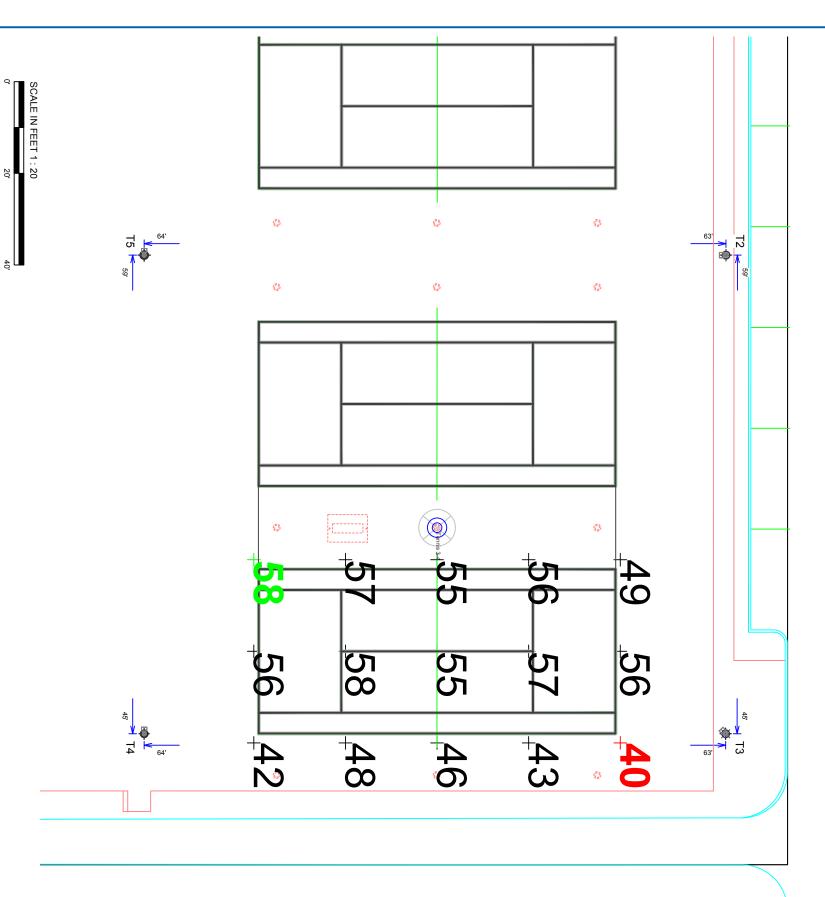


						ı	ı	
	P	Pole			Luminaires			
QΤΥ	LOCATION	SIZE	GRADE ELEVATION	HEIGHT BNITNDOW	LAMP TYPE	QTY/ POLE	THIS GRID	OTHER GRIDS
1	T2	50'	-	50'	1500W MZ	4	2	2
1	Т3	50'	-	50'	1500W MZ	2	2	0
-	Т4	60'	-	60'	1500W MZ	5	3	2
1	T5	60'	-	60'	1500W MZ	7/5*	3	9
4			TOTALS			23	10	13





	Name: Location:	Highland Park ISD SB And TE Dallas,TX
G	GRID SUMMARY	
	Name:	Court 4
	Size:	2 Court - 18' Spacing
	Spacing:	20.0' x 20.0'
	Height:	3.0' above grade
C	CONSTANT ILLUMINATION	VINATION
NS	SUMMARY	HORIZONTAL FOOTCANDLES
		Entire Grid
er er	Guaranteed Average:	50
	Scan Average:	51.8
	Maximum:	58
	Minimum:	40
	Avg / Min:	1.29
Gu	Guaranteed Max / Min:	2
	Max / Min:	1.45
	UG (adjacent pts):	1.39
	S:	0.12
	No. of Points:	15
LU	LUMINAIRE INFORMATION	ON
	Luminaire Type:	Green Generation
	Rated Lamp Life:	5,000 hours
>	Avg Lumens / Lamp:	134,000
Ą	Avg Lamp Tilt Factor:	1.000
	No. of Luminaires:	10
	Avg KW:	15.64 (17.0 max)

Guaranteed Performance: The Guaranteed Average CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary.

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

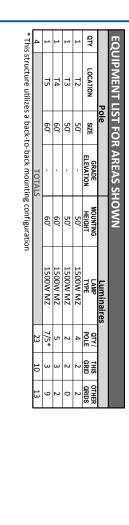
Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

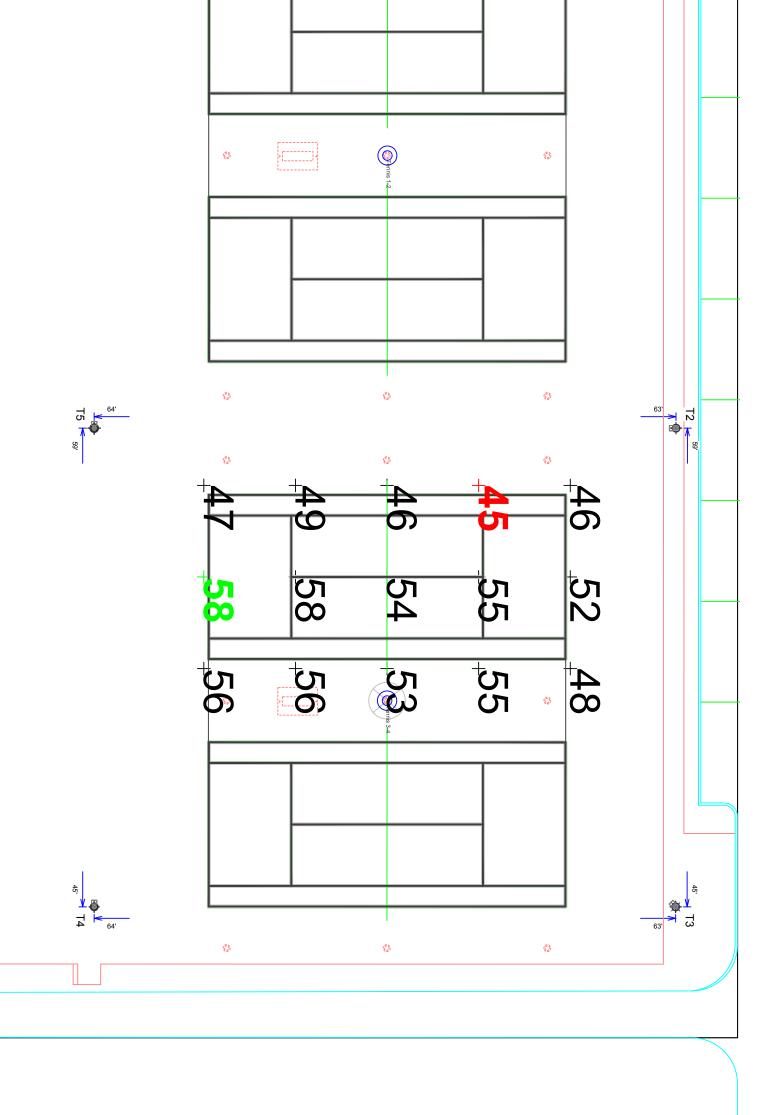
Pole location(s) \bigoplus dimensions are relative to 0,0 reference point(s) \bigotimes

ENGINEERED DESIGN By: Zach Strong, LC File # / Date: 139369R9 04-Jun-13

ILLUMINATION SUMMARY

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Name: Highland Park ISD SB And TE Location: Dallas,TX

Avg	Av	LUN				Guai					Gua		SUN	00					GR
Avg Lamp Tilt Factor: No. of Luminaires: Avg KW:	Luminaire Type: Rated Lamp Life: Avg Lumens / Lamp:	LUMINAIRE INFORMATION	No. of Points:	UG (adjacent pts): CV:	Max / Min:	Guaranteed Max / Min:	Avg/Min:	Minimum:	Maximum:	Scan Average:	Guaranteed Average:		SUMMARY	CONSTANT ILLUMINATION	Height:	Spacing:	Size:	Name:	GRID SUMMARY
	Luminaire Type: Green Generation lated Lamp Life: 5,000 hours Lumens / Lamp: 134,000		15	1.23 0.09	1.29	2	1.15	45	58	51.8	50	Entire Grid	HORIZONTAL FOOTCANDLES	VINATION	Height: 3.0' above grade	Spacing: 20.0' x 20.0'	Size: 2 Court - 18' Spacing	Court 3	

Guaranteed Performance: The Guaranteed Average CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

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 ballast and structures located within 3 feet (1m) of design locations.

ENGINEERED DESIGN

By: Zach Strong, LC

File # / Date: 139369R9

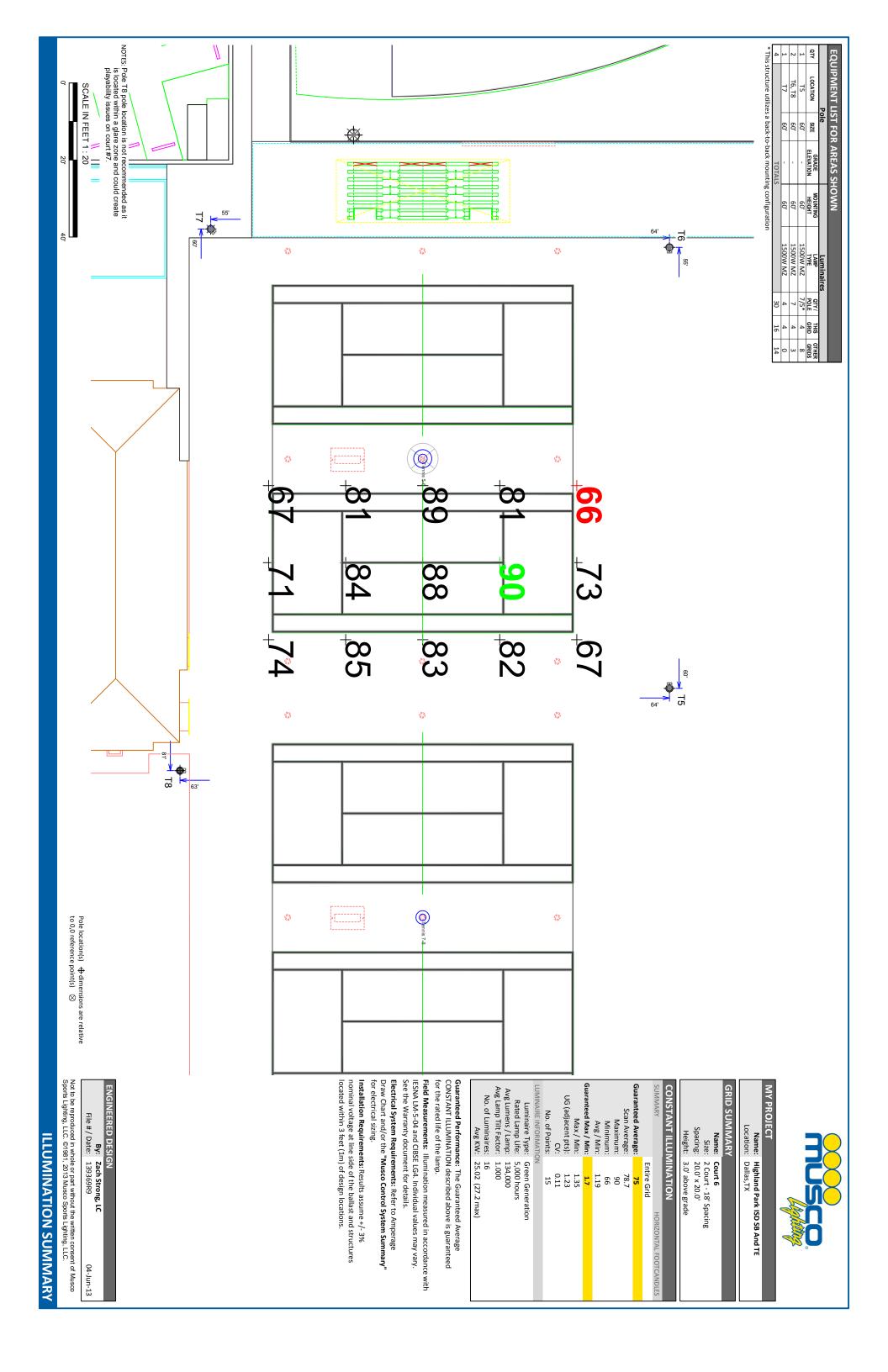
File # / Date: 139369R9 04-Jun-13

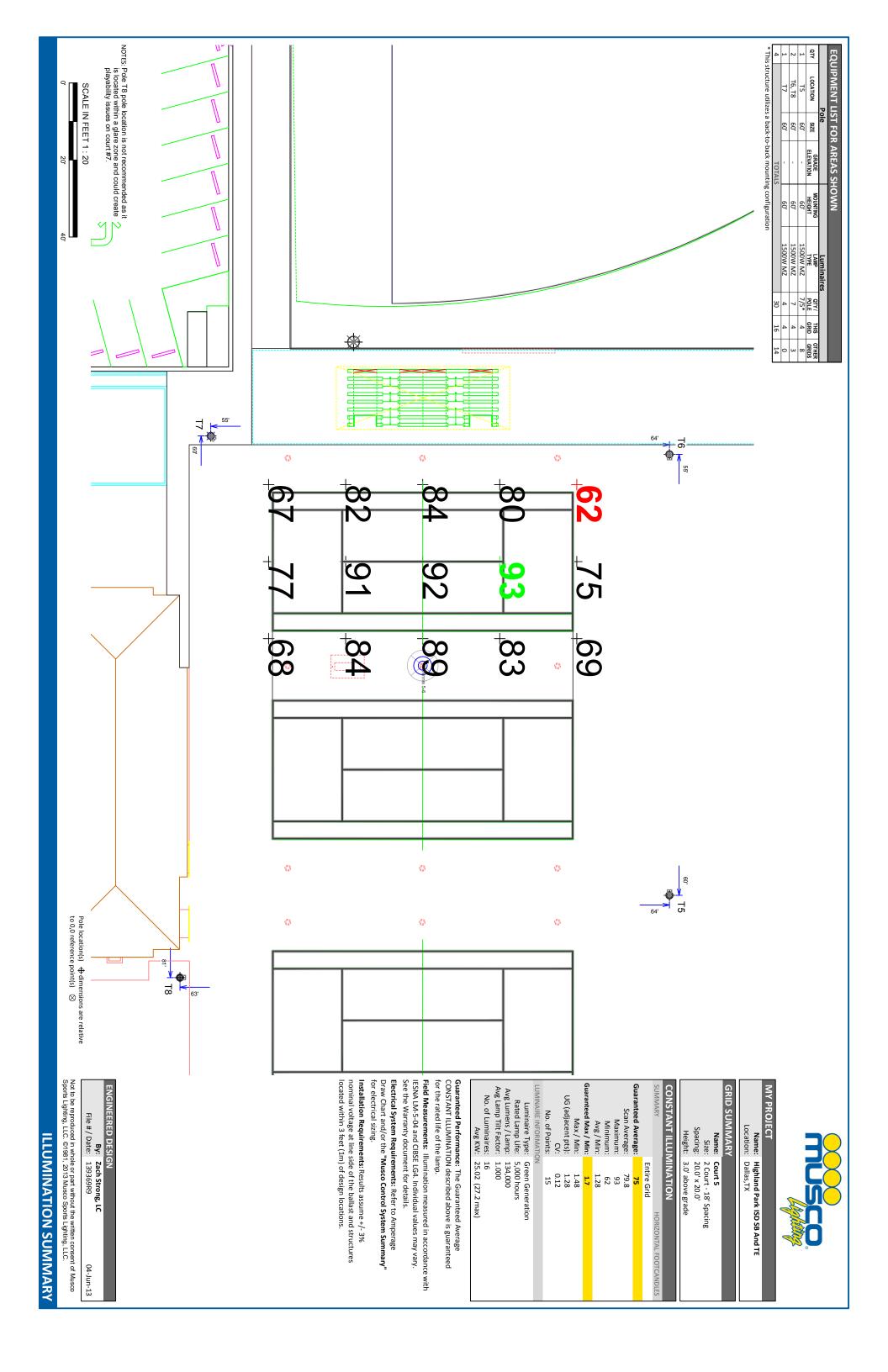
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Pole location(s) \bigoplus dimensions are relative to 0,0 reference point(s) \bigotimes

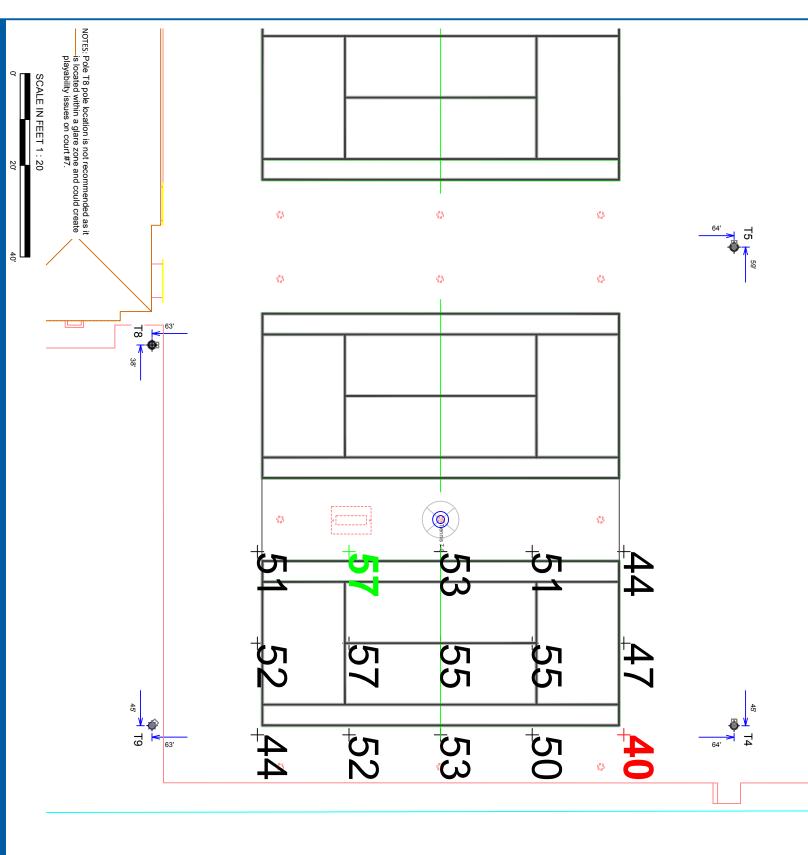
SCALE IN FEET 1: 20

ILLUMINATION SUMMARY





	P	Pole			Luminaires			
ΩTY	LOCATION	SIZE	GRADE ELEVATION	THDIBH	LAMP TYPE	QTY/	THIS	OTHER GRIDS
1	T4	60'	-	60'	1500W MZ	5	2	з
1	5T	60'	-	60'	1500W MZ	7/5*	2	10
1	81	60'	-	60'	1500W MZ	7	3	4
1	Т9	60'	1	60'	1500W MZ	3	3	0
4			TOTALS			27	10	17





Location:	Dallas,TX
GRID SUMMARY	
Name:	Court 8
Size:	2 Court - 18' Spacing
Spacing:	20.0' x 20.0'
Height:	3.0' above grade
CONSTANT ILLUMINATION	MINATION
SUMMARY	HORIZONTAL FOOTCANDLES
	Entire Grid
Guaranteed Average:	50
Scan Average:	50.7
Maximum:	57
Minimum:	40
Avg / Min:	1.28
Guaranteed Max / Min:	2
Max / Min:	1.43
UG (adjacent pts):	1.26
S:	0.10
No. of Points:	15
LUMINAIRE INFORMATION	SZ
Luminaire Type:	Green Generation
Rated Lamp Life:	5,000 hours
Avg Lumens / Lamp:	134,000
Avg Lamp Tilt Factor:	1.000
No. of Luminaires:	10
Avg KW:	15.64 (17.0 max)

Guaranteed Performance: The Guaranteed Average CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

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

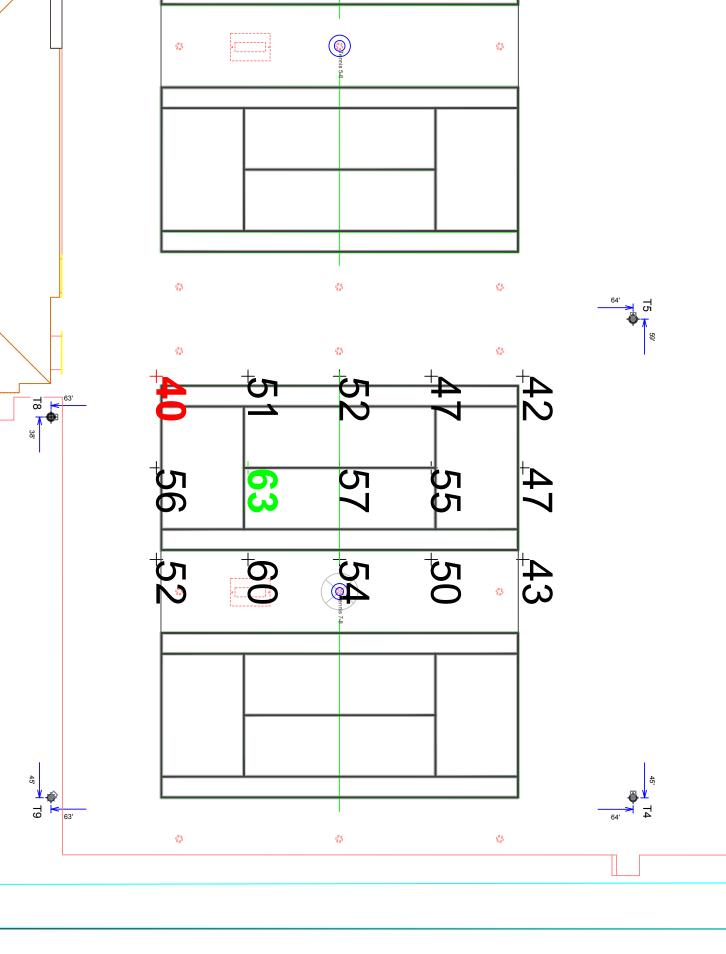
Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

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

04-Jun-13	By: Zach Strong, LC ste: 139369R9	By: Zach Stror File # / Date: 139369R9
	GN	ENGINEERED DESIGN

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	P	Pole			Luminaires			
Į,	LOCATION	SIZE	GRADE	DNITNUOM	LAMP	QTY/	SIHT	OTHER
=	LOCATION	376	ELEVATION	HEIGHT	TYPE	POLE	GRID	GRIDS
1	T4	60'	-	60'	1500W MZ	5	2	3
1	T5	60'	-	60'	1500W MZ	7/5*	2	10
1	Т8	60'		60'	1500W MZ	7	3	4
1	Т9	60'	1	60'	1500W MZ	3	3	0
4			TOTALS			27	10	17





Name: Highland Park ISD SB And TE

z	Avg Avg			LUMI			_		Guara					Guar		SUMMARY	CON					GRI	
No. of Luminaires: Avg KW:	Avg Lumens / Lamp: Avg Lamp Tilt Factor:	Rated Lamp Life:	Luminaire Type:	LUMINAIRE INFORMATION	No. of Points:	S:	UG (adjacent pts):	Max / Min:	Guaranteed Max / Min:	Avg / Min:	Minimum:	Maximum:	Scan Average:	Guaranteed Average:		MARY	CONSTANT ILLUMINATION	Height:	Spacing:	Size:	Name:	GRID SUMMARY	Location:
10 15.64 (17.0 max)	1.000	5,000 hours	Green Generation	ON	15	0.13	1.40	1.58	2	1.28	40	63	51.4	50	Entire Grid	HORIZONTAL FOOTCANDLES	VINATION	3.0' above grade	20.0' x 20.0'	2 Court - 18' Spacing	Court 7		Dallas,TX

Guaranteed Performance: The Guaranteed Average CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp. **Field Measurements:** Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary.

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

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

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

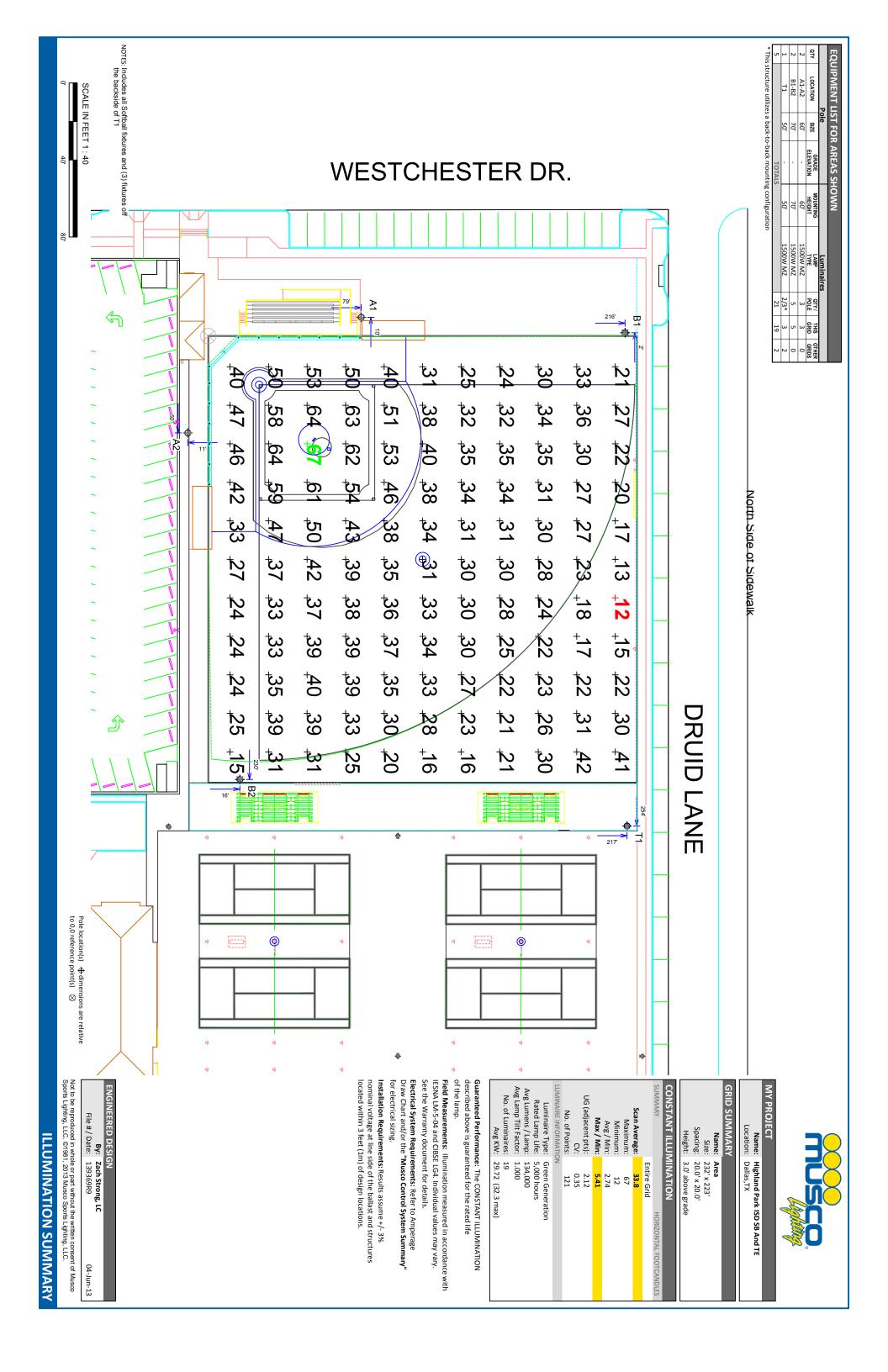
NOTES: Pole T8 pole location is not recommended as it is located within a glare zone and could create playability issues on court #7.

SCALE IN FEET 1: 20

File # / Date:	By:	NGINEERED DESIG
139369R9	Zach Strong, LC	N
04-Jun-13		

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ILLUMINATION SUMMARY



* This	13	1	2	1	1	1	1	1	2	ω	ΩTY		EQ	
structure utilize		Т7	T6, T8	T5	T4	Т3	T2	T1	B1-B2	A1-A2, T9	LOCATION	P	EQUIPMENT LIST FOR AREAS SHOWN	
s a back-to		60'	60'	60'	60'	50'	50'	50'	70'	60'	SIZE	Pole	ST FOF	
o-back m jojo tir	TOTALS	-		-	-		-		-	-	GRADE ELEVATION		R AREAS SH	
ழேiteமுற்றோமு் இ		60'	60'	60'	60'	50'	50'	50'	70'	60'	MOUNTING		NWO	
*This structure utilizes a back-to-back m0.00ting.00nf@.00ati00,0_0.0_0.0_0.0_0.0_0.0_0.0_0.0_0.0_0.0		1500W MZ	1500W MZ	1500W MZ	1500W MZ	1500W MZ	1500W MZ	1500W MZ	1500W MZ	1500W MZ	LAMP TYPE	Luminaires		
0.Q_C	65	4	7	7/5*	5	2	4	2/3*	5	ω	POLE /	,		
. O.Q	65	4	7	12	5	2	4	5	5	з	THIS GRID			
O_ O.O.	0	0	0	0	0	0	0	0	0	0	OTHER GRIDS			
0.0		0.0 0.0 0.0 0.0 0.0 0.0												
<u>Б</u> .О		1 0.0	,											
0.0		0.0	,											
J 0.0		T 0.0												
0).O												

0.0 р.о **0**.0 ρ.0 0.0 0.0 0.0 0.0 0.0 0.0 **D**.0 Ф.О **0**.0 **0**.0 **D**.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 **D**.0 ρ.0 0.0 0.0 0.0 م 0.0 0.0 0.0 0.0 **D**.0 **p**.0 **0**.0 **р**.0 0.0 р.о 0.0 0.0 0.0, 0.0, 0.0, 0.0, 0.0, 0.0 0.0 0.0 **0**.0 **0**.0 р.0 **D**.0 0.0 р.о Ф.0 0.0 **0**.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 р.о Д.О **D.0** 0.0 0.0 **0**.0 0.0 р.0 р.о 0.0 م **D**.0 р.о 0.0 **D**.0 **0**.0 **0**.0 **0**.0 0.0 0.0 ŧО.0 0.0 0.0 **D**.0 Д.О **0**.0 **D**.0 Ð.0 0.0 **0**.0 Д.О 0.0 0.0 **0**.0 0.0 0.0

Ф.0 **D**.0 **p**.0 **0**.0 **0**.0 Д.О **0**.0 0.0 Ф.О **D**.0 **0**.0 Ф.0 р.о **D**.0 **0**.0 **D**.0 **0**.0 **0**.0 Ф.О Д.О **0**.0 0.0 **0**.0 0.0 **D**.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 **0**.0 0.0 0.0 **D**.0 ф.0 **p**.0 **p**.0 0.0 0.0 0.0 **p**.0 **D**.0 **D**.1 ф.0 **D**.0 0.0 **0**.0 p.1 p.1 p.1 р.о р.1 р.1 Ф.0 0.0 0.0 Ф.О **p**.1 9 **.**0.1 0.0 0.0 0.0 0.0 0.0 **0**.0 **.**0.1 p.1 p.1 p.1 <u>ф.1</u> 0.0 **0**.0 0.0 02 <u>-</u>B1 0.0 0.0 p.1 p.1 p.2 p.4 £0.0 £0.1 £0.1 £0.1 £0.1 £.0 £.0 £.1 £.1 Д.О р.о **D**.0 .0.1 .D.2 b. 0.0 **р**.0 15.4 16.2 12.0 9.8 12.0 21 2 38.0 Ф.1 **p**.6 **p**.2 **D**.1 þ **.**0.1 ф.o р.3 ф.1 p.1 p.1 р.з **.**0.1 **p**.1 **D**.0 **D**.2 Ð.6 р.3 **p**.1 0.0 **p**.1 **D**.2 р.3 ρ.1 ρ.1 Ф.1 p.7 p.7 p.9 p.0 p.1.1 p.2 р.з **D**.2 0.1 Ф.1 **D**.1 р.3 **D**.1 p.1 p.1 p.1 p.1 p.2 p.2 p.2 p.4 p.4 **p**.1 p.1 p.1 **.**0.1 **D.**5 **D**.3 **р**.1 **p**.2 0.5 Д.З **p**.2 **.**0.1 **р**.1 **p**.1 **D**.2 1.2 1.2 1.0 p.7 p.5 p.3 ъ.3 ф.1 Ð.5 0.5 **₽.1** £ 1.2 £ 2.2 £ 1.1 £ 1.1 £ 0.1 £ 0.1 £.1 £.1 £.1 £.1 £.1 £.1 £.1 £.0 £.0 £.0 £.0 **p**.1 **p**.4 **D**.3 逫 p.1 p.1 p.1 р.3 4.3 1.5 £.2 £.1 £.1 £.1 **b** £.6 £.3 £.2 £.1 £.2 £.1 £.1 £.1 **D**.0 D.O D.O **D**.0 ф.0 **D**.0 0.0 0.0 **D**.0 Ф.1 ₽.1 **1**0.0 0.0 0.0 0.0 0.0 0.0 **0**.0 D.O 0.0 **0**.0 0.0 0.0 0.0 <u>ф</u> 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 **0**.0 Ф.0 Ф.0 **D**.0 ф.0 **p.**0 Ф.0 Ф.0 . Ф Ф.0 0.0 р.о 0.0 **0**.0 **D**.0 0.0 0.0 0.0 0.0

0.0 **6.0** 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 **0**.0 0.0 ο <mark>.</mark> **D**.0 0.0 0.0 0.0 **.**0.1 0.0 0.0 0.0 0.0 **0**.0 0.0 **0**.0 0.0 0.0 **p**.1 0.0 0.0 0.0 **0**.0 **b**0 **p**.1 **p**.1 Д.О **0**.0 **D**.0 Ð.0 **p**.1 ρ.1 **1**.1 **0**.1 **D**.1 **p**.0 **0**.0 **p**.0 р.0 **p**.0 Ф.О t0.0 p.1 p.1 **D**.0 **p**.0 **D**.0 **0**.0 **p**.1 **p**.1 **p**.1 **1**0.1 **p**.1 **p**.1 Ф.1 **0**.0 **0**.0 **.**0.0 **p**.1 **p**.0 £.0 £.1 £.1 ρ.1 р.о Ф.1 ₽.1 **D**.0 0.0 **0**.0 Д.О Ф.О S **D**.0 Ф.1 p.1 p.2 0.1 **p**.2 **p**.2 **D**.2 0.1 ρ.1 ф.1 **0**.0 0.0 0.0 **p**.1 **р**.3 **£**.2 **0**.0 0.0 0.0 to O р.1 0.3 ъ.3 ъ.3 **p**.2 Ф.1 **.**0.1 0.0 **0**.0 р.1 **p**.1 р.4 **0**.0 **0**.0 0.0 to O **p**.2 **D**.2 9.0 0.2 £.8 WESTCHESTER DR. 0.0 0.Q 0 N 6 70.4 p.6 **p**.0 TI-070-0 10.2 p/3/ Α₂ 0.0 <u>7</u> 5.7 5.6 2.4 9 10 +1 133 9.54 9.54 Ф.0 p.1/p.1/ 0.2 0.2 **D**.0 4.9 0.4 0.4 0 D.8 £.\$2 0.0 208163166142125 B2 L 2 4.5 4.7 4.2 4.1 3.5 T7 <u>0</u>.0 **р.4 6.**7 D.0 D.0 D.0 **0**.0 **D**.1 ρ.> 0.2 0.4/0/4/ p.3 p.3 p.1 p.1 ρ.5 ф. 1 20.6 28.6 51.9 **d**.4 **Д**.О Ď. 0.2 30.8 38.8 ±1.5 2.4 ъ.2 2 ♣0.3 0.3 0.3 **♣** 11⁹0 171 171 Đ.5 ф. 1 31.8 41 ф.o **0**.0 9.6E Ď.1 0.1 0 2 0.6 **p.o** p.1 p.1 **ф**.1 p.2 p.2 A.4 B.0 19.3 18.3 15.4 14.9 14.4 2.3 p.2 p.3 0.4 p.4 e.q. 8.q. 7.q **p**.0 **р**.1 Ð.0 **₽**.1 **p**.1 ф.4 0.0 0.0 **p.4** p.1 p.0 р.1 **.**0.1 **p**.2 5.0 م.0 م. Φ £.0, £.0, **p**.1 **p**.2 Ф.1 8<u>T</u> **p**.2 **1**.0 **.**0.1 **0**.0 0.0 ф.0 **p**.1 £.2 £.2 £.1 £.1 £.1 **.**0.1 Д.4 Д.З 9.0 p.1 p.1 Д.О Ф.1 **.**0.1 Ø 0.0 0.0 0.0 0.0 T9^{3.7} 1.3 424.7 5.0 ₽.1 Ф.1 0.2 0.0 **.**0 0.0 32.4 £.1 _1.2 0.3 p.9 p.5 35.6 £.7 27.3 4.9 18.3 2.8 16.0 2.7 16.8 4.1 1.4 30.1 5.0 £0.1 £0.1 **p**.1 0.0 ф.1 **D**.2 ф. О 3 **0**.9 +1.3 +1.4 †1.4 11.2 **6**.0 0.0 0.0 0.0 0.0 0.0 ф.1 **.**0.1 £.3 Ð.5 **.**0 **0.0** 5 **D.0 D**.6 **D**.5 ф.0 **p**.1 Ф.1 **D.**5 p.4 p.2 ф. О Д.О 0.0 p.1 p.1 0.5 p.6 p.3 p.2 0.0 0.0 0.0 م **p.**0 **p**.2 р.о **0.0** 0.0 p.1 p.1 **p**.3 **р**.3 р.2 **р**.3 р.2 **р**.2 ъ. 1 **.**00 **.**0 \$ <u>ф</u>. Ф.О **0**.1 **D**.1 0.1 0.0 9 £.1 £.1 ф.1 **D**.1 0.0 0.0 0.0 0.0 **D**.0 0.0 0.0 ŧО.1 **p**.1 0.0 **0**.0 0.0 0.0 **0**.0 **р**.0 **0**.0 **р**.0 0.0 **.**7 <u>,</u> **1**.0 0.0 b <u>0</u>.0 <u>ф</u> 0.0 0.0 <u>ф</u> <u>ф</u> 0.0 <u>ф</u> <u>ф</u> р.о 0.0 **D**.0 **0**.0 **0**.0 0.0 Д.О 0.0 **p**.0 **0**.0 **0**.0 р.о Ф.О Д.О **D**.0 **D**.0 . • **D**.0 0 0.0 р.0 0.0 **D**.0 Ф.0 0.0 р.о **0**.0 **D**.0 **D**.0 Ф.0 **D**.0 Ф.О р.о 0.0 **0**.0 **D**.0 0.0 **D**.0

NOTES: The blue line represents the point at which the light reaches 0.0 FC. 0.0 0.0 0.0 Д.О Ф.О **D**.0 **D**.0 0.0 **0**.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Д.О **D**.0 **0**.0 **0**.0 0.0 0.0 0.0 ф.0 Ф.О Ф.О **D**.0 р.о **0**.0 0.0 0.0 **0**.0 **0**.0 0.Q 0.Q 0.0 0.0 **D**.0 0.0 0.0 0.0 0.0 0.0 **0**.0 0.0 **D**.0 **D**.0 **D**.0 р.о 0.0 0.0 0.0 0.Q 0.0 0.0 0.0 0.0 0.0 ф.0 Д.О 0.0 0.0 **0**.0 0.0 0.0 0.0 **D**.0 **D**.0

SCALE IN FEET 1: 120

0.0 Ф.О **D**.0 **0**.0 **0**.0 **0**.0 **p**.0 **D**.0 **D**.0 **0**.0 **0**.0 **0**.0 Ф.О **D**.0 **0**.0 **0**.0

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0.0 **0.0** 0.0 0.0 0.0 0.0 0.0

Pole location(s) \bigoplus dimension to 0,0 reference point(s) \bigotimes

are relative

Name: Highland Park ISD SB And TE
Location: Dallas,TX
Name: Blanket Grid
Spacing: 30.0' x 30.0'
Height: 3.0' above grade
ω ω π

CONSTANT ILLUIVINATION	MATION
SUMMARY	HORIZONTAL FOOTCANDLES
	Entire Grid
Scan Average:	1.0
Maximum:	67
Minimum:	0
Avg/Min:	442.94
Max / Min:	28697.68
UG (adjacent pts):	10.30
cv:	4.77
No. of Points:	1247
LUMINAIRE INFORMATION	N
Luminaire Type:	Luminaire Type: Green Generation
Rated Lamp Life:	5,000 hours
Avg Lumens / Lamp:	134,000
	1.000
No. of Luminaires:	65
Avg KW:	Avg KW: 101.66 (110.5 max)

of the lamp. Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life

Field Measurements: Illumination measured in accordance with IESNA LN-5-04 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

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

Ф.0

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0.0 0.0 0.0 **0**.0 **0**.0

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0.0

0.0 **0**.0

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

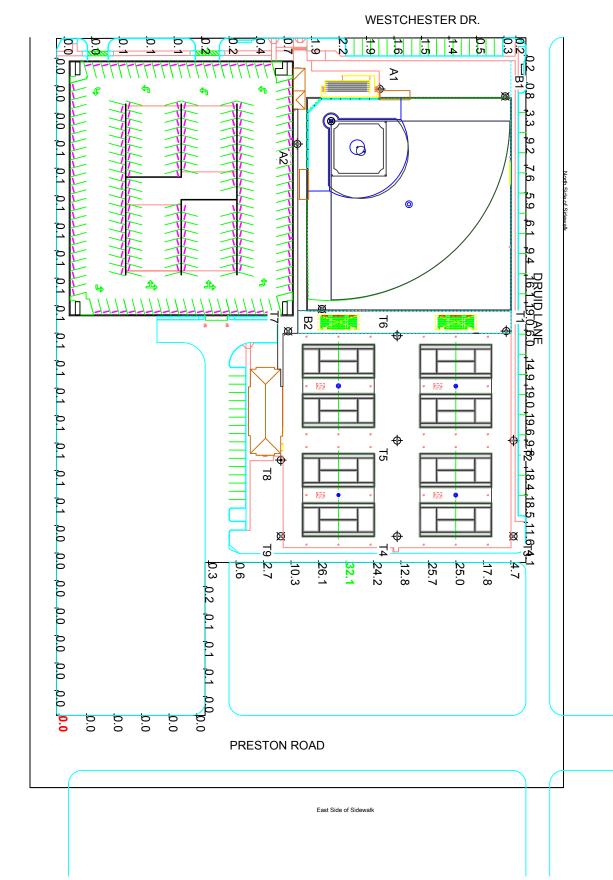
ENGINEERED DESIGN By: Zach Strong, LC File # / Date: 139369R9

04-Jun-13

ILLUMINATION SUMMARY

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	-	Pole			Luminaires	•	
QΤΥ	LOCATION	SIZE	GRADE ELEVATION	THBIBH BNITNDOW	LAMP TYPE	QTY/	THIS GRID
З	A1-A2, T9	60'		60'	1500W MZ	3	3
2	B1-B2	70'	-	70'	1500W MZ	5	5
1	T1	50'	-	50'	1500W MZ	2/3*	5
1	Т2	50'	1	50'	1500W MZ	4	4
1	Т3	50'	-	50'	1500W MZ	2	2
1	T4	60'		60'	1500W MZ	5	5
1	T5	60'		60'	1500W MZ	7/5*	12
2	T6, T8	60'	-	60'	1500W MZ	7	7
1	Т7	60'	-	60'	1500W MZ	4	4
13			TOTALS			65	65



TUSCO MY PROJECT

Name: Location:	Highland Park ISD SB And TE Dallas,TX
GRID SUMMARY	
Name:	Street Spill
	30.0'
	3.0' above grade
CONSTANT ILLUMINATION	MINATION
SUMMARY	HORIZONTAL FOOTCANDLES
	Entire Grid
Scan Average:	4.726
Maximum:	32.06
Minimum:	0.01
No. of Points:	84
LUMINAIRE INFORMATION	ON
Luminaire Type:	Luminaire Type: Green Generation
Rated Lamp Life:	5,000 hours
Avg Lumens / Lamp:	134,000
Avg Lamp Tilt Factor:	1.000
No. of Luminaires:	65
Avg KW:	101.66 (110.5 max)

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

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 hallast and structures.

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

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

SCALE IN FEET 1: 100

By: Zach Strong, LC

File # / Date: 139369R9

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ILLUMINATION SUMMARY

	70	Pole			Luminaires	Ţ	
ΩTY	LOCATION	SIZE	GRADE ELEVATION	THEIGHT SNITNUOM	LAMP TYPE	QTY/ POLE	THIS
ω	A1-A2, T9	60'		60'	1500W MZ	з	ω
2	B1-B2	70'	-	70'	1500W MZ	5	5
1	T1	50'	-	50'	1500W MZ	2/3*	5
ъ	Т2	50'		50'	1500W MZ	4	4
1	Т3	50'	-	50'	1500W MZ	2	2
1	T4	60'		60'	1500W MZ	ъ	ъ
1	T5	60'	-	60'	1500W MZ	7/5*	12
2	T6, T8	60'	-	60'	1500W MZ	7	7
1	Т7	60'	-	60'	1500W MZ	4	4
13			TOTALS			65	65

213 315 315 315 316 317 317 318 319 319 44 319 44 319 44 319 44 319 44 319 44 319 44 319 44 319 44 319 44 319 44 319 44 319 44 319 44 319 44 319 44 319 44 319 44 319 44 47 47 47 47 47 47 47 47 47	11 17 35 109,102,76 11,5,19.4 27/25,790 16,8,19.8,21.5,15,5,22.5,20.1,14.618.4
PRESTON ROAD	
East Side of Sidewalk	



GRID SUMMARY

Name: Highland Park ISD SB And TE Location: Dallas,TX

Name: Stree Spacing: 30.0' Height: 3.0' a	Name: Street Spill pacing: 30.0' Height: 3.0' above grade
CONSTANT ILLUMINATION	VINATION
SUMMARY	MAX VERTICAL FOOTCANDLES
	Entire Grid
Scan Average:	6.562
Maximum:	36.78
Minimum:	0.16
No. of Points:	84
LUMINAIRE INFORMATION	OZ
Luminaire Type:	Luminaire Type: Green Generation
Rated Lamp Life:	5,000 hours
Avg Lumens / Lamp:	134,000
Avg Lamp Tilt Factor:	1.000
No. of Luminaires:	65
Avg KW:	Avg KW: 101.66 (110.5 max)

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

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 ballast and structures located within 3 feet (1m) of design locations.

SCALE IN FEET 1: 100

ENGINEERED DESIGN

By: Zach Strong, LC

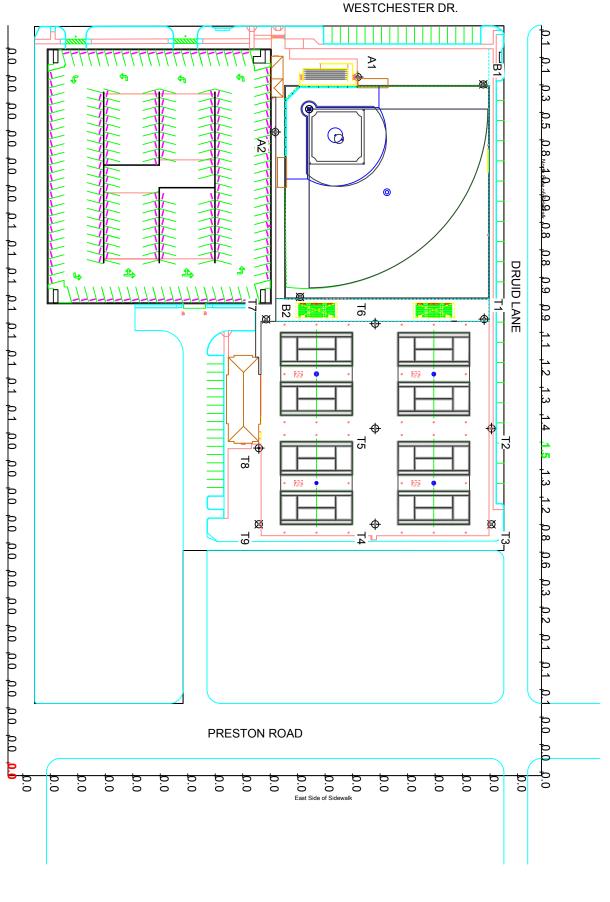
File # / Date: 139369R9

O4-Jun-13

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	P	Pole			Luminaires			
ΩŢγ	LOCATION	SIZE	GRADE	MOUNTING	LAMP	POLF/	GRID	OTHER
ω	A1-A2, T9	60'		60'	1500W MZ	з	ω	0
2	B1-B2	70'	-	70'	1500W MZ	5	5	0
1	T1	50'	-	50'	1500W MZ	2/3*	5	0
1	Т2	50'		50'	1500W MZ	4	4	0
1	Т3	50'	-	50'	1500W MZ	2	2	0
1	T4	60'	-	60'	1500W MZ	5	5	0
1	T5	60'		60'	1500W MZ	7/5*	12	0
2	T6, T8	60'	-	60'	1500W MZ	7	7	0
1	Т7	60'	-	60'	1500W MZ	4	4	0
13			TOTALS			65	65	0

Itilizes a back-to-back mounting configuration





Name: Residential Spill Spacing: 30.0' Height: 3.0' above grade CONSTANT ILLUMINATION SUMMARY Fortire Grid Residential Spill HORIZONTAL FOOTCANDLES	Maximum: 1.46	Minimum: 0.01	Spacing: Height: CONSTANT ILLUN SUMMARY Scan Average: Maximum: Minimum: No. of Points: LUMINAIRE INFORMATIC Luminaire Type: Rated Lamp Life: Avg Lumens / Lamp: Avg Lamp Tilt Factor:	Residential Spil 30.0° 3.0° above grad INATION INATION O.272 1.46 0.01 74 Green Generati 5,000 hours 134,000 1.000
Fntire Grid				Entire Grid
111111111111111111111111111111111111111			Scan Average:	0.272
			No. of Points:	74
			LUMINAIRE INFORMATIC	OZ
9			Luminaire Type:	Green Generation
Scan Average: 0.272 Maximum: 1.46 Minimum: 0.01 No. of Points: 74 LUMINAIRE INFORMATION Luminaire Type: Green Generation	Minimum: 0.01 No. of Points: 74 LUMINAIRE INFORMATION Luminaire Type: Green Generation	No. of Points: 74 LUMINAIRE INFORMATION Luminaire Type: Green Generation	Rated Lamp Life:	5,000 hours
Scan Average: 0.272 Maximum: 1.46 Minimum: 0.01 No. of Points: 74 LUMINAIRE INFORMATION Luminaire Type: Green Generation Rated Lamp Life: 5,000 hours	Minimum: 0.01 No. of Points: 74 LUMINAIRE INFORMATION Luminaire Type: Green Generation Rated Lamp Life: 5,000 hours	No. of Points: 74 LUMINAIRE INFORMATION Luminaire Type: Green Generation Rated Lamp Life: 5,000 hours	Avg Lumens / Lamp:	134,000
Scan Average: Maximum: 1.46 Minimum: No. of Points: 74 LUMINAIRE INFORMATION Luminaire Type: Green Generation Rated Lamp Life: 5,000 hours Avg Lumens / Lamp: 134,000	Minimum: 0.01 No. of Points: 74 LUMINAIRE INFORMATION Luminaire Type: Green Generation Rated Lamp Life: 5,000 hours Avg Lumens / Lamp: 134,000	No. of Points: 74 LUMINAIRE INFORMATION Luminaire Type: Green Generation Rated Lamp Life: 5,000 hours Avg Lumens / Lamp: 134,000	Avg Lamp Tilt Factor:	1.000
Scan Average: 0.272 Maximum: 1.46 Minimum: 0.01 No. of Points: 74 LUMINAIRE INFORMATION Luminaire Type: Green Generation Rated Lamp Life: 5,000 hours Avg Lumens / Lamp: 134,000 Avg Lamp Tilt Factor: 1.000	Minimum: 0.01 No. of Points: 74 LUMINAIRE INFORMATION Luminaire Type: Green Generation Rated Lamp Life: 5,000 hours Avg Lumens / Lamp: 134,000 Avg Lamp Tilt Factor: 1.000	No. of Points: 74 LUMINAIRE INFORMATION Luminaire Type: Green Generation Rated Lamp Life: 5,000 hours Avg Lumens / Lamp: 134,000 Avg Lamp Tilt Factor: 1.000	No of Luminaires:	65
Scan Average: 0.272 Maximum: 1.46 Minimum: 0.01 No. of Points: 74 LUMINAIRE INFORMATION Luminaire Type: Green Generation Rated Lamp Life: 5,000 hours Avg Lumens / Lamp: 134,000 Avg Lamp Tilt Factor: 1.000 No. of Luminaires: 65	Minimum: 0.01 No. of Points: 74 LUMINAIRE INFORMATION Luminaire Type: Green Generation Rated Lamp Life: 5,000 hours Avg Lumens / Lamp: 134,000 Avg Lamp Tilt Factor: 1.000 No. of Luminaires: 65	No. of Points: 74 LUMINAIRE INFORMATION Luminaire Type: Green Generation Rated Lamp Life: 5,000 hours Avg Lumens / Lamp: 134,000 Avg Lamp Tilt Factor: 1.000 No. of Luminaires: 65		

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

Electrical System Requirements: Refer to Amperage

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life

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 ballast and structures located within 3 feet (1m) of design locations.

