

TOWN OF AJAX

DESIGN CRITERIA

SECTION I

STREET LIGHTING

SECTION I - STREETLIGHTING

NOTE: Please be advised that this section is scheduled to be revised in 2005. Until then, this section is to be used for reference only.

Any questions are to be forwarded to Mr. Peter Petriw, P. Eng., of Veridian Connections, at (905) 427-9870 Ext 3252.

I 1.00 GENERAL

Street lighting systems for roadways in the Town of Ajax shall meet the requirements of Veridian Connections in addition to those listed here. The location of street lighting poles and transformers shall be shown on the Utility Coordination Plan.

I 1.01 ILLUMINANCE LEVELS

Average maintained illuminance shall not be less than the values shown in the following table. The ratio of the average to the minimum maintained illuminance shall not exceed 3 to 1, except on local residential streets where the ratio shall not exceed 4 to 1. The ratio of the maximum to minimum maintained illuminance shall not exceed 6 to 1, except on local residential streets where the ratio shall not exceed 8 to 1.

<u>ROADWAY</u>	<u>AVERAGE MAINTAINED ILLUMINANCE</u>
Local	0.6 fc (6.5 lux)
Collector	1.0 fc (11 lux)
Arterial	1.4 fc (15 lux)

Where possible, pole locations shall be placed opposite side lot lines. No street light pole shall be placed within 3.0 m of a transformer.

I 1.02 POLES

Street light poles shall be Ontario Stresscrete or equivalent, spun round concrete of Class B strength or better, with Burndy ground lug in handhole. Poles on local or collector roads shall be 9.1 m overall (30 feet), and arterial roadway poles shall be 13.7 m (45 feet).

I 1.03 BRACKETS

Bracket shall be 1.8 m (six feet) long with 0.9 m (3 foot) rise tapered elliptical aluminum (or steel), single member type complete with pole plate GTE Sylvania #RE6LA, or equivalent.

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I 1.04 LUMINARIES

Luminaries for local and collector roadways shall be 100 watt high pressure sodium type II or III distribution as required (eg. Westinghouse Style OV15). For residential roadways, luminaries shall have integral twist-lock photo control.

Luminaries for arterials shall be 250 watt high pressure sodium type II or III distribution as required (eg. Westinghouse Style OV25).

I 1.05 CONTROLS

Each circuit shall be controlled by 30 ampere single pole normally open relay, complete with twistlock photo control (Ferranti Packard EPAC). Relay shall have separate coil and load fuses. Control on residential collector or local roadways shall be integral to the luminaries.

I 1.06 CABLE

Cable assemblies from transformer vault to pole handholes shall consist of 2 single conductor #2 AWG compact aluminum XLPE/PVC 600 volt and one single conductor #6 AWG bare copper manufactured to IPCEA S-66-524 latest edition. For residential collector and local roadways, cable shall be 2 #10 AWG copper NMW-10.

From pole handhole to luminaries, conductors shall be #12 AWG TWU solid copper.

Splices shall be made only in handholes with Burndy compression conductors and "Scotch" tape.

I 1.07 DUCT

Except for residential collector and local roadways, from the transformer vault, cables shall be installed in 50 mm flexible polyethylene duct suitable for direct buried except 50 mm rigid Type I duct encased in 20 MPa concrete for road crossings. Cover on duct or concrete shall not be less than 0.75 m.

For residential collector and local roadways, cable shall be direct buried 0.75 m below finished grade, except road crossings shall be in encased duct as described above.

I 1.08 GROUNDING

A ground rod shall be installed adjacent to the last pole in each run (at least one for each 9 luminaries).

I 1.09 POLE NUMBERING

Ajax Hydro will provide pole numbers to be painted on street lighting poles. Numbers shall be 40mm (1-1/2") in height with line thickness 6 mm (1/4"). Paint to be Tremclad black enamel.

I 1.10 FUSING

Each street lighting feeder shall be protected at the transformer by suitably sized in-line fuse type K7K (ATM) in waterproof fuseholder.