
February 20, 2024

The Honorable Brian J. Feldman
Chair, Senate Education, Energy, and the Environment Committee
2 West, Miller Senate Office Building
Annapolis, Maryland 21401

RE: Letter of Concern – Senate Bill 405 – Outdoor Lighting – Standards and Use of State Funds

Dear Chair Feldman and Committee Members:

The Maryland Department of Transportation (MDOT) offers the following letter of concern for the Committee’s consideration on Senate Bill 405.

Senate Bill 405 requires the Maryland Department of the Environment to collaborate with several State agencies, including the State Highway Administration (SHA), to develop outdoor lighting standards that consider the impact of energy consumption, the environment, public health, and public safety. Additionally, Senate Bill 405 amends and applies an existing prohibition in State law against using State funds to install or replace a permanent outdoor luminaire to installations in parks and on trails and highways without considering several factors such as energy conservation, light temperature, illumination production, and lumen output.

Appropriate lighting is necessary to ensure a safe road network for all users. According to the Federal Highway Administration (FHWA), the nighttime fatality rate on the Nation’s roadways is three times higher than the daytime rate, and 76% of pedestrian fatalities occur at night. FHWA specifically highlights the benefits of effective roadway lighting, stating that “lighting can reduce crashes up to 42% for nighttime injury pedestrian crashes at intersections, 33-38% for nighttime crashes at rural and urban intersections, and 28% for nighttime injury crashes on rural and urban highways.” SHA is committed to maintaining an appropriate level of roadway lighting in areas with high volumes of pedestrian and bicycle traffic in support of the State’s mission to achieve Vision Zero. Similarly, other roadway features, such as bridges and underpasses, require proper lighting infrastructure to provide a safe level of visibility and for security of the infrastructure. To ensure this, SHA follows its Lighting Design Guide when planning the location and installation of highway lighting infrastructure. The Lighting Design Guide considers safety, light pollution, energy conservation, and maintenance requirements in its recommendations.

SHA is concerned by the provisions of this bill that limit its ability to select and implement luminaires that most appropriately address road safety needs on the State system. For example, the requirement that the light temperature of a luminaire not exceed 3,000 Kelvin will impact SHA’s ability to deliver safe and effective lighting along its road system. According to research from the National Academies of Sciences, Engineering, and Medicine, 4000K LED lighting provides advantages over other lighting levels for driver detection of objects in the roadway, including pedestrians and hazards. This effect is maximized in conditions where lighting solutions result in a high surround ratio.

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SHA understands and appreciates the importance of appropriately designed lighting for the environment, human health, and light pollution. For this reason, it is critical for decisions around lighting applications to be based on appropriate illumination engineering calculations and the context in which the application is used. The FHWA maintains that the balance between the needs of the road user and mitigation of potential impacts of a lighting system must be approached holistically.

In addition, current law creates an exception to the general rule prohibiting procurement of certain luminaires if the luminaire is required for storm operations. Senate Bill 405 modifies this exception and restricts its application to luminaires required for temporary storm operations. Given that all storm operations are temporary conditions, MDOT requests clarification on how the exception would be applied if the bill were to pass as drafted.

Given the clear impact of lighting design and implementation on public safety, it is imperative that SHA maintain the ability to ensure the engineering of lighting solutions is based on accepted best practices to maximize public safety while working to address the overall intent of this legislation.

The Maryland Department of Transportation respectfully requests the Committee consider this information when deliberating Senate Bill 405.

Sincerely,

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