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Architects, Engineers,
Planners, Surveyors,
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Architects



**GEO-TECHNOLOGY
ASSOCIATES, INC.**

Geotechnical and
Environmental
Consultants

from the ground UP

News on Land Use Throughout the Region

SPRING 2006



Timber and asphalt bridge construction.

Unique Timber Bridge Paves Way to MacPhail Woods

A picturesque, landlocked 40-acre site in Bel Air, Maryland was thought to be economically impossible to develop due to a large floodplain that impedes access to the property. Bynum Run and its expansive floodplain, a total distance of over 450 feet, have shied developers away.

Erecting an arched concrete bridge was deemed too expensive, and developer, Altieri Homes, turned to MRA and GTA to develop a creative, ecological, and cost-effective solution to help turn their planned MacPhail Woods development into a reality.

MRA and GTA engineers met the challenge by proposing a timber bridge with an asphalt topping. This style of bridge is utilized frequently in southern Maryland and the eastern shore to cross creeks and environmentally sensitive wetlands, but is generally not needed in northern Maryland.

Paul Muddiman from MRA managed the project, while Matt Pearce also from MRA

(continued on page 3)

Cracking the Code: New AAI and ASTM Phase I Standards

Evaluating a site for potential contamination is an essential step in any real property transaction. Since 2000, ASTM E1527-00 has been the benchmark for performing Phase I Environmental Site Assessments (ESAs). The U.S. Environmental Protection Agency (EPA) and ASTM have both contributed to recent changes in the ESA process, and prospective purchasers should be aware of these revisions.

On November 1, 2005, the EPA established the federal standards and practices for conducting "all appropriate inquiries" (or AAI) as required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Under CERCLA, a property owner may be strictly liable for contamination based solely on property ownership and without regard to fault. CERCLA does provide several landowner liability protections for persons who demonstrate, among other requirements, that they "did not know and had no reason to know" prior to purchasing a property that any hazardous substance was disposed of or released on a property. To demonstrate that they had "no reason to know," a person must have performed "all appropriate inquiries" prior to acquisition of the site. This is now known as the "AAI Rule," and it becomes effective November 1, 2006. In

(continued on page 3)

GTA Expands Environmental Services to Meet Client Demand

GTA's New Environmental Company: GTA Environmental Services, Inc.

GTA is pleased to announce the formation of a new affiliate company, GTA Environmental Services, Inc. Driven by client demand for a single point of contact or "turnkey" approach, the new company, together with GTA, will provide clients a seamless process to solve environmental issues encountered during site acquisition and development.

GTA Environmental Services, Inc., which serves clients throughout the mid-Atlantic region, provides the following:

- underground storage tank (UST) closure;
- excavation and off-site disposal of hazardous and non-hazardous soil;
- above-ground storage tank (AST) decommissioning;

(continued on back cover)



Removal of a 4,000-gallon underground fuel storage tank.

Also in this issue:

Pennsylvania Development Process • Honeygo Village Center • News Briefs •
GTA Opens Charlotte, NC Office

Navigating the PA Development Process

Perhaps you have considered pursuing a development project in Pennsylvania. With 67 counties, 2,565 municipalities (comprised of cities, boroughs, and townships), and 501 school districts, things can get complicated. The good news is that developers rarely need to deal with school districts. The bad news – that leaves only 2,600 forms of local government to contend with. Remember, though, most of your effort will be spent at the municipal level as most development regulations in PA are not implemented by the County but rather by the city, township, or borough in which the project is located.

Governing Regulations & Ordinances

Generally speaking, the development approval process across the Commonwealth follows a statutory outline provided in the Pennsylvania Municipalities Planning Code (MPC). The MPC was originally drafted by the state legislature in 1968 and has been amended numerous times since. The current version is the 18th Edition which was published in February 2005. A copy of the MPC can be downloaded from the Pennsylvania State Association of Township Supervisors website (www.psats.org/mpc). The MPC provides a framework that all municipalities must follow in preparation of their comprehensive plans, official maps, zoning ordinances, and subdivision and land development ordinances.

While not specifically mandated, most municipalities have a comprehensive plan

which is updated approximately every 10 years. The comprehensive plan usually contains the municipality's community planning goals, a description of the municipality's natural and cultural features, demographic and economic analyses, information regarding existing land uses and infrastructure, a discussion of the transportation system, and the municipality's future land use plan. Most importantly, however, the comprehensive plan is not binding upon developers. Rather, it provides the foundation for the municipality's official map and the development of its zoning ordinance.

Sometimes, municipalities will create an "official map." The official map shows many of the facilities described in the comprehensive plan. For example, future park and recreation sites may be identified on the map. Or, future pedestrian greenways and walking trails could be identified. The map may also show future roadways or realignments of existing roads. While many of these may have no impact on the development of a specific project, the official map can be a binding document. For example, if the map shows a proposed roadway realignment through the center of your development parcel, you may be required to design your site around this new roadway and dedicate land for the new roadway to the municipality.

Unlike comprehensive plans and official maps, zoning ordinances in Pennsylvania are quite similar to those in other states. And while many municipalities in Pennsylvania still do not have zoning, a zoning ordinance is in effect in the majority of municipalities. To complicate matters, municipalities that do not have their own zoning ordinance may choose

to be governed by a county-wide zoning ordinance. In still other cases, joint municipal zoning ordinances may cover two or more adjacent municipalities. Regardless of how the zoning ordinance is implemented, however, it still controls land use, minimum lot areas and widths, building heights, parking requirements, signage, and other typical provisions. It may also provide criteria for planned residential developments which are specifically discussed in the MPC.

Finally, nearly every municipality in Pennsylvania has a subdivision and land development ordinance. This ordinance typically includes the technical details of the required design, such as information that must be shown on design plans, criteria for processing a plan through the municipality, roadway design, landscaping, public utilities, and stormwater management. It may also include provisions for mobile home parks, bonding of public improvements, and developers' agreements.

While each of these documents may or may not exist in any specific municipality, most of the municipalities impacted by, or under pressure for, development will have most, if not all, of these plans, maps, and ordinances. Therefore, it is critical to obtain these documents early on in the development process. Rest assured that MRA is here to

assist you each step of the way.



Joshua George, P.E.
Associate
MRA York, PA office



Rendering prepared by Robinson & Tebay, LLC

Honeygo Village Center Receives Award of Excellence

MRA designed Chesapeake Realty & Development, Inc.'s Honeygo Village Center project, which won an "Award of Excellence" from the Land Development Council of the Home Builders Association of Maryland.

MRA provided architectural, structural, mechanical, electrical, and civil engineering, as well as site planning and landscape architectural

design services for nearly 160,000 SF of retail and office space. MRA also provided site engineering and design services for 262 two-car rear-entry garage condominium/townhouses.

The architectural challenge for this project was to meet Baltimore County's requirement to create a "main street" that appeared to have been built over a long period of time. This was achieved through creative site planning and the use of varying architectural styles, materials, and elevations.



Timber Bridge

(continued from pg. 1)



Timber pilings and cross-bracing.

oversaw the structural engineering of the bridge. MRA's services included surveying, planning, engineering, and construction stakeout. They also partnered with Dissen and Juhn, a well known marine and foundation contractor, who offered their expertise to value-engineer the project and ultimately handle construction. GTA delineated the wetlands and obtained necessary permits from regulatory agencies. Under the direction of Tom Wirth, GTA oversaw the geotechnical engineering and construction inspection for the bridge, and aided in the foundation design.

The Maryland Department of the Environment approved the construction of the bridge, which has been designed and built to meet AASHTO (American Association of State Highway and Transportation Officials) standards as well.

The end result is a 470-foot-long, 24-foot-wide structure constructed entirely of pressure-treated timber, except for the concrete abutments. The bridge deck is topped with a layer of asphalt in order to protect the wood decking and provide a more comfortable ride. The timber pilings supporting the bridge were driven to bedrock at depths of 6 to 13 feet below surface grades, and then fitted with cross-bracing to provide additional stability.

The timber bridge is a less expensive and more durable option when compared to a concrete structure of similar size. Properly maintained, the bridge will have a lifespan of over 100 years. The new bridge leads to Altieri Homes' planned MacPhail Woods development, comprising 114 condominium units for adults age 55 and better.

-Written by Matt Hombach, Nevins & Associates

AAI and ASTM Phase I Standards

(continued from pg. 1)

the interim, ASTM Standard E1527-00 may continue to be used to satisfy the statutory requirements of AAI.

Due in part to AAI, ASTM published a revised standard (E1527-05) on November 1, 2005, and it went into effect immediately. ASTM intended E1527-05 to satisfy AAI, and the EPA has recognized ASTM E1527-05 as consistent with the new AAI Rule. ASTM E1527-00 is now considered an interim standard and only remains in effect until November 1, 2006.

The AAI Rule and the ASTM E1527-05 standard include some significant changes, such as:

- "Environmental professionals" are now defined (those meeting specific education and experience requirements), and must perform certain ESA tasks. Previously, anyone could perform an ESA.
- The ESA must include more in-depth research, including a review of local environmental records, a broader historical review, interviews with past property owners, and a review of several new regulatory databases.
- The ESA "shelf life" is one year (i.e., reports prepared more than one year ago must be updated in their entirety).

