

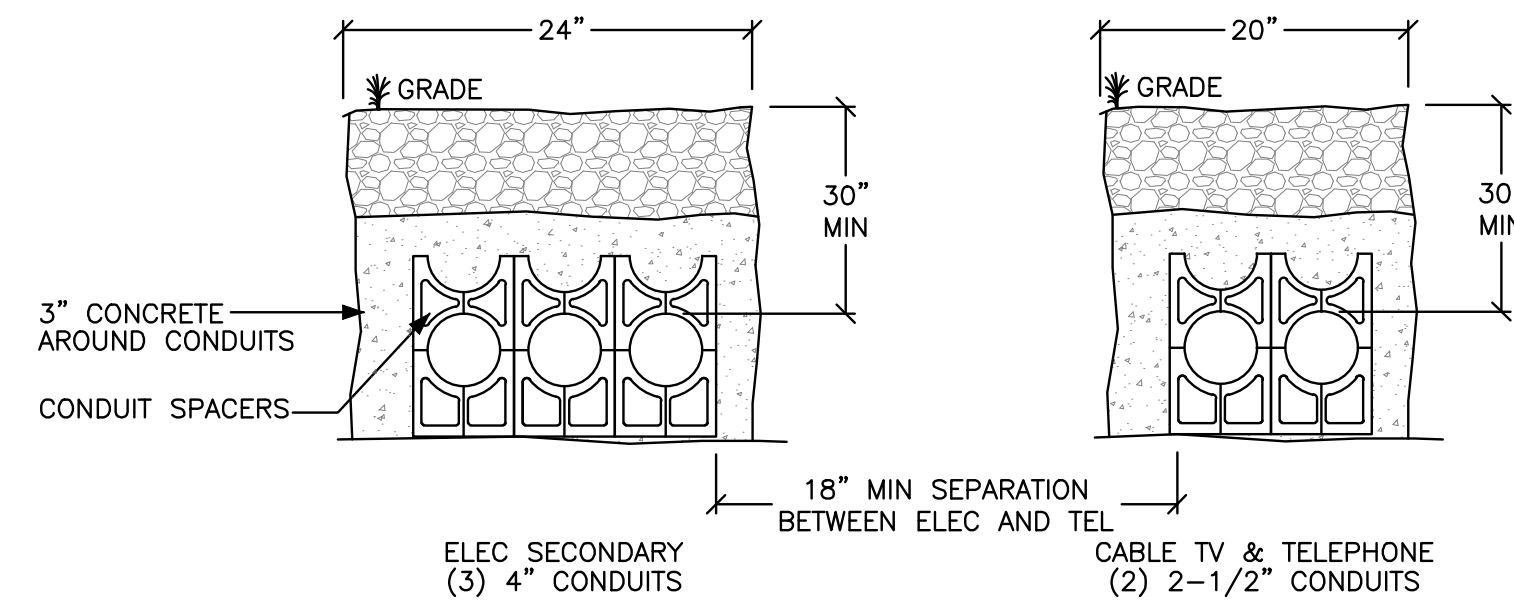
**ELECTRICAL & PHOTOMETRIC SITE PLAN NOTES:**

1. CALCULATED VALUES REPRESENT MAINTAINED FOOTCANDLE LEVELS AT GRADE.
2. LIGHTING CALCULATIONS WERE PERFORMED USING A 0.9 LIGHT LOSS FACTOR.
3. MOUNTING HEIGHTS FOR TYPE S2 LIGHTS ARE LISTED ON THE PHOTOMETRIC PLAN. THE TYPE S1 LIGHTS SHALL BE RECESSED INTO CANOPY CEILINGS.
4. MAXIMUM FOOTCANDLE LEVEL WAS CALCULATED TO BE 3.6.
5. TYPE S1:  
RECESSED LED DOWNLIGHT WITH NARROW BEAM SYMMETRICAL LIGHT DISTRIBUTION, CLEAR TEMPERED GLASS LENS, DIE-CAST ALUMINUM STEP BAFFLE AND INTERNAL ALUMINUM REFLECTOR. FIXTURE UTILIZES A 6.5W LED LAMP WITH AN INTEGRAL 120V DRIVER. COLOR TEMP 3K. UL LISTED FOR WET LOCATION. FIXTURE FINISH: BRUSHED STAINLESS STEEL.  
BEGA LIGHTING #6604 LED
- TYPE S2  
WALL MOUNTED DIE-CAST ALUMINUM FIXTURE WITH TEMPERED ETCHED GLASS LENS AND ALUMINUM REFLECTOR. FIXTURE UTILIZES A 12W LED LAMP WITH AN INTEGRAL 120V ELECTRONIC DRIVER. COLOR TEMP 3K. UL LISTED FOR WET LOCATIONS. FIXTURE FINISH: WHITE.  
BEGA LIGHTING #2380 LED WHT
- TYPE S3  
24IN LONG WALL MOUNTED STRAIGHT STEM 8W LED SIGN LIGHT WITH 180deg VERTICAL AND 360deg HORIZONTAL LOCKING ADJUSTMENT, FIELD CHANGEABLE OPTICAL DISTRIBUTION AND INTEGRAL TRANSFORMER LOCATED IN FIXTURE CANOPY. PROVIDE FIXTURE WITH MEDIUM FLOOD DISTRIBUTION, SOFT FOCUS LENS AND 45deg CUT-OFF END CAP. COLOR TEMP 3K. UL LISTED FOR WET LOCATIONS. FIXTURE FINISH: WHITE.  
B-K LIGHTING #SN LED e22 MFL A9 WHT 12 A 24 C PC

