



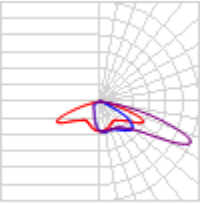
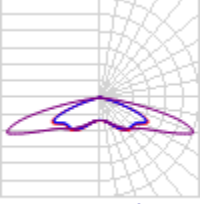
Statistics						
Description	Symbol	Avg	Max	Max/Min	Avg/Min	Min
Large Parking Lot	+	1.1 fc	3.4 fc	6.8:1	2.2:1	0.5 fc
Gangway Parking Lot	+	1.4 fc	3.4 fc	6.8:1	2.8:1	0.5 fc



Douglas Harbor
Upland Lighting Improvements

Designer
JDW
Date
11/11/2023
Scale
Not to Scale
Drawing No.

Summary

Schedule										
Symbol	Label	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Polar Plot
	R3	8	Cree Lighting	OSQX-C-50L-50K9-3M-Ux-xx-xx-xx-xx CONFIGURED FROM OSQL-C-xxL-30K7-3M-UL-xx-xx-xx	CONFIGURED FROM OSQL-C Luminaire, 3000K, 70 CRI, Type III Mid	1	35199	0.8	297	 Max: 26337cd
	R5	3	Cree Lighting	OSQX-C-50L-50K9-5M-Ux-xx-xx-xx-xx CONFIGURED FROM OSQL-C-xxL-30K7-5M-UL-xx-xx	CONFIGURED FROM OSQL-C Luminaire, 3000K, 70 CRI, Type V Mid	1	37000	0.8	297	 Max: 15925cd

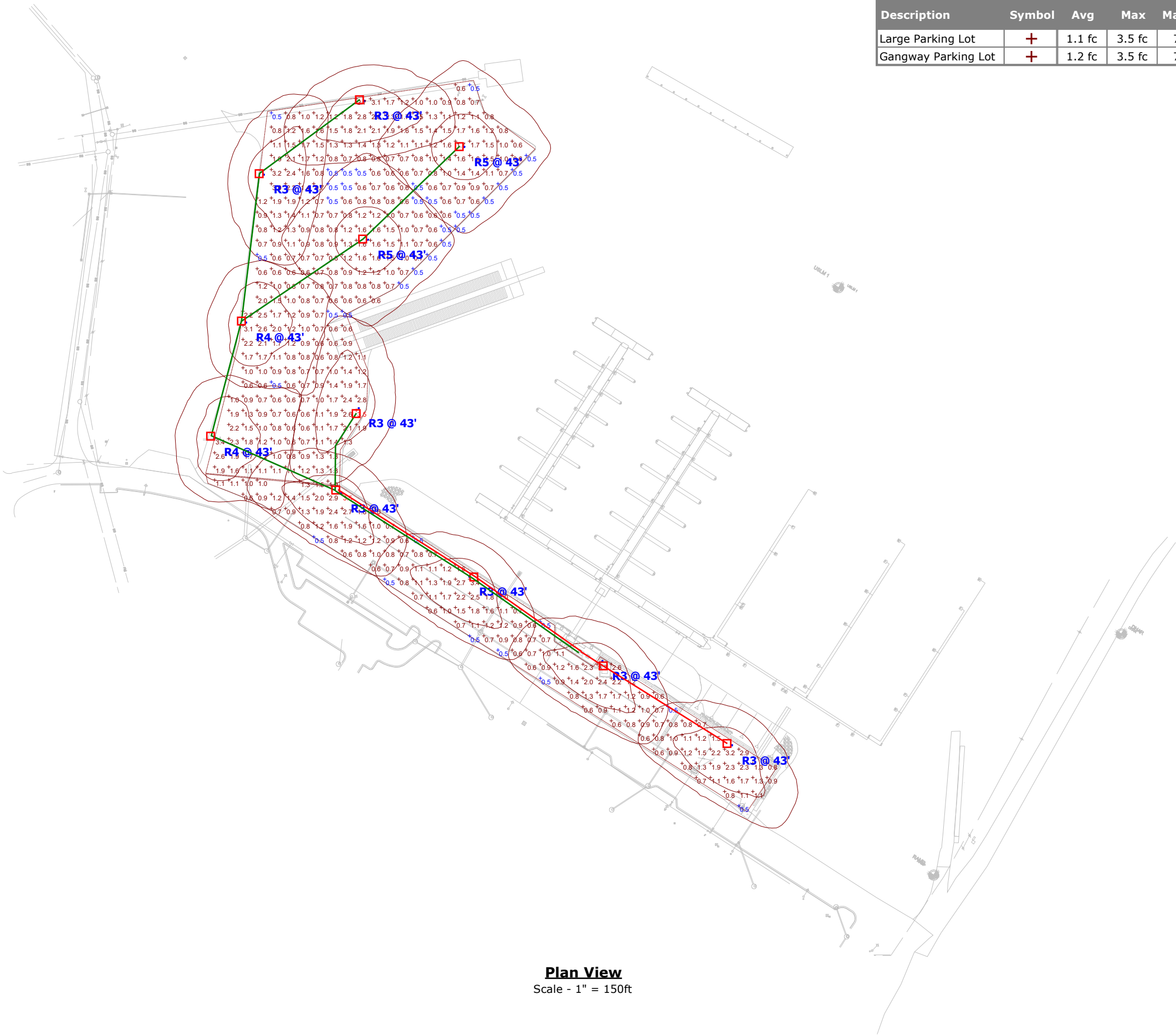
Luminaire Locations										
Location							Aim			
No.	Label	X	Y	Z	MH	Tilt	X	Y	Orientation	Z
2	R3	6985.00	3809.00	43.00	43.00	0.00	6985.00	3809.00	32.00	0.00
3	R3	6842.00	3902.00	43.00	43.00	0.00	6842.00	3902.00	32.00	0.00
4	R3	6669.00	4014.00	43.00	43.00	0.00	6669.00	4014.00	32.00	0.00
5	R3	6517.00	4104.00	43.00	43.00	0.00	6517.00	4104.00	32.00	0.00
6	R3	6530.00	4535.00	43.00	43.00	0.00	6530.00	4535.00	100.00	0.00
7	R3	6501.00	4321.00	43.00	43.00	0.00	6501.00	4321.00	100.00	0.00
8	R3	6642.00	4659.00	43.00	43.00	0.00	6642.00	4659.00	170.00	0.00
1	R5	6821.00	4606.00	43.00	43.00	0.00	6821.00	4606.00	45.00	0.00
2	R5	6687.00	4476.00	43.00	43.00	0.00	6687.00	4476.00	45.00	0.00
3	R5	6623.00	4266.00	43.00	43.00	0.00	6623.00	4266.00	45.00	0.00
1	R3	7164.00	3698.00	43.00	43.00	0.00	7164.00	3698.00	32.00	0.00