Until November 1, 2006, either E1527-00 or E1527-05 may be considered. Which standard to select depends on the user's goals, the desirability of CERCLA liability protection, the property settlement schedule, and corporate/lender requirements. Your environmental consultant should be able to assist in selecting an appropriate Phase I ESA standard. GTA is prepared to perform AAI Phase I ESAs and anticipates conducting all Phase I ESAs in accordance with the new standards well in advance of the new rule's November 1, 2006, effective date.



Mark D. Rodano
Vice President
GTA Abingdon, MD office

News Briefs

Perry Laudenslager Scholarship:

In October, GTA proudly awarded scholarships to two University of Maryland students in memory of GTA-Laurel team member, Perry Laudenslager. Since Perry's untimely death in early 2005, the partners of GTA and MRA have worked with Perry's family and friends to establish an endowment that will provide scholarships for future civil engineers from Perry's alma mater. Through donations and fundraising efforts, the endowment will be fully funded over the next few years. However, GTA & MRA stepped up to recognize qualified students by providing financial support for this memorial scholarship while the endowment is being funded.

President of Maryland State Builders Association, and Smart Growth Achievement Award Recipient:



Frank F. Hertsch, P.E.
MRA President

Frank F. Hertsch, P.E., President of MRA, has been elected as the President of the Maryland State Builders Association for 2006. He was also recently honored with the National Association of Home Builders' Smart Growth Achievement Award for his outstanding contributions to the industry in the area of land inventory and development capacity analysis.

MRA Announces New Principal:

MRA recently announced the appointment of a new stockholder. Jeremy Treadwell has been named Principal with MRA.



Jeremy Treadwell
Abingdon, MD

New MRA & GTA Associates:

MRA has announced the promotion of three new Associates: Joshua C. George, P.E., of the York, PA office; and Gary S. Powers, P.L.S., and Steven W. Hutchins, P.E. of the Georgetown, DE office. GTA's newest Associates are Meghan Lester, P.E., of the New Castle, DE office; and Jeremy D. Cooper, P.E., of the Frederick, MD office.



GTA Opens Charlotte Office

GTA expands its reach into the Carolinas with the recent opening of our Charlotte, North Carolina office. The new location creates an exciting opportunity to provide our established brand of geotechnical services for clients on residential, commercial, and institutional projects in North and South Carolina.



The new Charlotte office is managed by John P. Wille, P.E., an Associate of the firm and resident of Charlotte. Mr.

Wille has over 12 years of experience in the geotechnical field and is a registered professional engineer in both North Carolina and South Carolina.

Remediation Services

(continued from pg. 1)

- groundwater treatment technologies and systems;
- pesticide-impacted farmland remediation;
- hazardous metals-impacted soil stabilization;
- building decommissioning;
- contaminated soil consolidation, containment, and capping systems; and
- various other innovative soil and groundwater remediation services.

GTA Environmental Services, Inc. will evaluate remedial alternatives on a project-by-project basis to develop a cost-efficient cleanup approach and schedule that can be easily integrated into a client's site development plans with minimal or no impact to the client's overall project timeline.

Mark Rodano and Paul H. Hayden, P.G., L.R.S. will manage GTA Environmental Services, Inc. Mr. Rodano is a Principal of GTA and has been with the firm for over 15 years. Mr. Hayden is an Associate with GTA and has more than 12 years of experience in the environmental consulting services field. He is a registered Professional Geologist and Licensed Remediation Specialist. Gary Rakow, a Principal of GTA, with 20 years experience in environmental remediation services, will also manage remediation projects for the new company.

GTA is a leader in numerous Brownfield re-development/in-fill projects throughout the mid-Atlantic, including Baltimore's Inner



Harbor. These projects have transformed under-utilized or "blighted" parcels of land into thriving community resources.

*Paul H. Hayden, P.G., L.R.S.
Associate
GTA Laurel, MD office*



3445-A Box Hill Corporate Center Dr.
Abingdon, MD 21009



Abingdon, MD • 410-515-9000
Towson, MD • 410-821-1690
Laurel, MD • 301-776-1690
New Castle, DE • 302-326-2200
Georgetown, DE • 302-855-5734
York, PA • 717-751-6073



Abingdon, MD • 410-515-9446
Frederick, MD • 301-682-5226
Laurel, MD • 301-470-4470
New Castle, DE • 302-326-2100
Georgetown, DE • 302-855-9761
Quakertown, PA • 215-536-8363
York, PA • 717-751-6073
Somerset, NJ • 732-271-9301
Sterling, VA • 703-478-0055
Charlotte, NC • 704-333-7940