NOTICE OF DECISION

PLANNING DIVISION
555 LIBERTY ST. SE, RM 305
SALEM, OREGON 97301
PHONE: 503-588-6173
FAX: 503-588-6005

CITY OF Salem AT YOUR SERVICE

Si necesita ayuda para comprender esta informacion, por favor llame 503-588-6173

DECISION OF THE PLANNING ADMINISTRATOR

HISTORIC DESIGN REVIEW CASE NO.: HIS18-09

APPLICATION NO. : 18-106689-DR

NOTICE OF DECISION DATE: MARCH 23, 2018

SUMMARY: A proposal to replace non-historic light fixtures on the Church Street Bridge (c.1929).

REQUEST: Minor Historic Design Review of a proposal to replace eight non-historic light fixtures on the Church Street Bridge (c.1929), a historic contributing resource within the Gaiety Hill/Bush's Pasture Park National Register Historic District.

APPLICANT: Erick Shrunk for City of Salem Public Works Department

LOCATION: 600 Church St SE - Bridge

CRITERIA: Salem Revised Code (SRC) Chapter 230.075. Streetscape Standards.

FINDINGS: The findings are in the attached Decision dated March 23, 2018.

DECISION: The **Historic Preservation Officer** (a Planning Administrator Designee) **APPROVED** Historic Design Review HIS18-09 based upon the application materials deemed complete on March 22, 2018 and the findings as presented in this report.

*This Decision becomes effective on **April 10, 2018.** No work associated with this Decision shall start prior to this date unless expressly authorized by a separate permit, land use decision, or provision of the Salem Revised Code (SRC).*

The rights granted by this decision must be exercised by **April 10, 2020** or this approval shall be null and void.

Application Deemed Complete: March 22, 2018
Notice of Decision Mailing Date: March 23 2018
Decision Effective Date: April 10, 2018
State Mandate Date: July 20, 2018

Case Manager: Kimberli Fitzgerald, kfitzgerald@cityofsalem.net; 503.540.2397

This decision is final unless written appeal from an aggrieved party is filed with the City of Salem Planning Division, Room 305, 555 Liberty Street SE, Salem, OR 97301, no later than **5:00 p.m., Monday, April 9, 2018.** The appeal must state where the decision failed to conform to the provisions of the historic preservation ordinance (SRC Chapter 230). The appeal must be filed in duplicate with the City of Salem Planning Division.

The appeal fee must be paid at the time of filing. If the appeal is untimely and/or lacks the proper fee, the appeal will be rejected. The Salem Historic Landmarks Commission will review the appeal at a public hearing. After the hearing, the Historic Landmarks Commission may amend, rescind, or affirm the action, or refer the matter to staff for additional information.

The complete case file, including findings, conclusions and conditions of approval, if any, is available for review at the Planning Division office, Room 305, City Hall, 555 Liberty Street SE, during regular business hours.

http://www.cityofsalem.net/planning

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BEFORE THE PLANNING ADMINISTRATOR OF THE CITY OF SALEM

HISTORIC DESIGN REVIEW CASE NO. HIS18-09
DECISION

IN THE MATTER OF APPROVAL OF	**)**	**MINOR HISTORIC DESIGN REVIEW**
HISTORIC DESIGN REVIEW	**)**	
CASE NO. HIS18-09	**)**	
CHURCH STREET BRIDGE	**)**	**MARCH 23, 2018**

In the matter of the application for a Minor Historic Design Review submitted by Eric Shrunk on behalf of the City of Salem Public Works Department, the Historic Preservation Officer (a Planning Administrator Designee), having received and reviewed evidence and the application materials, makes the following findings and adopts the following order as set forth herein.

REQUEST

SUMMARY: A proposal replace non-historic light fixtures on the Church Street Bridge (1929).

REQUEST: Minor Historic Design Review of a proposal to replace eight non-historic light fixtures on the Church Street Bridge (1929), a historic contributing resource within the Gaiety Hill/Bush's Pasture Park National Register Historic District.

A vicinity map illustrating the location of the property is attached hereto, and made a part of this decision **(Attachment A).**

DECISION

APPROVED based upon the application materials deemed complete on March 22, 2018 and the findings as presented in this report.

FINDINGS

1. Minor Historic Design Review Applicability

SRC230.020(f) requires Historic Design Review approval for any alterations to historic resources as those terms and procedures are defined in SRC 230.The Planning Administrator shall render a decision supported by findings that explain conformance or lack thereof with relevant design standards, state the facts relied upon in rendering the decision, and explain justification for the decision.

2. Analysis of Minor Historic Design Review Approval Criteria

The applicant is proposing to replace eight (8) non-historic street light fixtures on the Church Street Bridge (1929) because the existing fixtures have deteriorated beyond repair. The proposed new lights are intended to match the original historic fixtures to the greatest degree possible, as detailed in the original bridge design (**Attachment B**). The non-historic light fixtures will be replaced with the K124 Paragon Luminaire (K124-R-LAR) with an LED flat array (P4P4-V-100w). This is an acorn style light fixture with a black cast aluminum finial, a GE style decorative filigree ring and capital (**Attachment C**). Staff determined that the following standards from SRC 230.075 (Streetscape Standards) are applicable to this project.

FINDINGS:

230.075. Streetscape Standards. Streetscape improvements in historic districts shall comply with this section.

(a) Materials.

(1) ***Replacement materials should match as closely as possible to the original color, texture, size and finish of the original materials***.

Findings
The finial, ring and capital are all of cast aluminum. The proposed new light fixtures match the original light fixture which is detailed on the original bridge plans to the greatest degree possible, thereby meeting SRC 230.075(a)(1).

(2) ***Diseased street trees should be replaced in kind, if possible***.

Findings
The applicant is not proposing to replace any diseased trees, therefore this standard is not applicable to the evaluation of this proposal.

(b) Design.
(1) ***Historic street lamps shall be preserved, if feasible***.

Findings
The existing light fixtures at the top of the posts are not from the historic period, but replacement fixtures. The existing historic street lamp posts will be retained, thereby meeting 230.075(b)(1).

(2) ***Healthy, mature street trees shall be preserved if they are significant to the district***.

Findings
The applicant is not proposing to replace any trees, therefore this standard is not

applicable to the evaluation of this proposal.

(3) *Historic landscaped buffer zones, such as the grassy median between the sidewalk and curb shall be preserved*.

Findings
The applicant is not proposing to alter the historic landscaped buffer zone, therefore this standard is not applicable to the evaluation of this proposal.

(4) *Historic retaining walls should be preserved, if feasible*.

Findings
The applicant is not proposing to alter any historic retaining walls, therefore this standard is not applicable to the evaluation of this proposal.

(5) *Significant sidewalk and driveway features should be preserved when they contribute to the character of the district*.

Findings
The applicant is not proposing to alter any significant sidewalk or driveway features, therefore this standard is not applicable to the evaluation of this proposal.

(6) *Original driveway locations and curb cuts should be preserved when they contribute to the character of the district*.

Findings
The applicant is not proposing to alter any original driveway locations or curb cuts, therefore this standard is not applicable to the evaluation of this proposal.

(7) *Only those portions of character-defining streetscape that are deteriorated beyond repair shall be replaced*.

Findings
The existing light fixtures have deteriorated beyond repair and require replacement, thereby meeting SRC 230.075(b)(7).

(8) *New sidewalks should align with existing historic sidewalks on the block, if present*.

Findings
The applicant is not proposing to install any new sidewalks, therefore this standard is not applicable to the evaluation of this proposal.

(9) *When feasible, replacement or new sidewalks should exhibit scoring lines and brush patterns consistent with the historic material when those elements contribute to the historic character of the district.*

Findings

The applicant is not proposing to install any new sidewalks, therefore this standard is not applicable to the evaluation of this proposal.

