

Managing Growth

by Joe McMahon, P.E., CEO



McMahon Associates has much to celebrate and look forward to in 2005. One area of major recent activity

is our offices.

We recently purchased the 34,000-square-foot building in Fort Washington, Pa., which houses our corporate headquarters and largest Pennsylvania office, as well as other tenants. This investment, along with a late 2003 participation in the partnership which purchased our Exton office building, is indicative of the commitment to our clients and our company.

In the Mid-Atlantic region, we opened a new office west of Trenton, New Jersey in Yardville, this February. This location will better serve existing clients and allow us to pursue new opportunities. We just relocated our Harrisburg area office to Mechanicsburg where we have larger office space to accommodate our growing business in central and western Pennsylvania.

Other regions join in Mid-Atlantic expansion

Our Florida operation is also booming. We have expanded our Palm Beach Gardens office, moved our Fort Lauderdale office to larger

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Engineers' Volunteerism to the Community

by Rod Plourde, Ph.D., P.E., President

Dedication to a profession can be found in any line of work. Engineers demonstrate this dedication through expert and ethical service to clients, respect for peers and co-workers, and participation in organizations that advance the engineering profession. Yet engineers are also a part of society, and a part of the world. Inherent to the environment in which we live should also be dedication to serve and improve the community.

Engineers serve the community in many ways, just like all members of society. They volunteer as youth soccer and baseball coaches, Scout leaders, and school and church leaders or aides. They volunteer for charity drives in their neighborhood, and they volunteer to help political candidates attain office. Yet their specialized engineering skills and experience help them contribute to their communities in ways, perhaps, that other occupations cannot.

Skills used in different ways

A true example of specialized engineering volunteer efforts by staff within our firm is service on public planning commissions and boards, where they provide technical expertise in reviews and approvals of proposed developments.

Other examples include pro-bono engineering

and survey services to schools and churches their children and family attend, participation in elementary or high school career days to foster interest in engineering, serving and providing engineering expertise on homeowners' organizations, and providing engineering expertise on Habitat for Humanity projects, along with manual labor too.

Engineers get personal

Many of our staff extend themselves further by giving their personal time to mentor, coordinate, and judge high school students for engineering competitions such as the Delaware Valley's Regional Future Cities Competition, a part of National Engineers Week where students design a city of the future on computer, then build a three-dimensional working model.

Our engineers also involve themselves in a similar capacity for MathCounts, a national math enrichment, coaching, and competition program that promotes middle school mathematics achievement. Student teams throughout the country undergo a three-hour written and oral multi-step math problem-solving competition.

We all have an obligation to serve our communities, and we are proud of our staff who go beyond the bounds of our day-to-day work to do so.

Did You Know?

Quasi-induced exposure is a method used to measure the relative exposure of driver/vehicle combinations to the risk of driving hazards with a well-defined responsibility assigning system. This concept has two underlying assumptions:

- 1) In a typical two-vehicle accident, there is one at-fault driver (D1) and one not-at-fault driver (D2);
- 2) And the non-responsible driver-vehicle combinations (D2s) involved in the accidents are a ran-

dom sample of the whole driving population on the road at the time of accident occurrence.

The objective of a study by Xinguo Jiang, Ph.D., is to validate the underlying assumptions of quasi-induced exposure using Michigan accident data related to the impacts of the Michigan Graduated Driver Licensing (GDL) program.

The GDL program imposes strict rules on young

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OUR SERVICES

- Land Survey
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- Traffic Impact Studies
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- Structural Design
- ITS/Traffic Signal Design
- Highway Access Permitting
- Geographic Information Systems
- Construction Inspection and Consultation

For more information, please contact **McMahon Associates** at any of the following locations:

MID ATLANTIC

Fort Washington, PA

Joe DeSantis, P.E., P.T.O.E.,
Regional Manager
215.283.9444

Mechanicsburg, PA

John Yacapsin, P.E.,
General Manager
717.691.5512

Exton, PA

Chris Williams, P.E.,
General Manager
610.594.9995

Yardville, NJ

Joe Fiocco, P.E., P.T.O.E.,
Sr. Project Manager
609.585.5745

FLORIDA

Palm Beach Gardens, FL

John DePalma,
Regional Manager
561.840.8650

Fort Lauderdale, FL

Tom Hall,
General Manager
954.771.0776

Miami, FL

Gerard Osbourne,
Project Manager
305.222.1945

Cape Coral, FL

Mike Spitz, P.E.,
Sr. Project Engineer
239.945.6103

NEW ENGLAND

Boston, MA

Bill Steffens,
Regional Manager
617.725.0099

ON THE WEB

www.mcmtrans.com

Competitive Markets Raise Confidentiality Concerns

by *Stu Moncrieff, P.E., Senior Project Engineer*

During times of increasing competition and prolonged approval procedures, many clients are requesting that their consultants agree to confidentiality clauses in order to protect the viability of the project in its early stages.

