

GENERAL NOTES:

APPLICABLE BUILDING CODE

All construction and workmanship shall conform to the 2019 California Building Code, California Code of Regulations – Title 24, Parts 1 & 2.

This pole and foundation standard has been designed for lateral loads on the completed structure as follows:

- Wind Design Data:
 - Vult = 95 MPH (Exposure C); Vasd = 74 MPH (Exposure C)
 - Risk Category = II
 - See Pole Foundation Schedule for maximum pole wind forces.

- Seismic Design Data:
 - Ie = 1.0
 - Risk Category = II (Self Supporting Poles)
 - Si = 1.640
 - Si = 0.583
 - Site Class = D
 - Se = 1.094
 - Se = 0.661
 - Seismic Design Category = D
 - Basic Seismic-Force-Resisting System = Non-Building Structure, not similar to buildings
 - (STRENGTH LEVEL) Cs = 0.225– F2; Cs = 0.230– F1, F3, F4, F6; Cs = 0.265– F5
 - R = 1.5
 - Q = 1.5
 - Analysis Procedure = Equivalent Lateral Force Procedure
 - See Pole Foundation Schedule for maximum pole seismic forces.

GENERAL CONSTRUCTION

These notes shall be used in conjunction with the plans and any discrepancies shall be brought to the attention of the Registered Design Professional (RDP) in Responsible Charge.

Contractor must check all dimensions, clearances and job conditions before starting work. The RDP in Responsible Charge shall be notified immediately of any discrepancies or possible deficiencies.

The drawings and specifications represent the finished structure. All bracing, temporary supports, shoring, etc., is the sole responsibility of the Contractor. Observation visits to the job site by the RDP in Responsible Charge do not include inspection of construction procedures. The Contractor is solely responsible for all construction methods and for safety conditions at the worksite. These visits by RDP in Responsible Charge shall not be construed as continuous and detailed inspections.

Design, material, equipment, and products other than those described below or indicated on the drawings may be considered for use, provided prior approval is obtained from the School District, the RDP in Responsible Charge, and DSA.

All changes to the approved plans after a contract for construction has been awarded, affecting structural, access or life-safety portions of the project, shall be made by means of construction change documents (CCD) approved by DSA, as required by Section 4–338, Part 1, Title 24, CCR. All CCD shall be prepared and signed by the RDP in general Responsible Charge.

Substitutions shall be considered as a CCD and shall be approved by DSA prior to fabrication or use.

A Class 1 or Class 2 Project Inspector employed by the School District (Owner) and approved by DSA shall provide continuous inspection of the work, the duties of the inspector are defined in Section 4–342, Part 1, Title 24, CCR.

All Tests And Inspections shall be performed by an independent lab employed by the School District and approved by DSA.

Reference pole location on the Architectural, Structural, and/or Electrical drawings for actual pole placement and site location. Pole shall be located 5'–0" min. from adjacent structures below 50'–0" A.G.L., unless noted otherwise.

LIGHT POLE FOUNDATIONS

Reference geotechnical report prepared by Converse Consultants, Dated October 24, 2019; Project no.: 19–31–285–01.

Allowable Vertical soil Capacity – 200 PSF (Skin Friction).

Allowable Lateral Bearing capacity: 150 PSF/FT to maximum 1,500 PSF/FT. The upper 2–feet of soil should be neglected.

A representative of Converse Consultants should be available at the time of the foundation installation to verify the soil design parameters and to provide assistance if any problems arise in foundation installation.

The Contractor must familiarize himself with the complete geotechnical report, and borings and contact the above firm to understand the soil conditions and the possibility of ground water pumping and excavation stabilization or bracing during the foundation installation and placement of concrete.

Soil formations that will require special design considerations or excavation procedures may exist. Pole foundations may need to be reanalyzed according to the soil conditions that exist.

If any discrepancies or inconsistencies arise, notify the RDP in Responsible Charge of such discrepancies.

All piers and concrete must bear on and against firm undisturbed soil as determined by the Geotechnical Engineer.