DECISION

Based upon the application materials deemed complete on March 22, 2018 and the findings as presented in this report, the application for HIS18-09 is **APPROVED.**

Kimberli Fitzgerald, AICP
Historic Preservation Officer
Planning Administrator Designee

Attachments: A. Vicinity Map
B. National Register Excerpt and Historic Photo
C. Applicant's Submittal Materials

Application Deemed Complete: March 22, 2018
Notice of Decision Mailing Date: March 23 2018
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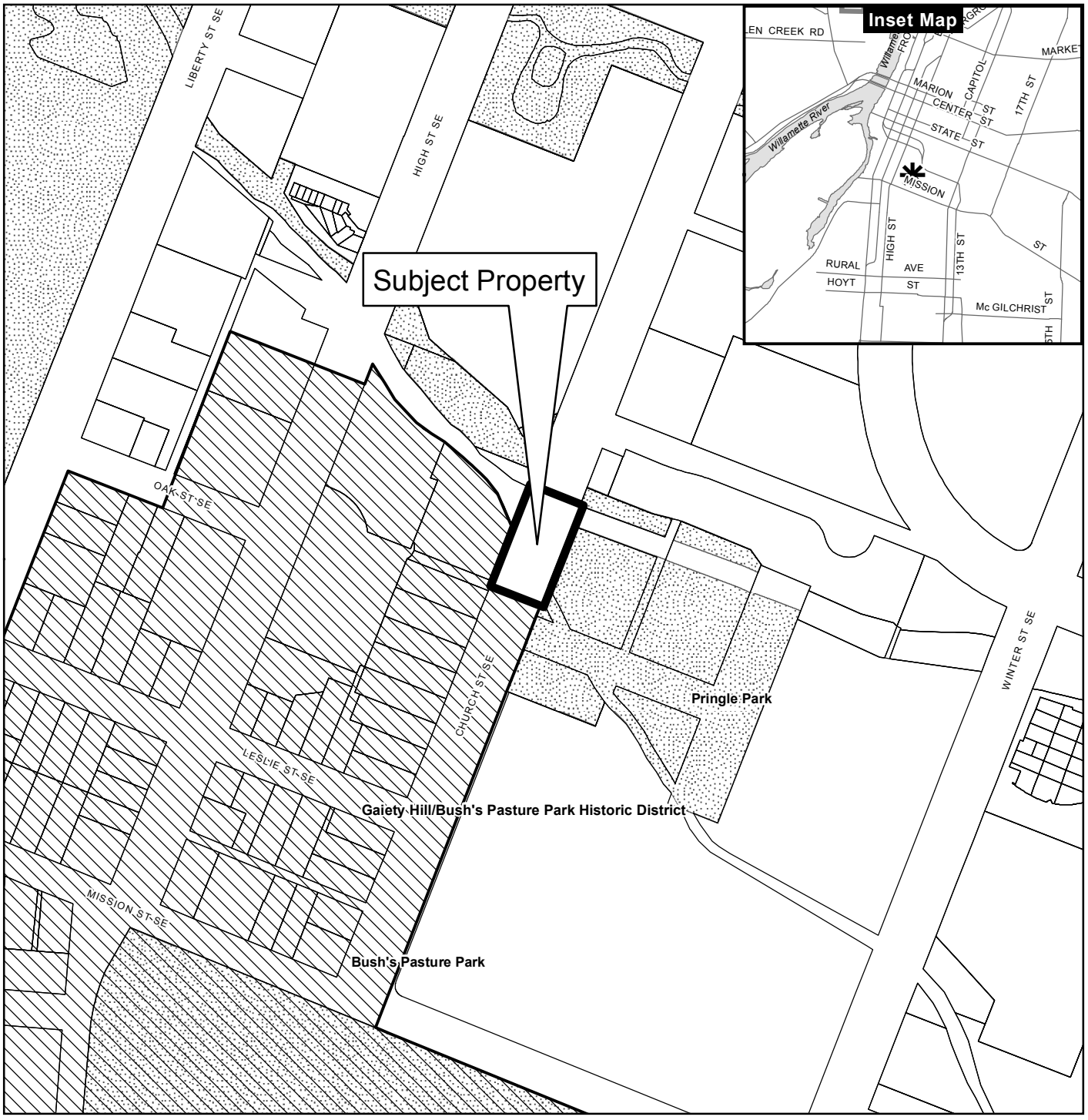
Vicinity Map
600 Church Street SE Bridge



Legend

- Taxlots
- Urban Growth Boundary
- City Limits
- Outside Salem City Limits
- Historic District
- Schools
- Parks

0 100 200 400 Feet

CITY OF Salem AT YOUR SERVICE
Community Development Dept.

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63. Public Street Bridge, Pringle Creek/Shelton Creek (Church StreetSE) SECONDARY Tax Lot 2-00836-502
Owner: City of Salem, 555 Liberty Street SE, Salem, OR 97301

Description: 1929; this ornate reinforced concrete deck girder bridge is over 500 feet long and spans both Pringle and Shelton creeks, east of their confluence. The girders of the bridge have low arches and are bush-hammered for textural variety. The low piers have fluted insets, and the arched-balustrade railing is supported by curved brackets. Eight lamp posts with operable lanterns are located at the ends and middle of the structure. There are two stairways on the bridge, the most elaborate one descending into Pringle Park. The series of low arches provide an unusual grace and rhythm to the structure, particularly when viewed from Pringle Park or the north bank pedestrian pathway.

The Church Street Bridge sets the tone and feeling for entrance into a fashionable Salem residential area. This structure is one of twelve or more bridges built by the City of Salem in 1928-29 and is the most architecturally embellished of the bridges from the period. R. A. Furrow was the city bridge engineer for Salem during the construction of this major public works project. The design of the bridge is attributed to the State Highway Department, which furnished design assistance to local governments. The attractiveness of the structure indicates it had the personal touch of Conde B. McCullough, Oregon's noted state bridge engineer, whose reputation in part is based on the large arched bridges he designed on the Oregon Coast Highway in the 1930's.

The bridge is included in Historic Highway Bridges of Oregon, (Oregon Department of Transportation, Salem, 1985), and was determined eligible for the National Register in May 1985.

3-⅝"ø dowels 6'-0" long thru posts

2'-10"

9½" 15½" 9½"

2-⅝"ø hoops in post cap.

11" 2'-6" 2'-0"

R-96'-11"

R-57'-6"

11 at 17" = 15'-7"

2-⅝"ø hoops in capitol

9½" 16⅜" 9½"

1" ½" 1"

All Scoring Thus
Full size

DETAIL OF TYPICAL HALF SPAN
SPANS A B C E F & G
Scale - 1½" / Ft

6" 5" 12" 17"

2" 4" 6"

R-5⅝" R-3⅝"

Details of Dentils
Scale 3½" / Ft

6" slab 3 5" slab 5 5" slab 4 6" slab

2'-6" 2'-7" 1'-4"

D D F F

5½" Span "D"

Make complete as shown on West side
Omit this portion on East side

HALF PLAN

General Electric Co's #125 lighting unit or equal See Special Provisions

Marbelite Co's #400-A Standard or equal

2'-7" 5'-2" 2'-7"

Standard handrail

ELEVATION

BALCONY
Scale ¼" / Ft

Obtain detail of precast baluster from Engineer.

Form pockets in curb to accomodate two precasts. Pour these pockets with 1:2 grout and build up ¾ rib after setting precasts.

10½" 8" 5" 6" 6" 6" 6" 5½" 6" 2'-0½"

3-½"ø bars #12 wire mesh at 2" ctrs.

1½" 1½" 1" 5" 1" 19" 3'-2" to 3'-6"

HANDRAIL CAP

C C

B B

Work above this line not included in concrete or metal reinf. pay quantities.

¾" V groove

SEC C-C

12½" 2'-4"

Set half precast before pouring posts.

6-½"ø verticals in post

3-⅜"ø horiz. in each side of posts.

