

### EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
1	A1	80'	-	80'	1500W MZ	5/5*	5	5
1	A2	80'	-	80'	1500W MZ	5	5	0
1	B1	80'	-	80'	1500W MZ	10/10*	10	10
1	B2	80'	-	80'	1500W MZ	10	10	0
2	C1-C2	70'	-	70'	1500W MZ	4	4	0
2	D1-D2	70'	-	70'	1500W MZ	5	5	0
TOTALS						63	48	15

\* This structure utilizes a back-to-back mounting configuration



### MY PROJECT

Name: Ravensdale Multipurpose Fields  
Location: Ravensdale, WA

### GRID SUMMARY

Name: Softball Field #1  
Size: Irregular 320' / 377' / 320'  
Spacing: 30.0' x 30.0'  
Height: 3.0' above grade

### CONSTANT ILLUMINATION

SUMMARY	HORIZONTAL FOOTCANDLES	
	Infield	Outfield
<b>Guaranteed Average:</b>	<b>50</b>	<b>30</b>
Scan Average:	51.2	31.7
Maximum:	60	50
Minimum:	37	22
Avg / Min:	1.37	1.43
<b>Guaranteed Max / Min:</b>	<b>2</b>	<b>2.5</b>
Max / Min:	1.60	2.24
UG (adjacent pts):	1.23	1.52
CV:	0.10	0.19
No. of Points:	25	113

### 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: 48  
Avg KW: 75.07 (81.6 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.

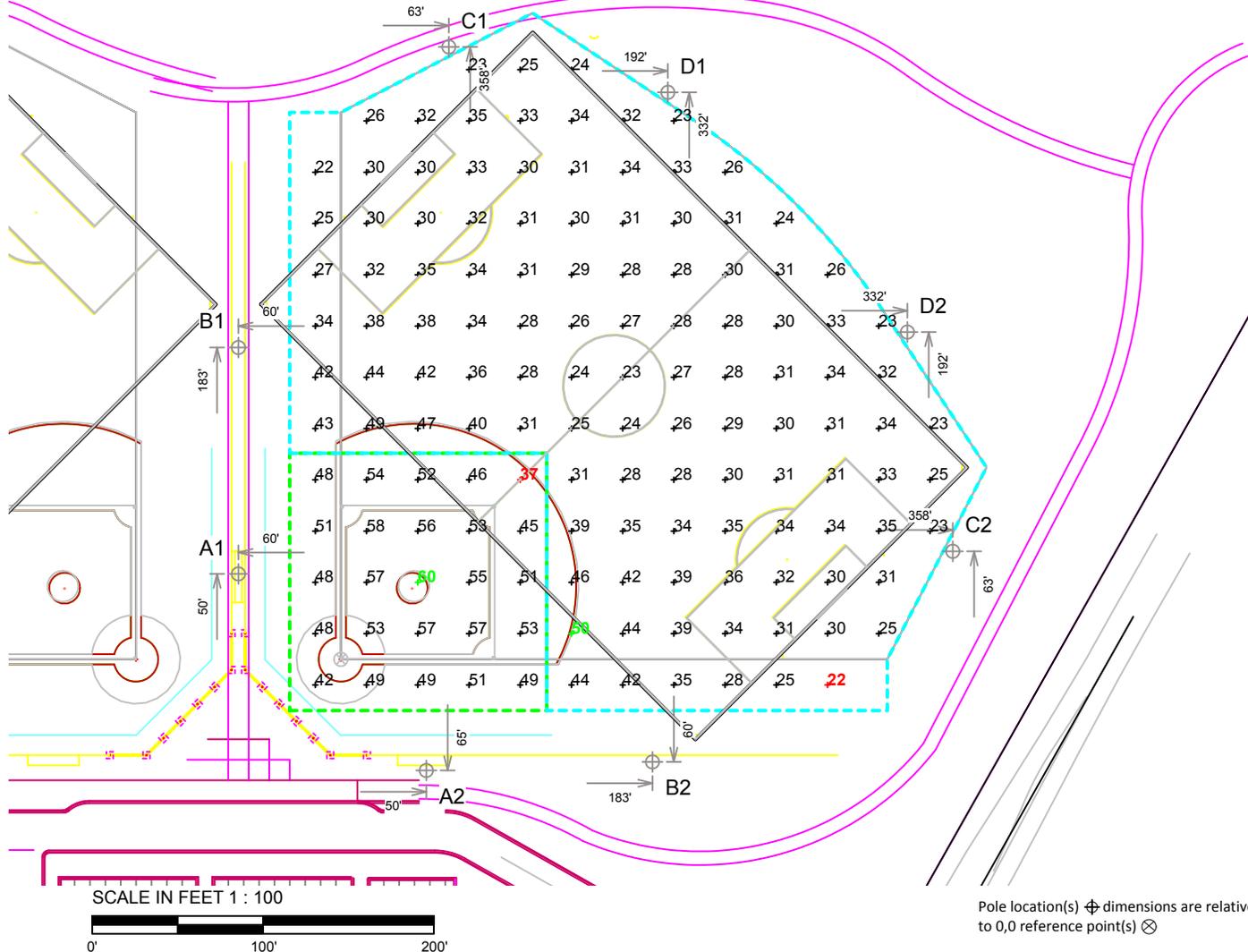
**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

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

### ENGINEERED DESIGN

By: Eric Svenby  
File # / Date: 160605R1 15-Oct-12

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## ILLUMINATION SUMMARY

### EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
1	A1	80'	-	80'	1500W MZ	5/5*	5	5
1	A3	80'	-	80'	1500W MZ	5	5	0
1	B1	80'	-	80'	1500W MZ	10/10*	10	10
1	B3	80'	-	80'	1500W MZ	10	10	0
2	C3-C4	70'	-	70'	1500W MZ	4	4	0
2	D3-D4	70'	-	70'	1500W MZ	5	5	0
8	TOTALS					63	48	15

\* This structure utilizes a back-to-back mounting configuration



### MY PROJECT

Name: Ravensdale Multipurpose Fields  
Location: Ravensdale, WA

### GRID SUMMARY

Name: Softball Field #2  
Size: Irregular 320' / 377' / 320'  
Spacing: 30.0' x 30.0'  
Height: 3.0' above grade

### CONSTANT ILLUMINATION

SUMMARY	HORIZONTAL FOOTCANDLES	
	Infield	Outfield
<b>Guaranteed Average:</b>	<b>50</b>	<b>30</b>
Scan Average:	51.0	31.7
Maximum:	60	49
Minimum:	36	22
Avg / Min:	1.40	1.41
<b>Guaranteed Max / Min:</b>	<b>2</b>	<b>2.5</b>
Max / Min:	1.65	2.16
UG (adjacent pts):	1.21	1.59
CV:	0.11	0.18
No. of Points:	25	113

### 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: 48  
Avg KW: 75.07 (81.6 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.

