Chapter 492

GREEN ROOFS

ARTICLE I
General

§ 492-1. Definitions.

ARTICLE II
Requirement for Green Roofs

§ 492-2. Green roofs required.

§ 492-3. Maintenance of green roofs and health of vegetation.

§ 492-4. Permit required.

§ 492-5. Exemption.

ARTICLE III
Application and Fees

§ 492-6. Application for approval.

§ 492-7. Fees and charges.

ARTICLE IV
Toronto Green Roof Construction Standard

§ 492-8. Purpose of Toronto Green Roof Construction Standard: relation to Ontario Building Code.

§ 492-9. Toronto Green Roof Construction Standard: mandatory provisions.

ARTICLE V
Approval of Application

§ 492-10. Approval by Chief Building Official.

§ 492-11. Exemption or variation of coverage requirement for a green roof by the Chief Planner.

§ 492-12. Cash in lieu of construction of a green roof.

ARTICLE VI
Green Roof Technical Advisory Group

§ 492-13. Green Roof Technical Advisory Group.

§ 492-14. Qualifications for Chair and members of the Green Roof Technical Advisory Group.

§ 492-15. Purpose of the Green Roof Technical Advisory Group.

§ 492-16. Recommendations of the Green Roof Technical Advisory Group.

§ 492-17. Meetings of the Green Roof Technical Advisory Group.

ARTICLE VII
Changes to the Technical Standards

§ 492-18. Changes to technical standards.

ARTICLE VIII
Chief Building Official to Publish Guideline

§ 492-19. Chief Building Official to publish guideline.

ARTICLE IX
Miscellaneous

§ 492-20. Offences.

§ 492-21. Penalty.

[HISTORY: Adopted by the Council of the City of Toronto 2009-05-27 by By-law No. 583-2009.[1] Amendments noted where applicable.]

GENERAL REFERENCES

Building construction and demolition - See Ch. 363.
Development of land - See Ch. 415.
***Building Code Act, 1992* - See S.O. 1992, c. 23.**
***City of Toronto Act, 2006* - See S.O. 2006, c. 11, Sched. A.**
***Nursing Homes Act* - See R.S.O. 1990, c. N.7.**
***Planning Act* - See R.S.O. 1990, c. P.13.**
***Weed Control Act* - See R.S.O. 1990, c. W.5.**

[1] **Editor's Note: This by-law was passed under the authority of section 108 of the *City of Toronto Act, 2006*, S.O. 2006, c. 11.**

ARTICLE I
General

§ 492-1. Definitions.

As used in this chapter, the following terms shall have the meanings indicated:

APPLICABLE LAW - Shall have the same meaning as defined in sentence 1.4.1.3(1) of Division A of the Building Code.

APPLICANT -The owner of a building or property who applies for a permit or any person authorized by the owner to apply for a permit on the owner's behalf.

AVAILABLE ROOF SPACE - The total roof area of the building or building addition excluding:

A. Areas designated for renewable energy devices;

B. Private terraces no greater in area than the floor of the abutting residential unit at the roof level; and

C. In the case of a residential building or a building addition to a residential building, the Required Outdoor Amenity Space. **[Amended 2012-11-29 by By-law No. 1598-2012]**

AVERAGE GRADE - The average elevation of the ground surface measured at the street property line.

BASEMENT - The portion of a building between the first floor and any floor below the first floor.

BUILDING CODE, ONTARIO BUILDING CODE or OBC - Means or refers to Ontario Regulation 350/06 as amended, under the *Building Code Act, 1992*.

CHIEF BUILDING OFFICIAL - The Chief Building Official and Executive Director, Toronto Building.

CHIEF PLANNER - The Chief Planner and Executive Director, City Planning.

COMPLETE BUILDING PERMIT APPLICATION - An application submitted to the Chief Building Official for an above grade building permit which complies with all technical requirements of the *Building Code Act, 1992*, and includes the payment of all applicable fees.

