



CREATIVE DESIGNS
IN LIGHTING



15982 N. 78th St. Suite A,
Scottsdale, Arizona 85260

602.248.7822
design@cdltg.com
www.cdltg.com

1978 41 2019
years of architectural
lighting design

SMOKE TREE RESORT

7101 E LINCOLN DR, PARADISE VALLEY, AZ 85253

REVISIONS	
△	
△	
△	
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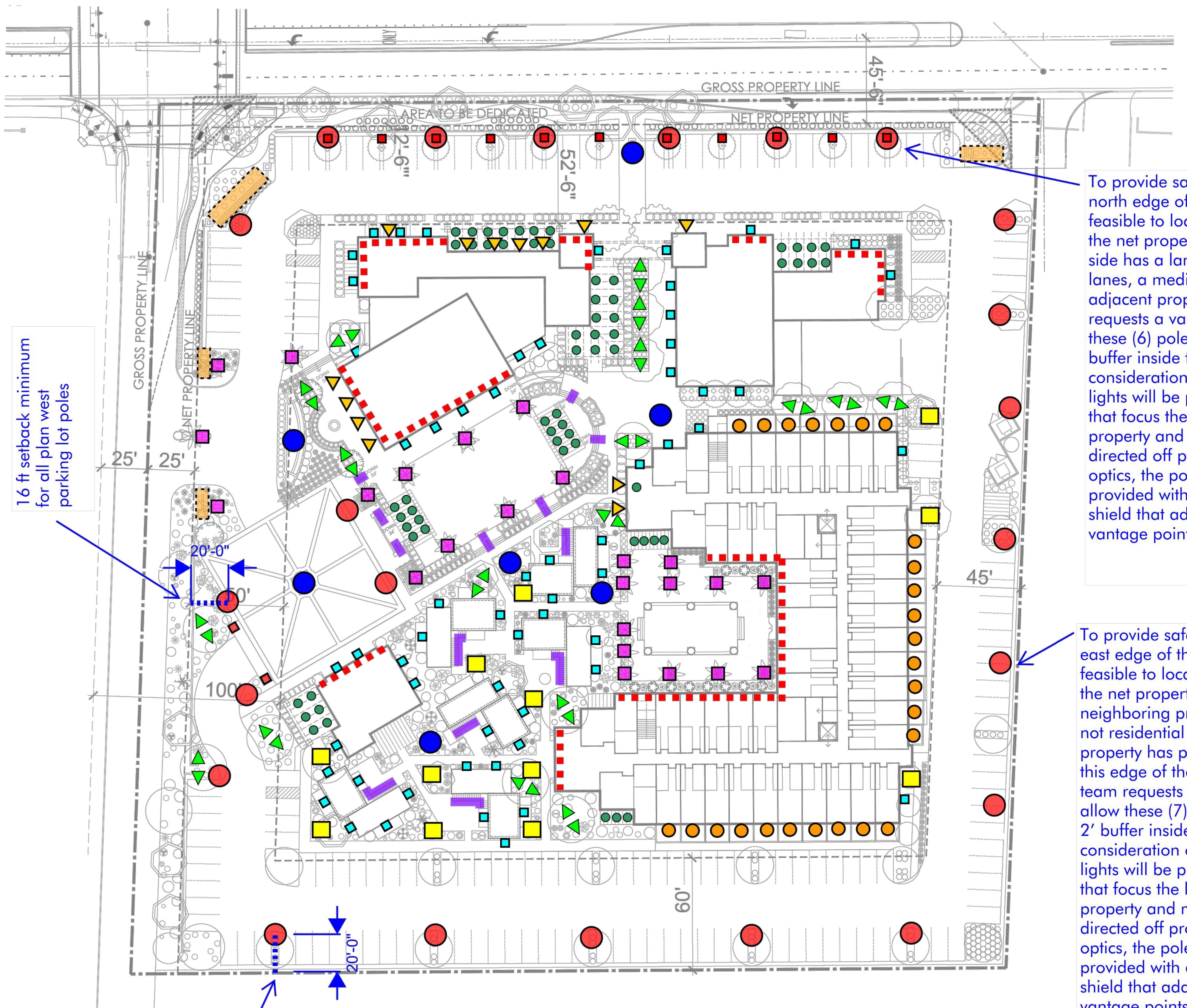
DATE
08.24.2020
SCALE
NTS
PROJECT NUMBER
116325-19
DRAWN BY
JG
CHECKED BY
MG
SHEET NAME

GROUND LEVEL
LIGHTING PLAN

SHEET NUMBER

AL3

GROUND LEVEL LIGHTING



TYPE BL
Symmetric bollard
fixture for way-finding



TYPE GU
Ground mounted landscape
fixture for accenting select
trees



TYPE HR
Handrail mounted puck
LED lights for safe
stair lighting



TYPE LU
Flush-to-grade fixture to uplight
landscape, pots, and key
architecture, max 250 lumen:



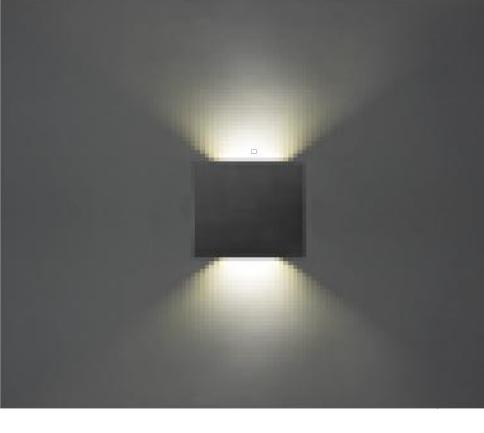
TYPE LT
Adjustable accent light trellis
mounted and concealed from
most vantage points



TYPE SA
Post-top thematic pole,
16' max pole height
(dark sky friendly with
house-side shield & optics)



TYPE TR
Palm tree ring for grazing
down sides of textured tree,
16' max mounting height



TYPE WP
Thematic wall sconce
for ambient illumination
& way-finding



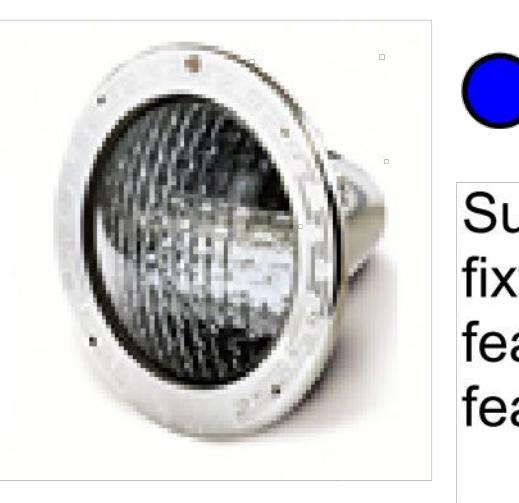
TYPE WS
Decorative wall
sconce for patios
(dark sky friendly)



Custom backlit signage,
light source completely
shielded with no footcandle
impact on ground, 2700K



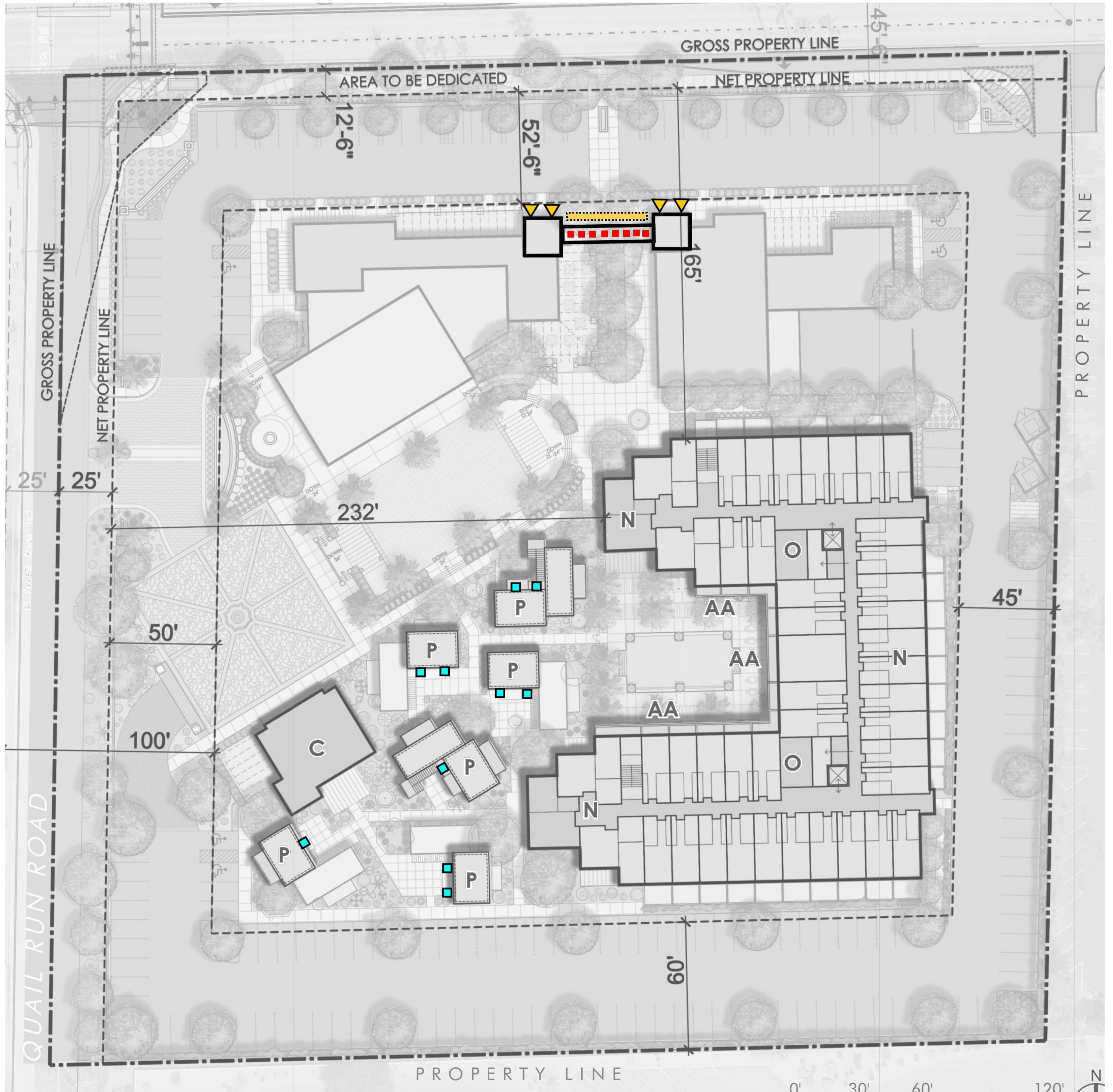
Custom decorative fixture
with semi-opaque glass
panels to obscure light
source, max 250 lumens



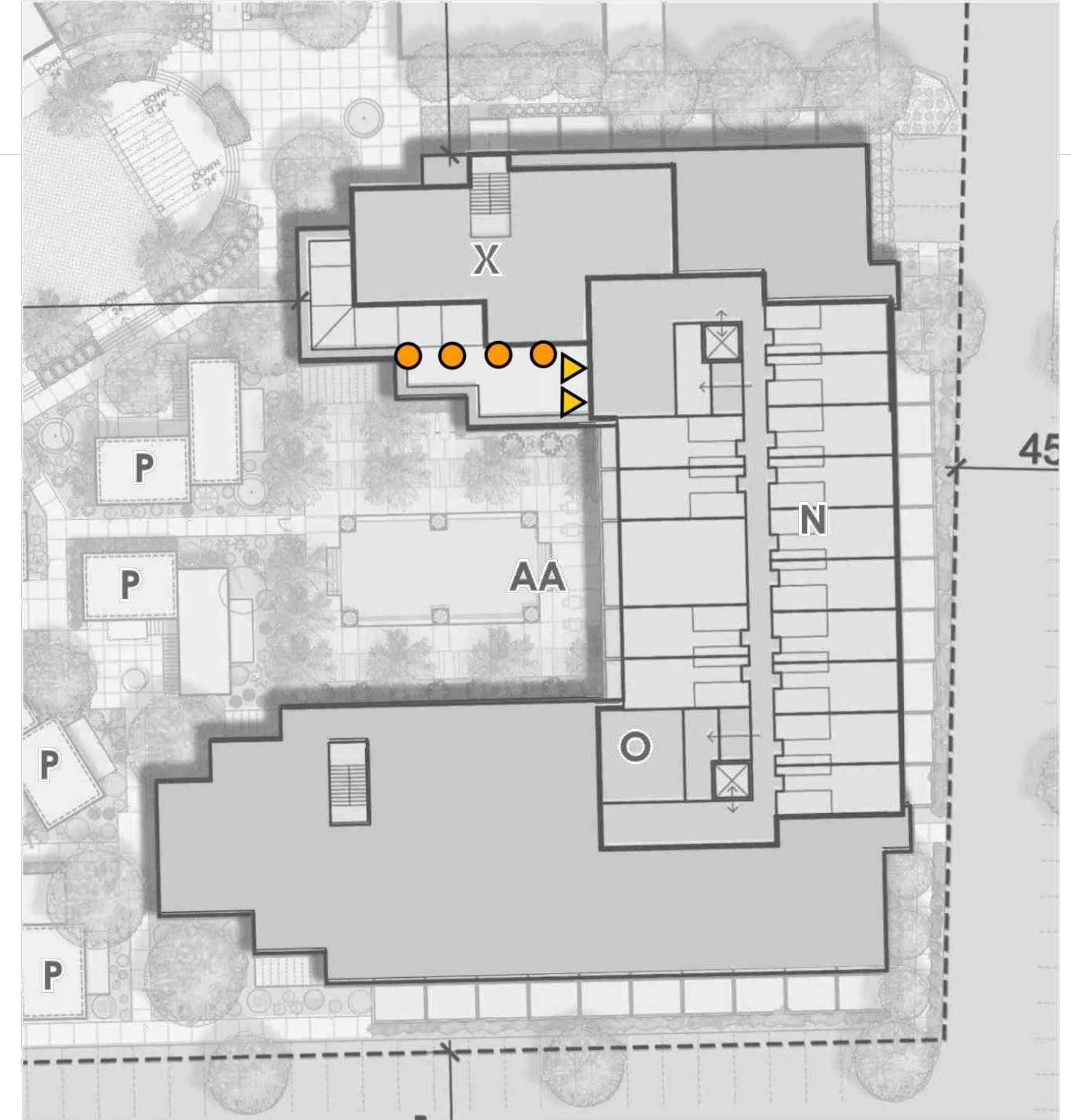
Submersible
fixtures in water
features by water
feature consultant



SECOND LEVEL LIGHTING



THIRD LEVEL LIGHTING



NDI

Custom backlit signage,
light source completely
shielded with no footcandle
impact on ground, **2700K**



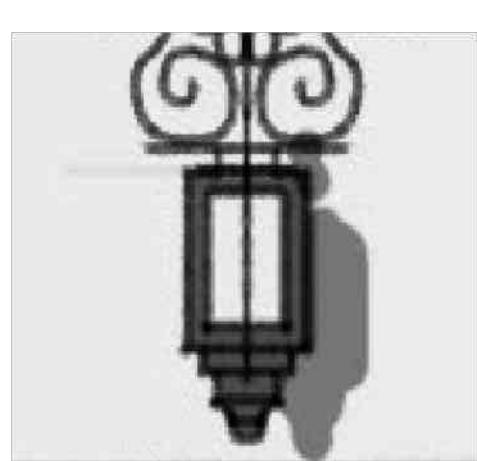
TYPE WP

Thematic wall sconce
for ambient
illumination &
way-finding



TYPE LU

Flush-to-grade fixture to
uplight pots and key
architecture, max 250 lumens



Custom decorative fixture
with semi-opaque glass
panels to obscure the light
source, max 250 lumens



