



U.S. Department
of Transportation
**Federal Highway
Administration**

Georgia Division

June 3, 2013

61 Forsyth Street S.W.
Suite 17T100
Atlanta, Georgia 30303
Phone 404-562-3630
Fax 404-562-2703
Georgia.fhwa@fhwa.dot.gov

In Reply Refer To:
HPE-GA

Keith Golden, P.E., Commissioner
Georgia Department of Transportation
One Georgia Center
600 West Peachtree Street, NW
Atlanta, GA 30308

Dear Commissioner Golden:

We have reviewed the request to use proprietary items on project CSSTP-0006-00(728), PI 0006728, Roswell Road Streetscape from Johnson Ferry to Abernathy in the City of Sandy Springs, Fulton County.

FHWA accepts the Certification provided by the City of Sandy Springs that the following items are necessary for aesthetic synchronization:

- Three (3) Intersection Pedestrian Light Fixtures and Poles (Shepherd's Hook, 15 foot) by Phillips Lumec,
- Forty five (45) Midblock Pedestrian Light Fixtures and Poles (Post Top) by Phillips Lumec,
- Three (3) Contoured Benches with Intermediate Armrest by Landscape Forms, Inc.,
- Two (2) Trash Receptacles by Landscape Forms, Inc., and
- One (1) Planter by Dura Art Stone

Therefore, FHWA finds that it is acceptable to use the above listed items for the purpose of aesthetic synchronization with existing highway facilities. This approval is only applicable to be used on Federal Project Number CSSTP-0006-00(728), PI 0006728, in Fulton County. The total estimate for these proprietary items should be corrected to \$170,900 (13.5% of the total project cost) rather than \$159,000.

If you have any questions, please contact Carlos F. Figueroa, Transportation Engineer, P.E. at (404) 562-4280.

Sincerely,

A handwritten signature in cursive script, appearing to read "Melinda M. Barry".

 Rodney N. Barry, P.E.
Division Administrator

Cc: Brent Story, P.E. State Design Policy Engineer
Genetha Rice-Singleton, State Program Delivery Engineer, Office of Program Delivery
Charner Rodgers-Register, GDOT Project Manager, Office or Program Delivery
Dave Peters, GDOT Conceptual Design Group Manager, Office of Design Policy & Support



April 12, 2013

Mr. Rodney Barry – Division Administration
Federal Highway Administration
61 Forsyth Street, Suite 17T100
Atlanta, GA 30277
Attention: Melinda Roberson

Subject: Proprietary Items Usage
PI # 0006728; Project CSSTP-0006-00(728)
Roswell Road Streetscape Project from Johnson Ferry to Abernathy
City of Sandy Springs, Fulton County

Mr. Barry:

Attached for your review and approval is a request package for the use of the following proprietary products: Light fixtures and poles, contoured benches, trash receptacles, and planters. The request is based on the Public Information Finding category. The City of Sandy Springs intends to use a single type of lighting and streetscape fixtures within its downtown area, and has adopted Overlay District Guidelines to ensure continuity and cost savings in terms of parts stocking, maintenance, and repair of the same types of fixtures.

The Public Interest Finding approval would only be valid for the above referenced project. The Department considers the use of the proposed proprietary items to be in compliance with 23 CFR 635.411.

Should you have any questions or concerns, please contact Dave Peters at 404-631-1738 or Charner Rodgers-Register at 404-631-1131.

Sincerely,

A handwritten signature in blue ink, appearing to read "B. Story", with a long horizontal flourish extending to the right.

Brent Story, P.E.
State Design Policy Engineer

BAS:JSS:DRP

cc: Marty Martin, City of Sandy Springs
Russell McMurry, Chief Engineer
Joe Carpenter, Director of Engineering
Genetha Rice-Singleton, Office of Program Delivery
Attn: Charner Rodgers-Register



April 10, 2013

Ms. Charner Rodgers-Register, Ph.D.
Project Manager
Georgia Department of Transportation
Office of Program Delivery (25th Floor)
600 West Peachtree Street, NW
Atlanta, GA 30308

Subject: Use of Proprietary Items for:
GDOT PI:0006728, Project number CSSTP 0006-00(728)
Roswell Road Streetscape Project, Johnson Ferry to Abernathy, City of Sandy Springs,
Fulton County

Dear Dr. Rodgers-Register,

As per Federal Highway Administration regulation in 23 CFR 635.411 provides the regulatory authority for FHWA's participation in the cost of a patented or proprietary product. For the Roswell Road Streetscape Project, Johnson Ferry to Abernathy, PI#0006728, I request to use the items documented in this letter based on Federal Guidance in the category of Public Interest Finding (PIF).

For the Roswell Road Streetscape Project, Johnson Ferry to Abernathy, PI#0006728, CSSTP-0006-00(728), the following proprietary items are proposed for use:

Intersection Pedestrian Light Fixture and Pole (Shepherd's Hook, 15 foot)

Manufacturer: Phillips Lumec Post: Hapco Drawing Reference #SKTB013008A
Cross Arm: N/A LUMEC Catalog # RA61U-15-GN8TX
Luminaire: #DMS50-70W64LED4K-ES-LE3S-120-GN8TX
Accessories: Lumec Bracket # LM-1A-GN8TX-LMS1565A
Quantity in Project: 3
Total Estimated Cost for Light Poles and Luminaires: \$10,500

Midblock Pedestrian Light Fixture and Pole – Post Top

Manufacturer: Phillips Lumec Post: Hapco Drawing Reference #SKTB051408B
Cross Arm: N/A LUMEC Catalog # APR4U-13-LBC1-GN8TX
Luminaire: #DMS60-65W69LED4K-ACDR-LE3A-120-GN8TX
Accessories: N/A
Quantity in Project: 45
Total Estimated Cost for Light Poles and Luminaires: \$148,500

Contoured Bench with Intermediate Armrest

Manufacturer: Landscape Forms, Inc.. Model: SC30005-BS-96 w/ Center Arm
Quantity in Project: 3 Finish: N/A
Total Estimated Cost for Benches: \$6600 Color: Ral 6012 Custom Color



Trash Receptacle

Manufacturer: Landscape Forms, Inc.