In most metropolitan areas, years of growth and hot real estate markets have left a scarce supply of developable land. Commercial and residential developers are constantly searching for sites suitable for their projects. When an acceptable location is found, they are often fiercely protective of it during the due diligence phase.

It is common for an extensive site analysis to be



Courtesy of E.R. RACEK ASSOCIATES

This retail and parking facility is an example of mixed-use development as part of a feasibility study for the Town of Ayer, Mass., and the Montachusett Regional Transit Authority.

completed before a developer purchases land for a project, and many purchase agreements hinge on whether the development plans are approved. During this time, it is critical for developers that information regarding the project is kept confidential. The slightest leak can derail a project, especially if any of the

following groups obtain sensitive information.

- **Competing developers.** It is not unheard of for competing developers to purchase abutting land to gain leverage and attempt to halt a project. Local opposition can often be financially backed by a competitor, creating a potential legal battle that costs both time and money.

- **Anti-development groups.** Environmental

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Bridging the Gap: Traffic Signal Systems Crossing Municipal Boundaries

by *Matthew M. Kozsuch, P.E., Senior Project Manager*

A unique challenge in Pennsylvania is providing contiguous systems of coordinated traffic signals that meet the needs of a region, and not just of a local municipality. In general, traffic signals in the Commonwealth are owned, operated, and maintained by local municipalities, not the state.

Regional arterials that carry major peak hour traffic typically cross many municipal boundaries. Ideally, the closely-spaced traffic signals on these arterials should be coordinated to provide a progressive flow of traf-



A car approaches the traffic signal at Routes 309 and 63 in Montgomery County. The signal is shared by Horsham, Lower Gwynedd, and Montgomery townships.

fic. Often times, however, the corridor will cross these borders without the traffic signal system staying in sync simply because adjacent municipalities do not work together.

The Pennsylvania Department of Transportation's (PennDOT) District 6-0 office, which covers the

Philadelphia area, is making a concerted effort to encourage inter-municipal cooperation to provide better traffic flow for our region, along with the

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New Mitigation System to Improve Transit Facilities

by Tom Hall, Senior Project Manager/General Manager – Fort Lauderdale

In 1985, the Florida Legislature passed the Growth Management Act, a landmark effort to control urban sprawl. As a consequence of that act, a new word was introduced into the development community's lexicon, "concurrency." Simply put, concurrency requires the mitigation of the impacts of new development prior to, or concurrent with, the development's opening.

Broward County was the second county in the state to codify this concurrency requirement in their Comprehensive Plan, the master planning document governing development within the county. Although Broward's concurrency requirements have been modified repeatedly over time, the basic premise has not changed — until now.

Many changes under new system

Historically, roadways over capacity were identified and new developments that add vehicular trips on those roads were expected to mitigate the impact of those trips. Effective April of this year, Broward County has decided on a new concurrency concept — Transit Oriented Concurrency. Some changes under the new system. Some of them are:

- Impact fees will no longer be collected.
- Roadway capacity will no longer be an impediment to development.
- Levels of service will be measured in terms of bus headways.
- Concurrency satisfaction will be required at the time of application for a building permit, not during platting.
- A new fee will be assessed by the county as a replacement for impact fees and concurrency mitigation fees.

Transit Oriented Concurrency is proposed in all

but two of the developable areas — southwest Broward County and northwest Broward County. In both of these areas, the current concurrency system will remain in effect.

Concept brings questions, answers

Many questions may come to mind when considering the new system and its impacts. Two, however, are probably most important. First, what happens to a currently approved and vested property? Second, how much does the new system cost?

The answer to the first question is properties that have a current concurrency approval will retain that approval.

The answer to the second question is more complicated. An exact fee per peak-hour trip has not yet been determined. However, estimates for a single-family home are between \$794 and \$1,572. Further complicating this is the fact Broward staff may recommend substantial credit against these assessed fees for projects designed to encourage transit usage.

The new system is intended to fuel the improvement of transit facilities within the developed areas of the county and it may do so. With more high-density redevelopment projects in central and eastern Broward County, and little available opportunity for additional roadways, transit becomes an ever more popular method for addressing traffic congestion.

As always, McMahon's Florida offices are working closely with county staff so we are prepared to assist our clients in navigating through this new system.

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space, relocated our Fort Myers office to larger, more comfortable surroundings, and opened a new office in Miami to serve Miami-Dade County.