Place plywood collar around perimeter at the top of foundation excavation to prevent soil from entering pier.

All excavations must be free of loose soil, and debris prior to foundation installation and placement of concrete. Casing or drilling slurry may be required if caving occurs. Review and approval of the Geotechnical Engineer and DSA is required.

All excavations must be free of water or concrete shall be placed by the Tremie Method in accordance with ACI standard 336. Concrete placed by the Tremie Method shall have a minimum ultimate strength of 1,000 PSI greater than required under "Concrete Cast-in-Place" and a maximum slump of 8".

CONCRETE (CAST-IN-PLACE)

Concrete pier foundations with steel reinforcement shall attain a minimum ultimate compressive strength at 28 day test of 3,000 psi. Batch plant inspection not required.

All concrete shall attain a minimum strength of 2,500 psi prior to steel pole erection.

Use Type II/V Portland cement or as directed by the Geotechnical Engineer.

Portland Cement ASTM C–150.

Aggregate ASTM C–33. 1" maximum aggregate size.

Mix in conformance with ASTM C–94, ACI 318 SECTIONS 19.2 and 26.4.

Place concrete immediately after completion of excavation and inspection by the Geotechnical Engineer and the DSA Inspector. Under no circumstances shall piers be allowed to remain open for more than 12 hours without the approval of the Geotechnical Engineer. Excavations shall be covered and protected until filled with concrete.

Concrete shall be placed in one continuous operation (no construction joint) with special equipment to assure a maximum freefall of 5 ft and to prevent concrete from striking the sides of the excavation. Freefall of concrete is unacceptable through water or drilling slurry.

Vibrate concrete full depth, except for concrete with slump greater than 6", then vibrate only upper 10'–0". Concrete placed under water shall have a slump of 6'–8".

STEEL POLE

Steel pole sections conform to the California Code of Regulations T.24, Part 2, Chapter 22A.

All steel conforms to referenced ASTM specifications. (See Pole Data Table for each pole type).

All weldment conforms with AWS D1.1–10 specification for GMAW fillet utilizing E70S–X filler metal or SAW fillet utilizing F7XX–EXXX or F8XX–EXXX filler metal. GMAW procedure conforms to AWS A5.18. SAW procedure conforms to AWS A5.23.

Longitudinal seam welds for pole sections shall have 60% minimum penetration; Except longitudinal seam welds on the female section of telescopic field splices shall be full penetration groove welds for a length equal to the minimum splice length plus 6 inches. See drawing number MD1 for seam weld details.

Pole sections hot dipped galvanized to ASTM A123 latest standards.

All miscellaneous structural steel items conform to AISC 360–16.

Steel pole sections shall be assembled in the field by attaching two 1.5 ton "come alongs" to jacking ears, using full effort on each simultaneously, to ensure minimum overlaps as indicated on the "MS" sheet(s) and detail G/MD1.

PRECAST BASE

The precast concrete base conforms to California Code of Regulations, T.24, part 2, Chapter 19A, to Building Code Requirements for Reinforced Concrete, ACI 318–14 and ICC–ES ESR–3765.

See detail "A" on "MS" sheet(s) for material strengths and specifications.

TESTING AND INSPECTION

Testing and inspection in accordance with Title 24, Part 1 & Part 2.

EXCAVATIONS & FOUNDATIONS:
Inspection of cast-in-place deep foundations – 1705A.8 & Table 1705A.8

CONCRETE MATERIALS: 1903A.1
Portland cement – 1910A.1
Concrete aggregates – 1903A.5
Reinforcing bars – 1910A.2 & DSA IR 17–10
Prestressing steel and anchorages – 1910A.3

CONCRETE QUALITY:
Proportions of concrete – Reference ACI 318 Section 26.4.3.1 Through 26.4.4.1.
Strength tests of concrete – 1905A.1.15 and ACI 318 Section 26.12 & 26.5.3.2.

