LIGHTING | AREA

Purpose

Lighting shall be used to illuminate portions of the park including parking lots, trails and designated areas.

General Information

Square, down light fixtures shall be installed in park locations subject to historic light guidelines or City of Alexandria small area plan approval may be modified.

Lighting in POS zoned properties requires a Special Use Permit.

Lighting levels to comply with the City of Alexandria lighting standards. Lights shields may be required by the City.

Light poles that exceed more than 15 feet in vertical height shall require approval from the City.

Materials and Finish

The lamp housing shall be die-cast aluminum with a black powder coat finish.

The lens frame shall be die-cast aluminum with a hinge assembly for maintenance. The lens shall be high impact, clear-tempered glass.

The metal pole and fixture shall be finished with a black powder coat finish.

Light fixtures shall be mounted on square aluminum poles with an extended pole mounting arm to offset the fixture.

Light poles shall be 15 feet in height from ground level and installed with an anchor base. The anchor bolts shall be recessed into an anchor base casting. Provide tamper resistant covers.

Foundations shall be designed by a professional engineer licensed in the Commonwealth of Virginia.

Features

Light fixtures that require separate ballast boxes are not permitted.

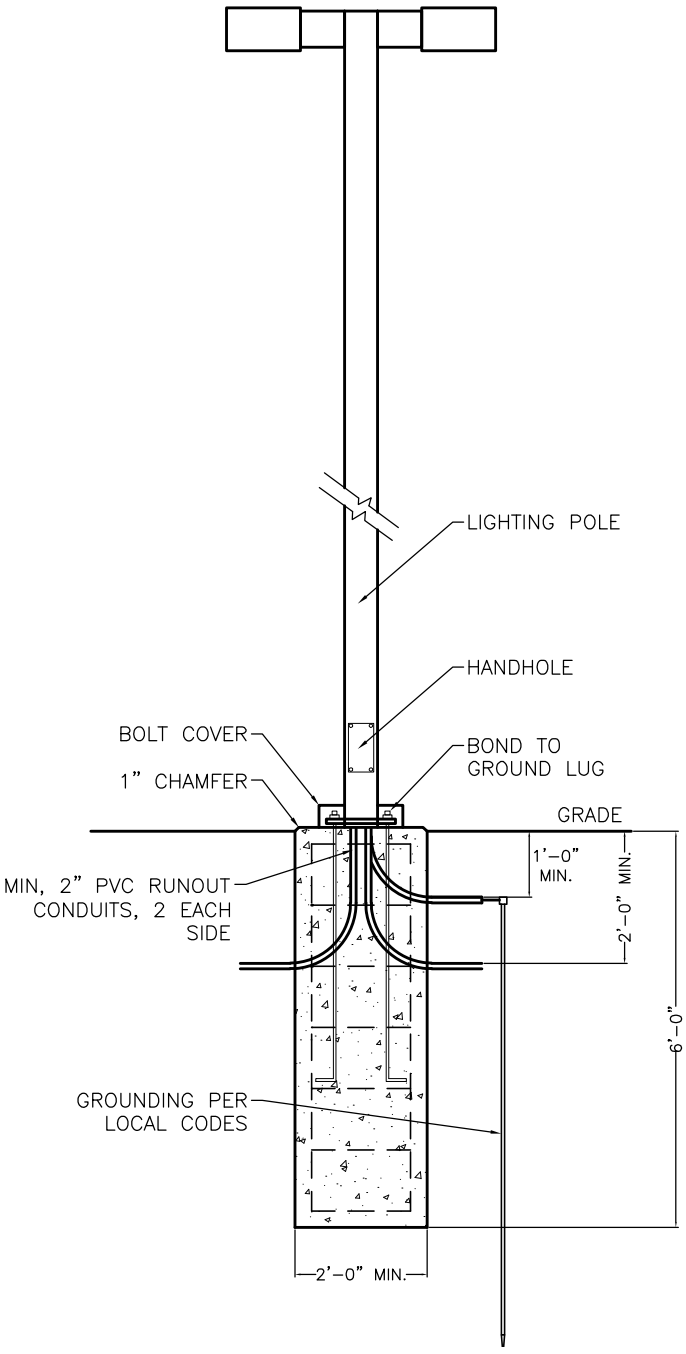
Lamps may include a wire guard.

