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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 PHOTOGRAPHY Carson Publishing, Inc. Denmarsh Photography Andrew Reilly DLA+ Architecture PJ Dick Inc Washington Hospital Butler Health System

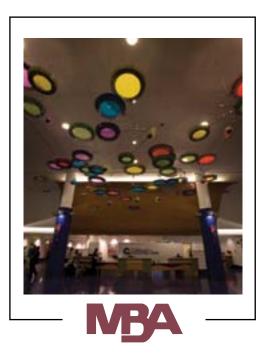
> ADVERTISING SALES James Hilliard 412-548-3823 milfordbay@comcast.net

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Children's Hospital of Pittsburgh of UPMC Photo by: Ed Rieker Photography.

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Publisher's Note

become a popular speaker whenever there is a change in the air and if my calendar is any indication there must be a sense that there is change in the air as winter finally gives way to spring.

Perhaps I should clarify that statement a tad. As the only person who professionally follows the Western PA construction market, I get tagged as being an expert on that subject. Those of you who have heard me speak already know how loosely the term expert is being used in this case. In any case what I mean by popular is that people in our industry tend to get very curious when they believe that the market is moving and I get more calls to share whatever it is that I know.

What's behind the curiosity is the very human need to grasp at straws when it seems that things are getting worse, hoping that a speaker will provide some hope, or to get confirmation that things are indeed getting better. During the fall and winter of 2008-2009 there was a lot of the former. Industry groups wanted to know how bad things could get. Many individual business owners made unprompted calls just to bounce around their opinions. I got invited to breakfast and lunch quite a bit. As 2009 dragged on the calls stopped. Then last fall, after two tough years, the calls started again. My guess is that the planners of meetings are sensing that conditions are turning around and want to see if someone else agrees.

Regardless of whether or not my observation about this is valid – and it is possible that a couple of years is just long enough to forget what it's like to hear me speak – the tone of my presentation currently is more upbeat. There are some positive things to say about where the market is heading now and some especially positive things to say about a few industries that are driving the region's economy. And one of those industries is healthcare.

BreakingGround last did a healthcare edition in the summer of 2007. At the time the building envelope for the new Children's Hospital was just being completed. That hospital's owner, UPMC had plans for several other large projects to follow once Children's was done. It's perhaps the best indication of how much the landscape has changed to note that as of this healthcare update only one of those projects – the new Passavant Pavilion – has gone forward. The system's two newest major projects weren't on the front burner in 2007. Back then the West Penn Allegheny Health System hadn't yet faced the financial obstacles it is dealing with currently. Endowments were at near-record levels and revenues over expenses were high. Little more than a year later the situation changed dramatically.

Almost every industry could tell the same story as described in the paragraph above. What is intriguing about the healthcare industry is that its demand was not impacted the way other businesses were. Medical customers didn't deleverage or slow down their spending if they were sick. It's true that millions lost healthcare benefits and nonessential procedures slowed in pace but like auto body shops, hospitals see customers who mostly don't want to be there. Demand only slows as a function of insurance. And insurers are dealing with their own set of recessiondriven headaches.

Four years later there's a whole new landscape for healthcare and with it a new landscape for capital spending on healthcare.

It's important to remember that having healthcare as an economic driver and a significant source of construction opportunities isn't a universal condition. That reality was driven home to me over the past couple years when I discovered I was also becoming popular with architects from other cities looking to Pittsburgh for healthcare work. Firms who specialize in hospital work in Cleveland and Detroit have seen the unhealthy side of the healthcare business. I have been treated to a handful of lunches by architects trying to get the lay of the land here. As far as I know, none have had much success breaking in here yet. They probably realize now to be careful about buying lunch for an 'expert'.

There have been a number of firms from other cities secure work in Pittsburgh, however. For Pittsburgh architects and contractors it has been unfortunate that the prosperity of the region's healthcare industry has gained a higher profile nationally and added to the competitive nature of the market. That's the downside of having a healthy sector in an unhealthy economy. This kind of thing has happened before and it will likely be a passing phenomenon rather than a trend, but that is little consolation for local firms that need work. I guess the upside of this development is that it demonstrates the strength of the region. I doubt that the firms serving the automotive industry are worried about out-of-town competition right now.

REGIONAL UPDATE

For local businesses, the end of the first quarter of 2011 gave a little more confidence that the easing of economic tensions will continue, inspiring more investment and hiring of staff. The unemployment rate announced in early April had fallen to 6.8 percent for the seven county metropolitan area, down more than a full point from December.

Most of the anecdotal economic news was positive for the region as well. Water treatment firm Heckman Corp. continued to grow its staff here and announced that Pittsburgh would be its headquarters. Oregon-based Eco Fueler was searching for a 200,000 square foot building to set up manufacturing for its compressed natural gas powered Roadster CNG automobile. The Mid-Mon Valley Industrial Development Authority's Alta Vista Business Park not only found a tenant for its 50,000 square foot spec building but also apparently is negotiating with companies looking to take the remaining five or six pad sites. *Site Selection* magazine named the region a 'Top Ten' market for the third straight year.

The first quarter's results for the construction industry bear out the improved confidence and especially reinforce the importance of the economic drivers in the region.

Non-residential contracting in metropolitan Pittsburgh experienced a 36.8% increase over the first quarter of 2010. Construction contracting volume during January to March was \$507.6 million, up from \$371 million in 2010. More encouraging was the fact that the share of public construction projects had fallen significantly since last year. The drivers behind the improved contracting conditions are the same ones that are in the business section every day – natural gas, healthcare, and higher education. There is more and more evidence of new construction coming from the businesses related to the Marcellus Shale exploration and especially from what is called the midstream activities - cryogenic processing, liquid gas separation and other production and distribution activities that follow drilling.

Another sector showing strength ahead of the national trend is the industrial market. Capacity utilization has been climbing for nine straight months nationally, reaching 75.3 percent in March but new industrial construction is still down. In Western PA, however, capacity utilization has been skewed by the natural gas and steel industries. Construction is underway on Durabond's 55,000 square foot pipe coating plant in Duquesne, Allied Technologies \$7 million pipe facility in Scottdale, Horizontal Wireline's 36,000 square foot plant in Alta Vista and the \$12 million Norfolk and Southern rail yard expansion in Conway, all projects related to natural gas exploration. Another gas-related project that will result in a much smaller investment than was hoped for is the return of USSteel

to McKeesport to open a threaded pipe facility. The company was contemplating construction of a new plant but was able to purchase an existing facility for retrofit instead.

Construction of steel manufacturing plants continues to drive activity for industrial contracting firms. Work is well underway on the AK Steel and USS Clairton projects. Latrobe Steel is planning a new titanium facility, probably in the 75,000 square foot range. And Allegheny Ludlum's new rolling mill in Brackenridge still looms, although planning for that \$1.2 billion plant may take the balance of 2011 before construction actually begins.

Power plants are also back on the radar in the region because of mandated environmental remediation. A new scrubber is being engineered for GenOn NMC's 1,711-megawatt plant in New Florence, a project that will probably cost less than the \$500-\$600 million generally needed for a scrubber installation. And further north in Homer City, Edison Mission Energy has been sued by the Environmental Protection Agency to force the installation of sulfur dioxide cleaning measures, likely a scrubber unit, which could run in excess of \$1 billion.

Following on the heels of a fourth quarter in 2010 that saw \$770 million in contracting, the higher activity in the first quarter has allowed architects and contractors to build backlog, and hiring activity is up in the industry. Demand for commercial and industrial space continues to improve while vacancy rates continue to fall, but the normal supply/demand dynamics are less important to the regional recovery right now than the ability of developers to borrow money at something close to normal conditions. Financing will be the key to the expansion of the recovery for the remainder of 2011.

Permits for single family detached homes spiked steeply during the first guarter of 2011 in metropolitan Pittsburgh, however the activity appears to be artificially-driven by a municipal response to the mandate for sprinklers in new homes. The mandate - which has now been repealed by legislative action - required that new homes have fire sprinklers beginning in 2011. Virtually all municipal code officials recognized homes that were permitted by December 31, 2010 as exempt from the mandate, which was believed to add as much as \$15,000 to the cost of new construction. A number of builders flooded municipal offices with applications at year's end, causing enough code offices to 'grandfather' permits that they couldn't process before December 31. More than half the permits for single-family homes issued in the first quarter were issued in January, typically the slowest month of the year for new construction.

During the January through March period, 495 permits were issued for single-family detached units, up 31.6% from the same period last year. Attached unit permits increased to a similar degree, with 178 units started compared to 138 during the first quarter of 2010. The overall housing construction market was up 30.9%.

While the increase in new residential construction permits appears to be an artificial response to a code change, the continued improvement of the residential real estate market is proving to be quite real. According to RealStats, the volume of home sales rose in January, February and March compared to the first quarter of 2010. Even more encouraging was the data on sales prices, which showed a 10.1 percent increase in the average price of a house compared to last year. For existing homes the average price was \$132,067 and for new homes the average price was up 20.2 percent, to \$303,134.

The non-residential market was highlighted by some significant projects in the education sector. March and April are months that usually have heavy contracting for K-12 schools, and

that was the case for spring 2011. Bidding recently were the \$38 million Connellsville High School and the \$90 million Mt. Lebanon High School projects. Bidding in May is a quartet of schools that are expected to cost between \$10 million and \$20 million just outside the metropolitan area. These include additions and alterations to Case Elementary in Sharon, Farmdale Elementary in Hempfield, Wilmington Area Middle-High School and Elderton K-12 in Armstrong County.

Activity at the university level has been normal for setting up the summer renovation season. Several construction projects have been bidding each week at Carnegie Mellon, University of Pittsburgh or Duquesne University, or some combination of the three. Pitt's \$32 million expansion of the Crabtree and Parran Hall facilities was put under contract as well. Most of the smaller colleges and universities outside the city have put at least a small project or two out for pricing as well.

Overall bidding activity is up markedly when compared to last year. Pittsburgh Builders Exchange was reporting 256 jobs bidding by end of May compared to less than 225 during the same period in 2010. Much of that ten percent increase in volume is due to a pickup in smaller privately funded projects, the type which were missing from the market during the slowest part of the recession. These include a number of auto dealerships, small healthcare practices and non-profit organizations that struggled to find funding a year or two ago.

A more robust private sector is a key to the expansion of economic recovery and perhaps even more so to the prospects for the construction industry, with the next few years promising to be a big challenge for state and local funding. One surprise among Gov. Corbett's

Municipality	#SFD	#SFA	Total
Pittsburgh	7	70	77
Adams Township	31	16	47
Pine Township	31	6	37
South Fayette Township	28	2	30
Cranberry Township	19	10	29
Richland Township	27	0	27
Collier Township	6	20	26
Peters Township	20	0	20
Total Pittsburgh MSA 2010:1	376	138	514
Total Pittsburgh MSA 2011:1	495	178	673
% Change	31.6%	29.0%	30.9%
By County	SFD	SFA	Total
Allegheny	217	118	335
Beaver	40	0	40
Butler	73	48	121
Fayette	35	2	37
Washington	63	10	73
Westmoreland	67	0	67

Housing permit activity climbed in response to a loophole in the sprinkler mandate. Activity is shown for the municipal markets with at least 20 new units. Source, Pittsburgh Homebuilding Report.

proposed 2011-2012 budget was the continuation of funding for capital expenditures during the next two fiscal years. Corbett's capital spending from bond proceeds and current revenues – like licenses, tolls, taxes and usage fees – remains flat in 2011-2012 at \$1.85 billion, and increases in 2012-2013 to \$1.98 billion. Capital plans fall precipitously from 2013-2016, dropping to \$981.9 million in 2015-2016. The austerity is not a surprise given the Governor's campaigning and philosophy, but it is surprising to note that his proposal for years three through five are virtually the same as Gov. Rendell's last proposal.

Perhaps it is just a political reality that any state executive would push out the real pain a couple of years in the hope of changing fortunes reversing the fiscal problems. And at this point the budget is merely a proposal and the final budget may require cuts in the coming year. Maintaining similar levels of spending in the next two years would be a welcome respite for companies who rely on the heavy and highway market for a living.

The summer holds more promise in 2011 than in the past two summers. Aside from more opportunities, an easing of hyper-competitive conditions would be most welcome for design and construction firms in the region. Lists of bidders and proposers have become shorter since the first of the year but plenty of competitors are still pursuing projects and the companies that have been successful continue to trim margins to get work. With the signs of recovery all around the reality of recovery is unlikely before the end of 2011.



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NATIONAL MARKET UPDATE

The data at end of the first quarter reinforced a sense of certainty about what is going on in the sub-segments of the national construction market. Not all of the certainty is necessarily good news, but given how the recession began there is some comfort that can be drawn from a more orderly progression of the trend.

Unfortunately the most certain trend is that construction of new single family homes will remain at depressed levels throughout the remainder of 2011 and likely through 2012. The overextension of home buying credit that precipitated the financial crisis has continued to roil the residential construction and real estate markets even as the financial institutions that survived have been rejuvenated. While the long-feared wave of foreclosed homes has not hit the market, a steady supply of distressed properties and record numbers of foreclosures have kept the residential real estate market with an overhang of unsold homes that shows no sign of burning off in the near future.

There is a bright spot in the residential market, however. In part because the mortgage debacle has limited who can buy a home and in part because the improved employment picture has goosed demand, the supply of vacant apartments has fallen. According to Co-Star Group, the nation's apartment owners saw net absorption of 44,000 units in the first quarter, which was the highest rate of absorption in a decade. New construction of multiFirst guarter data also suggests that there is an unprecedented disconnect between the recovery and the housing market. Even at the forecasted 2012 levels, the number of new construction units for multi-family residential will still be less than two-thirds of the 340,000 units built on average from 1997 to 2006. With construction of new single-family detached housing falling to less than 425,000 units annually, it's clear that the housing market will not lead a construction recovery. At the same time, the extended depression in housing has reduced employment in residential construction from 2.5 percent to 1.6 percent of all jobs. And residential investment - whether in the form of new construction, remodeling or purchase - has fallen to 2.5 percent of GDP from the pre-bubble norm of 5 percent. While these may be gloomy numbers the data underscores the reality that the new housing construction market currently has a negligible impact on the overall economy.

Non-residential construction activity is in the midst of recovering, even if the normal cyclical pattern isn't holding. The factors that had been depressing commercial construction – high unemployment, lower consumer spending and a lack of financing – have been easing since the early stages of 2010. And the real estate fundamentals are signaling coming improvement.

Office vacancy rates are still high but have begun to fall, dropping one-tenth of a percent to 17.5 percent in March. Office rents also climbed half a percent in March, the second straight month. Retail vacancies have not yet turned the corner, rising to over nine percent on average

family units fell to 121,000 units 2009 and in 130.000 units in 2010, but Co-Start forecasts growth of 22,500 units in 2011 and 94,600 units in 2012. In addition to the more favorable supply and demand conditions, financing and investor appetite for multi-family projects has improved dramatically since 2009.



The AIA's Architectural Billing Index shows the long-term trend of increasing design activity.

FIRST QUARTER DATA ALSO SUGGESTS THAT THERE IS AN UNPRECEDENTED DISCONNECT BETWEEN THE RECOVERY AND THE HOUSING MARKET ... THE NEW HOUSING CONSTRUCTION MARKET CURRENTLY HAS A NEGLIGIBLE IMPACT ON THE OVERALL ECONOMY.

in the first quarter for properties in the top 80 markets. Mall vacancies hit their highest level in eleven years and the outlook for strip centers and neighborhood retail is for vacancy rates to top eleven percent this year; however, for top-tier retail centers the tide has turned. Vacancies in such retail centers fell to seven percent.

If there is credence in what some of the national construction economists are observing about the data, the nonresidential market should regain its footing in 2011 and begin the next growth cycle in 2012.

One of the leading indicators of future activity is the American Institute of Architects' survey, the Architect Billings Index (ABI). The February ABI showed a slight recovery from January's level, and a 10 percent increase over last February. More importantly, the ABI – which tracks whether member firms have increased or decreased billings over the previous month – remains above 50 percent and extends the upward trend of improving conditions since a year ago. While it is an imprecise forecasting tool, the Index is an accurate way to gauge the overall trend and predict how contracting activity will be in six to nine months.

Reed Construction Data's vice president and chief economist, James Haughey, gave his outlook on the remainder of 2011 at a late March webcast with the AGC's Ken Simonson and AIA's Kermit Baker. Haughey projects that non-residential building construction will stabilize in 2011 but still decline 3.7 percent compare to last year. He expects the lingering spending from ARRA to offset the steep state and local cuts in heavy and highway spending, lifting contracting in that sector by 7 percent. Haughey sees the overall non-residential market to increase 2.8 percent in 2011.

Haughey pointed to the falling vacancy rates in commercial properties (although still above normal levels), the slight gains in rental rates, the return of investors to commercial real estate and more projects in the Reed Construction Data pipeline as indicators that the market is turning towards growth again next year. His forecast for 2012 has commercial construction gaining by 13.6 percent, residential expanding by 23.8 percent, heavy and highway by one percent and an overall increase in contracting of 12.5 percent over 2011.

AGC's Simonson sees a similar pattern unfolding for the balance of 2011, although with slightly deeper declines. Like Haughey, Simonson expects the follow through of the stimulus to keep public spending afloat in 2011 with a three percent increase to \$302 billion. Offsetting that gain, however, he projects an eight percent decline in private residential spending to \$246 billion, and a bigger decline of 13 percent to \$244 billion in private non-residential construction.

The Department of Labor's year-end jobs data was another indicator that the construction industry is healing. During 2010, construction jobs were added in 15 states. That number is now 19 states. While that is hardly a hiring frenzy, positive employment occurred in only one state in 2009. In eleven states, employment declined by two percent or less (Pennsylvania was virtually flat with a onetenth percent decline). Declines of three percent or more were registered in 24 states, but only three saw doubledigit declines. The AIA's data on architectural employment in 2010 showed stabilization, according to Kermit Baker; however, the number of architects employed at the end of 2010 was some 75,000 less than in 2006.

If the improving conditions are indicating a predictable pattern of recovery for the non-residential market, however, not all forecasters are seeing it that way. A look at the forecasts for the balance of 2011 from the major construction economists surveyed for the AIA's Consensus Construction Forecast shows some big variances, particularly when comparing opinions on specific sectors. Those variances demonstrate as well as any other measure just how difficult it is to get a handle on where the U. S. economy stands and to gauge how the various global influences will play out.

Among the categories with divergent forecasts are industrial construction – which Reed Construction Data forecasts as declining 5.6 percent while McGraw-Hill Construction predicts a 24.2 percent decline – and hotels – which McGraw-Hill sees declining 17.5 percent and IHS Global Insight forecasts as *increasing* 2.8 percent. IHS Global also goes against the majority in predicting an increase in retail spending of 4.3 percent while FMI forecasts a 7.8 percent decline at the other end of the spectrum. Generally, IHS is the only organization with a positive outlook for 2011. The most extremely negative outlooks came from McGraw-Hill and FMI, while Reed and Moody's expected more moderate declines that tended toward the mean of the forecasts. Differing data sources accounts for some of the variance but uncertain conditions is the more likely culprit.

As summer approaches, some of the economic questions appear to have answers. The federal government and Congress seem to have determined to avoid a shutdown, even if there is no actual budget agreement. The Obama administration has moved towards accepting deeper spending cuts, albeit without abandoning the rhetorical support of the middle class and elderly. State and local governments are facing up to their fiscal imbalances and making cuts that will slow public construction for the first half of the decade. Sovereign debt crises in Europe seem less likely to unwind into defaults. A protracted slump in the housing market isn't keeping recovery from starting.

The big questions left unanswered at the moment mostly center on energy costs. If prices climb, how high will prices go before tamping down consumer spending again? Will rising costs of products and materials derail projects that have been revived this spring? Is the short-term price inflation the first act in an inflation drama that will force borrowing rates up and wreck pro forma performance for commercial projects?

A nascent recovery in commercial construction depends on owners and developers being able to build for what they expect to and demonstrate ample cash flow to financers of construction. Keeping prices from going further north may be the key to maintaining momentum in the national economy.









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WHAT'S IT COST?

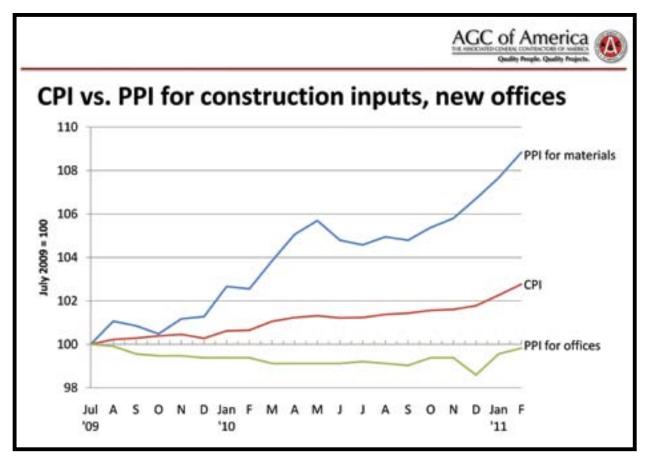
Anyone who has experienced a river's flooding knows the feeling of watching the waters rise, hoping that the flood will be averted but fearing the inevitable. There's a point when the river reaches the bank full stage where water seems to be testing the river bank and holding the level just before it breaks through and begins covering what had been dry land. Over the past year the progress of price inflation for construction has been progressing like a rising river and some recent events may be pointing to the bank full stage for pricing. locally during the past two months, climbing from \$2,700 or \$2,800 per ton to \$3,600 per ton in late April. Short supply due to constrained refining capacity is the primary reason being given for the price of diesel rising faster than that of oil.

March's data shows a steep jump compared to previous months and the major factor in the increases – rapidly rising energy costs – will likely push April's and May's index higher as well. Of greater concern to the longterm trend is the fact that the compounded impact of the more accelerated inflation over the past six months has pushed annual inflation to levels that are more than

First, a look at the data. The Bureau of Labor Statistics (BLS) released its report on producer price inflation on April 15, which showed that the trend upward since the end of the recession pushing inflation is well ahead of the historical norms. The producer price index (PPI) for finished goods jumped 1.3 percent, not seasonally adjusted (0.7 percent, seasonally adjusted), in March and 5.8 percent over the past 12 months. The PPI for inputs to construction. which includes diesel fuel, leaped 2.0 percent, not seasonally adjusted, for the month and 6.9 percent over 12 months.

The largest increases in materials prices were for diesel fuel, which was up 11 percent in March and 42.5 percent since March 2010; copper and brass mill shapes, which declined 6.0 percent in March but were up 17 percent over 12 months; aluminum mill shapes, up 1.9 percent in March and 12 percent for the year; and, steel mill products up 5.3 percent and 15 percent respectively. Steel pricing has spiked

PERCENTAGE CHANGES IN COSTS	March 2011 compared to				
Consumer, Producer & Construction Prices	1 mo.	<u>3 mo.</u>	1 yr.		
Consumer price index (CPI-U)	1.0	2.0	2.7		
Producer price index (PPI) for finished goods	1.3	3.5	5.8		
PPI for construction	2.0	4.0	6.9		
Costs by Construction Types/Subcontractors					
Residential buildings	1.6	3.3	5.7		
New industrial building construction	-0.3	-0.2	0.5		
New warehouse construction	0.0	0.2	1.0		
New school construction	-0.1	0.6	1.3		
New office construction	0.0	1.3	0.7		
Concrete contractors, nonresidential	0.0	-0.3	0.1		
Roofing contractors, nonresidential	0.4	1.3	-0.4		
Electrical contractors, nonresidential	-0.2	0.7	1.8		
Plumbing contractors, nonresidential	0.2	0.3	0.5		
Costs for Specific Construction Inputs #2 diesel fuel	11.1	22.8	42.5		
Asphalt paving mixtures and blocks	0.0	1.0	1.8		
Concrete products	0.0	-0.2	-0.6		
Brick and structural clay tile	-1.0	-3.7	-3.3		
Plastic construction products	1.4	1.2	2.5		
Gypsum products	7.0	2.7	5.4		
Lumber and plywood	0.6	2.3	0.7		
Architectural coatings	1.3	2.9	6.4		
Steel mill products	5.3	12.4	15.3		
Copper and brass mill shapes	-6.0	1.5	17.2		
Aluminum mill shapes	1.9	3.5	11.7		
Fabricated structural metal	-0.2	3.0	3.3		
Prefabricated metal buildings	3.6	10.7	16.9		
Crude petroleum (domestic production)	19.9	17.1	27.0		
Asphalt (at refinery)	0.3	7.9	-5.6		
Cement	0.8	-0.2	-3.7		
Iron and steel scrap	-1.2	12.2	18.8		
Copper base scrap	-0.1	5.0	16.9		
Source Bureau of Labor Statistics, Updated April 18, 2011 Compiled by Ken Simonson, AGC Chief Economist					



Producer prices for construction materials have outstripped increases in consumer prices since the last quarter of the recession. Producer prices for offices, which include market forces, continue to lag the July 2009 level. Source, Bureau of Labor Statistics.

50 percent higher than the four percent or so that has been the norm over the past two decades.

PNC senior economist Robert Dye addressed the spike in diesel prices at an April 25 construction cost seminar jointly held by CMMA, the Society of Professional Estimators and the MBA. Dye broke the price of oil into four components in what he calls the 'Oil Price Pyramid.'

"The underlying supply and demand fundamentals support an oil price of \$80 or \$90 per barrel," he explained. "But on top of supply and demand you have a risk premium – triggered by things like the unrest in Libya – as well as pricing that accounts for the day-to-day speculation in the price of oil and for the fluctuations in foreign currency exchange. Those three factors can add from \$10 to as much as \$25 per barrel."

Dye's opinion is that the current prices of roughly \$110 per barrel are beginning to impact consumption of fuel and will trigger what he calls the 'long-term negative feedback' that pushes prices back down to the \$90 level.

AGC's chief economist Ken Simonson agrees with Dye's opinion that oil should reach a plateau soon and added that the inflation for construction costs is divided into two categories.

"The inputs that have seen the bigger increases and most volatility all have significant global demand," he says. "The more stable materials – lumber, plywood, drywall, asphalt – are readily available in the U. S. and have little export demand."

Simonson forecasts that additional inflation is probable but that the upward action has less momentum now. His expectation is that increase could reach as much as eight percent but that energy costs should pull back in the second half, keeping producer prices at inflation levels between four and eight percent.

When put into the context of market conditions, the rising material prices may be compounded to have a larger impact on construction projects. As prices have continued to accelerate since early 2010, costs for completed structures have remained virtually flat. The BLS March report showed the index for finished industrial rising one-half percent during the past year, offices 0.7 percent and schools 1.3 percent. That means that the inflation has not been passed on from contractors to project owners, creating a squeeze on contractors' profit margins that reflects their anxiety about getting work.

More than one developer or building owner has bought into the notion that the most recent two or three years have been a good time to build because of aggressive, competitive contractor bids. Many owners in our region have in fact shifted their modus operandi away from negotiating or bidding to a narrow group of contractors to more open competitive bidding to take advantage of the market. Bidding six points or more below the cost of the materials is not a sustainable model for the market, however, and a couple of larger public projects which recently bid may be showing that the winds have shifted.

On April 5 the Quaker Valley School District took bids on an addition of 28,000 square feet and renovations to 110,000 square feet at its middle school. Bids came in roughly \$6 million over the \$19.6 million estimate for the cost of the project. Two weeks later the largest project to bid in the region this year experienced a similar result. Bids for the construction of the Mt. Lebanon High School came in at \$102.4 million – with asbestos abatement the low bids totaled \$107.8 million – which was 15 percent over the budget.

When prices climbed dramatically in the first half of 2008 the market conditions were quite different. Nearing the end of an extended growth cycle at that time, local contractors reflected the higher prices in their bids early in the inflationary period. Over the past twelve months the prices climbed more gradually and contractors were still fighting to rebuild backlogs and create positive cash flow. While market conditions have not improved to the same level as in 2008, the squeeze from higher prices – especially from rising diesel prices that impact almost all products – may have reached the point where inflation can no longer be absorbed by contractors.

If the evidence of two publicly bid schools is an indication of a trend, the most significant impact will be on larger projects with extended planning cycles – like the Allegheny Ludlum plant or the first phase of Grove City College's \$75 million science and technology center – and commercially financed projects which are tethered to tight pro forma projections – like Kratsa Properties's downtown Hilton or the two 15-story office towers planned by Millcraft Industries and Burns and Scalo. An extended period of inflation, however gradual the rate of growth, will put a damper on projects across all types.



THE CHANGING LANDSCAPE OF HEALTHCARE CONSTRUCTION

UPMC Passavant Pavilion completed by PJ Dick in 2010. (Photo by Andrew Reilly) FOR THE REST OF THE DECADE FEW TOPICS WILL DOMINATE THE DISCUSSION OF THE ECONOMIC AND POLITICAL FUTURE OF THE UNITED STATES AS MUCH AS HEALTHCARE. THAT CONVERSATION WILL LEAVE WESTERN PA BUSINESSES AND RESIDENTS WITH MIXED FEELINGS. OF ALL THE ECONOMIC DRIVERS – HIGH TECH, EDUCATION, ENERGY – THAT HAVE INFLUENCED THE REVIVAL OF THE ECONOMY IN THE REGION, NONE HAS BEEN MORE IMPORTANT THUS FAR THAN THE GROWTH OF HEALTHCARE. REGIONAL BUSINESSES HAVE THRIVED BECAUSE OF THE DEMOGRAPHICS DRIVING HEALTHCARE, BUT THE RISING COSTS HAVE THREATENED OVERALL PROSPERITY AND SO A DISCUSSION ABOUT PARING BACK COSTS ALSO MEANS PARING BACK GROWTH FOR AN ECONOMY DEPENDANT ON GROWING HEALTHCARE SYSTEMS.

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The changing landscape has already impacted who is delivering healthcare services in Western PA and therefore, who is demanding construction of healthcare facilities. Pittsburgh's largest employer is a hospital, the University of Pittsburgh Medical Center, whose growth has placed its largest competitor, West Penn Allegheny Health System, in financial peril. As a result there have continued to be extensive opportunities for design and construction at UPMC facilities, while needed improvements and new clinical construction at West Penn Allegheny have been deferred.



Three main problems have impacted the

direction of healthcare and the reactions of the hospitals: rising costs; overwhelming demographics; and the initial and ongoing attempts to reform the current system. For healthcare providers of all types the problems boil down to one overriding concern, which is how will they be reimbursed for services.



It is unfortunate that Americans had the opportunity to hear a vigorous and intelligent debate about the problems facing healthcare in 2009 but instead got a political show. Data of all kinds was available from thousands of sources with a few clicks. So too were endless opinions. Instead of learning about the issues facing hospitals, doctors, patients and insurers, the public got diatribes about whom to blame and loads of fear.

Healthcare is a political issue in the 2010's and therefore the subject of as much misinformation or incomplete information as it is the subject of illumination. For all the strident talk of death panels, healthcare for the rich only, rationing, taxpayer-funded abortion, or whatever might boost ratings or votes, the mainstream public debate speaks little of the only problem that really matters: the cost of providing healthcare has outgrown the ability of the system to pay for it.

There is no one root cause of the current dilemma. Americans have been caring for those who are unable to care for themselves since the Pilgrims' communal society. As a progressive nation we have continuously inched forward the care being provided to a broader group of those in need. This care was provided mostly by private largesse until the Great Depression forced the role of providing a safety net onto government.

Since the New Deal, the net has widened steadily and broadened to include, a host of social services. Public assistance crept into more corners of the populous but just as damaging to the system were the unintended consequences of a very good thing: public funding of health research. The results of three generations of medical research are that fewer diseases are beyond the reach of medicine to respond. Like a funnel growing wider at the

Butler Memorial Hospital's new patient tower was opened in July 2010 (Image courtesy Butler Health System).

top, the advances in medical capability meant that more procedures could be performed on more kinds of conditions. That government might fund huge advances in life saving medicine was probably one of the ultimate goals of New Deal or Great Society programs. What the New Deal didn't anticipate was the Baby Boom.

