Appendix

Appendix A Lighting Plans for Arroyo Valley High School

Appendix

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Lighting System

Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Ci
A1-A2	70'	70'	4	TLC-LED-1500	5.72 kW	
		16'	1	TLC-BT-575	0.58 kW	
A3	70'	70'	4	TLC-LED-1200	4.68 kW	
	-	16'	1	TLC-BT-575	0.58 kW	
A4	70'	70'	4	TLC-LED-1200	4.68 kW	
A4	70					
		16'	1	TLC-BT-575	0.58 kW	
		50'	1	TLC-LED-900	0.89 kW	
A5-A6	70'	70'	3	TLC-LED-900	2.67 kW	
		16'	1	TLC-BT-575	0.58 kW	
A7	60'	60'	3	TLC-LED-900	2.67 kW	
		16'	1	TLC-BT-575	0.58 kW	
		50'	1	TLC-LED-600	0.58 kW	
A8	60'	60'	3	TLC-LED-900	2.67 kW	
		16'	1	TLC-BT-575	0.58 kW	
B1	80'	80'	6	TLC-LED-1500	8.58 kW	
D1			-			
		16'	1	TLC-BT-575	0.58 kW	
		50'	1	TLC-LED-600	0.58 kW	
B2	80'	80'	6	TLC-LED-1500	8.58 kW	
		16'	1	TLC-BT-575	0.58 kW	
		50'	2	TLC-LED-400	0.80 kW	
B3-B4	80'	80'	8	TLC-LED-1500	11.44 kW	
		80'	1	TLC-LED-400	0.40 kW	
		16'	1	TLC-BT-575	0.58 kW	
B5-B6	80'	80'	5	TLC-LED-1200	5.85 kW	
B0-B0		16'	1	TLC-BT-575	0.58 kW	
D7 D0	701					
B7-B8	70'	70'	6	TLC-LED-1200	7.02 kW	
		16'	1	TLC-BT-575	0.58 kW	
-C2, D1-D2	70'	70'	3	TLC-LED-1500	4.29 kW	
		16'	1	TLC-BT-575	0.58 kW	
C3-C4	60'	60'	4	TLC-LED-900	3.56 kW	
		16'	1	TLC-BT-575	0.58 kW	
C5	80'	80'	5	TLC-LED-1500	7.15 kW	
		16'	2	TLC-BT-575	1.15 kW	
C6	80'	80'	5	TLC-LED-1500	7.15 kW	
		80'	2	TLC-LED-900	1.78 kW	
		16'	2	TLC-BT-575	1.15 kW	
		40'	1	TLC-LED-400	0.40 kW	
07	001					
C7	80'	80'	4	TLC-LED-1500	5.72 kW	
		16'	1	TLC-BT-575	0.58 kW	
		80'	2	TLC-LED-900	1.78 kW	
		60'	1	TLC-LED-400	0.40 kW	
C8	80'	80'	4	TLC-LED-1500	5.72 kW	
		16'	1	TLC-BT-575	0.58 kW	
P1-P2	60'	60'	2	TLC-LED-900	1.78 kW	
		40'	2	TLC-LED-400	0.80 kW	
T1, T10	50'	50'	3	TLC-LED-600	1.74 kW	
T2	50'	50'	3	TLC-LED-600	1.74 kW	
.=		50'	3	TLC-LED-600	1.74 kW	
T3, T8	50'	50'	6	TLC-LED-600	3.48 kW	
T4	50'	50'	3	TLC-LED-600	1.74 kW	
		50'	3	TLC-LED-600	1.74 kW	
T5-T6	50'	50'	3	TLC-LED-600	1.74 kW	
T7	50'	50'	3	TLC-LED-600	1.74 kW	
		50'	3	TLC-LED-600	1.74 kW	_
T9	50'	50'	3	TLC-LED-600	1.74 kW	
		50'	3	TLC-LED-600	1.74 kW	
38		1 55			1	

From Hometown to Professional











Circuit Summ	Circuit Summary								
Circuit	Description	Load	Fixture Qty						
A	Varsity Baseball	51.74 kW	43						
В	Varsity Softball	30.53 kW	33						
С	JV Baseball	52.83 kW	45						
D	JV Softball	31.93 kW	30						
Е	Tennis 1-2	6.96 kW	12						
F	Tennis 3-6	13.92 kW	24						
G	Tennis 7-8	6.96 kW	12						
Н	Pool	7.12 kW	8						
I	Pool Egress	2.4 kW	6						

Fixture Type Summary								
Type	Source	Wattage	Lumens	L90	L80	L70	Quantity	
TLC-LED-400	LED 5700K - 75 CRI	400W	46,500	>120,000	>120,000	>120,000	10	
TLC-LED-600	LED 5700K - 75 CRI	580W	65,600	>120,000	>120,000	>120,000	50	
TLC-LED-1500	LED 5700K - 75 CRI	1430W	160,000	>120,000	>120,000	>120,000	66	
TLC-LED-1200	LED 5700K - 75 CRI	1170W	136,000	>120,000	>120,000	>120,000	30	
TLC-BT-575	LED 5700K - 75 CRI	575W	52,000	>120,000	>120,000	>120,000	28	
TLC-LED-900	LED 5700K - 75 CRI	890W	89,600	>120,000	>120,000	>120,000	29	

Light Level Summary

Calculation Grid Summary								
Grid Name	Calculation Metric			Illumination			Circuits	Fixture Qty
	Horizontal Illuminance	Ave	Min 37	Max 60	Max/Min	Ave/Min	С	45
JV Baseball (Infield)		51.6			1.62	1.39		
JV Baseball (Outfield)	Horizontal Illuminance	33.2	20	46	2.38	1.66	С	45
JV Softball (Infield)	Horizontal Illuminance	56.2	46	67	1.45	1.22	D	30
JV Softball (Outfield)	Horizontal Illuminance	34.2	20	53	2.64	1.71	D	30
JVBB Bullpen	Horizontal	24.8	15	32	2.10	1.65	С	45
North Spill (100' offset)	Horizontal	0.01	0	0.04	0.00		A,B,C,D,E, F,G,H,I	213
North Spill (100' offset)	Max Candela (by Fixture)	2607	0	12280	0.00		A,B,C,D,E, F,G,H,I	213
North Spill (100' offset)	Max Vertical Illuminance Metric	0.02	0	0.13	0.00		A,B,C,D,E, F,G,H,I	213
North Spill	Horizontal	1.89	0	12.3	0.00		A,B,C,D,E, F,G,H,I	213
North Spill	Max Candela (by Fixture)	25133	0	57636	0.00		A,B,C,D,E, F,G,H,I	213
North Spill	Max Vertical Illuminance Metric	2.36	0	11	0.00		A,B,C,D,E, F,G,H,I	213
Pool Deck	Horizontal	30.3	1	54	98.87	30.34	H,I	14
Pool Egress	Horizontal	8.80	0	19	177.19		I	6
Pool	Horizontal	50.9	34	63	1.84	1.50	H,I	14
Tennis 1-2	Horizontal Illuminance	55	37	68	1.81	1.49	E	12
Tennis 3-4	Horizontal Illuminance	52.5	39	64	1.64	1.35	F	24
Tennis 5-6	Horizontal Illuminance	51.6	40	63	1.56	1.29	F	24
Tennis 7-8	Horizontal Illuminance	53	35	67	1.89	1.51	G	12
VBB 1st Base Bullpen/Batting Cage	Horizontal	27.5	18	41	2.31	1.53	Α	43
VBB 3rd Base Bullpen	Horizontal	27.2	20	32	1.63	1.36	Α	43
VSB Batting Cage	Horizontal	26.9	14	37	2.65	1.92	В	33
Varsity Baseball (Infield)	Horizontal Illuminance	52.2	40	59	1.49	1.30	Α	43
Varsity Baseball (Outfield)	Horizontal Illuminance	32.6	21	46	2.17	1.55	Α	43
Varsity Softball (Infield)	Horizontal Illuminance	54.4	45	62	1.39	1.21	В	33
Varsity Softball (Outfield)	Horizontal Illuminance	33.9	21	45	2.10	1.61	В	33
West Spill (100' Offset)	Horizontal	0.01	0	0.08	0.00		A,B,C,D,E, F,G,H,I	213
West Spill (100' Offset)	Max Candela (by Fixture)	1348	45.8	3815	83.30	29.44	A,B,C,D,E, F,G,H,I	213

From Hometown to Professional











Calculation Grid Summar	у							
Grid Name	Calculation Metric			Illumination			Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
West Spill (100' Offset)	Max Vertical Illuminance Metric	0.03	0	0.16	591.16		A,B,C,D,E, F,G,H,I	213
West Spill	Horizontal	0.70	0	4.64	17209.83		A,B,C,D,E, F,G,H,I	213
West Spill	Max Candela (by Fixture)	19065	665	48393	72.80	28.68	A,B,C,D,E, F,G,H,I	213
West Spill	Max Vertical Illuminance Metric	1.02	0	4.79	1744.00		A,B,C,D,E, F,G,H,I	213

From Hometown to Professional









EQI	EQUIPMENT LIST FOR AREAS SHOWN							
	P	ole			Luminaires			
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE Type	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1500	4	4	0
1	B1	80'	-	15.5'	TLC-BT-575	1	1	0
				50'	TLC-LED-600	1	1	0
				80'	TLC-LED-1500	6	6	0
1	B2	80'	-	15.5'	TLC-BT-575	1	1	0
				50'	TLC-LED-400	2	2	0
				80'	TLC-LED-1500	6	6	0
4	C1-C2	70'	-	70'	TLC-LED-1500	3	3	0
	D1-D2			15.5'	TLC-BT-575	1	1	0
8			TOTALS			43	43	0

Pole location(s) \bigoplus dimensions are relative to 0,0 reference point(s) \bigotimes

Arroyo Valley High School Athletic Playfields
San Bernardino,CA

RID SUMMARY

Name: Varsity Baseball
Size: Irregular 320' / 357' / 320'
Spacing: 30.0' x 30.0'
Height: 3.0' above grade

ILLUMINATION S	ILLUMINATION SUMMARY						
MAINTAINED HORIZONTAL FOOTCANDLES							
	Infield	Outfield					
Guaranteed Average:	50	30					
Scan Average:	52.19	32.61					
Maximum:	59	46					
Minimum:	40	21					
Avg / Min:	1.31	1.52					
Guaranteed Max / Min:	2	2.5					
Max / Min:	1.49	2.17					
UG (adjacent pts):	1.18	1.46					
CU:	0.74						
No. of Points:	25	98					
LUMINAIRE INFORMATIO	N						
Applied Circuits:	Α						
No. of Luminaires:	43						
Total Load:	51.74 kW						

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.

We Make It Happen.

EQI	EQUIPMENT LIST FOR AREAS SHOWN							
	P	ole			Luminaires			
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE Type	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1500	4	4	0
1	B1	80'	-	15.5'	TLC-BT-575	1	1	0
				50'	TLC-LED-600	1	1	0
				80'	TLC-LED-1500	6	6	0
1	B2	80'	-	15.5'	TLC-BT-575	1	1	0
				50'	TLC-LED-400	2	2	0
				80'	TLC-LED-1500	6	6	0
4	C1-C2	70'	-	70'	TLC-LED-1500	3	3	0
	D1-D2			15.5'	TLC-BT-575	1	1	0
8	8 TOTALS						43	0

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Arroyo Valley High School Athletic Playfields San Bernardino,CA

Rame: VBB 1st Base Bullpen/Batting Cage
Size: Irregular 320' / 357' / 320'
Spacing: 10.0' x 10.0'
Height: 0.0' above grade

ILLUMINATION S	UMMARY
MAINTAINED HORIZONTA	AL FOOTCANDLES
	Entire Grid
Scan Average:	27.54
Maximum:	41
Minimum:	18
Avg / Min:	1.55
Max / Min:	2.31
UG (adjacent pts):	1.38
CU:	0.02
No. of Points:	45
LUMINAIRE INFORMATIO	N
Applied Circuits:	A
No. of Luminaires:	43
Total Load:	51.74 kW

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.

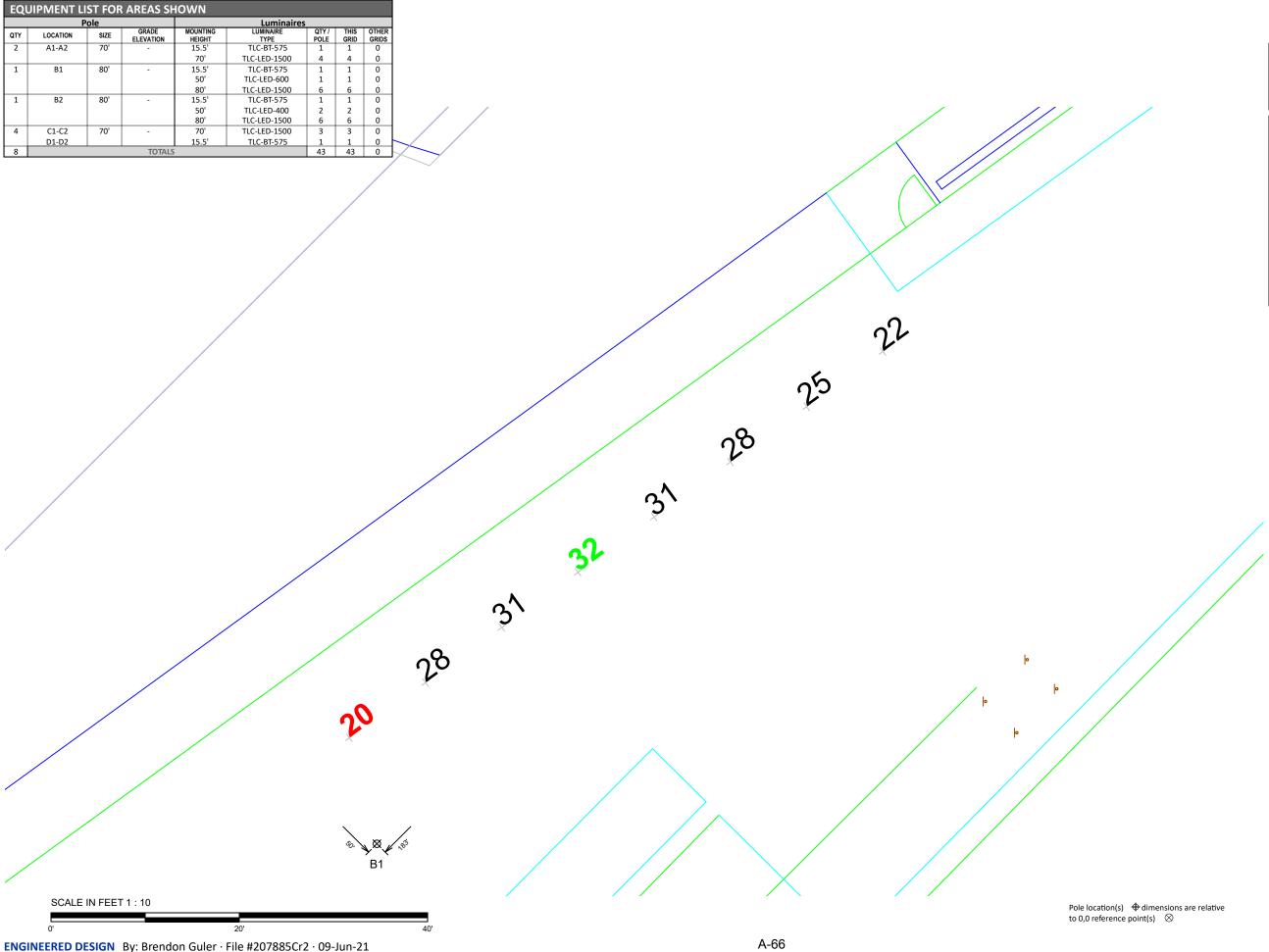
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

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



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to 0,0 reference point(s) \otimes



Rame: VBB 3rd Base Bullpen Size: Irregular 320' / 357' / 320' Spacing: 10.0' x 10.0' Height: 0.0' above grade

ILLUMINATION S	UMMARY
MAINTAINED HORIZONTA	AL FOOTCANDLES
	Entire Grid
Scan Average:	27.15
Maximum:	32
Minimum:	20
Avg / Min:	1.38
Max / Min:	1.63
UG (adjacent pts):	1.40
CU:	0.00
No. of Points:	8
LUMINAIRE INFORMATIO	N
Applied Circuits:	A
No. of Luminaires:	43
Total Load:	51.74 kW

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.

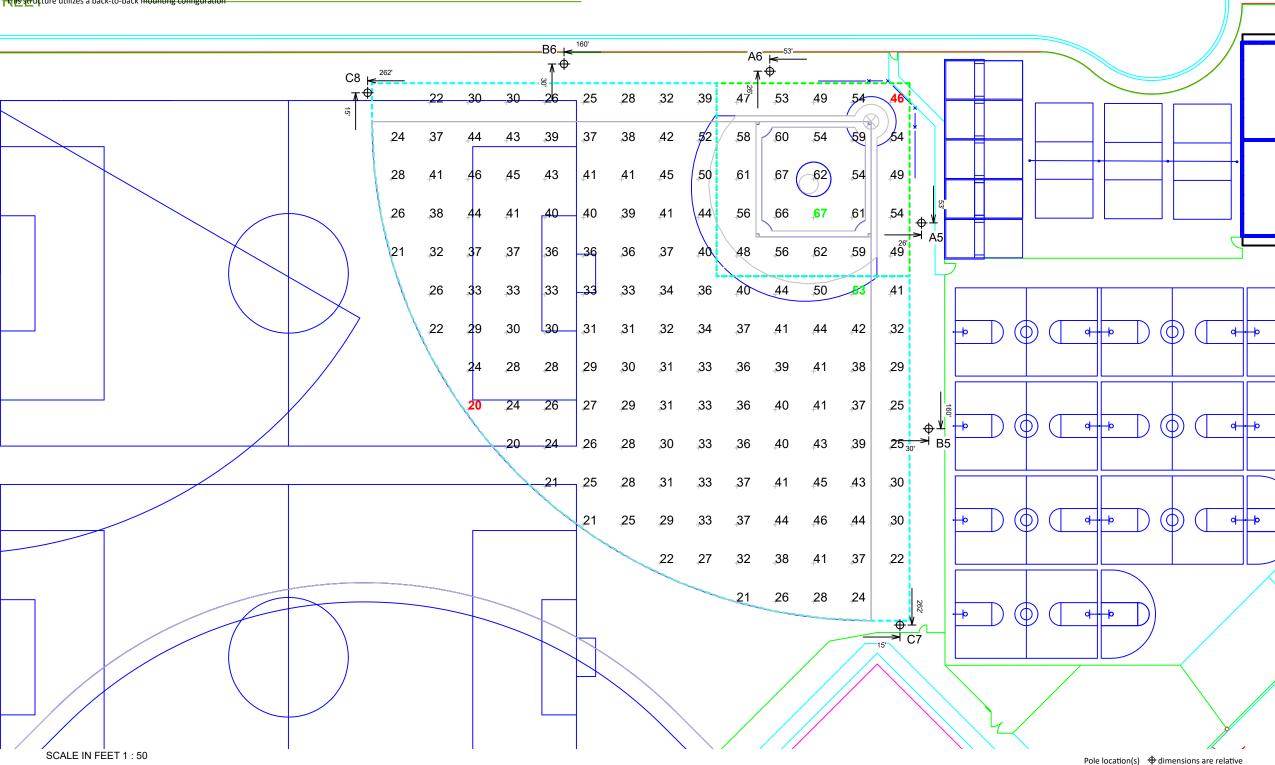
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

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



EQUIPMENT LIST FOR AREAS SHOWN QTY LOCATION SIZE ELEVATION TLC-LED-900 TLC-BT-575 B5-B6 80' 15.5 TLC-LED-1200 80' 80' TLC-LED-900 TLC-BT-575 15.5' TLC-LED-400 60' TLC-LED-1500 C8 15.5' TLC-BT-575 TLC-LED-1500 TOTALS 33 30 3 This structure utilizes a back-to-back mounting configuration

ENGINEERED DESIGN By: Brendon Guler · File #207885Cr2 · 09-Jun-21



Arroyo Valley High School Athletic Playfields San Bernardino,CA

GRID SUMMARY

Name: JV Softball

Size: 260'/260'/260' - basepath 60'

Spacing: 20.0' x 20.0' Height: 3.0' above grade

NATION SUMMARY

ILLUMINATION SUMMARY Infield Outfield **Guaranteed Average:** 34.18 Scan Average: 56.22 Maximum: 67 53 20 Minimum: 46 Avg / Min: 1.21 1.69 Guaranteed Max / Min: Max / Min: 1.45 2.64 1.23 1.68 UG (adjacent pts): CU: 0.71 135 No. of Points: 25 Applied Circuits: D No. of Luminaires: 30 Total Load: 31.93 kW

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.

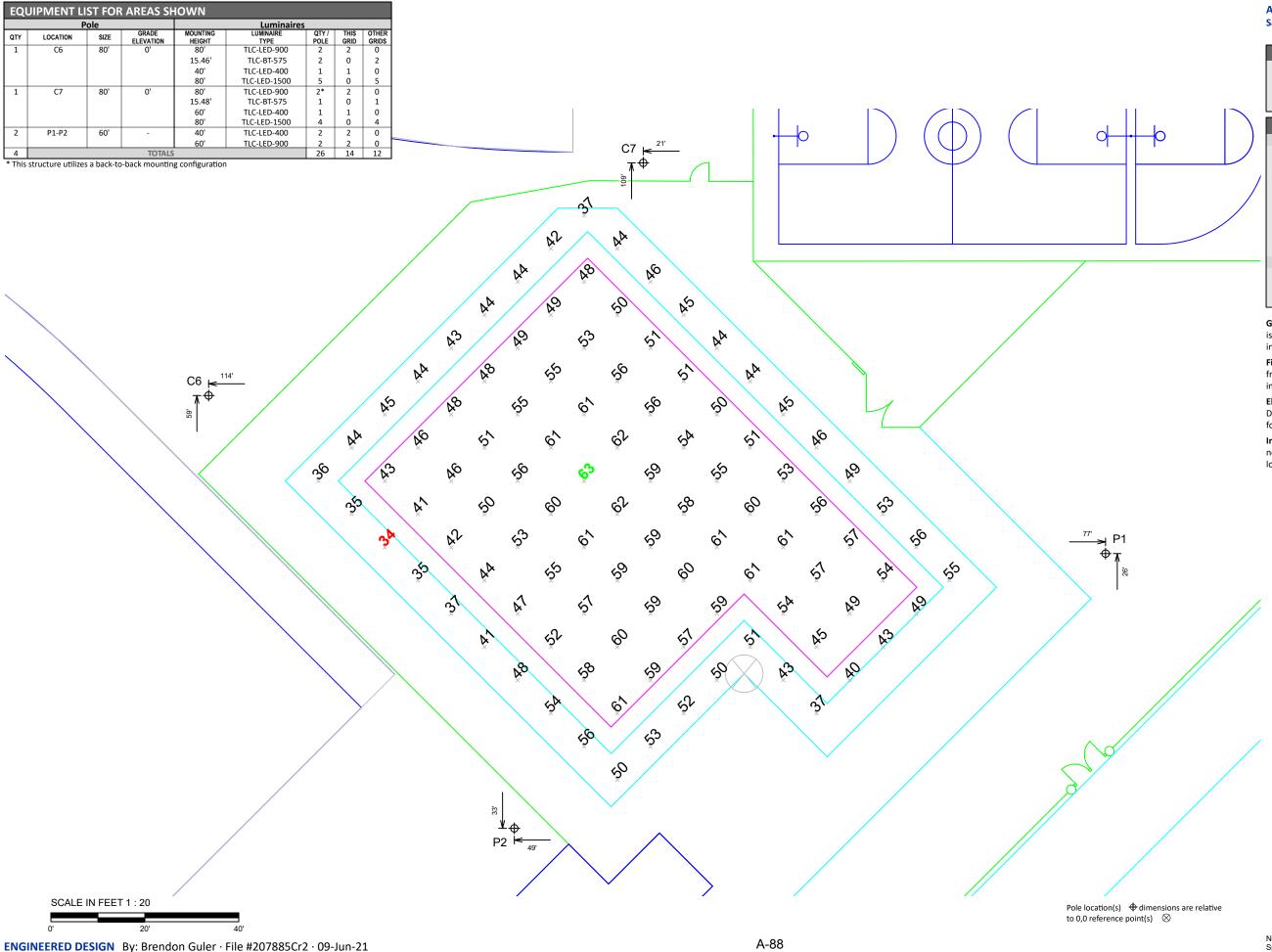
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

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



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to 0,0 reference point(s) \otimes



RID SUMMARY

Name: Pool
Size: 0' x 0'
Spacing: 10.0' x 10.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY Entire Grid Scan Average: Maximum: 63 Minimum: 34 Avg / Min: 1.48 Max / Min: UG (adjacent pts): 1.22 CU: 0.53 No. of Points: 100 LUMINAIRE INFORMATION Applied Circuits: H, I No. of Luminaires: 14 Total Load: 9.52 kW

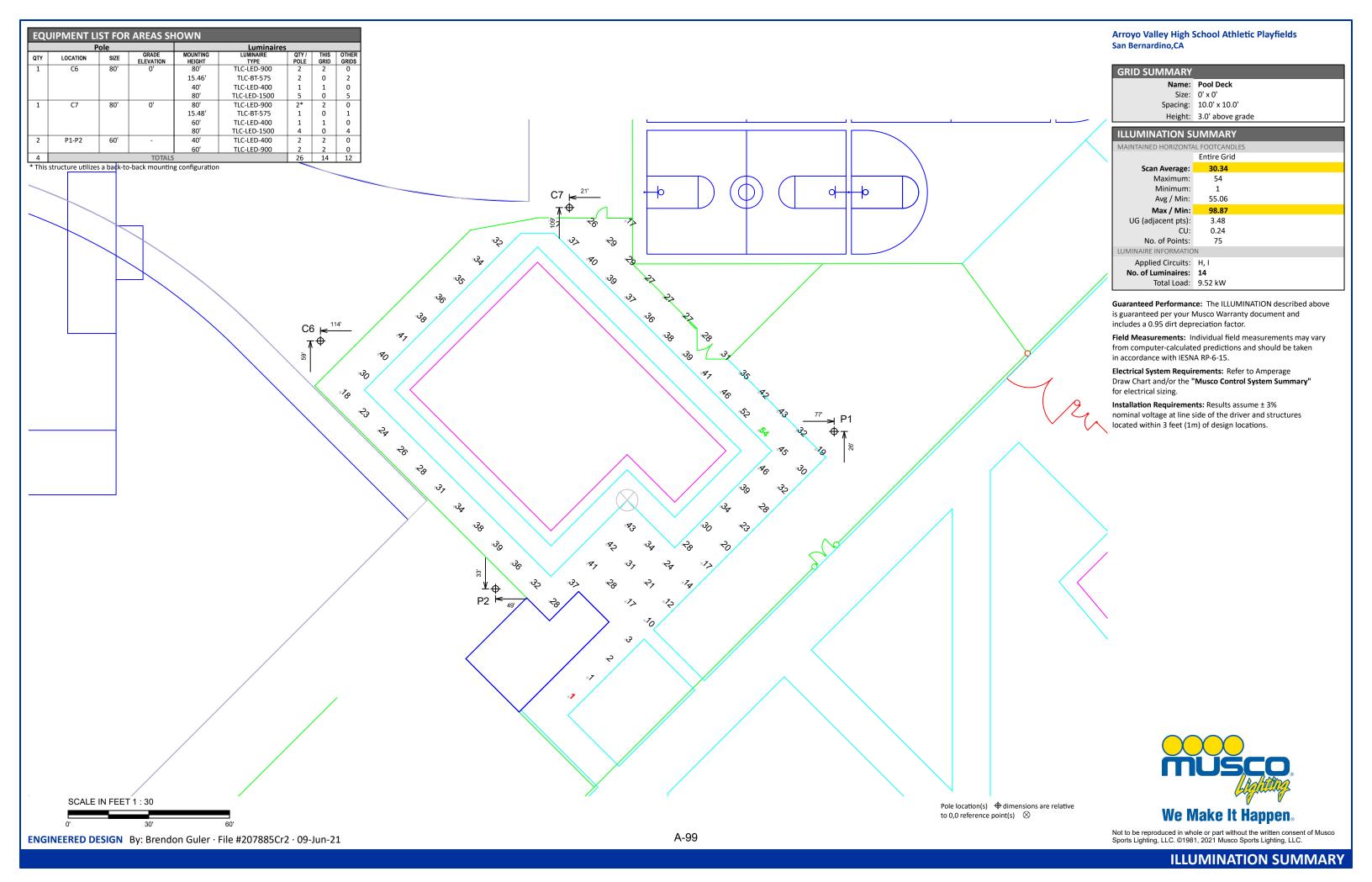
Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

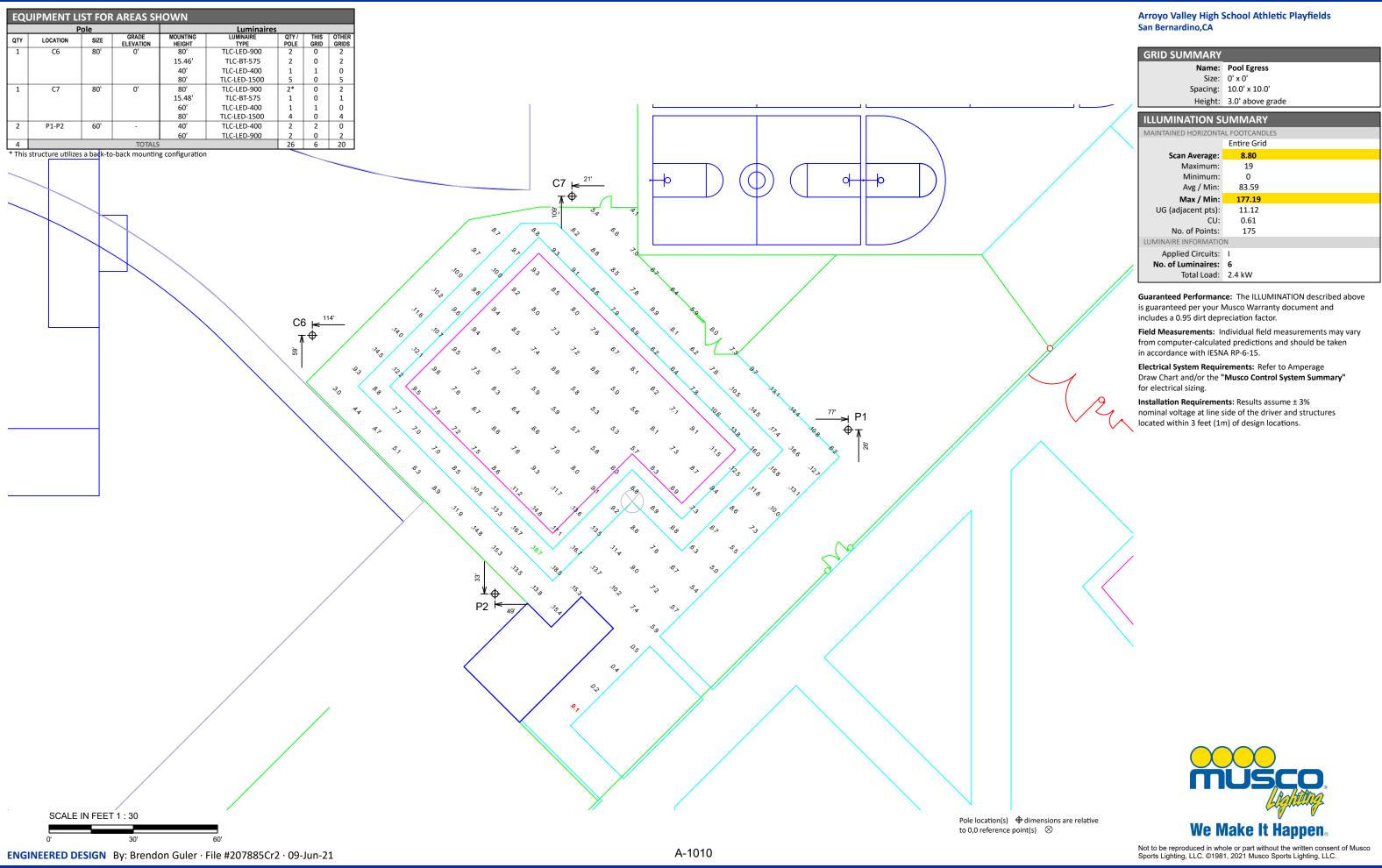
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

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.







EQI	EQUIPMENT LIST FOR AREAS SHOWN							
	P	ole			Luminaires			
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE Type	QTY / POLE	THIS GRID	OTHER GRIDS
1	A7	60'	-	15.5'	TLC-BT-575	1	1	0
				50'	TLC-LED-600	1	1	0
				60'	TLC-LED-900	3	3	0
1	A8	60'	-	15.5'	TLC-BT-575	1	1	0
				60'	TLC-LED-900	3	3	0
2	B7-B8	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1200	6	6	0
2	C3-C4	60'	-	15.5'	TLC-BT-575	1	1	0
				60'	TLC-LED-900	4	4	0
6	6 TOTALS						33	0

Rame: Varsity Softball
Size: 260'/260'/260' - basepath 60'

Spacing: 20.0' x 20.0' Height: 3.0' above grade

ILLUMINATION S	UMMARY		
MAINTAINED HORIZONTA	AL FOOTCANDL	ES	
	Infield	Outfield	
Guaranteed Average:	50	30	
Scan Average:	54.35	33.91	
Maximum:	62	45	
Minimum:	45	21	
Avg / Min:	1.21	1.59	
Guaranteed Max / Min:	2	2.5	
Max / Min:	1.39	2.10	
UG (adjacent pts):	1.22	1.46	
CU:	0.69		
No. of Points:	25	127	
LUMINAIRE INFORMATIO	N		
Applied Circuits:	В		
No. of Luminaires:	33		
Total Load:	30.53 kW		

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

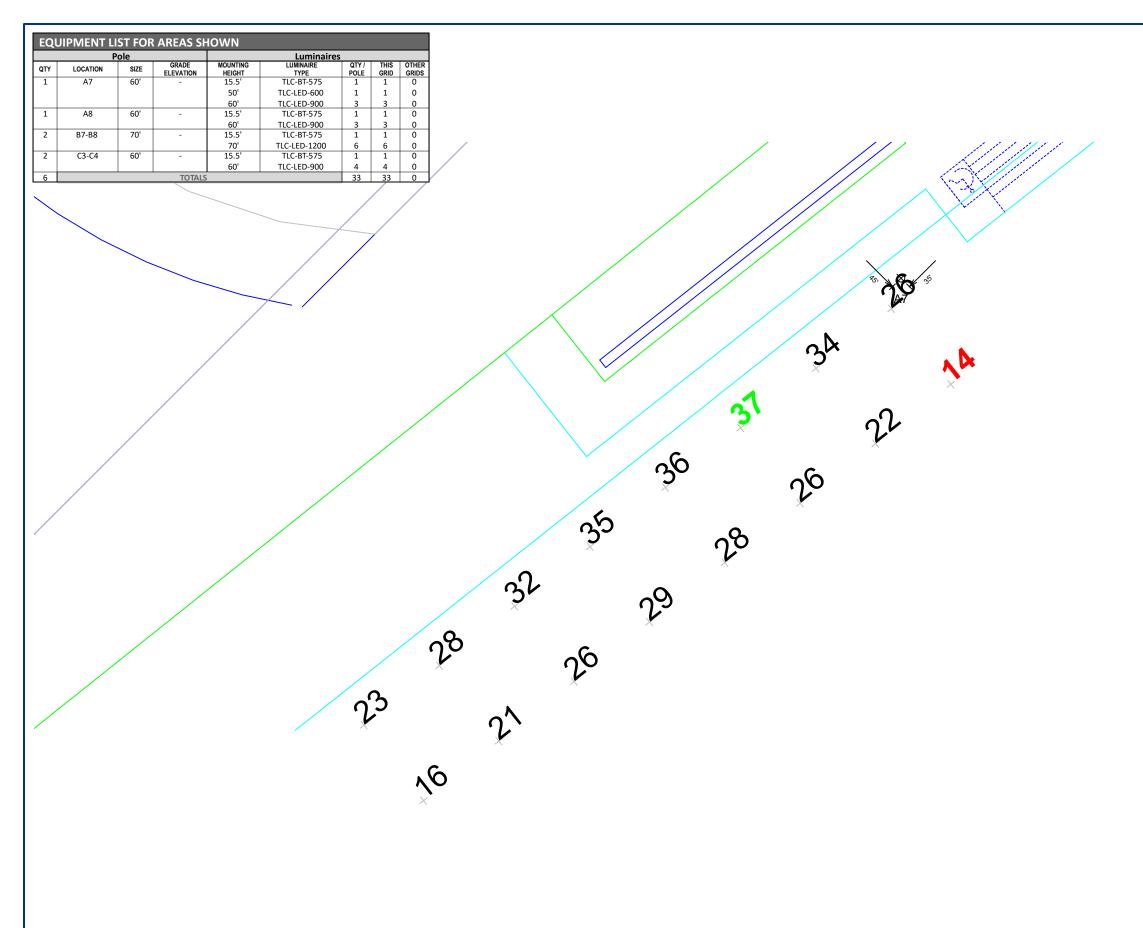
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

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.

We Make It Happen.

Pole location(s) \oplus dimensions are relative to 0,0 reference point(s) \otimes



Rame: VSB Batting Cage
Size: 260'/260'/260' - basepath 60'
Spacing: 10.0' x 10.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY						
MAINTAINED HORIZONTA	MAINTAINED HORIZONTAL FOOTCANDLES					
	Entire Grid					
Scan Average:	26.92					
Maximum:	37					
Minimum:	14					
Avg / Min:	1.93					
Max / Min:	2.65					
UG (adjacent pts):	1.83					
CU:	0.01					
No. of Points:	16					
LUMINAIRE INFORMATION						
Applied Circuits:	В					
No. of Luminaires:	33					
Total Load:	30.53 kW					

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

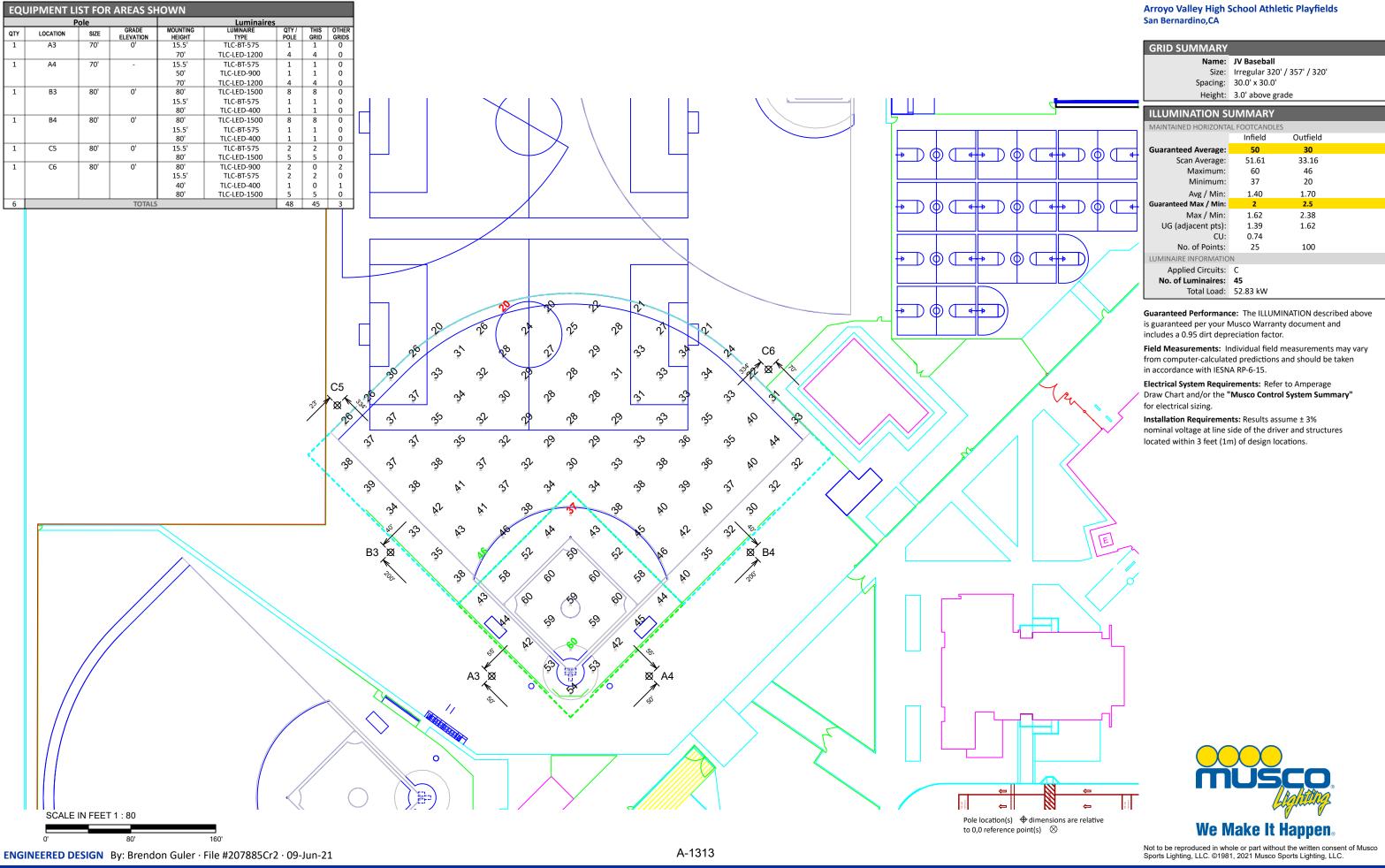
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

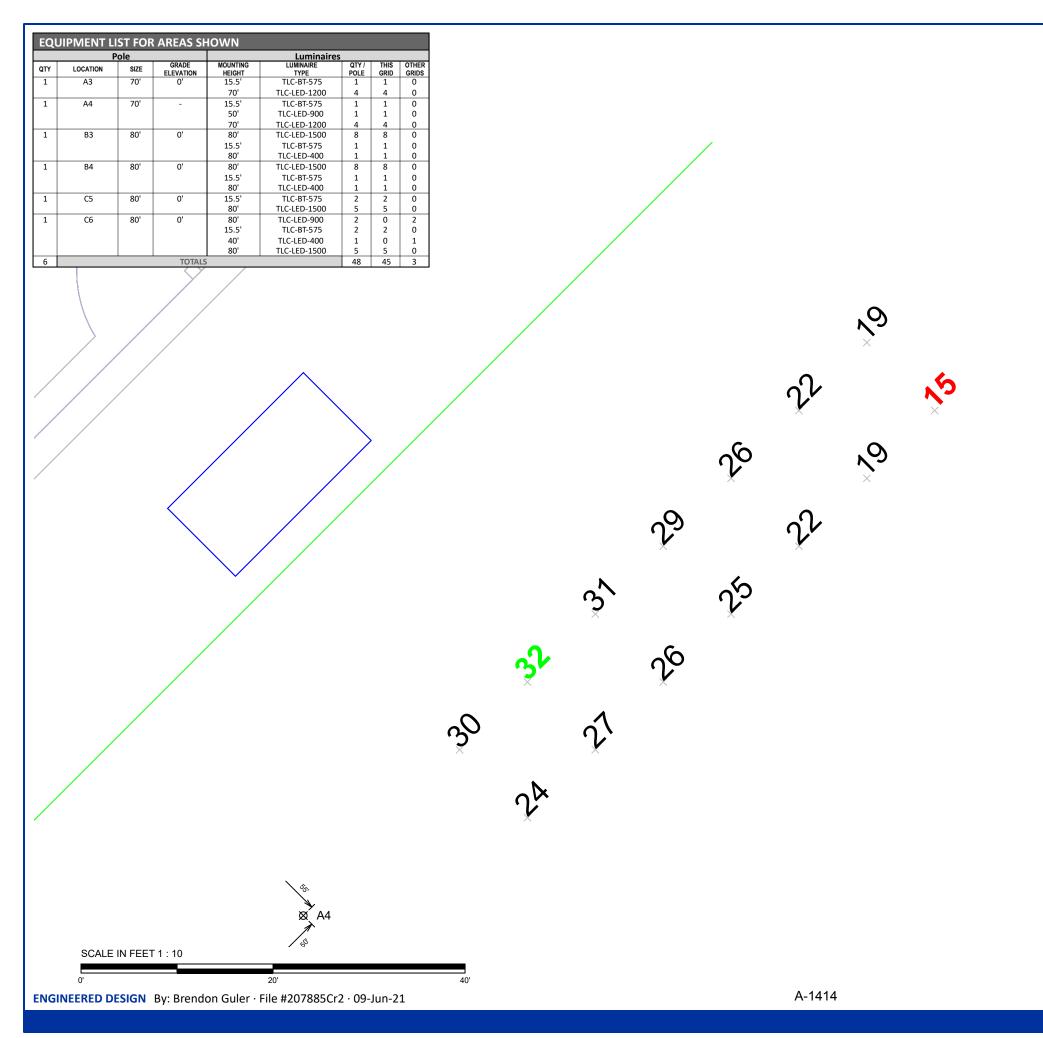
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

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



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RID SUMMARY

Name: JVBB Bullpen
Size: Irregular 320' / 357' / 320'
Spacing: 10.0' x 10.0'
Height: 0.0' above grade

ILLUMINATION SUMMARY				
MAINTAINED HORIZONTA	AL FOOTCANDLES			
	Entire Grid			
Scan Average:	24.79			
Maximum:	32			
Minimum:	15			
Avg / Min:	1.62			
Max / Min:	2.10			
UG (adjacent pts):	1.23			
CU:	0.01			
No. of Points:	14			
LUMINAIRE INFORMATION				
Applied Circuits:	С			
No. of Luminaires:	45			
Total Load:	52.83 kW			

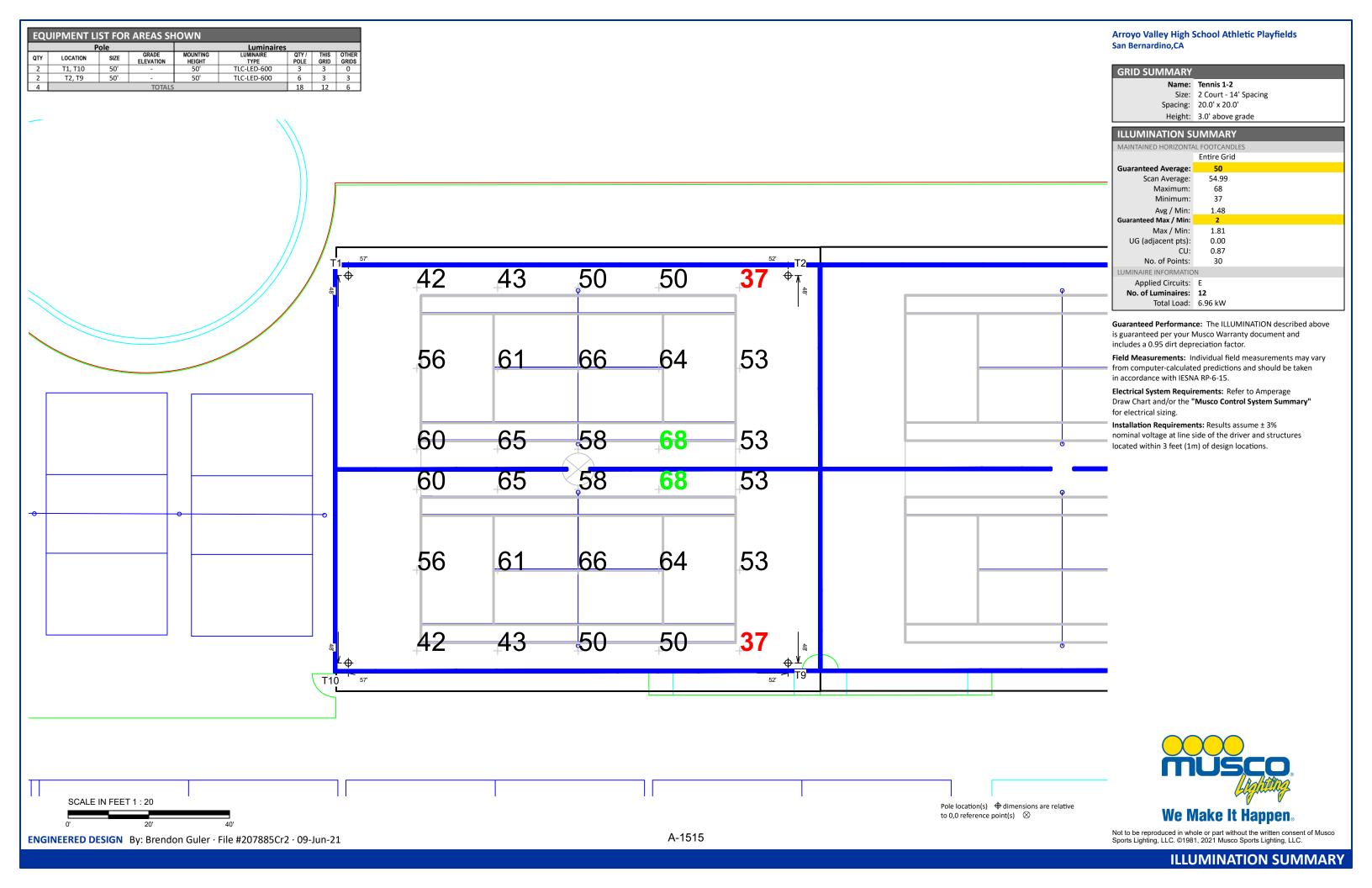
Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

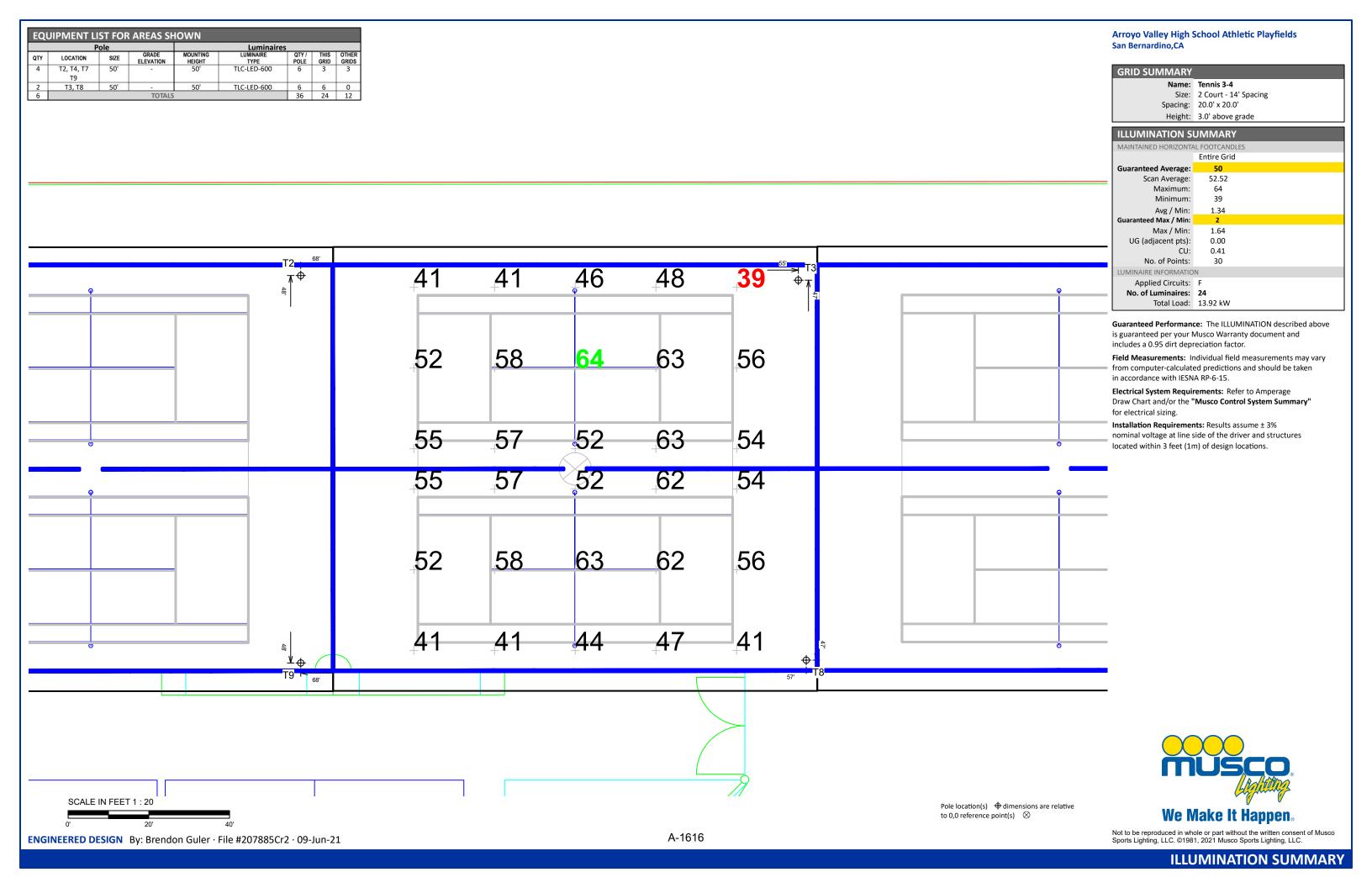
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

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.







According to the American American Service 1997									
## 1	Pole Luminaires								Arroyo Valley High School Athletic Playfields San Bernardino,CA
Management Annual 1	4 T2, T4, T7 50' - 50' TLC-LED-600 6 3 3 T9								Name: Tennis 5-6 Size: 2 Court - 14' Spacing Spacing: 20.0' x 20.0'
## A									ILLUMINATION SUMMARY
150 150									Entire Grid
## 40 # 41 # 42 # 41 # 5 # 5 # 5 # 5 # 5 # 5 # 5 # 5 # 5 #									Scan Average: 51.56
40 41 41 42 42 41									Avg / Min: 1.29
40 41 41 42 42 41 6 5 6 59 63 60 52 6 6 59 63 60 52 6 6 59 63 60 52 6 6 59 63 60 52 6 6 6 59 63 60 52 6 6 6 59 63 60 52 6 6 6 59 63 60 52 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6									Max / Min: 1.56
40 41 41 42 42 42 42 41 41 42 42 42 42 42 41 41 42 42 42 42 42							68'		CU: 0.41
Social National 1 to 100 to 1		40	41	41	42	41	14		LUMINAIRE INFORMATION
Scanned Pertanente: The BLUMINGTON described above and a 30 of interpretation for the BLUMINGTON described above and a 30 of	47	+ • •	+ • •	φ''	+ • —	+ ' '	48.	φ	No. of Luminaires: 24
56 59 62 59 52 Secondary of the Company of the C									Guaranteed Performance: The ILLUMINATION described above
SCALE IN PERT 1 - 20 SCALE IN PERT 1 - 20				0.0					is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.
Becard Specimen Requirements: Before to Approaga The Color and the Privacy Control Speciments Speciments To reduce in James Control To red		56	59	62	59	52			from computer-calculated predictions and should be taken
Description for the "Mass of Description Systems Summary" for occurring only beauting a signal a sig									Electrical System Requirements: Refer to Amperage
54 61 51 57 54 contents votage at the Sole of the offere and structures to coated with a Seet (Int) of deeply locations. 54 61 51 57 54 56 59 63 60 52 41 42 42 41 SCALE IN FEET 1:20 We Make It Happun.									Draw Chart and/or the "Musco Control System Summary"
54 61 51 57 54 56 59 63 60 52 41 42 42 41 To leave the going of the state of the		51	61	51	57	51			Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures
56 59 63 60 52 41 42 42 41 SCALE IN FEET 1: 20 We Make It Namen.	O	-54	-O I		51	54		0	located within 3 feet (1m) of design locations.
56 59 63 60 52 41 42 42 41 SCALE IN FEET 1: 20 We Make It Happen.		54	61	51	57	54			_
SCALE IN FEET 1: 20 SCALE IN FEET 1: 20 We Make It Happen.	Φ		+0 1				-	φ	_
SCALE IN FEET 1: 20 SCALE IN FEET 1: 20 We Make It Happen.						\neg			_
SCALE IN FEET 1: 20 SCALE IN FEET 1: 20 We Make It Happen.		L.							
SCALE IN FEET 1: 20 Pole location(s) # dimensions are relative to 0,0 reference point(s) We Make It Happen.		.56	59	63	60	52			_
SCALE IN FEET 1: 20 Pole location(s) # dimensions are relative to 0,0 reference point(s) We Make It Happen.									
SCALE IN FEET 1: 20 Pole location(s) # dimensions are relative to 0,0 reference point(s) We Make It Happen.									
SCALE IN FEET 1: 20 Pole location(s) # dimensions are relative to 0,0 reference point(s) We Make It Happen.		11	42	42	12	11			_
SCALE IN FEET 1: 20 Pole location(s)	· .l.	41	42	#2	42		, d	Ö	
SCALE IN FEET 1 : 20 Pole location(s)	i i i i i i i i i i i i i i i i i i i						68' T7		-
SCALE IN FEET 1 : 20 Pole location(s)									_
SCALE IN FEET 1 : 20 Pole location(s)									
SCALE IN FEET 1 : 20 Pole location(s)									
SCALE IN FEET 1 : 20 Pole location(s)									- MUSCO.
to 0,0 reference point(s) \otimes We Make It Happen									Lighting.
								Pole location(s) \oplus dimensions are relative to 0,0 reference point(s) \otimes	We Make It Happen

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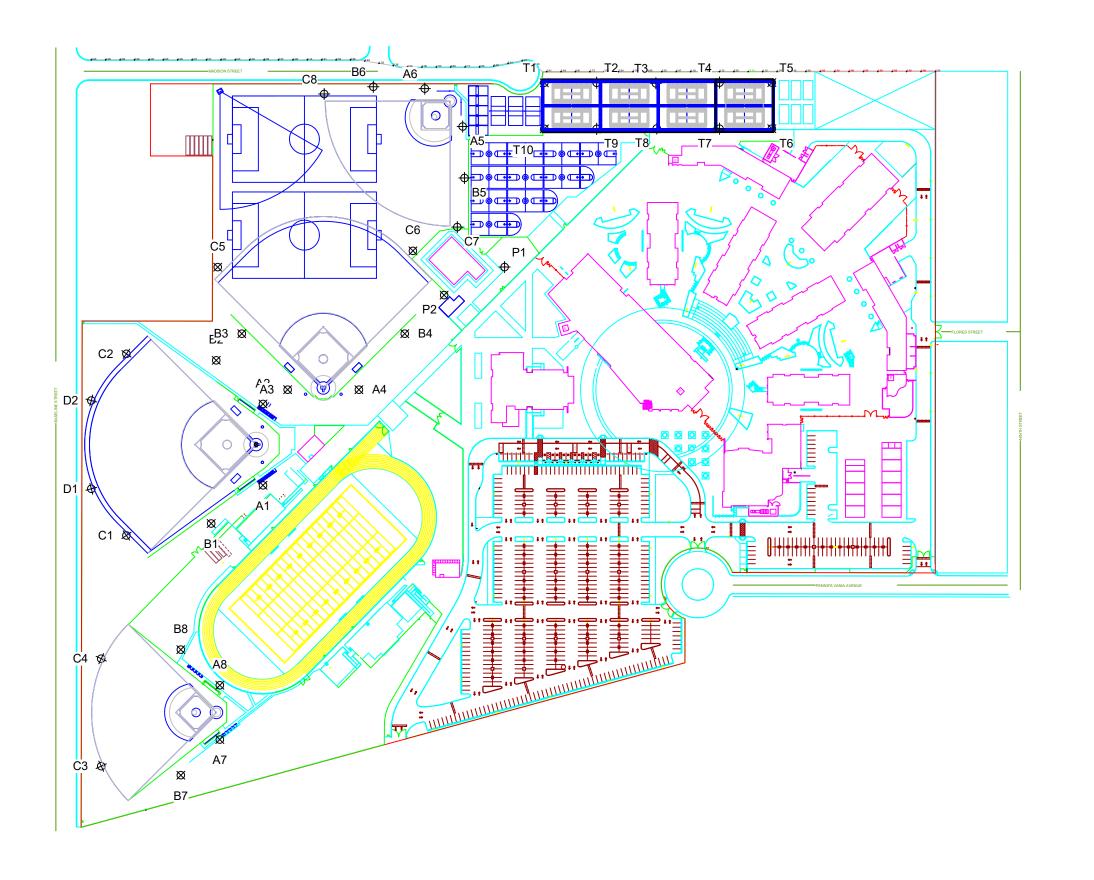
EQUIPMENT LIST FOR AREAS SHOWN Pole Luminaires								Arroyo Valley High School Athletic Playfields San Bernardino,CA
QTY LOCATION SIZE GRADE MOUNTING LUMINAIRE QTY THE POLE GRADE TYPE POLE GRADE TOTALS TOTALS TUMINAIRE QTY THE POLE GRADE TUMINAIRE QTY THE POLE TUMINAIRE QTY TUMINAIRE QTY THE POLE TUMINAIRE QTY Q	0							GRID SUMMARY Name: Tennis 7-8 Size: 2 Court - 14' Spacing Spacing: 20.0' x 20.0' Height: 3.0' above grade
								ILLUMINATION SUMMARY MAINTAINED HORIZONTAL FOOTCANDLES Entire Grid Guaranteed Average: 50 Scan Average: 52.99
								Maximum: 67 Minimum: 35 Avg / Min: 1.51 Guaranteed Max / Min: 2 Max / Min: 1.89 UG (adjacent pts): 0.00
φ	T4 🙀	35	48	48	44	40	57' → T5	CU: 0.84 No. of Points: 30 LUMINAIRE INFORMATION Applied Circuits: G No. of Luminaires: 12 Total Load: 6.96 kW
		51	61	67	62	54		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"
0		48	66	51	59	62		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.
•		48	66	51	59	62		
		51	61	67	62	₅ 54		
	T77 52'	35	48	48	44	40	⊕ 1	
	52					5	57	





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A-1818



GRID SUMMARY

Name: North Spill
Spacing: 30.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY

HORIZONTAL FOOTCANDLES

Entire Grid

Scan Average: 1.8880

Maximum: 12.25

Minimum: 0.00

No. of Points: 60

LUMINAIRE INFORMATION

Applied Circuits: A, B, C, D, E, F, G, H, I

213

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Total Load: 204.39 kW

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

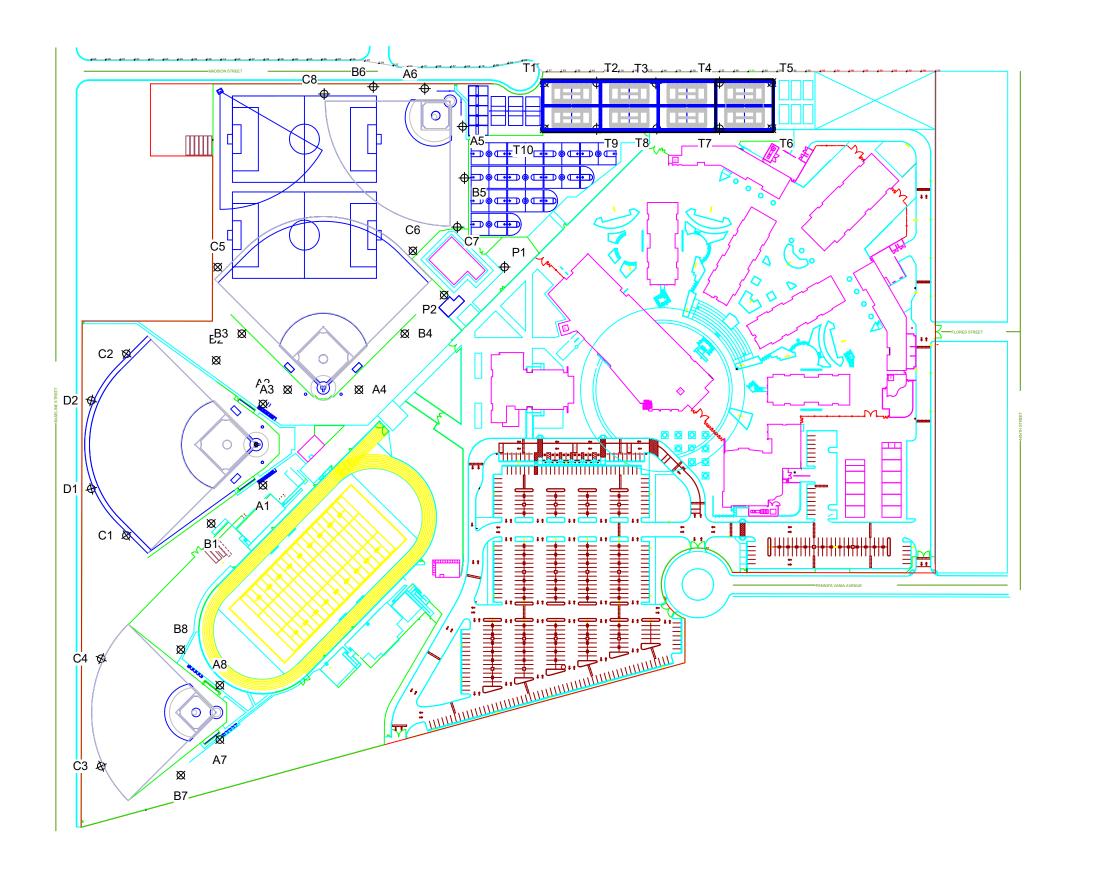
Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

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



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Pole location(s) \bigoplus dimensions are relative to 0,0 reference point(s) \bigotimes



Name: North Spill
Spacing: 30.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY

MAX VERTICAL FOOTCANDLES

Entire Grid
2.3633

Maximum: 10.95
Minimum: 0.00
No. of Points: 60

LUMINAIRE INFORMATION

Applied Circuits: A, B, C, D, E, F, G, H, I

No. of Luminaires: 213
Total Load: 204.39 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 and should be taken in accordance with IESNA RP-6-15.

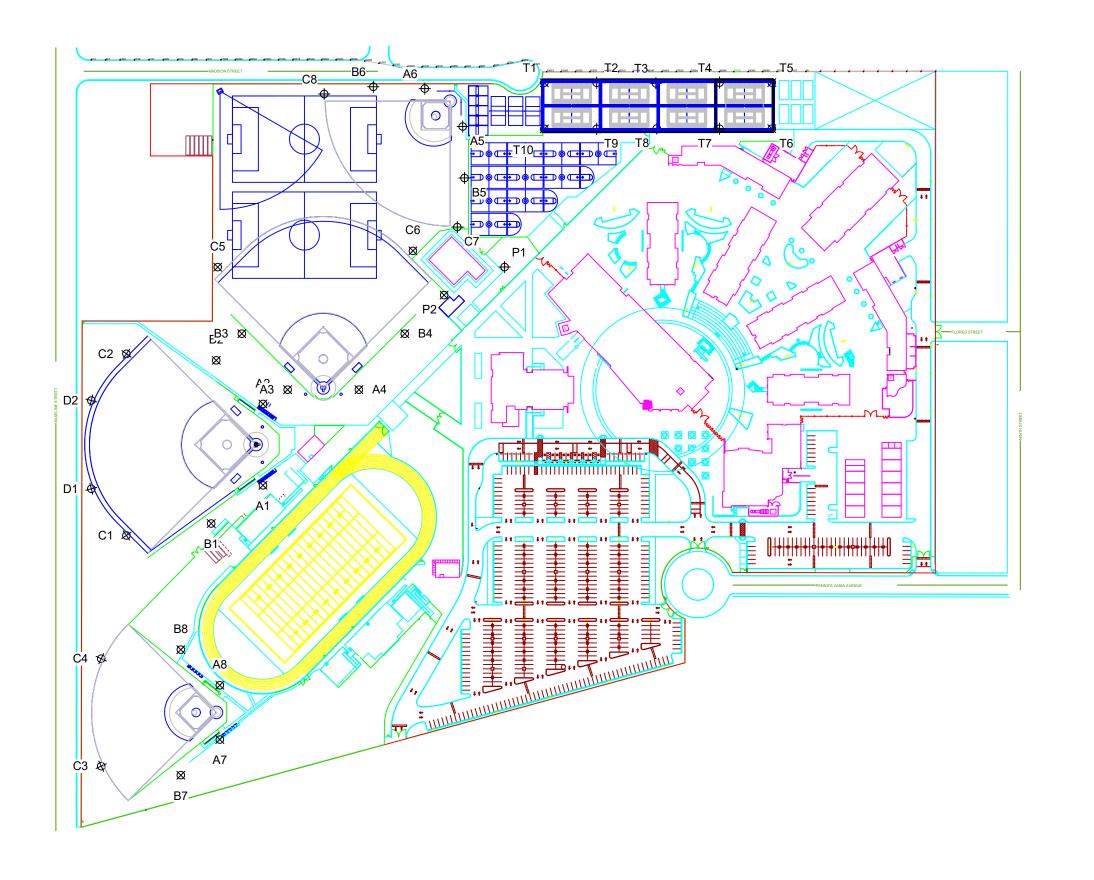
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "**Musco Control System Summary**" for electrical sizing.

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



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Pole location(s) \bigoplus dimensions are relative to 0,0 reference point(s) \bigotimes



RID SUMMARY

Name: North Spill
Spacing: 30.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY

CANDELA (PER FIXTURE)

Entire Grid

25133.2734

57636.39

0.00

No. of Points:
60

LUMINAIRE INFORMATION

Applied Circuits:
No. of Luminaires:
Total Load:
204.39 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 and should be taken in accordance with IESNA RP-6-15.

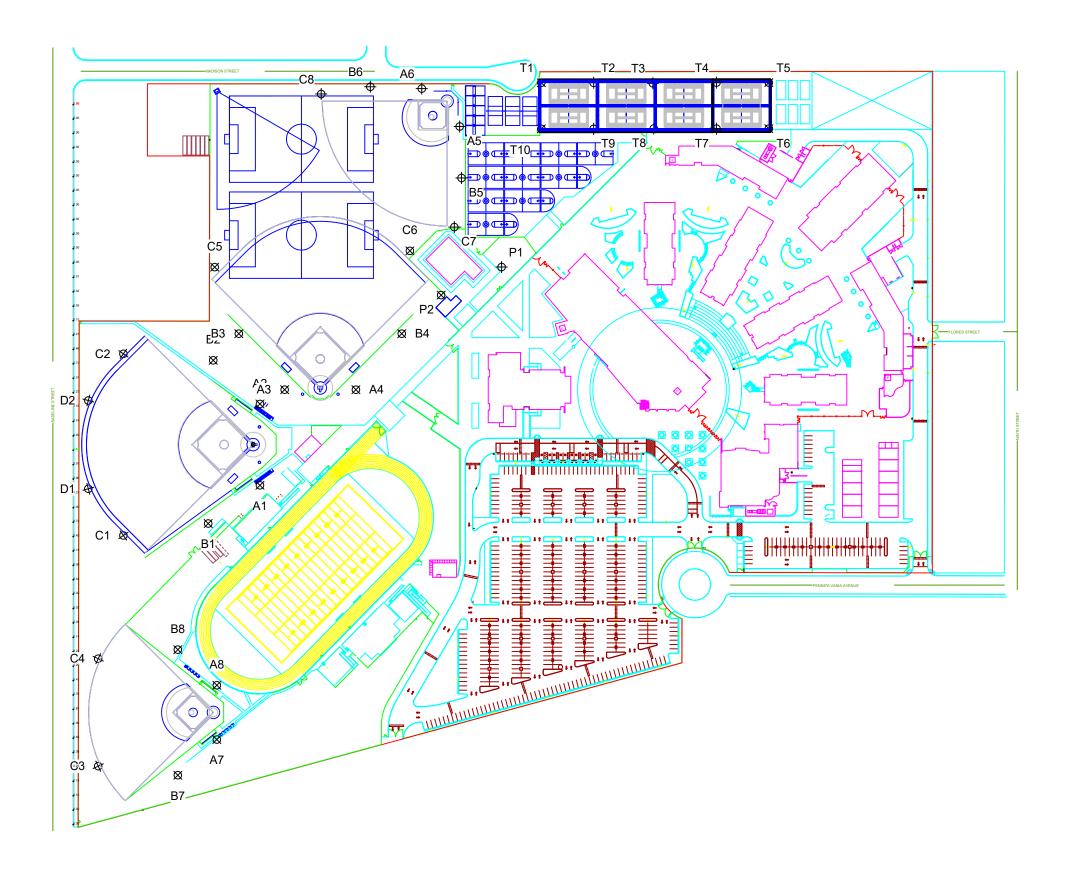
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

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



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Pole location(s) \bigoplus dimensions are relative to 0,0 reference point(s) \bigotimes



Pole location(s) \oplus dimensions are relative to 0,0 reference point(s) \otimes

Arroyo Valley High School Athletic Playfields San Bernardino,CA

Rame: West Spill
Spacing: 30.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY

HORIZONTAL FOOTCANDLES

Entire Grid

Scan Average: 0.7044

Maximum: 4.64

Minimum: 0.00

No. of Points: 51

LUMINAIRE INFORMATION

Applied Circuits: A, B, C, D, E, F, G, H, I

No. of Luminaires: 213

Total Load: 204.39 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document

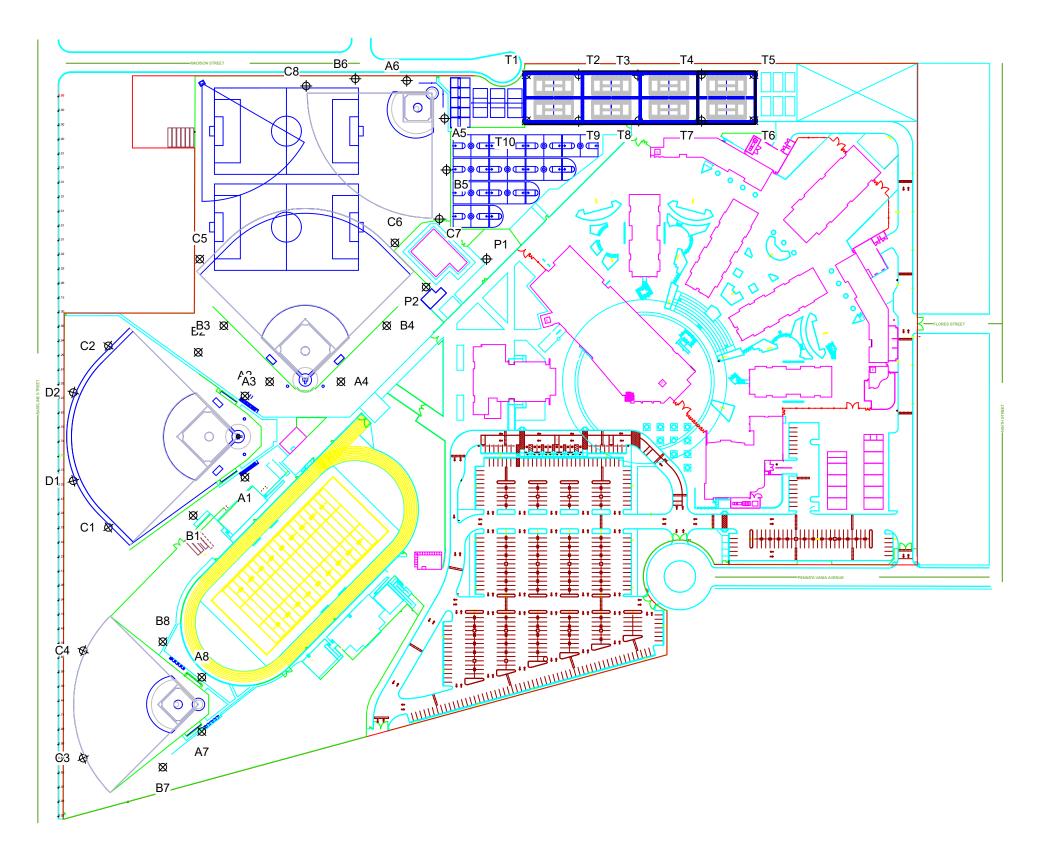
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

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.



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Pole location(s) \oplus dimensions are relative to 0,0 reference point(s) \otimes

Arroyo Valley High School Athletic Playfields San Bernardino,CA

Rame: West Spill Spacing: 30.0' Height: 3.0' above grade

ILLUMINATION SUMMARY								
MAX VERTICAL FOOTCAN	MAX VERTICAL FOOTCANDLES							
	Entire Grid							
Scan Average:	1.0177							
Maximum:	4.79							
Minimum:	0.00							
No. of Points:	51							
LUMINAIRE INFORMATIO	N							
Applied Circuits:	A, B, C, D, E, F, G, H, I							
No. of Luminaires:	213							
Total Load:	204.39 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 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.

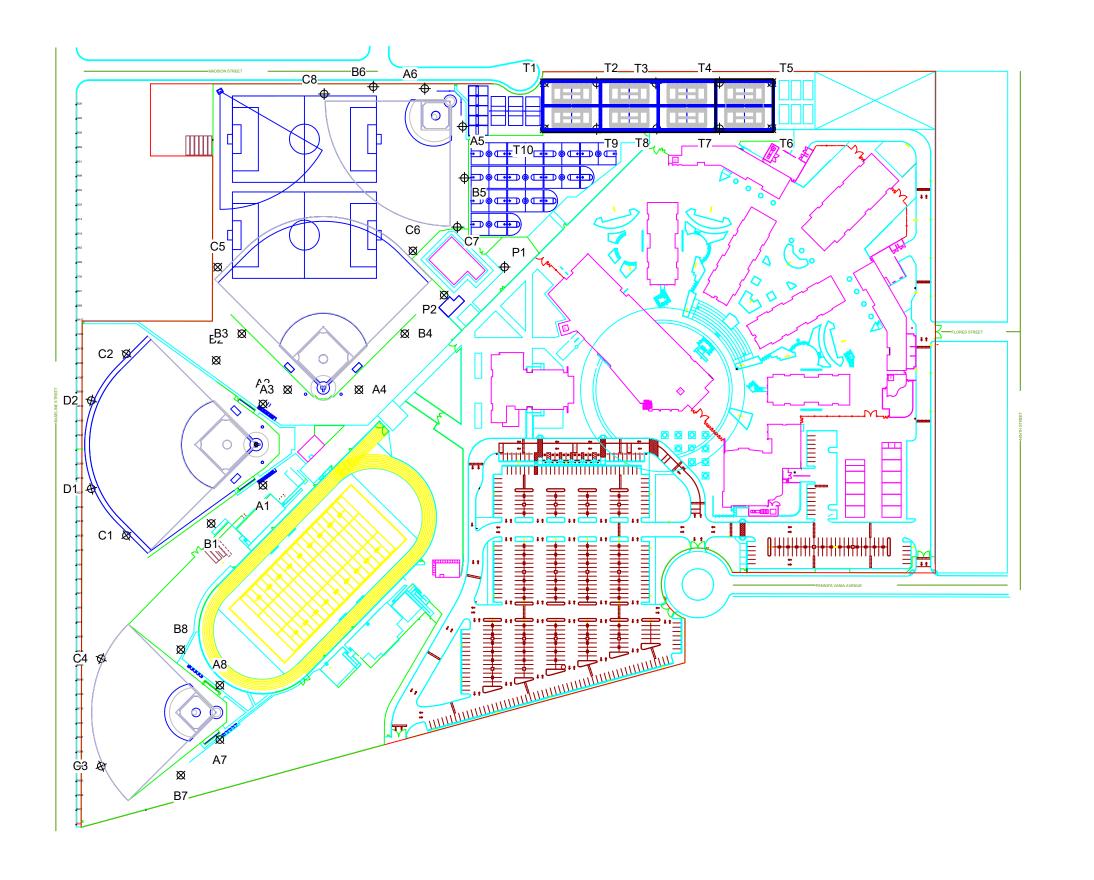
Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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SCALE IN FEET 1:200

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Arroyo Valley High School Athletic Playfields San Bernardino,CA

GRID SUMMARY Name: West Spill Spacing: 30.0' Height: 3.0' above grade

ILLUMINATION SUMMARY

CANDELA (PER FIXTURE)

Entire Grid
19064.9629

Maximum:
Minimum:
664.75
No. of Points:
51

LUMINARE INFORMATION

Applied Circuits:
No. of Luminaires:
Total Load:
204.39 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

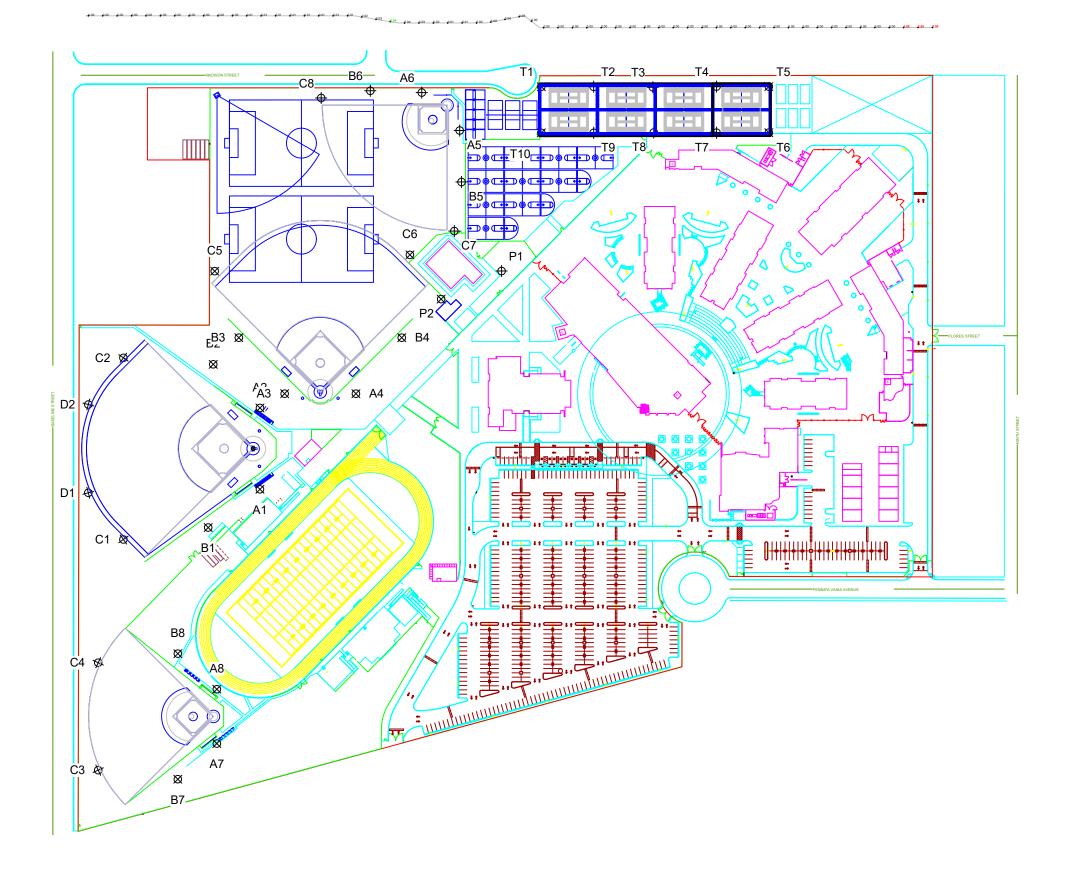
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

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.



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A-2525

Arroyo Valley High School Athletic Playfields San Bernardino,CA

GRID SUMMARY

Name: North Spill (100' offset)

Spacing: 30.0'

Height: 3.0' above grade

ILLUMINATION SUMMARY

HORIZONTAL FOOTCANDLES

Scan Average: 0.0051
Maximum: 0.04

Minimum: 0.00 No. of Points: 60

LUMINAIRE INFORMATION

Applied Circuits: A, B, C, D, E, F, G, H, I

No. of Luminaires: 213
Total Load: 204.39 kW

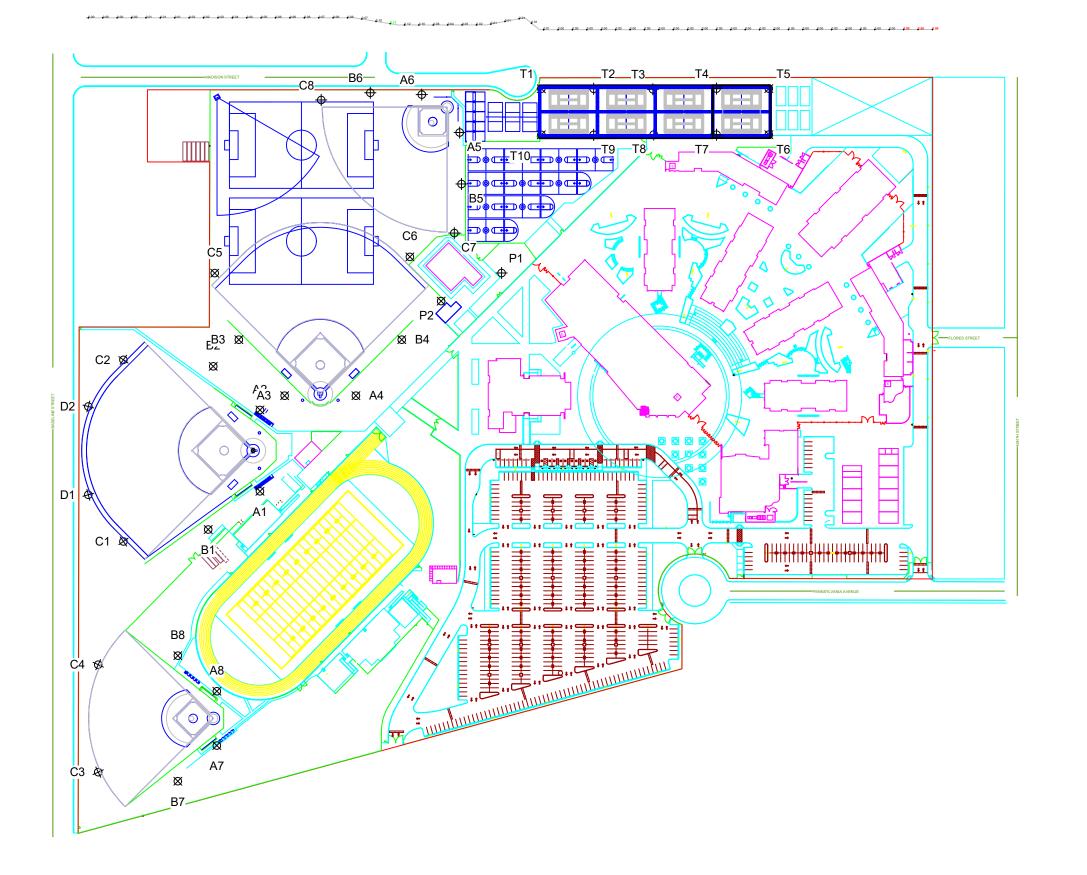
Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions 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.





GRID SUMMARY

Name: North Spill (100' offset)

Spacing: 30.0'
Height: 3.0' at

Height: 3.0' above grade

ILLUMINATION SUMMARY

MAX VERTICAL FOOTCANDLES

Entire Grid
Scan Average: 0.0221

Maximum: 0.13
Minimum: 0.00
No. of Points: 60

LUMINAIRE INFORMATION

Applied Circuits: A, B, C, D, E, F, G, H, I

No. of Luminaires: 213

Total Load: 204.39 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 and should be taken in accordance with IESNA RP-6-15.

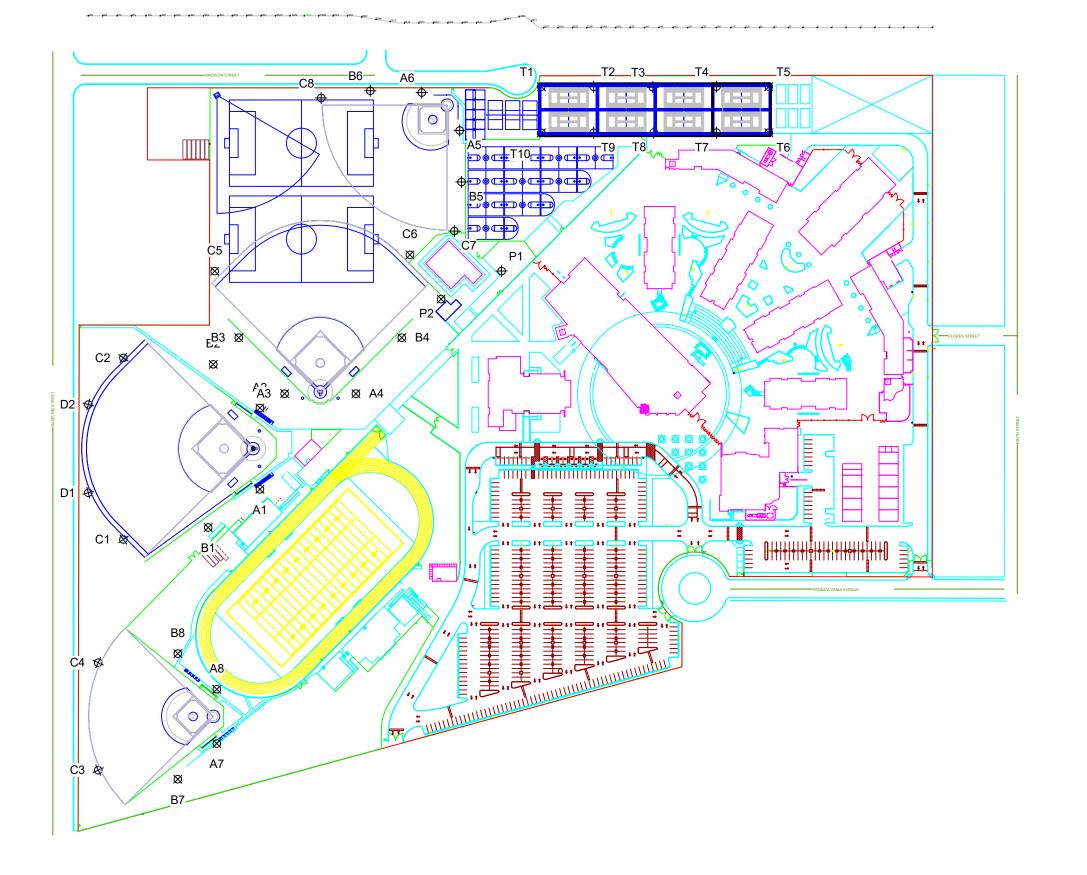
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

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



to 0,0 reference point(s) \otimes

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GRID SUMMARY

Name: North Spill (100' offset)

Spacing: 30.0'

Height: 3.0' above grade

ILLUMINATION SUMMARY

CANDELA (PER FIXTURE)

Entire Grid

Scan Average: 2607.3354

Maximum: 12279.51

Minimum: 0.00

No. of Points: 60

No. of Points: LUMINAIRE INFORMATION

Applied Circuits: A, B, C, D, E, F, G, H, I

No. of Luminaires: 213
Total Load: 204.39 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty

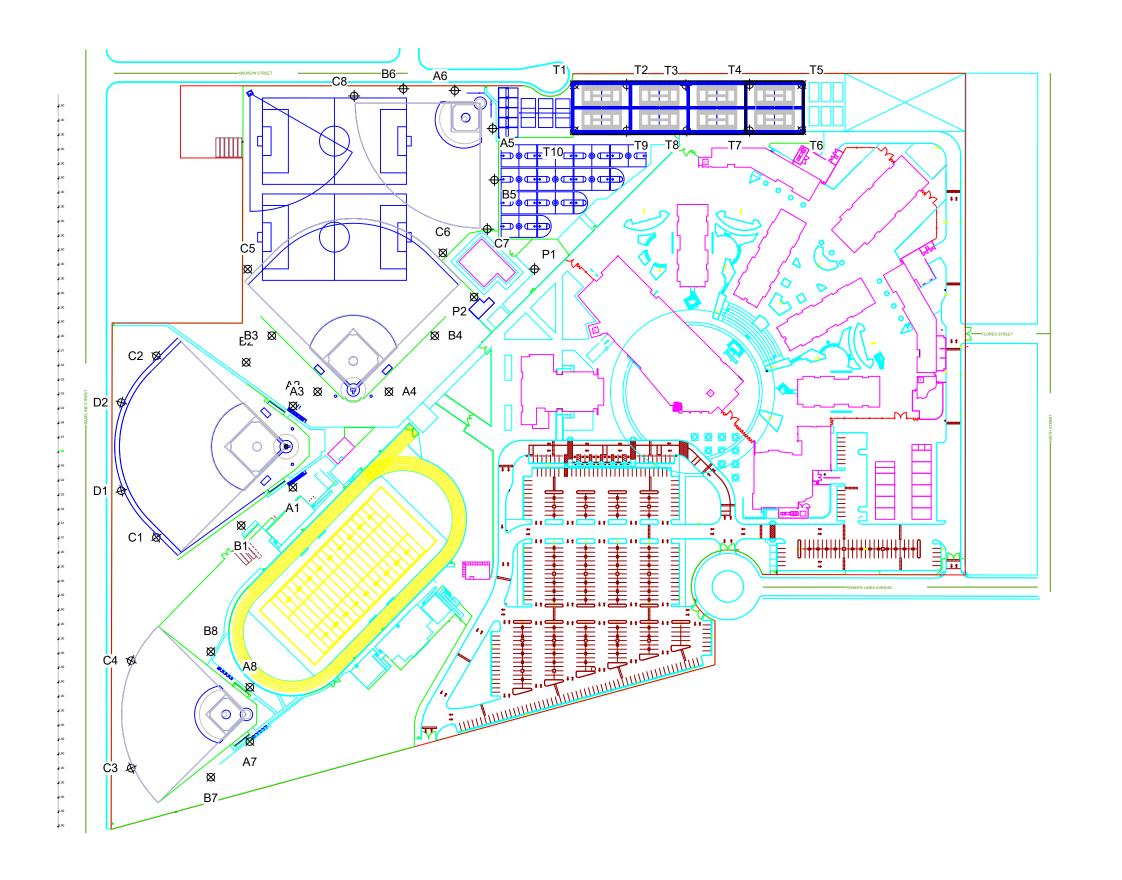
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

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.



to 0,0 reference point(s) \otimes



GRID SUMMARY

Name: West Spill (100' Offset)

Spacing: 30.0'
Height: 3.0' ah

Height: 3.0' above grade

ILLUMINATION SUMMARY

HORIZONTAL FOOTCANDLES

Entire Grid
Scan Average: 0.0093

Maximum: 0.08

Minimum: 0.00
No. of Points: 51
LUMINAIRE INFORMATION

Applied Circuits: A, B, C, D, E, F, G, H, I

No. of Luminaires: 213
Total Load: 204.39 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

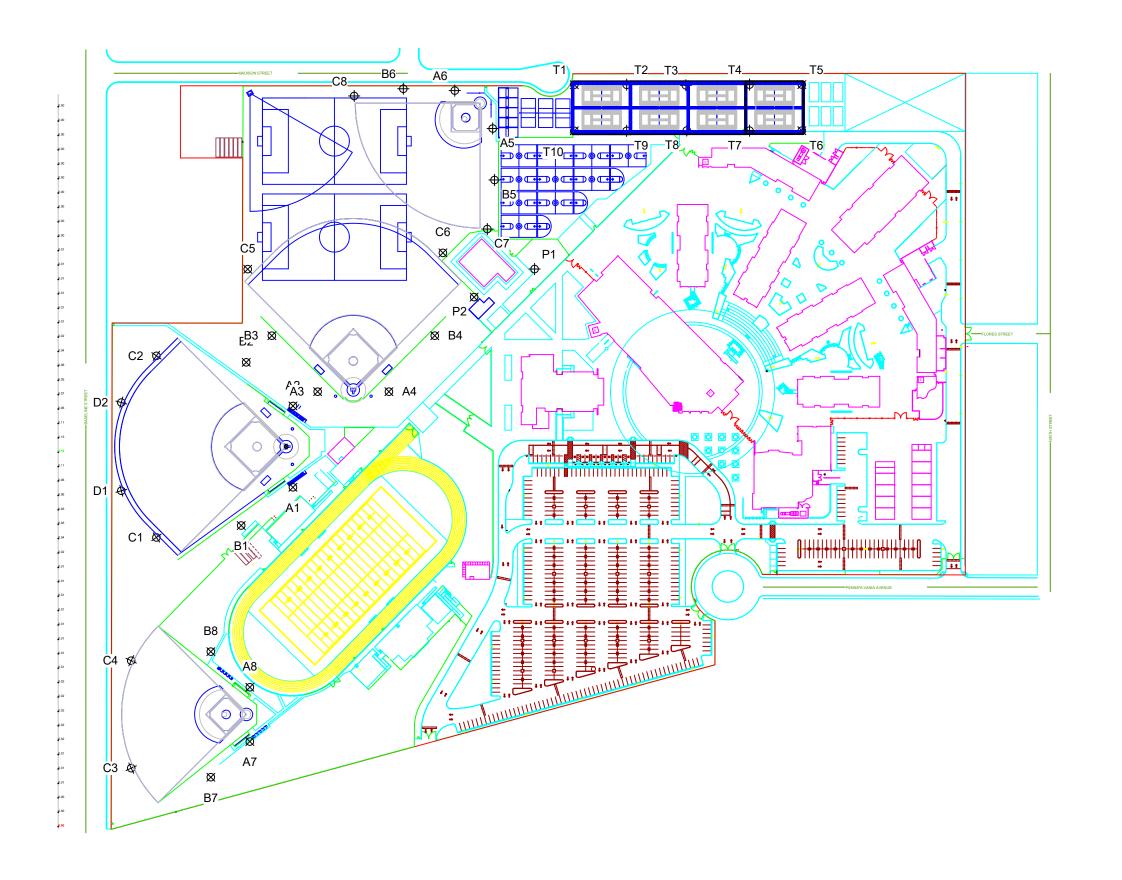
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

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.



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A-2929

Arroyo Valley High School Athletic Playfields San Bernardino,CA

GRID SUMMARY

Name: West Spill (100' Offset)

Spacing: 30.0'

Height: 3.0' above grade

ILLUMINATION SUMMARY

MAX VERTICAL FOOTCANDLES

Entire Grid
Scan Average: 0.0275

Maximum: 0.16

Minimum: 0.00
No. of Points: 51
LUMINAIRE INFORMATION

Applied Circuits: A, B, C, D, E, F, G, H, I

No. of Luminaires: 213
Total Load: 204.39 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

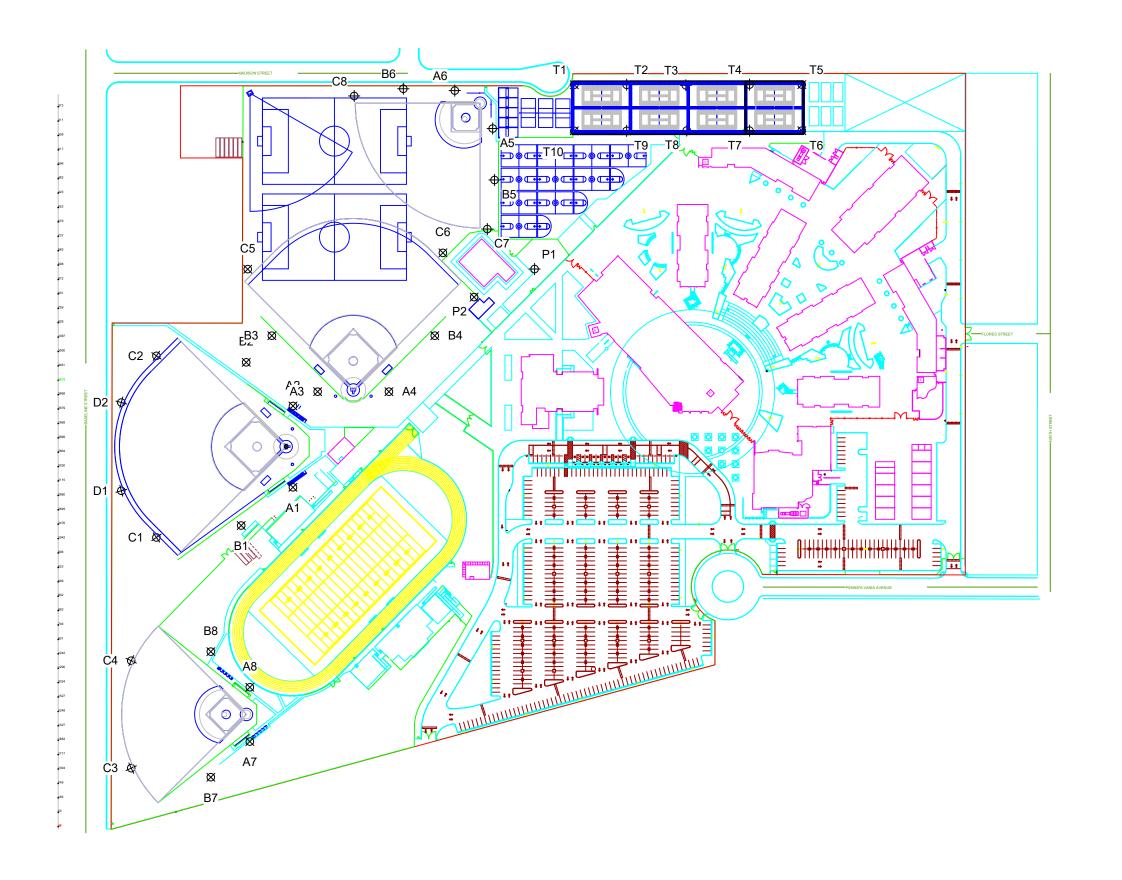
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

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.



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GRID SUMMARY

Name: West Spill (100' Offset)

Spacing: 30.0'

Height: 3.0' above grade

ILLUMINATION SUMMARY
CANDELA (PER FIXTURE)

Scan Average: 1348.3590
Maximum: 3815.39
Minimum: 45.80

No. of Points: 51

LUMINAIRE INFORMATION

Applied Circuits: A, B, C, D, E, F, G, H, I

No. of Luminaires: 213
Total Load: 204.39 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document

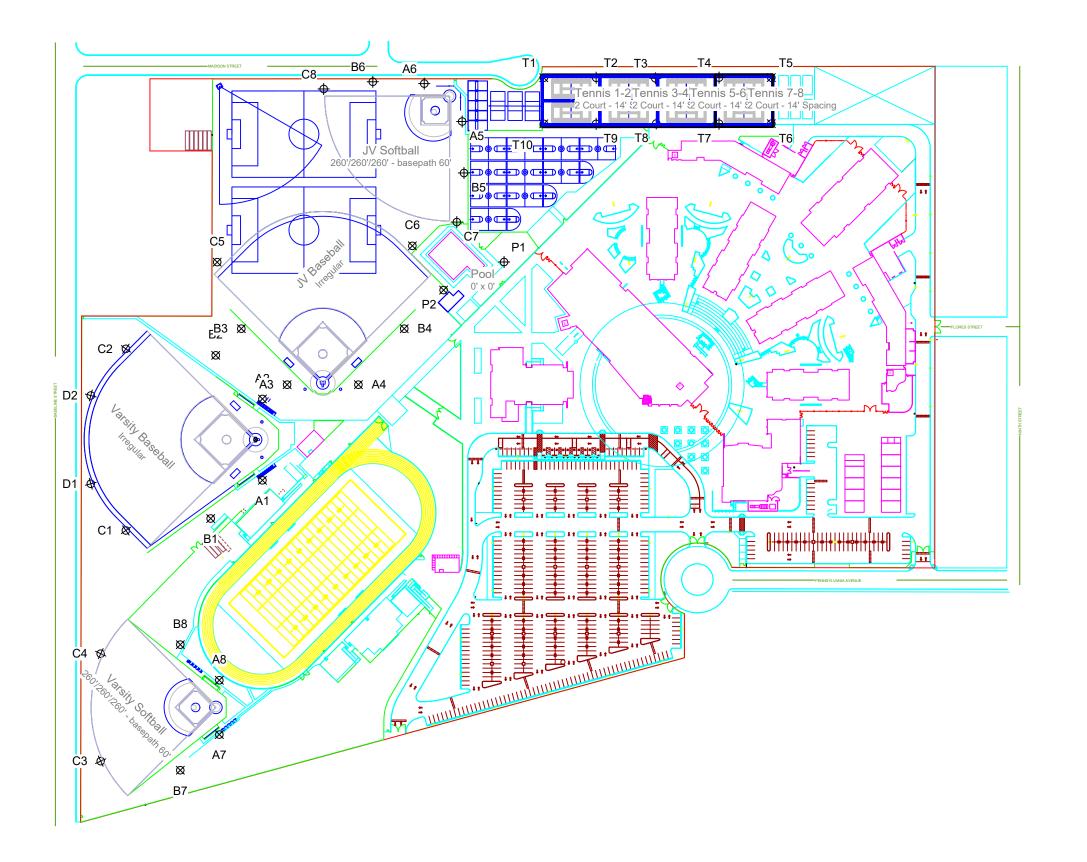
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

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.



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EQUIPMENT LAYOUT

INCLUDES:

· JV Baseball

· JV Softball

· Pool · Tennis 1-2

· Tennis 3-4

· Tennis 5-6

Tennis 7-8

Varsity Baseball

Varsity Softball

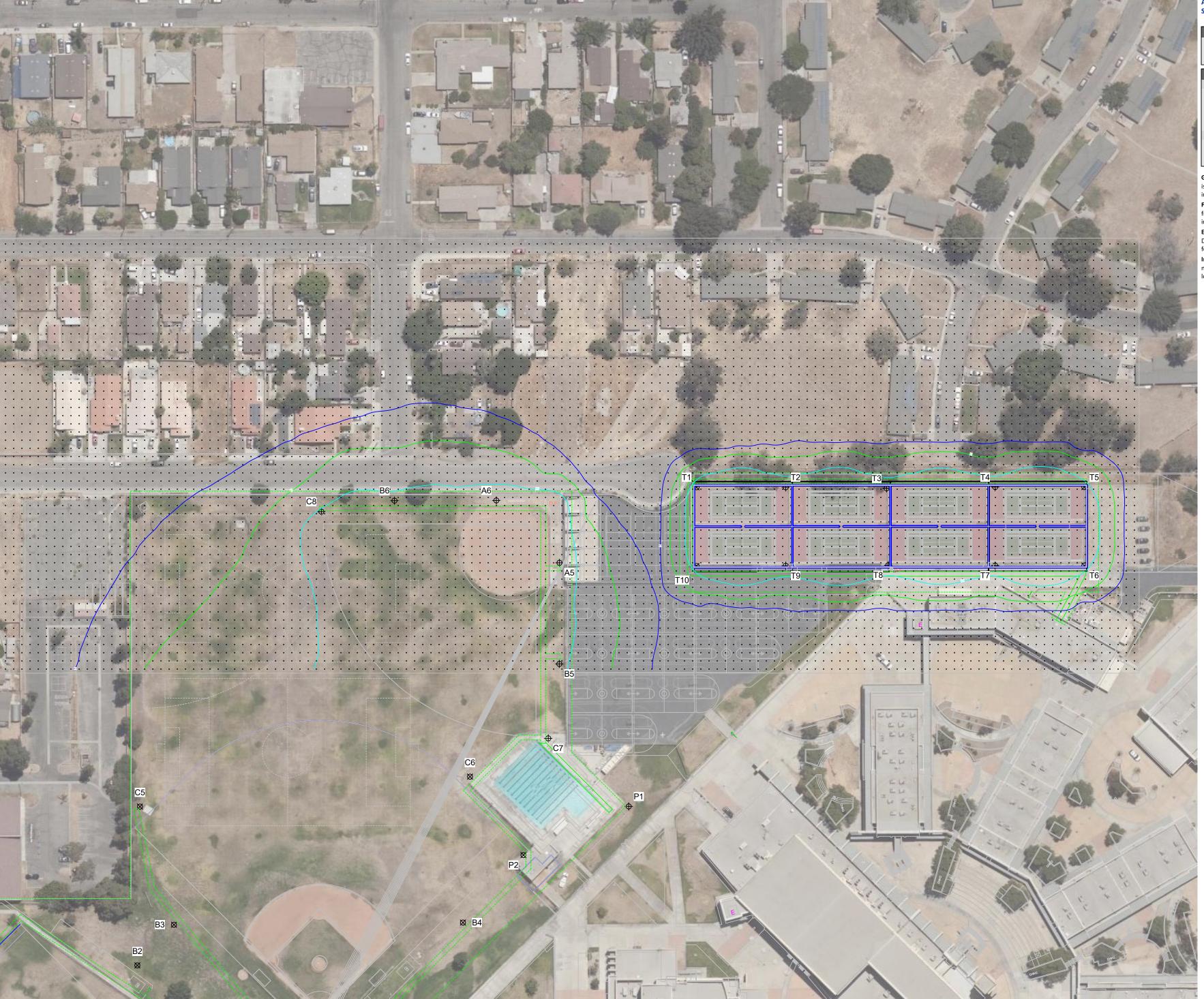
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "**Musco Control System Summary**" for electrical sizing.

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

SINGLE LUMINAIRE AMPERAGE DRAW CHART								
Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)							
Single Phase Voltage	208	220	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)	
TLC-LED-400	2.3	2.2	2.0	1.7	1.4	1.3	1.0	
TLC-LED-600	3.4	3.2	3.0	2.6	2.0	1.9	1.5	
TLC-LED-1500	8.5	8.1	7.4	6.4	5.1	4.7	3.7	
TLC-LED-1200	7.0	6.6	6.1	5.2	4.2	4.0	3.0	
TLC-BT-575	3.4	3.2	2.9	2.5	2.0	1.8	1.5	
TLC-LED-900	5.3	5.0	4.6	4.0	3.2	2.9	2.3	



to 0,0 reference point(s) \otimes



Spacing: 10.0' x 10.0' Height: 3.0' above grade

Entire Grid Scan Average: 6.87 No. of Points:

Applied Circuits: A, B, C, D, E, F, G, H, I No. of Luminaires: 213 Total Load: 204.39 kW

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

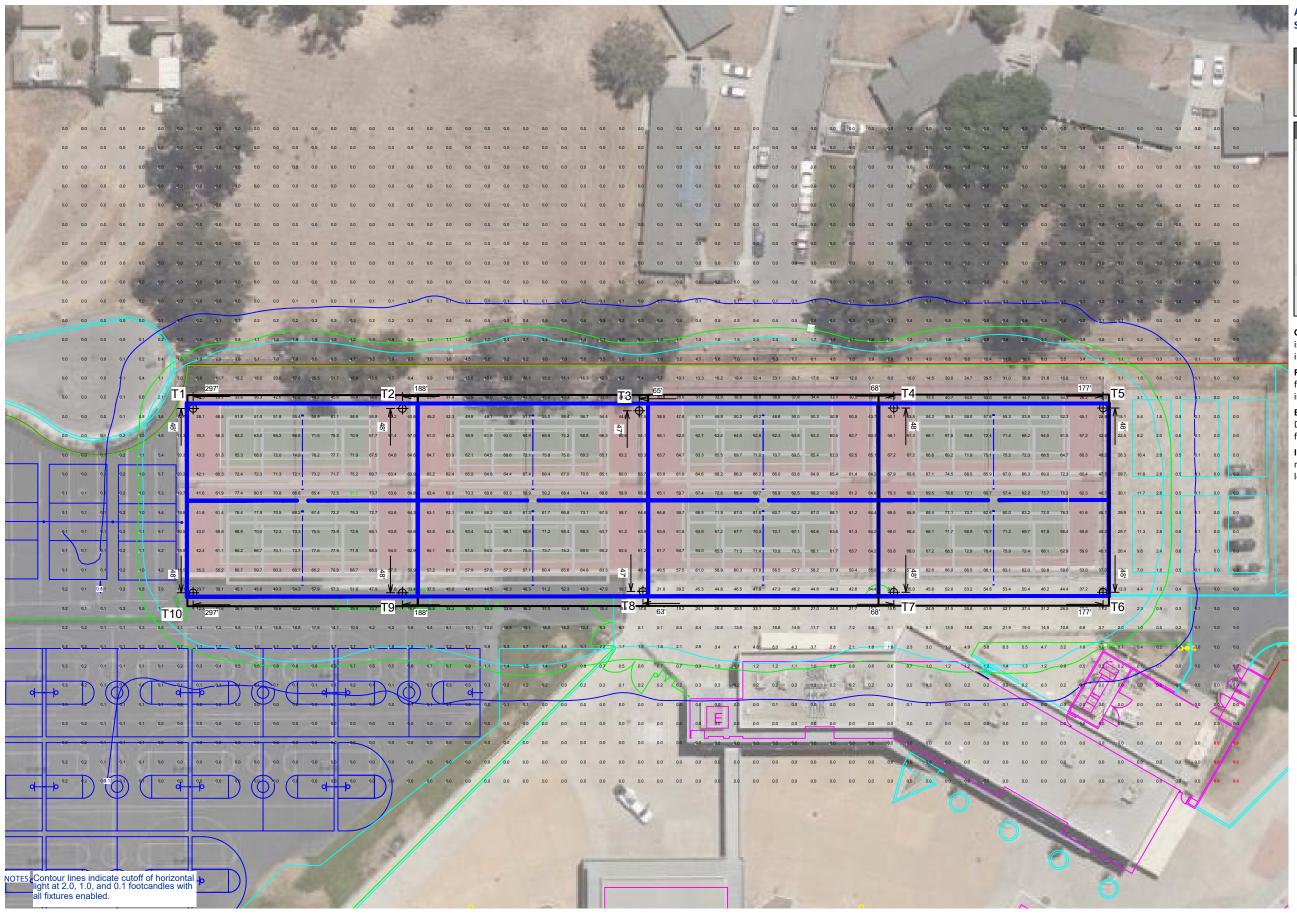
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary"

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

Contour lines indicate cutoff of horizontal light at 10 (Cyan), 0.7 (Green), and 0.1(Blue) footcandles





SCALE IN FEET 1:50

ENGINEERED DESIGN By: Brendon Guler · File #207885Cr2 · 09-Jul-21

.

Pole location(s) \oplus dimensions are relative to 0,0 reference point(s) \otimes

Arroyo Valley High School Athletic Playfields San Bernardino,CA

RID SUMMARY Name: Grid Size: 2 Court - 14' Spacing Spacing: 10.0' x 10.0' Height: 3.0' above grade

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

No. of Luminaires: 213

Total Load: 204.39 kW

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.

