

## Appendix B    Lighting Report

## Appendices

*This page intentionally left blank.*

# Crescenta Valley HS FB

La Crescenta, CA

## Lighting System

Pole / Fixture Summary						
Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
F1-F2	100'	100'	9	TLC-LED-1500	12.87 kW	A
		100'	1	TLC-LED-900	0.89 kW	A
F3-F4	100'	16'	2	TLC-BT-575	1.15 kW	A
		100'	8	TLC-LED-1500	11.44 kW	A
		100'	2	TLC-LED-900	1.78 kW	A
		16'	2	TLC-BT-575	1.15 kW	A
<b>4</b>			<b>48</b>		<b>58.56 kW</b>	

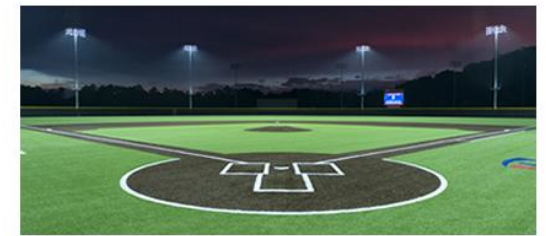
Circuit Summary			
Circuit	Description	Load	Fixture Qty
A	Football	58.56 kW	48

Fixture Type Summary							
Type	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-LED-1500	LED 5700K - 75 CRI	1430W	160,000	>120,000	>120,000	>120,000	34
TLC-BT-575	LED 5700K - 75 CRI	575W	52,000	>120,000	>120,000	>120,000	8
TLC-LED-900	LED 5700K - 75 CRI	890W	89,600	>120,000	>120,000	>120,000	6

## Light Level Summary

Calculation Grid Summary								
Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
Football	Horizontal Illuminance	51.8	37	59	1.61	1.40	A	48
Residential Spill	Horizontal	0.22	0	0.77	0.00		A	48
Residential Spill	Max Candela (by Fixture)	5626	0.05	14861	286028.50	112529.60	A	48
Residential Spill	Max Vertical Illuminance Metric	0.39	0	1.27	0.00		A	48
Soccer	Horizontal Illuminance	50.8	36	59	1.62	1.41	A	48
Spill @ I-210	Horizontal	0.21	0	0.98	0.00		A	48
Spill @ I-210	Max Candela (by Fixture)	13721	0	123924	0.00		A	48
Spill @ I-210	Max Vertical Illuminance Metric	0.38	0	2.11	0.00		A	48
Spill @ Mayfield Ave	Horizontal	0	0	0.03	0.00		A	48
Spill @ Mayfield Ave	Max Candela (by Fixture)	656	0	3474	0.00		A	48
Spill @ Mayfield Ave	Max Vertical Illuminance Metric	0.01	0	0.07	0.00		A	48
Spill @ Ramsdell Ave	Horizontal	0	0	0.01	0.00		A	48
Spill @ Ramsdell Ave	Max Candela (by Fixture)	349	0	966	0.00		A	48
Spill @ Ramsdell Ave	Max Vertical Illuminance Metric	0.01	0	0.03	0.00		A	48
Walking Track	Horizontal Illuminance	19.9	1	47	50.54	19.94	A	48

## From Hometown to Professional



**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2020 Musco Sports Lighting, LLC.

# Crescenta Valley HS FB

La Crescenta, CA

EQUIPMENT LIST FOR AREAS SHOWN							
Pole			Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID
2	F1-F2	100'	-	100'	TLC-LED-900	1	1
				15.5'	TLC-BT-575	2	2
				100'	TLC-LED-1500	9	9
2	F3-F4	100'	-	100'	TLC-LED-900	2	2
				15.5'	TLC-BT-575	2	2
				100'	TLC-LED-1500	8	8
4	TOTALS					48	48

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

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
Entire Grid	
Guaranteed Average:	50
Scan Average:	51.83
Maximum:	59
Minimum:	37
Avg / Min:	1.42
Guaranteed Max / Min:	2
Max / Min:	1.61
UG (adjacent pts):	1.43
CU:	0.53
No. of Points:	72

LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	160,000 / 52,000 / 89,600 lumens		
No. of Luminaires:	48		
Total Load:	58.56 kW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1500	>120,000	>120,000	>120,000
TLC-BT-575	>120,000	>120,000	>120,000
TLC-LED-900	>120,000	>120,000	>120,000

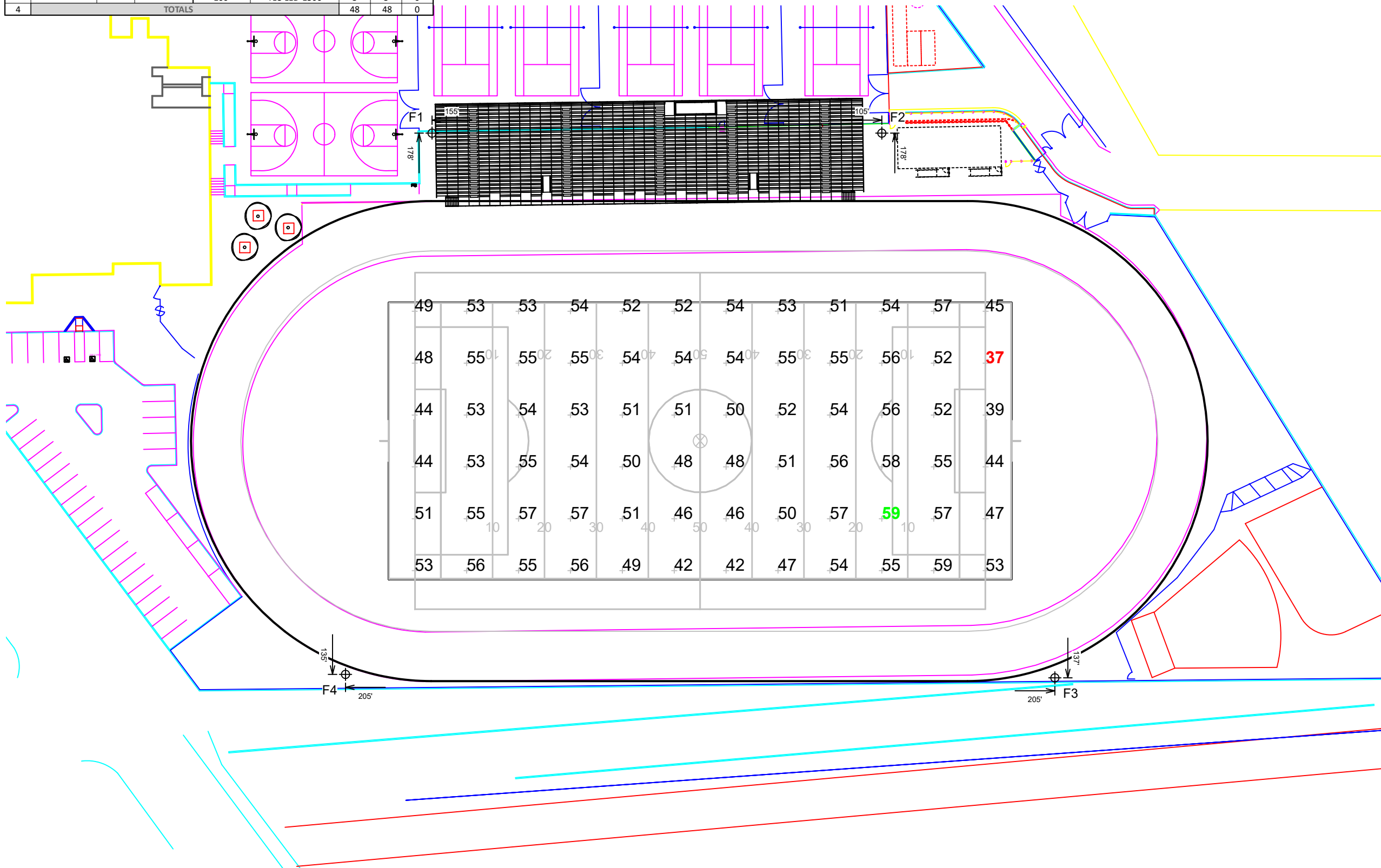
Reported per TM-21-11. See luminaire datasheet for details.

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

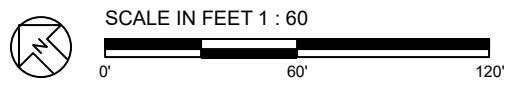
**Field Measurements:** Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

**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.



49	53	53	54	52	52	54	53	51	54	57	45
48	55	55	55	54	54	54	55	55	56	52	37
44	53	54	53	51	51	50	52	54	56	52	39
44	53	55	54	50	48	48	51	56	58	55	44
51	55	57	57	51	46	46	50	57	59	57	47
53	56	55	56	49	42	42	47	54	55	59	53



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



**EQUIPMENT LIST FOR AREAS SHOWN**

Pole		Luminaires						
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	100'	-	100'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	9	9	0
2	F3-F4	100'	-	100'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	8	8	0
4	TOTALS					48	48	0

**Crescenta Valley HS FB**

La Crescenta, CA

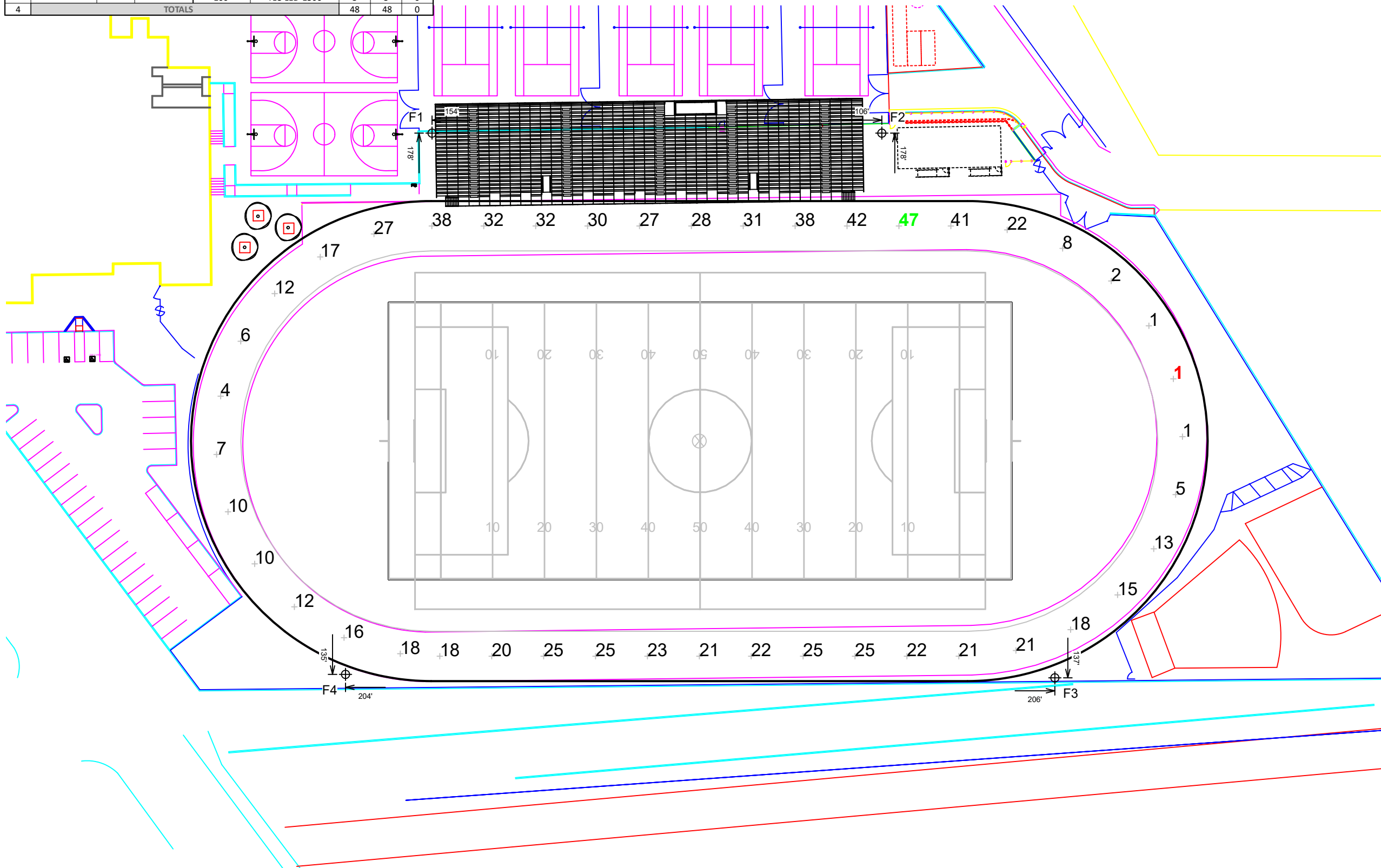
**GRID SUMMARY**

Name: **Walking Track**  
 Size: Irregular  
 Spacing: 30.0' x 30.0'  
 Height: 3.0' above grade

**ILLUMINATION SUMMARY**

MAINTAINED HORIZONTAL FOOTCANDLES			
Entire Grid			
Scan Average:	<b>19.94</b>		
Maximum:	47		
Minimum:	1		
Avg / Min:	21.59		
Max / Min:	<b>50.54</b>		
UG (adjacent pts):	0.00		
CU:	0.13		
No. of Points:	44		
LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	160,000 / 52,000 / 89,600 lumens		
No. of Luminaires:	48		
Total Load:	58.56 kW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1500	>120,000	>120,000	>120,000
TLC-BT-575	>120,000	>120,000	>120,000
TLC-LED-900	>120,000	>120,000	>120,000

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

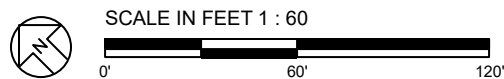


**Guaranteed Performance:** The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

**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) ⊗



**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2020 Musco Sports Lighting, LLC.

**ILLUMINATION SUMMARY**

# Crescenta Valley HS FB

La Crescenta, CA

EQUIPMENT LIST FOR AREAS SHOWN									
Pole				Luminaires					
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS	
2	F1-F2	100'	-	100'	TLC-LED-900	1	1	0	
				15.5'	TLC-BT-575	2	2	0	
				100'	TLC-LED-1500	9	9	0	
2	F3-F4	100'	-	100'	TLC-LED-900	2	2	0	
				15.5'	TLC-BT-575	2	2	0	
				100'	TLC-LED-1500	8	8	0	
4	TOTALS					48	48	0	

GRID SUMMARY	
Name:	Soccer
Size:	330' x 195'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
Entire Grid	
Guaranteed Average:	50
Scan Average:	50.78
Maximum:	59
Minimum:	36
Avg / Min:	1.39
Guaranteed Max / Min:	2
Max / Min:	1.62
UG (adjacent pts):	1.41
CU:	0.61
No. of Points:	84

LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	160,000 / 52,000 / 89,600 lumens		
No. of Luminaires:	48		
Total Load:	58.56 kW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1500	>120,000	>120,000	>120,000
TLC-BT-575	>120,000	>120,000	>120,000
TLC-LED-900	>120,000	>120,000	>120,000

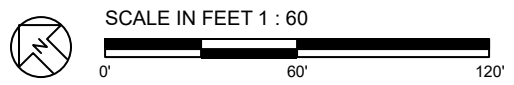
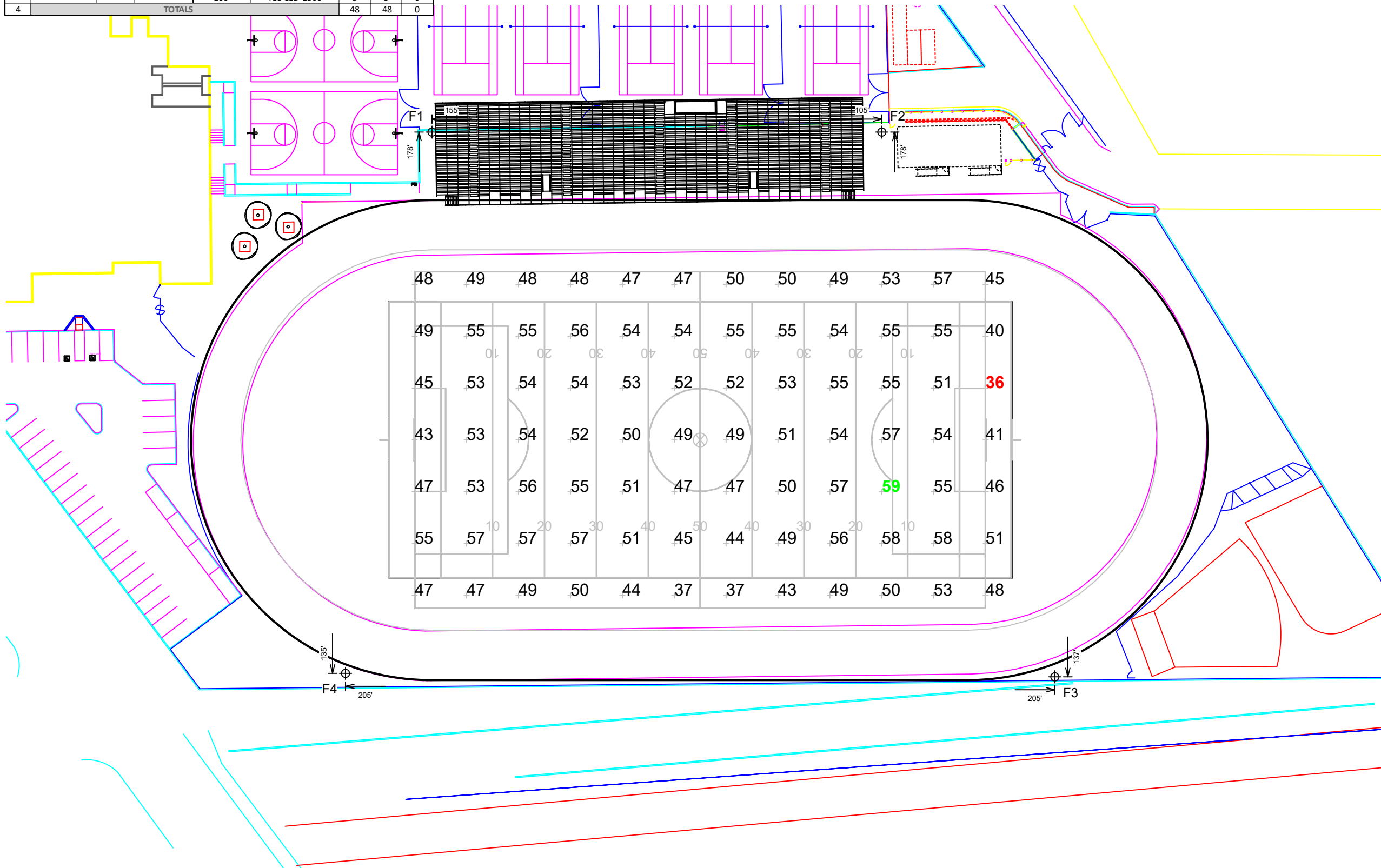
Reported per TM-21-11. See luminaire datasheet for details.

**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.

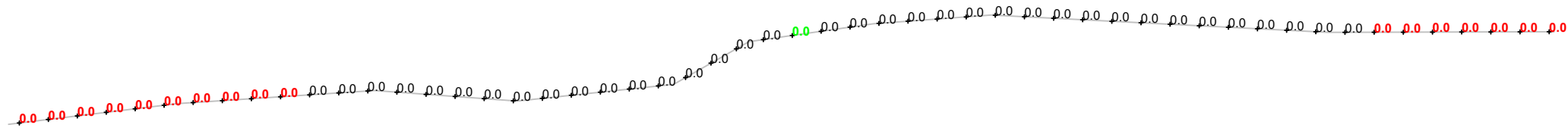
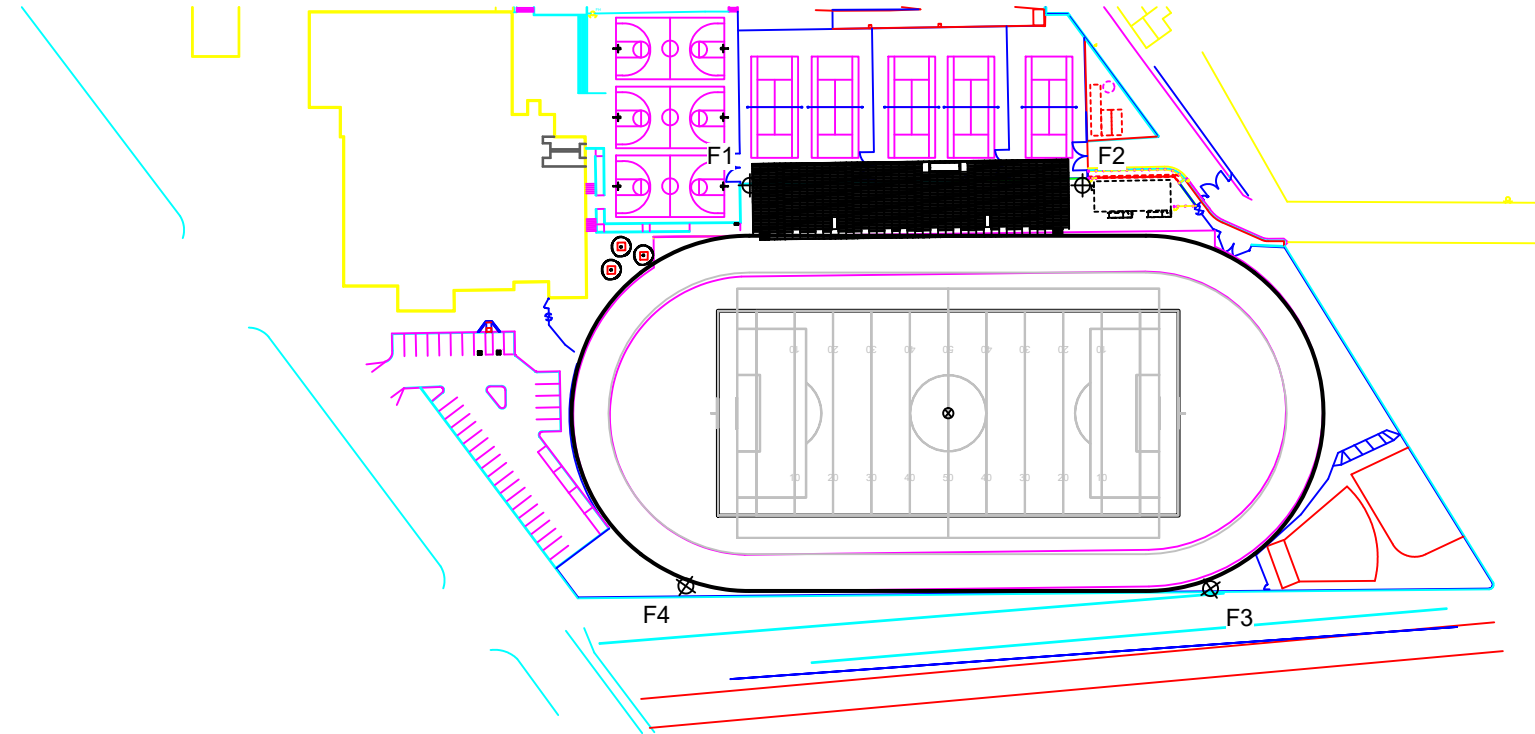
**Installation Requirements:** Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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



EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	100'	-	100'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	9	9	0
2	F3-F4	100'	-	100'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	8	8	0
4	TOTALS					48	48	0



## Crescenta Valley HS FB

La Crescenta, CA

GRID SUMMARY	
Name:	Spill @ Mayfield Ave
Spacing:	30.0'
Height:	-41.0' above grade

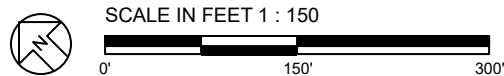
ILLUMINATION SUMMARY			
HORIZONTAL FOOTCANDLES			
		Entire Grid	
Scan Average:	0.0039		
Maximum:	0.03		
Minimum:	0.00		
No. of Points:	54		
LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	160,000 / 52,000 / 89,600 lumens		
No. of Luminaires:	48		
Total Load:	58.56 kW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1500	>120,000	>120,000	>120,000
TLC-BT-575	>120,000	>120,000	>120,000
TLC-LED-900	>120,000	>120,000	>120,000
Reported per TM-21-11. See luminaire datasheet for details.			

**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.



ENGINEERED DESIGN By: Brendon Guler • File #107739Cr1 • 09-Apr-20

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

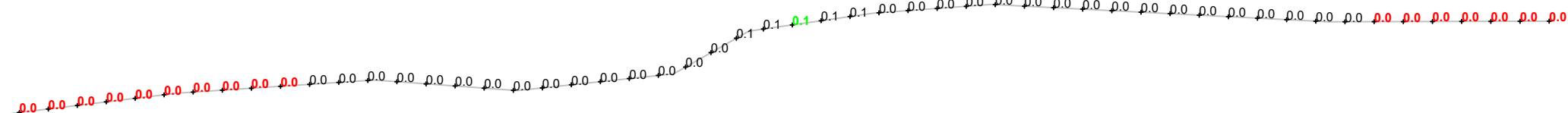
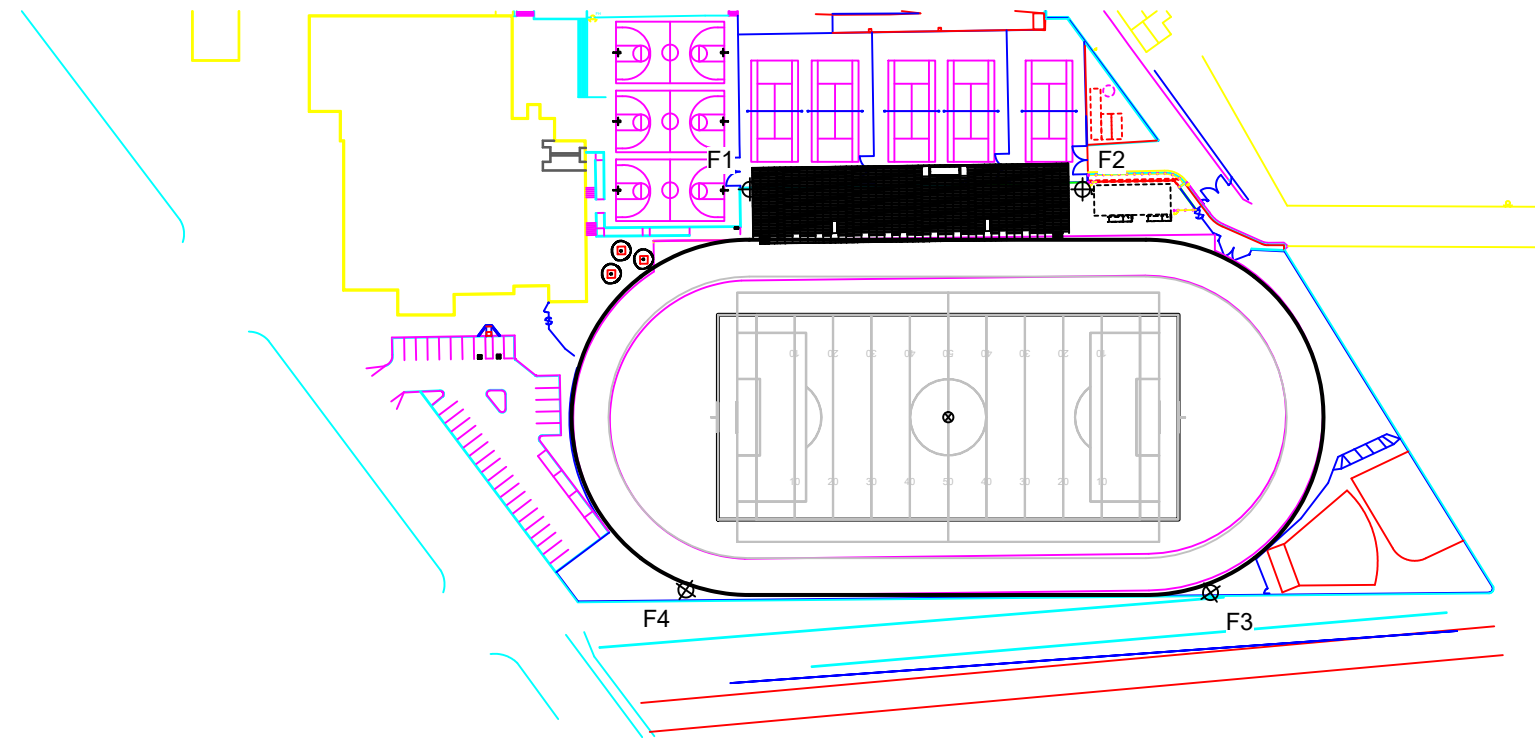


**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2020 Musco Sports Lighting, LLC.

**ILLUMINATION SUMMARY**

EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	100'	-	100'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	9	9	0
2	F3-F4	100'	-	100'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	8	8	0
4	TOTALS					48	48	0



## Crescenta Valley HS FB

La Crescenta, CA

GRID SUMMARY	
Name:	Spill @ Mayfield Ave
Spacing:	30.0'
Height:	-41.0' above grade

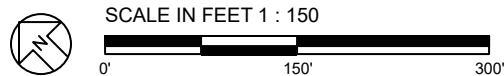
ILLUMINATION SUMMARY			
MAX VERTICAL FOOTCANDLES			
Entire Grid			
Scan Average:	0.0105		
Maximum:	0.07		
Minimum:	0.00		
No. of Points:	54		
LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	160,000 / 52,000 / 89,600 lumens		
No. of Luminaires:	48		
Total Load:	58.56 kW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1500	>120,000	>120,000	>120,000
TLC-BT-575	>120,000	>120,000	>120,000
TLC-LED-900	>120,000	>120,000	>120,000
Reported per TM-21-11. See luminaire datasheet for details.			

**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.



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



**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2020 Musco Sports Lighting, LLC.



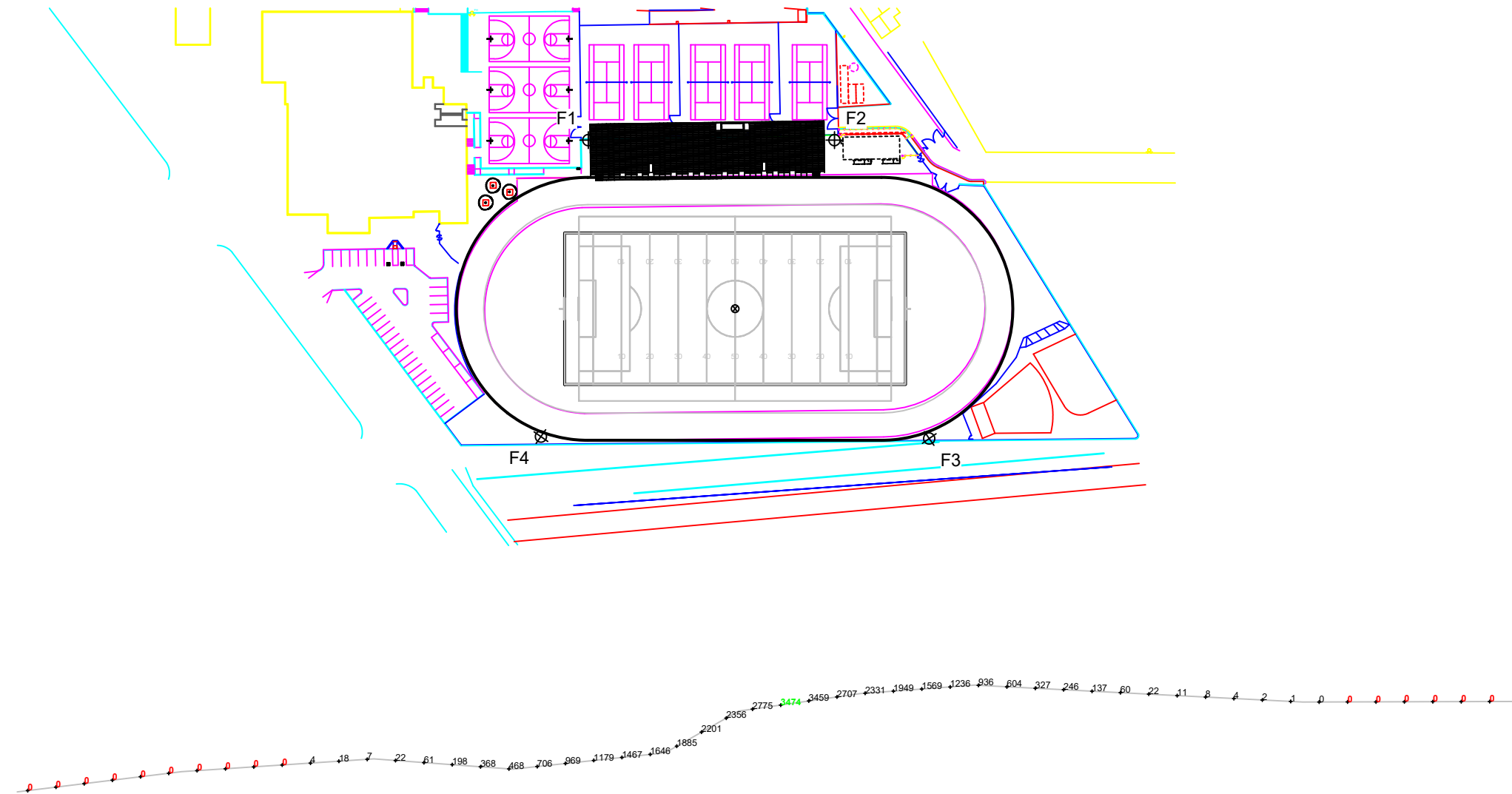
EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	100'	-	100'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	9	9	0
2	F3-F4	100'	-	100'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	8	8	0
4	TOTALS					48	48	0

## Crescenta Valley HS FB

La Crescenta, CA

GRID SUMMARY	
Name:	Spill @ Mayfield Ave
Spacing:	30.0'
Height:	-41.0' above grade

ILLUMINATION SUMMARY			
CANDELA (PER FIXTURE)			
Entire Grid			
Scan Average:	655.7317		
Maximum:	3473.55		
Minimum:	0.00		
No. of Points:	54		
LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	160,000 / 52,000 / 89,600 lumens		
No. of Luminaires:	48		
Total Load:	58.56 kW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1500	>120,000	>120,000	>120,000
TLC-BT-575	>120,000	>120,000	>120,000
TLC-LED-900	>120,000	>120,000	>120,000
Reported per TM-21-11. See luminaire datasheet for details.			



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

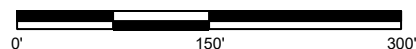
**Field Measurements:** Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

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

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



SCALE IN FEET 1 : 150



ENGINEERED DESIGN By: Brendon Guler • File #107739Cr1 • 09-Apr-20

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

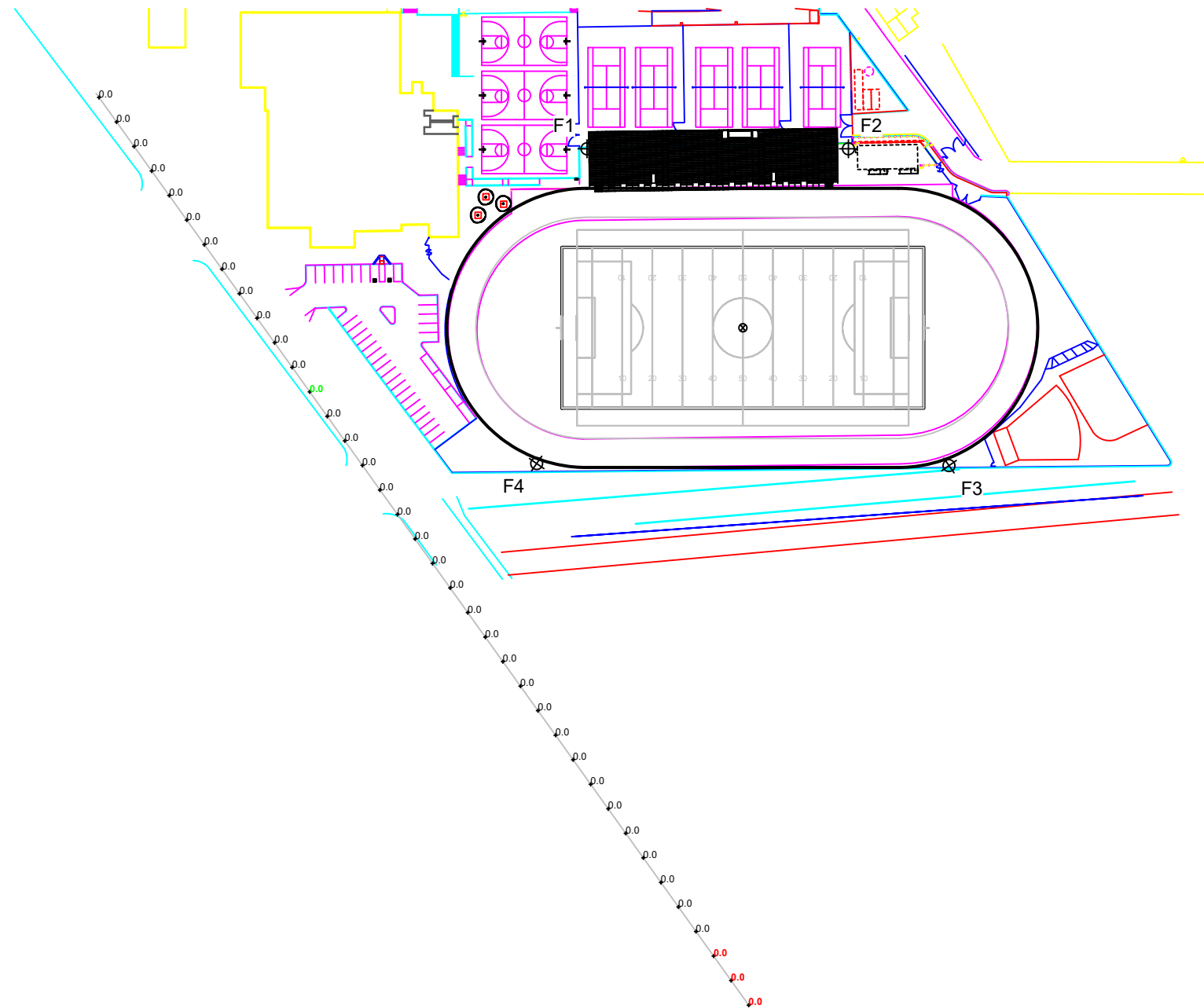


**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2020 Musco Sports Lighting, LLC.

**ILLUMINATION SUMMARY**

EQUIPMENT LIST FOR AREAS SHOWN							
Pole				Luminaires			
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID / OTHER GRIDS
2	F1-F2	100'	-	100'	TLC-LED-900	1	1 / 0
				15.5'	TLC-BT-575	2	2 / 0
				100'	TLC-LED-1500	9	9 / 0
2	F3-F4	100'	-	100'	TLC-LED-900	2	2 / 0
				15.5'	TLC-BT-575	2	2 / 0
				100'	TLC-LED-1500	8	8 / 0
4	TOTALS					48	48 / 0



## Crescenta Valley HS FB

La Crescenta, CA

GRID SUMMARY	
Name:	Spill @ Ramsdell Ave
Spacing:	30.0'
Height:	-14.0' above grade

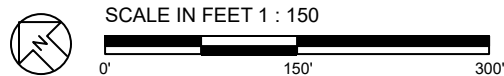
ILLUMINATION SUMMARY			
HORIZONTAL FOOTCANDLES			
		Entire Grid	
Scan Average:	0.0023		
Maximum:	0.01		
Minimum:	0.00		
No. of Points:	38		
LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	160,000 / 52,000 / 89,600 lumens		
No. of Luminaires:	48		
Total Load:	58.56 kW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1500	>120,000	>120,000	>120,000
TLC-BT-575	>120,000	>120,000	>120,000
TLC-LED-900	>120,000	>120,000	>120,000
Reported per TM-21-11. See luminaire datasheet for details.			

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



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



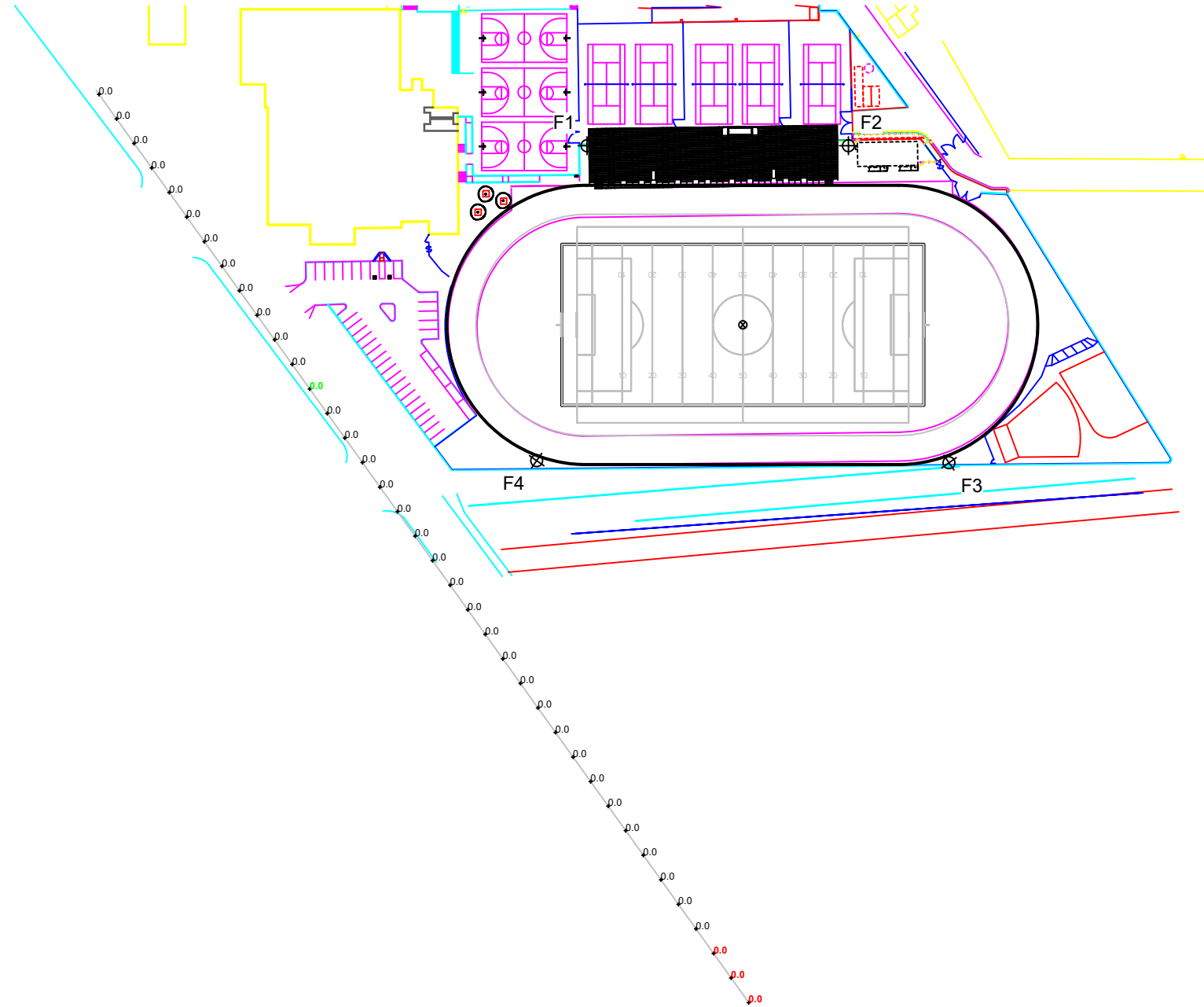
**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2020 Musco Sports Lighting, LLC.

**ILLUMINATION SUMMARY**

**EQUIPMENT LIST FOR AREAS SHOWN**

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	100'	-	100'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	9	9	0
2	F3-F4	100'	-	100'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	8	8	0
4	TOTALS					48	48	0



**Crescenta Valley HS FB**

La Crescenta, CA

**GRID SUMMARY**

Name: Spill @ Ramsdell Ave  
 Spacing: 30.0'  
 Height: -14.0' above grade

**ILLUMINATION SUMMARY**

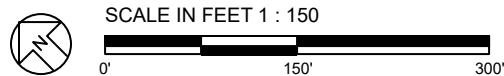
MAX VERTICAL FOOTCANDLES			
		Entire Grid	
Scan Average:	0.0067		
Maximum:	0.03		
Minimum:	0.00		
No. of Points:	38		
LUMINAIRE INFORMATION			
Color / CRI:		5700K - 75 CRI	
Luminaire Output:		160,000 / 52,000 / 89,600 lumens	
No. of Luminaires:		48	
Total Load:		58.56 kW	
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1500	>120,000	>120,000	>120,000
TLC-BT-575	>120,000	>120,000	>120,000
TLC-LED-900	>120,000	>120,000	>120,000
Reported per TM-21-11. See luminaire datasheet for details.			

**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.



ENGINEERED DESIGN By: Brendon Guler • File #107739Cr1 • 09-Apr-20

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

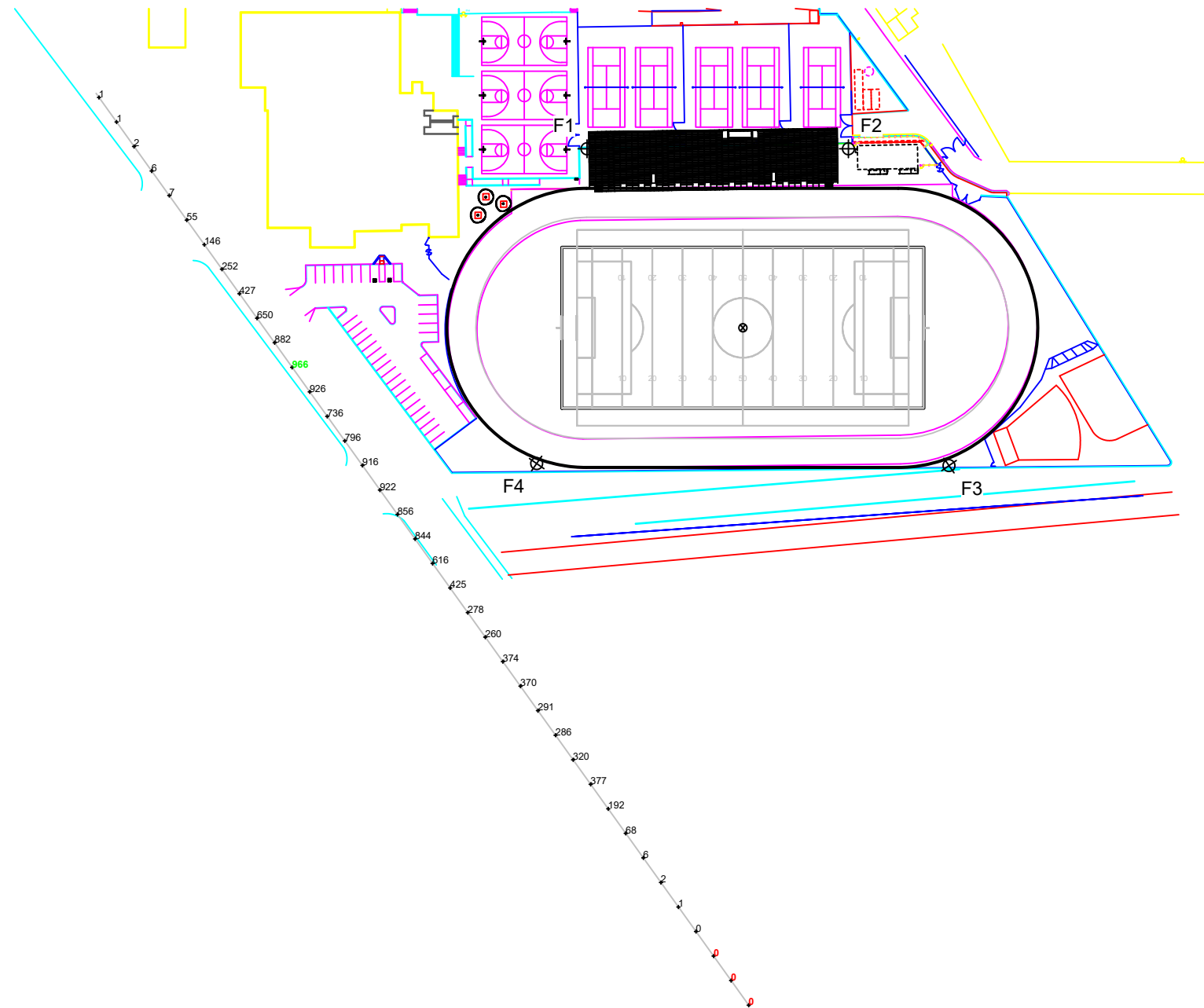


**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2020 Musco Sports Lighting, LLC.

**ILLUMINATION SUMMARY**

EQUIPMENT LIST FOR AREAS SHOWN								
Pole			Luminaires					
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	100'	-	100'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	9	9	0
2	F3-F4	100'	-	100'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	8	8	0
4	TOTALS					48	48	0



## Crescenta Valley HS FB

La Crescenta, CA

GRID SUMMARY	
Name:	Spill @ Ramsdell Ave
Spacing:	30.0'
Height:	-14.0' above grade

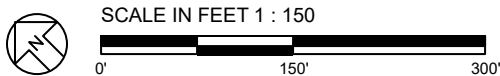
ILLUMINATION SUMMARY			
CANDELA (PER FIXTURE)			
Entire Grid			
Scan Average:	348.9518		
Maximum:	966.03		
Minimum:	0.00		
No. of Points:	38		
LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	160,000 / 52,000 / 89,600 lumens		
No. of Luminaires:	48		
Total Load:	58.56 kW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1500	>120,000	>120,000	>120,000
TLC-BT-575	>120,000	>120,000	>120,000
TLC-LED-900	>120,000	>120,000	>120,000
Reported per TM-21-11. See luminaire datasheet for details.			

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



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



**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2020 Musco Sports Lighting, LLC.

**ILLUMINATION SUMMARY**

EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	100'	-	100'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	9	9	0
2	F3-F4	100'	-	100'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	8	8	0
4	TOTALS					48	48	0

## Crescenta Valley HS FB

La Crescenta, CA

GRID SUMMARY	
Name:	Spill @ I-210
Spacing:	30.0'
Height:	-58.0' above grade

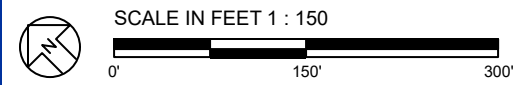
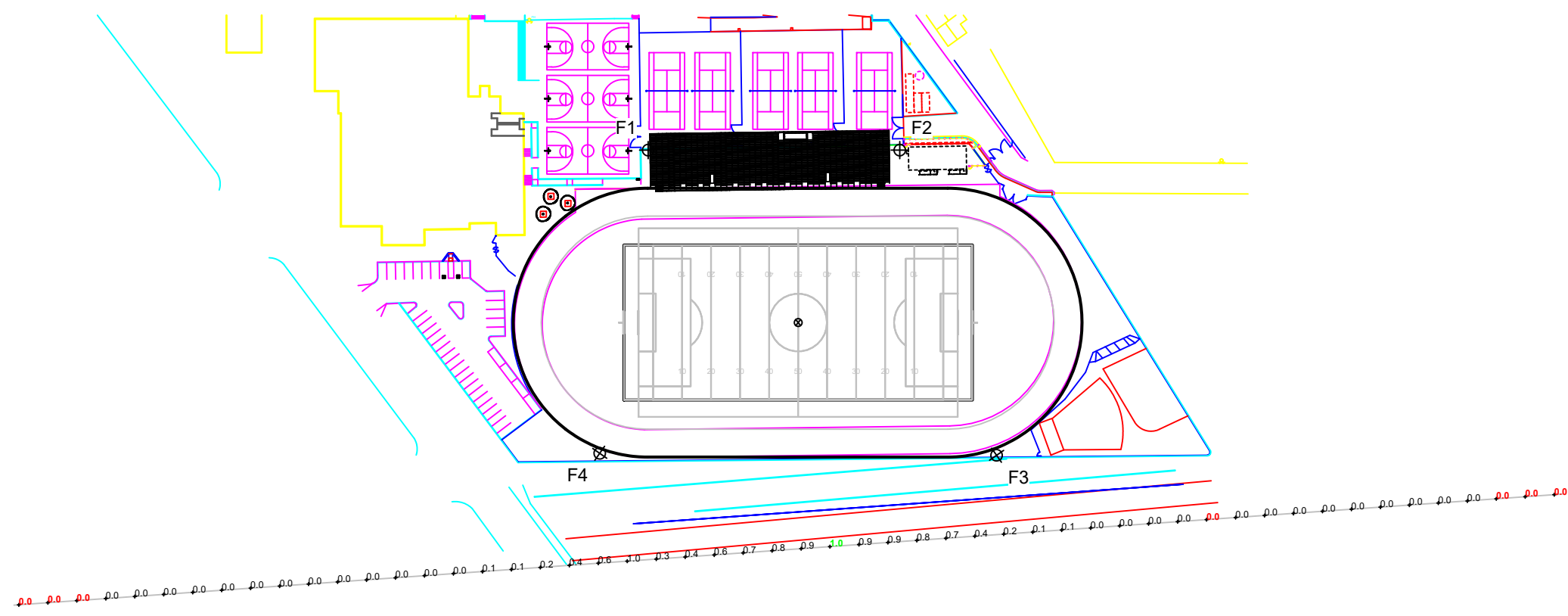
ILLUMINATION SUMMARY			
HORIZONTAL FOOTCANDLES			
		Entire Grid	
Scan Average:	0.2103		
Maximum:	0.98		
Minimum:	0.00		
No. of Points:	54		
LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	160,000 / 52,000 / 89,600 lumens		
No. of Luminaires:	48		
Total Load:	58.56 kW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1500	>120,000	>120,000	>120,000
TLC-BT-575	>120,000	>120,000	>120,000
TLC-LED-900	>120,000	>120,000	>120,000
Reported per TM-21-11. See luminaire datasheet for details.			

**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.



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



EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	100'	-	100'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	9	9	0
2	F3-F4	100'	-	100'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	8	8	0
4	TOTALS					48	48	0

## Crescenta Valley HS FB

La Crescenta, CA

GRID SUMMARY	
Name:	Spill @ I-210
Spacing:	30.0'
Height:	-58.0' above grade

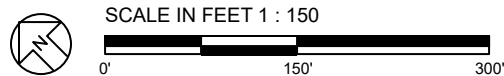
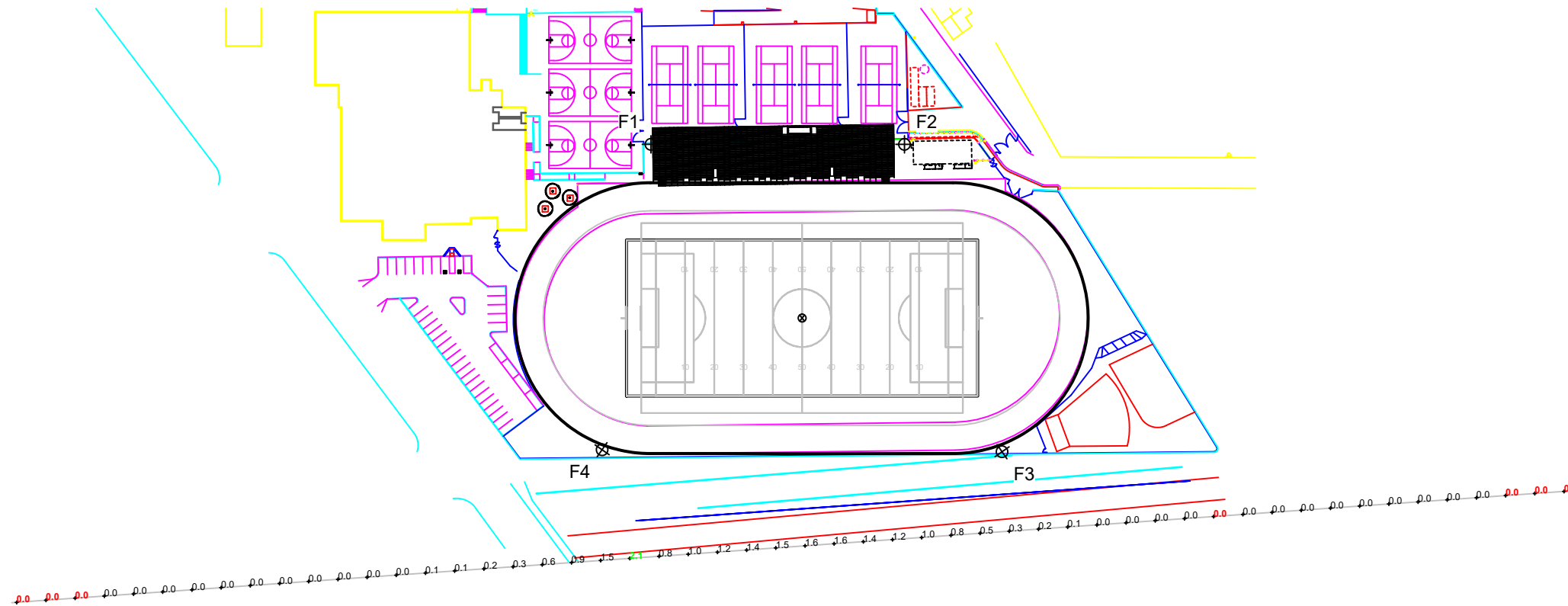
ILLUMINATION SUMMARY			
MAX VERTICAL FOOTCANDLES			
		Entire Grid	
Scan Average:	0.3811		
Maximum:	2.11		
Minimum:	0.00		
No. of Points:	54		
LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	160,000 / 52,000 / 89,600 lumens		
No. of Luminaires:	48		
Total Load:	58.56 kW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1500	>120,000	>120,000	>120,000
TLC-BT-575	>120,000	>120,000	>120,000
TLC-LED-900	>120,000	>120,000	>120,000
Reported per TM-21-11. See luminaire datasheet for details.			

**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.



ENGINEERED DESIGN By: Brendon Guler • File #107739Cr1 • 09-Apr-20

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



**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2020 Musco Sports Lighting, LLC.

**ILLUMINATION SUMMARY**

EQUIPMENT LIST FOR AREAS SHOWN								
Pole			Luminaires					
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	100'	-	100'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	9	9	0
2	F3-F4	100'	-	100'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	8	8	0
4	TOTALS					48	48	0

## Crescenta Valley HS FB

La Crescenta, CA

GRID SUMMARY	
Name:	Spill @ I-210
Spacing:	30.0'
Height:	-58.0' above grade

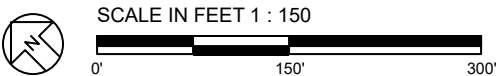
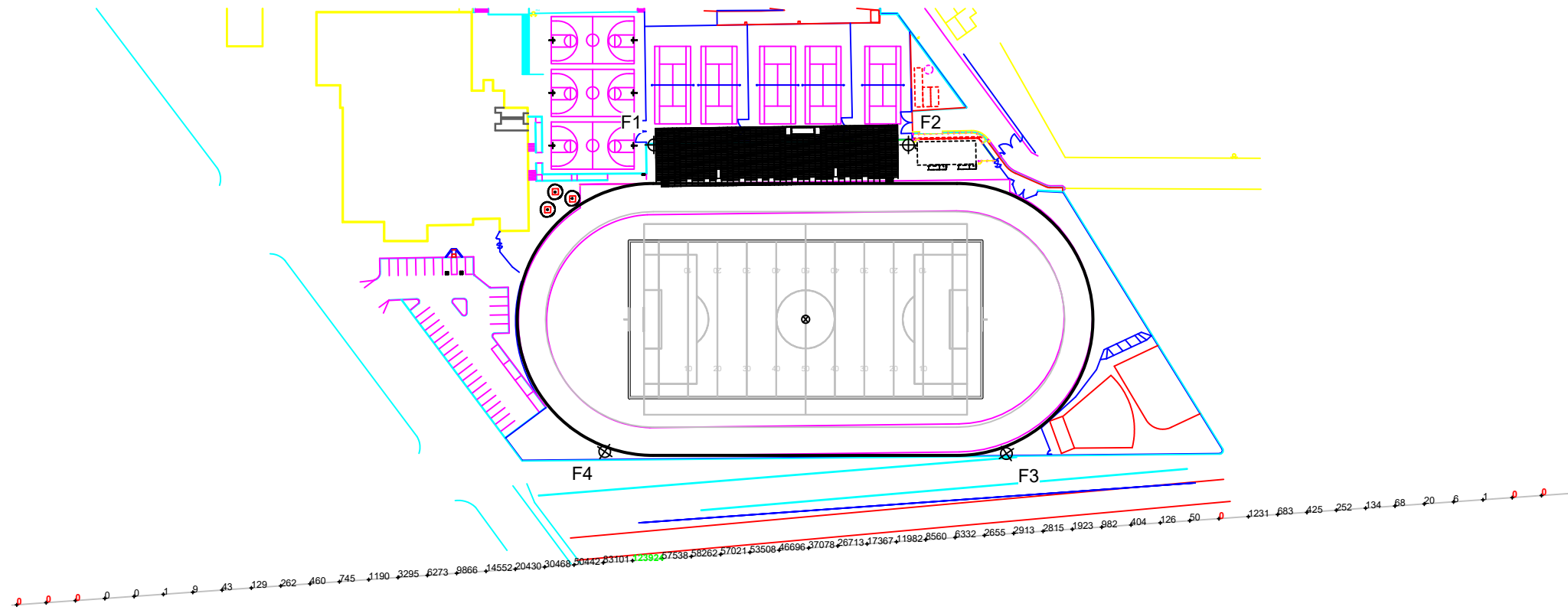
ILLUMINATION SUMMARY			
CANDELA (PER FIXTURE)			
Entire Grid			
Scan Average:	13721.0400		
Maximum:	123923.63		
Minimum:	0.00		
No. of Points:	54		
LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	160,000 / 52,000 / 89,600 lumens		
No. of Luminaires:	48		
Total Load:	58.56 kW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1500	>120,000	>120,000	>120,000
TLC-BT-575	>120,000	>120,000	>120,000
TLC-LED-900	>120,000	>120,000	>120,000
Reported per TM-21-11. See luminaire datasheet for details.			

**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.



ENGINEERED DESIGN By: Brendon Guler • File #107739Cr1 • 09-Apr-20

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

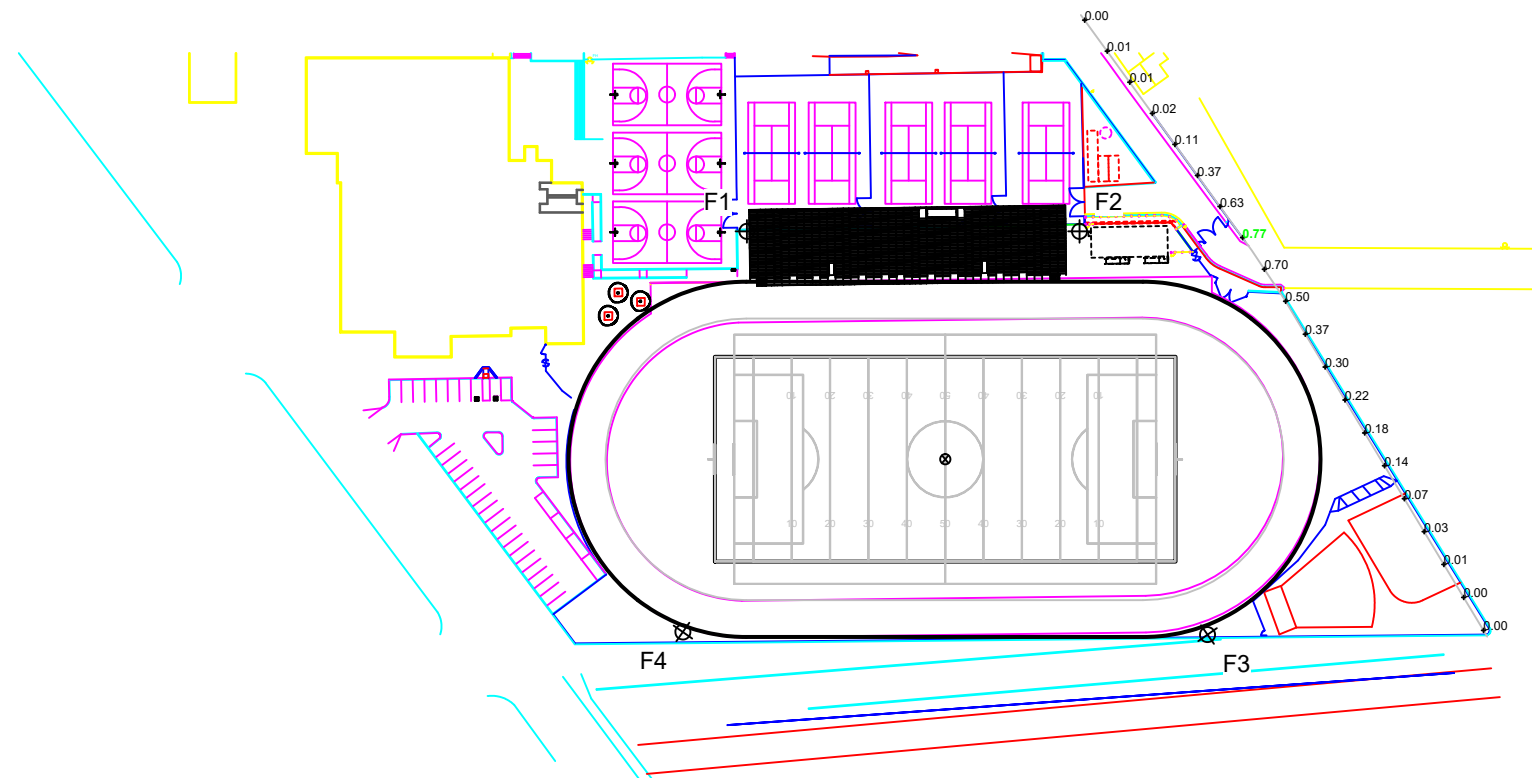


**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2020 Musco Sports Lighting, LLC.

**ILLUMINATION SUMMARY**

EQUIPMENT LIST FOR AREAS SHOWN								
Pole			Luminaires					
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	100'	-	100'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	9	9	0
2	F3-F4	100'	-	100'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	8	8	0
4	TOTALS					48	48	0



## Crescenta Valley HS FB

La Crescenta, CA

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

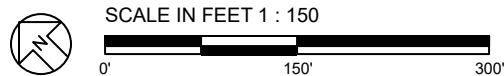
ILLUMINATION SUMMARY			
HORIZONTAL FOOTCANDLES			
Entire Grid			
Scan Average:	0.2217		
Maximum:	0.77		
Minimum:	0.00		
No. of Points:	20		
LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	160,000 / 52,000 / 89,600 lumens		
No. of Luminaires:	48		
Total Load:	58.56 kW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1500	>120,000	>120,000	>120,000
TLC-BT-575	>120,000	>120,000	>120,000
TLC-LED-900	>120,000	>120,000	>120,000
Reported per TM-21-11. See luminaire datasheet for details.			

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



SCALE IN FEET 1 : 150

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



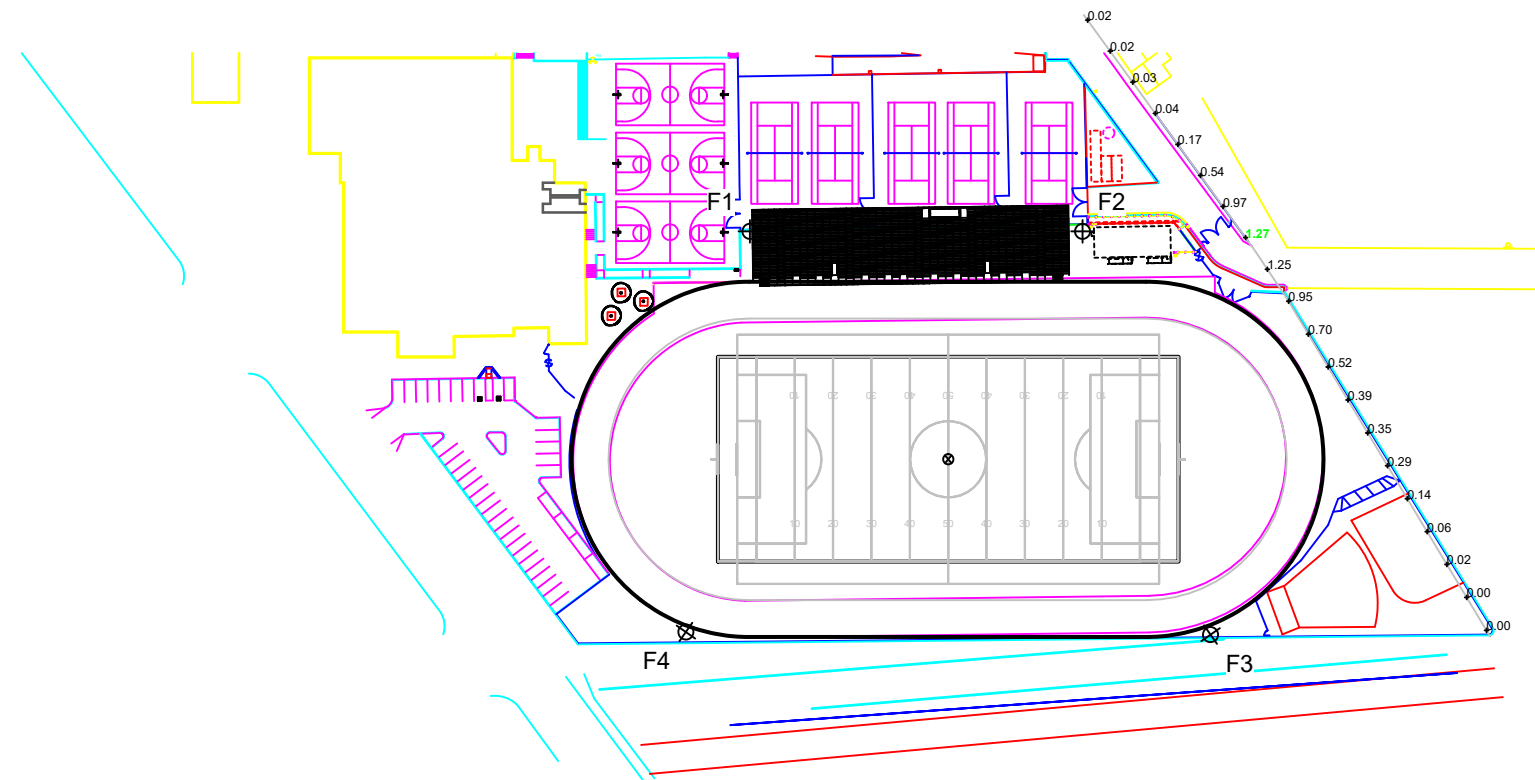
**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2020 Musco Sports Lighting, LLC.



**EQUIPMENT LIST FOR AREAS SHOWN**

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	100'	-	100'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	9	9	0
2	F3-F4	100'	-	100'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	8	8	0
4	TOTALS					48	48	0



**Crescenta Valley HS FB**

La Crescenta, CA

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

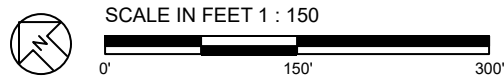
ILLUMINATION SUMMARY			
MAX VERTICAL FOOTCANDLES			
Entire Grid			
Scan Average:	0.3865		
Maximum:	1.27		
Minimum:	0.00		
No. of Points:	20		
LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	160,000 / 52,000 / 89,600 lumens		
No. of Luminaires:	48		
Total Load:	58.56 kW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1500	>120,000	>120,000	>120,000
TLC-BT-575	>120,000	>120,000	>120,000
TLC-LED-900	>120,000	>120,000	>120,000
Reported per TM-21-11. See luminaire datasheet for details.			

**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.



ENGINEERED DESIGN By: Brendon Guler • File #107739Cr1 • 09-Apr-20

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

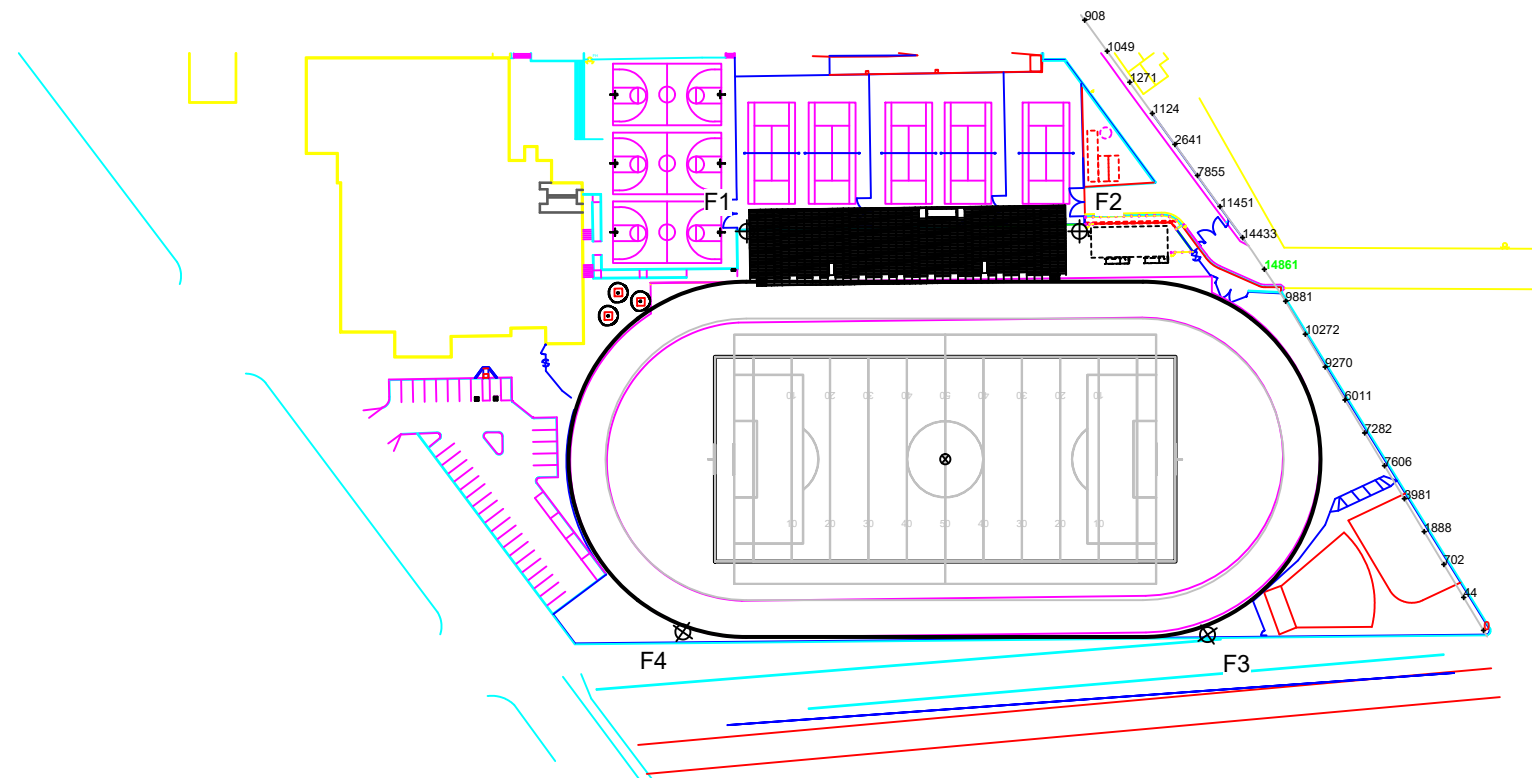


**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2020 Musco Sports Lighting, LLC.

**ILLUMINATION SUMMARY**

EQUIPMENT LIST FOR AREAS SHOWN								
Pole			Luminaires					
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	100'	-	100'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	9	9	0
2	F3-F4	100'	-	100'	TLC-LED-900	2	2	0
				15.5'	TLC-BT-575	2	2	0
				100'	TLC-LED-1500	8	8	0
4	TOTALS					48	48	0



## Crescenta Valley HS FB

La Crescenta, CA

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

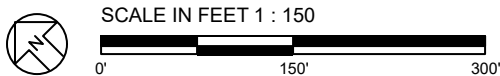
ILLUMINATION SUMMARY			
CANDELA (PER FIXTURE)			
Entire Grid			
Scan Average:	5626.4810		
Maximum:	14861.49		
Minimum:	0.05		
No. of Points:	20		
LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	160,000 / 52,000 / 89,600 lumens		
No. of Luminaires:	48		
Total Load:	58.56 kW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1500	>120,000	>120,000	>120,000
TLC-BT-575	>120,000	>120,000	>120,000
TLC-LED-900	>120,000	>120,000	>120,000
Reported per TM-21-11. See luminaire datasheet for details.			

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



ENGINEERED DESIGN By: Brendon Guler • File #107739Cr1 • 09-Apr-20

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



**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2020 Musco Sports Lighting, LLC.

**ILLUMINATION SUMMARY**

# Crescenta Valley HS FB

La Crescenta, CA

## EQUIPMENT LAYOUT

### INCLUDES:

- Football
- Soccer
- Walking Track

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

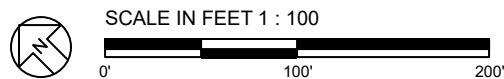
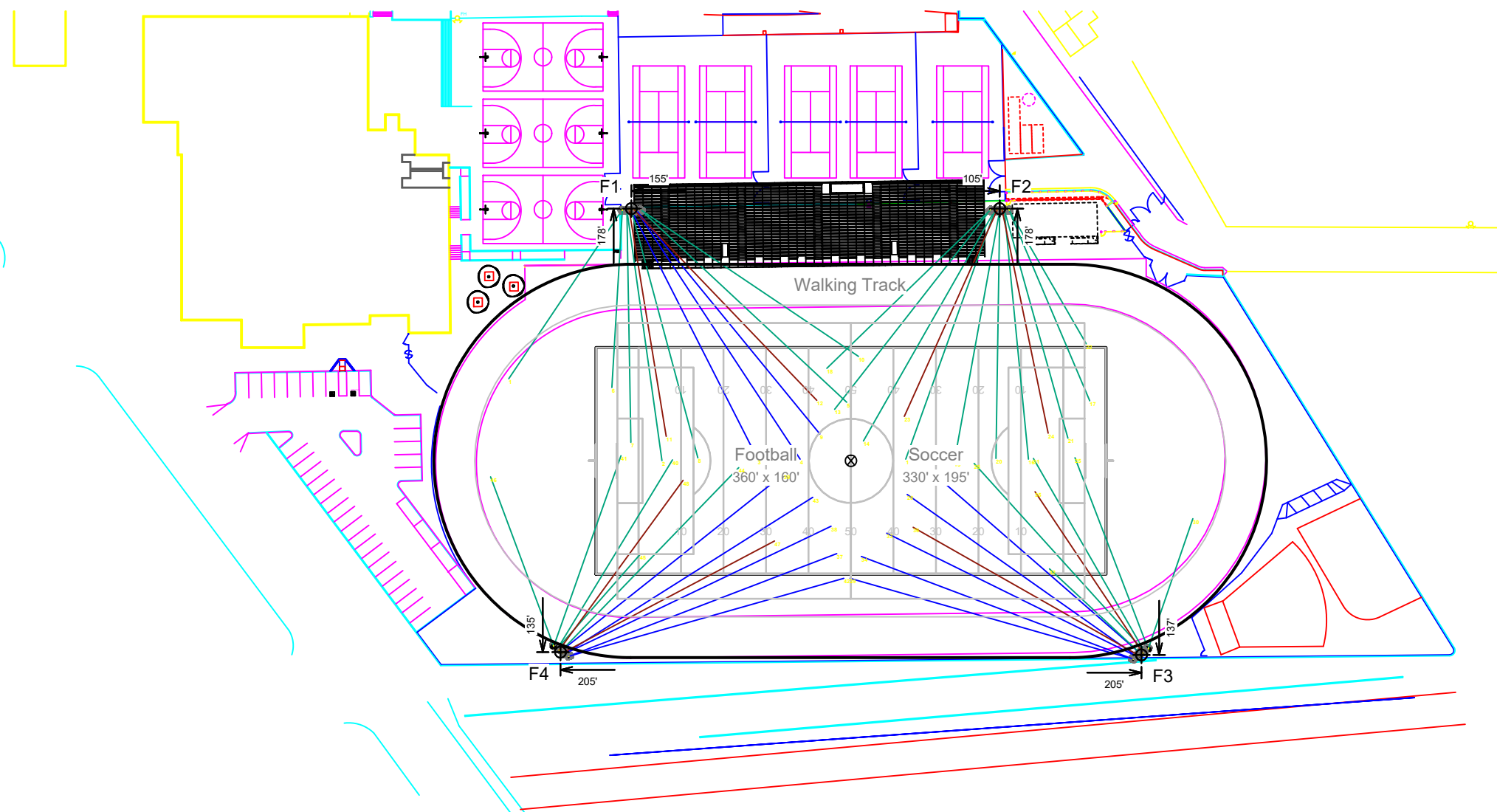
**Installation Requirements:** Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

## EQUIPMENT LIST FOR AREAS SHOWN

QTY	Pole			Luminaires		QTY / POLE
	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	
2	F1-F2	100'	-	100'	TLC-LED-900	1
				15.5'	TLC-BT-575	2
				100'	TLC-LED-1500	9
2	F3-F4	100'	-	100'	TLC-LED-900	2
				15.5'	TLC-BT-575	2
				100'	TLC-LED-1500	8
4	TOTALS					48

## SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)					
	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	480 (60)
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	480 (60)
TLC-LED-1500	8.5	8.1	7.4	6.4	5.1	4.7
TLC-BT-575	3.4	3.2	2.9	2.5	2.0	1.5
TLC-LED-900	5.3	5.0	4.6	4.0	3.2	2.9



ENGINEERED DESIGN By: Brendon Guler • File #107739Cr1 • 09-Apr-20

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



**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2020 Musco Sports Lighting, LLC.

**EQUIPMENT LAYOUT**