Even if the same level of care was being provided today as in 1950, our healthcare system would be straining under the weight of America's largest generation. With life expectancy growing longer each year, the trend is for the number of participants in Medicare and Medicaid to double by 2020. The safety net wasn't designed for such a catch.

According to the federal Health and Human Services data for 2009, reimbursement for Medicare and Medicaid amounted to 35 percent of the national healthcare expenditures, which climbed to a total of \$3.5 trillion or 17.6 percent of GDP. Private insurance accounted for 32 percent of the total expenditure, with out-of-pocket spending covering 12 percent of the total expenditure. The trend is for the national healthcare expenditure to grow to roughly 20 percent of GDP in 2020 and the Federal share to be nearly 60 percent.

The debate over how the government will deal with the trend described above, and the healthcare reform legislation that resulted has had a chilling effect on the way hospitals have spent during the most recent couple of years. Uncertain about what services and procedures hospitals can expect to be profitably reimbursed to perform, the acute care providers have limited investment to those areas that it feels will offer adequate returns.

Even though the healthcare reform that was passed – the Patient Protection and Affordable Care Act of 2010 (PPA-CA) or so-called Obamacare – delivered far less of the sweeping reform than was promised, the legislation was massive and required extensive analysis to understand what risks were posed by the changes. Like the last time similar reform was proposed in 1992-1994, healthcare



Construction is more than half completed on the UPMC East hospital in Monroeville (Image courtesy of PJ Dick Inc.).

capital spending slowed markedly from 2008 until 2010. In part, the caution was masked locally by the construction of a new hospital – UPMC East in Monroeville – as well as a new patient tower at Butler Memorial and a new outpatient facility at Heritage Valley Beaver. Over the last 12 months, most of the regional healthcare systems have begun to respond to the reform legislation and capital spending has reflected the strategies of each system.

The optimistic view is that the costs of healthcare have grown to the point that all stakeholders in the industry will craft solutions that will result in hospitals providing the best care in the world for fees that can be afforded. For providers, however, it means that most of the solutions will yield goods results, if they keep people out of hospitals. "All providers in this new era of healthcare are operating in a zero sum game," says Linda Weiland, Vice President of Provider Strategic Initiatives for Highmark. "The federal government isn't coming forward with any new money so everyone has to work towards a more collaborative, results-based system of healthcare."

The Catch-22 for providers is that meeting the challenge that Weiland describes also means preparing for a future that intentionally has far less patients in their facilities.

The Solutions

The new landscape of healthcare is not as radically different as was feared but key elements will nonetheless be altered. One important facet of the new normal is that Medicare will be reimbursing providers much less for treating patients who got sicker while in the hospital or who were readmitted after a hospital stay. Medicare is also looking at new levels of reimbursement that will reward providers who perform procedures for lower costs. Private insurers have followed suit and are offering financial incentives that aren't based on services rendered but rather on favorable outcomes. Providers are beginning to plan for providing the best outcomes for their patients. That means becoming more efficient, sharpening the focus of services provided, reducing hospital acquired infections, and matching the cost of procedures to the reimbursement models.

"There are big efforts and powerful forces trying to reduce the cost of delivering healthcare," says Harold Miller, president and CEO of the Network for Regional Healthcare Improvement and the executive director of the Center for Healthcare Quality and

FEATURE

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PJ Dick Projects: (above) Urban Active; (top to bottom) REI and Larrimor's

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Payment Reform. "There are many ways to do that without rationing healthcare, such as reducing infections, readmissions, or complications after treatment."

Infections are a focus of any reform in hospital operations. Hospital-borne infections are the third leading cause of mortality for patients nationally. Preventing them will save hundreds of millions of dollars, and many lives. It can also result in growth for the hospital.

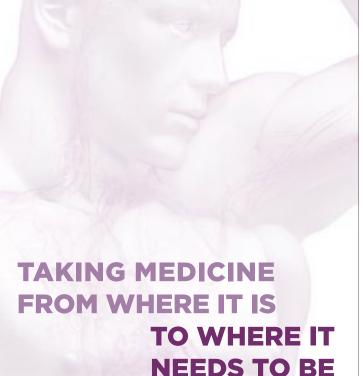
Kurt Gramley is the owner and chairman of the Edgewood Surgical Hospital in Transfer, PA. Opened in 2004, Edgewood has focused almost exclusively on surgery and imaging, and their commitment to managing infection prevention borders on the obsessive. Revenue at the facility has grown by 25 percent annually since Edgewood opened and Gramley is certain their focus on avoiding infections is a big reason.

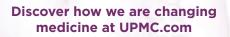
"There are relatively simple solutions. The majority of infections can be prevented by just washing your hands before treating a patient," he explains. "We're adamant about nurses and physicians washing hands and changing booties before entering a patient room. Edgewood has had the lowest infection rate of any facility in the state for all six years we've been open. Patients today are much better informed and do research. I know we get patients because they have done their homework about infection rates.'

Edgewood Surgical Hospital is an example of another trend that is being created by reform. With the onus on hospitals to provide better results in acute cases, many non-acute specialty procedures will be pushed out to specialty surgical facilities or physicians' offices. Edgewood specializes in orthopedic surgery. That allows for efficiency that keeps their costs down. It also allows their patients to avoid mingling with a patient population that has more serious illnesses. For big general hospitals this means dealing with more acute conditions, but also seeing reimbursements that are based on cost assumptions that are more aligned with the costs that bigger acute care facilities have. Those higher costs are also there for less acute cases, however, which means that doing procedures that have lower risks and lower reimbursements in a more costly environment will make the hospital uncompetitive. That's another strong incentive for focusing on acute cases in acute hospitals.

Burt Hill's Tim Cowan has spent his career designing healthcare facilities and was the architect for the Edgewood Surgical Hospital. "We're starting to see consolidation of hospitals and expansion of specialties out into community facilities," he says. "It's leaving the acute specialties to the inner city hospitals that have the ability to handle them." Cowan also notes that the federal government is frowning upon physician-owned facilities, which gives the hospitals an opportunity to operate specialty practices in their own less acute facilities. Another round of acquisitions of smaller practices and facilities is likely to follow.

Developer Jim Scalo is another who anticipates that the changes in the healthcare environment are going to mean an increase in more space outside the hospitals. His firm,





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Affiliated with the University of Pittsburgh School of Medicine, UPMC is ranked among the nation's best hospitals by U.S. News & World Report.



The proposed Greentree Primary Care Center 2, a 40,000 sq. ft. medical facility being developed by Burns & Scalo Real Estate Services off Greentree Road at the Parkway West. (Image courtesy DLA+ Architecture & Interior Design)

Burns & Scalo Real Estate Services owns the Greentree Primary Care Center and is planning a second primary care center on the adjacent property to the north. The project is a four-story, 40,000 square foot building suitable for a single user or for several users.

"I'm not sure what will come of the Highmark and UPMC negotiations but regardless of what is worked out I believe healthcare providers and physicians will be looking for more locations in key suburban locations," Scalo says. "Healthcare real estate is becoming more like retail. There will be more emphasis on desirable locations. The Greentree Primary Care Center 2 site sits along the Parkway West at the top of Green Tree hill. We believe whoever takes that space will have a gateway to the South Hills for healthcare."

Others apparently agree with Scalo, since at least five other outpatient or medical office projects are currently in the pipeline in the South Hills, all planned at roughly 40,000 to 50,000 square feet. Hospital-owned or lead facilities include an addition at the Jefferson Regional Health Pavilion in Bethel Park, an outpatient center for St. Clair Hospital in Peters Township and an emergent medical technologies building for Washington Hospital practices in South Strabane Township. Also in South Strabane, a partnership that includes Morgantown-based MedExpress is planning a medical office building; and Dasco Inc. from West Palm Beach has plans for a facility at South Hills Village.

Another divergence of service that reform is driving is in emergency care. Emergency departments are important portals for hospitals because they drive admissions but trends in emergency department usage make them sources of problems as well. Emergency departments are equipped and staffed for critical care cases – trauma, acute chronic conditions like heart attacks or strokes – but many more non-acute patients show up in the ER. With smaller reimbursements for urgent care, hospitals too often use costly resources to treat patients with ailments that could be handled at their doctor's office or that could have been treated before becoming urgent. As this situation developed in recent years it created an opportunity for a different kind of emergency care.

Paul Slowik is the architect for Morgantown-based MedExpress. His firm has designed approximately 50 MedExpress locations in Pennsylvania, with about 25 more in the pipeline for the coming year. He has seen the impact of the changes in emergency care firsthand.

"The insurance situation helps them in a way because the hospitals don't want to see all the ER patients they get," Slowik ex-

plains. "MedExpress has stuck to their knitting. They do urgent care and they are good at it. Now the hospitals are starting to do there own separate urgent care places. My clients are adding a fast-track facility at all the ER's I've designed."

Slowik describes the new emergency department as having "two doors" and using a gatekeeper approach to funnel critical cases to the well-equipped ER while handing non-emergency cases off to their non-acute emergency staff or to the patient's primary care provider.

That approach is supported by research, according to Harold Miller. "Exhaustive studies have shown that 40 percent of emergency room visits are preventable. That means either the trip was not urgent – someone gets an earache at 10PM or something like that – or because it could have been prevented," he says. "For example, a lot of chronic condition patients – like emphysema – end up in the ER because they have let medicine slide or haven't seen their PCP to maintain the treatment until they are having trouble breathing."

While big hospitals have the resources available to handle the most acute cases they will also have to be efficient in order to thrive in an era of healthcare reform. Linda Weiland points out that unlike in past years, their costs won't determine their reimbursements.

"Highmark has administered a pay for performance strategy into Western PA first, looking for some enduring, sustained outcomes – infections avoided, lives saved," she says. "We have clinical quality control people to work with individual hospitals to ensure that they are meeting benchmarks for performance that compare with clinical standards set by the government or private quality groups."

Organizations like the Hospital Safety Council, National Quality Forum or the Center for Disease Control are furnishing data that can be used by providers and insurers – including the government – to create standards and protocols for treatment. Those protocols will develop from evidence of the best results for all clinical situations. Specific patient results will be judged against these evidence-based results to determine hospital reimbursements in the future, a system Weiland called 'value-based reimbursement.' This model of a provider and insurer network with reimbursement tied to benchmarks of care quality is an accountable care organization (ACO), a model that is being used elsewhere on a limited basis.

This shift in how providers will be paid is already having an impact on facilities.

For a decade, the Pennsylvania Department of Health (DOH) has required an Infectious Control Risk Assessment (ICRA) for each construction project done in an acute care environment. Even though the regulation has been in effect the planning and implementation of an ICRA plan for a project still has a spotty record. The DOH reviews the ICRA plan for each project and an official inspects the measures for containment prior to the start of demolition or renovation, but education about infectious control on construction projects remains lacking at most facilities. With the prospect of punitive reimbursement measures for hospitals with poor records of hospital acquired infections, acute care providers have elevated infectious control to an even higher priority. At the region's largest hospital system, UPMC has initiated a joint training program with local construction trades that has a standard set for 100 percent compliance for all jobsite personnel by fall of 2012.

ICRA plans can be as involved as building full drywall and stud anterooms with HEPA filters and negative air for workers to prepare in before actually entering the containment area or as minor as well-taped plastic sheathing to seal off an area. The level of containment depends on the infection vulnerability of the area being renovated. Costs of ICRA measures vary with the complexity.

"ICRA doesn't add much to the cost of a project if it's in a Level 1 or Level 2 area but we hardly ever see work in Level 1 or 2 areas," explains Burchick Construction chief estimator Joe Scaramuzzo. "Most of the projects done in the hospitals are Level 3 or 4 and those measures can add quite a bit to the cost."

"ICRA really hasn't impacted the design of facilities themselves but it clearly has made a difference in terms of how construction is done," says John Radelet, founding partner of Radelet McCarthy Polletta Architects. "Our documents identify what the ICRA requirements for that specific project are, show where the barriers need to be but we don't want to be too specific about the construction of the barriers. That's something that has to be worked out in the field."

Infectious control measures aren't new to the hospitals that have dozens of projects or more each year but the heightened awareness that poor infection prevention can negatively impact the hospital's revenue is sharpening the focus on ICRA. For facility managers who don't do many projects or aren't familiar with ICRA plans, the renewed emphasis is eye-opening. ICRA measures are especially a



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Capital spending in hospitals will follow this trend of reorganization until the health systems find the configuration that works best for them ...

problem for small projects adjacent to infection-sensitive areas of the hospital because their cost can be disproportionately high.

The reliance on evidence in determining protocols has created its own trend in hospital architecture, a concept called evidencebased design. While elements of the concept have always been used, the idea of using research about best patient results to inform elemental design of facilities is being expanded. Some of the basic evidence is pretty obvious. You'd expect designs to isolate infectious-risk areas from high traffic areas or to lay out ICU floor plans to optimize the nurses' workflow, but the level of detail informing design is much more clinical than that. Data on what influences faster healing, for example, is driving design to incorporate more light, to create quieter environments, consider the plight of patients' families and attending caregivers or upgrade information systems so that caregivers can have constant access to patient conditions. Evidence-based design incorporates regional variances, demographic research and hospital-specific data to create environments that facilitate recovery from admission to discharge from a patient's perspective, not just to facilitate the most efficient treatment.

The biggest impact that the new payment models – most of which have yet to emerge – will have on healthcare facilities will

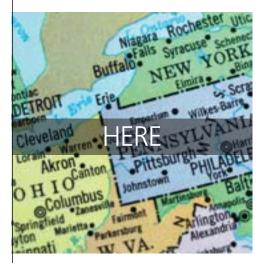
be in their utilization. At the core of the new healthcare environment are more cost-effective facilities. While design can have an impact on this, the central issue will be in facility planning, utilizing facilities in a way that matches up to the most realistic assessment of the reimbursement model. That means big hospitals will determine what medicine they can administer efficiently and may eliminate the beds that don't align. For example, if the fixed cost structure of a hospital means that it can't deliver babies competitively, expect to see that facility eliminate or re-purpose its obstetrics department. Capital spending in hospitals will follow this trend of reorganization until the health systems find the configuration that works best for them or they will fail. This reality has already hit home in Pittsburgh.

When asked about the most immediate issue facing UPMC's planning, Eric Cartwright didn't talk about long-term visions for the former Children's Hospital site or the Shadyside Hospital/Hillman Cancer campus but rather their strategic response to the decision by West Penn Hospital to shutter its emergency rooms.

"West Penn's decision meant that there were going to be 25,000, maybe as many as 35,000 patient visits annually that were going to have to be somewhere other than West Penn," says Cartwright, who is UPMC's vice president for corporate construction and real

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www.eckertseamans.com Pittsburgh Office: 412.566.6000 estate. "That meant our emergency departments were going to be inadequate to meet the new level of demand as they were." In response, UPMC has invested more than \$40 million in renovations to increase the capacity at its Mercy, Shadyside and Presbyterian Hospitals. That kind of response to competitive changes will not be the only one a health system makes as hospitals struggle to match their physical plants to their best clinical capabilities.

Another somewhat obvious trend to expect is an increase in capital spending in the specialty hospitals, and suburban hospitals with lower cost structures. Suburban hospitals that can offer clinical procedures with the same quality and effectiveness as bigger urban hospitals also expect to see insurers push patients in their direction. Regionally

that trend will help St. Clair and Jefferson Hospitals, both of whom are investing in their buildings. St. Clair is currently doing \$2.3 million renovations to an infusion center and cath lab, both being done by John Deklewa & Sons. Massaro Corp. recently completed a \$5 million operating room expansion project at St. Clair and is just starting a \$12 million OR expansion at Jefferson.

One category of facility that is becoming more endangered by the new landscape of healthcare is the small community hospital. These kinds of hospitals have always struggled to capitalize and



Washington Hospital's expansion of two towers was completed in 2009.

maintain competitive facilities, but with the shift in reimbursement towards rewarding avoidance these hospitals will see fewer patients. According to Harold Miller the leading health system in the central part of the state, Geisinger Medical Center has already put in place programs aimed at improving patient outcomes and reducing readmissions. Their results have been positive but have also resulted in reducing admissions by 50 percent. Small town hospitals will not survive such a slowdown.

