

PROTECTION

Chapter 1050 LIGHT POLLUTION

CHAPTER INDEX

Article 1 SHORT TITLE

1050.2.1 Short Title

Article 2 INTERPRETATION

1050.2.1 Automatic timing device - defined
1050.2.2 Average maintained horizontal illuminance - defined
1050.2.3 Average maintained vertical illuminance - defined
1050.2.4 Building - defined
1050.2.5 By-law enforcement officer - defined
1050.2.6 Chief Building Official - defined
1050.2.7 Commissioner - defined
1050.2.8 Corporation - defined
1050.2.9 Designated official - defined
1050.2.10 Dwelling unit - defined
1050.2.11 Existing outdoor light fixture - defined
1050.2.12 Grade - defined
1050.2.13 Illuminating Engineering Society - defined
1050.2.14 Internally illuminated sign - defined
1050.2.15 Lamp - defined
1050.2.16 Lane - defined

LIGHT POLLUTION

- 1050.2.17 Light fixture - defined
- 1050.2.18 Lot - defined
- 1050.2.19 Outdoor light fixture - defined
- 1050.2.20 Outdoor recreational facilities - defined
- 1050.2.21 Owner - defined
- 1050.2.22 Person - defined
- 1050.2.23 Shielded - defined
- 1050.2.24 Sign - defined
- 1050.2.25 Street - defined
- 1050.2.26 Street townhouse - defined

Article 3 GENERAL PROVISIONS

- 1050.3.1 Application - all outdoor light fixtures
- 1050.3.2 Exemption - lighting created by combustion
- 1050.3.3 Exemption - street townhouses
- 1050.3.4 Temporary display - celebration
- 1050.3.5 Exemption - existing outdoor fixtures
- 1050.3.6 Erection - use - non-complying - prohibited
- 1050.3.7 Illuminating Engineering Society - lighting handbook
- 1050.3.8 Measurements - imperial - metric

Article 4 INSTALLATION OF OUTDOOR LIGHT FIXTURES

- 1050.4.1 Shielding - required - all outdoor light fixtures
- 1050.4.2 Shielding - not required - types of fixtures - set out
- 1050.4.3 Neon - argon - krypton - shielding not required
- 1050.4.4 Entrance - exit lights - maximum 150 watts
- 1050.4.5 Recreational facilities - during television broadcast
- 1050.4.6 Movies - commercials - film production - under permit

LIGHT POLLUTION

- 1050.4.7 Concerts - public entertainment events
- 1050.4.8 Lighting - multi-directional - modifiable - restriction
- 1050.4.9 Wavelength distribution - restriction
- 1050.4.10 Exemption - outdoor display of merchandise
- 1050.4.11 Exemption - recreation facility - north of Stouffville
- 1050.4.12 Exemption - authorized activities
- 1050.4.13 Mounting height - maximum permissible
- 1050.4.14 Mounting height - calculation
- 1050.4.15 Mounting height - exemption
- 1050.4.16 Automatic timing devices - where required
- 1050.4.17 Automatic timing devices - maintained - in good repair

Article 5

ILLUMINANCE LEVELS

- 1050.5.1 Horizontal illuminance - maximum permissible
- 1050.5.2 Horizontal illuminance - display of merchandise
- 1050.5.3 Horizontal illuminance - recreational facility
- 1050.5.4 Illumination of vertical surfaces - maximum
- 1050.5.5 Exemption - outdoor recreational facilities

Article 6

HOURS OF OPERATION

- 1050.6.1 Turning off outdoor light fixtures
- 1050.6.2 Security - maximum illumination
- 1050.6.3 Recreational use - after 11p.m. - limitation
- 1050.6.4 Entertainment event - after 11p.m. - limitation
- 1050.6.5 Commercial - industrial use - after 11p.m.

