

## Lighting Pole Heights, Depth of Hood, Glare, & Light Pollution

To: Durham Planning Board / From: Joshua Meyrowitz, 7 Chesley Dr / March 17, 2022

On Feb 23, 2022, Toomerfs' engineer, Mike Sievert, said he would be using the same "low-glare" lighting fixtures used at Emery Farms, and he encouraged those listening to go and see them. *I did.*

As perhaps Board Members and Planner Behrendt have already discovered, the Emery Farm light shades are significantly closer-to-the ground than the 14-foot high ones proposed for Church Hill ([p. 4](#)). Thus, they provide a poor model for assessment of light-pollution and cone-of-illumination effects.

Even the *poles* at Emery Farm, which extend over a foot above the light shades, are only 9.7 feet tall. The metal "hoods" that house the bulbs (see pics) are only 8.5 feet off the ground (to their outer rims). The bulbs are barely recessed in those hoods; they are only about 8.7 feet from the ground.

Even with the least-glare view that I was able to photograph (from a distance on the *level* parking field), one can see the brightness of the bulb because of its limited shielding in the shallow hood. A truly low-glare fixture would have the bulb recessed quite a bit deeper into its hood, particularly for taller lights sited on a much higher elevation – all features of the Church Hill Woods parking lot plan.

In short, the Emery Farm lighting poles are only about 60% as high as those proposed for the Church Hill parking mound, and the Emery Farm lot is very level. Once an adult walks about 16-20 or so feet away on level ground (depending on the adult's height), the bulb becomes less visible and less glary, but the illumination at night looking toward the fixture is still rather bright.

The same fixture at a 65% taller mounting, as proposed by Mike Sievert, and especially on the significantly raised plane would be visible with glare from a much greater distance from the light.

What is proposed will NOT be low-glare with the greater height, at the elevation of a 5-story building looming over abutting homes, Chesley Dr, the Chesley Marsh footpaths, and the College Brook Footbridge. Imagine looking up at the Emery Farm fixtures from a sink-hole scores of feet deep!

Thus, lights such as these would deviate from our site-plan regulations by exceeding cone-of-illumination and light-pollution impacts. Please insist that the applicant document compliance to those criteria, whether with these or less glary lights.

Even more problematic: Anyone who now walks through the area at night knows that sweet darkness surrounds a star-lit sky, with the rustle of swaying trees. This has long been a prime joy of the convergence of Church Hill and the Faculty Neighborhood. Adding so much more light than the neighborhood experiences from other existing and permitted uses would be a prominent example of negative impacts under Conditional-Use Zoning criteria. It is the applicant's burden to prove otherwise.





**Having such lights on motion-detected change-of-illumination would not solve the light disturbances for abutting properties and the neighborhood; in some ways, that could make the impact even worse.**