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The Projects That Are Coming

Even as anxiety about healthcare's future has become heightened over the past couple of years the flow of construction projects has continued and planning for the new era is in progress.

Among the projects that are winding down or completed are the Veterans Administration's CARES Consolidation program, which invested \$200 million in construction to move operations from Highland Park to new facilities in Aspinwall and University Drive in Oakland. The VA just let a contract to PJ Dick for a \$27.3 million, 99,700 square foot research building in Oakland.

In addition to Jefferson Memorial and St. Clair Memorial Hospitals, Heritage Valley Health System is a suburban hospital that seems to be moving in the direction of the trend and is investing in facilities that will parallel the new landscape and upgrading others to be more competitive. Aside from completing the \$20 million outpatient facility, Heritage Valley is also planning a \$5 million radiology department at the Beaver Campus, as well as a \$3 million re-purposing of its nursing school building in Sewickley and more than \$25 million in modernizations at their operating rooms in both hospitals. Monongahela Valley Hospital is another suburban facility that has announced a modernization program, planning \$24 million in improvements and expansion over the next few years.

Some of the community hospitals in smaller towns are also continuing to invest in capital improvements, albeit on a smaller scale. In Kittanning, the Armstrong County Memorial Hospital is planning a \$4.6 million emergency room renovation. Jameson Hospital in New Castle took bids in April for a \$15 million emergency department and surgical expansion. Also bidding in April was a \$10 million expansion and modernization of the Elk Regional Health Center in St. Mary's. DuBois Regional Medical Center is investing in a 150,000 square foot expansion of its medical office building.

To the south, the West Virginia University Hospital has been in between cycles, having put nearly \$100 million into clinical and research facilities in the middle of the decade. The system is gearing up for more capital spending, although WVUH also has to contend with uncertainty in funding with the passing of Sen. Byrd and the ouster of Rep. Mollohan, both of who attracted federal dollars to northern West Virginia. Among the projects being planned now are a \$15 million research lab at the Robert C. Byrd Health Center and a \$20 million clinical building renovation at WVUH being designed by IKM Inc.

In Pittsburgh, there are a couple of question marks that could impact the future construction plans of the two main hospitals. West Penn Allegheny has been unable to invest at the rate it has historically and is facing the prospect of an enormous backlog of deferred renovation and improvement projects. Aside from its long-term

Butler Hospital Patient Tower	Completed	\$90,000,000
UPMC East, Monroeville	Under construction	\$160,000,000
Washington Hospital Towers	Completed	\$64,000,000
Hamot Medical Center, Erie	Planning	\$150,000,000
Magee Women's Center Expansion	Planning	\$125,000,000
Mercy Hospital Renovation	Under construction	\$90,000,000
VA CARES Consolidation	Under construction	\$200,000,000
Reidbord/Hillman Cancer Center	Planning	\$100-400,000,000
21CB Vaccine/Biodefense Facility	Proposed	\$600-800,000,000
WPAHS Medical School	Proposed	\$50-60,000,000
New Presbyterian Hospital	Proposed	\$1,000,000,000

Hospital projects over \$50 million that have started since the recession or are being planned

plans for a medical school there aren't any major projects being designed for West Penn or Allegheny General Hospital at the moment. A possible alliance with Highmark represents the potential for a sea change in their facility planning, however. If such a partnership were to develop it's unlikely that Highmark would expect to get optimal patient outcomes from the existing acute care hospitals without significant reconfiguration and renovation. Highmark is clear at this point that its discussions don't involve an acquisition but an investment in WPAHS remains possible.

Of course, the lion's share of the construction projects currently being planned for the region is coming from UPMC. The system recently presented its updated master plan for a major expansion and renovation to Magee Women's Hospital as part of its system-wide institutional master plan update, which should be completed by next summer. Among the significant projects underway at this point are a \$35 million renovation to the Rangos Pavilion, a research center opposite the former Children's Hospital that is being re-purposed to house all of UPMC's clinical and pathology labs. One of the most visible projects is the demolition of the old Children's buildings, which will take perhaps another year to be fully accomplished. Construction is continuing in phases on the \$20 million Shadyside Hospital emergency department expansion and the \$30 million operating room renovation at Presbyterian University Hospital. Work is also continuing on parts of a multi-million dollar renovation to the Mercy Hospital facility.

In its pipeline, UPMC expects to shift the emphasis of its \$250-300 million annual capital budget to upgrading its facilities rather than building new. Some of the significant upgrades are listed above but notable projects are also in the hopper at Passavant in the North Hills, the Presbyterian/Shadyside Hospital complexes, as well as at the Hamot Medical Center, with which UPMC recently formalized a partnership and pledged approximately \$300 million in capital expenditures over a multiyear period. Three other major projects loom on UPMC's radar screen: the Shadyside Cancer and Biomedical Research Center, a new flagship hospital in Oakland, and the much-anticipated vaccine or bio-defense facility.

Announced in 2006, the cancer research facility will expand and relieve the Hillman Cancer Center, which requires more research space. UPMC purchased the former Ford Motor building at Baum Blvd. and Morewood Ave. to renovate into research space. Before the project could be developed, however, research grants from the National Institute of Health slowed significantly and the progress was halted. Signals from NIH are that cancer research funding will be restarted within a year or so, and the project is back on the boards. According to Eric Cartwright, there will be visible progress as soon as this year, as plans are to invest in cleaning, renovating and weather-proofing the exterior of the Ford Motor building. Renovations should follow in 2012.

Progress on a new Presbyterian Hospital – or whatever a new flagship might be called – will not be as noticeable. Owing to utilization needs in past years, the former Children's Hospital also housed labs, shared radiology and other technology space that is being relocated over the course of the next year. As these projects are done – including moving a helipad to the roof of Scaife Hall – the balance of the Children's buildings will be demolished. After that, however, the site will be planted and remain green for the remainder of the decade in all likelihood.

Finally, the 'vaccine plant' is currently on a trajectory that should result in construction in 2012. It's important to remember, of course, that the UPMC-led team – dubbed 21CB – is simply a competitor for one of three facilities being planned. Currently, the U. S. Dept. of Health and Human Services (HHS) has requested proposals from turnkey teams to compete for two facilities. Later this Spring the Dept. of Defense will issue an RFP for a separate biodefense facility, which 21CB expects to compete for pending the progress of the HHS proposal. If all

goes as expected a final selection of cities should happen by the first of 2012.

The proposed 21CB partners are UPMC, Battelle, IBM, General Electric and Merck. Their solution is an approximately 650,000 square foot multi-drug and vaccine development and production facility. The building will be similar to what you would find in a suburban industrial park and is planned for 30 acres of the Almono site, a 178-acre brownfield that was the LTV coke works along the Monongahela River in Hazlewood. Beyond the exciting construction opportunity, the economic impact of the facility is significant. 21CB estimates the plant would result in 1,000 direct jobs created and 6,000 indirect jobs. The location of such a plant would also attract global pharmaceutical companies to establish facilities near the vaccine plant.

The Changed Landscape

The delivery of healthcare services is in the process of undergoing a significant change. Regardless of changes in the political climate, reform of how healthcare is delivered and paid for will continue. Should the PPACA of 2010 be repealed or pared back because of political pressure, the basic demographic and economic facts won't change. Too many people are tethered to a healthcare system that costs more to administer than the insurance system can afford to pay. In the end, it's really that simple. Clinical costs must be lowered and testing must show that it yields a measurable result if our quality of healthcare is to remain high. Americans have the highest per capita healthcare cost in the industrialized world but its results are far from the best.

For a region whose economic well-being is also tethered to the healthcare industry, Western PA is likely to feel some of the pains of implementing these changes. Should Highmark and UPMC be unable to reach an agreement, or if Highmark and WPAHS are able to form a partnership, the resulting choices for patients and employers will be even more painful. In the end, however, the region is home to both a behemoth and a number of nimble smaller hospitals who are already prepared to thrive in the new era of healthcare. A conversation with executives from UPMC, Highmark, or even an entrepreneur like Kurt Gramley will assure you that Western PA healthcare players intend to be ahead of where the industry is going.

In the end, that means better facilities and expanded services. And lots of construction. ${}^{\mathrm{BG}}$

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WEST PENN ALLEGHENY ONCOLOGY NETWORK INFUSION CENTER

"Good design definitely impacts the bottom line in healthcare facilities," he says. "There is a lot that we can do to make the hospital operate more efficiently. For example, we can design the nurses' station so that each nurse is opposite their patients. Nurses stay in closer contact with the patients' condition but they also walk much less during the course of a shift." One of the defining characteristics of hospital construction is that most of it is done on existing facilities. During the past decade, it is true that a number of new hospital and related healthcare construction has taken place; however, most hospital projects involve upgrading or re-purposing existing hospital departments, often times while the department remains fully operational. The challenges this reality presents are many but most regional general contractors have grown so accustomed to those challenges that they take them for granted. Dealing with the noise, dust and disruption has become ingrained in the standard operating procedures of those who work in hospital construction.

That fact probably explains why Ray Volpatt Jr. shrugs when asked about the challenges of the West Penn Allegheny Oncology Network (WPAON) Infusion Center recently completed in the Mellon Pavilion at the West Penn Hospital campus on Liberty Avenue in Bloomfield. "I don't know," he says. "The job just kind of ran itself."

"Ray is not giving his people enough credit," laughs John Schrott, president of IKM Inc., the architects on the project. "There was a lot of work to do in a short period of time and one of the tenants that eventually moved out was still there when the project started. Volpatt had to work around them during the demo and first stages of the project. It wasn't that easy a project."



The project was part of a system-wide initiative of the WPAON to improve its cancer treatment facilities. In 2008, IKM surveyed all of the WPAON sites and recommended changes for improving the patient experience, streamlining throughput and making the facilities add to the bottom line. The Mellon Pavilion site was the home hospital site but it was the sixth of the WPAON facilities to be renovated as part of the initiative. The renovation program was a component of re-thinking the WPAON approach and the design reflected the sense of constant improvement that WPAON brings to patient care.

John Schrott has spent most of his working career in the design of healthcare facilities – a significant amount of that time at West Penn Hospital – and he is animated when discussing the impact of design of those spaces.

"Good design definitely impacts the bottom line in healthcare facilities," he says. "There is a lot that we can do to make the hospital operate more efficiently. For example, we can design the nurses' station so that each nurse is opposite their patients. Nurses stay in closer contact with the patients' condition but they also walk much less during the course of a shift." The net result is that a nurse working in a well-designed ward is less distracted from the patients' needs and less fatigued throughout the work shift. Thinking about the nurses' condition is certainly thoughtful to the nurses but the aim is actually to allow the nurses to deliver care more effectively. The goal is better patient care and the design is driven by the study of how better care is given, hence the concept of 'evidence-based design.'

For the WPAON infusion center the design was influenced by a broad base of evidence about how cancer patients respond best to treatment and how the caregivers operate best. The considerations went well beyond the purely clinical, taking even cultural observations into account.

"There is a real debate about private versus public infusion and it's very much driven by demographics," explains Schrott. "In New York City, patients want privacy so the infusion chairs are separated by walls. Here, though we want neighbors and are used to supporting each other. People will become friends while fighting their individual battles against the disease. It's not unusual for patients who didn't previously know each other to schedule treatments together."

At the West Penn infusion center this translated into focusing the design, and the budget, on the common areas and especially on the infusion stations. IKM project architect Matt Hanson's design also took into account the need for space for the family or friends, since chemotherapy patients generally are accompanied by someone close. For the caregivers, the focus was on respecting the staff's response to giving care in a chemo center. Instead of



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PROJECT PROFILE



hiding staff in the back or middle of the facility, respite areas were designed along the perimeter as well to give caregivers windows and light. While this is a nod to the caregivers, the desired result is also better patient care from a staff that has a way to relieve the stress of treating cancer.

Another aspect of the design that considered how to optimize care was the completely uniform layout of the exam rooms. Even though the room sizes varied, each was set up identically to minimize wasted time and ensure the most accurate examinations. Oncologists and nurses entering any exam room would find the sinks, medical equipment, casework or supplies in the same spot throughout the center.

The project was planned to take 13,000 square feet on the third floor of the Mellon Pavilion, with a construction budget of about \$100 per square foot. WPAON planned the facility during the winter of 2009-2010 but some of the key decisions weren't finalized until March of 2010. Infusion center design is driven by the number of chairs – in this case 20 – and the size of the space and layout for support staff and related areas follow. The Mellon Pavilion was built in the early 1970's and had perimeter circulation, which meant that it would be difficult to maintain the original floor plan and give access to outside light at the same time. In the end, the decision was to gut the tenant spaces and start with a fresh canvas.

The decision to gut the space also added to the schedule headache, according to West Penn Allegheny's project manager,

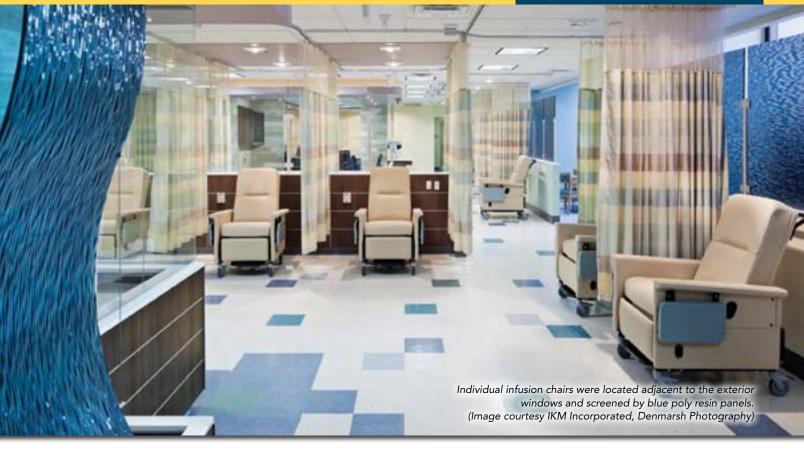
Bill Marshall of CB Richard Ellis. "There were seven physician practices that had to be relocated to prepare for this one space. It was pretty difficult to keep things moving as fast as we needed. We were doing asbestos removal one day and the carpenters were putting up walls the next day."

Like most projects, of course, the deliberation time for the infusion center didn't push back the planned opening of the space, which had an opening set for mid-October. From the equivalent of an approved cocktail napkin drawing, IKM was released to complete the design through construction documents in ten weeks.

The final design had very ordinary materials and finishes in the examination rooms, offices and corridors but special emphasis was put on the infusion area, patient lobbies and respite areas. The infusion stations are arranged opposite the exterior and get plenty of light. The windows in those areas are separated from the patients by individual blue poly resin panels manufactured by 3-Form. In the patient areas there are also upgraded casework, lighting fixtures and an interesting flooring choice. The tight budget dictated that the project use vinyl tile but the flooring was designed using bright blue and green tile on a white field, and the design had an interesting twist.

"IKM had done a flooring design but instead of doing a specific floor layout – tile one is blue; tile two is green – and dictating the precise placement they gave the flooring contractor the freedom to create," says Ray Volpatt. "There was a concept drawing that showed where they wanted the colors to be saturated but the

PROJECT PROFILE



layout was up to the flooring subcontractor. I don't think he knew exactly what to do with that at first but once he got going I think

he appreciated the opportunity to express his creativity."

The 3-Form panels were used in several applications. In addition to the translucent window treatment of a sort, the panels were also formed in a vertical curved wave panel that is used as a divider between infusion stations. The blue color and curved shape give the impression of water and

offer a soothing visual effect. IKM also designed a horizontal application for the material, using a lighter colored curved panel with embedded river rock as a counter top.

Volpatt Construction was awarded the project in June after a competitive bidding process. The company began demolition on July 5, with a plan to complete the project in roughly 100 days. About one-third of the space to be demolished was still occupied and would be fully operational while the adjoining areas were gutted. Ray Volpatt may have viewed managing the phasing of the early stages as commonplace for a hospital project but his superintendent, Ralph Ferry, was not as casual.

