

Crozet Park Field Lighting Proposal



October 17, 2018

Peachtree Baseball and Softball

- Peachtree is a 501(c)(3) **100% volunteer** organization that has proudly provided a positive baseball experience to thousands of western Albemarle families **since 1956**.
- Today, our community is growing and our league is registering record numbers of children and families as a result.
- Peachtree expanded to include softball in 2016.
- Since 2016, we have experienced a **64% increase in players**, and a **41% increase in scholarship use**.



Growing Need for Field Space

- **More Crozet youth means more kids who want to play ball... which means more teams in need of field space for practices and games.**
- **This spring, Peachtree had 41 teams, each needing 2-4 hours of field space for practice each week.**
- **Peachtree has access to 6 fields: two at Crozet Park (plus the t-ball field), one at Crozet Elementary, one at Brownsville, one at Field School, one at Greenwood, and has limited use of the JV softball field at WAHS. Only younger divisions can play at Brownsville and Field School because there are no fences. Peachtree maintains all these fields in partnership with ACPR.**



How Lights Will Help

- **Spring season practices begin in February, when it is dark by 6:15 p.m.**
- **Coaches are 100% volunteer. Because most are working parents, we normally can't start practices until 5:30 p.m., which makes it very hard to get even an hour in during October/February/March.**
- **Having a field with lights would also allow us to schedule more games so all teams can play at least 10-12 games a season.**



How Lights Will Be Used

- **The latest games in the summer months would normally start by 7:45.**
- **Games are normally 1 hour 45 minutes in duration.**
- **Very rare possibility of later starts only during tournament play when rain could delay starts.**
- **This is not an adult league that plays into the night. Peachtree is a 12 and under league with baseball and softball players as young as 4 years old.**



Lighting Plan

- **Peachtree is applying for a Minor Site Plan Revision with Albemarle County, with the help of Claudius Crozet Park.**
- **If approved, we will install state-of-the-art LED lighting designed by Musco Sport Lighting at Holzwarth Field.**



Holzwarth Field (the lower field) at Claudius Crozet Park

Community Support

We have raised \$131,000 out of our \$140,000 goal for this project since the campaign launched August 16th.

THANK YOU!

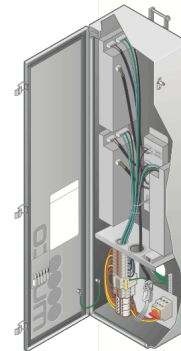


Light-Structure System™

LED Light Source

5 Easy Pieces™

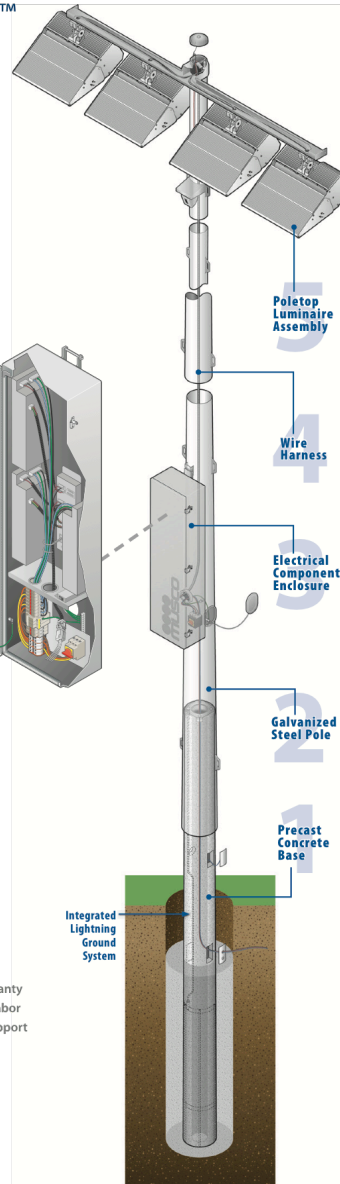
Complete System from
Foundation to Poletop



All components designed to work together ...
factory built, wired, aimed, and tested
to assure reliable, trouble-free operation

Covered by a 25-year product assurance and warranty
program with guaranteed light levels, parts and labor
for maintenance, system monitoring, and 24/7 support
from Control-Link Central™

For your
BUDGET,
for the
ENVIRONMENT.





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Light·Structure
GREEN™

Evolution of Light Control

1977

SportsCluster®



1989

SportsCluster·2



1989

**SportsCluster·2
Level 8™**



1989

**SportsCluster·2
Total Light Control™**



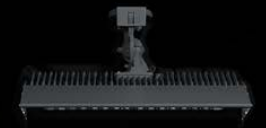
2005

**Light-Structure System™
Green Generation™**



Today

**Light-Structure System™
TLC for LED™**



1977
SportsCluster

1989
SportsCluster.2

1989
SportsCluster.2
Level 8™

1989
SportsCluster.2
Total Light Control™

2005
Light-Structure
System™
Green Generation™

Today
Light-Structure
System™
TLC for LED™

Today
Other Luminaire
Manufacturer
LED



Photographed at 100 ft (30 m) from field edge

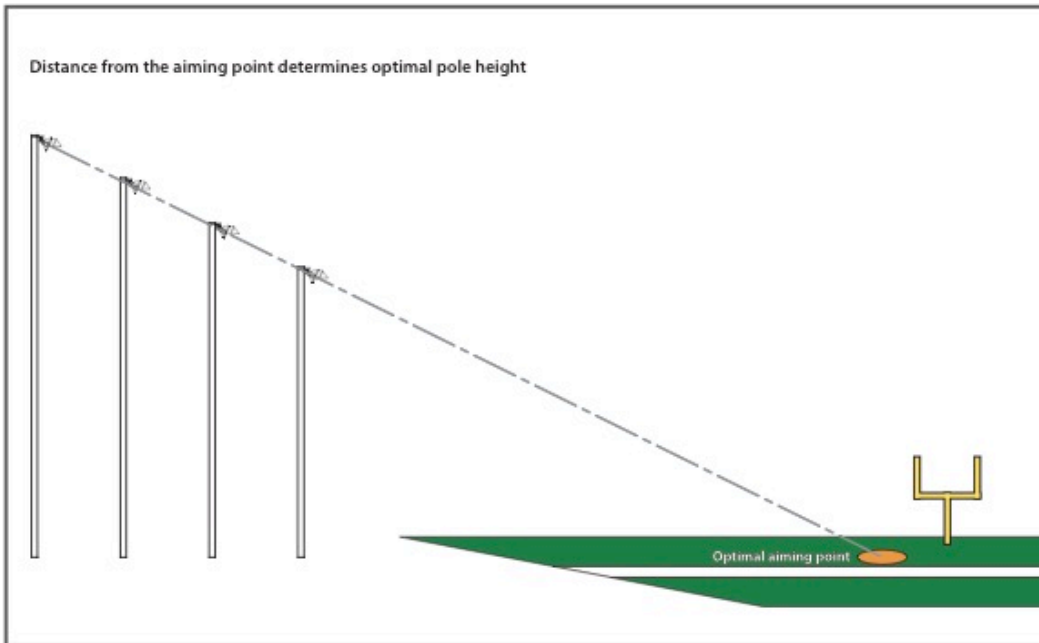
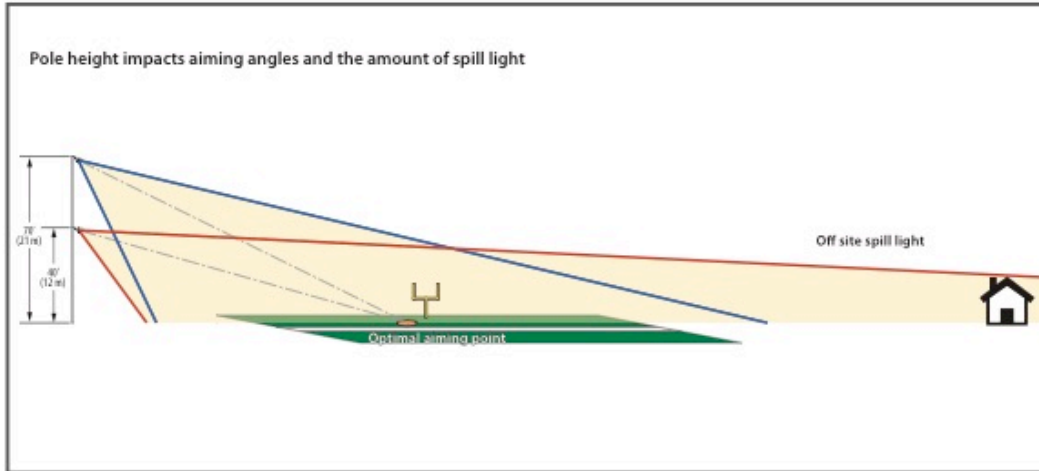
Used equal parameters for:

- On-field light level per pole
- Luminaire aiming angles
- Wattage per luminaire
- Pole distance from aiming point
- Mounting height

Total Light Control™ - TLC-LED-1150 Luminaire



White Finish Option





Typical Metal Halide

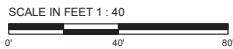
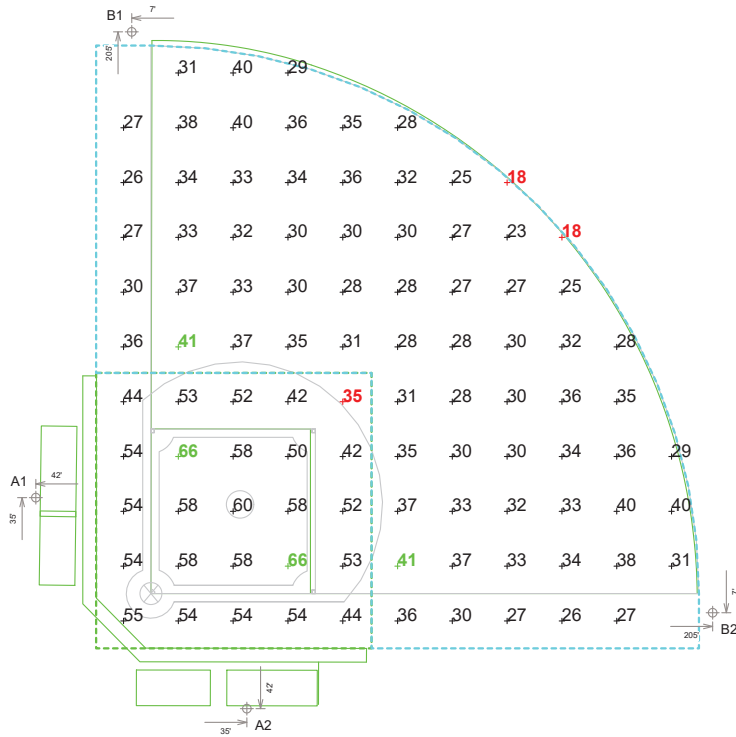


Green Generation Lighting® – Metal Halide



Total Light Control™ –TLC for LED™

EQUIPMENT LIST FOR AREAS SHOWN									
Pole				Luminaires					
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS	
2	A1-A2	70'	-	15'	TLC-BT-575	1	1	0	
				70'	TLC-LED-1150	3	3	0	
2	B1-B2	70'	-	15'	TLC-BT-575	2	2	0	
				70'	TLC-LED-1150	5	5	0	
4	TOTALS								
						22	22	0	



ENGINEERED DESIGN By: Jared Brown • File #152006A • 24-Sep-18

Claudius Crozet Park Baseball

Crozet, VA

GRID SUMMARY	
Name:	Softball
Size:	200'/200' - basepath 60'
Spacing:	20.0' x 20.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY		
MAINTAINED HORIZONTAL FOOTCANDLES		
	Infield	Outfield
Guaranteed Average:	50	30
Scan Average:	53.20	31.77
Maximum:	66	41
Minimum:	35	18
Avg / Min:	1.50	1.73
Guaranteed Max / Min:	2	2.5
Max / Min:	1.85	2.23
UG (adjacent pts):	1.24	1.38
CU:	0.66	
No. of Points:	25	73

LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	52,000 / 121,000 lumens		
No. of Luminaires:	22		
Total Load:	21.85 kW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-1150	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

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.

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

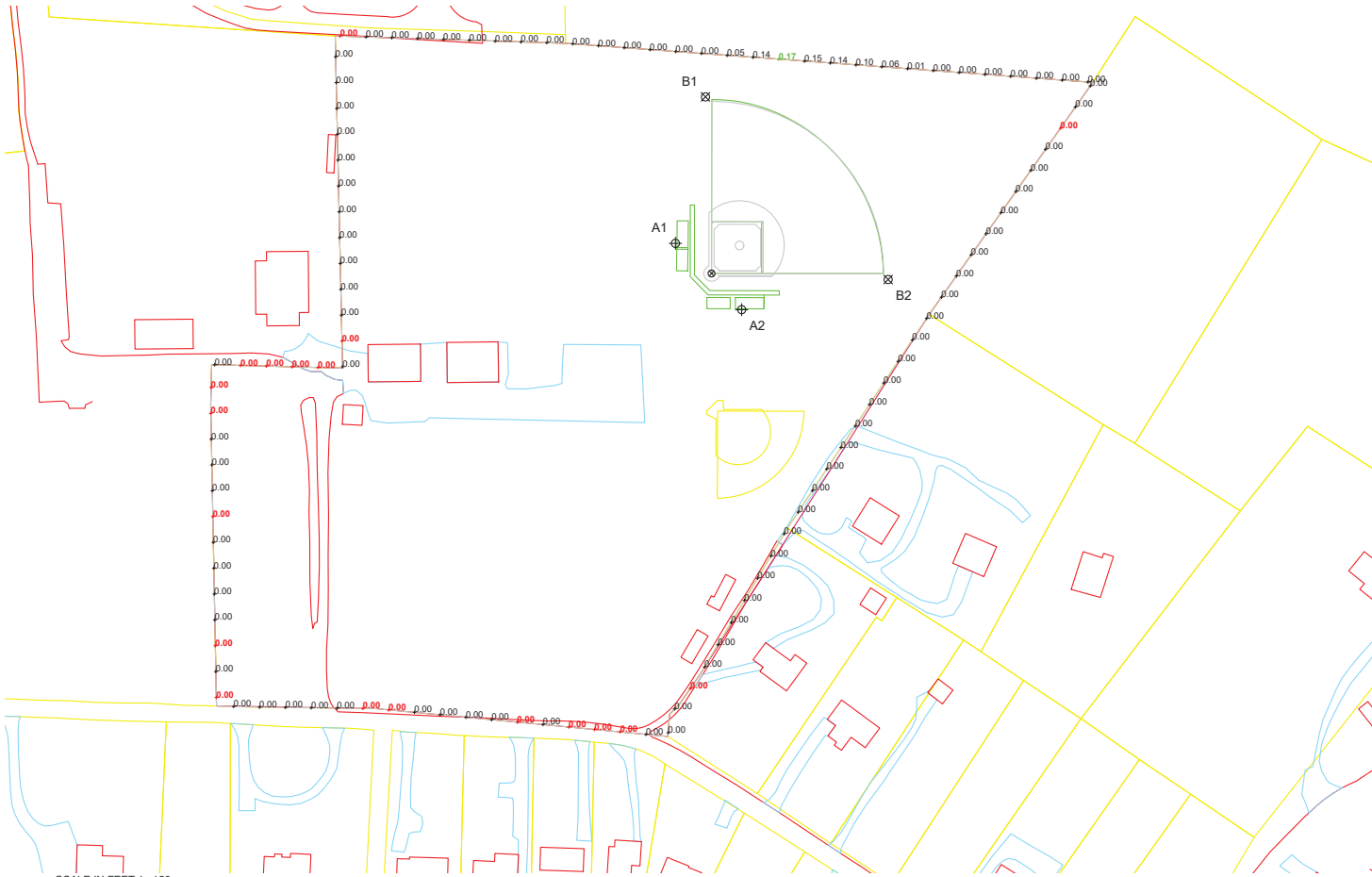


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ILLUMINATION SUMMARY

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QTY	Pole			Luminaires			THIS GRID	OTHER GRIDS	
	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY/POLE			
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				70'	TLC-LED-1150	3	3	0	
2	B1-B2	70'	-	15'	TLC-BT-575	2	2	0	
				70'	TLC-LED-1150	5	5	0	
4	TOTALS					22	22	0	



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

ENGINEERED DESIGN By: Jared Brown • File #152006A • 24-Sep-18

Claudius Crozet Park Baseball

Crozet, VA

GRID SUMMARY	
Name:	Property Line
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
Entire Grid	
Scan Average:	0.0076
Maximum:	0.17
Minimum:	0.00
No. of Points:	109

LUMINAIRE INFORMATION	
Color / CRI:	5700K - 75 CRI
Luminaire Output:	52,000 / 121,000 lumens
No. of Luminaires:	22
Total Load:	21.85 kW

Luminaire Type	Lumen Maintenance		
	L90 hrs	L80 hrs	L70 hrs
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ILLUMINATION SUMMARY



GLYNDON PARK

Vienna, Virginia, USA · April 2015

50 horizontal footcandles (500 lux) infield
30 horizontal footcandles (300 lux) outfield

System Performance Comparison:

26 kW — 46% reduction from typical 1500w metal halide floodlights
67% reduction in off-site glare

BROUSSARD SPORTS COMPLEX AT ST. JULIEN PARK

Broussard, Louisiana, USA

**5 Baseball Fields: 50/30 horizontal footcandles infield/
outfield (500/300 lux), 2.1:1/2.5:1 uniformity**

**System energy comparison:
188.8 kW – 39% reduction compared to typical HID equipment**



KENT-STEIN PARK

Muscatine, Iowa, USA

Baseball Field – 50 horizontal footcandles infield (500 lux)
30 horizontal footcandles outfield (300 lux)

System Energy Comparison:
55.7 kW – 56% reduction from typical HID equipment



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Solutions for Lighting · TLC for LED™

Musco: what can be

TOTAL LIGHT CONTROL — TLC FOR LED®

MCNAIR PARK
Saint Charles, Missouri, USA

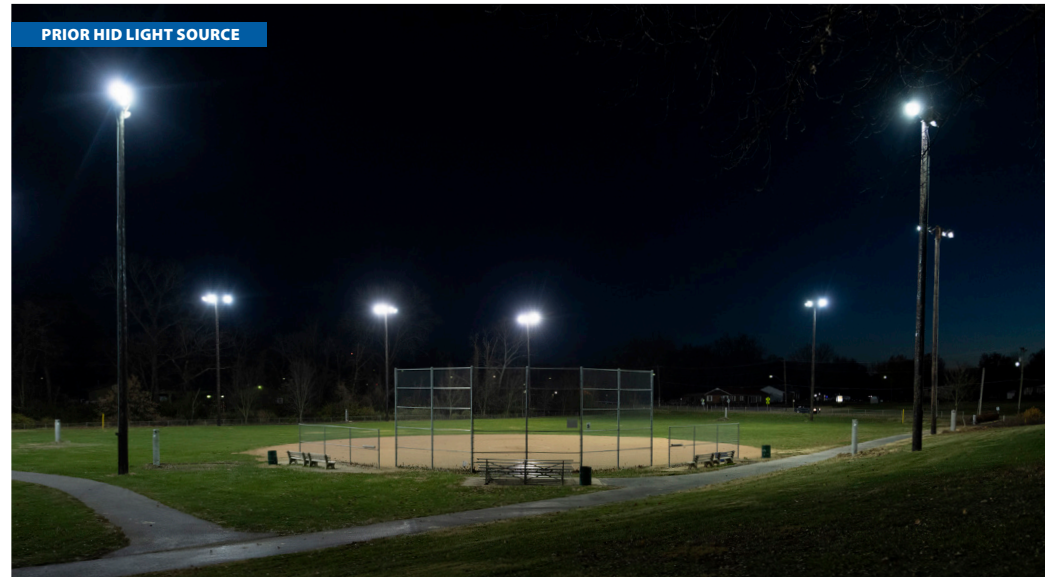


Light Levels:
50 horizontal footcandles infield (500 lux), 2.1:1 uniformity;
30 horizontal footcandles outfield (300 lux), 2.5:1 uniformity

System energy comparison:
40.7 kW – 25% reduction compared to previous HID equipment

What often is

PRIOR HID LIGHT SOURCE

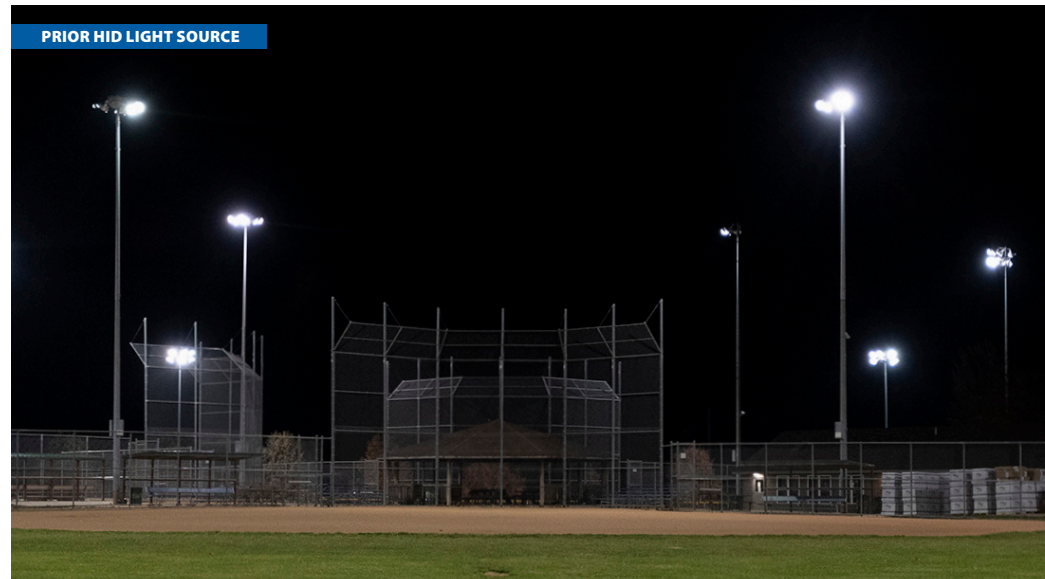


©2018 Musco Sports Lighting, LLC - 1/2019 - M-2770-en04-1 - Field 1 - Photos taken at equal camera settings

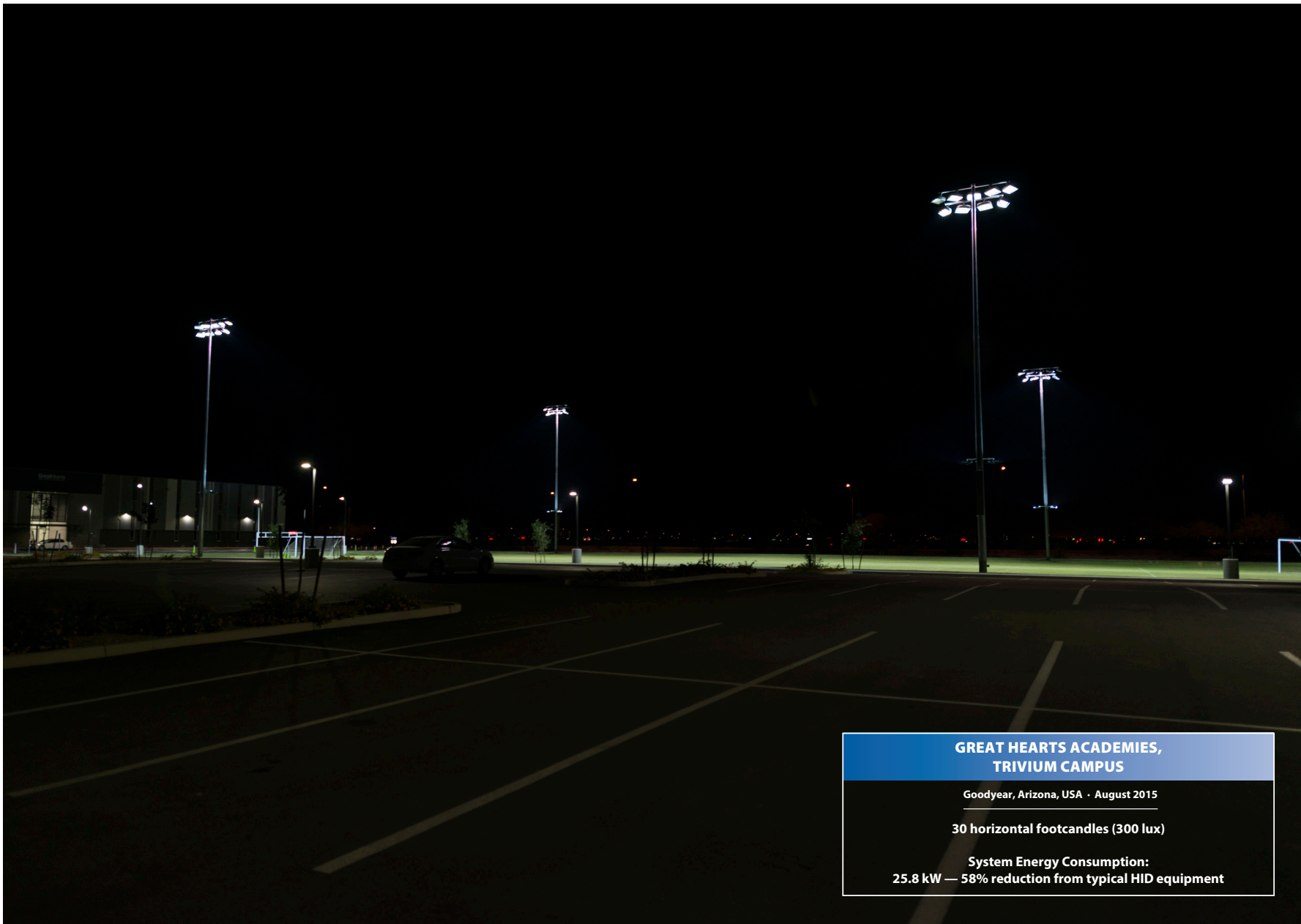
Musco: what can be



What often is



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**GREAT HEARTS ACADEMIES,
TRIVIUM CAMPUS**

Goodyear, Arizona, USA · August 2015

30 horizontal footcandles (300 lux)

System Energy Consumption:
25.8 kW — 58% reduction from typical HID equipment

SEMINOLE COUNTY SPORTS COMPLEX

Sanford, Florida, USA

15 Baseball Fields – 45 horizontal footcandles infield,
27 horizontal footcandles outfield

3 Batting Cages – 27 footcandles

System Energy Comparison:
639.1 kW – 64% reduction from typical HID equipment





