

POLE IDENTIFICATION				
POLE DESIGNATION	POLE TYPE	PRECAST BASE TYPE	FIXTURE CONFIGURATION (FIX. PER XARM)	FIXTURE AND ACCESSORIES EPA (FT ²)
A3, A4	LSS60AA	2B	3 (3)	7.5
A5, A6	LSS60AA	2B	3 (3)	7.8
B3, B4, B6	LSS70B	3B	7 (4+3)	17.5
B5	LSS70B	3B	7 (4+3)	18.2
C3, C4	LSS60A	2B	5 (5)	12.5
C5	LSS70B	3B	5 (5)	14.0
C6	LSS70A	3B	4 (4)	11.2
S1	LSS70B	3B	7 (4+3)	16.1

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"	13.37"

PRECAST BASE WEIGHT, LENGTH AND STANDARD EMBEDMENT ARE PRECUT PROPERTIES

CONCRETE/REINFORCEMENT NOTES

CONCRETE SHALL COMPLY WITH THE FOLLOWING ASTM STANDARDS: MIXTURE WITH ASTM C-94, PORTLAND CEMENT WITH ASTM C-150 TYPE 1-A, AGGREGATES WITH ASTM C-33 AND BE IN CONFORMANCE WITH ACI 318. CONCRETE SHALL BE AIR-ENTRAINED (COMPLY WITH ASTM C-260), HAVE A MAXIMUM WATER -CEMENT RATIO, w/cm = 0.43 AND HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 4,000 PSI (SPREAD FOOTINGS) AND 3,000 PSI (DRILLED PIERS).

DESIGN SLUMP LIMITS ARE 4" MINIMUM AND 6" MAXIMUM. THE JOB SITE SLUMP MAY BE INCREASED BY THE USE OF A WATER REDUCING AGENT MEETING ASTM C494-92.

CONCRETE REINFORCEMENT SHALL COMPLY WITH ASTM A615 GRADE 60, EXCEPT TIES CAN BE OF GRADE 40 AND BE IN CONFORMANCE WITH ACI 315 & 318.

CONCRETE FOR SPREAD FOOTINGS MUST ATTAIN 3,000 PSI STRENGTH PRIOR TO POLE INSTALLATION AND FIXTURE MOUNTING

DESIGN NOTES

DESIGN PARAMETERS:
WIND: 90 MPH (EXP. C, I = 1.0) PER IBC CODE, 2009 EDITION (ASCE 7-05).
DESIGN WIND PARAMETERS ARE NOTED. ACTUAL WIND SPEED AND EXPOSURE MUST BE VERIFIED FOR THE SITE BY THE PROPER GOVERNING OFFICIAL.

GEOTECHNICAL PARAMETERS:
ALLOWABLE END BEARING SOIL PRESSURE: 1,200 PSF (SPREAD FOOTING)
ALLOWABLE END BEARING SOIL PRESSURE: 1,500 PSF (DRILLED PIER)
ALLOWABLE LATERAL SOIL BEARING PRESSURE: 0 PSF/FT (GRADE TO -2'-0")
ALLOWABLE LATERAL SOIL BEARING PRESSURE: 150 PSF/FT (BELOW -2'-0")
IN ACCORDANCE WITH THE 2009 EDITION OF THE INTERNATIONAL BUILDING CODE, CHAPTER 18.

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 OR WHEN THE FREE DROP EXCEEDS 6'-0".

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.

GENERAL NOTES:
FIXTURES MUST BE LOCATED TO MAINTAIN 10'-0" MINIMUM HORIZONTAL CLEARANCE FROM ANY OBSTRUCTION. POLES, FIXTURES, PRECAST BASES, ELECTRICAL ITEMS AND INSTALLATION PER MUSCO LIGHTING.

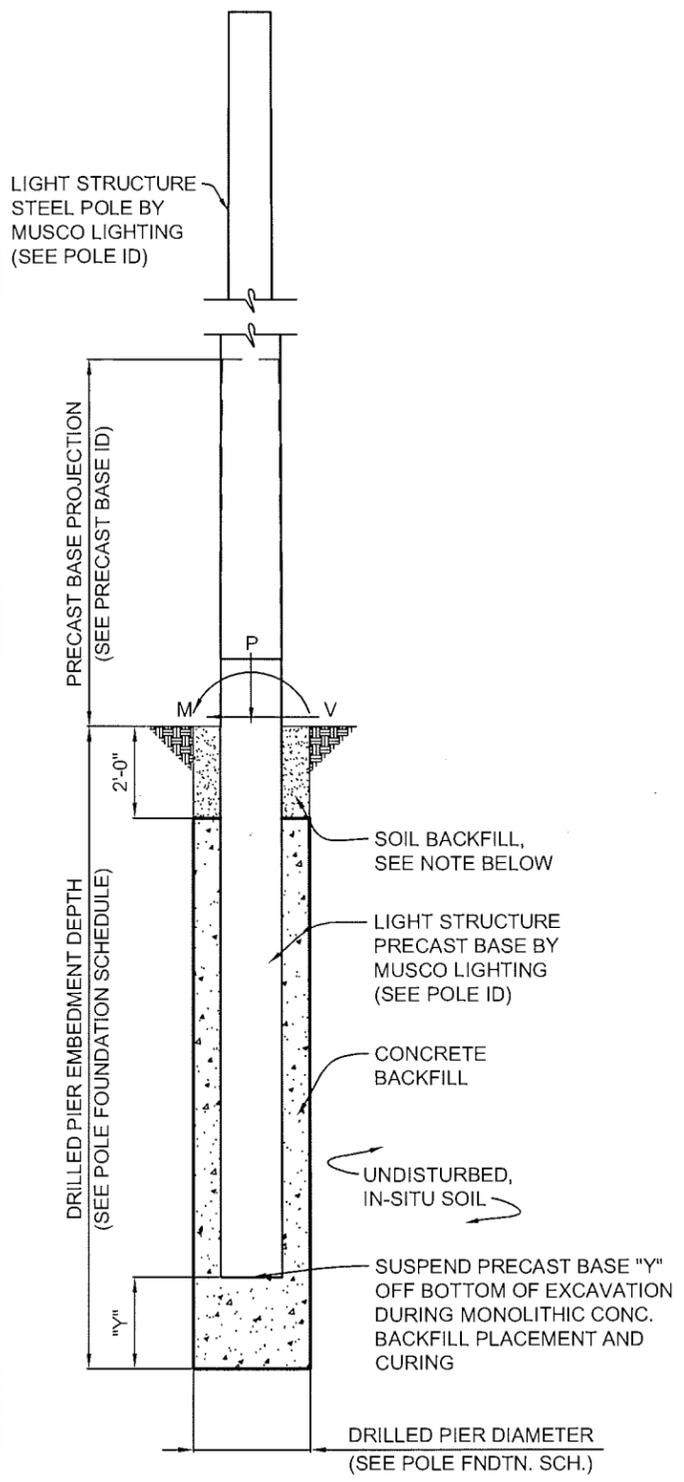


**RAMBLEWOOD PARK
BASEBALL AND SOCCER
PHASE 2 - FIELDS LIGHTING
HARRISONBURG, VIRGINIA**



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 #157918A FIELDS 2 & 3
PROJECT NUMBER	157918	
DATE	20 MAY 2013	
DRAWING NUMBER	C6	
OF FIVE		



POLES A5, A6, B5, C4 & C5 FOUNDATION ELEVATION

SCALE: NOT TO SCALE

SOIL BACKFILL NOTE:
 THE TOP TWO FEET OF ANNULUS MAY BE BACKFILLED WITH SOIL, WITH A CLASSIFICATION OF CLASS 5 OR BETTER IN ACCORDANCE WITH IBC - TABLE 1806.2.

POLES A5, A6, B5, C4, & C5 FOUNDATION SCHEDULE							
POLE DESIGNATION	FORCES			DRILLED PIER			
	MOMENT (M) FT-LBS	SHEAR (V) LBS	VERTICAL (P) LBS (1.)	DIAMETER INCHES	EMBEDMENT DEPTH	SUSPENSION "Y" (2.)	CONCRETE BACKFILL YD ³ (3.)
A5, A6	33,475	870	931	48	11'-0"	1'-0"	4.0
B5	69,269	1,360	1,854	48	13'-0"	1'-0"	4.8
C4	41,257	992	1,269	48	14'-0"	4'-0"	5.4
C5	60,268	1,250	1,674	48	16'-0"	4'-0"	6.2

1. WEIGHT OF POLE, FIXTURES AND ACCESSORIES.
2. SUSPEND PRECAST BASE "Y" OFF THE BOTTOM OF THE EXCAVATION DURING MONOLITHIC CONCRETE BACKFILL PLACEMENT AND CURING.
3. MINIMUM CONCRETE BACKFILL VOLUME, SITE CONDITIONS MAY REQUIRE ADDITIONAL BACKFILL.

**RAMBLEWOOD PARK
 BASEBALL AND SOCCER
 PHASE 2 - FIELD LIGHTING
 HARRISONBURG, VIRGINIA**



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 SCALE: SEE PLAN
 NOTES:
 SCAN #157918A
 FIELDS 2 & 3

PROJECT NUMBER
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DATE
 20 MAY 2013

DRAWING NUMBER
C7
 OF FIVE



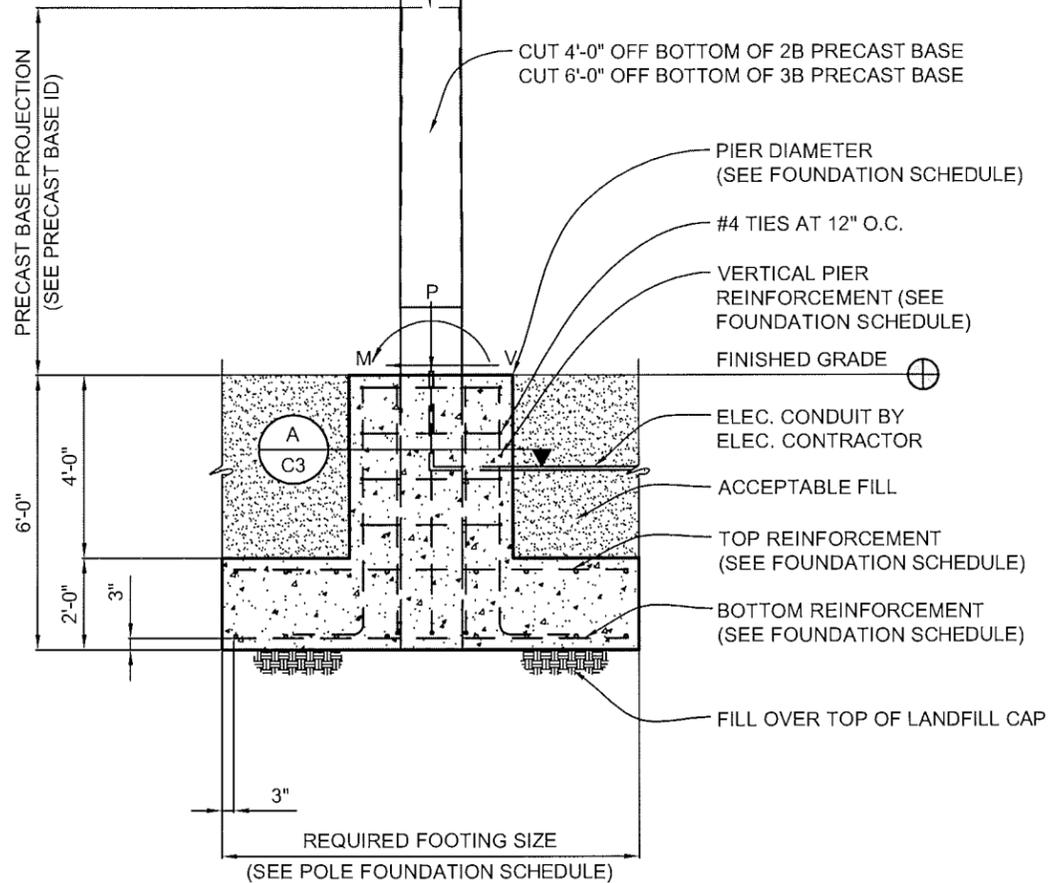
POLES A4, B4, B6 & C3 FOUNDATION SCHEDULE

POLE DESIGNATION	FORCES			FOOTING			PIER		
	MOMENT (M) FT-LBS	SHEAR (V) LBS	VERTICAL (P) LBS (1.)	SIZE	THICKNESS	REINFORCEMENT TOP & BOTTOM (TOTAL) QUANTITY - SIZE	DIAMETER INCHES	CORE DIA. INCHES (2.)	VERTICAL REINFORCING
A4	33,043	863	931	9'-0" x 9'-0"	2'-0"	(32) 8 - #7's EACH WAY	36	29	12 - #7's
B4, B6	67,952	1,360	1,854	10'-6" x 10'-6"	2'-0"	(40) 10 - #7's EACH WAY	36	29	12 - #7's
C3	41,257	992	1,269	9'-0" x 9'-0"	2'-0"	(32) 8 - #7's EACH WAY	36	29	12 - #7's

1. WEIGHT OF POLE, FIXTURES AND ACCESSORIES.
2. CORE DIAMETER EQUAL TO INSIDE DIAMETER OF TIES.

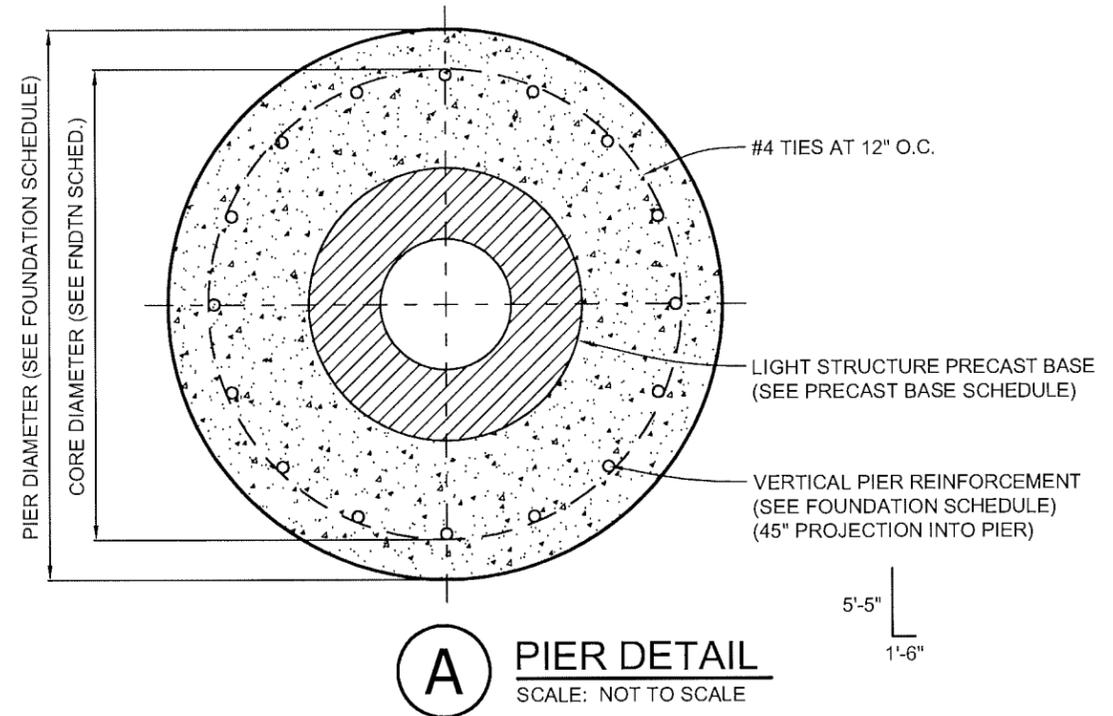
LIGHT STRUCTURE STEEL POLE BY MUSCO LIGHTING (SEE POLE ID)

LIGHT STRUCTURE PRECAST BASE TO BE CUT BY MUSCO OR IN THE FIELD. CONTRACTOR TO VERIFY CUT IN DIRECT COORDINATION WITH MUSCO LIGHTING. NEW BOTTOM SURFACE SHOULD BE EPOXY COATED. PRECAST BASE HAS A MINIMUM EMBEDMENT INTO PIER / SPREAD FTG OF 6'-0".



POLES A4, B4, B6 & C3 FOUNDATION ELEVATION

SCALE: NOT TO SCALE



RAMBLEWOOD PARK
BASEBALL AND SOCCER
PHASE 2 - FIELD LIGHTING
HARRISONBURG, VIRGINIA

MUSCO Lighting
CORPORATE: 100 1st AVE WEST
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DRAWING TITLE: POLE AND FOUNDATION
SCALE: SEE PLAN
NOTES: SCAN #157918A
FIELDS 2 & 3

PROJECT NUMBER
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DATE
20 MAY 2013

DRAWING NUMBER
C8

OF FIVE



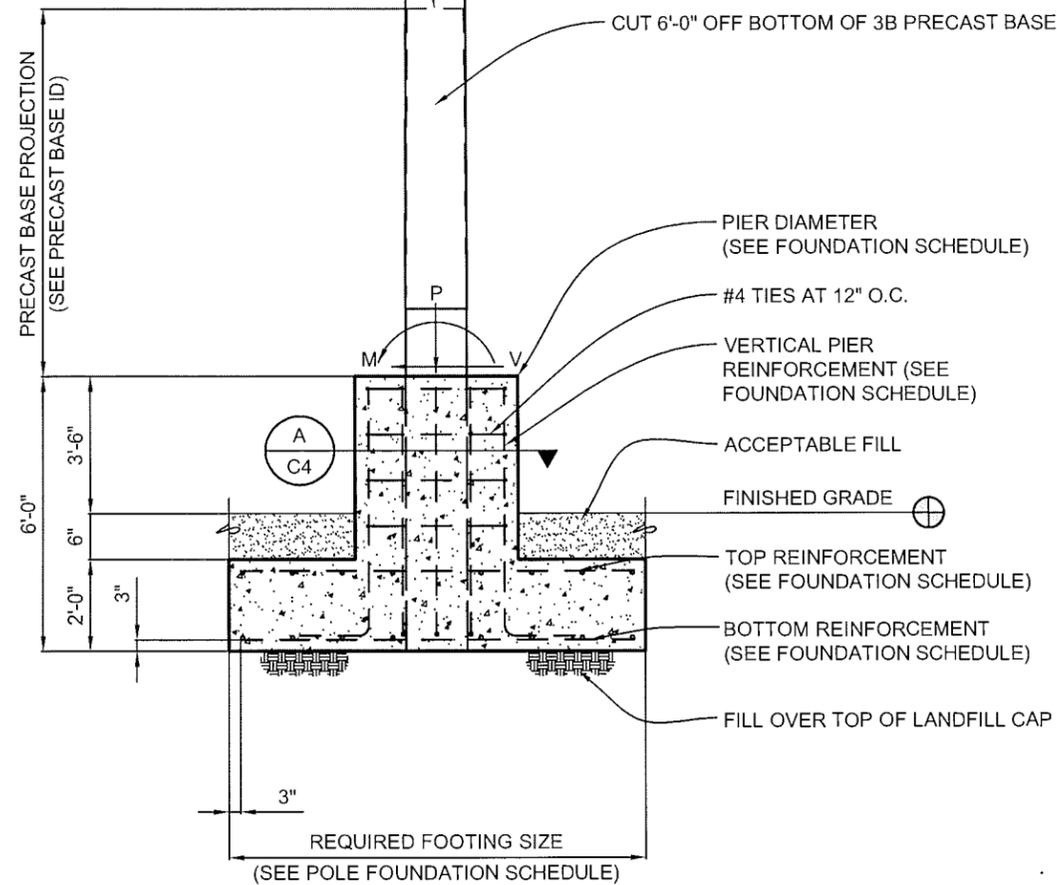
POLE C6 FOUNDATION SCHEDULE

POLE DESIGNATION	FORCES			FOOTING			PIER		
	MOMENT (M) FT-LBS	SHEAR (V) LBS	VERTICAL (P) LBS (1.)	SIZE	THICKNESS	REINFORCEMENT TOP & BOTTOM (TOTAL) QUANTITY - SIZE	DIAMETER INCHES	CORE DIA. INCHES (2.)	VERTICAL REINFORCING
C6	52,316	1,146	1,431	11'-6" x 11'-6"	2'-0"	(40) 10 - #7's EACH WAY	36	29	12 - #7's

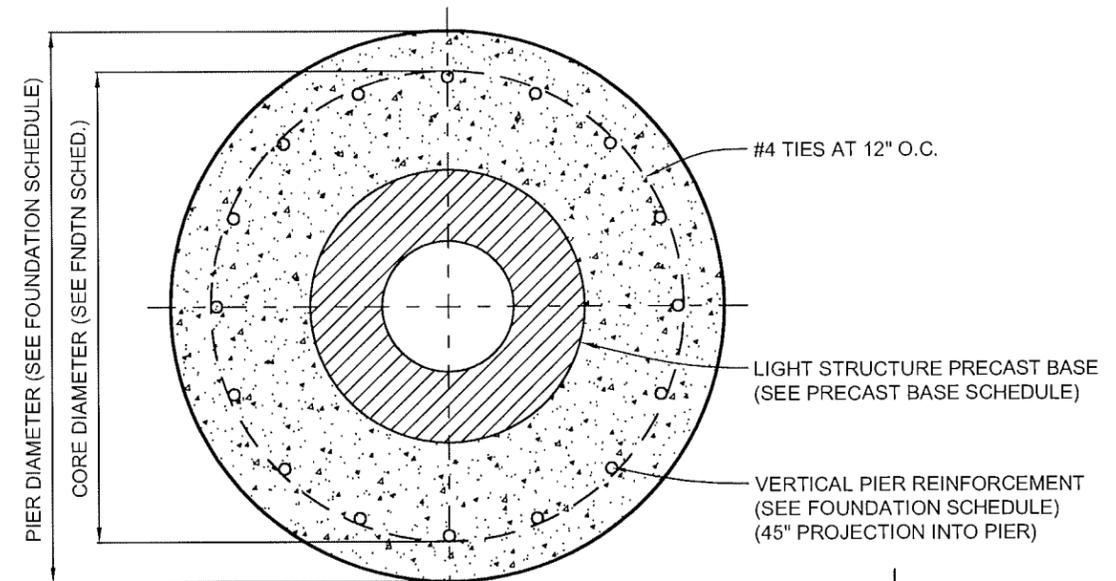
1. WEIGHT OF POLE, FIXTURES AND ACCESSORIES.
2. CORE DIAMETER EQUAL TO INSIDE DIAMETER OF TIES.

LIGHT STRUCTURE STEEL POLE BY MUSCO LIGHTING (SEE POLE ID)

LIGHT STRUCTURE PRECAST BASE TO BE CUT BY MUSCO OR IN THE FIELD. CONTRACTOR TO VERIFY CUT IN DIRECT COORDINATION WITH MUSCO LIGHTING. NEW BOTTOM SURFACE SHOULD BE EPOXY COATED. PRECAST BASE HAS A MINIMUM EMBEDMENT INTO PIER / SPREAD FTG OF 6'-0".



**POLE C6
FOUNDATION ELEVATION**
SCALE: NOT TO SCALE



A PIER DETAIL
SCALE: NOT TO SCALE

**RAMBLEWOOD PARK
BASEBALL AND SOCCER
PHASE 2 - FIELD LIGHTING
HARRISONBURG, VIRGINIA**

MUSCO Lighting
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 OSKALOOSA, IA 52577
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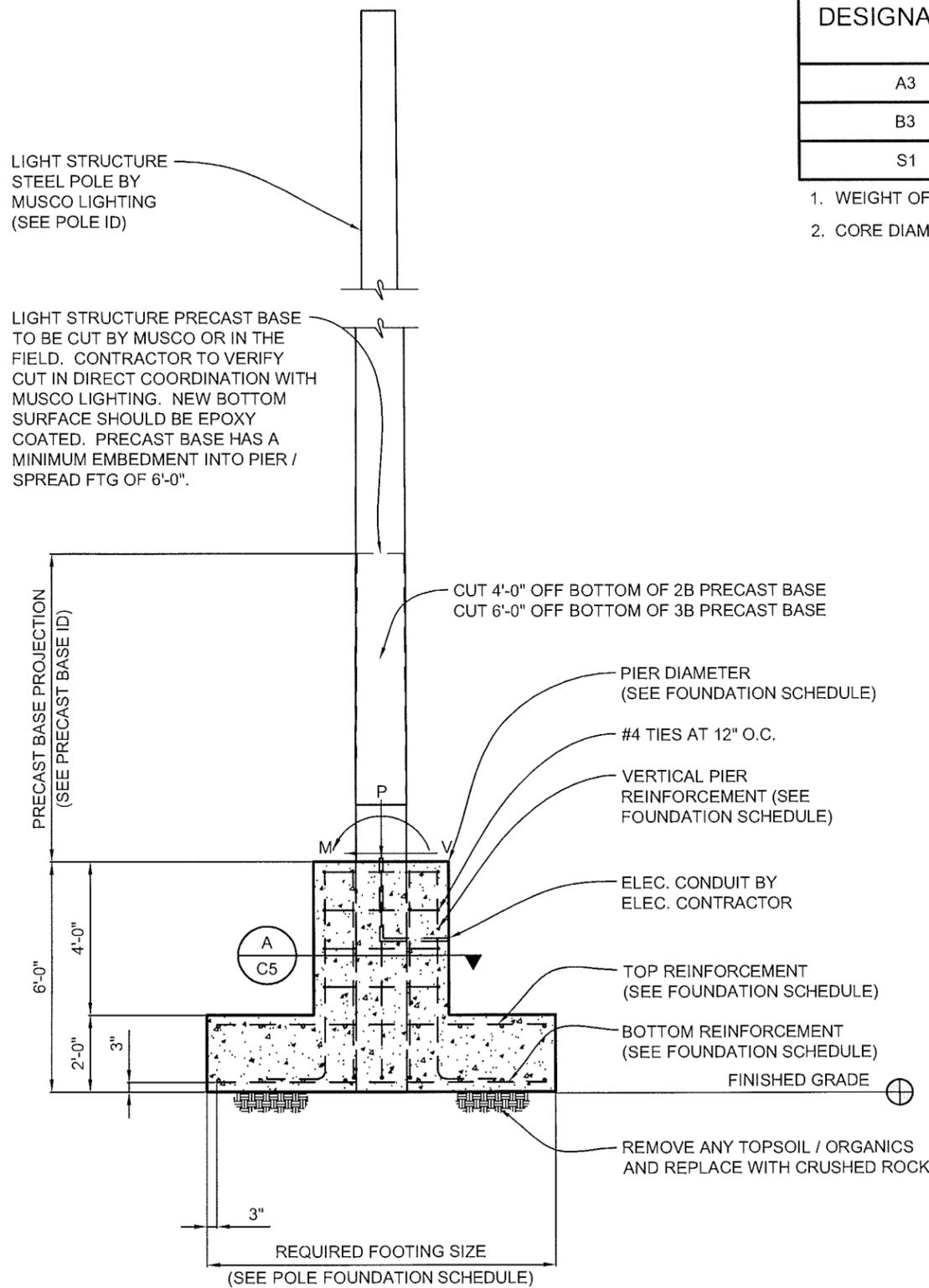
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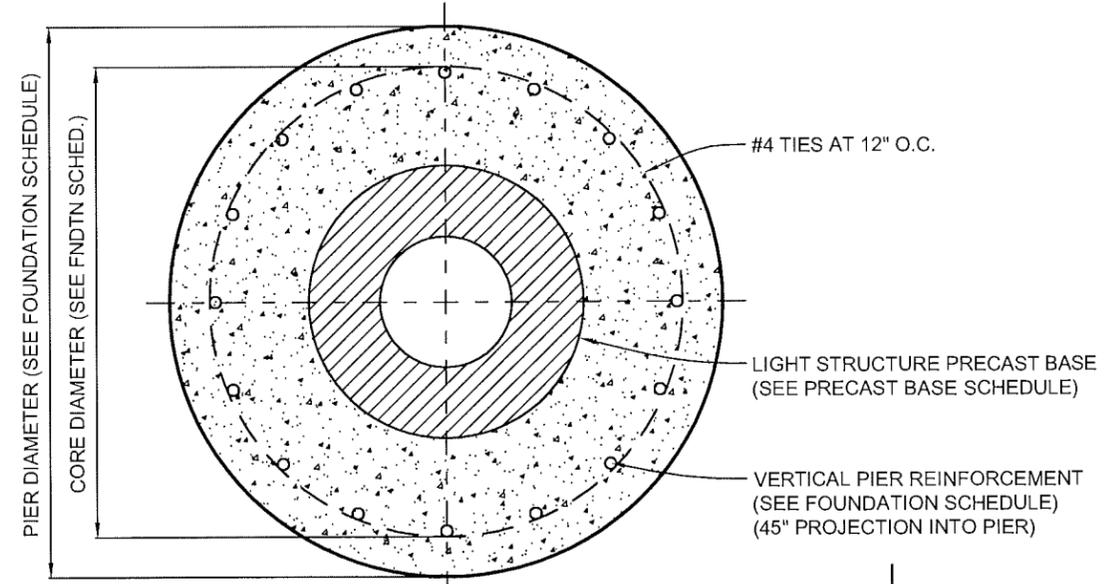