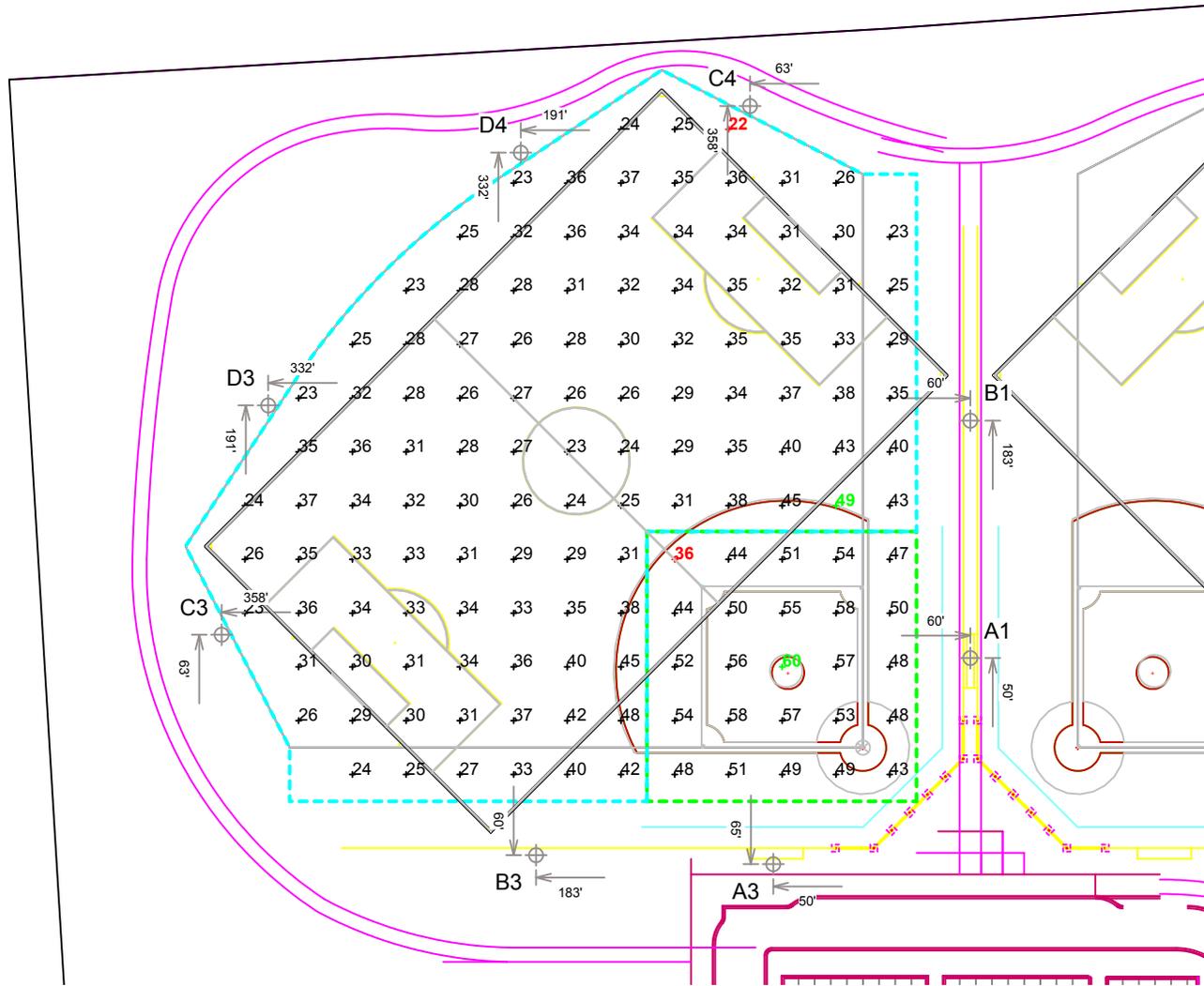
**Installation Requirements:** Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

### ENGINEERED DESIGN

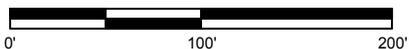
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File # / Date: 160605R1

15-Oct-12

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SCALE IN FEET 1 : 100



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

## ILLUMINATION SUMMARY

### EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
1	A1	80'	-	80'	1500W MZ	5/5*	5	5
1	A2	80'	-	80'	1500W MZ	5	5	0
1	B1	80'	-	80'	1500W MZ	10/10*	10	10
1	B2	80'	-	80'	1500W MZ	10	10	0
2	C1-C2	70'	-	70'	1500W MZ	4	4	0
2	D1-D2	70'	-	70'	1500W MZ	5	5	0
8	TOTALS						63	48

\* This structure utilizes a back-to-back mounting configuration



### MY PROJECT

Name: Ravensdale Multipurpose Fields  
Location: Ravensdale, WA

### GRID SUMMARY

Name: Soccer Field #1  
Size: 360' x 225'  
Spacing: 30.0' x 30.0'  
Height: 3.0' above grade

### CONSTANT ILLUMINATION

SUMMARY	HORIZONTAL FOOTCANDLES
	Entire Grid
<b>Guaranteed Average:</b>	<b>30</b>
Scan Average:	32.8
Maximum:	48
Minimum:	23
Avg / Min:	1.45
<b>Guaranteed Max / Min:</b>	<b>2.5</b>
Max / Min:	2.14
UG (adjacent pts):	1.76
CV:	0.19
No. of Points:	96
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:	48
Avg KW:	75.07 (81.6 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.

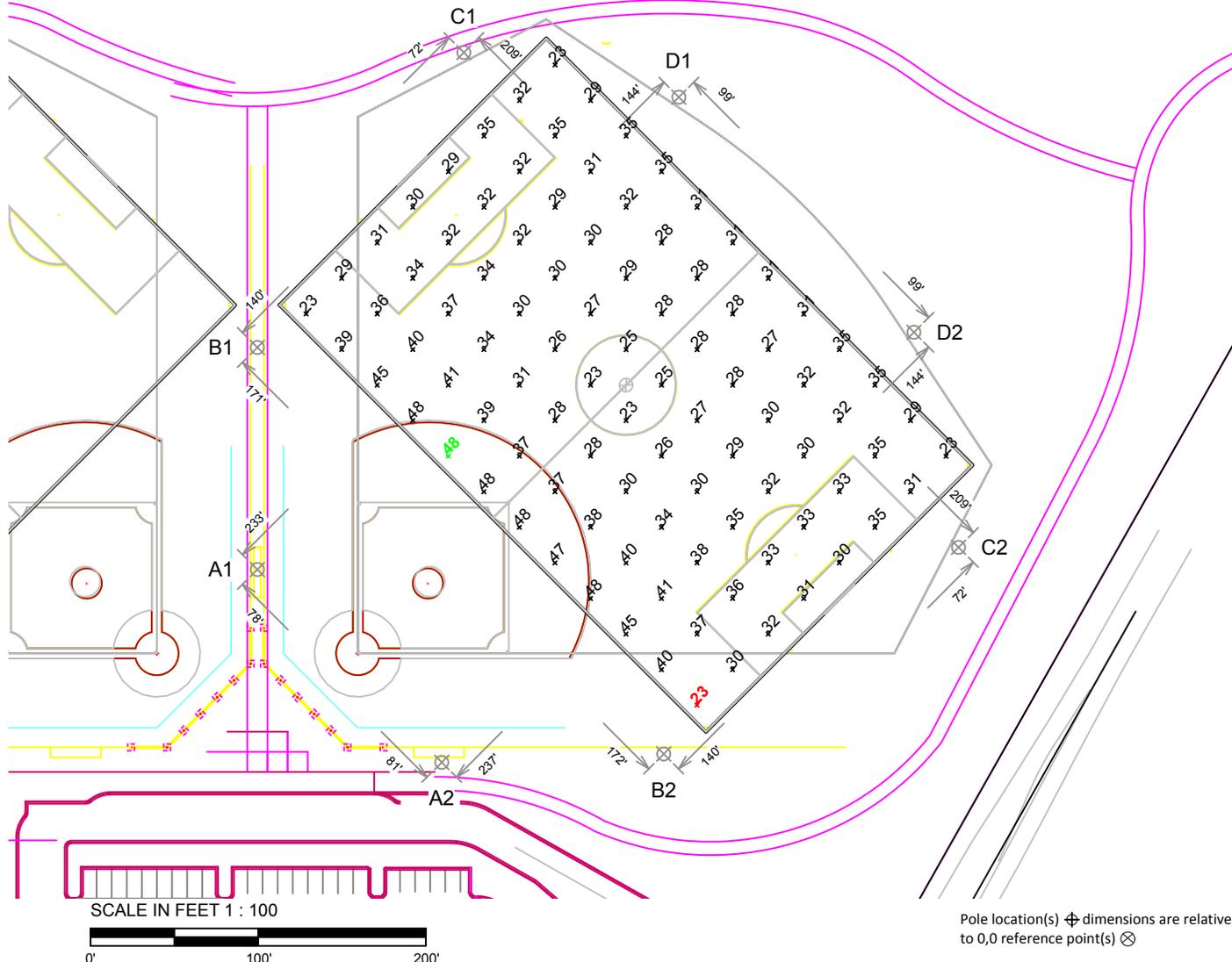
**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