Quantity in Project: 2

Total Estimated Cost for Receptacles: \$2800

Model: SC30005 36 Gallon

Finish: N/A

Color: Ral 6012 Custom Color

Planters

Manufacturer: Dura Art Stone

Quantity in Project: 1

Total Estimated Cost for (item): \$2500

Model: S-4-D-17-S18-LSB-(3)@1" centered saucers, rd
Reinforced cast stone planters with matching saucers

Finish: Integral non-fading color

Color: Stone Gray

The estimated costs for materials listed above are based on recent construction bids on similar projects. These costs include materials, labor, tax, and freight.

The estimated total construction cost for the project is \$1.30 million. The cost of \$159,000 for proprietary items represents 12.23% of the estimated construction costs.

I, William H. Martin, Jr., C.I.P. Unit Manager, of the City of Sandy Springs do hereby certify that in accordance with the requirements of 23 CFR 635.411(a)(2), that these patented or proprietary items are essential for synchronization with existing highway facilities. The use of these products is also essential for aesthetic synchronization to match the visual appearance of existing facilities previously installed in the City of Sandy Springs, GA and for compatibility with the City of Sandy Springs Zoning Ordinance, Article XII, Overlay District Guidelines.

The City of Sandy Springs respectfully requests that the use of these proprietary products be approved.

Sincerely,

William H. Martin, Jr.

C.I.P. Unit Manager

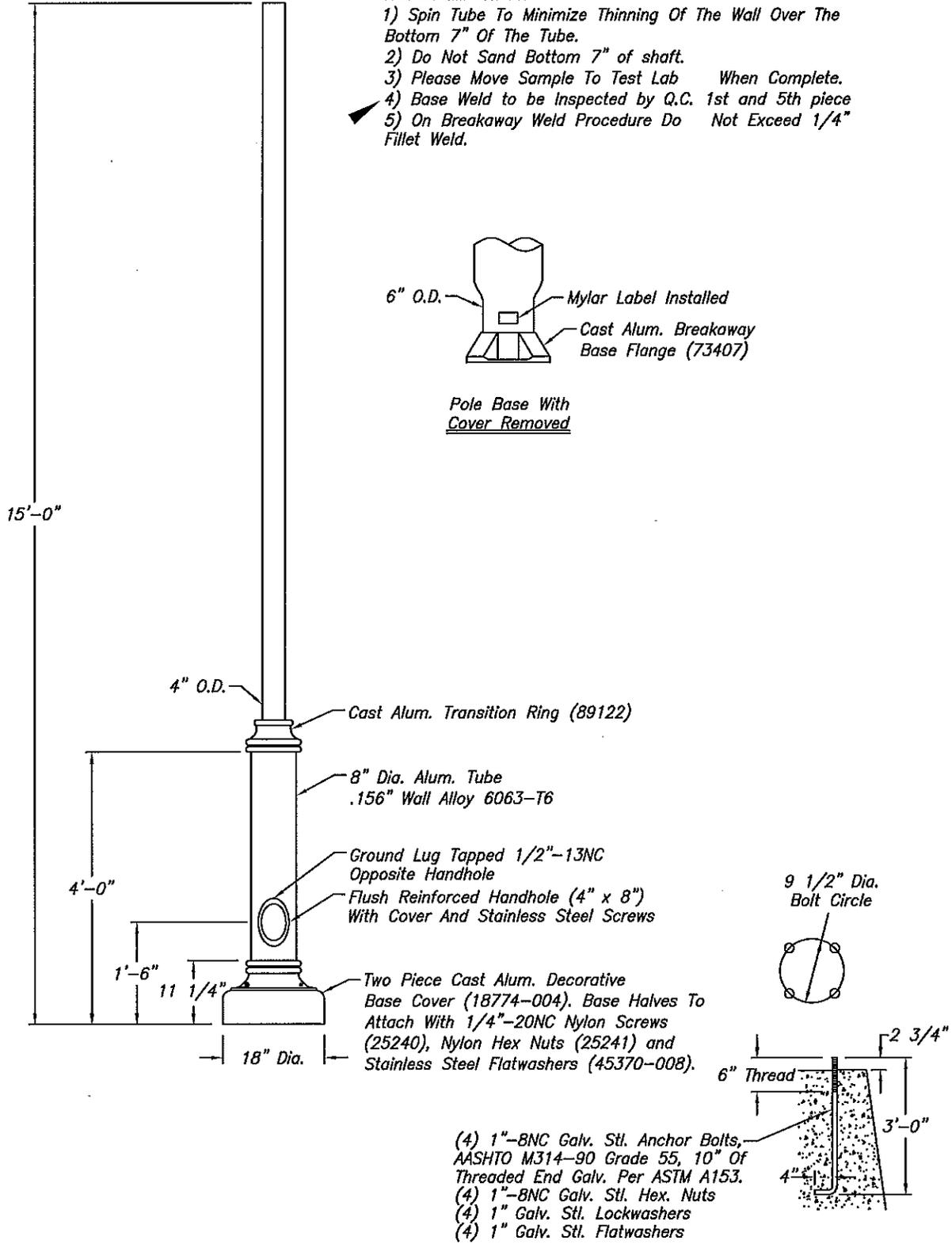
City of Sandy Springs

Attachments:

- A. Manufacturer details for lighting and posts.
- B. Overlay District Guidelines for planter, bench and litter receptacle.

