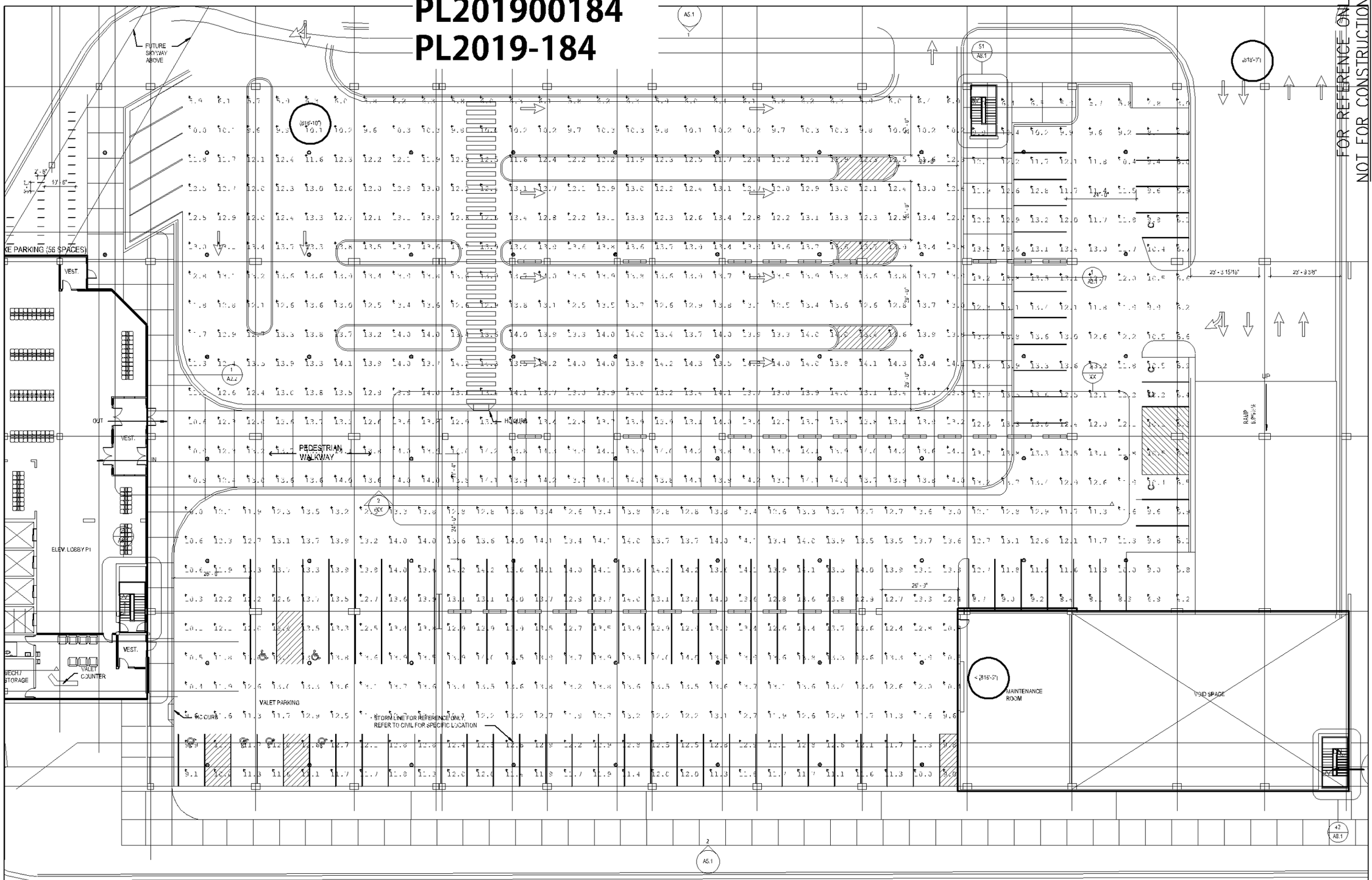
PL201900184
PL2019-184

FOR REFERENCE ONLY
NOT FOR CONSTRUCTION



Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
⊙	68	VCWG LED P7 50K TFN UVOLT	SINGLE	N.A.	1.000	VCWG LED P7 50K TFN UVOLT

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
P1 PARKING	Illuminance	FC	12.20	14.2	3.3	2.63	4.73
P1 TRANSIT	Illuminance	FC	12.52	14.3	5.7	2.20	2.51

DUNHAM
mechanical + electrical consulting engineering

Project: SOUTH LOOP WATERPARK PARKING GARAGE

Sheet Title: P1 LIGHTING

Checked By: XXX

Drawn By: JYK

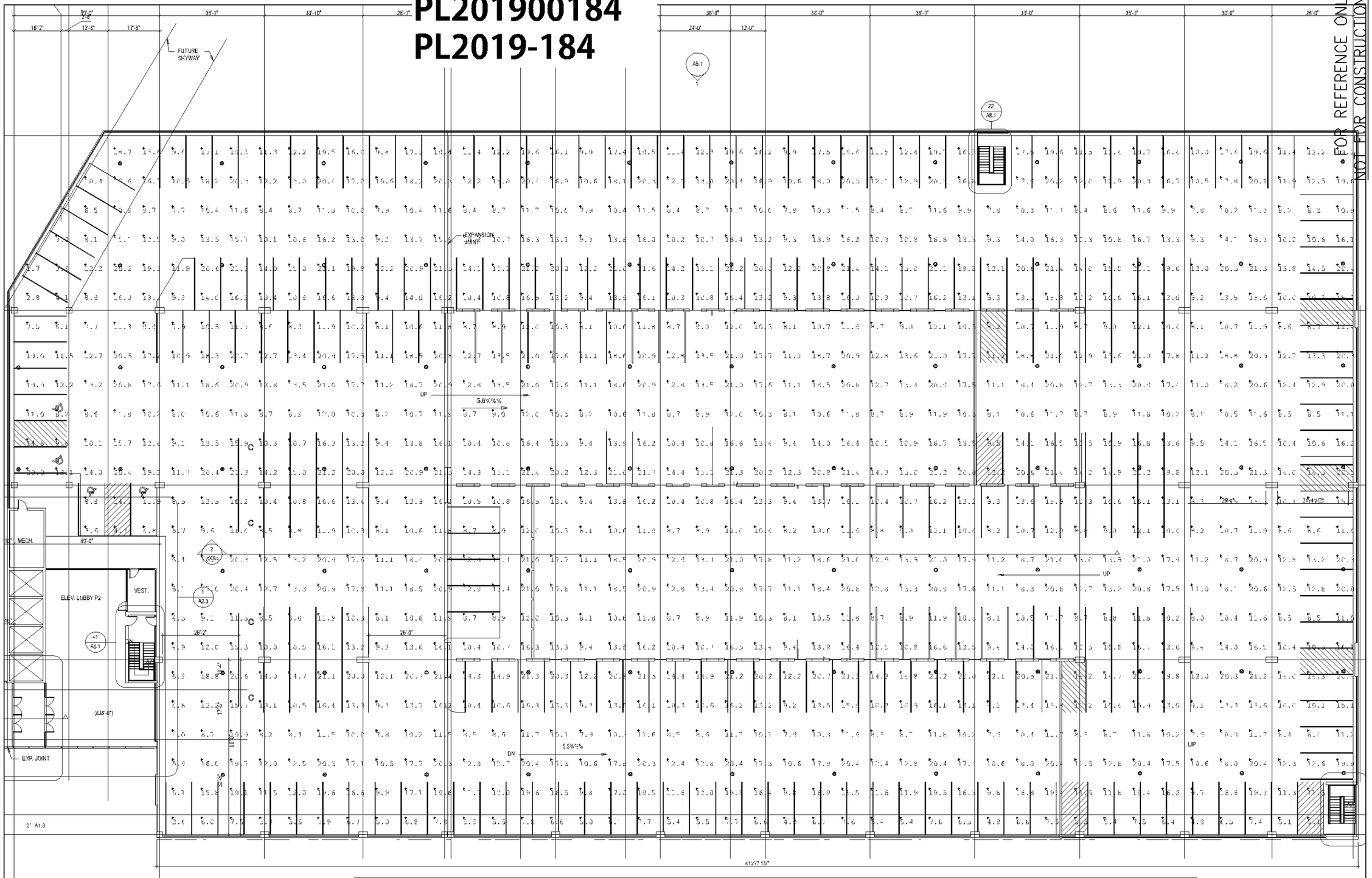
Project Number: 0420052-000

Sheet Number: EL1.1

Date: 10/02/2019

PL201900184
PL2019-184

FOR REFERENCE ONLY
NOT FOR CONSTRUCTION



Luminaire Schedule

Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
○	90	VCPG LED P7 50K T5M MVOLT	SINGLE	N/A	1.000	VCPG LED P7 50K T5M MVOLT