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

### ENGINEERED DESIGN

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### EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires					
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS	
1	A1	80'	-	80'	1500W MZ	5/5*	5	5	
1	A3	80'	-	80'	1500W MZ	5	5	0	
1	B1	80'	-	80'	1500W MZ	10/10*	10	10	
1	B3	80'	-	80'	1500W MZ	10	10	0	
2	C3-C4	70'	-	70'	1500W MZ	4	4	0	
2	D3-D4	70'	-	70'	1500W MZ	5	5	0	
8	TOTALS						63	48	15

\* This structure utilizes a back-to-back mounting configuration



#### MY PROJECT

**Name:** Ravensdale Multipurpose Fields  
**Location:** Ravensdale, WA

#### GRID SUMMARY

**Name:** Soccer Field #2  
**Size:** 360' x 225'  
**Spacing:** 30.0' x 30.0'  
**Height:** 3.0' above grade

#### CONSTANT ILLUMINATION

SUMMARY	HORIZONTAL FOOTCANDLES
	Entire Grid
<b>Guaranteed Average:</b>	<b>30</b>
Scan Average:	33.0
Maximum:	47
Minimum:	23
Avg / Min:	1.46
<b>Guaranteed Max / Min:</b>	<b>3.01</b>
Max / Min:	2.08
UG (adjacent pts):	1.68
CV:	0.17
No. of Points:	96
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:	48
Avg KW:	75.07 (81.6 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.

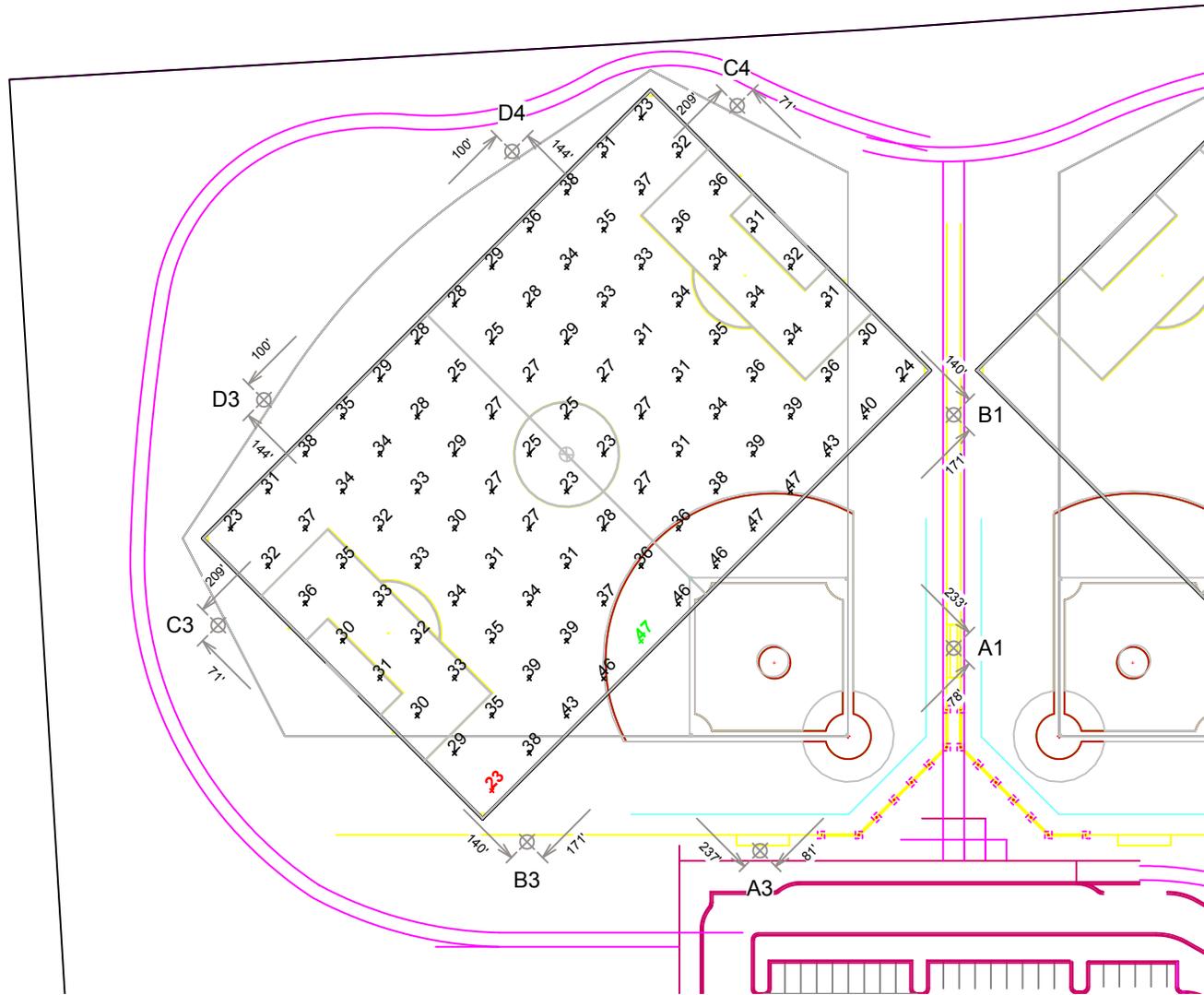
**Installation Requirements:** Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