Our New England operation continues to serve the New England region from its downtown Boston office.

More locations means more opportunities to serve

In total, McM now operates nine east coast

offices. By focusing on so many locations, we feel we are positioned to emulate the small, agile businesses that are the engine that makes this country great.

Our mission to provide responsive transportation solutions to our clients remains our paramount goal! Our growth, both in the number of offices and expanded services over nearly 30 years in business, facilitates the achievement of our goal to be regarded as a premier transportation engineering firm, recognized as experts in our chosen niche.

NEW ENGLAND

- Implementation Plan for the Fitchburg Commuter Rail Line, MBTA, Boston, MA
- Off-site Roadway Improvement Design, Shaw's Supermarkets, Inc., Town of Wakefield, MA
- Traffic Impact Study and Traffic Signal Design, Cumberland Farms, Inc., Town of Bridgewater, MA

FLORIDA

- 16th Street Master Plan and Design, Miami Beach, Miami-Dade County, FL
- Briger Tract Development of Regional Impact Study, Palm Beach Gardens, Palm Beach County, FL
- SR-A1A Highway Design, Deerfield Beach, Palm Beach County, FL

MID-ATLANTIC

- Henry's Woods Bridge Replacement for PENNDOT District 5-0, Bushkill Township, Northampton County, PA
- Prudential Expansion Traffic Impact Study in Upper Dublin Township, Montgomery County, PA
- Pennsylvania ACT 209 and Municipal Traffic Engineer for Land Development Reviews, Cumberland Township, Adams County, PA

New England Regional News

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and other advocacy groups often have significant local influence. Developers hope to deal with these groups at a time of their own choosing, with the intention of providing project details, addressing their concerns, and winning their support.

- **Media.** Any media coverage prior to project approval can create potential hassles from the previously mentioned groups. Projects may appear unfavorable when introduced by the media, which can create public resistance.

The rise in confidentiality requests highlights the need for consultants to better understand their clients and the sensitivity of projects. Maintaining a client's privacy and protecting specific project-related details can make the difference when dealing with difficult sites, competitive markets, and opposition groups.

Mid-Atlantic Regional News *(continued from page 2)*

assistance of the Federal Highway Administration and the Delaware Valley Regional Planning Commission. I recently sat down with Mr. Paul Lutz of PennDOT to discuss the department's views.

MK: *Explain some of the challenges you are experiencing relative to coordinating traffic signals across municipal boundaries.*

PL: Getting the municipalities to the table can be challenging. Sometimes they don't understand the importance of preliminary design coordination and how resolving operation and maintenance issues at the start of a project can save a lot of trouble down the road. It's also tough when new managers or board members get involved in a project after the scope has already been determined. Once a municipality commits to something it's important that they follow through so we can keep the project moving.

MK: *Do you see any legitimate reason why municipalities should not cooperate with each other in this case?*

PL: No. In fact, a lot of municipalities are cooperating. However, occasionally we see situations where one municipality may not want their traffic signals controlled by another entity. This is understandable, but it is important to have a more regional view of traffic signal operations. Legal agreements can be reached in the early stages of a project that will protect all project stakeholders.

MK: *What can municipalities do to help?*

PL: Learning to understand how technology is used can help. Municipalities should contact colleagues in other locales to learn about existing systems and how they are being used, as well as enlisting the assistance of a qualified traffic engineer. Most importantly, they should have an open mind to regional traffic needs, not just those in their town.

Professionals at McMahon Associates are currently working on projects ranging from planning to design, and construction of state and federal highways to local road/intersection improvements on behalf of state, county, municipal, or private sector clients. To learn more about our services and how we can lend our transportation expertise, visit us at www.mcmtrans.com.

Did You Know?

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drivers (ages 16-18) with regard to nighttime driving (midnight to 5 a.m.). Quasi-induced exposure is employed to see if it can pick up the drastic exposure change of young drivers due to the implementation of the GDL program. In general, the analytical results have shown that the exposure change is reflected in two quantitative ways.

First is the significant reduction of the number of D2 young drivers in two-vehicle accidents and the decreasing number of D1s. Second, there is the conspicuous shift in the time-of-day D2 young driver distribution, especially the restricted nighttime driving period. While not a complete verification, the results show promise that the assumptions inherent in using quasi-induced exposure can be validated.

A paper entitled *Measuring The Effectiveness of Michigan Graduated Driver Licensing With Quasi-Induced Exposure*, by Xinguo Jiang, Ph.D, can be read in full on our website at www.mcmtrans.com/News/publications.htm

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425 Commerce Drive, Suite 200
Fort Washington, Pennsylvania 19034

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