SEC B-B

8" 5" 1½" 5" 6" 1½"

2-½"ø bars #4 wire hoops 6" ctrs.

1½" panel bushhammer

Detail of bracket furnished by Engineer on request.

1½" 5" 2½" 13½" 6"

1¼" 6" 6" 6" 2'-0" 6" 18"

21½" R.

3-½"ø bars #12 wire mesh 2" c to c each way

½"ø vert. 12" c to c.

3-⅜"ø horiz.

¾" chamfer

3-½"ø bars

3'-2" 2'-8½" 1½"

¾" V groove

SEC D-D
Showing Curved Rail

18½"

2-½"ø hoops in each post cap

2" 5" 12½" 14" 3" 3'-2" 2'-8½"

¾" V groove

SEC D-D
Showing Post

Form octagonal surface on top of post. Form 8" square hole in post 18" deep. ½" conduit to extend from junction box on bottom of slab to top of post as shown. Fill hole with grout and place precast lamp post in place with steel extending into grout

8" 8" sq. 18"

PLAN
Lamppost not shown.

18½" 5½" 12" 5½" 2-½"ø hoops in each post cap

Other Vert. Dimen. same as Sec D-D 18"

G G

SEC F-F

12½" 2½" Half precast. Set before pouring post.

4-½"ø Vertical 3-⅜"ø hoops in each post 1" clear

SEC E-E

15½" 4-½"ø vert. in each post. Hook top ends 4-⅜"ø hoops each post 1" clear

SEC G-G

Scale: 1" = 1 ft.

DETAILS OF BALCONY

470608

GENERAL DETAILS

DATE. FEB. 14, 29 DRAWN BY DPT SHEET 4 OF 7
SCALE AS NOTED TRACED BY CG BRIDGE NO 9

DRAWING NO 44

ACCOMPANIED BY DRAWINGS
41 42 43 45 46 47 48

SPECIAL PROVISIONS

The following are special provisions supplementing the standard specifications and applying particularly to the work upon which this proposal is submitted. In case of conflict between these special provisions and the standard specifications, the special provisions will take precedence.

Work to be Done

The work to be done consists of the construction of a bridge over Mill and Pringle Creeks

Location of Work

on South Church Street in the City of Salem, Marion County, Oregon.

Date of Completion

The work covered by this contract is to be conpleted as herein stipulated, on or before Aug. 15, 1929

Removal of old bridge

In order that the street may not be closed to traffic longer than necessary, the contractor shall, before dismantling the old bridge, do as much work on the new structure as is practicable. This shall include the excavation for and pouring of all footings which are not interferred with by the supports of the old bridge, the pouring of such of the columns as is practicable and the completion of as much as is practicable of the retaining and wing walls at the North end. The contractor will be required to remove only that portion of the old bridge necessary for the construction of the new bridge, i.e.; from approximately Station 16 plus 40 to the South end.

This work will be paid for under Item No 11 and the price bid shall include the cost of dismantling the old bridge and the disposal of the material according to the General Specifications, and in addition the removal of all brush and trees within five feet of the new structure. All trees and old piling shall be either entirely removed or cut off six inches below the surface of the adjacent ground.

Pouring of Beams

SECIAL PROVISIONS—Continued

Pouring of Beams etc.

The concrete in all beams except the two beams on either side of the sewer shall be placed in one continuous operation during which time pouring shall not be stopped for a period longer than one hour unless so ordered by the Engineer. The forms for the sewer cradle shall then be built, the sewer laid and the joints made. The concrete in the sewer cradle shall then be placed, the two beams adjacent to the sewer built and the remainder of the construction proceed in the usual manner.

Concrete

All concrete shall be of class and mix as shown on the plans and/or mentioned in the specifications. Concrete for the approach walks and curbs shall be of Class "D" mix and will be measured and paid for as such.

For pouring the beams and slabs, the contractor shall provide a mixer or mixers capable of delivering acceptable Class "A" concrete at the minimum rate of 10 cubic yards per hour. The mixer or mixers and accessories shall be such that the amount of water and aggregate in each batch can be accurately controlled. Provision shall be made for the storage and handling of three sizes of aggregates.

Forms for the following parts of the structure shall be made of tongue and grooved lumber; all columns, soffit and outer face of all Beams #1, hand rail posts, End posts, soffit of overhanging sidewalk, outer face of wing walls, both faces of wing wall hand rails, and all exposed surfaces of the stairway. All other forms shall be according to the General Specifications. Surface finish shall be as specified for slab and girder bridges except that in addition, all faces of all columns and the soffit of the overhanging sidewalk shall receive a Class 2 surface finish. The rails and railing walls on the stairway and the risers of the steps shall receive a Class 1 surface finish. The other exposed surfaces of the stairway structure shall receive a Class 2 surface finish.

Lighting System:

This Item, No.8, shall include the furnishing of all labor and material necessary for the complete installation of thesystem as shown on the plans and mentioned herein. This will include the precast light posts, the globes, lighting units, conduit, wiring, etc., and including the extension of the conduit and wiring to the nearest P. E. P. Co. pole at the south end of the bridge. The following units or equal shall be used;

Lighting System (cont.)

General Electric Form 12 Novalux Ornamental Unit and #123 light alabaster rippled globe and #1123 light alabaster rippled canopy. The contractor shall furnish 6000 lumen lamps for the four lights at the ends of the bridge and 4000 lumen lamps for the four lights in the center of the bridge. One General Electric type SL Novalux series transformer with protective device, aerial type, or equal of 3 K.W. capacity shall be furnished and suitably mounted on the service pole. Any parts not shown or mentioned but required to complete the work in a first class manner shall be supplied by the contractor. All wiring shall be in approved metal conduit of the required size or as shown on the plans. All work and materials shall conform to the requirements of the National Electric Code* which is by this reference made a part of these specifications. The contractor shall maintain and be responsible for the lighting system until the acceptance of the bridge by the City.

Stairway:

The stairway shall be constructed as shown on the plans. The mix for the various parts of the structure shall be as designated by the Engineer; adjustment of cement will be made on the basis of 7.3 sacks per cubic yard. Concrete for the stairway will be known as Class "E" concrete and will be paid for under Item No.7, excavation and reinforcing will be paid for under Items No. 1 and No. 5 respectively, Surface finish shall be as noted hereinbefore.

Sewer:

Subject to the provisions hereinafter noted the sewer in this structure shall be constructed according to the "Specifications for Sewer Construction" of the City of Salem, Oregon issued December 1927, copies of which are on file at the office of the City Recorder. Payment for this will be made under Item No. 9 which shall include all labor and material for furnishing and placing the pipe, making the joints and constructing the manhole as shown on the plans. Concrete and steel in the cradle and supports will be paid for under Items No. 3 and No. 5 respectively.

The pipe shall be No.1 slat glazed vitrified clay of the size as shown on the plans. All joints are to be made with approved heated bituminous or asphaltic compound. The contractor's attention is called to the fact that a very rigid inspection of the material and workmanship will be maintained according to the Specifications referred to, said specifications, by this reference, are hereby made a part of the specifications.

* The following will be the interpretation of the National Electric Code as applying to the lighting system on the South Church St. Bridge:

"All wiring shall be #8 - 600 volt, lead covered wire run in 1" conduit".

STREET LIGHTING

Form 12 Novalux Ornamental Units

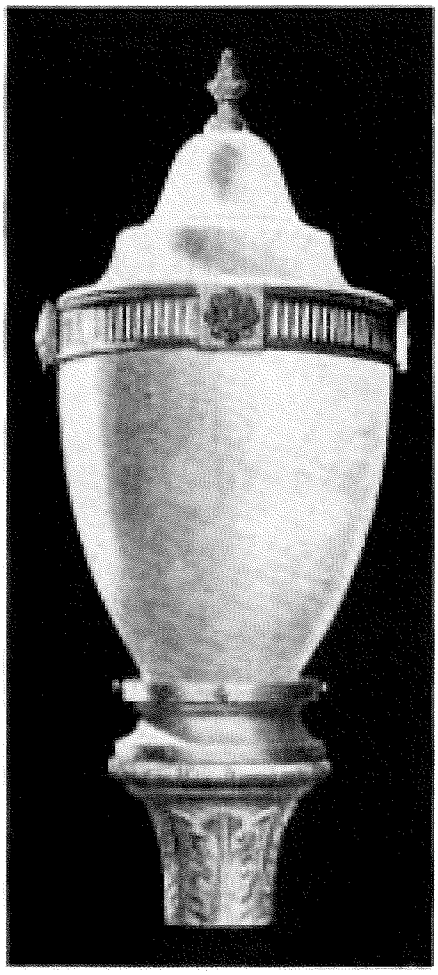


Fig. 10. Unit with No. 104 Polynaze Globe, No. 1104 Polynaze Glass Canopy and Form "M" Casing

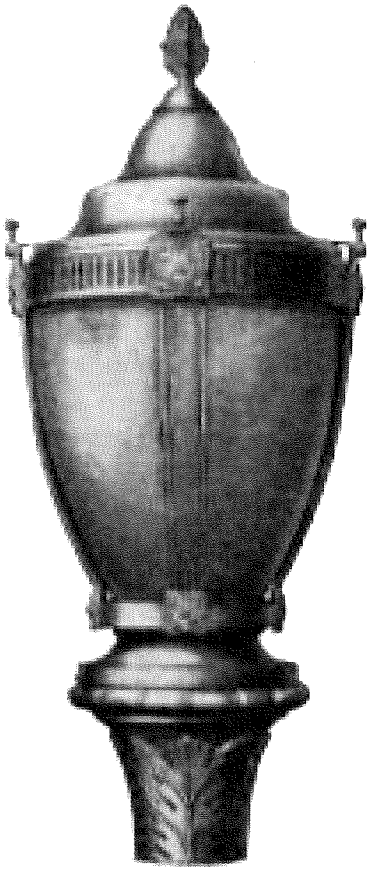


Fig. 11. Unit with No. 121 Alabaster Rippled Globe, No. 1121 Alabaster Rippled Canopy, and External Straps

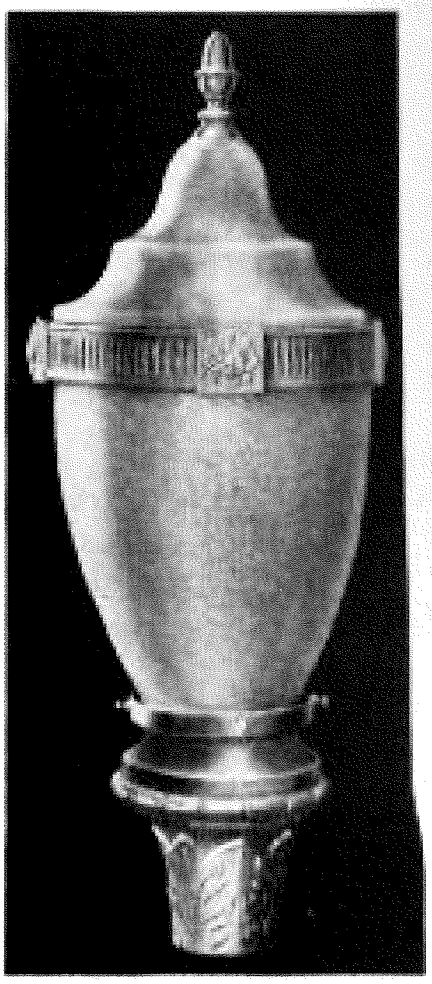


Fig. 12. Unit with No. 124 Alabaster Rippled Globe, No. 1124 Alabaster Rippled Glass Canopy and Form "M" Casing

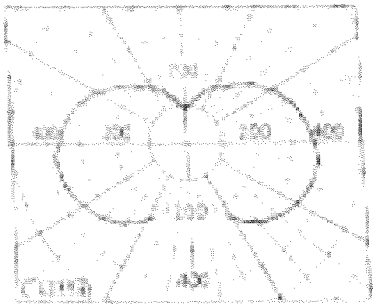
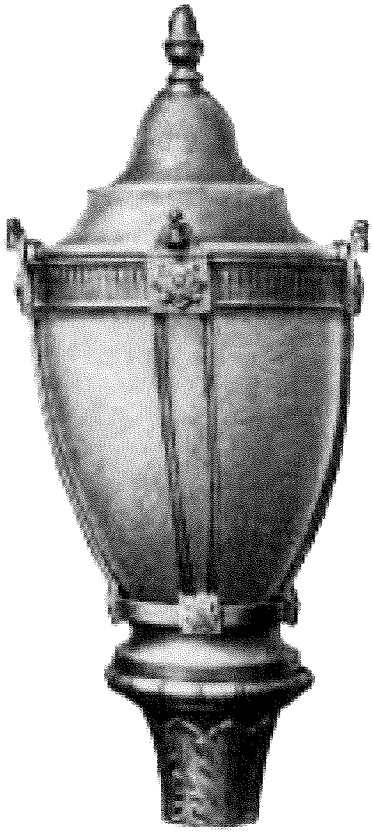


Fig. 13. Distribution Curve of Unit Above with 6000-lumen Lamp



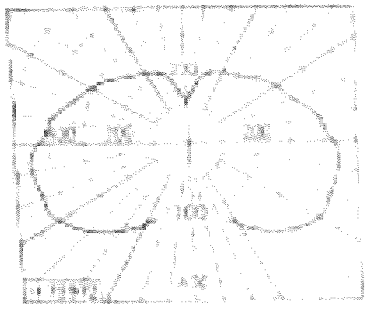


Fig. 15. Distribution Curve of Unit Above with 6000-lumen Lamp

Attachment C

Case No. HIS18-09

Historic Alteration Review - General Resource Worksheet

Site Address: 600 Church St SE Resource Status: ☐ Contributing ☐ Individual Landmark ☐ Non- Contributing

Type of Work Activity Proposed

Major ☐ Minor ☒

Replacement, Alteration, Restoration or Addition of:

Architectural Feature:

- ☐ Deck
- ☐ Door
- ☐ Exterior Trim
- ☐ Porch
- ☐ Roof
- ☐ Siding
- ☐ Window(s) Number of windows: _____
- ☒ Other architectural feature (describe) Street Lights

Landscape Feature:

- ☐ Fence
- ☐ Retaining wall
- ☐ Other Site feature
- ☐ Streetscape

New Construction:

- ☐ Addition
- ☐ New Accessory Structure
- ☐ Sign
- ☐ Awning

Will the proposed alteration be visible from any public right-of-way? ☒ YES ☐ NO

Project's Existing Material: _____ Project's New Material: _____

Project Description

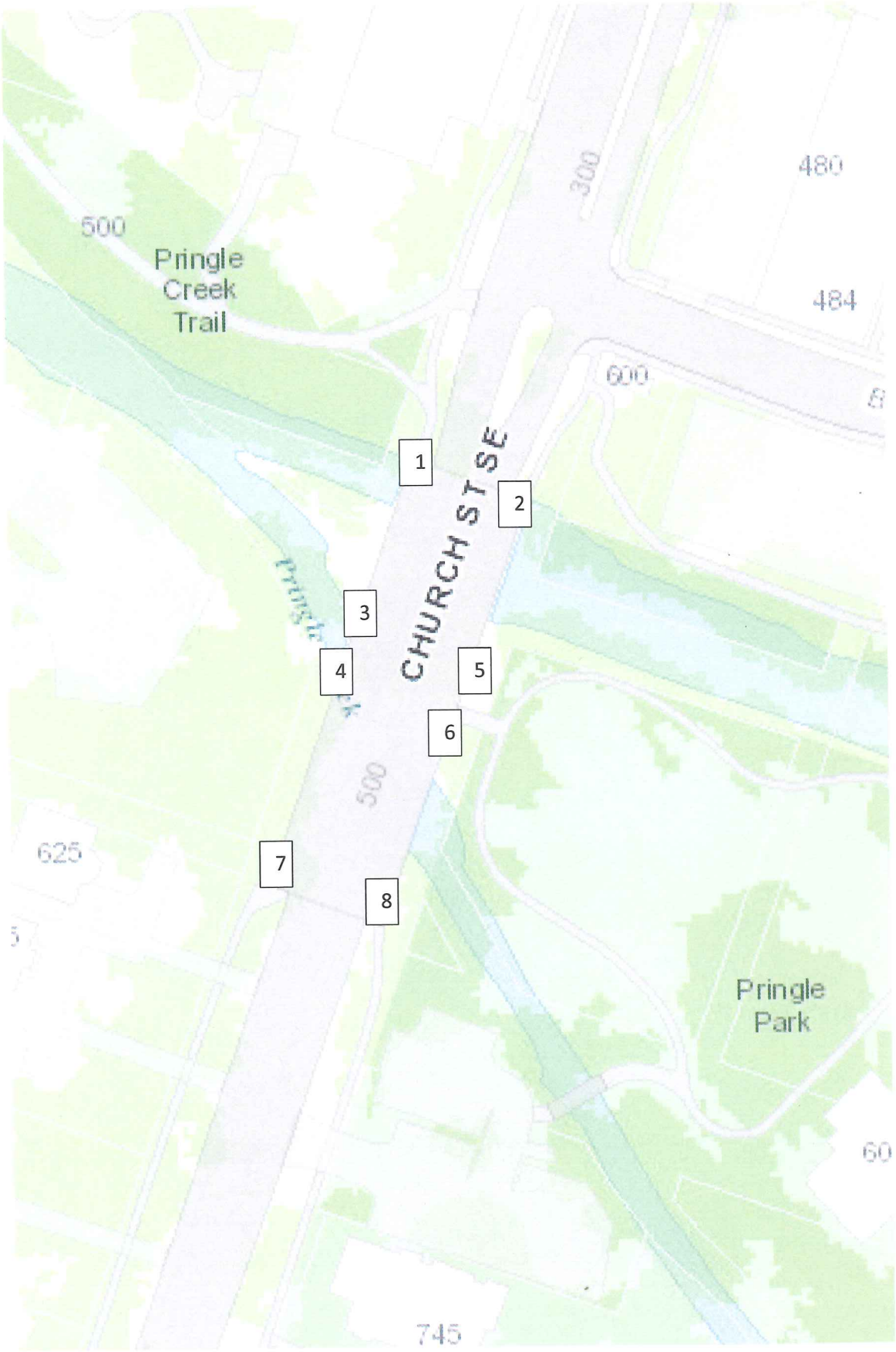
Briefly provide an overview of the type of work proposed. Describe how it meets the applicable design criteria in SRC Chapter 230. Please attach any additional information (i.e., product specification sheets) that will help Staff and the HLC clearly understand the proposed work:

Replace 8 Street Ligh + Fixtures with Historically Comparable fixtures

Kevin Cuthbertson for Eric Schrunk 2/20/18

Signature of Applicant Date Submitted/Signed

Light Fixture Locations

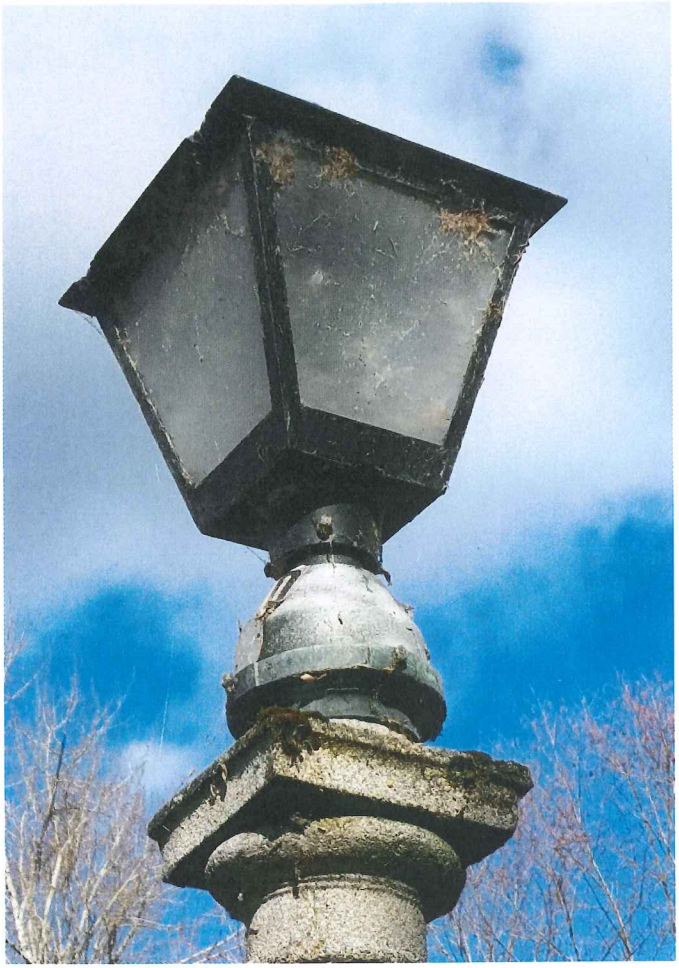


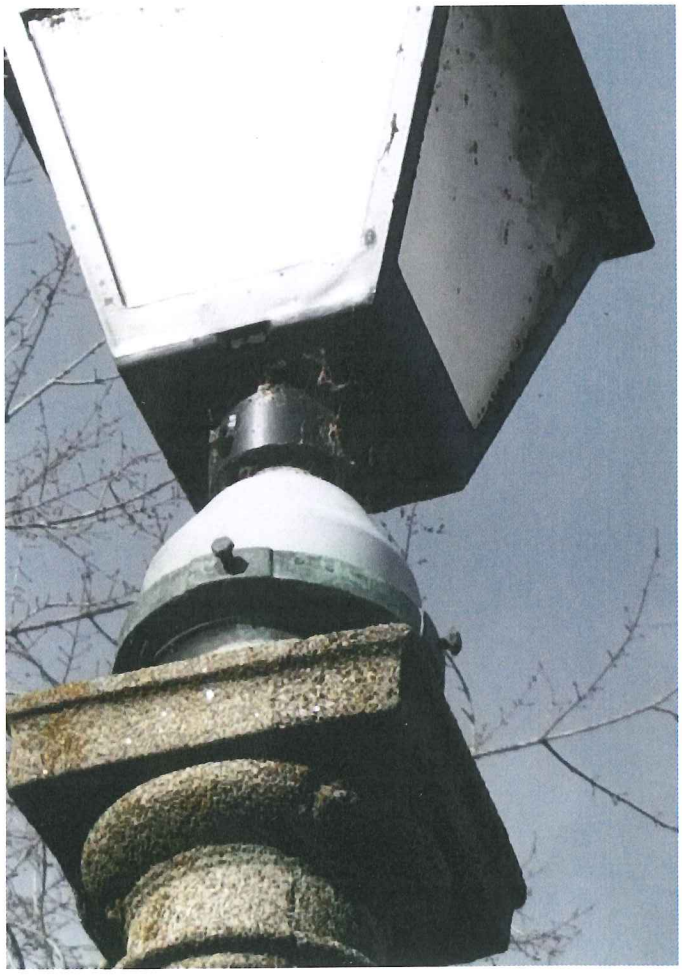
West Bridge Rail- Center, Church Street Bridge

East Bridge Rail- Center, Church Street Bridge

Northwest end of Church Street Bridge, Lighting Detail – (typical)