Article 7

REPLACING EXISTING OUTDOOR LIGHT FIXTURES

- 1050.7.1 Exemption - limitation

LIGHT POLLUTION

- 1050.7.2 Modification - shielded fixture - to non-shielded fixture
- 1050.7.3 Construction - prior to enactment - conditions

Article 8 PLANS - DOCUMENTS

- 1050.8.1 Lighting plan - required - new construction
- 1050.8.2 Lighting plan - information requirements
- 1050.8.3 Plans - sufficient - complete - to determine compliance
- 1050.8.4 Information - insufficient - other reports - required
- 1050.8.5 Lighting plan - not filed - permit refused
- 1050.8.6 Lighting plan - not filed - site plan approval refused
- 1050.8.7 Lighting plan - not approved - construction prohibited
- 1050.8.8 Light fixtures - installation - as approved - only
- 1050.8.9 Change in light fixtures - approval required

Article 9 COMPLIANCE ALTERNATIVES AND ADMINISTRATIVE EXEMPTIONS

- 1050.9.1 Alternative design - permitted - approval required
- 1050.9.2 Alternative design - approval requirements
- 1050.9.3 David Dunlap Observatory - notification - consultation
- 1050.9.4 Exemption - granted by Council - purpose maintained
- 1050.9.5 Minor variance granted - record kept - open to public
- 1050.9.6 Application for exemption - notice - to Observatory

Article 10 INSPECTION - OFFENCES

- 1050.10.1 Inspectors - appointment
- 1050.10.2 Entry - inspection - authority
- 1050.10.3 Entry - dwelling - consent - warrant - required
- 1050.10.4 Inspector - identification - produced upon request
- 1050.10.5 Inspection - power - authority to question

1050.1.1	LIGHT POLLUTION	1050.2.2
1050.10.6	Inspection - hindered - obstruction - prohibited	
1050.10.7	Inspection - hindered - offence	
1050.10.8	Warrant - application for - reasons	

**Article 11
ENFORCEMENT**

1050.11.1	Fine - for contravention - failure to perform duty
1050.11.2	Fine - for contravention

**Article 12
ENACTMENT**

1050.12.1	Effective date
-----------	----------------

SCHEDULE

Schedule 'A' - Wavelength Distribution Requirements

**Article 1
SHORT TITLE**

1050.1.1 Citation

The short title for this Chapter shall be the Light Pollution By-law.

**Article 2
INTERPRETATION**

1050.2.1 Automatic timing device - defined

“automatic timing device” means a device which automatically turns light fixtures or circuits on and off.

1050.2.2 Average maintained horizontal illuminance - defined

“average maintained horizontal illuminance” means the density of light flux in an outdoor area or areas calculated:

- (a) on a horizontal plane at ground level;
- (b) as an average flux density over the surface of the outdoor area or areas; and

- (c) applying a light loss factor calculated by methods prescribed by the lighting handbook of the Illuminating Engineering Society or any successor publication;

with calculations made by, or on the basis of lighting plans other information provided by, manufacturers or suppliers of outdoor light fixtures and made in a manner consistent with the lighting handbook of the Illuminating Engineering Society or any successor publication.

1050.2.3 Average maintained vertical illuminance - defined

“average maintained vertical illuminance” means the density of light flux in an outdoor area or areas calculated:

- (a) on a vertical plane at the vertical surface of that part of the building or other structure being illuminated;
- (b) as an average flux density over the entire exterior surface of that part of the Building or other structure being illuminated; and
- (c) applying a light loss factor calculated by methods prescribed by the lighting handbook of the Illuminating Engineering Society or any successor publication; with calculations made by, or on the basis of lighting plans and other information provided by, manufacturers or suppliers of the outdoor light fixtures and made in a manner consistent with the lighting handbook of the Illuminating Engineering Society or any successor publication.

1050.2.4 Building - defined

“building” has the meaning ascribed to it in the *Building Code Act, 1992*.

1050.2.5 By-law enforcement officer - defined

“by-law enforcement officer” means all individuals from time to time appointed by Council of the Corporation as by-law enforcement officers for the purpose of enforcing the provisions of this Chapter.

1050.2.6 Chief Building Official - defined

“Chief Building Official” means the Chief Building Official of the Corporation. By-law 63-95, 20 March, 1995.

1050.2.7 Commissioner - defined

“Commissioner” means the Commissioner of Engineering and Public Works or his or her authorized deputy or representative. By-law 31-07, 26 February, 2007.

1050.2.8 Corporation - defined

“Corporation” means The Corporation of the Town of Richmond Hill. By-law 63-95, 20 March, 1995.

