Breaking Ground

THE MAGAZINE OF THE MASTER BUILDERS' ASSOCIATION OF WESTERN PENNSYLVANIA

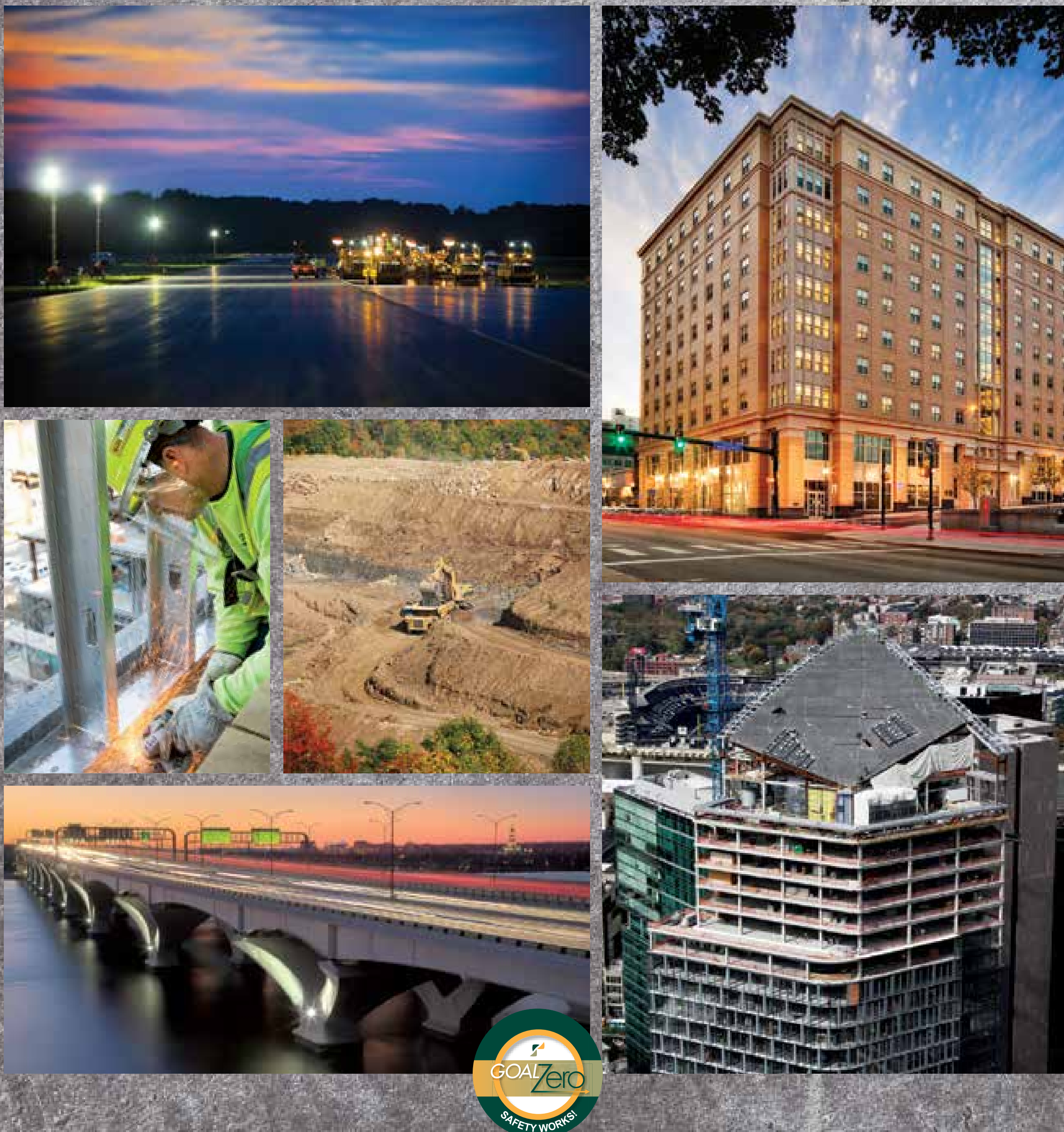
MARCH/APRIL 2016

Infrastructure Update

Surety Market Update

National Construction Market Losing Steam

The Risk In Cost-Reimbursable Contracts


GOAL Zero
SAFETY WORKS!

Contents 2016

PUBLISHER
Tall Timber Group
www.talltimbergroup.com

EDITOR
Jeff Burd
412-366-1857
jburd@talltimbergroup.com

PRODUCTION
Carson Publishing, Inc.
Kevin J. Gordon

ART DIRECTOR/GRAPHIC DESIGN
Carson Publishing, Inc.
Jaimee D. Greenawalt

CONTRIBUTING EDITORS
Anna Burd

CONTRIBUTING PHOTOGRAPHY
Tall Timber Group
Yasmina Conti
Mosites Construction & Development
Civil & Environmental Consultants
Becky Jarold

ADVERTISING DIRECTOR
Karen Kukish
412-837-6971
kkukish@talltimbergroup.com

MORE INFORMATION:
BreakingGround is published by Tall Timber Group for the Master Builders' Association of Western Pennsylvania, 412-922-3912 or www.mbawpa.org

Archive copies of BreakingGround can be viewed at www.mbawpa.org

Photo by Mosites Construction & Development.

Publisher's Note

Have you noticed how much better the roads on your commute are? OK, maybe it's too early to get warm and fuzzy about the impact of Act 89 but there are dozens of small patches of North Hills roads that are smoother today that they were two years ago. It's not often when government does something that effective so it's only fair to point it out.

Prior to the passage of Act 89 of 2013, the roads and bridges around Pittsburgh were taking on a very 1970s appearance. For the regular readers of this column (and you both know who you are), you are aware of my penchant for nostalgia, especially for that unfortunate decade during which I was raised. The 1970s gave America an incredible range of music, some of the worst fashions ever, really poor economic times and, in Western PA, some world-class potholes. Most things about that decade give me a warm, familiar feeling. Potholes aren't in that category.

The first sign of spring back then wasn't the first robin sighting or the blooming of the forsythia, it was the PennDOT crews being released to start filling in the potholes from the winter. Every so often there would be a photo in the paper of one of the PennDOT crew standing knee deep (or worse) in a pothole on a busy Pittsburgh road. Those were extreme cases but potholes were bad on virtually every road and a menace to both navigation and the longevity of vehicles. It was, however, something of a regional problem. When Pittsburgh Mayor Pete Flaherty campaigned for governor he promised to fix all the potholes. Citizens in the eastern part of the state weren't sure what that was all about. Here in Pittsburgh, of course, the problem was real.

Infrastructure improvements eventually were undertaken. But time passed and weather did its thing and by the time the Great Recession occurred, PA's roads were in lousy shape again. There weren't the kinds of spectacular potholes that we had 30 years earlier but the poor conditions were becoming a drag on commerce and an inconvenience for drivers.

Between 1980 and 2010 the political climate had changed sharply. Fixing roads used to be one of those things that elected officials would do to keep getting elected. A generation later, Grover Norquist happened. Republican lawmakers (and more than a few Democrats) supported fixing our roads but wouldn't find the revenue to pay for repairs for fear that it would be interpreted as raising taxes. Pretending that a problem will fix itself is a tempting approach but it wasn't working in the case of our infrastructure.

The battle to put more funding into the coffers for infrastructure in 2013 was pretty amazing. Conservatives dug in on their position of no increased revenues without a proportionate decrease in other spending. Civic leaders and local political officials were mostly in favor of a bill that invested in infrastructure improvements. They had the interest of businesses and residents in mind. But as pressure mounted to put a tax or fee in place, the groups that climbed onto the bandwagon found themselves sitting next to people they regularly opposed.

Labor leaders were working with corporate CEO's to convince key representatives that their financial and voting support depended on passing a bill. Contractors, chambers of commerce, business lobbyists, energy companies and Democrats were all pulling from the same side of the rope.

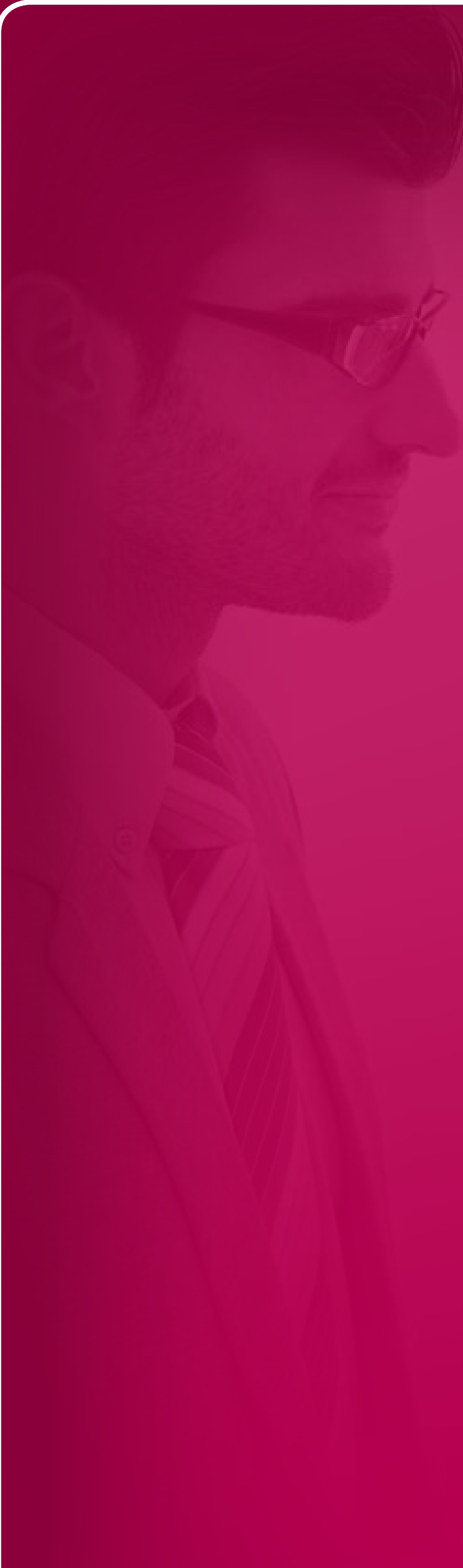
It had to be very confusing for the legislators, who were being told that the issue was potentially as politically toxic as the infamous midnight pay raise. Perhaps that's why the highway bill was drubbed one day and passed two days later. The response to the failure took the House and Senate aback, giving representatives the fear that a whole lot of constituents were displeased with the result. Of such fears, political courage is often born.

I was among those fiscal conservatives who felt compelled to write my representatives urging them to vote for higher taxes to pay for our roads. Unlike those on the more extreme right, I couldn't see the logic in holding PA's highways hostage to unreasonable principles. If you have overindulged your child, letting him or her starve to death isn't the way you show that you'll no longer spoil the child. Our government needs to be disciplined, just not by putting the taxpayer at greater risk.

The PA legislature did the right thing when it reversed its course in November 2013, even if it wasn't for the noblest of motives. The wisdom of the funding mechanism of Act 89 has become more apparent as our political leadership has shown itself to be incapable of discharging its most basic function, to pass a budget.

As an industry, construction played a big role in getting the House and Senate to do its duty in 2013. Not every union or every construction company owner favored Act 89, but the coalition that did was focused on the welfare of the Commonwealth as much as the benefit to the construction business. Perhaps that same alliance of dissimilar interests can find a way to impress upon Gov. Wolf and the legislature that a budget deal is in the best interests of the taxpayers they serve too. At least the roads leading to Harrisburg are smoother this time around.

Jeff Burd



REGIONAL MARKET UPDATE

First Commonwealth Bank
Time to be first.™

The start of 2016 has seen more of the same rather than a change in trend. On several levels that's not such a bad thing but the continuation of a spotty bidding market has been a disappointment for those hoping that a brisk first quarter would help solve backlog pressures. The lower-than-expected backlog is especially troubling for many first-tier subcontractors.

From the standpoint of data, the first two months were stronger for starts because of a few larger projects in the nonresidential segment. Construction starts and permits during January and February reached $532 million for commercial and institutional projects. That total is up $220 million over the first two months of 2015. While a 67 percent increase in activity is never a bad thing, the sample size and volumes are too small to expect that level of growth to last. Residential activity in January and February tends to be very slow because of weather and a lack of buyers in the market during the depths of winter. Permits for fewer than 300 new single-family housing units were issued during the first two months, about what the volume was for the past five years.

Multi-family residential construction has become a bigger story than expected this year, not for the activity level but rather for what seems to be a real shift in sentiment about the health of the sector.

Real estate advisory services provider Integra Realty Resources (IRR) held its annual Viewpoint presentation on February 19 and the segment dedicated to the multi-family market pointed out what IRR sees as challenges to the growth cycle that has been going on for four years. Doug Herold, IRR director, noted that the absorption of apartments in metro Pittsburgh from 2012 to 2015 ran between 502 and 581 units in a given year. The total of four years of net absorption was 2,159, just 125 units more than are to be delivered in 2016 and 2017. Herold saw nothing to suggest that the absorption rate would double in one year and forecasted that oversupply conditions would exist within 12 to 24 months.

What could change that forecast would be an unusual increase in the number of jobs created. The Bureau of Labor Statistics first report of employment growth in Pittsburgh for 2015 was a 1.2 percent rate, or about 14,000 jobs. At even conservative household formation rates, that number of new jobs should drive more absorption; however, the number of new units absorbed was essentially unchanged from 2014, when job growth of 11,000 yielded only 581 units absorbed.

The forecast IRR presented for the next two years is more in line with how appraisers and lenders are seeing the market; and the more cautious narrative is definitely more in line with sentiments about the U.S. multi-family market. Other segments of the commercial real estate market are faring better.

Activity at the Shell cracker site from across the Ohio River in Van Port.

At the same presentation IRR's analysis of the Pittsburgh office market found that Class A space was still tight; at 2.2 percent, vacancy in Pittsburgh was second among 62 U.S. cities IRR follows. IRR found suburban vacancies to be 8.8 percent in Pittsburgh, 11th lowest in the U.S. but owners of Class B buildings are struggling to find tenants. What concerns exist about the office market are focused more upon future supply and demand.

With more than 700,000 square feet potentially coming onto the market in 2017, the outlook for office buildings is somewhat softer than it has been in years. During the next 24 months, Pittsburgh's office market will test the depth of the regional economy, offering insight into whether or not the job creation engine will create space demand fast enough to absorb the space. The heightened competition will make for tougher market conditions for property owners but there is a silver lining in that cloud for construction.

One of the negatives associated with the tight Downtown and suburban office market conditions has been the lack of mobility for users, which meant fewer significant tenant improvement packages to build. The reintroduction of the Union Trust Building and the Allegheny Center Mall properties – now branded as Nova Place – have already created construction projects as new leases have been signed. Those buildings, along with newly renovated space at 11 Stanwix, 20 Stanwix and PPG Place, are creating more bidding opportunities for firms tied into the Downtown market.

The same dynamics may be in play at Southpointe, where the lack of space in recent years kept relocation there to a minimum.

Activity and procurement for the proposed Shell ethane cracker continue to pick up, with reports of a final investment decision to come before the end of the first quarter.

Falling energy commodity prices and the decline of the coal industry have created vacancies and sublease opportunities in the northern Washington County office park. Recent media coverage of Southpointe painted a negative picture of the market but the occupancy rate has fallen to just below 90 percent. That's in line with the regional average for Class A suburban office space. Most of the vacancy is in two buildings and the current rate is a spike from what was a 2.7 percent vacancy rate less than two years ago. At such a high level of occupancy, tenants in Southpointe had no place to grow and new businesses had no opportunities to locate in the park unless they could wait out new construction.

Southpointe property owners may not welcome the increased vacancy but the breathing room may allow for more diversity of tenants. One bit of evidence that the market may welcome the vacant space is MedExpress's reported interest in the vacant Fairmont Supply building and Crown Castle's interest in expanding its footprint. Neither of these opportunities existed until recently. Those moves would push occupancy well over 90 percent again.

There are also signs of life in the energy sector. Although most of the companies in the natural gas play cut capital spending plans further for 2016, there has been an increase in the bidding activity in the processing part of the midstream. Pipeline activity remained strong in 2015 but the expansion of the separation, compressing and storage capacity slowed significantly. In late February, there was bidding on revived projects to expand compressing stations built before 2015 by MarkWest.

Increased midstream construction should not be misconstrued as a sign of revival in the Marcellus and Utica plays. The volume of gas production outstripped estimates in the Appalachian region from day one of exploration and the capacity for processing and distribution has lagged output. What development of compressing stations or pipelines occurs in 2016 and 2017 will be to play catch up with drilling that has already been completed. Until the price of the commodity recovers to levels that are economically feasible – perhaps as high as $3.50 per million cubic feet or higher – upstream exploration is essentially dormant. No longer supported by higher oil prices, gas drilling will have to be justified by the profits from sales of the dry gas and the utility of wet gas byproducts like ethane to be leveraged to higher margins by making ethylene and polyethylene.

Activity and procurement for the proposed Shell ethane cracker continue to pick up, with reports of a final investment decision to come before the end of the first quarter. Those reports follow fairly closely on the heels of reports that the same decision would be delayed until at least mid-year; however, the most recent procurement packages – the parking garage, the control building and even an RFP for drinking water for the site – suggest that Shell will proceed on the plant.

Further down the Ohio River, in Belmont County, OH, PTT Global Chemical has been much less guarded with its plans for a smaller cracker, a plant that will nonetheless cost $5.7 billion to build. PTT is paying $100 million for front end engineering and design (FEED) to competing teams of Fluor, Technip and SK Engineering and Construction, and Bechtel, JGC America Inc., and Samsung Engineering America. According to plans PTT has shared with Ohio civic leaders, FEED

PROJECT	CITY	UNITS	OWNER/DEVELOPER
Baldwin Apartments	Baldwin	120	A. R. Building
Findlay Crossings Apartments	Findlay Twp.	300	Carbon Properties
North Shore Apartments	Pittsburgh	300	Continental Realty
Junction Apartments	Dormont	240	Fore Property Corp.
Station Square Apartments Ph. 1	Pittsburgh	300	Forest City/Trammel Crow
Haven at Cranberry Square	Cranberry Twp.	240	Johnson Development
Shannon Village Transit Apartments	Castle Shannon	152	JRA Development
Graystone Apartments	Hopewell Twp.	220	Larry Dorsch/Jim McCarthy
South Hills Village Transit Apartments	Upper St. Clair Twp.	340	Massaro Dawson
Arsenal Warehouse Site	Pittsburgh	650	Milhaus Development
350 Fifth Avenue Condos	Pittsburgh	77	Millcraft Investments
North Fayette Apartments	North Fayette Twp.	295	NRP Group
Riverfront Landing Ph. 1	Pittsburgh	365	NRP Group/Buncher
Emerald On Centre	Pittsburgh	172	Oxford Development
Craft Place Apartments	Pittsburgh	99	Oxford Development
The Empire	Pittsburgh	326	Park7 Group/Massaro
The Mill at Second Avenue	Pittsburgh	352	Walnut Capital Partners
Total		4,548	

A partial list of the multi-family projects still in the planning pipeline include more than 4,500 units.

work is to be completed by mid-year, with Fluor and Bechtel submitting formal price proposals in late 2016. PTT expects to make its final investment decision by early 2017.

Those who have been involved with the budgeting that is currently going on assert that the project is not advancing at the pace necessary to see construction underway before 2018. Unlike on the Monaca project – for which Shell began the permitting process immediately after making the Horsehead plant the preferred site – permits have not been granted for earthwork, air or water quality.

It is the businesses that will be attracted by a built-out ethylene manufacturing and supply chain that developers of properties in the western and southern suburbs may have in mind with new projects. Ashley Capital started construction in February on the new 316,000 square foot warehouse it's developing in Findlay Industrial Park, just a few miles away from where Neyer Development is building a 252,000 square foot spec warehouse at Clinton Commerce Park. Along the I-79 corridor, Burns & Scalo Real Estate Services announced plans for two new 80,000 square foot office buildings at Abele Business Park in South Fayette Township, along with a new hotel and 120,000 square foot office building at its Cedar Ridge property in Robinson Township.

Commercial real estate also received a boost from continued expansion of the new technology economy and the appetite for space near Pittsburgh's universities, Carnegie Mellon in particular.

On CMU's campus, Rycon Construction was selected as construction manager for its new maker space in Hamerschlag Hall, meant for quick transition between research and manufacturing through the use of additive materials and 3-D printing. Carnegie Mellon also selected the team of Mascaro Construction and SOM/Renaissance 3 Architects for the 40,000 square foot Tata Consulting Services building.

Robotics research is behind the RIDC's construction of a new 65,000 square foot facility in the Lawrenceville Technology Center, which is about to start construction. RIDC also secured financing and its first tenant at the new Almono development in Hazlewood. Uber will use the former roundhouse and a new track for testing of its automated vehicle. Pennsylvania Industrial Development Authority approved a $2 million loan for the renovations needed to build Uber's space, which should cost $4 million to complete.