NOTES: IMPORTANT

- 1) Spin Tube To Minimize Thinning Of The Wall Over The Bottom 7" Of The Tube.
- 2) Do Not Sand Bottom 7" of shaft.
- 3) Please Move Sample To Test Lab When Complete.
- 4) Base Weld to be Inspected by Q.C. 1st and 5th piece
- 5) On Breakaway Weld Procedure Do Not Exceed 1/4" Fillet Weld.



B16859

Ref: SKTB013008A

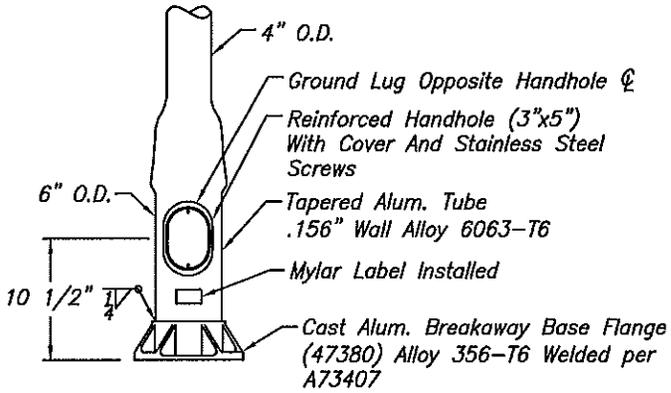
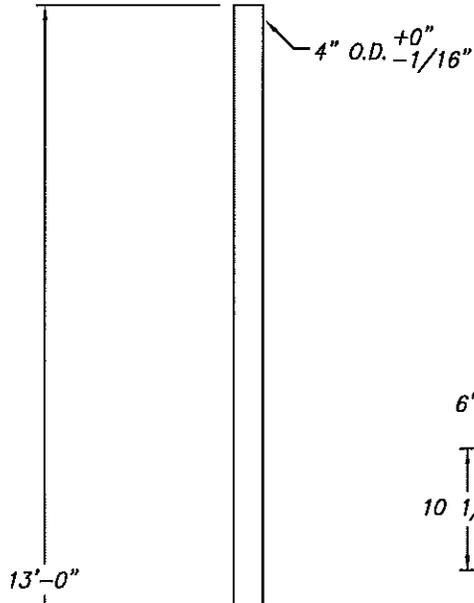
WARNING: DO NOT INSTALL LIGHTING POLES WITHOUT LUMINAIRES

NO.	REVISIONS	DATE
1	Was 8" Dia. At Base (TNB)	5/09
2	Was .188" Wall & Added Note (TNB)	9/09
3	Notes Block from Sample 482 added (GDM)	2/10
4	Was 88849-004 Cover & 3/8" Tap Gnd (PRS)	10/10
5	Base Hardware Was SS (TNB)	1/11

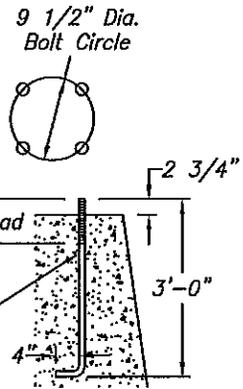
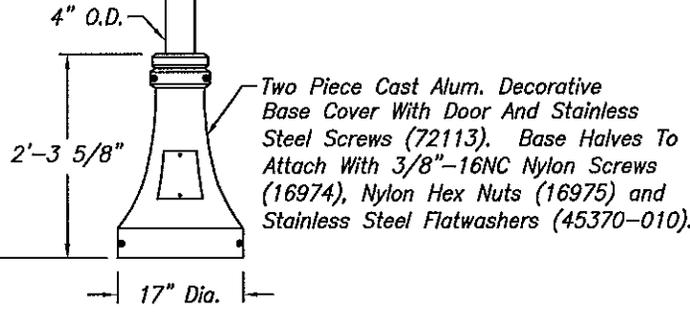
hapco
Abingdon, Va.

TITLE 15' DECORATIVE LIGHTING POLE	
CUSTOMER Roswell Road	
SCALE 16	DATE 05/20/2009
BY TNB	DWG. NO.
CHK'D	B16859

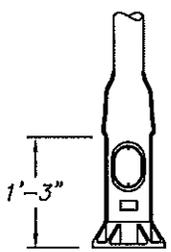
Note:
Dimensional Location Of Spun Section
Of Shaft Is Critical In Order For Pole
To Meet Breakaway Requirement.



Pole With Base
Cover Removed



- (4) 1"-8NC Galv. Stl. Anchor Bolts, AASHTO M314-90 Grade 55, 10" Of Threaded End Galv. Per ASTM A153.
- (4) 1"-8NC Galv. Stl. Hex. Nuts
- (4) 1" Galv. Stl. Lockwashers
- (4) 1" Galv. Stl. Flatwashers



This view is drawn to scale!!

