



“Wireless” Traffic Control Solutions

APPLICATION: *High-Water Warning System*

LOCATION: *Harrisonville, Missouri*

Description

Located about 30 minutes southeast of Kansas City, Harrisonville has installed a high-water warning system for the Commercial Street underpass, which is occasionally flooded. City Engineer Ted Martin located STC via the internet and requested a proposal for a system which could alert motorists in case of a flood. While Harrisonville is not a large community, Commercial Street is a busy thoroughfare. Traffic flow on the street includes large trucks which may have difficulty turning around or backing up if the street is flooded.

The city chose to deploy a distributed system solution to warn motorists of problems at the underpass. At the low point of the underpass is a solar-powered sensor station (STC PN 80SHW040XT) which includes a solar power system; control logic for the high- water sensors; redundant high-water sensor units located in the base of the pole with cabling; and a license-free radio link to the slave units. The city also chose to include a wireless alarm card function which provides a computer-generated message: a fax message and a series of e-mails to all parties requiring notification when high water is detected. Upon receipt, the local police department, sends officers to barricade the road and set up an alternate route for motorists.

In advance of the underpass are radio-activated, solar-powered warning flashers with a single 12-inch amber DC LED lamp. The flashers include radio receivers, control logic with LCD screens and are part of the XSR line from STC. The XSR logic devices contain proprietary software that includes screen messages for system status. The system is self-restoring: When the water drops to a safe level for a pre-determined time, the flashers will turn themselves off.



Sensor station assembly at the underpass



Southbound flashing beacon assembly



STC president and chief engineer, Joe Wise was present for the installation and provided on-site instruction and training for the Harrisonville public works personnel involved in the project. The flashers were assembled and planted on site on the first day of the installation, the sensor station was also assembled and then installed and operational by 2 p.m. the following day. Figure 1 shows the sensor station assembly in the underpass and Figure 2 shows the southbound flashing beacon assembly.

Take these steps to insure the success of your solar-powered project:

1. Location - identify the site of the application; for example, the nearest town, village or city and state.
2. Load - specify the number and size of lamps, timers or other controls (anything which draws power).
3. Duty Cycle - determine how many hours per day and which days per week the load will be drawing power.

Go to "Send us your requirements" at www.SolarTrafficControls.com/support/requirements.php for more details.

Solar Power: a free source of energy

STC's solar-powered systems are designed for quick and easy installation in the field. Our careful front-end engineering minimizes your installation costs and provides years of trouble-free operation. The standard solar power system includes the solar array, system enclosure with all the necessary electronics, color-coded wiring harnesses, sealed batteries and full documentation. DC LED lamp kits can also be purchased. These include the LED beacon, lamp housing and mounting hardware.

STC Systems are Cost Effective

Our solar flasher systems allow you to stretch your budget to obtain the traffic safety devices you need at affordable prices. Most systems are equivalent to the cost of obtaining an AC power drop. Battery life is typically three to six years; less expensive than grid electricity for the same period of time.

Solar Traffic Controls (STC) provides solar-powered traffic control systems for city, state and federal DOTs; police, firefighting and public works departments; facility maintenance and plant safety industries. Our primary products are solar-powered flashing beacon systems used for school zones and 24-hour applications. We also supply specialized flasher systems using environmental sensors and custom communications packages to control the flashing beacon systems. Our product spectrum also includes wireless power systems for ITS, EMS and HAR. STC's products and services are sold through a network of regional distributors who offer technical support for your project.

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