1050.2.9 Designated official - defined

“designated official” means the Commissioner of Engineering and Public Works or any other person designated by Council to administer certain provisions of this Chapter. By-law 31-07, 26 February, 2007.

1050.2.10 Dwelling unit - defined

“dwelling unit” means living accommodation comprising a single house-keeping unit designated or intended for use by one individual or by individuals living together as a single housekeeping unit and consisting of a room or suite of rooms in which both culinary and sanitary facilities are provided for the exclusive use of such individual or individuals.

1050.2.11 Existing outdoor light fixture - defined

“existing outdoor light fixtures” has the meaning ascribed to it in Article 7.

1050.2.12 Grade - defined

“grade” means, with reference to a building or to an outdoor light fixture affixed to a building, the average level of proposed or finished ground adjoining the building at all exterior walls and, when used with reference to an outdoor light fixture affixed to a pole or to a structure other than a building, means the average level of proposed or finished ground immediately surrounding such pole or structure other than a building.

1050.2.13 Illuminating Engineering Society - defined

“Illuminating Engineering Society” means the Illuminating Engineering Society of North America or any successor organization.

1050.2.14 Internally illuminated sign - defined

“internally illuminated sign” means a sign of which all or part of the external surface emits light received from an internal light source.

1050.2.15 Lamp - defined

“lamp” means an artificial source of light and includes a bulb or tube.

1050.2.16 Lane - defined

“lane” means a public or a private means of access which affords a secondary means of access to an abutting property in addition to a street.

1050.2.17 Light fixture - defined

“light fixture” means a complete artificial lighting unit consisting of one or more lamps and ballasting, where applicable, together with parts designed to distribute the light, position and protect the lamps and connect the lamps to the power supply.

1050.2.18 Lot - defined

“lot” means a parcel or tract of land:

- (a) which is a whole lot as shown on a registered plan of subdivision, but a registered plan of subdivision for the purpose of this definition does not include a registered plan of subdivision which has been deemed not to be a registered plan of subdivision under a by-law passed pursuant to subsection 50 (4) of the *Planning Act*, R.S.O. 1990, c. P.13 or a predecessor thereof; or
- (b) which fronts on a street and is a separate parcel of land without any adjoining land being owned by the same owner or owners as of the date of passing of this Chapter; or
- (c) the description of which is the same as in a deed which has been given consent pursuant to section 50 of the *Planning Act*, R.S.O. 1990, c. P.13 or a predecessor thereof.

but for the purpose of this definition, no parcel or tract of land ceases to be a lot by reason only of the fact that part or parts of it has or have been conveyed to or acquired by the Corporation, Her Majesty in Right of Ontario, Her Majesty in Right of Canada, or the Regional Municipality of York.

1050.2.19 Outdoor light fixture - defined

“outdoor light fixture” means a light fixture, permanent or portable, used or for use out of doors, including search lights, spotlights and floodlights but not including internally illuminated signs.

1050.2.20 Outdoor recreational facilities - defined

“outdoor recreational facilities” means land or facilities used for recreational purposes, including without limitation playgrounds, racquet courts, softball diamonds, baseball diamonds, soccer fields or other athletic fields, lawn bowling greens, golf courses, skating rinks, swimming pools and snow skiing, carried on in whole or in part outside a fully enclosed building and together with necessary accessory buildings and structures.

1050.2.21 Owner - defined

“owner” includes the registered owner of real property, the person who owns a leasehold estate in real property, and any person having control of real property, and also includes a person the owner authorizes in writing to act on his or her behalf.

1050.2.22 Person - defined

“person” means any individual, partnership, joint venture, corporation or other entity.

1050.2.23 Shielded - defined

“shielded” means that 98 per cent of the lumens emitted from the light fixture are projected below an imaginary horizontal plane passing through the highest point on the fixture from which light is emitted.

1050.2.24 Sign - defined

“sign” means any advertising device or notice and means any medium including its structure and any other component parts which is used or is capable of being used to attract attention to a specific subject matter.

1050.2.25 Street - defined

“street” means a public highway as defined by the *Municipal Act* and shall exclude a lane or any private right-of-way or unopened road allowance or any street which is shown on a registered plan of subdivision which has been deemed not to be a registered plan of subdivision for the purposes of subsection 50 (3) of the *Planning Act*, R.S.O. 1990, c. P.13 or a predecessor thereof.

1050.2.26 Street townhouse - defined

“street townhouse” means a building divided vertically into three or more dwelling units, each of which shares a wall above grade, and each of which has frontage on a street.

Article 3**GENERAL PROVISIONS****1050.3.1 Application - all outdoor light fixtures**

Except as otherwise provided in this Chapter, this Chapter applies to all outdoor light fixtures erected, installed or used in the Town in conjunction with:

- (a) commercial uses, including parking lots;
- (b) industrial uses;
- (c) institutional uses;
- (d) recreational or athletic uses; or
- (e) residential uses of five dwelling units or more on a single lot.

1050.3.2 Exemption - lighting created by combustion

All outdoor light fixtures which produce light directly or indirectly by the combustion of natural gas or other fossil fuels, such as gas lamps, are exempt from the requirements of this Chapter.

1050.3.3 Exemption - street townhouses

Outdoor light fixtures used exclusively in conjunction with street townhouses are exempt from the requirements of this Chapter.

1050.3.4 Temporary display - celebration

Nothing in this Chapter prohibits the temporary display of incandescent lights, other than search lights, as part of the celebration of a religious or cultural event during a reasonable period of celebration of that event which reasonable period shall in no event extend for more than 30 days prior to the date of the event or celebration or 30 days after such date.

1050.3.5 Exemption - existing outdoor fixtures

Except as provided in Sections 1050.7.1 through 1050.7.3 inclusive the provisions in Articles 4 and 5 do not apply to outdoor light fixtures existing and installed prior to the effective date of this Chapter.

1050.3.6 Erection - use - non-complying - prohibited

No person shall erect, install or use, or permit to be erected, installed or used, an outdoor light fixture otherwise than in compliance with the provisions of this Chapter.

1050.3.7 Illuminating Engineering Society - lighting handbook

Despite any other provisions in this Chapter, nothing in this Chapter shall have the effect of requiring outdoor lighting which provides a lower level of illuminance for a use or activity than the minimum level of illuminance recommended for such use or activity in the lighting handbook of the Illuminating Engineering Society in effect at the time of installation or replacement of outdoor light fixtures or any successor publication.

1050.3.8 Measurements - imperial - metric

The references to foot candles in this Chapter are for convenience only and represent the approximate imperial equivalent of the measurements expressed in lux. When the measurements expressed in lux and foot candles are different, the measurements expressed in lux shall prevail.

Article 4**INSTALLATION OF OUTDOOR LIGHT FIXTURES****1050.4.1 Shielding - required - all outdoor light fixtures**

Except as provided in Sections 1050.4.2 through 1050.4.6 inclusive no person shall erect, install, or use, or permit to be erected, installed or used, an outdoor light fixture which is not shielded.

1050.4.2 Shielding - not required - types of fixtures - set out

The outdoor light fixtures that are not required to be shielded are as set out in Sections 1050.4.3 through 1050.4.6 inclusive.

1050.4.3 Neon - argon - krypton - shielding not required

Outdoor light fixtures which are illuminance tube lighting containing neon, argon or krypton, are not required to be shielded.

1050.4.4 Entrance - exit lights - maximum 150 watts

Outdoor light fixtures illuminating building entrance or exit doorways where such fixtures are incandescent fixtures with each fixture having light sources totalling not more than 150 watts and provided that there are not more than two fixtures lighting each entrance or exit doorway, are not required to be shielded.

1050.4.5 Recreational facilities - during television broadcast

Outdoor light fixtures used exclusively for and in connection with the television broadcasting of events at outdoor recreational facilities, but only while the television broadcasting is being carried on, are not required to be shielded.

1050.4.6 Movies - commercials - film production - under permit

Outdoor light fixtures used exclusively for and in connection with the production of movies or commercials, but only while production is being carried on and provided that any permits required from the Corporation or any other governmental authority for the production of such movies or commercials have been obtained, are not required to be shielded.