SCALE: NOT TO SCALE

NOTES

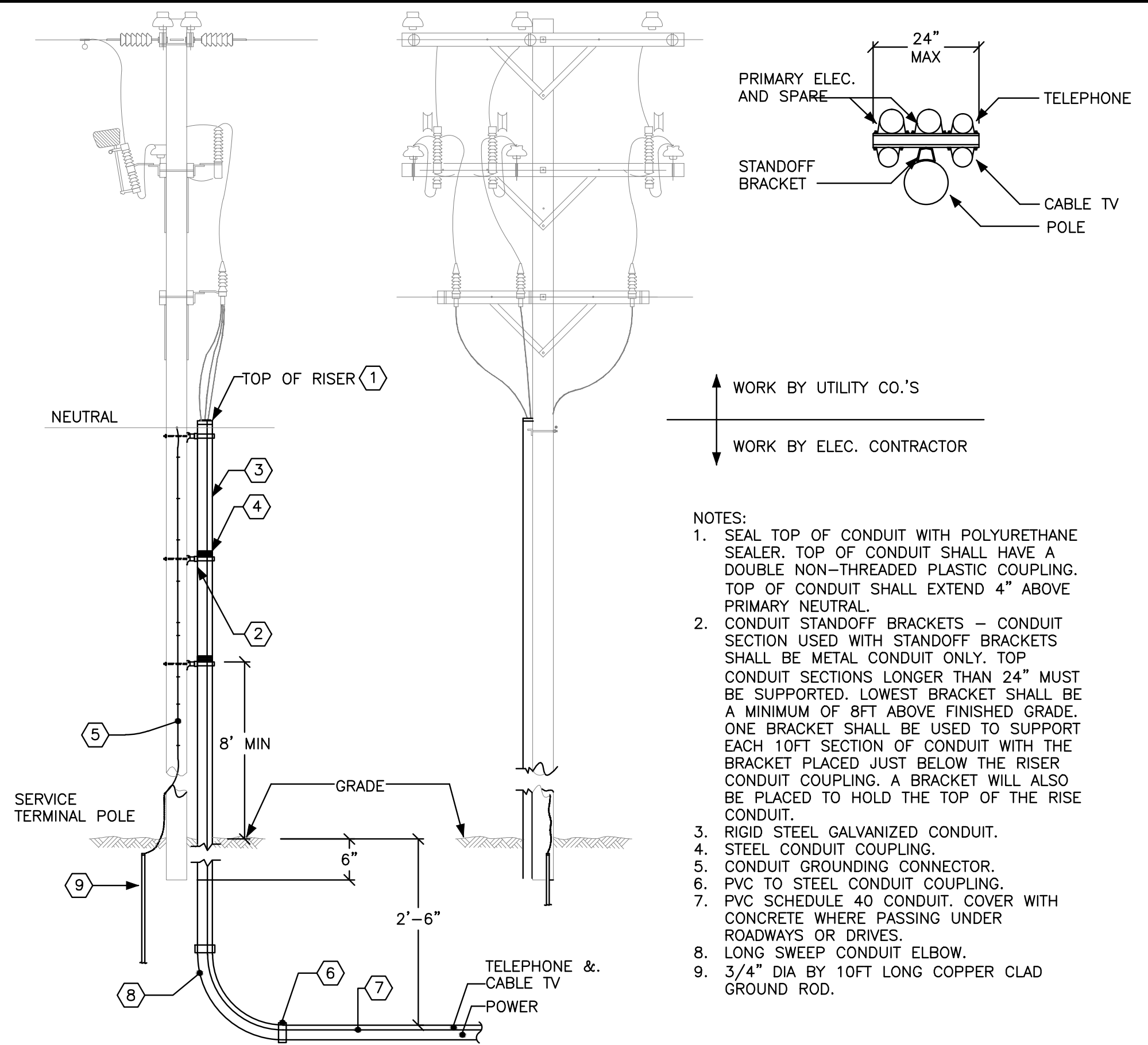
5



SCALE: NOT TO SCALE

DUCT SECTION

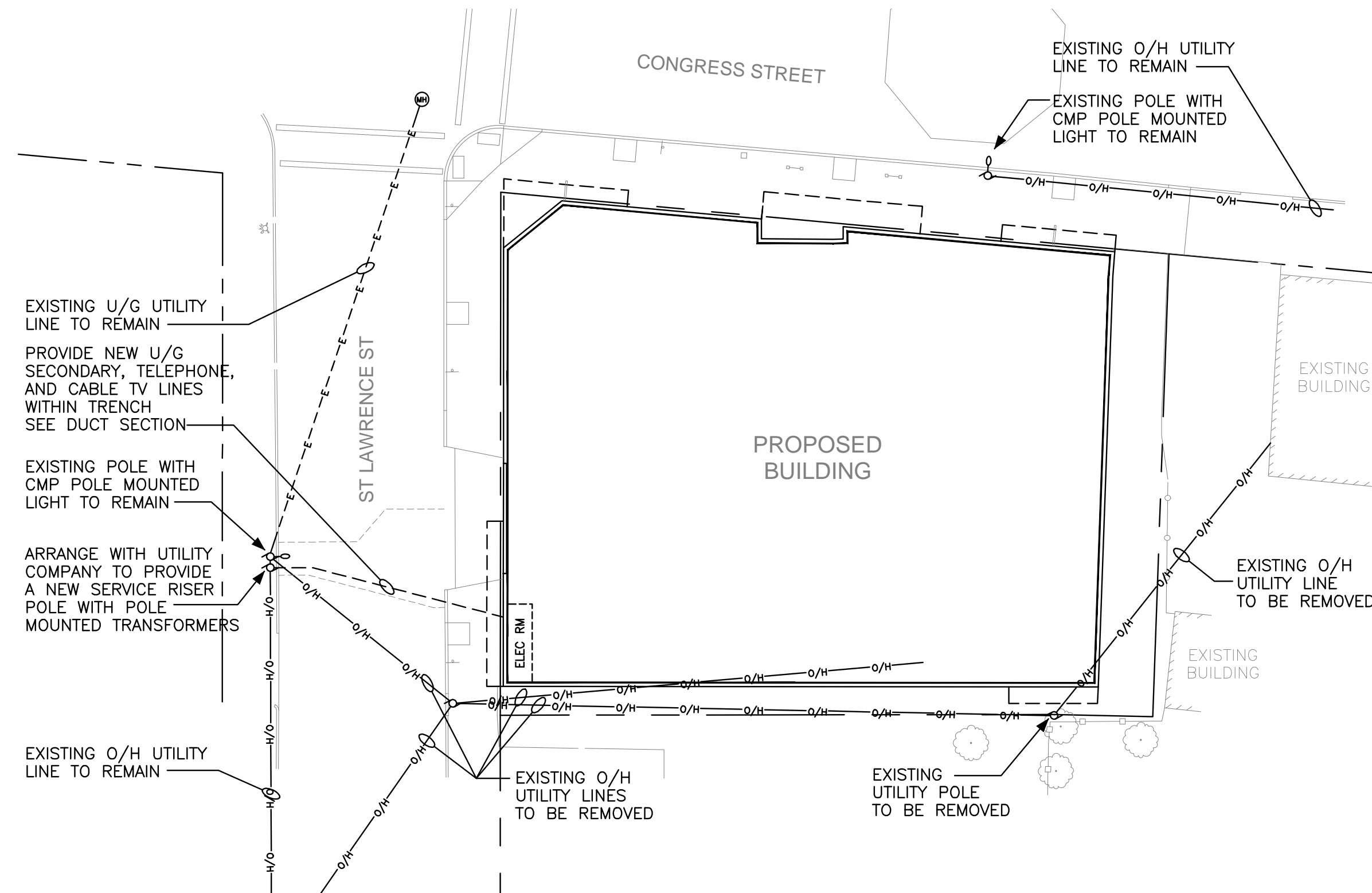
4



SCALE: NOT TO SCALE

SERVICE RISER POLE DETAIL

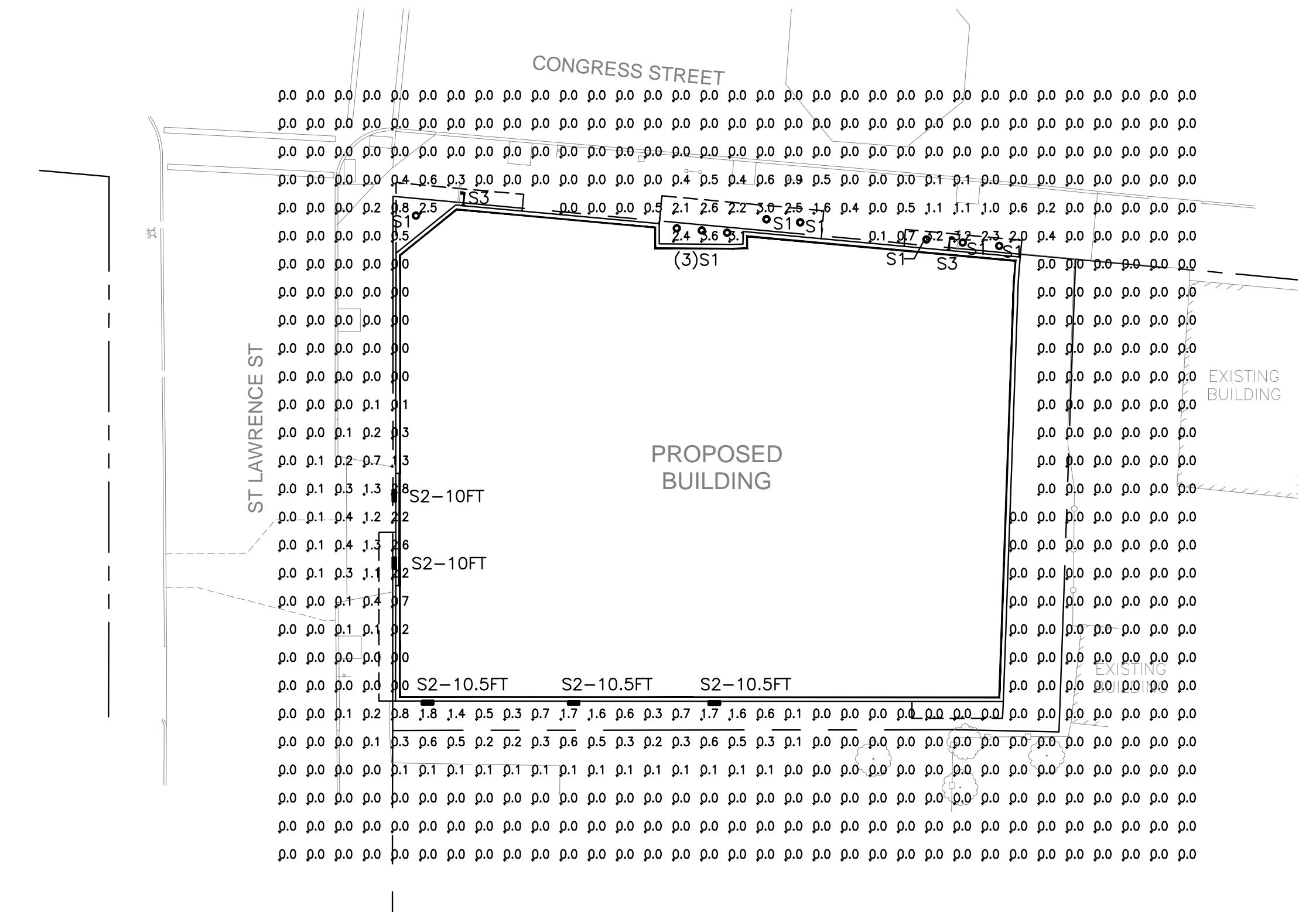
3



SCALE: 1" = 20'-0"

ELECTRICAL SITE PLAN

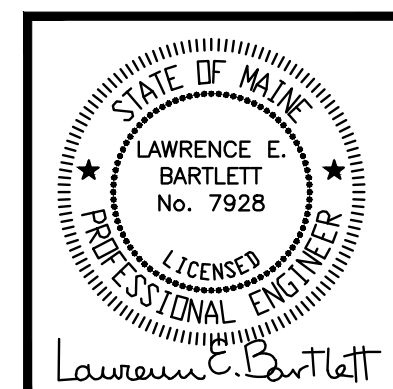
2



SCALE: 1" = 20'-0"

PHOTOMETRIC SITE PLAN

1



**Bartlett Design**  
LIGHTING & ELECTRICAL ENGINEERING  
942 WASHINGTON STREET, BATH, ME 04530  
TEL (207) 443-6447 FAX (207) 443-6560

date drawn: 11/12/13  
date issued: 11/12/13  
drawn by: JLC  
scale: 1" = 20'-0"

project 118 CONDOMINIUMS  
CONGRESS ST, PORTLAND MAINE  
ELECTRICAL & PHOTOMETRIC SITE PLAN  
drawing title

project no. 13-0049  
revisions:

**E0.1**

sheet number

Recessed ceiling downlights with symmetrical light distribution · narrow beam

**Housing:** Constructed of die-cast and extruded aluminum. Housing is provided with mounting clamps that provide a vibration proof installation in ceilings up to 1 3/8" total thickness. Rough-in housing constructed of galvanized steel with through wiring box. Rough-in housing included.

**Enclosure:** Tempered clear glass, retained by a one piece, die-cast aluminum step baffle frame that is treaded into luminaire housing. Internal reflector made from pure, anodized aluminum. Fully gasketed for weather tight operation using a molded silicone rubber gasket.

**Electrical:** 6.5W LED luminaire, 9 total system watts, -30°C start temperature. Integral 120V through 277V electronic LED driver, 0-10V dimming. LED module(s) are available from factory for easy replacement. Standard LED color temperature is 3000K with an 85 CRI. Available in 4000K (85 CRI); add suffix K4 to order.

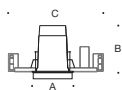
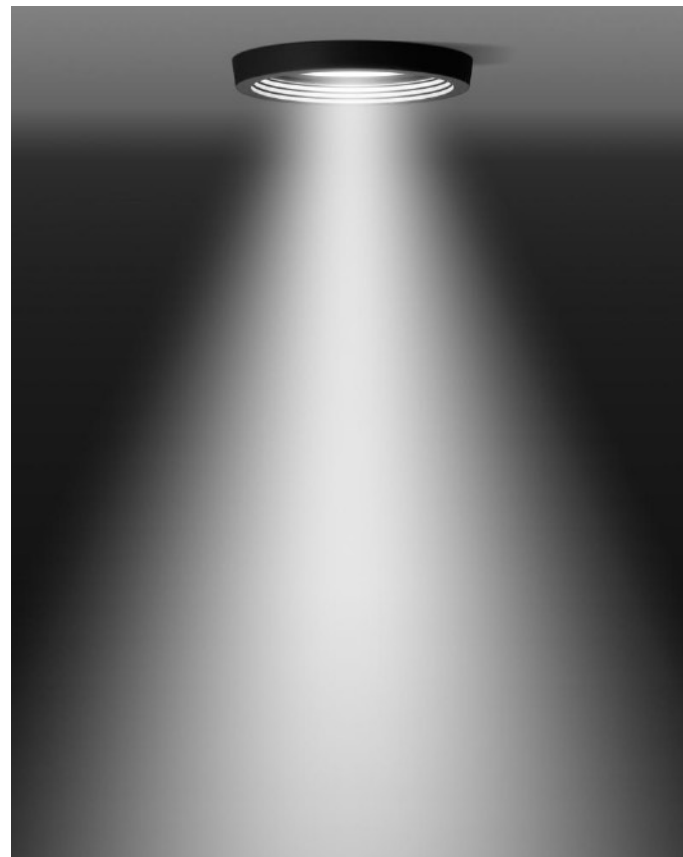
**Note:** LEDs supplied with luminaire. Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to [www.bega-us.com](http://www.bega-us.com).

