

GUNN & ASSOCIATES, P.C.
3102 Highway 14
Millbrook, AL 36104
PH (334) 285-1273 FAX (334)285-1274

ADDENDUM #1 **Dated: October 28, 2019**

**PROJECT: Lighting System for Baseball Field 2 at Orange Beach Sports Complex
Orange Beach, Alabama
GA#19-212
Bid Date: October 31, 2019 at 10:00AM**

TO: All Prospective Bidders

The following changes and/or additions to plans and specifications are hereby made a part of same and are incorporated in full as part of the original Contract Documents dated September 27, 2019. Bidders shall acknowledge on the Proposal Form the receipt of this addendum.

PART 1 – GENERAL

1. Orange Beach is not a guaranteed overnight delivery. Contractor is responsible for getting the bids to the bid opening on time. Please allow enough time to get to the Bid Opening on time.
2. Contractors shall provide on their bid envelope the Job name, Contractor's name, and Alabama's General Contractor's Number.
3. Contractor is responsible for all permits. Permit Fees will not be charged by the City of Orange Beach, but they are required. Coordinate with City Inspectors for all required inspections.
4. Contractor is responsible for providing all material not being provided by Musco. Please see attached Musco Bill of Material.
5. Final lighting readings will be done at night in the presence of Gunn & Associates representative, Musco, and the owner.
6. This is **NOT** a tax-exempt project. Include all sales taxes in your bid.
7. Contractor is responsible for removing and disposing of all light fixtures and other material shown to be removed.
8. Contractor is responsible for hauling off and disposing of all dirt and debris from installing new poles.
9. Contractor will be responsible for providing a safe work site at all times. Do not leave any uncovered holes.
10. Contractor will be responsible for securing water meter and paying for the water usage.
11. See attached foundation designs.

Attachments:
Musco Bill of Materials
Pole Foundation Design

End of Addendum #1



Express Engineering
FL CA# 26911

Express Engineering, LLC
155 Cranes Roost Blvd Ste2050
Altamonte Springs, FL 32701
Ph. 321.251.6305

ExE Job 1910-3

Calcs By Joe S

Ch'd By _____

Sheet _____ of _____

Date: 10/8/2019

Date: _____

www.expresseng.com

Client Baldwin Lighting/ Musco Lighting

Client Job _____

Job Name: Orange Beach Baseball Lighting

Location Orange Beach, AL

Design foundation to resist ground line moment and shear per client calculations
See Sheet 2 for pole information and ground line reactions

Check bearing under pole: Pole base area = $\pi d^2/4 = \pi(30.4/12)^2/4 = 5\text{sq ft}$

pole weight = 20.7k so $P/A = 20.7/5 = 4100\text{psf}$

Poles not sensitive to settlement, base is 20ft below grade is so bearing OK

Design foundation per IBC method, see calculations Sheet 3

1) This soil type is based on a review of a soils report by GeoCon Eng & Testing of Fairhope, AL, titled Report of Geotechnical Exploration, Soil boring for Light Poles Orange Beach, AL, GeoCon Project No DL 345-15, dated May 29, 2015. This soils report did not provide design parameters utilized by IBC design method. GeoCon shall review and approve these calculations and the soil parameters utilized for the foundation design. This soils report was also completed before any improvements to the site and therefore does not reflect any addition of fill or other modifications to the site that may occur before installation.

2) Before beginning construction the contractor should thoroughly read the soils reports and follow all its recommendations. Since the report does not specifically address pole foundations, the geotechnical engineer should be consulted before construction for any construction recommendations, especially pertaining to the high water table on the site. It is the sole responsibility of the contractor to follow acceptable and reasonable practices with regards to installations of direct buried foundations in areas of high water table. This might be sleeving, dewatering, use of drilling mud or other techniques as considered appropriate by the geotechnical engineer.

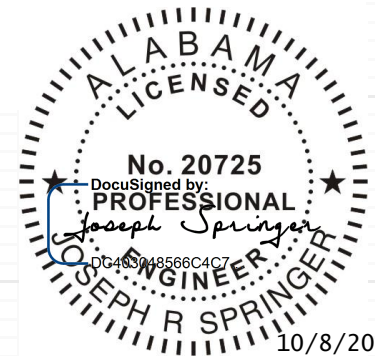
3) Calculation of burial depth per 2015 IBC 1807.3.2.1 Lateral bearing for nonconstrained structures.

4) Annulus of hole to be backfilled with #57 crushed stone or similar.

5) These designs have been prepared without specific site information. Poles should not be located near slopes or other topographical features that may affect foundation performance. See IBC Figure 1808.7.1 Foundation Clearances From Slopes. Pole must not be located near underground utilities which may affect foundation performance.

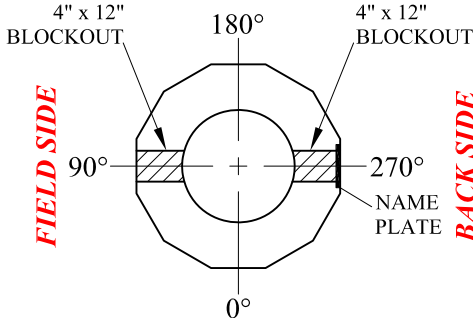
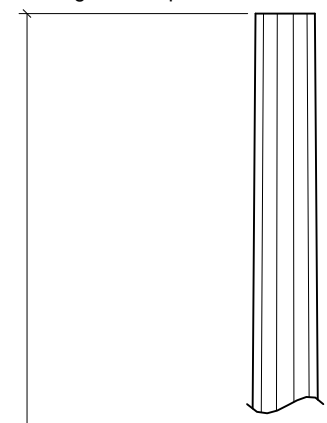
6) These calculations have been prepared by a specialty engineer in conformance with Rules of the State Board of Professional Engineers. Express Engineering is limited to the design of the pole foundation only based on design criteria and loading calculations provided by others. Express Engineering has not researched local code requirements.

7) Soil properties can vary greatly in a very short distance. The borings in the above report were NOT at the exact pole locations, therefore qualified personnel should be on-site during erection to confirm that the soil encountered at each pole location is accurately represented by the soil boring used for Foundation Design. Whenever discrepancies are discovered, Baldwin Lighting should be notified immediately.



10/8/2019

Joseph R Springer, PE
AL Reg 20725

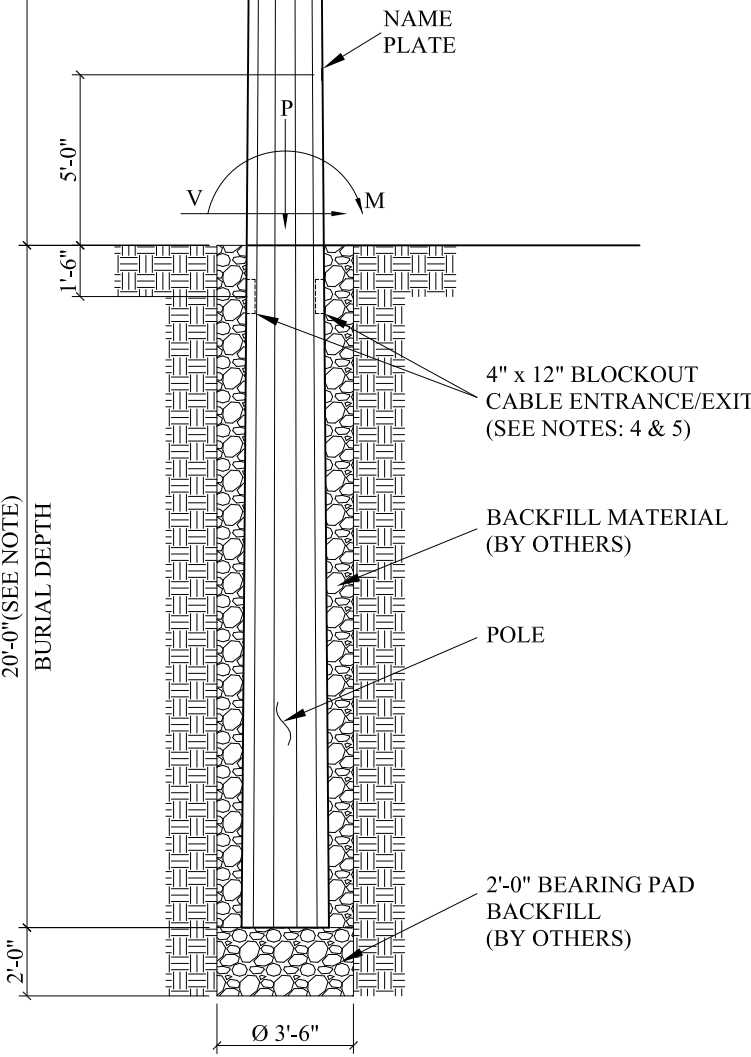


**POLE ORIENTATION
VIEWED FROM POLE TIP**

POLE FIXTURE DATA (REF. 196881 CPR SHEET)	
Pole ID:	B1
Fixture Qty.:	9
Total E.P.A.:	25.3(sqft) - assumed to include Bars
lbs at Top:	700 - assumed to include Bars
lbs at ECE:	200

LOADS AT GROUNDLINE	
M(ult.) =	477(ft-k)
S(ult.) =	9.2(k)
P =	20,700(lbs)
(Total weight of Pole)	

80'-0"



***NOTE:**
BALDWIN LIGHTING MAKES NO CLAIMS THAT THE REFERENCED EMBEDMENT DEPTH SHOWN IS SUITABLE FOR SUPPORTING THIS STRUCTURE. IT IS RECOMMENDED THAT A GEOTECHNICAL ENGINEER EVALUATE THE SOILS PRESENT ON SITE TO CONFIRM THE REQUIRED EMBEDMENT DEPTH AND BACKFILL MATERIAL TO BE USED.

BALDWIN
LIGHTING, INC.
P.O. BOX 608
BAY MINETTE, AL 36507
PHN: (251) 937-1540
FAX: (251) 937-1545

CUSTOMER / JOB	DESCRIPTION
MUSCO SPORTS LIGHTING (BASEBALL) ORANGE BEACH, AL.	80(FT) MH CONCRETE POLE (D12 -10006) BASEBALL

POLE LENGTH	100'-0"	EPA	25.3 max
LENGTH A.G.H.	80'-0"	CODE	ASCE 7-10
BURIAL DEPTH	*20'-0"	EXPOSURE	C
TIP WIDTH	12.7 in.	RISK CATEGORY	I
BUTT WIDTH	30.7 in.	DESIGN WIND	158(mph)
POLE WEIGHT	20,700 lbs.	POLE SHAPE	Dodecagonal
POLE TAPER	0.18 in./ft.	QUANTITY	1
DRAWN BY	M.D.W.	DATE	9/26/2019



Express Engineering LLC FL CA #26911
 155 Crantes Roost Blvd Ph. (321)251-6305
 Ste 2050 Fax (321)214-4128
 Altamonte Springs, FL 32701

Foundation Calculations, per IBC Method(=FBC Method)

Client: **Baldwin Lighting/ Musco Lighting** Soil Type= **4** (Assumed, see note below)
 Job Name: **Orange Beach Baseball** Proposed Burial Depth= **20.0 ft.**
 Location: **Orange Beach, AL** Diameter of Excavation (De)= **42 in.**
 Pole Width at Groundline(Dp)= **27.1 in.**
 Backfill Material= **4- Crushed Stone**
 Shear Friction angle (a)= **60 degrees**
 Effective bearing width (W)= **36.6 in.**

Loading Information:

Applied Moment= **477.000 ft. kips** Load Factor= **1.60** (enter 1 if service loads)
 Applied Shear (P)= **9.200 kips** Equiv.Hgt.(h)= **51.8 ft.(h)**

Burial Depth Calculations per IBC(or FBC) 1807.3.2.1

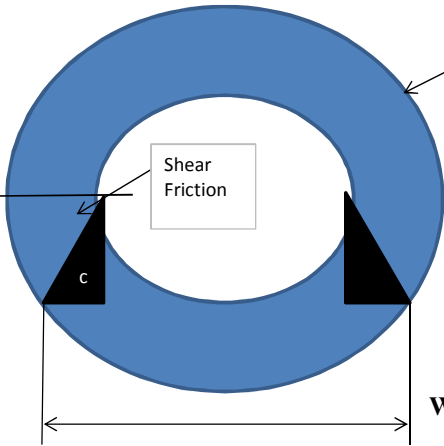
So $S_i = 1596$ psf $A = 2.76$
 Req'd. depth= **13.95 ft.** $d' = 20.0$
 $d/d' = 1.434$

Per 1804.3.1 If lateral motion of 1/2" at groundline is acceptable, lateral allowable bearing can be doubled.
 Input allowable increase: **2.0**

Burial Depth OK, per IBC Method

Per note d of referenced table, allowable lateral pressure can be increased by 1/3 for load combinations including WIND load.
 Input allowable increase: **1.33**

Calculation of Effective bearing width



$$W = D_p + 1.28(D_e - D_p)\cos(a) < D_e$$

Backfill Material	Shear friction angle (a)
1- Reinforced Concrete	0
2- UnReinf Concrete	45
3- Controlled LSM	55
4- Crushed Stone	60
5- Native Soil	90

Soils Report Information

Soils Information based on Assumed Soil Conditions, soils report not available.

Table 1806.2 --Allowable Lateral Pressure

Class of Material	Allowable Lateral Pressure
1 Bedrock	1200
2 Other rock	400
3 Gravel	200
4 Sand	150
5 Clay	100
6 Weak(added)	50 (Added)
7 Weaker(added)	25 (Added)

Joseph R. Springer, PE
 FL Reg No. 49806

Equipment Description	
26	Sports Cluster Total Light Control™ TLC-LED- 1500 Watt Fixtures
10	Musco Ball Tracker Fixtures 575 Watt Fixtures
6	Sports Cluster Total Light Control TLC-LED 1200 Watt Fixtures
2	Sports Cluster Total Light Control TLC-LED 600 Watt Fixtures
6	Factory wired and assembled pole top luminaire cross arm assemblies
12	Factory wired electrical component enclosures with disconnects
6	Factory built wire harnesses with plug-in connections
Warranty	
✓	Musco's Constant 10™ product assurance and warranty program that eliminates 100% maintenance costs for 10 years, including labor, materials, monitoring and guaranteed light levels.
Supplemental Lighting Warranty	
✓	Musco's 10-Year warranty guarantees your lighting system to be free from defects in materials and workmanship. This includes labor and materials to replace defective parts or repair defects in workmanship.

Note:

1. No Control cabinet is included as end user is going to continue to cutting lights on with existing breakers/controls
2. Musco will include all strapping and brackets to mount crossarms and driver enclosures to poles.
3. Driver Enclosures for each poles are as follows:
 - A- Poles---1 Driver Enclosure
 - B- Poles---3 Driver Enclosures
 - C- Poles---2 Driver Enclosures
4. No Poles are included in our BOM. As per the plans the electrical contractor shall include one new concrete pole in his base bid. The other three new poles to be installed are on site behind the adjacent south field.

