

GENERAL NOTES

A. GENERAL:

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND JOB SITE CONDITIONS BEFORE COMMENCING WORK AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER.
2. USE WRITTEN DIMENSIONS. DO NOT USE SCALED DIMENSIONS. WHERE NO DIMENSION IS PROVIDED, CONSULT THE ENGINEER FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
3. THE DESIGN, ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND HAS NOT BEEN CONSIDERED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE PRIOR TO THE COMPLETION OF ALL SHEAR WALLS, ROOF AND FLOOR DIAPHRAGMS AND FINISH MATERIALS.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SATISFY HIMSELF AS TO THE LOCATION OF ANY UTILITIES IN THE IMMEDIATE VICINITY OF CONSTRUCTION SO AS TO PREVENT DAMAGE TO THEM.
5. THE ENGINEER HOLDS NO LIABILITY FOR UNAUTHORIZED CHANGES MADE TO THE CONSTRUCTION DOCUMENTS. THE ENGINEER IS NOT RESPONSIBLE FOR DAMAGES THAT RESULT FROM UNAUTHORIZED CHANGES MADE BY THE OWNER, A CONTRACTOR OR A BUILDING OFFICIAL, ETC.
6. SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS MUST BE SUBMITTED FOR APPROVAL PRIOR TO CONSTRUCTION. IF THE CONTRACTOR OR OWNER FAILS TO OBTAIN THE ENGINEER'S REVIEW AND APPROVAL OF THE SHOP DRAWINGS THE ENGINEER WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT. AT THE TIME OF SHOP DRAWING SUBMISSION, THE GENERAL CONTRACTOR OR OWNER SHALL INFORM THE ENGINEER, IN WRITING, OF ANY DEVIATIONS OR OMISSIONS FROM THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS BEFORE SUBMISSION TO THE ENGINEER AND MAKE ALL CORRECTIONS AS HE/SHE DEEMS NECESSARY.

B. DESIGN CRITERIA:

1. CODE: OHIO BUILDING CODE WITH LOCAL AMENDMENTS, 2017 EDITION.
2. LATERAL LOADS:
WIND Vult: 9115 MPH, EXP. D
3. SNOW LOAD
GROUND SNOW LOAD Pg: 20PSF
4. SOIL:
FOUNDATIONS BEARING: 1500PSF (ASSUMED)
ALLOW PASSIVE PRESSURE: 250 PCF
MAXIMUM LATERAL PRESSURE LIMIT: 250PSF
5. THE STRUCTURE HAS BEEN DESIGNED FOR THE DEAD AND LIVE LOADS INDICATED ABOVE. ANY INCREASE OF LOADS DUE TO A CHANGE IN USAGE OR CONSTRUCTION MATERIALS, ETC. SHALL HAVE THE WRITTEN APPROVAL OF THE ENGINEER.
6. THE STABILITY OF THE STRUCTURE IS DEPENDENT UPON THE DIAPHRAGM ACTION OF THE FLOORS AND ROOFS. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR THE METHODS OF CONSTRUCTION AND SHALL PROVIDE ALL GUYS, BRACING AND SHORING REQUIRED TO ACCOMMODATE ALL INTERIM LOADING CONDITIONS THROUGHOUT THE CONSTRUCTION PHASE.

C. FOUNDATION NOTES

1. THE ENGINEER HAS DESIGNED THE FOUNDATION ELEMENTS OF THE BUILDING TO BE SUPPORTED ON THE SOIL TYPE DESCRIBED IN THESE NOTES.
2. IF THE SOIL AT THE BUILDING SITE CONTAINS DISTURBED, ORGANIC, SILTY OR CLAYEY SOILS, EXPANSIVE SOIL OR IF GROUND WATER IS PRESENT A GEOTECHNICAL ENGINEER SHALL BE RETAINED TO DESIGN THE SOIL USED TO SUPPORT THE FOOTINGS, SLABS, AND OTHER FOUNDATION ELEMENTS.
3. THE BUILDING SHALL BE SUPPORTED ON FOOTINGS BEARING ON UNDISTURBED, NATURAL, INORGANIC, NON-SILTY, NON-CLAYEY SOILS.
4. IF STRUCTURAL FILL IS TO BE USED, FILLS THAT SUPPORT FOOTINGS, FOUNDATIONS AND SLABS SHALL BE DESIGNED, INSTALLED AND TESTED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE. FILL AND THE INSTALLATION OF FILL SHALL BE DESIGNED AND SPECIFIED BY A GEOTECHNICAL ENGINEER LICENSED TO PRACTICE IN THE JURISDICTION OF THE CONSTRUCTION SITE.
5. SLAB ON GRADE SHALL HAVE A MINIMUM OF 4" OF CRUSHED ROCK AND 6 MIL. POLYETHYLENE SHEETING WITH ALL JOINTS LAPPED 18" CONTINUOUS UNDER THE CONCRETE. COMPACT TO A MINIMUM OF 95% COMPACTION (ASTM D698 STANDARD PROCTOR DENSITY).
6. EXTEND ALL EXTERIOR FOOTINGS AND ALL FOOTINGS SUSCEPTIBLE TO FROST HEAVE A MINIMUM OF 36" BELOW GRADE (FROST DEPTH).

D. CAST-IN-PLACE CONCRETE

1. CONCRETE:
 - A. FC = 4000 PSI AT 28 DAYS, NORMAL WEIGHT.
 - B. MAX. SLUMP = 3" FOR SLABS AND FOOTINGS.
 - C. CURING COMPOUND: ASTM C309, TYPE 2, CLASS B.
 - D. CONSTRUCTION TO BE IN ACCORDANCE WITH ACI 318-LATEST EDITION, AS WELL AS ACI 306R RECOMMENDED PRACTICE FOR COLD WEATHER CONCRETING.
 - E. CONCRETE SHALL BE AIR-ENTRAINED AND SHALL CONFORM TO SECTION 3.4.1 OF ACI 301-LATEST EDITION FOR DURABILITY.
2. REINFORCING STEEL:
 - A. USE ASTM A615 - GRADE 60 FOR #3 AND LARGER REINFORCING BARS.
 - B. PROVIDE CLEARANCE AND COVER OF REBAR AS DESIGNATED IN ACI-318-LATEST EDITION.
3. WELDED WIRE FABRIC:
 - A. USE ASTM A185 GRADE 65 (SHEETS ONLY).
4. CONTROL JOINTS:
 - A. CONTROL JOINTS FOR SLABS ON GRADE SHALL BE PROVIDED AT COLUMN CENTERLINES AND MORE FREQUENTLY SUCH THAT THE AREA OF THE SLAB DOES NOT EXCEED 625 SQUARE FEET WITH A MAXIMUM DISTANCE OF 15' BETWEEN JOINTS. CONTROL JOINT PANELS SHALL BE SQUARE OR RECTANGULAR IN SHAPE AND SHALL NOT EXCEED A LENGTH-TO-WIDTH RATIO OF 1.5.