1050.4.7 Concerts - public entertainment events

Outdoor light fixtures used exclusively for and in connection with the presentation of concerts, plays or other non-athletic entertainment events in parks or on other land owned by the Corporation and used for public purposes, are not required to be shielded.

1050.4.8 Lighting - multi-directional - modifiable - restriction

Where outdoor light fixtures are required to be shielded, no person shall erect, install or use, or permit to be erected, installed or used, an outdoor light fixture which is of a design which allows the direction of light projection to be modified after installation unless the outdoor light fixture is shielded in all possible configurations of the fixture.

1050.4.9 Wavelength distribution - restriction

Except as provided in Sections 1050.4.10 through 1050.4.12 inclusive no person shall erect, install or use or permit to be erected, installed or used a lamp or an outdoor light fixture which includes or is designed to include a lamp which is of a type other than:

- (a) incandescent;

- (b) low pressure sodium;
- (c) high pressure sodium;
- (d) carbon arc; or
- (e) any other type which satisfies the wavelength distribution requirements set out in Schedule 'A'.

1050.4.10 Exemption - outdoor display of merchandise

The provisions of Section 1050.4.8 do not apply to lamps or outdoor light fixtures that illuminate areas used for the outdoor display of merchandise for sale, provided that the applicable zoning by-law and other applicable law permits such outdoor display of merchandise.

1050.4.11 Exemption - recreation facility - north of Stouffville

The provisions of Section 1050.4.9 do not apply to lamps or outdoor light fixtures lighting outdoor recreational facilities located north of Stouffville Road.

1050.4.12 Exemption - authorized activities

The provisions of Section 1050.4.9 do not apply to lamps or outdoor light fixtures which come within the provisions of Sections 1050.4.5 through 1050.4.7 inclusive.

1050.4.13 Mounting height - maximum permissible

Except as provided in Section 1050.4.13, no person shall erect, install or use or permit to be erected, installed or used an outdoor light fixture at a mounting height above the higher of:

- (a) 253 metres above sea level; or
- (b) 9.2 metres above grade.

1050.4.14 Mounting height - calculation

Mounting height refers to the height of the lamp, or the highest of the lamps if there is more than one lamp, forming part of the outdoor light fixture.

1050.4.15 Mounting height - exemption

There is no restriction on the mounting height of outdoor light fixtures lighting outdoor recreational facilities or streets.

1050.4.16 Automatic timing devices - where required

No person shall erect, install or use or permit to be erected, installed or used, outdoor light fixtures in conjunction with uses described in Sections 1050.3.1 unless a sufficient number of such outdoor light fixtures are equipped with automatic timing devices which turn off outdoor light fixtures between 11 p.m. and sunrise the following day to satisfy the requirements of Sections 1050.6.1 through 1050.6.5 inclusive.

1050.4.17 Automatic timing devices - maintained - in good repair

The owners of real property on which outdoor light fixtures have been equipped with automatic timing devices shall maintain the automatic timing devices in a good state of repair and replace any automatic timing devices which are damaged, destroyed or removed.

Article 5**ILLUMINANCE LEVELS****1050.5.1 Horizontal illuminance - maximum permissible**

All persons erecting, installing or using, or permitting to be erected, installed or used, outdoor light fixtures in conjunction with uses described in Section 1050.3.1 shall ensure that except as provided in Sections 1050.5.2 and 1050.5.3, the average maintained horizontal illuminance of all outdoor areas on a lot shall not exceed 16.4 lux (1.5 foot candles).

1050.5.2 Horizontal illuminance - display of merchandise

All persons erecting, installing or using, or permitting to be erected, installed or used, outdoor light fixtures in conjunction with uses described in Section 1050.3.1 shall ensure that in an area used for the outdoor display of merchandise for sale, provided that the applicable zoning by-law and other applicable law permits such outdoor display of merchandise, the average maintained horizontal illuminance shall not exceed 215.2 lux (20 foot candles).

1050.5.3 Horizontal illuminance - recreational facility

All persons erecting, installing or using, or permitting to be erected, installed or used, outdoor light fixtures in conjunction with uses described in Section 1050.3.1 shall ensure that in an outdoor recreational facility, the average maintained horizontal illuminance shall not exceed 323 lux (30 foot candles).