Douglas Harbor
Upland Lighting Improvements

Designer
JDW
Date
11/11/2023
Scale
Not to Scale
Drawing No.

Summary



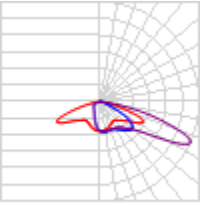
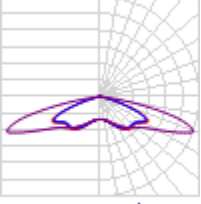
Statistics						
Description	Symbol	Avg	Max	Max/Min	Avg/Min	Min
Large Parking Lot	+	1.1 fc	3.5 fc	7.0:1	2.2:1	0.5 fc
Gangway Parking Lot	+	1.2 fc	3.5 fc	7.0:1	2.4:1	0.5 fc



Douglas Harbor
Upland Lighting Improvements

Designer
JDW
Date
11/11/2023
Scale
Not to Scale
Drawing No.

Summary

Schedule										
Symbol	Label	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Polar Plot
	R3	7	Cree Lighting	OSQX-C-50L-50K9-3M-Ux-xx-xx-xx-xx CONFIGURED FROM OSQL-C-xxL-30K7-3M-UL-xx-xx-xx	CONFIGURED FROM OSQL-C Luminaire, 3000K, 70 CRI, Type III Mid	1	35199	0.8	297	 Max: 26337cd
	R4	2	Cree Lighting	OSQX-C-50L-50K9-4M-Ux-xx-xx-xx-xx CONFIGURED FROM OSQL-C-xxL-30K7-4M-UL-xx-xx-xx	CONFIGURED FROM OSQL-C Luminaire, 3000K, 70 CRI, Type IV Mid	1	35200	0.8	297	 Max: 22921cd
	R5	2	Cree Lighting	OSQX-C-50L-50K9-5M-Ux-xx-xx-xx-xx CONFIGURED FROM OSQL-C-xxL-30K7-5M-UL-xx-xx	CONFIGURED FROM OSQL-C Luminaire, 3000K, 70 CRI, Type V Mid	1	37000	0.8	297	 Max: 15925cd

Luminaire Locations										
Location							Aim			
No.	Label	X	Y	Z	MH	Tilt	X	Y	Orientation	Z
2	R3	7011.00	3871.00	43.00	43.00	0.00	7011.00	3871.00	212.00	0.00
3	R3	6823.00	3990.00	43.00	43.00	0.00	6823.00	3990.00	212.00	0.00
4	R3	6642.00	4108.00	43.00	43.00	0.00	6642.00	4108.00	212.00	0.00
9	R4	6463.00	4187.00	43.00	43.00	0.00	6463.00	4187.00	100.00	0.00
4	R5	6680.00	4466.00	43.00	43.00	0.00	6680.00	4466.00	45.00	0.00
5	R5	6816.00	4597.00	43.00	43.00	0.00	6816.00	4597.00	45.00	0.00
10	R3	6533.00	4558.00	43.00	43.00	0.00	6533.00	4558.00	100.00	0.00
12	R3	6675.00	4662.00	43.00	43.00	0.00	6675.00	4662.00	170.00	0.00
14	R3	6667.00	4228.00	43.00	43.00	0.00	6667.00	4228.00	285.00	0.00
10	R4	6508.00	4349.00	43.00	43.00	0.00	6508.00	4349.00	100.00	0.00
1	R3	7194.00	3752.00	43.00	43.00	0.00	7194.00	3752.00	212.00	0.00



Douglas Harbor
Upland Lighting Improvements

Designer
JDW
Date
11/11/2023
Scale
Not to Scale
Drawing No.