E. STRUCTURAL AND MISCELLANEOUS STEEL

1. ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO THE 13TH EDITION OF THE AISC "STEEL CONSTRUCTION MANUAL" AND ALL ITS SUPPLEMENTS.
2. ALL STEEL PIPES SHALL CONFORM TO ASTM A53 GRADE B WITH A MINIMUM YIELD STRENGTH OF 35,000PSI.
3. ALL STEEL PLATES AND ANGLES SHALL CONFORM TO ASTM A36 HAVING A MINIMUM YIELD STRENGTH OF 36,000PSI.
4. ALL WELDED CONNECTIONS SHALL BE DONE WITH E70XX ELECTRODES. ALL BOLTED CONNECTIONS SHALL USE 3/4" DIAMETER ASTM A325N HIGH STRENGTH BOLTS U.N.O. CONNECTIONS NOT SHOWN SHALL BE DESIGNED IN ACCORDANCE WITH AISC "MANUAL FOR STEEL CONSTRUCTION", 13TH ED. SHEAR CONNECTIONS SHALL BE DESIGNED PER AISC FOR REACTION EQUAL TO 1/2 THE ALLOWABLE UNIFORM LOAD ON BEAM PER PART 3 OF MANUAL (MINIMUM OF 10 KIPS), UNLESS NOTED OTHERWISE. NO CONNECTION SHALL BE MADE USING LESS THAN TWO BOLTS. ALL ANCHOR BOLTS SHALL BE ASTM A307.
5. SHOP AND FIELD WELDS SHALL BE MADE BY APPROVED CERTIFIED WELDERS AND SHALL CONFORM TO THE AMERICAN WELDING SOCIETY CODE FOR BUILDINGS, AWS D1.1.
6. EXPOSED STRUCTURAL STEEL SHALL CONFORM TO THE "SPECIFICATION FOR ARCHITECTURALLY EXPOSED STRUCTURAL STEEL" AISC.
7. NO OPENINGS IN BEAMS SHALL BE PERMITTED WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. THE USE OF A GAS-CUTTING TORCH IN THE FIELD FOR CUTTING HOLES OR FOR CORRECTIONS TO FABRICATION ERRORS WILL NOT BE PERMITTED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
8. ALL STRUCTURAL STEEL SHALL BE SHOP PAINTED WITH AN APPROVED CORROSION RESISTANT PRIMER.
9. STEEL FABRICATOR SHALL BE A PARTICIPANT OF THE AISC QUALITY CERTIFICATION PROGRAM.
10. AN INDEPENDENT INSPECTION AGENCY SHALL BE EMPLOYED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER TO INSPECT THE STRUCTURAL STEEL IN THE FIELD AND VERIFY THAT IT CONFORMS TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

F. ANCHORS IN CONCRETE AND MASONRY

1. POST INSTALLED ANCHORS SHALL BE USED ONLY WHERE SPECIFIED ON STRUCTURAL DRAWINGS
2. THE INSTALLATION OF POST INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST-IN-PLACE ANCHORS SHALL BE APPROVED BY THE ENGINEER OF RECORD
3. EXISTING REINFORCING BARS IN THE CONCRETE STRUCTURE SHALL NOT BE CUT UNLESS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD
4. SUBMITTAL OF ALL PROPOSED PRODUCTS, WITH TECHNICAL DATA AND CURRENT ICC-ESR REPORTS IS REQUIRED FOR REVIEW AND APPROVAL BY EOR. ADDITIONAL APPLICATION CALCULATIONS MAY BE REQUIRED BY THE EOR
5. ALL ANCHORS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPI) IN CONJUNCTION WITH EDGE DISTANCE, SPACING AND EMBEDMENT DEPTH AS INDICATED ON THE DRAWINGS
6. THE CONTRACTOR SHALL ARRANGE FOR A MANUFACTURER'S FIELD REPRESENTATIVE TO PROVIDE INSTALLATION TRAINING FOR ALL PRODUCTS TO BE USED. PRIOR TO COMMENCEMENT OF WORK ONLY TRAINED INSTALLERS SHALL PERFORM POST INSTALLED ANCHOR INSTALLATION. A RECORD OF TRAINING SHALL BE KEPT ON SITE AND BE MADE AVAILABLE TO THE EOR/ IOR AS REQUESTED.
7. ADHESIVE ANCHORS INSTALLED IN HORIZONTAL TO VERTICALLY OVERHEAD ORIENTATION TO SUPPORT SUSTAINED TENSION LOADS SHALL BE DONE BY A CERTIFIED ADHESIVE ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH ACICRSI (ACI 318-11 D.9.2.2). PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION.
8. ADHESIVE ANCHORS MUST BE INSTALLED IN CONCRETE AGED A MINIMUM OF 21 DAYS (ACI 318-11 D.2.2).
9. PROVIDE SPECIAL INSPECTION FOR ALL MECHANICAL AND ADHESIVE ANCHORS PER THE APPLICABLE BUILDING CODE AND PER THE CURRENT ICC-ES REPORT (IBC 2012 TABLE 1705.3 NOTE B).
10. THE FOLLOWING MANUFACTURER'S HAVE BEEN PREAPPROVED FOR SUBMITTAL.
 - A. POWERS FASTENERS
 - B. HILTI INC
 - C. SIMPSON

CONCRETE ANCHORS

11. MECHANICAL ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193 FOR CRACKED, UNCRACKED AND SEISMIC CONCRETE RECOGNITION.
12. ADHESIVE ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED, UNCRACKED AND SEISMIC CONCRETE RECOGNITION. PRE-APPROVED ADHESIVE ANCHORS INCLUDE:
13. CAST-IN-PLACE INSERTS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC446 FOR CRACKED, UNCRACKED AND SEISMIC CONCRETE RECOGNITION.

MASONRY ANCHORS

14. MECHANICAL ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC01 OR AC106.
15. ADHESIVE ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC58.

