

Technology in Rural Transportation



A recent study documented more than eighty proven, cost-effective, “low-tech” solutions to rural transportation needs, most developed or implemented by local transportation professionals. One of these solutions is outlined below:

Learn all about the simple solutions on the Internet at <http://inform.enterprise.prog.org>

The simple solutions report is available from Hau To at (503) 892-2533, or email: to@crc-corp.com

Wireless Pagers to Activate Warning Beacons

Overall goal:

To reduce the costs of installing and operating flashing beacons at schools and to provide greater flexibility and cost-effectiveness in programming the beacons for special events.

Technical approach:

Flashing beacons have been installed to warn drivers that they are in a school zone where children are likely to be crossing. The original system used special timers to activate the beacons just before and after school. Any changes in school hours or special events required a special trip to the location to reprogram the clock.

To streamline this process, a pager-controlled system was designed and built. Each sign installation has a pager and 386-PC, and paging software is used to control the pager units. Messages are sent from the PC to the pagers. These messages contain the unique ID code of the pager and a code to switch the outputs on or off. The use of unique pager codes allows the city to use one pager telephone number for a subset of the school installations covered by the system. The central PC schedule is easily modified and allows greater flexibility for handling special school events.

Current status:

The system is fully operational all city elementary schools.

Location / geographic scope:

The City of Portland, Oregon.

Agencies involved:

The City of Portland Office of Transportation.



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Cost information:

The previous system, with individual timers and the necessary overhead cabling cost about \$2,500 per sign to install. The pager-activated system is much more cost-effective, costing around \$100 per site for the pager units themselves. As the pagers do not require separate housing, this also reduces costs. The paging service costs \$5 per month per number. At present five to six schools utilize one paging number. System software was created in-house.

Key contacts:

Bill Kloos, City of Portland Office of Transportation (503) 823-5382
Paul Zebell, City of Portland Office of Transportation (503) 823-7300

Have goals been achieved?

Yes. The system has reduced costs and streamlined the beacon activation process.

Solution timeline:

As this is a city-initiated solution, there are no plans at present to expand the system to additional cities.

