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THOMAS J. YUHAS, P.E., P.L.S.

SUMMARY

Mr. Yuhas has over 40 years in Civil and Architectural Engineering. His design work included complex projects in thirteen states and for six federal agencies. Mr. Yuhas has worked on projects for twenty-two municipalities in five counties in Pennsylvania. Mr. Yuhas' forensic engineering and expert witness experience ranges from testifying in front of zoning hearing boards and local government appeal boards to performing field surveys, preparing and verifying calculations and testifying in front of county and federal courts for both civil and criminal cases. Mr. Yuhas has also provided assistance to both county detectives and FBI investigators on various engineering matters.

EDUCATION

Master of Business Administration – Saint Joseph's University; 1999

Bachelor of Architectural Engineering – Structural Emphasis Pennsylvania State University; 1982

REGISTRATIONS & CERTIFICATIONS

Registered Professional Engineer:

- Florida #80844
- Maryland #21721
- Pennsylvania #PE036887E
- New Jersey #24GB03637900 (ina)

Registered Professional Land Surveyor:

- Pennsylvania #SU040403E
- New Jersey #24GB03637900 (ina)

Certified Construction Inspector with the Association of Construction Inspectors
Certified by PA Department of Labor & Industry for administration, plan review and inspection in the Building, Mechanical, Electrical, Plumbing, Energy, and Accessibility Categories. Certification #000468
Certifications acquired by International Code Council (ICC) examinations for the above trades.
Certified Locksmith (1975)

PROFESSIONAL ASSOCIATIONS

Pennsylvania Association of Municipal Engineers (PAME)

- Second Vice President (1993, 1994)
- Chairman of Technical Committee (1993, 1994)

American Society of Civil Engineers (ASCE)

Pennsylvania Society of Land Surveyors (PSLS)

Pennsylvania Building Officials Conference (PENNBOC)

American Concrete Institute (ACI)

Association of Construction Inspectors (ACI)

The Historical Society of Pennsylvania

Lower Pottsgrove Township Historical Society

Pottstown Jaycees

Toastmasters International - Treasurer of Pottstown Chapter

New Hanover Township Sewer Authority Chairman

Tri-County Area Chamber of Commerce

- Co-chairman of Regional Planning Committee
- Chairman of Regional Sewer Sub-committee

Wallace Township Sewer Authority Board Member (2006-2010)

New Jersey Society of Professional Land Surveyors (2007-2019)

CONTINUING EDUCATION

Additional courses and/or certifications completed in the following:

- Various Engineering & Land Survey Courses, Biennially NJSPLS Conference; 2007-2019
- Peak Performance, Advanced Performers Circuit; 2006
- Peak Performance, Sales Training and Managers Forum; 2005
- Project Control, Coordinate Systems & Datums for Navigation & Flood Control, 8pdh; 2004
- Stormwater Management, PLS Surveyors Conference
- Municipal Separate Storm Sewer Systems (MS-4), Pennsylvania Planning Association Conference; 2003
- PA Governor's Center Update: Land Use Planning & Community Revitalization initiatives, Pennsylvania Planning Association Conference; 2003
- Successful Brownfield Redevelopment Projects, PPA Conference; 2003
- Diversity training; 2002
- Desktop Mapping with ArcView, Rutgers University; 1998
- Ninth Conference on GIS/MIS regional issues, Hospitals Utilities Businesses & Schools (HUBS); 1997
- Geographic Information Systems; 1995
- American Disabilities Act Title II, Department of Community Affairs; 1994
- Liberation Management, Tom Peters; 1993
- Model Subdivision Ordinances, American Institute of Certified Planners; 1991
- Fatigue & Fracture in Steel Bridges, Lehigh University; 1990
- Real Estate Training Seminar, Federal Aviation Administration
- Low Level Wind Shear Analysis, Federal Aviation Administration Conference
- Rehabilitation of Sanitary Sewer Systems, American Public Works Association; 1988
- Rigid Pavement Design, Portland Cement Association
- Flexible Pavement Design, Asphalt Institute

CAREER HISTORY

FORCON International – Civil/Structural Engineer

Conducts forensic investigations and provides expert witness services as it relates to his fields of expertise.

Thomas J Yuhas Consulting, LLC – Owner

Borough of Downingtown – Borough Engineer, Zoning & Code Enforcement Officer

Horizon Engineering, LLC – Director of Government Services

Bursich Associates, Inc., Consulting Engineers – Project Coordinator/ Municipal Services Manager

Schoor DePalma, Engineers & Design Professionals – Vice President

Carroll Engineering Corporation (CEC), Consulting Engineers & Surveyors – Municipal Services

Barry Isett & Associates, Inc., Consulting Engineers & Surveyors – Vice President and Manager, Municipal Services

Sanders & Thomas, Inc., Engineers, Architects, Planners – Design Engineer and Project Manager

Joseph C. Yuhas, P.E., P.L.S. – Consulting Engineer

HIGHLIGHTED PROJECTS

Capital Projects

Kerr Park Improvements – Downingtown Borough, PA (2004). This project involved a grant to repair three deteriorated pavilions. Reconstruct a set of restroom facilities, renovate a baseball field and construct a new ADA compliant restroom for another area of the park. My work involved complete new roofs, full architectural design and plans for the new restroom and the remainder of the project.