There were glimmers of activity in the healthcare sector. UPMC made headlines by announcing its intentions to build a new 300,000 square foot hospital in Pleasant Hills. The new UPMC South is proposed for property off Lindsay-Snyder Drive along Route 51. Zoning hearings on the new building were postponed, however, and no schedule for construction has been set. At the opposite side of town, in Hampton Township, UPMC received approvals to build a 40,000 square foot medical office building on Route 8. Bidding for the construction of that facility is imminent.

Allegheny Health Network (AHN) began the year with a flurry of activity, requesting bids and proposals on a number of smaller projects at its flagship hospitals, along with work at Forbes Regional, Jefferson and Allegheny Valley Hospital. The projects also included the $20 million NICU and Mellon Pavilion at West Penn Hospital. The majority of these projects were put on hold before contracts were awarded; however, as the new AHN management team evaluates its capital spending plans. BG

NATIONAL MARKET UPDATE

Lower gross domestic product and a shaky global economy have not yet put a damper on employment. February's job growth was 242,000, stronger than January and slightly better than expected. Within the Bureau of Labor Statistics' March 4 report were several bits of encouraging data for the economic outlook. Unemployment held steady at 4.9 percent, an indication that more job seekers were entering the market. Along those same lines, the workforce participation rate climbed to 62.9 percent and the broadest measure of unemployment – the U6 rate – fell to 9.7%. Private payrolls swelled by 245,000 jobs and private payroll wages grew more than 2.5 percent year-over-year. Within the employment sectors, construction employment grew at the highest rate, more than doubling the rate of total non-farm job growth.

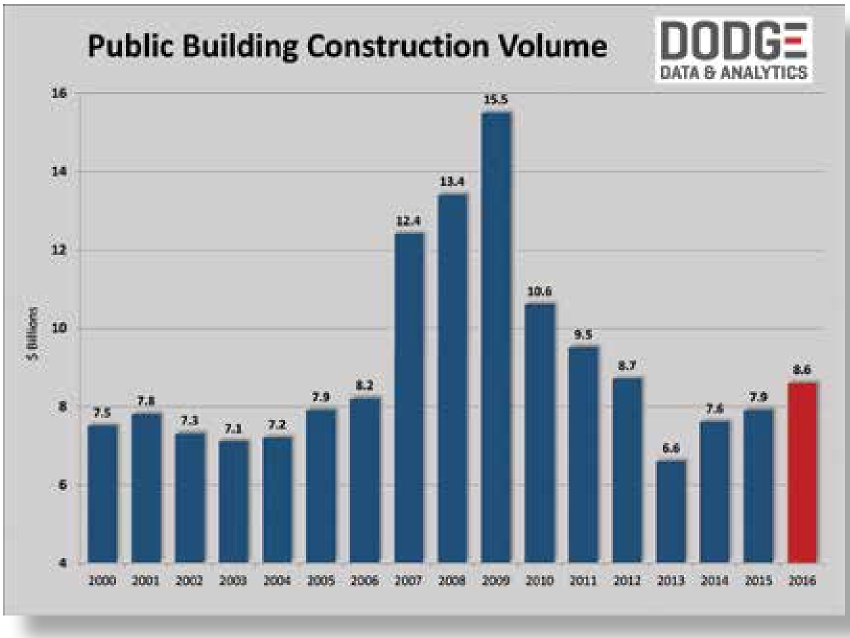
Construction data and sentiment appear to be moving in diverging directions after the first two months of 2016. Government data released on March 1 estimated that total construction spending in January 2016 was $1,140.8 billion, an increase of 1.5 percent compared to the upwardly revised $1,123.5 billion total in December. January's volume was ten percent higher than the previous January. The report, which also showed permits for construction trending higher than starts, supports the forecast from most construction economists of growth between five and ten percent for the full year. Public construction spending grew 4.5 percent over December, a continuation of a much stronger upward trend, while private investment was up modestly. The data portrays a market that may reflect the sentiment of mid-2015, however, as corporate profits, business investment forecasts and other economic metrics are less robust than construction.

The government's report on the housing market two weeks earlier showed continued strength, with construction of multi-family remaining in an upward trend. But, in the context of data on new and existing home sales and builders' sentiment, it's also clear that the uncertainty about the economy is sapping momentum.

On February 17, the Census Bureau reported that total housing starts rose 1.8 percent from January 2015 to January 2016 despite a 3.8 percent decline from December to January and a 2.8 percent drop the month before. Single-family starts increased 3.5 percent but multi-family starts fell 3.8 percent. Building permits, however, rose 14 percent year-over-year, with single-family permits up 9.6 percent and multi-family permits increasing by 18 percent. There were permits for more than 90,000 more multi-family units in January than starts, suggesting more projects may begin soon.

Also on February 17, the American Institute of Architects reported that the January Architectural Billings Index (ABI) slipped to 49.6, down from 51.3 in December. While barely negative – a reading below 50 merely indicates that more architects reported a decline in billings than an increase – the January decline is the third dip below 50 in the past six surveys. New project inquiries also fell significantly in January, although remaining positive at 50.3, a level that was ten points below the December reading.

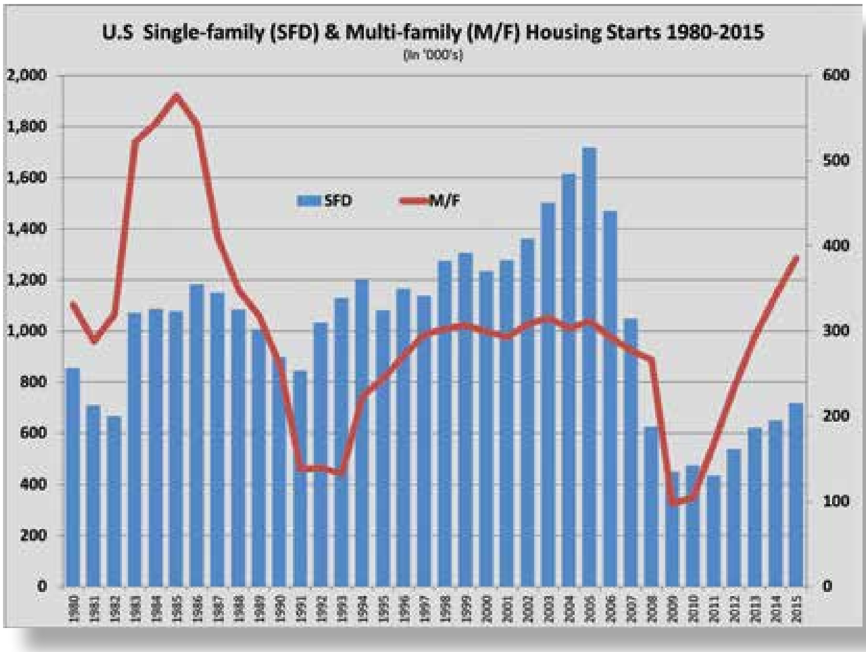
To the extent that inquiries indicate the future billings, January's survey raises concerns because the 12-month trend in inquiries has turned slightly downward. If the declining trend continues, it will lead to declining billings and eventually, declining construction activity. The modest downward dip in inquiries trending may also just reflect the growing slowdown in planning of multi-family and lodging development.



Spending on public buildings is expected to increase to $11 billion by 2019. Source: Dodge Data & Analytics

The hotel construction market continues to thrive but investor concern about overbuilding appears to be rising. According to data tracked by industry resource STR Inc., hotel occupancy rates hit an all-time high of 66 percent in 2015 and revenues and room rates climbed near record levels. Construction of hotels soared 31 percent in 2015 but slowed by 1.2 percent in the second half of the year. Hotel stocks, meanwhile, have been hit by investor selling. While strong performance is an incentive to develop more rooms, lenders are showing

a diminished appetite for hotel deals, meaning developers proceeding with projects will see higher lending costs. STR nonetheless expects growth in room inventory in line with the industry's 1.9 percent rate in both 2016 and 2017.



Source: Bureau of Census.

Concern about multi-family development is also rising, although several of the major financing conduits for apartment projects have added to their allocations for multi-family deals again in 2016. Analyses of the housing markets defy conventional or historical trends. For example, while the multi-family market has been seen as booming since the beginning of the recovery in 2010, the volume of actual starts only rose above the 50-year average of 359,000 units in 2015. Moreover, the peak of two earlier boom cycles – in 1985 and 1972 – reached 576,000 units and 902,000 units respectively. Construction of multi-family units appears to be peaking in early 2016 at somewhere above 425,000 units, but a slowdown below the average is more likely for the full year.

Even more inexplicable is the protracted sluggishness in the single-family market. Starts in this category of housing peaked in 1972, 1978 and again in 2005, when 2.068 million units were started. In the 48 years prior to 2005, the average number of single-family units started was above 1,546 units. Construction dropped off dramatically from 2006 to 2009, when only 554,000 single-family houses were started. The overextension of mortgages during the housing bubble created an excess inventory that had to be sold prior to the resurgence of new construction. By all measures, that overhanging inventory has been absorbed for two years or more, yet new construction only recovered to the one million-unit level in 2014 and the average number of starts in the intervening eight years has been 809,400.

There have been a number of explanations for the housing market performance since the mortgage crisis: tight credit, enormous foreclosure inventory, low household formation, shifting housing preferences, changing social demands of the Millennial generation and the urbanization of the retiring Baby Boomers. All of these trends could have had minor and/or short-term impacts on housing activity, but the magnitude of the decline goes well beyond such influences. Even if any or all of these trends could have depressed demand for single-family homes, the reality is that a proportional boom in apartments has not occurred. New construction of single-family homes was slightly greater than half the 50-year average over the past eight years, but new construction of apartments remained below the 50-year average for seven of those eight years.

One possible explanation for the protracted decline in starts is that the overhang of excess and troubled inventory was much greater than estimated. Still, the number of units built from 2008-2015 was almost 5.9 million units less than the average for half a century prior. The more likely explanation for the state of housing construction is that the severity of the Great Recession allowed for an extended deferral of household formation for an unusual number of Americans. That suggests pent-up demand that should drive another housing boom within a few years, regardless of the economic conditions.

Dodd Frank regulatory burdens have limited mortgage lending well past the time that lenders were anxious to renew higher volumes. Subdivision development also suffered from the effects of the recession and the heightened oversight that doing land acquisition and development loans would bring. There is no measure of the level to which these issues have suppressed construction but the data suggests that demand cannot be held back much longer.

Demand for commercial construction, on the other hand, has been less constrained by factors other than economic health. After suffering losses in value in excess of 50 percent following the financial crisis, commercial property values have recovered completely, reaching record levels per square foot in many markets and categories. As would be expected, commercial real estate saw steady gains in occupancy as employment gained strength. Stronger performance and property values allowed the large number of commercial loans written during the frothy days of 2005 to 2007 to refinance as they matured five and ten years after origination.

The closer correlation to the overall economy means that commercial development is getting long in the tooth as the economy is in 2016. In addition to the dynamics of the apartment and hospitality segments, growth in retail and industrial development is also slowing. The office market is seeing

The gap between public and private spending on construction has leveled since mid 2015, as federal and local revenues have increased. Source: Bureau of Census

above-average levels of construction in the first quarter of 2016, with demand still outstripping supply in a number of U.S. cities – including Tampa, Raleigh, Atlanta, Miami, San Diego, Phoenix, Washington DC and Pittsburgh. Development in some of the hot spots in the U.S. – Houston, Dallas, San Francisco, Seattle and San Jose for example – remains very active, but evidence is growing that the party is winding down in those cities.

Integra Realty Resources (IRR) looked at the commercial real estate property types in its 2016 Viewpoint report. One of its evaluations looks at the major U.S. markets and judges where those cities are in the lifecycle of recession to recovery to expansion and oversupply. Its findings concluded:

- Nearly half the office markets are still in expansion mode, with 41 percent more than two years away from supply/demand balance.

- All multi-family markets except one (Jackson MI) were in expansion, with 83 percent of suburban and 70 percent of urban markets in balance.

- Retail markets were still in an expansion phase, with 63 percent of the cities recovering or expanding. The central and western regions of the country had more cities in recovery than other regions.

- Expansion was still underway in 46 of 61 industrial markets, with no markets in the oversupply phase.

- Like multi-family, most hospitality markets were expanding, with 75 percent in that phase. IRR forecasts that hospitality will begin to decline in 2017.

The consensus forecast from these commercial real estate observers, along with the economists for Dodge Data & Analytics and Construction Market Data, is that commercial construction should see another five-to-seven percent growth in 2016. Even if a softer economy dampens demand earlier than expected, investors will continue to push supply higher. Yield from other investment vehicles simply won't offer sufficient risk-adjusted returns and pressure to place cash in real estate will encourage development, even if demand for the space isn't as robust.

Public construction has begun to emerge from an extended funk. Spending on public construction rose again in 2015, following an uptick in 2014. Long-term demographic trends are still unsupportive of revenues, at least until the next generation makes its move into home ownership, but the improved economy and labor market have given a boost to sales and income taxes that support state and local construction. And at the federal level, the long-overdue highway bill – known as FAST Act – will provide a reliable funding stream for repairs to highways and bridges through 2020.

In addition to the surface transportation funding, federal construction spending will also be driven by the extended period of deferred spending on government facilities that followed the expiration of the American Recovery and Reinvestment Act of 2009. Spending by the General Services Administration has increased during the past two years and more projects are in the pipeline to address obsolescence and space needs at federal offices and courthouses.

Beyond 2016, forecasts of greater public construction are built upon the assumption of continued economic growth of more than two percent, an assumption that looks less certain than it did six months ago. Political ideology battles will likely have a bigger impact on public construction than economic expansion, however. The growth of government debt and pension obligations have choked out room for capital spending without increasing revenues, which is at the heart of most ideological debates between the two major parties. There is inevitability to the ravages of time on the built environment, so maintenance and repairs cannot be deferred indefinitely.

One glimmer of hope on the revenue piece of the equation is the public response to referendum. The sample size is very limited but voters in a number of states have approved borrowing or revenue increases to support needed construction. In California, where referendum is the rule for major public bond programs, voters have said yes to as many as 80 percent of the projects on the ballot in recent years. That suggests that while Americans may be split on the concept of higher taxes, fees or debt, they are generally agreeable to such measures in practice in their own backyards. BG

WHAT'S IT COST?

Two central cost trends remained consistent in January compared to one year ago. Low energy prices and a sluggish global economy continue to push down the prices of many building products and materials while, at the same time, scarcity of skilled workers in key trades pushes labor costs higher. The net effect of these opposing forces has been that finished construction costs are increasing at a pace that is slightly higher than overall producer inflation and slightly lower than in 2015.

Evidence of the former trend came in the February 17 report on January's inflation from the Bureau of Labor Statistics (BLS). The producer price index (PPI) for inputs to construction fell 0.4 percent for the month and 2.7 percent from January 2015. The PPI for all goods used in construction fell 0.6 percent and 2.7 percent. A sub-index for energy declined 9.0 percent from December and 21 percent year-over-year. The BLS report also covered inflation for final demand, which includes goods, services and five types of nonresidential buildings that BLS says make up 34 percent of total construction. The PPI for final demand construction decreased 0.3 percent for January and increased 1.2 percent for the full year. That compares to a year-over-year hike of 1.8 percent from January 2014 to 2015.

Significant 12-month price changes in the costs of materials important to construction include a 35 percent drop in the price of diesel fuel, a 19 percent decline in steel mill product and copper and brass mill shape prices, an 18 percent decrease in aluminum mill shapes, and a 12 percent drop in lumber and plywood prices. Among the few costlier materials, cement rose 5.6 percent and flat glass 5.9 percent over the previous January.

Year-to-year changes in labor costs varied significantly by trade and were reflective of the relative supply of skilled craft workers. Costs declined two percent for plumbing contractors, but increased 1.2 percent for roofing contractors, 3.7 percent for concrete contractors and 5.4 percent for electrical contractors. According to the chief economist for the Associated General Contractors (AGC), Kenneth Simonson, the large increases in concrete and electrical subcontractors' rates are consistent with the September 2015 AGC Workforce Survey, in which 63 percent of respondents said their firms were having trouble filling positions for concrete workers and 60 percent for electricians.

Procurement professionals seem to have factored the trends in construction costs into their plans for 2016. Consultancy IHS and the Procurement Executives Group (PEG) reported on February 24 that the current IHS PEG Engineering and Construction Cost Index fell to 41.3 at year's end, down from 43.3 in November. A reading lower than 50 represents a downward pricing trend. The headline index has been below the neutral mark for 14 months. The current materials/equipment price index fell from 39.6 in January to 36.9 in February, which is the lowest mark in the four-year-old survey's existence. BG

PERCENTAGE CHANGES IN COSTS	Jan 2016 compared to		
	1 mo.	3 mo.	1 yr.
Consumer, Producer & Construction Prices			
Consumer price index (CPI-U)	(0.3)	(0.6)	0.7
Producer price index (PPI) for finished goods	0.3	(0.1)	(0.2)
PPI for final demand construction	(0.3)	(0.6)	1.2
Costs by Construction Types/Subcontractors			
New warehouse construction	(0.1)	(0.2)	1.6
New school construction	(0.5)	(0.4)	1.6
New office construction	0.0	(0.9)	1.1
New industrial building construction	(0.3)	(0.1)	1.3
New health care building construction	(0.8)	(1.3)	(0.2)
Concrete contractors, nonresidential	0.5	0.6	3.7
Roofing contractors, nonresidential	0.1	0.4	1.2
Electrical contractors, nonresidential	(0.3)	(0.3)	5.4
Plumbing contractors, nonresidential	(0.8)	(0.9)	(2.0)
Construction wages and benefits	N/A	0.7	2.6
Architectural services	0.2	0.8	1.5
Costs for Specific Construction Inputs			
#2 diesel fuel	(7.9)	(31.5)	(34.6)
Asphalt paving mixtures and blocks	2.6	1.7	(3.5)
Cement	2.6	2.8	5.6
Concrete products	0.3	1.3	2.5
Brick and structural clay tile	0.5	(0.1)	1.1
Plastic construction products	(0.8)	(0.7)	0.0
Gypsum products	3.9	(0.1)	(2.2)
Lumber and plywood	0.2	(0.1)	(7.3)
Architectural coatings	(0.2)	(0.3)	(1.8)
Steel mill products	(0.3)	(6.2)	(19.2)
Copper and brass mill shapes	(1.6)	(9.4)	(17.6)
Aluminum mill shapes	0.6	(1.4)	(11.9)
Fabricated structural metal	(1.8)	(2.4)	(3.1)
Prefabricated metal buildings	(0.2)	(0.2)	(1.3)
Iron and steel scrap	10.8	(2.5)	(46.7)

Source Bureau of Labor Statistics, Updated February 17, 2016
Compiled by Ken Simonson, AGC Chief Economist

MBA Building Excellence Awards 2015

Award Winners

New Construction Over $25 Million

Photography: Ed Massery

PROJECT: Industrial Scientific Corporate Campus

CONTRACTOR: **Mascaro Construction Company, L.P.**

ARCHITECT:
IDC Architects

OWNER:
Industrial Scientific Corporation

MBA SUBCONTRACTORS:
A. Folino Construction, Inc.
A.C. Dellovade, Inc.
Brayman Construction Corporation
Century Steel Erectors Co., LP
Clista Electric, Inc.
Cost Company
Dagostino Electronic Services, Inc.
D-M Products, Inc.
EMCOR Services Scalise Industries
Howard Concrete Pumping, Inc.
Massaro Industries, Inc.
RAM Acoustical Corporation
Ruthrauff | Sauer LLC
Wellington Power Corporation

New Construction Between $10 and $25 Million

Photography: Denmarsh Photography

PROJECT: Seton Hill University Dance & Visual Arts Center
CONTRACTOR: **PJ Dick Incorporated**

ARCHITECT:
DesignLAB Architects

OWNER:
Seton Hill University

MBA SUBCONTRACTORS:
Amthor Steel
Clista Electric, Inc.
Cost Company
Easley & Rivers, Inc.
Flooring Contractors of Pittsburgh
Massaro Industries, Inc.
Master Woodcraft Corporation
Specified Systems, Inc.

New Construction Under $10 Million

Photography: JAO Photography

PROJECT: Department of Veterans Affairs - Modernization of ICU Beds
CONTRACTOR: **RBVetCo, LLC**

ARCHITECTS:
Array Architects
HF Lenz Company

OWNER:
Department of Veterans Affairs – Pittsburgh Healthcare System

MBA SUBCONTRACTORS:
ABMECH Inc.
Century Steel Erectors Co., LP
Easley & Rivers, Inc.
Harris Masonry, Inc.
Howard Concrete Pumping, Inc.
Massaro Industries, Inc.
Mosites Construction Company
Phoenix Roofing, Inc.
Specified Systems, Inc.

Providing Sophisticated Building Enclosures Nationally

"Dellovade has been considered, and remains, one of the few premier contractors in their field."

Pittsburgh, PA

Kennedy Space Center, FL

Pittsburgh, PA

Albany, NY

A.C. DELLOVADE, INC.

1-800-245-1556
www.acdellovade.com

Renovation Construction Over $10 Million

PROJECT: Heinz Field Addition
CONTRACTOR: **Mascaro Construction Company, L.P.**

ARCHITECT:
Populous

OWNER:
PSSI Stadium Corporation LLC

MBA SUBCONTRACTORS:
A.C. Dellovade, Inc.
Allegheny Construction Group
Century Steel Erectors Co., LP
Dagostino Electronic Services, Inc.
Easley & Rivers, Inc.
Franco Associates
Lighthouse Electric, Inc.
Massaro Industries, Inc.
Phoenix Roofing, Inc.
Richard Goettle, Inc.
Specified Systems, Inc.
SSM Industries
T.D. Patrinos Painting & Contracting Company
Wyatt, Inc.

Renovation Construction Under $10 Million

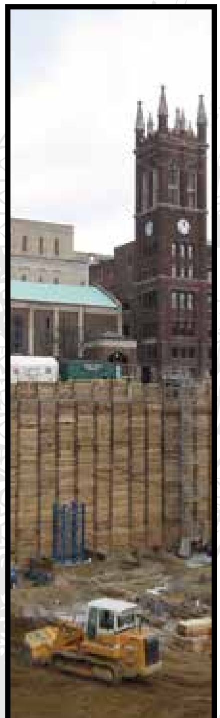
PROJECT: Clarion University Becht Hall
CONTRACTOR: **Uhl Construction Company**

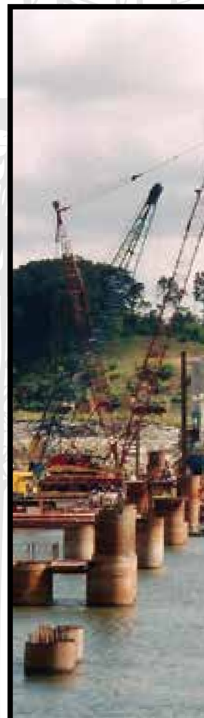
ARCHITECT:
Perfido, Weiskopf, Wagstaff + Goettel Architects

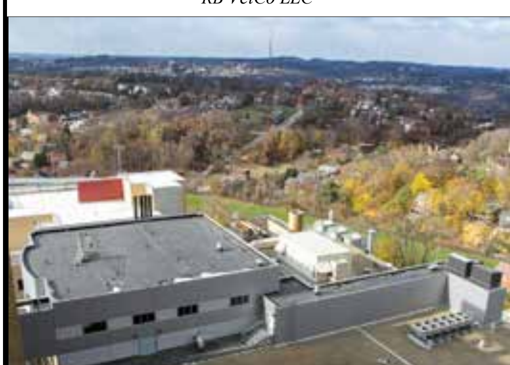
OWNER:
Clarion University

MBA SUBCONTRACTORS:
Fuellgraf Electric
J. J. Morris & Sons, Inc.
Marsa, Inc.

Photography: Multivista Photography








UPMC

Excellence in Craftsmanship - Exterior

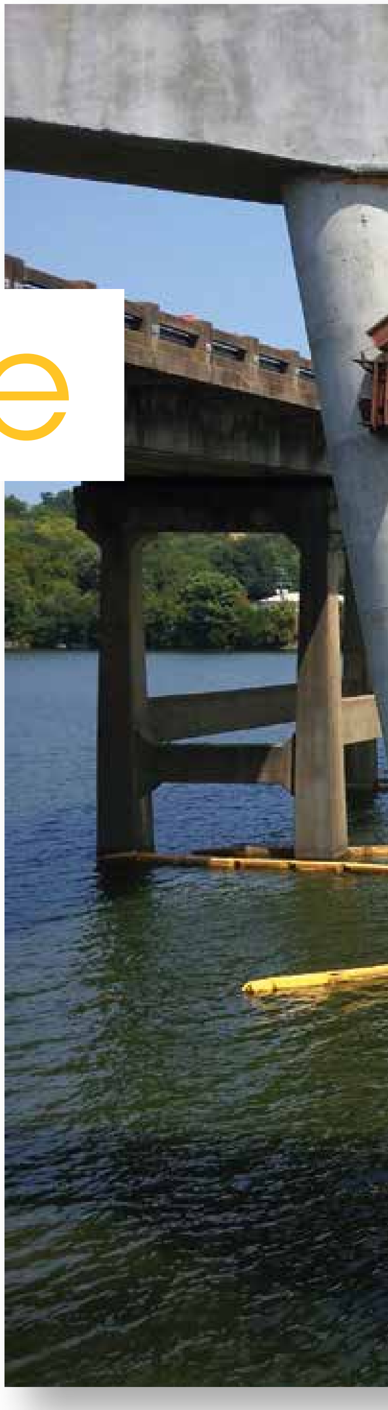
PROJECT: West Greene School District - Retaining Wall Reconstruction
CONTRACTOR: **Burchick Construction Company, Inc.**
ARCHITECT:
Michael Baker International
OWNER:
West Greene School District
MBA SUBCONTRACTORS:
Howard Concrete Pumping, Inc.
Maxim Crane Works, LP
Phoenix Roofing, Inc.
Richard Goettle, Inc.

Excellence in Craftsmanship - Interior

PROJECT: Monongalia Justice Center
CONTRACTOR: **Massaro Corporation**
ARCHITECT:
Silling Associates, Inc.
OWNER:
Monongalia County Commission
MBA SUBCONTRACTORS:
Easley & Rivers, Inc.
Kalkreuth Roofing & Sheet Metal, Inc.
T.D. Patrinos Painting & Contracting Company

Photography: Denmarsh Photography

Infrastructure Update



On December 4, 2015, President Obama signed into law the Fixing America's Surface Transportation Act, or "FAST Act" - the first federal law in over ten years to provide long-term funding certainty for surface transportation. The FAST Act authorizes $305 billion over fiscal years 2016 through 2020 for the department's highway, highway and motor vehicle safety, public transportation, motor carrier safety, hazardous materials safety, rail, and research, technology and statistics programs. With its enactment, state and local governments may now move forward with critical transportation projects, like new highways and transit lines, with the confidence that they will have a federal partner over the long term.

For states, FAST Act is bringing a 15 to 18 percent increase and stable funding. Boiled down to the regional level, FAST means an additional $658.6 million into the 11-county footprint of the Southwestern Pennsylvania Commission, including $48.9 million for transit funding. On top of a revolutionary and controversial state highway bill passed in late 2013, FAST Act is a boon to the infrastructure construction market.

Image courtesy Civil & Environmental Consultants.

"The FAST Act is probably the biggest news and the fact is that while the 'pay fors' are not ideal, Pennsylvania really benefits," observes Rich Barcaskey, executive director of the Constructors Association of Western PA (CAWP). With Rep. Bill Shuster as chair of the House Transportation and Infrastructure Committee, the Commonwealth did not get short-changed. PA is one of the top five states benefitting from the Act.

There are some long range economic and social benefits to Pennsylvania's taxpayers from FAST and Act 89 of 2013, particularly if the legislation signals a change in political attitude about infrastructure spending. At both the state and federal level, elected officials have behaved in their best interest, refusing to find the funds necessary to maintain highways and bridges out of fear that it might cost them reelection. If these two Acts are part of a trend, at least one of the country's problems will no longer be deferred.

For the construction industry, the willingness to fund highway work means something more immediate. Contractors and supply chain in heavy/highway work can look forward to a foreseeable future that has adequate work to allow businesses to thrive. Moreover, because of the timing of these pieces of funding legislation, there is hope that buying agencies can begin bidding work with confidence at the beginning of the year. That will help backlogs build and put less pressure on schedules. The year 2016 may actually be fun.

estimated at $30 million to $40 million – the Koppel Bridge and Freedom Road – are scheduled to let in Beaver County in August and September. In Washington County, bids will be taken on May 19 for a $40 million to $50 million section of I-70 from Route 519 to Somerset Township to the east, and a $50 million-plus section of I-70 between I-79 and the Route 136 exit.

As seems to happen when the Commonwealth's governor is from the eastern part of the state, more of the PennDOT dollars are slotted for Eastern PA (the reverse is true when the governor comes from the west, of

What's in the Market?

Among the projects let by PennDOT during the first two months of the year were the $63.9 million Route 219 project in Somerset County, the $13.2 million Crows Run project in Beaver County, and the $38 million Route 119 project in Westmoreland County.

In the next six months, PennDOT expects to bid four additional projects in Allegheny County that are estimated to be between $20 million and $30 million: repairs to the Seventh and Tenth Street bridges, Phase 5 of the Liberty Tunnel and the re-bid of a major resurfacing of Route 65 between the Fort Duquesne and McKees Rocks bridges. Two projects

SPC Region Projects in State Interstate Program

County	State Route	Project ID	Project Title	$ Programmed*
Butler	79	91919	I-79 Middle Section PM	$4,905,220
Butler	79	91920	I-79 South Section PM	$24,495,448
Allegheny	376	28587	I-376/I79 - Fort Pitt Turn	$68,083,000
Allegheny	376	87775	I-376/Airport - Bns 376	$47,542,534
Allegheny	376	97908	376/Fort Pitt Tunnel Repa	$13,743,000
Allegheny	376	87764	I376 Beaver Co- Airport	$53,045,000
Allegheny	6279	87772	6279/279-Ft Duq / Camp Horne	$22,982,414
Beaver	376	29162	Vanport Bridge Rehab	$18,051,914
Lawrence	376	95759	SMP-B / SR 376, 28 & 422	$3,092,152
Washington	70	47022	I-70 @ PA 481 Interchange	$27,800,000
Washington	70	70047	Bentleyville Interchange	$54,105,900
Washington	70	73514	I70: 79-S to SR 136 Intch	$39,378,980
Washington	70	87236	I70: I79N to SR 136 Intch	$65,714,000
Washington	70	75950	South Junction to SR 519	$39,500,500
Westmoreland	70	75978	I-70 @ PA 51 Interchange	$3,278,181
Westmoreland	70	88508	I-70 Arnold City Interch	$7,781,649
Westmoreland	70	31894	I-70 @ PA 31 Interchange	$14,124,468
Westmoreland	70	31895	I-70 @ Yukon Interchange	$32,736,628
			Region Interstate Total	**$540,360,988**

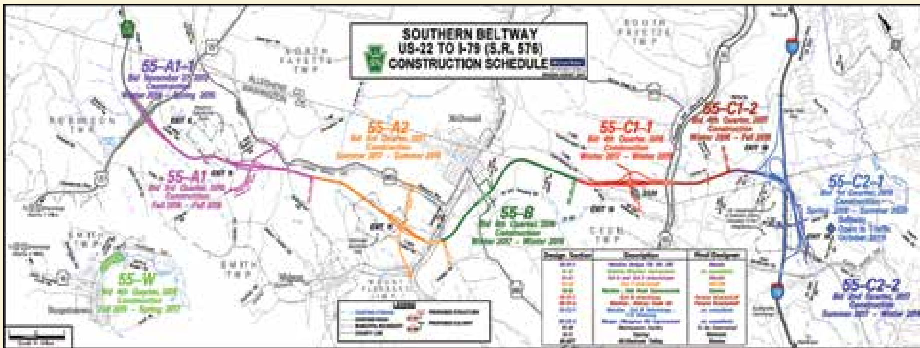
*Estimated project cost in 2015-2018 TIP.

Major projects from the Southwestern Pennsylvania Commission's 2015-2018 TIP will be handled by PennDOT.


Image courtesy Mosites Construction & Development.

course). That's especially true for the largest projects in the letting schedule. There is plenty to like about PennDOT's 2016 schedule for contractors and vendors in Western PA. It should be helpful to market conditions in the western counties of the state that there will be more projects between $1 million and $5 million. That's a size that is a good fit for the many mid-size contractors who work in this part of the state.

The Turnpike Commission has been fiscally constrained since the ill-advised passage of Act 44 and its spring lettings reflect that. Aside from several interchange overlays that should be less than $5 million, new work on the Turnpike's western half will be limited in 2016. The bigger impact on Turnpike-owned roads will occur in 2017, when the Commission has ambitious plans for getting the Southern Beltway project on track.



PennDOT and the Turnpike Commission are the two largest buyers of infrastructure construction services in the market but a third entity will be a factor in the heavy and highway marketplace in the short-term.

Perhaps because the decision on the Rapid Bridge Replacement (RBR) program was made in 2014, the $899 million program has fallen off the radar. The public/private partnership (P3) was revolutionary for Pennsylvania, which adopted the delivery system as a much-needed remedy to the state's growing problem with structurally-deficient bridges. RBR will replace 558 bridges throughout the Commonwealth between 2015 and 2017. While the bridges will continue to be state-owned, the P3 partnership, called Plenary Walsh Keystone Partners (PWKP), will design, build and maintain the new bridges for 25 years. At the time of the award of the P3 contract, PennDOT estimated that the approach would shave more than a decade from the time it needed to replace the same bridges using conventional delivery methods.

Much of the work done under the contract in 2015 involved design, with only 50 bridges being replaced. Daniel Galvin, public information director for PWKP, explains that the majority of the bridges being replaced are short-span structures that will fit one of three basic design templates. During 2016 and 2017 the remaining 508 bridges will be replaced, with the volume roughly equal each year. That means roughly $400 million in bridge construction that isn't part of the PennDOT budget will be put in place in the next two years.

Although there are 11 firms involved in the PWKP team, including a handful of subcontractors, the RBR program does represent opportunities for subcontractors and suppliers. About 20 firms outside of PWKP have won pieces of the work so far.

"There will be bidding documents posted on the RBR website as the bridges are designed, with letting dates that are opposite the PennDOT lettings," notes Galvin. "Contractors can set up an account, log in and bid as many or as few of the projects as they would like."

Broader participation in infrastructure spending is not in the cards in 2016. Other than for PennDOT, improvements in the funding of transportation and transit construction are in the pipeline rather than on the streets.

This can be seen in the Southwestern Pennsylvania Commission's (SPC) Transportation Improvement Program (TIP), which is a recommendation of the SPC to help guide where the major transportation departments will allocate spending. Last updated in late 2014, the 2015-2018 TIP has the distinction of being completed under the erroneous assumption that no federal highway bill would exist. The lesser funding assumption is evident in the priorities. In preparing the TIP, the SPC purposely constrains itself to projects that will cost less than the funding available. For the 2017-2020 TIP, the SPC anticipates $719 million for bridges and $621 in roadway improvements for its 11-county footprint.

Fiscal constraints have been evident in the capital spending by Allegheny County and the City of Pittsburgh for years. Once one of the largest construction buyers in Western PA, Pittsburgh's capital budget is less than $38 million for 2016, with the $5.2 million Lower Heth's Run project as the only one more than $3 million. Even the TIP-funded projects within the city – which are mainly administered by PennDOT – are in a lull. Four such multi-year projects will be in some phase of construction in 2016 but no new projects are scheduled to be under construction until late 2017.

What's on the Horizon?

It's hard to say which transportation agency in PA is happiest about the legislative developments since November 2013 but the Turnpike Commission would be a good bet. The funding mechanism enacted in Act 89 is of little consequence to the Turnpike, which gets its revenue from tolls, but within Act 89 there was language that put a sundown to the provision in Act 44 that $400 million of its annual revenue went to fund public transit. That involuntary contribution came right off the top, so in leaner years the remaining revenues strapped the Turnpike Commission severely.

When the funding mechanism was put into place it was with the expectation that I-80 would become a toll road, thus increasing the revenue for the Turnpike significantly. As planned, those tolls would not only have provided relief for public transit systems but also expanded the Turnpike's revenue to maintain and expand

roads and bridges. The proposal was denied approval by the Federal Highway Commission, as was the proposal to privatize the Turnpike. Without an alternative stream of funding, the Turnpike Commission was left reeling.

What the Turnpike Commission has proposed going forward is a marked increase in capital spending over the next ten years. Whereas capital spending from 2004 to 2014 only reached $400 million in four years – and barely exceeded $100 million in 2004 – spending on highways is proposed to average more than $600 million from 2016 to 2025. The plan is to spend over $2.5 billion more in the next ten years than in the previous ten.

Image courtesy Civil & Environmental Consultants.

The largest of the Turnpike projects is the Southern Beltway. Proposed for decades, this critical section of the highway linking the airport to I-79 was finally given a green light two years ago. Mosites Construction completed the first phase of the five-year program in 2015, but the next sections did not immediately follow. According to the Turnpike Commission's schedule, however, three sections worth more than $50 million each will bid in 2016. Section 55-A1 is slated for letting in the third quarter with Sections 55-B and 55-C1-1 set for the final quarter of 2016. That schedule may be more ambitious than practical but the progress on the Southern Beltway is welcome and the current bid schedule for the remaining sections needed to link to I-79 gives contractors a shot to complete the project by the end of construction season 2019.

PennDOT's major projects in the coming few years will continue to be focused on the three busiest interstate corridors.

In addition to the I-70 Washington County projects bidding in 2016, there are plans for a $54 million Bentleyville Interchange project, $28 million Route 481 Interchange and $65.7 million work between I-79 North and Route 136. In Westmoreland County, I-70 is slated for a $32.7 million project at the Yukon Interchange. Another $14 million will be spent at the Route 31 interchange.

In Allegheny County, there will be a $68 million project on the Parkway West between I-79 and the Tunnels, as well as two large projects on I-376 closer to the airport: the $47.5 million work between the airport and Business 376 and the $53 million project on the stretch between the airport and Beaver County. Roughly $23 million is tabbed for repairs on I-279 between the Ft. Duquesne Bridge and Camp Horne Road exit.

ALCOSAN is in the planning stages for what is the largest infrastructure project in Western PA. Its ultimate solution to the wet weather consent decree will result in about $1.5 billion in expansion and improvements to the ALCOSAN plant on Preble Street,

"How many bridges could you fix for one billion dollars?" asks Rich Barcaskey rhetorically. "The problem is a tough nut to crack if you have a legislature and governor working well together. We certainly don't have that. You have to find another way to fund the police through the general fund."

much of which will be the construction of a massive underground containment system for stormwater inflow. Another $500 million in wastewater treatment plant projects will be built in the communities within the ALCOSAN footprint to either capture or treat stormwater that is getting into the sanitary system through combined sewers. Over the past two years, a handful of large treatment plant projects have bid and started construction. In fact, the regional treatment solutions are the only parts of the consent decree solution that are moving forward.

At present, the funding mechanism for ALCOSAN's wet weather solution will be bonds that are repaid through user fees – dramatically higher user fees. ALCOSAN recognizes that passing such fees along is unfeasible and has been working at alternative solutions, primarily aimed at reducing the amount of stormwater and wastewater entering its system. Thus far, the state has been cooperative with the Authority as it seeks to solve the problem but because of the real lack of funding, the horizon on the main plant project continues to move out. Design on a plant solution isn't expected to begin until 2017 or 2018, with construction not likely until 2020.

One dark cloud looming on the horizon for the Commonwealth's highways and bridges is a potential – if not likely – shortfall in the funding promised by Act 89. The problem isn't that revenues are falling short or that the additional costs borne by the taxpayer are dampening usage. The problem is, not surprisingly, politics.

During a budget shortfall in Gov. Ridge's Administration, funds from the Motor License Fund were diverted to meet the needs of the state police budget. By constitutional rule, all proceeds from liquid fuels taxes, vehicle registrations and driver's license fees go into the Motor License Fund. The use of those funds is limited to "highway purposes." Through some reinterpretation of that phrase legislators saw fit to support state police, since officers patrolled the highways as part of their duties. The political reality was that it was a budget balancing move that could be quietly done without increasing other taxes and fees designated for funding the state police.

This practice was expanded significantly during the Rendell Administration and used annually by Gov. Corbett. During those three administrations the average increase in the amount of the state police budget funded by the Motor License Fund was 8.8 percent. In Gov. Wolf's still proposed 2015-2016 budget, the allocation jumped at a higher rate, adding $78 million to reach a total of $758 million. That's three-quarters of the police budget. At the current rate of growth, diversion of funds meant for highway maintenance and construction will reach $1 billion before 2020.

Opponents of this funding mechanism aren't arguing for reduced state police funding, but rather that the revenues come from another source. PA's state police are the de facto municipal police force for almost half of the Commonwealth's 2,561 municipalities, none of which pays for that state police service. Like with many fiscal problems, the can has been kicked down the road for long enough that the road is nearing an end.

"How many bridges could you fix for one billion dollars?" asks Rich Barcaskey rhetorically. "The problem is a tough nut to crack if you have a legislature and governor working well together. We certainly don't have that. You have to find another way to fund the police through the general fund."

When PennDOT Secretary Elizabeth Richards testified before the legislature last November, she did not specify the amount of shortfall from the increased revenues approved in 2013 that were keeping projects from proceeding; however, she did acknowledge that some of the revenue stream that was intended to increase infrastructure funding by up to $2.5 billion annually was not going to achieve that purpose.

Getting the Work Done

Regardless of the available funding, another concern about the heavy/highway market is the squeeze on available skilled workers. Like all aspects of the construction industry – as well as many other skilled professions – the heavy/highway segment has experienced regular outflows of workers because of demographics and less work. It's a problem that industry leaders recognized a while ago.

Smaller bridges on less heavily-traveled roads, like this one in Lycoming County, make up the bulk of the Rapid Bridge Replacement program. Image courtesy PWKP.

Image courtesy Civil & Environmental Consultants.

"What we've been doing since a year out from the passage of Act 89 is working on recruiting. We think there's a recruitment problem in general in the construction industry," explains Barcaskey. Working with the trades, CAWP has developed a website for recruitment that lets potential workers interact with video and games to experience the work. "Futureroadbuilders.com allows you to train online and links you directly to the apprenticeship process."

Despite efforts to accelerate the pace of apprenticeship in the construction trades, however, there are head winds. From 2010 to 2013 demand for many of the skills used in heavy and highway construction were in high demand in the natural gas industry. Experienced construction workers from the Baby Boom generation continue to retire at a faster pace than they can be replaced, especially since the seasoning needed takes much longer than an apprenticeship period. Although the average age of a worker has declined somewhat, the average age of a superintendent has risen.

Experienced construction workers from the Baby Boom generation continues to retire at a faster pace than they can be replaced, especially since the seasoning needed takes much longer than an apprenticeship period. Although the average age of a worker has declined somewhat, the average age of a superintendent has risen.

"The weak link in the chain is the superintendent, the foreman in the field," notes George Mezey, president of Trumbull Corporation.

The danger a scarcity of labor presents is multi-faceted. Labor supply tightens erratically and somewhat imperceptibly. As the pipeline of projects grows, it's very difficult for even the keenest observer to know how quickly the pool of workers is being absorbed week-to-week. That means projecting labor costs – the amount of production that can be estimated when a project bids – can be wrong. One of the problems that can result is contractor failure. That will be a limited issue. The more common occurrence will be the adjustment in bidding as productivity declines. That issue is already in the marketplace.

On a February bid for reconstruction work on Route 65 in Allegheny County, Swank and Trumbull finished first and second respectively with a spread of less than $29,000 on $30 million. That's less than one-hundredth of one percent. An owner would normally be thrilled with having two low bidders so tightly bunched, except that in this case the budget was $8.5 million lower than the bids.

Mezey says that the productivity concerns are already being factored into Trumbull's bids and that the factor his team – and Swank's – estimated may have been as much as ten percent. "The budget was wrong, but it wasn't $8.5 million wrong," he asserts.

There was peril for Pennsylvania's roadways as the government kicked the can down the road with regard to funding construction over the past decade. It may be that the hidden peril in that sort of negligence was the lost opportunity to build while costs were lower and workers were more available. It's likely that if the current trend continues some amount of the work that is proposed won't be done, at least not in the year planned. Tighter labor means fewer miles of road repaired. And with Shell's cracker plant potentially requiring as many as 2,000 workers with skills applicable to infrastructure work, the issue isn't going to get easier to fix this decade.

The Impact of Improving Infrastructure

Public safety is one of government's principle functions. Maintaining safe roads and bridges certainly fits into that definition; in fact, few seem to argue that even the smallest form of government should give the responsibility for highway maintenance to some other entity. Infrastructure construction has also been a political device for government when it seeks to curry favor with labor or a particular community, and especially when government sees the need to stimulate the economy. The American Recovery and Reinvestment Act of 2009 (ARRA) was the most recent example of such a stimulus but it was far from the only example.

According to a study done at the time of ARRA by the Associated General Contractors, each billion dollars spent in construction yields 29,000 direct and induced jobs. The economic multiplier effect ultimately created three times as much activity from the investment. It's easy to see why infrastructure stimulus is popular in times of crisis.

Creating jobs isn't a bad thing but stimulating short-term employment is one of the least effective arguments for investment in infrastructure. Pennsylvania has great natural resource and lifestyle advantages because of its rivers and vast sparsely-populated areas. A highly-developed state in a freeze-thaw climate, Pennsylvania will be unable to avoid continuous maintenance of its road system. That reality is a taxpayer burden; but keeping the road system up to par will pay dividends beyond construction employment.

"In 2010, the U.S. Treasury and Council of Economic Advisors concluded a study of the economic effects of infrastructure investment. Their findings couldn't be clearer: investment in transportation infrastructure increases productivity, accelerates economic growth, generates permanent new jobs, enhances real-estate values, and yields new tax revenues at the federal, state and local levels. In short, it creates new wealth," notes PennDOT Secretary Leslie Richards. "But that's not all of it. Transportation investment reduces congestion, thus saving the public valuable time, expense, energy consumption and the emission of pollutants and green-house gases."

President Dwight Eisenhower made a very similar argument when he proposed the interstate highway system in 1956. America was in a post-war expansion and population was rapidly pushing west of the Mississippi River. Eisenhower implored U.S. taxpayers to support the interstate system with higher taxes as a measure of citizenship, much as they had supported World War II. That sort of proposal might keep Eisenhower from getting reelected today. It was a similar, if more restrained, pitch that industry and civic leaders used to persuade reluctant state law makers to pass Act 89 in 2013.

"Sustainable and predictable federal, state and local investments, as embodied in Act 89 - which I was proud to support as a state senator - are essential to building and maintaining a modern, effective and interconnected regional transportation network," asserts Matt Smith, president of the Greater Pittsburgh Chamber of Commerce.

"Critical to the Allegheny Conference's current three-year agenda is connecting people to opportunity in the region. A more robust infrastructure network will address this issue by enabling more people to move easily from where they work, recreate, live and learn, and it will move goods from regional companies to market faster and more efficiently," he continues "This is right at the heart of the Conference's – and its Greater Pittsburgh Chamber of Commerce affiliate's – mission to improve the economy and quality of life in southwestern Pennsylvania." BG

The "cart" fabricated by Interstate Equipment Corp. acted as a movable staging area for the tools and crane.

MONONGAHELA INCLINE

Rail and Tie Replacement

Do-it-yourselfers can doubtless empathize with a worker who drops a piece of material or discovers upon settling in on a ladder that the needed tool is in the toolbox. It's one of the common frustrations of DIY work. Now imagine if that oversight meant trekking 300 feet down a steep hillside to get the forgotten or misplaced material. That's the conditions that workers on the Monongahela Incline experienced.

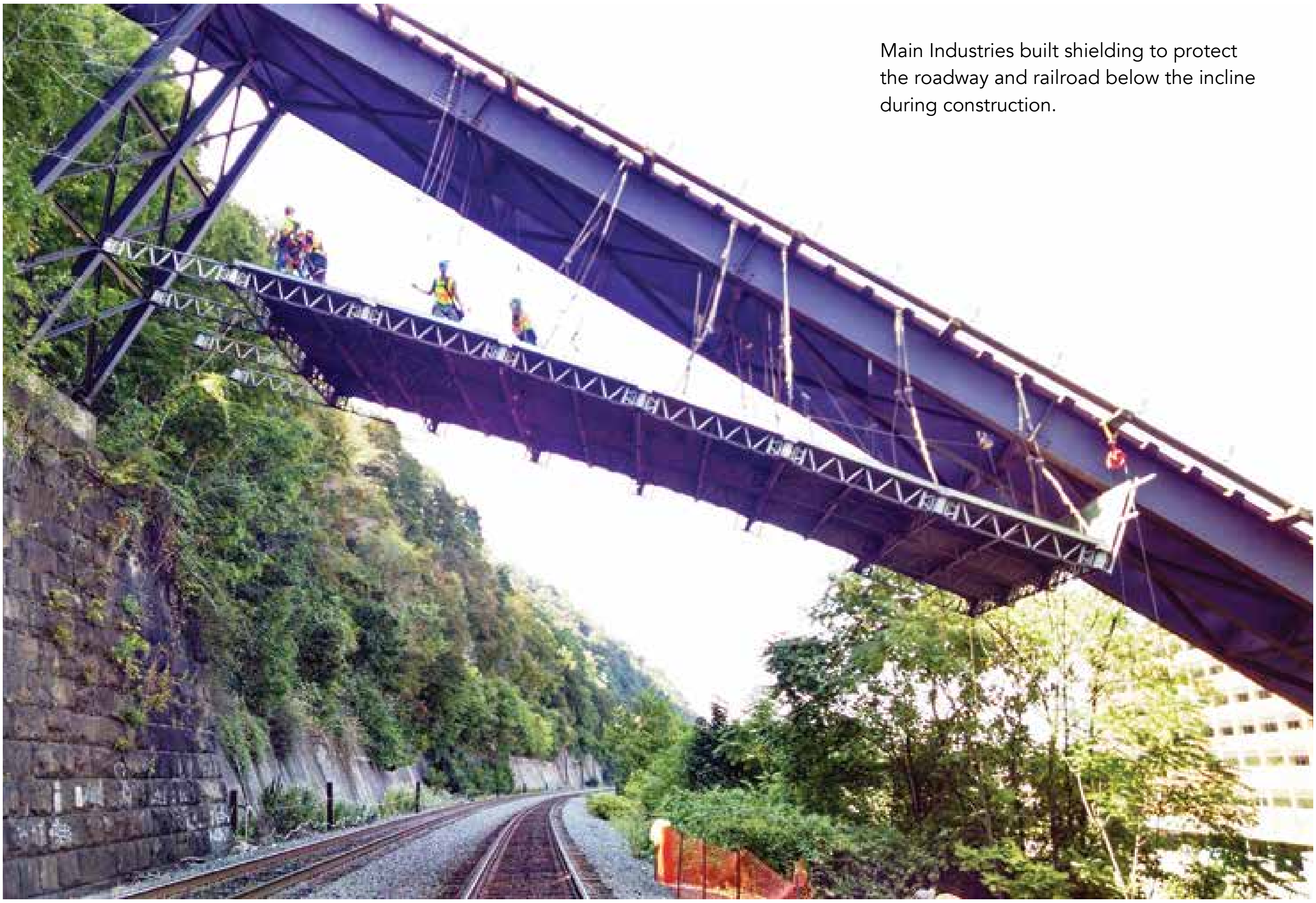
One of the main challenges of the project was right there in the name: the incline.

"The project was done on a 35-degree incline. It's very difficult working on such an incline plane," notes Brian Gilkey, president of Mosites Construction & Development Co., Heavy Division. "The only access points were a spot on McArdle Roadway and the lower station, so if you forget your tools you were going to be a sad man. The walk up and down that hill was going to kill you."

Job site conditions were one of three major considerations in accomplishing the Mon Incline's updating. When the Port Authority awarded the $3.5 million contract to Mosites in February 2015, project managers had two other major concerns. One was the protection of the pedestrians, workers and users of the road and railroad that the Incline spans. The other was the amount of time that the Incline would be out of service.

Although it isn't a heavy commuter option, the Incline is used by residents of Mount Washington who work in Downtown or Station Square to get to and from work; and of course, it's also a part of a Pittsburgh tourist attraction. The views from Mount Washington are among the best urban vistas in America.

"We have bus service from Mount Washington to Carson Street but a lot of commuters use the inclines to go up and down the mountain. The inclines average 500,000 riders every year,"



Main Industries built shielding to protect the roadway and railroad below the incline during construction.

says Adam Brandolph, spokesman for the Port Authority of Allegheny County. "The ties had reached the end of their useful life and it was a chance to add capacity to the safety wire used by workers."

For Mosites and its team, many facets of these three challenges were interrelated. The scope of the project was not especially complex, although experience working on a funicular wasn't on the resume of any of Mosites' people. Approximately 636 lineal feet of rail had to be removed and replaced, along with all the ties. The project also involved painting of the top flanges, safety rope replacement, rehabilitation of the incline cars, and replacement of the car and station doors. It was the logistics of the project that made for most of the headaches. The Mon Incline project was going to be one of those where the preparation would take three times as long as the construction. That was probably for the best, since construction wasn't supposed to take but 70 days.

"We planned the project out for three or four months before we even started. Seventy days isn't very much time. When workers would ask about off days, we told them there were no off days. If a day of the week ends with a d-a-y, we're working. Every day's a work day," Gilkey jokes.

There were several engineered solutions to the principle challenges of the project. Because the McArdle Roadway evenly bisected the run of the Incline, access to the site was at least 300 feet from the nearest road. The solution to the problem of getting equipment and material to and from the Incline was to fabricate a platform that could move along the rails of the Incline that could be outfitted. It was fortunate that one of Mosites' key subcontractors, International Equipment Corporation, had experience providing material handling solutions for the Mon Incline.

"Interstate had rehabilitated the Incline in the mid-1980s and they used a cart similar to this one," says Gilkey. "They essentially did the same thing. We couldn't have done it without the cart."

What Gilkey refers to as the "cart" was a multi-level steel structure, with a wood deck that would hold the materials or equipment being used on the job. A crane was mounted on the structure so that rails and ties could be moved into place or removed. The project started with the cart assembled at the top station as track was pulled and each tie was pulled off one at a time. Rail was cut in 15 foot sections as rails and ties were pulled continuously until demolition was completed at the bottom of the hill. A larger crane was used to move the cart around as work proceeded. For reasons of safety, however, the cart could not be used to move workers.

Gilkey sites concerns for protecting Mosites' workers as another key component of the planning.

"There was extensive planning on how to keep people safe. Each and every day you had to change where you tied off because it was always a moving product," he notes. Workers were actually standing on the ground so protection against falling was different. The fear wasn't protecting workers from falling to the ground but rather from falling down the steep slope if they slipped on footing that Gilkey called a "greasy mess." Workers tied off the Incline's structure above them.

Protecting the public areas surrounding the Mon Incline was also part of the challenge. In addition to McArdle Roadway, the Incline also spans two railroad lines at the bottom of the hill and meets the bottom station at West Carson Street. Trains, cars and pedestrians needed to be protected from anything that could fall from above. Here again, one of the subcontractors on the team had a solution. Main Industries fabricated shielding that resembled a section of road or bridge, which was suspended between the Incline and the road or rail bed below it.

The third piece of the puzzle – the schedule – was the one that the team could not completely control. No matter how well planned, a compressed schedule left almost no room for error. A day lost to weather or logistical failure on a 70-day project would be much harder to recover than on a project of longer duration, especially since demolition of the Incline was going to be done using six 12-hour shifts and reconstruction with seven 12-hour shifts. Compounding the tight schedule were additions to the work. The base bid was scheduled for 70 working days but with alternates and owner-directed changes, the total days allowed to complete the work stretched to 98 days. The pressure to re-open the Incline by Light-Up Night did not change, even though the scope had expanded. Mosites worked with its crews and subcontractors to see how to compress the schedule.

The project commenced on September 14, 2015 and was substantially completed on November 13. That was one week ahead of Light-Up Night. "It took the cooperation of Mosites, the Port Authority, Parsons Brinckerhoff and our subs to get the job done. We actually beat the revised time frame for the opening by 22 days," Gilkey recalls.

That pleased the Port Authority. "It was an absolute success," says Brandolph. "There were no major problems."

Steep terrain made simple demolition and construction tasks more difficult.

Brian Gilkey believes his crews understand how trying the project was and are justifiably proud at what the team accomplished. Working on a Pittsburgh landmark is an experience that doesn't happen often. At the same time he's sure that not many would sign up for another round.

"I've been doing this for 20 years and this was one of the more difficult jobs I've been involved with. The logistics were a killer," Gilkey reflects. He said the reaction of the workers on the project was a good barometer for how they viewed the conditions. "One of the toughest things in the industry is working with a chipping gun over your head. When we said that the Duquesne Incline is coming out next and maybe we'll get that job too, each guy said 'Don't sign me up. I'd rather chip overhead for the rest of my life than do this again'," he laughs. BG

PROJECT TEAM

Mosites Construction & Development Co. .... *General Contractor*
Port Authority of Allegheny County .... *Owner*
Mackin Engineering Co. .... *Design Engineer*
Hatch Mott McDonald .... *Program Engineer*
Parsons Brinckerhoff Engineering .... *Inspection Engineer*
G. W. Peoples Contracting Co. .... *Rail Contractor*
Trinity Door Systems .... *Automatic Doors*
Panthera Painting Co. .... *Painting*
Diversified Fall Protection .... *Fall Protection Systems*
Schultheis Electric .... *Electrical Contractor*
Interstate Equipment Corp. .... *Material Handling Equipment*
Main Industries .... *Safety Shielding*

Master Builders' Association of Western Pennsylvania, Inc.

The Construction Industry Evening of Excellence

is a night that celebrates the brilliant and unparalleled design and construction industry. This event unites the firms and individuals that are developing our region with a commitment of excellence in each and every construction project.

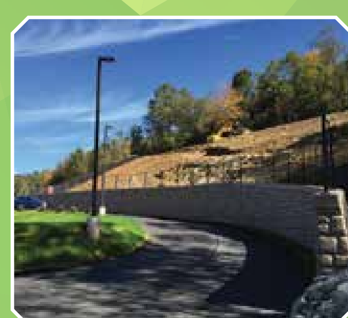
New Construction Over $25 Million
PROJECT: Industrial Scientific Corporate Campus
CONTRACTOR: Mascaro Construction Company, L.P.

New Construction Between $10 and $25 Million
PROJECT: Seton Hill University Dance & Visual Arts Center
CONTRACTOR: PJ Dick Incorporated

New Construction Under $10 Million
PROJECT: Department of Veterans Affairs - Modernization of ICU Beds
CONTRACTOR: RBVetCo, LLC

Renovation Construction Over $10 Million
PROJECT: Heinz Field Addition
CONTRACTOR: Mascaro Construction Company, L.P.

Renovation Construction Under $10 Million
PROJECT: Clarion University Becht Hall
CONTRACTOR: Uhl Construction Company



Excellence in Craftsmanship - Exterior
PROJECT: West Greene School District - Retaining Wall Reconstruction
CONTRACTOR: Burchick Construction Company, Inc.

Excellence in Craftsmanship - Interior
PROJECT: Monongalia Justice Center
CONTRACTOR: Massaro Corporation

GOLD SPONSORS:

Keystone + Mountain + Lakes Regional Council of Carpenters
UPMC Life Changing Medicine
Gateway
cap Construction Advancement Program of western pennsylvania fund
Babst Calland Attorneys at Law

SILVER SPONSORS:

Eckert Seamans Attorneys at Law
International Union of Operating Engineers

BRONZE SPONSORS:

Aon Risk Solution - Construction Services Group
B Jarod & Company
BDO, United States
Blumling & Gusky
BreakingGround
Carson Publishing
Chartwell Investment Partners, Inc.
Cohen Seglias Pallas Greenhall & Furman, PC
Desmone Architects
Howick, LTD
International Brotherhood of Electrical Workers
Ironworker Employers Association of Western Pennsylvania
Iron Workers Local Union No. 3
Laborers' District Council of Western PA
Langan
Oxford Development
Schneider Downs & Co., Inc.
Seubert & Associates
The National Electrical Contractors Association (NECA)
Tri - State Reprographics
VEBH Architects
Zurich

RICHARD GOETTLE INC.

The path to success for Richard Goettle Inc. probably began when the founders of the company decided to refocus their business from the general to the specific. Founded by Dick Goettle and Thomas Buzek in 1956, Richard Goettle Inc. was a general contractor that built commercial, industrial and institutional buildings in the Cincinnati area. During the first decade of its existence, Goettle also developed the experience and equipment needed to build bridges and treatment plant projects. That expertise was valued by some of their competitors, who subcontracted difficult deep foundation, shoring and marine construction projects to Richard Goettle Inc. Doing that specialty work yielded a revelation for Goettle and Buzek.

"They discovered that those projects were more profitable than their work as general contractor," says Ralph Pagone, regional manager for Richard Goettle Inc. in Pittsburgh.

Goettle worked as part of the teams for 3 PNC Plaza and The Tower at PNC (shown above).

"It was my boss's customer but we were a three-person office so whenever that phone rang and it was Goettle you did what you had to do because they were paying the bills," Pagone recalls. "I got to entertain Goettle people with my boss back then. I made friends with Larry Rayburn and [current CEO] Doug Keller, who was the estimating and sales guy."

Pagone was just starting his family and felt the tug to move back to Pittsburgh, where his and his wife's families were living. He approached Larry Rayburn to see what sort of opportunities might exist with Goettle in Pittsburgh. Some months later, Rayburn received notice that Posey would be retiring in November 1996 and offered Pagone the position, with a delayed starting date. When L. B. Foster downsized before the holidays in 1985, Rayburn accelerated the schedule and Pagone began with Goettle.

The two founders had a vision for growth that involved providing expertise in geo-construction and marine construction projects nationwide. With the capability to self-perform difficult deep foundation work, earth retention and underwater construction projects, Goettle Inc. could land work that needed complex solutions. Expertise would be as valued as price. Many of the projects would require that Goettle handle the design and construction. In 1968, the two founders convinced Larry Rayburn to join them in making this vision a reality.

In the new company's early years there were still many projects in the industrial heartland and Ohio River Valley. The topography and rivers in Pittsburgh are similar to Cincinnati. Goettle came to Pittsburgh for a project with Dick Corporation in 1977 and never left. Rayburn had a relationship with a well-known former Dravo manager named Tom Posey and hired him in Pittsburgh. Over the next decade Rochard Goettle Inc. worked on the Allegheny County Jail, Gray's Landing Lock & Dam, coffer dams for the bridge piers of the Veterans Bridge and other pieces of I-279.

Ralph Pagone was working for L. B. Foster Co. and in 1993 accepted a position in Lexington, KY. Foster's biggest customer in the Lexington office happened to be Richard Goettle Inc.

Pagone saw first-hand how Goettle planned to invest in Pittsburgh during the next year. Having come from an equipment sales background, Pagone was concerned about his construction inexperience. He wasn't an engineer, as Posey was, but Goettle sent Pagone to work on projects that exposed him to all aspects of the work it performed. He spent time in Cincinnati learning Goettle's estimating philosophy. Posey and he shared an office and the long-term relationships were handed off smoothly. When Thanksgiving 1996 rolled around, the Pittsburgh operation was firmly in Pagone's hands.

The upside of Pagone's relative inexperience in the Pittsburgh construction market was that he didn't prejudge the opportunities that arose. Because he was building his own Rolodex of sorts, Pagone pursued projects with contractors and customers with which Goettle had not worked before. The kinds of projects that Goettle landed expanded from mostly PennDOT and civil construction to building projects throughout the region. Within a couple of years, Goettle was regularly performing 20 to 30 projects each year with Pittsburgh companies, instead of a handful.

One of Goettle's strengths in the market is its engineering capabilities. During Pagone's early years running the Pittsburgh operations, projects were sold and then turned over to the engineer-

ing office in Cincinnati. That led to a certain amount of disconnection between the customer expectations and what Goettle's engineers expected was the scope of work. Pagone was uncomfortable with that process. In 2004, Hurricane Ivan provided an opportunity for the process to change.

"I had just put out feelers to all the county engineering offices before Ivan hit, reminding them that we're PennDOT approved. We do design in-house. We can respond very quickly," he recalls. "I got a call on Monday, after Ivan caused the flooding, from Gene Lipovich – who was with Allegheny County back then – saying he had two sites he needed us to look at. We did two jobs design-build, partnering with Baker as a reviewer. We took a turn-key deal, taking traffic maintenance and other aspects that we would never handle."

> One of Goettle's strengths in the market is its engineering capabilities. During Pagone's early years running the Pittsburgh operations, projects were sold and then turned over to the engineering office in Cincinnati.

The outreach to county engineers was an initiative Pagone had wanted to try for some time, having worked directly with those kinds of officials when he served in Lexington. The timing of the marketing was uncanny and the emergency contracts were the impetus for a change in philosophy for Goettle. While the Cincinnati engineering department worked on the two projects, those were the final two jobs handled in that manner.

"From that point on if we sold it, we built it," Pagone says.

Pagone is very optimistic about the prospects for Richard Goettle Inc. in the Pittsburgh market. Early in the year, Goettle priced a number of compressor stations and natural gas midstream projects that had been put on the shelf in 2015.

Project management has been the driver for growth in Pittsburgh. Rayburn suggested that an administrative assistant be added so that the project tracking and accounting responsibilities could be handled in the office. A project superintendent was needed to ensure the projects run as planned.

The more integrated approach in Pittsburgh yielded results. Goettle Inc. landed $8 million in contracts with Trumbull Corporation as part of the West End Circle reconstruction. Goettle was able to secure a number of contracts as part of U.S. Steel's Coke Battery C at the Clairton Works. The project helped carry the office through the downturn.

"We were there for three years working consistently," says Pagone. "It was good work for us because it was a lot of different things. That job had deep foundations for pilings. It had auger cast, mini piles, caissons, soldier-pile-lagging earth retention internally-braced, and earth retention tangent walls tied back. It had eight different things that we do in one project."

The U.S. Steel project highlighted Goettle's capabilities in design/build. With six professional engineers on staff, Goettle is able to bid projects as designed and also suggest alternative designs that it feels are more effective or cost-effective. During the Battery C project, Goettle was able to help U.S. Steel stay on budget during several phases of its work with more efficient solutions.

When the needs of the Pittsburgh office grew further in the early 2010s, Goettle reached out to colleges with strong geo-technical programs to investigate the hiring of interns. Dick Goettle was very involved in philanthropic efforts in Cincinnati, especially those involving the University of Cincinnati. Goettle established a program of hiring interns from the university. Several of the company's current executives had their first exposure to Richard Goettle Inc. as interns. In Pittsburgh, Goettle began a relationship with the University of Pittsburgh's cooperative program, a relationship that is in its fifth year.

Recently, another full-time estimator has been added, bringing the total staff count in Pittsburgh to five. The company is in the process of identifying options for larger space in the North Hills, planning a June move.

Another of Dick Goettle's initiatives has had an enduring impact. Goettle observed what had happened to a number of his peers when the next generation matured and was wary of having that transition cause problems for the business or friction within his family. He was ahead of his time in the construction industry, creating an employee stock ownership plan prior to 1990. Today Richard Goettle Inc. is an employee-owned company, with 47 shareholders. That number includes Ralph Pagone, who is also one of the company's officers.

Pagone is very optimistic about the prospects for Richard Goettle Inc. in the Pittsburgh market. Early in the year, Goettle priced a number of compressor stations and natural gas midstream projects that had been put on the shelf in 2015. Although the current political climate in Harrisburg is anything but productive, the geotechnical reality is that bridges and roadways in Western PA continue to decline. Most of the technologies used to retain earth along the highways have been replaced so major bridge and highway projects lead to more opportunities for geo-tech construction. Whether through planned allocation or emergency repairs, money will be spent on the infrastructure in Western PA.

For Pagone, having the increased capacity to respond to opportunities helps support Goettle's business philosophy.

"We never sell a job for one time. We want that customer. We want that client all the time," he explains. "There are contractors in the heavy/highway world or the building world that we want to do all their work. But the reality of it is we have more competition now than ever, so how do we set ourselves apart? Now we have five people here who can support our customers." BG

Company Facts

Richard Goettle Inc.
Ralph J. Pagone
Regional Manager/Principal
135 Cumberland Road, Suite 217
Pittsburgh, PA 15237
412-635-7155 – Phone
412-635-7156 – Fax
rpagone@goettle.com
www.goettle.com

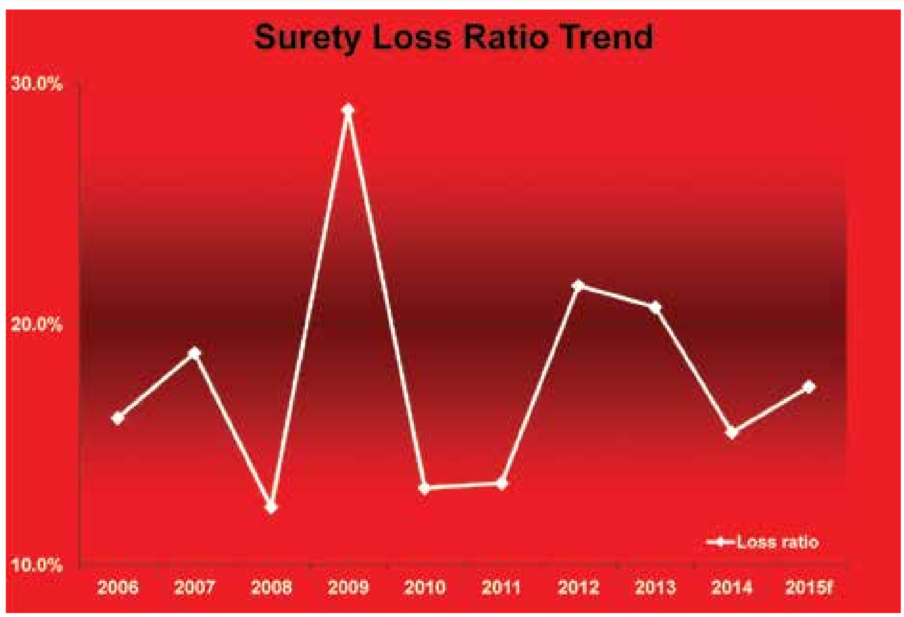

Stantec
We take a unique approach to every design
stantec.com
Our workplaces are more than four walls. They inspire, engage, and build loyalty from your most valuable asset—your people.
Design with community in mind
architecture | engineering | interior design


VOLPATT
CONSTRUCTION
We Are Building
412-942-0200
rayjr@volpatt.com
www.volpatt.com
Carnegie Library of Pittsburgh, Beechview Branch
GBBN architects
Delivering quality construction since 1991 in the institutional, industrial and commercial market.

Financial Perspective

Surety Market Update

Financial conditions for contractors continued to improve in 2015, making the year another healthy and profitable one for the surety industry; however, some significant individual losses, coupled with significant changes among the insurers is making the outlook for 2016 more dynamic than in recent years. Even with public construction making a comeback from almost a decade of underinvestment, buyers of surety bonds will be in the driver's seat. That's good news for contractors looking to add capacity or improve conditions but it's worth noting that the construction industry has rarely benefitted from a soft surety market in the long run.



Better discipline during the 2009-2010 downturn has helped keep surety losses relatively flat compared to previous business cycles.

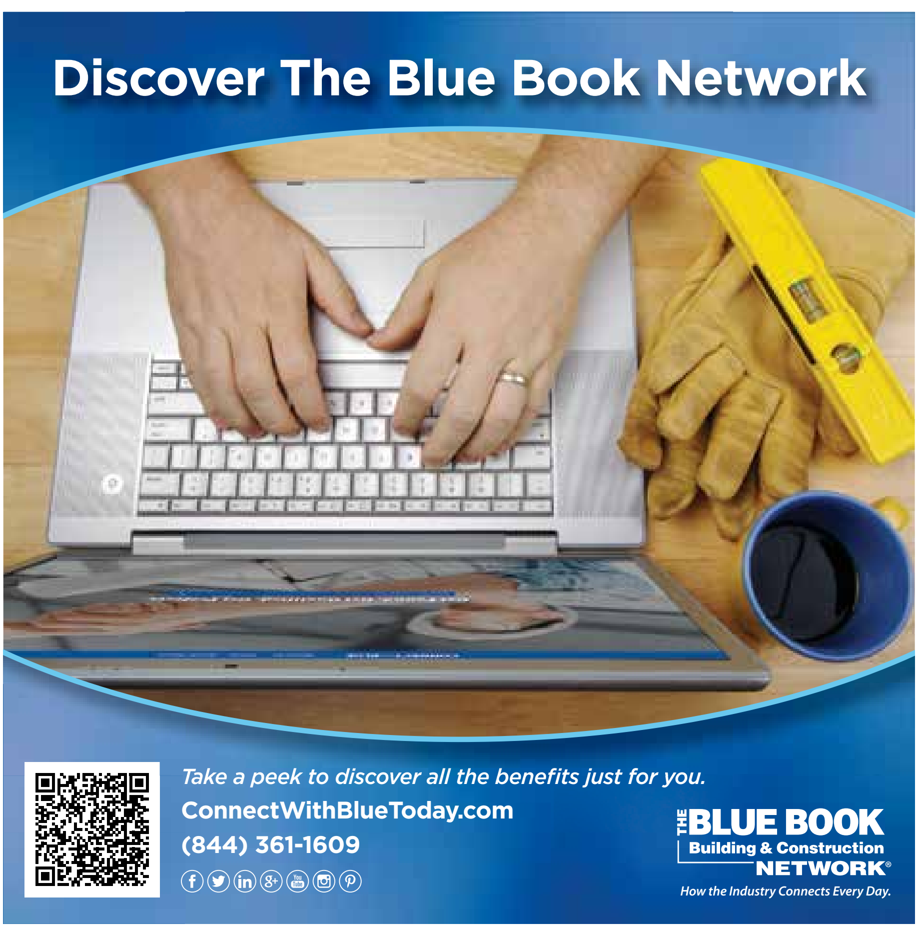
Based on premiums and losses recorded through September 30, 2015, the total loss ratio for all surety companies is forecast to be around 17.5 percent for the full year. That's the seventh year in the past ten that the industry's loss ratio was below 20 percent. The benchmark for profitability is 25 percent so sureties should have prospered again in 2015.

"In January my partners and I jump on a plane or hop in a car and visit every one of the insurers we represent. We go see the decision-makers, the policy-makers, even though they may have an office in Pittsburgh," notes Brian Jeffe, managing partner of surety bonds for agent Seubert Inc. "For the third year in a row the surety industry did well in 2015. [Surety] mirrors the construction industry. 2014 was better than 2015 and 2016 should be better than 2015. Losses are still well below 25 percent."

Much of the credit for the strong loss ratio performance goes to simple market improvements over the past five years. As volume has returned, contractors were able to land profitable work that enabled them to work through any weak projects with fewer defaults. Surety underwriters obviously deserve a share of the credit. Proactive during the wrenching downturn in 2009 and 2010, sureties avoided repeating many of the mistakes that plagued the industry during the 2002-2004 recovery. It also helped the insurance business in general that the years since the Great Recession have seen far fewer major disasters like those that occurred between 2001 and 2005.

The need to recover from losses like 9/11 and Hurricane Katrina pushed sales ahead of prudence. That was reflected in high premium growth, which spilled over into surety premiums and surety underwriting standards. By comparison, 2015 premiums were roughly $4.5 billion, down almost 20 percent from the heyday, and up about two percent from 2014. That means there is still plenty of excess capacity and room for growing premiums. Conditions in the general property and casualty insurance market are even softer, with even more appetite for premiums. That has made for a buyer's market.

"I've seen a couple of deals come through that surprised me in terms of rate and capacity, especially capacity," observes



Jeff Ream, executive vice president for Willis of Pennsylvania. "The property and casualty market is relatively soft."

Still, few surety agents expect to see pressure for revenue impact underwriting. More to the point, the expected conditions for contractors should allow for growth even with the same underwriting standards.

"No one is panicking to where they feel like they have to write everything," says Jeffe, pointing out that being in Pittsburgh is an attraction at the moment. "Sureties are coming to us, wanting to take advantage of a good construction market. They like Pittsburgh because sureties have seen very few big losses here over the years."

Although the industry is profitable overall and the outlook for publicly-bid work is positive, problems with several major insurers and consolidation among top insurers have caused turmoil among the sureties. There appears to be a yin and yang for every issue facing the industry but in general, surety bonding will be less predictable in 2016.

Among the factors impacting surety bonding is the continued fallout from a number of very large losses experienced in 2014 and 2015 from contracts awarded in 2010 and 2011. These losses caused the departure of XL Insurance from the surety market, taking with it $1 billion in capacity. Another of the industry's bigger players, Zurich North America, experienced large write downs in surety and losses in its Subguard subcontractor default insurance (SDI) product that have changed its approach to the marketplace. In fact, the competitive dynamics of the insurance companies are having a bigger impact on the surety market than the usual concerns about construction volume and contactor finances.

In the case of the SDI market, increased competition in recent years pushed the threshold lower for the size of contractors for which the SDI product made sense. SDI is purchased by the general contractor in lieu of having the project's subcontractors bonded individually. In the event of a subcontractor default, the general contractor files a claim with the

Subcontractor default insurance is still attractive to general contractors, who can also profit by pocketing reserves for claim deductibles if they manage risk well.

SDI insurer, which then subrogates the claim to the subcontractor's insurance. The advantage of default insurance over a bond is that the contractor has access to the cash to complete the work without the delays of defending the bond claim.

SDI was originally aimed at companies doing $750 million or more, but SDI market competition created opportunities for pricing that worked for companies with annual volumes of $200 million to $300 million. SDI competition broadened the base of contractors who could feasibly get coverage and increased the opportunity for default. Moreover, the kinds of prequalification that general contractors applied to subs were different from the financial prequalification that an insurer would do. Contractors focus on performance and experience; sureties focus on balance sheet and financial benchmarks that would produce different red flags. As a result, claims rose.

As market leader, Zurich was hardest hit and has taken steps back to revise the product by changing the coverage, capping the limit on any loss. They are relaunching Subguard and going through a transition in the market.

Subcontractor default insurance is still attractive to general contractors, who can also profit by pocketing reserves for claim deductibles if they manage risk well. Jim Bly, managing director for Alliant Construction Services Group, says that Zurich's problems haven't diminished the demand for SDI.

"The good news is that there's a new SDI coming into the market through a [managing general underwriter] from California called Cove, and Lloyd's is going to be the carrier," he explains. "They are coming into the market to fill the void or some of the void for business that Zurich couldn't renew or had problems with."

As the market leader, Zurich's problems were having a significant ripple effect throughout the SDI market. Initially Zurich's two other competitors, XL and Arch, were overwhelmed with requests for quotes from agents and effectively put a moratorium on new SDI business. That overreaction has settled down since then but Zurich's problems clearly created the opportunity for another carrier.

Because of the emphasis on prequalifying subcontractors, insuring against subcontractor default isn't going to decline. Bly says Alliant has a proprietary financial benchmarking service called Contractor Credit Model (C2M) that uses the analytical tools that sureties use to qualify subs and risk rates them for the contractors, assigning capacity limits for single projects and total capacity.

"We're getting a lot of interest in that. Sureties are the best at prequalifying subs in the market. That's what they do; it's all they do," says Bly. "People are hungry for that. There are other services in the market that are emerging because all the underwriting with sub default has been pushed out to the general contractor or CM and they are not really equipped for it."

In addition to XL's exit from the surety market, there are several other competitive situations that are creating a frothier surety environment. The January 2016 merger of Chubb Corporation and ACE Ltd. created the fourth largest surety in the market, with $700 million in business written globally. Industry observers expect the merger to make Chubb more growth-oriented than in past, as evidenced by its increase in participation with one client to $5 billion, which was only the second instance of a single insurer at that volume.

"They're going to get a mandate to grow and Chubb had a tendency to keep its powder really dry. That will be worth watching," notes Bly.

At the Pittsburgh regional level, the biggest negative factor for surety bonding is the continued high level of competitive bidding. Prior to mid-2015 the bridge and highway market was mired in below average volumes for three or four years. School districts have been faced with slumping demographic support, political pressure against raising taxes and two separate moratoriums on the PlanCon process by two different governors. All of these factors have limited school construction volume. For more than a decade, both the city of Pittsburgh and Allegheny County have drastically underinvested in capital spending due to fiscal crises. Some of the frozen conditions began to thaw in 2015 and the taps should open wider in 2016 for public construction, but the pressure to get work hasn't abated yet.

The loss of XL's capacity in the market will also likely be negligible because of inflows of new capital into the surety insurance sector. Unsatisfactory investment returns and poor performance in other markets are driving new money into surety in the hopes of boosting return on equity.

Global giant Allianz is entering the U.S. surety market through its Euler Hermes surety business, bringing $500 million in capacity per account. Tokyo Marine purchased HCC Surety Group to add to its U.S. surety business, which it serves with Philadelphia Insurance Group. The move makes the combined companies the equivalent of the sixth largest surety. Nationwide, which opened surety lines in 2014, is expecting to aggressively expand its business and offers $200 million in single-project capacity and $400 million aggregate capacity. Commercial surety companies have grown construction surety profitably and are expected to continue expanding capacity. Names like ARGO, Berkeley and One Beacon are each capable of adding $150 million in capacity.

Experienced surety professionals see the changes in competitive landscape as potential precursors to increased problems. Even without the new capital, utilization of surety capacity was inconsistent and less than potential. The addition of insurers that will immediately be among the ten largest sureties is likely to have some liberalizing of underwriting standards so that new capacity can be utilized. History has shown that such market dynamics can influence underwriting flexibility about pay on demand capacity, security and indemnification in the pursuit of market share.

"Stay tuned. Fasten your seat belt," jokes Bly. "It's still relatively soft but if anything, the needle is starting to move towards potentially hardening the market if the losses continue."

At the Pittsburgh regional level, the biggest negative factor for surety bonding is the continued high level of competitive bidding. Prior to mid-2015 the bridge and highway market was mired in below average volumes for three or four years. School districts have been faced with slumping demographic support, political pressure against raising taxes and two separate moratoriums on the PlanCon process by two different governors. All of these factors have limited school construction volume. For more than a decade, both the City of Pittsburgh and Allegheny County have drastically underinvested in capital spending due to fiscal crises. Some of the frozen conditions began to thaw in 2015 and the taps should open wider in 2016 for public construction, but the pressure to get work hasn't abated yet.

"It's still very competitive. Contractors just don't have backlog and backlog is life," Jeffe points out. "They don't have backlog like they did coming into 2008 and 2009, so bidding is still very tight to build backlog."

There are significant increases in spending on highways and bridges planned for 2016 and beyond. Some $700 million more will be spent in PennDOT District 11 for example.

Brian Jeffe has seen plenty of early signs that 2016 will be a year of further improvement and says Seubert is counseling clients to avoid the trap of filling up on the first course of the meal.

"Seubert had the best January and February in its history. We're writing 80 bid bonds a day," he explains. "We're preaching to be patient, be margin hunters. The opportunities will be there." BG

Legal Perspective

Bilt-Rite and the Evolving Scope of Negligence Liability for Design Professionals

By Kurt F. Fernsler, D. Matthew Jameson, III, and Esther Soria Mignanelli

On three different occasions over the past year, the Pennsylvania appellate courts have recently elaborated on the potentially broad reach of negligent misrepresentation claims a contractor may have against a design professional for a faulty design, despite the absence of a contract between them.

Although Pennsylvania law generally adheres to the "economic loss" doctrine and prohibits the filing of a negligence claim that resulted solely in economic loss, a narrow exception is found in Section 552 of the Restatement (Second) of Torts entitled, "Information Negligently Supplied for the Guidance of Others." In Bilt-Rite Contractors, Inc. v. The Architectural Studio, the Pennsylvania Supreme Court adopted Section 552 and held a general contractor was able to bring an action against an architect for alleged negligent misrepresentations in plans and specifications upon which the contractor relied in submitting its winning bid for the construction of a school. 866 A.2d 270 (Pa. 2005).

Since the Supreme Court's decision in Bilt-Rite, architects and engineers performing services on Pennsylvania projects have been tasked with carefully considering the potential liabilities that may be asserted by third-parties with whom they may have no contract.

A Failure To Update Plans In Light Of New Data May Constitute A Misrepresentation

In December 2015, the Pennsylvania Commonwealth Court confirmed the weight a Bilt-Rite claim can carry amidst a construction dispute in Trinity Contracting, Inc. v. Mun. Sewage Auth. of Twp. of Sewickley and Gibson-Thomas Eng. Co., Inc., No. 523 C.D. 2015, 2015 WL 8776568 (Pa. Commw. Ct. Dec. 15, 2015).

The Trinity Contracting case arose out of a contract for the construction of a complete sewage treatment plant in Sewickley Township, Pennsylvania. Gibson-Thomas Engineering Co., Inc. ("Gibson-Thomas") served as the engineer of record and the Authority's representative for the project. Gibson-Thomas completed its preliminary design in August of 2007, following which it contracted with a geotechnical engineer for the Project. In March 2007, the geotechnical engineer wrote to Gibson-Thomas and identified certain significant geotechnical problems associated with the site recommended by Gibson-Thomas for the project. Nevertheless, Gibson-Thomas completed its design for the project on the site it had originally selected, and never revised its design in light of the findings expressed in the geotechnical report. The Project Manual specifically indicated that the geotechnical report also was not a Contract Document.

Finally, the project was solicited as a "plan-and-spec project," and ultimately awarded to Trinity Contracting, Inc. ("Trinity") as the lowest responsible bidder. After construction was commenced, it was discovered that the subsurface conditions at the site differed substantially from the anticipated subsurface conditions as planned for by Gibson-Thomas, resulting in the need to move the location of the plant.

In response to Gibson-Thomas's attempt to assess liquidated damages against Trinity based on Trinity's delay in reaching substantial completion, Trinity retained Babst Calland Clements & Zomnir, P.C. to assert claims for (1) breach of contract against the Authority and (2) a Bilt-Rite claim against Gibson-Thomas, to recover the losses it incurred for having to move the project site. Under these facts, Trinity was able to prove at trial that the Authority breached its contract with Trinity and that Gibson-Thomas negligently misrepresented the site conditions, and the judgment entered in favor of Trinity was affirmed by the Pennsylvania Commonwealth Court.

In its affirming opinion, the Commonwealth Court held that, Gibson-Thomas was liable to Trinity on the Bilt-Rite claim because: (1) Gibson-Thomas had actual notice of the geotechnical data 14 months before the bid solicitation; (2) Gibson-Thomas failed to revise the project design in light of that data; and (3) Gibson-Thomas's design constituted a representation to all bidders (including Trinity) that the project could be constructed as originally designed. 2015 WL 8776568, at *3.

The Commonwealth Court also rejected Gibson-Thomas's argument that Trinity had a duty to perform its own geotechnical investigation prior to bidding on the contract, and held Trinity had no burden to independently verify the representations made by Gibson-Thomas or the owner during the bidding process in order for Trinity to properly rely on such information. Id.

The Design Itself Can Be Construed As A Representation

Earlier the same year, the Pennsylvania Superior Court also held that Bilt-Rite plaintiffs need not explicitly allege an "express misrepresentation" in order to properly assert a claim for negligent misrepresentation. Gongloff Contracting, L.L.C. v. L. Robert Kimball & Associates, Architects & Engineers, Inc., 119 A.3d 1070 (Pa. Super. Ct. 2015). Plaintiff Gongloff did not allege the defendant "expressly" represented it could complete construction as designed by the defendant. Nevertheless, the Superior Court held the absence of such a representation is not fatal to a Bilt-Rite claim; meaning it no longer matters whether an owner or design professional expressly states "the project can be constructed as designed," because the design itself is a representation.

In Gongloff, the roofing subcontractor (Gongloff Contracting, LLC or "Gongloff") sued the project architect (L. Robert Kimball & Associates, Architects and Engineers, Inc. or "Kimball") for negligent misrepresentation, alleging Kimball negligently misrepresented, either explicitly or implicitly, that the design of the structure would allow it to bear all required loads. Kimball moved for judgment on the pleadings, and the trial court granted the motion, ruling that a negligent misrepresentation claim required an express misrepresentation, which Gongloff had not alleged in its complaint.

The Superior Court later reversed, holding Bilt–Rite subjects architects to liability for Section 522 negligent misrepresentation claims when it is alleged that those professionals negligently included faulty information in their design documents.

The court stated: "The design itself can be construed as a representation by the architect that the plans and specifications, if followed, will result in a successful project. If, however, construction in accordance with the design is either impossible or increases the contractor's costs beyond those anticipated because of defects or false information included in the design, the specter of liability is raised against the design professional." Gongloff, 2015 WL 4112446, at *6.

In reaching its conclusion, the Superior Court distinguished the "actual misrepresentation" requirement under Bilt-Rite from the trial court's decision to require an "express misrepresentation." Acknowledging that courts have required plaintiffs to assert "an actual misrepresentation as opposed to assumptions on the part of the recipient," id. (citing State College Area School District v. Royal Bank of Canada, 825 F.Supp.2d 573, 584 (M.D. Pa. 2011)), the Superior Court rejected the notion that a plaintiff must also identify some particular communication that was expressly false. The plaintiff's use of the tangible design documents containing the allegedly faulty design was sufficient to allege an "actual misrepresentation" under Bilt-Rite. Id.

The court also pointed out Bilt-Rite does not require that a plaintiff precisely identify the misrepresentation in the design documents. Id. at *7. Although the court in Bilt-Rite mentioned that the design professional therein "expressly represented" that its aluminum curtain wall "could be installed and constructed through the use of normal and reasonable means and methods, using standard construction design tables," the court did make "express representation" an element of a Section 552 negligent misrepresentation claim. Id. (citing Bilt-Rite, 866 A.2d at 272). Instead, Bilt–Rite only requires "that information, a rather general term, be negligently supplied by the design professional." Id.

Although a defendant-architect may still defend against a Bilt-Rite claim by demonstrating through the presentation of evidence that the plaintiff-contractor's misrepresentation allegations are not substantiated, the Gongloff case will make it more difficult for a defendant to have a Bilt-Rite case dismissed on this basis early in the litigation, before engaging in discovery.

Bilt-Rite in the Days Ahead

Notably, these two decisions came on the heels of Bruno v. Erie Ins. Co., 106 A.3d 48 (Pa. 2014), wherein the Pennsylvania Supreme Court held that contractors need not obtain a certificate of merit in support of a Bilt-Rite claim against a design professional because the contractor is not the design professional's client. In light of these decisions, contractors face fewer procedural hurdles in asserting a Bilt-Rite claim.

Overall, the recent developments in Bilt-Rite and its progeny indicate a contractor's assertions that certain unforeseen losses or a project delay could have been prevented by a more accurate design may carry more weight in the negotiation and resolution of construction disputes moving forward. The Gongloff decision serves as a reminder to design professionals that the plans in and of themselves operate as a "representation" to the third-parties who will ultimately utilize them. And in light of the Trinity Contracting decision, owners and design professionals would be prudent to ensure that the design fully considers the most accurate and up-to-date design information possible prior to letting a project out for bid. As a result of these decisions, it is also a possibility the industry experiences an increase in attempts by owners to allocate a certain amount of design responsibility to their contractors.

It is certainly without doubt we have yet to experience the full impact Bilt-Rite will have on construction disputes in Pennsylvania. In light of these cases, contractors, owners and design professionals alike should carefully consider the allocation of design responsibilities in their contracts, keeping in mind the importance these responsibilities will carry through the course of a project.

Kurt Fernsler, Matth Jameson and Esther Mignanelli are attorneys in the construction practice at Babst Calland. They can be reached at KFernsler@babstcalland.com, MJameson@babstcalland.com or EMignanelli@babstcalland.com. BG

Management Perspective

Cost-Reimbursable Contracts – Where's the Risk?

By Laura Arrigo, CCP, PSP

With an anticipated influx of more large-scale industrial projects in Western PA, particularly in the petrochemical and power generation sectors, the construction industry here may see more engineering, procurement and construction (EPC) projects in the coming years. With these EPC projects may come more cost-reimbursable contracts. Cost-reimbursable contracts can be used on projects where the design and/or scope of work is not yet defined accurately or definitively, or may evolve during the project, yet the owner still wants to proceed in the interest of completing the project within a given timeframe.

In its purest form, a cost-reimbursable contract can shift much of the schedule and cost risk on a construction project to the owner. However, it is important for both owner and contractor to recognize how different contract terms related to schedule and cost can adjust the allocation of risk. Following contract execution, the owner or contractor's conduct during the project can further alter that party's risk exposure, increasing or decreasing the potential for disputes or the ability to defend claims related to time or money.

Understanding the Risk Spectrum

For the sake of discussion, consider a contractor/owner risk spectrum related to different forms of contract, with a traditional lump sum contract at one end and a pure cost-reimbursable contract at the other. Generally, the perception is that the lump-sum (or fixed-fee) agreement carries the most risk for a contractor, while the pure cost-reimbursable agreement assigns the most risk to the owner. Along this supposed risk spectrum existing between the lump sum and reimbursable contract forms, sits a myriad of variations and hybrid forms of agreement. Each form of agreement along the risk spectrum incorporates differing compensation structures and other provisions aimed at better balancing the risk between the contractor and the owner. For example, a guaranteed maximum price (GMP) contract may fall towards the middle of the spectrum, as it is based on a reimbursable structure, but also includes a limit on the reimbursable costs, thereby increasing the contractor's risk and lessening the owner's.

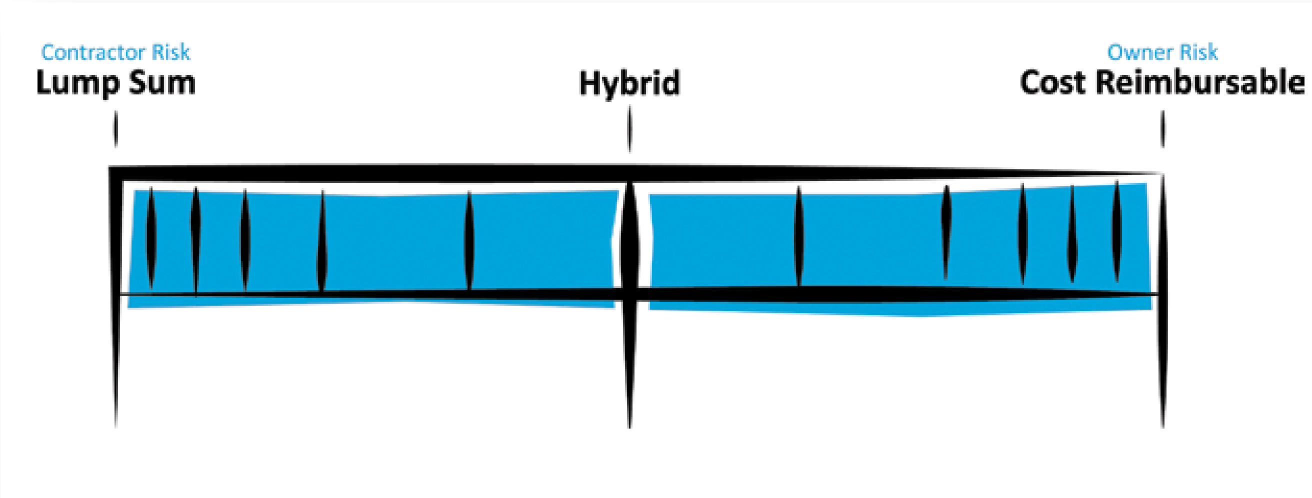
Contractors and owners typically pay close attention to identifying and limiting risks when determining the best form of agreement and negotiating the particular terms of that agreement. However, once the structure of the agreement is determined, the parties to the contract can overlook how their individual actions during the project may affect their respective risk exposure – or said differently: how their actions may affect the possibility that a negotiated contract will continue to slide along the risk spectrum after contract execution. As contractors and owners get involved in contracts that incorporate elements of a reimbursable cost structure, some may not recognize the unique ways that their actions under these forms of agreement can contribute to increased risk and/or the potential for disputes. Two examples follow, one from the contractor's perspective and the other from the owner's.

Risk from the Contractor's Perspective: The Cost-Reimbursable Mindset

The first example considers additional risk that can arise under reimbursable forms of agreement when a contractor fails to contemporaneously identify and document scope changes. This conduct by the contractor can be referred to as the "cost-reimbursable mindset." Essentially what occurs when a contractor approaches a project with a cost-reimbursable mindset is that the contractor focuses on the reimbursable structure of its contract and generally expects that it will be reimbursed its costs (according to the terms of its agreement) regardless of how the originally requested scope of work may change. With this mindset, the contractor does not put into place procedures for identifying and tracking changes to the base scope of work.

> **Contractors and owners typically pay close attention to identifying and limiting risks when determining the best form of agreement and negotiating the particular terms of that agreement.**

Under a pure cost-reimbursable structure, there may not be a need to identify scope changes, or it may be problematic to do so depending on how well the original scope of work was defined. However, under different forms of agreement along the risk spectrum, a contract that has what seems to be a reimbursable structure may also include compensation



formulas, fee arrangements or other requirements that make the identification and segregation of extra work more important (e.g., provisions for a target price, profit/loss sharing, incentive fees, etc.). Under these types of contracts, a contractor's failure to consider, identify and track scope changes can have unexpected repercussions on the contractor's ability to receive reimbursement for its costs and maximize its revenue and profit.

Under the various forms of contracts that include elements of cost reimbursement for the contractor, a contractor's failure to identify and track scope changes can result in perceived overruns that are, in reality, costs that relate to extra work. These perceived overruns, in turn, can affect compensation formulas and reduce the revenue generated by the project. The failure to identify and segregate extra work can also affect the contractor's reporting of productivity – where more hours (which are truly extra work hours) appear to be spent progressing base scope work and reports therefore indicate that the contractor is experiencing poor productivity. Depending on the particulars of a given situation, these perceived overruns and/or contractor-reported productivity problems can lead to owner allegations of poor performance, the owner withholding payment, and even the owner terminating the contractor.

Risk from the Owner's Perspective: Consistency of an Owner's Course of Conduct

The second example of additional risk that can arise as a result of conduct during the project pertains to the owner's contemporaneous review of the contractor's detailed cost records. Reimbursable contracts typically require that the contractor submit detailed records in support of its costs and allow the owner the opportunity to review such records before remitting payment to the contractor. One clear way an owner can increase its risk is by failing to conduct regular and thorough reviews of the requested costs prior to issuing payment to the contractor. But even in cases when the owner performs regular reviews, these reviews and related records can affect the owner's ability to backcharge the contractor for additional costs incurred or otherwise assert that the amount to be paid to the contractor should be reduced.

In these cases, where regular reviews are performed by the owner, the issue generally relates to consistency of the owner's position. By way of example, if the owner conducts detailed reviews, approves and pays all of the contractor's engineering costs during the course of a project, it may face difficulties arguing after-the-fact that the contractor's engineering performance was deficient. As a result, the owner may have challenges in asserting backcharges or substantiating any alleged basis for non-payment to the contractor. Substantiating claims can become more difficult for the owner if the owner failed to provide notice to the contractor that it believed the work to be deficient, particularly if the owner was well-informed over the course of the project (i.e. received detailed reports and updates or was a very involved owner).

Conclusion

It is essential that contractor and owner align their conduct with the form of the contract in order to preserve the respective levels of risk anticipated in the contract. Under forms of cost-reimbursable agreements, the potential risks associated with a party's conduct during the project may be less obvious or straightforward. Whether it is the contractor seeking reimbursement or the owner verifying those costs, both parties should consider how their actions affect their exposure to risk and act accordingly. In some cases, this may mean mid-project adjustments to routines, internal procedures and/or record-keeping practices.

Laura Arrigo, CCP, PSP is a Project Executive at The Rhodes Group. She may be reached at larrigo@rhodes-group.com. BG

Trend to Watch

Can Pittsburgh Be a Smart City?

On March 12, while attending the South-by-Southwest festival, Mayor William Peduto learned that the U.S. Department of Transportation (DOT) and Vulcan Inc. selected Pittsburgh as one of seven finalists for the Smart City Challenge. The challenge will result in one city receiving a $50 million grant to integrate emerging technology into its transportation systems.

The Smart City Challenge is intended to create a financial pathway for cities that have the desire and access to technology to solve transportation problems. The description of transportation problems is sufficiently broad that it has attracted support from advocates of transit technology, advanced research, robotics, environmental sustainability and better government. In fact, the two main funders of the award have different aims. DOT is trying to find a solution to the reality that America's highways are inadequate for the growth of vehicles and too expensive to maintain. Vulcan Inc., which was founded by Microsoft co-founder Paul Allen, seeks to impact a number of global problems and in the case of Smart City, is looking to have technology reduce carbon output and electricity generation. The grant will be funded to the tune of $40 million by DOT and $10 million from Vulcan.

The other cities selected as finalists in the Smart City Challenge – all of which have between 250,000 and 850,000 people - are San Francisco, Austin, Columbus, Denver, Kansas City and Portland.

Were Pittsburgh to be selected it would be quite a coup for Mayor Peduto and something of a validation of the vision of Pittsburgh in 2030 or 2050 that he has been promoting, often to skeptical audiences. Peduto addressed an audience of public and private leaders at the Pittsburgh Downtown Partnership's (PDP) annual meeting on March 15. There he took the opportunity to talk about what transportation and technology would look like in the future, a future he looks to in ten years rather than 30. Peduto reminded the audience that Carnegie Mellon was already driving automated vehicles around Oakland and that plans for using the steam that heated Downtown buildings to generate power through the Hill District were very advanced.

Pittsburgh's proposal was made in collaboration with Allegheny County, the Port Authority, the URA, Carnegie Mellon, University of Pittsburgh, six of Pittsburgh's leading philanthropic foundations, nearly a dozen non-profit organizations and two dozen industry partners. The latter includes names like IBM, General Motors, Ford, Amazon, Google, Bosch, Zipcar and Uber. It is the fact that DOT is trying to foster collaboration between intelligent transportation systems and automated vehicles – like that between CMU and Uber – that gives the Pittsburgh contingent optimism about its chances.

Smart cities will employ sensors that will control traffic flow and will allow smart vehicles to communicate with the system and each other. Automated vehicles – cars, trucks, buses and transit vehicles – are integral to the smart transit system. Aside from navigating the vehicle, automation will prevent accidents and provide telemetry that the traffic control center can use to change light sequencing or re-route the vehicles themselves. The idea of transit will be replaced with mobility, freeing planners to expand upon designs to include equivalent access to bikes, mass transit, autos and pedestrians. Big data applications will give cities and businesses the tools to analyze how people are moving and adapt the traffic systems accordingly. Most of the technologies that will impact smart cities are just emerging, which means that the concept of what a smart city will look like is going to change significantly with each passing year.

What won't change – at least not until smart transportation is implemented widely – is the need for better transportation systems.

In 1900, one person in seven lived in a city. By 2015, one of two people lived in a city on the planet and the forecast for 2050 is two out of three living in a city. That's an extra 2.5 billion urban dwellers and the additional urban population is expected to add 233 percent to the number of miles driven. Unabated, the expansion of automobile driving in cities would add 54 trillion car trips annually compared to the number today. This level of growth would have a devastating effect on pollution, productivity, safety and health. That's why there are initiatives underway across the globe to change how people get around. Smart City Challenge is just one.

The Smart City Challenge doesn't limit the applicants in how they might apply technology. While the focus of all of the respondents has been on creating safe and efficient transportation systems, the components of the individual approaches vary. The solutions will address problems that are interwoven with transit in high-density environments, but not all are transit problems.

For example, intelligent traffic management will result in fewer and shorter car trips, thereby reducing the amount of carbon emissions from autos. Juniper Research estimated that smart traffic management being planned for installation between 2014 and 2019 would have the impact of removing 35 million cars from the roads.

Goal Attainment:	• Vision Zero • 50% Emissions Reductions by 2030 • Corridors of Opportunity- mobility services for all residents
Outcomes:	• Better Traffic Management • Improved Safety • Mode Shift toward Transit, Biking, Walking • Corridor Investment • Best practice and national standard
Demonstrable Applications:	• Connected Autonomous vehicles • Integrated payment systems • Integration of district energy system
Deployable Applications:	• Surtrac expansion • Expansion of existing connected vehicle network • Electric Avenue (2nd Avenue) • MovePGH Mobility Information
Data Collection Network:	• Fixed, Mobile, Human (Social Media) Assets • RAMP Air Quality Monitors • Mobility Analytics Center & Western Pennsylvania Regional Data Center
Governance Structure:	• SmartPGH Consortium

Where transit solutions have already been implemented there has been a measurable benefit to business. One of the outcomes of smart transportation is the expansion of pedestrian space. Smarter transportation means fewer cars and vehicles. It also means those driving will be going slower, even though vehicles will take less time to travel. The net result of smart transportation is the commercial spaces see higher consumer traffic that is moving slower, an equation that is a winner for retail or dining. Property values increase for the buildings that house the shops and restaurants. Development flourishes.

Not surprisingly, implementing smart transportation systems save lives. Several of the cities competing in the Smart City Challenge are also participants in the Vision Zero initiative, which was founded in Sweden with the road safety aim of eliminating the loss of human life. Automated vehicles will play an enormous role in achieving zero fatalities but Vision Zero advocates for putting people first in design and policy today, an idea which was foundational for Gabe Klein when he was the head of transportation in Washington DC and Chicago from 2008 until 2013.

Klein is an entrepreneur who is also a lifelong bicyclist. He was lured into public service in Washington by the opportunity to enact change in urban transit policy. During his time in Washington, Klein introduced bike sharing and added miles of bike lanes to the city. In Chicago, working for Rahm Emanuel, Klein led the Chicago Department of Transportation to start bike sharing, create bike lanes, and redesign the Riverwalk and Bloomingdale Trail into pedestrian and commercial attractions.

Klein credits his private sector background and lack of government experience as keys to getting changes made, especially in an environment where there was no funding to make major investments in infrastructure.

"I think that was a big part of the recipe, coming at the problem with a different point of view," he explains. "Historically we think of transportation as cars and buses and trains. It's also walking. In Chicago, we controlled one-third of the public space with the streets and it was all allocated to vehicles."

A smart city is going to be a work in progress. If the information age has taught us anything, it is that innovation will breed more innovation so a city that integrates its transportation, energy and information systems won't be static. That said, a smart city will have less traffic congestion. People will be more productive or will have more free time. Overloaded highway systems will no longer have capacity problems. Pollution will diminish. Citizens will be able to make lifestyle choices without consideration about workplace proximity. Valuable urban real estate can be used for something other than parking cars.

Some of the technologies of the smart city of the future seem like they are straight out of the Jetson's. Of course, some of the technologies from the Jetson's have already arrived. Most of the conversation about smart transportation anticipates that wholesale changes have a mid-century time horizon. Pittsburgh's mayor isn't thinking in such patient terms.

"What we've been handed from the 1940s and 1950s is a city designed around the automobile," notes Peduto. "What we want to be able to do is provide a city back in the next ten years for anybody – no matter what type of transportation they choose to use – to get there safely, efficiently and effectively; and make sure it's equitable for everyone." BG

Celebrating Milestone Anniversaries is Important

Construction is a tough business. In the U.S., the failure rate for construction companies in any given year is about 14 percent, at least two full points higher than the average of all other businesses. Across the globe, the rate is 20 percent.

Sustaining a business of any type over time is also tough. The U.S. Small Business Administration reports that by year five, 50 percent of businesses fail. By year ten the survival rate drops to one-in-three. And only 25 percent of businesses make it to a 15th year. It's with good reason that companies that reach long-term milestones look to celebrate that accomplishment.

The milestone anniversary is a reason to celebrate and show appreciation. How those anniversaries are being observed varies as widely as cultures of the companies themselves. Most companies will, in fact, take the opportunity to throw a party of some kind during the anniversary year. But a landmark year can also be a catalyst for a venerable business to embrace change.

"We used the 50th anniversary to develop a whole new marketing campaign and update all of our marketing material. We went from the 1950s to the 2010s in one big jump," jokes John Skorupan, associate vice president and office director for Pennoni Associates in Pittsburgh. "It changed the whole face of Pennoni from a marketing standpoint. We even developed a mission statement!"

For companies that are more marketing-oriented, a milestone anniversary is a chance to flex those muscles.

Burns & Scalo Roofing turns 60 in 2016. Founded by John T. Scalo and Duke Burns as a residential roofing company, the company has grown in its second generation to include commercial real estate, commercial roofing in multiple states, solar solutions, green roofs and exterior wall panel manufacturing. Accustomed to multi-faceted campaigns, the marketing team at Burns & Scalo is planning a large party on April 9, a commemorative video and a timeline wall in the company's offices, which Jack Scalo says is his favorite.

Whether it is intentional or not, anniversary celebrations tend to reflect the personality of the owners and the company cultures. Two Pittsburgh general contractors mark 25 years in business in 2016. Each will approach the anniversary differently, but both seem to share a feeling of pride in the accomplishment itself.

"It's a huge opportunity to draw attention to what we've accomplished," say Ray Volpatt Jr., president of Volpatt Construction. "It's a chance to let people know that we've been around for 25 years. My dad started this company and has turned it over to me and we're growing. That's a hard thing to do in this business and it's worth celebrating with not only your employees but your customers."

The style of celebration can also be dictated by the resources a business can put into planning for it. There is a lot of planning and detailed preparation involved in what construction companies do to build their work. Taking time to plan an anniversary party can be quite a distraction from a staff's primary responsibilities so pulling a celebration off means dedicating time and resources. When Mary Chuderewicz talks about planning the Master Builders' Association's 125th anniversary in 2001, it sounds a lot like a wedding for 375 people.

Dave Meuschke, vice president of Burchick Construction, says he's been instigating ideas to celebrate the company's 25th anniversary in June but hasn't pinned Joe Burchick down to finalize any plans. Meuschke knows it isn't Burchick's style to make a big deal out of the anniversary but he doesn't want to see it ignored.

"I think Joe's being too humble about it. It's worth celebrating," asserts Meuschke. "We didn't do anything for the 20th anniversary. We had a small celebration for our 10th but five years ago, during the recession, I don't think Joe was in the mood to celebrate."

It is a fact of life that the business cycle can certainly influence the kind of commemoration. Most businesses aren't looking to be spendthrifts during a slow time and more conservative companies would find it to be bad form to throw a lavish party when business is bad. At the same time, celebrating a milestone of any length means that a company has endured tough markets and good times. For most companies, that fact is enough reason to connect those that helped them in the past with the employees and customers they have today.

"This year marks the 70th year since my father founded the company [as A. R. Scalise Co.]," says Mark Scalise, retired CEO of EMCOR/Scalise Industries. "I think it's important to acknowledge the longevity and skill sets that the group developed over the years to maintain the business. I think it's noble and respectful to acknowledge those who were responsible for the continuity.

"You want to thank your employees, both present and past. You want to create venues and chances to draw the retired employees into the celebration of the company," he continues. "You also want to thank the clients, not just our paying customers but architects, engineers and vendors that helped us accomplish our goals."

The style of celebration can also be dictated by the resources a business can put into planning for it. There is a lot of planning and detailed preparation involved in what construction companies do to build their work. Taking time to plan an anniversary party can be quite a distraction from a staff's primary responsibilities so pulling a celebration off means dedicating time and resources. When Mary Chuderewicz talks about planning the Master Builders' Association's 125th anniversary in 2001, it sounds a lot like a wedding for 375 people.

"It takes about a year to pull it together. As soon as we knew it was going to happen we started," she recalls. "We made a list of everything that had to be done, with dates for when all those things had to happen."

Chuderewicz's check list has lots of obvious and not-so-obvious items. A venue must be booked. Catering arranged in time. Menus picked. Budget's met. She says the details are what separate a good event from a regrettable one.

"You have to make sure you don't miss anybody on the invitee list. Tables have to have flowers and candles. Who is greeting? Who is speaking and when?" she says. "And then you have to manage the million changes that are going to happen!"

Anniversaries are opportunities to shine a light on the company, to say thanks, to change the guard and to refresh the firm's culture as it moves – hopefully – towards the next milestone. Businesses in the construction industry tend to be staid in the face of a high-risk industry, perhaps to project stability to the employees and customers. The talented workforce of the future has thus far shown that it wants less formal, more flexible places to work. Many designers and builders have changed their cultures to be more inviting to talented employees. Milestone anniversaries are great opportunities to spotlight those changes in culture.

"This had been in the works for a couple years. It was time," observes Skorupan. "It was a real investment on the part of our ownership. Pennoni as a company has gotten a lot younger and we needed to show it."

Jack Scalo says, "We want to respect and honor the tradition and values of our founders that we continue in our business today. There is immense pride and honor to uphold a great legacy. Six decades of business screams volumes about our commitment to make sound decisions for the long term benefit of our employees, our customers and our company."

Sometimes the impulse to mark an anniversary can be more personal. In 2002, when his company turned 35, Joe Massaro used the occasion to announce that his son Joe Massaro III was his successor as president. Anniversaries are great opportunities to thank founders as well.

William Tomko and his wife Martha founded their plumbing business in 1954. Through three generations of ownership, W. G. Tomko Inc. had never held a celebration to mark any milestone years in business. Sharee Waskowiak, CFO and secretary/treasurer of W. G. Tomko and granddaughter of the founders, says it was a milestone birthday for her grandmother that prompted the mechanical contractor to throw a party.

"We did our 60th a year late. The main reason we did something was my gram, Martha, had just turned 85 and we wanted her to enjoy it," Waskowiak explains. "She still works for the company, handles our collections. That gives you a flavor of our company."

Tomko celebrated by hosting a party for 300 people at the Sheraton Station Square. Employees and former employees, close vendors and extended family were invited. They commissioned a cake in the shape of the company's new offices. A video was done with interviews of long-time employees. Sharee and her brother Bill Tomko III spoke, as did their father Bill Tomko Jr. It was a big night with a very personal aim.

"We wanted to honor my grandmother. If it wasn't for her and my grandpap, we wouldn't be here today," Waskowiak says. BG

INDUSTRY & COMMUNITY NEWS

MBA & CAP Award Scholarships to Pitt Engineering Students

The Master Builders' Association and the Construction Advancement Program (CAP) awarded two scholarships this year at the MBA's Annual Membership Meeting. The two scholarship awardees were Christopher Walko and Amy Hummel, collectively these students received $15,000. Both students are enrolled at the University of Pittsburgh School of Engineering's Construction Management/Civil Engineering Program. Since the MBA & CAP teamed to provide annual scholarships in 1998, over $150,000 in scholarships have been provided.

MBA Education Committee Chair James Frantz from TEDCO Construction with scholarship awardee Chris Walko and Jennifer Landau.

Jim Frantz and Jen Landau flank CAP scholarship winner Amy Hummel.

Mascaro Skates for Autism Speaks

On Saturday February 27, Mascaro held its fifth annual Winter Hockey Classic and Family Fun Skate at South Park Rink to raise funds for Autism Speaks. This year Team Mascaro played against a formidable opponent in W.G. Tomko. The two teams combined with 100 spectators raised over $2,000 for a great cause.

Team Mascaro and Team Tomko unwind.

Incoming MBA President Steve Massaro (left) with Executive Director Jack Ramage and outgoing President Dean Mosites.

Rycon's Brian Capone (left) with Brittany Coscia and Alex Dick from Dick Building Co.

(From left) John Mascaro, Pitt's Dan Marcinko and Chris Niemann and Jeff Turconi from PJ Dick.

Jendoco's Michael Kuhn and Ray Gajski from Ruthrauff Sauer (right).

Ralph Sterzinger (left) and Steve Cupcheck from RSSC Architecture flank Jeffrey Landau.

Landau's Dave Curry with Mike Campbell from Marsa Masonry.

Seubert's Frank Rozyczka (left) with Kelly Perkins and Dave Hengelsberg from Uhl Construction.

(From left) Clint Oramas with Huth Technologies, Matt Smith from Red Swing and Massaro's Chris Fiumara.

Ross Fazio from FMS Construction (left) with the MCA's Rege Claus, Anne Chen from GBBN and Joe Burchick (right).

Aaron Reed (left) and father JR Reed (right) from JRD Sales, with Steve Mazza from the Carpenters.

Pitt Alums Lance Shreffler (left) of McKinney Drilling and Jon O'Brien (right) of the MBA flank Carl Whispell, Leslie Burton and Sean Arayate, the three students from the University of Pittsburgh who are responsible for launching the MBA Student Chapter at Pitt.

(From left) Desmone's Jen Bee, Molly Lubert from the AIA, Mark Dietrick from Case Technologies and AIA's Ann Swager.

Babst Calland's Matt Jameson (left) with Janice and Tom Kennedy.

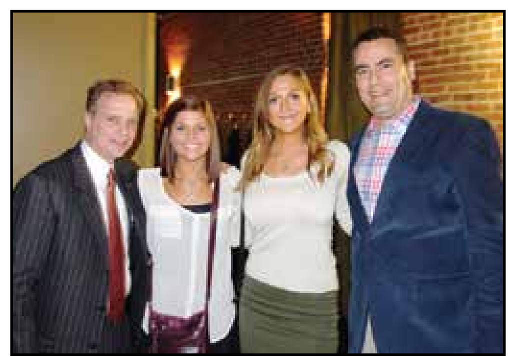
(From left) Mark Price from Stevens Engineers & Constructors, Doug Clark from Civil & Environmental Consultants and Tom Cory from Stevens.

John Mroz from FSS with Lisa Wampler and John Greenhall from Cohen Seglias.

CMUS Ralph Horgan, Ellen Romagni and Salonika Garapaty with John Zang from Volpatt Construction.

Babst Calland's Rich Saxe (left) with Bill Tomko III at the ASA's annual networking event.

Mike Yohe from A. Martini & Co. (left) and Shane Fishel from Easley & Rivers.



MBA President Steve Massaro (left) with Brooke Waterkotte from Easley & Rivers, Landau's Selma Voljevica and the MBA's Jon O'Brien.

MBA Young Constructors Chair Adam Ramsey from Wyatt Inc. (left) with PJ Dick's Brian Budny.

Awards & Contracts

F. J. Busse Company was the successful contractor for Carnegie Mellon University's GATF Building fourth floor renovation. The architect for the 11,000 square foot project is IDC Architects.

Regus Group selected F. J. Busse Co. for the tenant fit-out of its space at Foster Plaza in Green Tree. Huntington Bank awarded a contract to F. J. Busse Co. for the buildout of its new branch at the East Side development in East Liberty.

Robert Bosch LLC selected Rycon Construction as contractor for the tenant fit-out of 51,634 square feet at 2555 Smallman Street, in the 3 Crossings project being developed by Oxford Development. Whitney Architects Inc. is the architect for the tenant.

Rycon's work continues at the $45 million Shoppes at Parma redevelopment in Ohio. Fast Eddie's, Pet Valu, Aspen Dental, Panera Bread and FitWorks were recently completed while the Open Air Mall construction is underway.

In January, Rycon was awarded a general trades contract to build a new strip center and renovate an existing strip center at Westwood Commons in Strongsville, OH.

PREIT selected Rycon's Building Group to construct a new 50,000 square foot Dick's Sporting Goods at Cumberland Mall in Vineland, NJ and also Rycon's Special Projects Group to renovate H&M at Valley Mall in Harrisburg at a cost of $500,000. Both projects are scheduled for completion in the summer.

In May, Rycon will begin construction of a 40,000 square foot Dick's Sporting Goods addition in Springfield, OH.

Construction is underway by Rycon on Vitmore's BaumHaus, a seven-story, 103-unit, upscale apartment building located on Baum Boulevard.

Duquesne Light selected Rycon Construction to complete its new Tecumseh Substation Control House. Construction is scheduled for completion early spring.

Duquesne University selected Rycon's Special Projects Group to complete restroom renovations on the ground and first floors within St. Ann Hall. The work, designed by Stantec, will be completed over the summer recess.

In April, Rycon's Special Projects Group will begin renovating Pittsburgh Internal Medicine Associates' offices at UPMC West Mifflin. Radelet McCarthy Polletta is the architect.

Rycon's Special Projects Group is responsible for the renovation of Suite 130 within the Jefferson Medical Associates building for Allegheny Health Network. The 3,100 square foot project was designed by Radelet McCarthy Polletta.

Rycon's Special Projects Group was awarded a $1 million contract by CBL & Associates Properties to renovate a former restaurant space into a new 10,000 square foot Kirklands store at Monroeville Mall. The project is scheduled for completion in May.

Rycon is underway on a 16,000 square foot renovation of The Hub Group offices at RIDC West. Designed by McCormick Architects, the project will be complete in April.

The PNC Financial Services Group awarded a contract to Rycon Construction for renovations to One PNC Plaza Phases 1 & 2. The project includes renovations to 122,000 square feet of offices. IKM Inc. is the architect.

UPMC awarded a contract to Dick Building Co. for the tenant improvements for UPMC Womancare Associates at the Monroeville Surgical Center at 125 Daugherty Drive. The work involves demolition and fit-out of 4,800 square feet.

FMS Construction was the successful contractor for the $4 million renovation to Giant Eagle #61 at 2021 Wharton Street in the South Side. The work involves renovations to 44,271 square feet. FMS is also doing renovations to the Giant Eagle store at Village Square in Bethel Park.

Pittsburgh Public Schools awarded a $3 million contract to FMS Construction for the general construction portion of the $10.4 million renovation to the Philip Murray School. The architect is Graves Design Group.

Burchick Construction was awarded the contract for the tenant improvements for the University of Pittsburgh Finance Department at Elmhurst's Schenley Place office building in Oakland. The project involves 13,500 square feet of build-out.

Facebook selected Burchick Construction to build out 20,000 square feet of virtual reality research space for its Oculus group at Schenley Place. The architect for the $3 million project is Gensler.

Turner Construction is completing construction of the tenant improvements for Jones Lang LaSalle at the new Tower Two-Sixty in Market Square. The $5 million, 54,000 square foot space was designed by Perkins Eastman Architects.

Turner Construction was the successful contractor for the build-out of the Pirata restaurant space in the newly-opened Tower Two-Sixty in Market Square.

Mosites Construction was awarded contracts for the foundations and general trades packages for the 19,500 square foot addition to the ALCOA Research Center in Upper Burrell Township, Westmoreland County. The project is part of the $66 million advanced materials initiative being undertaken by ALCOA to support additive manufacturing for aluminum. Cintar is the engineer for the project.

Mosites Construction is construction manager for the Cohon Center Graduate Student Lounge at Carnegie Mellon University. CannonDesign Group is the architect for the project.

dck worldwide's recently completed addition and renovation of the Wheeler School's Gilder Center for the Arts received a Merit Award for Design from the Rhode Island Chapter of the AIA. The $11.4 million addition and renovation to this Providence, RI, school included classrooms, a sound/recording room, a 340-seat auditorium with a lobby, and elevator.

The Smashburger restaurant in Monroeville, PA, is being renovated by dck worldwide.

dck worldwide's $42.8 million award-winning project, University of Hawaii Information Technology Center, was awarded LEED Gold certification. This six-story, 74,000 square foot state-of-the-art facility also recently won an Honor Award from the American Council of Engineering Companies of Hawaii in the Building/Technology category.

RJS Construction is completing work for iDL Worldwide on the 20,144 square foot GSA Lease Space in East Butler, PA. The architect is 4-Most Group.

St. Elizabeth of Hungary Parish awarded a $1.7 million contract to Volpatt Construction for renovations to its church in Baldwin Borough. The project was designed by RSH Architects.

Volpatt Construction was the successful contractor on the University of Pittsburgh Peterson Sports Center baseball and softball practice facilities' scoreboards, camera stand and batting eye project. The architect is DLA+ Architecture & Interior Design.

Nello Construction was awarded a $44.2 million contract for the general construction portion of the new $67.4 million Thomas Jefferson High School. WTW Architects is the architect for the project.

PJ Dick Inc. was awarded a contract for Two PNC Plaza Phases 10 & 11 by The PNC Financial Services Group. The 144,000 square foot renovation project was designed by DLA+ Architecture & Interior Design.

PJ Dick is providing Construction Management at Risk services to the University of Pittsburgh on the Trees Hall Locker Room Renovations.

Point Park University selected Landau Building Company as contractor for the $1.5 million renovation to create its Center for Media Innovation. GBBN Architecture designed the 4,200 square foot space, which will be in the School of Communications at the corner of Wood Street and Third Avenue.

Landau Building Company was asked to assess and complete fire damage repairs to Leetsdale Industrial Park Buildings 180/70/76. The buildings suffered major structural damages on November 17, 2015 from a fire that broke out in tenant space occupied by The Lubrizol Corporation. Clean-up, demolition, and reconstruction of the damaged 35,000 square foot building began immediately and will be completed by mid-May 2016.

Landau Building Company began major renovations to the Rivers Club, located in One Oxford Centre Downtown Pittsburgh. The décor and layout of the bar and dining areas of the existing club will be updated. The club will remain open during construction, which is expected to be complete this Summer 2016.

Landau Building Company will begin renovations of St. Clair Hospital's CT #2, located on the third floor. The 1,818 square foot renovations include mechanical, electrical, and architectural alterations to allow for new CT equipment. Renovations are expected to be completed by June 2016.

West Virginia University awarded Facility Support Services, LLC (FSS) a $1.3 million contract for Percival/Allen Hall Fire Protection and Life Safety Upgrades. Work includes extending site utilities, upgrading the existing fire alarm system and associated electrical work. The project is scheduled to complete in August 2016.

FSS recently completed a $1.3 million tenant fit-out for Revel + Roost, an upscale restaurant located in Downtown Pittsburgh, PA. Comprised of two floors, Roost hosts upscale dining on the Upper Level, while Revel has an ultra-lounge atmosphere on the Lower Level. This fast-tracked project was completed in three months.

Carnegie Mellon University selected Mascaro to be its construction manager for the new TATA Consultancy Services (TCS) Building. Tentative construction plans for the 40,000 square foot, $15 million building is to begin in the summer with demolition of an existing building and routing of utilities.

Mascaro's Client Services department received several new awards during the first quarter of 2016: This included renovation of the JMA Suite at Jefferson Hospital for Allegheny Health Network and renovation of the third floor of Harbor Gardens for UPMC.

Continuing its long-standing relationship with Heinz Hall, Mascaro will be working at the facility during the summer to replace carpeting.

Mascaro, in collaboration with R3A, is providing design-build services for the adaptive reuse of a three-story warehouse in West Homestead to provide a new facility for The Program for Offenders. The project is currently in the design phase.

Mascaro received a contract for the concrete and structural excavation packages from Veolia North America for the Antero Produced Water Treatment System project. When complete, Veolia will operate the ultra-modern $275 million treatment complex to treat and recycle 9,500 cubic meters a day of flowback and produced water.

A. Martini & Co. was selected as the general contractor for the Pediatric Orthopedic Institute for Allegheny Health Network. This 17,000 square foot project is located on the second story of the ConnectedHealth building, completed by A. Martini & Co. in early 2015, in Wexford. The scope of work entails construction of a welcome center/waiting area, over a half dozen exam rooms, two new x-ray rooms, 2,000 square foot PT gym and therapy rooms. Construction is expected to be complete in August 2016. WTW Architects is the designer.

Oxford Development selected A. Martini & Co. as the construction manager at risk for its Craft Place Apartments project. The residential building will be located in Oakland, southeast of the intersection of Craft Place and Boulevard of the Allies. The scope of work will entail construction of 99 apartments and 70 parking spaces (46 under the building and 24 on grade). The project is slated to be completed in the spring of 2017.

UPMC choose A. Martini & Co. for the renovations of the BST department area on the fourth floor of the Iroquois Building and for office and kitchen renovation at Falk Library.

Faces & New Places

dck worldwide promoted Shelby Gardner to vice president of operations for its North America West region.

Holly Marcheck has joined dck worldwide as director of finance.

Milton Mitsui, P.E., has been promoted by dck worldwide to vice president of technical & construction Support.

dck worldwide has promoted Mark Stritzel to MEP director for the company.

dck worldwide Project Manager Jason Pang, P.E., became a Designated Design-Build Professional as part of the DBIA's class of 2016.

Volpatt Construction hired John Zang as project executive/director of business development. Zang has a bachelor's degree in architectural engineering from Penn State University, master of architecture from Oklahoma State University and an MBA from University of Pittsburgh's Katz School of Business.

Facility Support Services, LLC (FSS) recently promoted Michael McCormack, senior project manager, to vice president - operations. In his new position, Michael will oversee operations for project management, coordination and engineering. Michael brings more than 12 years of construction knowledge to the FSS team.

Martin J. Donahue was recently hired by FSS as chief estimator and brings over 35 years of construction estimating experience. Marty is responsible for pricing of projects from request for proposal (RFP) through completed design documents.

FSS recently opened an office in Virginia Beach, VA to better serve its federal clients to include NASA and Naval Facilities Engineering Command (NAVFAC).

Rycon Construction added Justin Delmaster as an assistant project engineer in the Building Group. He is a graduate of the University of Pittsburgh with a degree in civil engineering.

Rycon's newest senior project manager in the Building Group, Daniel Dick, has over 30 years experience in the construction industry. Daniel graduated from Penn State with a degree in civil engineering.

Rycon hired Mark Himmel as network administrator. He has over five years of relevant IT experience and is a graduate of Robert Morris University.

Alana Jensen has been hired at Rycon as marketing coordinator. A graduate of Slippery Rock University, Alana brings over ten years of marketing experience to the company.

Rycon's Special Projects Group added Chris Rokitski as an estimator. He received a degree in civil & environmental engineering from Old Dominion University. Chris has 19 years experience.

Tessa Schmitt has transitioned from marketing coordinator to marketing manager at Rycon Construction.

Rycon Construction recently announced Kevin Montez, Simon Rodriguez, and their staff at Acies Construction Group (ACG), based in Ft. Lauderdale, merged to become Rycon's newest office location.

Kevin Montez is president of Rycon's Ft. Lauderdale office. With more than 25 years of experience in the construction industry, Mr. Montez began his career working as a foreman gaining significant hands-on experience in every aspect of the construction business. Graduating from Florida State University with a dual bachelor in BFA and History, he went on to pursue a Master's in Construction Management from Florida International University.

Executive Vice President Simon Rodriguez, has an extensive background in retail and commercial construction in Florida and Puerto Rico. He received a Bachelor of Science in civil engineering from Florida International University and brings more than 20 years of construction experience to the firm.

Nicholson Construction Company has moved their headquarters from Cuddy, Pennsylvania, to the Zenith Ridge II Building at Southpointe in Canonsburg, Pennsylvania. Nicholson's employees moved into the new space for their first day of work on February 1. The company's address is 2400 Ansys Drive, Suite 303, Canonsburg, PA, 15317. All phone and fax numbers will remain the same.

The Associated General Contractors of America (AGC) has named Clifford Rowe to its Board of Governors. Mr. Rowe is Chief Executive Officer for PJ Dick – Trumbull – Lindy Paving. Mr. Rowe is active in the AGC's local affiliate, the Master Builders' Association, where he has served on the Board of Directors since 1998 and he served as MBA president from 2007 to 2009.

Specified Systems Inc., the Canonsburg PA based glazing fabrication and contracting company, announced the following personnel changes: James Hyland has been promoted to vice president of business development; Ryan Seitzinger has been promoted to vice president of operations; and Emily Yukish has been promoted to vice president of finance.

Babst Calland named James D. Miller a shareholder in the firm. Miller is a member of the firm's Litigation and Construction groups, focusing his practice primarily on commercial litigation and construction law. Miller is a 2008 graduate of Duquesne University School of Law.

Babst Calland announced the opening of a new office in Washington, D.C., and the addition of two experienced energy attorneys, James Curry and Keith Coyle, to serve clients from the Washington D.C. office.

Charles Maher has joined Gateway Engineers as project engineer. Maher has extensive experience in the planning, design, and construction of municipal water distribution systems, wastewater collection systems, and water and wastewater treatment processes. Gateway also announced the promotion of Jennifer J. Slagle, P.E. and David Housley to project manager. Slagle began working at Gateway as an engineer in 2012 and is a graduate of the University of Pittsburgh with a Bachelor of Science degree in civil engineering. Housley began working at Gateway as an assistant survey crew chief in 2007. He is a graduate of California University of Pennsylvania.

Gateway Engineers also announced that Ryan R. Berner, GISP, Jonathan E. Garczewski, P.E., Michael J. Haberman, P.E., PTOE, and Philip R. Strunk, P.E. have been made shareholders of the firm.

The Master Builders' Association announced the election of its new officers. President: Steven M. Massaro, Massaro Corporation; Vice President: Todd A. Dominick, Rycon Construction, Inc.; Treasurer: Raymond A. Volpatt, Jr., Volpatt Construction Corporation; MBA Executive Director: Jack W. Ramage.

The Construction Advancement Program of Western Pennsylvania (CAP) announced that Dean Mosites has been named chairman of CAP. Mr. Mosites is president of the Building Division at Mosites Construction. Joining Mr. Mosites on the CAP executive board are Steven M. Massaro and Jack W. Ramage. Mr. Massaro, senior vice president of Massaro Corporation, will serve as CAP treasurer. Mr. Ramage will serve as CAP executive director; he also serves in this position for the Master Builders' Association.

Cohen Seglias Pallas Greenhall & Furman PC, announced the promotion of Lisa M. Wampler to managing partner of the firm's Pittsburgh office. The announcement marks the first female managing partner in the firm's history. Ms. Wampler joined Cohen Seglias in 2003 with the opening of the Pittsburgh office.

Len Kapton joined Mascaro on January 11 as a project manager for the Client Services Department. Len began his construction career in 1991 as a carpenter and brings diverse experience with building projects, with a strong background on healthcare projects.

Melina Tomeo became part of the Mascaro team on January 4 as proposal manager. Melina recently relocated back to Pittsburgh after serving as a proposal consultant for the construction and energy services industry.

Mascaro welcomed Alyssa Kunselman as director of business development on February 22. Alyssa began her career in construction and was previously employed by Duane Morris Government Strategies, LLC as a sales, marketing and business development director.

Morgan Covey joined the Mascaro team on February 29 as a project accountant. She was previously employed by the Ruhlin Company as a project coordinator

Maiello Brungo & Maiello, LLP announced that Leo G. Mezerski, Jr. has been appointed chief operating officer, a new position within Maiello Brungo & Maiello. Effective immediately, Mezerski will assume responsibility for overseeing daily operations in the law and tax offices for overall financial and administrative operations, and focus on the firm's growth strategy and execution

2016 MBA OFFICERS

President
Steven M. Massaro
Massaro Corporation

Vice President
Todd A. Dominick
Rycon Construction, Inc.

Treasurer
Raymond A. Volpatt, Jr., P.E.
Volpatt Construction Corporation

Secretary/Executive Director
Jack W. Ramage

2016 MBA BOARD OF DIRECTORS

Joseph E. Burchick
Burchick Construction Company, Inc.

John C. Busse
F.J. Busse Company, Inc.

Domenic P. Dozzi
Jendoco Construction Corporation

James T. Frantz,
TEDCO Construction Corporation

Anthony F. Martini,
A. Martini and Co., Inc.

Michael R. Mascaro
Mascaro Construction Company, L.P.

M. Dean Mosites
Past President, Mosites Construction Company

Clifford R. Rowe, Jr.
PJ Dick Incorporated

Glenn Sieber (MICA President)
Easley & Rivers, Inc.

REGULAR MEMBERS

Aim Construction, Inc.
Allegheny Construction Group, Inc.
Michael Baker Jr., Inc. Construction Services Group
A. Betler Construction, Inc.
Burchick Construction Company, Inc.
F.J. Busse Company, Inc.
dck worldwide, LLC
Dick Building Company
PJ Dick Incorporated
Facility Support Services, LLC
FMS Construction Company
James Construction
Jendoco Construction Corporation
Landau Building Company
A. Martini & Company, Inc.
Mascaro Construction Company, LP
Massaro Corporation
McCrossin, Inc.
Menard USA
Mosites Construction Company
Nello Construction Company
Nicholson Construction Company
RBVetCo, LLC
RJS Construction, Consulting, LLC
Rycon Construction, Inc.
Spartan Construction Services, Inc.
STEVENS
TEDCO Construction Corporation
Turner Construction Company
Uhl Construction Company, Inc.
Volpatt Construction Corporation
Yarborough Development, Inc.

ASSOCIATE MEMBERS

A.C. Dellovade, Inc.
ABMECH, Inc.
Advantage Steel & Construction LLC
Alliance Drywall Interiors, Inc.
Amelie Construction & Supply, LLC
Amthor Steel Inc.
Brayman Construction Corporation
Bristol Environmental, Inc.
Century Steel Erectors Co., LP
Clista Electric, Inc.
Cost Company
Cuddy Roofing Company, Inc.
D-M Products, Inc.
Dagostino Electronic Services, Inc.
Douglass Pile Company, Inc.
Easley & Rivers, Inc.
Joseph B. Fay Company
A. Folino Construction, Inc.
Ferry Electric Company
William A. Fischer Carpet Company
Flooring Contractors of Pittsburgh
Franco Associates
Fuellgraf Electric Company
Gaven Industries
Giffin Interior & Fixture, Inc.
Richard Goettle, Inc.
Guinto Schirack
Gunning, Inc.
Hanlon Electric Company
Harris Masonry, Inc.
HOFF Enterprises, Inc.
Howard Concrete Pumping, Inc.
Independence Excavating, Inc.
J. J. Morris & Sons, Inc.
Kalkreuth Roofing & Sheet Metal, Inc.
Keystone Electrical Systems, Inc.
Kirby Electric, Inc.
L & E Concrete Pumping Inc.
Lighthouse Electric Company, Inc.
Limbach Company, LLC
Luca Construction & Design
Marsa, Inc.
Massaro Industries, Inc. - Floor Covering Group
Master Woodcraft Corporation
Matcon Diamond Inc.
Maxim Crane Works, LP
McCrossin Foundations, LLC
McKamish, Inc.
McKinney Drilling Company
Mele & Mele & Sons, Inc.
Minnotte Contracting Corporation
Moretrench American Corporation
Nathan Contracting LP
Noralco Corporation
Paramount Flooring Associates, Inc.
Phoenix Roofing Inc.
Pittsburgh Interior Systems, Inc.
Precision Environmental Company
RAM Acoustical Corporation
Ruthrauff | Sauer LLC
Sargent Electric Company
Scalise Industries Corporation
Schnabel Foundation Company
Specified Systems, Inc.
Spectrum Environmental, Inc.
SSM Industries, Inc.
Swank Associated Companies, Inc.
T.D. Patrinos Painting & Contracting Company
A. J. Vater & Company, Inc.
W.G. Tomko, Inc.
Wayne Crouse, Inc.
Wellington Power Corporation
Winjen Corporation
Wyatt, Inc.

AFFILIATE MEMBERS

AE Works Ltd.
AEC Online Store LLC
Aerotek, Inc.
All Crane Rental of Pennsylvania
Alliant
American Contractors Equipment Company
American Contractors Insurance Group
American Institute of Steel Construction
AmeriServ Trust and Financial Services Company
AON Risk Services of PA, Inc.
Arnett Carbis Toothman, LLP
Arthur J. Gallagher Risk Management Services, Inc.
Associates in Rehabilitation Management, Inc.
Babst | Calland
Baker Tilly Virchow Krause
BDO
BlueLine Rental, LLC
Blumling & Gusky, LLP
Bronder & Company, P.C.
Bunting Graphics, Inc.
Burns & Scalo Real Estate Service, Inc.
Cadnetics
CaselSabatini
Chartwell Investment Partners
Chubb Group of Insurance Companies
Civil & Environmental Consultants, Inc.
Clark Hill PLC
Cleveland Brothers Equipment Co., Inc.
CliftonLarsonAllen LLP
Cohen, Seglias, Pallas, Greenhall & Furman
Computer Fellows, Inc
Construction Insurance Consultants, Inc.
Construction Risk Solutions, LLC (CRS)
Culligan of Sewickley
Dickie, McCamey & Chilcote, PC
Dingess, Foster, Luciana, Davidson & Chleboski LLP
Eckert Seamans Cherin & Mellott
ECS Mid Atlantic, LLC
Edwards APQM
Eighty Four Lumber
Enterprise Fleet Management
FDR Safety, LLC
First National Bank of PA
Forta Corporation
HalanHardy, LLC
Henderson Brothers, Inc.
Henry Rossi & Company
Hill, Barth & King, LLC
Howick LTD.
Huntington Insurance, Inc.
Huth Technologies LLC
Karpinski Engineering
Langan Engineering & Environmental Services
Law Offices of David A. Scotti, P.C.
Leech Tishman Fuscaldo & Lampl, LLC
Liberty Insurance Agency
Liberty Mutual Surety
Lytle EAP Partners/Lytle Testing Services, Inc.
m/design
Maiello, Brungo & Maiello
Marsh
Merrick & Company
Meyer, Unkovic & Scott LLP
Mobile Air, Inc.
Mobile Medical Corporation
Multivista
Picadio Sneath Miller & Norton, P.C.
Pietragallo Gordon Alfano Bosick & Raspanti, LLP
Pittsburgh Mobile Concrete, Inc.
Port of Pittsburgh Commission
Precision Laser & Instrument, Inc.
PSI
R.A. Smith National, Inc.
R.J. Bridges Corporation
Reed Smith LLP
Saul Ewing, LLP
SBC Building Systems
Schnader Harrison Segal & Lewis LLP
Schneider Downs & Company, Inc.
Seubert & Associates, Inc.
Shore Corporation
Steptoe and Johnson PLLC
Steel Structural Products
The Blue Book Building & Construction Network
The Gateway Engineers, Inc.
The HDH Group, Inc.
The Rhodes Group
Tom Brown, Inc.
Travelers Bond & Financial Products
Tucker Arensberg, P.C.
UPMC Work Partners
VEBH Architects, PC
Veka, Inc.
Wells Fargo Ins. Services of Pennsylvania, Inc.
Westfield Insurance
Wilke & Associates, LLP
Willis of Pennsylvania, Inc.
Worksite Medical
Zurich NA Construction

Closing Out

Working with Improved Resources and Bent On Innovation and Efficiencies, PennDOT Maps the Road to a Brighter Transportation Future

By Leslie S. Richards

Secy. Leslie S. Richards

At a time when federal and state governments struggle to reach compromise on tough problems, Pennsylvania set a high benchmark with the adoption of the far-reaching Act 89 funding plan.

Adopted with bipartisan support in the Pennsylvania Legislature, Act 89 is designed to invest an additional $2.3 billion to $2.4 billion a year in all transportation modes by 2018. This investment is allowing Pennsylvania to make progress on the backlog of pavement and bridge maintenance and in some cases clearing the way for a few capacity adding projects.

Among the bigger projects is the start on a long-awaited 13-mile expressway to close a missing link in the important U.S. 15 north-south corridor. The first segment is a $155.7 million contract for a stretch that includes a new, large crossing of the West Branch of the Susquehanna River north of Sunbury. Another is the $127 million four-lane expressway bypass around Potters Mills in Centre County, the $97 million replacement of the U.S. 422 Bridge over the Schuylkill River near Valley Forge and a $97.4 million project to modernize a portion of the Interstate 70 corridor in southwestern Pennsylvania.

Act 89 also created a new Multimodal Fund, which is dedicating roughly $79 million in the current fiscal year to the non-highway and bridge modes. This is on top of the more than $1 billion made available to public transit across Pennsylvania.

Pennsylvania faces a challenging transportation environment. Its state-maintained highway system is the nation's fifth largest and the bridge system is the third largest. The average age of bridges on the state system is more than 50 years, and Pennsylvania long has had the distinction of having the largest number of structurally deficient bridges. With this in mind, we are creating an Interstate Preservation Program to tackle our aging system and are allocating almost half a billion dollars in our Twelve Year Program to interstate road and bridge reconstruction.

One of Pennsylvania Governor Tom Wolf's cornerstones is government that works and PennDOT exemplifies that goal. Here is how I see our road ahead:

PennDOT Invests

- We have created a new Transportation Investment Plan to provide strategic direction for investments that will restore and enhance the state's transportation system. We have given Metropolitan and Rural Planning organizations who help us to develop our Twelve Year Program specific guidance and funding targets based on road and bridge reconstruction metrics.

- We have initiated a County Transformation for Excellence in Maintenance program to provide guidance, training, and support as well as the resources to efficiently and effectively maintain our highway and bridge system. We have operations in each of the state's 67 counties and we are looking to our staff there to take a stronger hand in deciding how to address system conditions. This program will provide a maintenance complement to the Transportation Investment Plan.

- We are protecting our system by initiating an Extreme Weather Study, which will identify transportation-asset risks and vulnerabilities in light of global climate change.

- We are publishing an RFP to upgrade and modernize our nearly 30 year old driver and vehicle IT systems which will result in one titling and registration system for all constituents in the Commonwealth.

PennDOT Innovates

- We are implementing state and national innovations through the Transportation Quality Initiative for construction methods and the State Transportation Innovation Council for new research and ideas that can be put into practice quickly.

- We are improving customer wait times at Driver License Centers by utilizing monitoring software, improving construction inspection with the use of mobile applications and tapping into employee-generated innovations through a formalized idea collection process. The results will be savings estimated to run to the tens, if not hundreds of millions of dollars.

PennDOT Empowers

- We have enhanced communications through new department websites and social media – including my Facebook page Secretary Leslie S. Richards and twitter account @Sec Richards -- to improve customer service.

- We have placed information on active, planned and Act-89-enabled projects through a new projects website – www.Projects.PennDOT.gov.

- We have improved public winter-weather road condition awareness by adding more than 700 plow trucks with automated vehicle locators on www.511PA.com.

- We are improving public access to traffic conditions through a data-sharing partnership with the Waze travel information application.

PennDOT Partners

- We collaborate with schools, the Department of Drug and Alcohol, and the turnpike on a a variety of safety initiatives including seat belts, DUI and work zones.

- We partnered with the Department of State to implement Online Voter Registration.

- We team with women's transportation groups and associations such as the Northeast Association of State Transportation Officials, which I chair, to improve diversity and increase the emphasis on women pursuing careers in transportation.

Maintaining transportation investment is critical to our economic well-being.

Act 89 meant not only improvements to the road and bridge system, but jobs for people working on these projects and improved connections that help bolster commerce and quality of life. The rough estimate is an additional 25,000 to 30,000 jobs for every $1 billion in infrastructure investment.

Beyond these immediate job gains, crucial as they are to our economy, Act 89 has enabled Pennsylvania to do something even more important: to invest for the long-term in a future of economic growth, opportunity, a sustainable quality of life and a cleaner, healthier environment for our kids and their kids.

Pennsylvania has a long history of transportation innovations: first roads to the frontier, canals and railroads that spurred national development, and the nation's first turnpike. We at PennDOT are committed to efficiency and innovations that will build on that legacy.

Leslie S. Richards is Secretary of the Pennsylvania Department of Transportation. BG