POWER ACTUATED FASTENERS

21. POWER ACTUATED FASTENERS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC70

SPECIAL INSPECTION

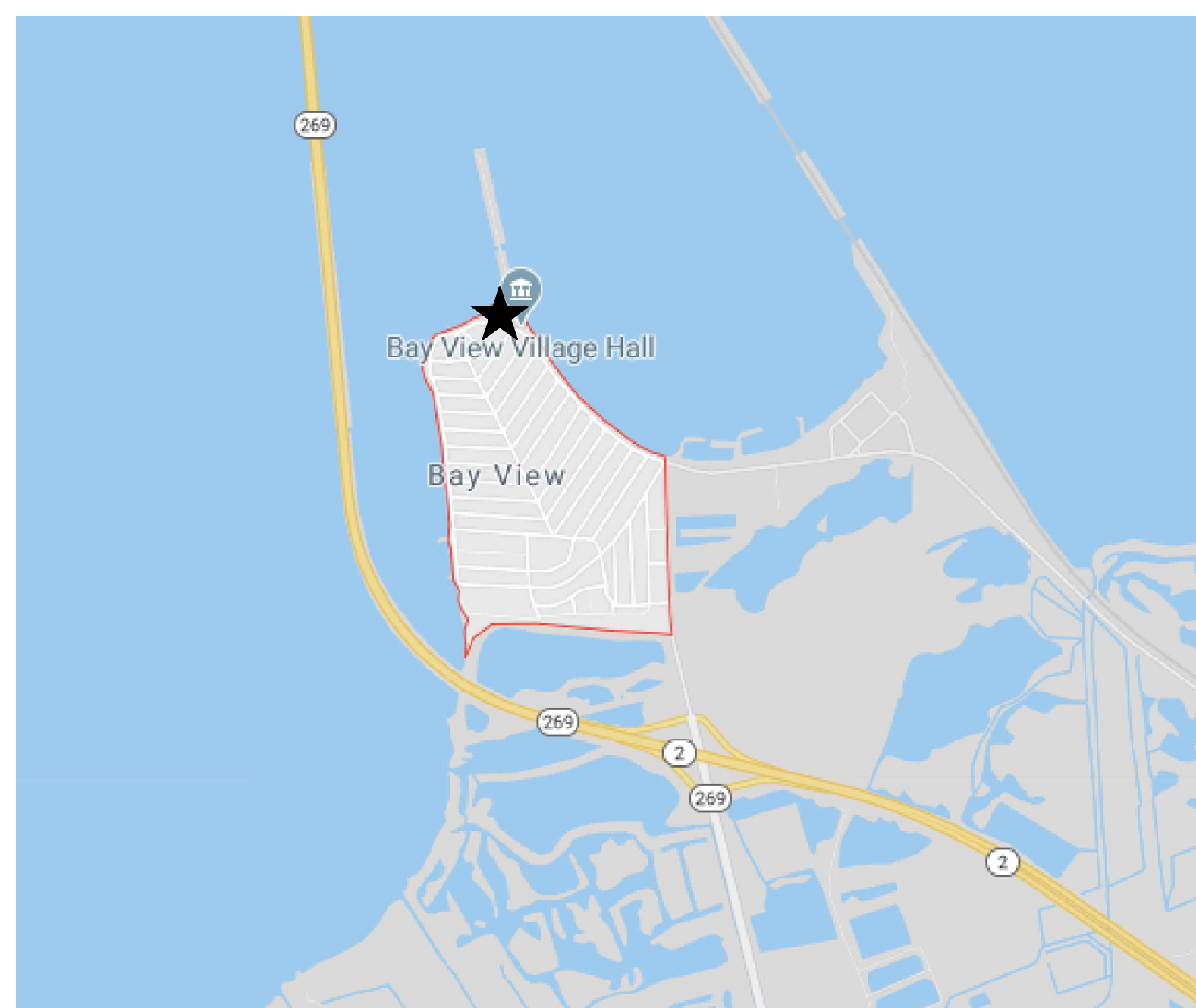
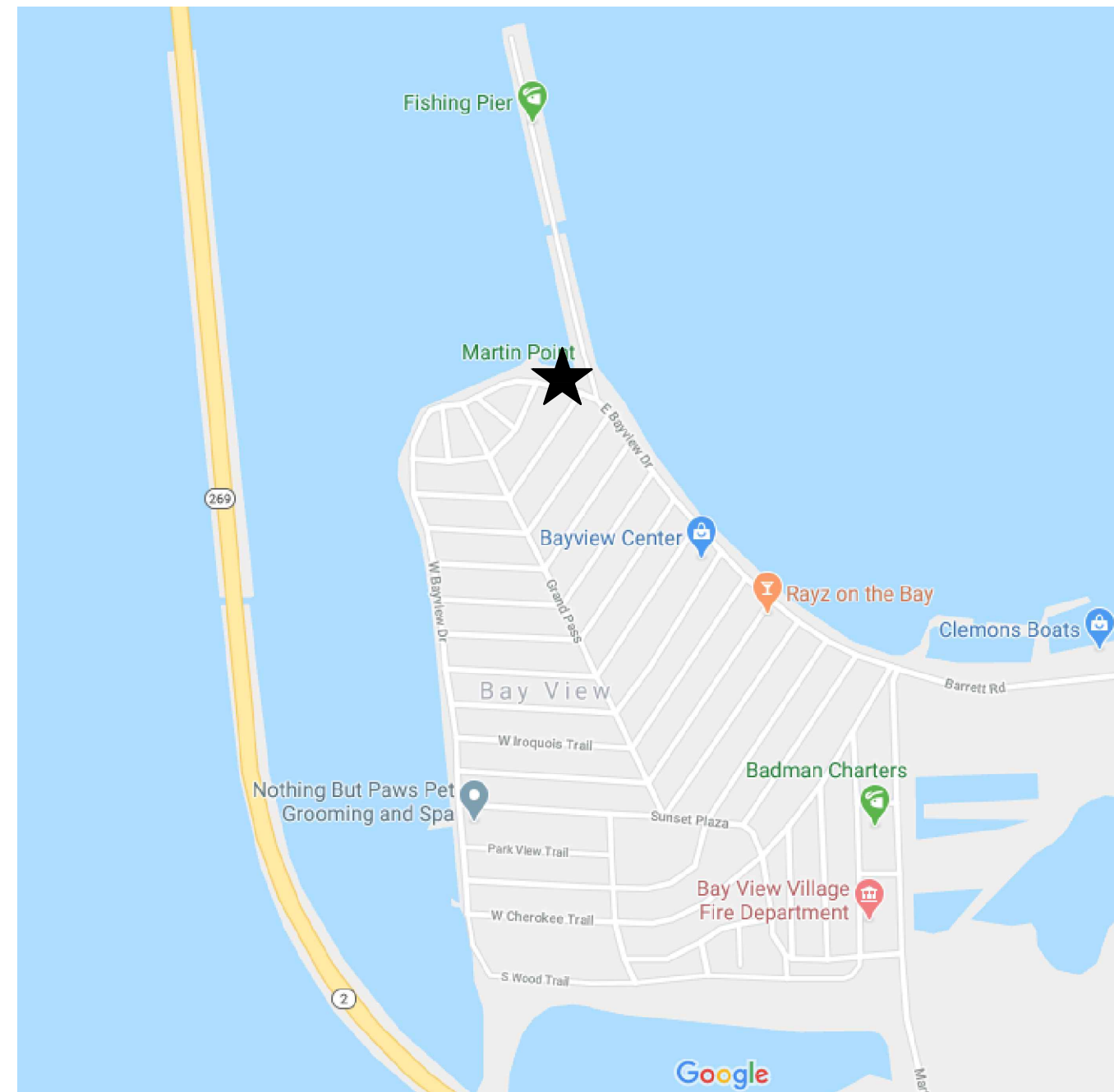
23. SPECIAL INSPECTION REQUIREMENTS
 - A. PROVIDE SPECIAL INSPECTION FOR ALL MECHANICAL AND ADHESIVE ANCHORS PER THE APPLICABLE BUILDING CODE AND PER THE CURRENT ICC-ES REPORT (IBC 2012 TABLE 1705.3 NOTE B).
 - B. ADHESIVE ANCHORS INSTALLED IN HORIZONTAL OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS SHALL BE CONTINUOUSLY INSPECTED DURING INSTALLATION BY AN INSPECTOR SPECIALLY APPROVED FOR THAT PURPOSE BY THE BUILDING OFFICIAL (ACI 318-11 D.9.2.4)
 - C. TEST METHODS, LOADS PROCEDURE, FREQUENCY, ACCEPTANCE CRITERIA PER 2013 CBC 1913A.7