1050.5.4 Illumination of vertical surfaces - maximum

Except as provided in Section 1050.5.5, where vertical surfaces of

buildings or other structures are illuminated for decorative purposes or for any other purpose, the average maintained vertical illuminance of such vertical surfaces shall not exceed 64.6 lux (6 foot candles).

1050.5.5 Exemption - outdoor recreational facilities

The provisions of Section 1050.5.4 shall not apply to outdoor light fixtures installed in conjunction with outdoor recreational facilities.

**Article 6
HOURS OF OPERATION**

1050.6.1 Turning off outdoor light fixtures

All owners of property on which outdoor light fixtures are erected, installed or used in conjunction with the uses described in Section 1050.3.1 shall ensure that those outdoor light fixtures are turned off between 11:00 p.m. and sunrise the following day except as set out in Sections 1050.6.2 through 1050.6.5 inclusive.

1050.6.2 Security - maximum illumination

Outdoor light fixtures may remain on to illuminate outdoor areas for security purposes provided that the average horizontal illuminance of outdoor areas shall not exceed:

- (a) 10.76 lux (1 foot candle) for all outdoor areas other than those described in Section 1050.6.2(b); and
- (b) 53.8 lux (5 foot candles) in any area which is used for the outdoor display of merchandise for sale, provided that such outdoor display of merchandise is permitted under the applicable zoning by-law or any other applicable law.

1050.6.3 Recreational use - after 11 p.m. - limitation

Where an outdoor recreational use in an outdoor recreational facility continues after 11 p.m., outdoor light fixtures required to be on in connection with that use are permitted, but only while that use continues.

1050.6.4 Entertainment event - after 11 p.m. - limitation

Where a concert, play or other entertainment event in a park or on other land owned by the Corporation and used for public purposes takes place or continues after 11 p.m., outdoor light fixtures required to be on in connection with that event are permitted, but only while the event takes place or continues.

1050.6.5 Commercial - industrial use - after 11 p.m.

In an area which is used for commercial, industrial or institutional uses where such uses are carried on after 11 p.m. and personnel relevant to such uses are working on the premises, outdoor light fixtures required to be on in connection with such uses are permitted, but only while such uses are carried on.

Article 7**REPLACING EXISTING OUTDOOR LIGHT FIXTURES****1050.7.1 Exemption - limitation**

Except as provided in Sections 1050.7.2 and 1050.7.3, outdoor light fixtures existing and installed on a lot prior to the effective date of this Chapter (“existing outdoor light fixtures”) are exempt from the provisions of this Chapter save and except the provisions of Article 6.

1050.7.2 Modification - shielded fixture - to non-shielded fixture

No person shall modify or permit to be modified an outdoor light fixture including an existing outdoor light fixture in a way which changes that fixture from a fixture which is shielded to a fixture which is not shielded or from a fixture which satisfies the requirements of Section 1050.4.8 to a fixture which does not satisfy those requirements.

1050.7.3 Construction - prior to enactment - conditions

Where an owner:

- (a) constructs a building on a lot which is used or intended to be used for one or more purposes described in Section 1050.3.1 and on which there are existing outdoor light fixtures; and
- (b) in conjunction with that construction, replaces 50 per cent or more of the existing outdoor light fixtures on the lot or increases by 50 per cent or more the number of outdoor light fixtures existing on the lot immediately prior to the effective date of this Chapter;

the owner shall ensure that all outdoor light fixtures on that lot, including existing outdoor light fixtures, comply with all of the provisions of this Chapter and if existing outdoor light fixtures are required to be replaced or modified to achieve compliance, the owner shall replace or modify those existing outdoor light fixtures.

Article 8**PLANS - DOCUMENTS****1050.8.1 Lighting plan - required - new construction**

Where a person:

- (a) proposes to lay out and establish a commercial parking lot or proposes to construct a building on a lot used or intended to be used for one or more purposes described in Section 1050.3.1; and
- (b) proposes to install or erect outdoor light fixtures in conjunction with such commercial parking lot or building;

that person shall file with the designated official a lighting plan together with related documents and information to satisfy the designated official that the proposed lighting will comply with the provisions of this Chapter. Where the provisions of Section 1050.7.3 apply, the lighting plan, documents and information also shall satisfy the designated official that existing outdoor light fixtures will comply with the provisions of this Chapter.