"The key to hospital construction is an actively engaged superintendent who understands the patient needs," Schrott

contends. "And Ralph is just that. He's a great guy and was very sensitive to the needs of the remaining tenant before they were

THE CHANGE WAS ONLY AROUND \$100,000 in cost but the impact on a tight schedule was a bigger concern. relocated. He met daily with their management to explain the day's activities, telling them what time they could expect noise, when there would be more movement in the area, anything that would impact their operation."

"It was a big obstacle on the project to have to do the work directly above cardiologists open for business the entire

and surgeons' offices that were open for business the entire time," says CBRE's Bill Marshall. "It's pretty difficult to keep a construction project going in those conditions, although that's normal for a hospital project."

Ralph Ferry's role became magnified when the project engineer for Volpatt Construction left the company in the early stages of the infusion center job. Ferry's preparation and management of the site allowed Ray Volpatt to seamlessly pinch hit as project manager. That didn't mean all the surprises were eliminated.

As the project approached the midway point WPAON decided that the infusion center would need a full pharmacy. The architectural revisions to accommodate the change were minor, as the construction of the casework and finishes had not begun yet. But the change in plan meant that pharmacy fume hoods would be required and roof-top exhaust fan units had to be installed. The change was only around \$100,000 in cost but the impact on a tight schedule was a bigger concern.

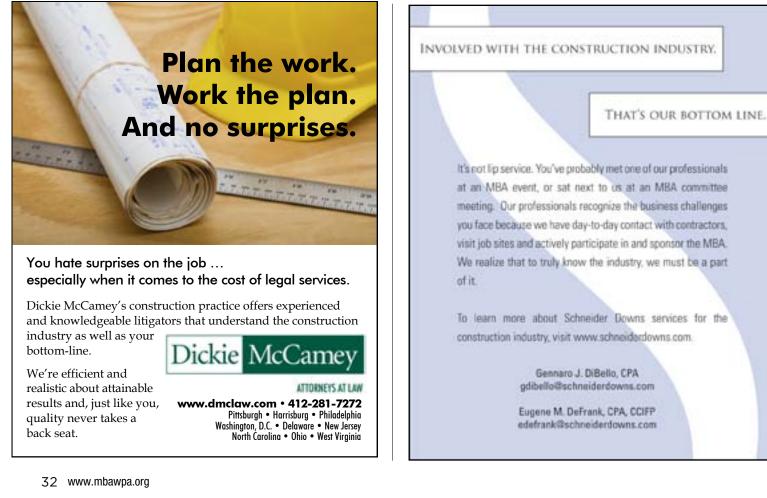
"It wasn't so much getting the submittals done and approved as it was having enough time for the units to be made and shipped." explains Volpatt. "The mechanical and electrical contractors had to juggle their plans for the project to accommodate the extra power and HVAC work that wasn't part of their original plan for meeting the schedule. And there wasn't any changing the opening date."

In the end, the opening of the center was right on time. WPAON was given the completed space on October 15, 2010. As finished the infusion center offers patients a place that is both bright and soothing. The flexibility of the 3-Form material gives the partitions the appearance of art more than demising structures. West Penn Allegheny Oncology Network is left with a space that they believe assists in their patients' fights against cancer. Of course, the finished space is also the result of a well-executed plan.

"Volpatt did a fantastic job," says Marshall. "I've worked with Ralph Ferry on a number of jobs over the years and he's one of the best. When you make a decision about something in the field you know he's going to take care of it. With him there's no doing things over to get it right."



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ONE OF THE TRUEST TESTS OF A FIRM'S BUSINESS PHILOSOPHY IS A JARRING RECESSION. FOR VEBH ARCHITECTS, THE MOST RECENT DOWNTURN WAS PROBABLY NOT THE MOST JARRING THE FIRM HAS ENDURED AND IT CERTAINLY DIDN'T GIVE THE PRINCIPALS OF THE PRACTICE REASON TO ALTER THEIR COURSE; IN FACT, THAT PHILOSOPHY WAS REINFORCED.



ARCHITECTS



(from left) VEBH principals Daniel C. Engen, Robert D. Bodnar, Stephen A. Kurpiewski, and James D. Howell. Missing is Thomas Durkin.

Architectural practices of all sizes tend to be influenced – if not dominated – by individuals. An extraordinary share of design firms are one or two person firms so this tendency is logical. But even larger firms are often driven by a single personality. What's interesting in the case of VEBH is that the dominant personality driving the practice still seems to be that of one of its former partners, the late Louis Valentour.

"Lou was the one who focused the practice on institutional clients," says VEBH principal James Howell. "His theory was that institutional clients needed the kinds of services that fit our firm best. We build a knowledge base about our clients that helps us understand their needs well. Our style is to bring to our clients whatever they need, whenever they need it. Lou's opinion was that institutions may not pay great, but they do pay. His goal was to get good clients and to hang onto them. Bill English followed that philosophy after him, and Bob [Bodnar] still does."

Howell explains that Valentour's business philosophy was backed up with a dynamic, outgoing personal style that attracted clients and aggressively built the firm's practice from seven to twenty five people. During Lou Valentour's time at the firm a number of clients hired the firm that VEBH still works for every year. Keeping clients like St. Clair Hospital, Waynesburg University and Pittsburgh Theological Seminary means focusing the firm's service on responsiveness and durability – both in design and relationship-building. Those principles have guided VEBH's recruiting over the years, creating a workplace where turnover is the exception. The average tenure of current VEBH employees is more than twelve years. It's an atmosphere that produces stability and clients notice it.

Bob Bodnar says that while the firm looks for architects with a service-oriented approach, VEBH's culture is the result of intention rather than good matchmaking.

"You have to train employees to make sure they are taking care of things properly," he says. "It's a lot of little things: be on time for meetings; dress professionally; ask questions and if you don't know an answer to a client's question, for Heaven's sake don't guess. We just train the employees to work with clients as we were trained to do."

Perhaps no client illustrates what VEBH sees as its mission better than St. Clair Memorial Hospital. When St. Clair's board authorized the purchase of land for a new hospital at 1000 Bower Hill Road, the firm – then known as Kuhn and Newcomer – was selected to design the new facility. Lou Valentour worked on the project and managed the client relationship for the better part of three decades, as Bob Bodnar has done up until the current day. On a couple of occasions throughout the 67 years they have served St. Clair Hospital, VEBH has watched as a new administrator or executive brought another architect in to a project but has seen the hospital return to hire them again. Currently the firm is working on three projects under construction at St. Clair.

What is now known as VEBH Architects was founded in 1945 as Kuhn and Newcomer by architects Norman Kuhn and Ed Newcomer. After a stint in the Army Air Corps during World War II, Lou Valentour joined Kuhn and Newcomer upon his graduation from Carnegie Tech in 1949, and became partner in 1956. The firm merged with architect Ken Johnstone in 1973, becoming Johnstone, Newcomer & Valentour. After Newcomer's and Johnstone's departure, Bill English became Valentour's partner in 1979. By that time Bob Bodnar and Jim Howell had joined the firm. Bodnar's name was added to the title block in 1987 and Howell's in 1997. And after adding principals Steve Kurpiewski and Tom Durkin, the firm's name changed to the acronym VEBH, which most people used to refer to the architects. In 2010 Dan Engen became the fifth of the firm's current principals.

Engen's hiring was part of the firm's approach to continue serving the K-12 education sector of the market, a niche in which Engen has spent his entire career. Public schools have historically been a portion of VEBH's portfolio, but the nature of school board hiring has made that segment of the market less desirable. The K-12 market has very few repeat customers anymore, at least not clients who bring back their 'district architect' without shopping. But the principals at VEBH see their depth of experience as an asset to school districts who will face unusual challenges in the coming decade or so. With public funding ebbing, the forecast for new school construction is for less not more. The K-12 demographics, however, aren't as grim and other factors suggest that school construction opportunities will be available but different in nature.

"Those schools we designed in the 1960's and 1970's that were so modern are turning out to be not such good buildings," jokes Howell. "They are not energy efficient or waterproof. Their HVAC and electrical infrastructure is outdated. The future for education design is in helping school districts understand how best to rework those buildings from that era or to re-purpose schools that aren't needed anymore."

VEBH has managed to stay busy during the recent recession and has added three people to its staff in the past eighteen months. Much of their work has come from long-term clients who had smaller projects like window replacements, re-roofing jobs or HVAC system retrofits. But there have also been a string of projects that are right in VEBH's wheelhouse. Those include the \$5 million St. Clair Hospital operating rooms, the \$7 million emergency department expansion at Alle-Kiski, Waynesburg University's \$4 million Roberts Chapel, and a \$9 million Peters Ambulatory Center for Canonsburg Hospital. And most recently, Mon Valley Hospital announced that VEBH is the architect for their four-year \$24 million capital program.

That workflow, while not glamorous, has validated VEBH's commitment to service for the long haul. The volume also allowed the firm to avoid layoffs, which run counter to VEBH's culture historically. Jim Howell remembers being kept busy re-organizing the firm's file room for six months during a slow period early in his career. He says that the partners have always been aware of the pain layoffs cause and believe strongly that it sets the practice back further to replace the experience and skill sets of those employees they lose.

Howell also recognizes that VEBH could be seen as something of a dinosaur when it comes to their approach. The firm experimented only briefly with a marketing director and intentionally doesn't do business development. The senior principals discourage marketing to other architects' clients and dislike the use of the term 'rainmaker.' In a competitive environment – and the design market

is competitive even in good times – such a reactive approach could result in a slowdown in business. Yet the results of the most recent recession bear out VEBH's philosophy and their resolve to stick with it.

"We know that our clients stick with us because of good service. It seems like a common sense thing but you have to work hard at it," explains Bob Bodnar. "There's more to it than just doing nice drawings. You have to be there when the client needs you; answer their questions; help them solve their problems. Sometimes that means doing things that are a little outside the box."

"We don't see a job with a new client as 'the project' but rather as the first job with the client." 80

VEBH ARCHITECTS

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William F. English, AIA 1933-2011

Former VEBH partner Bill English died at St. Clair Hospital on March 31, 2011. Mr. English joined the firm in 1958 after graduating from Carnegie Tech, now Carnegie Mellon University. He was the architect for a wide range of projects for the firm's healthcare, educational and public building clients. Bill was the president of the firm from 1993 until his retirement in 1998.

His designs included major new buildings on the University of Pittsburgh campus that were constructed during the 1970's, including the Barco Law Building and the 14-story Chemistry Building (now the Chevron Science Center). The Chemistry Building received honors from R&D Magazine in 1975 as one of the best new laboratory buildings in the country.

Mr. English was active with the local architectural and building community, serving on the Board of Directors of the Pittsburgh Chapter of the American Institute of Architects. Bill also served on the Board of Directors of the Pittsburgh Builders Exchange and became the first architect to ever serve as the Board president in 1992.

Mr. English is survived by his wife Darlene and four children; Donna, David, Ron, and Sue; and six grandchildren.

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Criminal and Civil Penalties Now Possible for Misclassification of Independent Contractors

By Ericson P. Kimbel and Marc Furman

The Pennsylvania Construction Workplace Misclassification Act (the Act) went into effect on February 10, 2011 and applies to all public and private construction projects in Pennsylvania. The Act includes criminal penalties for those who misclassify their own employees, or those who contract with a company while knowing that company's intent to misclassify its employees as independent contractors. Other penalties for violation include fines, incarceration, stop-work orders and administrative penalties.

The Pennsylvania Department of Labor & Industry (DLI) has enforcement responsibility for the Act and has stated, "misclassification of employees as independent contractors is illegal for all commercial and residential construction in Pennsylvania." A spokesperson for DLI has further stated that, "DLI takes its enforcement responsibilities [under the Act] seriously and will enforce the [Act] as written."

The Act is broad in scope and defines construction to include "erection, reconstruction, demolition, alteration, modification, custom fabrication, building, assembling, site preparation and repair work done on any real property or premises under contract...." 43 P.S. §933.2. This definition appears to include all aspects of vertical construction.

In order to be considered in compliance under the Act, an independent contractor must (1) have a written contract, (2) be free of control or direction of the work, and (3) be customarily engaged in an independently established trade, business or profession. The third element includes the following criteria: ownership of one's own tools, realization of profit or loss from that business, prior work as an independent contractor, a separate business location and maintenance of at least \$50,000 of liability insurance. If the above elements are not satisfied, the purported independent contractor will be considered an "employee" under the Act and penalties may be imposed upon the employer (or an officer or agent of the employer) and, in certain circumstances, upon those who contract with the employer.

Further, each misclassified independent contractor is considered a separate violation of the Act. There are criminal and civil fines up to \$1,000 for a first violation and up to \$2,500 for each subsequent violation. Other criminal penalties include a third degree misdemeanor for a first

violation and second degree misdemeanor for subsequent violations.

The back benefits and taxes owed under the Act may far outweigh the other monetary penalties. Liability for unpaid unemployment and/or workers' compensation benefits, federal, state and local taxes, and other remittances for multiple employees, together with penalties and interest, could reach into the hundreds of thousands of dollars. Just as troubling is the concerted action provision under the Act. That section provides that a contracting party "which intentionally contracts with an employer knowing the employer intends to misclassify employees in violation of this act, shall be subject to the same penalties, remedies or other actions as the employer...." 43 P.S. §933.4(e) (emphasis added). Thus, liability extends from the noncompliant employer to the contracting party when the contracting party enters into the contract knowing of this problem.

The language of this section raises several obvious issues. How may a contracting party know of the non-compliant employer's intent? What is the proof required to establish this knowledge of another's intent? Further, would the liability of the contracting party under the concerted action provision also extend to the officers or agents of that contracting party?

It may be that a contracting party will stand in the shoes of the non-complying employer. A finding of concerted action treats the concerted actor as the employer for purposes of the "penalties, remedies or other actions" under the Act. Could a general contractor found to be a concerted actor and liable for civil and/or criminal penalties also be held liable for its subcontractor's employees' back benefits and



taxes? Could pursuit of such recovery only occur when a subcontractor is insolvent? These and other questions are not answered in the text of the Act as it presently exists.

The Act does include a good faith defense, which provides "it shall be a defense to an alleged violation of this section if the person for whom the services are performed in good faith believed that the individual who performed the services qualified as an independent contractor at the time the services were performed." 43 P.S. §933.4(f). All persons alleged to have violated the Act will obviously attempt to assert this defense.

The Act addresses two other types of violations. A party may not require or demand an agreement or document which results in a misclassification under the Act. Monetary penalties for violation of this provision are in the same amounts as those set forth above. It is also a violation to retaliate against any person for exercising one's rights under the Act.

Finally, DLI has the ability to issue a stop work order. 43 P.S. §933.4(c). If the employer does not respond to a DLI investigation, DLI has the option of petitioning a court for a stop work order, or immediately assessing penalties. The stop work order is effective 24 hours after the date of issuance. The impact of a stop work order would be devastating to an employer's cash flow, current contractual relationships and future attempts to obtain work. It would also disrupt job progress, most likely cause delays and impact all parties up the contractual chain.

To avoid possible non-compliance, all independent contractor and subcontractor relationships should be reviewed. Contractual provisions regarding the Act should be included in all forthcoming contracts and independent contractor agreements. All project sites should also be posted with the Act requirements poster. DLI has provided a work site poster, a guidance statement and a misclassification complaint form on its website, http://www.dli.state.pa.us/portal/server.pt/community/l_i_home/5278.

For further information, please contact Marc Furman or Ericson P. Kimbel at mfurman@cohenseglias.com or ekimbel@cohenseglias.com, respectively.

Marc Furman is a Partner and Chair of the Labor & Employment Group at Cohen Seglias Pallas Greenhall & Furman, PC. He focuses his practice on representing and counseling both union and non-union employers throughout the United States, in all aspects of labor and employment law.

Ericson P. Kimbel is Senior Counsel at Cohen Seglias Pallas Greenhall & Furman, PC. He concentratess his practice in construction litigation, arbitration and mediation, representing subcontractors, contractors, design-builders and construction managers on public and private projects.





Covering Architecture in the July/August issue of BreakingGround. Call Jamie Hilliard at 412-548-3823 for information.



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Management Perspective

Major changes in the 2010 Health Care Guidelines

By John C. Schrott III, AIA, ACHA

Rules are rules! They are essential to living an ordered life, both in our personal lives and our work lives.