Calculation Summary

Label	Calc Type	Units	Avg	Max	Min	Avg/Min	Max/Min
P2 PARKING	Illuminance	Fc	13.34	21.7	1.7	7.85	12.76

DUNHAM
mechanical + electrical consulting engineering

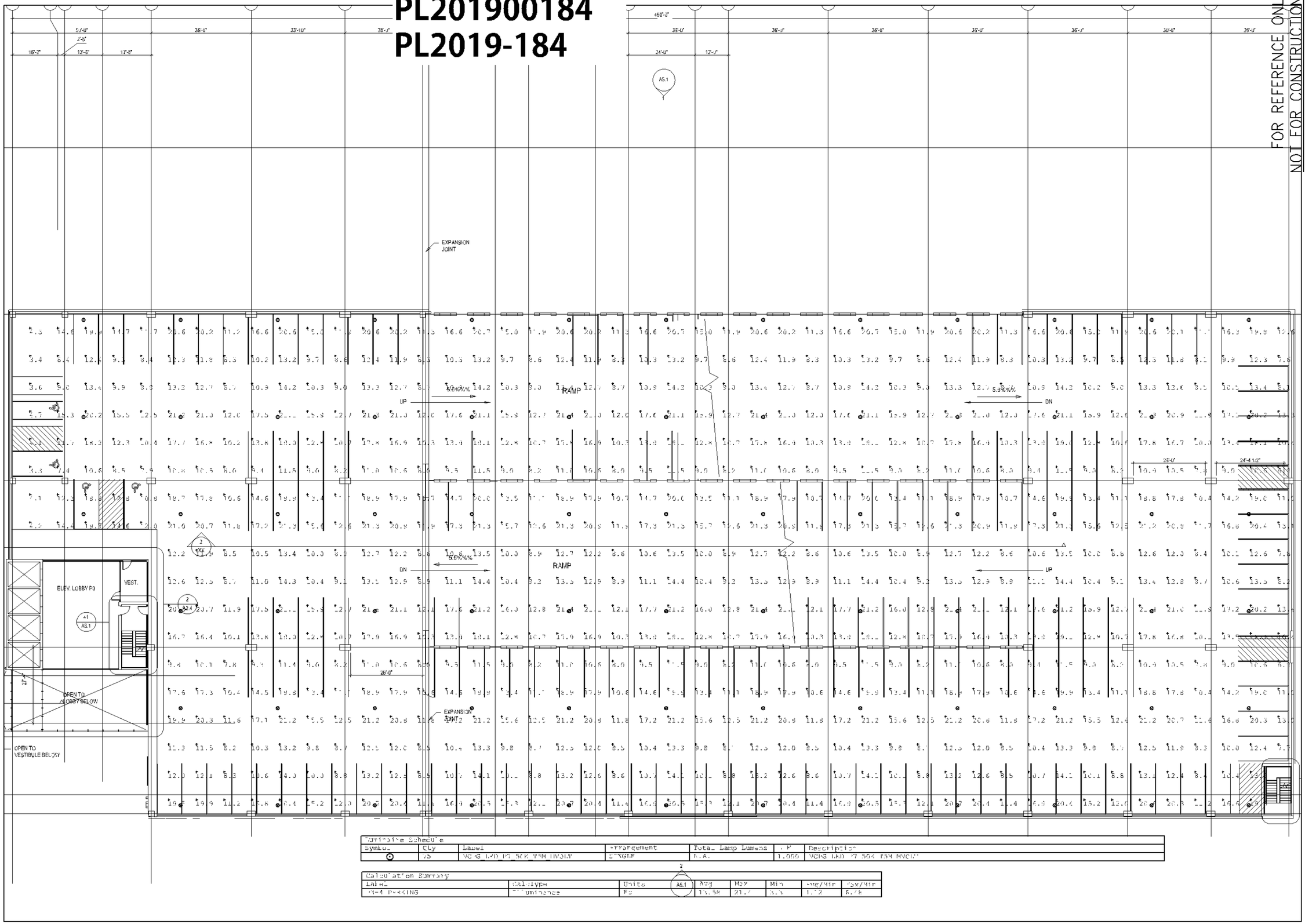
Project: SOUTH LOOP WATERPARK PARKING GARAGE
Sheet Title: P2 LIGHTING
Checked By: XXX
Drawn By: JYK
Project Number: 0420052-000

Sheet Number: EL1.2

Date: 10/02/2019

PL201900184
PL2019-184

FOR REFERENCE ONLY
NOT FOR CONSTRUCTION



Luminaire Schedule

Symbol	Qty	Label	Arrangement	Total Lamp Lumens	L.F	Description
⊙	75	VGNG LED P7 50K T5M MVOLT	SINGLE	N.A.	1.000	VGNG LED P7 50K T5M MVOLT

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
P3-4 PARKING	Illuminance	FC	15.58	21.7	3.3	4.72	6.76

DUNHAM
mechanical + electrical consulting engineering

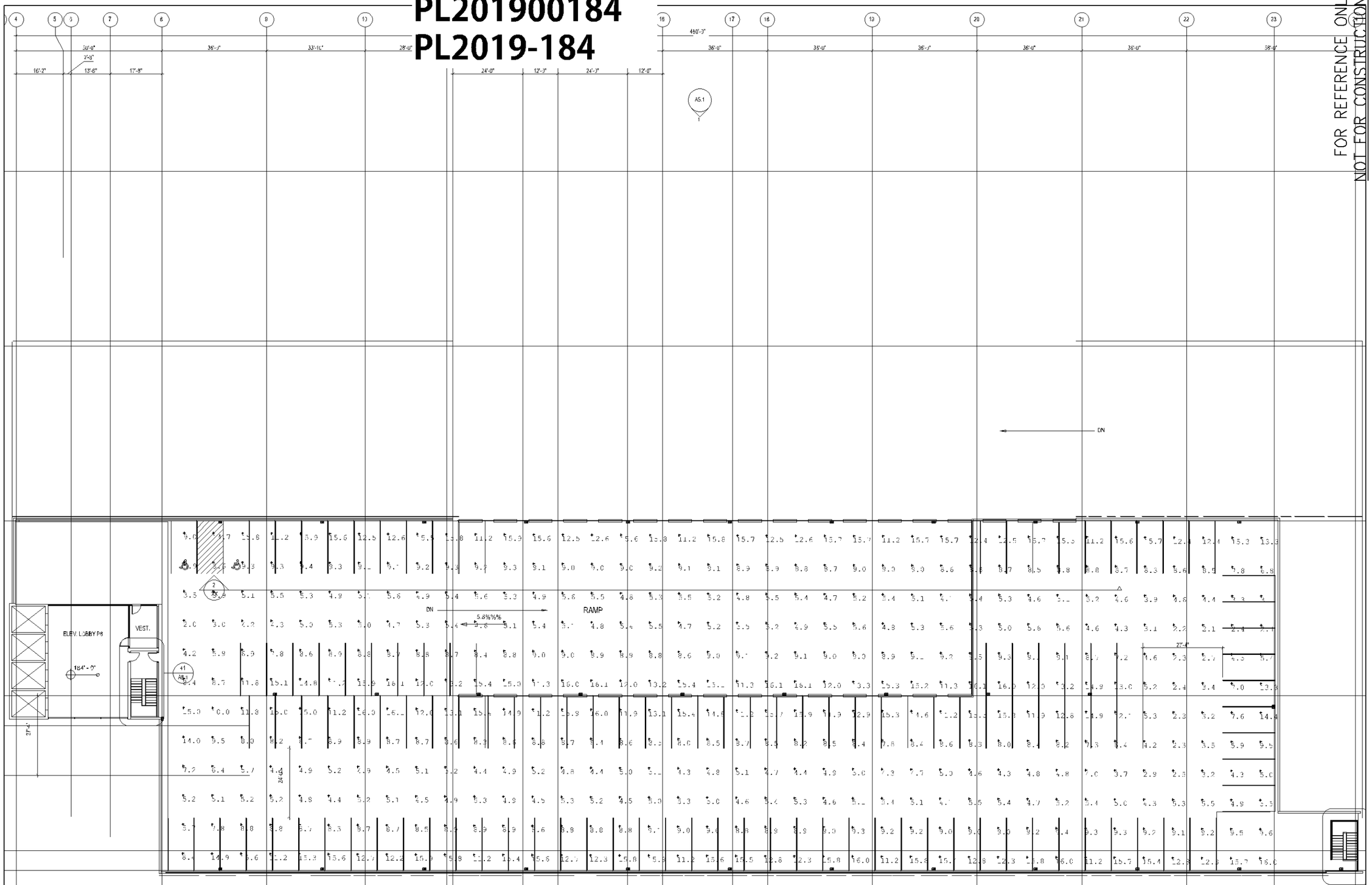
Project: SOUTH LOOP WATERPARK PARKING GARAGE
Sheet Title: P3-4 LIGHTING
Project Number: 0420052-000
Drawn By: JYK
Checked By: XXX