#### ENGINEERED DESIGN

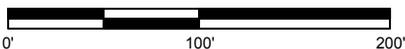
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15-Oct-12

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SCALE IN FEET 1 : 100



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

## ILLUMINATION SUMMARY



**MY PROJECT**

Name: Ravensdale Multipurpose Fields  
 Location: Ravensdale, WA

**EQUIPMENT LAYOUT**

**INCLUDES:**  
 · Soccer Field #1  
 · Soccer Field #2  
 · Softball Field #1  
 · Softball Field #2

**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.

**EQUIPMENT LIST FOR AREAS SHOWN**

QTY	LOCATION	Pole		Luminaires		
		SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE
1	A1	80'	-	80'	1500W MZ	5/5*
2	A2-A3	80'	-	80'	1500W MZ	5
1	B1	80'	-	80'	1500W MZ	10/10*
2	B2-B3	80'	-	80'	1500W MZ	10
4	C1-C4	70'	-	70'	1500W MZ	4
4	D1-D4	70'	-	70'	1500W MZ	5
14	<b>TOTALS</b>					96

\* This structure utilizes a back-to-back mounting configuration

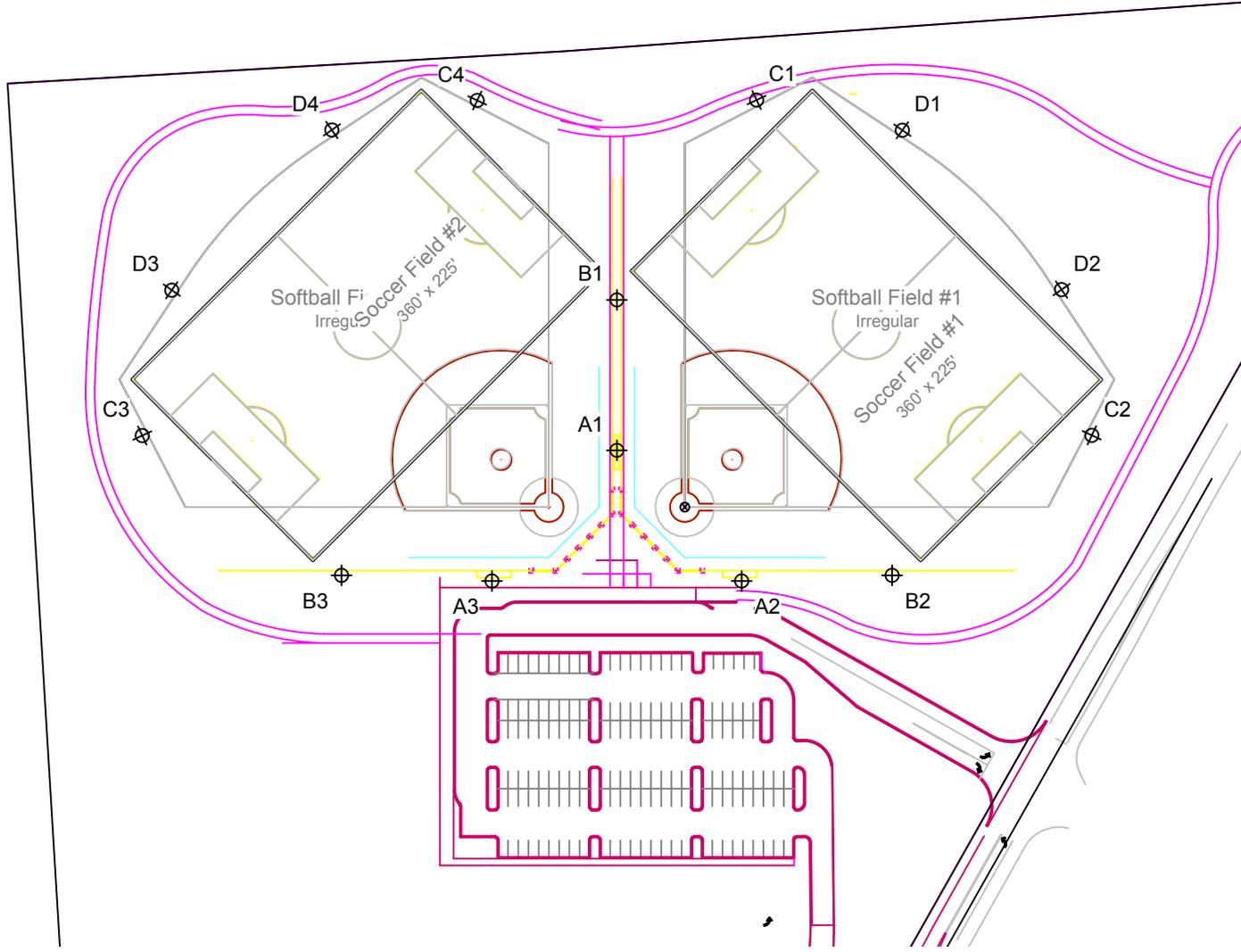
**SINGLE LUMINAIRE AMPERAGE DRAW CHART**

Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)						
	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
1500 watt MZ	8.6	8.3	7.5	6.5	5.1	-	3.7

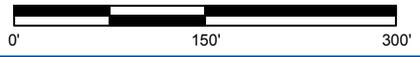
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SCALE IN FEET 1 : 150