G. TESTING AND INSPECTION:

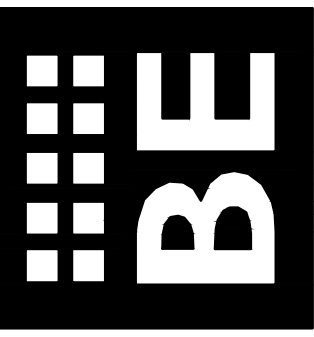
1. A QUALIFIED, INDEPENDENT INSPECTION AGENCY SHALL BE RETAINED TO PERFORM ALL TESTING AND INSPECTIONS. THE AGENCY MUST HAVE AN ENGINEER, REGISTERED IN THE JURISDICTION OF THE PROJECT, IN CHARGE OF ALL TESTING AND INSPECTIONS. THE AGENCY MUST ALSO HAVE EXPERIENCE IN THE TESTING AND INSPECTION OF MATERIALS AND CONSTRUCTION REQUIRED HEREIN.
2. TESTING AGENCY SHALL SUBMIT WRITTEN REPORTS TO THE CONTRACTOR, OWNER AND STRUCTURAL ENGINEER WITHIN 3 DAYS OF THE TESTING/INSPECTION. THE CONTRACTOR SHALL BE IMMEDIATELY NOTIFIED OF ANY WORK FOUND TO BE DEFICIENT.
3. ANY RETESTING OF MATERIALS/WORK FOUND TO BE DEFICIENT SHALL BE DONE BY THE INSPECTION AGENCY AT THE CONTRACTOR'S EXPENSE.

THE FOLLOWING TESTING AND INSPECTIONS SHALL BE PERFORMED:

- A. SOILS AND SUBGRADE
 - A QUALIFIED GEOTECHNICAL ENGINEER SHALL INSPECT BEARING SUBGRADES TO VERIFY COMPLIANCE WITH THE DESIGN NET ALLOWABLE BEARING PRESSURE.
 - A QUALIFIED GEOTECHNICAL ENGINEER SHALL MONITOR AND DIRECT THE COMPACTION OF THE EXISTING SOILS, AND AS REQUIRED, THE OVERCUTTING AND PLACEMENT OF STRUCTURAL FILL WHERE UNSUITABLE SUBGRADES ARE ENCOUNTERED.



SITE LOCATION PLAN
SCALE: NTS



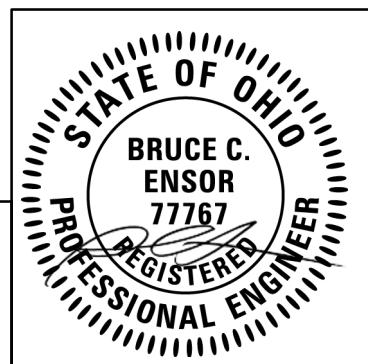
BRUCE ENSOR, STRUCTURAL ENGINEER
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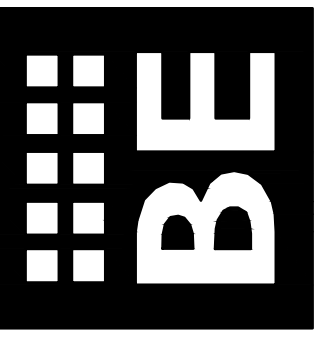
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PLANS,
SECTIONS,
AND DETAILS

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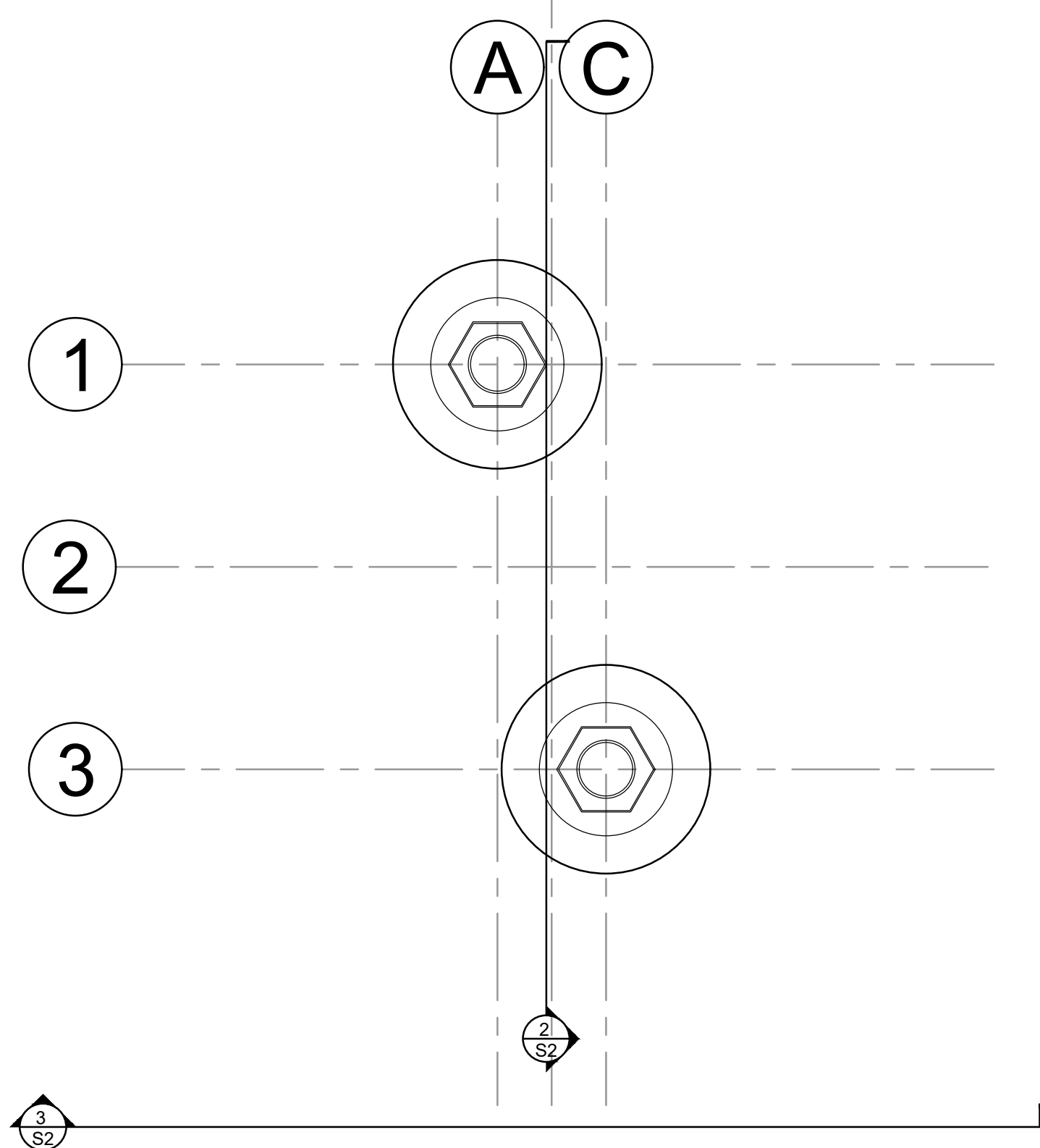
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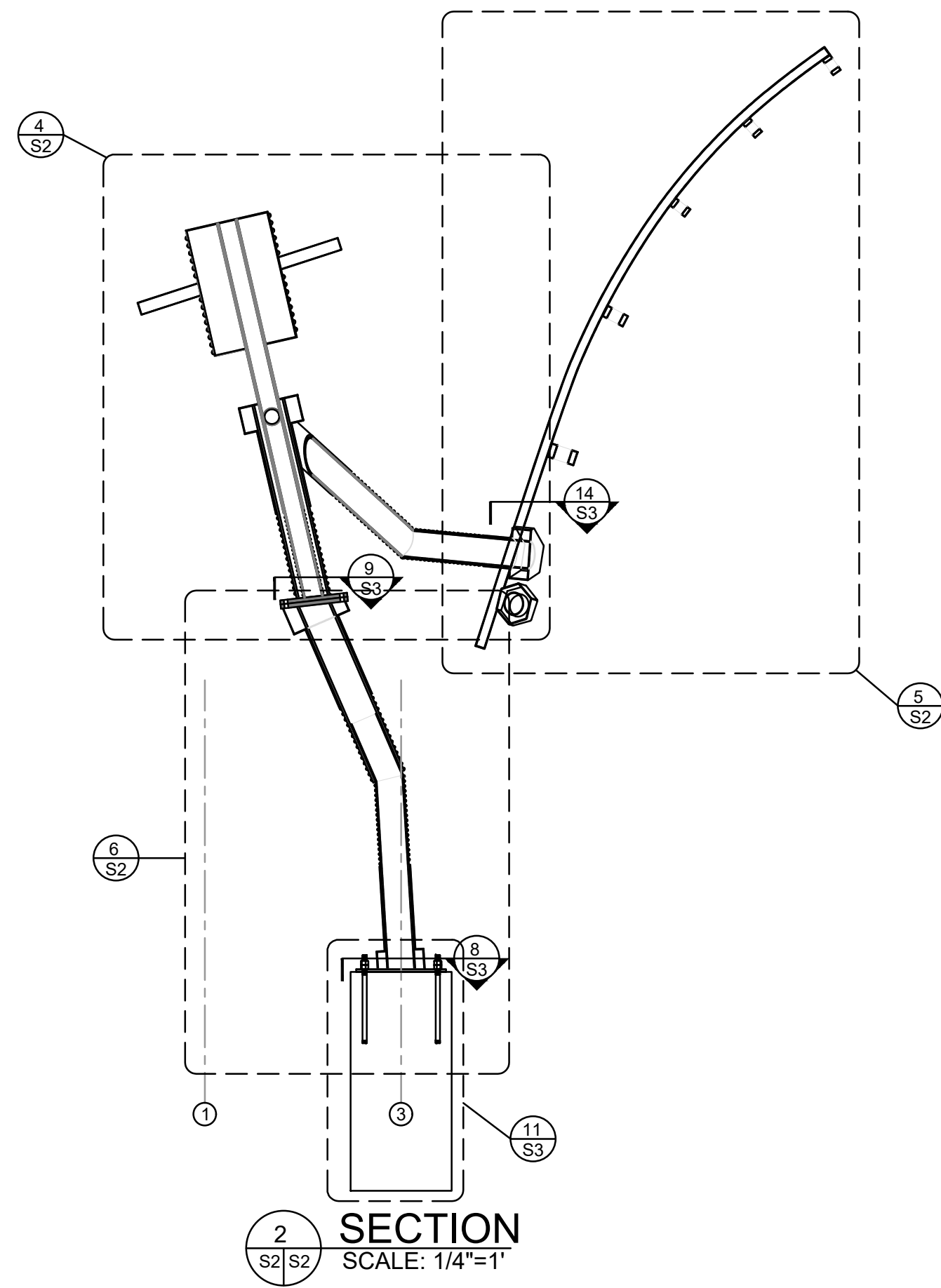
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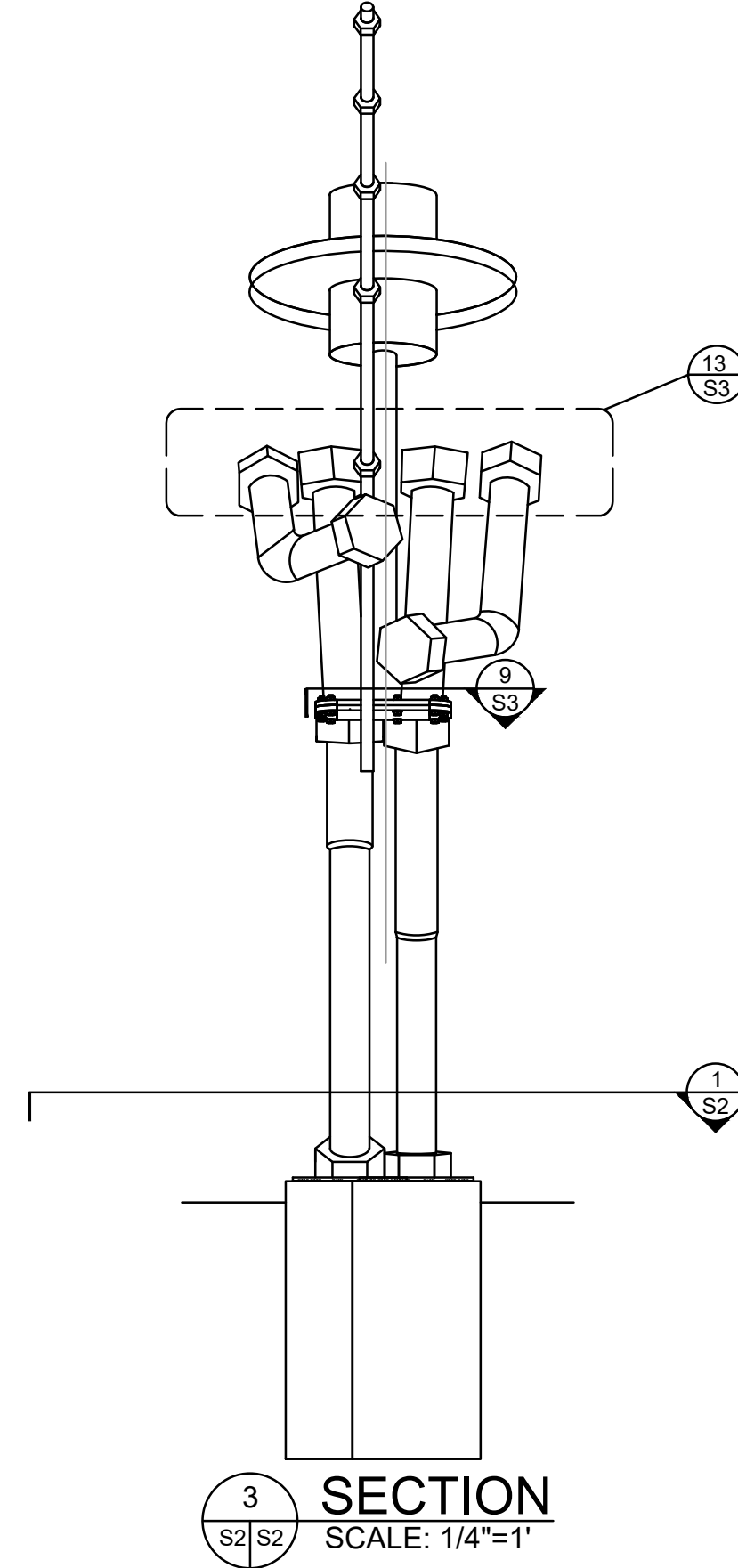
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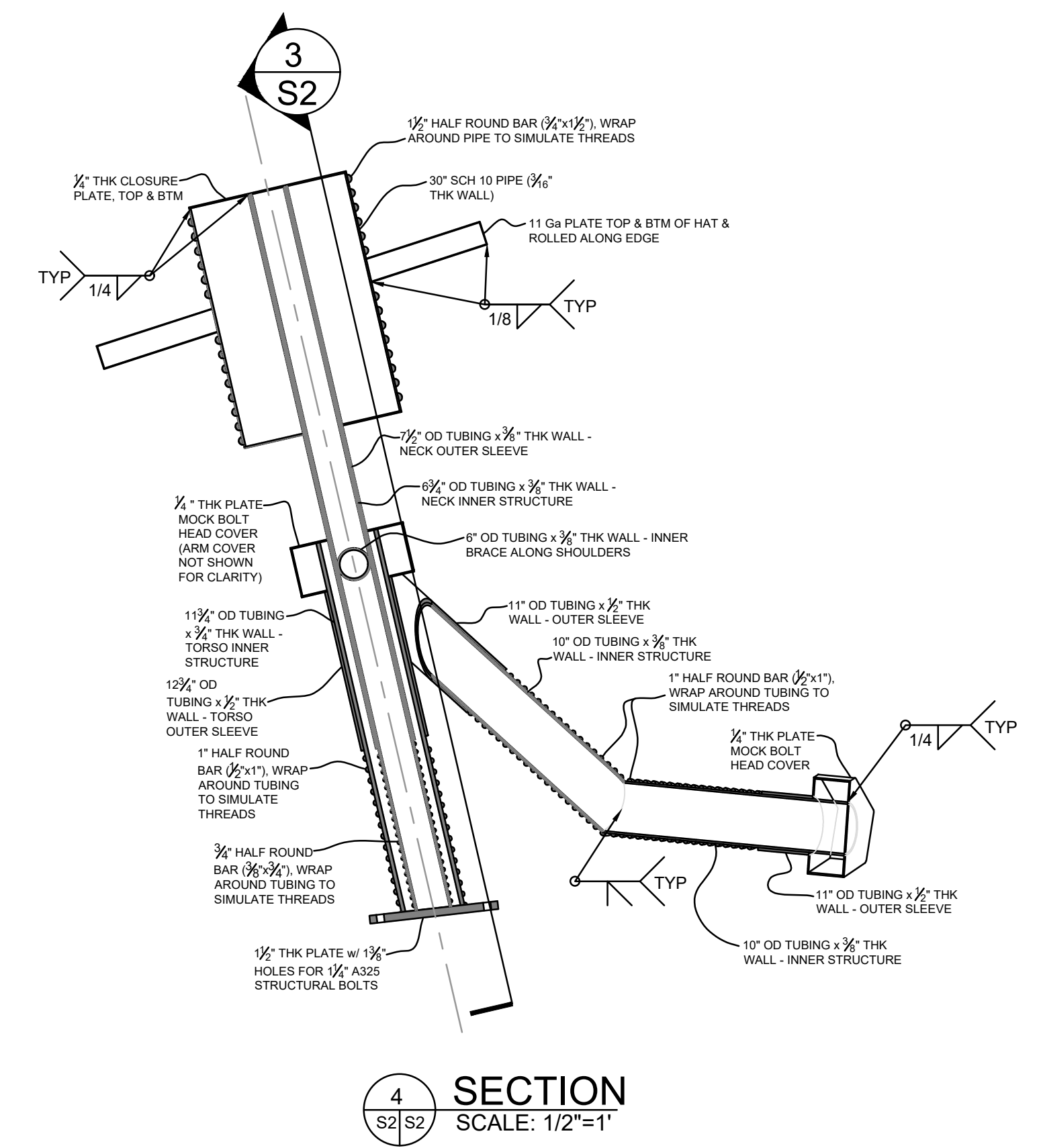
1 FOUNDATION PLAN
SCALE: 1/2" = 1'-0"



