

# Good Connections

Vol. 1 Issue 1

Information on Watertight Storm Sewers

## Water Facts

Test your water knowledge by guessing the answers to these water facts.

*(Answers inside)*

How many gallons of water does it take to:

1. Produce an average American Car
2. Raise a Christmas Tree
3. Refine 1 barrel of crude oil
4. Produce a hamburger
5. Water a lawn
6. Wash a car
7. Take a 5 minute shower
8. Flush a water conserving toilet

Source: Water Education Foundation, American Water Works Assoc. & US Dept. of Agriculture

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## BIG SAVINGS WITH FLEXIBLE CONNECTORS

A construction project with a time limit and a penalty clause provides all the encouragement and motivation a good contractor needs to search out the most efficient and economical installation methods that satisfy tough specifications. One such project is the Lockwood Ridge Road connector highway to Route 70 in Manatee County, Florida. The nearly 8 million dollar 2-1/2 mile four lane road project uses over 20,000 feet of concrete pipe from 15" through 60" and connects with over 110 structures using 134 flexible connectors. The engineering firm for the project is Tampa based Post, Buckley, Schuh & Jernigan, Inc.

Frederick Derr & Company, Inc., the general contractor on the job, chose to use flexible connectors where possible as one of the means of assuring completion under the 14 month time limit. According to Mike Limoge of Manatee County, the use of flexible connectors on storm sewers is not new to the county. Both the project engineer, PBS&J, and the Florida DOT approve flexible connectors as an alternative to traditional mortar joints. This was, however, the first time for the contractor. Bill Tarolli, Vice President of Frederick Derr and job superintendent said, "We specified the flexible connectors per Florida DOT standards. This is my first experience with them but they work pretty slick. Time is an important element on this job and, while I don't have exact numbers, I believe we are saving at least 50% of the installation time we would have had with mortar joints." Bill Tarolli joins a long list of Florida contractors who report large savings by using flexible connectors to join storm pipe to structures. Flexible connectors specifically give the contractor advantages in taking the variables out of cost estimating, reducing dewatering costs and fast, easy installation.

System owners also reap large cost savings advantages. Flexible connectors give long term protection against water infiltration with the resulting soil erosion into the storm sewer systems. They provide for economical construction by eliminating costly mortaring and enable normal traffic patterns to be re-established more quickly due to immediate backfill. The system is also effective in reducing

long term maintenance costs. Repair of road surface failure at or around structures is a large budget item for most cities and municipalities. Traditional mortar joints fail relatively quickly and cause subsidence in these areas. Flexible connectors provide long term joint integrity under the most adverse conditions. Finally, gasketed storm connections can provide help meeting the new EPA regulations dealing with non-point source pollution which is closely related to storm water movement. Flexible connectors provide a "win - win" situation for everyone.



Shown are Jimmy Sibley (L), Frederick Derr & Co. and Joe Abraham (R), Atlantic Precast.





The Journal for Surface Water Quality Professionals  
**Stormwater**

## Free Subscription to Stormwater Magazine

Forester Communications, publisher of construction related magazines, has introduced a magazine devoted to stormwater professionals.

For a free subscription, contact Ms. Perveen Dhokal at 800-546-4679 or register online at [www.stormh2o.com](http://www.stormh2o.com).

## Water Facts Quiz Answers

1. 39,000 2. 4,776 3. 1,851 4. 1,303  
5. 300 6. 50 7. 9-12 8. 1.5-2

## FREE Newsletter Subscription

The Watertight Storm Sewer Group newsletter, *Good Connections*, is published semi-annually and is free of charge. If you would like to be added or deleted from our mailing list, fax to Joyce at 717-840-1795 or e-mail [joyce@frankgroupinc.com](mailto:joyce@frankgroupinc.com). Please be sure to reference the *Good Connections* Newsletter in your request.

# First Comprehensive Storm Water Conference Held in Columbus, Ohio

The first Comprehensive Storm Water Conference sponsored by the Watertight Storm Sewer Group was held in Columbus, Ohio on November 29, 2000. The Conference addressed the increasingly important issue of Storm Water Management with emphasis on New Storm Water Regulations and Collection requirements. The presenters included Ronald Moore, Materials Engineer for the Construction Management Division of the St. Louis Metro Sewer District; Robert Phelps, PE, Storm Water Section Manager for the Ohio EPA; Gail Hesse, Environment Manager for the Ohio EPA and John Kurdziel, PE, Technical Director, Press-Seal Gasket Corp.

The Program emphasized that the movement and treatment of storm water effects both the economics and health of the country. State, regional and local government agencies, as well as private owners and designers have been tasked by Federal and State EPA



agencies to comply with the latest amendments to the Safe Drinking Water ACT. In this regard, attention is being focused on storm water and its treatment with emphasis on the introduction of non-point source pollution into drinking water sources. Private and Public entities are also under increasing pressure to design longer lasting roads and highways in order to make more efficient use of funds provided for transportation infrastructure. A significant percentage of the problems associated with road, high degradation and aquifer problems can be traced to traditional construction methods for installing storm sewers. The Storm Water Conference Program offered detailed solutions and answers to meet the newest requirements.

A series of conferences are planned for 2001 and 2002, cities and dates to be determined. The next Storm Water Conference is scheduled to be held on Thursday, March 22, 2001 at Kansas City, Missouri. Invitation requests can be faxed to Joyce at 717-840-1795 or e-mail [joyce@frankgroupinc.com](mailto:joyce@frankgroupinc.com).





# Stay Out of the Corners

Whether you're talking about sports, painting or life's general guidelines, getting cornered is not good! Placing a cut-out in the corner of a square catch basin or manhole has similar negative consequences.

A square or box section has many advantages when used as a manhole or catch basin structure. Primarily though, it allows pipe to be placed in the structure at a perpendicular angle, on a flat wall, that can be easily sealed. Placing the pipe in a corner eliminates this principal benefit.

Pipe, which enter a box structure at a corner, decrease the structural rigidity of the corner and can adversely effect the piece's stability during handling and installation. Due to the skewed angle, which the pipe would enter, a greater area of the structure's wall is also lost. Both of these issues could result in additional cracking as the structure is placed and backfilled. This problem is compounded if the structure is placed under high fill heights.



There are numerous ways to effectively seal a pipe in a flat wall. A flat wall allows the use of connectors, gaskets or other sealing alternatives for the pipe to structure connection. Placing the pipe in the corner eliminates all the options except a mastic or mortar seal. Neither of these options is watertight and both would be difficult to install properly due to the difficulty of consolidating these field-applied materials in the close confined spaces of the corner.

Placing a pipe in a flat wall provides three other walls for pipe inlets and outlets. A corner placement eliminates two walls and decreases not only the number of pipe, which can be placed in the structure but also their locations. Due to the angle of entrance, corner pipes may protrude significantly into the structure and conflict with other inlet or outlet pipe.

Don't get yourself cornered. Place all the pipe to structure connections in the flat walls.

## Storm Water Brown Bag Seminar

Interested in learning about the latest watertight technologies for storm sewers? Or, how your municipality can reduce its road maintenance budget as others have? Or, how flexible connectors assist in reducing non-source pollution, part of the EPA's new Phase II Rules and Regulations? Contact us and the Watertight Storm Sewer Group will come to you and bring lunch for a one-hour educational brown bag seminar at no charge. If you are an Engineering firm, D.O.T., City or Town, please fax Joyce at 717-840-1795 or e-mail [joyce@frankgroupinc.com](mailto:joyce@frankgroupinc.com) in care of the Watertight Storm Sewer Group.

## BENEFITS

### Watertight Storm Sewers Put A Stop To...

- Structural Failures
- Non-Point Stream Pollution
- Groundwater Contamination
- De-Watering of Wetlands

### With Watertight Storm Sewers You Can Count On...

- Faster and Lower Cost Construction
- High Product Quality
- Exceptional Value

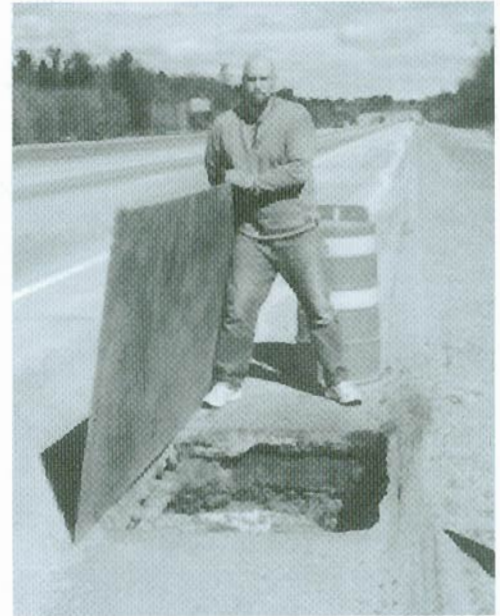
## WANTED Storm Sewer Job Profile Using Flexible Connectors

Do you have an upcoming or in progress drainage job where flexible connectors have been specified or requested? If so, we would like to profile it for an upcoming issue of our newsletter.

Please fax Joyce at 717-840-1795 or e-mail [joyce@frankgroupinc.com](mailto:joyce@frankgroupinc.com).

## Wanted: Road Damage Pictures Reward: \$100.00

Many potholes, subsidence, pavement distress and other road degradation around manhole covers, catch basins and curb inlets are due to using an outdated and old-fashioned method using brick and mortaring storm sewer pipe connections. Every issue, we will publish a picture highlighting road damage associated with not using resilient and flexible connections. If you have an interesting picture and we use it in our issue of Good Connections you earn a \$100.00 reward. Please e-mail your pictures to [joyce@frankgroupinc.com](mailto:joyce@frankgroupinc.com) or mail to Frank Group, Inc., 2555 Kingston Road, Suite 230, York PA 17402. Please be sure to reference the Watertight Storm Sewer Group.



**Beware! You never know what you will find when you pull off the road. On I-95 North of Boston, MA, a catch basin is uncovered.**



**Watertight Storm Sewer Group**

c/o Frank Group, Inc., 2555 Kingston Rd., Suite 230, York, PA 17402

# FREE Newsletter Subscription!

DETAILS INSIDE