COMPLETE SITE PLAN APPLICATION - An application submitted to the Chief Planner for site plan approval pursuant to section 114 of the *City of Toronto Act, 2006*, and section 41 of the *Planning Act*, and includes the payment of all applicable fees and the submission of all supporting documentation as may be required by the Chief Planner or his delegate.

COOL ROOFING MATERIALS - With reference to an Industrial Building or building addition, means roofing materials with a minimum Solar Reflectance Index ("SRI") of 78. **[Added 2011-12-01 by By-law No. 1381-2011; amended 2013-10-11 by By-law No. 1244-2013]**

FIRST FLOOR - The floor of a building closest to average grade.

FLOOR PLATE AREA - The total area of a floor of a building, measured from the exterior of the main wall of the floor level, including voids at the level of the floor, such as an atrium, mezzanine, stairwell, escalator, elevator, ventilation duct or utility shaft.

GRADE - The finished ground level of the land upon which the building is located.

GREEN ROOF - An extension of an above grade roof, built on top of a human-made structure, that allows vegetation to grow in a growing medium and which is designed, constructed and maintained in accordance with the Toronto Green Roof Construction Standard.

GROSS FLOOR AREA - The total area of each floor level of a building, above and below average grade, measured from the exterior of the main wall of each floor level, including voids at the level of each floor, such as an atrium, mezzanine, stairwell, escalator, elevator, ventilation duct or utility shaft, but excluding areas used for the purpose of parking or loading

HEIGHT - The vertical distance measured between a horizontal line drawn from the average grade to the highest point on the building, but shall not include the following elements located on a roof of the building:

A. Equipment used for the functional operation of the building, such as electrical, utility, mechanical and ventilation equipment;

B. Structures or parts of the building that are used for the functional operation of the building, such as enclosed stairwells, roof access, maintenance equipment storage, elevator shafts, chimneys, vents and water supply facilities;

C. Structures that enclose, screen or cover the elements listed in Subsections A and B above;

D. A flagpole;

E. An antenna; and

F. A satellite dish, provided that no part of such element shall exceed a vertical distance of 25 metres measured from average grade, and further provided that in the case of the elements listed in Subsections A, B and C above, the total area of all of those elements together shall not cover more than 30 percent of the area of the roof.

HOTEL - A commercial establishment offering temporary accommodations on a daily or weekly rate to the public, and where all rooms, suites, apartments or similar forms of accommodation are owned by a single owner or entity.

INDUSTRIAL BUILDING - A building or a building addition exclusively used or designed or intended for use for or in connection exclusively with the manufacturing, producing or processing of goods, warehousing or bulk storage of goods, self-storage facility, distribution centre, truck terminal, research and development in connection with manufacturing, producing or processing of goods, and:

A. Includes office uses and the sale of commodities to the general public where such uses are accessory to and subordinate to an industrial use;

B. Does not include:

(1) A building used exclusively for office or administrative purposes unless it is attached to an industrial building as defined above; or

(2) Warehouse clubs and retail warehouses, including commercial establishments which have as their principal use the sale of goods and merchandise in a warehouse format.

NURSING HOME - A building or portion of a building licensed as a nursing home under the *Nursing Homes Act*.

PODIUM - The base of a building consisting of a base and a tower above the base where the base is two storeys or greater.[2]

PRIVATE TERRACE - Outdoor amenity area on a roof that is available exclusively for use by the occupants of an abutting residential unit for recreational or social activities.

RENEWABLE ENERGY - Energy obtained from solar energy or wind energy.

REQUIRED OUTDOOR AMENITY SPACE - An area located on the roof of a building, intended for recreational use by the residents of the building, but does not exceed the minimum area required under the applicable zoning by-law for the building for outdoor amenity space. **[Added 2012-11-29 by By-law No. 1598-2012]**

RESIDENTIAL BUILDING - A building or building addition where more than 60 percent of the gross floor area of the building or building addition is used, designed or intended to be used for one or more dwelling units, including accessory uses naturally and normally incidental in purpose and exclusively devoted to the residential use, but does not include a nursing home, retirement home or lodge, or hotel.

RETIREMENT HOME OR LODGE - A building or portion of a building which provides room and board accommodation for senior citizens and is not presently governed under any Provincial Act.

