SITE IMPROVEMENT PLAN

SCALE: 1"=20'

N

NO.	REVISION	DATE	BY	APPD

REVISIONS

CITY OF GRASS VALLEY
ENGINEERING DIVISION
125 E MAIN ST
GRASS VALLEY, CA 95945

LYMAN GILMORE MIDDLE SCHOOL
10837 ROUGH AND READY HIGHWAY
GRASS VALLEY, CA 95945
NEVADA COUNTY, CALIFORNIA

SPORTS COURT LIGHTING

DRAWN:	B JONES
DATE:	DEC 2025
CHECKED:	B JONES
DATE:	DEC 2025
REV. NO:	
DATE:	
FILE NAME:	
JOB NO:	

REGISTERED PROFESSIONAL ENGINEER
BJORN P JONES
No. 75378
CIVIL
STATE OF CALIFORNIA

SITE PLAN

SHEET NO:
C1.1

LYMAN GILMORE SCHOOL FIELD LIGHTING
10837 ROUGH AND READY HWY, GRASS VALLEY, CA 95945
A#02-123505

GRASS VALLEY SCHOOL DISTRICT
10840 GILMORE WAY, GRASS VALLEY, CA 95945

PROJECT DIRECTORY

OWNER:
GRASS VALLEY SCHOOL DISTRICT
10840 GILMORE WAY, GRASS VALLEY, CA 95945
CONTACT: BRIAN MARTINEZ
(530) 273-4483 OFFICE

STRUCTURAL ENGINEER:
RTM ENGINEERING CONSULTANTS
1 ADA, SUITE 100
IRVINE, CA 92618
CONTACT: JOSH RANDALL
(949) 462-3200 OFFICE
(949) 462-3201 FAX

ELECTRICAL ENGINEER:
CES ENGINEERING INC.
13420 MESA DRIVE
GRASS VALLEY, CA 95949
CONTACT: RICHARD ROCCUCCI
(916) 768-7932 OFFICE

PROJECT DESCRIPTION

INSTALLATION OF (4) NEW MUSCO SPORTS LIGHTING POLES AND FOUNDATIONS.

DSA NOTES

1. CHANGES TO THE DSA APPROVED DRAWINGS AND/OR SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR CONSTRUCTION CHANGE DOCUMENT FOR THE STRUCTURAL, ACCESSIBILTY OR FIRE-LIFE SAFETY PORTIONS OF THE PROJECT. CHANGES SHALL BE SUBMITTED TO AND APPROVED BY DSA PRIOR TO COMMENCEMENT OF THE WORK SHOWN THEREON, (CAC 4-338(c)).
2. AN INSPECTOR, EMPLOYED BY THE DISTRICT AND APPROVED IN WRITING BY THE DIVISION OF THE STATE ARCHITECT, SHALL BE REQUIRED FOR CONTINUOUS INSPECTION OF THIS WORK IN ACCORDANCE WITH THE DUTIES DEFINED BY THE CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 1, SECTION 4-342. THE INSPECTOR SHALL BE QUALIFIED AS A CLASS 2 INSPECTOR FOR THIS PROJECT.
3. TESTING, IF ANY, SHALL BE DONE BY A QUALIFIED TESTING LAB AND PAID FOR BY THE OWNER IN ACCORDANCE WITH THE CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 1, SECTION 4-335.
4. THERE ARE NO DEFERRED APPROVALS FOR THIS PROJECT.
5. FIRE SAFETY DURING DEMOLITION AND CONSTRUCTION SHALL COMPLY WITH CHAPTER 33 OF THE CBC AND CFC, AND THE WRITTEN SITE SAFETY PLAN.
6. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NONCOMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CHANGE ORDER, OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE REPAIR WORK (CAC, 2103, 4-317(c)).
7. ALL WORK SHALL CONFORM TO TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).

GENERAL NOTES

1. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO THE START OF WORK AND IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ANY DISCREPANCIES, WHICH MAY EXIST BETWEEN WHAT IS SHOWN ON THESE DRAWINGS AND THE ACTUAL FIELD CONDITIONS.
2. THE CONTRACTOR SHALL THOROUGHLY INVESTIGATE, VERIFY, AND BEAR FULL RESPONSIBILITY FOR DIMENSIONS AND EXISTING CONDITIONS THAT AFFECT CONSTRUCTION AS SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF ANY CONDITIONS REQUIRING MODIFICATION OR CHANGE PRIOR TO STARTING WORK.
3. ANY DAMAGE TO EXISTING CONSTRUCTION OR EQUIPMENT CAUSED BY OPERATIONS UNDER THIS CONTRACT SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE SCHOOL DISTRICT AT THE CONTRACTOR'S EXPENSE.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ALL UTILITIES AND SUBSTRUCTURES WITHIN THE LIMITS OF NEW WORK WHETHER SHOWN ON THE DRAWINGS OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR WILL BE HELD RESPONSIBLE AND SHALL BEAR THE TOTAL EXPENSE OF REPAIR OR REPLACEMENT OF SAID UTILITIES AND SUBSTRUCTURES DAMAGED BY HIS OPERATION IN CONNECTION WITH THE EXECUTION OF THIS WORK. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ALL DAMAGE ARISING FROM AND/OR CONNECTED WITH DAMAGE TO SAID UTILITIES AND SUBSTRUCTURES AS OUTLINED ABOVE.
5. DURING THE ENTIRE CONSTRUCTION PERIOD, IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN CONDITIONS AT THE PROJECT SITE TO MEET THE REQUIREMENTS OF THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND CALIFORNIA OCCUPATIONAL REGULATIONS. THIS PROVISION SHALL COVER THE CONTRACTOR'S EMPLOYEES AND ALL OTHER PERSONS WORKING UPON OR VISITING THE SITE. THE CONTRACTOR SHALL BECOME FULLY INFORMED OF ALL APPLICABLE STANDARDS AND REGULATIONS AND INFORM ALL PERSONS AND REPRESENTATIVES RESPONSIBLE FOR WORK UNDER THIS CONTRACT.
6. PROVIDE BARRICADES AND PROTECTIVE DEVICES SEPARATING CONSTRUCTION AREAS. PROVIDE TEMPORARY PASSAGES AS REQUIRED. PRIOR TO DELIVERY OF MATERIALS TO CONSTRUCTION ZONE AND REMOVAL OF WASTE FROM SITE, CHECK WITH THE OWNER FOR ACCEPTABLE ACCESS ROUTE AND TIME. UNDER NO CIRCUMSTANCES USE AREA OUTSIDE THE CONSTRUCTION ZONE WITHOUT PRIOR CLEARANCE FROM THE OWNER.
7. TAKE ALL MEASURES TO ACCOMPLISH THE WORK WITH THE MINIMUM OF INTERRUPTION TO NORMAL BUILDING PROCEDURES. NOTIFY OWNER IN ADVANCE OF HVAC, ELECTRICAL OR OTHER BUILDING SYSTEM SHUT-OFFS. MINIMIZE NOISE AND DUST GENERATION TO MAXIMUM EXTENT POSSIBLE.

CODE INFORMATION

ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH:

2025 CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R

2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.
(2021 INTERNATIONAL BUILDING CODE VOLUMES 1-2 & 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R
(2020 NATIONAL ELECTRICAL CODE & 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24 C.C.R
(2021 UNIFORM MECHANICAL CODE & 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R
(2021 UNIFORM PLUMBING CODE & 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R.

2022 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R
(2021 INTERNATIONAL FIRE CODE & 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24 C.C.R.

2022 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R

TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

SHEET INDEX (TOTAL SHEETS = 12)

STATEMENT OF GENERAL CONFORMANCE

THIS NOTE IS FOR UTILIZING PLANS PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND / OR CONSULTANTS

FOR ARCHITECTS/ENGINEERS WHO UTILIZE PLANS, INCLUDING BUT NOT LIMITED TO SHOP DRAWINGS, PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS (APPLICATION NO. 02-123505)

THIS DRAWING, PAGE OF SPECIFICATIONS/CALCULATIONS, OR THE ATTACHED LIST OF ITEMS HAS BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. IT HAS BEEN EXAMINED BY ME FOR:

1) DESIGN INTENT AND APPEARS TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY ME, AND

2) COORDINATION WITH MY PLANS AND SPECIFICATIONS AND IS ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT.

THE STATEMENT OF GENERAL CONFORMANCE "SHALL NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS, DUTIES, AND RESPONSIBILITIES UNDER SECTIONS 17302 AND 81138 OF THE EDUCATION CODE AND SECTIONS 4-336, 4-341 AND 4-344" OF TITLE 24, PART 1. (TITLE 24, PART 1, SECTION 4-317 (B))

DRAWINGS: C1.0, E1, E2, E3, E4, E5

_____ 09/24/2025
SIGNATURE DATE

JOSH RANDALL S-4506 6/30/27
PRINT NAME LICENSE NUMBER EXPIRATION DATE

VICINITY MAP

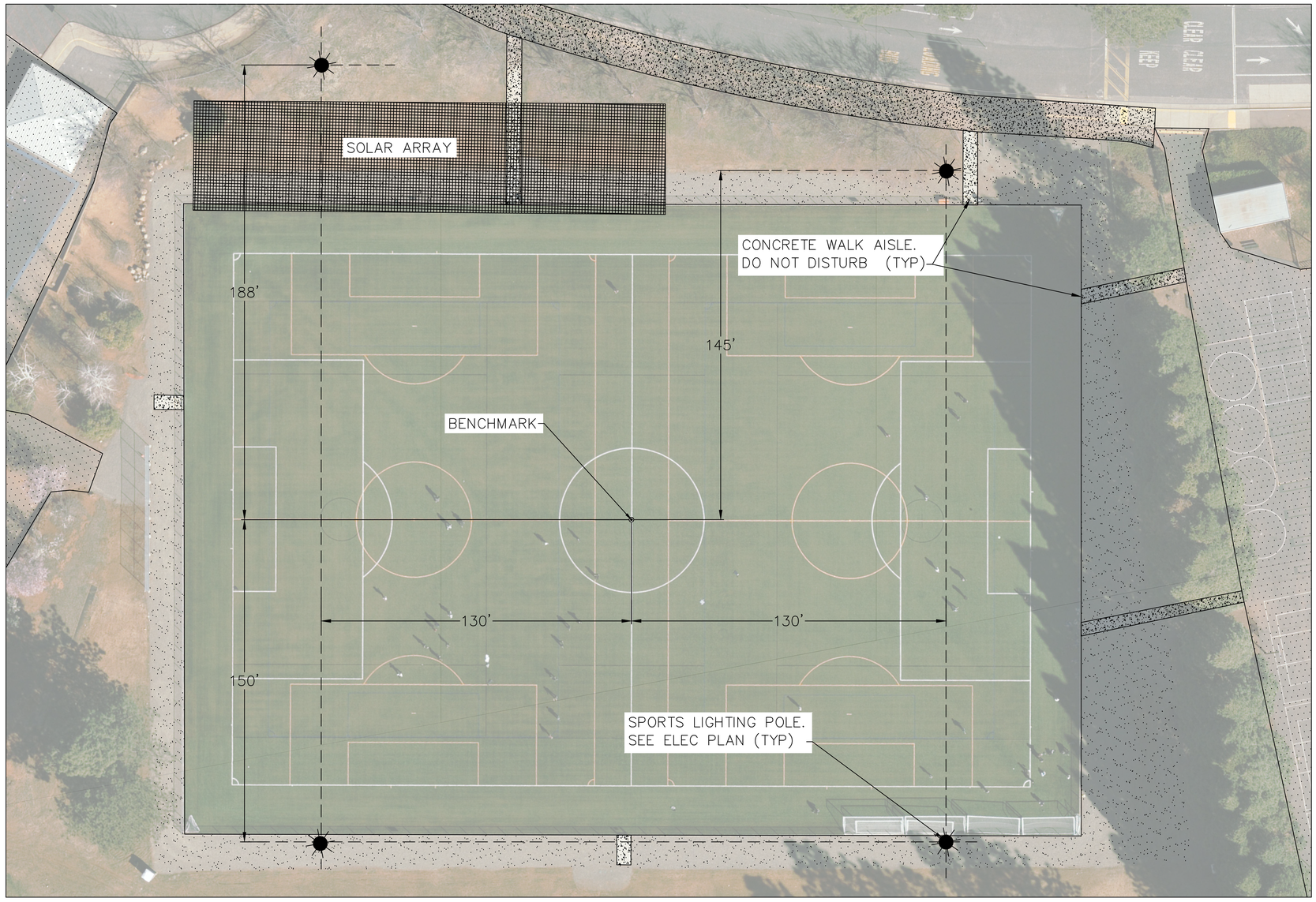
LYMAN GILMORE SCHOOL
FIELD LIGHTING
GRASS VALLEY, CA 95945