B16858

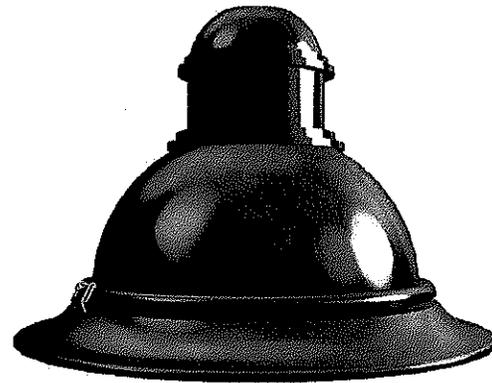
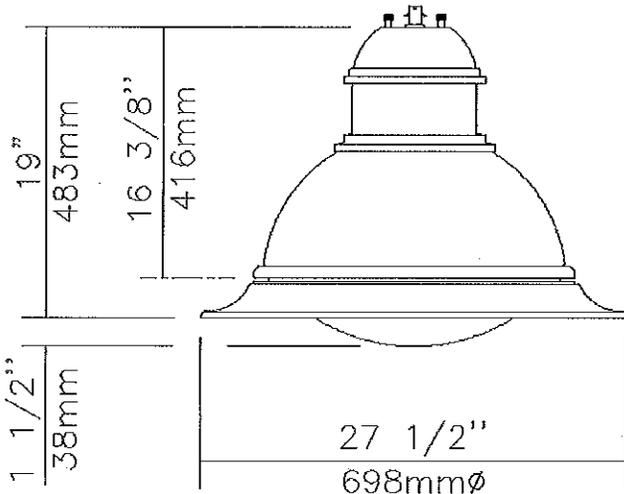
Ref: SKTB051408B

WARNING: DO NOT INSTALL LIGHTING POLES WITHOUT LUMINAIRES

NO.	REVISIONS	DATE
1	added Top diameter tolerance GM	5/09
2	Removed Tolerance & Added Tenon (TNB)	5/09
3	Removed Tenon & added Tolerance GM	5/09

hapco
Abingdon, Va.

TITLE 13' DECORATIVE LIGHTING POLE	
CUSTOMER Roswell Road	
SCALE 16	DATE 05/20/2009
BY TNB	DWG. NO.
CHK'D	B16858



EPA: 1.42 sq ft / weight: 42 lb (19.09 kg)
Note: 3D image may not represent color or option selected.
Logos above include link, click to access.



Qty 1 Luminaire DMS50-70W64LED4K-ES-LE3S-120-GN8TX

Description of Components:

Hood: A die cast A360.1 aluminum dome complete with a cast-in technical ring with latch and hinge. The mechanism shall offer toolfree access to the inside of the luminaire. An embedded memory-retentive gasket shall ensure weatherproofing.

Housing: In a round shape, this housing is made of cast 356 aluminum, c/w a watertight grommet, mechanically assembled to the bracket with four bolts 3/8-16 UNC. This suspension system permits for a full rotation of the luminaire in 90 degree increments.

Light Engine: LEDgine composed of 4 main components: LED lamp / Optical System / Heat Sink / Driver
Electrical components are RoHS compliant.

Lens: Made of soda-lime clear tempered glass curved lens, mechanically assembled and sealed onto the lower part of the heat sink.

Lamp: (Included), Lamp type ES, 120 lumens/watt. Composed of 64 high-performance white LEDs, 70w lamp wattage. Color temperature of 4000 Kelvin nominal, 70 CRI. Operating lifespan based on LM80 results after which 50% still emits over 70% (L70) of its original lumen output. Use of a metal core board insures greater heat transfer and longer lifespan of the light engine. The LED circuit board is included with a connector, (no connection wire required for ease of replacement).

Optical System: (LE3S), I.E.S type III (asymmetrical). Composed of high-performance acrylic refractors lenses to achieve desired distribution optimized to get maximum spacing, target lumen's and a perfect lighting uniformity. System is rated IP66. Performance shall be tested per LM63 and LM79 and TM15 (IESNA) certifying its photometric performance.

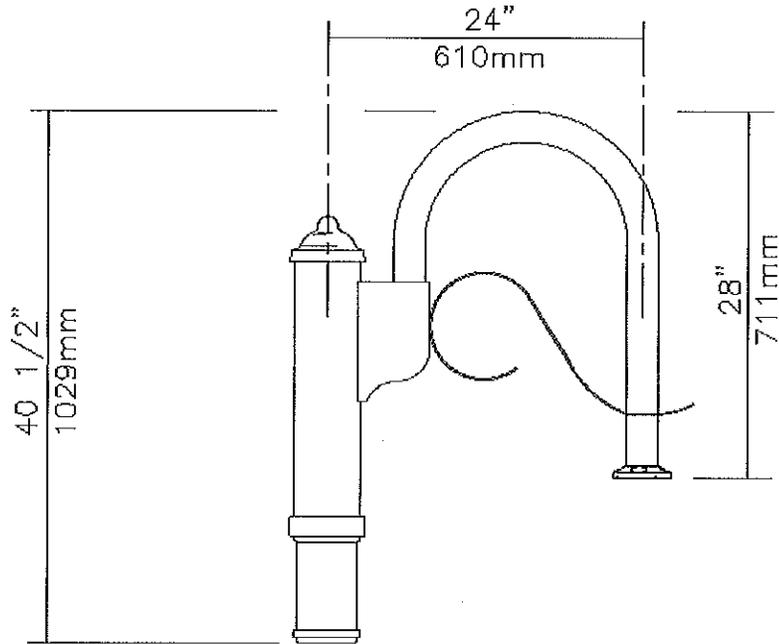
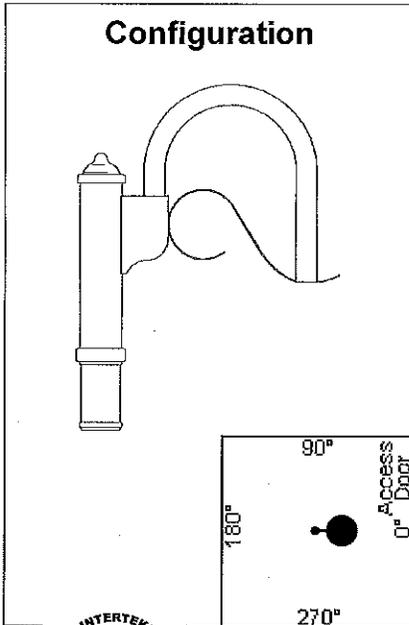
Heat Sink: Heat Sink: Made of die cast A360 aluminum optimising the LEDs efficiency and life, complete with a cast in skirt

and technical ring. Product does not use any cooling device with moving parts (only passive cooling device)

Driver: High power factor of 95%. Electronic driver, operating range 50-60 Hz. **Auto-adjusting to a voltage between 120 and 277 volt AC rated for both application line to line or line to neutral, Class I**, THD of 20% max. Maximum ambient operating temperature from -40F(-40C) to 130F(55C) degrees. Certified in compliance to cULus requirement. Weather tightness rating IP66. Assembled on a unitized removable tray with Tyco quick disconnect plug resisting to 221F(105C) degrees.

The current supplying the LEDs will be reduced by the driver if the internal temperature exceeds 176F(80C), as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction.

Surge Protector: LED Driver 3 poles 10KV surge Protectors that protect Line-Ground, Line-Neutral, and Neutral-Ground in accordance with IEEE / ANSI C62.41.2 guidelines.



Qty 1 Bracket LM-1A-GN8TX

Description of Components:

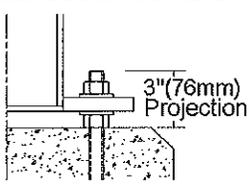
Arm: Shall be made from bent 6061-T6 aluminum tubing, 2 3/8" (60mm) outside diameter, welded.

Decorative Element: Scroll made of bent aluminium, welded to the arm.

Central Adaptor: Made of aluminum 6061-T6, 5" (127mm) outside diameter. Complete with a cast 356 aluminum fitter that slip-fits 9" (229mm) over a 4" (102mm) outside diameter pole tenon. Mechanically assembled using two sets of four set screws at 90 degrees around the bracket.

Sandy Springs, GA (Lighting Standards)

Base & Bolts Information



3" (76mm) Projection

Comes with 4 steel anchor bolts, 3/4" X 17" + 3", 8 nuts and 8 washers. Important: Do not obstruct space between anchor plate and concrete base.

Anchor Plate

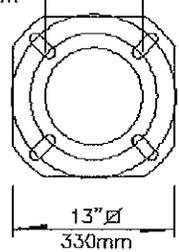
Free opening

8 1/8" ϕ 206mm

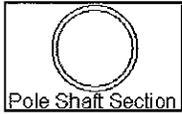
-B.C.: 12 1/2" (318mm)

- Material: Cast Aluminum

- NOTE: Bolt Circle Allowed: 11" to 13" 279mm to 330mm



13" ϕ 330mm



Qty	1	Pole	RA61U-15-GN8TX
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Description of Components:

Pole Shaft: Shall be made from a 4" (102mm) round extruded 6061-T6 aluminum tubing, having a 0.226" (5.7mm) wall thickness, welded to the pole base.

Joint Cover: Two-piece round joint cover made from cast 356 aluminum, mechanically fastened with stainless steel screws.

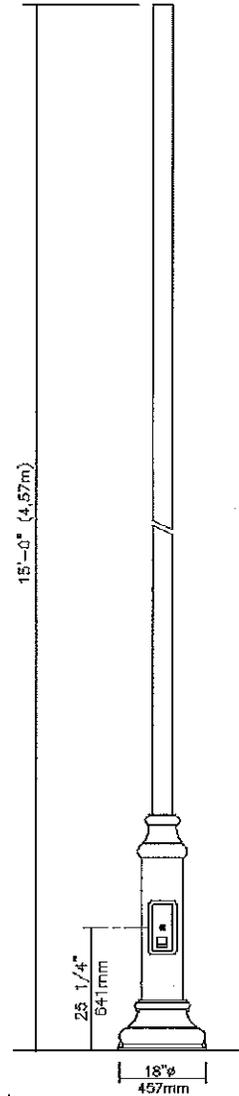
Pole Base: Shall be made from a 8 5/8" (219mm) round extruded 6061-T6 aluminum tubing base having a 0.148" (4.8mm) wall thickness, welded to both the bottom and top of the anchor plate.

Maintenance Opening: The pole shall have a 4 1/2" x 10" (114mm x 254mm) maintenance opening centered 25 1/4" (641mm) from the bottom of the anchor plate, complete with a weatherproof embossed aluminum cover and a copper ground lug.

Base Cover: Two piece round base cover made from cast 356 aluminum, mechanically fastened with stainless steel screws.

Note: A tenon will be provided when the luminaire or bracket does not fit directly on pole shaft. Tenon not shown on the drawing.

IMPORTANT: Philips Lumec strongly recommends the installation of the complete lighting assembly with all of its accessories upon the anchoring of the pole. This will ensure that the structural integrity of the product is maintained throughout its lifetime.



Miscellaneous

Description of Components:

Wiring: Gauge (#14) TEW/AWM 1015 or 1230 wires, 6" (152mm) minimum exceeding top of the bracket.

Hardware: All exposed screws shall be stainless steel with Ceramic primer-seal basecoat to reduce seizing of the parts. All seals and sealing devices are made and/or lined with EPDM and/or silicone.

Finish: Color to be **dark forest green textured (GN8TX)**. Application of a polyester powder coat paint. (4 mils/100 microns). The chemical composition provides a highly durable UV and salt spray resistant finish in accordance to the ASTM-B117-73 standard and humidity proof in accordance to the ASTM-D2247-68 standard.

Quality Control: The manufacturer must provide a written confirmation of its ISO 9001-2008 and ISO 14001-2004 International Quality Standards Certification.

Mechanical resistance: In order to ensure the mechanical resistance of the poles, the projected area should be calculated according to AASHTO 2001.