Summary

Morris Engineering Group, Inc
PRELIMINARY CONSTRUCTION COST ESTIMATE

PROJECT: Douglas Harbor Upland Lighting Improvements
JOB #: 113-42
Date: November 22, 2023

Description: Parking Lot Lighting - Ful Parking Lot Lighting Build Out

Labor multiplier	1.5
Labor rate	85
Materials multiplier	1.25

OPTION A - POLES ALONG ROADWAY

Material/Task	Quantity	Units	Cost	Material Total	Labor	Labor Total	Subtotals
2 no. 8 & 1no. 10 gnd	9600	ft.	\$ 2.3	\$ 27,000	0.03	\$ 36,720	\$ 63,720
2" Schedule 40 PVC	2600	ft.	\$ 3.5	\$ 11,375	0.09	\$ 29,835	\$ 41,210
2" GRS	100	ft.	\$ 15.9	\$ 1,981	0.18	\$ 2,295	\$ 4,276
2" GRS Elbow	13	ea.	\$ 50.4	\$ 819	0.70	\$ 1,160	\$ 1,979
Trenching/Backfilling	2600	ft.	\$ 4.0	\$ 13,000	0.10	\$ 33,150	\$ 46,150
Fuse Set	11	ea.	\$ 75.0	\$ 1,031	1.00	\$ 1,403	\$ 2,434
Light Pole w/ luminaire	11	ea.	\$ 4,500.0	\$ 61,875	12.00	\$ 16,830	\$ 78,705
Light Pole Base	11	ea.	\$ 2,200.0	\$ 30,250	12.00	\$ 16,830	\$ 47,080
Handholes	11	ea.	\$ 475.0	\$ 6,531	4.00	\$ 5,610	\$ 12,141
Surge Protection Device	11	ea.	\$ 100.0	\$ 1,375	0.50	\$ 701	\$ 2,076
Subtotal				\$ 153,862		\$ 143,833	\$ 297,695
Overhead (15%)							\$ 44,654
Contingency (10%)							\$ 29,770
Profit (10%)							\$ 29,770
Total - Site Lighting							\$ 401,888

Morris Engineering Group, Inc
PRELIMINARY CONSTRUCTION COST ESTIMATE

PROJECT: Douglas Harbor Upland Lighting Improvements

JOB #: 113-42

Date: November 22, 2023

Description: Parking Lot Lighting - Ful Parking Lot Lighting Build Out

Labor multiplier	1.5
Labor rate	85
Materials multiplier	1.25

OPTION B - POLES ALONG THE WATERFRONT

Material/Task	Quantity	Units	Cost	Material Total	Labor	Labor Total	Subtotals
2 no. 8 & 1no. 10 gnd	9000	ft.	\$ 2.3	\$ 25,313	0.03	\$ 34,425	\$ 59,738
2" Schedule 40 PVC	2400	ft.	\$ 3.5	\$ 10,500	0.06	\$ 18,360	\$ 28,860
2" GRS	100	ft.	\$ 15.9	\$ 1,981	0.19	\$ 2,423	\$ 4,404
2" GRS Elbow	13	ea.	\$ 50.4	\$ 819		\$ -	\$ 819
Trenching/Backfilling	2400	ft.	\$ 4.0	\$ 12,000	0.10	\$ 30,600	\$ 42,600
Fuse Set	11	ea.	\$ 75.0	\$ 1,031	1.00	\$ 1,403	\$ 2,434
Light Pole w/ luminaire	11	ea.	\$ 4,500.0	\$ 61,875	12.00	\$ 16,830	\$ 78,705
Light Pole Base	11	ea.	\$ 2,200.0	\$ 30,250	12.00	\$ 16,830	\$ 47,080
Handholes	11	ea.	\$ 475.0	\$ 6,531	4.00	\$ 5,610	\$ 12,141
Surge Protection Device	11	ea.	\$ 100.0	\$ 1,375		\$ -	\$ 1,375
Subtotal				\$ 150,300		\$ 126,480	\$ 276,780
Overhead (15%)							\$ 41,517
Contingency (10%)							\$ 27,678
Profit (10%)							\$ 27,678
Total - Site Lighting							\$ 373,653