CONSULTANT
rtm engineering consultants
1 Ada, Suite 100, Irvine, CA 92618
Tel (949) 462-3200
Fax (949) 462-3201
RTM JOB NO.: 463.642

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

DRAWING TITLE: TITLE SHEET/CODE/INDEX
SCALE: SEE PLAN
REVISIONS:
REFERENCE:

PROJECT NO. 199230
DATE: 09/23/2025
DRAWN BY: J.Donahue
DRAWING NO. T1
1 OF 1



CIVIL SITE PLAN

SCALE: 1"=20'

NO.	REVISION	DATE	BY	APP'D
	REVISIONS			

CITY OF GRASS VALLEY
ENGINEERING DIVISION
125 E MAIN ST
GRASS VALLEY, CA 95945

LYMAN GILMORE MIDDLE SCHOOL
10837 ROUGH AND READY HIGHWAY
GRASS VALLEY, CA 95945
NEVADA COUNTY, CALIFORNIA

SPORTS COURT LIGHTING

DRAWN:	B JONES	
DATE:	AUG 2025	
CHECKED:	B JONES	
DATE:	AUG 2025	
REV. NO:		
DATE:		
FILE NAME:		
JOB NO:		

REGISTERED PROFESSIONAL ENGINEER
BJORN P JONES
No. 72378
CIVIL
STATE OF CALIFORNIA

CIVIL SITE PLAN

SHEET NO:
C1.0

GENERAL NOTES:

APPLICABLE BUILDING CODE

All construction and workmanship shall conform to the 2022 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 = 110 MPH (Exposure C); Vasd = 85 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)
- Ss = 0.549
- S1 = 0.233
- Site Class = C
- Sms = 0.469
- Sm1 = 0.233
- Seismic Design Category = D
- Basic Seismic-Force-Resisting System = Non-Building Structure, not similar to buildings
- Cs = 0.106 (70D); 0.080 (90B) (STRENGTH LEVEL)
- R = 1.5
- Ω = 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 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 NV5, Dated February 22, 2019; Project No. 5249.00, Quantum Geotechnical Inc., Dated July 10, 2023; Project no. J062.G, and addendum prepared by NV5, Dated June 20, 2025; Projecct No. 5249.02.

Allowable Vertical soil Capacity – 2,500 PSF (End Bearing).

Allowable Lateral Bearing capacity: 550 PSF/FT to maximum 6,600 PSF (Values may be doubled for isolated piers spaced more than 2.0 x diameter and increased ⅓ for wind and seismic loading.

A representative of NV5 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 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.

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 backfill without steel reinforcement shall attain a minimum ultimate compressive strength at 28 day test of 3,000 psi (2,500psi used for structural design). 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. ⅜" max agg. size acceptable where pump mixes are used at unreinforced concrete backfill.

Mix in conformance with ASTM C-94, ACI 318 SECTIONS 19.3 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 D1.1-15 specification for GMAW fillet utilizing E70S-X filler metal or SAW fillet utilizing F7XX-EXXX or FBXX-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 and to Building Code Requirements for Reinforced Concrete, ACI 318-19. Precast bases are an ICC approved product under 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 & project DSA 103 form.

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
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.1.17 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

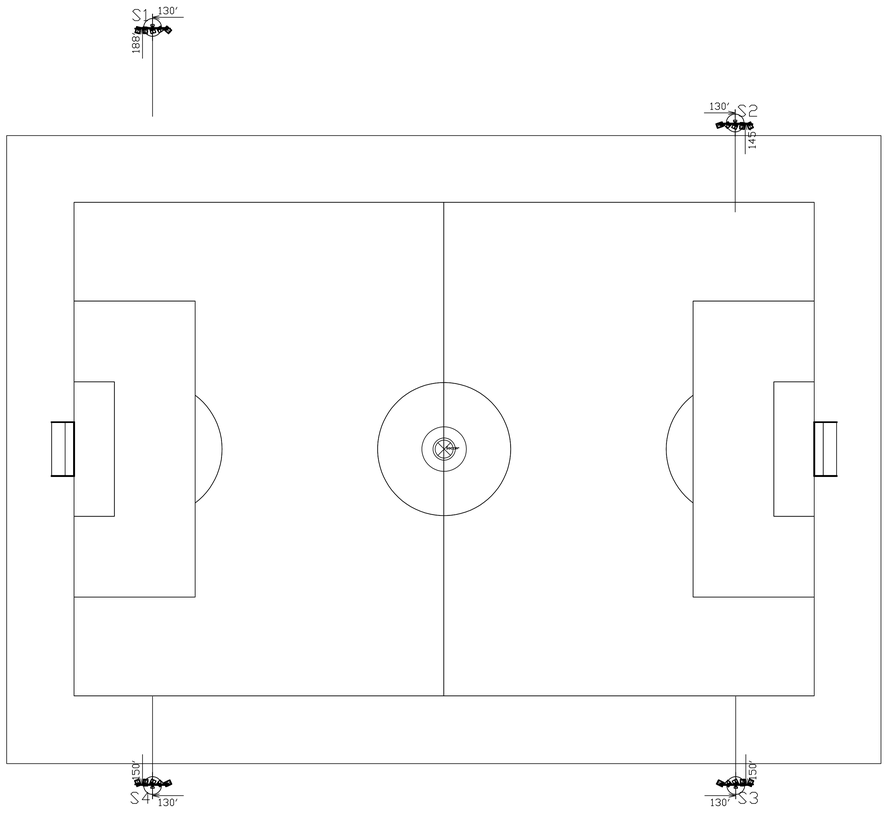
STEEL MATERIALS:
Structural steel – 2202A.1 & 2205A.1
Cold formed steel – 2210A.1
Identification – 2202A.1
High strength bolt identification – table 1705A.2.1 & DSA IR 17-9

STEEL QUALITY:
Tests of structural steel & cold formed steel – 2202A.1
Tests of high strength bolts, nuts, & washers – 2213A.1 & DSA IR 17-8

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 CWI 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.

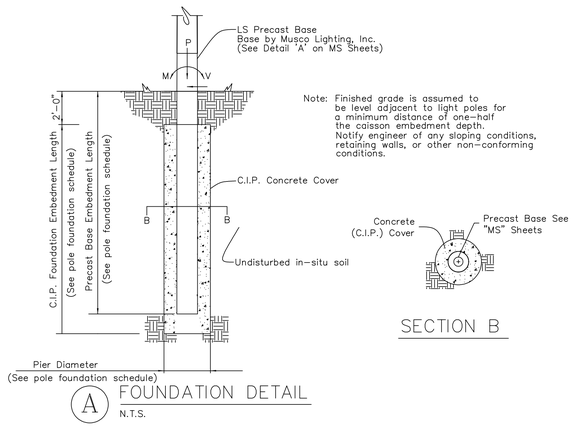
INDEX OF SHEETS



POLE ORIENTATION PLAN

N.T.S.

NOTE: THIS PLAN IS A PICTORAL REPRESENTATION OF THE SITE LAYOUT.
REFERENCE SITE PLAN ON SHEET C1.0 FOR DIMENSIONED POLE LOCATIONS.



SECTION B

A FOUNDATION DETAIL

N.T.S.

POLE FOUNDATION SCHEDULE

POLE TYPE-# OF FIXTURES (MAX) (LSS=LIGHT STRUCTURE)	MARK (SEE POLE ORIENTATION PLAN)	WIND OR SEISMIC (SEISMIC FORCE 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	EMBEDMENT LENGTH
LSS70D-5	S2, S3, S4	SEISMIC	22,600	509	4,590	36"	16'-0"	16'-0"
		WIND	82,100	1,783	2,828			
LSS90B-5	S1	SEISMIC	29,200	525	6,225	36"	18'-0"	18'-0"
		WIND	127,300	2,309	3,566			

*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.

DSA-TITLE1_E

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-123505 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 09/25/2025

Lyman Gilmore School
FIELD LIGHTING
Grass Valley, CA

REGISTERED PROFESSIONAL ENGINEER ★ KINHO ★ No. 4506 Exp. 6-30-27 ★ STRUCTURAL ★ STATE OF CALIFORNIA

CONSULTANT
rtm
engineering consultants
1 Ada, Suite 100, Irvine, CA 92618
949.461.2000
www.rtmeng.com
RTM JOB NO.: 463.642

musco Lighting

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

DRAWING TITLE: NOTES, FOUNDATION DETAIL
SCALE: SEE PLAN
REVISIONS:
REFERENCE:

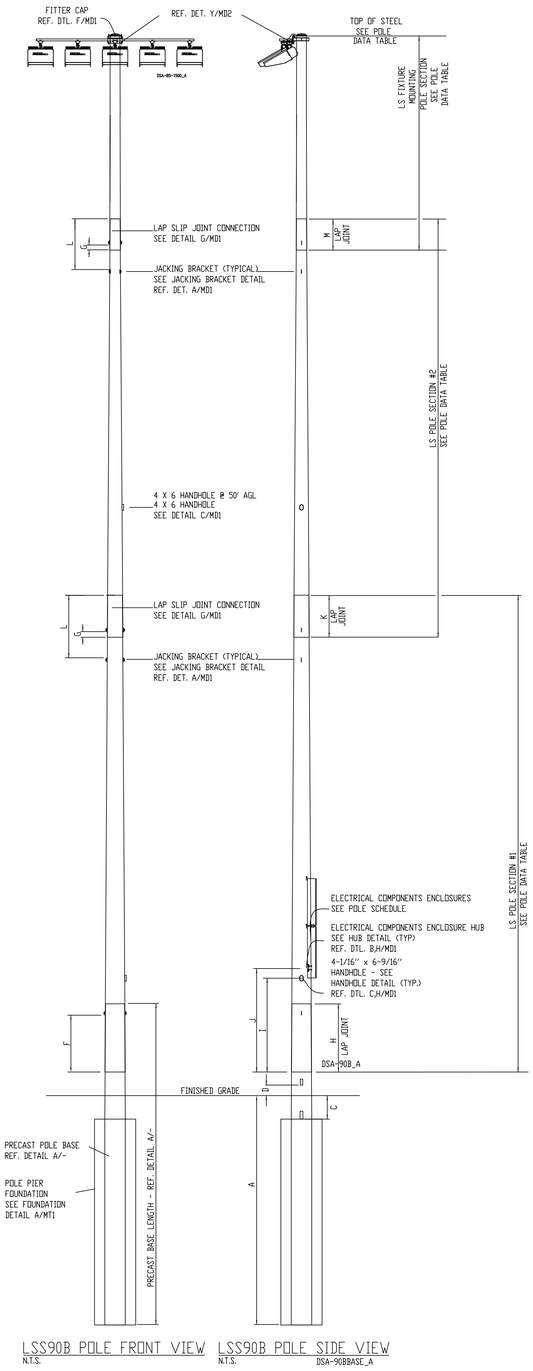
PROJECT NO. 199230

DATE: 09/23/2025

DRAWN BY: dipalmer

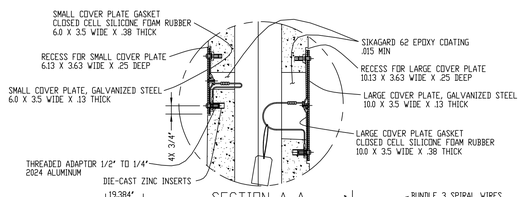
DRAWING NO. MT1

1 OF 5

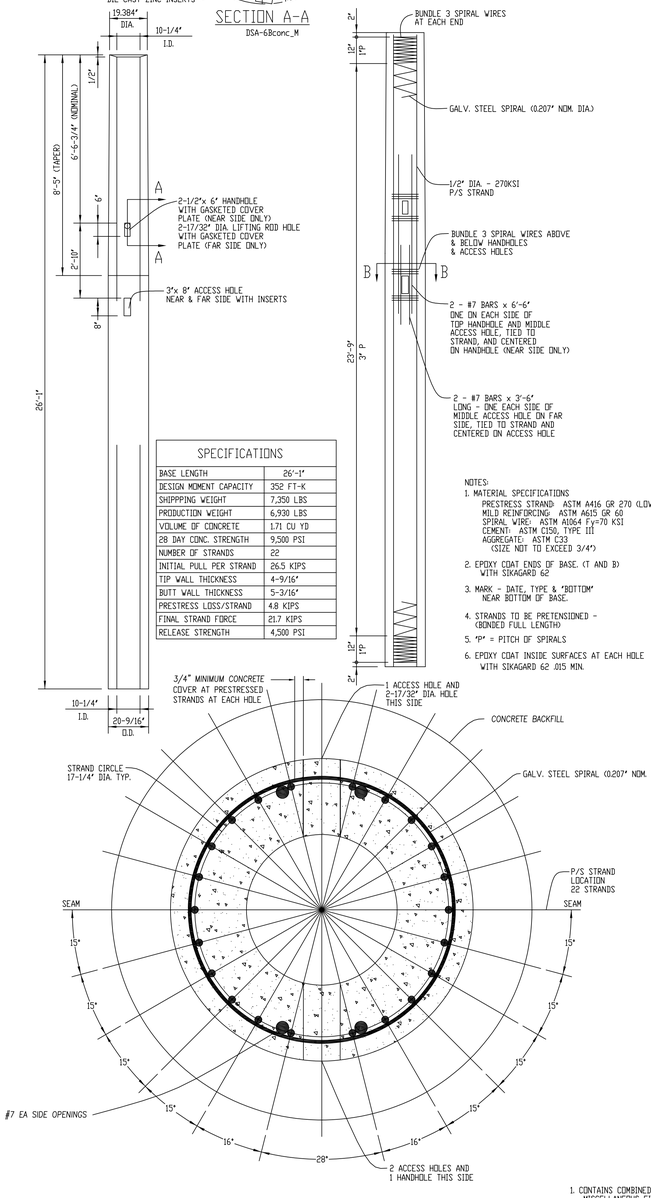


LSS90B POLE FRONT VIEW
N.T.S.

LSS90B POLE SIDE VIEW
N.T.S. DSA-90BBASE_A



SECTION A-A
DSA-6Bconc_M

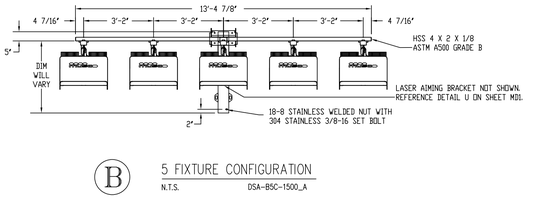


SPECIFICATIONS	
BASE LENGTH	26'-1"
DESIGN MOMENT CAPACITY	352 FT-K
SHIPPPING WEIGHT	7,350 LBS
PRODUCTION WEIGHT	6,930 LBS
VOLUME OF CONCRETE	1.71 CU YD
28 DAY CONC. STRENGTH	9,500 PSI
NUMBER OF STRANDS	22
INITIAL PULL PER STRAND	26.5 KIPS
TIP WALL THICKNESS	4-9/16"
BUTT WALL THICKNESS	5-3/16"
PRESTRESS LOSS/STRAND	4.8 KIPS
FINAL STRAND FORCE	21.7 KIPS
RELEASE STRENGTH	4,500 PSI

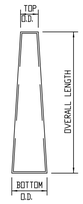
NOTES:
1. MATERIAL SPECIFICATIONS
   PRESTRESS STRAND: ASTM A416 GR 270 (LOW RELAXATION)
   MILD REINFORCING: ASTM A615 GR 60
   SPIRAL WIRE: ASTM A1064 Fy=70 KSI
   CEMENT: ASTM C150, TYPE III
   AGGREGATE: ASTM C33
   (SIZE NOT TO EXCEED 3/4")
2. EPOXY COAT ENDS OF BASE. (T AND B) WITH SIKAGARD 62
3. MARK - DATE, TYPE & "BOTTOM" NEAR BOTTOM OF BASE.
4. STRANDS TO BE PRETENSIONED - (BONDED FULL LENGTH)
5. "P" = PITCH OF SPIRALS
6. EPOXY COAT INSIDE SURFACES AT EACH HOLE WITH SIKAGARD 62 .015 MIN.

PLAN SECTION B-B

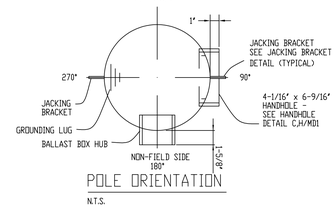
A TYPE 6B PRECAST BASE DETAIL
N.T.S. DSA-6Bconc_M



B 5 FIXTURE CONFIGURATION
N.T.S. DSA-BSC-1500_A



TOP/MIDDLE/BOTTOM
POLE SECTION



POLE ORIENTATION
N.T.S.

NOTATION	DIMENSION LSS90B
A	18'-0"
C	2'-0" NOM.
D	1'-0" NOM.
F	4'-10" NOM.
G	1'-6"
H	6'-5 7/8" NOM. 5'-3 3/4" MIN.
I	8'-1 1/2" NOM.
J	9'-3 1/2" NOM.
K	4'-7 7/8" NOM. 3'-1 3/8" MIN.
L	5'-6 1/2" NOM.
M	3'-3 1/4" NOM. 2'-4" MIN.

1. CONTAINS COMBINED EPA OF LIGHT FIXTURES, CROSS ARM AND MISCELLANEOUS FIXTURE MOUNTING APPARATUS.

FIXTURE WEIGHT 80 LBS. THIS INCLUDES THE WEIGHT OF FIXTURE, CROSS ARM & MISC. MOUNTING APPARATUS. ELECTRICAL BALLAST BOX WEIGHT 20 LBS PER FIXTURE SERVICED

POLE SCHEDULE						
SITE LOCATION	POLE MARK	REFERENCE LOCATION	POLE TYPE	FIXTURE CONFIGURATION	TOTAL EPA[1]	BALLAST BOX REQUIREMENTS
SEE SITE PLAN (BY OTHERS)	S1	SEE POLE ORIENTATION PLAN	LSS90B	5 - SEE DETAIL B/MS1	17.4	SEE DETAIL RL./MD1

DSA-POLESCHE_C

POLE DATA TABLE										
POLE TYPE	PIECE MARK	MAX NUMBER of X-Arms	POLE SECTION	TOP O.D. (INCHES)	BTM. O.D. (INCHES)	OVERALL LENGTH	STRAIGHT LENGTH	TAPER LENGTH	THICKNESS (INCHES)	TOP OF STEEL NOMINAL	ASTM REFERENCE
LSS90B	MP-1BTT-1	1	FIXTURE MOUNTING	9.462"	12.000"	18'-1 1/2"	-----	18'-1 1/2"	.179	87-5 7/8"	A595A (Fy=55 ksi) or A572, Gr 55 or 65
	MP-5BTTDSA-5		#2	11.183"	15.965"	34'-1 7/8"	-----	34'-1 7/8"	.179	-----	A595A (Fy=55 ksi) or A572, Gr 55 or 65
	MP-7BTDSA-D		#1	14.954"	20.770"	41'-6 1/2"	-----	41'-6 1/2"	.239	-----	A595A (Fy=55 ksi) or A572, Gr 55 or 65
	MP-6BDSA		PRECAST BASE	FOR PRECAST MEMBER PROPERTIES SEE PRECAST BASE DETAIL A/-						

DSA-90BDT_A

DSA-90_A

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-123505 INC:
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DATE: 09/25/2025

Lyman Gilmore School
FIELD LIGHTING
Grass Valley, CA

PROFESSIONAL ENGINEER * REGISTERED * STRUCTURAL * STATE OF CALIFORNIA
No. 45618
Exp. 6-30-27

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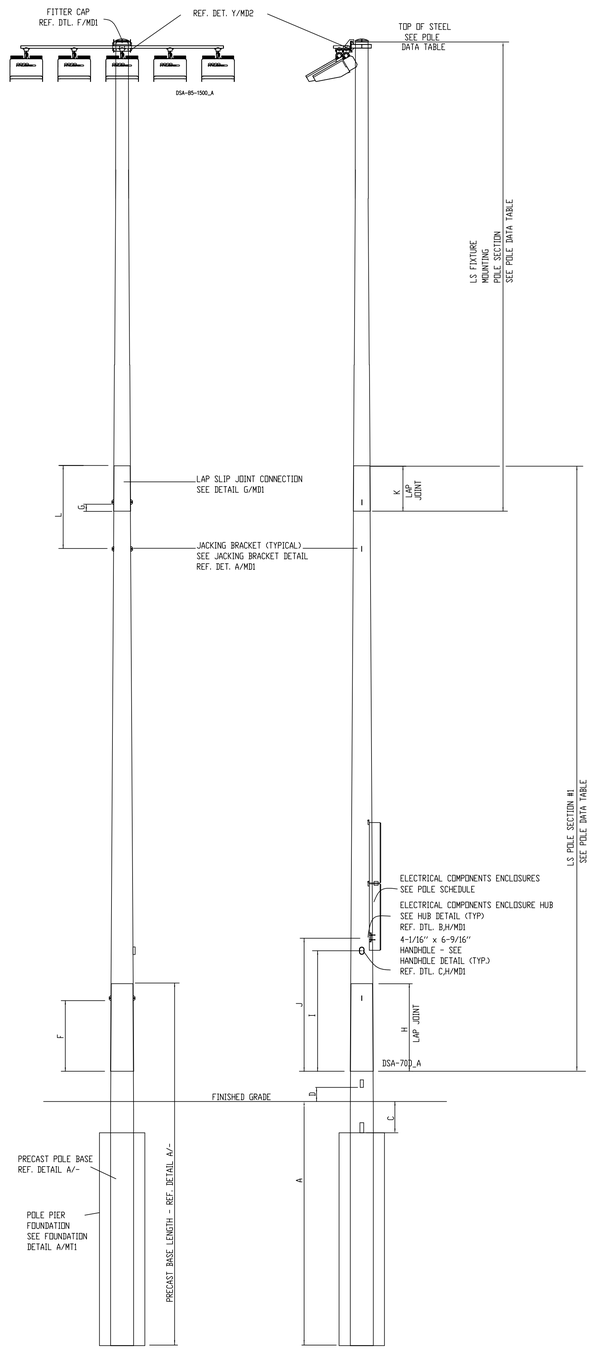
DRAWING TITLE: POLE DETAIL
SCALE: SEE PLAN
REVISIONS:
REFERENCE:

PROJECT NO. 199230

DATE: 09/23/2025

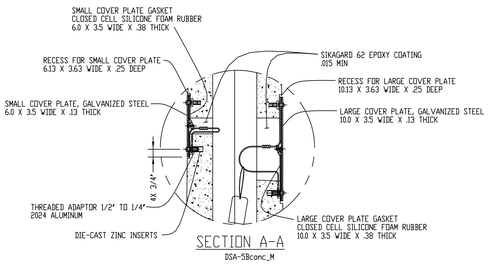
DRAWN BY: dipalmer

DRAWING NO. MS1
2 OF 5

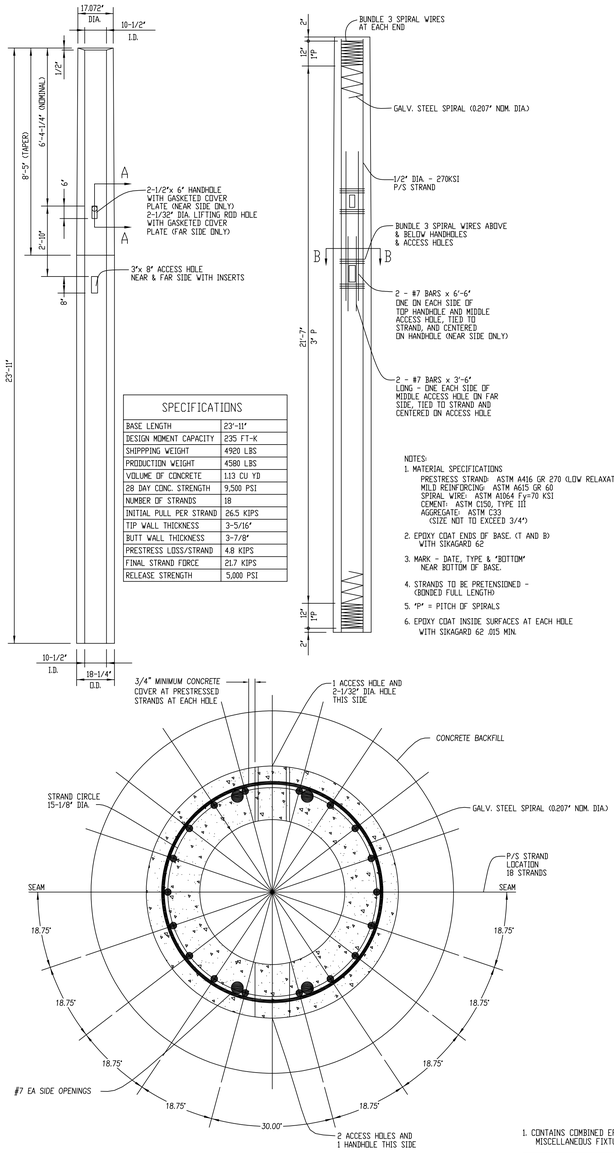


LSS70D POLE FRONT VIEW
N.T.S.

LSS70D POLE SIDE VIEW
N.T.S. DSA-70DBASE_A



SECTION A-A
DSA-5Bconc_M

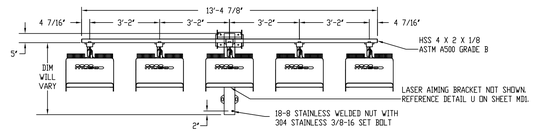


SPECIFICATIONS	
BASE LENGTH	23'-11"
DESIGN MOMENT CAPACITY	235 FT-K
SHIPPPING WEIGHT	4920 LBS
PRODUCTION WEIGHT	4580 LBS
VOLUME OF CONCRETE	1.13 CU YD
28 DAY CONC. STRENGTH	9,500 PSI
NUMBER OF STRANDS	18
INITIAL PULL PER STRAND	26.5 KIPS
TIP WALL THICKNESS	3-5/16"
BUTT WALL THICKNESS	3-7/8"
PRESTRESS LOSS/STRAND	4.8 KIPS
FINAL STRAND FORCE	21.7 KIPS
RELEASE STRENGTH	5,000 PSI

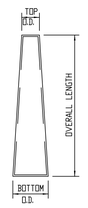
NOTES:
1. MATERIAL SPECIFICATIONS
   PRESTRESS STRAND: ASTM A416 GR 270 (LOW RELAXATION)
   MILD REINFORCING: ASTM A615 GR 60
   SPIRAL WIRE: ASTM A1064 Fy=70 KSI
   CEMENT: ASTM C150, TYPE III
   AGGREGATE: ASTM C33
   (SIZE NOT TO EXCEED 3/4")
2. EPOXY COAT ENDS OF BASE. (T AND B)
   WITH SIKAGARD 62
3. MARK - DATE, TYPE & "BOTTOM"
   NEAR BOTTOM OF BASE.
4. STRANDS TO BE PRETENSIONED -
   (BONDED FULL LENGTH)
5. "P" = PITCH OF SPIRALS
6. EPOXY COAT INSIDE SURFACES AT EACH HOLE
   WITH SIKAGARD 62 .015 MIN.

PLAN SECTION B-B

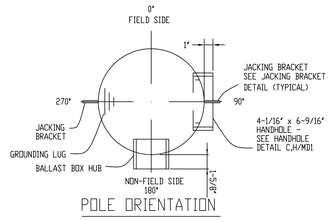
A TYPE 5B PRECAST BASE DETAIL
N.T.S. DSA-5Bconc_M



B 5 FIXTURE CONFIGURATION
N.T.S. DSA-BSC-1500_A



TOP/MIDDLE/BOTTOM
POLE SECTION



POLE ORIENTATION
N.T.S.

NOTATION	DIMENSION LSS70D
A	16'-0"
C	2'-0" NOM.
D	1'-0" NOM.
F	4'-8" NOM.
G	6"
H	6'-1 1/2" NOM. 5'-3 3/4" MIN.
I	7'-11 1/2" NOM.
J	9'-1 1/2" NOM.
K	3'-11 1/4" NOM. 2'-7 5/8" MIN.
L	4'-11 1/2" NOM.

1. CONTAINS COMBINED EPA OF LIGHT FIXTURES, CROSS ARM AND MISCELLANEOUS FIXTURE MOUNTING APPARATUS.

FIXTURE WEIGHT 80 LBS. THIS INCLUDES THE WEIGHT OF FIXTURE, CROSS ARM & MISC. MOUNTING APPARATUS. ELECTRICAL BALLAST BOX WEIGHT 20 LBS PER FIXTURE SERVICED

POLE SCHEDULE

SITE LOCATION	POLE MARK	REFERENCE LOCATION	POLE TYPE	FIXTURE CONFIGURATION	TOTAL EPA[1]	BALLAST BOX REQUIREMENTS
SEE SITE PLAN (BY OTHERS)	S2-S4	SEE POLE ORIENTATION PLAN	LSS70D	5 - SEE DETAIL B/MS2	17.0	SEE DETAIL RL,/MD1

DSA-POLESCHE_C

POLE DATA TABLE

POLE TYPE	PIECE MARK	MAX NUMBER OF X-Arms	POLE SECTION	TOP O.D. (INCHES)	BTM. O.D. (INCHES)	OVERALL LENGTH	STRAIGHT LENGTH	TAPER LENGTH	THICKNESS (INCHES)	TOP OF STEEL NOMINAL	ASTM REFERENCE
LSS70D	MP-4BTTDSA-6	1	FIXTURE MOUNTING	9.118"	13.582"	31'-10 5/8"	-----	31'-10 5/8"	.179	70'-8 1/2"	A595A (Fy=55 ksi) or A572, Gr 55 or 65
	MP-6BTDSA-D		#1	12.672"	18.407"	40'-11 5/8"	-----	40'-11 5/8"	.239	-----	A595A (Fy=55 ksi) or A572, Gr 55 or 65
	MP-5BDSA		PRECAST BASE	FOR PRECAST MEMBER PROPERTIES SEE PRECAST BASE DETAIL A/-							

DSA-70DDT_A

DSA-7B_A

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DIV. OF THE STATE ARCHITECT
APP: 02-123505 INC:
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DATE: 09/25/2025

Lyman Gilmore School
FIELD LIGHTING
Grass Valley, CA

REGISTERED PROFESSIONAL ENGINEER
No. 41506
Exp. 6-30-27
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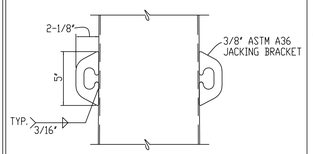
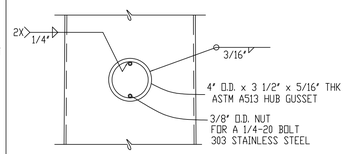
DRAWING TITLE: POLE DETAIL
SCALE: SEE PLAN
REVISIONS:
REFERENCE:

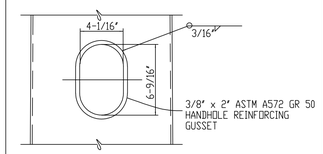
PROJECT NO. 199230
DATE: 09/23/2025
DRAWN BY: dipalmer
DRAWING NO. MS2
3 OF 5



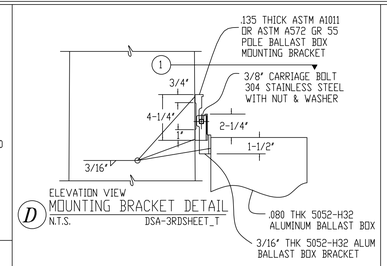
A JACKING BRACKET DETAIL
N.T.S. DSA-3RDSHEET_T



