

Mr. Brian Gregg Chief Administrative Officer, County of Essex  
cc Mr. Tom Bateman, County Engineer, County of Essex

Regarding County of Essex Roadway lighting policy: Environmentally friendly lighting

Some years ago, on behalf of the Royal Astronomical Society of Canada, I presented Essex County engineering administration with a proposal to adopt environmentally friendly lighting practices.

Briefly, this is accomplished through use of a fixture design commonly referred to as full cut-off (FCO). From the perspective of astronomy, these fixtures prevent light wastefully going up into the night sky. With respect to driving safety, they reduce roadway glare to the lowest level possible.

This proposal was greeted favourably and the County joined the other road authorities in the region already using FCO lighting. Our membership was grateful for this display of cooperation on county administration's behalf.

Recently though, it was noted at a number of sites new installations are not the full cut-off fixture design. These units have lenses that sag downward somewhat below the fixture housing, causing some uplight and, additionally, glare. After a few emails I was connected to Mr. Aaron Swartz.

He confirmed that indeed the policy has relented somewhat on this point of environmental concern.

He clearly explained the rationale as to why this has taken place. It was reassuring to learn that we have public officials in place that are conscientious in regard to public safety.

However sound as his arguments would seem, this flies in the face of current roadway illumination research and conclusions. Recently I attended a street lighting symposium in Toronto, The Canadian Street Light Summit. There I learned that the Illuminating Engineering Association of North America, recommends that all rural roadway lighting should be full cut-off, via their "Model Lighting Ordinance" documentation. See attached material.

In the matter of liability, several exhaustive legal reviews have shown that liability exists in the ongoing maintenance of a given policy and NOT the policy itself. Simply, no one is held to a specific set of rigid requirements, but maintenance is bound to whatever guidelines are in place.

The attachments consist of a number of papers from various roadway lighting authorities outlining the superiority of full cut-off illumination. These documents form the basis of the Royal Astronomical Society of Canada's position on roadway illumination.

Therefore we the members of the Royal Astronomical Society of Canada Windsor Centre submit the following requests:

- the county return to exclusive full cut off installation.
- that lighting be installed via a system of warranting and not through citizen complaint/request as is understood to be the current practice.
- that full cut-off luminaires be installed as per manufacturer instruction i.e. level with the horizon and not up-tilted as is the case in many instances. The photometric properties of these fixtures are such that the roadway is illuminated properly when the fixture is in the horizontal position.

Thank you.

Respectfully,

Dan Taylor, Royal Astronomical Society of Canada- Windsor Centre, Light Pollution Abatement Director

Co-signed: