

On The Mark

Staff News

Bruce Gustin's Retirement

Benchmark is pleased to share with you news of Bruce Gustin's retirement. Bruce has always planned to relocate to the West and has seized the opportunity. Bruce founded *Benchmark* along with Pete Terry in 1994 and provided expertise in surveying and civil design.

Everyone at *Benchmark* wishes Bruce and Sherry a happy retirement in sunny Arizona!

Joe Gruver, P.L.S. has taken over the responsibilities of the Surveying Department.

Scott Harney's Achievements

Scott Harney, P.E., PTOE completed the requirements for a Master's of Science Degree in Civil Engineering from Villanova University. Scott has been taking classes through Villanova's night program since 2007 and finished his final courses during the summer of 2011.

Scott recently accepted an Adjunct Lecturer position with the Lehigh University Department of Civil and Environmental Engineering. Scott will be teaching their Transportation Engineering Course during the Fall 2011 Semester.

Benchmark congratulates Scott on completing the degree and taking the opportunity to teach others.

Rain Gardens Can Look Great While Helping the Environment

The photo below was taken on a recent tour of stormwater facilities at Villanova University. The image is of a bio-infiltration system, also informally known as a rain garden. Rain garden designs are flexible and typically designed around other site constraints.



Even though the flowering plants are appealing to the eye, they are also an important part of a rain garden. The bowl shape holds runoff water until it can percolate into the soil. Much of the water is absorbed by the plant roots and gradually returned to the atmosphere via evapotranspiration. Some water infiltrates deeper into aquifers which can replenish streams and wells.

If infiltration is a concern because of contamination or sinkholes, the bowl can be lined. This is called bioretention as opposed to bioinfiltration, and relies only on evapotranspiration. In large storms, the excess water is designed to overflow either into a small drain or over the berm.

This particular bio-infiltration area is located in a scenic spot right in front of the admissions office. Bottom line: while it mimics the pre-development stormwater conditions, stormwater facilities can also improve the appearance of the area.



Tractor-trailer Blind Spots and Performance Limitations

How many times have you been driving your car and had a truck change lanes in front of you as if they did not even know you were there? How many times have you been right behind a truck and noticed as you passed through an intersection that the light has changed and you just ran a red light? How many times does it seem that a truck races past you going downhill only to slow down in front of you when you reach the next upgrade?

Sometimes even the best skilled and intentioned truck drivers have no idea that you are behind them, that they block your view of the roadway ahead, or that the power limitations of their vehicles will result in you having to slow down. A tractor-trailer can be nearly seventy feet long and when fully (legally) loaded can weigh upwards of 80,000 pounds. While tractor-trailer drivers have a commanding view of the roadway as they sit up high in the cab, the view to the sides and rear are severely limited due to their reliance on mirrors only.

The figure below (<http://www.truckdriversnews.com/blind-spots-learn-them-and-live/>) indicates the areas which are typically in view for the driver. If you are in one of the blind spots (No Zones) the driver may have difficulty seeing you and providing you the proper courtesy.



Fall is here!

Fall is one of the best seasons for surveying. Whether you require a topographic or a large acreage boundary survey, fall is the time to get started.

When the leaves fall off the trees and vegetation begins its winter dormancy, a surveyor's job is easier. Seeing features and navigating through vegetation is less difficult. This generally results in a more accurate and cost effective survey.

The majority of aerial surveys are performed during the fall due to better accuracy for topographic features.

Benchmark offers surveying services including topographic and boundary surveys. Contact Joe Gruver, P.L.S. (joe.gruver@bencivil.com) to discuss your survey requirements.

While diesel engine technology has made great strides, it is still difficult to create enough power to maintain a truck's speed as it traverses a long or steep grade. The diesel engines only have a narrow band of engine speed through which they have good power. Therefore, they must have multiple gears to accelerate from a stopped condition to a freeway cruising speed.

Our society relies heavily on tractor-trailers to deliver the goods we need so we need to

give them respect and consideration as we share the road with them. Stay out of the "No Zones!" See <http://www.sharetheroadsafely.org/> for more information regarding tractor-trailer safety.

Tell Our Elected Officials How You Want Transportation Infrastructure Funded

Do you support the findings of the Pennsylvania Transportation Funding Commission?

On August 2, 2011 the Commission released their report recommending a wide array of options for funding Pennsylvania's transportation infrastructure. The Commission recommends a number of cost cutting measures such as less frequent renewal of driver's licenses and an increased interval for inspection of newer vehicles.

The recommended revenue enhancements include uncapping the fuel franchise tax, shifting the cost for the state police to the general fund, and increasing driver's license and vehicle registration fees.

Please check out the details of the report at www.tfac.pa.gov, and contact the Governor, your state representative, and your state senator. It is expected that Governor Corbett will release his position on the Commission report in mid to late September.

If you choose not to contact your elected officials, remember that many other people will. Many of them will not share your concern for the condition of our transportation infrastructure. It is truly the time to act.

Public Rights-of-Way Accessibility Guidelines

Sidewalks, street crossings, and other elements of the public rights-of-way present unique challenges to accessibility for which specific guidance is considered essential. Over many years, the U.S. Access Board has developed the Draft Public Rights-of-Way Accessibility Guidelines (PROWAG), which are currently available for public comment.



The guidelines address various issues, including access for blind pedestrians at street crossings, wheelchair access to on-street parking, and various constraints posed by space limitations, roadway design practices, slope, and terrain. The new guidelines will cover pedestrian access to sidewalks and streets including crosswalks, curb ramps, street furnishings, pedestrian signals, parking, and other components of the public rights-of-way. On July 26, 2011, the Board released proposed guidelines for public comment, which are available at www.access-board.gov/prowag/guide/prowguide.htm. You can provide comments through www.regulations.gov until November 23, 2011.

These requirements will become part of the approval process for PennDOT Highway Occupancy Permits (HOPs). PennDOT Strike-off Letter 432-11-02 strengthens the language in Design Manual 2 to require HOP projects to comply with the Draft PROWAG, even prior to their full adoption by the U.S. Access Board.

Benchmark fully supports providing access to all

travelers within our public right-of-ways. We also recognize that this is likely to increase design costs and review periods as well as construction cost. *Benchmark* will focus on reducing the impact of these costs by identifying the requirements early in the design process. We will work to help reduce the impact of these regulations on our economic recovery.



Route 33 Tax Increment Financing District

Discussions are ongoing concerning the Tax Increment Financing District proposed for nearly 690 acres of land in Palmer Township, Northampton County which is predominantly owned by the Chrin Family. A Tax Increment Financing District is a creative way to raise bond revenue to construct infrastructure improvements by selling bonds that will be repaid by developers of lots in the district.

The major improvement that will be constructed is a new interchange on Route 33, which will provide access to the property. Roadway improvements will also be constructed on Route 33 and adjacent to the new interchange. This project includes guarantees from the Chrin Family to repay the bonds in the event that the property does not develop as projected.



Easton-Phillipsburg Route 22 Toll Bridge Rehab Planned

The Delaware River Joint Toll Bridge Commission (DRJTBC) recently conducted public meetings and is accepting public comment on their plan to rehab the Route 22 Bridge over the Delaware River. The bridge was opened in 1938 and is owned by the DRJTBC.



This project will be funded by the commission through the collection of tolls. The rehab construction is expected to start in 2013 and will affect traffic flow for eight months. During this period traffic may be limited to one lane in each direction. The entire project is expected to last 13 months. For more information please visit <http://www.drjtbc.org/default.aspx?pageid=2326>.

The local taxpayers will be protected from potential losses. The local municipalities and school districts would see significant increases in the amount of tax revenue as the property develops. Residential development will not be permitted within the district, therefore this development will have no impact on the local schools. It is estimated that 3600 new jobs would be created with the development of the property.

Approvals are still required from Northampton County and the Easton Area School Board. These governing bodies are expected to make decisions in September 2011. *Benchmark* supports the use of innovative funding mechanisms for transportation infrastructure.

Water Wars

Disputes along water boundaries are an issue in many areas of the country including Pennsylvania. *Benchmark's* Vice President, Bernard M. Telatovich, P.E., Esq. and Dr. Frank Willis, Ph.D., P.E., P.L.S., a renowned expert on riparian boundary issues, are presenting a seminar at various professional land surveying conferences throughout the country on the topic.

This unique seminar covers a myriad of issues related to riparian and boundary rights along watercourses. You can view the course summary at <http://www.psls.org/wp-content/uploads/2011/06/Water-Wars-Half-day-seminar.pdf>.

Along with Mr. Telatovich's expertise in the area, *Benchmark's* registered Professional Land Surveyor, Joseph A. Gruver, P.L.S., can assist you if you have a property related issue along a watercourse.

Please call our office if you have any questions related to your property rights and boundaries along watercourses.

PaDEP Regulation Modification

Riparian Buffer and Riparian Forested Buffers

Recently, the Pennsylvania Department of Environmental Protection (PaDEP) modified their National Pollution Discharge Elimination System (NPDES) regulations. The new regulations (025 Pa. Code 102.14 - effective November 19, 2010) apply to any development adjacent to a watercourse (e.g. river, stream, creek, lake, pond, etc.), when the project is located in an exceptional value (EV) or high-quality (HQ) watershed. No disturbance can occur within the required 150 foot buffer adjacent to any watercourse.

Riparian buffers are permanent areas of native trees and shrubs near a watercourse which improve water quality through the absorption of rainwater, removal of pollutants, and prevention of streambank erosion.



The total amount of tree cover delineates the slight difference between a riparian forested buffer and a riparian

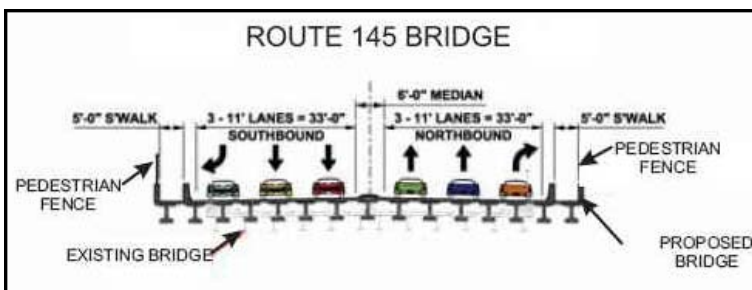
buffer. A riparian forested buffer consists of at least a 60% uniform canopy cover, while a riparian buffer consists of less than 60% uniform canopy cover.

Depending on the location of your site and the condition of the existing buffer area, the regulations may require the protection of existing riparian buffers, the potential conversion of an existing riparian buffer into a riparian forested buffer, or the creation of a new riparian forested buffer. These natural areas help to create a healthier ecosystem and are typically required in distressed areas.

If you are working on a site near a watercourse and are unsure of the potential requirements, please contact Bernie (Bernie.Telatovich@bencivil.com) for further information.

Route 22 Project Status

PennDOT's project to improve Route 22 between Airport Road and 15th Street in Allentown, PA continues along a challenging course. PennDOT has included the replacement of two major structurally deficient bridges: MacArthur Road (Route 145) over Route 22 and the Route 22 Bridge over the Lehigh River in the safety project. PennDOT has been struggling with balancing financial constraints, their desire to widen Route 22 to provide additional through lanes both eastbound and westbound, and their desire to improve the safety in this corridor. The project currently proposes constructing several new bridges, reconfiguring the Fullerton Avenue interchange, and removing the Fifth Street Bridge. The project will be advertised as a design-build-bid project in November 2011. It is likely that major construction will not be underway until late 2012.



This project will construct the MacArthur Road Bridge over Route 22 as a first phase. The project will raise the clearance under the MacArthur Road Bridge to meet current standards and lengthen the bridge so that additional lanes can be accommodated on Route 22. With the replacement of the bridge several of the ramps will be reconfigured.

The improvements to the Lehigh River Bridge are scheduled to start construction in 2013. The new Lehigh River Bridge will be located to the south of the existing bridge and will carry the eastbound traffic. The existing bridge decks will be demolished and the existing piers will carry the westbound traffic on a new bridge deck. The Fullerton Avenue Bridge over Route 22 will be removed and replaced with a longer and wider bridge which will meet current standards for underclearance. The interchange ramps will also be modified to meet current design standards. This includes the ramp onto Route 22 Westbound that is very short today.



As part of the project, PennDOT is removing the bridge which carries Fifth Street over Route 22. PennDOT had previously proposed the removal of the Fifth Street Bridge and replacing it with a "pedestrian only" bridge but has now changed its plans to eliminate the bridge completely unless Whitehall Township agrees to own and maintain the bridge into the future. Whitehall Township has not been supportive of accepting this additional financial responsibility and has not accepted this offer since it will be a significant future cost to maintain the bridge. It is difficult to tell what the final outcome will be concerning the Fifth Street Bridge.

Benchmark continues to provide technical assistance to Whitehall Township concerning the Route 22 Corridor Project. You can view <http://www.22lv.com/index.cfm> for more information regarding the project.