Sheet Number: EL1.3

Date: 10/02/2019

PL201900184
PL2019-184

FOR REFERENCE ONLY
NOT FOR CONSTRUCTION



Luminaire Schedule

Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
▭	84	DsX0_LED_P7_50K_T5M_MVOLT	SINGLE	N.A.	1.000	DsX0 LED P7 50K T5M MVOLT

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
P8 PARKING	Illuminance	Fc	8.88	16.1	2.0	4.44	8.05

DUNHAM
mechanical + electrical consulting engineering

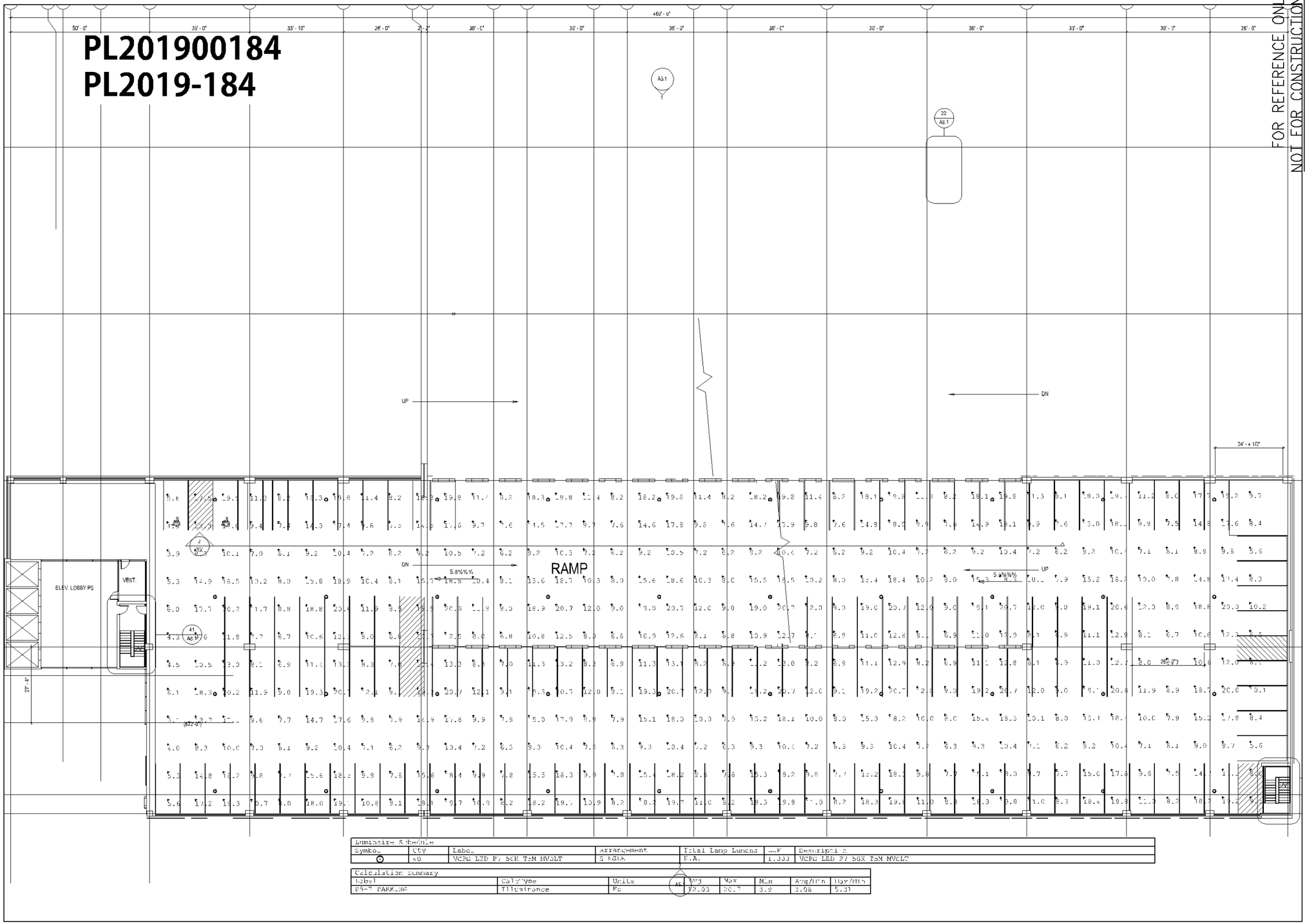
Project: SOUTH LOOP WATERPARK PARKING GARAGE
Sheet Title: P8 LIGHTING
Project Number: 0420052-000
Drawn By: JYK
Checked By: XXX

Sheet Number: EL1.8

Date: 10/02/2019

PL201900184
PL2019-184

FOR REFERENCE ONLY
NOT FOR CONSTRUCTION



Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
⊙	40	VCPG LED P7 50K T5M MVOLT	SINGLE	N.A.	1.000	VCPG LED P7 50K T5M MVOLT

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
P5-7 PARKING	Illuminance	Fc	12.00	20.7	3.9	3.08	5.31

DUNHAM
mechanical + electrical consulting engineering

Project: SOUTH LOOP WATERPARK PARKING GARAGE

Sheet Title: P5-7 LIGHTING

Checked By: XXX

Drawn By: JYK

Project Number: 0420052-000

Sheet Number: EL1.5

Date: 10/02/2019

PL201900184
PL2019-184

VCPG LED
Parking Garage

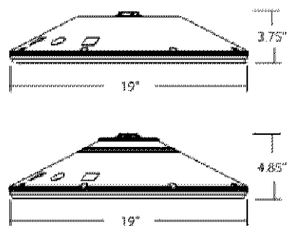
Catalog Number: VCPG LED P7 50K T5M MVOLT
Notes:
Type: P1

Specifications

Diameter: 19"

Height: 3.75" (4.85" with 6" stem)

Weight (max, with no options): 18 lbs



Introduction

The all new VCPG LED (Visually Comfortable Parking Garage) luminaire is designed to bring glare control, optical performance and energy savings into one package. The recessed lens design of VCPG LED minimizes high angle glare, while its precision molded acrylic lens eliminates LED pixilation and delivers the required minimums, vertical's and uniformity. The dedicated up-light module option reduces the contrast between the luminaire and the ceiling creating a more visually comfortable environment.