B HUB DETAIL
N.T.S. DSA-3RDSHEET_T



C HANDHOLE SLEEVE DETAIL
N.T.S. DSA-3RDSHEET_T



D MOUNTING BRACKET DETAIL
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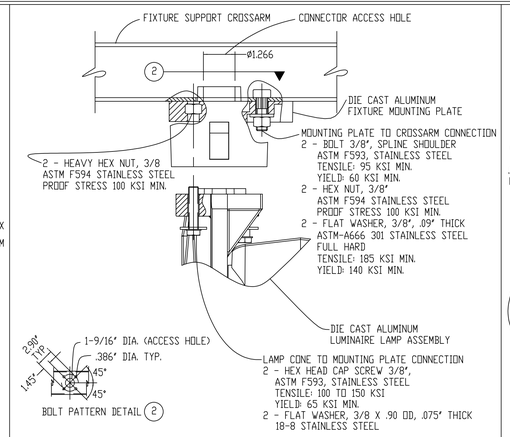
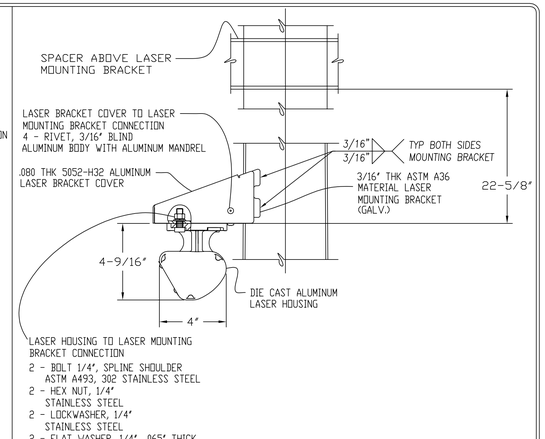
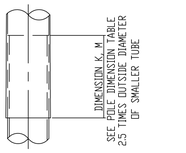


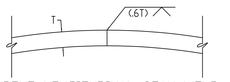
E LUMINAIRE ATTACHMENT DETAIL
N.T.S. DSA-3RDSHEET_T



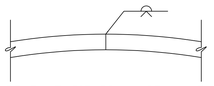
U LASER AIMING BRACKET
N.T.S. DSA-3RDSHEET_T



G SLIP JOINT CONNECTION DETAIL
N.T.S. DSA-LAP

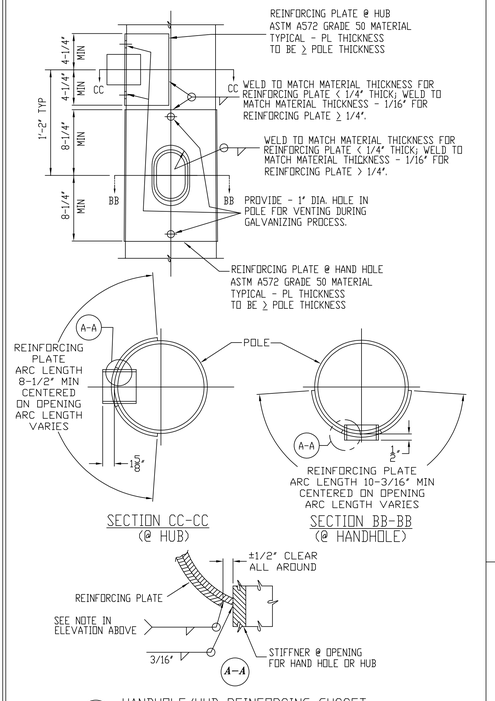


POLE LONGITUDINAL SEAM WELD
DETAIL TYPICAL CONDITION *
N.T.S. DSA-3RDSHEET_T



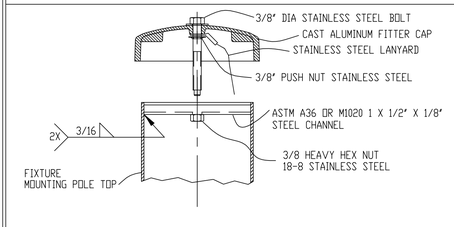
POLE LONGITUDINAL SEAM WELD DETAIL
AT LAP SPLICES (FEMALE END) *
N.T.S. DSA-3RDSHEET_T

* NOTE- 100% PENETRATION SEAM WELDS MAY BE PROVIDED FULL LENGTH OF POLE SHAFTS PROVIDED WPS'S ARE QUALIFIED BY TEST.



H HANDHOLE/HUB REINFORCING GUSSET
N.T.S.

4P/6PX-LP
RL BALLAST BOX CONNECTION DETAIL
N.T.S. STRU-4P6PXLP_E



F FITTER CAP DETAIL
N.T.S. DSA-3RDSHEET_T

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Lyman Gilmore School
FIELD LIGHTING
Grass Valley, CA

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DRAWING TITLE: ATTACHMENT DETAILS
SCALE: SEE PLAN
REVISIONS
REFERENCE:

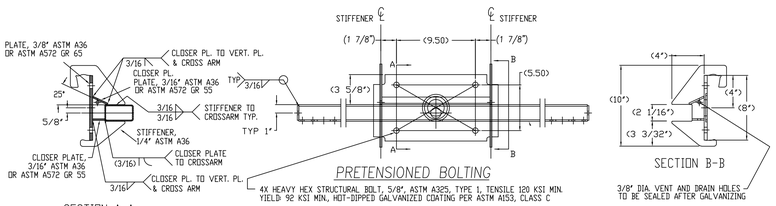
PROJECT NO. 199230

DATE: 09/23/2025

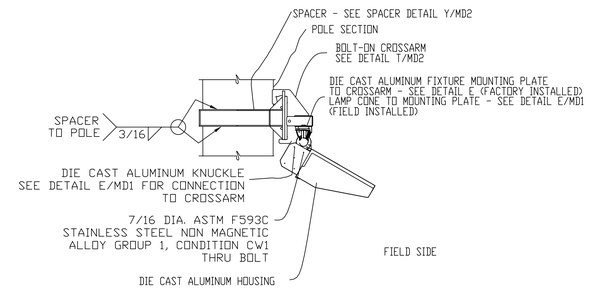
DRAWN BY: dipalmer

DRAWING NO. MD1
4 OF 5

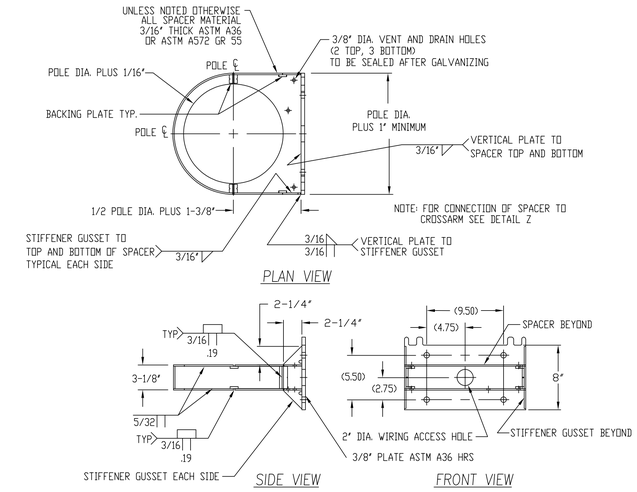
STRU-MD1



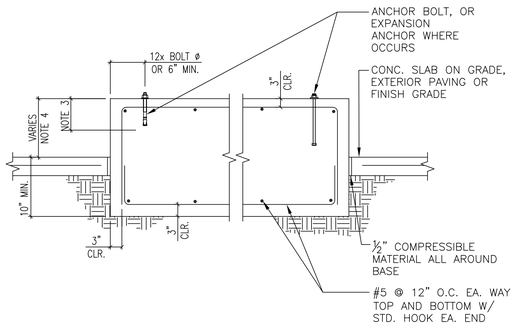
T BOLT ON CROSSARM DETAIL
SCALE: N.T.S. DSA-BOLTonBAR-LED_A_1



Z LIGHT FIXTURE (TYPICAL)
SCALE: N.T.S. DSA-1500-BOLTON_A



Y SPACER DETAIL
SCALE: N.T.S. DSA-BOLTON_L



NOTES:
ELECTRICAL DRAWINGS FOR THE FOLLOWING:
1. LOCATION AND DIMENSIONS OF BASES.
2. LOCATION, NUMBER, SIZE AND TYPE OF BOLTS.
3. EMBEDMENT OF EXPANSION ANCHORS WHERE OCCURS.
4. CURB HEIGHT, $1\frac{1}{2}$" MIN.

A CONCRETE BASE FOR EQUIPMENT

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DIV. OF THE STATE ARCHITECT
APP: 02-123505 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 09/25/2025

Lyman Gilmore School
FIELD LIGHTING
Grass Valley, CA

REGISTERED PROFESSIONAL ENGINEER ★ STRUCTURAL ★ STATE OF CALIFORNIA
No. 4506
Exp. 6-30-27

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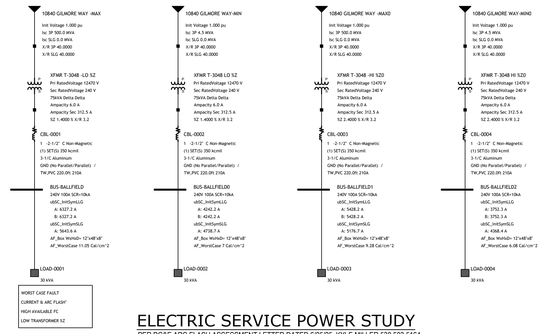
DRAWING TITLE: ATTACHMENT DETAILS
SCALE: SEE PLAN
REVISIONS:
REFERENCE:
PROJECT NO. 199230
DATE: 09/23/2025
DRAWN BY: dipalmer
DRAWING NO. MD2
5 OF 5

STRU-M02

- A -	
A	AMPERE
AC	ABOVE COUNTER
ACB	AIR CIRCUIT BREAKER
AF	AMP FUSE RATING
AFF/AFG	ABOVE FINISHED FLOOR/GRADE
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
AL	ALARM
AM	AMMETER
ARR	ABOVE RAISED FLOOR
ASYM	ASYMMETRICAL
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AWG	AMERICAN WIRE GAUGE
- B -	
BIL	BASIC IMPULSE LEVEL
BLDG	BUILDING
BCC	BELOW FINISHED CEILING
- C -	
C	CONDUIT
°C	DEGREE CELSIUS
CAB	CABINET
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CL	CENTER LINE
CLG	CEILING
CTRL	CONTROL
CO	CONDUIT ONLY
COM	COMMUNICATION
CONT	CONTINUATION
CT	CURRENT TRANSFORMER
CU	COPPER
- D -	
BD	DECIBEL
DC	DEDICATED OUTLET
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DISC	DISCONNECT
DN	DOWN
DP	DISTRIBUTION PANELBOARD
DT	DUST TIGHT
DWG	DRAWING
- E -	
EA	EACH
EC	ELECTRICAL CLOSET
EF	EXHAUST FAN
ELEV	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EM	EMERGENCY
EP XP	EXPLOSION PROOF
EQ	EQUAL
EQUIP	EQUIPMENT
EX. (E) EXISTING	
EXT	EXTERIOR
- F -	
°F	DEGREE FAHRENHEIT
F	FUSE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FCU	FAN COIL UNIT
FDR	FEEDER
FDS	FUSED DISCONNECT SWITCH
FL	FLOOR
FLA	FULL LOAD AMPS
FLEC	FLEXIBLE
FLUOR	FLUORESCENT
PNL	PANEL
FT '	FEET OR FOOT
FVNR	FULL VOLTAGE NON-REVERSING
- G -	
G	GND GROUND
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTING
- H -	
HOA	HAND-OFF-AUTO SWITCH
HOAK	HOA KEY OPERATED
HID	HIGH INTENSITY DISCHARGE
HH	HAND HOLE
HP	HORSEPOWER
HV	HIGH VOLTAGE
HZ	HERTZ
- I -	
IC	INTERRUPTING CAPACITY
ID	INSIDE DIAMETER
IG	ISOLATED GROUND
INSTR	INSTRUMENT
- J -	
J	JUNCTION BOX
- K -	
KCM	THOUSAND CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWH	KILOWATT HOUR
KWHM	KILOWATT HOUR METER
- L -	
LCP	LIGHTING CONTROL PANEL
LIM	LINE ISOLATION MONITOR
LYG	LIGHTING
LRA	LOCKED ROTOR AMPS
- M -	
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCM	THOUSAND CIRCULAR MILS
MECH	MECHANICAL
MH	MANHOLE
MIC	MICROPHONE
MIN	MINIMUM
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
- N -	
NEUT	NEUTRAL
NAC	NOTIFICATION APPLIANCE CIRCUIT
NC	NORMALLY CLOSED
NF	NON-FUSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NP	NETWORK PROTECTOR
NTS	NOT TO SCALE
- O -	
OC	ON CENTER
OCN	OIL CIRCUIT BREAKER
OD	OUTSIDE DIAMETER
- P -	
P	POLE
PB	PULL BOX
PB	PUSH BUTTON SWITCH
PH	PHASE
PNL	PANEL
PS	PRESSURE SWITCH
PT	POTENTIAL TRANSFORMER
PWR	POWER
- R -	
RECEPT	RECEPTACLE
REQ	REQUIRED
RLA	RATED LOAD AMPS
RM	ROOM
- S -	
SCHED	SCHEDULE
SC	SEPARATE CIRCUIT
SD	SMOKE DETECTOR
SECT	SECTION
SOG	SIGNAL
SLC	SIGNALING LINE CIRCUIT
SN	SOLID NEUTRAL
SOW	SCOPE OF WORK
SPEC	SPECIFICATION
SPKR	SPEAKER
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYM	SYMMETRICAL
SYS	SYSTEMS
- T -	
TBC	TO BE CONFIRMED
TB	TERMINAL BOARD
T	TELEPHONE
TEMP	TEMPERATURE
THERM	THERMOSTAT
TRANSF	TRANSFORMER
TS	TAMPER SWITCH
TV	TELEVISION
TYP	TYPICAL
- U -	
UFD	UNDERFLOOR DUCT
UH	UNIT HEATER
UF	UNFUSED
UNO	UNLESS OTHERWISE NOTED
- V -	
VA	VOLT AMPERE
VA	VOLT OR VOLTAGE
VFD	VARIABLE FREQUENCY DRIVE
VM	VOLTMETER
VP	VAPORPROOF
- W -	
W	WATT
WC	WATER COOLER
WF	WATER FLOW SWITCH
WHM	WATT HOUR METER
WP	WEATHERPROOF
WT	WATERTIGHT
- X -	
XP EP	EXPLOSION PROOF
+48"	MOUNTING HEIGHT TO CENTER OF DEVICE FROM FINISHED FLOOR OR GRADE, UNLESS OTHERWISE NOTED

ABBREVIATIONS

UNDERGROUND SERVICE ALERT
CALL TOLL FREE
1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG



ELECTRIC SERVICE POWER STUDY

PER PG&E ARC FLASH ASSESSMENT LETTER DATED 6/25/25 KYLE MILLER 530.503.5164

OVERALL SITE PLAN
1" = 50'-0"

NORTH

0' 50' 100'
1" = 50'

Panel: EP 208V 3PH

LYMAN GILMORE MIDDLE SCHOOL

Voltage: 120 208 3 Phase
Location: ELEC.RM. 4 Wire

Main Breaker: 200A Lugs: NA
Feeder Size: 1-LINE Entry: TOP
Mounting: PEDESTA Bus: 200A
AIC Rating: 10KA

DESCRIPTION	CKT	BKR	P	LTS LCL	REC	MISC	A-VA	B-VA	C-VA	AMPS
SPORTS POLE #1	1	30	2				2620.8			21.8
---(TOTAL 6.989KW)---	3							2620.8		21.8
-------	5								1747.2	14.6
SPORTS POLE #2	7	30	2				1747.2			14.6
---(TOTAL 6.989KW)---	9							2620.8		21.8
-------	11								2620.8	21.8
SPORTS POLE #3	13	30	2				2620.8			21.8
---(TOTAL 6.989KW)---	15							2620.8		21.8
-------	17								1747.2	14.6
SPORTS POLE #4	19	30	2				2620.8			21.8
---(TOTAL 6.989KW)---	21							1747.2		14.6
-------	23								2620.8	21.8
SPORTS PANEL CONTROLS	25	20	1				200			1.7
						Subtotal:	9609.6	9609.6	8736	

DESCRIPTION	CKT	BKR	P	LTS LCL	REC	MISC	A-VA	B-VA	C-VA	AMPS
SPARE	2	20	1				0			0.0
SPARE	4	20	1					0		0.0
PEDESTAL INTEGRAL CONV OUTLET	6	20	1		1				1500	12.5
Blank (prepared space)	8						0			0.0
Blank (prepared space)	10							0		0.0
Blank (prepared space)	12								0	0.0
Blank (prepared space)	14						0			0.0
Blank (prepared space)	16							0		0.0
Blank (prepared space)	18								0	0.0
Blank (prepared space)	20						0			0.0
Blank (prepared space)	22							0		0.0
Blank (prepared space)	24								0	0.0
Blank (prepared space)	26						0			0.0
						Subtotal:	0	0	1500	

			Total VA per phase:	9609.6	9609.6	10236
25% of Lighting Long Continuous Load:	0		Connected Amps:	82	80	85
25% of Other Long Continuous Load:	0		Adjusted Avg. VA:	9878	9878	9878
25% of Largest Motor:	0		Adjusted Avg. Amps:	82	82	82
Less 50% >=10kVA 180VA Receptacles:	0		Total Connected VA:	29,655		
Less 35% >=6 Kitchen Units:	0		Total Connected AMPS:	82		
			Total Calculated VA:	29,655		
			Total Calculated AMPS:	82		

Under MISC column "K"=Kitchen Load, "LCL"=Long Continuous Load other than lighting
*PER PG&E ARC FLASH ASSESSMENT LETTER DATED 6/25/25

GENERAL NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE, AND ALL OTHER CODES, ACTS, STANDARDS, REGULATIONS, ORDINANCES AND AUTHORITIES HAVING JURISDICTION.
2. CONTRACTOR SHALL CONDUCT FIELD COORDINATION AND REVIEW OF PLACEMENT OF ALL DEVICES WITH OWNER'S REPRESENTATIVE PRIOR TO ROUGH IN OF BOXES, CONDUITS AND SUPPORTS
3. CONTRACTOR IS RESPONSIBLE FOR PROVIDING COMPLETE AND OPERABLE SYSTEMS. CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER IN WRITING OF ANY AND ALL DEFICIENCIES PRIOR TO BID.
4. THESE DRAWINGS AND SPECIFICATIONS ARE SUBJECT TO REVIEW AND APPROVAL BY THE AUTHORITY HAVING JURISDICTION

CODE COMPLIANCE

2022 CALIFORNIA ELECTRICAL CODE

SCOPE OF WORK

1. PROVIDE NEW METERED TESCO SERVICE PEDESTAL
2. CONNECT TO EXISTING PG&E TRANSFORMER
3. PROVIDE POWER TO MUCSO SPORTS LIGHTING SYSTEM, DESIGN BY MUSCO SPORTS LIGHTING, LLC., DRAWINGS INCLUDED IN THIS CONSTRUCTION PERMIT PACKAGE
4. PROVIDE POWER DISTRIBUTION FROM SPORTS LIGHTING PANEL TO LIGHTING EQUIPMENT
5. SEE MUSCO LIGHTING STRUCTURAL DRAWINGS FOR RELATED WORK.

DRAWING INDEX

REGISTERED PROFESSIONAL ENGINEER
RICHARD ROSCOVER
No. E7339
ELECTRICAL
STATE OF CALIFORNIA
Richard Roscover

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12911 Loma Rica Drive
Grass Valley, CA 95945

Lyman Gilmore Middle School
10837 Rough and Ready Highway
Grass Valley, CA 95945
NEVADA COUNTY, CALIFORNIA

SPORTS COURT LIGHTING

No.	Date:	Description:
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B	2025.04.28	FOR CLIENT REVIEW
A	2025.04.25	FOR DESIGN REVIEW

Checked by: GC/RR
Design by: GC/TB
Scale:

Sheet Title: COVER SHEET

Sheet Number: E1

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-123505 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 09/25/2025

REFERENCE NOTES:

1. NEW ELECTRIC SERVICE EQUIPMENT & CONNECTIONS, SEE SHEET E3
2. NEW SPORTS LIGHTING EQUIPMENT PAD, SEE SHEETS E4 & E5
3. UNDERGROUND CONDUIT & WIRE, AS NOTED. SEE 1-LINE, SEE DETAIL E3. ALL TRENCHES TO BE IN TURF & GRAVEL AREAS, PROVIDE BORING FOR CROSSING PAVEMENT OR WALKWAY
4. UNDERGROUND TAMPER RESISTANT (PENTABOLT) PULLBOX. CHRISTY 'NF' (#3.5) 10"x15" OR EQUIVALENT BY JENSEN OR OLDCASTLE; EXCEPT LARGER WHERE INDICATED BY:
   N16 11"x21" INSIDE N30 13"x24" INSIDE N36 17"x30" INSIDE.
   LABEL LID "ELECTRIC". SEE DETAIL.
   -IF ANGLE PULL DIMENSIONS EXCEED NEC 314.28 PROVIDE LARGER PULLBOX.
   -PULLBOXES IN TRAFFIC AREAS TO BE TRAFFIC RATED.
   -DASHED LINES TO PULLBOXES REPRESENT UNDERGROUND PVC SCHEDULE 40 CONDUIT - MINIMUM 1" .
5. NEW SPORTS LIGHTING POLE SEE SHEETS E4 & E5. REFERENCE STRUCTURAL DRAWINGS MT1, MS1, MS2, MD1 & MD2 FOR ADDITIONAL POLE & FOUNDATION CONSTRUCTION REQUIREMENTS.

