

Idea Exchange

Sign repairs get step up

Green County's patrolmen are finding it easier to replace road signs thanks to an idea from patrolman Alan King. A small step welded to back of the side wing plow puts the worker at just the right height. The step is much more stable than ladders on the sloping ground along roads and the worker's hands are free to easily replace the sign. The 12 x 18 inch step grid costs about \$35 to fabricate from non-slip floor grating.



"We feel these steps have helped us continue to be effective with one-person sign replacements and, more importantly, made them safer operations," says Green County General Superintendent, Jeff Wunschel.

For more information contact Jeff Wunschel, Green County Highway Department, 608/328-9411.

Spray pothole repair update

A Wisconsin business is patching cracks and potholes using the spray injection method we described in the spring '96 **Crossroads**. The equipment propels chips and asphalt at 65 mph which produces a 94% compaction, according to Keven Haser of Fahrner Asphalt Sealers, Inc., Plover, Wisc.

"It's especially effective for potholes on hills," says Haser. They also use the system to prepare and repair chip sealed roads, and to fix surfaces where cracks have caused the road to sink or cup. The injected material fills and levels the area.

Instead of just patching, the technique appears to produce permanent repairs. This method was developed by the federal Strategic Highway Research Program (SHRP).

Fahrner's pricing for repair projects is based on the costs of stone and asphalt used plus \$125 per hour for the two operators and the machine. There is a 10 hour minimum.

For more information contact Fahrner Asphalt Sealers, Inc., Waunakee, Wisc. at 800/898-2102. The T.I.C. presents this information as a service to readers. No endorsement is implied. We welcome information from other businesses or agencies offering comparable services. Call at 800/442-4615 or fax at 608/263-3160 (use the form on page 7).

Counties report on new spreaders

Last fall counties put 103 zero-velocity spreaders with prewetting systems into service as part of the WisDOT Winter Maintenance Initiative. Under the program, every Wisconsin county received at least one new piece of equipment for winter maintenance of state and federal roads. The zero-velocity spreaders propel salt backwards at the same speed that the truck is traveling forward. As a result, deicing material effectively is at a standstill relative to the road surface (it has a velocity of zero).

There were the usual problems with the new equipment: plugging of augers, hose breaks, and equipment calibrations. Some counties modified connections and found ways to help resolve the problems. Tom Lorfeld of WisDOT's Maintenance Office is surveying counties on equipment performance and preferences.

Many counties reported increased efficiency and effectiveness from using the new equipment. Patrolmen could salt at speeds of 35-40 mph compared to the 20-25 mph maximum with ordinary auger/spinner combinations. Directional controls permit them to salt the high sides of curves without having to drive on the shoulders.

According to research, pre-wetting salt saves money and makes roads safer through quicker salt action. When salt was pre-wetted with liquid sodium chloride, 40% remained on the roadway after 1000 vehicle passes at 55 mph, compared to only 10% of dry salt applied at the same rate. Salt pre-wetted with calcium chloride and applied under the same conditions had a 50% retention rate.

The WisDOT Winter Equipment Committee will work through the summer to plan for '96-'97. At their May meeting the committee agreed to order several mobile pavement temperature sensors. (See Winter '96 **Crossroads** page 2 for a description.) These should help supervisors more quickly and easily determine what are the effective de-icing levels and chemicals they should be using.

Some information in this article is adapted from stories in the January and March issues of **Highway Maintenance Matters**, a newsletter of the WisDOT Office of Highway Maintenance.

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