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**The mission of Iowa's LTAP:** To foster a safe, efficient, environmentally sound transportation system by improving skills and knowledge of local transportation providers through training, technical assistance, and technology transfer, thus improving the quality of life for Iowans.

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## LED . . . continued from page 1

- is replacing all red signal lamps with LED lamps over four years. The red LED lamps are the least expensive of the three colors. One red LED lamp takes about nine months to pay for itself in energy savings.
- is replacing lamps at higher energy consuming intersections first. Lower energy consuming intersections are left until last or, if scheduled for an upgrade within a few years, passed over altogether.
- is installing green LED lamps and pedestrian crossing lamps during the next few years.
- does not plan to switch to yellow LED lamps. Yellow incandescent lamps already last significantly longer than their red and green counterparts because they are "off" most of the time. Therefore, Lang believes that switching to yellow LED lamps would not be cost effective.

### **Bettendorf**

Bob Webster, Bettendorf city electrician, has taken a slightly different approach to replacing signal lamps. Webster

- has replaced red and green incandescent lamps with LED lamps over the past three years in Bettendorf's 38 signalized intersections.
- calculates energy savings of about \$52,000 since the switch to LED lamps. He projects that the entire \$85,000 project will pay for itself in energy savings in less than two years.
- has developed a plan to allocate money over the next five years to maintain and replace LED lamps.
- is installing yellow LED lamps because they will rarely need to be replaced.
- is installing LED lamps in pedestrian crossing lights and obsolete pedestrian signal heads during the coming year, which will save even more money in energy costs.

Webster says that installing LED lamps is relatively easy. Because Bettendorf crews installed the city's new lamps, the city received a \$40 per red lamp rebate from the utility company that supplied them.

### **For more information**

Contact Ken Lang in Ames, 515-239-5535, klang@city.ames.ia.us, or Bob Webster in Bettendorf, 563-344-4055, tbob48@aol.com. •

## **Web-based course for 2002 roadside design**

WOULD YOU like to take a professional course on AASHTO's roadside design guidelines but don't want the hassle and expense of out-of-state travel?

You can. Within 48 hours of signing up online, you can begin taking a new, web-based overview of the *2002 AASHTO Roadside Design Guide* offered by the National Highway Institute.

Completing the course will take approximately 14 hours. Take the course at your desk, at your leisure, and at your own pace; it's available 24 hours a day, 365 days a year. Earn 1.4 continuing education units for completing the course.

### **Objectives**

Upon completing the online course, you will be able to

- apply the clear zone concept to all classes of roadways
- recognize unsafe roadside design features and elements and make appropriate changes
- identify the need for a traffic barrier
- select, design, and install a traffic barrier
- apply safety concepts to roadside features and appurtenance selection/use in work zone
- compare alternate safety treatments and select a cost-effective design
- identify policies and practices that are inconsistent with current state-of-the-art

### **Logistics**

The course is free for FHWA staff. A "get-acquainted-with-web-based-training" special registration fee for state, local, and private sector personnel is \$80. (Compare this to the regular classroom fee of \$400 for two days of training, plus travel and lodging expenses.)

To register, see the NHI's website, [www.nhi.fhwa.dot.gov/](http://www.nhi.fhwa.dot.gov/), and click on the ONLINE COURSE button on the left.

### **For more information**

For registration or other logistical information, contact Eloise Freeman-Powell, course coordinator, 703-235-0553, [eloise.freeman@fhwa.dot.gov](mailto:eloise.freeman@fhwa.dot.gov).

For technical information about the course, contact Richard Powers, 202-366-1320, [richard.powers@fhwa.dot.gov](mailto:richard.powers@fhwa.dot.gov). •