1050.8.2 Lighting plan - information requirements

The submission shall contain, but shall not be limited to the following:

- (a) plans indicating:
 - (i) the location of all buildings and structures on the property;
 - (ii) location, number, type, position, elevation and mounting height of all outdoor light fixtures;
 - (iii) the number and location of outdoor light fixtures to be equipped with automatic timing devices; and
 - (iv) any building design or other features which may affect the nature, intensity or direction of light emission from outdoor light fixtures;
- (b) description and background information regarding all outdoor light fixtures, including:
 - (i) power (in watts);
 - (ii) type of light source;
 - (iii) filtering, if any;
 - (iv) information evidencing whether or not outdoor light fixtures are shielded;
 - (v) information as to light distribution in the horizontal and vertical planes;
 - (vi) information as to light distribution in the horizontal plane between 11 p.m. and sunrise the following day; and

- (vii) manufacturer's catalogue information and drawings; and
- (c) information regarding the design capability of the outdoor light fixture to permit any change in the items referred to in Section 1050.8.2 (a) and (b).

1050.8.3 Plans - sufficient - complete - to determine compliance

The required plans and descriptions shall be sufficiently complete to enable the designated official to readily determine whether the requirements of this Chapter will be complied with.

1050.8.4 Information - insufficient - other reports - required

If the plans and descriptions referred in Sections 1050.8.2 and 1050.8.3 do not enable the designated official to readily determine whether the requirements of this Chapter will be complied with, the person referred to in Section 1050.8.1 shall submit further evidence of compliance, such as reports of tests evidencing compliance performed and certified by a testing laboratory recognized by the Illuminating Engineering Society.

1050.8.5 Lighting plan - not filed - permit refused

The Chief Building Official shall not issue a building permit for any construction in respect of which a lighting plan is required pursuant to Section 1050.8.1 if the required plan has not been filed and approved by the designated official.

1050.8.6 Lighting plan - not filed - site plan approval refused

When a lighting plan is required to be filed under this Chapter in connection with the laying out and establishment of a commercial parking lot, Council of the Corporation or its designated official for granting site plan approval shall refuse to grant site plan approval for such development if the required lighting plan has not been filed and approved by the designated official.

1050.8.7 Lighting plan - not approved - construction prohibited

No person shall commence construction of any development referred to in Section 1050.8.1 until the lighting plan has been filed and approved by the designated official.

1050.8.8 Light fixtures - installation - as approved - only

Where an approved lighting plan is required, no person shall erect or install, or permit to be erected or installed, outdoor light fixtures except in accordance with the approved lighting plan or a change application approved in accordance with Section 1050.8.9.

1050.8.9 Change in light fixtures - approval required

If there is an approved lighting plan in place and a person proposes to modify the approved lighting plan or to install outdoor light fixtures otherwise than in accordance with the approved lighting plan (including any change in the type of lamp shown on the approved plan) the applicant shall submit a change request to the designated official together with adequate information to evidence compliance with the requirements of this Chapter.

Article 9**COMPLIANCE ALTERNATIVES
AND ADMINISTRATIVE EXEMPTIONS****1050.9.1 Alternative design - permitted - approval required**

The provisions of this Chapter are not intended to prevent the use of any design, material or method of installation not specifically prescribed by this Chapter, provided any such alternate design, material or method of installation has been approved by the designated official.

1050.9.2 Alternative design - approval requirements

The designated official may approve any such proposed alternative provided that he or she finds that it:

- (a) provides at least approximate equivalent to the applicable specific requirements of this Chapter; and
- (b) is otherwise satisfactory and complies with the intent of this Chapter.

1050.9.3 David Dunlap Observatory - notification - consultation

The designated official shall cause the David Dunlap Observatory to be notified of each request for alternate design, material or method of installation prior to making a decision on such request.

