



City of Cambridge

O-7
IN CITY COUNCIL
December 3, 2018

COUNCILLOR KELLEY
COUNCILLOR ZONDERVAN

- WHEREAS: Flat roofs and associated central drains on residential three-story homes can lead to more storm water entering Cambridge's sanitary sewer; and
- WHEREAS: These flat roofs may be on homes that have been insulated or otherwise improved for energy efficiency with the result that snow and/or ice during the winter may build up amounts unanticipated by the original building designers; and
- WHEREAS: Climate change appears to be bringing more episodes of heavy snow and rainfall during winter months, as experienced during the winter of 2014-2015 and again in 2017-2018, and with clogged drains this results in more buildup of snow, ice, and water on flat roofs than may be safe, especially with an energy-efficient building which helps keep rooftop ice and snow from melting away; and
- WHEREAS: Retrofitting flat roofs to allow angled drainage to the side of residential three-story houses would alleviate snow, ice, and water buildup safety concerns and would decrease the amount of storm water going into Cambridge's sanitary sewer system; and
- WHEREAS: The expensive alteration of putting a pitched roof on a flat roof could be offset by the added value of increasing interior space in the existing home and possible improving other options for room use; and
- WHEREAS: The extra height and living space created as a result of installing a pitched roof may negatively impact neighbors; and
- WHEREAS: The Special Permit process used for other challenging zoning situations may be appropriate in this case; now therefore be it

ORDERED: That the City Council refer to the Ordinance Committee and the Planning Board, for hearing and report, the proposed amendments to Article 5.000 of the Cambridge Zoning Ordinance:

Proposal for converting flat concave roofs to a kind of greenhouse/glass porch

Z.O. 5.55

In an effort to enhance the City's commitment to mitigating environmental impacts of certain older types of residential buildings, namely so-called "triple-deckers", while improving the City's storm-water management, modifications to the applicable dimensional requirements of this Article 5.000, in particular regarding FAR and height limitations, may be authorized under the following circumstances:

Residential buildings with a flat (concave) roof which may have poor upper-level thermal insulation and/or contribute to important heat island effects, or may suffer from the secondary effects of over- insulation, and on which a drain pipe collects water from the roof and combines it with household waste-water, discharging into a single outflow pipe to the municipal sewer line

Provided that the resulting construction will:

significantly increase the thermal efficiency of the building

entirely eliminate rain water entry from the concerned roof into the sewer system, and that

said rain water is harvested on the property at the rate of 1/8 gallon per square foot of roof area, with the remainder dispersed at the ground to follow its natural path without direct encumbrance onto abutting properties,

the construction of a partial structure relieved from the applicable FAR and height limit may be permitted within the following limits:

Additional height not to exceed 10 ft. above the existing roof line of the building

Footprint to be no closer than 3 feet from either long edge or rear side of the building, no less than 6 feet from front/street-side of building, and

Additional FAR not to exceed 20% of the existing FAR of the building.

Furthermore, in enhancing alternative energy sources (Article 22), additional positive consideration will be given to projects that improve the:

installation of solar panels (impractical on residential flat roofs)

use of passive solar heating, convective cooling, seasonal shading with natural plants,

using rainwater at the roof level or floors below,

planting flowering bushes and vegetation attractive to pollinating insects at the roof level, and

harmonization of the new roof profile with the neighborhood architecture.