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ROAD TESTED

An Ounce Of Pothole Prevention Is Worth A Pound Of Blacktop

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It's never been easy for cities and towns to balance their public safety needs with budget constraints.

There are always limited financial resources for taking care of basic public safety functions. All too often, cities and towns are forced to prioritize which services to provide, and important projects like road repairs are often postponed.

Maintaining roadways and repairing deteriorating pavement can cost cities and towns millions of dollars each year. But, mismanaging roadways can create dangerous situations for residents and lead to millions of dollars in unnecessary repairs. That's why it is so important for municipalities to invest in maintenance and prevention.

The essence of a pavement management plan is balancing prevention with safety. Safety, of course, is essential, and requires repairing deteriorating roads that can cause accidents or other hazardous situations.

Prevention, on the other hand, is where cities and towns realize the greatest financial returns on their investment. By anticipating when pavement will require service, and performing maintenance on sections of roadways or sidewalks that are likely to break down or are already showing signs of wear and tear, municipalities can head off problems and



Cities and towns can save millions in road repairs by continuously evaluating pavement conditions.

avoid having to perform more extensive and expensive repairs.

Cities and towns that are most successful focus approximately 80 percent of their resources on prevention and 20 percent on repairs. Unfortunately, many cities and towns take the opposite approach, focusing on repairs, and only after there are already serious problems.

Instead, cities and towns should consider implementing a 10-year plan for maintaining all of their roadways.

There are a number of high- and low-tech tools available to help predict the useful life of paved roadways and sidewalks.

Pavement condition analysis is the starting point. This process begins by individually analyzing and evaluating the condition of each street in a city or town. In addition to recording the condition of individual roads (or stretches of roadway on longer streets), it's advisable to visually record these conditions. One of the best ways to do that is with a bumper-mounted camera that can videotape roadways as engineers or local Department Of Public Works' representatives drive throughout the city or town.

After reviewing the footage and data, engineers assign values of deterioration based on a scale of zero to 100, with zero meaning the pavement is hazardous and repairs are required. A score of 80 to 100 means the

pavement is in excellent condition and no attention is necessary.

Assigned values can then be entered into an asset management database, which can be used to provide a risk/benefit assessment. An asset management software package can pinpoint exactly where service should be conducted, and when it's likely to be required.

It often makes more sense to leave worn pavement alone until the wear and tear impacts the road's functionality. Typically, roads that have been categorized within the 20-to-40 range would fall into this category. By ignoring this level of wear, cities and towns can focus their resources on conducting basic repairs on streets in the 40-to-60 range to prevent further deterioration, and major repairs on roads in the zero-to-20 range.

Communities save money by not having to conduct major repairs so often. And because fewer major repairs are required, it also keeps more roads in service.

Cities and towns can save tens of millions of dollars over the course of a typical 10-year plan. Several towns in the Greater Boston area are currently in the midst of such plans, and they are anticipating up to \$20 million in total savings. ■

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