Lamps shall be LED. Other lamp options may be installed with the approval of the Director of Recreation, Parks and Cultural Activities, and the Director of Transportation and Environmental Services.

Double fixtures shall be specified with approval from the City.

Square light fixture

LIGHTING | AREA



Area light pole assembly Not to scale

Installation

Light poles shall be located so as not to be in conflict with tree vegetation or plantings.

Lights shall be located a minimum of 3 feet clear from the edge of all shared-use paths or pedestrian walkways.

Top of Light pole foundations shall be flush to finished grade and sloped to shed water.

Connections installed beneath paving shall be sleeved with 2 inch diameter minimum PVC pipe.

Installation work shall be performed in conformity with USBC.

Luminaire shall not extend below fixture housing.

Provide grounding per local electrical codes.

As-built drawings shall be provided to the City following the completion of lighting projects. Drawings shall show field verified offset dimensions, pole locations, and underground electrical components.

Life Cycle Expectations

A 3 year minimum warranty is required on area light fixtures.

A 3 year minimum warranty is required on poles.

Lights are anticipated to require replacement after 20 years of normal and ordinary use.

LIGHTING | ATHLETIC FACILITIES

Purpose

Athletic field and court lighting systems shall be provided to ensure safe play environments where athletic field/court use is desired beyond normal daylight hours.

General Information

Athletic field and court lighting shall be provided as a complete sports lighting system.

The standard system is the Musco Light-Structure or City approved equal.

Lighting levels shall provide safe play for the programed sports. The average foot candle level on a rectangular playing surface shall be 50 fc and the uniformity shall be 2.0:1.0. The average foot candle level on a court playing surface shall be 30 fc and designated uniformity shall be 2.0:1.0.

Lighting in POS zoned properties requires a Special Use Permit.

A photometric analysis shall be required and approved by the Director of Recreation, Parks, and Cultural Activities.

Materials and Finish

Light poles and cross arms shall be galvanized steel, and shall meet wind loading requirements of the IBC Building Code and AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals.

Bases shall be pre-stressed direct burial concrete. Foundations shall be designed by a professional engineer licensed in the Commonwealth of Virginia.

The mounting heights for athletic fields are 60-80 feet above the playing surface. Mounting heights for athletic courts are 20-40 feet above the playing surface.

Wiring shall be contained inside the cross arms and poles.

Light fixtures shall be 1500W or 1000W LED lamps with external visors to minimize light glare and spill.

Features

Light system shall include a remote monitoring system for performance tracking.

Lighting system shall include a remote lighting control system that allows operation via web site, phone, and email. System shall be programmable up to a year in advance and accept a seven day schedule.

Lighting system shall include an accessible on-off selector switch located on one of the poles.

Lighting shall include pegs on poles for maintenance access.

Ballasts shall be located on each individual pole.

System shall have a emergency shut off box.

Installation

Light pole installations require separate permits.

Coordinate player-activated switches and timers to minimize additional infrastructure.

Installation work shall be performed in conformity with USBC.

Poles shall include direct burial concrete bases.

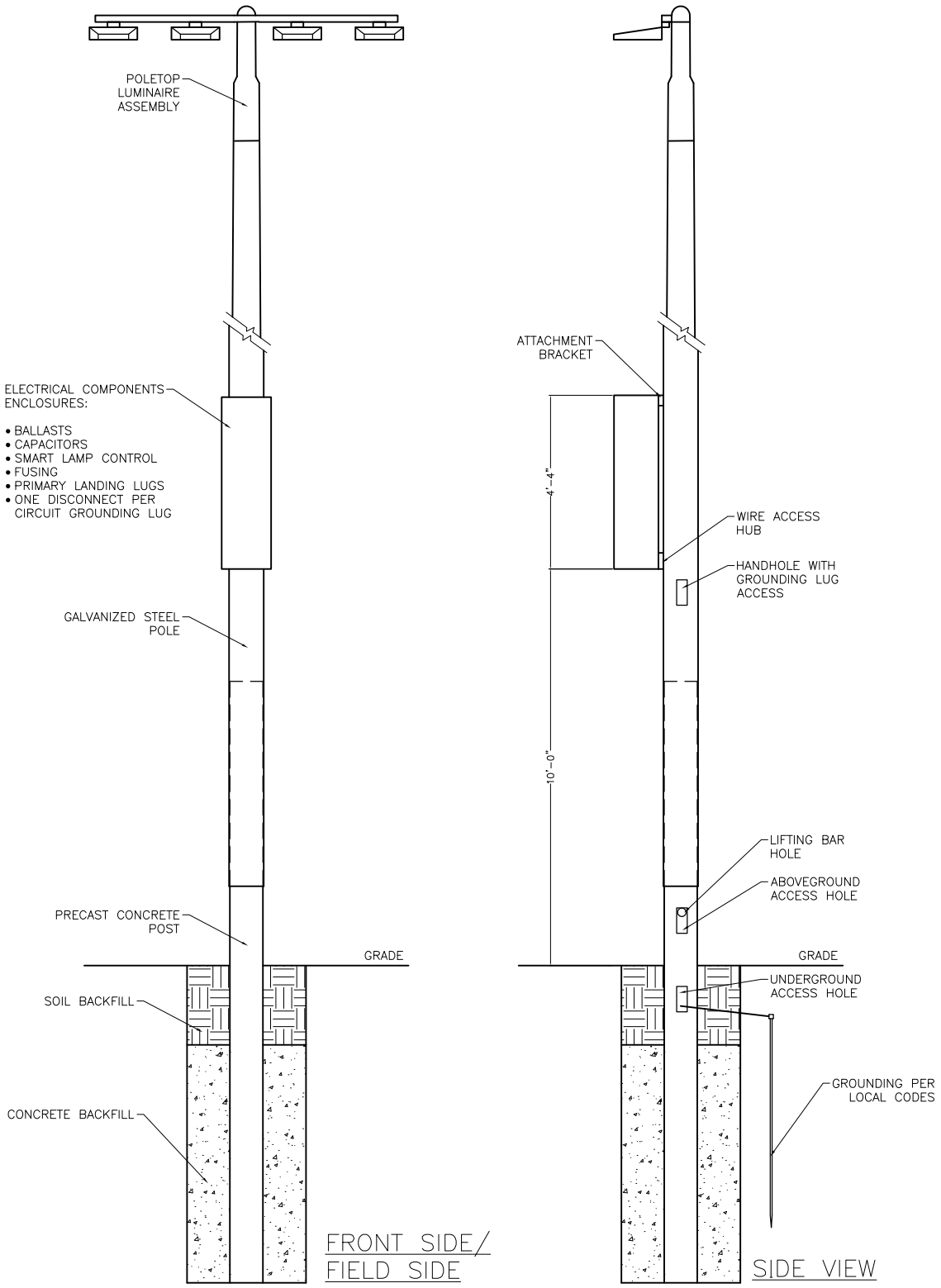
Light pole installations shall require lighting strike grounding protection systems designed by a professional engineer.

Life Cycle Expectations

A 25 year warranty is required on athletic lighting systems.

Lighting systems are anticipated to require replacement after 40 years of normal and ordinary use.

LIGHTING | ATHLETIC FACILITIES



Typical athletic lighting

Not to scale

LIGHTING | FLAGPOLE

Purpose

Solar lighting shall be used to illuminate flags and flag poles during evening and park hours. Locations may require all night illumination.

General Information

Commercial grade square or round up light fixtures and solar panels shall be installed on flag poles. Fixtures shall be weather tight, vandal proof and have key access.

Related standard: Flagpole.

Materials and Finish

The lamp housing shall be die-cast aluminum with a black powder coat finish or stainless steel.

Lamps shall be LED.

Features

Fixtures shall have a dusk to dawn sensor with rechargeable battery pack.

Mounting hardware/shall be included.