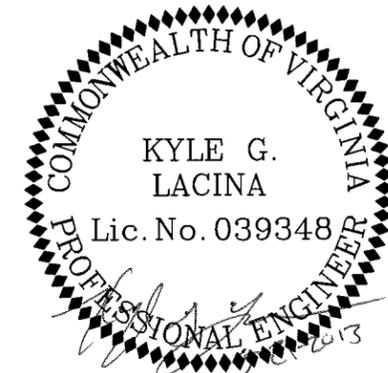
**POLES A3, B3 & S1
FOUNDATION ELEVATION**
SCALE: NOT TO SCALE

POLES A3, B3 & S1 FOUNDATION SCHEDULE									
POLE DESIGNATION	FORCES			FOOTING			PIER		
	MOMENT (M) FT-LBS	SHEAR (V) LBS	VERTICAL (P) LBS (1.)	SIZE	THICKNESS	REINFORCEMENT TOP & BOTTOM (TOTAL) QUANTITY - SIZE	DIAMETER INCHES	CORE DIA. INCHES (2.)	VERTICAL REINFORCING
A3	33,043	863	931	11'-0" x 11'-0"	2'-0"	(48) 12 - #7's EACH WAY	36	29	12 - #7's
B3	67,952	1,360	1,854	12'-6" x 12'-6"	2'-0"	(48) 12 - #7's EACH WAY	36	29	12 - #7's
S1	65,317	1,325	1,854	12'-6" x 12'-6"	2'-0"	(48) 12 - #7's EACH WAY	36	29	12 - #7's

1. WEIGHT OF POLE, FIXTURES AND ACCESSORIES.
2. CORE DIAMETER EQUAL TO INSIDE DIAMETER OF TIES.



A PIER DETAIL
SCALE: NOT TO SCALE



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DRAWING TITLE: POLE AND FOUNDATION	PROJECT NUMBER 157918
SCALE: SEE PLAN	DATE 20 MAY 2013
NOTES: SCAN #157918A FIELDS 2 & 3	DRAWING NUMBER C10
OF FIVE	