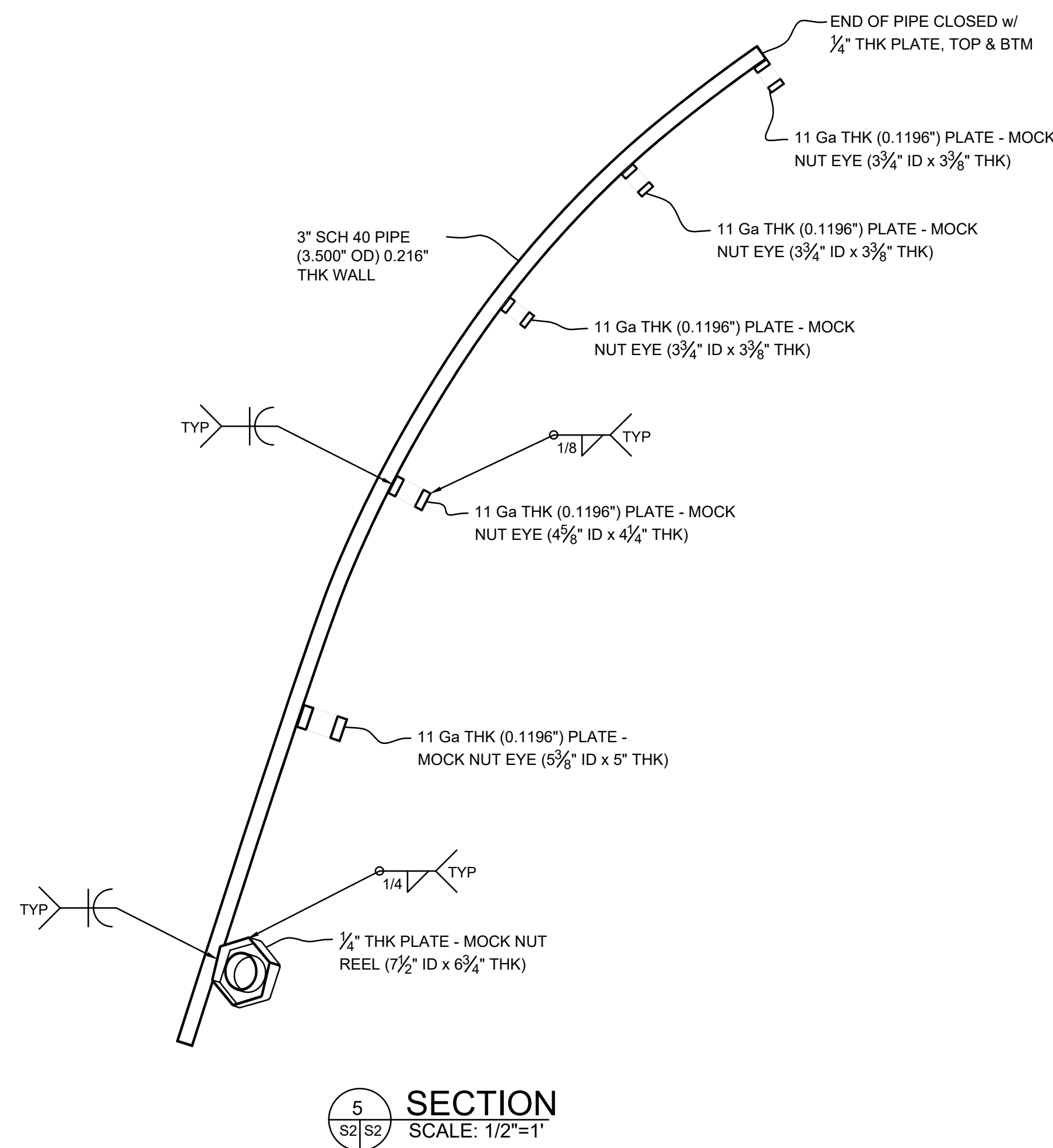
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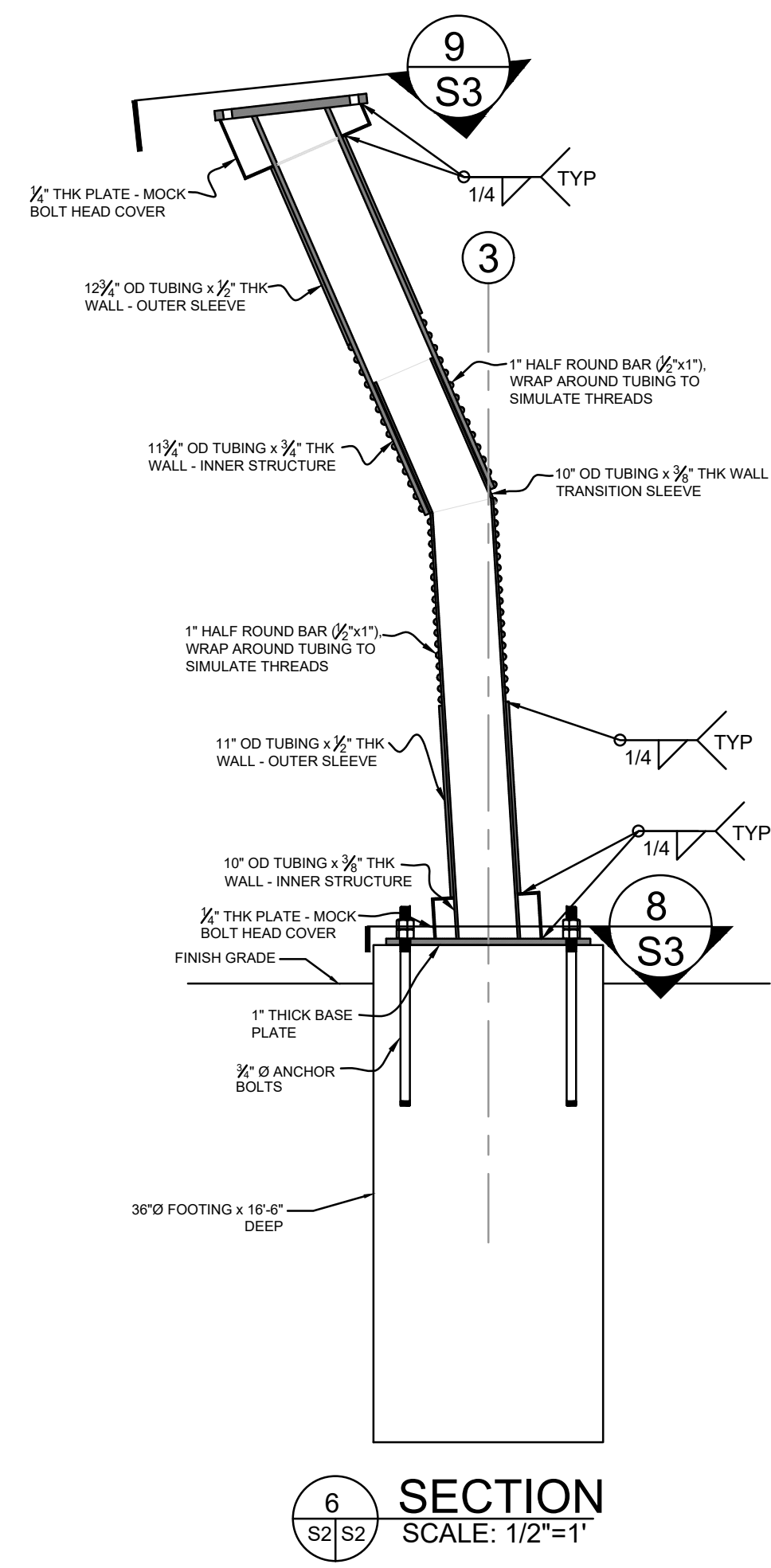
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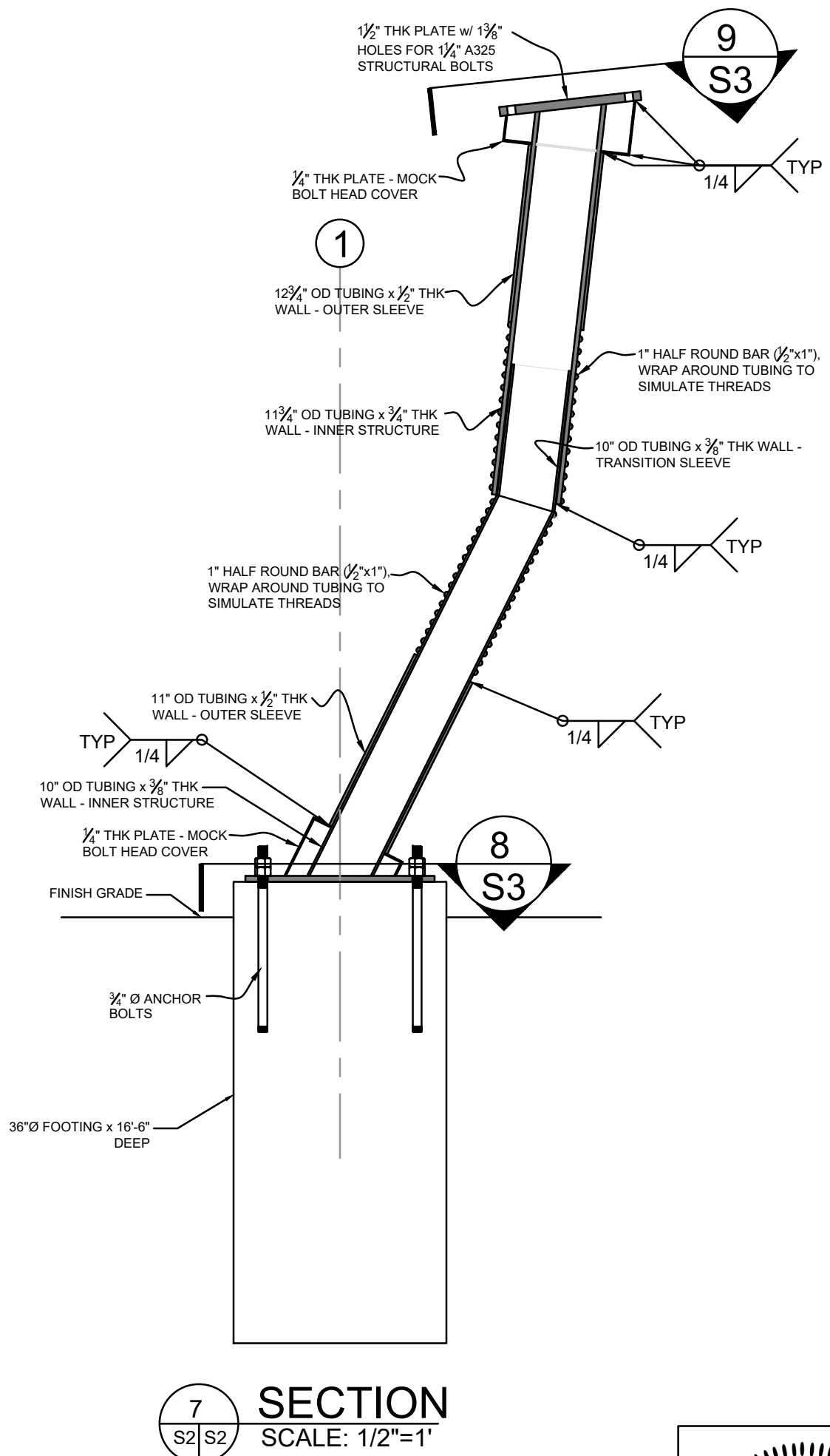
4 SECTION
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5 SECTION
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6 SECTION
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7 SECTION
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