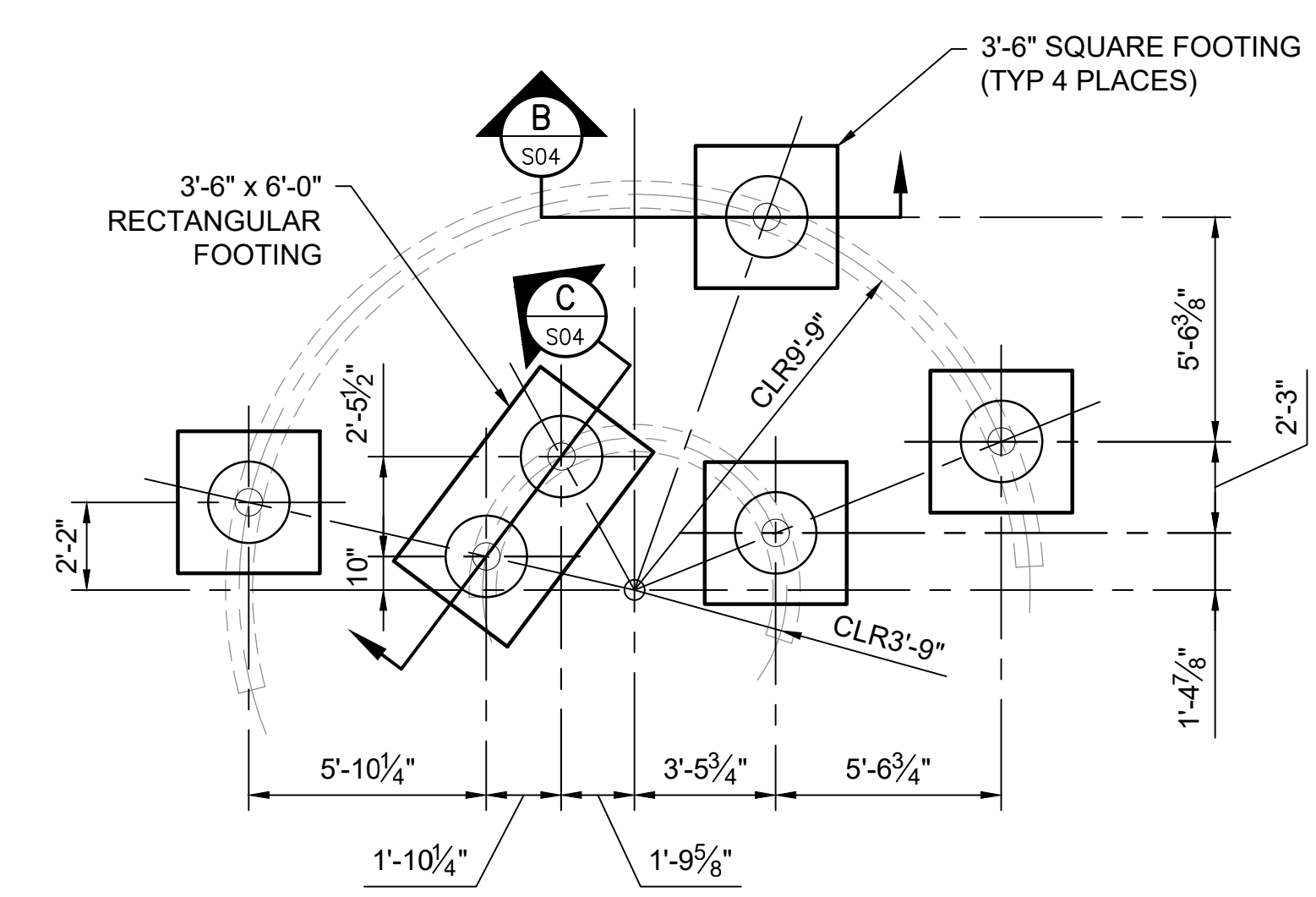
SHEET TITLE:
GENERAL
STRUCTURAL
NOTES

SCALE: AS SHOWN

SHEET NUMBER:



1 LARGE SHADE STRUCTURE FOUNDATION PLAN
Scale: 1/4" = 1'-0"



2 SMALL SHADE STRUCTURE FOUNDATION PLAN
Scale: 1/4" = 1'-0"

HARVIE OPEN SPACE PARK
CONSTRUCTION DOCUMENTS - STRUCTURAL

20120 East Main Street, Parker, CO 80138

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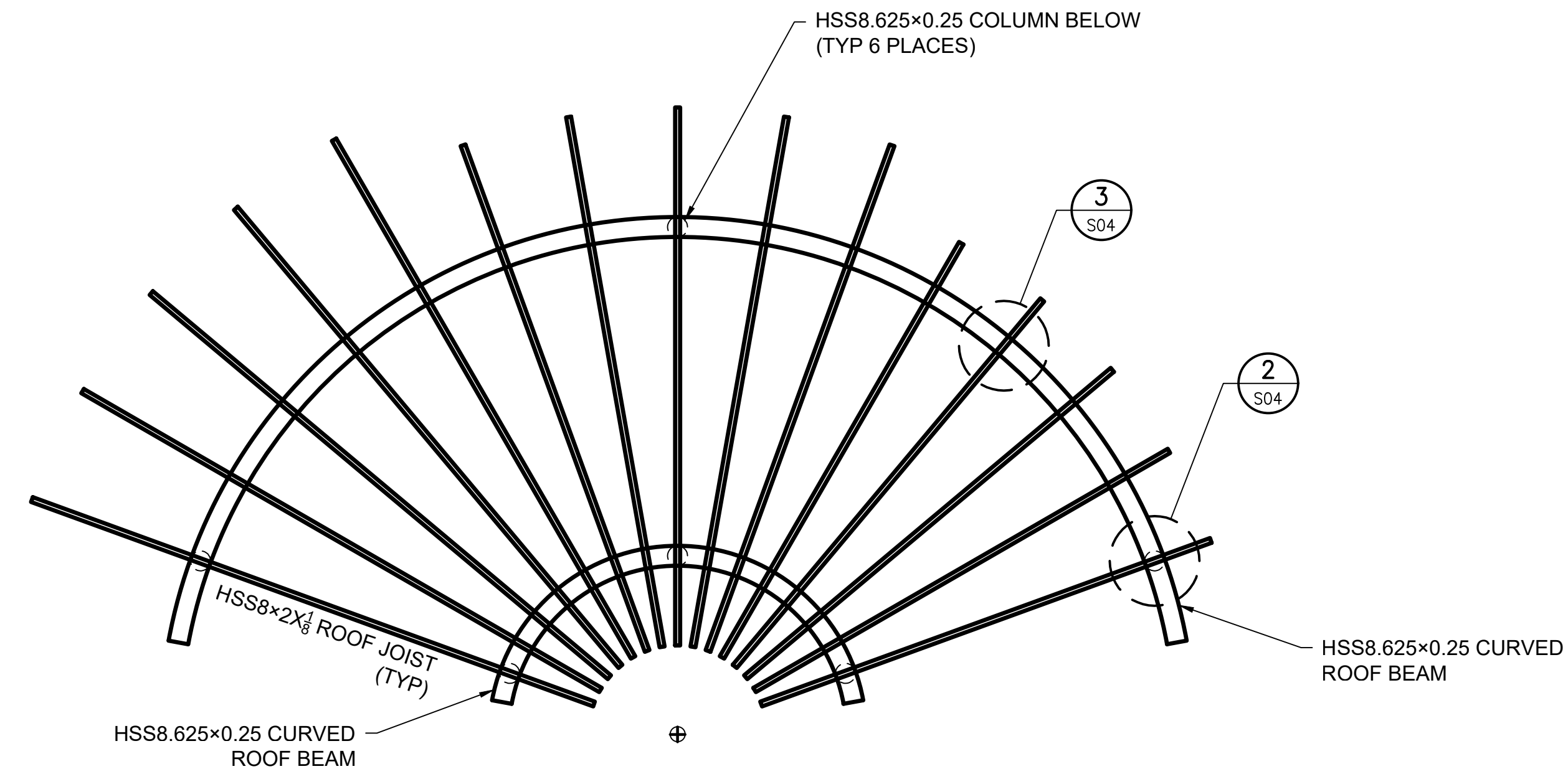
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SHEET TITLE:
SHADE STRUCTURE
FOUNDATION PLANS

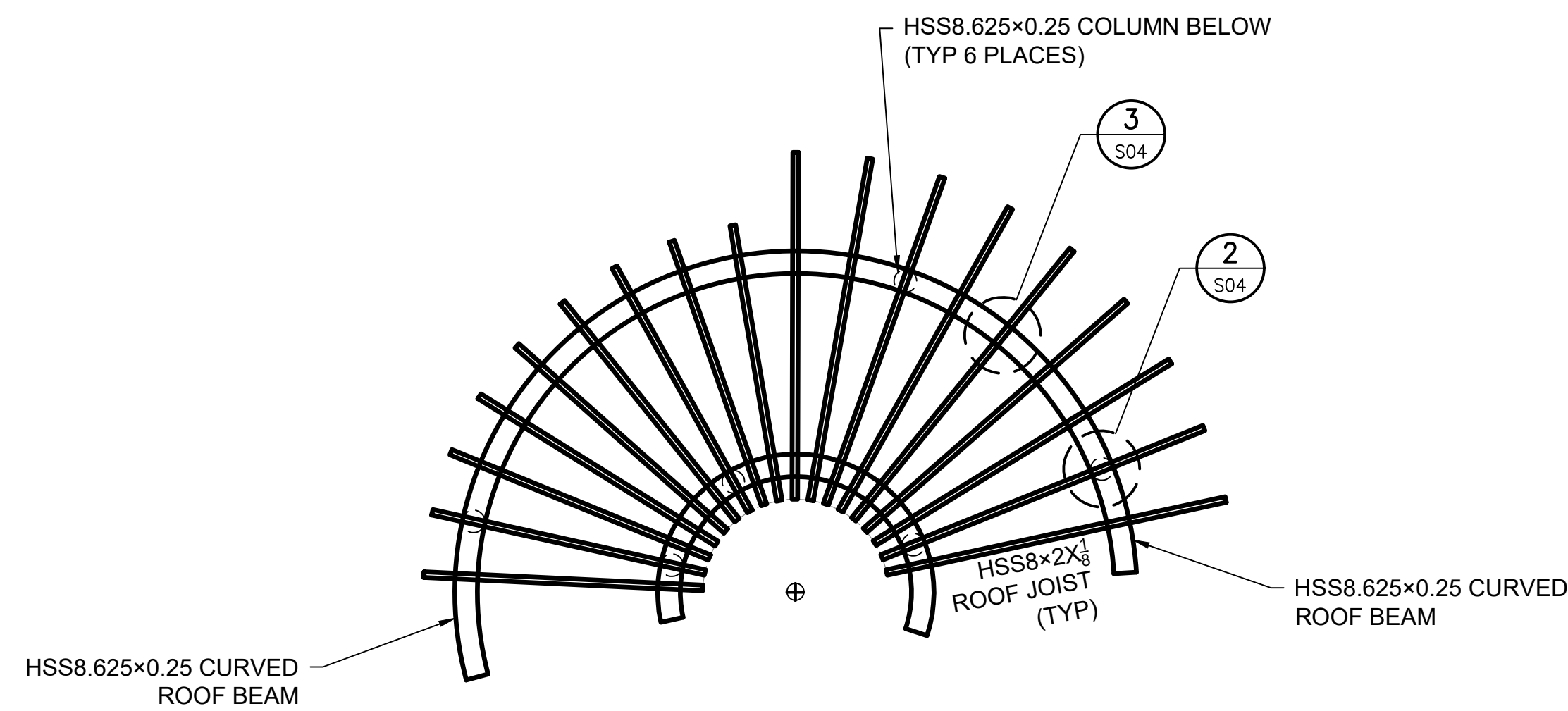
SCALE: AS SHOWN
SHEET NUMBER:

S2.0



NOTE: REFER TO SHEET L6.7 FOR DIMENSIONAL LAYOUT OF ROOF FRAMING.

1 LARGE SHADE STRUCTURE ROOF FRAMING PLAN
Scale: 1/4" = 1'-0"



NOTE: REFER TO SHEET L6.8 FOR DIMENSIONAL LAYOUT OF ROOF FRAMING.

2 SMALL SHADE STRUCTURE ROOF FRAMING PLAN
Scale: 1/4" = 1'-0"

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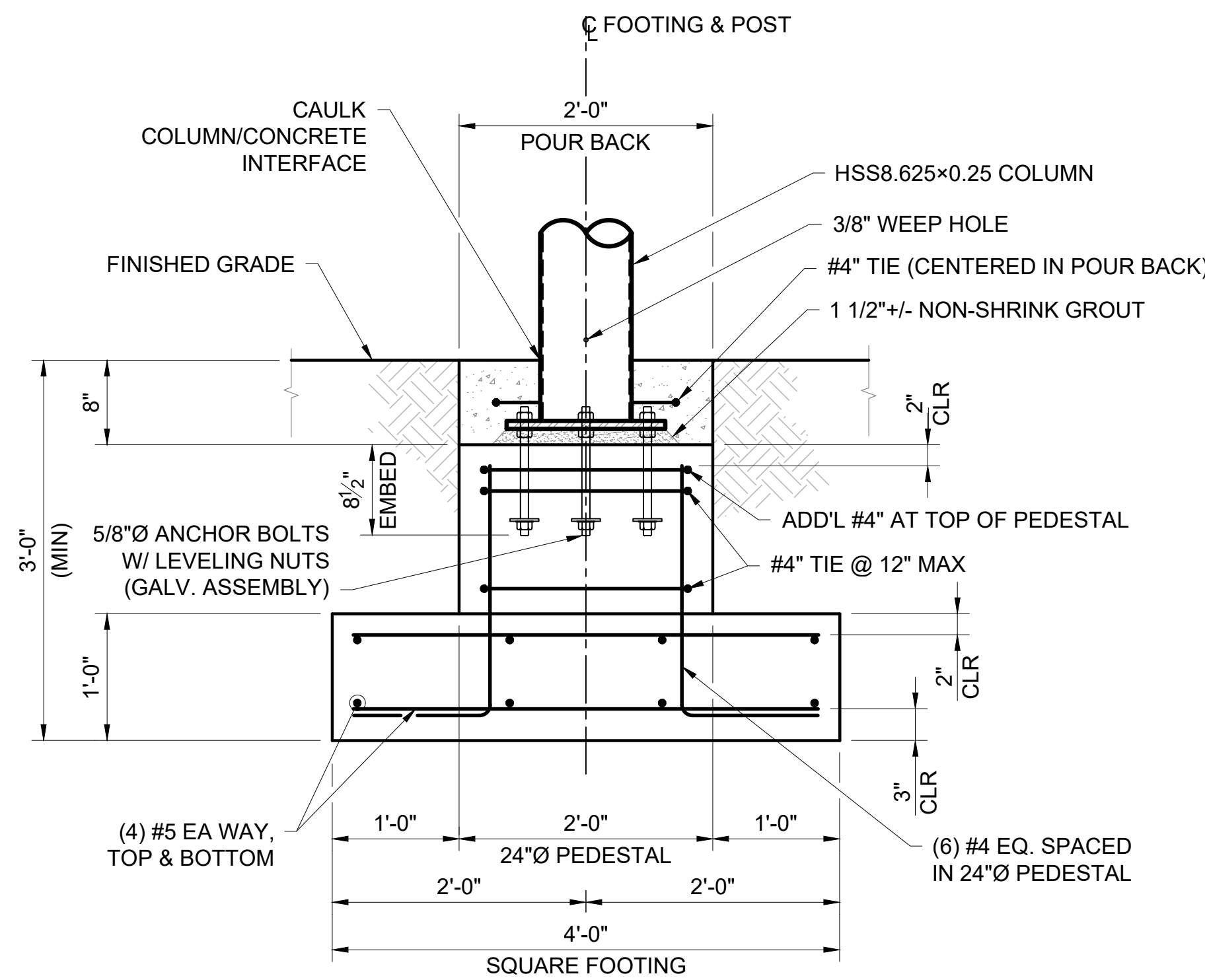
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CONSTRUCTION DOCUMENTS

SHEET TITLE:
SHADE STRUCTURE
ROOF FRAMING PLANS

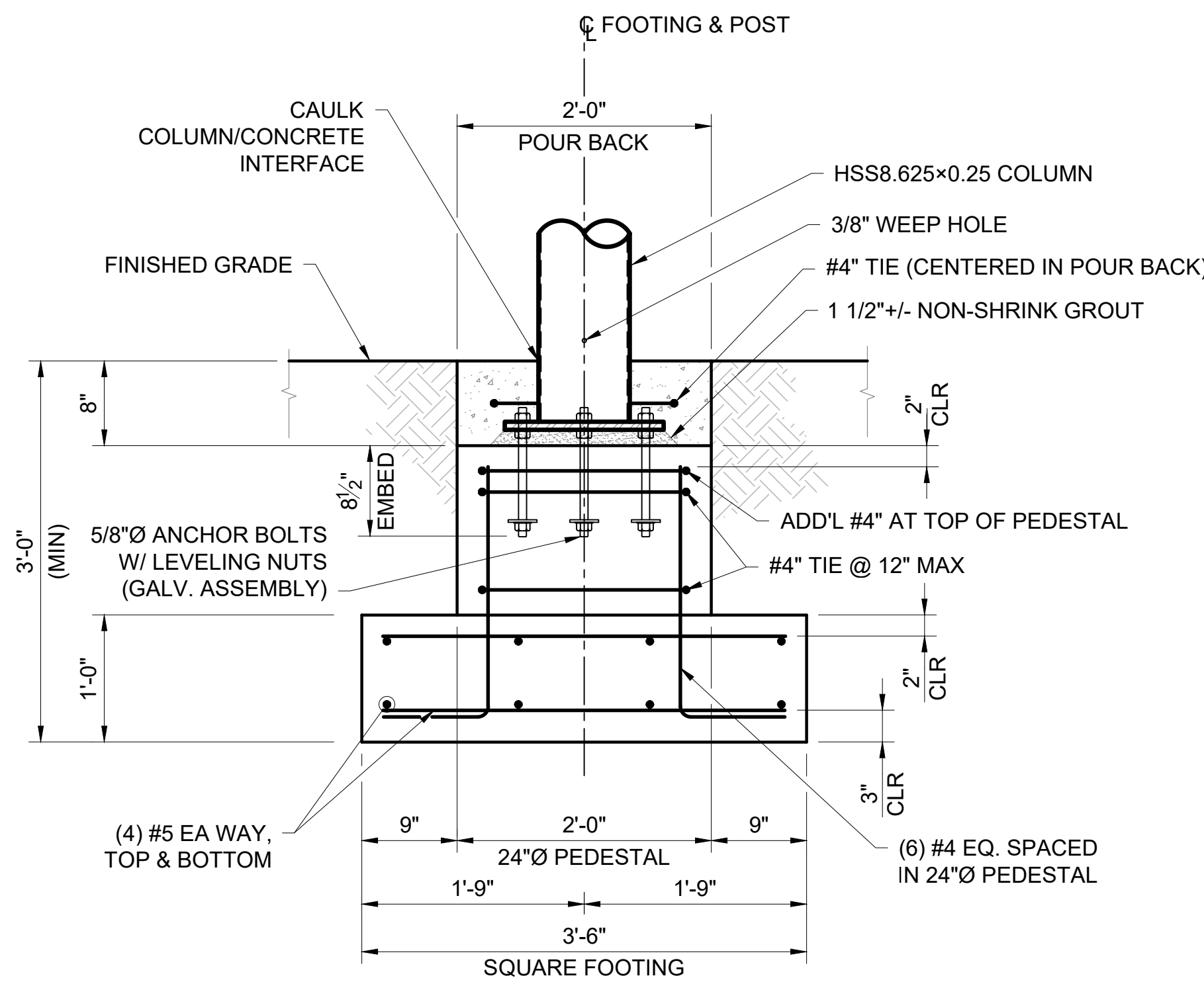
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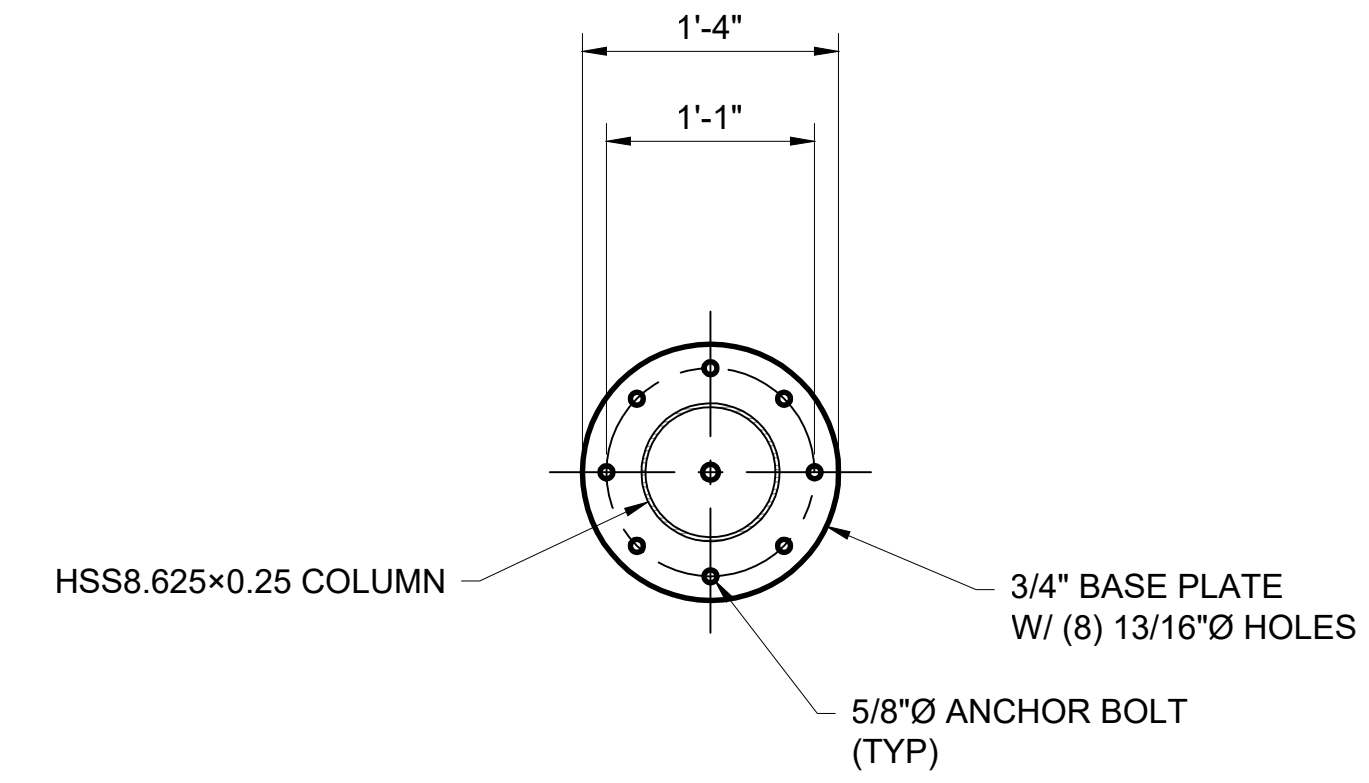
S3.0



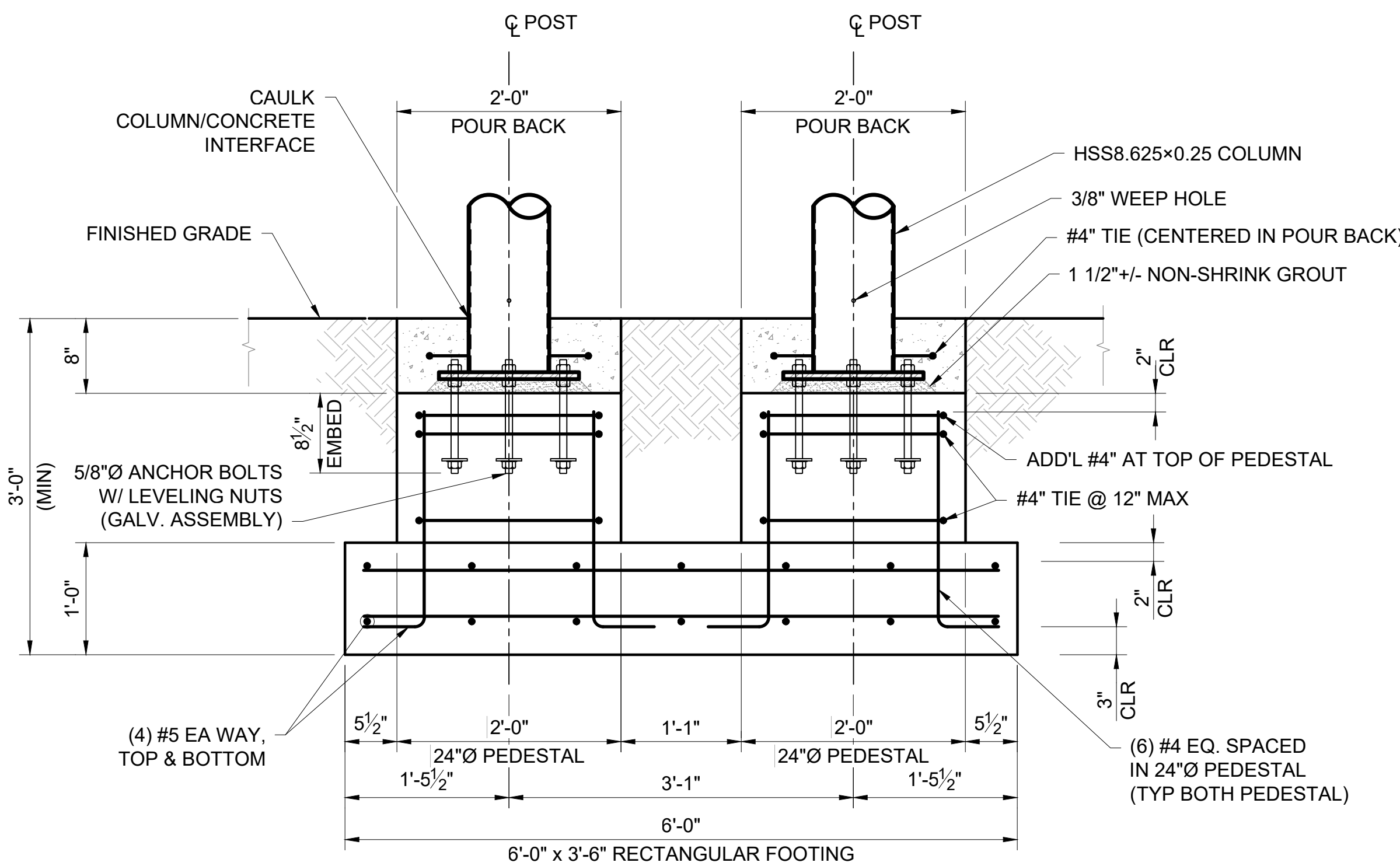
A SECTION - LARGE SHADE STRUCTURE TYPICAL COLUMN FOUNDATION
Scale: 1" = 1'-0"



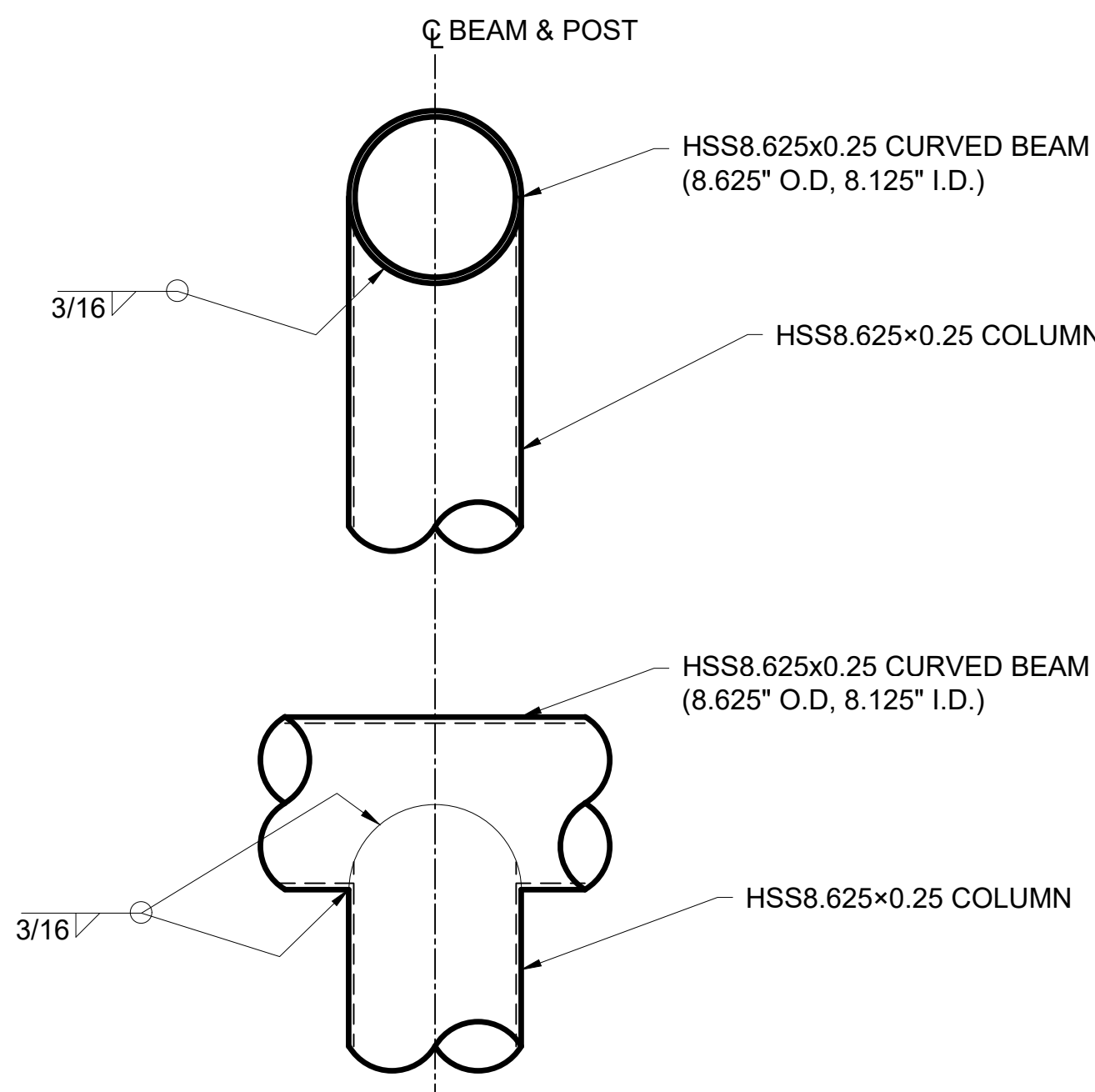
B SECTION - SMALL SHADE STRUCTURE TYPICAL COLUMN FOUNDATION
Scale: 1" = 1'-0"



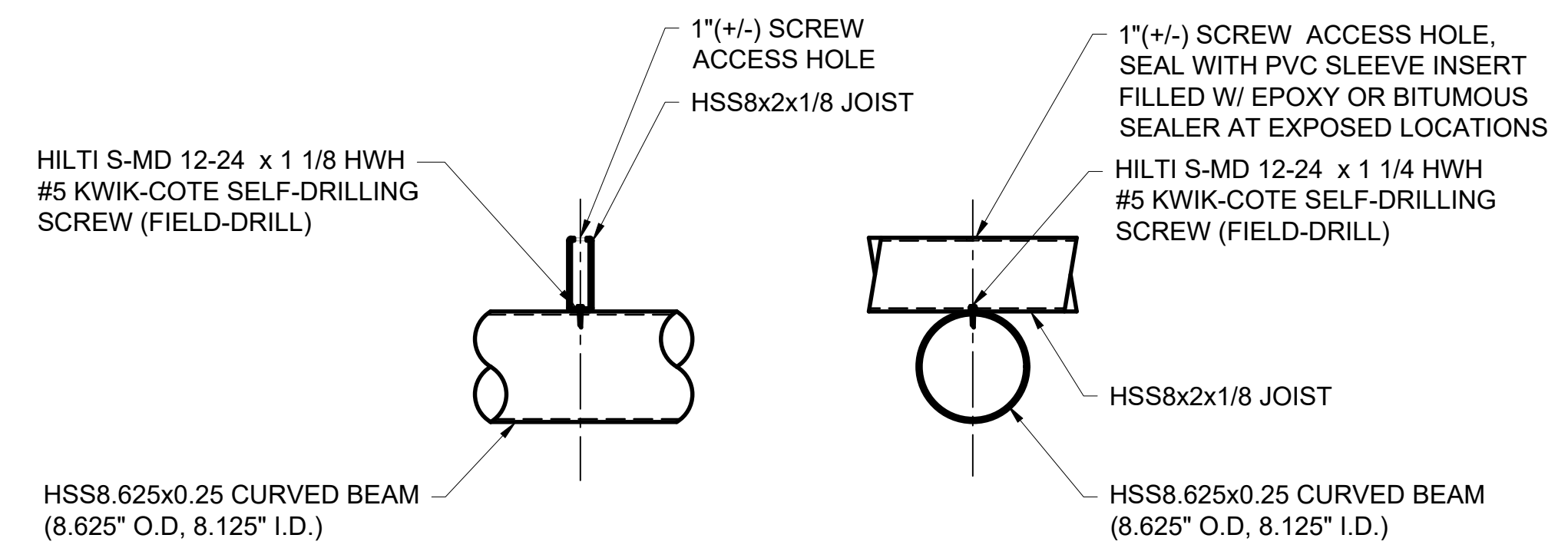
1 TYPICAL COLUMN BASE PLATE DETAIL
Scale: 1" = 1'-0"



C SECTION - SMALL SHADE STRUCTURE RECTANGULAR COLUMN FOUNDATION
Scale: 1" = 1'-0"



2 TYPICAL COLUMN-TO-BEAM CONNECTION
Scale: 1 1/2" = 1'-0"



3 TYPICAL JOIST-TO-BEAM CONNECTION
Scale: 1" = 1'-0"

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JOB DESCRIPTION: CONSTRUCTION DOCUMENTS
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SHEET TITLE: SHADE STRUCTURE STRUCTURAL SECTIONS AND DETAILS

SCALE: AS SHOWN
SHEET NUMBER: