System Requirements: Control System Summary

Project Name: Triton High School Softball | Project #: 245815
Control System ID: 1 of 1
Distribution Panel Location/ID: Service 1

Circuit Summary

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

Control Module ID: 2

Lighting Circuit Voltage: 240/60/1

Circuit Summary by Switch							
Switch	**Zone Description**	**Pole ID**	**Qty of Fixtures**	**Full load amperes**	**Contactor Size (Amps)**	**Cabinet #**	**Contactor ID**
1	Field 1	A1	4	17.94	30	1	C1
	Field 1	A2	4	17.94	30	1	C2
	Field 1	B1	5	31.94	60	1	C3
	Field 1	B2	5	31.94	60	1	C4

Existing HID Fixtures Load:

Pole A1 - 21.6 Amps

Pole A2 - 21.6 Amps

Pole B1 - 36.0 Amps

Pole B2 - 36.0 Amps

New LED Fixtures Load:

Pole A1 - 17.94 Amps

Pole A2 - 17.94 Amps

Pole B1 - 31.94 Amps

Pole B2 - 31.94 Amps

Reduction in Load from HID to LED Fixtures:

Pole A1 - (3.66) Amps

Pole A2 - (3.66) Amps

Pole B1 - (4.06) Amps

Pole B2 - (4.06) Amps

Field Name	Pole I.D.	Laser Aiming Points		
		I.D.	X	Y
Field 1	A1	Pole	0	0
	A2	Pole	0	0
	B1	Pole	0	0
	B2	Pole	0	0

Wind Design Criteria: IBC STD 2015 120MPH Exposure C

Lighting Equipment

APPROXIMATE FOOTCANDLE LEVEL:	50/30	DESIGN ID:	245815B_Prod
MAX. TO MIN. RATIO NOT TO EXCEED:	2:1 / 2.5:1	DATED:	31/JUL/25
		ORDER NUMBER:	623586

POLE				LUMINAIRES				ELECTRICAL LOAD	
POLE QUANTITY	POLE LOCATION	ELEV.	POLE SIZE	MOUNTING HEIGHT	LUMINAIRE TYPE	LUMINAIRES PER POLE /UNIT	LUMINAIRES PER POLE TOTAL	KILOWATT CONSUMPTION /UNIT	KILOWATT CONSUMPTION TOTAL
1	A1	0'	60AA	60.0'	TLC-LED-1200	1	1	1.17	1.17
				60.0'	TLC-LED-900	2	2	1.76	1.76
				15.5'	TLC-BT-575	1	1	0.58	0.58
1	A2	0'	60AA	60.0'	TLC-LED-1200	1	1	1.17	1.17
				60.0'	TLC-LED-900	2	2	1.76	1.76
				15.5'	TLC-BT-575	1	1	0.58	0.58
1	B1	0'	70B	70.0'	TLC-LED-1500	4	4	5.64	5.64
				15.5'	TLC-BT-575	1	1	0.58	0.58
1	B2	0'	70B	70.0'	TLC-LED-1500	4	4	5.64	5.64
				15.5'	TLC-BT-575	1	1	0.58	0.58
4	← TOTALS →					18		19.44	

Overcurrent devices and conductors MUST be sized using the Manufacturer's rated amperage draw per luminaire (kVA). Using the kW rating can result in undersized calculations. Refer to Musco's Control System Summary or Specification Chart (located below) for manufacturer's amperage draw.

DRIVER SPECIFICATIONS	VOLTAGE: 240v SINGLE PHASE									
TLC-LED-575 MAX WATT (Also applicable to each single phase of a 3 phase system)	208	220	230	240	277	347	380	400	415	480
Per LED Luminaire	3.35	3.16	3.03	2.90	2.51	2.01	1.83	1.74	1.68	1.45

DRIVER SPECIFICATIONS	VOLTAGE: 240v SINGLE PHASE									
TLC-LED-1200 MAX WATT (Also applicable to each single phase of a 3 phase system)	208	220	230	240	277	347	380	400	415	480
Per LED Luminaire	6.98	6.60	6.31	6.05	5.24	4.18	3.82	3.63	3.50	3.03

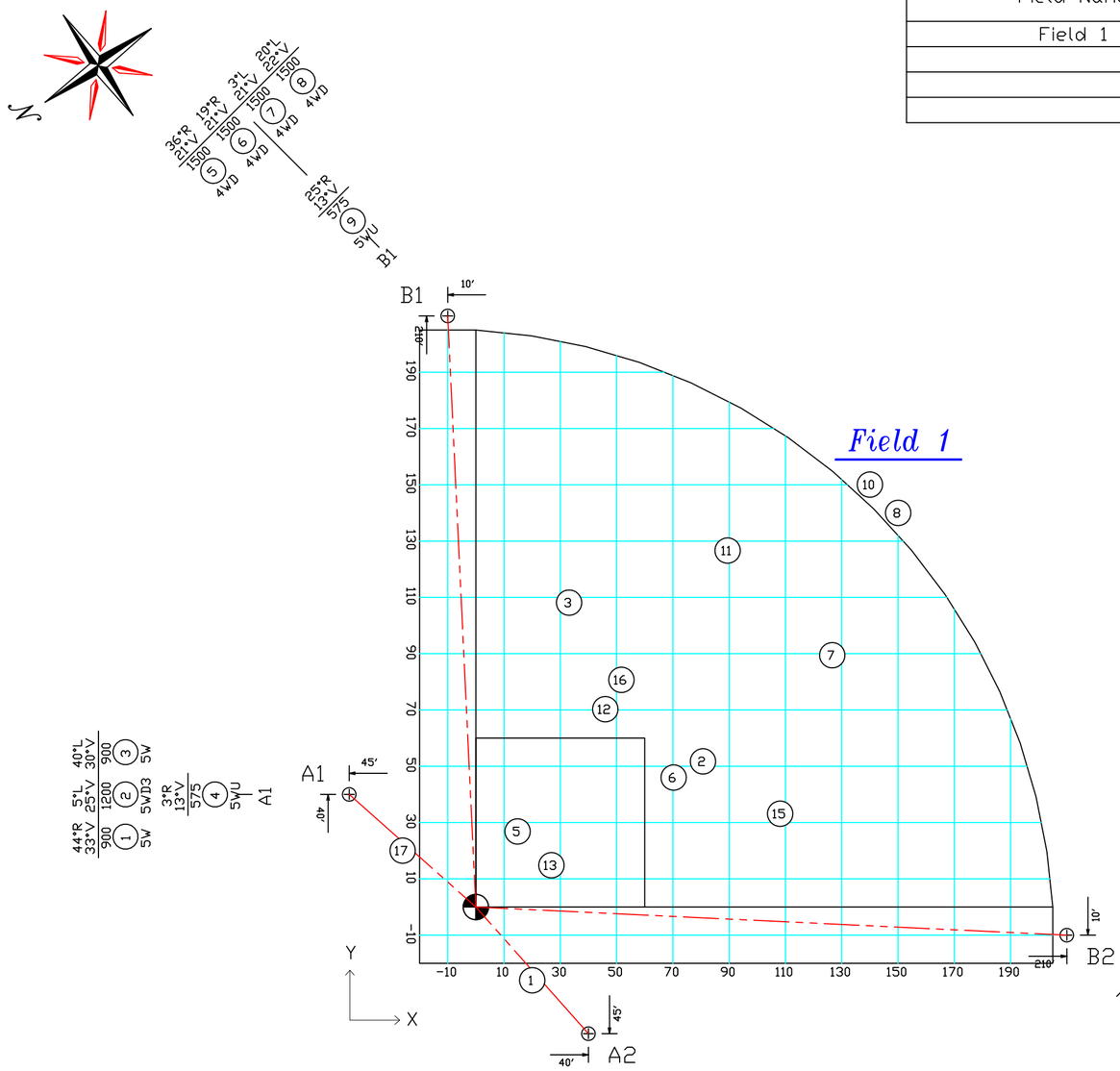
DRIVER SPECIFICATIONS	VOLTAGE: 240v SINGLE PHASE									
TLC-LED-1500 MAX WATT (Also applicable to each single phase of a 3 phase system)	208	220	230	240	277	347	380	400	415	480
Per LED Luminaire	8.37	7.92	7.57	7.26	6.29	5.02	4.59	4.36	4.20	3.63

DRIVER SPECIFICATIONS	VOLTAGE: 240v SINGLE PHASE									
TLC-LED-900 MAX WATT (Also applicable to each single phase of a 3 phase system)	208	220	230	240	277	347	380	400	415	480
Per LED Luminaire	5.29	5.00	4.78	4.58	3.97	3.17	2.90	2.75	2.65	2.29

If you have questions pertaining to this document, please contact JOE NICHOLSON, your project engineer.
Phone: 800-825-6025 ext: 2973#
DATE: 10/14/25

This symbol represents the 0,0 point for locating poles.

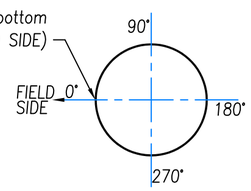
The following poles ECE's will have spare fuses: A1



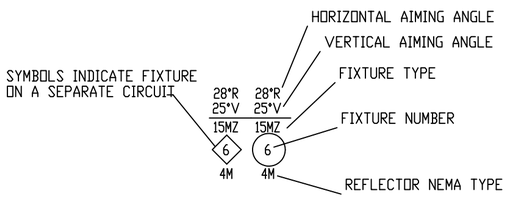
0 40' 80'

SCALE: 1 inch = 40'

Align weld marks located at bottom of pole sections @ 0°(FIELD SIDE)



AIMING LEGEND



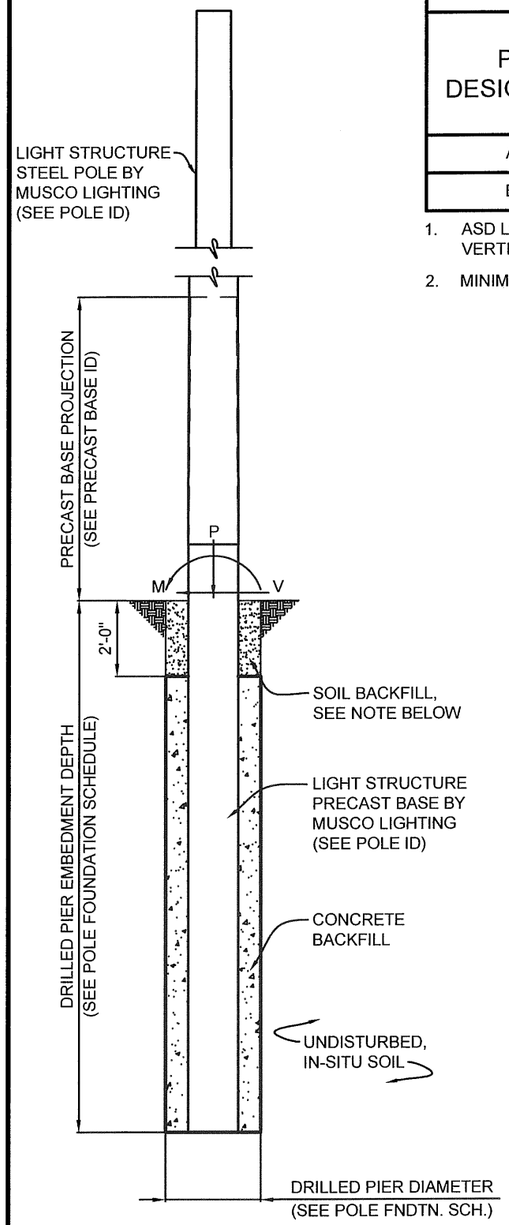
Triton HS SB
Erwin, NC
Field Aiming Diagram

CORPORATE OFFICE:
P.O. Box 808
211 2nd Avenue West
Oskaloosa, Iowa 52577
800/825-6020
Musco Lighting

REVISIONS:

DATE:	BY:	R.L.

JOB NUMBER: 245815
DRAWN BY: J.Nicholson
PROJECT ENGINEER: J.Nicholson
REPRESENTATIVE: B. Marolf
SCALE: 1 = 40
DATE: 10/14/25
DRAWING NUMBER: 245815A1
1 OF 1 SHEETS



POLE FOUNDATION ELEV.

SCALE: NOT TO SCALE

SOIL BACKFILL NOTE:
THE TOP TWO FEET OF ANNULUS SHALL BE BACKFILLED WITH SOIL, WITH A CLASSIFICATION OF CLASS 5 (TABLE 1806.2) OR BETTER. COMPACTION, 95% FOR COHESIVE SOIL AND 98% FOR A COHESIONLESS SOIL BASED UPON STANDARD PROCTOR TESTING (ASTM D698).

POLE FOUNDATION SCHEDULE

POLE DESIGNATION	FORCES (1.)			DRILLED PIER		
	MOMENT (M) FT-LBS	SHEAR (V) LBS	VERTICAL (P) LBS	DIAMETER INCHES	EMBEDMENT DEPTH	CONCRETE BACKFILL YD^3 (2.)
A1, A2	34,253	944	981	30	10'-0"	1.3
B1, B2	60,016	1,338	1,658	30	12'-0"	1.5

1. ASD LOAD COMBINATION D + 0.6W.
   VERTICAL FORCE IS WEIGHT OF DRESSED POLE (DOES NOT INCLUDE PRECAST BASE WEIGHT).
2. MINIMUM CONCRETE BACKFILL VOLUME, SITE CONDITIONS MAY REQUIRE ADDITIONAL BACKFILL.

PRECAST BASE IDENTIFICATION

PRECAST BASE TYPE	PRECAST BASE WEIGHT	PRECAST BASE LENGTH	PROJECTION ABOVE GRADE	STANDARD EMBEDMENT	OUTSIDE DIAMETER
2B	1,690 LBS	17'-3"	7'-3"	10'-0"	12.00"
3B	2,470 LBS	20'-0"	8'-0"	12'-0"	13.38"

POLE IDENTIFICATION

POLE DESIGNATION	POLE TYPE	PRECAST BASE TYPE	FIXTURE CONFIGURATION (FIX. PER XARM)	FIXTURE AND ACCESSORIES EPA (FT^2)
A1, A2	LSS60AA	2B	4 (3)	9.9
B1, B2	LSS70B	3B	5 (4)	13.5

- EACH POLE HAS (1) MUSCO LED FIXTURE AT 15'-6" AGL INCLUDED ABOVE.

DESIGN NOTES

DESIGN PARAMETERS:
WIND V_{ult} = 120 MPH, V_{asd} = 93 MPH (EXPOSURE C, RISK CATEGORY II) PER NORTH CAROLINA BUILDING CODE, 2018 EDITION (IBC 2015 / ASCE 7-10).
DESIGN WIND PARAMETERS ARE AS NOTED, ACTUAL EXPOSURE MUST BE VERIFIED FOR THE SITE BY THE PROPER GOVERNING OFFICIAL.

GEOTECHNICAL PARAMETERS:
ALLOWABLE END BEARING SOIL PRESSURE: 1,500 PSF OR SKIN FRICTION: 250 PSF
ALLOWABLE LATERAL SOIL BEARING PRESSURE: 200 PSF/FT (NEGLECT TO -2'-0")
IN ACCORDANCE WITH THE 2018 EDITION OF THE NORTH CAROLINA BUILDING CODE, CHAPTER 18. SEE TABLE 1806.2, SOIL MATERIAL CLASS 5 & SECTION 1806.3.4.

DESIGN SOIL PARAMETERS ARE AS NOTED. ACTUAL ALLOWABLE SOIL PARAMETERS MUST BE VERIFIED ON SITE.

A GEOTECHNICAL ENGINEER OR REPRESENTATIVE OF IS RECOMMENDED (NOT REQUIRED) TO 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.

ENCOUNTERING SOIL FORMATIONS THAT WILL REQUIRE SPECIAL DESIGN CONSIDERATIONS OR EXCAVATION PROCEDURES MAY OCCUR. POLE FOUNDATIONS WILL NEED TO BE ANALYZED ACCORDING TO THE SOIL CONDITIONS THAT EXIST. IF ANY DISCREPANCIES OR INCONSISTENCIES ARISE, NOTIFY THE ENGINEER OF SUCH DISCREPANCIES. FOUNDATIONS WILL THEN BE REVISED ACCORDINGLY. REVISIONS WILL BE ANALYZED PER RECOMMENDATIONS DIRECTED BY A REGISTERED ENGINEER.

ALL EXCAVATIONS MUST BE FREE OF LOOSE SOIL AND DEBRIS PRIOR TO FOUNDATION INSTALLATION AND CONCRETE BACKFILL PLACEMENT. TEMPORARY CASINGS OR DRILLERS SLURRY MAY BE USED TO STABILIZE THE EXCAVATION DURING INSTALLATION. CASINGS MUST BE REMOVED DURING CONCRETE BACKFILL PLACEMENT. CONCRETE BACKFILL MUST BE PLACED WITH A TREMIE WHEN SLURRY OR WATER IS PRESENT WITHIN THE EXCAVATION.

CONTRACTOR MUST BE FAMILIAR WITH THE COMPLETE SOIL INVESTIGATION REPORT AND BORINGS, AND CONTACT THE GEOTECHNICAL FIRM (IF NECESSARY) TO UNDERSTAND THE SOIL CONDITIONS AND THE POSSIBILITY OF GROUND WATER PUMPING AND EXCAVATION STABILIZATION OR BRACING DURING PRECAST BASE INSTALLATION AND PLACEMENT OF CONCRETE BACKFILL.

CONCRETE:
CONCRETE SHALL BE AIR-ENTRAINED AND HAVE A MINIMUM COMPRESSIVE DESIGN STRENGTH AT 28 DAYS OF 3,000 PSI. 3,000 PSI CONCRETE SPECIFIED FOR EARLY POLE ERECTION, ACTUAL REQUIRED MINIMUM ALLOWABLE CONCRETE STRENGTH IS 1,000 PSI. ALL PIERS AND CONCRETE BACKFILL MUST BEAR ON AND AGAINST FIRM UNDISTURBED SOIL.

GENERAL NOTES:
FIXTURES MUST BE LOCATED TO MAINTAIN 10'-0" MINIMUM HORIZONTAL CLEARANCE FROM ANY OBSTRUCTION. ENGINEER MUST BE NOTIFIED IF FOUNDATIONS ARE NEAR ANY RETAINING WALLS OR WITHIN / NEAR ANY SLOPES STEEPER THAN 3H : 1V. POLES, FIXTURES, PRECAST BASES, ELECTRICAL ITEMS AND INSTALLATION PER MUSCO LIGHTING.

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF NORTH CAROLINA.

KYLE G. LACINA - NO. 039346
LICENSE RENEWAL DATE: DECEMBER 31, 2025

IOWA SE, PC - NO. C-2836

DRAWING NO. COVERED BY THIS SEAL: C1

TRITON HS
SOFTBALL
FIELD LIGHTING
ERWIN, NC

musco Lighting
CORPORATE: 100 1st AVE WEST
OSKALOOSA, IA 52577
(800) 825-6020

STRUCTURAL ENGINEERS, P.C.
114 NICHOLAS DRIVE
MARSHALLTOWN, IOWA 50158
PHONE NUMBER: 641-752-6334
EMAIL: MSL.INFO@SEPC.BIZ

DRAWING TITLE: POLE AND FOUNDATION
SCALE: SEE PLAN
NOTES: SCAN #245815B

PROJECT NUMBER
245815

DATE
11 AUGUST 2025

DRAWING NUMBER
C1
OF ONE