

Rapid repair material cuts time of mending concrete

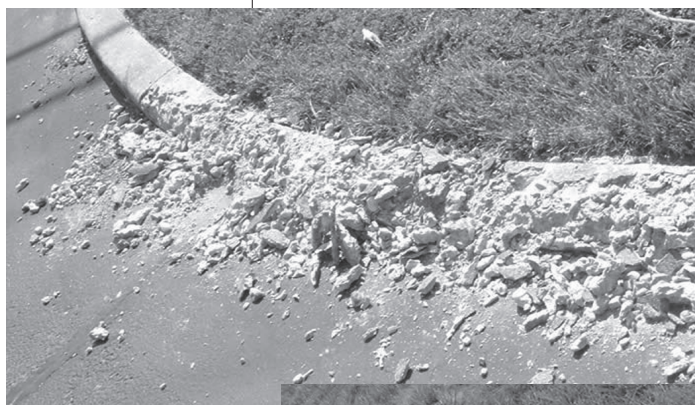
EACH YEAR AS BRIDGE surfaces degrade, they develop multiple potholes. Periodically, the Virginia Department of Transportation must close bridges and perform routine maintenance, often resulting in full-day bridge closings. Bridge closings are never very popular.

Last summer, VDOT used a rapid repair product called Pavemend to repair approximately 155 potholes on a bridge in eight hours, a task that had been predicted to result in a two-day closure.

Pavemend uses non-hazardous inorganic recovered raw materials to replace conventional virgin raw materials. Its manufacturer, Environmental Solutions, Inc. (ESI), employs a chemical bonding process that uses very high percentages of waste or by-products such as coal ash, municipal solid waste ash, foundry sand residue, and dredge material. Pavemend can be used for concrete repairs ranging from curbs and walkways to bridge decks and highways. The product offers several advantages over conventional concrete, such as the use of recyclable materials, low porosity and permeability, wide temperature range for effective curing and rapid set time, and the use of non-potable water, which aids in the conservation of drinking water. In addition, it gives off no problematic emissions or leachates and is recyclable.

Pavemend not only extends the life of bridges, it limits inconvenience to motorists, including tourists and

truckers and those who depend on bridges daily. The material's speed of repair and longevity were put to use last fall on a portion of a bridge on Interstate 95. Multiple bridge joints had deteriorated for more than two years. A failing joint can be extremely hazardous to motorists because it can



The Pavemend product can be used for sidewalk and curb repairs, too.

allow the steel in the road way to pop up, potentially causing accidents and damage to vehicles. Using Pavemend, a 15-foot joint can be ready for traffic in less than one hour. For this project, approximately 140 feet of joint was repaired. The damaged material was removed, the site prepped, and Pavemend was applied. The three-day project was completed at night.

In addition to large-scale operations, Pavemend has been successfully used as part of concrete mainte-

nance programs for curbs and sidewalks. Deteriorated entrance steps at the Ronald McDonald House in Washington, D.C. were fixed with Pavemend. The product was requested because of an urgent need for quick access. Pedestrian access was permitted 20 minutes after Pavemend was applied. Traditional concrete products typically require two hours for initial set and at least six hours before traffic can be allowed.

As shown in the photographs on this page, normal wear and tear, as well as exposure to natural elements, has caused a curb to wear and crumble. Not only is this unsightly, it is potentially dangerous and a legal liability. Typically, the repair would

require a six-person crew working for 16 hours, and, quite possibly, total replacement of the curb. By using Pavemend, curb repairs took only 90 minutes for a two-man crew – saving time and money.

Contact: ESI President Brenda Robinson at 804/740-5605. Environmental Solutions, Inc., a VML sustaining member, is a closely held business with headquarters in Richmond. ESI offers training and consulting, as well as project development and management, using the Environmental Management Systems (EMS) principals. Visit online at www.envirsol.com. 