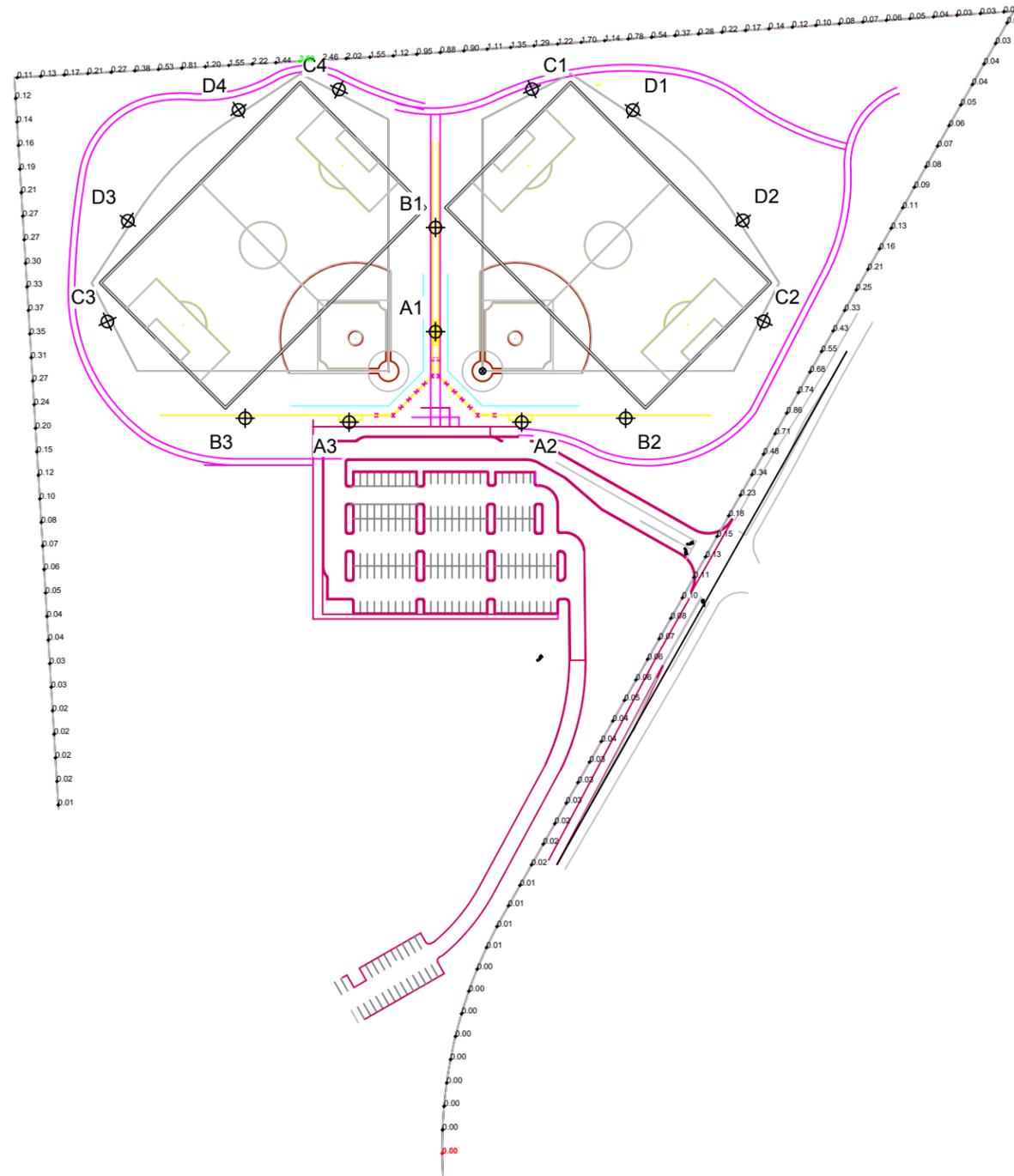


Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗



EQUIPMENT LIST FOR AREAS SHOWN									
Pole			Luminaires						
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS	
1	A1	80'	-	80'	1500W MZ	5/5*	10	0	
2	A2-A3	80'	-	80'	1500W MZ	5	5	0	
1	B1	80'	-	80'	1500W MZ	10/10*	20	0	
2	B2-B3	80'	-	80'	1500W MZ	10	10	0	
4	C1-C4	70'	-	70'	1500W MZ	4	4	0	
4	D1-D4	70'	-	70'	1500W MZ	5	5	0	
14	TOTALS						96	96	0

\* This structure utilizes a back-to-back mounting configuration



MY PROJECT	
Name:	Ravensdale Multipurpose Fields
Location:	Ravensdale, WA

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

CONSTANT ILLUMINATION	
SUMMARY	HORIZONTAL FOOTCANDLES
Entire Grid	
Scan Average:	0.372
Maximum:	3.60
Minimum:	0.00
No. of Points:	129
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:	96
Avg KW:	150.14 (163.2 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 : 200



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

ENGINEERED DESIGN		
By:	Eric Svenby	
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