Web site information details: Click on any specific information details you need:

[Paint finish](#) / [Warranties](#) / [Installation pictures](#) / [ISO 9001-2008 Certification](#) / [ISO 14001-2004 Certification](#)

Lamp Technical Information (LEDgine)									
Lamps #	Rated life hrs. ¹	LED Manufacturer	CRI	Color Temperature ²	Initial Lumens	Wattage		Max System AC current: 120v	LED mA
						Lamp	System ³		
35W32LED4KES	100,000	Philips Lumileds Rebel ES	70	4000K	3872	35W	40	0.36A	350mA
42W32LED4KES	100,000		70	4000K	4576	42W	45	0.42A	400mA
55W32LED4KES	100,000		70	4000K	5632	55W	60	0.54A	530mA
55W48LED4KES	100,000		70	4000K	5808	55W	60	0.54A	350mA
65W48LED4KES	100,000		70	4000K	6864	65W	72	0.63A	400mA
80W48LED4KES	100,000		70	4000K	8448	80W	88	0.82A	530mA
70W64LED4KES	100,000		70	4000K	7744	70W	77	0.72A	350mA
85W64LED4KES	100,000		70	4000K	9152	80W	94	0.84A	400mA
110W64LED4KES	100,000		70	4000K	11264	110W	120	1.09A	530mA
90W80LED4KES	100,000		70	4000K	9680	90W	100	0.90A	350mA
105W80LED4KES	100,000		70	4000K	11440	110W	115	1.05A	400mA
135W80LED4KES	100,000		70	4000K	14080	135W	150	1.36A	530mA

¹ Rated life represents the time it takes for the LED system to reach 70% of initial lumen output (as described in LM-79)
² On average.
³ System wattage includes the lamp and the LED driver.

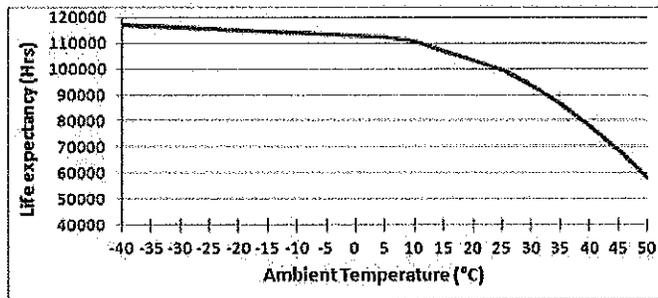
Ambient (°C)	-55	-35	-15	5	25	45	65
% Flux	104.8	104.5	103.5	101.8	98	91.5	83

Photometric tests are done at 25°C ambient (as requested by LM-79)
 If our product is used at a different ambient temperature, you can multiply the lumens by the percentage above

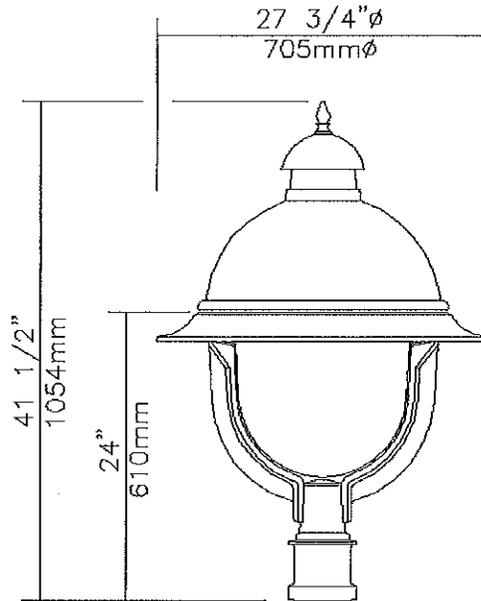
CCT (K)	6000	4000	3000
% Flux	100.00	100.00	68.18

As 4000K is our standard, photometric tests are only done with this CCT
 Light output of 6000K is the same as 4000K (With Lumileds Rebel)
 If you want to use another CCT (6000K or 3000K) you can multiply the lumens by the percentage above

Life expectancy vs ambient temperature (at 530 mA)



Note : Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Philips.



Qty 1 Luminaire DMS60-65W49LED4K-ACDR-LE3A-120-GN8TX

Description of Components:

Finial: Decorative cast 356 aluminum, mechanically assembled.

Cupola: Decorative spun aluminum 1100-0, mechanically mounted on hood.

Hood: Spun aluminum 1100-0 dome, mechanically assembled on the luminaire.

Guard: With 2 cast aluminum 356 arms, this guard is welded to the fitter and to the access-mechanism.

Access-Mechanism: A die cast A360 aluminum technical ring with latch and hinge. The mechanism shall offer toolfree access to the inside of the luminaire. An embedded memory-retentive gasket shall ensure weatherproofing.

Light Engine: LifeLED™ composed of 5 main components: **Globe / LED lamp / Optical System / Heat Sink / Driver**
Electrical components are RoHS compliant.

Globe: (ACDR), Made of one-piece seamless injected-molded impact-resistant (DR) acrylic having an inner prismatic surface. The globe is mechanically assembled and sealed onto the lower part of the heat sink.

Lamp: (Included), Composed of 49 high-performance white LEDs, 65w lamp wattage. Color temperature of 4000 Kelvin nominal, 70 CRI. Operating lifespan after which the system emits 70% of its original lumen output, all of those parameters are tested for 100% of light engines. Use of a metal core board insures greater heat transfer and longer lifespan of the light engine.

Optical System: (LE3A), I.E.S type III (asymmetrical). Composed of high-performance acrylic collimators, optimized with varying beam angles to achieve desired distribution. System is rated IP66. Performance shall be tested per LM63 and LM79 (IESNA) certifying its photometric performance. Street-side indicated.

Heat Sink: Made of cast aluminum optimising the LEDs efficiency and life. Product does not use any cooling device with

Sandy Springs, GA (Lighting Standards)

moving parts (only passive cooling device)

Driver: High power factor of 90%. Electronic driver, operating range 50-60 Hz. **Auto-adjusting to a voltage between 120 and 277 volt AC rated for both application line to line or line to neutral, Class II**, THD of 20% max. Maximum ambient operating temperature from -40F(-40C) to 130F(55C) degrees. Certified in compliance to cULus requirement. Weather tightness rating IP66. Assembled on a unitized removable tray with Tyco quick disconnect plug resisting to 221F(105C) degrees.

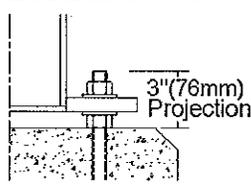
The current supplying the LEDs will be reduced by the driver if the internal temperature exceeds 185F(85C), as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction.

Surge Protector: LED Driver 3 poles 10KV surge Protectors that protect Line-Ground, Line-Neutral, and Neutral-Ground in accordance with IEEE / ANSI C62.41.2 guidelines.

Fitter: Cast 356 aluminum c/w 4 set screws 3/8-16 UNC. This fitter holds 2 arms made of cast aluminum 356 mechanically assembled. Slip-fits on a 4"(102mm) outside diameter x 4" (102mm) long tenon.

Sandy Springs, GA (Lighting Standards)

Base & Bolts Information



3" (76mm) Projection

Comes with 4 steel anchor bolts, 3/4" X 17" + 3", 8 nuts and 8 washers. Important: Do not obstruct space between anchor plate and concrete base.

Anchor Plate

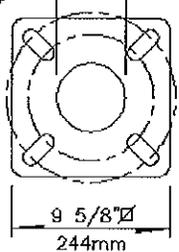
Free opening

3 5/16" ϕ
84mm ϕ

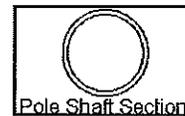
-B.C.:
8 1/2" (216mm)

- Material:
Cast Aluminum

- NOTE:
Bolt Circle Allowed:
6 3/4" to 10"
171mm to 254mm



9 5/8" ϕ
244mm



Qty	1	Pole	APR4U-13-LBC1-GN8TX
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Description of Components:

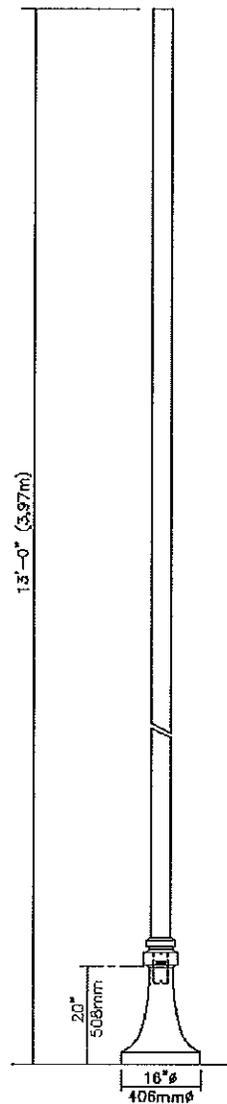
Pole Shaft: Shall be made from a 4" (102mm) round extruded 6061-T6 aluminum tubing, having a 0.226" (5.7mm) wall thickness, welded to both the bottom and top of the anchor plate.

Maintenance Opening: The pole shall have a 2" x 4 1/2" (51mm x 114mm) maintenance opening centered 20" (508mm) from the bottom of the anchor plate, complete with a weatherproof aluminum cover and a copper ground lug.

Base Cover: Two piece round base cover made from cast 356 aluminum, mechanically fastened with stainless steel screws.

Note: A tenon will be provided when the luminaire or bracket does not fit directly on pole shaft. Tenon not shown on the drawing.

IMPORTANT: Philips Lumec strongly recommends the installation of the complete lighting assembly with all of its accessories upon the anchoring of the pole. This will ensure that the structural integrity of the product is maintained throughout its lifetime.



Miscellaneous

Description of Components:

Wiring: Gauge (#14) TEW/AWM 1015 or 1230 wires, 6" (152mm) minimum exceeding from luminaire.

Hardware: All exposed screws shall be stainless steel with Ceramic primer-seal basecoat to reduce seizing of the parts. All seals and sealing devices are made and/or lined with EPDM and/or silicone.

Finish: Color to be **dark forest green textured (GN8TX)**. Application of a polyester powder coat paint. (4 mils/100 microns). The chemical composition provides a highly durable UV and salt spray resistant finish in accordance to the ASTM-B117-73 standard and humidity proof in accordance to the ASTM-D2247-68 standard.

Quality Control: The manufacturer must provide a written confirmation of its ISO 9001-2008 and ISO 14001-2004 International Quality Standards Certification.

Mechanical resistance: In order to ensure the mechanical resistance of the poles, the projected area should be calculated according to AASHTO 2001.

Web site information details: Click on any specific information details you need:

[Paint finish](#) / [Warranties](#) / [ISO 9001-2008 Certification](#) / [ISO 14001-2004 Certification](#)