The VCPG LED delivers up to 87% in energy savings when replacing 175W metal halide luminaires. With over 100,000 hour life expectancy (12+ years of 24/7 continuous operation), the VCPG LED luminaire provides significant maintenance savings over traditional luminaires.

A+ Capable options indicated by this color background.

Ordering Information

EXAMPLE: VCPG LED V4 P4 40K 70CRI T5M MVOLT SRM DNAXD

VCPG LED

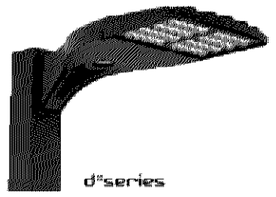
Series	LED Light Engines	Package	Color Temperature	Color Rendering Index	Distribution	Voltage	Mounting
VCPG LED	V4 4 light Engines V8 8 light Engines	P1 P2 P3 P4 P5 P6 P7	30K 3000 K 35K 3500K 40K 4000 K 50K 5000 K	70CRI 80CRI	T5M Type V medium T5F Type V forward throw T5W Type V wide T5E Type V extra wide LANE[1] Linear Lens	MVOLT[2] For ordering with fuse 347 480	Shipped included PM Pendant mount bracket (24-inch length, supply leads)[3] SHM Surface mount bracket (24-inch length, supply leads)[3] Shipped separately WK Wire nut mounting cap

Options		Finish
Shipped installed		DWHXD White
UPL1 Up Light, 1000 lumens		DNAXD Natural aluminum
UPL2 Up Light, 2000 lumens		DDBXD Dark bronze
EBWMC Emergency battery backup, Certified in CA Title 20 MAEPS, 18W, 25°C min[4,5]		DBLXD Black
ETLWH Emergency battery backup, Certified in CA Title 20 MAEPS, 18W, 0°C min[4,5]		
HA High ambient (50°C, max)[6]		
ST Single fuse (120V, 277V, 347V)[7]		
DF Double fuse (208V, 240V, 480V)[7]		
SPD10KV 10kV Surge Rating		
LDS36 36 inch (3ft) cord length		
LDS72 72 inch (6ft) cord length		
LDS108 108 inch (9ft) cord length		
DMG Extra cable for 0-10V leads, not connected[8]		
Shipped Separately		
WG Wire guard		
BDS Bird Shroud		
HS House Side Shield		

Standalone Sensors/Controls[9]	
PIR	Motion/ambient sensor for 8-15' mounting heights
PIRH	Motion/ambient sensor for 15-30' mounting heights
PIR3EC3V	Motion/ambient sensor for 8-15' mounting heights, pre-programmed to 3% and 85% light output
PIRH3EC3V	Motion/ambient sensor for 15-30' mounting heights, pre-programmed to 3% and 85% light output
PIR3EC3V924	UL 924 listed motion/ambient sensor for emergency circuits for 8-15' mounting heights, pre-programmed to 3% and 85% light output[10]
PIRH3EC3V924	UL 924 listed motion/ambient sensor for emergency circuits for 15-30' mounting heights, pre-programmed to 3% and 85% light output[10]
Networked Sensors/Controls[9]	
NLTAIR2 PIR	nLIGHT AIR Wireless enabled motion/ambient sensor for 8-15' mounting heights
NLTAIR2 PIRH	nLIGHT AIR Wireless enabled motion/ambient sensor for 15-30' mounting heights
SAD	XPoint™ Wireless enabled[11]
SAD924	XPoint™ Wireless enabled, UL 924 listed for emergency circuits[10]
SAD PIR	XPoint™ Wireless enabled motion/ambient sensor for 8-15' mounting heights[12]
SAD PIRH	XPoint™ Wireless enabled motion/ambient sensor for 15-30' mounting heights
SAD924PIR	XPoint™ Wireless enabled, UL 924 listed motion/ambient sensor for emergency circuits for 8-15' mounting heights[10]
SAD924PIRH	XPoint™ Wireless enabled, UL 924 listed motion/ambient sensor for emergency circuits for 15-30' mounting heights[10]

Finish	
DWHXD	White
DNAXD	Natural aluminum
DDBXD	Dark bronze
DBLXD	Black

© 2012-2019 Acuity Brands Lighting, Inc. All rights reserved.



D-Series Size 0
LED Area Luminaire

Catalog Number: DSX0 LED P7 50K T5M MVOLT
Notes:
Type: P2A, P2B

Specifications

EPA: 0.95 ft² (0.09 m²)

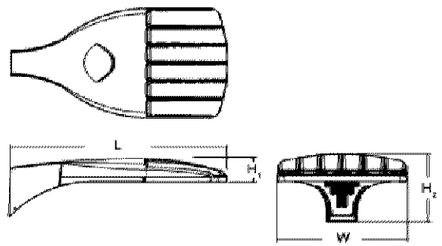
Length: 26" (66.0 cm)

Width: 13" (33.0 cm)

Height$_1$: 3" (7.6 cm)

Height$_2$: 7" (17.8 cm)

Weight (max): 16 lbs (7.3 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire. The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 400W metal halide with typical energy savings of 70% and expected service life of over 100,000 hours.

A+ Capable options indicated by this color background.

Ordering Information

EXAMPLE: DSX0 LED P6 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX0 LED

Series	LEDs	Color temperature	Distribution	Voltage	Mounting
DSX0 LED	**Forward optics** P1 P4 P7 P2 P5 P3 P6 **Rotated optics** P10[1] P12[1] P11[1] P13[1]	30K 3000 K 40K 4000K 50K 5000 K	T1S Type I short T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium TSVS Type V very short	T5S Type V short T5M Type V medium T5W Type V wide BLC Backlight control LCCO Left corner cutoff RCCO Right corner cutoff	MVOLT[2,3] 120[1] 208[1] 240[1] 277[1] 347[1,4] 480[1,4]	**Shipped included** SPA Square pole mounting RPA Round pole mounting WBA Wall bracket SPUMBA Square pole universal mounting adaptor[5] RPUMBA Round pole universal mounting adaptor[5] **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)[6]

Control Options		Other Options		Finish	
Shipped installed		PIR	Bi-level, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 3fc[7,8]	**Shipped installed**	
NLTAIR2 nLight AIR generation 2 enabled[9]		PIRH	Bi-level, high/low motion/ambient sensor[8]	HS House side shield	
PER NEMA twist-lock receptacle only (control ordered separately)[10]		PIR1FC3V	Bi-level, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[7,8]	SF Single fuse (120V, 277V, 347V)[3]	
PER5 Five-pin receptacle only (control ordered separately)[10,11]		PIRH1FC3V	Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[7,8]	DF Double fuse (208V, 240V, 480V)[3]	
PER7 Seven-pin receptacle only (controls ordered separately)[10,12]		FAO Field adjustable output[13]		L90 Left rotated optics	
DMG 0-10V dimming extend out back of housing for external control (control ordered separately)[7]				R90 Right rotated optics	
				DBL Diffused drop lens	
				Shipped separately	
				BS Bird spikes[14]	
				EGS Extruded glass shield[15]	

Finish	
DDBXD	Dark bronze
DBLXD	Black
DNAXD	Natural aluminum
DWHXD	White
DDB1XD	Textured dark bronze
DBL1XD	Textured black
DNA1XD	Textured natural aluminum
DWHGXD	Textured white

© 2011-2019 Acuity Brands Lighting, Inc. All rights reserved.

