

1.0 Street Lighting System

The objective of the Street Lighting System is to:

- Provide a comfortable and safe night time environment for both vehicular and pedestrian traffic
- Improve the energy efficiency of street lighting to save energy and money
- Reduce the public's fear of crime
- Enhance commercial areas

2.0 General

This document will be subject to revisions from time to time. The City of Quinte West reserves the right to make revisions having due regard for applications already in the review process. Individuals or groups affected accordingly will be notified by the City of Quinte West, and revisions will become effective on the date of notification.

(Contents of this document are subject to change without further notice)

3.0 References

In addition to the standards specified in this manual, street lighting design shall follow current standards and in conformance with the following standards, specifications or publications:

Publications

- Ontario Provincial Standard Specifications
- Guide for the Design of Roadway Lighting
- Municipal Engineers Association Design Manual
- City of Quinte West Official Plan

Standards

City of Quinte West Standard Drawings

- Series 1200 – Street Lighting System

Permits/Approvals

- City of Quinte West Development Approvals
- Streetlight Operator – City of Quinte West Public Works and Environmental Services
- Electrical Safety Association (ESA)

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5.0 General

The City of Quinte West Public Works and Environmental Services Department is the City's streetlight operator.

Street lighting system wiring for roadways in the City of Quinte West shall be underground.

6.0 Applications

This standard is intended to address lighting of local and collector streets only. Illumination of streets of a higher classification will be dealt with on a case by case basis.

Lighting may be required for pedestrian walkways and paths constructed as part of a development. The requirements for such will be considered on a case-by-case basis.

7.0 Process

The following is a general guideline for the steps involved in the installation of streetlights:

- 1) Developer must contact the Electrical Utility for layout and power source.
- 2) Electrical Utility completes the layout
- 3) Layout is returned to Developer's Engineer for review. Review to verify compliance with City of Quinte West standards and other utility requirements (gas, telephone) for conflict.
- 4) If approved, Developer or their Engineer to sign and submit design to City for review.
- 5) City approves or rejects and returns design. If approved, Engineer to include works in their Cost of Works estimate if required.
- 6) Owner installs lights in accordance with approved development process.
- 7) Owner's utility contractor calls for an Electrical Safety Authority (ESA) inspection upon completion.
- 8) ESA inspection certificate is forwarded to the City's Public Works and Environmental Services Department and Ontario Hydro.
- 9) City contacts Ontario Hydro and registers an account for billing purposes.
- 10) Ontario Hydro acknowledges the account and ESA inspection certificate and schedules energization of the street light system.
- 11) Lights are energized by Ontario Hydro.

8.0 Intensity Requirements

Classification Criteria	Rural Local	Urban Local	Urban Collector
Lighting: Maintained Intensity in foot-candles at surface	0.2	0.5	0.9

9.0 Typical Material Requirements

Criteria	Size / Description	Local	Collector	Sample Product
Luminaire	Cobrahead Clear tempered glass lens 120V High Power Ballast PC Receptacle	Minimum 200 Watt High Pressure Sodium Lamp	As approved	GE M-250R2 Luminaire "M2RR15S1A2GM"

Photometric	Individual Photo Control Gray Cover			Fisher-Pierce
Color	Mold Finish			
Bracket / Davit	Die cast aluminum housing bracket Swing down cover with filter basket	Bracket to extend to align over curb edge (1.8m typical)		Stresscrete
Poles	Class "B" (direct bury) spun concrete pole Electrically grounded	9.9 meters	10.7 meters	Stresscrete Round, Class B – Medium Duty Pole "E-350-BPR-G"

10.0 Wiring

Wiring shall be sized to suit load and voltage drop and be a minimum #4 RWU, Orange Twin.

Up to four standards may be serviced from one circuit. Each pole shall house a fuse holder which shall also be the pole disconnect.

Each separate streetlight circuit shall be wired through a fusing pedestal or similar enclosure for the purpose of isolating it from the main supply transformer.

10.1 Ducts

All wiring shall be placed in ducts between poles. Ducts shall be flexible non-metallic suitable for direct burial sized to suit wire sizes with a minimum of 50mm in diameter.

The ducts shall be assembled as neatly as possible with watertight joints.

Where possible, the bottom of the trench shall be graded so that the duct run will have no sags or depressions in which water will accumulate.

11.0 Standard Location

11.1 Standard Location for Poles

For urban cross sections, poles shall be located at lot lines and 1.8 metres behind the back of the curb.

For rural cross sections, poles shall be located behind the ditch, preferably at lot lines. Due to the variability that may occur in rural subdivision design, the location of the poles may vary between developments. However, the guiding principles for the location shall be:

- In a consistent offset from the property line for each street.
- No closer than 1m to the property line.
- At a location where the luminaire height is within the manufacturers guidelines.

11.2 Spacing Requirement

Spacing of light standards shall conform to the following:

- Standard - maximum spacing 60 m
- Theme - maximum spacing 30 m
- Standard to be placed at each intersection
- Asymmetric distribution throughout the development