Public Water Engineering

Phoenixville Borough, PA (1993-1997). In 1993 I managed the preparation of a five-year capital improvement plan for the Borough of Phoenixville which serves approximately 20,000 customers. The system included a 6 MGD filtration plant, six million-gallon reservoir, 1.28 million-gallon storage tank, two large pump stations, and 80 miles of pipelines.

Transportation Engineering

Green Street Bridge Replacement – Downingtown Borough, PA (2005-2006). An existing neighborhood had been experiencing severe flooding in the five year storm events. The USACOE did an entire watershed study of the 2 square mile area. I expanded on that study, coordinated the emergency permits for FEMA “no rise” certificate and demolition of a small stone arch bridge that was a major bottle neck to the flooding problem. I also coordinated the design and permitting of the replacement bridge that has a much larger opening and an improved profile to help alleviate the high frequency of flooding.

Windmarker Hill Bridge Evaluation (1990-1995). I performed a bridge feasibility study for access to a proposed office campus. Five alternate bridge locations were evaluated for crossing a 50-foot wide waterway with a 600-foot floodplain. The following issues were addressed: environmental impact of channel modifications; tributary relocation and wetland mitigation; traffic impact of trip generation, as well as geometric layout relative to other cross streets; earthwork impact for both aesthetics and efficient access to the higher elevations of the site; and permit requirements of PennDOT, DEP, FEMA, Fish Commission and the local Township. The recommendation was for two 85-foot spans of an adjacent concrete box beam bridge design. I performed a preliminary design and obtained accurate contractor cost estimates. I also coordinated the final plan design of this bridge.

Sanitary Sewer Engineering

Sanitary Sewer Extension – Lower Pottsgrove Township Municipal Authority (1992-1993). This project involved 2.6 miles of sanitary gravity/force main interceptor line with a 0.7 MGD pump station. I assisted with the design and coordinated and supervised the contract administration and construction observation services. Coordination of four prime contractors was provided to maintain a smooth transition between phases of work.

Phoenixville Borough Sanitary Sewer Work (1989-1997). I supervised and assisted with engineering studies for the following: French Creek Interceptor including replacement and rerouting of 1.5 mile of 8-inch to 24-inch gravity lines and evaluating upstream system for diversion options to balance the collection system flows relative to pipe carrying capacity; the Vanderslice Interceptor study was similar to the above and included 4000 LF of 8-inch to 10-inch line. In this study, alternative routing options were considered to coordinate with two highway bridges, a railroad right-of-way and a railroad bridge; the Schuylkill Canal force main project involved upgrading an existing pump station from 200 EDU's to 500 EDU capacity. A unique feature of this project involved the routing of a new force main of primarily negative slope through the canal and within the canal berm. A large gravity siphon under the French Creek was also evaluated.

Storm Water Engineering

Alcoa Regional Detention Basin – Downingtown Borough (2004-2007). This basin is located on the Little Parke Run which is a major tributary to the Parke Run watershed. The basin will occupy approximately 6 acres of surface

FORCON INTERNATIONAL

area, 40 acre feet in volume, and is expected to control about 20 % of the total watershed and reduce flooding downstream by over 2 feet. I have been involved in negotiations for right-of-way, preparation of grant applications, and participation in regional storm water committee meetings. I have also negotiated rights to an additional several acre basin area at the adjacent Bishop Shanahan School site.

Hall and Dean Streets Drainage Project, Phoenixville Borough – Chester County, PA (1994 to 1997). This project included replacing 1200 LF of a 150-year old stone arch draining the lower reaches of a 360-acre fully developed watershed. The new pipes were 60” diameter and had to be routed through backyards, in between two three-story apartment buildings that were only 40 feet apart, under two sewer interceptor lines, two fiber optic lines and numerous other utilities and laterals. Depths ranged from 15 to 20 feet and existing soil was unstable. The discharge flowed directly into French Creek in close proximity to its confluence with the Schuylkill River. Because the discharge was subject to over 14 feet of tail water, detailed calculations were performed which involved combined pressure and gravity flow of both the limitations of the existing arch and the capacity of the new pipe. Contract specifications allowed for alternate construction methods and incorporated a new specification for flowable backfill utilizing flyash as a prime ingredient. The project was set up in two phases. Phase I was bid at \$680,000. Full time resident engineering was provided to assure coordination of stakeout, field adjustments and contract changes. The project was completed ahead of schedule and \$55,000 under budget. I managed Phase I of the project in entirety from conception to finish.

Building Codes

Code Enforcement Technical Support (2003-2020). I reviewed permits, monitored construction and prepared reports for code compliance as well as structures ranging from single family home renovations to multi-million dollar commercial, industrial, and institutional sites.

Private Sector Subdivision and Land Development Projects

Regal Oaks Subdivision, Sanitary Sewer – Upper Pottsgrove Township, Montgomery County, PA (1987-1988 & 2006). I was responsible for spot checking as-built installations of sewer lines and manholes. I recorded material quantities and field measured rock excavation volumes. I assisted in topographic surveys of individual lots and performed the design and layout of on-lot sanitary sewer systems. I also performed a topographic survey for a sanitary sewer stream crossing and prepared the application for a DER GP5 Permit. In 2006 I helped the developer in meeting with the DEP and turning the plant over to the township.

Twin Hills of Chester Subdivision – West Pikeland Township, Montgomery County, PA (1988). This project consisted of a 250-unit Planned Residential Development on over 190 acres of land. I performed the complete final designs of the storm water management system, which included a combination of infiltration basins, check dams and diversion swales for flow attenuation and five detention basins. I performed a field topography survey to investigate different basin discharge options for a 12-acre foot basin. I coordinated and assisted with the horizontal and vertical layout of all the roads, sanitary sewer and water distribution systems.

Other Projects

Laurel Hill Development – Avoca, Pennsylvania (1993-1994). I provided project management services to coordinate final plan approval of a 20-lot subdivision to be constructed in three phases. I assisted in providing technical support for purchase negotiations, cost estimates of public improvements, construction contracts and overall project feasibility.

Latin-American Club – Reading, Pennsylvania (1992-1993). This project involved the structural evaluation of a wood truss system supporting the roof and plaster ceiling of a 90-year-old stage theater. I determined the cause of failure of three of the existing trusses and designed a steel composite bracing system, customized in order to be attached with minimal disturbance to the existing structure. I later provided expert testimony relative to a lawsuit concerning the failed trusses.

FORCON INTERNATIONAL

Hughestown Borough Flood Recovery Project (Hurricane Gloria, 1986). I was responsible for measuring and assessing flood damage throughout the Borough. I assisted in performing and checking calculations for approximately 1000 feet of stream channel upgrades which included road restoration, sidewalks, curbing, a pedestrian bridge, and concrete and gabion retaining walls. I also assisted in the design, stakeout and supervision of four bridge wingwalls and miscellaneous storm sewer repairs.

Armstrong World Industries – Rotogravure Printing Facility; Stillwater, Oklahoma (1987). This project consists of conceptual and final design of a rotogravure printing facility for Armstrong World Industries converting a manufacturing facility for printing operations. My responsibilities for this project include the complete civil design of the site. Modifications to the site include providing storm drainage and new rigid pavement access roads over treated, expansive clay subgrade.

Federal Aviation Administration – Task Order for Site Adaptation of Approach Lighting Systems, for Various Airports within the FAA Eastern Region (1987). These projects consisted of electrical, civil and structural design for installation of new medium intensity approach lighting systems with runway alignment indicating lights. Projects included underground cable distribution from substations to 13 light stations with some light towers being over 200 feet high. My responsibilities included the total civil/structural design for the projects. I also conducted field investigations to verify existing conditions for compliance with EO 6850.2a.

Department of Energy – Enriched Uranium Recovery Improvements; Oak Ridge, Tennessee (1985). This project involved structural engineering for renovations and improvements to a highly enriched uranium salvage facility. It included structural design of brace, steel, and space frame buildings; equipment supports; a three-story penthouse; and a single-story penthouse addition. My responsibilities included seismic analysis and steel frame design for the single-story penthouse addition along with design of several of the mechanical equipment structural supports.

PUBLICATIONS

- Phoenixville to Grow Greener with Grants, (18 Million) Sitelines, Volume 2 No. 1. The Quarterly Newsletter of Carroll Engineering Corporation; Spring 2001.
- TriCounty Area Chamber of Commerce Regional Planning Committee Update, Route 422 Business Advisor (ISSN 1524-1254); February 2000.
- Cooperative Road Efforts, Engineers Should Consider Benefits, Pitfalls of PennDOT's Agility Program, Township Engineer, Volume 8, No. 1; First Quarter 2000.
- Air Bags Free Wedged Digester Lid, Water Environment Technology, Problem Solvers Column. "Water Environment Technology" is published monthly by the Water Environment Federation, an international not-for-profit educational and technical organization of over 400,000 water experts; May 1999.
- Does Government Really Understand the Professionals They Hire to Help Them in Making Informed Decisions? Pennsylvania Association of Municipal Engineers, Volume 2; Fall 1992.