FOR REFERENCE ONLY
NOT FOR CONSTRUCTION

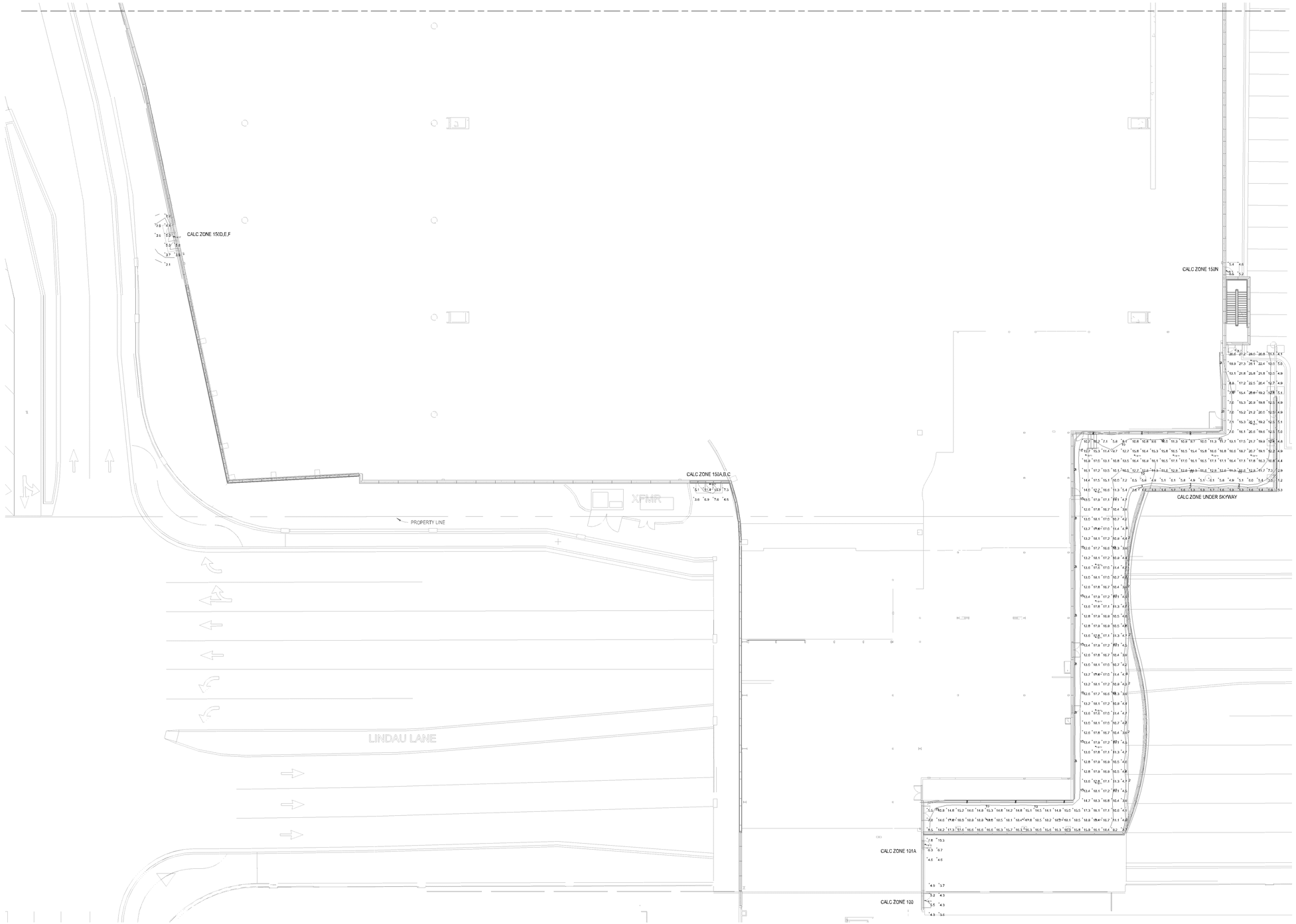
DUNHAM
mechanical + electrical consulting engineering

Project: SOUTH LOOP WATERPARK PARKING GARAGE
Sheet Title: LIGHTING CUTSHEETS
Project Number: 0420052-000
Drawn By: JYK
Checked By: XXX

Sheet Number: EL2.1

Date: 10/02/2019

PL201900184
PL2019-184



1 PHOTOMETRICS SITE PLAN - INITIAL AT-GRADE - AREA A
1/16" = 1'-0"

Statistics - Area A						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone 100	+	4.4 fc	5.5 fc	3.6 fc	1.5:1	1.2:1
Calc Zone 101A	+	6.7 fc	10.3 fc	4.6 fc	2.2:1	1.5:1
Calc Zone 150A,B,C	+	7.5 fc	13.3 fc	3.6 fc	3.7:1	2.1:1
Calc Zone 150D,E,F	+	3.9 fc	5.8 fc	2.1 fc	2.8:1	1.9:1
Calc Zone 150N	+	5.4 fc	6.5 fc	4.6 fc	1.4:1	1.2:1
Calc Zone Under Skyway	+	12.8 fc	28.1 fc	0.3 fc	93.7:1	42.7:1

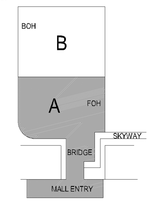
HUNT
Electric Corporation

7900 Chicago Avenue S
Bloomington MN 55420
(651) 646 2911
Fax (651) 643 6575

SOUTH LOOP WATERPARK

BLOOMINGTON, MN 55425

KEY PLAN



NORTH ARROW

SIGNATURE

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DANIEL PAUL BIGGAR

REG. NO. 26752 DATE: Issue Date

THESE DOCUMENTS HAVE BEEN PREPARED BY HUNT ELECTRIC CORPORATION WITH THE EXPRESSED UNDERSTANDING THAT THE INSTALLATION OF THE WORK DESCRIBED WILL BE PERFORMED BY HUNT ELECTRIC CORPORATION OR UNDER DIRECT SUPERVISION. INSTALLATION OF THIS WORK UNDER ANY OTHER CIRCUMSTANCES IS PROHIBITED.

REVISION SCHEDULE

NO.	REVISION	DATE

SHEET NAME

PHOTOMETRIC SITE PLAN - INITIAL AT-GRADE - AREA A

PROJECT NUMBER:	81799
DATE:	10/02/19
DRAWN:	GG
CHECKED:	DPB
SCALE:	As indicated

SHEET NUMBER

ES1.1A

PL201900184
PL2019-184

1 PHOTOMETRICS SITE PLAN - INITIAL AT-GRADE - AREA B
1/16" = 1'-0"

Statistics - Area B						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone 150G,H,I	+	3.9 fc	5.8 fc	2.1 fc	2.8:1	1.9:1
Calc Zone 150K	+	4.7 fc	6.0 fc	3.8 fc	1.6:1	1.2:1
Calc Zone 150L	+	4.7 fc	6.0 fc	3.8 fc	1.6:1	1.2:1
Calc Zone 150M	+	5.2 fc	6.4 fc	4.3 fc	1.5:1	1.2:1
Calc Zone 161,165A	+	7.8 fc	13.5 fc	4.0 fc	3.4:1	2.0:1
Calc Zone S2A	+	8.8 fc	14.2 fc	4.5 fc	3.2:1	2.0:1
Loading Dock	+	5.5 fc	7.9 fc	2.3 fc	3.4:1	2.4:1
Loading Dock Roof	+	1.4 fc	6.1 fc	0.1 fc	61.0:1	14.0:1
Utility	+	7.1 fc	12.4 fc	2.7 fc	4.6:1	2.6:1

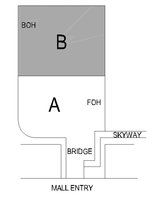
HUNT
Electric Corporation

7900 Chicago Avenue S
Bloomington MN 55420
(651) 646 2911
Fax (651) 643 6575

SOUTH LOOP WATERPARK

BLOOMINGTON, MN 55425

KEY PLAN



NORTH ARROW

SIGNATURE

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DANIEL PAUL BIGGAR

REG. NO. 26752 DATE: Issue Date

THESE DOCUMENTS HAVE BEEN PREPARED BY HUNT ELECTRIC CORPORATION WITH THE EXPRESSED UNDERSTANDING THAT THE INSTALLATION OF THE WORK DESCRIBED WILL BE PERFORMED BY HUNT ELECTRIC CORPORATION OR UNDER DIRECT SUPERVISION. INSTALLATION OF THIS WORK UNDER ANY OTHER CIRCUMSTANCES IS PROHIBITED.

