

SiteLines



Vol. 5 No. 1

The quarterly newsletter of Carroll Engineering Corporation

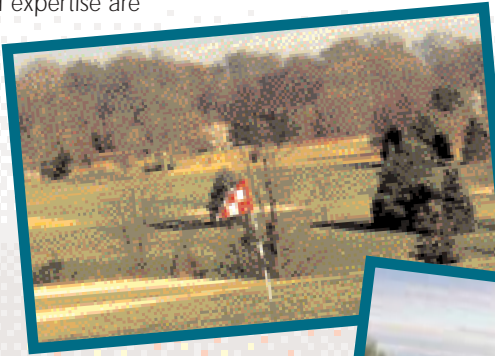
Winter 2004

Golf, anyone? *Carroll has the skills*

For the truly dedicated, the season for golf never closes.

The same might be said for the dedicated professional team at Carroll Engineering whose collective and individual creativity and expertise are employed throughout the year in developing a variety of golf course projects.

Carroll's first involvement with golf course development was in providing engineering and landscape architectural services for North Hills Country Club in Springfield Township, Montgomery County, Pa., which improved portions of its course in the early 1980s.



Soon after, CEC's first significant golf course project was Five Ponds Golf Club for Warminster Township, Bucks County, Pa., for which Carroll provided civil engineering, surveying and landscape architectural services. The firm worked with X.F. Hassenplug, PE, renowned golf course designer, and Hassenplug Associates Inc.

Other golf course projects have included streambank stabilization at Manufacturer's



Are You Aware?

The Pennsylvania General Assembly passed House Bill 51 regarding tapping fees on December 17. Once the governor signs the bill into law, municipal authorities have 18 months before they're required to recalculate fees, unless they're now updating them or setting them for the first time. You can access the bill at www.legis.state.pa.us. If you have questions, please contact Carroll Engineering's Kenneth E. Heydt, PE, at 215.343.5700 or kheydt@carrollengineering.com.

Golf and Country Club in Springfield Township, Montgomery County, and a cart path bridge project at Glenhardie Country Club, Wayne, Chester County.

Since then, CEC has significantly expanded its range of expertise. It entered the field of golf course design when golf course architect Gregory Mellett, RL A, joined the firm in 2000. Soon after Mellett came on board, the department was further strengthened when Carroll teamed with Jim Furyk, 2003 U.S. Open champion, to develop

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CEC Golf Course Consulting

Carroll Engineering's range of services includes:

Golf Course Planning

- Feasibility Studies
- Golf Course Community Master Plans
- Clubhouse Site Design
- Maintenance Facility Site Design
- Landscape Architecture

Golf Course Architecture

- Golf Course Master Plans
- Golf Course Renovation
- Golf Course Restoration
- Practice Facility Design
- Short Course Design
- Construction Management

Golf Course Engineering

- Water Supply
- Stormwater Management
- Wastewater Management
- Structural Design
- Streambank Stabilization
- Erosion Control Design

Golf Course Surveying

- Topographic Survey
- Property Boundary Survey
- Golf Course Construction - Stakeout Survey
- Golf Course Construction - As-Built Survey




From My Chair



Harry J. Barford Jr., PE

At this writing, Carroll Engineering Corporation is looking forward to 2004 and the exciting growth it promises. The improving national economic picture, coupled with our expanded services in the technology, recreation, revitalization and golf course areas, is enabling Carroll to attract new projects and discerning new clients. With great care, we're steering the firm's expansion so that we meet the needs of long-time clients who have been with us for many years...and anticipate and fulfill the expectations of new clients who turn to us for our extensive skills and professional experience.

This fall we opened our third office in a restored historic building at 128 East Lincoln Highway in downtown Coatesville, giving us an actual workplace in Chester County from which to better serve our private and municipal clients in the region. This has been particularly exciting for us, since it places us right in the historic town center as the City of Coatesville undertakes its long-awaited revitalization. Our CEC personnel have an extraordinary opportunity to be active in the city's remarkable evolution, surrounded by the energy of dedicated professionals, community leaders and involved citizens.

Increasingly, we find ourselves in the fortunate position of seeking professional men and women to fill staffing requirements generated by phenomenal growth at all three of our offices. As we go to press, a corporate family of more than 130 Carroll staff, engaged in diverse and satisfying work, is responsible for our firm's continued success. 

Roofing Projects Benefit from CEC's Services

Carroll Engineering does not build roofs. But it can help make the roofs that others build safer and better by preparing plans and specifications, providing construction administration services and inspecting the work.

This summer, CEC was involved in substantial roofing projects for the County of Bucks: the courthouse rotunda in Doylestown Borough and the county corrections center in Doylestown Township. Paul Cardie, PE, was project manager on the two jobs.

Bucks County Courthouse Rotunda

The courthouse project entailed removing the 25,000 square feet of single-ply EPDM from the concrete decks of the fifth- and sixth-floor rotunda roofs before applying a four-ply modified roofing system over rigid insulation.

"A tapered insulation system was installed on the sixth-floor roof to address the lack of drainage that had caused 'ponding' in the past and which could have shortened the new roof's life expectancy," says Cardie. The roofing material was covered with hot asphalt and then topped with loose stone that serves as ballast.

As part of the roofing contract, repairs were made to the masonry "ring" wall and planters that circle the fifth-floor roof area. In addition, extensive soffit repairs were made and covered with an elastomeric coating so the soffits look clean and uniform.

Pro Com Roofing Corp. of Warrington, Pa. completed the \$500,000 project.

In conjunction with the roofing and soffit work, the county replaced all the lighting fixtures—many of which were

damaged—that project down through the fifth-floor soffit. The new roofing system protects the lighting conduit and wiring that lay beneath it, and a skylight cover installed over each light allows maintenance access.

Bucks County Correctional Facility


"The \$1 million roofing project for the correctional facility required complete removal of the existing 90,000-square-foot single-ply EPDM roof and installation of a four-ply modified built-up roof system identical to that on the rotunda," Cardie says.

In addition to the roofing work, the contractor, Noble Roofing Corp. of Richboro, also installed razor ribbon at the perimeter of the roof as part of an overall security upgrade. That upgrade



Bucks County Courthouse, Doylestown, Pa.

included separate installation of security lighting to the roof area and around the facility's yard.

"Both contracts began in the summer and were substantially complete by the fall," notes Cardie. Carroll Engineering provided preparation of plans and specifications and construction administration services for both the roofing and electrical work, and construction inspection for the roofing contracts. 



The Personnel Side of Carroll: *Celebration!*

The Carroll Engineering family celebrated the holidays and 30 years in business during a gala party at the Doylestown Country Club on November 22. Great food, the pleasurable company of coworkers and their guests and fabulous music from the band Generation Gap made it a memorable evening for all.



First MS4 Annual Report Due April 2004

Once again, municipalities with separate storm sewer systems are dealing with the often confusing processes and fast-approaching deadlines for complying with federal and state requirements.

More than one thousand municipalities in "urbanized areas," as defined by the U.S. Census Bureau, are operators of these municipal separate storm sewer systems—or "MS4s."

"Right now," says CEC's Ron Horton, PE, "many municipalities are quickly moving ahead to meet the April 2004 deadline for the first annual report to the Pennsylvania Department of Environmental Protection (DEP). This report chronicles all activities that must be completed in the year ending March 13, 2004."

Carroll Engineering has been keeping its clients up-to-date on National Pollution Discharge Elimination System (NPDES) requirements devised to clean up the nation's streams and rivers to the extent outlined in the 30-year-old Clean Water Act of 1972. As deadlines loom, CEC offers the professionals and expertise to clarify, simplify and complete the requirements municipalities face. Horton has even assembled a document that explains the regulations and processes.

"We've done the homework, and we share that information with the municipalities in easily understood portions, in a timely manner."

The federal government has passed the NPDES Phase II Requirements, which the Environmental Protection Agency has directed the states' environmental protection agencies to administer. (See SiteLines, Spring 2003.)

"Our existing clients count on us to keep them out of trouble and in compliance," says Horton. "Many of them depend on state and federal grant monies for certain projects, and we want to ensure that their report card is in good shape in the eyes of the DEP and EPA."

According to Horton, the requirements for this first year cover two main issues. "Passing certain municipal ordinances is straight-forward, because these have been written and made available by the DEP. More involved is creating a map of the township or borough showing locations of outfalls—any hard pipe or man-made improvement that carries storm water to a stream or creek.

"We have the skills and tools to create this map efficiently from scratch or from the municipality's own data sources. The

municipality can manage the other requirements easily once they've been clarified. Our idea is to keep the municipalities informed so they can leave the more technical work to their professional consultants."



Philadelphia region stormwater entities

Currently, Pennsylvania's DEP protocol for MS4s—approved by the EPA and providing the state with a "general permit"—covers five years, starting March 13, 2003. Most of the affected municipalities adopted the DEP protocol and will comply according to its guidelines and deadlines.

For a copy of Carroll's MS4 Required Elements, contact Ron Horton, 215.343.5700 x488, rhorton@carrollengineering.com, or visit [www.carrollengineering.com's Updates](http://www.carrollengineering.com's%20Updates).

Golf, anyone? *Carroll has the skills ...continued*

golf facilities for municipal and private clients. Mellett is a graduate of the prestigious Cornell University's School of Landscape Architecture—deemed by many to be the best program for golf course architecture in the country—and



sharpened his skills on significant domestic and overseas golf course projects before he became Carroll's lead designer.

"Jim Furyk's unique feel for the game of golf and his ability to visualize a great hole or approach shot combine

beautifully with Greg's gift for working with natural land forms, his skill as a creative and knowledgeable designer and his experience with site development," says Daniel Mullin, RLA, vice president.

Mullin manages the planning and site design arm of the golf facility development team at CEC. His own credentials include study with renowned golf course designers Geoffrey Cornish and Robert Muir Graves at the Harvard Graduate School of Design's golf course architecture conference in 1985.

The team at Carroll is enhanced by senior vice president Russell Dunlevy, PE, lead civil engineer, who has an abundance of municipal experience to his credit that supports the projects now in the works and those anticipated down the road.

Currently, the firm's flagship golf design and construction project with Jim Furyk

is Iron Hawk Golf Club for the City of Coatesville in Chester County, Pa. Furyk is also working with Carroll on the Coatesville Golf Training Facility in nearby West Brandywine Township for the City of Coatesville. CEC is helping develop a golf facility in Lower Bucks for The First Tee of Bucks County Inc. (See SiteLines, Spring 2002).

Carroll Engineering is a member of the Golf Course Superintendents Association of America, Golf Course Builders Association, National Golf Foundation and the Philadelphia Association of Golf Course Superintendents. 

Look for Carroll Engineering at...

BCATO 2004
Bucks County Association of Township Officials
February 21
Spring Mill Manor,
Jacksonville Road,
Ivyland, Pa.

PASBO 2004
Pennsylvania Association of School Business Officials
March 9-12
Hershey Lodge
& Convention Center
Hershey, Pa.

PSATS 2004
Pennsylvania State Association of Township Supervisors
April 18-21 Hershey Lodge
& Convention Center
Hershey, Pa.

Stop by and say hello!

Library Construction Underway in Horsham



Steel for the new Horsham Library reaches toward the winter sky near the intersection of Babylon and Jarrett Roads. The contractor is Nason and Cullen Inc., King of Prussia, Pa. Completion is scheduled for Summer 2004.

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