The design and construction community who are engaged in healthcare work understand that one of the main sets of rules we work with on a daily basis are the "Guidelines for Design and Construction of Healthcare Facilities." This ever expanding document is used by the Commonwealth of Pennsylvania and roughly 42 other states as not just "Guidelines", but as hard and fast requirements. The PA Department of Health, who licenses and regulates healthcare facilities, follows the prescriptive language of this document in reviewing drawings and granting licenses to provider organizations.

The Facilities Guidelines Institute (FGI), with assistance from the U.S. Department of Health and Human Services, publishes this document and engages in a proactive revision process that includes comment drafts and public hearings that result in new editions at four or five year intervals.

The current 2010 edition has been adopted by the Commonwealth, and was effectively placed into law by the legislature as the set of requirements to be adhered to beginning October 3, 2010. One of the significant changes of this edition is that the numbering format has completely changed to better reflect the numbering systems of other codes familiar to the profession. While this makes it more difficult initially to find the section one so frequently references, the long term advantage is for a publication more consistent with other national standards. This 2010 edition continues the trend of the previous editions to encourage transformation of facilities to support: better infection control procedures, the accommodation of larger patients, the expanding utilization of outpatient services, and the impact of evidence based design studies that validate the incorporation of natural light and better acoustic controls to enhance the healing process. The highlights of the significant changes of the 2010 edition are as follows.

PART 1 General

- A section was added requiring the owner to provide the design professional a PHAMA (Patient Handling and Movement Assessment) prior to design initiation that addresses the types of equipment to be used operationally for the transport of patients.
- A significant change has been the inclusion of a detailed section regarding acoustic design. This stipulates relatively stringent STC rating requirements for specific spaces. This impacts the construction assembly and costs of both interior and exterior walls, floors, and ceilings.

PART 2 Hospitals

- Clarification was given regarding permissible locations and support needed for self-contained medication dispensing stations.
- Soiled Holding Rooms are now defined as locations for temporary holding of soiled materials and do not require a clinical service sink or hand wash sink (Soiled Workrooms retain that requirement).
- Sliding doors with exposed, cleanable tasks, i.e. not pocket doors, are now permitted provided they do not compromise the fire exiting requirements, which are governed by other codes.
- Windows, where identified as being required, must be a minimum of 8% of that room's floor area. Therefore a 250 SF room needs a glass area of 20 SF.
- Hand sanitation dispensers are now required in addition to plumbed hand washing stations. Number and placement as described in the Infection Control Risk Assessment (ICRA).
- Sensor operated plumbing fixtures are now required to operate in the event of a power outage.
- The clear floor area of exam/treatment spaces has increased to 120 SF.
- New sections were added for Bone Marrow/Stem Cell Transplants and Oncology Nursing Units.
- Expanded acoustic control requirements were added for the NICU (Neonatal Intensive Care Units) to address the deleterious effects of noise on the development of premature babies.
- In Critical Care Patient Rooms a requirement has been added for direct access to an enclosed toilet room or soiled utility room for disposal of bodily wastes, swiveling toilets no longer meet the requirements.

- The size of a Labor, Delivery and Recovery (LDR(P)) room expanded to 340 SF.
- A new section was added for a Bariatric Care Nursing Unit that stipulates expanded clearances and a 200 SF room size (versus 120 SF for a typical patient room), toilet fixture specifications and expanded clearances, patient lift requirements, expanded door widths, grab bar capacity to 1,000 pounds, and the furniture requirements for the family support areas.
- The section on Emergency Services expands the description and requirements for triage, pediatric treatment, bariatric treatment, fast track area, observation unit and secure holding areas.
- Pre and Post Surgical Units have modified clearances around the stretcher, effectively increasing the overall size of the unit.
- OR storage for small surgical suites was doubled to 300 SF.
- Definitive language was added for surgical sub-sterile rooms.
- The language associated with the design configuration of an MRI Suite is expanded to represent the four zones of control suggested by the American College of Radiology for safe MRI practices.
- Ultrasound rooms are set at a clear floor area of 120 SF minimum.
- A new section on Cancer Treatment / Infusion Therapy was added that defines treatment station size and clearances, ratio of hand washing areas, visualization requirements from the nurse's station, and the support area elements needed.
- Language was added throughout regarding doorway width and room clearance issues related to accommodate patient movement equipment, i.e. lifts, gurneys, and wheelchairs.

PART 3 Outpatient Facilities

- New section on waste management requiring enclosure of "Red Bag" waste in secure areas. No longer is it permissible to sit the collection containers in publicly accessed areas.
- Hand sanitation dispensers are now required in addition to plumbed hand washing stations. Number and placement as described in the Infection Control Risk Assessment (ICRA).
- Flooring finish material properties are defined.
- The size of general exam and procedure rooms in Urgent Care Facilities is reduced to a clear floor area of 80 SF.
- A new section of Freestanding Cancer Treatment Facilities was added that stipulates 80 SF/treatment bay with 5'-0" clearances, ratio of hand washing areas, visualization requirements from the nurses' station and the support elements needed.



- Surgical facility section further defines zones of space, classification of Operating Rooms, and Pre and Post Holding areas to mirror the language used for inpatient facilities
- Endoscopy facility section further defines Pre and Post Procedure spaces in terms of clearances, area, ratio of hand washing areas, and nursing locations.
- A new section for Outpatient Rehabilitation Facilities was added.

PART 4 Residential Health Care Facilities

• This section is not applicable in Pennsylvania which has its own code as it relates to Skilled Nursing and Long Term Care.

PART 5 Other Health Care Facilities

- Language was added establishing some requirements regarding appropriate location of mobile units.
- Significant changes to the section of Freestanding Birth Centers include increasing the size of the birthing room from 160 SF to 200 SF, requiring windows in each birthing room, defining hand wash requirements, and expanding the details of the required support spaces.

PART 6 Ventilation of Health Care Facilities

This is a new part of the Guidelines and merges the language of ASHRAE / ASHE 170 into the Guidelines.

• Ventilation for Class B and C Operating Rooms has increased from 16 to 20 air changes per hour (ACH) and 4 outside ACH.

- Reserve cooling capacity is required if the facility cooling needs are greater than 400 tons.
- Newly installed ductwork must be cleaned before occupancy.
- Single filter banks required for Class A operating rooms.
- Pressure relationships must be maintained in the event of a loss of normal power.
- Rooms with differential air pressure requirements shall include a permanent device to continually monitor the pressure.

What is on the Horizon

The current revision cycle anticipates the next edition to be published in 2014.

As Evidenced Based Design continues to inform design solutions, the "Guidelines" will respond and begin to incorporate requirements that have been vetted through recognized scientific studies to improve the healing process and patient experience.

Look for language continuing to require more natural light, acoustic control, and nursing locations that support improved patient safety.

A section on Critical Access Hospitals is most likely to be included in the next edition.

Language that addresses: variable acuity rooms, interventional imaging, and sustainability issues is likely to be considered for the 2014 edition.

While many of us tend to balk at following rules, they provide the basis through which we can effectively execute our craft, whether it is design or construction, and make a difference in the lives of those that occupy the spaces they create.

To order a copy or find out more information about the guidelines, go to: www.fgiguidelines.org.

John Schrott joined IKM in 1982 and currently serves as the Managing Partner and President, and directs the healthcare practice group at IKM. He is a member of the American College of Healthcare Architects, an elite group of Certified Healthcare Architects. He has been published in Becker's Orthopedic and Spine Review, Hospital News, Healthcare Building Ideas, Healthcare Design, and West Virginia Executive magazines.







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MBE/WBE Company Spotlight



JOHNSON MARKETING

ALLEGHENY DESIGN GROUP

Peter Johnson has found a way to serve both sides of his brain, using his business to satisfy his artistic and entrepreneurial natures.

Part of the Allegheny Design Group installation at the East Liberty Place North lobby.

The entrepreneurial bent comes naturally. Johnson's mother, Faye Ritter, owns small businesses that over the years have included electrical subcomponents wiring, construction supplies and an office furniture dealership. While still attending Central Catholic High School he established Johnson Marketing to sell skateboards and after graduation went to work for his mother's Allegheny Group. One of her customers was Bombardier, who offered Peter an opportunity to work in their quality control operation in central Vermont. From there his path took a few turns.

In his early twenties Johnson decided to give in to his artistic impulses and went back to school to study sculpture. During the next decade he studied and worked for sculptors, eventually alternating between carving stone in Vermont in good weather and carving wood in Hawaii during the winter months. By 2004, however, he decided that he preferred to be closer to family and moved back to Pittsburgh to help his mother iron out some business difficulties, which included having her CFO embezzle from Allegheny Group. To assist, Johnson took an active role in managing the office systems and furniture business. Johnson took over ownership of that business under the Allegheny Design Group brand when the Allegheny Group reorganized a year later

With lead lines KI and Maxon, Allegheny Design Group concentrates on the higher education and corporate markets. The company has worked extensively at Slippery



Peter Johnson's tree of life sculpture purchased by architect Michael Berkowicz for a future synagogue design.

Rock University, as well as with Washington & Jefferson, Carlow College and CCAC. Its corporate clients include Highmark, Urban Settlement and the OK Grocery chain. Wisconsin-based manufacturer KI is the leader in education furniture, offering custom furniture and systems that are made in America. KI's emphasis on design suits life cycle oriented end users' needs, while the Maxon product line is better suited to more price-sensitive projects. The flexibility allows Allegheny Design Group to serve both end users directly and the plan-and-spec market. In fact, it's a publicly bid project –ALCOSAN's C S & T Center – that is the firm's largest order to date.

Johnson has run the custom furniture and office systems business with a partial mission of subsidizing his sculpting, and his facilities include a workshop and gallery for the artwork. The epiphany for merging the two pursuits came after an opportunity to sell custom furniture to local developer Community Builders morphed into a different opportunity.

"When we were trying to sell them furniture they came out to tour our facility, and they saw the sculpture gallery when I showed them around," explains Johnson. "A while later they called back because they remembered the sculptures. During the conversation about that they asked about furniture. I had to remind them that furniture was the reason they visited in the first place."

Community Builders commissioned Johnson to sculpt several trees to be used as wall furnishings in the lobby of the East Liberty Place North apartment they were developing along the 5800 block of Penn Avenue. The developer also ordered carved stone and wood benches for the lobby, as well as furniture that became a \$50,000 contract in total. Like Johnson's other work, these pieces were carved from local trees that were felled by nature or disease and stone sourced from Boyers, PA.

The concept was reinforced when Johnson sold another piece, a tree of life wall sculpture, to renowned synagogue designer Michael Berkowicz of Presentation Gallery in Mt. Vernon, NY. Berkowitz was sufficiently impressed to buy the sculpture without a specific installation in mind. He's confident that the piece will find a home in one of his projects still in design.

The process showed Johnson that he had an opportunity to differentiate his furniture business while at the same time offering personal satisfaction by creating a market for his art. The niche market also matches up well with the needs of architects and designers, who often aren't given the budgetary freedom to design custom furnishings on a larger scale.

"We have traditionally marketed to end users," he says. "But KI focuses as much on the architects and designers. The Community Builders experience has shown me that we can combine art, furniture and green furniture to give an architect an opportunity to focus on a specific area – a lobby, an executive office or conference room – and design something truly unique."

COMPANY FACTS Johnson Marketing d/b/a Allegheny Design Group

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Trend to Watch

Top IT Trends For 2011

By Christian Burger

2011 will prove to be another exciting and eventful year for companies in the construction industry, if not for new work, at least for technology and systems. Many contractors have decided this unprecedented slowdown in the economy was an ideal time to "sharpen the tools". This often involved process change, new systems, or at least implementing systems already purchased but perhaps less well adopted. While there are some new trends to look at this year, many of the trends that began emerging a few years ago are starting to mature and gain traction now. This article provides some insight into the most prevalent trends the market can expect and/or the most interesting, at least to the author.

Alignment

For so long, managers in construction businesses would apply technology or software solutions to the management team or department that asked the loudest or most convincingly, not necessarily as part of a larger overall IT strategy. Now, senior management has gotten a little wiser about the pursuit of technology and how it is deployed and leveraged within the organization. Managers are looking closely at the business plan and strategic direction of the company and asking good questions relative to value and need. They have also realized that acquiring new systems does not, by itself, force change or standardization. In short, companies seem to be acquiring and implementing technology a little more strategically and pragmatically.

Enterprise Content Management (ECM)

ECM technology has actually been around for over ten years; it just did not have the modern (and comprehensive) label when it first emerged. Many companies got started with ECM five or ten years ago when they started scanning and imaging documents, and storing them on a separate server. Some even got into a basic workflow routine for invoice routing and approval. However, ECM is a much more comprehensive solution for more than just scanned documents.

This technology has been around for a number of years in other industries as a broader records management platform. It is only now moving into Construction as such. When fully deployed, one could easily see e-mail and shared drives greatly reduced or eliminated and the elimination of many banker boxes and cabinets full of paper. This trend is one that is likely to transform most businesses in the industry and is changing the development path of many software developers that serve this space as well.

Building and Equipment Sensors

A recent article in The Economist's Technology Quarterly described the emergence of electronic sensors installed in larger civil structures like bridges and tunnels. These sensors collect and report traffic, movement, and other important wear data to listening posts and then computer systems that monitor the data, the idea being that more real-time data on structural stress and movement could be useful in preventing failures or predicting maintenance requirements. This could be another strategic advantage for the civil contractor if they can integrate the installation and monitoring of the sensors and data.

This technology is very similar to another type of telemetric data that is now being regularly captured on pieces of heavy equipment. Contractors with large fleets of expensive heavy/civil equipment are installing telemetric sensors with cell connectivity to base systems that monitor pressures, temperatures, operating hours, and the like, comparing the data against normal thresholds and warning shop personnel if a problem exists, usually long before the operator knows there is an issue. This is a much more efficient way of collecting critical data from the field and protecting those very expensive assets.

Business Intelligence

This technology too is one that has evolved and matured from simple report writing and metric monitoring tools to more advanced reporting over the enterprise and dashboard views customizable by user. This only makes sense as companies begin to focus on applications separately from reporting and bring data together from multiple sources for a more tailored management view. Business Objects, Cognos, and Microsoft's SSRS are among the leaders in this arena. As with many things though, some development needs to be done before this is widely accessible by contractors. Many of the application databases in place today do not lend themselves to that sort of access and make development of data cubes or "universes" necessary.

Building Information Modeling (BIM)

An article not mentioning the evolution and movement of BIM within construction would be missing a significant signpost. BIM, as most readers know, is not really a single product or technology but instead is a digital or data representation of a building or facility. This data set, which is rather large, is used by a variety of different products and participants in the design and construction process, from architects to schedulers and designers to fabricators. As this model becomes more mature and accessible, more software products will see the value of accessing parts of that data, importing it into their system, and then sending it back into the model, quite possibly enhanced. Just one small example of that would be the use within the ERP system of building material data to issue RFQs and purchase orders once the project is underway.

IT Staffing

As technology rapidly changes and becomes even more heavily used within the construction office, so too does the IT staffing requirements within those companies. Combine that with greater availability of traditional IT functions (e.g., the popularity of hosted e-mail solutions instead of managing in-house) and changes in the way that technology needs are identified and procured, and it is not surprising that the structure of IT departments is changing. In the past, IT would lead most technology purchases. They identified a problem, found a solution, and deployed it, hoping only at the end that the users would like it. Now IT is more of a support function to the organization, working with IT steering committees and end-user groups to help the end users identify the solution to a need and supporting them through the implementation. Many organizations are deploying Project Management Offices (PMOs) within IT departments to provide better oversight and control on IT initiatives. Common day-to-day tasks such as server patching, network monitoring, etc. can be outsourced, allowing IT staff to focus on more value-add functions such as application integrations, business intelligence solutions, and workflow development among others. Although the total FTE (Full Time Equivalent) count may not change, the skill set of the individuals and the roles within the IT organization are changing, with greater focus on vendor management, project management, business analyst, and development skills rather than server/infrastructure management skills.

