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CIVIL TALK

CIVIL ENGINEERING ~ SURVEYING ~ GRANT WRITING

A NEWSLETTER FROM HENEGHAN & ASSOCIATES, P.C.

Celebrating Our 22nd Year in Business

February 2009

Funding Facts

The Community Development Assistance Program (CDAP) grants funded through the Department of Commerce and Economic Opportunity (DCEO) and are a valuable source of funds for unforeseen problems and emergencies that may occur within your community or water system. They have an emergency grant application that can be submitted at any time during the year. The maximum amount of the grant, which does not have to be repaid, is \$100,000. The funding must be used to improve public infrastructure and eliminate conditions detrimental to health, safety, and public welfare. Priority is given to emergency related water and sanitary and storm sewer projects. If you have any questions please give us a call, or you may call DCEO at 217-785-6142, or visit their website at www.commerce.state.il.us.

Tip of the Month

Construction projects often create risks in addition to those normally associated with your standard operations as a utility owner. Although you may already carry a variety of insurance coverage, it is still a good idea to ensure that any additional risks associated with a new project will be covered.

One important item all utility owners should consider is to require that the utility owner and their engineer be named as co-insured on the contractor's policy for every construction project.

Green Pavement

We are familiar with green eggs and ham, green grass, the grass is greener on the other side, even green M & M's. But the idea of green pavement is one that some of us might not be so familiar with.

So just what is green pavement? As most of you probably already guessed, this does not mean the pavement is the color green like you see above. In fact green pavement is often gray and sometimes other colors. Green pavement is another facet of the conservation campaign that is so prevalent throughout the United States.

The use of asphalt has been traced back to as early as 625 B.C., and the pavement and asphalt industry has been in existence since the 1800's. Belgian chemist, Edmund DeSmedt, laid the first true asphalt pavement in the United States in 1870. Since then, according to the US Department of Transportation Federal Highway Administration fact and figures for the year 2000, the United States has 3.9 million miles of roadway. That number has significantly increased over the past decade.

While porous pavement is new to some areas, Florida and other states in the southeast have been using green pavement since the 1970's. And like traditional roads, the use of green pavement is also on the rise.

Have you ever watched what happens on regular pavement when it rains? The water tends to pool near the roadside curbing and run toward the storm sewer. When there is a heavy rainfall, water will gush towards the storm sewer. This is what we know as runoff which causes flooding and erosion. The runoff also causes water contamination as it swoops up oil and gas residues, fertilizer and pesticides, winter salt used for de-icing, trash, and other nasty things as it gushes along the streets. The runoff is created because of the traditional nonporous pavement which does not allow the rainwater to seep into the ground.

Green pavement is a concept in green building where the pavement is permeable and porous which allows the rainwater to be absorbed versus running down the street and becoming polluted before dumping into the storm sewer system. With the rainwater being absorbed, there is less concern for

flooding. Green pavement can absorb three to five gallons of rainwater per minute, per square foot, which exceeds the flow rate necessary to prevent runoff in most rainy weather, according to www.concretenetwork.com.

As the rainwater seeps through the porous pavement, it percolates, like in a coffee pot while it seeps to a cleansing layer of rock. The rock serves as a natural filter, clearing the water of pollutants. This process helps to recharge our local groundwater.

While one can already begin to see the benefits of green pavement, other benefits include that in certain cases, permeable pavement can eliminate the need for curb gutters, storm sewers, and even retention ponds, making developments less costly.

With traditional asphalt possessing the tendency to get very hot and creating an area that is hotter than its surroundings, known as a heat island, green pavement does not create this heat effect. Permeable pavement may be warmer in the winter and cooler in the summer due to its light color which radiates less heat. The light colored pavement does not ice-up as quickly in the winter because the melting snow and rainwater doesn't pool on the surface of the green pavement. Consequently, the porous surface provides a safer walking and driving surface.

Green pavement has been successfully used for streets, sidewalks, golf cart paths, retaining walls, French drains, foot and bike paths, parking lots, emergency access lanes, and driveways. In fact, homeowners can receive extra points for porous pavement toward qualifying for Leadership in Energy and Environmental Design (LEED) certification from the U.S. Green Building Council. The Environmental Protection Agency (EPA) list porous pavement as one of its recommended Best Management Practices.

While today's green pavement doesn't have enough load-bearing strength to maintain highway traffic, new breakthroughs in building materials could make that a reality in the future. In fact, a few porous asphalt highways are in use in the United States and Europe. (continued)



SCHOLARSHIP OPPORTUNITY

Attention relatives or friends of high school Seniors

who are interested in College Math, Surveying, or Engineering—

We are now accepting applications for our 9th Annual H&A Scholarships.

Please call Cheryl Moody at 618-281-8133 for details.

February 14th Valentine's Day
February 16th President's Day

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Questions or comments? Call **Craig Olsen** in **Centralia**, **Doug Kinzinger** in **Columbia**, **Curt Westrich** in **Godfrey**, or **Bob Manns** in **Jerseyville**. For address changes or changes/updates to your lists of elected officials, board members, etc., please e-mail **Susan**:

skisinghausen@heneghanassoc.com or call **618-466-8076**.

Green Pavement (Continued)

Green pavement can be made with recycled products and byproducts from other processes which ultimately reduces landfill space.

According to www.howstuffworks.com, there are several different kinds of permeable pavements. One type is a traditional asphalt or concrete with fine particles eliminated to make the substance porous. A second type of permeable pavement is a plastic paver where plastic grids with a honeycomb shape allow vegetation to grow through the holes. Another type of is a concrete paver which is concrete blocks with spaces in between them which allows for improved drainage and water permeability.

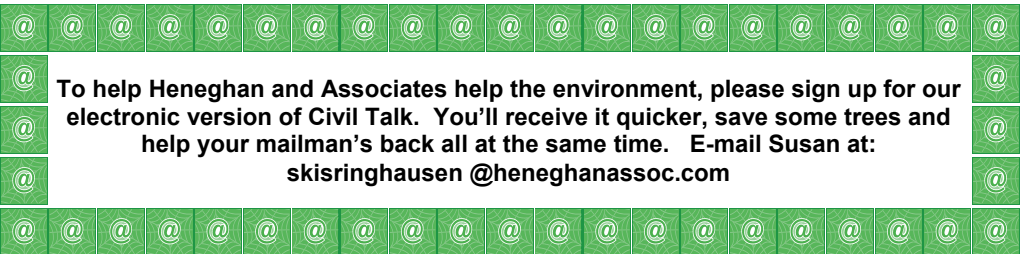
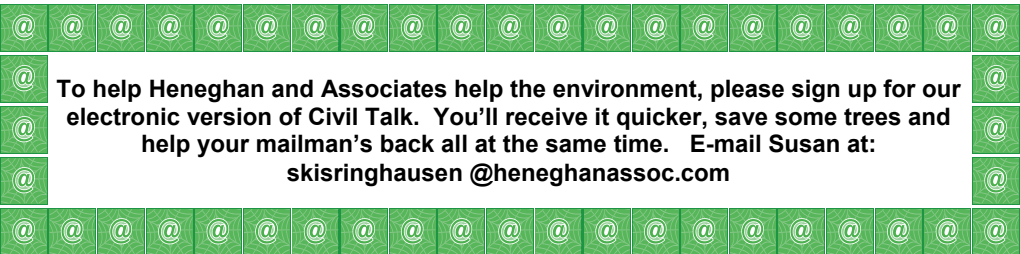
Anyone interested in investing in green pavement should recognize that although it may cost more up front, the cost is worth it in the long run because of its ability to last longer than traditional concrete.

Additionally, green pavement requires less maintenance work.

Like anything else, there are pros and cons. One of the negatives is that in addition to the green pavement products being more costly, they can also be difficult to find. The pavers pose problems for snowplows as the pavers are not smooth surfaced leaving the chance for a plow blade to catch on the edge, tearing up the pavement.

The porous pavement is more susceptible to clogging and actually should be vacuumed or high pressure washed at least two times yearly to remove fine particles that can block the spaces between the pavers.

As with other products, researchers will continue to study ways of improving the relatively new concept of green pavement. Who knows? Maybe someday we will all be driving on a different kind of highway! - CAM


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