---

[2] **Editor's Note: The definition for "OUTDOOR AMENITY SPACE" was deleted November 29, 2012 by By-law No. 1598-2012.**

ROOF - The overhead structural component of a building or a part of a building supported by walls or columns and which functions primarily to shelter the interior of the building from the effects of weather and the infiltration of water.

SOLAR ENERGY - Energy from the sun that is converted to produce electrical or thermal energy.

SOLAR REFLECTANCE INDEX - With reference to an Industrial Building or building addition, is a measurement of a roof's ability to reject solar heat, where a reference black roof (solar reflectance 0.05, thermal emittance 0.90) is 0 and a reference white roof (solar reflectance 0.80, thermal emittance 0.90) is 100. **[Added 2011-12-01 by By-law No. 1381-2011]**

STOREY - The portion of a building, other than a basement, between any floor level and the floor, ceiling or roof immediately above it.

STREET - A public highway.

TORONTO GREEN ROOF CONSTRUCTION STANDARD - The minimum mandatory standards for construction of a green roof as set out in Article IV of this chapter.

TOWER - The portion of a building above the podium of the building, where the tower portion of the building is at least 12 storeys.

VEGETATION - Plants selected in accordance with the plant selection criteria of the Toronto Green Roof Construction Standard.

WIND ENERGY - Energy from the wind that is converted to produce electrical energy.

ARTICLE II
Requirement for Green Roofs

§ 492-2. Green roofs required.

A. Every building or building addition constructed after January 30, 2010, with a gross floor area of 2,000 square metres or greater shall include a green roof with a coverage of available roof space in accordance with the following chart:

Gross Floor Area (Size of Building)	**Coverage of Available Roof Space (Size of Green Roof)**
2,000 — 4,999 m^2	20%
5,000 — 9,999 m^2	30%
10,000 — 14,999 m^2	40%
15,000 — 19,999 m^2	50%
20,000 m^2 or greater	60%

and no person shall construct a green roof or cause a green roof to be constructed unless a permit therefor has been issued by the Chief Building Official. Notwithstanding the foregoing, where a development consists of two or more buildings under a Complete Site Plan Application and the buildings are to be constructed on a phased basis, the first phase of the development shall comply with the Green Roof requirements of this chapter for the building permit being issued and any Green Roof area provided in excess of the minimum Green Roof area required may be applied to subsequent phases of the development. **[Amended 2012-11-29 by By-law No. 1598-2012]**

B. Every building or building addition consisting of a tower above a podium, where no storey in the tower above the podium level has a floor with a floor plate area exceeding 750 m^2, shall be permitted to provide the required green roof area on available roof space at the podium roof level or levels and the roof area of the tower shall not be considered as part of the available roof space for a green roof.

C. In the case of an Industrial Building or a building addition to an Industrial Building, constructed after April 29, 2012, with a Gross Floor area of 2,000 m^2 or greater, the provisions in Subsection A above shall not apply, but the building or addition shall include: **[Amended 2011-02-08 by By-law No. 182-2011; amended 2011-12-01 by By-law No. 1381-2011]**

(1) a Green Roof with a minimum coverage of Available Roof Space that is equal to the lesser of 2,000 m^2 or 10 percent of the Available Roof Space of the building or addition; or; **[Amended 2012-11-29 by By-law No. 1598-2012]**

(2) a roof that uses Cool Roofing Materials for 100% of the Available Roof Space and complies with the stormwater management performance measures required through the Site Plan Approval process, pursuant to Section 114 of the *City of Toronto Act, 2006*, or where Site Plan Approval is not required, retains or collects for re-use at least the first 5 mm from each rainfall or 50 percent of annual rainfall volume falling on the roof through systems that incorporate roof surfaces.

§ 492-3. Maintenance of green roofs and health of vegetation.

Every green roof required to be constructed pursuant to this chapter shall be maintained in accordance with the maintenance plan required in the Toronto Green Roof Construction Standard.

§ 492-4. Permit required.

A. No person shall construct, or cause to be constructed, a green roof required pursuant to this chapter unless a permit has been obtained from the Chief Building Official in accordance with the requirements of this chapter.

B. No person shall materially alter, or cause to be materially altered, a green roof required pursuant to this chapter unless a permit has been obtained from the Chief Building Official in accordance with the requirements of this chapter.

C. Where a green roof is constructed in conjunction with a building or building addition the Chief Building Official may issue a single permit under section 8 of the *Building Code Act, 1992*, for the building or building addition and for the green roof.

D. Where a green roof is proposed although not required under this chapter no person shall construct a green roof or cause a green roof to be constructed unless a permit has been obtained from the Chief Building Official in accordance with the Toronto Green Roof Construction Standard.

§ 492-5. Exemption.

A. Section 492-2 does not apply to a building or building addition if:

(1) A complete building permit application in accordance with section 8 of the *Building Code Act, 1992*, has been submitted for the building or building addition prior to January 31, 2010; or

(2) A complete site plan application has been submitted for the building or building addition prior to January 31, 2010.

B. Section 492-2 does not apply to a residential building or building addition to a residential building with a height less than or equal to the greater of six storeys or 20 metres.

C. Section 492-2 does not apply to an industrial building or building addition to an industrial building constructed prior to April 30, 2012. **[Amended 2011-02-08 by By-law No. 182-2011]**

D. Section 492-2 does not apply to commercial greenhouses located at grade, temporary structures and air supported structures. **[Added 2012-11-29 by By-law No. 1598-2012]**

ARTICLE III
Application and Fees

§ 492-6. Application for approval.

An application for a permit for construction of a green roof shall be made to the Chief Building Official on forms, including a "Green Roof Declaration Form," that may be prescribed by the Chief Building Official from time to time. The "Green Roof Declaration Form" may require information including, but not limited to: structural design; intended use of the roof and whether or not it will be accessible to the public; and fire safety provisions.

§ 492-7. Fees and charges.

A. Where an application for a required green roof is made in conjunction with an application for a permit for construction of a building or building addition under section 8 of the *Building Code Act, 1992*, there shall be no additional fee for the green roof.

B. Where an application for a permit is made for an alteration or renovation to construct a green roof, the fee for the application shall be the same as for the building permit classification "Re-Roofing with structural work, raise roof structure" provided in Chapter 363, Building Construction and Demolition.

ARTICLE IV
Toronto Green Roof Construction Standard

§ 492-8. Purpose of Toronto Green Roof Construction Standard: relation to Ontario Building Code.

A. The purpose of the Toronto Green Roof Construction Standard is to set out minimum requirements for the construction and maintenance of green roofs. The design and construction of a green roof shall meet the City's minimum requirements for green roof construction while also meeting the Ontario Building Code (OBC) requirements. The Toronto Green Roof Construction Standard does not replace or alter any existing OBC requirements, or define a singular code-compliant green roof design.

B. A designer of a green roof shall apply the measures described in this article with reference to the principles governing the OBC requirements related to each measure.

C. This article is considered an acceptable solution for the design and construction of a green roof in addition to the acceptable solutions contained in parts 3 to 12, Division B, of the OBC. Designs shall meet the OBC objectives to demonstrate compliance with the OBC; however a design that complies with the provisions of § 492-9 shall be deemed to comply to such objectives.

D. A green roof designed to the Toronto Green Roof Construction Standard may be constructed on both combustible and non-combustible buildings.

§ 492-9. Toronto Green Roof Construction Standard: mandatory provisions.

The following standards shall be met in the design and construction of a green roof:

A. Green roof assembly.

A green roof assembly shall, as a minimum, consist of a root repellent system, a drainage system, a filtering layer, a growing medium and plants, and shall be installed on a waterproof membrane of an applicable roof.

B. Gravity loads.

(1) The applicant shall calculate green roof gravity loads following the protocol provided by the ASTM standard: "ASTM E2397.05 — Standard Practice for Determination of Dead Loads and Live Loads Associated with Green Roof Systems."

(2) The density of the growing media shall be determined:

(a) In accordance with "ASTM E2399.05 — Standard Test Method for Maximum Media Density for Dead Load Analysis of Green Roof Systems"; or alternatively

(b) The designer may use an un-factored, saturated density of the growing media of 2,000 kg/m^3.

(3) The applicant shall include design loads definition as part of the "Green Roof Declaration" form which shall be required as part of an application for building permit.

C. Slope stability.

All roofs with slopes in excess of 10º (17%) that support green roof assemblies shall incorporate anti-shear measures.

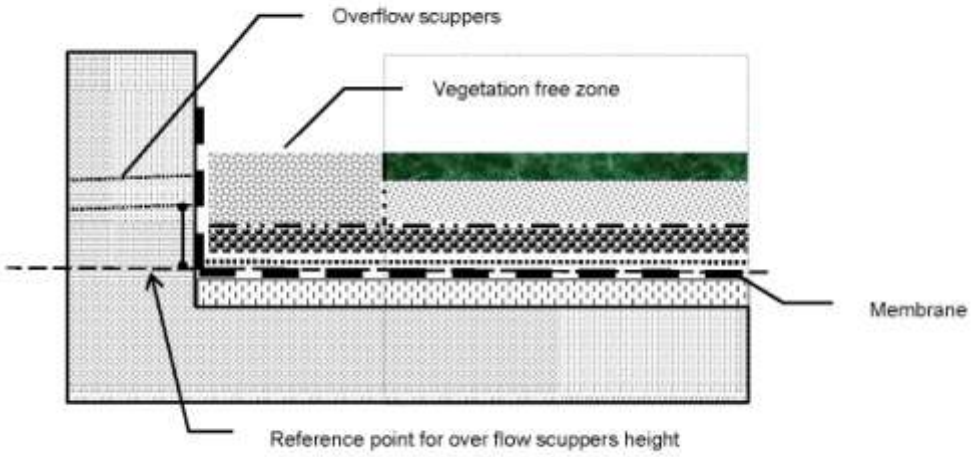
D. Parapet height and/or overflow scupper locations.

(1) Parapets and scuppers shall be specified in the design, as required, to limit retained rain water loads to within structural limits in the event of obstructed internal drains.

(2) Analysis shall be done in conformance with OBC Division B 4.1.6.4.(4).(3).

(3) The referenced point for the overflow scuppers height must be clearly indicated to avoid the possibility of confusing the overflow scupper height as being measured

above the finished green surface or other layer above the waterproofing resulting in higher water load than accounted for by the design as indicated in the sketch below.



E. Wind uplift.

The applicant shall provide a report, stamped by an engineer, providing wind uplift pressures being designed for (including a description of how the pressures were determined), and describing how the design addresses these pressures.

F. Fire safety.

Where roof penetrations, intersecting walls, parapets, upturns or mechanical equipment are clad with combustible materials the design shall include a vegetation-free border zone abutting such features and the vegetation-free border shall be equal to the vegetation height at maturity but in no case be less than 0.5 m.

G. Occupancy and safety.

The applicant shall state, in a green roof declaration form and the green roof application, the use of the roof and whether or not it will be accessible to the public.

H. Waterproofing.

(1) The design and construction shall include the installation of a root barrier in all vegetated roofing systems.

(2) Immediately prior to installation of the green roof, the applicant shall cause to be conducted one of the following leakage testing protocols:

(a) Flood test;

(b) Electric field vector mapping;

(c) Impedance test;

(d) Infrared (IR) thermal imaging;

(e) Low voltage testing;

(f) High voltage testing;

(g) Moisture sensors;

and a report documenting a successful test, signed by an architect or engineer, shall be provided to the Chief Building Official.

I. Drainage.

(1) The design hydraulic load shall be evaluated assuming that the green roof system is fully saturated prior to the maximum fifteen-minute rainfall.

(2) Positive slope to drain shall be provided at the level of the waterproofing membrane.

(3) The system shall permit effective drainage beneath the growth media.

(4) Vegetation-free zones shall be provided around all drains.

J. Water retention.

(1) Water retention mats or equivalent materials shall be employed as required to promote vegetation growth.

