

Solving Real Problems in Transportation Lighting

Recent developments in technologies such as light emitting diodes, electrodeless lamps, and in-pavement warning lights provide new potential solutions for guiding motorists around increasingly complex traffic patterns. The LRC is helping the New York State Thruway Authority (NYSTA) and the New York State Department of Transportation (NYSDOT) to decide which technologies merit further consideration at specific locations within New York State.

Plans for a new NYSTA interchange between I-84 and I-87 in Newburgh, N.Y. call for high-mast lighting as well as localized lighting for maintenance equipment and trucks stored on the site. The LRC assisted NYSTA by reviewing lighting plans and suggesting locations for supplemental lighting, as well as identifying pole locations where shielding should be considered to minimize potential for light pollution and trespass. The LRC also identified where new technologies might be implemented for evaluation. These include electrodeless, fluorescent highway sign lighting (systems to minimize sky glow) and in-ground LED wayfinding systems.



With NYSDOT and the New York State Energy Research and Development Authority (NYSERDA), the LRC is studying solutions for lighting and marking a single-point urban interchange (SPUI) in Utica, N.Y. A SPUI is a complex but efficient intersection involving traffic signal control and multiple lane crossovers. The intersection must provide lighting and marking systems to enable drivers to maneuver accurately through the interchange. Other important considerations are the minimization of light trespass, sky glow, and glare.

LRC rendering of a proposed SPUI viewed from a vehicle at an intersection using LED markers.



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