TYPE WS

Decorative wall
sconce for patios
(dark sky friendly)

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IN LIGHTING



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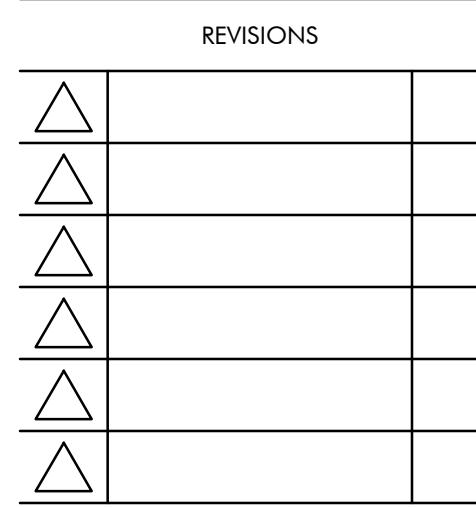
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CHECKED BY
MG
SHEET NAME

2ND & 3RD LEVEL
LIGHTING PLAN

AL4



CREATIVE DESIGNS
IN LIGHTING



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Scottsdale, Arizona 85260

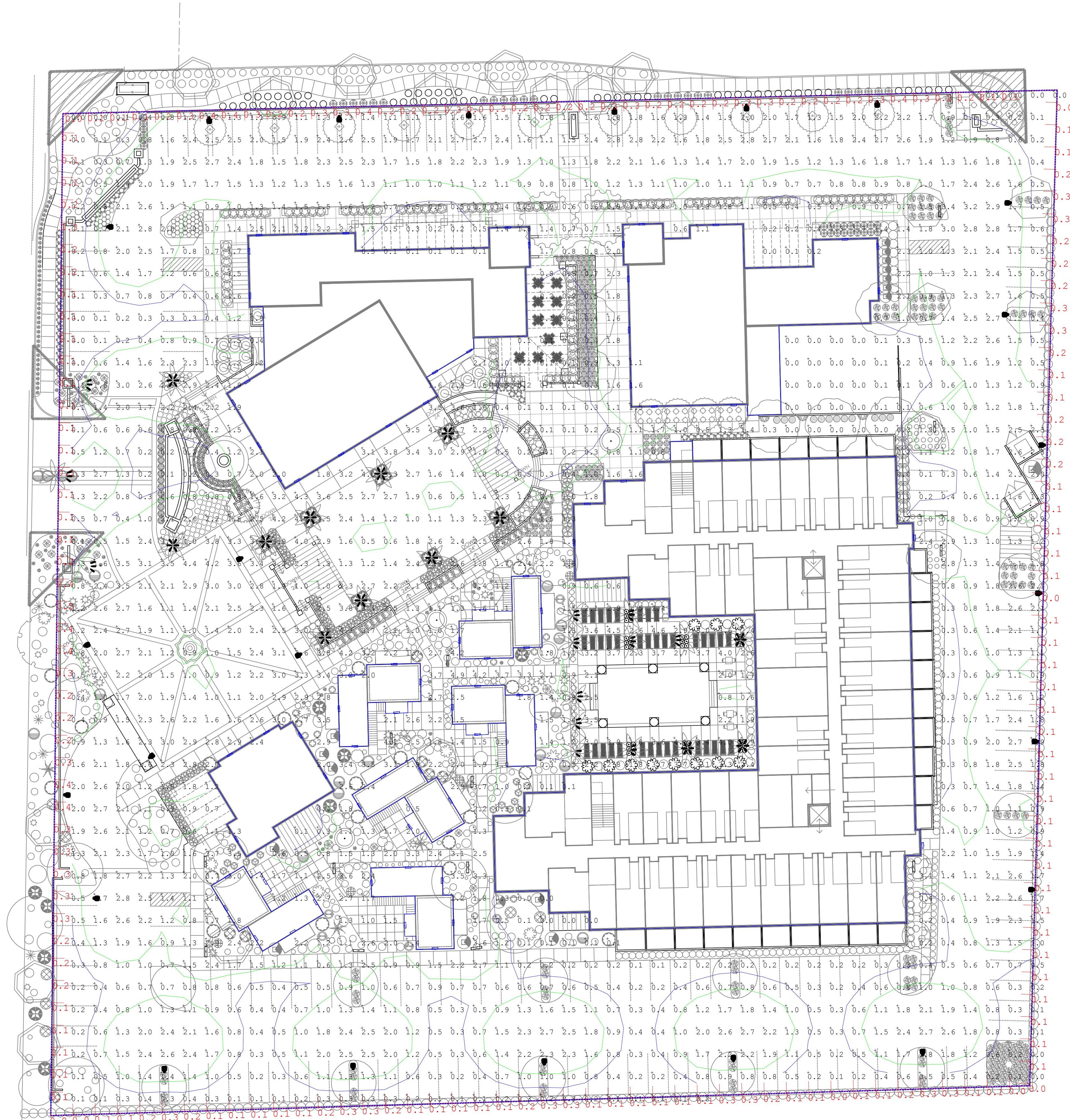
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Calculation Summary

Label	CalcType	Units	Avg	Max	Min
Light Trespass Calc	Illuminance	Fc	0.18	0.5	0.0
Entrance Rd Interior Drives	Illuminance	Fc	1.08	4.4	0.0
Pool Deck Function Areas	Illuminance	Fc	1.62	4.9	0.0

DESIGN DEVELOPMENT SET - NOT FOR CONSTRUCTION

REVISIONS
△
△
△
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△

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SHEET NAME

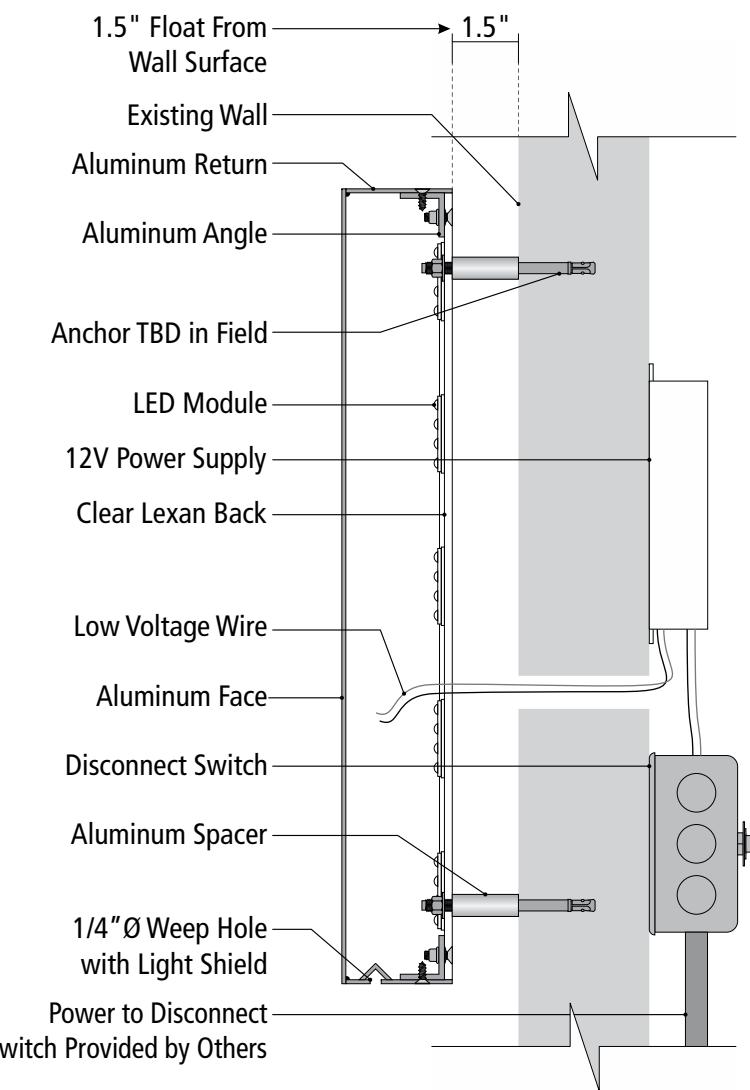
GROUND LEVEL
PHOTOMETRY PLAN

AL5



1.5"

Custom backlit signage,
light source completely
shielded with no footcandle
impact on ground, **2700K**



This sign is intended to be installed in accordance with the requirements of article 600 of the national electrical code and/or other applicable local codes. This includes proper grounding and bonding of the sign. The location of the disconnect switch after installation shall comply with Article 600.6(A)(1) of the National Electrical Code. All signs fabricated as per 2008 N.E.C. Standards.

TYP. HALO ILLUMINATED LETTER SECTION

scale: nts



Gretchen Wilde, owner / designer
1205 N. Miller Road
Tempe, AZ 85281
480.966.6565 / 480.966.5668 (f)
signs@airparksigns.com

Address

NOTES:

Approved By:

Date:

trc
th

Phoenix Architecture

08.24.20

Letter Section

1

PAGE



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REVISIONS

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SCALE
N.T.S.

PROJECT NUMBER
116325-19

DRAWN BY
JG

SHEET NAME

LIGHTING CUTSHEETS

AL1

TYPE "BL"
VUDAH
LED

VOLTAIRE CONCRETE BOLLARD – ARCHILINEAR

CATALOG #:

TYPE:

PROJECT:

NOTES:

EXAMPLE → **VCBA - L9/830 - NC - AB - OPTIONS - 120**

▼
SERIES

▼
LUMEN
PACKAGE

▼
CRI &
CCT

▼
FINISH

▼
ANCHOR
BOLTS

▼
OPTIONS

▼
VOLTAGE

CROSS SECTIONS

ORDERING INFORMATION

SERIES

VCBA Voltaire Concrete Bollard – Archilinear

LED PACKAGE

Nominal lumens based on 120V input. See back for fixture performance data.

EXAMPLE: L9/830

LUMEN PACKAGE	NOMINAL LUMENS	MINIMUM CRI & CCT	AVERAGE WATTAGE
		830 = 80 CRI, 3000K	
		840 = 80 CRI, 4000K	
L9	900	850 = 80 CRI, 5000K	17

CONCRETE FINISH

SANDBLAST FINISH

- NC** Natural
- BF** Buff
- BN** Brown
- CP** Copper

GLAZED SANDBLAST FINISH

- NCG** Natural with glazed protective sealant
- BNG** Brown with glazed protective sealant
- BFG** Buff with glazed protective sealant
- CPG** Copper with glazed protective sealant

ANCHOR BOLTS

- AB¹** Anchor bolts (4 each, shipped with fixture)¹
- LAB** Less anchor bolts
- PAB¹** Pre-shipped anchor bolts (4 each)¹

OPTIONS

- SFW** Single fuse, wet location (120V, 277V, or 347V only; must specify voltage)
- DFW** Double fuse, wet location (208V, 240V, or 480V only; must specify voltage)

VOLTAGE

120	120V
208	208V
240	240V
277	277V (integral stepdown transformer)
347	347V (integral stepdown transformer)
480	480V (integral stepdown transformer)

FEATURES

- Concrete housing complements gardens, pathways, and pedestrian-area applications
- Aesthetically designed to blend seamlessly with a variety of architectural styles
- Provides accent and security lighting
- Symmetric distribution
- Available in four concrete colors with light sandblast or glazed protective finish
- Engineered with the highest quality materials to ensure reliability and performance
- Rated >50,000 hours at 70% lumen maintenance (L70)
- ANSI 3000K, 4000K, or 5000K CCT
- Minimum 80 CRI
- Integral heatsink provides optimal passive thermal management
- Rated for -30°C to 40°C ambient operating temperature
- Direct line driven LED module
- This fixture is proudly made in the USA

¹ Four 3/8" x 12" cast-in galvanized steel anchor J-bolts. Mounting template included.

H.E. Williams, Inc. • Carthage, Missouri • www.hew.com • 417-358-4065

H.E. WILLIAMS, INC.

Bollards

Page 1 of 2



ZX16-SOI

Area Accent ▶ ZX16 Series

Characteristics

Listed

Standard

- Wet/Dry location rated.
- Swivel Stem | facilitates 355° deg. rotation for aiming precision on any installation plane.
- Integral Thermal dissipation for the SORAA MR16 LED in a compact, aesthetic fixture. US patented.
- Reduces LED junction temperature by a tested 20-30C(68-86F)
- Allows entire catalogue of SORAA LED MR16 lamps to be used in an enclosed fixture without sacrificing the performance of the light bulb.
- For lamp selections, please refer to <http://www.soraa.com/products/specs-GU5.3-US>

Technical Data

Material

Housing/Cap/Stem - Machined silicone magnesium aluminum alloy (6061-T6) resistant to corrosion
Stainless steel (SS304) hardware

Lamp

Soraa MR16

Dimmability

ELV, MLV

Hoods

A, B, C

Socket

Bi-pin, GX5.3

Voltage

12V

Color Temp

2.7K, 3K, 4K, 5K

Power Supply

Integral LED Driver

PROJECT

Fixture Type

Ordering Guide

Series	ZX16-SOI
Hoods	A B C
Glare Shields (optional)	GSL GSA GSS
Voltage	12V
Lamp	Soraa MR16
Socket	Bi-pin GX5.3
Color Temp	2.7K 3K 4K 5K
Stem (optional)	FSS
Finish	BK (black) BZ (bronze) WT (white) ABK (anodized black) ACL (anodized clear) NBS (natural brass) CC (custom)

ALPHABET
LEDRbrands

Alphabet By Ledra Brands | 15774 Gateway Circle | PH: 714.259.9959
Tustin, CA 92780 | FAX: 714.259.9969 | www.alphabetlighting.com

TYPE 'HR'

Job Name:

Contact:

Ordering Code:

Fixture Type:

ZETA750

Description

LED Performance

LED:	Cree XPG
DUV:	.001
CCT:	2700k, 3000k, 4000k, 5000k
CRI:	>80*
Life:	90% at 51k hrs based on LM-80 testing

Warranty: 5 year limited warranty

*At 5000K CRI >70

Lumens	CCT
104 lm	2700k
111 lm	3000k
119 lm	4000k
127 lm	5000k

The ZETA750 Series Puck is the most flexible and vandal resistant LED handrail lighting module on the market, offering unrivaled uniformity and photometric performance. Designed with the specifier in mind, it accommodates a wide range of options of beam distribution for a clean design.

The pucks can be installed in new handrail or retrofitted into existing handrail, flat or oval metallic structures and surfaces. Powerful yet small and unobtrusive, makes the Handrail Puck ideal for incorporation into street sculptures, illuminating artwork or to wash walls with clean, white LED light.

The ZETA750 is engineered of electroplated 316 stainless steel. Other custom materials are available including aluminum, brass, and super-duplex stainless steel (which offers exceptional corrosion resistance), as well as custom painted finishes. Please consult factory for these custom options.

At standard handrail height the pucks provide 11 foot-candles at the surface below. They are offered with wide, narrow, and asymmetric beam patterns. ETL wet rated for outdoor applications. For round handrail, the LED pucks are field installed with use of the ZETA750 series Drill Tool Kit. For flat surfaces the installer may use their own drill bits and threading taps. Please refer to the installation instructions.

Housing

Extremely durable 316 stainless steel marine grade housing, with 3.5" (90mm) 20AWG wire leads. Choice of Thin Wall (recommended for ease of installation), or Heavy Wall. Curved face or flat face options available in three different beam patterns 60°, 90° asymmetric, and 120°.

Mounting

Type of Surface- Install in metallic surface only for proper thermal dissipation. Luminaire is for use in non-insulated recessed surfaces.

Fits Railing size - Ø38.0mm, 1.496in to 100.0mm, 3.937in.

Thin Wall Puck minimum wall thickness - 1.5mm, 0.059in.

Heavy Wall Puck minimum wall thickness - 2.5mm, 0.980in.

Minimum distance between lights - 101.6mm, 4.000inches (center to center). Max 16 lights may be connected in series.