(2) The drainage layer shall be appropriate for storm water retention and must be selected following "ASTM E2398-05 Standard Test Method for Water Capture and Media Retention of Geo-composite Drain Layers for Green Roof Systems."

K. Vegetation performance.

In order to support plant survivability:

(1) When structurally possible, the growing media shall be at a minimum 100 mm; or

(2) The applicant shall provide a report confirming that the engineered system as designed provides plant survivability comparable to that of an un-irrigated system with growing media at minimum 100 mm.

L. Plant selection.

(1) Vegetation on a green roof shall not include any noxious weeds as defined in Ontario Regulation 1096 under the *Weed Control Act*, as may be amended from time to time.

(2) The plant selection and design shall be such that within three years of the planting date the selected plants shall cover no less than 80% of the vegetated roof.

(3) Compliance with the plant coverage required in the preceding sentence can be satisfied by a design that will provide one or more of the following:

(a) That seeds for groundcover plantings shall be sown at a rate not less than $325/m^2$;

(b) That cuttings shall be distributed not less than $12kg/100m^2$; and

(c) Either that pre-grown plugs shall be installed not less than $11/m^2$ or a report from the designer that describes how the design fulfills this coverage requirement shall be provided with the application.

M. Irrigation.

Adequate measures shall be provided to permit irrigation necessary to initiate and sustain the vegetation during the service life of the green roof.

N. Maintenance plan.

(1) The applicant shall develop a maintenance plan for the green roof as per CSA-S478-95 "Guideline on Durability in Buildings" which shall define programs of routine maintenance and inspection sufficient to ensure that the green roof components perform their required functions for the duration of their design service lives.

(2) The maintenance plan shall address the requirements of the specified growth media and vegetation for vegetation survival.

(3) The maintenance plan shall address re-planting, in the event that re-planting should become necessary, and assure that complete coverage at canopy level is achieved within three growing seasons and maintained for the service life of the green roof.

(4) The maintenance plan shall be submitted with the application for a permit for a green roof.

ARTICLE V
Approval of Application

§ 492-10. Approval by Chief Building Official.

The Chief Building Official shall approve an application for construction of a green roof that conforms to this chapter by issuing a permit in accordance with section 8 of the *Building Code Act, 1992*, in conjunction with an application for construction of a building or structure that includes a green roof.

§ 492-11. Exemption or variation of coverage requirement for a green roof by the Chief Planner.

[Amended 2012-11-29 by By-law No. 1598-2012]

A. If an applicant is unable to provide the green roof coverage as required in this chapter, application may be made to the Chief Planner for either a complete exemption to the requirement to provide a green roof or to provide a smaller green roof area than would otherwise be required, provided that a cash-in-lieu payment is made in accordance with this chapter, and the Chief Planner shall approve such application and shall notify the local Councillor(s) of the decision.

B. Where an application for a reduced green roof requirement is made to the Chief Planner pursuant to subsection A, no alteration or variance to the technical standards for construction of green roofs as provided in the Toronto Green Roofs Construction Standard shall be permitted.

C. Where the Chief Planner has approved an exemption or variance and the cash-in-lieu payment is made, the Chief Building Official may issue a permit for the related building or building addition as though the applicant was in compliance with this chapter.

§ 492-12. Cash in lieu of construction of a green roof.

A. Where less than the required green roof coverage than otherwise would be required by this chapter is provided, either because of a variance or exemption approved by the Chief Planner, the applicant shall make a payment of cash-in-lieu of construction of a green roof for the reduced or exempted area based on the average actual cost of construction of a green roof which at the time of the passing of this chapter shall be deemed to be $\$200.00/m^2$. **[Amended 2012-11-29 by By-law No. 1598-2012]**

B. The Chief Planner shall from time to time, and at least bi-annually, report to City Council on the cost of construction for a green roof and shall recommend changes to the base sum in Subsection A to ensure that it reflects the prevailing average actual cost of construction of a green roof.

C. All of the funds collected as cash in lieu of construction of a green roof shall be segregated and directed to the Eco-Roof Incentive Program of the City for the provision of green roofs. **[Amended 2012-11-29 by By-law No. 1598-2012]**

ARTICLE VI
Green Roof Technical Advisory Group

§ 492-13. Green Roof Technical Advisory Group.

A. The Chief Building Official shall appoint a chair and 10 members of the Green Roof Technical Advisory Group.

B. The Chair and members of the Green Roof Technical Advisory Group shall be appointed for a term of three years, and may be re-appointed for an additional term of three years.

C. The Office of the Chief Building Official shall provide staff support, including secretariat duties, for the Green Roof Technical Advisory Group.

§ 492-14. Qualifications for Chair and members of the Green Roof Technical Advisory Group.

A. Persons appointed as the Chair or as a member of the Green Roof Technical Advisory Group shall possess expert knowledge and professional qualification concerning green roof technology and have a working familiarity with the building code.

B. Membership in the Green Roof Technical Advisory Group shall be representative of various sectors including the following:

(1) Enforcement of regulations and administration of the building code sector including but not limited to members from staff of Toronto Building and the Building and Development Branch of the Ministry of Municipal Affairs;

(2) Design sector;

(3) Material and component manufacturers and suppliers sector;

(4) Construction sector;

(5) Research sector including but not limited to persons involved in green roof research and testing in a professional academic institution, school of engineering or architecture; and

(6) Green roof industry sector being individuals working in the green roof industry.

§ 492-15. Purpose of the Green Roof Technical Advisory Group.

A. The Green Roof Technical Advisory Group shall make recommendations for consideration by the Chief Building Official with respect to:

(1) Technical issues relating to the creation, implementation and development of the City of Toronto Green Roof Construction Standard;

(2) Possible amendments to the Toronto Green Roof Construction Standard; and

(3) Take part in periodic review of the Toronto Green Roof Construction Standard.

§ 492-16. Recommendations of the Green Roof Technical Advisory Group.

A. The Green Roof Technical Advisory Group shall consider and comment upon the following matters in making recommendations for consideration by the Chief Building Official:

(1) Policy directions from City Council related to requiring and constructing green roofs;

(2) The City's green roof strategy as expressed in the document "Making Green Roofs Happen";

(3) Consultations with stakeholders from government, industry, and the community at large;

(4) Technical viability of existing or proposed standards for green roofs;

(5) Consistency of the green roof standards with objectives of the building code;

(6) Impacts of the green roof standard on the interests of stakeholders and the economic feasibility of the recommendation; and

(7) The enforceability of the recommendation if implemented as part of the green roof standard.

§ 492-17. Meetings of the Green Roof Technical Advisory Group.

A. The Green Roof Technical Advisory Group shall meet at the call of the Chief Building Official and the meeting shall consider the matters set out in a meeting agenda prepared by Toronto Building staff.

ARTICLE VII
Changes to the Technical Standards

§ 492-18. Changes to technical standards.

A. The Chief Building Official shall periodically review the Toronto Green Roof Construction Standard and, after consultation with the Green Roof Technical Advisory Group, recommend amendments to City Council to reflect the City's experience with green roofs and new construction techniques and materials.

ARTICLE VIII
Chief Building Official to Publish Guideline

§ 492-19. Chief Building Official to publish guideline.

A. The Chief Building Official shall, after consulting with the Green Roof Technical Advisory Group, periodically develop and publish green roof construction guidelines and best practices to assist designers and others to design and construct green roofs in accordance with the Toronto Green Roof Construction Standard.

ARTICLE IX
Miscellaneous

§ 492-20. Offences.

A. Every person who contravenes a provision of this chapter is guilty of an offence.

B. Every director or officer of a corporation who knowingly concurs in a contravention of this chapter by the corporation is guilty of an offence.

C. Every person who fails to comply with a term or condition of a green roof permit under this chapter is guilty of an offence.

D. Every person who contravenes an order under subsection 384(1) or 385(1) of the *City of Toronto Act, 2006*, is guilty of an offence.

§ 492-21. Penalty.

Every person convicted of an offence under this chapter is liable to a maximum fine of not more than $100,000.