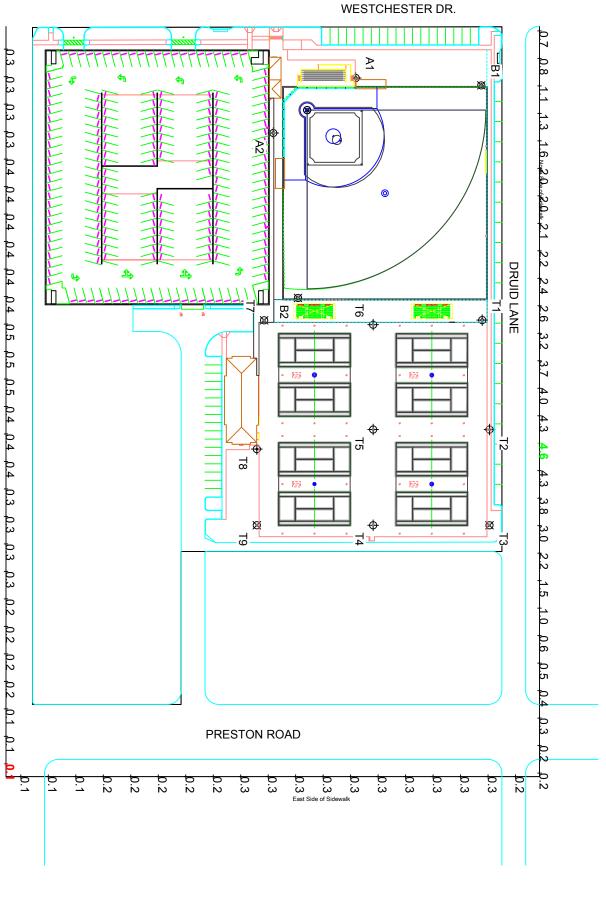
Pole location(s) \bigoplus dimensions are relative to 0,0 reference point(s) \bigotimes

SCALE IN FEET 1: 100

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04-Jun-13	Zach Strong, LC 139369R9	By: Zach Stron File # / Date: 139369R9
	GN	ENGINEERED DESIGN

Ę	EQUIPIEN I LIST FOR AREAS SHOWN	Pole	K AKEAS SI	JOWN	Luminaires	ı	ı	
QTY	LOCATION	SIZE	GRADE ELEVATION	THÐIÐH SNILNNOW	LAMP TYPE	QTY/ POLE	THIS	OTHER GRIDS
3	A1-A2, T9	60'	-	60'	1500W MZ	3	3	0
2	B1-B2	70'		70'	1500W MZ	5	5	0
1	T1	50'	-	50'	1500W MZ	2/3*	5	0
1	Т2	50'		50'	1500W MZ	4	4	0
1	Т3	50'	-	50'	1500W MZ	2	2	0
1	T4	60'		60'	1500W MZ	5	5	0
1	T5	60'	-	60'	1500W MZ	7/5*	12	0
2	T6, T8	60'		60'	1500W MZ	7	7	0
1	T7	60'		60'	1500W MZ	4	4	0
13			TOTALS			65	65	0
*	* This standard stillings hook to book as a safe and in	Land.						

are utilizes a back-to-back mounting configuration





0 0	GRID SUMIMARY Name: Residential Spacing: 30.0° Height: 3.0° above g CONSTANT ILLUMINATION SUMMARY CONSTANT ILLUMINATION Maximum: 4.60 Minimum: 0.11 No. of Points: 74 LUMINARE INFORMATION Luminaire Type: Green Gene Rated Lamp Life: 5,000 hours Avg Lumens / Lamp: 134,000	MARY Name: Residential Spill pacing: 30.0' Height: 3.0' above grade ILLUMINATION MAX VERTICAL FOOTCANDLES Entire Grid Verage: 0.937 Ximum: 4.60 Inimum: 0.11 Points: 74 ORNATION Green Generation np Life: 5,000 hours / Lamp: 134,000
	Minimum: No. of Points: MINAIRE INFORMATIO	
	Luminaire Type: Rated Lamp Life:	Green Generation 5,000 hours
No. of Points: /4 MINAIRE INFORMATION Luminaire Type: Green Generation Rated Lamp Life: 5,000 hours	Avg Lumens / Lamp:	134,000 1.000
No. of Points: /4 MINAIRE INFORMATION Luminaire Type: Green Generation Rated Lamp Life: 5,000 hours // Lumens / Lamp: 134,000 g Lamp Tilt Factor: 1.000	vg Lamp Tilt Factor:	67
No. of Points: /4 MINAIRE INFORMATION Luminaire Type: Green Generation Rated Lamp Life: 5,000 hours //g Lumens / Lamp: 134,000 g Lamp Tilt Factor: 1.000 No. of Luminaires: 65	Avg Lamp Tilt Factor: No. of Luminaires:	

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

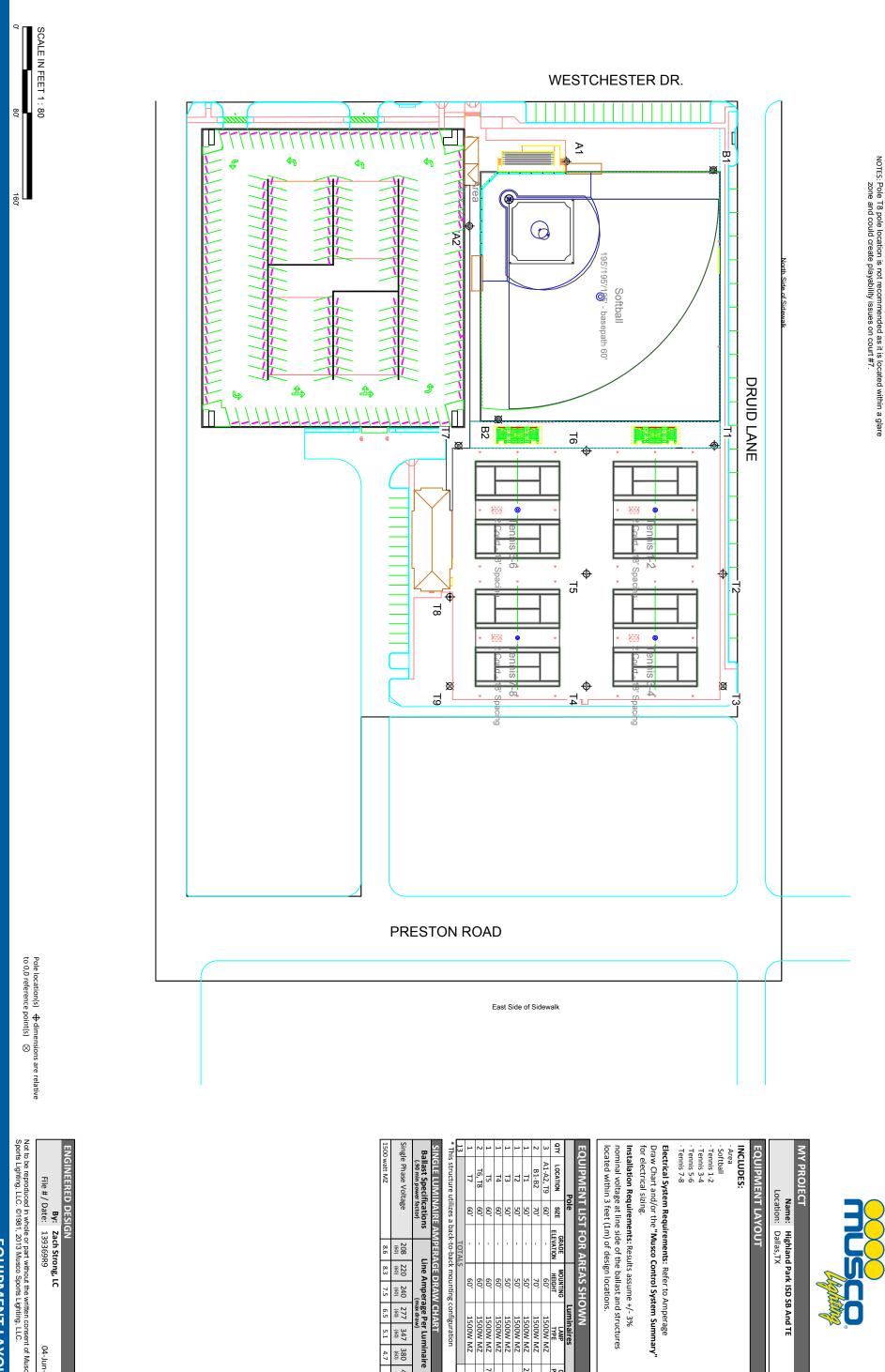
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

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

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

SCALE IN FEET 1: 100

Not to be re Sports Light		ENGINE
produced in wh ing, LLC. ©198	By: Zach Stror File # / Date: 139369R9	ENGINEERED DESIGN
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of Musco	04-Jun-13	



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ENGINEERED DESIGN By: Zach Strong, LC File # / Date: 139369R9

04-Jun-13

EQUIPMENT LAYOUT

Name: Highland Park ISD SB And TE Location: Dallas,TX