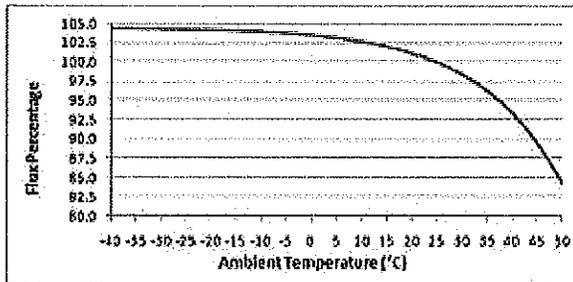
Lamp Technical Information									
Lamps U	Rated life hrs. ¹	LED Manufacturer	CRI	Color Temperature ²	Initial Lamp Lumens	Wattage		Max System AC current: 120v	LED mA
						Lamp	System ³		
40W30LED4K	73,000	Philips Lumileds Rebel	70	4000K	3450	40W	45W	0.48A	400mA
40W49LED4K	147,000		70	4000K	4620	42W	47W	0.48A	285mA
60W30LED4K	73,000		70	4000K	4230	60W	68W	0.72A	600mA
65W49LED4K	73,000		70	4000K	5890	65W	72W	0.72A	428mA
90W49LED4K	73,000		70	4000K	6850	90W	102W	0.93A	571mA
105W79LED4K	73,000	Philips Lumileds Rebel	70	4000K	9490	105W	119W	1.2A	428mA
130W98LED4K	73,000		70	4000K	11780	130W	147W	1.4A	428mA
150W79LED4K	73,000		70	4000K	11190	150W	170W	1.7A	600mA
180W98LED4K	73,000		70	4000K	13720	180W	204W	1.9A	571mA

¹ Rated life represents the time it takes for the LED system to reach 70% of initial lumen output.
² On average.
³ System wattage includes the lamp and the LED driver.

- How to calculate the lamp lumen per watt ratio: In the above table and according to your choice of lamp, please note the initial lamp lumen value and divide this value by the lamp wattage. (Example: 40W30LED4K: 3450/40=86.25)
 - How to calculate the system lumen per watt ratio (LER): First, visit our website at www.lumec.com and download the IES file (photometric file) of your selected Philips lumec product. Then, use a photometric software to get the absolute system lumens value and divide by the system wattage. (Example: 40W30LED4K: Absolute system lumens / 45W = LER)

Ambient (°C)	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
% Flux	104.4	104.2	104.3	104.2	104.1	103.9	103.7	103.5	103.3	102.6	101.9	101.2	100	99.4	98.3	97.6	96.4

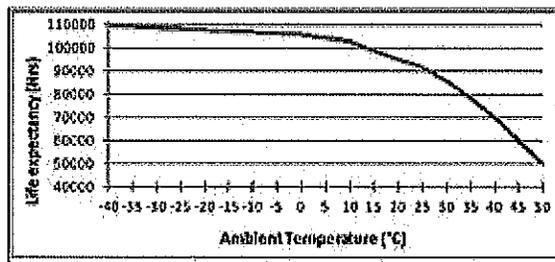
Photometric tests are done at 25°C ambient (as requested by IAT-79)
 If our product is used at a different ambient temperature, you can multiply the lumens by the percentage above



CCT (K)	6000	4000	3000
% Flux	100.00	100.00	68.18

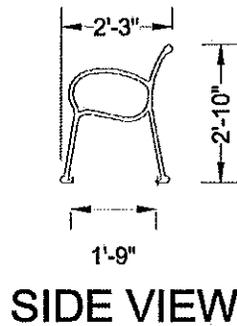
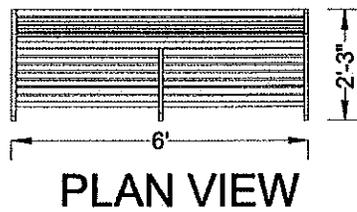
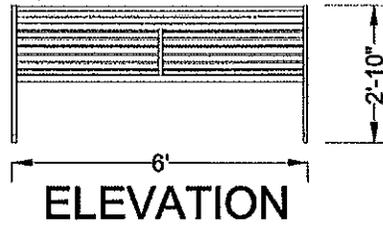
As 4000K is our standard, photometric tests are only done with this CCT
 (Light output of 6000K is the same as 4000K (With Lumileds' Rebel))
 If you want to use another CCT (6000K or 3000K) you can multiply the lumens by the percentage above

Life expectancy vs ambient temperature (at 571mA)



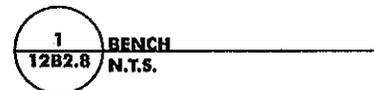
Note: Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Philips.

Street Furniture Details - Bench Elevation (Section 12B2.8)



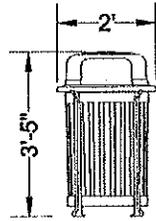
BENCH:

LANDSCAPE FORMS INC. (404)231-0185
 SC3005-BS-96 W/ CENTER ARM
 HORIZONTAL INSERT, SURFACE MOUNT, RAL 6012 CUSTOM COLOR

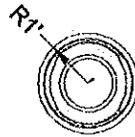


STREETSCAPE MANUAL / URBAN DESIGN STANDARDS

Street Furniture Details (Section 12B2.8)



SIDE VIEW



PLAN VIEW



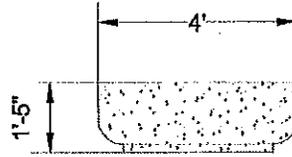
TRASH RECEPTACLE:

HORIZONTAL INSERT, SURFACE MOUNT, RAL 6012 CUSTOM COLOR

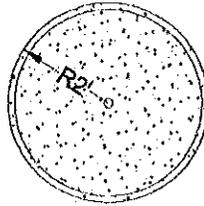
LANDSCAPE FORMS INC. (404)231-0185
SC3005-BS-96 W/ CENTER ARM
STRAP DETAIL, SURFACE MOUNT, RAL 6012 CUSTOM COLOR

STREETSCAPE MANUAL / URBAN DESIGN STANDARDS

Landscape Details (Section 12B2.7)



SIDE VIEW



PLAN VIEW



PLANTER DURA ART STONE INC. (800)821-1120
S-4-D-17-S18-LSB-(3)@1" CENTERED-SAUCERS
ROUND, REINFORCED CAST STONE PLANTERS WITH MATCHING SAUCERS
AND INTEGRAL NON-FADING COLOR

STREETScape MANUAL / URBAN DESIGN STANDARDS