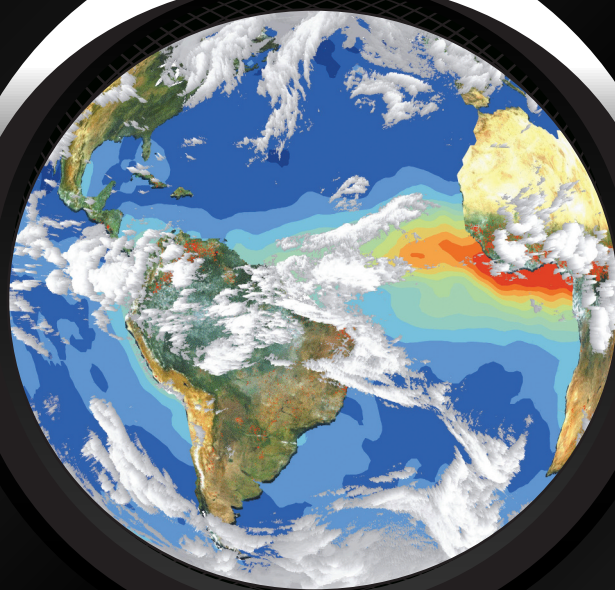


TR NEWS

Climate Change

*Curbing
Transportation's
Contributions*



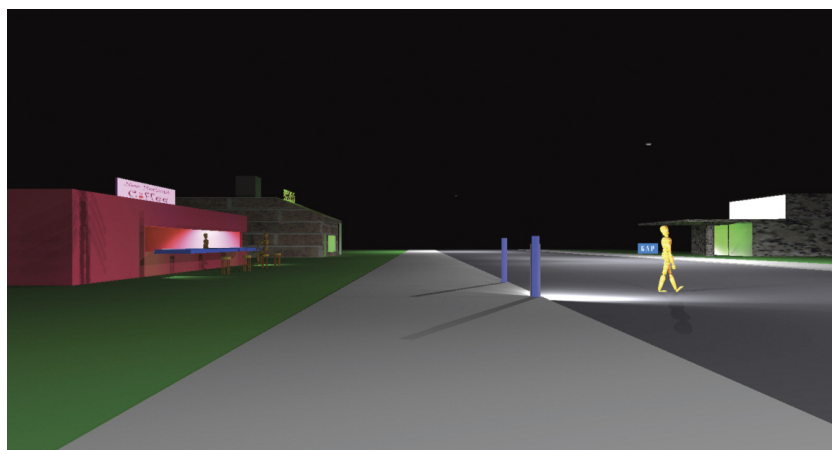


PHOTO: LIGHTING RESEARCH CENTER

The beams from the Lighting Research Center's bollard-based lighting system highlight the pedestrian crossing the street while still providing contrast with the background, making the pedestrian easier to see.

Lighting Innovation Increases Pedestrian Safety

Scientists at the Rensselaer Polytechnic Institute's Lighting Research Center (LRC) are developing a lighting system to increase the safety of pedestrians crossing the street at nighttime. Led by John Bulough, the researchers evaluated different crosswalk lighting systems to determine which would best illuminate the pedestrian and provide enough background contrast to increase visibility. The study was supported by the New Jersey Department of Trans-

portation and the Federal Highway Administration through the University Transportation Research Center at the City University of New York.

Most intersections are lighted by pole-mounted luminaires, which illuminate the crosswalk, pedestrian, and surrounding areas but often do not provide enough contrast between the pedestrian and the background. Researchers devised a lighting system using bollards—short, vertical posts—with linear light sources inside that provided sufficient contrast between the pedestrian and the surroundings. Economic analyses indicated that the installation, maintenance, and operation of the bollard-based system were less expensive than the typical crosswalk lighting system.

A temporary, prototype fluorescent bollard lighting system was installed at a crosswalk along U.S. Route 9 in Middlesex County, New Jersey. Local police and state transportation officials evaluated the prototype and determined that it was likely to increase pedestrian safety but suggested improvements such as louvers to reduce glare, dimming the lights when no pedestrians were present, and installing LEDs on the bollards.

The LRC study is accessible at www.utrc2.org/research/assets/152/FHWA-NJ-2009-0031.pdf.