10



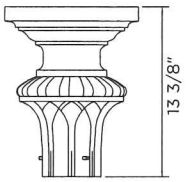


FIXTURE OPTIONS

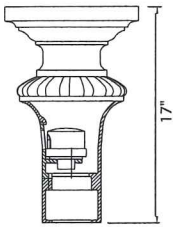
K124 PARAGON - LED ACORN

Capital Options

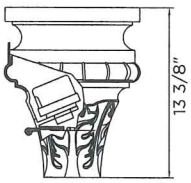
K16



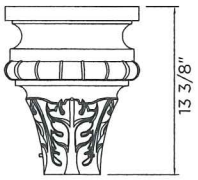
K18



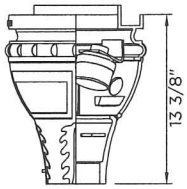
K14 C/W PR



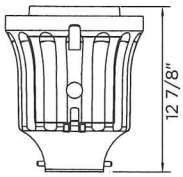
K13



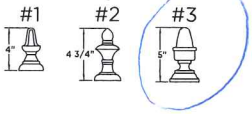
K23 C/W PR



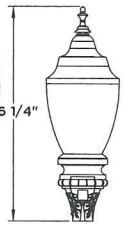
K24 C/W PR



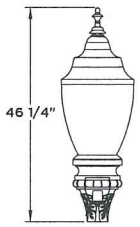
Finial Options



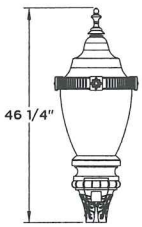
Decorative Options



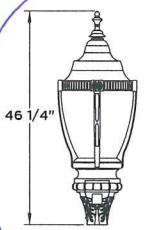
Standard



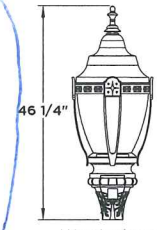
Solid Spun Aluminum Top



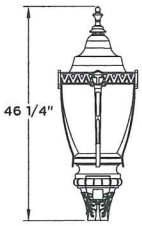
GE Ring



GE Ring & Struts



Westinghouse Ring & Struts



Tacoma Ring & Struts

HOW TO ORDER

LUMINAIRE STYLE
K124R - Paragon

IES LIGHTING CLASSIFICATION
II - Type 2 (P4)
III - Type 3 (B2, R1, P4)
IV - Type 4 (B3, P4)
V - Type 5 (B3, R1, P4)

SERIES
1036 (40 - 75W B3)
1042 (40 - 75W B2, R1)
1054 (100W B3)
1063 (100 - 120W B2, R1)
7030 (40 - 100W P4)

SOURCE
SSL - Solid State

LINE VOLTAGE
120V (120-277)
480V (347-480)*

*Select wattages available within this range, contact King Luminaire

CAPITAL
K13, K14, K16
K18, K24, K23

*Additional options available on website

DECORATIVE OPTIONS
SST - Solid Spun Top
GE - GE Ring
GRS - GE Ring & Struts
WRS - Westinghouse Ring & Struts
TRS - Tacoma Ring & Struts

PAINT COLOR
GN - Federal Green
BE - Blue
GY - Gray
BN - Brown
BK - Black
BZ - Bronze

*Additional options available on website

CCT
3K - 3000K
4K - 4000K

K124R - [ ] - [ ] - [ ] - (SSL) [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

WATTAGE
40, 60, 75, 100, 120
*120 only available in R1

OPTICAL OPTIONS
B2 - B2 Optic (Baffled Array)
B3 - B3 Optic (Baffled Array)
R1 - R1 Optic (Refractive Array)
P4 - P4 Optic (Flat Array)

LENS OPTIONS
AR - Acrylic Rippled
PR - Polycarbonate Rippled

PHOTO CONTROL OPTION
PR - Photo Receptacle c/w cover and PR. Available with K14, K18, K24 & K23

PE - Photo Receptacle c/w cover, PR and Photo Eye. Available with K14, K18, K24 & K23

PEBC - Photo Electric Buttoncell

*leave blank if no photo control required

CONNECTION
TB - Terminal Block

*leave blank if terminal block is not required

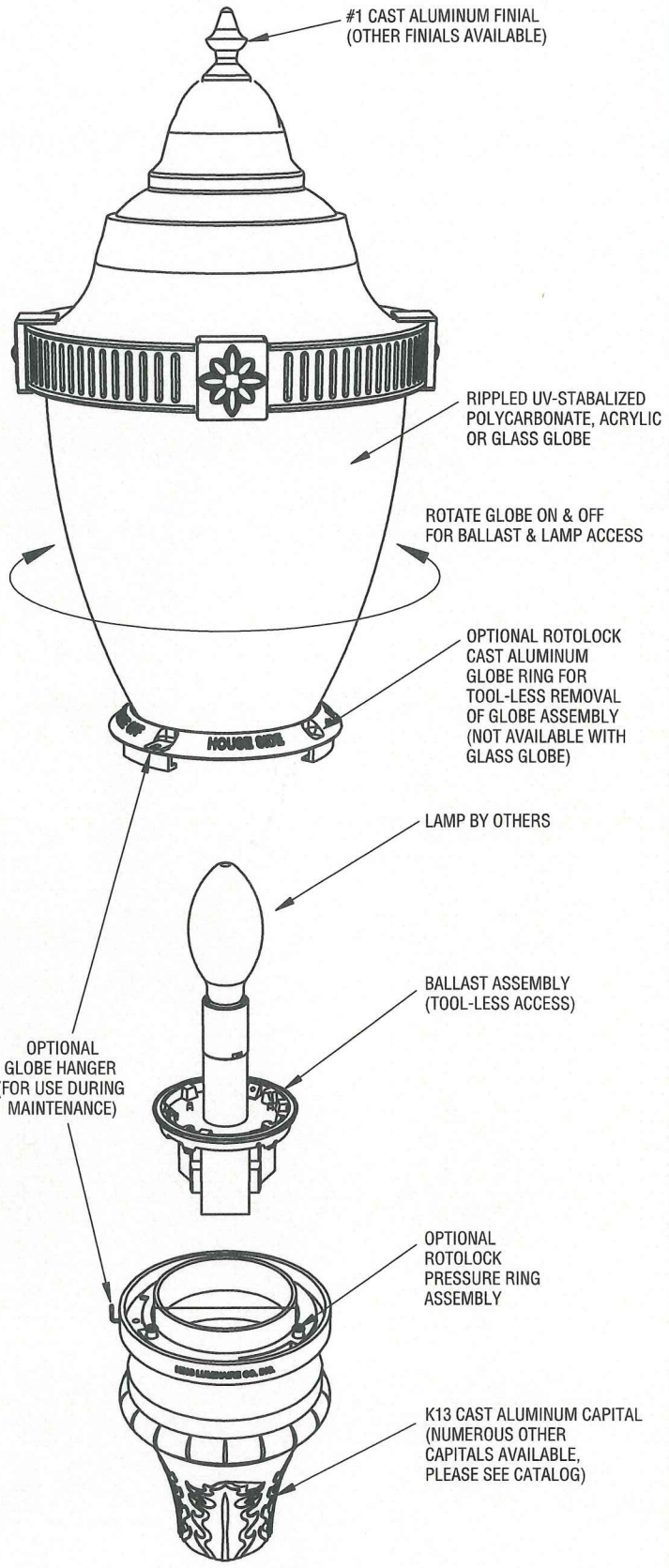
FINIAL OPTIONS
#1, #2, #3

*Finial #2 is standard
Additional options available on website

KING LED TECHNOLOGY

A Member of The StressCrete Group of Companies
www.stresscretegroup.com

KING LUMINAIRE 1153 State Route 46N Jefferson, OH 44047 Phone: 1.800.268.7809 www.kingluminaire.com



K124-R-LAR

Choosing the Right Optical System

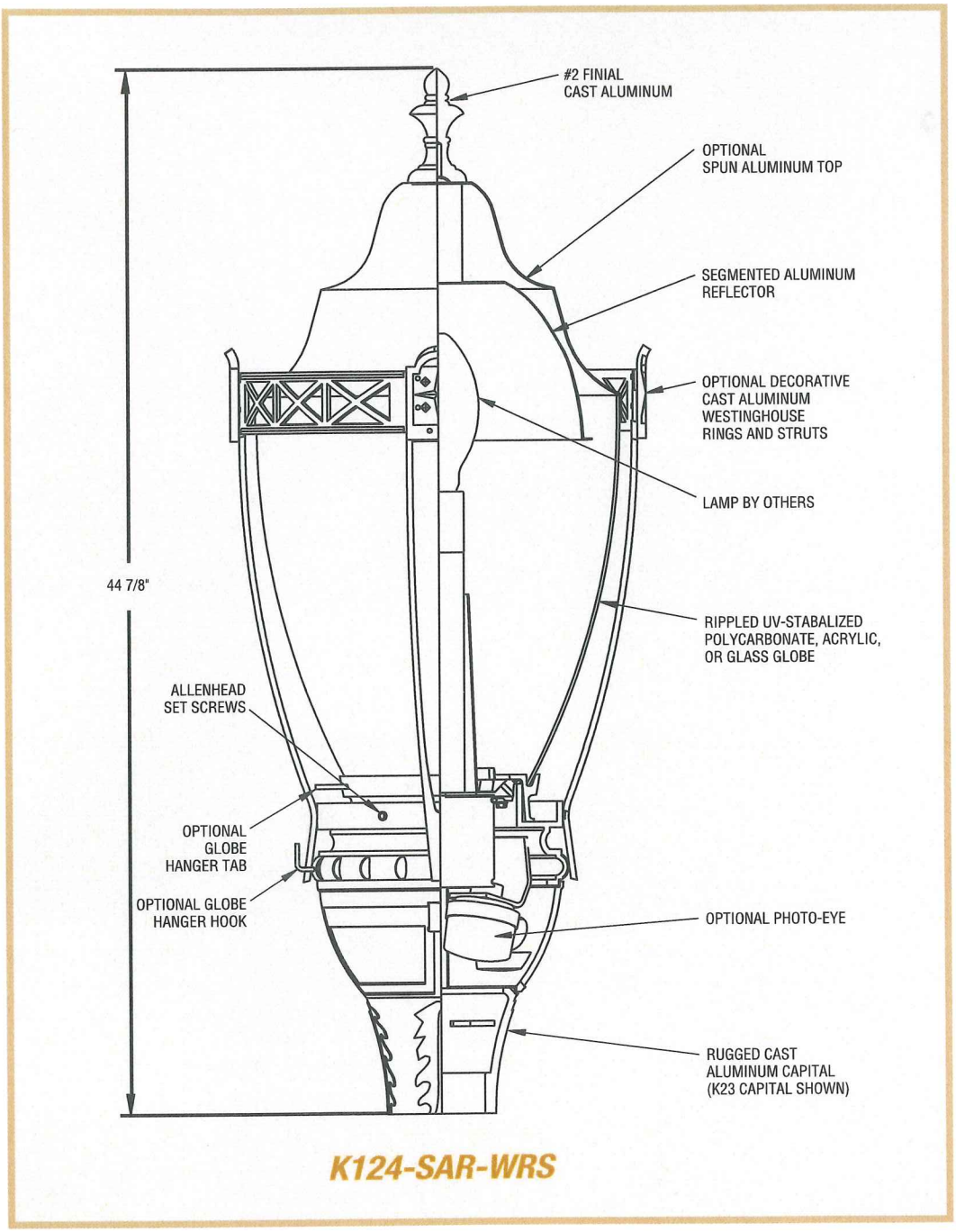
In selecting which of the K124 optical systems is right for your project, numerous items, besides the luminaire's lighting characteristics, need to be considered.

Glare:	*Luminaires must provide the ability to see, not just light the ground.*
Purpose:	*Consideration must be given to the purpose of the lighting. (i.e. roadway vs. area lighting and if roadway, which type)*
Ambiance:	*Light standards provide the finishing architectural touch - 24 hours a day.*
Safety:	*The finished project must meet all codes and ordinances.*
Up light:	*Consider the project's environment and design accordingly.*
Light Trespass:	*Put light in the right places, not in private areas or bedroom windows.*
Budget:	*Consider both the initial capital investment and, especially, the ongoing maintenance costs.*
Power Usage:	*Use as few assemblies as is practical.*

With the above points in mind and using the requisite IES files, the lighting desginer will be enabled to make an educated decision as to which optical system will be most suitable for a given project.

K124 - Features at a Glance

- *Authentic historic acorn shape*
- *Accurate reproductions of GE & Westinghouse decorative filigree rings and struts*
- *Custom filigree hardware available*
- *Tool-less change out of ballast and lamp*
- *Heavy duty aluminum casting*
- *Polycarbonate and acrylic globes available with rotolock option*
- *Globes available in glass, durable polycarbonate, or high impact UV resistant acrylic*
- *Ease of maintenance - globe hanger for service*
- *Four (4) optical systems from which to choose*

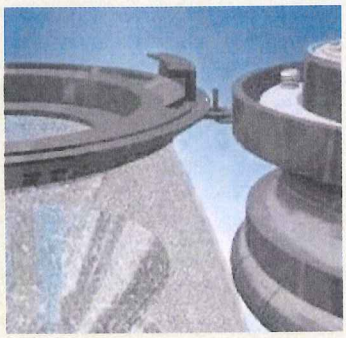


K124-SAR-WRS

K124-S VL2
Segmented Reflector

A sophisticated segmented aluminum reflector specifically designed to minimize glare and uplight. Offering a cutoff classification, this sparkling performer works within the parameters of the environmental issues that are becoming ever more important in our modern world.

Available Options for K124 Luminaire



GH - Globe Holder

An innovative maintenance option that allows for easy servicing of the lamp and/or ballast module by enabling the globe to hang off the capital, allowing two-hand access for maintenance. (specify "GH" after capital type, eg. K16-GH)

R - Rotolock Globe Feature

Ensures a tight bug/water seal of globe to capital, as well as allowing easy twist/turn access to lamp and ballast module. (specify "R" after luminaire style, eg. K118-R as allenhead screw mounting is standard)

K124 PARAGON - LED ACORN

The King Luminaire Paragon Luminaire is undoubtedly one of the most gracefully proportioned of the acorn luminaires. Teamed with King Luminaire's high performance LED engines it makes for a perfect solution for city streets, parks, schools and commercial areas.

KING LED TECHNOLOGY

PROJECT: _____

PREPARED BY: _____

DATE: _____

PRODUCT SPECIFICATIONS

R1/B3 LED ENGINE
Light engine shall be an array of 36, 42, 54 or 63 solid state Cree X-Series high power LEDs (light emitting diodes) mounted to a multi-sided, vertical heat sink of highly conductive aluminum. The LED emitters are mounted to removable circuit boards such that they are in full thermal contact with the vertical heat sink. The vertical heat sink is open at the bottom and vented at the top to provide appropriate dynamic airflow cooling for the LED array. The emitters are arranged in various patterns on each face of the vertical heat sink to provide the required light distribution.

The LED arrays include optical baffles constructed of optical grade ABS plastic with a vacuum metallized reflective surface or clear acrylic precision refractors over each diode. Both optical options are designed to efficiently control light distribution to produce IESNA Type IV & V for the B3 and Type III & V for the R1.

P4 LED ENGINE
Light engine shall include an array of Cree X-Series high power LEDs (light emitting diodes). The emitters shall be mounted to a metal core circuit board using SMT technology. The LEDs and circuit boards shall then be mounted to a high performance heat sink.