REVISION SCHEDULE

NO.	REVISION	DATE

SHEET NAME

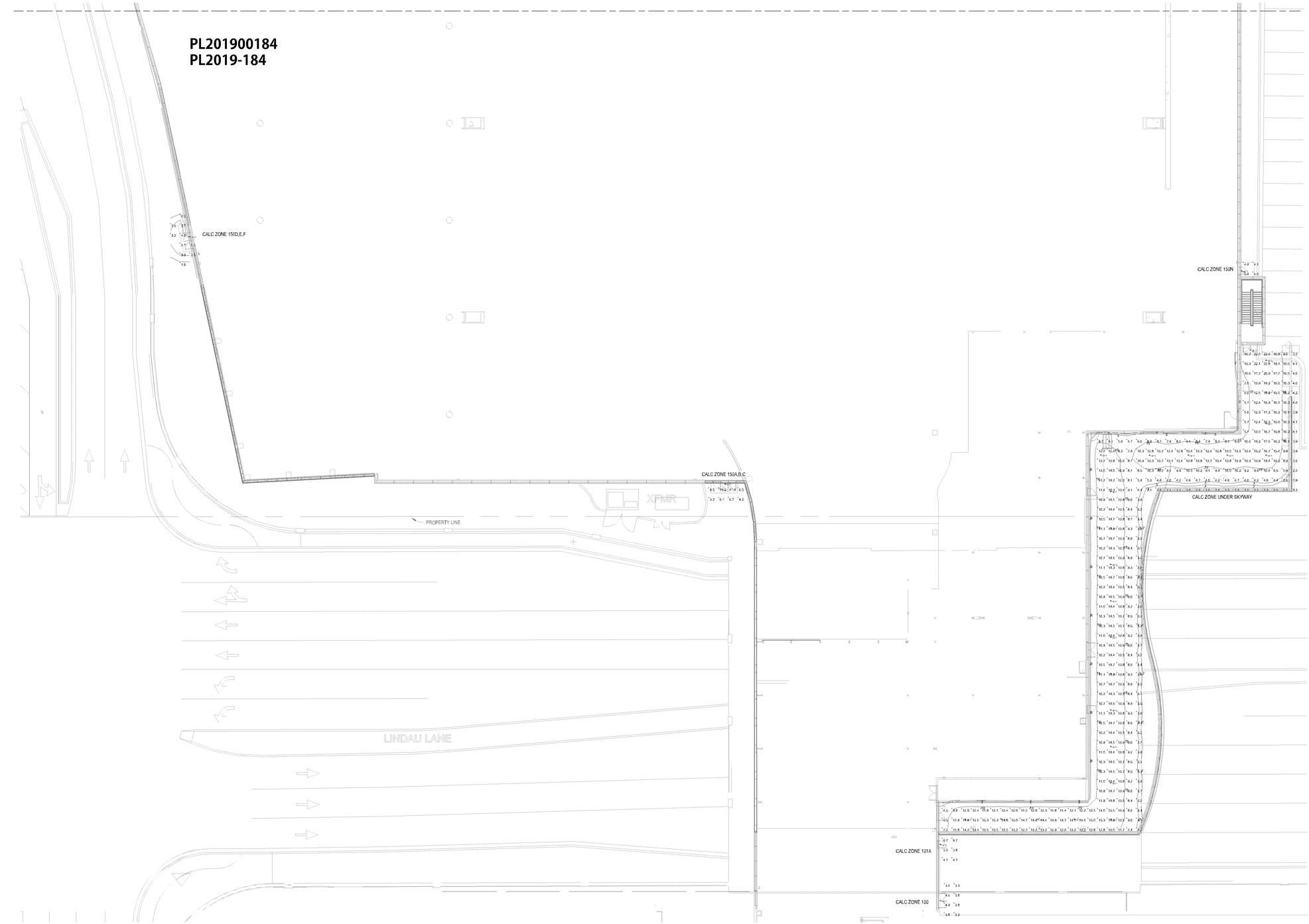
PHOTOMETRIC SITE PLAN - INITIAL AT-GRADE - AREA B

PROJECT NUMBER:	81799
DATE:	10/2/19
DRAWN:	GG
CHECKED:	DPB
SCALE:	As indicated

SHEET NUMBER

ES1.1B

PL201900184
PL2019-184



1 PHOTOMETRICS SITE PLAN - MAINTAINED AT-GRADE - AREA A
1/16" = 1'-0"

Statistics - Area A						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone 100	+	3.9 fc	4.9 fc	3.2 fc	1.5:1	1.2:1
Calc Zone 101A	+	5.8 fc	8.7 fc	4.1 fc	2.1:1	1.4:1
Calc Zone 150A,B,C	+	6.6 fc	11.8 fc	3.2 fc	3.7:1	2.1:1
Calc Zone 150D,E,F	+	3.5 fc	5.2 fc	1.9 fc	2.7:1	1.8:1
Calc Zone 150N	+	4.8 fc	5.8 fc	4.1 fc	1.4:1	1.2:1
Calc Zone Under Skyway	+	10.4 fc	22.8 fc	0.3 fc	76.0:1	34.7:1

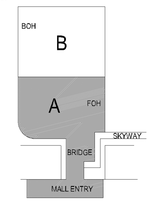
HUNT
Electric Corporation

7900 Chicago Avenue S
Bloomington MN 55420
(651) 646 2911
Fax (651) 643 6575

SOUTH LOOP WATERPARK

BLOOMINGTON, MN 55425

KEY PLAN



NORTH ARROW

SIGNATURE

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DANIEL PAUL BIGGAR

REG. NO. 26752 DATE: Issue Date

THESE DOCUMENTS HAVE BEEN PREPARED BY HUNT ELECTRIC CORPORATION (HEC) THE EXPRESSED INTENDED WORK IS THAT THE INSTALLATION OF THIS WORK DESCRIBED HERE WILL BE PERFORMED BY HUNT ELECTRIC CORPORATION OR UNDER DIRECT SUPERVISION. INSTALLATION OF THIS WORK UNDER ANY OTHER CIRCUMSTANCES IS PROHIBITED.

REVISION SCHEDULE

NO.	REVISION	DATE

SHEET NAME

PHOTOMETRIC SITE PLAN - MAINTAINED AT-GRADE - AREA A

PROJECT NUMBER:	81799
DATE:	10/02/19
DRAWN:	GG
CHECKED:	DPB
SCALE:	As indicated

SHEET NUMBER

ES1.2A

PL201900184
PL2019-184

1 PHOTOMETRICS SITE PLAN - MAINTAINED AT-GRADE - AREA B
1/16" = 1'-0"

Statistics - Area B						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone 150G,H,I	+	3.5 fc	5.1 fc	1.9 fc	2.7:1	1.8:1
Calc Zone 150K	+	4.2 fc	5.4 fc	3.3 fc	1.6:1	1.3:1
Calc Zone 150L	+	4.2 fc	5.4 fc	3.3 fc	1.6:1	1.3:1
Calc Zone 150M	+	4.6 fc	5.7 fc	3.8 fc	1.5:1	1.2:1
Calc Zone 161,165A	+	6.9 fc	12.0 fc	3.6 fc	3.3:1	1.9:1
Calc Zone S2A	+	7.8 fc	12.6 fc	4.0 fc	3.2:1	2.0:1
Loading Dock	+	4.9 fc	7.0 fc	2.0 fc	3.5:1	2.5:1
Loading Dock Roof	+	1.3 fc	5.4 fc	0.1 fc	54.0:1	13.0:1
Utility	+	6.3 fc	11.0 fc	2.4 fc	4.6:1	2.6:1

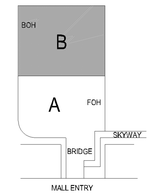
HUNT
Electric Corporation

7900 Chicago Avenue S
Bloomington MN 55420
(651) 646 2911
Fax (651) 643 6575

SOUTH LOOP WATERPARK

BLOOMINGTON, MN 55425

KEY PLAN



NORTH ARROW

PLAN NORTH

TRUE NORTH

SIGNATURE

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DANIEL PAUL BIGGAR

REG. NO. 26752 DATE: Issue Date

THESE DOCUMENTS HAVE BEEN PREPARED BY HUNT ELECTRIC CORPORATION WITH THE EXPRESSED UNDERSTANDING THAT THE INSTALLATION OF THIS WORK DESCRIBED WILL BE PERFORMED BY HUNT ELECTRIC CORPORATION OR UNDER DIRECT SUPERVISION. INSTALLATION OF THIS WORK UNDER ANY OTHER CIRCUMSTANCES IS PROHIBITED.