**Finish:** #4 brushed stainless steel. Stainless steel requires regular cleaning and maintenance, much like appliances, to maintain its luster and to prevent tarnishing or the appearance of rust like stains.

**CSA** certified to U.S. and Canadian standards, suitable for wet locations. Protection class IP65

**Weight:** 1.6 lbs.

Type:  
 BEGA Product:  
 Project:  
 Voltage:  
 Color:  
 Options:  
 Modified:



Lamp	$\beta$	A	B	C
<b>6604 LED</b> 6.5W LED	26°	4 3/4	7 1/4	18

## Wall luminaires with directed light

**Housing:** One piece die-cast aluminum for direct attachment to wall over 3½" or 4" octagonal wiring box.

**Enclosure:** One piece die-cast aluminum guard, secured by two (2) captive socket head, stainless steel screws threaded into stainless steel inserts. Tempered etched glass with matte finish. Pure anodized aluminum reflector. Fully gasketed for weather tight operation using a molded silicone rubber O-ring gasket.

**Electrical:** 12W LED luminaire, 14.3 total system watts, -20°C start temperature. Integral 120V through 277V electronic LED driver, 0-10V dimming. The LED module and driver are mounted on a removable inner assembly for easy replacement. Standard LED color temperature is 3000K with an 85 CRI. Available in 4000K (85 CRI); add suffix K4 to order.

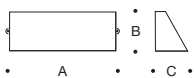
**Finish:** Available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

**UL listed,** suitable for wet locations.  
Protection class: IP64

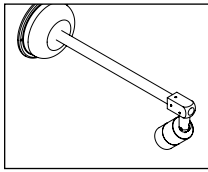
**Luminaire Lumens:** 465

Tested in accordance with LM-79-08.

Type:  
BEGA Product:  
Project:  
Voltage:  
Color:  
Options:  
Modified:



	Lamp	A	B	C
<b>2380 LED</b> <b>ADA</b>	12W LED	11 ¾	4 ⅝	3 ⅜



# SIGN STAR™ STYLE C with Power Canopy

<b>PROJECT:</b>	
<b>TYPE:</b>	
<b>CATALOG NUMBER:</b>	
<b>SOURCE:</b>	
<b>NOTES:</b>	

## CATALOG NUMBER LOGIC

Example: **SN - LED - e22 - SP - A9 - CAP - 12 - 11 - A - 24 - C - PC**

Series: **SN** - Sign Star™

Source: **LED** - 'e' Technology with Integral Driver

LED Type: **e36** - 8WLED/2.7K, **e22** - 8WLED/3K, **e23** - 8WLED/4K, **e24** - 8WLED/Red, **e25** - 8WLED/Green, **e26** - 8WLED/Blue, **e27** - 8WLED/Amber

Optics\*: **NSP** - Narrow Spot (Red Indicator), **SP** - Spot (Green Indicator), **MFL** - Medium Flood (Yellow Indicator), **WFL** - Wide Flood (Blue Indicator)

Adjust-e-Lume® Output Intensity\*\* (Choose factory setting): **A9** (Standard), **A8, A7, A6, A5, A4, A3, A2, A1**  
 \*\*Please see Adjust-e-Lume® photometry to determine desired intensity.

Finish: **Aluminum Finish** and **Premium Finish**

Powder Coat Color	Satin	Wrinkle	ABP	CMG	RMG
Bronze	<b>BZP</b>	<b>BZW</b>	Antique Brass Powder	Cascade Mountain Granite	Rocky Mountain Granite
Black	<b>BLP</b>	<b>BLW</b>	AMG Aleutian Mountain Granite	<b>CRI</b> Cracked Ice	<b>SDS</b> Sonoran Desert Sandstone
White (Gloss)	<b>WHP</b>	<b>WHW</b>	AQW Antique White	<b>CRM</b> Cream	<b>SMG</b> Sierra Mountain Granite
Aluminum	<b>SAP</b>	—	<b>BCM</b> Black Chrome	<b>HUG</b> Hunter Green	<b>TXF</b> Textured Forest
Verde	—	<b>VER</b>	<b>BGE</b> Beige	<b>MDS</b> Mojave Desert Sandstone	<b>WCP</b> Weathered Copper
			<b>BPP</b> Brown Patina Powder	<b>NBP</b> Natural Brass Powder	<b>WIR</b> Weathered Iron
			<b>CAP</b> Clear Anodized Powder	<b>OCP</b> Old Copper	<i>Also available in RAL Finishes See submittal SUB-1439-00</i>

Lens Type: **12** - Soft Focus Lens, **13** - Rectilinear Lens

Shielding: **11** - Honeycomb Baffle

Cap Style: **A** - 45°, **B** - 90°, **C** - Flush, **D** - 45° without Weep Hole, **E** - 90° without Weep Hole

Stem Length (Specify in inches): 18", 24", 30", or 36"