Electrical / Led Driver

- 3VDC, 500mA, 1.5W (Remote Driver Required)

Listings

- ETLus Listed to UL2108 (suitable for wet locations)

- cETL Listed to CSA C22.2 #250.0

- Impact tested to IK10 (EN62262)

- IP66 rated

- ADA Compliant when using handrail diameter 31.75mm (1.25") to 38.1mm (1.5") O.D.

Ordering Codes

Follow the steps to specify your fixture, example: 750 - 4 - 2 - 1 - 1

Part Number	CCT	Beam	Face Type	Wall Thickness
750 Rail Puck	2 2700k	1 Standard 60°	1 Curved	1 Heavy
	3 3000k	2 Symmetric 120°	2 Flat	2 Thin
	4 4000k	3 Assymetric 90°		
	5 5000k			

Heavy Wall Curved Face

- Mounts to pipe size: Ø38mm - Ø100mm
- Wall thickness ≥ 2.5mm
- Mounting thread: M16x1mm
- Requires counterbore Ø16mm x 1.8mm ↴

Thin Wall Curved Face

- Mounts to pipe size: Ø38mm - Ø100mm
- Wall thickness ≥ 1.5mm
- Mounting thread: M16x1mm

Heavy Wall Flat Face

- Mounts to flat surfaces
- Wall thickness ≥ 2.5mm
- Mounting thread: M16x1mm
- Requires counterbore Ø16mm x 1.8mm ↴

Thin Wall Flat Face

- Mounts to flat surfaces
- Wall thickness ≥ 1.5mm
- Mounting thread: M16x1mm

LM 70

TYPE 'L'

Lumière

DESCRIPTION

Cambria 203 is a small, low voltage dimmable LED and halogen MR16 luminaire. It is available with a fully adjustable side swivel stem (203, 203-FL), an adjustable center rear swivel (203-CRS) or a stationary rear flush mount (203-FM). Side swivel models 203 and 203-FL provide 340° tilt and 360° rotation. Center rear swivel model CRS provides 200° tilt and 360° rotation. Center rear swivel model CRS provides 200° tilt and 360° rotation. Various lenses, louvers and color or dichroic filters can be combined - up to three at once - to create multiple lighting effects. The Lumière exclusive Siphon Protection System (S.P.S.) prevents water from siphoning into the fixture through its own lead wires.

SPECIFICATION FEATURES

Material

Housing, hood and mounting stem are precision-machined from corrosion-resistant billet stock 6061-T6 aluminum, C360 brass, C932 bronze, C110 copper or 303/304 stainless steel.

Finish

Fixtures constructed from 6061-T6 aluminum are double protected by an ROHS compliant chemical film undercoating and polyester powdercoat paint finish, surpassing the rigorous demands of the outdoor environment. A variety of standard colors are available.

Brass, Bronze, Copper or Stainless Steel

Fixtures constructed from brass, bronze, copper or stainless steel are left unpainted to reveal the natural beauty of the material. Brass, bronze and copper will patina naturally over time.

Hood

Hood is removable for easy relamping and accepts up to three internal accessories at once (lenses, louvers, filters) to achieve multiple lighting effects. Model 203, 203-CRS & 203-FM: Weep holes prevent water and mineral stains from collecting on the lens, even in the straight-up position. Model 203-FL: The flush lens design reduces fixture length, minimizes debris collection and prevents water and mineral stains from collecting on the lens.

Gasket

Housing and hood are sealed with a high temperature silicone o-ring gasket to prevent water intrusion.

Lens

Tempered glass lens, factory sealed with high temperature adhesive to prevent water intrusion and breakage due to thermal shock.

Mounting Stem

Model 203 and 203-FL include fully adjustable side-mounted swivel stem, providing 340° tilt and 360° rotation for easy aiming. Center rear swivel (203-CRS) or stationary rear flush mount (203-FM) models are also available. All models include 1/2" NPS threaded male fitting. Stainless steel aim-locking mechanisms are standard (not available on 203-FM). Lumière's exclusive Siphon Protection System (S.P.S.) prevents water from siphoning into the fixture through its own lead wires.

Hardware

Stainless steel hardware is standard to provide maximum corrosion-resistance.

Socket

Ceramic socket with 250° CTeflon® coated lead wires and GU5.3 bi-pin base.

Electrical

Remote 12V transformer required (not included). NOTE: initial power draw on LED equipped fixtures is 15 watts. When sizing transformer use 15 watts per LED fixture. Nominal power draw after start up is 6 watts or 10 watts accordingly. Also, LEDs are more voltage sensitive than standard halogen MR16 lamps. The LED module is designed to operate between 10 and 13 volts. Any less or more voltage can cause premature failures.

Lamp

Halogen lamp not included. LED modules are included and are available in four color temperatures (2700, 3000, 4000, and 5700) and three distributions (spot, narrow, and flood). Both color temperature and distribution must be specified when ordering. Soraa lamp compatible (10W Max).

20

CAMBRI

LE
HALOGE

APPLICATION
ACCENT / FLOOR

WORKS WITH
SORAA®

CERTIFICATION DATA

UL and cUL Wet Location Listed
LM79 / LM80 Compliant
ROHS Compliant
IP65 Ingressed Protection Rated

TECHNICAL DATA

6W LED, L70/60,000 hours at 25°C
10W LED, L70/60,000 hours at 25°C
Low Voltage: 50W Halogen MR16

ORDERING INFORMATION

Sample Number: 203-FL-50MR16-12-NSS

Series	Construction	Source (for LED, select from each column and combine)	Voltage	Finish
203=LED of MR16 Cambria Accent Fixture	=Standard Side Swivel Stem, 1/2" NPS CRS=Center Rear Swivel Stem, 1/2" NPS FM=Rear Flush Mount, 1/2" NPS FL=Flush Lens, Side Swivel Stem, 1/2" NPS	50MR16=50W max. Halogen MR16 (lamp not included)	12=12V	Painted BK=Black BZ=Bronze CS=City Silver VE=Verde WT=White Premium Finish NBR=Natural Brass NCP=Natural Copper NBZ=Natural Bronze NSS=Natural Stainless Steel
		6LED=6W LED 10LED=10W LED	27=2700K 30=3000K 40=4000K 57=5700K 12=12° Spot 21=21° Narrow 41=41° Wide	
		4LED=4W LED 7LED=7W LED	AM=Amber (585-595nm)	

EATON

ADL0324

July 22, 2014

The page features a large image of two Soraa LED MR16 lamps at the top left. To the right is the product title 'SORAA LED MR16 7.5W'. The top right corner shows the 'SORAA' logo with 'TYPE 'GU'' below it. A vertical column of icons on the right side represents different lamp types: GU10, GU5.3, MR16, DLMR16, UGR, and HGR. The main content area contains several sections with tables and graphs, including 'POINT SOURCE OPTICS', 'VP₃ VIVID COLOR AND VP₃ NATURAL WHITE', 'ENERGY EFFICIENCY AND LONG LIFE', 'CERTIFICATIONS', 'GENERAL SPECIFICATIONS', 'COLOR RENDERING', and 'DIMENSIONS'. Each section includes descriptive text and technical details.

In a continuing effort to offer the best product possible we reserve the right to change, without notice, specifications or materials that in our opinion will not alter the function of the product. v.11.20.17 ZELTA/50 | Page 1

Alphabet By Ledra Brands | 15774 Gateway Circle | PH: 714.259.9959
Tustin, CA 92780 | FAX: 714.259.9969 | www.alphabetlighting.com

Job Name:

Contact:

Ordering Code:

Fixture Type:

60° STANDARD BEAM

W = Path Width H = handrail height (900mm nominal) S = LED spacing

STANDARD BEAM - LIGHT FROM ONE SIDE

path width	1.2m		2.0m		3.0m		4.0m	
LED Spacing	Ix	u	Ix	u	Ix	u	Ix	u
0.5m	107	0.67	82	0.51	61	0.31	47	0.19
1.0m	55	0.76	41	0.58	31	0.34	24	0.21
2.0m	27	0.78	21	0.59	15	0.34	12	0.21

Ix = average lux u = uniformity color temp = 3000K

STANDARD BEAM - LIGHT FROM BOTH SIDES

path width	1.2m		2.0m		3.0m		4.0m	
LED Spacing	Ix	u	Ix	u	Ix	u	Ix	u
0.5m	216	0.76	164	0.68	121	0.66	95	0.66
1.0m	109	0.82	83	0.72	61	0.72	48	0.72
2.0m	55	0.84	41	0.72	31	0.71	24	0.72

Ix = average lux u = uniformity color temp = 3000K

90° VERTICAL ASYMMETRIC

W = Path Width H = handrail height (900mm nominal) S = LED spacing

STANDARD BEAM - LIGHT FROM ONE SIDE

path width	1.2m		2.0m		3.0m		4.0m	
LED Spacing	Ix	u	Ix	u	Ix	u	Ix	u
0.5m	95	0.8	73	0.45	52	0.21	40	0.15
1.0m	48	0.89	37	0.51	27	0.23	20	0.16
2.0m	23	0.89	18	0.51	13	0.23	10	0.16

Ix = average lux u = uniformity color temp = 3000K

STANDARD BEAM - LIGHT FROM BOTH SIDES

path width	1.2m		2.0m		3.0m		4.0m	
LED Spacing	Ix	u	Ix	u	Ix	u	Ix	u
0.5m	193	0.89	148	0.8	105	0.77	81	0.62
1.0m	97	0.9	74	0.8	53	0.86	41	0.66
2.0m	48	0.84	37	0.8	27	0.84	20	0.68

Ix = average lux u = uniformity color temp = 3000K

120° VERTICAL SYMMETRIC

W = Path Width H = handrail height (900mm nominal) S = LED spacing

STANDARD BEAM - LIGHT FROM ONE SIDE

path width	1.2m		2.0m		3.0m		4.0m	
LED Spacing	Ix	u	Ix	u	Ix	u	Ix	u
0.5m	147	0.7	113	0.4	79	0.12	58	0.02
1.0m	74	0.71	57	0.44	40	0.12	29	0.02
2.0m	36	0.22	28	0.11	19	0.03	14	0.01

Ix = average lux u = uniformity color temp = 3000K

STANDARD BEAM - LIGHT FROM BOTH SIDES

path width	1.2m		2.0m		3.0m		4.0m	
LED Spacing	Ix	u	Ix	u	Ix	u	Ix	u
0.5m	195	0.87	103	0.56	61	0.12	46	0.02
1.0m	95	0.88	52	0.62	32	0.11	24	0.02
2.0m	43	0.25	25	0.15	15	0.05	11	0.01

Ix = average lux u = uniformity color temp = 3000K

FULLY SHIELDED LIGHTING