CONCRETE INSPECTION: 1705A.3 & Table 1705A.3
Job site – Reference ACI 318 Section 26.5.1.26.5.2.1(a) & (b), 26.6.1.2(d), 26.11.1.1(a).
Batch Plant Inspection Not Required – 1705A.3.3.2
Prestressed concrete – 1704A.2.5, 1705A.3.4

STEEL MATERIALS:
Structural steel – 2202A.1 & 2205A.1
Cold formed steel – 2210A.1
Identification – 2202A.1
High strength bolt identification – table 1705A.2.1 & DSA IR 17–9

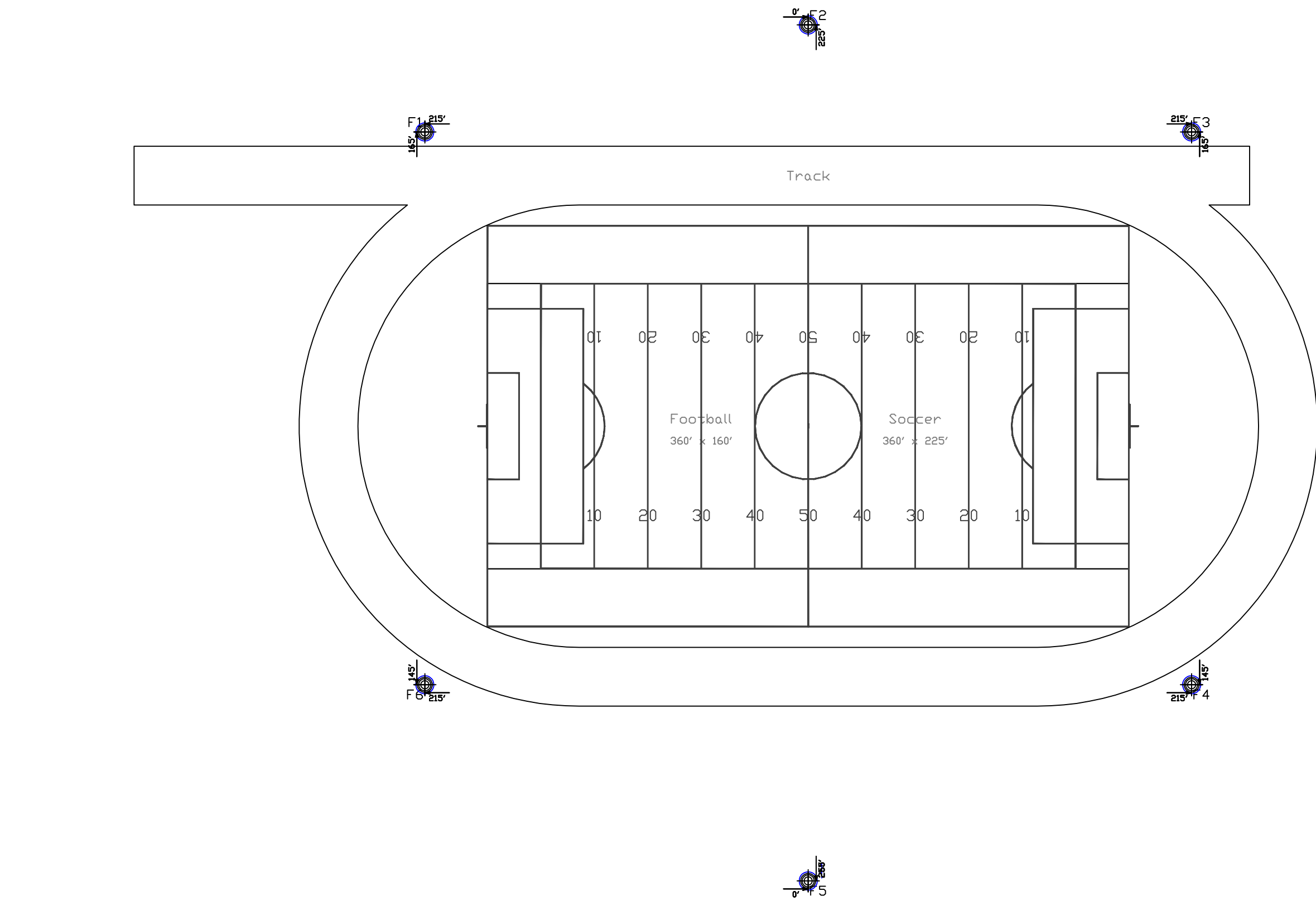
STEEL QUALITY:
Tests of structural steel & cold formed steel – 2202A.1
Tests of high strength bolts, nuts, & washers – 2213A.1 & DSA IR 17–8
Non-destructive weld tests – 1705A.2.5 & DSA IR–17–2

STRUCTURAL STEEL INSPECTIONS: Table 1705A.2.1
Shop fabrication inspection – 1704A2.5
Welding – 1705A.2.5, DSA IR 17–3 and AWS D1.1.
High strength bolt installation – Table 1705A.2.1 & DSA IR 17–9
(Including Skidmore-Wilhelm bolt tension pre-installation verification testing)
(NOTE: ALL WELDING SHALL BE CONTINUOUSLY INSPECTED BY AN AWS CW CERTIFIED INSPECTOR APPROVED BY DSA)

These plans are for construction approval. An application number and approval of these drawings by the Division of The State Architect of California must be secured to build from these plans.

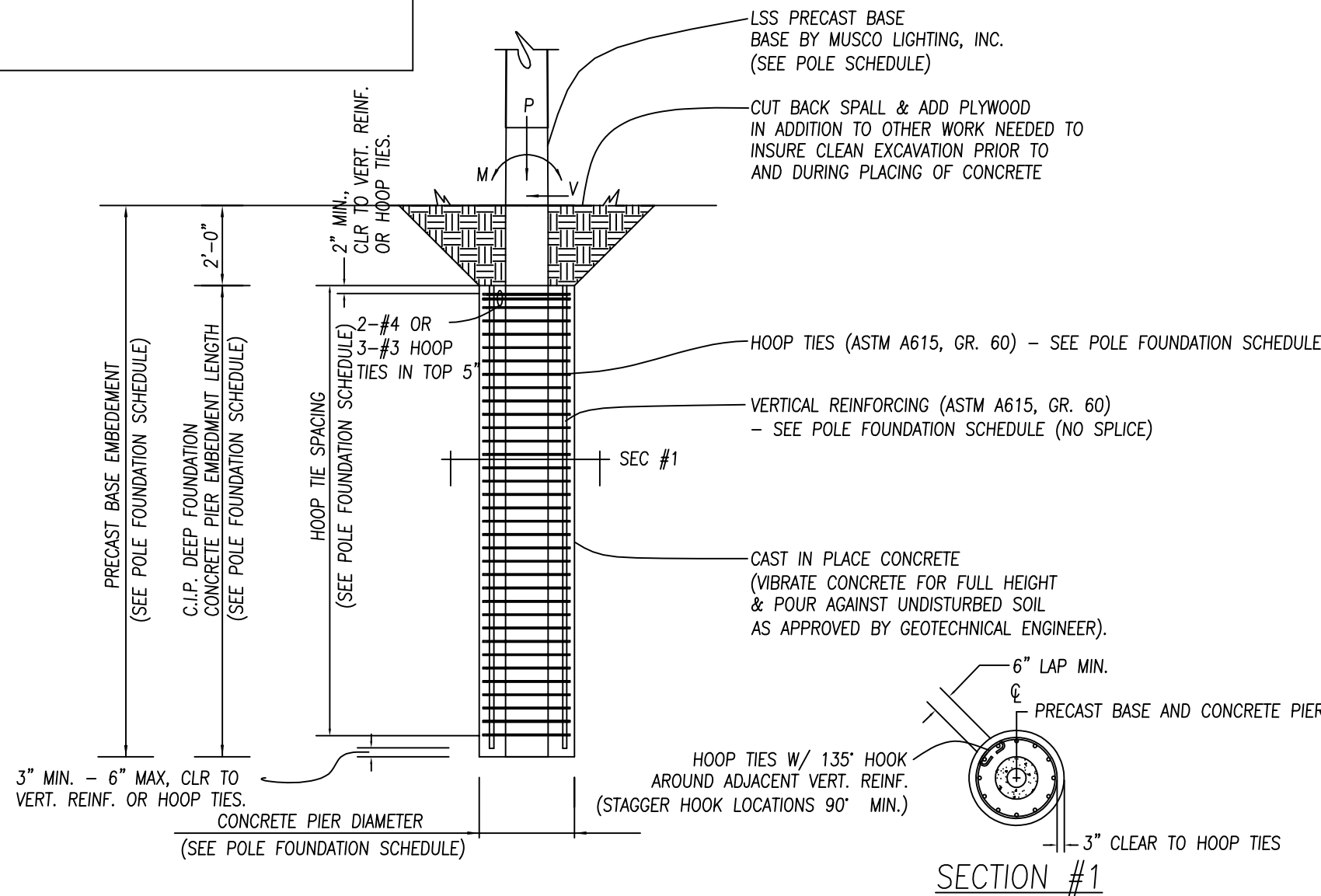
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POLE ORIENTATION PLAN
N.T.S.