Installation

Light fixtures shall be clamp mounted on poles with an extended pole mounting arm to offset the fixture from pole.

Light fixtures shall be mounted between 10 feet and 15 feet in height from ground level.

Life Cycle Expectations

A 1 year minimum warranty is required on solar pole light fixtures with a minimum lifespan of 40,000 hours.

Lights are anticipated to require replacement after 10 years of normal and ordinary use.

LIGHTING | GROUND RECESSED

Purpose

Ground recessed lights shall be used to illuminate significant park features or items of special interest such as art, pathways and signs.

General Information

Lighting installations require electrical permits.

Lighting in Public Opened Space zoned properties requires a Special Use Permit.

Materials and Finish

The lamp housing shall be composite material, resistant to ultraviolet degradation and corrosion or rust resistive metal.

Lamp housing and lens shall be weather tight and vapor proof.

The lens shall be ADA compliant, anti-slip material and able to withstand loads up to 200 PSI, with a commercial grade frame.

Lens frame material shall be bronze, aluminum or black finish.

Lamps shall be LED.

Features

Directional shields shall be provided where appropriate.

Installation

Lights shall be installed in locations with positive drainage away from lights.

Flush light fixtures shall be installed in hardscape surfaces.

Connections installed beneath paving shall be sleeved.

Installation work shall be performed consistent with USBC.

Fixture shall be ground faulted protected with city code requirements and applicable NEC requirements.

Install manufacturer's recommended drainage.

Life Cycle Expectations

A 1 year minimum warranty is required on ground recessed light fixtures.

Lamps are anticipated to require replacement after 2 years of normal and ordinary use.

Light fixtures are anticipated to require replacement after 7-10 years of normal and ordinary use.

LIGHTING | HISTORIC POLE

Purpose

The historic pole light shall be used as a street or park road light in the City's Historic Districts to illuminate portions of public land or right-of-way.

General Information

Gadsby light fixtures shall be installed in the Gadsby Light District within the Old and Historic District of Alexandria.

Lighting in Public Open Space zoned properties requires a Special Use Permit.

Materials and Finish

Lights shall be mounted on aluminum poles.

Poles and fixtures shall be finished with a black UV-resistant catalyzed urethane coating.

Light poles/fixtures/luminaires shall be 14 feet total height from finished grade and installed with an anchor base.

The ornamental base cover shall be designed to cover the anchor bolts with one or two pieces, be vandal resistant, and finished to match the post.

The pole top shall meet the requirements of the Department of Transportation and Environmental Services.

Fixture metal finishing shall be a high-quality, permanently affixed powder coating, done through a heat-finished process.

Lamps shall be LED.

Features

Light fixtures that require separate ballast boxes are not permitted.

Globes/post tops shall include full top reflectors.

Color temperature shall be between 3,000K and 4,000K.

Pole can include arms to hold flower baskets or banners as approved by the Director of Recreation, Parks, and Cultural Activities.

Installation

Light poles shall be located so as not to be in conflict with tree vegetation or plantings.

Lights shall be located a minimum of 3 feet clear from the edge of all shared-use paths or pedestrian walkways.

Top of light pole foundations shall be flush to finished grade. Top of footing shall be sloped to shed water.

Connections installed beneath paving shall be sleeved.Install ground fault protection at each pole.

Installation work shall be performed in conformity with USBC.

Lights shall be installed on a GFCI circuit.

Lights shall have photocell and time clock activation.

Life Cycle Expectations

A 3 year minimum warranty is required on historic light fixtures.

A 3 year minimum warranty is required on poles.

Lights are anticipated to require replacement after 20 years of normal and ordinary use.

LIGHTING | HISTORIC POLE

Gadsby historic pole light

Historic light fixture

Image Footnotes

(1) http://www.hadco.com

LIGHTING | STREET POLE

Purpose

The street pole light shall be used to illuminate portions of the park system, including streets, park roads and trails.

General Information

Light fixtures shall be installed as a street or park road light in areas not guided by historic light fixture requirements or small area plan requirements.

Lighting in Public Open Space zoned properties requires a Special Use Permit.

The standard light fixture is Hadco, Inc., R53, or City approved equal.

Materials and Finish

The globe/post top shall be Type V, clear stabilized acrylic with a Victorian style roof.

The pole and fixture shall be finished with a black UV-resistant catalyzed urethane coating.

Lights shall be mounted on fiberglass, fluted and tapered decorative poles for post top lights.

Light poles/fixtures/luminaires shall be 14 feet total height from finished grade and installed with an anchor base.

The ornamental base cover shall be designed to cover the anchor bolts in one or two pieces, be vandal resistant and finished to match the post.

Lamps shall be LED.

Features

Light fixtures that require separate ballast boxes are not permitted.

Post tops shall include full top reflectors and may include a house side shield if warranted by the pole location.

Color temperature shall be between 3,000K and 4,000K.

Installation

Light poles shall be located so as not to be in conflict with tree vegetation or plantings.

Lights shall be located a minimum of 3 feet clear from the edge of all shared-use paths or pedestrian walkways.

Top of light pole foundations shall be flush to finished grade. Top of footing shall be sloped to shed water.

Connections installed beneath paving shall be sleeved. Install ground fault protection at each pole.

Installation work shall be performed in conformity with USBC.

Lights shall be installed on a GFCI circuit.

Lights shall have photocell and time clock activation.

Life Cycle Expectations

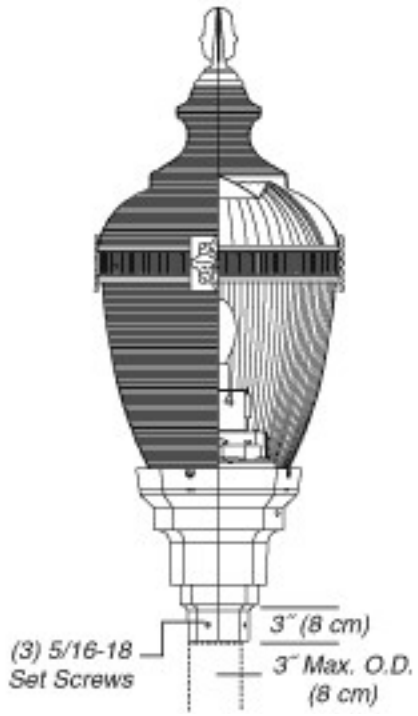
A 5 year minimum warranty is required on street pole light fixtures.

A 3 year minimum warranty is required on poles.

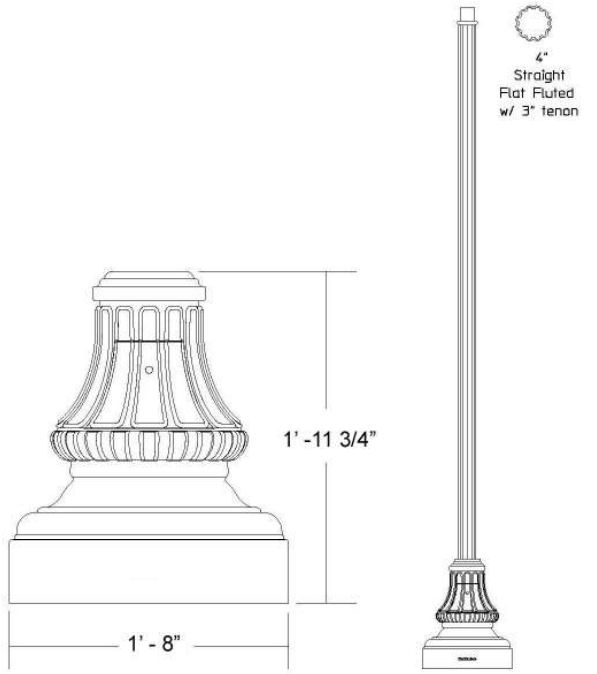
Lights are anticipated to require replacement after 20 years of normal and ordinary use.

Fiberglass fluted base

LIGHTING | STREET POLE



Street light fixture



Virginia Dominion Power - Fiberglass fluted street pole

Image Footnotes

(1) http://www.hadco.com