Desktop Virtualization, VDI, and Virtualized Apps

Desktop virtualization, the method of deploying an end user's computing environment to them remotely, from anywhere, from any device, is not new but the technology to deploy it, VDI (Virtual Desktop Infrastructure) is a newer term in the industry. Microsoft and Citrix (among others) have been able to provide this capability for years but are now seeing more competitors in the marketplace. The supporting technology (VDI) has matured significantly, providing greater management tools and more options for deployment. Virtual desktops are now available via a hosted model and according to a recent report by Gartner, there is significant growth in this area.

Application Virtualization is a mechanism for deploying individual applications in a package that can be deployed irrespective of the operating system on which it is being run. This allows companies to deploy applications across multiple operating system platforms without having to deploy a completely virtualized desktop as well.

Collaboration

Collaboration as it was first defined in the .com era in early 2000 had high expectations that were never quite realized. Products like ConstructWare and e-Builder promised to connect all participants on a single project (e.g., subs, architect, owner, GC) on a single web-based platform built to share construction data. This was actually accomplished well but did not have the broad base of acceptance within the industry. It meant everyone used one platform, not necessarily their native platform or tool set. This left integration issues unresolved.

Version 2.0 of this technology will accomplish much the same thing but through e-mail and/or web-services. Each company will use their own platform for project management but will be able to send documents and records to other project participants that are recognized and accepted into their system. Similarly, a response can be sent back out and accepted by the various platforms of the other participants. This is an immature but promising approach both to the real value of collaboration and to where the industry is heading.

SaaS

The software vendor community continues to test the SaaS (software as a service) model as an alternative to providing a full version of software for the customer to host and operate. The SaaS was limited to only a few application types (e.g., CRM) a few years ago but now seems to be catching on in other areas. The advantage of this approach accrues to both contractor and developer but it is not without some risk. In a SaaS model, the contactor can opt into a more expensive solution or a solution that requires more infrastructure support than they otherwise might be able to afford. Typically, monthly charges for SaaS delivered software (the vendors call it a service) are lower than the maintenance cost of the software, particularly when you add in the acquisition cost. In addition, the SaaS model frequently allows for moving up or down in the subscription based on need, whereas a traditional licensing model usually allows for adding more licenses but not returning unneeded ones. This approach also allows the developer to manage and deploy the software in a controlled environment thereby alleviating an entire area of risk associated with contractors operating their own servers or datacenter.

Conclusion

This will be an exciting and potentially watershed year for many companies as they refocus on both technology and their organization. Management is proving to be much more careful in their IT spending and want to ensure that value will be delivered quickly and clearly before commitments are made. Management is also becoming clearer on the need for the organizational commitment necessary for successful deployments. One thing is certain, technology continues a pace even in this down economy and contractors will have to bridge the gap sometime.

About the Author

Christian Burger is president of the Burger Consulting Group, an independent consulting firm based in the Chicago area. The firm concentrates exclusively on IT strategy and tactics for the construction industry. ^{BG}



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Best Practice

A Local Partnership Sets a National Example

For more than a decade there has been ample research telling hospitals that their number one enemy was infections acquired during the patient's stay. This knowledge has impacted hospital culture in many ways, from disinfecting stations in every room for hand washing to changing the standard from double occupancy to single occupancy rooms. Infection control is now one of the top priorities for providers and insurers, and a hospital's effectiveness at preventing infections will have a significant impact on its ability to be reimbursed going forward.

Construction is one of those activities that are inherently dirty and noisy. Its impact on a building is pervasive, even a large building, so for the past decade the state of Pennsylvania has required that each construction project have an Infectious Control Risk Assessment (ICRA) and ICRA plan in place. For the most part ICRA involves sealing off the construction site from the rest of the hospital, generally by the construction of temporary drywall and stud barriers.

The construction of ICRA barriers is the work of carpenters. In an effort to make its members better qualified, the United Brotherhood of Carpenters developed a Best Practices in Hospital Construction training program, which feature a 24-hour class to teach the proper assembly of barrier protection and raise awareness of the protocols for working in a hospital environment.

Rick Okraszewski is the Apprentice Training Coordinator for the Greater PA Regional Council of Carpenters in Robinson Township. He saw the program and realized that it could be of great value to the carpenters in Western PA because so many were assigned to healthcare projects during their careers. Okraszewski adopted the program and apprentice and journeyman carpenters getting training that would sharpen their skills and make them more valuable to contractors doing hospital projects. Across town, the management of the University of Pittsburgh Medical Center's construction programs were also thinking hard about infection control. UPMC had integrated ICRA requirements into its project management years before and noticed that for a variety of reasons, the state was not putting staff in the field to monitor ICRA measures on job sites after their initial inspections. To ensure that ICRA plans were being followed on UPMC jobs they created the position of infection control coordinator, a position held by Jeff Clair at UPMC. In the latter part of 2010, Clair and project management executives were searching for a way to be more proactive and improve infection control on projects even further.

"We were aware that the Carpenters International had a training program for apprentices and journeymen on best practices in hospitals and arranged to meet with the local training people," says Tom Kennedy, director of capital projects for UPMC. "We met with the local carpenters and the Master Builders' at the new training center. After we saw what they were doing we got a good feeling they were already ahead of us."

... SEARCHING FOR A WAY TO BE MORE PROACTIVE AND IMPROVE INFECTION CONTROL ON PROJECTS EVEN FURTHER.

"THE RESULTS ALWAYS BEGIN AND END WITH THE PATIENT'S WELL-BEING AND EVERYONE RESPECTS THAT.

"I think they were impressed by the fact that our training was as much about the awareness of the hospital as anything else," says Okraszewski. "We're trying to wrap our arms around the spirit of infection control instead of just being technical. Our people need to understand that each facility has different protocols and they must respond to each one differently. The mindset is to see the construction worker as the same as a healthcare provider who is working on a construction site."

That mindset was what UPMC was looking for. "One of the best ways to improve infection control is to heighten the awareness of everyone who comes on a project that it's a hospital not a jobsite," notes Kennedy.

What came out of the first meeting was an interest in developing a training course that elevated the awareness of the nontechnical issues that could be used by anyone who visited a jobsite. Okraszewski and Jeff Clair worked together to craft such a course that is an eight-hour ICRA awareness program. The training explains what infectious control is, why it's important to patient well being, what the PA regulations are and establishes what the chain of command and communication is for any ICRA questions or problems. The program parallels that of UPMC's in-house infectious control protocols.

"The big thing is communication. It must go through the general contractor," explains Okraszewski. "We drill home that no one does anything without going through the general contractor's project manager."

The intent of the program was to use the eight-hour course as an introduction for anyone involved in the project who wouldn't be building containment barriers, but UPMC soon wanted to expand the course to include all the trades. They took the program developed jointly with the carpenters and worked with MBA safety director Bob McCall to develop an eight-hour course for all trades people who work in a hospital. The focus is for workers from other trades to respect the containment measures built by the carpenters. Every worker on a site takes the course, which includes going to the carpenters' training center to work in an actual containment area.

UPMC was pleased enough with the results that they made it a requirement. By November 1, 2011 anyone who builds or demolishes containment plus any superintendent or project manager for any trade on the project must complete the eighthour course (carpenters require that their trade take the full 24-hour program). By November 1, 2012 the requirement will extend to anyone who will come on site, including architects, consultants or any contractor's staff.

"Everyone who completes the course will have a card to carry and a sticker for their hard hat," says Kennedy. "You must have that to work at a UPMC facility."

Developing the program only required some hard work among several enthusiastic parties. Getting the other trades and contractors to buy in would be the next step. For UPMC, it meant pulling their approved contractors together to explain the program and their requirements.

"We invited all the general contractors and MEP subcontractors that we work with, a total of 200 people or so," says Kennedy. "The heartening thing was that we had 100 percent attendance of all the invitees." Kennedy noted that all the firms wanted to continue working for UPMC and joked, "I guess it wasn't really an invitation."

Okraszewski said the feedback from the other trades people was also very positive.

"The ultimate goal is to improve the patient's condition," he says. "The results always begin and end with the patient's well-being and everyone respects that. One of the guys from another trade who took the course approached me afterwards to say that his wife had recently been treated for breast cancer. He said we had explained to him things that he had been trying to understand for months."

Kennedy believes that the success of the program will hinge on that human touch. "It becomes a personal thing. Everybody ends up in a hospital sometime. People understand how important it is to keep the environment safe for patients."



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INDUSTRY COMMUNITY NEWS

PJ Dick Receives Aon Build America Award

PJ Dick Inc. became the first Pittsburgh contractor to receive an Aon Build America Award when it was recognized by the Associated General Contractors of America (AGC) at their annual meeting in Las Vegas on April 3. PJ Dick's award was for Best New Building Project in recognition of its role as Construction Manager on the CONSOL Energy Center. The Aon Build America Awards are considered by many to be the most prestigious recognition of construction accomplishments in the U.S. A panel of judges, representing all areas of construction, evaluated over 115 projects this year, assessing each project's complexity, use of innovative construction techniques and coordination with partners, among other criteria.



(At left) C.L. Cross and John Cook of Hunt Construction (third from left-to-right) Walt Czekaj, Cliff Rowe, Jeff Turconi and Bryan Pascarella of PJ Dick.



Council president Darlene Harris hands MBA board president Tom Landau the City Council resolution declaring March 19 the Master Builders' Association day in commemoration of its 125th anniversary. Behind Harris and Landau are, from left, council members Natalia Rudyak, Doug Shields and Bruce Kraus, MBA board member Michael Mascaro, Bob McCall and Jon O'Brien of the MBA staff, and council members Theresa Kail-Smith and Patrick Dowd.



GBA's executive director Mike Schiller (center) was the speaker at the Young Constructors' 2011 Kickoff event at Claddagh on March 15. With Schiller are Neal Rivers of Easley & Rivers and YC chair Brett Pitcairn of PJ Dick.

MBA Evening of Excellence Celebrates the Industry

On February 24 the Master Builders' Association celebrated its fourth annual Evening of Excellence at Heinz Field. The event drew 750 professionals from all fields to network and honor the winners of the MBA's Building Excellence Awards. This year's winners included

A. Martini & Co., PJ Dick Inc., Nello Construction, Mascaro Construction, Mosites Construction, Giffin Interiors and Jendoco Construction.



Brad Hazelwood from Civil & Environmental Consultants with Rycon's Tessa Berkebile.



Joe Moran from Duane Morris LLP with Mary Conroy Adams of Desmone & Associates Architects.



(left-to-right) Jeff Thorla of PJ Dick, Chip Desmone and Peter Licastro of Grant Street Associates at the Evening of Excellence.



Bill Wilson, owner of Specified Systems Inc. with Eric Passucci of PJ Dick and Ken Brown (right) of Tom Brown Inc.



.

Nello's Gino Torriero, Jay Sukernek of Riverlife and Jennifer Landau.



Hill Barth & King's Dan Dunphy with Herb Reeder from Huntington Insurance (right).

NAIOP Celebrates 2010's Best Developments

NAIOP Pittsburgh held its annual awards banquet on March 10 at the David Lawrence Convention Center. Approximately 650 people attended the event, which celebrated the best development projects in the region last year. The evening also included the induction of Greg Quatchak of Civil & Environmental Consultants and the Allegheny Conference's DeWitt Peart into the NAIOP Pittsburgh Hall of Fame.



Chaska Property Advisors' Patrick Gilligan and Dick Donley with Tom Landau.



First National Bank's Kristen Pleasants (left) with Christine Vann from Alpern Rosenthal and Randy Cornelius of First Niagara.



NAIOP Pittsburgh Hall of Fame honorees Greg Quatchak, president of CEC (left) and DeWitt Peart, president of the Pittsburgh Regional Alliance (right) with NAIOP executive director Leo Castagnari.

Massaro Serves the Little Sisters

As part of the Community Serves Program at Massaro Corporation, a Day of Service was donated to The Little Sisters of the Poor on March 30, 2011. The day was spent helping with spring time cleaning & minor repairs



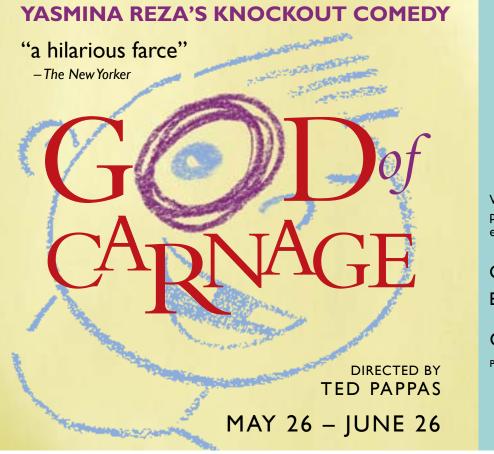
Massaro Becomes USGBC Educator

Massaro Corp. recently became the first Pennsylvaniabased general contractor to hold the USGBC Education Provider designation. Under recently enacted LEED regulations, all LEED accredited professionals must engage in 30 hours of continuing education over a two year period in order to maintain LEED AP status. Massaro Corporation is now certified to provide a portion of that training. Massaro Corporation's sustainability coordinator, Zack Walters spearheaded the development of a four hour course, which has been reviewed and approved by the USGBC. The "LEED Documentation for Contractors" course will represent four hours of the required continuing education for LEED accredited professionals.



Massaro's first in-house course

will cover "LEED Documentation for Contractors" and will be offered in late April. On June 3, 2011 the course will be offered to select architects, owners, associates and subcontractors by invitation only. A second course for "Green Roofs" is currently in development and is slated for mid-summer completion.



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AWARDSCONTRACTS

Jendoco Construction Corporation was selected by Franciscan University of Steubenville as the contractor for its Egan Hall Renovations. The project involves 10,000 square feet of renovations including new HVAC, lighting, and interior finishes. A new building addition will be erected for exterior aesthetics and mechanical access into the building. McLachlan, Cornelius & Filoni is the project's architect.

Nello Construction was awarded a \$3.4 million contract for the general construction portion of the \$4.4 million State Police Vehicle Maintenance Garage in Bethlehem Township of Washington County. The new 8,000 square foot building was designed by Jeff Zell Consultants.

Rycon Construction is the construction manager for the new \$20 million Hyatt Summerfield hotel at the South Side Works. The 150-room hotel is being developed by Oxford Development and Sierra Associates. NORR Illinois is the architect.

Rycon Construction, Inc. was awarded the \$2M contract to build a new PNC Bank in Peters Township, PA. Located on the busy intersection of Rt. 19 and McMurray Road, this branch is scheduled to be complete in the fall season.

Rycon Special Projects Group is currently responsible for the locker room renovation within the A.J. Palumbo Center. This \$1.2M project, scheduled for completion in August, was designed by DRS Architects.

Macy's Department Store at Monroeville Mall will undergo a five-month renovation led by Rycon's Special Projects Group.

At UPMC Headquarters within the USS Tower, Rycon Special Projects Group will renovate the café on the 24th floor. This \$1.2M project was designed by The Design Alliance.

dck north america, a dck worldwide company, has been awarded a contract to build a new Jimmy Johns Gourmet Sandwich Shop. This shop will be located in Bakery Square in the East end section of Pittsburgh.

Passavant Retirement Community has awarded dck north america, a dck worldwide company, a contract to build their new Campus Building Replacement project in Zelienople, Pennsylvania. This three-story, 214,000 sf building will serve as a replacement of the present facility, which was built in the 1930s.

dck north america, a dck worldwide company, was awarded a contract for the Morgan Building Renovation on the campus of the Wheeler School, a private, prestigious K-12th school, located in the heart of Providence, Rhode Island, near Brown University. The planned renovations will take place over the course of two consecutive summers. Pre-construction services are also being provided by dck and have already begun.

The U.S. Army Corps of Engineers, Honolulu District, awarded dck pacific construction, a dck worldwide company, a \$127.9 million designbuild contract to provide architectural and engineering services for the U.S. Army Pacific Command at Fort Shafter, Schofield Barracks. Along with its joint venture partner, ECC, dck will provide site improvements and utilities necessary to access and support the new South Range Campus, including the complete design and construction of a Brigade Complex, Engineer Unit Operations and Maintenance Complex, and Explosive Ordnance Facilities.

dck pacific construction, a dck worldwide company, was awarded a \$30 million contract by Hawaii Pacific Health to build a 17-story, 360,000 sf cast-in-place concrete parking structure (called the New Bingham Parking Garage) at the Kapiolani Medical Center for Women & Children in Honolulu.

Oakview dck, a dck worldwide company, was recently awarded its 35th Wal-Mart project. This

one is a remodel of a 195,000 sf store in Kirksville, Missouri, which includes the complete removal and installation of a new refrigeration system.

Panda Express awarded Oakview dck, a dck worldwide company, its sixth Panda Express restaurant. This latest is a 2,848 sf, free-standing restaurant in Ft Wayne, Indiana.

Oakview dck , a dck worldwide company, signed up its second project with the Des Moines, Iowa, area franchisee, Taco John's. This new restaurant will be located in the Valley West Mall food court.

Oakview dck, a dck worldwide company, was awarded a construction contract for the Ottumwa, lowa, Rural Emergency Training Center. The project will be built on the north campus of Indian Hills Community College.

The A. Martini & Co was selected to provide CM and General Construction services for the new St. Thomas A'Becket church. This 32,000 square foot building includes a main chapel, day chapel, parish offices, kitchen, social hall, and support spaces. Construction began early April 2011. Astorino is the architect for this new church.

A. Martini & Co was chosen by Dollar Bank to provide General Construction services for the new Market Square branch. Construction is scheduled for completion in July 2011. Integrity Design is the architect for this new 3,100 square foot branch bank.

A. Martini & Co was awarded the general construction for renovation of the BNY Mellon facility in Monroeville. Construction is due to begin this spring for this 34,000 square foot building. DRS is the project architect.

Landau Building Company was contracted by MedExpress to build another interior fit-out in Hanover, PA. Facilities in Altoona, Reading, State College, Lancaster North and Johnstown, PA have been built. Projects currently under construction include Lancaster West and Chambersburg, PA.

Landau Building Co. will soon start construction at UPMC Presbyterian Level 7 South. This project consists of upgrades and renovations to the 7th floor of the old Children's Hospital building to make way for a pulmonary floor. The architect is Burt Hill. The Armstrong County YMCA has contracted Landau Building Co. to build a new 27,200 square foot facility to replace their antiquated existing one. The new two story building will be located a few blocks north of the old facility on North Water Street in Kittanning, PA. The architect is RSSC Architecture.

Landau was the successful contractor for the renovations to the Sennott Hall second floor Center for Student Success for the University of Pittsburgh. The Design Alliance is the architect. Landau Building Co. will soon start construction of a Hyperbaric Wound Therapy Suite for West Virginia University Hospitals at the Cheat Lake site in Morgantown, West Virginia. The 2,660 sq. ft. basement shell space has been renovated to include a Class B Hyperbaric Chamber Room setup for two single occupant units. The hyperbaric chamber room is also supported by four new treatment rooms, staff area and waiting room.

Monongalia General Hospital has contracted Landau Building Company to renovate three areas within the Morgantown, WV hospital; A 22,000 sq. ft. Orthopedic OR on the first floor, a 11,000 sq. ft. Endoscopy Suite on the second floor and a 4,000 sq. ft. Infusion Unit on the third floor that will be used for cancer treatment.

University of Pittsburgh awarded Volpatt Construction a contract for renovations to Thackeray Hall. The project includes major mechanical systems work and architectural renovations. The architect is Lami Grubb Architects. Claitman Engineering is the mechanical engineer.

Poerio Incorporated received a contract from JC Penney Department store in Youngstown Ohio to renovate the entire store. Interior renovation to the 149,000 square foot store includes all flooring, lighting restrooms and an expanded portrait studio. Little is the architect on the project.

JC Penney Department store selected Poerio Inc. to renovate the Charleston West Virginia Department Store. The renovation includes the entire sales floor, stock area, styling salon and revisions to the sprinkler system. The 123,621 ft renovation is to be completed in July 2011. Nudell is the architect on the job. Poerio Inc. was selected by FED-EX Ground to be the contractor for the renovations to the Shelby OH facility. Renovations included new fencing and additional parking. Poerio also enlarged the existing securities specialist office in the Administration Building. Nudell is the architect on the job. Poerio is also renovating FED-EX Ground's Altoona facility.

Mascaro was awarded a contract from the Pittsburgh Cultural Trust for the Phase II renovations to Heinz Hall. The scope of the project involves roof renovation, sound system upgrades, new dimmers, modification to the stage area for new rigging and new riggings for the chandeliers.

The Pittsburgh Zoo and PPG Aquarium selected Mascaro Construction for the new \$5 million Animal Health and Education Center. The two-story, 22,000 square foot building will contain veterinarian facilities, general offices, and a children's education center. Indovina & Associates are the architects.

PJ Dick Inc. was awarded contracting services for the new offices of the Disney Research Group

located in the Collaborative Innovation Center at Carnegie Mellon University. This 16,482 square foot renovation will include lab and research space.

Burns & Scalo Real Estate Services selected PJ Dick for the conversion of the former seven-story Goodwill Industries building into a market rate apartment building with 87 suites and attached two-level garage for 88 cars and 44 bikes.

PJ Dick was awarded a Construction Management at Risk contract for a 2,000 square foot expansion and 10,400 square foot renovation for Apple, Inc. located in the Collaborative Innovation Center at Carnegie Mellon University.

PJ Dick was the successful contractor on the VA Pittsburgh Healthcare System's new 99,671 square foot lab and research building on University Drive in Oakland. Astorino is the architect for the project.

Pitt Ohio Truck, Inc. has selected Massaro Corporation to serve as their general contractor for their new truck terminal and maintenance facility in Harmarville. This \$10 million project



will be one of the first green terminals in the country and the first in Pennsylvania. Lami Grubb is the architect.

Massaro Corporation has been hired by The Benedictine Sisters to perform design/build services for their new monastery.

The Department of Conservation & Natural Resources awarded Mosites Construction a \$1.3 million contract for the Laurel Highlands hiking trail bridge in Laurel Ridge State Park, Somerset County. Gibson-Thomas Engineering designed the project.

Mosites Construction was the successful contractor for the University of Pittsburgh's Mid-Campus Renovations in Oakland. The \$10 million project involves renovations to 22,000 square feet, including lab space. Wilson Architects is the architect.

Mosites has started construction on the \$3 million Residence at Wood Street an adaptive re-use of 301 Third Avenue. RSH Architects are the designers for the project.

Mosites Construction was the low bidder on the \$4.1 million rehabilitation of the Allegheny Tunnel for the PA Turnpike Commission. The tunnel is located

between mile markers 122 and 123 in Somerset County.

Carnegie Mellon University awarded contracts to F. J. Busse Co. for renovations to several of its facilities. Busse is doing work at Hamburg Hall designed by Quad 3 Architecture and the MHCI renovation at Newell Simon Hall with EDGE Studio. Busse was also awarded the CERT modifications project at the Software Engineering Institute.

F. J. Busse was the successful contractor for the roof replacement at the Western Pennsylvania School for the Blind in Oakland. The architect is Hayes Large Architects.

L. S. Brinker Group was the successful construction manager for the 36,000 square foot Heldman Plaza, which includes a 29,500 square foot Shop 'n Save in the Hill District of Pittsburgh. Renaissance 3 Architecture is the architect for the project.

Penn State University awarded Yarborough Development Inc. a contract for a 4,500 square foot addition to the gymnasium at its Beaver campus in Center Township. The \$2.3 million wellness center was designed by WTW Architects.



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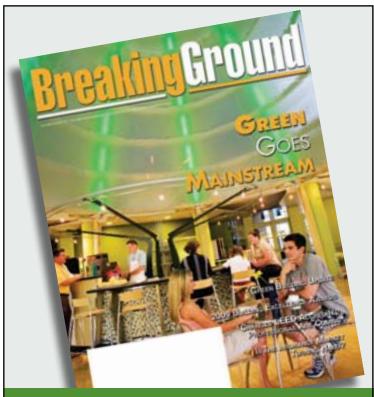
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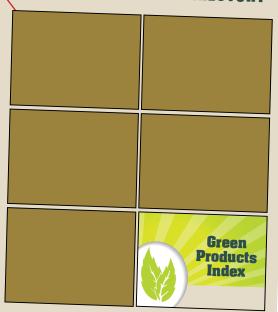
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BUILDING PRODUCTS DIRECTORY



FACES NEW PLACES

Landau Building Company is pleased to announce that Andrew Marsic rejoined the company as a Project Manager. Marsic interned for Landau Building Company while finishing a Bachelors of Science in Construction Management at the Pennsylvania College of Technology.

The Master Builders' Association is pleased to announce the following appointments to serve on the MBA Young Constructors Committee: Peter Bianco, Mosites Construction Company; Gregory Heddaeus, Carl Walker Construction Group; Robert Michel, Allegheny Construction Group; and Adam Reichbaum, Miller Electric Construction, Inc.

Jeanne Cotter, CQE was named Director of Quality for GAI Consultants, Inc. As Director of Quality, Cotter will oversee GAI's company-wide QA/QC program, which includes nuclear protocols. She will be based in GAI's Pittsburgh office at the Waterfront in Homestead, PA, working directly with Senior Vice President and Chief Operating Officer Anthony Morrocco, P.E., PLS. Cotter earned a B.S. in industrial engineering from Pennsylvania State University and is a member of the American Society for Quality as well as an ASQ Certified Quality Engineer.

Pittsburgh native Jeff Young, AIA has returned to the region, where he will lend his management expertise to Burt Hill, a Stantec Company. Having earned a Master of Architecture from the University of Pennsylvania in 1997, Jeff spent the past 14 years at the New York office of Skidmore, Owings & Merrill (SOM).

William Kerns, a director with The Duggan Rhodes Group, was recently named to the Board of Trustees of the Institute of Certified Construction Industry Financial Professionals (ICCIFP). Carren Gallick, CCC was promoted to project manager at DRG. Carren has been with DRG since its founding year of 1999 and has held several pivotal roles throughout her tenure. Carren specializes in construction claim analysis and the related damage assessment and quantification. In addition, Ivonne Beltran, CCC was promoted to project consultant. Four DRG professionals became certified through the Association for Advancement of Cost Engineering International (AACE). William Kerns, Donald Kaplan, and Ivonne Beltran received the designation of Certified Cost Consultant (CCC). Jeffrey Hogan received the designation of Certified Cost Engineer (CCE).

MBA News

Electronically Delivering Western Pennsylvania's Construction Industry News Twice A Month, The Second & Last Tuesday of Each Month.

"The MBA News is the Voice of our region's construction industry." M. Dean Mosites, Treasurer, Master Builders' Association

"The MBA News is my source of construction industry news." Leo Castagnari, Executive Director, NAIOP Pittsburgh

"The MBA News keeps the Carpenters Union informed of the latest news and events in our region's construction industry." William Waterkotte, Executive Secretary Treasurer, Greater PA Regional Council of Carpenters

To view the latest issue of the MBA News or to become a recipient visit the MBA homepage: www.mbawpa.org.





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MBA Membership

MBA MEMBERSHIP

The Master Builders' Association (MBA) is a trade organization representing Western Pennsylvania's leading commercial, institutional and industrial contractors. MBA contractors invest in a skilled workforce, implementing award-winning safety programs and offer the best in management and stability.

The MBA is a chapter of the Associated General Contractors of America, the nation's largest and oldest construction trade association. The MBA is committed to improving the construction trade association through education, promoting technological advancements and advocating building the highest quality projects for owners. To learn more go to www.mbawpa.org.

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Closing Out

Hospitals Make a Difference to a Region By Elizabeth B. Concordia

nnovation and forward thinking to ensure a healthy and productive region are the foundation of UPMC's approach to construction and infrastructure development. Each day, in every season, more than 100 active construction projects big and small are under way at UPMC facilities.

These varied projects include remodeling hospital facilities, renovating physician practice offices, new equipment installation, additions to existing structures, and major new construction. At any given time, many other projects are in planning stages, on the



Elizabeth B. Concordia

tion project is estimated to be over \$700 million, with more than \$200 million to be generated in the city of Pittsburgh. Total job generation since 2003 includes more than 4,000 direct construction-related jobs and an additional estimated 4,000 jobs created by the hospital's presence in the community.

As a \$9 billion integrated global health enterprise and western Pennsylvania's largest employer with more than 50,000 employees, UPMC is transforming the economy of the region into one based on medicine, research, and technology. The long-range plan for Oakland is a new UPMC

drawing board, or being imagined at meetings.

UPMC experienced major growth in 2010, and construction for 2011 is equally ambitious. For our service communities, this translates as investment in both physical and fiscal health, job generation, increased need for building materials, construction equipment, and ancillary economic activity. New health care facility construction provides the work places and clinical homes for our latest medical advances, leading-edge treatments, and promising research. They also show the way toward healthy environmental advances in design and construction for which our region is a national leader.

For example, the new Children's Hospital of Pittsburgh of UPMC, which opened in May 2009, was designed as a "hospital of the future." The \$622-million hospital and research facility is one of the first all-digital pediatric hospitals in the country, a leader in the use of "green" practices to protect the environment, and a model of patient-centered care. Every aspect of the hospital's design, from spacious, private rooms to a rooftop healing garden, focuses on the comfort, convenience, and safety of patients and families. The hospital's research center has been awarded Leadership in Energy and Environmental Design (LEED) Silver certification.

An economic generator for the region, the total economic impact of the new Children's Hospital construcPresbyterian on the site of the old Children's Hospital, which will tie into UPMC Presbyterian's existing structures. The new building will be a dynamic state-of-theart tertiary/quaternary center.

UPMC construction projects are designed to meet pressing community needs. The expansion of UPMC Presbyterian's Emergency Department is part of UPMC's broader expansion and modernization of emergency medicine in Pittsburgh, including the EDs at Magee-Womens Hospital of UPMC, UPMC Shadyside, UPMC McKeesport, and UPMC Mercy.

To meet a growing need for intensive care beds, Magee-Womens Hospital of UPMC has begun a major renovation to add an additional two floors to existing structures for expanded intensive care capabilities. The project is challenging and requires structural reinforcement of existing floors. UPMC Shadyside also will undergo renovation to accommodate more ICU beds.

Investment in construction at UPMC Passavant, which serves our northern communities, has brought a transformation of the hospital from a traditional community hospital to a regional tertiary and specialty hospital. Central to this transformation has been the addition of a new seven-story pavilion that provides increased capacity for the UPMC Cancer Center at UPMC Passavant, the Emergency Department, and surgical services. In 2011, the new pavilion was awarded LEED status, another example of green design that can help to prevent chronic diseases such as emphysema and heart disease.

On any given day during the current fiscal year, more than 750 workers in the construction trades have been employed on UPMC projects. Yearly man hours total more than 1.5 million and aggregate wages are \$42 million for the year. Also in FY11, UPMC's total capital spending is expected to exceed \$450 million. Construction spending approaches \$300 million.

UPMC East in Monroeville has been making progress toward planned completion in 2012. Environmentally friendly construction has been part of the project from the beginning. Demolition debris from a preexisting structure was crushed and recycled to stay on-site for use as fill around foundations and behind retaining walls. UPMC East incorporates storm water management as a unique design feature to mitigate Monroeville's storm water runoff.

This new construction, employing 98 percent local workers, provides opportunity for innovation and ap-

plication of new technologies, some of which have been developed elsewhere at UPMC. UPMC East will incorporate new SmartRoomTM technology developed by UPMC and IBM. SmartRoom identifies health care staff as they enter a patient's room, and provides relevant clinical information needed at the bedside. In planning and equipping the new hospital, UPMC has engaged clinician teams and user groups from different disciplines to provide feedback and specifications for room-design features.

Through innovation and expansion of health care in western Pennsylvania, UPMC is helping to ensure both the health of our communities and our region's economic well-being. Investment in facilities expands access to care while fueling the economic engine with jobs in construction and related fields.

Liz Concordia is Executive Vice President, UPMC, and President, Hospital and Community Services Division. 89

Sustainable Development

Whether you need advice on working within an integrated project delivery model to deliver a LEED® certified facility, negotiating a green commercial lease or obtaining energy-efficiency incentives or tax credits, our Sustainable Development Practice Group has the resources to help you succeed. Chad Michaelson, Construction Litigation

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