1050.9.4 Exemption - granted by Council - purpose maintained

Council of the Corporation may grant an exemption or minor variance from some or all of the provisions of this Chapter upon the application of any person if in the opinion of Council compliance with the Chapter is impracticable and the general intent and purpose of the Chapter is maintained.

1050.9.5 Minor variance granted - record kept - open to public

If the request for an exemption or minor variance is approved by Council, a written record of the request and approval shall be kept by the Corporation and shall be open to public inspection.

1050.9.6 Application for exemption - notice - to Observatory

The designated official shall cause the David Dunlap Observatory to be notified of each application for an exemption prior to Council making a decision on such application.

**Article 10
INSPECTION - OFFENCES****1050.10.1 Inspectors - appointment**

All by-law enforcement officers are hereby appointed inspectors for the enforcement of this Chapter.

1050.10.2 Entry - inspection - authority

For the purpose of determining whether there is compliance with this Chapter, an inspector may have access to or enter any land, building or structure governed by this Chapter between the hours of 6 a.m. and 9 p.m. and may conduct an inspection.

1050.10.3 Entry - dwelling - consent - warrant - required

No inspector may enter a building or structure that is also a dwelling without the consent of the occupant or without first obtaining and producing a warrant.

1050.10.4 Inspector - identification - produced upon request

An inspector conducting an inspection shall produce identification issued by the Clerk of the Corporation upon request.

1050.10.5 Inspection - power - authority to question

Any inspector conducting an inspection may inspect the land, building or structure and may question a person on matters relevant to the inspection.

1050.10.6 Inspection - hindered - obstruction - prohibited

No person shall hinder or obstruct an inspector lawfully conducting an inspection under this Chapter.

1050.10.7 Inspection - hindered - offence

Any person who contravenes Section 1050.10.6 is guilty of an offence.

1050.10.8 Warrant - application for - reasons

An inspector may apply to a justice of the peace for a warrant if:

- (a) the inspector has been denied access or entry to any land, building or structure;
- (b) the inspector has been instructed or directed to leave any land, building or structure; or

- (c) the inspector has been obstructed in the conduct of the inspection.

Article 11 ENFORCEMENT

1050.11.1 Fine - for contravention - failure to perform duty

Whenever in this Chapter there is a duty imposed upon any person and such person fails to perform such duty, such person is guilty of an offence under this Chapter and upon conviction is liable to a maximum fine as established pursuant to the *Provincial Offences Act*, or any successor legislation.

1050.11.2 Fine - for contravention

Without limiting any other provision of this Chapter and in addition thereto, any person who otherwise contravenes the provisions of this Chapter is guilty of an offence and upon conviction is liable to a maximum fine as established pursuant to the *Provincial Offences Act*, or any successor legislation.

Article 12 ENACTMENT

1050.12.1 Effective date

This Chapter shall come into effect upon third reading and passage of the enabling by-law. By-law 63-95, 20 March, 1995.

Note: The *Town of Richmond Hill Act, 1993* permits the Council of the Corporation to pass by-laws for prohibiting or regulating outdoor light fixtures.

LIGHT POLLUTION

SCHEDULE

Schedule 'A' - Wavelength Distribution Requirements

1. For purposes of this Schedule a "total emergent flux" means the total amount of light energy emitted by a lamp in the wavelength band between 320 and 700 nanometres.

2. Lamps and outdoor light fixtures satisfy the requirements of Section 1050.4.9:

- (a) where,
 - (i) not more than five percent of the total emergent flux emitted by the lamp or the lamp or lamps forming part of the outdoor light fixture is at wavelengths between 320 nanometres and 340 nanometres;
 - (ii) not more than twenty percent of the total emergent flux emitted by the lamp or the lamp or lamps forming part of the outdoor light fixture is at wavelengths between 340 nanometres and 440 nanometres; and
 - (iii) not more than fifteen percent of the total emergent flux emitted by the lamp or the lamp or lamps forming part of the outdoor light fixture is at wavelengths between 641 nanometres and 700 nanometres; or
- (b) where the lamp or the lamp or lamps forming part of the outdoor light fixture emit light energy in a smooth continuum without an emission line anywhere in the wavelength range of 320 nanometres to 700 nanometres. By-law 63-95, 20 March, 1995; Schedule 'A'.