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

Remote-Controlled "Shadow" Truck

Overall goal:	To reduce the risk of injury or death to drivers of both work zone "shadow" trucks and passing vehicles.
Technical approach:	Using a large dump truck donated by Minnesota DOT, the Strategic Highway Research Program (SHRP) built a prototype remote-control shadow vehicle. The remotely driven shadow vehicle is operated using a radio-control system that controls the truck's steering, brakes, and accelerator, as well as the headlights, horn, turn signals, and emergency flashers. When the remote-control system is turned off, the truck works like any conventional dump truck. In the work zone, the shadow vehicle's driver operates the truck from the relative safety of the roadside. Using the remote controls, the operator keeps the truck a fairly constant distance of 200 to 300 feet behind the work crew. The back end of the truck is equipped with an energy-absorbing cushion that softens the impact should a vehicle crash into the back of the truck. The cushion ensures that the truck helps to protect motorists as well as workers.
Current status:	Following successful testing, the vehicle is now approaching commercial production. A kit that converts a regular truck into a remote controlled truck will soon be on the market as well.
Location / geographic scope:	The test was performed in Minnesota.
Agencies involved:	Minnesota DOT, SHRP.

U.S. Department of Transportation
Federal Highway Administration

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Cost information:	The initial project to convert Minnesota DOT’s truck to remote control cost approximately $75,000. However, the soon-to-be-released conversion kit should only cost around $35,000.
Key contacts:	Glenn Berkman, Project Manager, 320.589.7310.
Have goals been achieved?	Yes. The test proved the effectiveness of using a “shadow truck” to improve the safety of travelers as well as work crews.
Solution timeline:	Project has been deployed.

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