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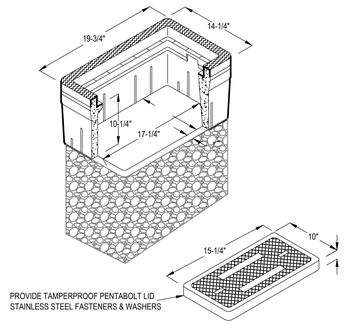
Checked by: GC/RR
Design by: GC/TB
Scale:

Sheet Title:
ELECTRICAL SITE PLAN

Sheet Number:
E2

PULLBOX LID SHALL BE INSCRIBED WITH "ELECTRIC" OR AS REQUIRED BY AHJ

PROVIDE MINIMUM 18" OF GRAVEL INSIDE/BENEATH HANDHOLE FOR DRAINAGE ALL SPLICES SHALL BE WATERPROOF WITH 3M SCOTCHKOTE ELECTRICAL COATING
EXCEPT WHERE NOTED OTHERWISE BOXES SHALL BE CHRISTY OR JENSEN MODEL N9 (OR LARGER WHERE NOTED OR REQUIRED) OR APPROVED EQUIVALENT HIGH DENSITY
REINFORCED CONCRETE PULL AND JUNCTION BOX WITH END AND SIDE KNOCKOUTS, WITH REINFORCED CONCRETE



4 E3 PULL BOX
NO SCALE

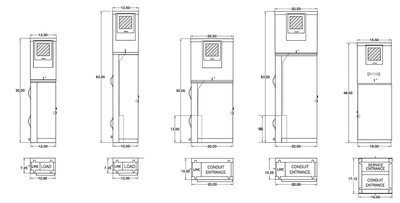
TESCOFLEX® The Established Standard

Low-Profile Slimline Industrial Pedestals

Durable, Compact, Aesthetic, and Flexible

TESCOFLEX® low-profile switchgear and underground service distribution/control pedestals are used for a wide variety of municipal applications. Developed by Tesco Controls, Inc. in 1972, they have become the standard for state, county, municipal, highway, and public works departments.

TESCOFLEX® Pedestals provide power distribution and metering for 100-800 volts; single phase or three phase applications.



Durable

Constructed using the highest grade materials, TESCOFLEX® Pedestals are built for durability. Our standard pedestals are fabricated from American-made, hot-dipped galvanized sheet steel, stainless steel, or aluminum. TESCO pedestals are built using all-welded construction, with no exposed fasteners and vandal-resistant doors.

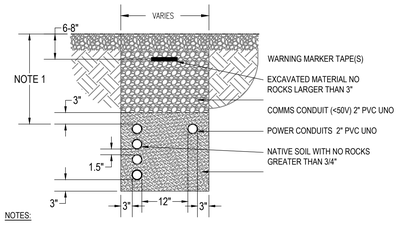
The coating system begins with a 5-step pre-treatment followed by electrostatically applied polyurethane baked-on powder. Our coatings will withstand the most stringent testing applied to outdoor enclosures and meet or exceed state specifications.

Compact and Aesthetic

Innovative engineering, flexibility, and a wide range of sizes and options provides for the maximum utilization of space and nearly limitless applications. Because of their low-profile and slimline sizes, TESCOFLEX® products are perfectly suited for applications that require a more architectural aesthetic. With a substantial color chart to choose from and the ability to match any architectural standard with custom manufactured colors, your project will look as great as it performs.

	26-000 Type IIIAF **	26-100 Type IIIAF **	27-000 Type IIIAF **	27-100 Type IIIAF **	28-105 Type IIIBF **
Meter Socket	100 AMP	100 AMP	Up to 200 AMP	Up to 200 AMP	Up to 200 AMP
Test By-Pass	YES	YES	YES	YES	YES
Max 1" Poles Includes Main CB	7	14	14	28	12
Metered & Unmetered	YES	YES	YES	YES	YES
Meets EUSERC Requirements	YES	YES	YES	YES	YES
Copper Interior	YES	YES	YES	YES	YES
P.E. Socket	YES	YES	YES	YES	YES
Lightning Contactors	YES	YES	YES	YES	YES
Flashing Beacon Controls	YES	YES	YES	YES	YES
Time Clocks	YES	YES	YES	YES	YES
Time Delays	YES	YES	YES	YES	YES
Transformers*	YES	YES	YES	YES	YES
Test Switches	YES	YES	YES	YES	YES

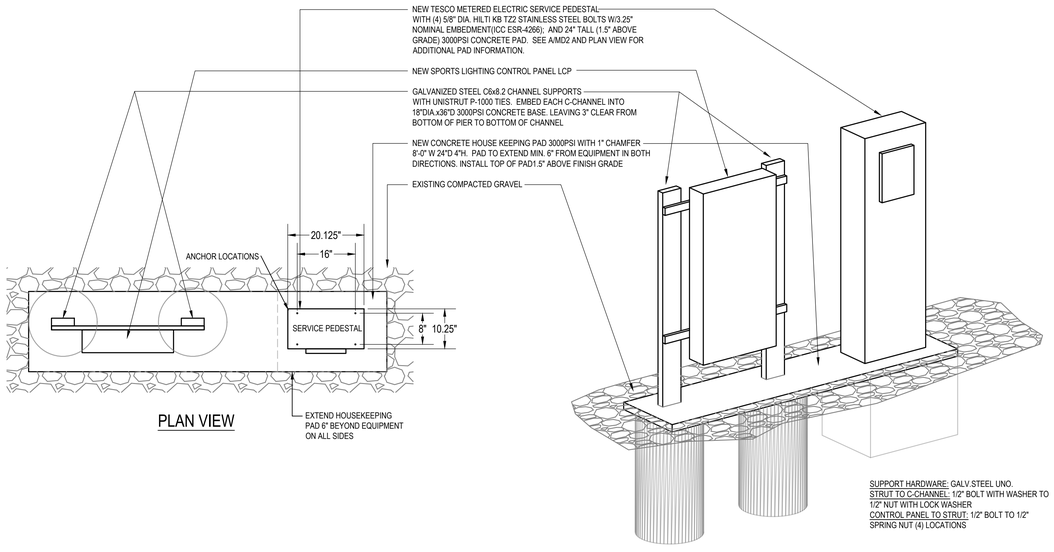
* Consult Manufacturer to Verify Space Requirements **Reverse Service Available



NOTES:

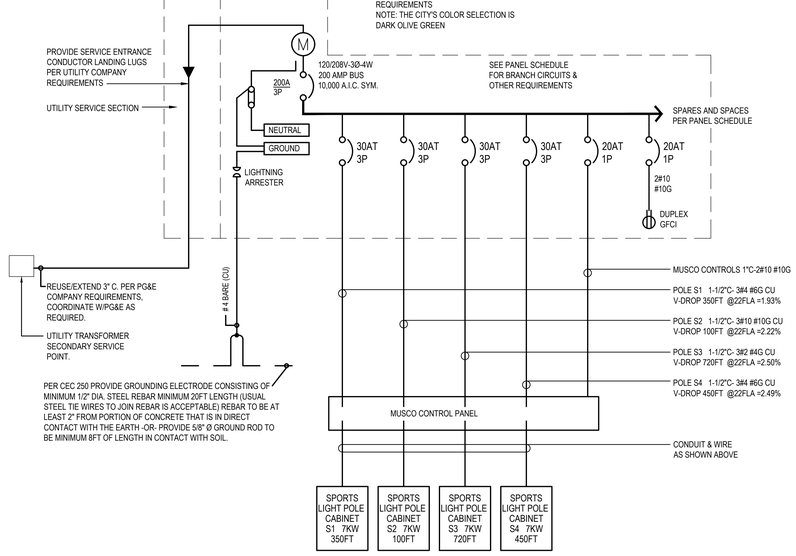
1. MINIMUM BURIAL DEPTH SHALL BE 24" OF COVER AND NOT LESS THAN NEC TABLE 300-5.
2. PROVIDE ADDITIONAL MARKER TAPE FOR DUCTBANKS GREATER THAN 24" WIDE.
3. MAINTAIN 1.5" SEPARATION BETWEEN UNDERGROUND POWER CONDUITS FOR CONDUIT DUCTBANK COOLING & COMPACTION.
4. MAINTAIN 12" SEPARATION BETWEEN PARALLEL (NOT CROSSING) POWER AND COMMUNICATIONS CONDUITS. NOT REQUIRED BETWEEN POWER AND CONTROLS CONDUITS UNLESS NOTER OTHERWISE.
5. BACKFILL & BEDDING TO BE TO 95% COMPACTION

3 E3 UNDERGROUND CONDUIT
NO SCALE



PLAN VIEW

2 E3 LOWER SITE SINGLE LINE DIAGRAM
FOR CONFIRMATION OF ELECTRICAL SUPPORTS, REFER TO STRUCTURAL ENGINEER



1 E3 SERVICE PEDESTAL SINGLE LINE DIAGRAM

REGISTERED PROFESSIONAL ENGINEER RICHARD ROSCOE No. E7339 ELECTRICAL STATE OF CALIFORNIA
CES ENGINEERING, INC.
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SPORTS COURT LIGHTING

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Checked by: GC/RR
Design by: GC/TB
Scale:

Sheet Title: ELECTRICAL DETAILS

Sheet Number: E3

Equipment List For Areas Shown

Structure QTY	Structure ID	SIZE	GRADE ELEVATION	ABOVE FIELD LEVEL	Fixtures FIXTURE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
1	S1	90'	-	90'	TLC-LED-1500	5	5	0
3	S2-S4	70'	-	70'	TLC-LED-1500	5	5	0
4	Totals					20	20	0

Above Field Level is height of fixtures above area shown

Pole location(s) ☐ dimensions are relative to (L,l) reference point(s) ☒

ENGINEERED DESIGN By: D.Palmer • File #199230C • 22-Apr-25

Lyman Gilmore Turf Field
Grass Valley,CA

Grid Summary

Name:	Soccer Spill @ 5ft.
Spacing:	10.0'
Height:	5.0' above grade

Illumination Summary

INITIAL CANDELA (PER FIXTURE)

	Entire Grid
Scan Average:	2982.3239
Maximum:	12206.225
Minimum:	200.916
CU:	0.00
No. of Points:	68
FIXTURE INFORMATION	
Applied Circuits:	A
No. of Fixtures:	20
Total Load:	28.20 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

musco. We Make It Happen.

ILLUMINATION SUMMARY

Lyman Gilmore Turf Field
Grass Valley,CA

LIGHTING SYSTEM

Structure/Fixture Summary

Structure ID	Structure Height	Fixt. Attachment Ht.	Fixture Qty	Fixture Type	Load	Circuit
S1	90'	90'	5	TLC-LED-1500	7.05 kW	A
S2-S4	70'	70'	5	TLC-LED-1500	7.05 kW	A
4			**20**		**28.20 kW**	

Circuit Summary

Circuit	Description	Load	Fixture Qty
A	Soccer	28.20 kW	20

Fixture Type Summary

Type	Circuit	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-LED-1500	A	LED 5700K - 75 CRI	1410W	181,000	>100,000	>120,000	>120,000	20

Single Fixture Amperage Draw Chart

Driver Specifications (L90 min power factor)	Line Amperage Per Fixture (max draw)						
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
TLC-LED-1500	8.4	7.9	7.3	6.3	5.0	4.6	3.6

Light Level Summary

Calculation Grid Summary

Grid Name	Calculation Metric	Illumination Ave						
		Ave	Min	Max	Max/Min	Ave/Min	Circuits	Fixture Qty
Soccer	Horizontal Illuminance	31.50	20.7	40.9	1.97	1.52	A	20
Soccer Spill @ 5ft.	Horizontal Illuminance	0.0581	0.001	0.327	405.824	72.132	A	20
Soccer Spill @ 5ft.	Max Candela Metric	2982.2229	200.916	12206.225	60.753	14.843	A	20
Soccer Spill @ 5ft.	Max Vertical Illuminance Metric	0.1071	0.002	0.438	213.424	52.230	A	20
Soccer Spill @ 5ft.	True Max Vert Illuminance Metric	0.0967	0.002	0.403	259.102	63.464	A	20

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

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ENGINEERED DESIGN By: D.Palmer • File #199230C • 22-Apr-25

PROJECT SUMMARY

Equipment List For Areas Shown

Structure QTY	Structure ID	SIZE	GRADE ELEVATION	ABOVE FIELD LEVEL	Fixtures FIXTURE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
1	S1	90'	-	90'	TLC-LED-1500	5	5	0
3	S2-S4	70'	-	70'	TLC-LED-1500	5	5	0
4	Totals					20	20	0

Above Field Level is height of fixtures above area shown

Pole location(s) ☐ dimensions are relative to (L,l) reference point(s) ☒

ENGINEERED DESIGN By: D.Palmer • File #199230C • 22-Apr-25

Lyman Gilmore Turf Field
Grass Valley,CA

Grid Summary

Name:	Soccer Spill @ 3ft.
Spacing:	10.0'
Height:	3.0' above grade

Illumination Summary

INITIAL HORIZONTAL FOOTCANDLES

	Entire Grid
Scan Average:	0.0581
Maximum:	0.327
Minimum:	0.001
CU:	0.00
No. of Points:	68
FIXTURE INFORMATION	
Applied Circuits:	A
No. of Fixtures:	20
Total Load:	28.20 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

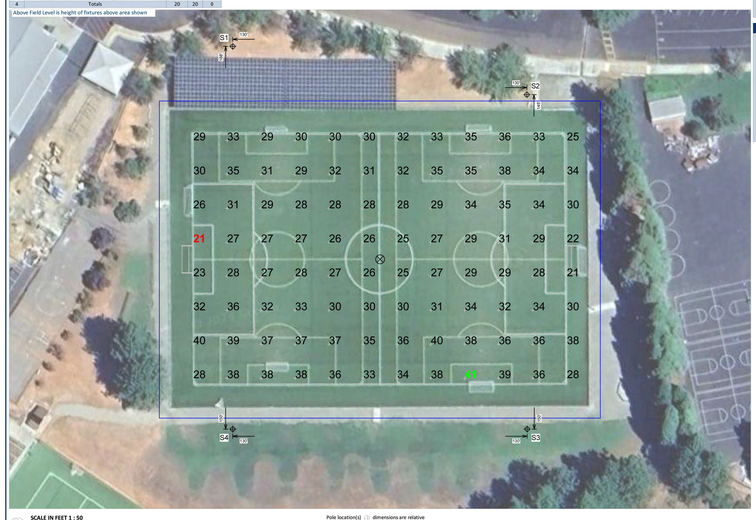
musco. We Make It Happen.

ILLUMINATION SUMMARY

Equipment List For Areas Shown

Structure QTY	Structure ID	SIZE	GRADE ELEVATION	ABOVE FIELD LEVEL	Fixtures FIXTURE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
1	S1	90'	-	90'	TLC-LED-1500	5	5	0
3	S2-S4	70'	-	70'	TLC-LED-1500	5	5	0
4	Totals					20	20	0

Above Field Level is height of fixtures above area shown



Pole location(s) ☐ dimensions are relative to (L,l) reference point(s) ☒

ENGINEERED DESIGN By: D.Palmer • File #199230C • 22-Apr-25

Lyman Gilmore Turf Field
Grass Valley,CA

Grid Summary

Name:	Soccer
Size:	130' x 220'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

Illumination Summary

MAINTAINED HORIZONTAL FOOTCANDLES

	Entire Grid
Guaranteed Average:	30
Scan Average:	31.50
Maximum:	40.9
Minimum:	20.7
Avg/Min:	1.52
Guaranteed Max/Min:	2.5
Max/Min:	1.97
UG (adjacent pts):	1.43
CU:	0.74
No. of Points:	96
FIXTURE INFORMATION	
Applied Circuits:	A
No. of Fixtures:	20
Total Load:	28.20 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

musco. We Make It Happen.

ILLUMINATION SUMMARY

REGISTERED PROFESSIONAL ENGINEER
RICHARD ROSCOE
No. E7339
Richard Roscoe
ELECTRICAL
STATE OF CALIFORNIA

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Checked by: GC/RR
Design by: GC/TB
Scale:

Sheet Title:
MUSCO SPORTS LIGHTING DETAILS

Sheet Number:
E4

SCALE IN FEET 1 : 80
0 80' 160'
ENGINEERED DESIGN By: D.Palmer • File #199230C • 22-Apr-25

Pole location(s) dimensions are relative to 0,0 reference point(s)

Lyman Gilmore Turf Field

Grass Valley,CA

Equipment Layout

INCLUDES:
- Soccer

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

Equipment List For Areas Shown

Structure				Fixtures	
QTY	STRUCTURE ID	SIZE	GLOBAL ELEVATION	ABOVE GLOBAL LEVEL	FIXTURE TYPE	QTY/POLE
1	S1	90'	-	90'	TLC-LED-1500	5
3	S2-S4	70'	-	70'	TLC-LED-1500	5
4			Totals			20

Above Global Level is height of fixtures above design (0,0,0)

Single Fixture Amperage Draw Chart

Driver Specifications (.90 min power factor)	Line Amperage Per Fixture (max draw)						
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
TLC-LED-1500	8.4	7.9	7.3	6.3	5.0	4.6	3.6

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EQUIPMENT LAYOUT

System Requirements: Control System Summary

Project Name: Lyman Gilmore Turf Field | Project #: 199230
Control System ID: 1 of 1
Distribution Panel Location/ID: Service 1

Project Information

Control System

Control System ID: 1 of 1
Control System Type: Control-Link ® Control and Monitoring System
Communication Type: PowerLine-ST

Power Requirements

Control cabinet(s):
Control voltage (phase to neutral): 120/60
VA loading - Inrush: 1553.0
VA loading - Sealed: 180.0
Lighting Circuits:
Voltage/Hertz/Phase: 208/60/3

Project Notes:

PRELIMINARY CONTROL SUMMARY
LED C&M
208V/3P, Powerline Comms

A dedicated 120V/60hz circuit is needed to control the lighting system. If needed, Musco can provide a step-down transormer to provide the control power.

Equipment Listing

Description	Qty	Size (in)
Control and monitoring cabinet - primary	1	24 X 48
Contactors, 30 amperes	4	-
Off/On/Auto switches	1	-

Important Notes:

1. Please confirm that the lighting circuit voltage listed above is accurate for this facility. This is the voltage/phase being connected and utilized at each lighting pole's electrical components enclosure disconnect. Inaccurate voltage/phase can result in additional costs and delays. Contact your Musco sales representative to confirm this item.
2. In a 3 phase design, all 3 phases are to be run to each pole location. Musco's single phase luminaires come pre-wired to utilize all 3 phases across the entire facility.
3. One contactor is required for each circuit at each pole location. Contactors are 3 pole and 100% rated for the published continuous load.
4. If the lighting system will be fed from more than one distribution location, additional equipment may be required. Contact your Musco sales representative.
5. Size overcurrent devices using the full load amps column of the Circuit Summary by Switch chart (Minimum power factor is 0.9). Size conduit per code unless otherwise specified as larger to allow for harness connectors.
6. Avoid use of in-ground junction/pull boxes when possible. If used, the following best practices must be followed:
   • Underground handholes (pull boxes) must be supported to prevent settling. Boxes buried directly in soil, without support, are not allowed.
   • Use polymer concrete lids marked with ELECTRIC for underground handholes. Steel lids are not allowed.
   • Avoid underground connections when possible. If used, all wire connectors must be UL listed for Wet Locations to prevent leakage current.
7. Control power wiring must be in separate conduit from line or load power wiring. Communication cables must be in separate conduit from any power wiring.
8. Test wire per ANSI/NETA ATS-2021. Wires with insulation resistance less than 100 MOhms, in water-filled conduit, must be replaced.

System Requirements: Control System Summary

Project Name: Lyman Gilmore Turf Field | Project #: 199230
Control System ID: 1 of 1
Distribution Panel Location/ID: Service 1

Circuit Summary

Switching Schedule	
Field/Switch Description	**Switches**
Soccer	1

Control Module ID: 1 **Lighting Circuit Voltage: 208/60/3**

Circuit Summary by Switch							
Switch	**Zone Description**	**Pole ID**	**Qty of Fixtures**	**Full load amperes**	**Contactor Size (Amps)**	**Cabinet #**	**Contactor ID**
1	Soccer	S1	5	28.99	30	SEE SHEET E1 PANEL SCHEDULE	C1
	Soccer	S2	5	28.99	30		C2
	Soccer	S3	5	28.99	30		C3
	Soccer	S4	5	28.99	30		C4

System Requirements: Control System Summary

Project Name: Lyman Gilmore Turf Field | Project #: 199230
Control System ID: 1 of 1
Distribution Panel Location/ID: Service 1

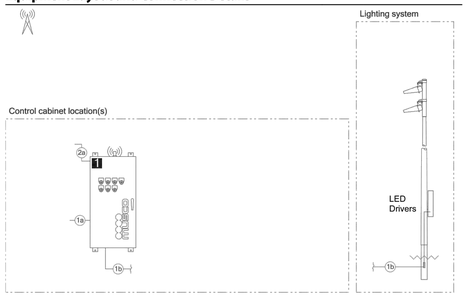
Important Notes:

9. Refer to Installation Instructions for more details on equipment information and the installation requirements.

System Requirements: Control System Summary

Project Name: Lyman Gilmore Turf Field | Project #: 199230
Control System ID: 1 of 1
Distribution Panel Location/ID: Service 1

Equipment Layout and Connection Details



Connection Details	
ID	**Description**
1a	Line power to contactors, and equipment grounding conductor. Requires one circuit per contactor, size wiring per load and voltage drop.
1b	Load power from contactors, and equipment grounding conductor. Requires one circuit per contactor, size wiring per load and voltage drop.
2a	Control power with equipment ground to control cabinet. Requires dedicated 20 A circuit. Provide transformer if control voltage not present.

Equipment	
ID	**Description**
1	Control and monitoring cabinet - primary

REGISTERED PROFESSIONAL ENGINEER
RICHARD ROSCOVIUS
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Exp. 12/31/2025
ELECTRICAL
STATE OF CALIFORNIA
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NEVADA COUNTY, CALIFORNIA

SPORTS COURT LIGHTING

No.	Date:	Description:
F	2025.09.09	DSA PC COMMENTS
E	2025.06.30	POWER STUDY RESULTS
D	2025.06.18	REVIEW & CONSTRUCTION
C	2025.05.13	REVIEW & CONSTRUCTION
B	2025.04.28	FOR CLIENT REVIEW
A	2025.04.25	FOR DESIGN REVIEW

Checked by: GC/RR
Design by: GC/TB
Scale:

Sheet Title:
MUSCO SPORTS LIGHTING DETAILS

Sheet Number:
E5