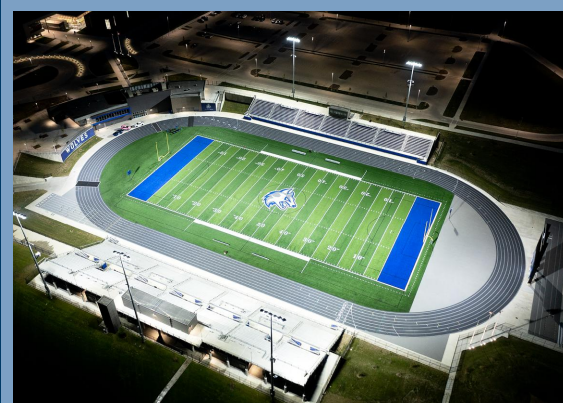




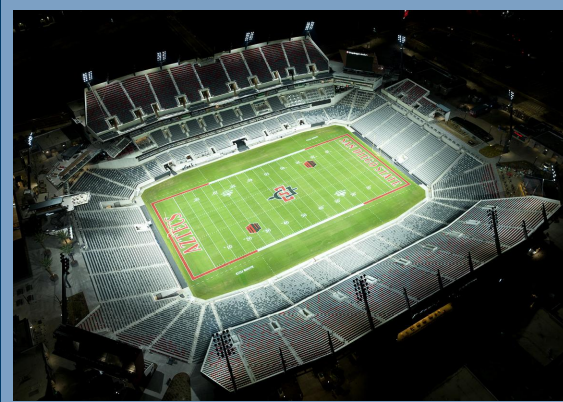
Elk River High School Stadium, Elk River, Minnesota, USA



Waukee Northwest High School, Waukee, Iowa, USA



AT&T Stadium, Dallas Cowboys, Arlington, Texas, USA



San Diego State University, Snapdragon Stadium, San Diego, California, USA

Browning Springs Middle School Football

Madisonville, KY



Sales Representative: C. Mickey · Designed By: J. Danielson · Design No.: 230597B · June 04, 2025

Browning Springs Middle School Football

Madisonville, KY

LIGHTING SYSTEM

Structure/Fixture Summary						
Structure ID	Structure Height	Fixt. Attachment Ht.	Fixture Qty	Fixture Type	Load	Circuit
F1-F2	60'	60'	1	TLC-LED-900	0.88 kW	A
		60'	4	TLC-LED-1200	4.68 kW	A
		16'	2	TLC-BT-575	1.15 kW	A
F3-F4	70'	70'	5	TLC-LED-1200	5.85 kW	A
		16'	2	TLC-BT-575	1.15 kW	A
4			28		27.42 kW	

Circuit Summary			
Circuit	Description	Load	Fixture Qty
A	Football	27.42 kW	28

Fixture Type Summary								
Type	Circuit	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-BT-575	A	LED 5700K - 75 CRI	575W	52,000	>120,000	>120,000	>120,000	8
TLC-LED-1200	A	LED 5700K - 75 CRI	1170W	150,000	>120,000	>120,000	>120,000	18
TLC-LED-900	A	LED 5700K - 75 CRI	880W	104,000	>120,000	>120,000	>120,000	2

Single Fixture Amperage Draw Chart								
Driver Specifications (.90 min power factor)	Line Amperage Per Fixture (max draw)							
	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)	
Single Phase Voltage								
TLC-LED-1200	6.9	6.5	6.0	5.2	4.2	3.8	3.0	
TLC-LED-900	5.2	4.9	4.5	3.9	3.1	2.9	2.3	
TLC-BT-575	3.3	3.2	2.9	2.5	2.0	1.8	1.5	

Light Level Summary

Calculation Grid Summary								
Grid Name	Calculation Metric	Illumination Ave					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
Football	Horizontal Illuminance	32.96	29	39	1.36	1.15	A	28
Football Spill @ 3ft.	Horizontal Illuminance	0.0198	0.00	0.08	485.632	114.491	A	28
Football Spill @ 5ft.	Max Candela Metric	1610.4406	55.00	4049.26	73.621	29.280	A	28
Football Spill @ 5ft.	Max Vertical Illuminance Metric	0.0478	0.00	0.16	335.694	98.881	A	28
Football Spill @ 5ft.	True Max Vert Illuminance Metric	0.0448	0.00	0.16	377.747	106.937	A	28
Home Bleachers	Horizontal	15.80	10	23	2.34	1.62	A	28
Visitor Bleachers	Horizontal	17.14	11	26	2.45	1.62	A	28

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.

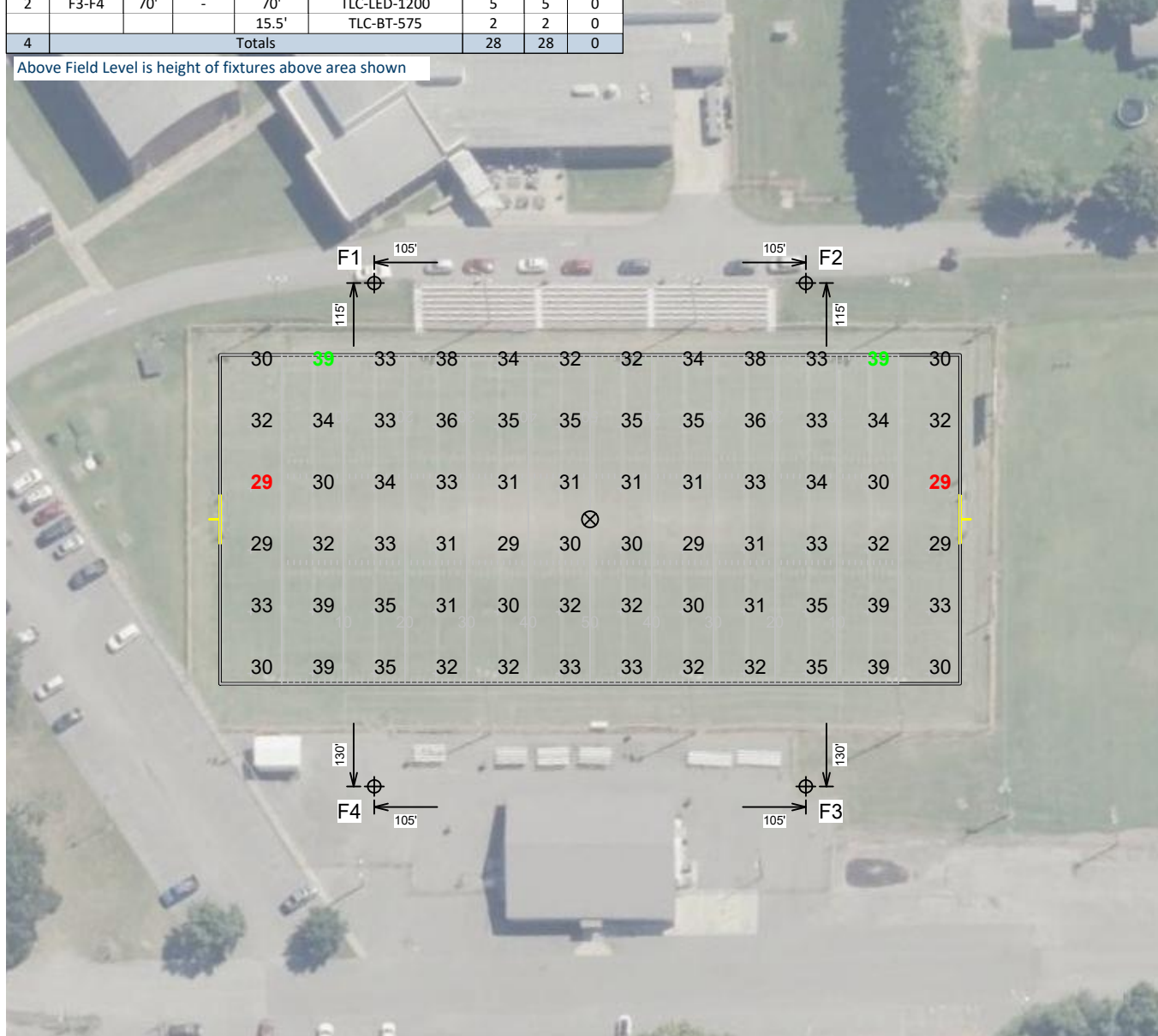
Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



Equipment List For Areas Shown

Structure				Fixtures				
QTY	STRUCTURE ID	SIZE	GRADE ELEVATION	ABOVE FIELD LEVEL	FIXTURE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
2	F1-F2	60'	5'	65'	TLC-LED-1200	4	4	0
				65'	TLC-LED-900	1	1	0
				20.5'	TLC-BT-575	2	2	0
2	F3-F4	70'	-	70'	TLC-LED-1200	5	5	0
				15.5'	TLC-BT-575	2	2	0
4	Totals					28	28	0

Above Field Level is height of fixtures above area shown



Browning Springs Middle School Football

Madisonville, KY

Grid Summary

Name: Football
Size: 360' x 160'
Spacing: 30.0' x 30.0'
Height: 3.0' above grade

Illumination Summary

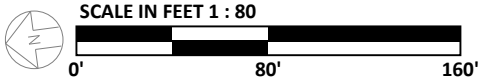
MAINTAINED HORIZONTAL FOOTCANDELS	
Entire Grid	
Guaranteed Average:	30
Scan Average:	32.96
Maximum:	39
Minimum:	29
Avg/Min:	1.15
Guaranteed Max/Min:	2.5
Max/Min:	1.36
UG (adjacent pts):	1.31
CU:	0.64
No. of Points:	72
FIXTURE INFORMATION	
Applied Circuits:	A
No. of Fixtures:	28
Total Load:	27.42 kW

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 $\pm 3\%$ nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



ENGINEERED DESIGN By: J. Danielson • File #230597B • 04-Jun-25

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



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ILLUMINATION SUMMARY

Equipment List For Areas Shown

Structure				Fixtures				
QTY	STRUCTURE ID	SIZE	GRADE ELEVATION	ABOVE FIELD LEVEL	FIXTURE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
2	F1-F2	60'	5'	65'	TLC-LED-1200	4	4	0
				20.5'	TLC-BT-575	2	2	0
				15.5'	TLC-BT-575	2	2	0
2	F3-F4	70'	-	70'	TLC-LED-1200	5	5	0
				15.5'	TLC-BT-575	2	2	0
4	Totals					28	28	0

Above Field Level is height of fixtures above area shown

Browning Springs Middle School Football

Madisonville, KY

Grid Summary

Name: Home Bleachers
Size: 360' x 160'
Spacing: 20.0' x 10.0'
Height: 3.0' above grade

Illumination Summary

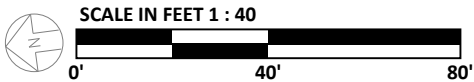
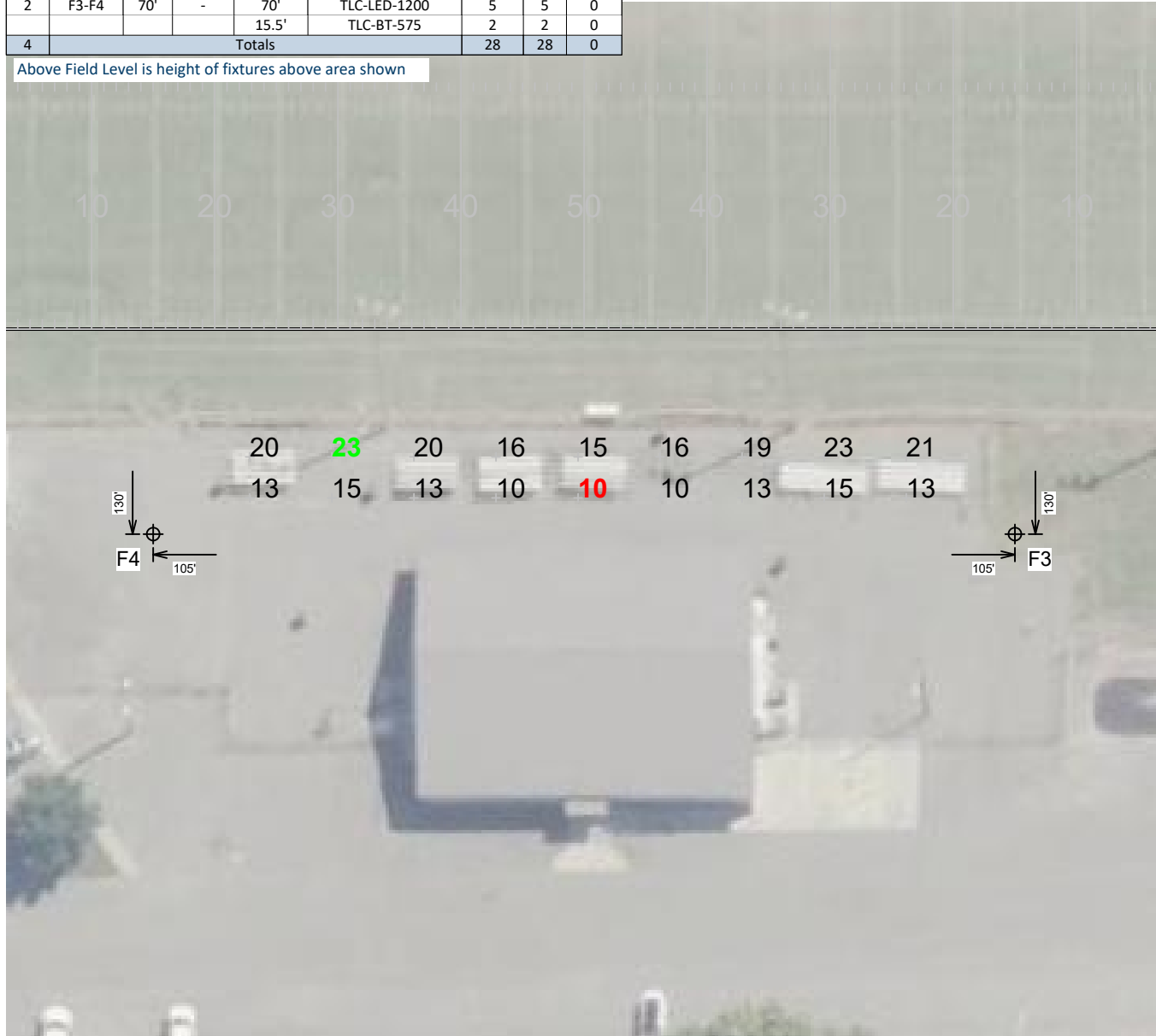
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Scan Average:	15.80
Maximum:	23
Minimum:	10
Avg/Min:	1.62
Max/Min:	2.34
UG (adjacent pts):	1.59
CU:	0.02
No. of Points:	18
FIXTURE INFORMATION	
Applied Circuits:	A
No. of Fixtures:	28
Total Load:	27.42 kW

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.



ENGINEERED DESIGN By: J. Danielson • File #230597B • 04-Jun-25

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



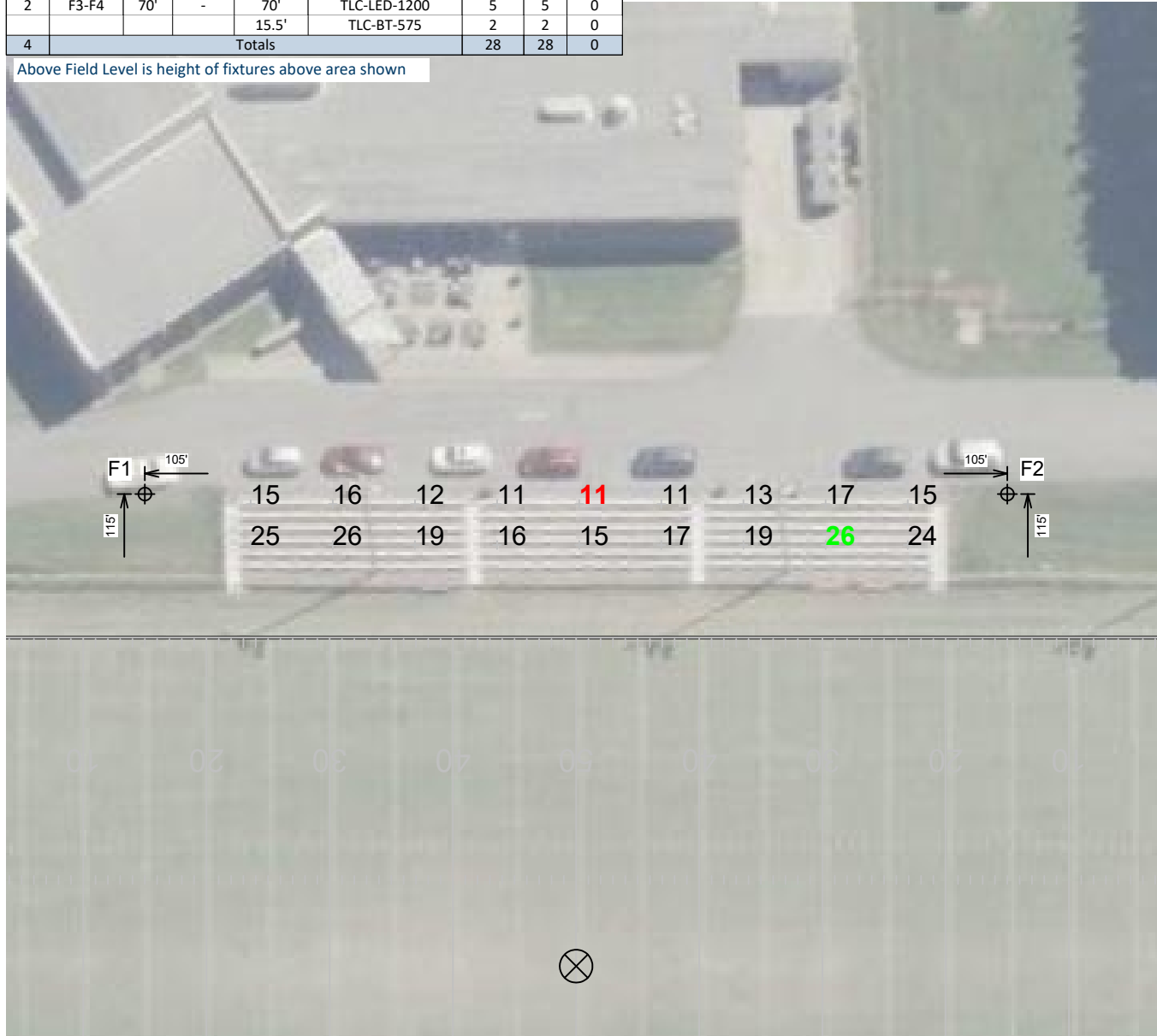
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ILLUMINATION SUMMARY

Equipment List For Areas Shown

Structure			Fixtures					
QTY	STRUCTURE ID	SIZE	GRADE ELEVATION	ABOVE FIELD LEVEL	FIXTURE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
2	F1-F2	60'	5'	65'	TLC-LED-1200	4	4	0
				65'	TLC-LED-900	1	1	0
				20.5'	TLC-BT-575	2	2	0
2	F3-F4	70'	-	70'	TLC-LED-1200	5	5	0
				15.5'	TLC-BT-575	2	2	0
4	Totals					28	28	0

Above Field Level is height of fixtures above area shown



Browning Springs Middle School Football

Madisonville, KY

Grid Summary

Name: Visitor Bleachers
Size: 360' x 160'
Spacing: 20.0' x 10.0'
Height: 3.0' above grade

Illumination Summary

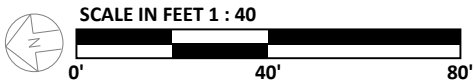
MAINTAINED HORIZONTAL FOOTCANDELS	
Entire Grid	
Scan Average:	17.14
Maximum:	26
Minimum:	11
Avg/Min:	1.62
Max/Min:	2.45
UG (adjacent pts):	1.61
CU:	0.02
No. of Points:	18
FIXTURE INFORMATION	
Applied Circuits:	A
No. of Fixtures:	28
Total Load:	27.42 kW

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 $\pm 3\%$ nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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ILLUMINATION SUMMARY

Browning Springs Middle School Football

Madisonville, KY

Grid Summary

Name: **Football Spill @ 3ft.**
 Spacing: 30.0'
 Height: 3.0' above grade

Illumination Summary

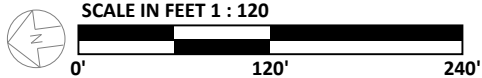
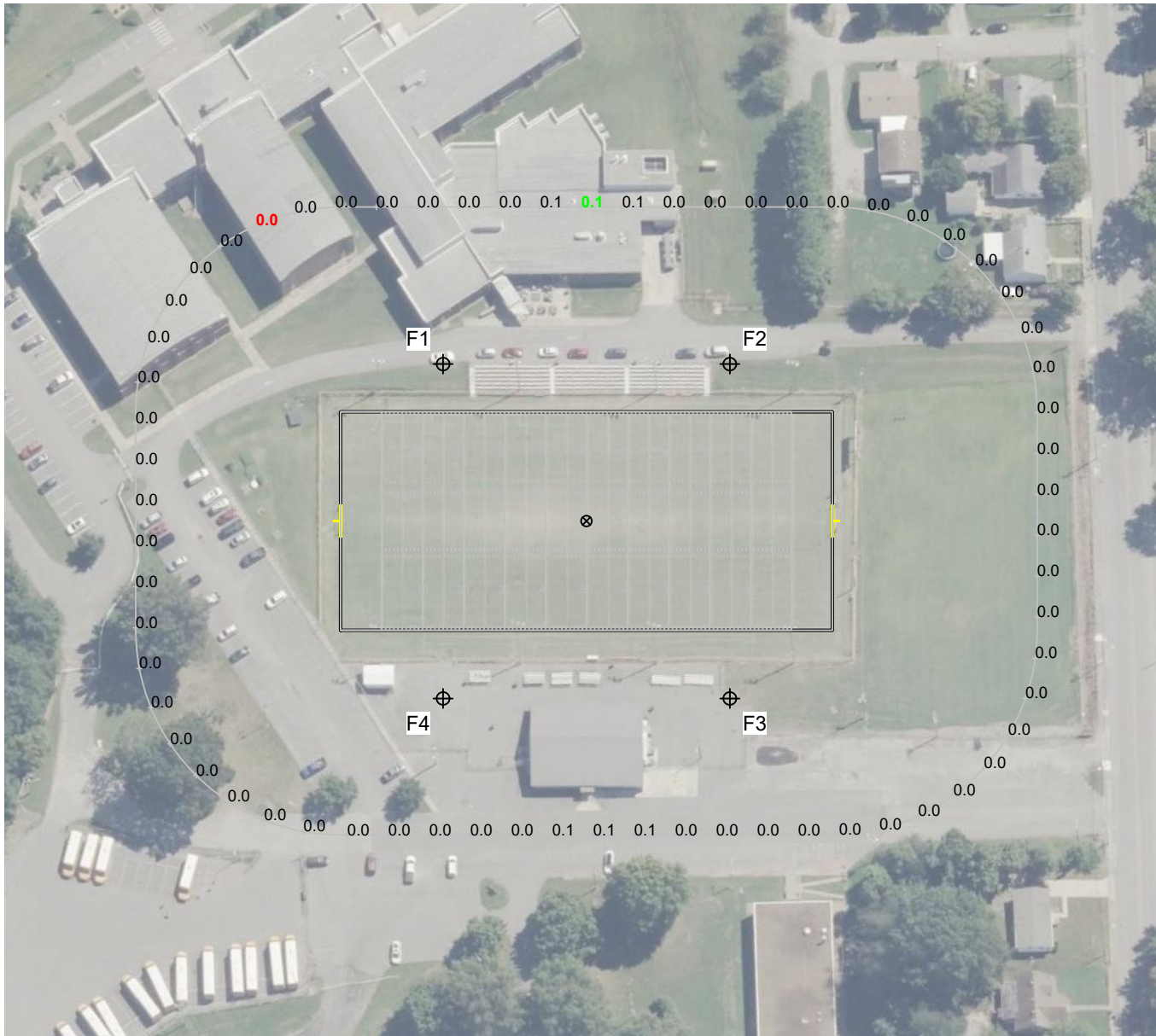
INITIAL HORIZONTAL FOOTCANDLES	
Scan Average:	0.0198
Maximum:	0.08
Minimum:	0.00
CU:	0.00
No. of Points:	66
FIXTURE INFORMATION	
Applied Circuits:	A
No. of Fixtures:	28
Total Load:	27.42 kW

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.



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ILLUMINATION SUMMARY

Browning Springs Middle School Football

Madisonville, KY

Grid Summary	
Name:	Football Spill @ 5ft.
Spacing:	30.0'
Height:	5.0' above grade

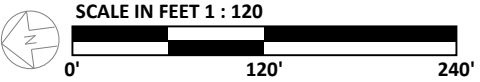
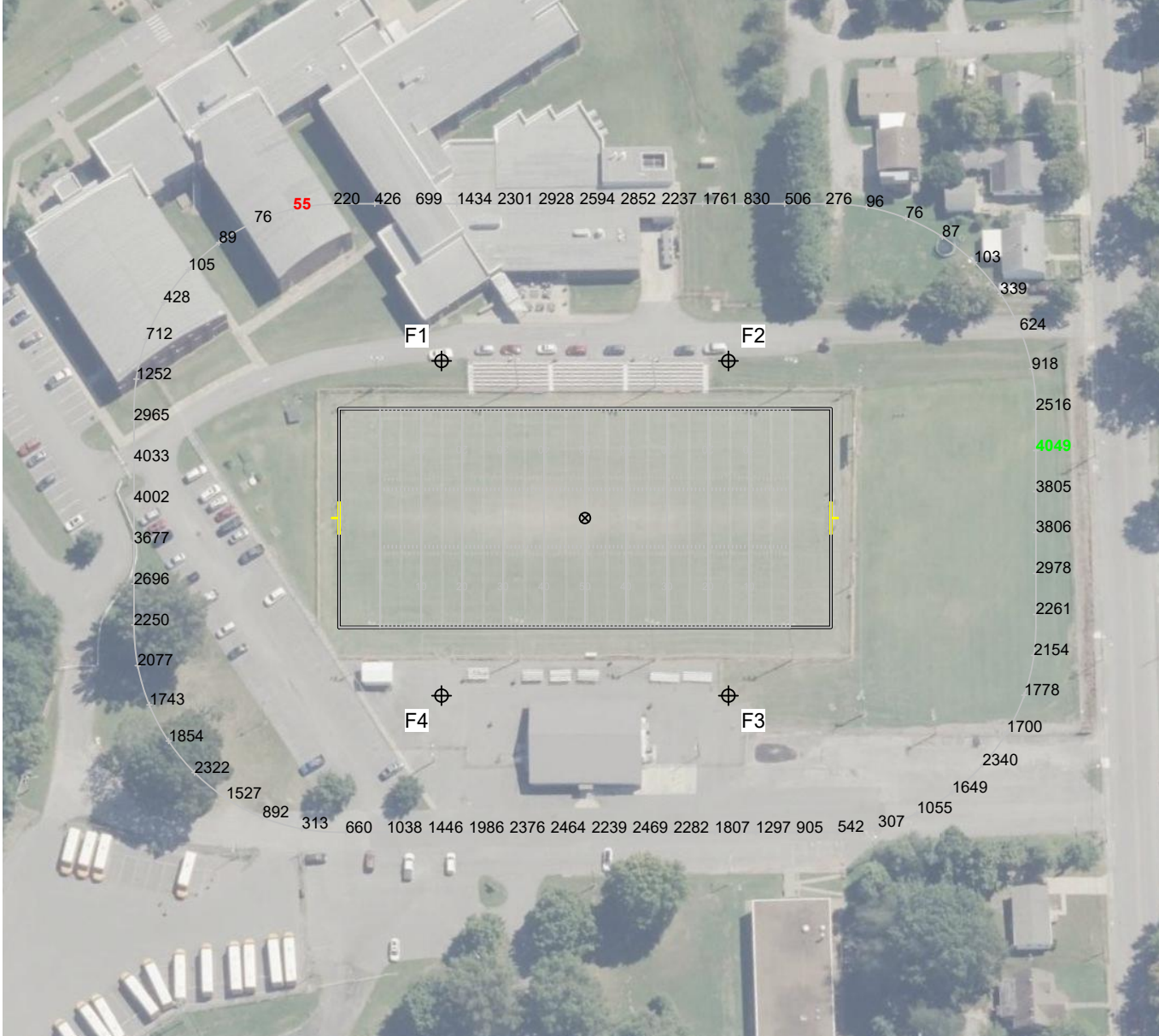
Illumination Summary	
	INITIAL CANDELA (PER FIXTURE)
Entire Grid	
Scan Average:	1610.4406
Maximum:	4049.26
Minimum:	55.00
CU:	0.00
No. of Points:	66
FIXTURE INFORMATION	
Applied Circuits:	A
No. of Fixtures:	28
Total Load:	27.42 kW

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.



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



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Browning Springs Middle School Football

Madisonville, KY

Grid Summary	
Name:	Football Spill @ 5ft.
Spacing:	30.0'
Height:	5.0' above grade

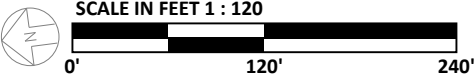
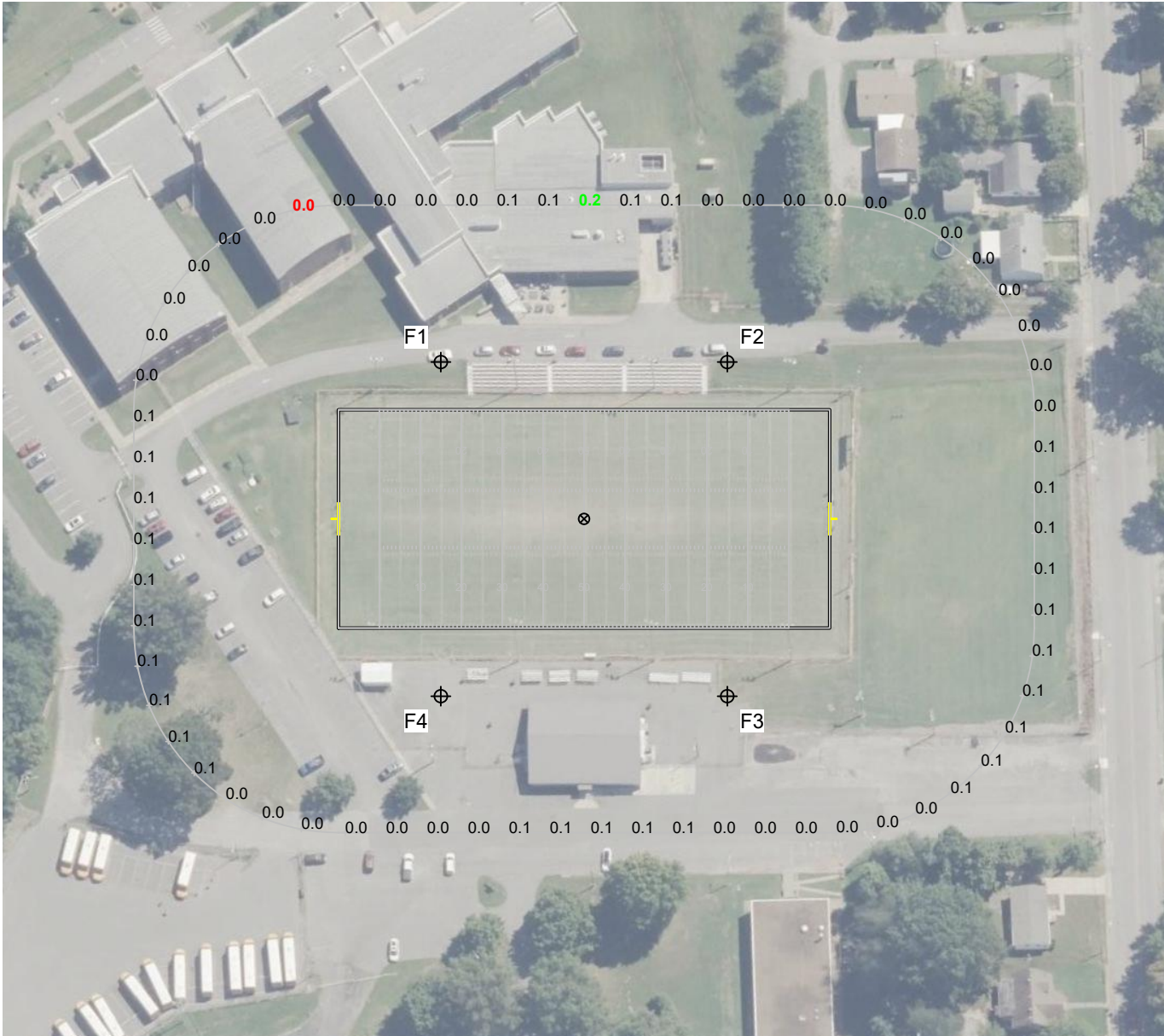
Illumination Summary	
	INITIAL MAX VERTICAL FOOTCANDLES
Scan Average:	0.0478
Maximum:	0.16
Minimum:	0.00
CU:	0.00
No. of Points:	66
FITTURE INFORMATION	
Applied Circuits:	A
No. of Fixtures:	28
Total Load:	27.42 kW

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.



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



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Browning Springs Middle School Football

Madisonville, KY

Equipment Layout

INCLUDES:
· Football

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.

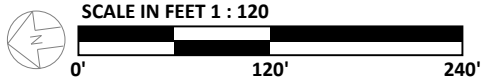
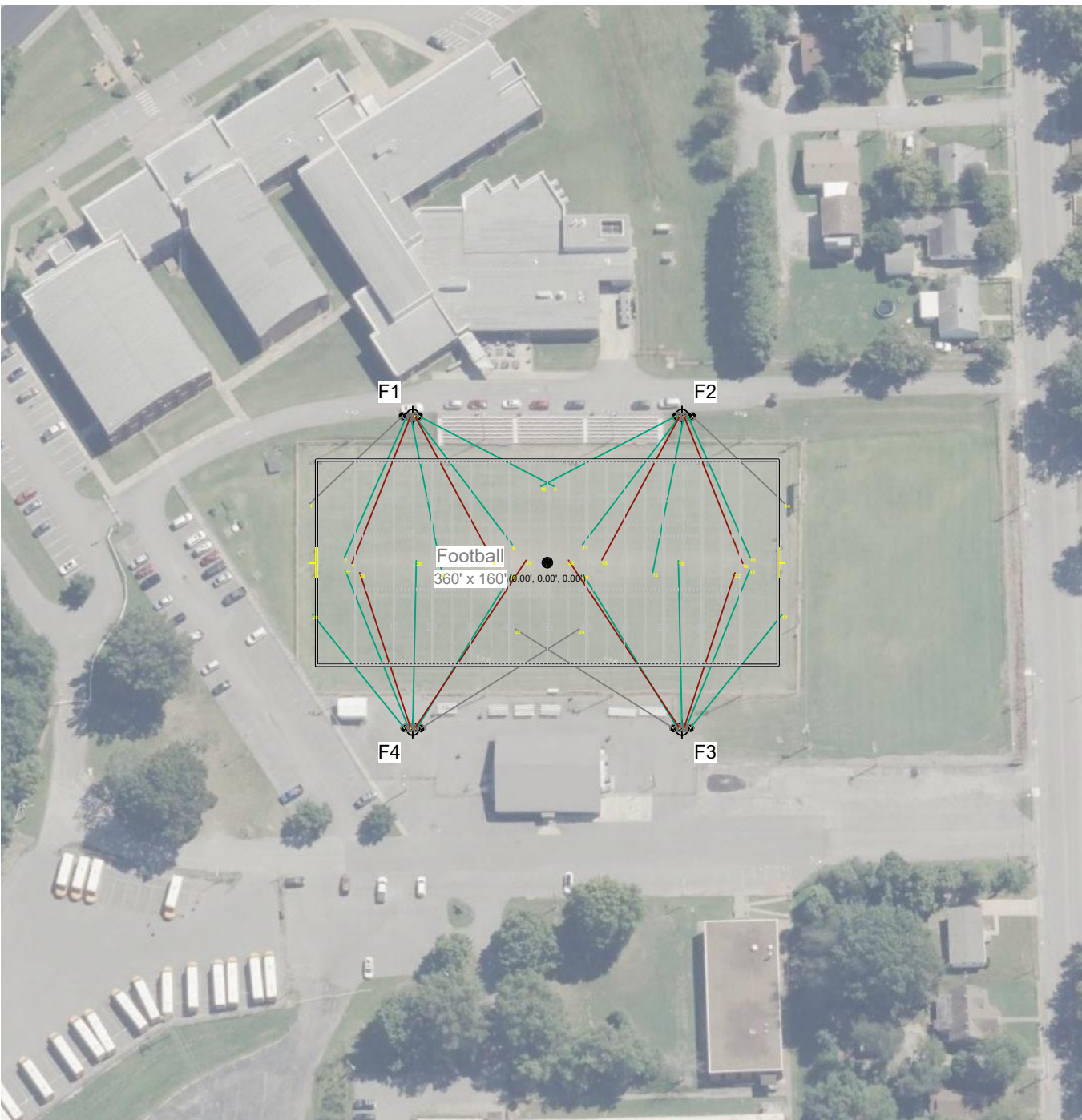
Equipment List For Areas Shown

QTY	Structure			Fixtures		
	STRUCTURE ID	SIZE	GLOBAL ELEVATION	ABOVE GLOBAL LEVEL	FIXTURE TYPE	QTY/POLE
2	F1-F2	60'	5'	65'	TLC-LED-1200	4
				65'	TLC-LED-900	1
				20.5'	TLC-BT-575	2
2	F3-F4	70'	-	70'	TLC-LED-1200	5
				15.5'	TLC-BT-575	2
				Totals		28

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)						
	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
Single Phase Voltage							
TLC-LED-1200	6.9	6.5	6.0	5.2	4.2	3.8	3.0
TLC-LED-900	5.2	4.9	4.5	3.9	3.1	2.9	2.3
TLC-BT-575	3.3	3.2	2.9	2.5	2.0	1.8	1.5



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