REVISION SCHEDULE

NO.	REVISION	DATE

SHEET NAME

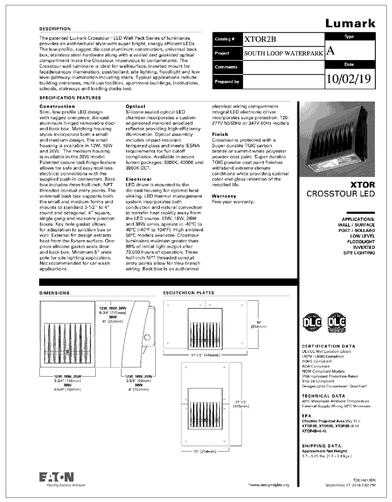
PHOTOMETRIC SITE PLAN - MAINTAINED AT-GRADE - AREA B

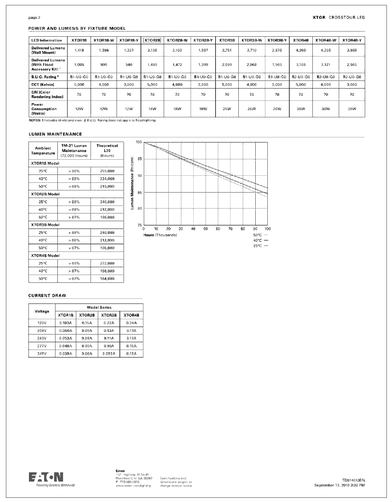
PROJECT NUMBER:	81799
DATE:	10/02/19
DRAWN:	GG
CHECKED:	DPB
SCALE:	As indicated

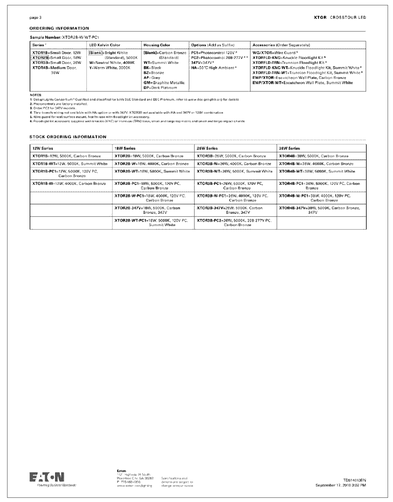
SHEET NUMBER

ES1.2B

PL201900184
PL2019-184







Schedule - Initial

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	A	15	EATON - LUMARK (FORMER COOPER LIGHTING)	XTOR2B	CROSSTOUR 16W WALL MOUNT LED	EATON LED 5099K	1	XTOR2B.ies	2134	1	18.2
	B	4	EATON - LUMARK (FORMER COOPER LIGHTING)	XTOR6BRL	CROSSTOUR WALL MOUNT LED WITH REFRACTIVE LENS	EATON LED 5099K	1	XTOR6BRL.ies	6216	1	58
	C	23	EATON - PORTFOLIO (FORMER COOPER LIGHTING)	LDB840D010 EU0R305090350 6LBWL11	PORTFOLIO 6 INCH 90 DEGREE CUTOFF RECESSED DOWNLIGHT WIDE DISTRIBUTION WITH SPECULAR CLEAR TRIM WATTAGE: D010TR-43.02 W D010-42.54 W DL2-42.53 W DM0-41.57 W DL2-41.57 W DL3-44.71 W DL6-39.33 W	HIGH LUMEN LED ABSOLUTE PHOTOMETRY IS BASED ON CALIBRATION FACTORS CREATED USING LAB LUMEN STANDARDS IN GONIOPHOTOMETER WITH TEST DISTANCE OF 28.75 FEET	1	LDB840D010 EU0R305090350 6LBWL11.ies	4367	1	41.6

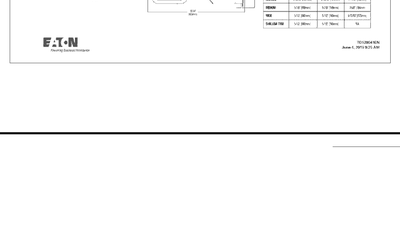
2 LIGHT FIXTURE SCHEDULE - INITIAL
1" = 1'-0"

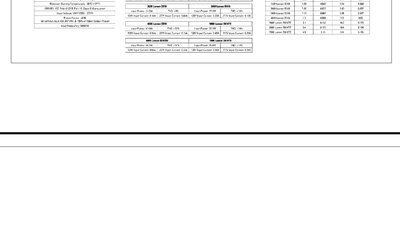
Schedule - Maintained

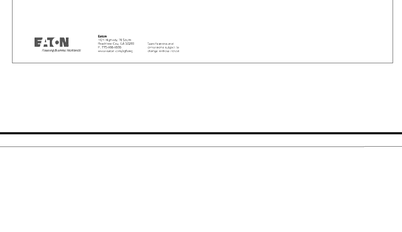
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	A	15	EATON - LUMARK (FORMER COOPER LIGHTING)	XTOR2B	CROSSTOUR 16W WALL MOUNT LED	EATON LED 5000K	1	XTOR2B.ies	2134	0.83	18.2
	B	4	EATON - LUMARK (FORMER COOPER LIGHTING)	XTOR6BRL	CROSSTOUR WALL MOUNT LED WITH REFRACTIVE LENS	EATON LED 5000K	1	XTOR6BRL.ies	6216	0.83	58
	C	23	EATON - PORTFOLIO (FORMER COOPER LIGHTING)	LDB840D010 EU0B305090350 6LBWL11	PORTFOLIO 6 INCH 90 DEGREE CUTOFF RECESSED DOWNLIGHT WIDE DISTRIBUTION WITH SPECULAR CLEAR TRIM WATTAGE D010TR-43.52 W D0010-42.54 W DL7-42.53W W DM0-41.57 W DL2-41.57 W DL3-44.71 W DLE-39.33 W	HIGH LUMEN LED ABSOLUTE PHOTOMETRY IS BASED ON CALIBRATION FACTORS CREATED USING LAB LUMEN STANDARDS IN GONIOPHOTOMETER WITH TEST DISTANCE OF 28.75 FEET	1	LDB840D010 EU0B305090350 6LBWL11.ies	4367	0.61	41.6

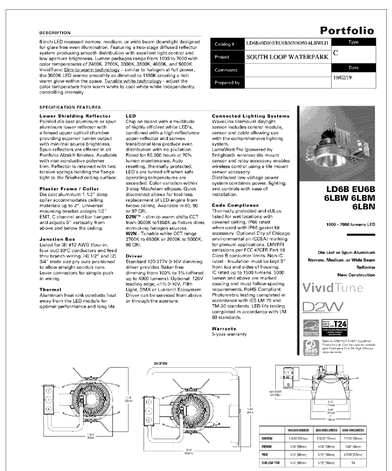
3 LIGHT FIXTURE SCHEDULE - MAINTAINED
1" = 1'-0"

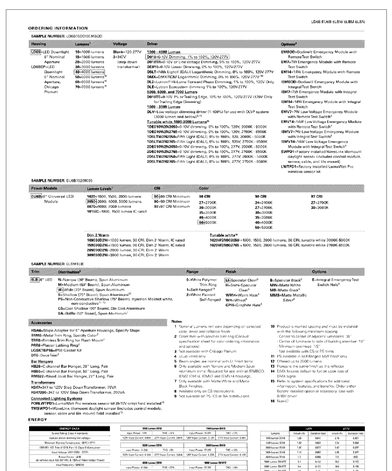
GENERAL NOTES - SITE LIGHTING	
#	
A	ALL BUILDING MOUNTED LIGHTING SHALL BE CONTROLLED AS DUSK-TO-DAWN OPERATION VIA LIGHTING RELAYS CONTROLLED BY ENERGY MANAGEMENT SYSTEM.
B	LIGHT FIXTURE SUBSTITUTIONS ARE ALLOWED PENDING COMPLIANCE TO CITY OF BLOOMINGTON ORDINANCE SECTION 21.301.07
C	FIXTURE FINISH TO BE DETERMINED BY ARCHITECT.

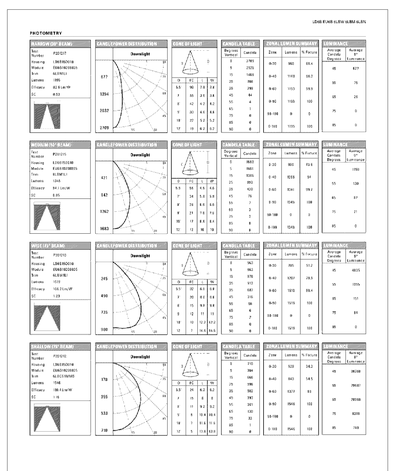


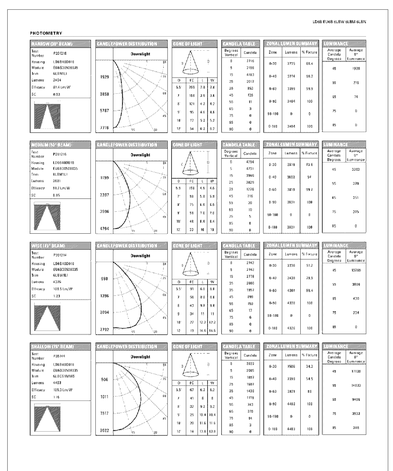










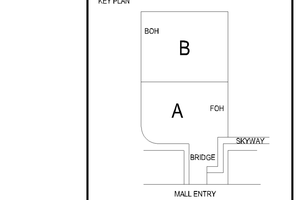


HUNT
Electric Corporation
7900 Chicago Avenue S
Bloomington MN 55420
(651) 646 2911
Fax (651) 643 6575

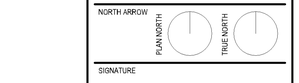
SOUTH LOOP WATERPARK

BLOOMINGTON, MN 55425

KEY PLAN



NORTH ARROW



SIGNATURE

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DANIEL PAUL BIGGAR

REG. NO. 26752 DATE: Issue Date

THESE DOCUMENTS HAVE BEEN PREPARED BY HUNT ELECTRIC CORPORATION WITH THE EXPRESSED UNDERSTANDING THAT THE INSTALLATION OF THE WORK DESCRIBED WILL BE PERFORMED BY HUNT ELECTRIC CORPORATION OR UNDER DIRECT SUPERVISION. INSTALLATION OF THIS WORK UNDER ANY OTHER CIRCUMSTANCES IS PROHIBITED.

REVISION SCHEDULE

NO.	REVISION	DATE

SHEET NAME

CATALOG INFORMATION
SHEETS & LIGHT FIXTURE SCHEDULES

PROJECT NUMBER:	81799
DATE:	10/02/19
DRAWN:	GG
CHECKED:	DPB
SCALE:	As indicated

SHEET NUMBER

ES1.3

PL201900184
PL2019-184

COMcheck Software Version 4.1.1.0
Exterior Lighting Compliance Certificate

Project Information

Energy Code:	90.1 (2013) Standard
Project Title:	South Loop Waterpark
Project Type:	New Construction
Exterior Lighting Zone	4 (High activity metropolitan commercial districts)

Construction Site:
Lindau Lane
Bloomington, MN 55425

Owner/Agent:

Designer/Contractor:
Greg Gergen
Hunt Electric
Bloomington, MN 55420

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Other door (not main entry)	112 ft of	20	Yes	2240
Walkway >= 10 feet wide	6548 ft2	0.2	Yes	1269
Loading dock	673 ft2	0.5	Yes	336
		Total Tradable Watts (a) =		3845
		Total Allowed Watts =		3845
		Total Allowed Supplemental Watts (b) =		1300

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 1300 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Other door (not main entry) [112 ft of door; exempt]: Tradable Wattage				
LED 2: B: XTOR Maxx Wall Pack: Other:	1	3	58	174
LED 1: A: XTOR Wall Pack: Other:	1	15	18	270
Walkway >= 10 feet wide (6548 ft2): Tradable Wattage				
LED 3: C: LO6B Recessed Downlight: Other:	1	23	42	961
Loading dock (673 ft2): Tradable Wattage				
LED 2: B: XTOR Maxx Wall Pack: Other:	1	1	58	58
		Total Tradable Proposed Watts =		1466

Exterior Lighting PASSES: Design 72% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 90.1 (2010) Standard requirements in COMcheck Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Greg Gergen - Electrical Designer
Name - Title

Signature

Date 10/2/19

COMcheck Software Version 4.1.1.0
Inspection Checklist

Energy Code: 90.1 (2010) Standard

Requirements: 60.0% were addressed directly in the COMcheck software
Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
4.2.2.6.c, 5.1.1.5.d.1, 2.8.1 [PRE]1	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the electrical systems and equipment and document where exceptions are claimed. Feeder connections sized in accordance with approved plans and branch circuits sized to not exceed limit of 3%.	☐Complies ☐Does Not ☑Not Observable ☑Not Applicable	
9.7 [PRE]1	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to Table 9.4.3 are claimed. Information required should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
6.4.2 [EL]10	At least 50% of all 125 volt 15- and 20-Amp receptacles are controlled by an automatic control device.	☐Complies ☐Does Not ☐Not Observable ☑Not Applicable	
9.4.1.7 [EL]3	Automatic lighting controls for exterior lighting installed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
9.4.3 [EL]7	Exterior grounds lighting over 100 W provides >40 lm/W unless on motion sensor or fixture is exempt from scope of code or from external LPD.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
9.4.3 [FI]9[1]	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	See the Exterior Lighting fixture schedule for values.

Additional Comments/Assumptions:

1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3)

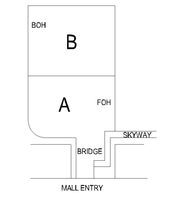
HUNT
Electric Corporation

7900 Chicago Avenue S
Bloomington MN 55420
(651) 646 2911
Fax (651) 643 6575

SOUTH LOOP WATERPARK

BLOOMINGTON, MN 55425

KEY PLAN



NORTH ARROW

SIGNATURE

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DANIEL PAUL BIGGAR

REG. NO. 26752 DATE: Issue Date

THESE DOCUMENTS HAVE BEEN PREPARED BY HUNT ELECTRIC CORPORATION WITH THE EXPRESSED UNDERSTANDING THAT THE INSTALLATION OF THE WORK DESCRIBED WILL BE PERFORMED BY HUNT ELECTRIC CORPORATION OR UNDER DIRECT SUPERVISION. INSTALLATION OF THIS WORK UNDER ANY OTHER CIRCUMSTANCES IS PROHIBITED.

REVISION SCHEDULE

NO.	REVISION	DATE

SHEET NAME

ENERGY CODE COMPLIANCE SHEETS

PROJECT NUMBER:	81799
DATE:	10/2/19
DRAWN:	GG
CHECKED:	DPB
SCALE:	12" = 1'-0"

SHEET NUMBER

ES1.4