NOTE: THIS PLAN IS A PICTORIAL REPRESENTATION OF THE SITE LAYOUT.
REFERENCE APPROPRIATE ARCHITECTURAL SITE PLAN FOR ALL NECESSARY INFORMATION.



A REINFORCED FOUNDATION DETAIL
N.T.S. DSA-A2-CASFND_A

POLE FOUNDATION SCHEDULE									
POLE TYPE-# OF FIXTURES (MAX) (LSS=LIGHT STRUCTURE)	MARK (SEE POLE ORIENTATION PLAN)	WIND OR SEISMIC (SEISMIC FORCE ORIENTATION INCLUDES OVERSTRENGTH FACTOR=1.5)	ASD LEVEL FORCES (MAX)			C.I.P. DEEP FOUNDATION			PRECAST BASE
			MOMENT (M) FT-LBS*	SHEAR (V) LBS	VERTICAL (P) LBS**	DIAMETER INCHES	EMBEDMENT FEET (SEE NOTE BELOW)	VERTICAL REINFORCING (ASTM A615, GR 60)	HOOP TIE SIZE & SPACING (ASTM A615, GR 60)
LSS100B–7	F1, F3, F4, F6	SEISMIC	127,100	1,755	7,269	42"	16'–0"	8–#7	#4 @ 12" O.C. FULL DEPTH
		WIND	160,700	2,530	4,622				
LSS100B–10	F2	SEISMIC	123,500	1,697	7,178	42"	16'–0"	8–#7	#4 @ 12" O.C. FULL DEPTH
		WIND	166,500	2,505	4,531				
LSS110C–10	F5	SEISMIC	198,700	2,689	9,669	48"	18'–0"	8–#8	#4 @ 12" O.C. FULL DEPTH
		WIND	194,000	2,838	6,311				

*Moment (M) computed below grade at Shear (V) = 0.

**Vertical (P) load includes steel pole, light fixtures, and attachments. Vertical (P) load for wind is the dressed pole weight for erection purposes. Vertical (P) load for seismic also includes weight of precast base above groundline. Reference Detail "A" on MS Sheet(s) for precast base weight.

Notes:

Final Embedment to be determined in the field by the Geotechnical Engineer of Record

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DSA–TITLE1_E

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-120551 INC:
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒
DATE: 01/11/2021

La Mirada HS Football
FIELD LIGHTING
La Mirada, CA



CORPORATE OFFICE:
P.O. Box 808
100 1st Avenue West
Oskaloosa, Iowa 52577
800/825–6020

DRAWING TITLE: SEE PLAN NOTES, FOUNDATION DETAIL

REVISIONS

REFERENCE:

PROJECT NO.
200279

DATE:
12/10/2020

DRAWN BY:
VMA

DRAWING NO.

1 OF 6

MT1