External light control shall consist of high precision refractive lenses mounted above the LED emitter arrays in such a way to achieve optimum uplight control. The lenses shall also control horizontal light distribution so that either Type II, III, IV or V IESNA distribution patterns are achieved.

LUMINAIRE CONSTRUCTION
All K124 Paragon cast components (including optional ring and struts) shall consist of a heavy grade A319 cast aluminum. The main body, or capital, acts as an enclosure for the ballast assembly and is of adequate thickness to give sufficient structural rigidity. The capital shall have an opening at the base tenon body to allow the luminaire to be mounted to a tenon of 3-1/2" maximum diameter. The luminaire shall be locked in place by means of heavy duty, stainless steel set-screws.

GLOBE ASSEMBLY
The protective globe shall be molded of either; rippled polycarbonate Miles Makrolon GP/OP Thermoplastic Polymer, or equivalent, or rippled acrylic Acrylite Plus Acrylic Polymer, or equivalent, having a minimum thickness of 0.125".

The globe assembly is a self-contained unit consisting of the globe, rugged cast locking ring, and the LED light engine and optical control. The LED light engine is of a modular design, and is able to be quickly removed from the globe assembly. The globe assembly is secured to the main housing by means of a spring-tensioned, twist-locking Rotolock™ unit to allow tool-less removal of the globe, while maintaining a secure seal between the globe assembly and the main body of the luminaire, making the K124 Paragon suitable for an outdoor environment.

High performance protection against water or dust particle ingress is available by means of a non-porous, closed-cell silicon rubber o-ring gasket which is highly efficient in sealing against particle ingress over a wide temperature range (-40°F to 310°F).

DRIVER
The LED universal dimmable driver will be class 2 and capable of 120 - 277V or 347 - 480V input voltage, greater than 0.9 power factor, less than 20% total harmonic distortion and features an ambient temperature range of -35°C up to 65°C. Each LED system comes with a standard surge protection designed to withstand up to 20kV/10kA of transient line surge as per IEEE C62.41.2 C High. An in-line ferrite choke is utilized to provide protection against EFT's. The driver assembly will be mounted on a heavy duty fabricated galvanized steel bracket to allow complete tool-less maintenance.

PHOTOMETRICS
Fixtures are tested to IESNA LM79 specifications. These reports are available upon request.

CHROMATICITY
High output LEDs come standard at 3000 & 4000K (+/-300K) with a minimum nominal 70 CRI. Additional CCT emitters are available upon request.

LUMEN MAINTENANCE
Reported (TM21) and Calculated (L70) reports are available upon request with a minimum calculated value of 100,000 hrs.

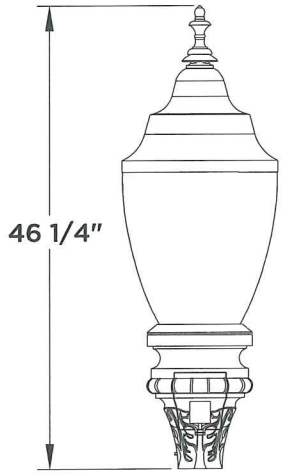
WIRING
All internal wiring and connections shall be completed so that it will be necessary only to attach the incoming supply connectors to Mate-N-Lok connectors or to a terminal block. Mate-N-Lok shall be certified for 600V operation. Internal wire connectors shall be crimp connector only and rated at 1000V and 150°C. All wiring to be CSA certified and/or UL listed, type SFF-2, SEWF-2, or SEW-2 No. 14 gauge, 150°C, 600V, and color coded for the required voltage.

THERMALS
Fixtures tested by a DOE sanctioned test facility to determine the maximum in-situ solder-point or junction-point temperatures of the LED emitters. This report is available upon request.

FINISH
Housing is finished with a 13 step KingCoat™ SuperDurable polyester TGIC powder coat. Standard colors include strobe white, brown metal, marina blue, gate gray, Chicago bronze, standard gold, standard black, federal green and rain forest. Please see our website for a complete list of colors. RAL and custom color matches are available.

MISCELLANEOUS
All exterior hardware and fasteners, wholly or partly exposed, shall be stainless steel alloy. All internal fasteners are stainless steel or zinc coated steel. All remaining internal hardware is stainless steel, aluminum alloy, or zinc coated steel.

WARRANTY
The K124 Paragon LED luminaire comes with a 7 year limited warranty.



CERTIFICATION:
CSA US Listed
Suitable for wet locations
ISO 9001
IP66
ARRA Compliant
LM79 / LM80 Compliant

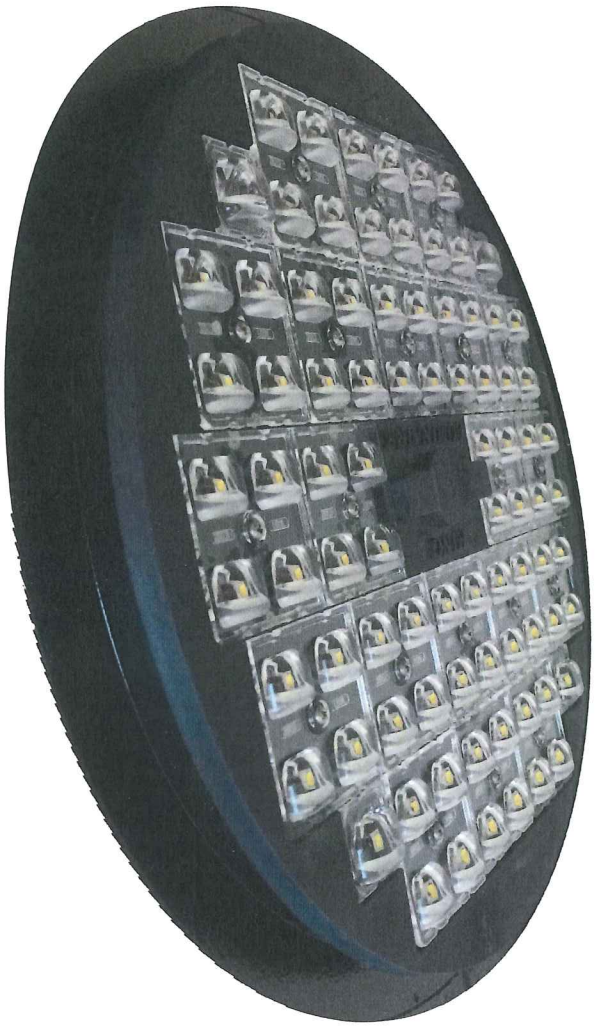
DRIVER INFO:
>0.9 Power Factor
<20% Total Harmonic Distortion
120 - 277V & 347 - 480V
-35°C Min. Case Temperature
65°C Max. Case Temperature
Surge Protection: ANSI C136.2 extreme level 20kV/10kA

EPA:
1.80 sq. ft.

FIXTURE WEIGHT:
40 lb

12-8-2017

KING LED TECHNOLOGY



P4 LED ENGINE

PENDANT LED ENGINE
with ADVANCED LED TECHNOLOGY

- Back Light Control
- Uplight Control
- Glare Control
- Sustainable Technology
- Superior Thermal Management
- Long Useful Life
- Dimmable
- Photometric Performance

Performance Outdoor Lighting Solution!

Description

The P4 is our 4th generation Flat Array, designed to increase roadway performance while providing superior spacing. Utilizing a refractor optic, the P4 is perfect for roadway applications and features a uniform footprint. The light quality is evident with low glare and excellent chromaticity. The P4 is available in the distinctive styles of King Luminaire's K130, K200, K580, K600, K700, K800 & Octagonal Series, as well as the impressive K124, K308, K309, K330 and K902. It comes in Type II, III, IV & V IESNA distribution patterns.

King Luminaire designs LED systems around highly effective thermal management and the P4 Engine is no different. Utilizing dynamic airflow through natural convection to effectively manage the LED case temperature, the P4 has a long useful life that exceeds 100,000 hours. TM21 information is available upon request.

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