Style: **C** - Straight Mount

Transformer Style: **PC** - Power Canopy with TRe20 Electronic Transformer\*  
 \*105-300 VAC. 50/60 Hz. Non-Dimming

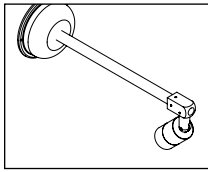
DRIVER DATA	Input Volts	InRush Current	Operation Ambient Temperature
	12VAC/DC 50/60Hz	<1A (non-dimmed)	-10°F-130°F

LM79 DATA				L70 DATA	
BK No.	CCT (Typ.)	Input Watts (Typ.)	CRI (Typ.)	Minimum Rated Life (hrs.) 70% of initial lumens (L70)	
e36	2700K	8.4	90	50,000	
e22	3100K	8.4	90	50,000	
e23	4100K	8.4	75	50,000	
e24	Red (627nm)	7.9	~	50,000	
e25	Green (530nm)	8.4	~	50,000	
e26	Blue (470nm)	8.4	~	50,000	
e27	Amber (590nm)	7.9	~	50,000	

*OPTICAL DATA		
Beam Type	Angle	Visual Indicator
Narrow Spot	14°	Red Dot
Spot	18°	Green Dot
Medium Flood	25°	Yellow Dot
Wide Flood	36°	Blue Dot

<b>B-K LIGHTING</b>	40429 Brickyard Drive • Madera, CA 93636 • USA 559.438.5800 • FAX 559.438.5900 www.bklighting.com • info@bklighting.com	SUBMITTAL DATE	DRAWING NUMBER
		8-21-13	SUB000973.1

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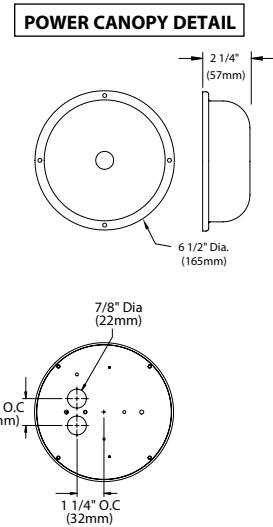
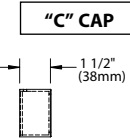
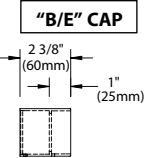
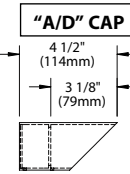
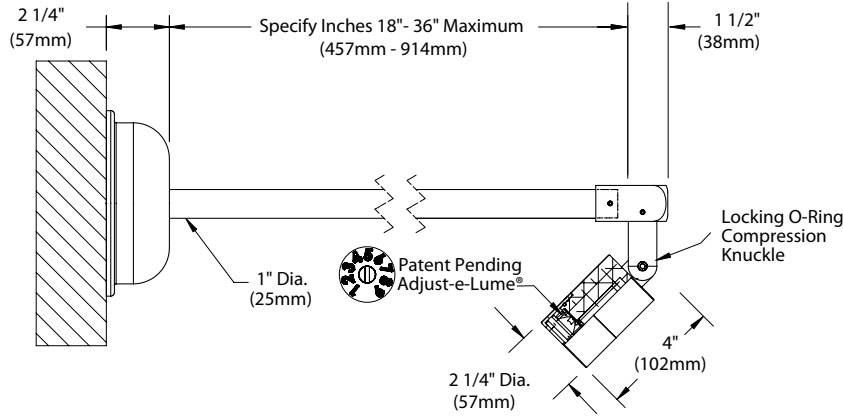
**BKSSL**  
SOLID STATE LIGHTING

the power of  
with **adjust-e-Lume®**  
TECHNOLOGY

# SIGN STAR™ STYLE C with Power Canopy

<b>PROJECT:</b>	
<b>TYPE:</b>	

## SIDE VIEW



All dimensions indicated on this submittal are nominal. Contact Technical Sales if you require more stringent specifications.

## SPECIFICATIONS

**GreenSource Initiative™**  
Metal and packaging components are made from recycled materials. Manufactured using renewable solar energy, produced onsite. Returnable to manufacturer at end of life to ensure cradle-to-cradle handling. Packaging contains no chlorofluorocarbons (CFC's). Use of this product may qualify for GreenSource efficacy and recycling rebate(s). Consult [www.bklighting.com/greensource](http://www.bklighting.com/greensource) for program requirements.

**Materials**  
Furnished in Copper-Free Aluminum (Type 6061-T6).

**Style**  
'C' Style provides straight profile with machined adapter for 90° transition from fixture to stem.

**Body**  
Fully machined from solid billet. Unibody design provides enclosed, water-proof wireway and integral heat sink for maximum component life. Integral knuckle for maximum mechanical strength. High temperature, silicone 'O' Ring provides water-tight seal.

**Knuckle**  
The LOCK™ (Locking 'O' Ring Compression Knuckle) is comprised of two components. The first is integral to the body and features an interior, machined taper. The second is machined from solid billet and features a second, reverse angle taper. The resultant mechanical taper-lock allows a full 180° vertical adjustment without the use of serrated teeth, which inherently limit aiming. High temperature, silicone 'O' Ring provides water-tight seal and compressive resistance to maintain fixture position. Design withstands 73 lb. static load prior to movement to ensure decades of optical alignment. Biaxial source control with 360° horizontal rotation in addition to vertical adjustment.

**Cap**  
Fully machined. Accommodates [1] lens or louver media. Choose from 45° cutoff ('A' or 'D'), 1" deep bezel with 90° cutoff ('B' or 'E'), or flush lens ('C') cap styles. 'A' and 'B' caps include weep-hole for water and debris drainage. 'D' and 'E' caps exclude weep-hole and are for interior use only.

**Stem**  
Fully machined, 1" dia. with internal threads for maximum visual appeal. Available in configurable lengths to 36" maximum overall.

**Lens**  
Shock resistant, tempered, glass lens is factory adhered to fixture cap and provides hermetically sealed optical compartment. Specify soft focus (#12) or rectilinear (#13) lens.

**BKSSL™**  
Integrated solid state system with 'e' technology is scalable for field upgrade. Modular design with electrical quick disconnects permit field maintenance. High power, forward throw source complies with ANSI C78.377 binning requirements. Exceeds ENERGY STAR® lumen maintenance requirements. LM-80 certified components.

Integral, constant current driver. 12VAC/VDC input. 50/60Hz. Proprietary input control scheme achieves power factor correction and eliminates inrush current. Output, over-voltage, open-circuit, and short circuit protected. Inrush current limited to <1A. Conforms to Safety Std. C22.2 No. 250.13-12.

**Optics**  
Interchangeable OPTIKIT™ modules permit field changes to optical distribution. Color-coded for easy reference: Narrow Spot (NSP) = Red. Spot (SP) = Green. Medium Flood (MFL) = Yellow. Wide Flood = Blue.

**Adjust-e-Lume®** (Pat. Pending)  
Integral electronics allows dynamic lumen response at the individual fixture. Indexed (100% to 25% nom.) lumen output. Maintains output at desired level or may be changed as conditions require. Specify factory preset output intensity.

**Installation**  
6-1/2" dia. Power Canopy™ features gasketed mounting plate for surface or junction box installation with two 1/2" KO's for wiring (hardware by others). Junction box installation must be designed to hold full fulcrum weight of fixture.

**Transformer**  
Integral, TRe20 electronic transformer. 105-300VAC primary voltage. 50/60Hz. Non Dimming. 20VA maximum load.

**Wiring**  
Teflon® coated, 18AWG, 600V, 250° C rated and certified to UL 1659 standard.

**Hardware**  
Tamper-resistant, stainless steel hardware. LOCK™ aiming screw and canopy mounting screws are additionally black oxide treated for additional corrosion resistance.

**Finish**  
StarGuard®, our exclusive RoHs compliant, 15 stage chromate-free process cleans and conversion coats aluminum components prior to application of Class 'A' TGIC polyester powder coating. Brass components are available in powder coat or handcrafted metal finish.

**Warranty**  
5 year limited warranty.

**Certification and Listing**  
ITL tested to IESNA LM-79. Lighting Facts Registration per USDOE ([www.lightingfacts.com](http://www.lightingfacts.com)). ETL Listed to ANSI/UL Standard 1838 and UL Subject 8750 and Certified to CAN/CSA Standard C22.2 No. 9. RoHs compliant. Suitable for indoor or outdoor use. Suitable for use in wet locations. IP 66 Rated. Made in USA.



\*Teflon is a registered trademark of DuPont Corporation.  
\*Energy Star is a registered trademark of the United States Environmental Protection Agency.

Select OptiKit™ for desired distribution

- RED**  **Narrow Spot (NSP)**
- GREEN**  **Spot (SP)**
- YELLOW**  **Medium Flood (MFL)**
- BLUE**  **Wide Flood (WFL)**

Set adjust-e-lume™ Dial to desired output



Distance from lamp	Narrow Spot	Adjust-e-Lume™ Setting								
		1	2	3	4	5	6	7	8	9
20'		2.4	2.9	4.9	6.1	7.3	8.8	9.1	9.3	9.3
16'		3.8	4.6	7.6	9.6	11.4	13.8	14.3	14.5	14.6
12'		6.7	8.2	13.5	17.0	20.3	24.5	25.4	25.7	25.9
8'		15.1	18.4	30.3	38.2	45.8	55.2	57.0	57.9	58.2
4'		60.3	73.6	121.3	152.8	183.1	220.9	228.2	231.6	232.8
	4' 2' 0' 2' 4'									

Note: If using No. 11 honeycomb baffle multiply footcandle values by .80

Distance from lamp	Spot	Adjust-e-Lume™ Setting								
		1	2	3	4	5	6	7	8	9
20'		1.6	2.1	3.1	4.1	4.9	6.0	6.1	6.2	6.3
16'		2.5	3.3	4.9	6.4	7.6	9.3	9.6	9.8	9.9
12'		4.5	5.9	8.7	11.4	13.5	16.6	17.0	17.3	17.5
8'		10.2	13.2	19.5	25.6	30.5	37.3	38.3	39.0	39.4
4'		40.6	52.7	78.1	102.3	121.9	149.1	153.1	156.0	157.8
	8' 6' 4' 2' 0' 2' 4' 6' 8'									

Note: If using No. 11 honeycomb baffle multiply footcandle values by .80

Distance from lamp	Medium Flood	Adjust-e-Lume™ Setting								
		1	2	3	4	5	6	7	8	9
20'		1.0	1.2	1.9	2.4	2.9	3.4	3.5	3.6	3.7
16'		1.5	1.8	2.9	3.8	4.6	5.3	5.4	5.7	5.8
12'		2.6	3.3	5.2	6.7	8.1	9.5	9.6	10.1	10.2
8'		6.0	7.4	11.8	15.0	18.3	21.3	21.6	22.8	23.0
4'		23.8	29.5	47.0	60.2	73.3	85.1	86.4	91.2	92.2
	10' 8' 6' 4' 2' 0' 2' 4' 6' 8' 10'									

Note: If using No. 11 honeycomb baffle multiply footcandle values by .80

Distance from lamp	Wide Flood	Adjust-e-Lume™ Setting								
		1	2	3	4	5	6	7	8	9
20'		0.4	0.5	0.9	1.1	1.3	1.6	1.7	1.7	1.7
16'		0.7	0.8	1.4	1.7	2.0	2.4	2.6	2.7	2.7
12'		1.2	1.5	2.5	3.0	3.5	4.3	4.7	4.7	4.7
8'		2.8	3.4	5.5	6.7	7.9	9.8	10.5	10.7	10.7
4'		11.1	13.4	22.2	26.8	31.7	39.0	41.9	42.6	42.7
	14' 12' 10' 8' 6' 4' 2' 0' 2' 4' 6' 8' 10' 12' 14'									

Note: If using No. 11 honeycomb baffle multiply footcandle values by .80

Sign Star™ - Narrow Spot

# lighting facts

A Program of the U.S. DOE

Light Output (Lumens)	365
Watts	8.2
Lumens per Watt (Efficacy)	44
Color Accuracy Color Rendering Index (CRI)	68

**Light Color**  
Correlated Color Temperature (CCT)

2700K Warm White | 3000K Bright White | 4500K Daylight | 6500K

4102 (Bright White)

All results are according to IESNA LM-79-2008; Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit [www.lightingfacts.com](http://www.lightingfacts.com) for the Label Reference Guide.

Registration Number: GCXV-PNVP1B  
Model Number: SN-LED-e23-NSP-12-C  
Type: Surface-mounted fixture (other)

Sign Star™ - W. Flood

# lighting facts

A Program of the U.S. DOE

Light Output (Lumens)	345
Watts	8.3
Lumens per Watt (Efficacy)	41
Color Accuracy Color Rendering Index (CRI)	67

**Light Color**  
Correlated Color Temperature (CCT)

2700K Warm White | 3000K Bright White | 4500K Daylight | 6500K

3981 (Bright White)

All results are according to IESNA LM-79-2008; Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit [www.lightingfacts.com](http://www.lightingfacts.com) for the Label Reference Guide.

Registration Number: GCXV-TWK83Q  
Model Number: SN-LED-e23-WFL-12-C  
Type: Surface-mounted fixture (other)

Sign Star™ - Spot

# lighting facts

A Program of the U.S. DOE

Light Output (Lumens)	354
Watts	8.1
Lumens per Watt (Efficacy)	43
Color Accuracy Color Rendering Index (CRI)	68

**Light Color**  
Correlated Color Temperature (CCT)

2700K Warm White | 3000K Bright White | 4500K Daylight | 6500K

4080 (Bright White)

All results are according to IESNA LM-79-2008; Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit [www.lightingfacts.com](http://www.lightingfacts.com) for the Label Reference Guide.

Registration Number: GCXV-KCSWRE  
Model Number: SN-LED-e23-SP-12-C  
Type: Surface-mounted fixture (other)

Sign Star™ - Med. Flood

# lighting facts

A Program of the U.S. DOE

Light Output (Lumens)	346
Watts	8.2
Lumens per Watt (Efficacy)	42
Color Accuracy Color Rendering Index (CRI)	68

**Light Color**  
Correlated Color Temperature (CCT)

2700K Warm White | 3000K Bright White | 4500K Daylight | 6500K

4047 (Bright White)

All results are according to IESNA LM-79-2008; Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit [www.lightingfacts.com](http://www.lightingfacts.com) for the Label Reference Guide.

Registration Number: GCXV-N7PELT  
Model Number: SN-LED-e23-MFL-12-C  
Type: Surface-mounted fixture (other)

Sign Star™ - Spot

# lighting facts

A Program of the U.S. DOE

Light Output (Lumens)	253
Watts	8.2
Lumens per Watt (Efficacy)	30
Color Accuracy Color Rendering Index (CRI)	83

**Light Color**  
Correlated Color Temperature (CCT)

2700K Warm White | 3000K Bright White | 4500K Daylight | 6500K

3182 (Bright White)

All results are according to IESNA LM-79-2008; Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit [www.lightingfacts.com](http://www.lightingfacts.com) for the Label Reference Guide.

Registration Number: GCXV-WRRNTE  
Model Number: SN-LED-e22-SP-12-C  
Type: Other

Sign Star™ - Med. Flood - Rectilinear

# lighting facts

A Program of the U.S. DOE

Light Output (Lumens)	299
Watts	8.5
Lumens per Watt (Efficacy)	35
Color Accuracy Color Rendering Index (CRI)	66

**Light Color**  
Correlated Color Temperature (CCT)

2700K Warm White | 3000K Bright White | 4500K Daylight | 6500K

4022 (Bright White)

All results are according to IESNA LM-79-2008; Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

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Registration Number: GCXV-YMSK1B  
Model Number: SN-LED-e23-MFL-13-C  
Type: Surface-mounted fixture (other)